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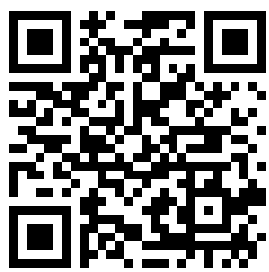
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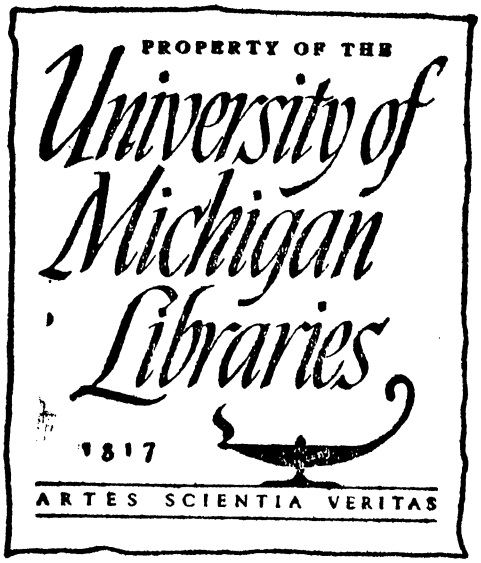
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END OF THE FIRST VOLUME FOR 1897.

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A Clinical Lecture

ON

INSULAR SCLEROSIS AND HYSTERIA;

Delivered at the National Hospital for the Paralysed and Epileptic, Queen-square, on Nov. 10th, 1896,

BY THOMAS BUZZARD, M.D., F.R.C.P. LOND.,
PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—It need scarcely be said that to enter at all fully into the subject either of Insular (disseminated) Sclerosis or of Hysteria would require a good many lectures. My object to-day is to give you a sketch illustrative of a single point, viz.—the extraordinary liability of Insular Sclerosis to be diagnosed as Hysteria. In making a sketch of a landscape from nature the art largely consists in knowing what to leave out. In my sketch it will be understood, in like manner, that everything which is not essential to the particular object in view will necessarily be omitted.

Of the two patients present, one, aged forty-two years, I have the opportunity of showing by the courtesy of Dr. Hughlings Jackson; the other, aged twenty-eight years, is under my own care. The first is a married woman who, ten years ago, began to suffer from giddiness and complained of weakness in her legs, which has continued to the present time, and has been accompanied occasionally by pains. Four years ago she first noticed trembling and inability to hold things with her right hand, and two years ago the left arm became similarly affected. One year ago she began to have delay in micturition, and more recently incontinence of urine. She suffered also from double vision. During the last six months there has been some trembling of the hand and her articulation has been impaired. On admission to the hospital she appeared to be well nourished, and nothing wrong was found in the digestive, circulatory, or respiratory systems. Her mental state appeared to be normal. Her utterance was slow and inclined to be syllabic. There was diminution of power in the arms and great incoördination in voluntary movements. There was no marked wasting. She could not walk, and when lying was unable to raise the legs from the bed. The legs were stiff and spastic. The sensory system was unimpaired. Of the organic reflexes the act of swallowing was normal; there was complete loss of control over the bladder; the bowels were constipated. Of the superficial reflexes the abdominal and epigastric were absent, but the plantars were present. (I shall have something to say presently about the retention of the plantar reflex.) Of the deep reflexes those at the knees were exaggerated. There was no ankle clonus. There was very marked nystagmus. The vision of the right eye was $\frac{6}{9}$, Jaeger 12 (− 1); that of the left eye was $\frac{6}{9}$, Jaeger 7 (− 3). The optic discs were pale. The patient's present condition will be seen to correspond with this description, for which I am indebted to Dr. Harris, senior house physician. She may be taken as a typical example of insular sclerosis. She has slowly but uninterruptedly grown worse since her illness commenced, some ten years ago, and there is no record of a diagnosis of hysteria having been made in the earlier stages of her disease. If this be so it is a rare exception. Both in hospital and private practice we almost invariably find that a female patient presenting a characteristic picture of insular sclerosis has in the earlier part of her illness been considered, for longer or shorter periods, to be suffering only from hysteria.

Before proceeding to dwell in some detail on this point I will show you the other patient, a single woman aged twenty-eight years, who applied at this hospital in March, 1894, on account of a difficulty in walking from which she had suffered more or less for ten months. It appeared that in May, 1893, she began to complain of weakness of the left arm and leg. She dragged the leg a little, and it felt numbed, "like a log of wood." She had had some considerable mental trouble before this, and the symptoms were set down to "hysteria." This diagnosis appeared to be confirmed when, in the course of a month, the arm had recovered. Although her leg dragged a little she continued to walk until February, 1894. There had been a progressively increasing weakness, which at Christmas, 1893, had extended slightly to the right leg. On examination in the out-patient department the knee jerks were found to be very well marked on both sides. Ankle clonus was obtained readily on the left side at the first attempt, but on the second trial it could not be elicited. There was no sign of ankle clonus on the right side. There was no nystagmus and there had not been any double vision. On the other hand, micturition had been inclined to be precipitate. The patient was a well-grown, healthy-looking young woman. Some doubt was felt by my colleague in the out-patient department as to the diagnosis of this case, and she was sent to Finchley, to our convalescent home, to be under observation and treatment. In May it was noted that she walked much better. It was also remarked that she would get better one day and then worse again. On May 3rd ankle clonus was observed to be definite, though not prolonged, on each side, and about equally well-marked in the two legs. At this time the plantar reflex was present on the right side, but doubtfully expressed on the left. Sensation was apparently normal to touch and pain. On May 31st it was noted that she walked much better—in fact, fairly well; but the left leg was considered rather weaker than the right. There was now an attempt at ankle clonus in the right leg and on the left side it was well marked. For the first time, too, some fine though definite nystagmus was noted in the left eye. In the right eye this was barely perceptible. At this date it was remarked that no plantar reflex was obtained, but the patient appeared to feel both touch and the prick of a pin well. She was discharged from Finchley, but continued to attend the out-patient department in Queen-square till October, 1894, when she was admitted into the hospital for five months, improving considerably during this time under treatment. She was discharged in February, 1895, and readmitted last August in the condition which she now presents. The patient keeps her bed, but can walk alone for a very few minutes and then becomes exhausted. Her gait is very staggering and the act of walking occasions incontinence of urine. The left foot is slightly dragged. When recumbent she can just lift the left leg off the bed, the right being much stronger. The left arm is weaker than the right, but its movements are fairly good. Sensation appears to be normal and equal on both legs and arms. The patient can stand with feet together, the eyes being closed. She can thread a needle if given plenty of time, but is very clumsy and shows tremor in picking up a pin, especially with the left hand. This is also noted when she touches the forehead with her finger. There is incontinence both in regard to the bladder and rectum. The knee-jerks are greatly in excess and there is double ankle clonus. The plantar reflexes are present. There is marked horizontal nystagmus in each eye. Two years ago it appears that the sight of the right eye was dim for a time, but now she says that she can see perfectly, and in effect V = $\frac{6}{9}$ and Jaeger 1 with each eye. Notwithstanding this, when we examine the fundus oculi with the ophthalmoscope we find the optic discs pale, the right showing rather more pallor than the left. I shall presently have to advert to an important feature in the state of her visual fields.

I suppose it can hardly be doubted that both these patients are examples of organic disease and probably of insular sclerosis. Yet the last case was considered before her admission to be one of hysteria, and in hospital some doubt was at first felt as to the nature of her affection. This is evidenced by a note on the out-patient letter. The patient was first examined in March, 1894, and under the heading "Diagnosis" a note of interrogation appears. On May 31st, when the patient had been under observation for two or three months, the following note was made: "Diagnosis uncertain. Thought to be perhaps hysterical, but the definite ankle clonus and the observation of slight nystagmus rather suggest disseminated sclerosis."

I take it that we have all of us at various times given the name of hysteria to an early stage of insular sclerosis. One reason for the common fallacy in diagnosis appears to be that we have somehow failed to remember that insular sclerosis does not spring suddenly into existence in a typical form. Like most other chronic or sub-acute ailments it has to go through a budding period, during which the aspect presented differs much from that of the full-blown disease. Several years ago I expressed the opinion that "many symptoms which have come to be considered characteristic of hysteria will, if examined by the light of improved knowledge and experience, be relegated to disseminated sclerosis." In the case just shown you there are illustrations of this. The sudden loss of power in a limb, occurring after mental shock in an otherwise apparently healthy girl and passing off completely in a

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month, is a symptom which is practically certain to be set down to hysteria. And so with the dimness of vision in one eye of temporary character, recovering without treatment; and, again, the dragging of a leg, which felt "numbed and like a log of wood." Whatever may be the case with regard to hysteria I have no hesitation in saying that these are as much symptoms of insular sclerosis as cough is of bronchitis or pain of peritonitis (of course, this is not to say that the symptoms are pathognomonic). I would therefore urge you, when you come across such symptoms in an apparently healthy young woman, to remember that they may possibly point to insular sclerosis. Whatever you think of them do not jump to the conclusion that they are any proof that the girl is only suffering from hysteria. Insular sclerosis must be studied in its infancy, so to speak. The full-grown disease is frequently not recognised, the infant disease practically never. In its infancy, according to my observation, the name given to insular sclerosis is "hysteria." This is not a hasty expression of opinion; it is founded upon observation of the sequels of numerous cases during the last twenty years. Some of these have been patients of my own, the progress of whose cases has taught me that I had been in error in originally regarding them as examples of hysteria. Let me refer in the briefest possible manner to some cases illustrating this point which have more or less recently come under my notice in private practice.

CASE 1.—A single woman at twenty-one years of age suffered from weakness in her legs and also in the left arm. After a few months the left hand recovered and then the right hand became weak, so that she could scarcely write for three months. Since then sometimes one and sometimes the other leg has dragged. Her case had been treated always as one of hysteria. When I saw her, four years after the commencement, examination showed nystagmoid movements of the eyes, inability to lift the knees or, except to a trifling degree, to extend the legs, incontinence of urine, grasp of the right hand very weak, that of the left a little stronger, spasticity of legs.

CASE 2.—A married woman aged forty years. For three and a half years she had been unable to walk properly, though at times this had very greatly improved. Six years ago she had diplopia for two months after a great shock. For the last six months she had been getting worse. When seen by me the gait was staggering and the knee-jerks were exaggerated. There was double ankle clonus. There was no manifest unsteadiness of the arms. The sight of the left eye was much better than that of the right. The right optic disc was distinctly pale, the left probably normal. Some weakness of the bladder. She had been treated as a case of hysteria.

CASE 3.—A single woman aged thirty-five years. Difficulty in walking had been observed for four years, and especially for two years, past. For a long time she could not retain urine, but that is now better. Her gait was staggering and stiff. Her knee-jerks were exaggerated and there was double ankle clonus. There was no tremor of the hands on voluntary movement. The first appearance of symptoms was after mental shock and physical fatigue. There was no nystagmus or articulatory difficulty. At times she has improved, but has never been able to run. Medical advisers, of whom she has seen three, all agreed that it was a nervous functional affection, that "it was merely a matter of time and she would recover." She has been told that she could "throw it off by her will." The right disc is paler than the left and sight of the left eye rather better than that of the right.

CASE 4.—A married woman aged thirty-nine years. For many years she had had attacks in which she "would feel that she could not walk." Five years ago she was very anæmic and lost power in her legs, but quite recovered under chalybeate treatment and walked up hills. Seven years ago she lost the use of one arm and saw double; she was in bed for three months, during which the diplopia continued. When seen by me there was nystagmus and marked tremor of the right hand on voluntary movement, so that she was obliged to carry a cup to the lips with both hands. She had been treated as a case of hysteria and had twice undergone Weir-Mitchell treatment. The physician by whom she was sent to me, however, doubted the correctness of this diagnosis, and I agreed with him that it was a case of organic disease. I thought it one of insular sclerosis. Some months later I found partial paralysis of the right external rectus muscle. The sight of the right eye was $\frac{6}{18}$, and that of the left $\frac{6}{9}$. There was some pallor of both optic discs, especially of the left.

CASE 5.—A married woman, whose present age is thirty-seven years, was seen by me in 1883, and she underwent Weir-Mitchell treatment with my consent on account of loss of power in her legs with transitory loss of feeling in the left arm, which had appeared to be of hysterical character. I lost sight of her and did not see her again for thirteen years. Her condition was then as follows. She could not stand, the lower limbs being in a state of rigid contracture. Her speech was hesitating and slurring and her manner vacant. She was unable to retain the urine night or day, this condition having followed a period of inability to empty the bladder except after great delay. On testing the vision it was found that she could only read Jaeger No. 6 with the right eye, whilst with the left she could not see No. 14. Ophthalmoscopic examination showed both discs (especially the left) greatly atrophied, even the nasal side being grey. There were nystagmiform movements in each eye. At the same time she could carry a glass to her lips with either hand very fairly.

CASE 6.—A single woman aged nineteen years, at Christmas, 1892, had an attack of facial paralysis which lasted a month. On recovering from influenza in February, 1893, she found some loss of control over her legs in walking; she staggered and stumbled. In about six months she had recovered the power in her legs except that she could not walk far. Her complaint had been called hysterical paralysis. When seen by me she had weakness of the right leg which had existed for eight months, with numbness in some of her fingers and the sole of one foot. She had intention tremor. The knee-jerks were well-marked, but there was no ankle clonus and no nystagmus. Vision with the right eye was $\frac{6}{9}$ and with the left $\frac{6}{6}$. The opinion given was that she was in an early stage of insular sclerosis. A year and a half later the tremor of the right hand was reported to be diminished, but the right leg dragged more. She had recently on one occasion lost all power suddenly in the right leg and to a great extent in the left. This was accompanied by a feeling of "pins and needles." A few days ago I heard that she was more helpless than ever.

I could easily multiply such cases were there time. It will be noted that there is only an imperfect resemblance of symptoms in these cases, but that is what one must be prepared to expect in this disease. The islets of interstitial myelitis which eventually become sclerosed are variously scattered in individual cases, producing therefore disorders of function referable to different parts of the frame. Considering, indeed, the morbid anatomy of the disease it is quite remarkable how much general resemblance may be found in the cases. In several the "intention tremor"—i.e., the tremulousness of the arm when a voluntary movement is undertaken—is marked; in others this is absent. Nystagmiform movements of the eyes occur in several. A history of diplopia is very common, whilst incontinence of urine is of great frequency. I look upon these symptoms as pointing to organic disease of the central nervous system. There are two others upon which, in my experience, great stress should be laid as indicative of organic disease. One is impairment of vision, with more or less atrophy of optic discs. The other is the history in the case of recovered power in a limb where this had been more or less lost, with recurrence on one or more occasions of similar paresis after longer or shorter intervals in the same or some other limb. The fact that in the course of insular sclerosis there are apt to be periods varying in length of almost or even complete subsidence of symptoms, though mentioned by Charcot and some succeeding writers, is not yet, I think, sufficiently remembered and taken into account. These intervals of exemption are sometimes long. In a lecture given here last year I showed a patient in whom there had been an interval of eleven years between her attacks. When sixteen years old she had attacks of powerlessness in the right arm, so that she used to drop things. These attacks recurred during three months and then altogether ceased. At twenty-seven years of age she had a sensation of pins and needless in the left foot and her leg dragged. When shown here she presented a typical picture of insular sclerosis.

CASE 7.—In 1877 a girl aged twenty years was brought to me with great loss of power in her legs, especially the left. A short time previously the right had been most affected. She complained also of numbness of the left hand. She was typically hysterical in manner and her moral character I was told had changed. She had marked "intention tremor,"

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impaired articulation, and ankle clonus, on the strength of which symptoms I expressed the opinion that she was suffering from organic disease, probably insular sclerosis. A few months later I heard that she was quite well. Two and a half years after my examination her medical man, to whom I applied for information as to the sequel, wrote me as follows: "When last saw Miss —— she was very well. ..... I cannot help thinking that her symptoms are due to that wonderful simulator—hysteria." I heard nothing more of her till 1891 (fourteen years after her visit to me), when I was called into the country to see her. She had been bedridden for two years and presented all the unmistakable characteristics of advanced insular sclerosis.[1]

CASE 8.—A woman aged forty years lost all power in the left leg at the age of thirty-three years. After six months she recovered and was able to walk well. She remained well for four years, when the right leg began to go as the left had gone in her former attack. Three years later the left leg again lost power quite suddenly and when I saw her both legs were useless. Her case had been diagnosed, I was told, as hysteria, and she had been hypnotised for many months previous to consulting me. I found inability to write, with great incoördination of the hands, marked atrophy of the right optic disc, nystagmus, and exaggerated knee-jerks. She was evidently suffering from insular sclerosis. A month later she died from cardiac failure, probably due to invasion of the bulb by the disease.[2]

CASE 9.—A girl sixteen years of age suffered from partial loss of power in her legs and failure of coördination in them. Her condition was diagnosed as hysterical, and this appeared to be confirmed by her complete recovery in two or three months. She remained apparently well for more than five years, during which time she was in the habit of taking a large amount of exercise, walking, riding, and hunting. Then she complained one day of some difficulty in walking and three days afterwards became perfectly paralysed in the lower extremities. She lay powerless for from three to four weeks and then gradual improvement took place, and she regained strength enough to walk with support. A little later she suddenly again relapsed and became paralysed in the arms as well as the legs. I was told that the case had been pronounced to be one of hysteria and the Weir-Mitchell treatment recommended. Examination showed the existence of marked intention tremor in each arm, especially in the left, excessive knee-jerks, and slight ankle clonus. The right optic disc was atrophic. She was evidently suffering from insular sclerosis. A year later I learned that the disease had greatly progressed; there was great contracture in the legs, incontinence of urine and fæces, still further impairment of sight, with loss of memory.[3]

I can hardly lay too much stress upon the fact that intermissions of the kind shown in these cases are very common, although they are not constant, in the course of insular sclerosis. It is evident that the intervals of apparent recovery are peculiarly liable to give rise to the opinion that the loss of power has been hysterical. Here let me for a moment try to estimate the value of various symptoms as pointing, on the one hand, to organic disease and, on the other hand, to an hysterical condition. Intention tremor, if well marked, appears to hold a most important place in the diagnosis of insular sclerosis; it is true that in the hysterical there is not unfrequently a clumsiness of movement of the hand when directed towards an object (arising probably from a loss of muscular sense), but this rarely assumes the character of a rhythmical tremor. I cannot call to mind (looking back over many years) any instance in which well-marked intention tremor was observed in a case which the sequel showed to be of purely functional character.

Nystagmus or nystagmiform movements must also be considered important evidence of organic disease. It is, of course, necessary to remember that these movements are liable to occur in some other diseases, in coarse disease of the cerebellum, and of the corpora quadrigemina, in Friedreich's ataxy, and in chronic alcoholism. The presence of these must be excluded. Nor must it be forgotten that nystagmus, besides occurring in miners, may sometimes be found as a temporary and solitary symptom incapable of explanation in the present state of our knowledge. But this is extremely rare.

Ankle clonus if strongly marked is a valuable symptom of organic disease of the antero-lateral column of the spinal cord. But the phenomenon, usually in an imperfect form, may be of functional origin. It is very rare indeed, in my experience, for ankle clonus of well-pronounced character to exist in the absence of organic disease.

Of greater weight than any of these symptoms is atrophy, even though it be slight, of one or other optic disc. I have never seen this symptom in any case in which the sequel failed to confirm the organic character of the disease. Let me say here that a few years ago I showed that some degree of optic atrophy was present in the course of 43 out of a collection which I had made of 100 cases of insular sclerosis.[4]

Pallor of the disc will almost invariably be found associated with some visual defect. This may take the form of a central scotoma or of greater or less concentric narrowing of the visual field. In some cases the ophthalmoscope fails to detect change in the fundus oculi, although the size of the visual field or the acuteness of central vision is found by testing to be diminished.

In each of the two patients who have been before you there is very considerable contraction of the visual field. This concentric contraction cannot be ascertained by any means at our disposal to differ in character from that which occurs in some cases of hysteria, a circumstance which will be recognised as adding exceedingly to the very great difficulties which beset the differential diagnosis of insular sclerosis in an early stage. It may be asked why I do not lay great stress upon this condition of the visual field in my patient as a weighty argument in favour of her case being one of simple hysteria, as it was originally supposed to be. My reasons are these:—1. I have seen this concentric contraction of the visual field before in cases which were undoubtedly examples of insular sclerosis. 2. The concentric contraction is found almost as much marked in the first patient shown (about the diagnosis of whose case as one of insular sclerosis there can be no doubt) as in the second patient shown, who has presented hysterical symptoms. 3. This concentric contraction is associated with some non-symmetrical pallor of the optic discs. (I must warn you that a slight degree of pallor of the optic disc is very easily overlooked. It has to be searched for with care, but in order to avoid being unconsciously prejudiced I always examine the discs with the ophthalmoscope and come to a judgment as to their colour *before* inquiring into the visual acuteness or the extent of the visual fields.)

There is a symptom which is of very considerable value in the diagnosis of insular sclerosis and that is the state of the plantar reflex. It is a rule of almost universal application (as I have repeatedly urged for many years past) that the plantar reflex is either entirely absent or very feebly indeed expressed in almost all cases of hysterical paraplegia. If we exclude cases of gross structural disease of the spinal cord or brain, in the course of which the plantar reflex is not seldom lost, and also the not very infrequent instances of congenital absence of the phenomenon, we shall find, I think, that loss of plantar reflex points to a "functional" symptom. It may come and go in circumstances in which the presence of, at all events, any gross structural disease may be easily excluded. In patients with hysterical paraplegia the plantar reflex, entirely absent at the commencement of a course of Weir-Mitchell treatment, will be found to return as recovery takes place. In my experience the retention of the plantar reflex in a case of loss of power in the lower extremities of doubtful character affords a strong presumption that there is structural disease. The converse, however, does not apply. Although, if you observe closely, you will find that as a grand general rule cases of insular sclerosis are characterised by retention of the plantar reflex, you will now and again find one in which, at least for a while, the phenomenon is absent. It has been so in the case of the second patient shown. As I have shown you at the present time tickling the foot-sole produces retraction of the toes; but during a short period, when she was in the out-patient department, no such effect was produced. I believe this to have been a "functional" symptom occurring in the course of organic disease. It is very important to remember that this kind of complication—the occurrence of "functional" symptoms—is common in the course of insular sclerosis and must be allowed for. How greatly it increases the difficulties of diagnosis may readily be conceived.

Lastly, let me say that until such symptoms as nystagmus, diplopia, pallor of the optic disc, marked intention tremor, or

[1] Vide "On the Simulation of Hysteria by Organic Disease of the Nervous System," 1891. Since the publication of that work the patient, I am informed, has died with terrible bedsores and bladder trouble.

[2] Op. cit.

[3] Op. cit.

[4] Atrophy of the Optic Nerve as a Symptom of Chronic Disease of the Central Nervous System, Brit. Med. Jour., Oct. 7th, 1893.

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incontinence of urine make their appearance in a case about which doubt has existed I do not think that we can as a rule safely pronounce a diagnosis of insular sclerosis. But in a case in the history of which paresis has occurred in one or more limbs, with spontaneous recovery, and repeated recurrence of the symptom in the same or another part, after longer or shorter intervals, together with a history of amblyopia, either temporary or persistent, my experience would lead me to diagnose insular sclerosis in the absence even of the symptoms first enumerated.

A Lecture
ON
THE SPREAD OF PLAGUE.

Delivered before the Epidemiological Society on Dec 18th, 1896,

BY JAMES CANTLIE, M.B. ABERD.,
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GENTLEMEN,—The history of plague has been so often written that it is unnecessary for me to even sketch its devastations and distribution in pre-Christian, early Christian, mediæval, or more recent times. My remarks will be confined to an exposition of matters appertaining to the epidemicity of the disease as it has been met with during the latter half of this century, and more particularly to a description of the information gathered during the outbreak in China in 1894-6, and of the most recent evidence of its activity in the Bombay Presidency. The reasons for selecting the Hong-Kong epidemic as the basis of my dissertation are that plague was first studied there bacteriologically, and that many medical men, myself amongst the number, had ample opportunity of observing and recording the disease. Without entering into the discussion as to whether or not all epidemics styled "plague" in Biblical and mediæval literature were of the nature of the bubonic plague of recent times, there can be no doubt that since 1850 the name "plague" has been applied to a definite train of symptoms which are considered to constitute a specific disease. As we proceed it will be seen how during different outbreaks some one symptom attains a fatal pre-eminence, but not to the exclusion of others, which might at any time assume the death lead and serve to baptize the disease as "bubonic," "hæmorrhagic," "typhoidal," "pneumonic," and so forth.

During the latter half of the century the names bestowed on plague have been as follows:—1. In 1856 in Tripoli, it was known as "typhus with glandular swelling." When the disease reached the island of Chios in the same year it was called "petechial typhus analogous to that of Tripoli." 2. In Mesopotamia, where the disease was prevalent from 1856-85, and possibly up to the present day, the titles, "adynamic typhoid fever" and "intermittent fever with glandular swellings" were usual. 3 In Persia, where plague seems to be endemic since 1863, the term "hæmorrhagic fever" is used to designate a pestilence which differs from the diseases with which the Persians are familiar 4. During the years 1877-79 the Russian province of Astrakan was visited by a disease which was, and is, regarded as plague, but which was variously described as: (*a*) intermittent fever with buboes; (*b*) croupous pneumonia with buboes; (*c*) typhus with glandular swellings proving fatal by pneumonia; and (*d*) a peculiar form of mumps. That all the above-mentioned outbreaks were actually plague, a specific disease caused by a specific bacillus, will never be known; but the presumptive and clinical evidence is decidedly in favour of their being one and the same disease. 5. In Hong-Kong, where a moiety of languages obtain, the epidemic was known as:—(*a*) the "plague" or "the bubonic plague" by the British; (*b*) "la plaga" by the Spaniards; (*c*) "de peste bubonica" by the Portuguese; (*d*) "la peste" by the French; (*e*) "la pestilenza" by the Italians; (*f*) "die peste" by the Germans; (*g*) "wan-yik" by the Cantonese, the term signifying an epidemic disease of high mortality; (*h*) "yang-tsu-chwarg" in Yunnan, which, being interpreted, means bubonic disease; and (*i*) "li-tsu-cheng" in Pakhoi, where the disease has been endemic for many years. The name "black death" was never used, nor were any of the names by which it was known in Tripoli, Mesopotamia, or Persia, or Russia applied to it, although hæmorrhages, pneumonia, petechiæ, and typhoidal signs and symptoms were not wanting. Perhaps the most interesting name is that of the "rat plague," by which it is known in various parts of Asia, thereby affording additional proof, if such were needed, of the widespread infection of the rat during plague epidemics.

The name "plague," however, is not one which helps us to place the complaint in its proper scientific niche in the category of disease. The word conveys the idea of an unusual disease, attacking many persons and attended by a high mortality, but that gives it no scientific value any more than the "wan yik" of the Chinese. Were I to attempt to classify plague I would place it amongst the specific fevers and particularise it under the name of "polyadenitis" and individualise it still further as "malignant polyadenitis." It may be objected that adenitis is not always present, that many plague stricken patients die before the glands are even swollen and that therefore the name is defective; but it is needless to point out that in many diseases the most typical of symptoms are at times absent and yet the cases can be classed with their kind. To justify the prefix "poly" to the word "adenitis" it is necessary to remember that although one gland alone may be clinically apparent, most, if not all, the lymphatic glands are found to be enlarged at the post-mortem examinations. The most recent report in regard to this subject is interesting. "Thirty-three cases (22 per cent.) were received without a proper bubo. In most of these cases multiple adenitis was found, the general size of the glands being that of a lentil. In the latter stages of the disease other buboes formed in different localities and complicated the case; 90 per cent. of the cases showed swelling of the intestinal, bronchial, and mediastinal glands in different stages." [1]

The term "bubonic" so frequently applied to the disease is not so appropriate as would at first sight appear. A bubo is essentially the swelling of a gland caused by the entrance of septic materials in the tract of lymphatics over which the gland presides. This cannot be said to obtain in plague, for the so-called bubo of plague can in no sense be regarded as a sympathetic swelling, but merely the outcome of a blood poison. If it is to be classed a bubo at all it must be distinctly understood to be an "idiopathic" bubo, a true "bubon d'emblée." One never speaks of the buboes of tertiary syphilis or of scrofulous buboes. The terms may be clinically correct, but they are not in common use; they have, however, as much right to be called bubonic as the glandular enlargements in plague. With these considerations before us I would venture to name the disease "Malignant Polyadenitis" in the hopes that attention may be drawn to the naming of the disease by more competent students than myself.

Plague or malignant polyadenitis we may define as an acute febrile disease of an intensely fatal nature, characterised by inflammation of the lymphatic glands, marked cerebral and vascular disturbances, and by the presence of a specific bacillus. It is only since 1894 that we have been able to set forth a definition with precision; it is only since then that we have acquired the knowledge of a definite bacillus by which the disease can be recognised scientifically when ordinary symptoms are in abeyance. In this definition no mention is made of hæmorrhage, pneumonia, petechiæ, or carbuncles.

At the present day plague is confined to Asia, but since 1850 it has made its appearance in Europe, Asia, and Africa. The *western* limit of plague during the latter half of the century is the Canary Islands, where it raged in 1852; while its *eastern* limit is the Island of Formosa, off the coast of China, where it is now prevalent. The *southern* limit is practically the Tropic of Cancer, but the *northern* range is indefinite. Since 1850 plague has never travelled further north than Astrakan, about 45° N.; but we have it on excellent and sustained authority that Moscow, Norway, and Sweden, and latitudes as far as 60° N., have within the present century been visited by plague. All limits are, therefore, fairly definite with the exception of the northerly limit. In other words, plague has been met with from 19° W. longitude to 121° E. longitude and between 40° N. latitude

[1] Report of Dr. M. Wilm, dated Hong-Kong, May 20th, 1896.

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to 19° S. latitude. Plague has never been known in the Western Hemisphere or anywhere south of 19° N. of the Equator.[2] The Basin of the Mediterranean and the strip of country which runs parallel to that sea across the Asian continent from Turkey to China may be roughly taken as its present belt during the nineteenth century, but the Mediterranean part of the belt has disappeared almost wholly within the present generation. A map of the plague-stricken districts within the last fifty years shows plague astride the Himalayas with a giant limb reaching on one side the Red Sea and on the other the shores of the Pacific.

What determines the distribution it is impossible to say. Racial distinctions do not account for it, as the Mongoloid and Indo-European races are equally attacked. Neither ocean nor air currents have aught to do with its transit. It seems to thrive in the densely packed population of Canton and in the sparsely populated semi-desert regions of Rajputana and Arabia; the elevated plateau of Thibet and the low-lying valleys of the Euphrates are equally affected. It occurs during the summer's heat and the winter's snows. In fact, no known meteorological condition has any effect upon either the genesis or the exodus of plague.

As animals are affected, it is interesting to inquire what animals are affected, what is their geographical distribution, and what share, if any, they take in its spread. The animal which above all others is known to be affected by plague is the rat; but the wide geographical area throughout which this animal is met with would seem to frustrate any attempt to determine a collateral distribution. On looking a little more closely, however, we find rats (the Murinæ) divided into two great sections—the mures, inhabiting the Old World (except Madagascar), and the sigmodontes, inhabiting the New World and Madagascar. Of the mures, one subfamily, that of the Nesokia, is met with, reaching from Palestine to Formosa across the northern part of India. The southern limit in India seems to be where the great bandicoot, or pig rat, exists, and here plague is unknown. This is the only animal which presents a habitation well-nigh corresponding to the present distribution of plague, and it is the animal above all others which is looked upon as being liable to be attacked by plague. The geographical distribution of this family of rats well-nigh coincides with the plague belt as delineated.

Pigeons are said to be severely stricken in Bombay at the present moment, but what kind of pigeon is attacked I have not yet been able to ascertain. When we have the information it will be interesting to note its geographical distribution. We have no notice from China, however, of the pigeons being attacked by plague. The part the rat plays as a distributor of plague will be dealt with later when we come to consider the relationship of animals to plague generally.

With regard to the continuity of plague outbreaks it would appear that in the plague belt the disease is ever active, now in one place and now in another. At times we find it in Arabia, then in Persia and the Himalayas, and the wave travels eastwards over Yunnan and Southern China to the sea. The disease oscillates, now east and now west, but with a fatal precision, making the slow swing of the pendulum of plague within a fairly definite area. A glance at the table giving the dates at which plague appeared in epidemic form since 1850 will confirm this. Taking the chief seats passed *en route* between the Red Sea and the Pacific we find that plague appeared as follows:—In 1850, India; 1850, China; 1853, Arabia; 1853, India; 1856, Tripoli; 1858, Mesopotamia; 1859, Tripoli; 1863, Persia; 1867, Mesopotamia; 1869, India; 1871, Yunnan; 1872, Persia; 1873, Mesopotamia; 1874, Arabia; 1876, India; 1876, Mesopotamia; 1877, Tripoli; 1877, Russia (Caspian Sea); 1879, Arabia; 1880, Mesopotamia; 1881, Persia; 1881, China (Pakhoi); 1883, Afghanistan; 1884, Mesopotamia; 1886, Persia; 1887–89, Arabia; 1890, China (Yunnan); 1893, Tripoli; 1894, China (Canton, Hong-Kong); 1895, China (Macao); 1896, China (Hong-Kong); 1896, India (Bombay); and 1896, Merv (?). A study of this table shows the continuity of the course of plague and how the eruption in one district is followed by its appearance in another. A slow traveller, it, however, stays when it comes, and unless the scenes of its visitation are well garnished it becomes endemic.

The cause of plague is the advent of a definite bacillus, and it is the life-history of this bacillus which must in future occupy the attention of bacteriologists and clinical observers. The proximity of the bacillus is at the present day known only by its effect on human beings, and, it may be, rats as well. What fosters it appears to be bad sanitation; once established time alone will stay its ravages so far as any given epidemic is concerned, but there seems every hope that improved sanitation will check its recurrences.

The *prodromata* of plague may be divided into the remote and the immediate, but I will consider them together. Time and again has it happened that before an outbreak of plague, during a period varying from a few months to several years, buboes with fever have been observed in a more or less epidemic form. In 1877 the variety of plague which infected Astrakan, previously to the serious outbreak that occurred in 1878 some 150 miles higher up the Volga, was classed as a "pestis minor." No one died from the disease *per se* and but few people were confined to bed. Should such another outbreak take place in the neighbourhood the diagnosis will be readily cleared up by an examination of the blood, the tissues, and the excretion.

I was of the belief until within the last few days that this disease—this pestis minor—was of a nature wholly apart from true plague. From Calcutta, however, the news of the discovery of a bacillus allied in every respect to the Kitasato bacillus of true plague and associated with the variety of plague known as pestis minor has altered my views, although the bacillus is stated not to possess the toxic or virulent properties of the true plague bacillus, but to be similar in all other respects. The real question at issue at present is: Is there a disease of an epidemic character, attended by a low death-rate, characterised by polyadenitis and showing in the blood and tissues a bacillus resembling the bacillus met with in typical plague (malignant polyadenitis), and yet so apart clinically that it is either a separate disease or caused by the same bacillus in a lesser or non-toxic form? In the discussion of this subject it is necessary to ask the following questions:—1. Does pestis minor occur as a precursor, as a collateral ailment, or a sequela of true plague? 2. Is it confined to the plague belt delineated in the map? 3. Has it anything to do with plague? 4. Is it a disease *per se?* Dr. Payne in the "Encyclopædia Britannica," writes as follows: "In the minor form of the disease spontaneous swellings of the glands occur chiefly in the armpits, but also in the neck or other parts, which either undergo resolution or suppurate. There is a certain amount of fever; the temperature is rarely high, but has been known to be 104° F. The duration of the disease is from ten to twenty days usually, but may be eight weeks, for most of which time the general health is but little impaired and the patient able to go about as usual. It rarely, if ever, causes death, the only fatal case at Astrakan in 1877 having been so through a complication. The disease is not obviously contagious; whether it is propagated by infection or not is unknown. It is possibly rather of a miasmatic character. This form of disease has sometimes preceded or followed severe epidemics, as in Mesopotamia (Irak) on several occasions (1873–78) and in Astrakan (1877). Its importance in relation to the origin of plague has only lately been appreciated. It might be expected that gradations would be found connecting this form with the severe epidemic form; but this appears to be not usually the case, the latter form appearing somewhat suddenly and abruptly; hence the minor form has probably often been regarded as a 'distinct' disease, even when observed in plague countries." From all hands we have evidence of such a disease—namely a pestis minor benign polyadenitis. 1. The Russian outbreak at Astrakan in 1877 was probably; nay, certainly, of this nature, the low rate of mortality being sufficient to stamp it other than true plague. It is to be noted also that the typical plague which ranged in the same province appeared, not amongst the community afflicted with pestis minor, but in a district 150 miles away, where pestis minor was unknown. 2. In Calcutta six years ago a form of fever existed among the British troops there which in all points resembled the present form of bubonic fever which exists there now—namely, fever with specific glandular swellings. 3. We have it also from Calcutta that the natives are frequently afflicted with glandular enlargements during malarial fever. 4. In the far east, from Singapore, the Straits, and along the coast of China as far as Shanghai, between the years

[2] This remark requires to be accepted with reservation, as it is reported that several cases of plague came to Hong-Kong from Singapore (2° north latitude).

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1892 and 1896, we have accounts of a singular affection of the inguinal glands which occupied the attention of the Singapore and Hong-Kong branches of the British Medical Association. The correspondence was carried on between the societies, and there is no doubt the affection at both places was identical in its nature.

I am compelled to draw attention to this subject in consequence of a paper which appeared in the *British Medical Journal* of Sept. 26th, 1896, by Surgeon C. C. Godding, R.N. Surgeon Godding refers to many cases of chronic glandular swelling attended by fever and anæmia, and he gives a careful clinical account of several such cases as having occurred in Hong-Kong. This is the first notice to the profession generally of a type of ailment with which all practitioners in the far east are but too familiar. When the literature of the present outbreaks of plague comes to be written, the recorder will no doubt light upon these cases of glandular swellings given by Surgeon Godding, and take them as evidence of the association of pestis minor with the malignant type. We must, therefore, deal with them, come to what conclusions we may. When I brought the matter before the Hong-Kong Medical Society in 1893, I mentioned that I employed the term "bubon d'emblée" to designate the condition and that I had treated thirty-eight cases in thirty-two months. My account of the ailment was as follows: "A slowly developing non-venereal bubo occurring in one or other groin, attended by general weakness, anæmia, and fever. The groin glands affected are discrete at first, but gradually the swellings amalgamate and a large mass as big as half an orange or larger presents. At the end of about twenty days points of boggy softness occur, and if the bubo be left to itself the skin becomes undermined and the pus finds its way to the surface through two or three or more fistulous openings. The swelling, when cut into early, shows a peri glandular serous infiltration, and when pus occurs the gland will be found lying detached except by shreds of tissue at one or two points. The gland when cut into shows many focal points of suppuration and breaks down quite easily beneath the fingers." Surgeon Godding advocates arsenic as almost a specific, but my own treatment latterly was early incision. It is necessary to make a clean sweep of every gland that can be felt or seen, as there is a great tendency to recurrence in any gland or piece of a gland that is left. Seeing that glands, except strumous glands, are seldom excised for other diseases, I examined the records of the Government Civil Hospital in Hong-Kong in connexion with the excision of glands, and I found the following:—In 1891, 19 buboes were scraped or excised; cervical glands, 1. In 1892, I have not the record. In 1893, 27 buboes were scraped or excised. In 1894, 12 buboes were scraped or excised. 1894 was the plague year, and the list of operations is stated to be incomplete. Taking this evidence in conjunction with Surgeon Godding's and the private practitioners' in Hong-Kong and Singapore we have weighty evidence of a widespread affection, be the cause what it may.[3]

Another form of glandular idiopathic enlargement is seen in what may be styled an epidemic form in children. In the year 1891, I reported twenty-three cases at the Medical Society in Hong-Kong, and since that date cases have frequently occurred. The affection consists of an enlargement of one gland, seldom more, in the necks of children over the sterno-mastoid about the middle of its length The swelling is seen *upon* the sterno-mastoid, but it might be found to commence, were it met with early enough, in a gland on its anterior border. The disease appears infectious and is attended by feverishness. There is no throat affection, nor is the seat of the disease in the parotid. We, the medical practitioners, styled the condition for convenience sake mumps, but we all admitted that neither the parotid nor the submaxillary glands were the seat of trouble. It will be remembered that the term "peculiar form of mumps" was employed by some to designate the Astrakan disease in 1877. 6. In the years 1893-4, and since, in Hong-Kong, cases of fever of a typho-malarial type occasionally presented in the third or fourth week a general enlargement of lymphatic glands, which lasted for a week or ten days and then subsided. They were deemed interesting cases at the time, but with the fresh light thrown upon them by recent investigation, more especially the researches in Calcutta, they assume a new aspect.

[3] Europeans were mostly attacked by these buboes, being 83 per cent. of the cases operated upon.

To sum up the evidence before us it would seem—(1) that a fever with glandular enlargement, pestis minor, a "benign polyadenitis," is an established disease; (2) that it may be independent of plague or malignant polyadenitis; (3) that the two may coexist; and (4) that the one may exist independently of the other.

As to infection and contagion, direct contagion, that is, transference of the disease from the sick to the healthy by bodily contact would appear at the first glance to be an element in the transmission of plague. How otherwise can we explain the circumstance that, when a case of plague occurs in a house, those dwelling in the house and brought in contact with the sufferer are almost certain to be seized, and not only so, but few, if any, of the other inmates escape. The next in order to be seized by plague are the relatives of the sick and the visitors to the house, who, going to their own homes, set up a fresh focus of infection. Of the community, medical men, clergymen, and attendants, who are brought in contact with the sufferers, more readily acquire the disease than others who are alien to the family and house. These facts would appear to prove conclusively the contagious nature of plague. But there is another side to the argument. As long ago as 1835, when plague was epidemic in Egypt, out of ten French medical men who attended the sick only one contracted the disease. Further, we have the well-known case of Bulard during the same outbreak, who, anxious to prove his contention that the contagious nature of plague was much exaggerated, for two days wore the shirt of a patient who had died from plague. Yet Bulard did not contract the disease. More recently we have the evidence of the Hong-Kong epidemic in 1894. None of the European medical men in attendance on the plague patients, in all, some fifteen in number, were attacked by plague. Those men were freely exposed in the wards and at post-mortem examinations, yet none were infected. Further, none of the British or Italian born nurses—these were the only two European nationalities represented—were attacked by plague during 1894. But a more interesting fact still is that none of the Chinese students of the College of Medicine were attacked. For six weeks these men were on duty in turns night and day in the Plague Hospital. Eight of them acted as ward attendants and clerks throughout the period and were consequently in constant contact with the sick. A racial immunity might be claimed for Europeans, but in face of this fact it cannot hold good. If there be any truth in the acquisition of disease during an epidemic by fear or nervousness the case of these students refutes the legend. They saw that the Europeans escaped and how terribly their countrymen suffered; they had to contend with the superstitious beliefs of their country, inherited and acquired; they were breathing the same air, eating similar food, hearing daily, hourly even, of the deaths of their friends, relatives and acquaintances, yet none of them succumbed to plague. We have, therefore, two opposite conditions before us—namely, plague entering a house and seizing practically all the inmates; and, on the other hand, medical men, nurses, and native students acting as clerks and dressers escaping completely. Where, then, lies the truth of the contagious nature of plague?

As usual, there is a channel of escape from either of these two extremes of argument. The immunity above related does not extend indefinitely. The Europeans attacked during the 1894 epidemic were chiefly soldiers of the Shropshire regiment, then stationed in Hong-Kong. When plague required sanitary interference beyond the power of the local board these soldiers came forward and volunteered to help in the work of cleansing and purifying the city. The work assigned to them was of the most laborious order and they were exposed to a concentration of the contagion, for the field of their duty lay amongst the dwellings of the poorest class of Chinese who were suffering from plague. Those houses were of the vilest kind of habitation mankind is acquainted with; small, windowless, low-ceilinged, reeking with filth and excretions, they presented infection in its most concentrated form. Further, the soldiers had to use spade and shovel to dig down into the accumulated layers of dirt on the floors of the houses and throw it into the street. It was this occupation more than any other to which is attributed the infection of the soldiers. During the 1894 epidemic two of the sisters of the Italian Convent contracted the disease and died, but they were neither of them Italian born; they were both Eurasians and in very humble circumstances. In 1894, also, three Japanese medical men contracted plague, of whom one died.

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The two who recovered were both considered to have inoculated themselves at a post-mortem examination on a case of plague. The facts recorded would seem to show that, during the 1894 epidemic in Hong-Kong, English practitioners and nurses enjoyed an immunity which did not extend to the Japanese medical men or to the nurses of Eurasian blood.

The evidence of the subsequent outbreak in Hong-Kong in 1896 goes to show that Europeans were much more frequently attacked than in 1894, and two of the nurses in attendance on the sick contracted plague. One of the nurses was a British-born nursing sister at the Plague Hospital, where she had been for many months. She never was ill until the very end of the epidemic, when she got a sharp attack of plague, from which, however, she fortunately recovered. The sister (Katherine M'Intosh) believes she was infected by a little child she nursed, and whom she frequently carried about in her arms. The other European nurse was an Italian-born sister in the convent, who believed she was infected in the same way—viz., by nursing and carrying about a child sick from plague. The Italian sister died from her disease. It is interesting to note that the patient from whom the English sister contracted her disease recovered, whereas the patient of the Italian sister died. Was the recovery of the English sister due to a lessened degree of infection, seeing that her patient recovered, and the death of the latter due to the extreme malignancy of the emanations from the body of the dying child? is a pertinent question. Nor is this all, for yet another sister in the convent died, presumably infected whilst nursing her companion. These three deaths seem to point markedly to contagion rather than infection as the means of spread, for although there were some 600 persons in the convent none of the other inmates were afflicted thereby.

Gathering this evidence together and trying to focus it we find that the soldiers who were affected were exposed—if there is any truth in intensity of contagium at all—to the most concentrated form of the poison. They worked not in the streets in the open air, but in reeking hovels for several hours together Intimate and prolonged contact with the contagium in an active condition seems to be the explanation of their infection. The same is to be said of the two European nurses who were seized. Both attributed their ailment to intimate and prolonged contact with a generating source—viz., a child carried in the arms not for a few minutes, but for several hours daily extending over several days. That there are, moreover, degrees of power in the contagium, even when emanating from the human body, seems to be supported by the nurse and infecting child both recovering in the one instance, and the nurse and infecting child both dying in another. Bulard sleeping in the dead man's shirt proves nothing further than that the plague-infected garment did not generate poison of an intensity sufficient to infect. The poison grew every moment more dilute, but a nurse carrying a child, throwing off contagium continuously, is an exposure of a different stamp. The immunity of the medical men and Chinese students does not annul the effect of prolonged and intimate contact as being a means of spread; for it must be remembered that the medical man "visits" only, he does not stay for a day beside one case as a relative does, nor does he sleep or eat under the same roof as does a nurse. In this way also the immunity of the Chinese students is to be accounted for. They performed their task in a newly-built, commodious, and roomy mat-shed. Freely ventilated by being raised three feet from the ground, and its lofty roof constructed so that air swept across between the side walls and the roof with large apertures in the roof itself, the chance of contracting the disease from so diluted a form was reduced to a minimum.

The practical lesson to be learned from these statements is that free ventilation, and attention to ordinary hygienic rules, lessen the chance of contracting the disease to a very great extent, not only for Europeans, but also for natives; but that all are liable to contract the disease when either from the calls of duty or wilful neglect exposure is extreme.

(To be continued.)

AWARDS FOR MEDICAL SERVICES.—Dr. J. S. Mackay and Dr. Alex. L. Curror of Kirkcaldy have been awarded by the town council £100 each for services rendered by them during the late epidemic of typhoid fever.

A Clinical Lecture

ON

PELVIC INFLAMMATION IN WOMEN.

Delivered at the Middlesex Hospital on Dec. 3rd, 1896,

BY WILLIAM DUNCAN, M.D.,

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GENTLEMEN,—Pelvic inflammation in women is probably the most frequent disease which in one form or another is met with in general practice; it is often dangerous to life and always causes a great amount of chronic suffering if allowed to progress unchecked. On the other hand, if diagnosed and treated in its early stages it can often be cured. Far better still, if proper preventive measures (which we will consider presently) be adopted many women can be saved from the onset of the disease.

In the first place let me say that the manner in which pelvic inflammation has been hitherto dealt with in most text-books on the diseases of women requires complete revision. Formerly it was the custom to divide pelvic inflammation into (*a*) perimetritis or pelvic peritonitis, and (*b*) parametritis or pelvic cellulitis, to give a long string of causes for each disease, and to describe separately the symptoms, physical signs, and treatment of each. But nowadays with the help of the light which has been thrown on the subject by performing abdominal section for diseases of the ovaries and tubes the situation is completely changed. And what do we learn? Why, that parametritis (pelvic cellulitis) is rarely met with except after parturition, and that pelvic peritonitis (perimetritis) is in the vast majority of cases associated with, and caused by, pre-existing disease in the Fallopian tubes or ovaries, or both. This being so, when discussing pelvic inflammation in women we must consider not only perimetritis and parametritis, but also disease of the tubes (salpingitis, hydrosalpinx, pyosalpinx, and hæmatosalpinx) and of the ovaries (ovaritis and ovarian abscess).

I particularly want you to remember that, except after parturition, pelvic inflammation in its widest sense is due to infection extending along the Fallopian tubes *from the uterus*. A precisely analogous state of things is met with in disease of the appendix vermiformis. The peritonitis, cellulitis, and abscesses which complicate an appendicitis are due to an infection inside the appendix which passes through its walls to the surrounding peritoneum and cellular tissue. In exactly the same manner does an infection of the Fallopian tube cause similar results: with this difference, that the infection, instead of having to extend through the walls of the tube (as in the case of the appendix), finds an easy exit in the first instance through the abdominal ostium. The cause, then, of pelvic inflammation is almost always either septic or specific infection.

Septic infection is in the great majority of cases the result of parturition, though a few cases may be due to the use of sponge or laminaria tents or to operations performed on the uterus with dirty instruments; this latter is not very likely to occur in these days of aseptic surgery. Bernutz analyses 99 cases of peritonitis as follows: 43 occurred in puerperæ; 28 occurred after gonorrhœa; 20 occurred during menstruation; and 8 were traumatic—viz., 3 owing to excessive coitus, 2 from syphilis, 2 from the use of the sound, and 1 from the use of the vaginal douche. Specific infection from gonorrhœa is accountable for 28 of the 99 cases; but in my opinion the 20 cases in which menstruation is given as a cause of peritonitis had in addition disease of the tubes, probably of gonorrhœal origin. So that almost all the cases of peritonitis occurring in women, apart from labour, are most likely secondary to specific infection from gonorrhœa. I do not go so far as to say that any man who contracts gonorrhœa and gets completely cured of it before he marries is in the least likely to infect his wife; but, from personal knowledge, I can assure you that men who consider themselves well and who are "passed sound" by their medical men, but who probably have a slight and occasional gleet which the excitement of marriage renders virulent, do sometimes infect their wives with gonorrhœa,

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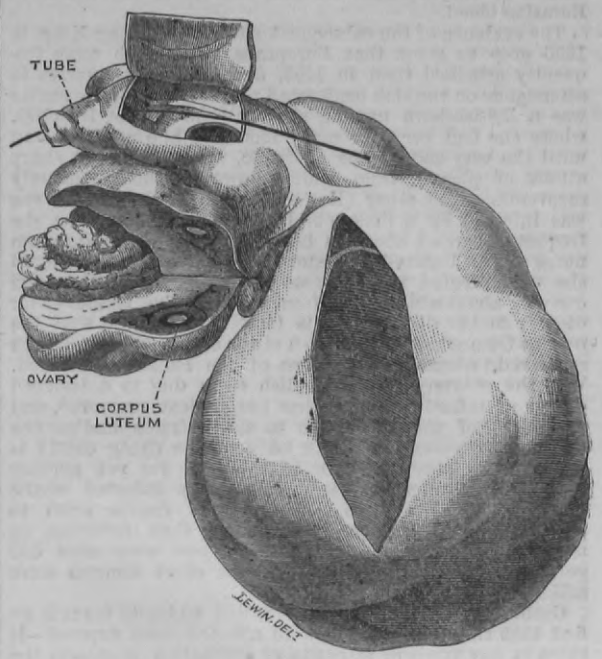
which, unless promptly and vigorously treated, may give rise to untold suffering and completely ruin a woman's health and happiness. These unfortunate cases are doubtless met with more frequently in the lower orders, but are not confined to them by any means. I may here briefly mention two cases which occurred in my practice in 1896.

CASE 1.—A woman aged twenty-four years, who was perfectly well up to marriage, began two months later to suffer from dysmenorrhœa, somewhat profuse menstruation, and an inter-menstrual yellow discharge. On examination I found the upper half of the vagina in a state of granular vaginitis; the uterus was tender on bimanual examination and a muco-purulent discharge was seen exuding from the os uteri, around which was some erosion. No thickening of either Fallopian tube could be felt. On questioning the husband he at once told me that he had suffered from a severe attack of gonorrhœa two years previously. This was followed by a gleet, which, however, for six months before marriage was very slight in amount and only occurred at intervals, so his medical man told him he might safely marry. After marriage the gleet became more abundant. It was evident the wife had gonorrhœal endometritis, and vigorous measures were at once called for so as to prevent the disease spreading to the tubes. Under anæsthesia I dilated the cervix up to No. 14 Hegar and thoroughly scraped away the endometrium with the flushing sharp curette; next I swabbed out the uterine cavity with iodised phenol, and then packed it with a long, thin strip of iodoform gauze; finally the vagina was packed with iodoform gauze. These plugs were allowed to remain for forty-eight hours undisturbed; they were then removed, the vagina was irrigated with a 1 in 3000 perchloride of mercury solution, an iodoform pencil was passed into the uterine cavity, and the vagina was again filled with tampons of iodoform. Subsequently for a fortnight the vagina was douched twice daily with a similar solution and a couple of iodoform plugs were passed into the upper part of the vagina. In two months the patient was perfectly cured and she continues so. The husband is now under treatment by a surgeon who found a stricture of the urethra, and of course coitus will not be resumed until the patient is quite well, as he fully understands the great risk his wife would otherwise be exposed to.

CASE 2.—The patient was a woman who married last Easter. I saw her six weeks later when she said that a week after marriage she began to suffer from pelvic pains, a yellow discharge, pain on micturition, and great pain on coitus. She had been treated all this time by her husband's medical attendant, who gave her medicine, but no local examination was made or suggested. I at once insisted on examining her and found she had urethritis, vaginitis, and endometritis. She went into hospital without delay and I carried out the same treatment as in Case 1 and with a like satisfactory result. On sending for the husband he admitted that he contracted gonorrhœa in January last, but said his medical man told him he might marry when he did. He also admitted having had a urethral discharge the day after marriage; this he attributed to taking a good amount of wine at the wedding breakfast! I explained to him the danger his wife ran if he resumed intercourse before he was completely cured and advised him to consult a surgeon. This, I am sorry to say, he neglected to do, the result being that his wife again came to me a month later with recurrent vaginitis, for which she had a second time to enter the hospital. I need hardly add that I reproached the husband in the strongest terms with his brutal conduct.

If, then, pelvic inflammation is usually due, as I maintain it is, to infection carried from the uterus through the tubes, let us shortly consider what happens. A good deal depends on the virulence of the infection. In mild cases the only result may be a "catarrhal" inflammation of the lining of the tube, in which the secretion is serous in character, and this may escape into the uterus or it may even pass through the abdominal ostium into the peritoneal cavity without setting up peritonitis; or in addition there may be cellular infiltration into the coats of the tube, causing it to become greatly thickened, even to the size of one's finger (chronic interstitial salpingitis), but without any pus formation. These are the cases in which, if the co-existing endometritis be cured, a return to perfect health may be reasonably looked for. In other cases of catarrhal inflammation the ends of the tube are closed, the tube becomes more or less distended, giving rise to a hydrosalpinx, or, whilst the abdominal ostium is closed, the uterine end of the tube remains patent and the distended tube at intervals discharges its contents into the uterine cavity (intermitting hydrosalpinx). Fig. 1 is a typical illustration of a specimen of this condition which I removed from a patient some years ago.

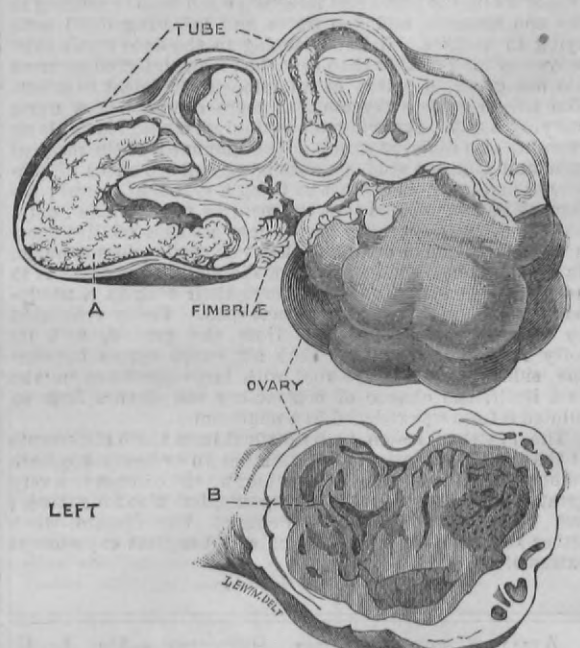
FIG. 1.



Intermitting hydrosalpinx: left Fallopian tube and ovary. The tube is greatly distended and the coats are thinned, the abdominal ostium is closed, and the uterine end (through which a bristle is passed) is patent. The ovary is enlarged and adherent to the tube. It contains a corpus luteum and a blood clot.

In more severe cases, however, a purulent salpingitis sets in; the pus may escape for a time into the uterus, but sooner or later a little passes through the abdominal ostium, giving rise to more or less severe pelvic peritonitis, with all its

FIG. 2.

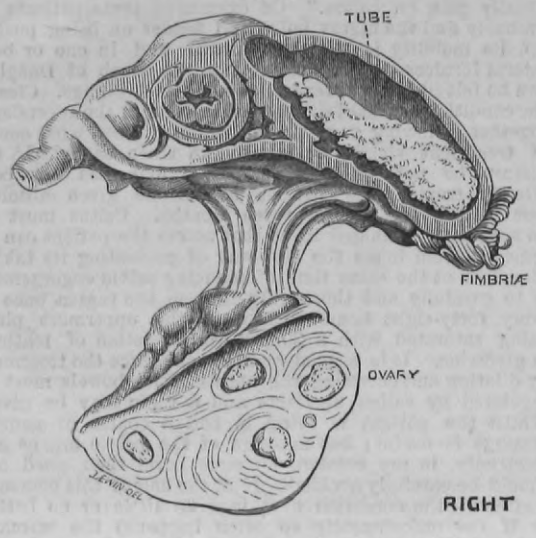


Left ovary and tube. The ovary is enlarged, adherent to the tube, and full of blood (B). The tube is distended with inspissated tuberculous pus (A).

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dangers and results. In these cases of purulent salpingitis the ostium becomes closed by peritonitic adhesions and the pus may escape through the uterine end of the tube, but more often this also gets closed. Pus accumulates in, and distends, the tube, giving rise to pyosalpinx. A rare condition is where the tube becomes distended with cheesy, tuberculous pus. Figs. 2 and 3, which illustrate this condition well, are taken from a case on which I operated in 1890. The patient, aged twenty-two years, had been married two years and had never been pregnant. The catamenia began at fifteen years of age and were always accompanied by pain and clots, but especially so since marriage. When the abdomen was opened the peritoneum was seen to be studded with rice-like bodies. Both the tubes and the ovaries were full of yellow, cheesy pus, and were everywhere matted

FIG. 3.



Right ovary and tube. The ovary is twice the normal size, containing deposits of cheesy pus. The tube is distended with similar material.

down by adhesions, making removal very difficult. The patient made an excellent recovery and was in good health several years after the operation.

When the tube leaks into the peritoneal cavity peritonitis follows, and this may be either (*a*) serous, (*b*) plastic, or (*c*) suppurative; it may be quite localised or affect the whole pelvis, or even in very severe cases may become general. Usually it is limited in extent, the ostium of the tube becomes closed, and the ovary is matted to the tube; then ovaritis follows or an abscess may be formed in the ovary. (Fig. 4.)

The form of peritonitis most often met with is the plastic, where lymph is thrown out, matting the parts together; and in severe cases, where this matting is general, it feels on vaginal examination as if the uterus were fixed in a mass of plaster-of-Paris which had been poured in from above. After a longer or shorter time most of the effusion is absorbed, but adhesions are left, and these bind the various pelvic organs together in all manner of ways. Sometimes the adhesions are few and easily broken down when abdominal section is performed; at other times they are so firm, dense, and universal that it is only after a prolonged and dangerous operation that the ovaries and tubes can be shelled out and removed. Indeed, in some few cases their removal has to be abandoned.

As I have already pointed out, it is after labour that pelvic cellulitis or parametritis occurs; especially when there has been extensive laceration of the cervix, an exudation takes place into the cellular tissue of one or other broad ligament, giving rise to a unilateral swelling which pushes the uterus over to the opposite side and which, though usually absorbed, may form an abscess that bursts externally above Poupart's ligament but may open into the bowel, vagina, or bladder.

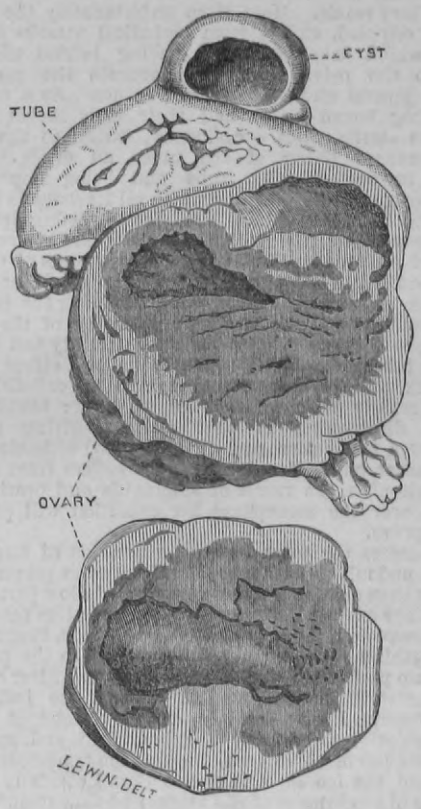
With regard to the symptoms and physical signs af acute pelvic inflammation I need say little. The sudden onset, pyrexia, pelvic pain, and the mass to be felt either surrounding the uterus or to one side of it cannot well be mistaken. But when we have to diagnose chronic disease of the tubes and ovaries associated with slight peritonitis the case is by no means so simple. The chief symptoms are (*a*) pain, (*b*) hæmorrhage, and (*c*) yellow discharge.

The pain varies; in catarrhal salpingitis it is slight, as there are no pelvic adhesions; but in purulent salpingitis and ovaritis (especially when the ovary and tube are matted together) there is more or less constant pain in the back and iliac fossæ, extending down one or both thighs, and aggravated by coitus, walking, or jolting in a carriage.

Hæmorrhage is pretty constant in these cases in the form of menorrhagia; the periods recur every two or three weeks, are more profuse, painful, and accompanied by clots. In the intervals of the periods there is a muco-purulent uterine discharge.

The physical signs vary of course with the condition present. In simple salpingitis it will probably be impossible to detect anything wrong with the tubes, but where the inflammation has been severe and of some duration one or both tubes can be felt as thick and tender cords running out from the sides of the uterus. Let me advise you to always make a digital examination per rectum when the bowels have been emptied, as you can thus learn far more than by a vaginal examination. In many cases the ovaries can be felt enlarged, tender, and prolapsed into Douglas's pouch. In other cases a more or less rounded mass will be felt to one or other side of the uterus, which latter is displaced somewhat to the opposite side, is tender on pressure, and its

FIG 4.



Chronic peritonitis. The ovary and tube are matted together; the ovary (shown in section) is much enlarged and full of blood; the tube is dilated.

mobility is impaired. This is the condition which until recent years has been described as a "pelvic cellulitis of the broad ligaments." As a matter of fact it is nothing of the kind, for, as already mentioned, pelvic cellulitis occurs rarely except after parturition. In these cases the tube is thickened, perhaps contains some serum or pus, the ovary is enlarged, and cystic, and both tube and ovary are matted together by adhesions forming a tumour which appears larger to the fingers on bimanual examination than it really is found to be when the abdomen is opened. In other

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cases, when one or both tubes are distended, the condition is easily recognised provided the tube develops the typical shape—an elongated cystic swelling constricted at intervals and extending outwards from the uterus. Even when the tube has this shape one cannot positively say what is the nature of the fluid inside it, for a pyosalpinx may exist without any irregular rise and fall of temperature. As a rule, however, the symptoms are fewer and less severe in a case of hydrosalpinx than in one of pyosalpinx. Not infrequently the dilated tube develops a rounded shape (owing to adhesions) and then it cannot be distinguished from an ovary distended with pus or cystic. Indeed, I never like to give a positive diagnosis of the nature of any pelvic swelling until after I have opened the abdomen. A point to remember in examining a pelvic tumour is that care is necessary lest it be ruptured. About eighteen months ago I was suddenly summoned to the hospital one afternoon and told that whilst examining a woman in the out-patient department the clinical assistant felt a cystic tumour in the pelvis suddenly disappear and the woman became faint. She was at once admitted. On my arrival an hour later she had rallied and I could find no sign of a ruptured cyst; still, as the resident medical officer assured me there had been one I at once opened the abdomen and found about a pint of clear fluid which had escaped through a rent in a thin-walled ovarian cyst. This I removed and the patient recovered without a bad symptom; fortunately for her the cyst contents were not purulent.

Now what is the prognosis in cases of chronic pelvic inflammation? If the tubes be only affected with catarrhal inflammation, provided the endometritis be cured, perfect recovery may result. More often unfortunately the patient becomes crippled, suffers from periodical attacks of peritonitis, which usually subside leaving behind still more injury to the pelvic organs; sometimes the peritonitis becomes general and a fatal result ensues. As a rule, the tubes being bound down and their ends sealed up the woman is sterile; but occasionally, owing to the injury to the mucous lining of the tubes, an ovum becomes arrested in one or other tube, and being impregnated there an extra-uterine pregnancy with all its dangers follows. If one or both tubes be dilated into a hydrosalpinx the patient may have fairly good health but is liable to recurrent attacks of peritonitis. If, however, the contents of the tube be pus, or if there be an ovarian abscess, there is far greater danger, as peritonitis is sure to recur, rendering the patient a chronic sufferer, whilst also she runs the risk of the collection of pus bursting into the peritoneal cavity and causing a rapidly fatal end. In a few cases the pus, either from a pyosalpinx, ovarian abscess, or suppurating cellulitis, may burst externally or into the bowel, vagina, or bladder, and continue discharging in that manner, giving rise to hectic fever, emaciation, and (if untreated) ultimate death. On the other hand, if a patient who suffers from chronic pelvic peritonitis, the result of salpingitis and ovaritis, can be tided over the menopause her condition will probably much improve.

Lastly comes the most important question of treatment. It being undoubtedly true that in these cases prevention is far better than cure, and as so very many follow parturition, we nowadays exercise the greatest care ourselves (and insist on the nurse doing likewise) that our hands, instruments, and everything that comes into contact with the patient's genitals are perfectly aseptic. If a day or two after delivery the temperature rises above 100° F. and the lochia are at all offensive I give an intra-uterine douche of a 1 in 5000 perchloride of mercury solution night and morning, and if after two or three such douches the temperature does not fall and the lochia become odourless I carefully curette the whole of the interior of the uterus and thus remove every possible source of infection there; after curetting another douche is given and a twenty-grain iodoform suppository is passed well into the uterine cavity. These measures can be carried out with the patient lying on her left side and without an anæsthetic.

With regard to pelvic inflammation occurring apart from labour or an abortion, and remembering that it is almost always preceded by an endometritis, it behoves us to most carefully investigate all cases in which married women complain of pelvic pain, pain on coitus, increased menstruation, and an inter-menstrual yellow discharge, for assuredly if we find only an endometritis (without involvement of the tubes) we can by adopting the vigorous treatment I have already described cut short the disease and save the woman from untold future misery. If, however, we first see the case when acute pelvic peritonitis is actually present, then the condition must be treated in the usual way by giving a saline purge to start with, followed by hot vaginal douches at a temperature of from 108° to 112° F. three times a day; these douches must be given whilst the patient is lying down and several quarts of water used each time. If sedatives are required I prefer morphia suppositories. Hot fomentations or poultices applied to the abdomen are soothing and at all events do no harm. The acute attack usually subsides in ten or fourteen days, leaving the uterine appendages more or less damaged.

We are often consulted by patients who give a history somewhat as follows. "After the last confinement (which may have been months or years previously) they had an attack of 'inflammation' and since then have suffered with pains in the pelvis, excessive and painful menstruation, with a yellow discharge in the intervals of the periods, also usually pain on coitus." On examining these patients we probably find the uterus bulky and tender on being pushed up, its mobility is less than normal, and in one or both lateral fornices (and extending into the pouch of Douglas) can be felt ill-defined, tender, and elastic swellings. Clearly the condition is that of disease and matting of the appendages together following a pelvic peritonitis. Now, what course of treatment should be adopted in these cases? If the disease be not of long standing and has not been already treated the patient should be given absolute rest in bed for two or three months. Coitus must on no account be indulged in, so that unless the patient can be removed from home the best way of preventing its taking place and at the same time of reducing pelvic engorgement is to carefully and thoroughly tampon the vagina once in every forty-eight hours with wool, the uppermost plugs being saturated with a 20 per cent. solution of ichthyol in glycerine. It is a good plan to commence the treatment by dilating and curetting the uterus. The bowels must be regulated by saline aperients and a tonic may be given. Whilst the patient is lying in bed a course of general massage is useful; but massage of the pelvic organs and electricity, in my opinion, do more harm than good and should be carefully avoided. If at the end of this course of treatment the condition of things be little or no better, or if (as unfortunately so often happens) the woman's state of life prevents her from having such a prolonged rest, there are only two courses open—either the patient drags on her life more or less of an invalid and in suffering, or she elects the wiser course of having abdominal section performed and the diseased parts removed. The mortality from this operation, when performed by a skilled operator, is not more than 3 per cent. The risks of the operation and the fact that in all probability both tubes and ovaries will require removal must be fully explained to the patient and her friends, and their full consent to allow the operator a free hand—so that he can use his own judgment as to how much requires removal—must in all cases be obtained in writing before any operation is entered upon.

The results are in most cases very satisfactory, the patients losing their constant pain, and although it sometimes takes months for them to regain robust health I have never yet had a patient who regretted undergoing the operation. If operation be absolutely refused and the patient be in a position to afford the expense a six weeks' annual course of the mineral waters and mud baths at one of the German watering-places—such as Schwalbach or Kreuznach—will sometimes prove beneficial in relieving pain and promoting the absorption of inflammatory pelvic products, so that life may be rendered fairly tolerable until the menopause sets in, after which the pelvic conditions may be expected to cause less trouble. But, no matter whether the patient be wealthy or poor, if a cystic swelling of the tubes or ovaries be detected, as it is impossible to say definitely whether the contents be purulent or not, it is our duty to urge the necessity of abdominal section being performed without delay.

ST. JOHN AMBULANCE ASSOCIATION.—His Royal Highness the Prince of Wales, President of the St. John Ambulance Association, has sanctioned a grand ambulance *fête* and demonstration to be held at the Crystal Palace in May or June next in commemoration of Her Majesty's long reign, under the personal patronage of Her Royal Highness Princess Christian, President of the Norwood and the Great Western Railway Centres, and other members of the Royal Family

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ACTINOMYCOSIS AND MADURA DISEASE.

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(WITH COLOURED PLATE.[1])

Is human actinomycosis a rare disease in this country, or are there many cases lost sight of under a variety of names? I am anxious to draw the attention of the general practitioner to this disease, by indicating its clinical manifestations, and more especially by pointing out how easily it may be diagnosed by means of a bacteriological examination, as this may lead to the recognition of many cases in private practice, to their publication, and ultimately to the determination of the extent to which actinomycosis exists in this country. I propose to add a short account of madura disease, which should be studied in connexion with actinomycosis, as there are several points bearing upon their relation to each other which require further elucidation by careful observation and experiments. The readiness with which actinomycosis may be mistaken for other morbid conditions which resemble it and the absolute necessity for a microscopical examination are illustrated by many of the early descriptions of this disease both in man and in cattle. In 1845 Langenbeck of Kiel made notes of a case of vertebral caries and prepared drawings of peculiar bodies present in the pus from an abscess. The drawings were published many years afterwards and there can be no doubt that these particles were typical ray-fungi. In 1848 Lebert received from M. Louis some pus of a thick, almost gelatinous, constituency from the thoracic wall of a man aged fifty years. The patient was suffering from a pulmonary affection cancerous in nature. The pus contained a number of little spherical bodies of a slightly greenish-yellow colour, each about the size of a pin's head. They were readily crushed between two glass slides, and on examination with a power of fifty diameters they were found to consist of a soft, connective substance and many wedge-shaped corpuscles arranged in a radiating manner. Lebert figured these bodies and thought of helminthic débris, but he searched in vain for echinococci and cysticerci. Rivolta of Turin claims to have been the first to discover the ray fungus in a bovine case. As early as 1868 he published a paper on this subject, while Perroncito, who studied the sarcomata of cattle, claims to have observed the micro-organism in 1863. Hahn of Munich in 1870 detected it by microscopical examination, for he states that in a bovine case of "wooden tongue" he found characteristic organised structures which he provisionally regarded as a species of mould fungus. Robin in 1871 both described and figured most accurately the bodies which we now recognise as "ray fungi." They were found in two or three cases in the pus of deep-seated chronic abscesses in man, and were described as yellowish grains composed of elements swollen at one end and tapering off at the other, arranged in a regular series radiating from a common centre, which consisted of granular matter. Bollinger, in 1876, pointed out that actinomycotic growths occasionally occurred on the upper and lower jaws of cattle. These growths either started from the alveoli of the back teeth or from the spongy tissue of the bone, and by increasing in size loosened the teeth. In their progress they destroyed bone, muscles, mucous membrane, and skin. After some time they frequently broke down, forming ulcers, abscesses, and fistulæ; while in some cases tumours were formed which might attain the size of a child's head. Actinomycosis in man was first described as such by Israel in a paper published in 1878, and Ponfick was the first to clearly recognise the identity of the disease in man with that occurring in cattle. Israel, in addition to the club-shaped elements, recognised and described a central core of fine filaments. In a work which he published in 1885 the various cases which had been observed up to that time were described. From this time onwards numbers of cases in man have been recognised with the aid of the microscope, and the publications of Bostrom, Moosbrugger, and my reports to the Agricultural Department of the Privy Council may especially be referred to. Altogether some hundreds of cases have been diagnosed, but very few of these have been contributed by English practitioners. In England, Dr. T. Acland was the first to recognise the disease by microscopical examination of the liver after death, and Dr. H. Taylor was the first to demonstrate the presence of the ray fungus during the life of a patient. Shattock found specimens in museums which, though bearing other names, were really from cases of actinomycosis. Among the English cases I may also mention those described by Dr. Skerritt, Mr. Eve, Dr. Ransom, Dr. Fairweather, Dr. Poore, and Mr. Malcolm Morris. I shall refer more in detail to some of the comparatively recent English cases in describing the various manifestations of the disease.

Though actinomycosis in cattle has long been known in this country, it, as in man, was mistaken for other diseases or received popular names. Indeed, to many the disease is still familiar under the names of wens, clyers, scrofulous abscesses, polypus, lymphoma, cancer of the tongue, lumpy jaw, bone cancer, bone tubercle, osteo-sarcoma, and fibro-plastic degeneration of bone; so that until about eight years ago, when my Reports were published, actinomycosis was not generally recognised as a common disease of cattle in this country, in spite of the interest excited by the work of Fleming, to whom is due the credit of being the first to recognise the fungus in a bovine case. In 1887 there was a disease prevailing in Norfolk, and in the following year outbreaks of the same disease were reported in Essex, Hertfordshire, Cambridgeshire, and Middlesex. In the Norfolk outbreak on one farm 8 per cent. of the cattle were suffering from wens or sitfasts, which I found on microscopical examination to be produced by actinomycosis. In all similar specimens which I have received from different parts of England and Scotland, as well as from the colonies, I have been able to demonstrate the presence of the ray fungus. I also met with the disease in other forms, including a case of pulmonary actinomycosis, with grape-like growths on the pleura, which had been regarded as tuberculous. In Australia tumours in the upper and lower jaw commonly occur in cattle, and were attributed to scrofulous inflammation, or designated cancer or lumpy jaw, but a microscopical examination has revealed their true nature. In America also the disease was known as lumpy jaw, and is prevalent. Mr. Casewell, State Veterinarian, examined cases microscopically, and on one farm in Yates City, where there were eighty head of cattle, no less than sixteen were found to be suffering from actinomycosis. Mr. Casewell reported to the Board of Live-stock Commissioners for the State of Illinois that the disease was common in nearly every county in that State and that in his opinion it was increasing. In one instance 109 animals suffering from actinomycosis were slaughtered. But is the disease really spreading in America, or is it that by increase of knowledge and by more careful observation more cases have been brought to light? And as regards actinomycosis in man in England, may we not well ask whether the disease is really a rare one, or is it not rather that many cases are still overlooked through want of discrimination with the microscope? With a view to obtaining further information with regard to the human cases in this country I will proceed to point out the various ways in which the disease has been found to manifest itself in cattle and in man.

MANIFESTATIONS OF ACTINOMYCOSIS.

I.—ACTINOMYCOSIS OF THE DIGESTIVE SYSTEM.

(*a*) *Of the upper and lower jaw.*—In cattle actinomycosis commonly attacks the upper and lower jaw and is frequently associated with carious teeth. The growth extends and invades the neighbouring cavities and sinuses, destroying the tissues with which it comes in contact, expanding the bones into thin plates or reducing them to the appearance of pumice stone. Quite recently I received the head of a Sussex steer in which the lower jaw was diseased on both sides (Figs. 1 and 2). On dissecting away the soft parts it proved to be a most characteristic case of so-called osteo-sarcoma. The teeth on both sides were carious. In man also the fungus may gain access through carious teeth, or wounds or fistulæ of the jaw, and very possibly by inflammatory processes in the pharynx and tonsils. The disease attacks the lower jaw most frequently. The tumour

[1] This article is based upon a Post-Graduate Lecture delivered at King's College on Oct. 30th, 1896. The coloured plate and some of the photographs are reproduced from the article on Actinomycosis in 'Bacteriology and Infective Diseases."

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is found in close connexion with the bone or in the submaxillary or sub-mental region and also in the præ-tracheal region. It occurs, though rarely, in the interior of the bone. In a case described by Israel, that of a woman aged forty-six years, there was a small tumour about the size of a cherry attached to the external surface of the lower jaw, with an opening through which a probe could be passed into the bone. The tumour was incised and scraped away, and a cavity discovered in the bone, admitting a small sharp-spoon.

FIG. 1.



Actinomycosis of the lower jaw of a Sussex steer (in an early stage). (About one-third the natural size.)

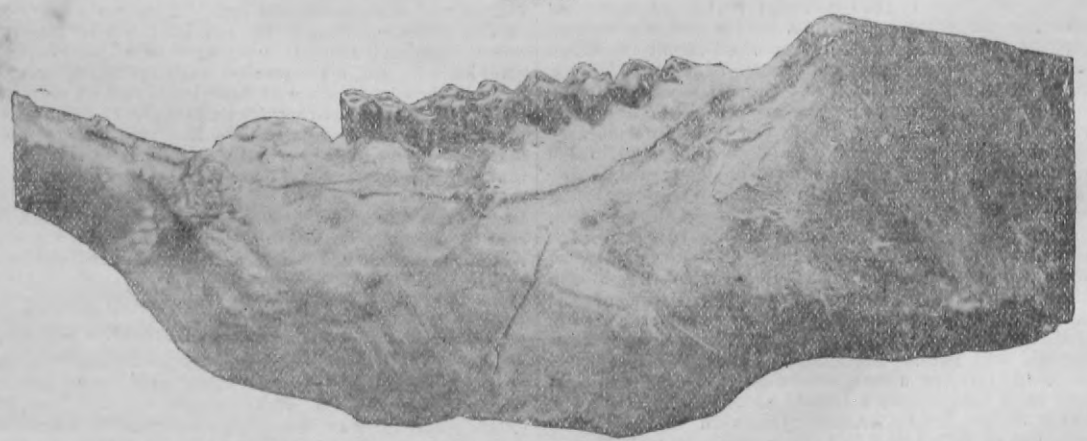
Later, a further operation was performed; the periosteum was detached, the cavity of the bone enlarged and the contents scraped out, consisting of granulation tissue, fragments of bone, and the yellowish fungi. At the bottom of the cavity the fang of the canine tooth was found. No return of the growth occurred.

The first cases of human actinomycosis observed in America were connected with the jaw. In 1884 Dr. Murphy described two cases at Chicago. The first patient was a woman aged twenty-eight years. Two weeks previously she had suffered from severe toothache, with swelling in the throat and great pain in swallowing. It disappeared after poulticing, but she was again attacked with toothache and a swelling appeared on the angle of the jaw on the left side. The mouth could not be opened without difficulty; the tonsil was much enlarged and pus was set free on incision. She still suffered from toothache and a small swelling now occurred on the left side of the neck below the jaw. She had several carious teeth. The swelling, which was about the size of a walnut, was punctured and a drainage-tube inserted; a creamy-looking discharge containing yellow granules continued to escape, but the swelling and induration increased. A further operation was decided upon. The carious tooth was removed, and a probe passed into the alveolus showed a communication with the external wound; the angle of the jaw was chiselled away and the alveolus scraped out. Iodoformed gauze was applied and the patient recovered.

The second case was that of a man aged eighteen years who had also suffered with severe toothache and swelling at the angle of the jaw. On examination a carious tooth was noticed. The swelling was well marked and there was fluctuation; it was as large as a pigeon's egg and situated below the jaw. When punctured, thick creamy pus escaped containing the fungi; the sinus was scraped out and in ten days the wound was healed. Another swelling appeared and this was treated as before and the patient recovered.

The peculiar feature of growths in this region is their apparent migration. Israel states that in one case a tumour occurred on the alveolar process, close to carious teeth, and later was close to the edge of the jaw in the sub-maxillary region. Thence it disappeared, and a large swelling formed below the hyoid bone, and after this had been incised and

FIG. 2.



Actinomycotic tumour of the lower jaw of a Sussex steer; a case of so-called osteo-sarcoma. (About one-third the natural size.)

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Fig 1.



Fig 2.

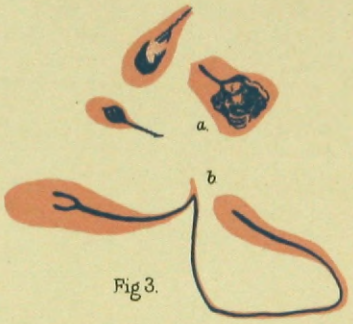


Fig 3.

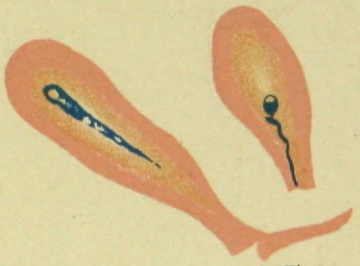


Fig 4.

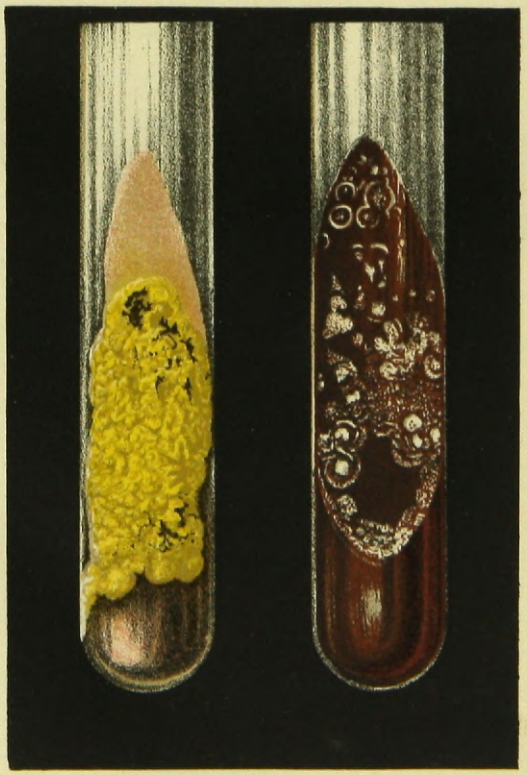


Fig 7.

Fig 8.

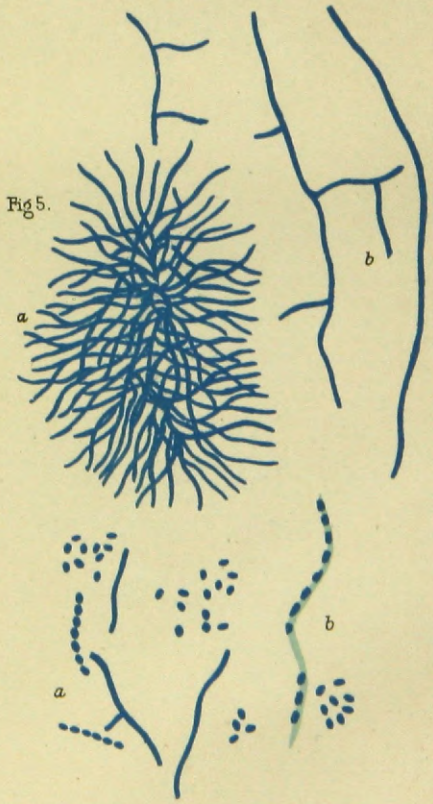


Fig 6.

TO ILLUSTRATE PROFESSOR CROOKSHANK'S PAPER ON ACTINOMYCOSIS.

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had healed an abscess formed above the clavicle. In other cases the disease has been described as extending from the alveolar process to the temporal bone or the base of the skull, destroying bones and even reaching the brain; or the growth may descend by the spinal column, implicating the vertebræ and travelling and pointing in various directions.

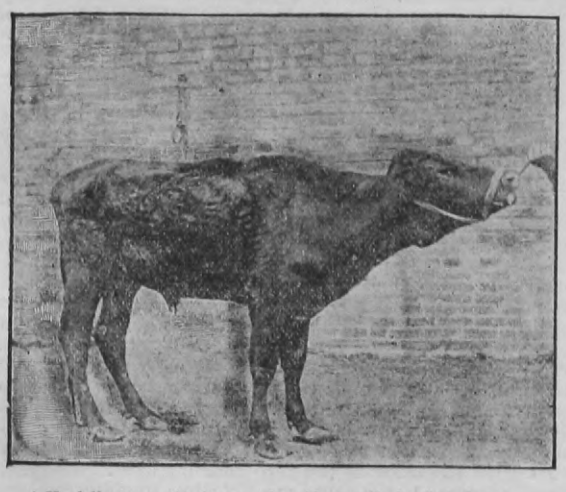
(*b*) *Of the lips, gums, buccal mucous membrane, and palate.*—In cattle we find the disease occasionally appearing in the form of nodules, wart-like growths, or ulcers on the lips, gums, buccal mucous membrane, and palate. The nodules and ulceration of the palate were particularly well marked in a specimen submitted to me for examination under suspicion of being the result of a severe attack of foot-and-mouth disease.

(*c*) *Of the tongue.*—In cattle, actinomycosis of the tongue shows itself in the form of nodules or wart-like patches under the mucous membrane, with a special tendency to ulcerate from the irritation of the teeth. These nodules may extend into the deep muscles and often collect in rows more or less parallel to the superficial muscular fibres. Complete transverse sections of the tongue, double-stained, readily show this arrangement even to the naked eye. Induration of the tongue results from secondary interstitial glossitis. I have only in one case found a distinct tumour of considerable size embedded in the substance of the tongue. It was about as large as a small Tangerine orange, and more or less completely isolated from any surrounding neoplasms.

(*d*) *Of the pharynx.*—In the pharynx I have found the disease in cattle in the form of polypoid growths. In one case there was a large growth about the size of a cricket ball which by interference with deglutition produced great emaciation and ultimately death from asphyxia (Fig. 3).

(*e*) *Of the intestines.*—Small nodules about the size of a pea may be found in the human intestine in the sub-mucous tissue and in the mucous membrane itself. They soften and form ulcers with undermined edges, the base reaching the muscular layer. They may undergo cicatrisation, but generally the disease extends through the peritoneum to the abdominal cavity, and perforates the bladder or the intestines or makes its way through the abdominal wall. Symptoms are either absent or not characteristic. The fungus may sometimes be found in the evacuations or by exploratory puncture. In a human case under the care of Chiari death with general marasmus took place at the age of thirty-four years after an illness of two years' duration. The mucous membrane of the intestines was found at the post-mortem examination to be almost entirely covered with whitish patches raised in the centre and covered with yellow and brown granules closely adherent to the subjacent tissues.

FIG. 3.



A Norfolk steer with large polypoid growth in the pharynx producing emaciation; and a "wen" in the præ-tracheal region.

FIG. 4.



Section of liver from a case of actinomycosis in man.

(*f*) *Of the liver.*—The liver has been found to be the seat of the disease in several cases in man. The actinomycotic growths have a characteristic naked-eye appearance from their peculiar honeycombed structure (Fig. 4). The spaces between the fibrous trabeculæ are full of caseous matter, in which the more or less spheroidal masses of the fungus are embedded. In museum specimens which have been for some time preserved in spirit the contents of the loculi may have fallen out and the honeycombed appearance is then much more marked than in recent specimens. In Dr. John Harley's well-known case, which was recognised after death as one of actinomycosis, the patient had been admitted to St. Thomas's Hospital with a very painful tumour, about the size of an orange, projecting forwards from the left hypochondrium. The skin covering it was distended, shining, and pale, and the swelling was very painful on pressure. After death it was found that a number of tumours were scattered throughout the liver, and on examining sections under the microscope Dr. Acland discovered the ray-fungus. Subsequently Mr. Shattock examined similar specimens in the museum of St. Thomas's Hospital, and in two cases with honeycombed abscesses the ray-fungus was detected. Dr. Skerritt and Mr. Eve have both met with this disease of the liver.

I think it is extremely probable that cases of actinomycotic invasion of the digestive system not infrequently occur in general practice and are attributed to other causes. I am

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supported in this belief by the fact that Dr. W. Ransom has published an account of no less than eight cases which have been brought to his notice within the last six years in the Nottingham district alone. In five instances the mouth was probably the seat of invasion and in all the digestive tract was affected. These cases included one of actinomycosis of the orbit, two of actinomycotic perityphlitis, one of actinomycosis of the head and neck, two of actinomycosis of the neck, one of actinomycosis of the cheek, and one of actinomycosis of the rectum and prostate. In the same year Dr. Fairweather recorded a most interesting case of actinomycosis commencing in the vermiform appendix.

II.—ACTINOMYCOSIS OF THE RESPIRATORY SYSTEM.

(*a*) *Of the nasal cavities.*—In cattle the disease may occur in the nasal cavities either primarily or as the result of extension of a growth from the lips or from the pharynx.

FIG 5.



Actinomycotic tumour of the trachea.

(*b*) *Of the larynx, trachea, and bronchi.*—In cattle polypoid growths, either sessile or pedunculated, arise primarily in the larynx, trachea, and bronchi, or occur secondarily by extension from the tissues in the neighbourhood. I have had one specimen submitted to me in which the disease had invaded the mouth, travelled downwards by the lymphatics, and ultimately developed a polypoid growth in the interior of the trachea (Fig. 5). In one recorded case in man the

FIG. 6



Actinomycotic nodules from the pleura (bovine).

disease existed for seven years and was localised to the bronchi. The fungus was detected in the sputum by microscopical examination.

(*c*) *Of the lungs.*—Actinomycosis of the lungs is of especial interest from its liability to be mistaken for tuberculosis. When there are actinomycotic nodules in the lungs of cattle and actinomycotic grape-like masses on the pleura (Fig. 6) this mistake may be most readily made. In man the course of the disease in the lungs may be thus described. The spores of the ray-fungi are inhaled and pass into the bronchioles and alveoli, where they produce proliferation of round cells, which undergo fatty degeneration. The resulting patches of peri-bronchitis or pneumonia become yellowish-white, suppuration and hæmorrhage from the capillaries follow, and small cavities result, containing pus cells, fat granules, blood, and the fungi. In the neighbourhood of the new growth there is compression of the alveoli, and ultimately the formation of a dense stratum of connective tissue, separated from the cavities by a lining of granulation tissue containing the characteristic fungus. The symptoms are usually obscure; but the sputum may contain the fungi, which are often visible to the naked eye. The apices of the lungs are not, as a rule, affected. There is considerable clinical resemblance to chronic phthisis; cough, night-sweats, pallor, shortness of breath, and hæmoptysis are symptoms common to both. The existence of these symptoms with the absence of tubercle bacilli in the sputum would lead to the suspicion of actinomycosis, and the detection of the fungus is positive evidence as to the nature of the disease. In the second stage the symptoms are more characteristic. The disease spreads to neighbouring parts and pleurisy commonly supervenes. This extension may involve the peri-pleural tissues. Thus the disease may follow the præ-vertebral tissues, descend behind the insertion of the diaphragm, and point as an ordinary psoas or lumbar abscess; it may perforate the diaphragm and reach the abdominal cavity. Peritonitis or sub-phrenic abscess may then result. In some cases adhesions have formed, and the disease has extended to the liver or spleen, or other abdominal organs. The disease may also extend forwards in the direction of the anterior mediastinum and the pericardium. The primary affection of the lung becomes of secondary importance. Grave symptoms occur—hectic fever, night-sweats, rigors, and marked pallor. In the third stage the disease comes to the surface, either over the chest or in the neighbourhood of the dorsal or lumbar vertebræ; a swelling appears of a livid colour, and if punctured no fluid escapes, but if allowed to make its own way to the surface the skin gives way, a muco-purulent discharge mixed with pieces of the growth escapes, and the fungi can readily be recognised.

I have said that the ray-fungi may be detected with the naked eye, and I may illustrate this by a reference to the case recently described by Dr. Vivian Poore. The patient had come under the care of a medical man in the country with all the symptoms of effusion into the right pleura. Paracentesis was performed and in the pus the little yellowish particles were observed. By a microscopical examination the diagnosis of ray-fungi was readily confirmed.

I have indicated how readily this disease may be mistaken for tuberculosis, and the case recognised by Mr. H. Taylor, and subsequently described at length by Dr. Douglas Powell, Mr. Godlee, and Mr. Taylor, is of special interest in this connexion, for there was a strong family history of phthisis. This case was briefly as follows. A boy aged nine years was admitted to the Brompton Hospital for pleurisy. He had a hacking cough, dyspnœa, and hectic temperature. Over the fifth interspace there was a soft swelling. A piece of rib was excised by Mr. Godlee and a large soft mass was felt within the chest walls which was thought to be of sarcomatous origin. Mr. Taylor examined microscopically a fragment of the growth and detected the ray fungus, which was also readily found in the purulent discharge. About four months afterwards the boy died and the case was found at the post-mortem examination to be one of primary invasion of the lungs with extension to the peri-pleural tissues. All other organs appeared to the naked eye to be free from the disease, except the liver, in which there was a small actinomycotic abscess.

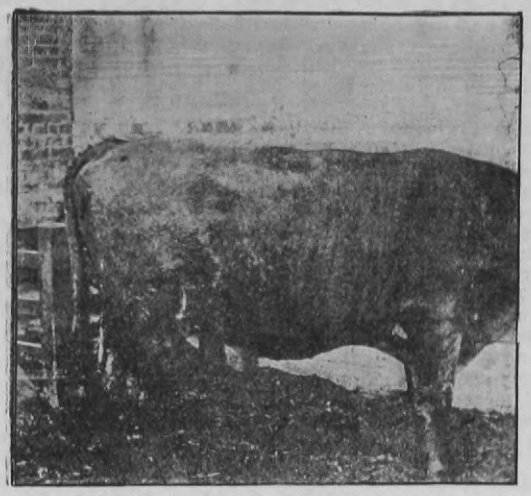
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A more recent case also very strikingly illustrates the resemblance to tuberculosis and was recorded in THE LANCET.[2] A patient had been suffering with symptoms of acute pleurisy. Paracentesis was performed, but the fever continued. No tubercle bacilli could be found in the scanty sputum. Later the patient came under the care of Dr. Heusser of Davos. Slight infiltration of the right upper lobe and a cavity in the right lower lobe were diagnosed, and to the surprise of the physician in charge instead of tubercle bacilli typical ray-fungi were found in the expectoration.

III.—ACTINOMYCOSIS OF THE SKIN AND SUBCUTANEOUS TISSUES.

The skin and subcutaneous tissues are a favourite seat of this disease in cattle, producing the so-called wens or clyers

FIG. 7.



A Norfolk steer with extensive actinomycotic ulceration of the skin of the flank.

so commonly seen in the fen country. A wen is first recognised as a small tumour the size of a marble or walnut, which increases in size sometimes with great rapidity, and breaks down and discharges its muco-purulent contents through the inflamed and ulcerated skin (Figs. 7 and 8); or

FIG. 8.



A Norfolk steer with a "wen" about the size of an orange in front of the throat.

it may go on increasing, and form a large compact growth the size of a child's head (Fig. 9). These growths when excised, hardened, and cut, have the characteristic honeycombed appearance, produced by the interlacing bands of fibrous tissue, which form a spongy structure, from the interstices of which the fungus tufts and thick yellowish pus have for the most part dropped out. Actinomycotic tumours of the face in man sometimes correspond with "wens" or "clyers," and, as in cattle, they may discharge

FIG. 9.



A Norfolk heifer with a large "wen" in the parotid region.

through the skin and the opening close or a fistula result. They differ in their tendency to form burrowing abscesses instead of recognisable tumours. In this respect they recall chronic inflammation rather than sarcoma-like growths. An interesting case of this kind was brought before the Pathological Society of London by Mr. Waring and reported in THE LANCET.[3] The patient had been admitted to the hospital for a swelling of the cheek, which increased in size and burst into the mouth with discharge of purulent fluid. The swelling subsequently re-appeared and an incision was made at a fluctuating spot. In the pus which escaped the ray fungus was detected.

IV.—ACTINOMYCOSIS OF THE NERVOUS SYSTEM.

Both in cattle and in man, tumours are very rarely found in connexion with the nervous system. They may occur primarily or as the result of extension of the disease from neighbouring parts. Dr. Delépine has met with and fully described a most interesting case in man of an actinomycotic tumour of the brain.

V.—ACTINOMYCOSIS OF THE REPRODUCTIVE SYSTEM.

The disease has been very rarely found to occur in man in the organs of reproduction. I have only met with one case in cattle, and this was the result of an extension to the scrotum of actinomycotic ulceration of the skin in the vicinity.

VI.—UNCLASSIFIED CASES OF ACTINOMYCOSIS.

In addition there are a number of recorded cases presenting very varied symptoms and anatomical relations in which it has not been possible to satisfactorily determine the path of infection or to account for the seat of invasion. I need only refer in illustration of these cases in man to one reported in THE LANCET.[4] This case was under the care of Dr. Marten of Adelaide. There was an ill-defined swelling near the great trochanter, associated with weakness, fever, night sweats, and insomnia. The swelling was incised and the discharge contained abundance of the ray-fungus. Later an incision was made almost the whole length of the thigh and various sinuses scraped out and a portion of the vastus externus which was studded with nodules was excised. In cattle the disease has been found in a few cases localised in the udder.

BACTERIOLOGICAL DIAGNOSIS.[5]

Careful examination of pus from a case of actinomycosis in man will reveal to the naked eye little yellowish-white or yellow bodies, which a casual observer might mistake for grains of iodoform. On collecting some of the discharge in a test-tube and holding it between the light and the eye the

[2] THE LANCET, Dec. 14th, 1896.

[3] THE LANCET, May 25th, 1895.

[4] THE LANCET, Jan. 12th, 1895.

[5] The concluding paragraphs are largely drawn from my Report to the Agricultural Department, 1888, and from the article on Actinomycosis in "Bacteriology and Infective Diseases," 1896.]

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tufts of fungi appear as brownish or greenish-brown grains, embedded in a muco-purulent matrix. On spreading some of the discharge on a glass slip the largest tufts of the fungus are found to be about the size of a pin's head. They have a distinctly sulphur-yellow colour by reflected light, but appear of a yellowish or greenish-brown tint by transmitted light. With a sewing needle or a platinum wire flattened at the end into a miniature spatula the grains can be readily picked out of the purulent discharge, transferred to a clean slide, and gently covered with a cover-glass. Examined with an inch objective they have the appearance of more or less spheroidal masses of a pale greenish-yellow colour. On removing the preparation from the microscope, and gently pressing down the cover glass with the finger, the grains flatten out like specks of tallow; and on again examining with the same power they are found to have fallen apart into a number of irregular and sometimes wedge-shaped fragments of a faintly brown colour, affording a characteristic appearance. By preparing another specimen and covering it with a cover-glass without completely flattening out the grains, the spherical, oblong, and reniform masses of which they are composed can be recognised with a $\frac{1}{6}$ in. objective as rosettes of clubs. If the grains consist of typical rosettes and be merely covered with the cover-glass and examined without being flattened out between the cover-glass and the slide they will recall to mind, on focussing alternately the centre and the periphery, the appearance of the capitulum of a composite flower. The central portion appears to consist of spherical forms; these are the extremities of the component elements, and as we focus the edge of the rosette these elements are seen laterally and their characteristic club-form is readily distinguished. The central portion may be flattened against the cover-glass, and as the individual clubs vary considerably in size, the appearance of an irregular mosaic is then produced. By examining the peripheral part of a rosette with a $\frac{1}{12}$th in. objective, and especially after pressing the grains into a thin layer, with or without the addition of a drop of glycerine, the characteristic clubs are most readily demonstrated and the most varied shapes observed. In some cases the clubs will be found to be bifid at the extremity; in other cases there are lateral offshoots or daughter-clubs. Here and there will be found clubs closely pressed together like a bunch of bananas, and in other cases the broken-off pieces have a palmate form. In many cases the clubs are divided by transverse fission into two, three, or more segments. As a rule the clubs are regular in shape and about equal in size, while a few are conspicuous by their length. In other parts of a preparation the clubs are replaced by long, slender forms, which are sometimes transversely divided into a number of short links. With suitable illumination many clubs are seen to taper off into slender filaments. In addition there are free filaments, which are twisted, branched, and sometimes spirilliform. Many of the clubs are composed of layers differing in their refractive power and many have the appearance of a central channel. There are also in the same preparation small, highly refractive bodies, fat granules, granular detritus, round cells, pus cells, and sometimes blood corpuscles. The grains differ, as a rule, from those from a bovine source, in the absence of a sensation of grittiness so often transmitted to the finger when pressing the cover-glass upon them, and in the slightly greater tendency of the tufts to retain their compact form. By teasing the grains in a drop of water on a slide, and examining the preparation with a $\frac{1}{6}$ in. or a $\frac{1}{12}$ in. objective, the explanation of this is forthcoming; for by this process the clubs are gradually washed away and a central core remains, which is composed entirely of a dense network of fine filaments. This can readily be observed by using a small diaphragm, and it will be found that the rosettes of clubs are now replaced by tangled masses, having some resemblance to miniature tufts of cotton-wool. These filaments constitute the delicate network which is seen in tissue-sections stained by the method of Gram. This can be readily verified by making a cover-glass preparation of the grains and staining by that method. The clubs in fresh specimens have a faintly greenish tint, and in form and arrangement are quite characteristic and easily recognisable.

The fungus in cattle may in the same way be detected with the naked eye in the muco-purulent discharge or in a scraping from the cut surface of a growth. The tufts of the fungus vary in size under different circumstances, from that of a grain of fine sand to that of a pin's head. If the pus or scraping be spread out on a slide and examined against a dark background the grains appear to be white or yellowish-white in colour; but if examined by transmitted light they appear distinctly brownish. On pressing the cover-glass on the slide the grains readily flatten out, being of a soft, tallowy consistency; or in the process of gently pressing the cover-glass on the slide with slight lateral movement a distinct gritty sensation is transmitted to the finger, owing to the presence of calcareous matter. On examination with a low power the fungus will be recognised in the form of irregular patches scattered over the field, which might readily be regarded as collections of granular *débris* of a brownish or yellowish-brown colour. On examining with a higher power, spherical, ovoid, or reniform bodies are to be seen which are either typical rosettes of clubs, or granular masses with here and there a club-shaped body at the periphery. Pus cells, round cells, fat granules, and minute spherical bodies may also be distinguished. By teasing out the grains in water, and pressing them apart between the slide and cover-glass, we find that the central portion is composed, as a rule, of a structureless core; but the core may be composed of the delicate filaments which are found in cultures and in the fungus from man. Calcareous material, if present, may readily be demonstrated by the action of acids. It will be found that on the addition of dilute hydrochloric, nitric, or acetic acids the calcareous deposit is dissolved while the clubs are not affected, and even with the addition of the strongest acids the only result will be to dissolve out the calcareous matter and clarify the tufts of the fungus, the form of the clubs being still recognisable. Permanent preparations may be made by mounting the fungus in glycerine.

The fungus in stained specimens.—Although the ray-fungus can be detected without any staining process there may sometimes be doubtful appearances, and then sections or cover-glass preparations should be made and stained by the method of Gram and with eosin or with orange-rubin (Plate, Figs 1 and 2). The filaments in human cases can be readily recognised, and this is of value, as it forms an additional means for the diagnosis of the disease. In combination with eosin or with orange-rubin we have a test that is as characteristic and useful as that employed for staining sputum for tubercle bacilli. The discharge, scraping from a growth, sputum, or the isolated fungus is squeezed between two cover-glasses, which are then slid apart; they are allowed to dry, passed through the flame in the ordinary manner, and then stained. The cover-glasses can be cleared in clove-oil, the excess of clove-oil being removed by gentle pressure between pieces of blotting-paper, and then the preparation can be mounted in balsam and rendered permanent. On examination of these specimens the masses of filaments will be found to be stained blue and the tissue elements pink. The filaments vary very much in extent and character in different preparations. In some cases there are masses of short threads, which are some straight, others sinuous, or twisted, and sometimes branched. In other parts the field is occupied by very short, straight, or curved and sometimes even spiral fragments; in others, again, there are comparatively long strands. On examination with a high power and with careful illumination some filaments will be observed to be moniliform, while others are provided with a terminal oval body. There are also free elements resembling cocci which are stained blue, and represent the spores of the organism. If orange-rubin be used instead of eosin the clubs will be more deeply stained. Both methods enable one to determine the exact relation of the threads to the club-shaped bodies. The threads are stained blue and the clubs crimson. In the younger clubs the protoplasm of the thread can be traced into the interior of the club. (Plate, Fig. 3 *b*) In some of the older clubs stained with orange-rubin the central portion takes a yellowish stain, and in others the protoplasm is not continued as a thread, but is collected into a spherical, ovoid, or pear-shaped mass (*b*). In others, again, irregular grains, stained blue, are scattered throughout the central portion. The sheath of the thread is stained pink; and the protoplasm, stained blue, fills the sheath, or consists of small spherical and irregular grains, giving a distinctly beaded appearance.

The effect of various reagents should be tried upon the isolated grains. The grains are picked out of the pus and transferred to watch-glasses containing strong potash, xylol, and benzole. If returned to a slide and covered with a

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cover-glass the clubs are found unaltered. Water or weak potash washes away the clubs and the filaments become easily distinguished; ether and strong acids have no effect upon them. Corallin soda, Hanstein's violet, and iodine zinc-chloride fail to give any particular reaction. Hoffman's blue stains the clubs, but without bringing out any structural details which could not be observed in the unstained specimens.

Appearances of cultures.—Boström, Wolff, Israel, Paltauf, and others have shown that actinomyces can be cultivated in the ordinary nutrient media I have carried on a series of cultivations for some years on glycerine agar, gelatine and in milk, in broth, and on bread-paste, and potato, in order to observe the changes which take place and to study the variations which I found in the appearance of sub-cultures. In my experience the actinomyces after a few days on glycerine agar at the temperature of the blood, forms little, white, shining, moist colonies, which may remain stationary or increase and coalesce. In a week or ten days, sometimes earlier, and sometimes after several weeks, the cultures turn a bright yellow colour, but some remain white; others, again, have a tinge of pink and others are yellowish-brown (Plate, Figs. 7 and 8). After a time a powdery efflorescence makes its appearance on the surface of the culture, which may be either yellow or white in colour. The culture may go on increasing, spreading over the surface of the medium, and retain its yellow colour, or it may turn black, partly or completely, while the agar is coloured brownish-black. Cultures have a peculiar sour smell; the variations in cultures were all proved, by careful testing by sub-cultures, to be due to the growth of the actinomyces under varying conditions of soil, temperature, and the supply of air. On microscopical examination the cultures are found to be composed of dense masses of fine branching filaments (Plate, Fig. 5 *a*). Filaments with slight terminal enlargements may occasionally be seen, but typical rosettes of clubs are not to be found. These appearances are only obtained when the fungus is growing in the living body. The stage of efflorescence corresponds with the breaking-up of the filaments into masses of ovoid spores, singly, and in chains often closely resembling streptococci (Plate, Fig. 6). Gelatin is slowly liquefied. Wolff and Israel cultivated actinomyces on raw and boiled eggs and claim to have succeeded by inoculation in the peritoneal cavity, in producing the disease in rabbits and guinea-pigs in the form of tumours of the peritoneum.

Life-history of streptothrix actinomycotica.—The life-history of the micro-organism may be summed up thus. The spores sprout into excessively fine, straight, or sinuous, and sometimes spirilliform threads which branch irregularly and sometimes dichotomously. The extremities of the branches develop the club-shaped bodies. The clubs are closely packed together so that a more or less globular body is formed with a central core composed of a dense mass of threads. The threads can be differentiated by the method of Gram into an external sheath and protoplasmic contents. The club-shaped body externally appears to be mucilaginous, while internally it is continuous with the protoplasm of the thread. It is difficult to say what changes, if any, occur in the club-shaped bodies. Spores and young fungi are taken up by wandering cells and conveyed to a distance from the parent fungus, and thus fresh centres of growth are established.

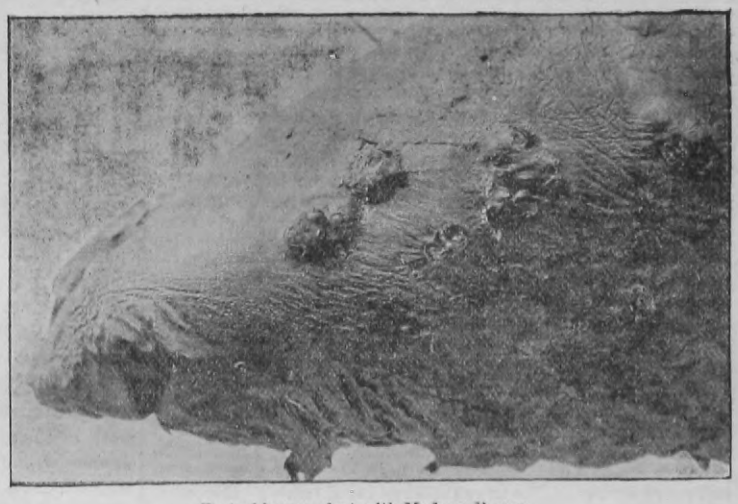
MADURA DISEASE.

Mycetoma, or Madura foot, is a chronic local disease, attacking the hands and feet, and having considerable resemblance to actinomycosis. It is a disease of tropical climates, and is commonly known as the fungus-foot disease of India. A small tumour forms on the hand or foot, which after a year or two suppurates and bursts, leaving one or more sinuses, from which peculiar black particles, or white or pinkish roe-like bodies, are discharged. The disease in the foot may commence in the big toe and spread upwards, involving the leg as far as the knee, and even the thigh. In a typical case, the foot is enlarged and painful, and later there are several sinuses from which a purulent and blood-stained discharge can be expressed containing the characteristic particles. (Fig. 10.)

According to Bocarro[6] all early growths are superficial. Dissection of the growths during an operation, or sections made through the diseased tissues after excision or amputation, show that the disease generally begins in the loose cellular tissue, usually the subcutaneous tissue, and thence extends along the sheath of muscles and tendons to other soft tissues, and finally to the bones. There are several facts in connexion with the causation of the disease which are of great interest when the disease is compared with actinomycosis in cattle. Bocarro states that the disease originates in wounds, sores and pricks of thorns, and that the points of the thorns of the Acacia Arabica have been found embedded in the diseased parts. The disease is common among the agricultural class, and in 90 per cent. of the cases observed in the Hyderabad Civil Hospital it occurred in the hands and feet. Dr. Vandyke Carter was the first to point out the resemblance of the pale particles to actinomyces.[7] He described a mycelial fungus and named it chionyphe Carteri.

Dr. Kanthack pointed out that if portions of the growth were placed in ether or chloroform, and afterwards well washed in caustic potash, small rounded bodies were left which showed rays under the microscope closely resembling the appearances in actinomycosis, and that the reaction of the fungus to staining reagents was identical with actinomyces.

FIG. 10.



Part of human foot with Madura disease.

Dr. Hewlett, under my directions, examined sections from a specimen of the disease in the foot, which I had received from Surgeon-Major Hatch, I.M.S., and found both filaments and clubs. These observations were published in THE LANCET of July 2nd, 1892. Dr. Boyce and Dr. Surveyor examined a number of cases and carefully studied the black and white varieties of the disease. In the black variety the particles were found to vary greatly in size, from that of a grain of gunpowder to that of a marble. If the particles were boiled for from a few minutes to one hour in concentrated caustic potash and then transferred to distilled water the brown colouring matter was removed and a mycelial fungus could be seen. This fungus consisted of large radiating and branched hyphæ, like those of a species of aspergillus or mucor. Sections of the white, fish-roe bodies showed, usually in the centre, numerous small, reniform, deeply-stained masses, surrounded by a radiate zone, with the presence of dwarfed, club-like elements resembling actinomyces. I am of opinion that the presence of the coarser septate mycelium of the black variety may be attributed to a mixed infection. Vincent in Algiers (1891–1893) succeeded in cultivating a micro-organism and showed that it was a new species of streptothrix. He published a very full account of his researches, illustrated with

[6] THE LANCET, Jan. 5th, 1895.
[7] THE LANCET, Feb. 13th, 1886.

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a coloured plate, in the *Annales de l'Institut Pasteur*, March, 1894. In the same year Dr. Boyce forwarded to the civil hospital, Hyderabad, a number of glycerine-agar tubes for inoculation and these Dr. Keith and Dr. Bocarro inoculated with particles from fresh specimens of both the black and white varieties of Madura disease. From these inoculations Dr. Boyce and Dr. Surveyor were unable to cultivate the black fungus, but Dr. Boyce succeeded in obtaining one tube with white particles which was almost free from contamination and from this tube he succeeded in isolating a streptothrix. This fungus was similar to the streptothrix which Vincent had cultivated from a case of the white variety of the disease in Algiers.

Streptothrix Maduræ.—Vincent states that the streptothrix at first grew scantily in the ordinary culture media and in such liquids as Colin's solution. In broth, at the end of about a fortnight, there is a limited growth composed of small, round, greyish masses, and in sub-cultures the growth becomes more abundant. The little colonies float in the clear liquid when the tube is shaken and subside to the bottom when the liquid is at rest, while some adhere to the sides of the tube. They may be very small or attain the size of peas; after two months they acquire a reddish tinge. Later, on the surface of the liquid, there is a white efflorescence composed of spores. The streptothrix grows well in slightly acid infusions of hay or straw, the proportion of hay to water being 15 grammes to the litre. Vegetable infusions, made with carrots, turnips, and potatoes (20 grammes to 1000 of water), also are suitable media. The streptothrix grows at the temperature of the room, but best at 37° C. and with free access to air. Inoculated in the depth of gelatine there is a scanty growth in the track of the needle and on the surface; but it grows best in a nutrient medium, composed of infusions of hay or potato 100 c.c., gelatine 9 grammes, glycerine 4 grammes, and glycose 4 grammes. Gelatin is not liquefied. Ordinary nutrient agar is not a very favourable medium, but glycerine-agar and glycose produces an abundant growth of circular, projecting, shining colonies, slightly yellowish-white, which later become pink or bright red. When the colonies are numerous they remain small, but isolated colonies grow rapidly; they are depressed in the centre or umbilicated, and the central part remains white while the periphery becomes red. Later the culture loses its colour and becomes a dull white. The growth is very adherent to the surface of the jelly and very tough—almost horny. The streptothrix can be cultivated in milk and slowly peptonises it. It cannot be grown on blood serum or egg. On potato, on the fifth day at 37° C., there are little prominent colonies, slowly increasing. After a month the growth acquires a pale rose colour, which gradually increases and changes to orange or dark red. The colour is most intense on acid potato, and after a time an efflorescence or whitish dust appears on some of the colonies, consisting of spores. The growth is hard and friable. Rabbits, mice, guinea-pigs, and a cat were inoculated subcutaneously with particles from the disease or with cultures; but only a local nodule was produced, which after a slight increase subsided. Nocard confirmed these results. Intra-peritoneal and intravenous and subcutaneous inoculations in guinea-pigs, rabbits, pigeons, fowls, dogs, and sheep were negative; and no trace could be found of the cultures in any animal subsequently killed and examined. According to Bocarro, though fresh particles from the disease inoculated in rabbits and dogs gave negative results, inoculations of cultures in guinea-pigs, rabbits, monkeys, and rats produced a local tumour of slow growth, which on section had the character of the inoculated material.

From these experiments we must conclude that the disease has not been proved to be transmissible to the lower animals by either inoculation of the diseased tissue or of cultures of the streptothrix; and the exact relation to the disease of both the mycelial fungus and the streptothrix require further investigation. It must also be borne in mind in investigating the origin of Madura disease and actinomycosis that closely allied species of streptothrix have been isolated from air, soil, pus, and the contents of the stomach, and from a disease in cattle known in France as *farcin de bœuf*. For an account of these species I must refer to the researches of Gasparini, Sauvageau and Radais, Doria, Lehmann and Neumann, Gruber, Dunker, Rullmann, and Nocard.

DESCRIPTION OF COLOURED PLATE.

(Reproduced from Bacteriology and Infective Diseases.)

FIG. 1.—From a section of a portion of an actinomycotic growth removed from a boy during life. The tissue was hardened in alcohol and cut in celloidin. The section was stained with Gram's method and orange-rubin. × 50.

FIG. 2.—From the same specimen. A mass of extremely fine filaments occupies the central part of the rosette. Many of the filaments have a terminal enlargement. The marginal part shows a palisade of clubs stained by the orange-rubin. × 500.

FIGS. 3 and 4.—From cover-glass preparations of the ray-fungus teased out of the new growths produced by inoculation of a calf with pus from a boy suffering from pulmonary actinomycosis. Stained by Gram's method and orange-rubin. The threads are stained blue and the clubs crimson (*a* and *b*). In the younger clubs the thread can be traced into the interior of the club. In some of the older clubs the central portion takes a yellowish stain and in others the protoplasm is not continued as a thread, but is collected into a spherical or ovoid or pear-shaped mass. In others, again, irregular grains stained blue are scattered throughout the central portion. × 1200.

FIG. 5.—From a pure culture of actinomyces on glycerine agar. (*a*) A mass of entangled filaments, (*b*) branching filaments. Gram's method. × 200.

FIG. 6.—From a similar but older cultivation. (*a*) Chains of spores simulating streptococci, (*b*) a filament with spores. Gram's method. × 1200.

FIG. 7.—Pure cultivation of actinomyces on the surface of potato, showing a luxuriant sulphur-yellow growth composed of entangled masses of filaments and of spores. After three months' growth.

FIG. 8.—Pure culture from the same series on glycerine agar. In this case the culture remained perfectly white. The jelly was coloured reddish-brown. After fifteen months' growth.

NEUROLOGICAL FRAGMENTS.

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(Continued from THE LANCET *of Dec. 12th, 1896.)*

No. XVII.

CERVICAL FRACTURE-DISLOCATION CASES.—DESTRUCTION BY COMPLETE TRANSVERSE LESION OF THE CERVICAL CORD OF INTRINSIC AND EXTRINSIC ELEMENTS OF THE LOWEST LEVEL.—PARALYSIS "AT" AND PARALYSIS "BELOW" THE LESION.—MUTILATION OF THE NERVOUS MECHANISMS OF THE "FOUR SYSTEMS" (THERMAL, CIRCULATORY, RESPIRATORY, DIGESTIVE). — INTRA-CENTRAL INHIBITION.

I HAVE spoken[1] of the great number of symptoms in cervical fracture-dislocation cases and of their diversity; the complexity of the symptomatology is obvious. Besides, there appear during the course of the cases two complicating factors. High supervenosity from inefficient respiration and great heat will, so to say, traverse that part, the main part, of the symptomatology which is not, properly speaking, *caused by*, but is indirectly consequent on, the local negative lesion; more specifically, high supervenosity and great heat will over-stimulate at least some of the citerior centres and probably some of the ulterior centres of the lowest level. Here is an important matter; blood which is highly supervenous will strongly stimulate the respiratory (medulla) centre and the cardio-inhibitory (medulla) centre; it will (vide *infra*) act on the intestines; and it will stimulate sweat glands or their centres or both; these agencies will make the symptomatology vary in different stages. Now for the second complicating factor. The imperfect action of the organs of each of the "four systems" will no doubt complicate (directly or indirectly) the action of the organs of the other three systems. To give a very simple example of this kind of complication: distension of the abdomen (digestive system) will impede the action of the diaphragm (respiratory system) and will thus render the patient's breathing still more inefficient than it already is from the paralysis of his intercostal muscles. I shall in this Note for the most part ignore these two complicating factors.

The local crush of the cord destroys both intrinsic and extrinsic elements of the lowest level. For ease of exposition I will speak as if but one segment of the infra-phrenic cervical region was destroyed; fibres passing through the segment are destroyed at the same time. First for the effect of the injury on the proper elements of the segment. There is destruction of two anterior and of two posterior horns (some motor and sensory centres of what I called[2] the homologous series of centres of the lowest level) and of their

[1] THE LANCET, Dec. 12th, 1896.
[2] THE LANCET, Feb. 16th, 1895.

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interconnecting fibres; these four centres and their interconnecting fibres are intrinsic elements of the lowest level. Now for fibres passing through the segment: some of them are intrinsic, others extrinsic of the level. There is destruction of fibres connecting higher (citerior) centres of the level with lower (ulterior) centres of it; there is, for example, destruction of fibres connecting the (medulla) respiratory centre, a superior centre of the level, with costal motor centres of the level (centres of the homologous series), for movements of the intercostal muscles; such fibres, since they interconnect centres of the level itself, are intrinsic elements of it.[3] Now for destruction of other fibres also passing through the segment which are extrinsic elements of the level; I mention some of them. There is destruction of fibres from ulterior motor centres of the level as they pass through the segment on their way, not to citerior centres of the lowest level, but to centres of a higher level of the cerebral sub-system; these are fibres of the pyramidal tract, fibres extrinsic upwards to motor centres of the middle level (Rolandic region). There is destruction of fibres of the direct cerebellar tract, sensory fibres extrinsic upwards to the cerebellum.[4] There is destruction of fibres of Goll's column and of Burdach's column, fibres extrinsic downwards from, respectively, the gracile and cuneate nuclei to the periphery.

I will illustrate more particularly, and with some recapitulation, the difference between destruction of intrinsic elements and destruction of extrinsic elements of the lowest level; both kinds of the elements to be dealt with are parts of what is morphologically the spinal cord; the former (centres) are elements of the anatomico-physiological community which I call lowest level; the latter (fibres) connect motor centres of this community with centres of a higher level.

There are two *kinds* of motor paralysis in the cervical fracture-dislocation case. There is (1) to use an elliptical expression "the motor paralysis at the lesion," from destruction of certain anterior horns of the segment crushed (intrinsic elements of the level); consequent on destruction of these lowest motor centres the comparatively few muscles they should innervate *are cut off from the influence of the whole of the central nervous system.* This paralysis, using clinical language, now rather old-fashioned, is "spinal paralysis" as certainly as is that in cases of progressive muscular atrophy (Duchenne-Aran type) or that in anterior polio-myelitis. There is (2) the motor paralysis from cutting across fibres of the pyramidal tract on their way through the segment crushed (fibres extrinsic upwards from ulterior motor centres to motor centres of the middle level, Rolandic region); most of the motor paralysis in the cervical fracture-dislocation case ("the motor paralysis below the lesion," another elliptical expression) is owing to the severance of these fibres; here the muscles concerned *are not cut off from the whole of the central nervous system;* they remain connected with their lowest motor centres, motor centres ulterior of the lesion, by fibres extrinsic downwards of the level. This, in clinical language, although the lesion is of fibres in the morphological mass, the cord, is "cerebral paralysis" as certainly as the paralysis of hemiplegia from lesion of the internal capsule is (the same tract higher up but further fed by fibres from bulbar and pontal centres of the lowest level and by fibres from other lowest level centres in the aqueduct of Sylvius). In both cases the lesion is of fibres extrinsic upwards of the lowest level, of a set of fibres connecting two levels, lowest and middle.

I will illustrate more definitely the difference between the two kinds of paralysis, making once more the entirely arbitrary supposition, simply for ease of illustration, that but one segment, the fifth cervical, is crushed. Then, adopting Starr's conclusions,[5] the muscles of the arm "paralysed at the lesion" will be "deltoid biceps, coraco-brachialis, brachialis anticus, supinator longus, supinator brevis, rhomboid, teres minor, pectoralis (clavicular part) serratus magnus." These muscles are cut off from the influence of the whole of the central nervous system ("paralysis at the lesion"), except, of course, in so far as some of them are also supplied by segments above and below the fifth. Certain other muscles of the arms, those of the hands for instance, are also paralysed, but these muscles are not cut off from the influence of the whole of the central nervous system; they remain connected with their anterior horns. This motor paralysis of the hands is "paralysis below the lesion"; it is, like that of the legs, owing to destruction of fibres of the pyramidal tract.

The extreme seriousness of the cervical fracture dislocation case is not owing to destruction of the centres of the segments crushed—although this by itself is a great calamity, since there results from it the paralysis elliptically called "paralysis at the lesion"—but to severance of fibres which pass through the segments, is owing to "cutting connexions." I am not referring only to the severance of fibres of the pyramidal tract, fibres extrinsic upwards, which severance disconnects ulterior motor centres of the lowest level from motor centres of the middle level, and thus produces the paralysis elliptically called "paralysis below the lesion," nor only to the cutting across of sensory fibres, also fibres extrinsic upwards, disconnecting ulterior sensory centres for the legs from higher levels, cerebral and cerebellar, nor only to fibres extrinsic downwards from some citerior centres, gracile and cuneate nuclei, to the legs. These disconnexions entail a terrible calamity, but as regards life, the most serious thing is the severance of certain fibres, extrinsic and intrinsic of the level, by which severance the nervous mechanisms of the "four systems" are mutilated. I shall in the remainder of this note speak of the several abnormal conditions (I have fancifully called them "sub-maladies") which are consequent on mutilation of the nervous mechanisms of these systems.

I submit that the scheme of Lowest Level is especially useful in the analyses we are about to attempt. It is manifest that we cannot study the sub-maladies mentioned as merely resulting from a local injury of the cervical spinal cord; in their analysis we are concerned both with citerior and with ulterior centres of the lowest level. Were we to consider also a symptom from the sexual system (priapism), symptoms from the urinary system, and from the system of the hind-gut (defæcation) we should have to deal with nearly all the centres of the lowest level, citerior and ulterior. There is more to be said in this regard. We have spoken of the condition of the pupils and of the eyelids, consequent on lesion of those fibres which after their emergence from the cord pass by way of the cervical sympathetic to certain parts of the ocular musculature (fibres extrinsic downwards); this involves consideration of healthy citerior centres for the circular fibres of the iris, because the pupils contract more when the sympathetic fibres (inhibitory) are severed and do not dilate in a dim light when shaded. Theoretically there should be a "salivary symptom" in cervical fracture-dislocation cases; the sub-maxillary gland continues to be supplied by chorda fibres from citerior centres, but is bereft of sympathetic fibres. However, I know nothing of this imagined symptom in cervical dislocation-fracture cases.[6]

As I have mentioned, some cases of fracture-dislocation vary very much in their course; I have pointed out that the symptomatology will be traversed by super-venosity and also that, instead of orderly coöperation and amicable antagonism between the organs of the four systems, each organ is more or less "pursuing its private ends." Thus the separate consideration of the "sub-maladies" as if each were an independent and unvarying thing, is, of course, an arbitrary proceeding.

For the proper analysis of so complex a symptomatology, a vastly greater knowledge of physiology than I possess is required. What is to follow must be taken almost as remarks on mere symptoms. But just as one who wishes to be a good musical performer practises scales, so he who wishes to be a good diagnostician must study mere symptoms. If the symptomatology of the cervical fracture-dislocation case were thoroughly and correctly analysed a valuable

[3] If the speculation I advanced in THE LANCET of Feb. 23rd, 1895, on the difference between respiration proper (organic service of the thoracic cage) and so-called forced inspiration (animal service of the thoracic cage) were proved, there will be also cutting across of other fibres to the costal motor centres—fibres of the pyramidal tract from motor centres of the middle level (Rolandic cortex). These fibres are for "voluntary" movements of the intercostal muscles (for "voluntary expansion" of the thoracic cage, for the so-called forced inspiration).

[4] Motor fibres interconnecting lowest motor centres and the cerebellum have not been found; this is, of course, an objection to the hypothesis I hold as to cerebellar influence upon the anterior horns (lowest motor centres), as explaining, for example, the rigidity in hemiplegia and the tremor and rigidity of paralysis agitans.

[5] Starr's table is given in Osler's *Principles and Practice of Medicine*, second edition, p. 819 and seq. Osler makes the remark: "Movements, not muscles, are localised in the central nervous system, a point carefully to be borne in mind by the student." I have often insisted on this; yet in the text I speak of muscles for convenience.

[6] We should have a scheme of the lowest level so that in fracture-dislocation cases and in other cases we might be helped in our analyses of the complex symptomatologies produced. I have made such a scheme, but it is too poor a thing to publish.

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contribution would be made to neurology. Were it right to suggest work for other people to do, I would commend the study of this complex neurological problem to well-trained physiologists.

Thermal System.—To begin with, I quote authorities on the great difference in the thermic state of different patients who have undergone cervical fracture-dislocation.

Hutchinson writes[7]: "The general result of my examination [of notes of fracture-dislocations of the spine] has led me to believe that, although increase of temperature is the rule, it is liable to not infrequent exceptions, and that some of these are very remarkable. Nor have I found it at all easy to explain why this should be so, *why, in fact, we should have some cases of fracture of the cervical spine in which the patient becomes very hot, and others in which he becomes very cold.*" (There are no italics in the original)

Weber[8] "has recorded cases where, after fracture of the cervical vertebræ (third, fourth, and fifth in one case, and third and fourth in the other) with severe lesions of the cervical cord, the temperature (in the axilla) reached 111° F. just before death, eight hours after the injury; while in the other case (taken in the rectum), immediately after death, and nineteen hours after the accident, it was 110°."[9]

So much for high temperatures; now for low temperatures. Jacobson[10] mentions a case recorded by Hutchinson[11] of a man aged twenty-eight years, who had fractured the fifth cervical vertebra, the cord being crushed at this level, with a temperature of 95·8° in the rectum, twenty-four hours after the accident; just before death, five days after the accident, it was 95° both in rectum and axilla. "It is expressly stated that the patient was not during the greater part of the time suffering in the least from shock, and that though the face was with the rest of his body almost as chilly to the hand as a corpse, yet his lips, ears, and face were florid twenty-hours after the accident, 'of a good rosy colour' on the third day, becoming blue only during the last twenty-four hours of life." Jacobson gives details[12] of a case recorded by Nieden[13]; "fracture-dislocation of the first dorsal vertebra with crushing of the cord on this level, where there was progressive lowering of the temperature and pulse during the eleven days which intervened between the injury and death of the patient Thus the temperature fell steadily from 98·6° on the third day to 80 6° at the time of death. In the same interval the pulse, which on the third day was 68, full and strong, became slower and less perceptible, falling to 30 before death."

I shall deal only with those cervical fracture-dislocation cases in which the temperature is very high. Of course this is a very arbitrary proceeding; it is one which shirks the difficulties presented by other cases in which, or at a stage of which, temperature is low or very low.

Donald MacAlister in his very valuable Gulstonian Lectures on the Nature of Fever,[14] re-published by Macmillan and Co., writes in the third lecture: "The thermal nervous system has three parts; let us call them briefly the thermotaxic or adjusting, the thermogenic or producing, and the thermolytic or discharging mechanism.[15] ..... In the ascending scale of evolution we seem to rise from the thermolytic to the thermogenic and thence to the thermotaxic nervous system." He regards fever "as a 'dissolution,' a progressive negative process" and recovery from fever as a process of re-evolution. His remarks on these matters are very interesting. In the cervical fracture-dislocation case the nervous mechanisms of all three parts of the thermal nervous system are damaged suddenly together; thus the "fever" produced, if I may call it a fever, will not have so orderly a course as fevers proper.

The muscles are the main parts concerned in thermogenesis; they, under the influence of the nervous system, unceasingly produce heat in entire and healthy men. I submit the hypothesis that in cervical fracture-dislocation cases, when the temperature is very high, as it is in many of these cases, the "muscles below the lesion," those connected with ulterior motor centres, produce much more than normal. Here, however, is a difficult question; the high temperature in cervical fractured-islocation cases may not signify increased thermogenesis, but only greater emission of heat. We cannot make calorimetrical researches on our patients to decide the question. We must bear in mind that from arterial relaxation, owing to severance of all fibres passing from the medulla vaso-motor centre (fibres extrinsic downwards) thermolysis will be greatly facilitated.

It must be borne in mind, as already urged, that there are in the cases under remark two very different kinds of paralysis. There is that "at the lesion" in which some few muscles of the arms are cut off from the influence of the whole of the central nervous system. No doubt these muscles cease, or soon cease, to produce heat. Although the amount of heat not produced consequent on these few muscles being bereft of influence from the central nervous system is a negligible quantity, the consideration of this kind of paralysis in comparison with the other kind in regard to the state of the thermal system of our patient is important for purposes of illustration. The other kind of paralysis, "paralysis below the lesion," is very different from that "at the lesion," the muscles concerned being in a very different case; the muscles in the "paralysis below the lesion" remain connected with their anterior horns (some lowest motor centres). These muscles never move (molar movement), but this is not, I submit, because their anterior horns are functionless, but because the higher levels can, on account of the transverse cervical lesion, no longer "get at" these lowest motor centres to put them into activity. But may not these uninjured ulterior motor centres, or some elements of them,[16] continue so to act on the muscles they supply as to cause them to produce heat? My speculation is that in the cases with a high temperature these centres over-act to that end, and cause the muscles to produce more heat than normal. (Once more I admit the inadequacy of this exposition of the state of the thermal system in cervical fracture-dislocation cases; cases with an abnormally low temperature not being taken into account.)

It is so important with regard to the thermal system, to distinguish the paralysis in which muscles are cut off from the whole of the central nervous system, from that paralysis in which they are not cut off from the whole of that system, but only from its higher levels, that at the risk of tedious iteration, I will consider the matter from another point of view. Suppose for mere illustration's sake, that it is possible (of course, it is not) to limit in the case of a dog the action of curara to the motor nerve endings of what we may call the same muscles as those which in the cervical dislocation-fracture case of man are "paralysed below the lesion"; these muscles in the curarised dog would, so long as the poisoning lasted, be cut off from the influence of the whole of the central nervous system and would produce no heat; the animal would be rendered "cold-blooded," except for the heat produced by other muscles, "muscles above the lesion," the motor nerve endings in which we are imagining to be spared from the action of curara, and by the liver and other parts of the body. And thus the muscles of which the motor nerve endings are poisoned would, to borrow a term and a notion from Hutchinson, become "refrigerators" to the rest of the body. But, I repeat, in the cervical fracture-dislocation case of man, "the muscles below the lesion" are in a very different case since they remain connected with their lowest motor centres, although these centres are, by severance of fibres of the pyramidal tract, disconnected from motor centres of the middle level (Rolandic cortex). Could we in the case of the dog curarise only the motor nerve endings to the same few muscles, as those which are supplied in the case of man by the crushed sub-phrenic cervical anterior horns, or, let us say, referring back to a former illustration, those muscles which are, according to Starr, supplied by the fifth segment, which we shall suppose is the only one crushed in man, there would be very little, next to no, diminution in the dog's production of heat, the amount of muscle cut off from the central nervous system being so small. But in this imaginary case of very localised action of curara in the dog, there is not a transverse lesion of the cervical cord at the level of the fifth segment as there is in the fracture-dislocation case of man.

I submit the hypothesis that the ulterior motor centres in cervical fracture-dislocation cases of man with a high

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[7] THE LANCET, May 22nd, 1875, p. 714.
[8] Translations of the Clinical Society, vol. i., p 163.
[9] Injuries of the Back, by Jacobson, Holmes and Hulke's Surgery. Third edition, vol. i., p 654.
[10] Op. cit. p. 654.
[11] THE LANCET, May 22nd, 1875, p. 714.
[12] Op cit., p. 655.
[13] Transactions of the Clinical Society, vol. vi., p. 75.
[14] THE LANCET, March 12th, 19th, and 26th, 1887.
[15] See also Hale White, Brit. Med. Jour., April 26th, 1890.

[16] "Lukjanow, Mosso, and MacAlister have shown that probably the thermogenetic function is distinct from the motor function of muscle." *A Discussion on Pyrexia and its treatment*, by Hale White.—Brit. Med. Jour., Nov. 17th, 1894

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temperature continue functionable for thermogenesis, and that from section, by the infra-phrenic transverse lesion of the cord, of "inhibitory nerves" of the thermal system coming down from some centres of higher levels, or from some citerior centre of the lowest level (thermotaxic mechanism of MacAlister) to these ulterior motor centres, they, or some elements of them, so rise in activity that great increase of thermogenesis by the muscles they remain connected with occurs. The suggestion is that the very high temperature in some cervical fracture-dislocation cases does signify greater thermogenesis, although no doubt there is greater thermolysis too. Cases with a high temperature, in which death occurs in a few hours or days, have been so far dealt with. I shall now speak of the case of a man who lived many years after cervical fracture-dislocation.

There is repetition in the foregoing from a lecture entitled Neurological Fragments, which I published in THE LANCET of March 5th, 1892. I quote the following from that lecture: "A patient of the late Mr. Hilton lived fourteen years after a fracture-dislocation crushing the cervical cord across below the emergence of the phrenic nerves. Did not the 'muscles below the lesion' in this man produce heat when they were 'paralysed'? If they did not, they would have had to share the heat produced by the 'muscles above the lesion' (and of course by other parts of the body), and would thus be refrigerators." If in Hilton's patient[17] there was excessive thermogenesis soon after the accident, we must suppose that this greatly increased generation of heat continued for a short time only. It is not likely that the patient had a very high temperature for fourteen years, and it is not likely either that all the muscles "paralysed below the lesion" produced no, or very little, heat during that time. The patient was twenty-one years of age at the time of the accident. He was taken about on a four-wheeled cart by a boy.[18] "The patient used to amuse himself or earn his living by making copies of engravings with his mouth."[19] So far as I can judge by the report, this patient was by no means "cold-blooded" and made the best of a sadly maimed life. Consider also the case of B. G., a dorsal case, narrated in Note XVI., THE LANCET, Dec. 12th, 1896. She certainly was in no degree "cold-blooded"; her temperature was occasionally raised (102° F., once 103·5°), but never persistently raised; sometimes it was 97°; she was cheerful and occupied herself in needlework and reading.

I am dealing, I repeat, in this note with cervical fracture-dislocation cases in which death occurs in a few days. Probably when the patients live a very long time, as did Hilton's patient, or in chronic dorsal cases like that of B. G., the ulterior motor centres become a little more nearly normal in function; very possibly small vaso-motor centres in the ulterior part of the lowest level gain greater power and thus thermolysis will become more nearly normal. More generally it is probable that when a patient lives a long time the part of his lowest level below the transverse lesion of the supra-lumbar cord (ulterior part) recuperates to some little extent.[20] In the case of the girl B. G., the catamenia were normal; the return of her knee-jerks probably showed some recuperation of the anterior horns concerned; in her, however, the lowest level nervous mechanism for the bladder, which on her admission was so far effective that the bladder emptied itself at intervals, failed later. In her case, however, possibly the transverse lesion was not completely transverse. In Hilton's patient there were other phenomena showing functionability of some ulterior centres which I shall mention when speaking of the state of the Sexual System.

The Circulatory System.—There is cutting in two of fibres descending in the cord from the accelerator[21] (medulla) centre (fibres of the lowest level extrinsic downwards) and also of fibres from the great (medulla) vaso-motor centre (also fibres extrinsic downwards). (I have spoken of severance of the latter as facilitating thermolysis.) The pulse is infrequent and relaxed (low tension). We have here to bear in mind that the cardio-inhibitory centre of the lowest level is intact, and that the fibres (extrinsic downwards) from it by way of the vagi to the heart are so too; possibly when respiration becomes very inefficient the heart may beat still less frequently from stimulation of that centre by supervenous blood, and, perhaps by great heat also, until the time comes when the cardiac musculature itself succumbs to those agencies.

The difficulty is to explain how it happens that there is infrequent pulse in the cases remarked on. Landois and Stirling[22] write: "The accelerating centre is certainly not continually in a state of tonic excitement, as section of the accelerans nerve does not cause slowing of the action of the heart; the same is true of destruction of the medulla oblongata or of the cervical spinal cord. In the latter case, the splanchnic nerves must be divided beforehand, to avoid the slowing effect on the action of the heart produced by the great fall of blood pressure consequent upon destruction of the cord, otherwise we might be apt to ascribe the result to the action of the accelerating centre, when it is in reality due to the diminished blood-pressure" (Cyon).

The following is from Hutchinson's article *On Dislocations and Fractures of the Spine, London Hospital Reports*, vol. iii., 1866, pp. 365-6. I give this quotation partly because it contains remarks on a tract of hyperæsthesia which is sometimes a great addition to the patient's misery, and partly because the quotation deals in a striking way with the state of the circulatory system in some cases of cervical fracture-dislocation. Hutchinson writes:[23] "Unless the injuries be in the cervical region, no influence upon the heart's action is observed. When high up a very peculiar condition results. The pulsations are diminished in frequency and the pulse (from the paralysis of the artery) is remarkably full and large. Your first impression is that it is much slower than you find it to be on counting, at least, this has generally been my experience. It feels remarkably deliberate. The manner in which the heart seems exempted from all share in the patient's general excitement is sometimes very curious. I recollect well going to the bedside of a poor fellow who had been admitted a few hours before with a fracture of the fifth cervical. It was one of those cases in which the boundary tract of skin between that quite paralysed and that enjoying perfect sensation, was excessively tender. He was screaming with pain, and his countenance expressive of the utmost suffering and anxiety, yet his pulse, which we might have expected to be quick and excited, was slow, full and deliberate, about 48 in the minute. Although the pulse after injuries to the cervical cord becomes slow, it does not intermit."

Considering the complex situation of the circulatory system—severance of the accelerator fibres (which severance in a lower animal the physiologist tells us does not slow the heart), the severance of all fibres from the medulla vaso-motor centre, the intactness of the cardio-inhibitory centre and the possibility that this centre is over-stimulated when the blood has become very venous, and the possibility that minor vaso-motor centres below the transverse cervical lesion are also then stimulated—I refrain from attempting an explanation of the infrequent action of the heart in cases of cervical fracture-dislocation.

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[17] Hilton recorded the case in his *Rest and Pain*." I quote from the second edition by Jacobson, p. 102 and seq. *The heading of the report of the case is*, "*Case of Injury to fifth, sixth, and seventh Cervical Vertebræ; Paralysis and Loss of Sensation in the Upper and Lower Extremities: the patient lived fourteen years, and then died from another accident.*"

[18] As to the cause of his death: "He was upset, and, as he could not put out his hands to save himself, he fell with great violence upon the ground; this led to some chest affection which occasioned his death in a few days."—Hilton, op. cit., p. 105.

[19] Hilton, op. cit., p. 104.]

[20] In a lower mammal there will presumably be after a transverse supra-lumbar lesion considerably more recuperation of the ulterior part of the cord than in the case of man. I take the following from Landois and Stirling's Physiology, Fourth Edition, vol. ii., p. 786. I suppose the intercalation marked by square brackets in the original is by Stirling. "In mammals (dogs) the following reflex acts are performed by the posterior part of the spinal cord, even after it is separated from the rest of the cord: [In mammals, however, the cord takes a long time to recover from the shock of the operation compared with the time required for this result in cold-blooded animals.] Scratching with the hind feet a part of the skin which has been tickled (just as in intact animals); the movements necessary for emptying the bladder and for defecation, as well as those necessary for erection; the movements necessary for parturition (*Goltz, Freusbery, and Gergens*). Coördinated movements do not as a rule occur simultaneously in portions of the spinal cord lying widely apart after removal of the medulla oblongata. According to Ludwig and Owsjannikow, the medulla oblongata perhaps contains a reflex organ of a higher order which forms, as it were, a centre for combining through the medium of the nerve fibres the various reflex provinces in the spinal cord." I should suppose this centre in the medulla to be the coördinating centre of the whole of the lowest level—the "highest centre" of the lowest level.

[21] In the dog the accelerator fibres "leave the spinal ford as medullated fibres by the anterior roots of the second and third dorsal nerves, and it may be by the fourth and fifth nerves as well." Landois and Stirling, Physiology, fourth edition vol. ii., p. 827. Although I use the term "accelerator *centre*," Landois and Stirling only say, "It is more than probable that a centre exists in the medulla oblongata which sends accelerating fibres to the heart."

[22] Physiology, vol. ii., p. 829. Fourth edition

[23] *Effects of Injuries to the Cord upon the Heart*

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The Respiratory Nervous System.—There is cutting off of the costal motor centres from the Respiratory centre, a Superior centre in the bulbar region of the level, by severance of intrinsic fibres of the level; the laryngeal and phrenic motor centres remain in connexion with that Superior (respiratory) centre by intrinsic fibres. As venosity increases the respiratory centre being strongly stimulated by super-venous blood, and perhaps by great heat too, the diaphragm will act more and thus for a time there will be some compensation for the effects on respiration of suddenly occurring paralysis of the intercostal muscles.

Paralysis of the intercostal muscles alone or of the diaphragm alone does not seem to greatly trouble a man who is, for other reasons, obliged to lie quiet in bed; there seems to be no reason why in those circumstances he should not live for years, in spite of either paralysis. But in the cervical fracture-dislocation case the paralysis of the intercostals is suddenly produced, a very important thing. Besides, as we have seen, there is mutilation of the nervous mechanisms of the three other systems; there is much more than paralysis of the chest-walls to cause death. I say this because whilst the abnormal state of the respiratory system properly attracts great attention, not enough attention is given to the abnormal state of the other three systems.[24]

The Digestive System.—In some cervical fracture-dislocation cases there is great distension of the intestines and constipation; I speak of the distension only, although the interpretation of the constipation is similar. In the analysis of this sub-malady we require to take into very particular account certain citerior and certain ulterior centres of the lowest level, both of which are uninjured. The intestines (I here exclude the hind-gut[25] from consideration) have two direct sources of innervation from centres of the lowest level; there is one, motor, from a centre of the medulla region of the level, by way of the vagi, and there is another, inhibitory, by way of the splanchnic nerves, from centres of the dorsal region of the level (in the dog by way of the sixth and some lower dorsal roots, perhaps from the intermedio-lateral tract, which Mott thinks gives off visceral fibres). I suggest that the centre in the medulla region of the level is not only motor, but that it has also a certain inhibitory function of which I go on to speak. In an entire man I suppose that the two sets of centres of the level, medulla and dorsal, being connected by intra-central fibres, are in a relation of amicable antagonism, and that the centre of the medulla region of the level can not only act motorily upon the intestines by way of the vagi, but that, by the intra-central fibres suggested, it continuously slightly inhibits the "dorsal centres" which by way of the splanchnic nerves are inhibitory of intestinal movements; there is inhibition of inhibitory centres. When in an entire man the medulla centre comes into activity for defæcation, or rather for intestinal action preparatory to that of the hind-gut, two things, according to the speculation advanced occur; there is direct motor action of the medulla centre upon the intestines by way of the vagi, and there is also by that medulla centre so much greater inhibition than what I have spoken of as slight and continuous, of the inhibitory dorsal centres that they cease altogether to inhibit the intestines and thus the gut is *surrendered to* the direct vagal motor influence. In other words, there results from action of the medulla centre a direct "making go" of the intestines and indirectly a "letting go" of them. So much for the entire man; next for the man whose central nervous system has been cut in two at the point mentioned (infra-phrenic cervical cord).

In the cervical fracture-dislocation case there is a complete transverse lesion of the cord between what I now call the citerior centre for the intestines and the ulterior centres for them; and certainly in many cases great distension of the abdomen does occur, often to such an extent as to be a very serious addition to the patient's misery.[26] How does this distension result from the infra-phrenic cervical transverse lesion of the cord—from a *negative* lesion of that part? It does not result directly from that lesion. My speculation is that the negative transverse lesion divorces the medulla centre from the dorsal centres by cutting across fibres (intrinsic elements of the level) which connect the two—fibres from the centre of the medulla region of the level by which in an entire man that medulla centre slightly inhibits continuously, and occasionally inhibits strongly, the dorsal inhibitory centres. In the fracture-dislocation case the citerior centre has become in effect motor only; that is to say, the inhibitory part of it can no longer act on the ulterior dorsal centres to compel them to cease to inhibit the intestines; thus the intestines are not surrendered to the action of the motor part of the citerior centre. Indeed, the ulterior centres in question, being no longer inhibited, rise in inhibitory power upon the intestines and keep them dilated, so that motor action upon them by the vagal fibres from the citerior (medulla) centre is ineffective. This is making the assumption that the (dorsal) ulterior inhibitory centres when themselves no longer inhibited can overpower by their enhanced inhibitory influence the motor action upon the intestines of the (medulla) citerior centre.[27]

I neglected in the foregoing remarks on the digestive system the complications induced by great venosity, which may become great in the cases under remark. It is said that stimulation of the splanchnic nerves causes peristalsis when the circulation of the blood in the capillaries of the intestines has become venous.

The Sexual System.—There is, I believe, a dislike to the supposition of a hierarchy of inhibitory centres, but the case of cervical fracture-dislocation supplies us with one symptom, priapism,[28] which I submit is difficult of interpretation on any other supposition than that of removal of inhibition from a centre which is itself inhibitory. In priapism there is dilatation of the arteries of the penis; during erection of the penis in entire men its arteries are inhibited (Eckhardt) by over-activity of a

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[24] I believe that paralysis of the intercostal muscles is often overlooked in patients who are bedridden or who lead a very sluggish life indoors; indeed, it has to be looked for as the patient when obliged to lie quiet in bed may suffer very little indeed from it and may exhibit no signs of venosity. I have seen it in a case of disseminated sclerosis. Some years ago my then house physician at the London Hospital, Dr. Howard Sturge, told me that a woman's breathing became abdominal when she was under chloroform, a great change from the normal manner of respiration of her sex. I have seen this abdominal mode of breathing in surgical anæsthesia several times since, as I have mentioned (No. XV., THE LANCET, Feb. 23rd, 1895, Footnote 6), both in men and women; there being paralysis of the intercostals, the chest sinking in inspiration. I am not speaking generally of "defective respiration" but of the breathing being solely diaphragmatic, consequent on paralysis of the intercostal muscles. Sometimes in men the respiration under chloroform is almost solely costal. Much will, I suppose, depend on the stage of anæsthesia. I learn from Dr. Hewett's very interesting work, *Anæsthetics and their Administration*, p. 219, that "Snow stated that thoracic movements usually cease before abdominal." We must remember that the diaphragm alone can raise and evert the lowest ribs so that their movement is no proof that some of the intercostals escape when the higher intercostals do not act. The respiration may become solely abdominal in coma, even in women, from other causes than chloroformisation or etherisation.

[25] The hind-gut is under different nervous government. In this note I omit consideration of a symptom, incontinence of fæces, referable to this part of the intestinal tube. (See Hutchinson, London Hospital Reports, vol. iii., 1866, pp. 366-7.) Nor shall I speak of the vesical apparatus (I again refer to Hutchinson, op. cit., pp. 367-8). What he then wrote was written before the days of antiseptic surgery.

[26] Properly there is inaction of the circular fibres of the intestines from strong inhibition of them, so that gases accumulate.

[27] It has long been a custom with some prescribers to add a little belladonna to aperient pills. I suppose this drug facilitates peristalsis by reducing the potency of the inhibitory fibres of the splanchnic nerves, and possibly also by stimulating the vagus centre, or, it may be better to say by stimulating the centre in the medulla from which come the motor fibres which pass by way of the vagi to the circular muscular coat of the intestines. It occurred to me that this drug should be useful in the "distension" spoken of in the text; by partially paralysing the inhibitory fibres of the splanchnics, the vagal fibres would then be less opposed in their action on the circular muscular coat of the intestines. I saw a patient with Mr. Wreford who had essentially the symptomatology of a cervical fracture-dislocation case but from disease; the patient's abdominal distension was much reduced when he was taking belladona which I advised for the theoretical reasons mentioned, Dr. James Taylor saw this patient with us and agreed that improvement attended the use of the drug.

[28] There is not, or there is not commonly, more than turgescence of the part (when the catheter is passed the organ becomes more turgid). If the muscles which on contraction impede exit of blood from the penis are paralysed, we could not expect there to be such priapism as occurs in normal erection or in the so-called idiopathic priapism of surgeons. But the ulterior centres of the lowest level for the muscles in question are intact, and although they are cut off from higher levels these centres, perhaps, sometimes come into action and produce muscular contraction. In a case (*Fracture-Dislocation between the Fifth and Sixth Cervical Vertebræ.—Complete Paralysis of all Nerves below the Fifth Cervical.—Death*) recorded by Thorburn (Surgery of the Spinal Cord," p 8), "The penis was subject to frequent erections with seminal emissions." This patient died twenty-one days after the accident. We rarely see—I never saw—a case of cervical fracture-dislocation in which the cervical cord is crushed completely across in which the patient lived for years. But such a case, mentioned earlier in the text, when speaking of the thermal system, is recorded by Hilton ("Rest and Pain," second edition, by Jacobson, p. 102 *et seq.*); the patient lived fourteen years. Priapism and seminal emissions occasionally occurred. Hilton wrote, p. 104, *op. cit.* (from notes taken "during the latter period of the patient's life"). "erections of penis are frequent, and last a quarter of an hour, with slight escape of seminal fluid occasionally." (Priapism occurs in cases of transverse lesions of the cord lower than its cervical region.)

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centre in the sacral part of the cord (as I should say in the sacral region of the lowest level) giving off the nervi erigentes. But in entire men there is, neglecting obvious occasional exceptions, flaccidity of the organ, and thus I assume that the sacral centre mentioned is in them continuously kept down (inhibited), either by a medulla centre of the level (and if so, by intermediation of fibres intrinsic of the level) or by a centre of some higher level (and if so, by intermediation of fibres extrinsic upwards of the level). After the occurrence of the transverse lesion of the cord in cervical fracture-dislocations priapism occurs, and it lasts for a time after the accident. Now this state of the penis is consecutive to a *negative* lesion anatomical miles above the now over-acting sacral centre. Surely there is here something "taken off" that sacral centre—no longer inhibition of a centre itself inhibitory. (It is important to note that priapism may be present during "shock" in cervical fracture-dislocation cases (Hutchinson).) Here is another illustration of the principal spoken of at the beginning of Note XVI.[29] Here again is a problem in physiology. The sacral centre is untouched by any pathological process or injury; that centre is simply "let go."

I submit that the hypothesis of intra-central inhibition applies more widely in the lowest level than as illustrated by the two symptoms of the fracture-dislocation case, distension of the abdomen (digestive system) and priapism (sexual system). That the cardio-inhibitory centre reins in the heart by the vagi is accepted doctrine, but I submit the speculation that this centre also continuously inhibits the accelerator centre. On this hypothesis, increased activity of the cardio-inhibitory centre in an entire man makes the heart beat less frequently by two modes of action: by direct action on the heart by way of the vagi and by greater inhibition of the accelerator centre. I will illustrate this hypothesis by applying it to the interpretation of a well-known nervous malady. In Graves's malady the great frequency of the pulse, to limit attention to that symptom, has been (Sattler) ascribed to lesion of the cardio-inhibitory centre. Adopting the speculation that there is a negative state of, or of much of, this centre, I submit that the heart beats more frequently, not only because it is less inhibited by way of the vagi, but also because the accelerator centre, not being inhibited, or being less inhibited than normally, the cardio-inhibitory centre is "let go" to act more on the heart. On the supposition made, the increased frequency of the pulse in Graves's malady is of two-fold origination from one negative lesion.

It may be said, of cases of Graves's malady in which the pulse is not very frequent, that loss of inhibition on the heart alone is enough to account for the greater rate. Sir William Broadbent writes,[30] speaking of Graves's malady: "The pulse is seldom under 100 per minute, often 120 or over, sometimes 160 to 200. In a case recently under observation the pulse was never under 160 for many weeks, and in paroxysms of palpitation it sometimes numbered 240 for several days, reaching at times 300." Would the higher rates[31] Broadbent mentions be owing to cessation of inhibition on the heart alone? Broadbent, in continuation of the observations quoted, writes: "The beat is sudden, sharp, and vehement; and its very frequency renders it short. The artery has not time to subside, but, though it is full between the beats, there is no peripheral resistance and no real pulse-tension."

The accelerator centre in healthy people is not, according to physiologists, in continued activity; the sacral centre in healthy people is not, so far, at any rate, as the arteries of the penis are concerned. We might infer this from the flaccidity of the penis, except on particular occasions; it is said that section of the nervi erigentes makes no change in the state of the organ, although excitation of the peripheral ends of these nerves produces turgescence of it. And although the pulse is infrequent in many cases of cervical fracture-dislocations the physiologist tells us that section of the accelerans nerve does not slow the heart (see quotation from Landois and Stirling in a footnote to an earlier part of this Note) and yet excitation of its peripheral end makes the heart beat more frequently. It may be that in healthy men the accelerator motor centre only comes into increased activity on the diminution of inhibition of it, just as, to illustrate by an abnormal state, in the fracture-dislocation case the arteries of the penis are dilated and the organ thereby made turgid only on the taking off of inhibition from the sacral inhibitory centre, which gives origin to the nervi erigentes.[32]

I will now remark on the indefinite meaning of the word paralysis in some of its applications. In the cervical fracture-dislocation case the "paralysis at the lesion" is "spinal," the "paralysis below the lesion" is mainly "cerebral"; the two paralyses are (vide *supra*) of very different kinds. And in reference to the illustration from the effects of mutilation of the nervous mechanism of the digestive system, it is from a scientific standpoint erroneous to say "the intestines are paralysed"; they are inactive, but the medulla centre can still act upon them by the vagi although it effects nothing, and for the rest of the condition they are kept dilated by abnormally high inhibition; there is simply cutting of connexions between two centres for the intestines, the centres themselves being intact. It is for this reason that I have sometimes used the term "field of a symptom." We cannot, to take another illustration, say that the iris is paralysed in the cervical fracture-dislocation case; the pupil contracts to light and during accommodation, but fails to dilate in a dim light when shaded (Hutchinson); the iris is "the field of a symptom." The heart is one of the parts of the body which has "double different innervation"; it is in the fracture-dislocation case cut off from the accelerator centre, but remains connected with the vagus centre. To say that it is, or rather that it is partially, paralysed, is misleading, especially considering retention of its inherent power of acting.

I have to thank my friend, Dr. Rose Bradford, for looking over the foregoing.

[29] THE LANCET, Dec. 12th, 1896.

[30] The Pulse, p. 89.

[31] Lauder Brunton, Pharmacology, Therapeutics, and Materia Medica, Third Edition, p. 288, writes: "In man the effect of the vagus on the heart is intermediate between that of the rabbit and dog; so that if the normal pulse is between 70 and 80 in the minute, it rises to between 140 and 180 when the vagus is paralysed by atropine (Van Bezold)."

[32] It occurred to me that if the hypothesis of intra-central inhibition, as thus applied in the case of the heart, were valid, excitation of the central end of the superior laryngeal nerve might make the heart beat less frequently by acting on, and increasing the power of, the cardio-inhibitory centre *when the vagi are divided*; for according to that hypothesis increased action of the cardio-inhibitory centre would inhibit (or inhibit more than normally) the accelerator centre. Some experiments on dogs which Dr. Risien Russell made for me show that there is no such result from that excitation in those circumstances.

A NOTE ON THE OCCURRENCE OF METRORRHAGIA AFTER THE MENOPAUSE IN CASES OF OVARIAN TUMOUR.

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DURING the years of menstrual life—that is to say, from the age of puberty, which may be taken as about fifteen years, up to the menopause, which is normally established between the age of forty-five and fifty years—the influence on menstruation exerted by the development of an ovarian tumour is well known. In about one-third of all such cases menstruation is unaffected; as regards the remainder, in the majority there is a tendency in the direction of amenorrhœa, the periods occurring either less frequently or the quantity lost each time becoming diminished, or both these conditions may be combined. In a minority of cases the development of an ovarian tumour is marked by the occurrence of menorrhagia. When, however, we come to inquire about cases where an ovarian tumour commences to develop *after* the menopause, as to whether hæmorrhagic discharges from the uterus may be caused by the ovarian tumour and be rightly regarded as symptomatic of it, we find little or no information on the point in the majority of books to which reference would most naturally be made. Thus, for instance, in the works on the "Diseases of Women" by Barnes, Thomas, Hart and Barbour, and Skene there appears to be no notice of the point, and the same applies to several other works. In West and Duncan's "Lectures on the Diseases of Women" there is an analysis of ninety-four cases of ovarian tumour with reference to the way in which menstruation was affected. It is merely stated there that "in seven

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cases menstruation had ceased before the disease began." Similarly in the "System of Gynæcology" by Allbutt and Playfair recently published there is an analysis of 118 cases as regards this point, and it is mentioned that twenty were cases before puberty or after the menopause, apparently implying that no menstruation or pseudo-menstruation was to be expected as the result of the growth of the tumour in cases of this kind. It may fairly be concluded that the occurrence of bleeding from the uterus after the menopause in cases of ovarian tumour is a somewhat rare event. That this symptom may occur is, however, mentioned by Pozzi in the following passage: "After the menopause congestive phenomena have been noted in the uterus leading to the re-appearance of a more or less irregular bloody discharge, which makes the patient believe menstruation has returned." At this passage there is a reference to a paper by Terrier in the *Revue de Chirurgie*, 1884, p. 1, but on looking up this paper it appears that he is speaking of the appearance of bleeding subsequent to the operation for removing the tumour, which is quite a different thing. The passage by Terrier is as follows: "To resume, in women already aged, accustomed, so to speak, to the menstrual flow, the periods have a certain tendency to re-appear after the removal of both ovaries. But this red discharge only lasts a few months, and is not slow to disappear altogether."[1] In Garrigues' "Diseases of Women," 1894, p. 565, the point in question is clearly but very briefly mentioned. He says: "On the other hand, even after the menopause, new hæmorrhagic discharges from the uterus may occur."

A special importance attaches to the causes of bleeding after the menopause, since in such a large proportion of cases, as is well known, this symptom is due to the presence of a malignant growth at some part of the genital tract. It is interesting, therefore, to keep in mind that this symptom may in rare cases be due to the fact that an ovarian tumour is in process of development. While the tumour is still small, especially in a very stout patient, the occurrence of bleeding after the menopause may not improbably excite a suspicion of cancer. Without doubt in all such cases the possibility of the presence of cancer should always be thought of first, but when cancer has been excluded by careful and repeated examination—and in some cases this is only possible after dilatation of the cervix—it is satisfactory to bear in mind that there are causes for metrorrhagia after the menopause other than cancer, and that the development of an ovarian tumour is in rare instances one of them. The following case is an example of it.

A woman aged fifty-four years was admitted into the London Hospital under my care on Jan. 6th, 1896. She was a widow and had had seven children. She was sent to me by Mr. W. H. Piercy Fox. She had first noticed a swelling in the abdomen about six months previously, but she thought that it might have been present longer without her noticing it, as she was very stout. The swelling in the abdomen had increased very rapidly, she thought, during the last six weeks, so that, in her opinion, the abdomen was now twice the size it was three months before. For the last three months she had suffered very much from dragging pains and general discomfort in the abdomen with dyspnœa. She was only fairly comfortable when lying on her right side. About three years previously the catamenia ceased, and she "saw nothing" for two years. There was then a period of bleeding, some blood coming away daily for six months. Then there was an interval of three months without bleeding. During the last month there had been a continuous red discharge daily. Up to three years previously she had been regular. She had "suffered from her chest and heart" for some years, with a good deal of shortness of breath. On examination the physical signs were those of an ovarian tumour reaching six and a half inches above the umbilicus. The circumference of the abdomen was forty-five inches at the umbilicus. On vaginal examination some brown discharge was seen about the external genitals, and the speculum showed some sanious discharge in the external os, but the cervix appeared normal. The sound passed three inches. Tilting the uterus with the finger gave one the impression that it did not form part of the large tumour in the abdomen.

On Jan. 23rd the patient was anæsthetised with the A.C.E. mixture and the abdomen opened by the usual incision. On opening the peritoneum a good deal of fr e fluid was seen; this was soapy and of thick consistence, and at once suggested that the cyst had burst, as was found to be the case. Most of the loculi of the tumour were small, and the size of the tumour could not be materially reduced by punctuting with the trocar. The incision was therefore extended above the umbilicus, and the tumour removed practically entire. An interesting point was the presence of recent adhesive peritonitis generally over the intestines and, in fact, over whatever part of the peritoneal surface came into view. The patient had had no acute symptoms before the operation, no rise of temperature, acceleration of pulse, vomiting, or more pain than the mere distension of the abdomen would sufficiently account for, and she walked to the operation table. Yet the cyst had burst and the extravasated contents had set up the general adhesive inflammation of the peritoneum above described. I had a similar case about five years ago, where, in spite of the rupture, there were no symptoms. In the present case the peritoneum was irrigated with warm saline fluid, and, a Keith's tube having been inserted, the rest of the wound was closed in the usual way. The tube was removed on the third day, and the patient made an uninterrupted recovery.

Apart from the bursting of the cyst before operation, an interesting point in the case is the return of a sanguineous vaginal discharge after complete cessation of the catamenia for two years. Generally of course after so long a period of amenorrhœa the re-appearance of blood suggests malignant disease of the uterus; but so far as could be ascertained, without dilating the cervix, the uterus in this case was perfectly healthy. It seems certain that the metrorrhagia was to be accounted for by the development of the ovarian tumour exciting a sympathetic congestion of the uterine mucous membrane. I have seen the patient several times during the past year, and since leaving the hospital she has never had any return of the sanguineous discharge, and she remains quite well.

Harley-street, W.

[1] Revue de Chirurgie, 1882, p. 367.

CASES OF STREPTOCOCCUS INFECTION.[1]

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WHERE it is practicable my endeavour is to make an efficient bacteriological examination of every case that possesses evidence of a bacterial nature. The result of an investigation of this kind sometimes actually makes the diagnosis and at other times leads to its confirmation. Consequently, it has a marked influence upon the prognosis and treatment even in the course of ordinary clinical surgery. There can be no doubt that it is an addition to the task of ordinary hospital work, but as experience increases the burden decreases and this collection of evidence becomes part of the ordinary routine work. In cases that are to be treated by antitoxins or in those that are to be published concerning their use or otherwise this examination is a *sine quâ non*.

The histories of the following patients are selected out of a series of cases and they may prove of interest at the present time. In each of the six cases that are reported a virulent streptococcus pyogenes was found. Three of these were treated by the antistreptococcic serum as well as by operative and antiseptic surgical methods. One case was treated by the anti-streptiococcic serum alone. And two were treated by operative and antiseptic surgical procedures alone, which prove that properly conducted surgical means can cure even when the patient suffers from a severe streptococcus infection, whether that infection is pure or mixed. Therefore when a case is treated surgically as well as by the injection of the antitoxin it must not be too hastily assumed that the latter was the cause of the cure.

When reporting such cases as these it seems to me very important to state whether the infection was pure or whether it was mixed, for those cases in which there is a mixture of infection it is not always easy to definitely say which of the infecting organisms is the cause of most or of all the local and constitutional signs. For instance, a streptococcus infection may become super-infected by a highly virulent

[1] The antistreptococcic serum employed in the cases that were injected came from the British Institute of Preventive Medicine.

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staphylococcus and under these circumstances the latter may be, for all we know, the chief cause of the local and constitutional signs. In fact it may become the predominant organism of the mixed infection. There are additional reasons for the separation, one is that the contaminating organism, or organisms, may modify the whole biological conditions, under the influence of which the streptococcus pyogenes exists and operates; and another is that a mixture of infection tends to lower the natural antiseptic properties of the part by further diminishing its physiological resistance. Hence it is not fair to publish the failure of an antitoxin to cure without stating the exact circumstances in which its curative power was tested. Therefore these cases have been divided into those of pure infections and those of mixed infections, and three of each are described in that order.

CASE 1.—A farrier, aged forty-five years, was admitted to the West London Hospital on Feb. 26th, 1896, under the care of Dr. Donald Hood. The patient's family and previous histories contained no positive evidence of importance. The patient had never suffered from gonorrhœa or syphilis, nor had he indulged in alcoholic excesses. On Feb. 22nd, five days before admission, the patient became suddenly ill and complained of severe prostration and one or two severe attacks of shivering. On the same day he complained of pain and noticed redness over the region of the right shoulder. During the next few days he suffered from more attacks of shivering and the right shoulder was blistered. Upon admission the patient was restless and excitable and his manner generally exhibited the premonitory symptoms of delirium tremens. His temperature was 104° F. The pulse was 160 and the urine was clear and free from albumin and sugar and remained so during the course of the illness. During the last few days there was a trace of albumin; streptococci were then sought for, but none were discovered, the urine being sterile. The condition of the skin over the region of the right shoulder was red, slightly swollen, and œdematous; the blister had healed. On March 1st the skin in the following situations was red, somewhat swollen, and œdematous: over the triceps of the left arm and the back of the left shoulder and over the ham muscles of the right thigh, as well as the previously described condition of the right shoulder. The morning temperature was 101° and 105° in the evening. On the 2nd the temperature was 101° in the morning and 105° in the evening. On the 3rd the morning temperature was 101° and the evening temperature 102°. On the 4th another and a similar patch appeared upon the skin over the region of the ham muscles of the left thigh. The tongue was now dry, brown, and transversely fissured. The temperature in the morning was 101° and in the evening before operation 102°. Dr. Donald Hood kindly asked me to see the case and gave it to me to keep under my care. The mental condition was the same and appeared to me to correspond with a similar state in cases similarly infected; fluctuation was demonstrated in the patches of the right shoulder and right and left thigh; there was no joint affection, whilst the local signs of the other regions had subsided almost to disappearance. The patient's work suggested glanders and the diagnosis lay between that and a streptococcus infection, the possible seats of infection being small superficial wounds upon the hands, wrists and forearms, caused by the dropping thereupon of hot cinders that had been blown into the air by bellows whilst he was at work. The patient was isolated until my subsequent bacteriological examination had been made proving it to be a case of streptococcus infection. The same evening the patient was anæsthetised, and after the parts were thoroughly purified incisions were made into the fluctuating areas described above; pus was found collecting in the subcutaneous tissue, but in the right thigh it was extending into and between the muscles. The pus was received into a sterilised tube; cover-glass preparations were made of it, and with it were inoculated tubes of agar, gelatin, bouillon, and potato. The cover-glass preparations were stained after the operation by Gram's method and Löffler's blue. Diplococci and streptococci were demonstrated in short and long chains. A rabbit and a male guinea-pig were inoculated with the pus; the rabbit died in less than twenty-four hours. Diplococci and streptococci were stained in the blood of its liver, heart, and peritoneal fluid. The guinea-pig after being ill recovered. Upon March 8th the media tubes, including the potato, showed a white growth. The gelatin was not liquefied. Streptococci were present and stroke cultures only led to the same result. The streptococcus chains in the fluid medium became much longer and more prolific than in the other tubes. The case was henceforward regarded as a pure infection of streptococcus. The operation of March 4th brought down the temperature, the wounds all did well, there was little or no serous discharge, and no pus or any further indications of inflammation. On March 5th the morning temperature was 99°, that of the evening being 101°. On the 6th the temperature was 98° in the morning and in the evening 100°. On the 7th, 8th, and 9th it was about 99° in the morning and 101° at night. On the 10th, 11th, and 12th the morning temperature was 99° and the evening 103°. During this time the general conditions had improved a little, but none of the areas unoperated upon had completely disappeared. The mental excitability still persisted. As no valuable progress had been made it was decided to inject the anti-streptococcic serum, so in the evening of the 12th 10 c.c. of the serum were injected. On the 13th the morning temperature was 101° and the evening temperature 103°. The patch previously noticed over the left shoulder on this day gave fluctuation; there was no redness. Pus was removed and stained and showed the same organisms as before. In the evening 15 c.c. of serum were injected. On the 14th the temperature in the morning fell, as usual, to 100° and remained there during the day. The patch previously noticed over the biceps of the left arm showed signs of fluctuation; there was no redness. Pus was removed and stained with the same result. After the operation 15 c.c. of serum were injected again. On the 15th, at 2 A.M., the temperature was 103°, at 12 A.M. 98°, and at 8 P.M. 103·6°. In the evening 15 c.c. of serum were injected. On the 16th, at 2 A.M., the temperature was 97°; in the evening 103°. In the evening 10 c.c. of serum were injected. On the 17th the temperature during most of the day was 101°. In the evening 8 c.c. of serum were injected. On the 18th, the serum having had no marked effect upon the patient's temperature or general condition, it was decided to increase the dose and inject it before the evening rise; therefore 35 c.c. were administered at 2 P.M., but at 8 o'clock the temperature was 104°. On the 19th the skin in front of the shoulder and below the clavicle and over the axilla of the right side was noticed to be œdematous and swollen; no fluctuation could be detected, but pus was liberated in a small quantity from the axilla; none could be found below the clavicle. The temperature, which before operation was 103·6°, fell after the anæsthetic and operation to 101°. The morning temperature was 100°. After the operation 30 c.c. of serum were injected. On the 20th the patient's general condition was much worse; in fact, the temperature from this date to the evening of the 24th varied between 103° in the morning and 105° in the evening. Upon the morning of the 26th he quietly died, and before death his temperature was 106°. The amount of serum injected had been 138 c.c. in the six days. The serum used was perfectly clear and sterile and there was never any local sign after its injection. The case was one of general infection, and this dosage of serum did not appear to have had any effect.

Necropsy.—Dr. Turner kindly allowed me to make the post-mortem examination with a view to the bacteriological part of the investigation. The blood from the heart, liver, spleen, and kidneys was subjected to the same tests as was the pus of March 4th and with practically the same result in the case of the blood from the liver and heart, but nothing could be grown upon the media or stained upon the cover-glass preparation of the blood from the spleen and kidneys. The viscera were normal and the microscopical examination of tissues hardened in methylated spirit showed no signs of lardaceous disease. At the top of, and in communication with, the wound of the right thigh there was a pocket of pus that was not detected during life, but it could hardly have been an important factor in the fatal issue of the case.

CASE 2.—A married woman aged thirty years was admitted into the West London Hospital on June 18th, 1896. Upon admission her temperature was 100° F. There were pain, redness, and swelling of the back and front of the right hand and forearm. Pus was just escaping from a small opening over the head of the metacarpal bone of the thumb. This wound was the seat of infection and was made by a splinter of wood whilst scrubbing the floor. Dr. Pardoe, who was house surgeon at the time, enlarged this opening, dressed it with cyanide gauze, and placed the limb upon a splint. On the following day (the 19th) the pain and swelling of the forearm were about the same. The temperature was 102°. On the 20th the temperature in the morning was 100° and at night

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102°. On the 21st the morning temperature was 102° and that at night 104°. Dr. Pardoe asked me to see the case. The patient was evidently very ill and the whole forearm and hand was red and very swollen and œdematous. The tongue was dry and brown, and as it was quite late that night I made cover-glass preparations, stained them, and reserved the necessary operation till the next day. Diplococci and streptococci in short and long chains were again the only organisms stainable by Gram's and Löffler's blue. On the 22nd the patient was about the same, the temperature being 104°. Under an anæsthetic pus was found in front burrowing up the sheath of each finger and that of the thumb and also deep down on the surfaces of the metacarpal bones; also in the forearm pus was burrowing between the skin and superficial muscles, between the superficial and deep muscles, and between the deep muscles and the interosseous membrane as far up as the elbow. Free incisions were made into these areas as well as into the back of the hand and forearm. Over forty incisions were made, varying from one to four inches in length. Two of the biggest drainage-tubes obtainable (three-quarters of an inch in diameter) were inserted into the forearm, one between the superficial and deep muscles and the other between the deep muscles and the interosseous membrane. The limb was dressed as before and placed upon a splint. Before sending her back to the ward 30 c.c. of the anti-streptococcic serum were injected. Her temperature in the evening was 100°. On the 23rd the morning temperature was 99°, and 35 c.c. of serum were injected. The limb looked well and healthy; the skin showed fine longitudinal lines indicating the subsidence of the attack. The temperature remained down until June 27th, when it suddenly rose to 104°, but with no further treatment it came down as quickly as it rose and the patient made an uninterrupted recovery. Passive movement was begun early, and the last time she was seen, Nov. 28rd, 1896, she had very nearly regained perfect movement of her finger, wrist, and thumb. Supination and pronation were normal.

The pus removed from the limb upon June 22nd was subjected to the same test as in the first case; the rabbit died in twenty-four hours with diplococci and streptococci in the blood of the liver and heart and in the fluid of the peritoneal cavity. This case was one of localised streptococcus infection and was subjected to very extensive operative treatment as well as the injection of 65 c.c. of the antitoxin. From the surface of the wounds streptococci were stained during the whole of the healing period whilst the patient was in hospital. The seat of injection gave no sign of local complications.

CASE 3.—A child aged twelve months was admitted into the West London Hospital on Feb. 6th, 1896. The family history and the patient's previous history were practically of no importance. The mother stated that for six weeks the child had been ailing, and for the last three weeks had apparently pain in the back and legs that was more marked upon the child being washed or moved. The pain was more localised to the right leg. Dr. F. H. Low saw the case upon Feb. 6th and immediately sent it to the hospital. Two days after admission a swelling over the lower part of the back was noticed by the mother. The patient was a well-nourished child, cried when moved, and passive movement of the pelvis and legs elicited pain, the movement of the right limb causing more pain than the movement of the left. There was a swelling the size of half an orange over the right sacro-iliac synchondrosis. Its margins were diffuse and there was marked fluctuation. When the child cried it became very tense. No rectal examination was made. The temperature was 101° F. After a thorough purification of the skin of the lower half of the body an incision two inches in length was made immediately over the centre of the fluctuating swelling, ten ounces of pus were removed, and on digital examination of the cavity the fore and middle fingers could easily be passed through a jagged opening in the right sacro-iliac synchondrosis and into a larger cavity beyond that was limited in front by the anterior abdominal wall. The latter could be felt between the examiner's finger and the hand upon the surface of the abdomen. Both cavities were wiped out by sponges wrung as dry as possible out of a 1 in 2000 solution of perchloride of mercury and the wound was sewn up with horsehair. After the operation the child was much collapsed. The wound healed and on the eleventh day the stitches were removed. The pus was inoculated into a rabbit and a guinea-pig; the rabbit died and the guinea-pig recovered. Only diplococci and streptococci could be found upon examining in the same way as before; the cover-glass preparations were stained for tubercle bacilli, but the carbol fuchsine and sulphuric acid gave negative results. On the 18th a fluctuating swelling again appeared over the previous site, but no increase of tension could be detected upon the child crying. The temperature was 100°. An incision into this swelling only liberated serum and no pus. My forefinger could not be passed into the opening through the right iliac synchondrosis. The wound was again sewn up by continuous suture and did not further trouble the child or surgeon. The mother has had two or three alarms since and has brought the child up for examination, but the patient has remained up to the present time perfectly well The serum removed at the second operation was not examined.

This was a case of severe local infection; the source of inoculation could not be detected. The disease probably began as an osteo-myelitis of the bones forming the right sacro-iliac synchondrosis. No antitoxin was injected.

The next three cases are those of mixed infection.

CASE 4.—A man aged thirty-five years was admitted to hospital on June 5th, 1896. The family and previous histories were of no clinical importance. He had not been conscious of being a subject of an infective disease for six years. Then he had an attack of gonorrhœa. The first thing noticed by the patient was that in August, 1895, his penis swelled and a small sore appeared on its dorsum; the sore gradually spread and eventually under treatment (which was of a doubtful nature) it healed. No further trouble was experienced until the end of January, 1896, when his penis again became swollen and another sore appeared near his frænum. The sore remained the same size for a month when it rapidly grew larger and a swelling appeared in the perineum and up the fold between the thigh and perineum. A swelling also appeared in the groin of the left side; this was freely opened, but eventually became a large foul-smelling ulcer. In May lumps appeared in the tibiæ that gradually became quite soft. On admission the urethra was found to be laid open for an inch of its extent, and a ring of skin at its base was the only part of the penis with a cutaneous covering. A large sore with undermined edges and the size of a man's hand was situated above Poupart's ligament. In the right groin was another large abscess; an abscess was also discovered on the dorsum of the right foot. These swellings were opened on June 16th. Fluctuating swellings over the forearms were opened and pus was removed for examination in the same manner as before. Only streptococci could be stained upon the cover-glass preparation; a white growth in two or three days occurred upon all the tubes, but the gelatin was rapidly liquefied; stroke cultivations were made upon gelatin, but all the growth that could be seen liquefied the gelatin and still only streptococci were stainable, and the rabbit inoculated with the pus did not die, but recovered after being very ill for twenty-four hours. (In recently describing the case to an authority it was definitely decided by him to be a case of mixed infection of streptococcus pyogenes, and that plate cultivations ought to have been made instead of the stroke cultures with a view of determining the organism that liquefied the gelatin.) After the operation the large sore in the left groin was more efficiently examined and the forefinger was passed directly downwards and inwards towards the base of the bladder. A catheter was then passed into the bladder, but no communication could be detected between the great cavity in which was the finger and the bladder or urethra. The digital examination caused profuse hæmorrhage, but it was easily controlled by pressure. The No. 12 catheter passed with the greatest ease. In examining by the rectum nothing definite could be detected; rather than any tumour, the parts outside seemed to be more ulcerated. After this examination the patient passed blood in some quantity by the urethra with the urine, but urine without blood escaped from the groin ulcer, a large quantity a day. In the urine passed per urethram were large epithelial cells containing pigment granules. The case was undoubtedly one of extravasation of urine, and, I thought, probably due to the ulceration of malignant disease at the base of the bladder and prostate, and the extravasation the source of the mixed infection. During the whole of this time his temperature varied between 98° F. in the morning and 103·6° at night. Fortunately there was no frequency of, or pain on, micturition, and in the patient's condition it was not thought justifiable to do more than carefully dress his groin and other wounds. No further collection of pus occurred until July 13th, when the skin over the malar bone of the right side was seen to be swollen and fluctuation

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was obtained. This abscess was opened by Mr. Wilmer. To try to eradicate the streptococcus element from the case it was decided to inject the antitoxin, so with the patient's consent on the 16th 10 c.c. of the serum were injected. The temperature remained about the same as before (99° in the morning and 102° at night). On the 17th during the day three injections of the antitoxic serum were made, each of which was of 10 c.c. The evening temperature was still 102°. On the 18th, in the morning another 10 c.c. of serum were injected, but still the patient was not showing any sign of improvement. On the 19th an abscess was noticed on the right frontal eminence and another over the skin of the right tibia, both of which were opened and 20 c.c. of serum were injected. On the 20th, upon the advice of Dr. W. Bulloch a larger dose of 75 c.c. of the serum was injected, but the temperature and general signs continued to get worse. The opened abscesses did not in any way give rise to further trouble, neither were there any complications at the seats of the injections. The patient died on July 26th. The relatives would not allow me to determine the cause of the extravasation or to examine the blood and various viscera for bacteriological evidence. In all 140 c.c. of the anti-streptococcic serum had been injected.

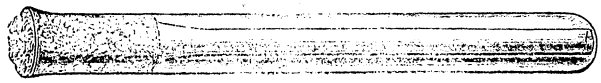
CASE 5.—A girl aged sixteen years attended as an out-patient at the West London Hospital in August, 1896, with facial erysipelas. A small bleb under the left eye was cauterised and cover-glass preparations were made of the contained serum, and a gelatin and a potato tube were inoculated. There was a yellow growth on each. The gelatin was liquefied and plate cultivations showed diplococci, streptococci, and staphylococci. The cover-glass preparations of the pus showed the same when stained. The patient had been ill two days. Upon the first day of her attendance 10 c.c. of the serum were injected. On the next day the rash had spread to the front of the forehead into the scalp and over the nose and chin, the temperature being 101° F. A dose of 20 c.c. of serum was injected. On the following day the rash was still spreading; the temperature was 102°, and 30 c.c. of serum were injected. On the fourth day the rash had spread still further, involving the neck and forehead, and no more antitoxin was given, but the face was getting better. No seat of inoculation was to be discovered. As the disease seemed to be running its usual course and the 60 c.c. of the antitoxic serum did not appear to influence it no more injections were made.

CASE 6.—A girl aged eighteen years was admitted to the West London Hospital on Sept. 18th, 1895. Her family history was unimportant. Since childhood the patient had had a discharge from the right ear. For the previous three weeks she had complained of pains in the head and occasional attacks of vomiting and shivering. The mother stated that for the last three days the patient had been light-headed. On admission her temperature was 102°; she was delirious; there were double optic neuritis and an œdematous, fluctuating, crepitant swelling extending subcutaneously from behind the right ear over the temporal and mastoid regions. Three-quarters of an hour after admission the patient was anæsthetised, and I made a semi-circular incision behind the right ear and upwards to the temporal region and downwards to the mastoid region. From the centre of the incision another was made directly backwards and therefore at right angles to it. The flaps thus made were turned up and down. By these procedures most offensive pus was liberated. No opening into the so-called mastoid antrum could be seen so an opening was chiselled into it; out of this cavity sprang up, as if under pressure, some more offensive but thicker pus. The mastoid process was also chiselled open and pus was scraped away together with the infiltrated cells of the mastoid process. Chiselling still growths back the lateral sinus was well exposed, and as this venous channel was evidently thrombosed it was freely opened upwards and downwards and the same offensive and semi-purulent contents were removed. The limit of the clot was reached in the upper end but not in the lower. The internal jugular vein was next exposed and ligatured and an inch of it excised at the level of the upper border of the thyroid cartilage. No thrombosis had reached this point. She made an uninterrupted recovery. There was no facial paralysis. Stained cover-glass preparations and stroke cultivations made on agar, gelatin, and potato from the blood clot from the lateral sinus demonstrated a very mixed infection of streptococci, staphylococci, and various kinds of bacteria. No antitoxin was administered. I saw the patient last on Sept. 27th, 1896. She was perfectly well with the exception of a slight discharge from the ear. The big hole behind it had to a great extent filled up with bone.

With regard to the cases injected with the antitoxic serum it will be seen that the disease was well advanced in all of them before the antistreptococcic serum was administered. This point is important, and had these cases been treated by the serum quite early, their results might possibly have been different.

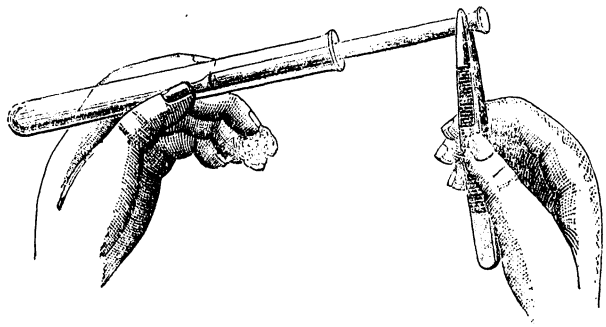
By means of a sterilised test-tube alone it is impossible to collect pus or other fluid without soiling its upper part, thereby setting up connexion that may lead to the contamination of its contents. To eliminate this source of contamination I now use the simple apparatus depicted in the figures. It consists of two parts—an inner or conducting tube, which is only a piece of glass tubing open at the ends and its top made into the shape of a small funnel, placed into an ordinary test-tube and fixed *in situ* by means of the cotton-wool plug with which this tube is stopped (Fig. 1). This precaution is of importance, for unless the

FIG. 1.



inner tube is fixed it will shake about while travelling and crack its host. The whole thing is sterilised together. Fig. 2 demonstrates its method of use. The cavity containing the fluid is opened at its most accessible spot by means of an incision most conveniently directed and its walls are held apart by blunt hooks; the inner or conducting tube is then drawn half-way out of its host and by

FIG. 2.



means of a pair of forceps is held in the cavity at an angle that will permit the fluid to gravitate through it to the bottom of the receiving tube. When a sufficient quantity has been collected the inner tube is carefully and permanently removed, and the tube containing the fluid must be again stopped with its sterilised cotton-wool plug.

Harley-street, W.

A CASE OF ACROMEGALY.

BY ISAAC BANKS, M.D. R.U.I.

I THINK the following case will be of interest especially considering its rapid progress. The patient is a woman aged twenty-six years who has been married four years; she is a nullipara. She has led a regular life and has never had any illness that she can remember except an attack of scarlet fever. Her family history is good, there being no hereditary complaints and no specific history. About eighteen months ago she began to suffer from intense pains in her head, eyes, and legs; the head pain was continuous and most marked in the frontal and occipital regions. The pain in her eyes she described as affecting "the back of her eyes," especially the left, and was increased on movement. The pain in her legs was intermittent; it was most marked in the lower half of both tibiæ and gave the sensation as if her "bones were bursting." She had not menstruated for two months and thought she was pregnant. Her hands

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commenced to swell so that she had to remove one of her rings, and at the same time her boots, which previously were bought ready-made "fives," had to be got to order owing to the increased breadth of her feet. At the same time her hair became much coarser and longer. She came under my treatment nine months ago, having never had previous medical attendance. Her relatives attributed all her symptoms to pregnancy and her mother wished me to examine her for this. Fig. 1 is reproduced from a photograph which was taken three years ago, the other two showing her condition when she first came under my care. Her present condition is as follows. Her face is elongated, oval in form, measuring from the frontal hair to the symphysis menti 9½ in. The left malar bone is very prominent and the left eye appears as if pushed upwards by it. The expression is dull and lethargic. The optic axes are convergant and proptosis of both eyes is well-marked, but both these symptoms vary from time to time. Both eyes are hypermetropic, but the vision varies with the degree of proptosis present. Central vision is lowered in the left eye and the optic papilla is of a pale pink colour; the right eye

FIG. 1.



Shows an active energetic young girl three years before she came under my notice.

has well-marked temporal hemianopia. The eyelids, lips, and nose have a thickened, œdematous appearance; they are firm to the touch and do not pit on pressure. She breathes through her mouth, which is always open. The Schneiderian membrane is hypertrophied. The lower jaw takes part in the general enlargement of the bones of the face and measures from condyle to condyle 14¾ in. When the mouth is closed the upper and lower incisors meet, but the latter do not project. The skin is of a sallow colour, moist, and without pigmentation. At times there are profuse perspirations. The temperature at different periods has been 97·4°, 99°, 98°, and 100·4° F. The tongue and the soft palate are hypertrophied; speech is slow, clumsy, and thickened. The neck is greatly enlarged, especially about the origin and lower portion of the sterno-mastoid. So far as can be determined the thyroid body is normal; there is no evidence of increase in size or persistent thymus. The scapula and the bones of the shoulders are normal, but the sternum is broad and elongated, especially at the junction of the manubrium and the gladiolus, where there is a thick prominent ridge, as can be seen in Fig. 2. The second rib is also prominent and thickened. The breasts are atrophied, and particularly the nipples, which are surrounded by a few coarse long hairs. The cervico-dorsal curve is well-marked — a true kyphosis with no lateral deviation. The abdomen is extremely pendulous, with transverse folds at and below the umbilicus; the girth at the umbilicus is 45½ in. Her waist has increased by 15 in. during the last two years. The splenic dulness seems increased, so far as could be made out; the lower ribs are very oblique and almost touch the iliac crests. The pelvic bones are not enlarged. The hands are greatly enlarged; she has been unable to wear gloves for about two years, and her wedding ring, which was much too large, cannot now be removed from her finger. This enlargement is entirely in breadth and thickness and of the whole hand. The circumference of the forefinger over the middle of the proximal phalanx is 3½ in., that of the thumb at a corresponding point being 3¾ in. The fingers do not taper; the nails are longitudinally striated, broad, thin, and brittle. The palmar folds are well marked; the thenar and the hypothenar eminences take part in the general enlargement, and the entire hand is firm and resistant to the touch.

FIG. 2.



Shows the cervico-dorsal curvature, the pendulous abdomen, and the ridge at the junction of the first and second pieces of the sternum.

There is no loss of strength. The enlargement of the feet is characteristic, but not so well marked as that of the hands. The circumference at the metatarso-phalangeal joint is almost 10½ in. The tibiæ are tender on pressure. The muscles of the arms and the legs are lax and flabby—she says "wasted"—but they do not appear so. The patellar reflexes are absent; the superficial reflexes and the cutaneous sensibility are normal. Her gait is clumsy and she cannot stand erect with her eyes shut. The circulatory and respiratory systems are normal, though at times the breathing is laboured and a little irregular; the appetite is fair, there is extreme thirst, and obstinate constipation is present. The mental condition resembles that characterising myxœdema. She sleeps for twelve hours out of the twenty-four; she appears to suffer from slight sensory aphasia; her memory is at times deficient—she will ask the time repeatedly in the course of an hour. The condition of the genito-urinary system is as follows. She passes in the twenty-four hours from five to seven pints of urine of a specific gravity of 1020 and containing a large quantity of

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phosphates, but otherwise normal. The hair over the pubes is coarse and thick and its distribution is similar to that in the male, being continued upwards to the umbilicus and backwards past the anus; these changes in quality and distribution have developed within the last two years. The external genitals are normal; the vagina is elongated, large, and patulous, easily admitting three fingers. The uterus is small, atrophied, and apparently not larger than a hazel nut. The sound passed a little less than two inches. The ovaries could not be felt. No sexual gratification had been experienced for more than a year.

FIG. 3.



Shows the formation and expression of the face, the condition of the hands, the strabismus, and the upward displacement of the left eye.

The patient has now been under treatment for three months. This consists of one ounce of sulphate of magnesia every second day and a mixture of ten grains of iodide of potassium with twelve grains of bromide of potassium thrice daily. Under this treatment her mental state has materially improved; she sleeps less, her memory is better, and she is able to perform most of her household work, but otherwise her condition is unaltered.

The most noticeable peculiarities of this case are its rapid progress, the change in quantity, quality, and distribution of the hair and the hypermetropia seemingly dependent on the proptosis.

Aberdare.

THE PATHOLOGY OF ECLAMPSIA.

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IN the whole range of obstetric medicine there is no more interesting or fascinating subject than eclampsia and certainly none which presents such a variety of questions for discussion. The physician knows so little of the natural history of eclampsia that he cannot predict the course of any case either with or without treatment. He knows that a great many of the cases are associated with albuminuria and diminution in the amount of urea excreted. He also observes that the condition is most frequently seen in primiparæ, that its occurrence varies in different parts of the same country and in different years and seasons, that when it sets in during pregnancy it is most frequently met with towards the latter months of gestation, but that it is more often encountered at labour and less frequently after the birth of the child. Further, he knows that various post-mortem lesions are met with in the kidneys, liver, lungs, and brain. The clinical history and the morbid anatomy vary in different cases, and there is no condition in which the medical man finds his grounds for prognosis less sure, for, as Professor Tarnier stated at the late International Congress of Obstetrics and Gynæcology at Geneva, eclampsia is a disease full of surprises, cases the most benign in appearance frequently turning out badly, while, on the other hand, the very reverse is often true.

If the treatment of eclampsia is to be at all scientific, if it is to be anything more than merely empirical, it must be based upon some sound knowledge of the causation of the condition with which the physician is called to deal; but before discussing the various views put forward as to the origin of eclampsia I would like to speak of a point of great importance, to which, at least in these countries, too little attention has been paid in considering the cause of eclampsia, and that is the part played by the fœtus. It is surely a very noteworthy circumstance, which personally I have now verified on several occasions and to which notice was first drawn by Winckel, that when the fœtus dies during pregnancy, even in the case of a woman who has what we term the premonitory symptoms of eclampsia, the danger for the mother is entirely overcome or very much diminished. I called attention to this point in a paper at the Geneva Congress introductory to the question of the Treatment of Eclampsia, and in the discussion which followed Professor Morisani (Naples) and Professor Pasquali (Rome) referred to it, the former stating that before deciding on obstetrical intervention it was necessary to ascertain whether the child was alive or not, as he had on several occasions proved that the death of the fœtus put an end to the convulsions and the albuminuria; while Dr. Pasquali said he had found that the death of the child checked the eclampsia, and he confirmed the view put forward by me by stating that this fact suggested the question whether the fœtus does not play an important *rôle* in the etiology of such a dangerous complication. It is known also that in multiple pregnancies there is a greater predisposition to convulsions, and, finally, while the maternal mortality is greatest when the eclampsia sets in during pregnancy, it is less when that complication occurs during labour, and least of all when it occurs for the first time after the birth of the child. It must not be forgotten that the fœtus in its development forms excrementitious or waste products, which must be eliminated by the mother in addition to what she has to get rid of as the result of metabolism in her own system. Various views have been put forward to account for the origin of eclampsia, but they may be grouped under three heads:—

I. *The reflex neurosis theory.*—According to some teachers the uterine nerves are, owing to the enlargement and contraction and retraction of the uterus, kept in a state of irritation which reflexly acts on the renal and sympathetic nerves, causing the albuminuria and the eclampsia; while others teach that the convulsions are reflex, but culminate in a cerebro-spinal centre in close proximity to the albuminuria centre. There are three objections to such an explanation of eclampsia: (1) there is no evidence in support of it beyond the circumstance that the nervous system in pregnancy and during labour is in a condition of high tension or increased irritability; (2) this view fails to explain the post-mortem lesions present in fatal cases; and (3) if the whole phenomena of eclampsia are to be regarded as merely reflex, why do they not occur in every pregnant woman who has a highly-strung nervous system? Reflex action may be a factor in the problem, but it certainly will not explain the whole question.

II. *The kidney view.*—Ever since the time that Lever, in 1842, made his brilliant discovery that in many cases of puerperal eclampsia there is albumin in the urine, the attention of obstetricians has been fixed on the kidneys, and the view has for long held the field that the convulsions are caused by the poisoning of the nerve-centres by certain by-products, urea, creatin, &c., which the kidney, owing to its abnormal condition, fails to eliminate. The arguments in favour of the kidney theory are:—1. In eclampsia the condition of the urine clinically indicates some decided interference with the function of the kidneys. It often contains albumin, blood, renal epithelium, and casts. It is scanty, and at times there is a history of its sudden suppression, and, as Dr. Herman has pointed out, the most constant feature in these cases is diminution in the excretion of urea during the fits. Œdema of various parts

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of the body is noted, and in certain cases ophthalmoscopic examination demonstrates changes in the fundus oculi. 2. The results of post-mortem cases show that often a diseased condition of the kidneys is present, and Professor Leyden thought there was a nephritis specially associated with pregnancy and distinct from all others. He found the kidney in three fatal cases "large and pale, the cortex yellowish and dull. Microscopic examination showed a very extensive loading with fat, especially in the tubuli contorti; to some extent also in the glomeruli and in the Malpighian capsules. The fat was distinctly present in large drops." When the kidneys had remained for a time in spirit the fat in great part disappeared, and then the organs, on microscopic examination, appeared to be normal, and accordingly he inferred that this fatty condition was not a degeneration but an infiltration. His view was that such morbid conditions are due to a prolonged arterial anæmia and that they explain the rapid recovery which so frequently follows delivery. This extreme view that all cases of eclampsia are the result of renal disease is, I think, being abandoned, and the following facts are distinctly against the renal theory of the causation of eclampsia. 1. Every obstetrician now and again comes across cases of this complication in which no albumin has ever been present; nay, even, in some fatal cases, the kidneys are quite healthy. 2. All obstetricians have seen women with chronic renal disease become pregnant and yet never develop convulsions. 3. It is also remarkable that the certainty of the occurrence of eclampsia is not proportionate to the intensity of the albuminuria. 4. It is very rare for convulsions to occur in acute disease of the kidney apart from pregnancy, except in cases where the renal affection is associated with some specific disease like scarlet fever, where there is *already* a poison circulating in the blood. 5. Again, sometimes women die comatose in eclampsia, and yet the amount of albumin present has never been more than a trace. I believe albuminuria is of the utmost importance as a predisposing factor, but I do not think it is the exciting or sole cause of eclampsia.

III. *The toxæmic or blood-poisoning hypothesis.* — As neither of the two previous views covers all the cases of eclampsia, and as serious objections can be brought against them both, modern observers have been inclined to take a broader view of the causation of eclampsia; and the opinion held by many obstetricians at present may be stated in this way. Taking everything into consideration, the most probable explanation of eclampsia is that the convulsions are caused by the action on the nerve centres of a poison which arises as a product of ordinary tissue metamorphosis (elaborated in part by the mother and also by the fœtus), and which, provided it does not accumulate in too great an amount and that the eliminating organs are working properly, is got rid of without any ill effects. If, however, any of these organs (especially the kidney, liver, and intestines) gets too much to do—as when the muscular efforts of labour increase the work of the kidney—then the poison is not eliminated and its increased accumulation affects the nervous centres; or the same thing may occur if the function of the excreting organs is interfered with, as in constipation, or when the kidney is in that condition which Leyden has described as being peculiar to pregnancy, or when there are changes in the renal organs and the liver in the form of a parenchymatous degeneration, produced it may be by the poison in its circulation through them. It is in this way that the presence of albuminuria is of such importance clinically. The high tension and increased irritability of the nervous system in pregnancy and labour and the presence of a source of peripheral irritation in the uterus are also elements of great importance in the problem. This theory of blood poisoning or toxæmia as the cause of eclampsia is supported by the following arguments:—1. It covers all the cases whether there is albumin or not present. 2. The clinical history of eclampsia is that of a toxæmia. "The prodromata," as Kaetenbach puts it—"gastric and cerebral symptoms—the rapid occurrence of serious disturbance in the action of the brain, the post-mortem increase of temperature, the nature and frequency of nerve disorders that follow and which find their analogy in the neuroses consequent upon typhus and diphtheria probably caused by toxalbumins, are scarcely to be explained unless by the theory of blood poisoning."[1] 3. The post-mortem appearances. According to Zweifel[2] multiple thromboses are invariably found in the liver, lungs, and brain in all fatal cases of eclampsia and certainly indicate the existence in the circulation of some blood-coagulating product of organic change—it may be creatin, suggested in 1853 by Wieger and Schottin, and, more recently by Landois, some leucomaine or carbonic acid. Zweifel mentions that the inoculation of creatin into the cortical cerebral matter of apes caused clinical symptoms like those of eclampsia. Chambrelent of Bordeaux showed in a series of experimental researches that the toxicity of the blood is increased both in the fœtus as well as in the mother when the latter has presented symptoms of eclampsic intoxication; and it is worth noting that Professor Tarnier has stated that the better results in his treatment of eclampsia from 1892 until 1896 (when he had twenty-two cases of convulsions with two deaths—a mortality of 9 per cent.) were due to the new treatment he adopted based on Dr. Chambrelent's researches on the toxicity of the blood in eclampsia. At the Geneva Congress Professor Lindfors (Upsala) showed microscopic sections exhibiting changes in the liver cells and also emboli proving the existence of hepatic cells in the floor of the cardiac cavities from a woman dying from eclampsia.

Such is the modern view as to the causation of eclampsia, and considering the extraordinary progress of bacteriology there have not been wanting some to suggest that the ultimate cause of the blood-poisoning is the entrance of bacilli, but up to the present these have not been discovered and all the phenomena of eclampsia can be explained as due to an auto-intoxication. This toxæmic theory is of the utmost practical value, because, acting upon it as a good working hypothesis, it assists the physician in the prophylaxis of eclampsia. It teaches him the enormous importance of the eliminating organs in pregnancy, and when these show any sign of not acting properly he at once puts the patient on a diet such as milk, which gives them the least to do, and which French observers think has the power of getting rid of a quantity of the toxin; and also by hot baths and purgation he encourages these organs to act and so to eliminate the poison.

Belfast.

[1] Text-book of Obstetrics (Norris), p. 632.
[2] Centralblatt für Gynäkologie, Nos. 46, 47, and 48, 1895.

NOTES ON BERI-BERI AS OBSERVED AT THE SEAMEN'S HOSPITAL, GREENWICH.

BY M. H. SPENCER, M.A., M.D. CANTAB.

BERI-BERI is a disease which rarely finds its way into the wards of a general hospital in England, but at the Seamen's Hospital, Greenwich, where patients are received from all parts of the world and of all nationalities, many instances of this disease come under notice. On referring to notes there appear to have been between thirty and forty cases of beri-beri treated in this hospital during the two years 1890 and 1891. The diagnosis in many or most of the cases was "œdema of legs" or "peripheral neuritis," but the description of them leaves but little doubt that they were cases of beri-beri. During my residence in the hospital from January, 1891, to August, 1895, I saw a good number of these cases, but amongst them only one which terminated fatally. I believe that the form of the disease that we see in England is the sub-acute variety, for in the countries where the disease is endemic it is extremely fatal. The average duration of our cases after they came under treatment was about two months. The majority of the patients were Lascars or Zanzibari; a few were Chinamen. Beri-beri is very common in China, but the Chinese form a small proportion of the ships' crews visiting England. As a rule, owing to the difficulty of understanding the patient's language, we got very incomplete histories or none at all. Even those who can speak Hindustani can make little of the Lascars, who generally speak a dialect of their own. In most cases, however, the diagnosis is not difficult even when all verbal communication between medical man and patient is impossible. One cannot help regretting that in many cases the observations with regard to sensation are incomplete, and in other cases where a history might have been of considerable value in clearing up the case, the diagnosis had to be written down with a decided query in front of it.

I do not intend in this paper to introduce long case narratives, but to confine myself to a brief sketch of the disease, illustrated by the chief symptoms which presented themselves in the cases that were under treatment at the

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Seamen's Hospital, Greenwich. Nearly all observers now agree in regarding beri-beri as a disease of the peripheral nervous system. All the symptoms which are observed in the course of the disease are accounted for by this view, and it has been established, moreover, by microscopical examination of the nerves in fatal cases. The symptoms arising from a diffuse peripheral nerve lesion are, of course, varied, and they are seldom all present in a given case. The muscular, sensory, circulatory, respiratory, and digestive systems are all liable to be affected, and it will be convenient in giving a sketch of the disease to consider the symptoms it presents in this order.

The muscular system.—Loss of power in the limbs was present in all cases. The legs were always affected more than the arms. The paralysis was never absolutely complete and it varied much in degree, but in most of the cases when first seen the patient was unable to stand alone without assistance. When tested electrically the reaction of degeneration was generally present. The muscular wasting in chronic cases was very marked, the legs often being reduced to mere sticks. When the patient recovered sufficiently to be able to walk a little the gait was very tottering and slow. In some of the cases it was rather spastic in character, the feet being lifted high from the ground. In most cases the toes were placed upon the ground first, but in one case the heels were brought to the ground first, as in ataxy. Dr. Manson in speaking of the gait remarks: "The patient has to raise the heel very high before he can clear his toes from the floor on advancing the foot. This is due partly to imperfect perception of the ground, partly from the foot flexors being weakened, partly from a certain amount of semi-spastic contraction of the calf muscles. On the foot being placed upon the ground again the toes are seen to be the first to touch it, the sole and heel falling with a flop. If the flexors of the leg and thigh become seriously involved the foot cannot be raised and the gait becomes a shuffle." As in alcoholic paralysis, the extensors suffer more quickly than the flexors and foot drop is therefore a common phenomenon. The weakness of the arms in the cases I have seen was evidenced by feebleness of grasp, but never amounted to actual paralysis. The weakness of the legs and muscular wasting was generally, but not always, symmetrical on the two sides. The paralysis was never accompanied by loss of control over the emunctories. Laryngeal paralysis is said to be common. I saw one instance of marked aphonia, but could not get a view of the cords owing to the swelling of the fauces and soft palate. Ocular paralysis was never present. Cycloplegia was not tested for. It does not seem to have been noticed by writers. The order in which the muscles are attacked has been observed by Pekelharing and Winkler. The muscles supplied by the peroneal nerve are invariably the first to be affected, next the calf muscles, then the extensors of the knee, then the adductors and flexors of the thighs. When the thigh muscles are attacked the hand and wrist muscles, with the supinator longus, are nearly sure to suffer. The knee-jerk was absent in all the cases I saw; it may, I believe, be exaggerated very early in the disease, but is soon lost and is late in returning.

The sensory system.—Anæsthesia is, on the whole, a very constant symptom. It is often difficult to map out at all accurately anæsthetic areas for reasons given above. In a greater or lesser degree it was present in nearly all the cases that I saw, and I have no doubt that if seen early enough and tested carefully every case would have shown some change or loss of sensation. Pekelharing says that the groin and neighbouring surfaces always retains sensibility. Simons found numbness round the mouth to be a common symptom in Japanese beri-beri. The chest appears to be seldom affected. In some of the cases I saw the anæsthesia was general, the lips only retaining their sensibility. The most usual seats of anæsthesia were the lower extremities, especially over the anterior surface and the tips of the fingers. When admitted a patient could seldom perform the rough test of picking up a pin between the thumb and index finger. The return of sensation took place, as might be expected, far more rapidly than the return of power. Hyperæsthesia is as constant a symptom as anæsthesia. Tenderness of the muscles was present in all the cases I saw; it varied in degree; the parts most sensitive to pressure were the calves of the legs and thenar and hypothenar eminences; in some cases tenderness was very marked over the front of the tibia. Besides tenderness painful cramps are present at times in the muscles. There is often tenderness over the nerve trunks. Precordial and epigastric pain is sometimes complained of, with a sense of constriction and oppression in the latter region.

The circulatory system.—Anæmia is present in many of the cases, and by some authors the disease has been put down to anæmia, and has even been considered to be identical with pernicious anæmia or ankylostomiasis. It must be confessed, however, that anæmia may be absent and that the whiteness of the œdematous skin is in some cases mistaken for anæmia. The hæmoglobin percentage falls in some cases to a little below normal, but leucocytosis is not present, and it is probable that the heart symptoms which are so often present are not the result of anæmia, but of a degenerative change of the pneumogastric nerves. The pneumogastric and phrenic nerves were particularly noticed by Pekelharing as those which generally showed signs of pathological changes in fatal cases. The presence of the ankylostomum duodenale is a coincidence, not a cause of the disease; it must be remembered that it is of frequent occurrence in Orientals. Dilatation of the heart was observed in most of the cases. Pulsation of the veins in the neck with enlargement of the area of the heart's dulness to the right often showed that the right ventricle had unusual strain thrown upon it, and this, as we shall see, is one of the dangers which have to be met and treated in severe cases. Absolute dulness in one case extended beyond the right edge of the sternum, whilst the apex beat was outside the nipple line. The cardiac impulse was often feeble and diffused. Murmurs were frequently, though not invariably, present. In several cases a loud systolic bruit was present at the apex partly conducted to the axilla. A systolic murmur over the base of the heart was more frequent. The second sound was frequently reduplicated and this sign was present in several cases in which the murmurs were absent. As convalescence was established the murmurs and cardiac dilatation subsided. The pulse was rapid, feeble, and irregular in most of the severe cases. It was always more rapid in the erect posture and on exertion of any kind. The rapidity of the pulse of a patient who was at rest in bed was looked upon to some extent as an indication of the severity of the disease even in the absence of other bad symptoms, and on the whole I think this opinion was justified. Œdema was present to some extent in the great majority of cases, and in some of them it was very marked. In two cases the œdema was of the hard variety, but before many days had elapsed the parts began to pit on pressure. Occasionally the whole body, trunk, limbs, and face were œdematous, giving to the patient the appearance of one suffering from an attack of acute nephritis. In one case there was considerable swelling of the soft palate and fauces. When the œdema was slight or disappearing it could generally be recognised by some pitting on pressure over the front of the shins, crests of the tibiæ, and front of the sternum. The œdema generally subsided quickly under suitable treatment. Dr. Manson says the œdema may be confined to certain spots, being localised at times to one limb; it may migrate from one part to another. In one type of the disease it is the most striking symptom. Pekelharing and Winkler lay great stress on pre-tibial œdema as an early sign of the disease; if in these cases the electrical reactions of the leg muscles are tested some definite changes from the normal type will, they say, be almost certainly found and a diagnosis be established. Albumin was only found in the urine in one of the cases that I saw. The œdema in this case was very marked and more persistent than usual; this case might have been diagnosed as Bright's disease but for the paresis, subsequent wasting of the muscles, anæsthesia, and localised tenderness. Ascites was not present in any of the cases; it seems to be of uncommon occurrence. The same remark holds good of hydrothorax. It is exceptional, Dr. Manson says, to meet with cases of extreme œdema, which render the patient completely waterlogged.

The respiratory system.—Dyspnœa is a frequent symptom in beri-beri. It may be paroxysmal in character and resemble the dyspnœa met with sometimes in influenza apart from lung complications. This form of dyspnœa was noticed by Graves in the influenza epidemic of 1839, and was no doubt of nervous origin; a similar explanation is probably applicable in beri-beri. When the right ventricle is seriously dilated and hampered in its action a severe form of dyspnœa with cyanosis results, and apart from this form dyspnœa of cardiac origin from failure of the heart's action may be present, accompanied by great epigastric pain and oppression. I saw one instance of this form of dyspnœa in a Chinaman who

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died from the disease soon after admission. The diaphragm or intercostal muscles may be paralysed and thus cause death from interference with the respiration. Besides these nervous and cardiac forms dyspnœa may arise from œdema of the lungs. Some œdema of lung is not an infrequent complication, as evidenced by cough and expectoration of watery, frothy sputum. In the fatal case above mentioned the lungs were very œdematous and the heart was dilated with soft, friable muscle wall. In most cases there is a certain amount of breathlessness on exertion.

The digestive system.—Together with the other organs supplied by the pneumogastric nerve the stomach is liable to suffer. In one case under treatment vomiting was a prominent symptom, but as a rule it is absent. Diarrhœa was present in one case only and was easily checked. Dr. Manson mentions it as not an infrequent symptom at the commencement of the disease.

Temperature.—In the cases we had under treatment the temperature was normal or subnormal throughout. There is a period in the disease at its commencement when the temperature rises to 103° or 104° F., preceded by a rigor; it soon, however, falls to normal. This fact was observed by Dr. Manson during an epidemic which occurred in hospital. I do not think, however, that a rise of temperature at the onset of the disease is a constant symptom. The onset in many cases is most insidious.

Etiology.—In spite of the arduous researches of Pekelharing, Winkler, and others the organism which is the cause of beri-beri has not been satisfactorily and certainly determined. But little doubt, however, remains that it is a germ-borne disease and that the micro-organism which is the cause of it has a specially toxic influence upon the peripheral nerves. Europeans residing in endemic areas but seldom suffer owing to their habits being different to those of the natives. There was an epidemic of beri-beri, however, amongst the British troops in Burma in 1824, so that it is not a "race disease." Takaki believed it to be due to absence of nitrogen in the diet, and after this defect was altered beri-beri almost disappeared from the Japanese navy, but at the same time the hygienic conditions of the ships were greatly improved. Overcrowding seems strongly to predispose to the disease, but it occurs, as Dr. Manson says, not "from overcrowding but in overcrowding." It is certainly more prevalent in some ships than others, owing no doubt to the forecastles in which the crews live becoming infected. It may spring up at sea long after the ship has left port. The incubation period is a long one in some instances, and a slow poisoning may precede acute manifestations just as with alcoholic neuritis. Damp and heat seem to be predisposing causes. It is more common amongst men than women; amongst women pregnancy and the puerperal state have been mentioned as predisposing to it. The most susceptible period of life seems to be between twenty and thirty years of age.

Pathology.—Degeneration of the nerves was discovered in eighty-five successive necropsies made by Pekelharing and Winkler. The microscopical examination of the nerves showed great increase in the number of the nuclei in the endoneurium and often a proliferation of nuclei of the blood-vessels of the nerves. The medullary sheath was destroyed especially near the nodes of Ranvier. The myeline sheath was aggregated into shining granules. At a more advanced stage it disappeared and at a later stage even the axis cylinder was destroyed. In chronic cases there was hyperplasia of the endoneurium of a gelatinous character. The changes found in the cord were few and inconstant. Changes in the muscles of a degenerative kind were nearly always present to a greater or less degree.

Treatment.—Patients suffering from beri-beri should as soon as possible be removed from the infected area. They should be kept carefully at rest in bed in well ventilated rooms, which should be raised above the ground. Great care should be exercised in moving severe cases, for, as in scurvy, sudden heart failure is liable to occur. Treatment should be directed firstly towards strengthening the heart's action and towards the relief of the overloaded pulmonary system. For this purpose a mixture containing sulphate of magnesia, digitalis, and nux vomica seems to be useful. The sulphate of magnesia should be present in sufficient doses to secure free action of the bowels. In the meantime the patient's strength should be supported with suitable diet. Wheat, barley, or beans should be substituted for rice, and some animal food should be taken. Stimulants are best kept in reserve for attacks of syncope. If the right side of the heart is much dilated, as evidenced by pulsation of vessels in the neck, dyspnœa with cyanosis, increased area of the heart's dulness to the right, and reduplicated second sound, free purgation should be employed. Nitro-glycerine may also prove useful in such cases, but if relief does not follow these measures it is best to bleed the patient from the arm without delay. When the affection has reached a chronic stage, with wasting muscles, well applied massage and faradaism may do much to hasten recovery. During convalescence iron and arsenic may be given with advantage.

Geographical note.—In India the disease is met with in the Northern Circars, less frequently on the Coromandel coast, in the Carnatic, and on the Malabar coast. It is exceedingly prevalent in the Malay archipelago and Malay peninsula generally. It is present in Siam, Tonkin, Anam, Cochin China, and to a great extent in Japan. It is less prevalent in China than in Japan. It is present also in and around Calcutta, Assam, Aden, Zanzibar, Réunion, Mauritius, Nosibé, and Madagascar, the Congo and probably the West Coast of Africa generally, the Isthmus of Panama, Cayenne, Cuba, and Guadaloupe.

References.—Davidson's Diseases of Warm Climates; Dr. Patrick Manson; and Pekelharing and Winkler.

PHOTOGRAPHY AND CRIMINAL INQUIRIES.

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To render a medical report of a post-mortem examination as distinct and as easily comprehended as possible is no easy matter. Few possess the requisite skill, and our language, unlike the French, does not lend itself to definite expression. The highest praise that can be given to such an important document is to say of it that the party who reads it has as clear a notion of the injuries therein described as if he had been present and watched every stage of the dissection. Indeed, two different classes of readers have to be catered for—the strictly professional, who alone can fully estimate the value of the technical terms employed, and also those who cannot follow the intricacies of medical phraseology and who desire merely a plain statement as to the cause of death. Take, for example, a simple case of fracture of the skull. It is only a medical man who can intelligently follow the direction of such an injury, winding among the various cranial bones and at each step of its progress involving the use of uncouth names, the etymology of which is shrouded in mystery. In fact, it requires great descriptive power and a happy combination of scientific and popular phraseology to render such injuries intelligible to any but strictly professional persons. But if this is too often a matter of difficulty even to an experienced surgeon, what must it be to a juryman of average ability who towards the conclusion of an exhausting trial in court listens to a document bristling with the jargon of the schools? A judge has declared that the anatomical term, "sacro-iliac synchondrosis" had, like "Mesopotamia," a remarkably satisfying effect on his ear, but it certainly requires a considerable amount of explanation to render it comprehensible to the average mind.

Now, while accurate and clearly expressed reports are of importance so far as the prosecution is concerned, they become doubly so when the exigencies of the defence are considered. The Crown can by repeated precognitions possibly arrive at satisfactory explanations of the leading anatomical and other details mentioned in the medical report, but the defence, in the case of a poor client, has difficulty in obtaining medical assistance; and even when this is available the medical report—the basis of the charge—is too often so worded as to render it impossible even for a skilled witness to understand its full import. Details of most vital importance, as bearing on the causation of the fatal injuries, are too often so indefinitely expressed as to leave grave doubts as to their exact meaning. I have read such documents, full of sounding phrases and apparently teeming with accurate information, and yet which to the practised eye failed egregiously to supply the very information necessary to support the opinion expressed as to the cause of death. Indeed, it may be said that both the Crown and the

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defence are at the mercy of the medical reporters, who, however honest and desirous of discharging their important duty, fail from want of experience and of power of expression to give a clear description of what was found on dissection. This, while specially to be feared in country districts where the opportunities for medico-legal practice are rarely afforded, is met with alike in town and country. I remember the first official dissection at which I was present. Associated with me was a senior member of the profession. It was a case of exposure of a newly-born infant. After what seemed to be an ordinary investigation, yielding no very definite results beyond establishing the fact that the child had survived its birth, it was luckily proposed to examine the throat, when a mass of soft dough was found accurately fitted to the upper strait of the air-passages and moulding itself into the interior of the larynx. This satisfactorily explained the death, and was described by my co-inspector, who dictated the report, as a "doughy mass in the pharynx." It so happened that at the time there was a public scare as to a new and formidable disease—viz., diphtheria—which, unfortunately, has never left us. Our report was read by the authorities as indicating death from natural causes, "the doughy mass in the pharynx" being looked upon as a graphic description of an unusual disease. But, in the language of correct description, "the doughy mass in the pharynx" became a mass of dough in that important cavity. The mistake was accidentally discovered; but in the detection of such a crime allow a few days to elapse and the best directed efforts of skilled officials are of little avail.

The remedy I propose for all this uncertainty is the more general use of photography. At present this is limited to the identification of the criminal, but with the unusual facilities now afforded for the practice of this popular art I hold that it should be extended to all departments of criminal inquiry. In the case just cited two photographs would have been of great interest—one showing the placid features of the deceased and the care that had been taken to shut the lips, the other representing the actual position of the foreign body occluding the entrance to the air-passages. Every county constable, in my opinion, should be provided with a camera, by means of which he could indicate with unerring accuracy the attitude of a dead body and its relations to surrounding objects.

The records of medical jurisprudence afford numerous examples of the importance of determining the position of the body and that of the weapon. This has frequently settled the question of accident, suicide, or murder. No doubt in our police regulations it is laid down that no dead body is to be moved until a medical man has inspected it; but in remote districts of the country, and even in our larger towns, medical assistance is not always available at once. A photograph in such circumstances would be invaluable and would put an end to discrepancies of otherwise trustworthy witnesses as to such simple facts as those connected with the disposition of a body. When the death has occurred in a house it might be of essential importance to determine the position of the body on a bed and its relation to articles on the bed or in the room. I need not insist on the benefit to be obtained in cases of murder and even in those of aggravated assault from at once taking a photograph of the *locus* before any of the furniture is moved, as one of the important questions in such cases relates to the presence of some article of domestic use which might furnish a plausible clue to the causation of some special injury. No doubt in such cases plans of the *locus* are in some instances implied and the furniture may be subsequently arranged as on the fatal night. The element of uncertainty, however, remains and might be avoided by the early use of the camera.

But I go further, and I urge, as a medical jurist, that in every important dissection the assistance of photography should be provided. I believe it was in the Monson case that it was first applied during successive stages of an actual dissection. The circumstances were peculiar. The body had remained for some time unburied, had undergone a long railway journey, and had been interred for nineteen days. Under these circumstances the skin quickly decays and is easily destroyed by a slight touch. Advantage was taken of photography to preserve the appearance of the flesh wound that existed on the neck and which indicated the size and direction of the original superficial injury. Another photograph determined with accuracy the extent of laceration to which the ear had been subjected, while a third showed the amount of shattering of the skull and a fourth the condition of the surface of the brain. Thus every stage of the dissection from without inwards was carefully followed and accurately delineated in circumstances of great difficulty. But although night had set in before the examination was finished the magnesium light afforded perfect definition in the various plates. Of course, the defence benefited by those illustrations and the medical report itself was in consequence much curtailed by simple reference to the various photographs, which were admitted as evidence and included in the list of productions in the case.

Numberless are the applications of photography to forensic medicine. A few of these I have alluded to. I am confident that while the detection of crime will be greatly aided by its use the administration of justice in its widest signification, as protecting the innocent and enabling the accused to bring forward every circumstance that can be urged in his favour, will be materially strengthened.

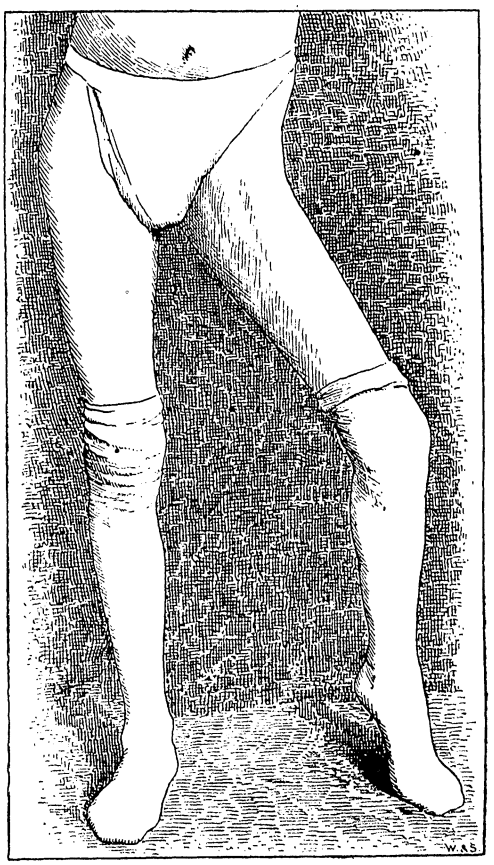
Edinburgh.

A CASE OF UNREDUCED DISLOCATION OF THE HEAD OF THE FEMUR INTO THE OBTURATOR FORAMEN TREATED BY EXCISION.

BY G. R. TURNER, F.R.C.S. ENG.,
SENIOR ASSISTANT SURGEON, ST. GEORGE'S HOSPITAL.

A MAN whilst at sea dislocated the head of the femur and was not treated till eight weeks afterwards at a hospital at Santos. Attempts at reduction were made, both with and without an anæsthetic, but unsuccessfully. On his way back

FIG. 1.

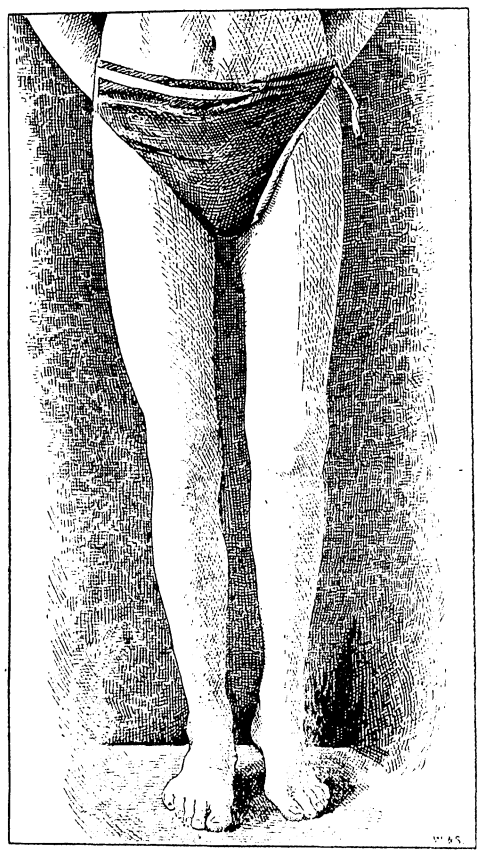


The position before operation. The patient could not, however, stand to be photographed without support, as was shown in the upper (omitted) part of the photograph.

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to England reduction was again attempted under an anæsthetic with block and tackle. He was admitted into the Seamen's Hospital, Greenwich, more than three months after the accident, with the left lower limb considerably flexed and everted, the pelvis tilted and buttock flattened. The thigh could be flexed on the abdomen but could not be extended. Both internal and external rotation were limited to less than half their extent. The head of the femur could be felt almost in the perineum and the great trochanter about the centre of the buttock. There was shortening of one and a half inches, and when standing upright the great toe of the left foot did not quite touch the ground, the heel being drawn up and the foot everted (Fig. 1). The patient could only limp and hobble about with a stick. The head of the bone, which was found lying to the inner side of the obturator foramen, was excised on Feb. 18th, 1896. Several contracted bands of fascia and muscle in front of the thigh required division before the limb could be straightened. The head of the femur was found to be denuded of cartilage for about half its extent, and there had obviously been considerable damage done to the parts round the joint by the accident and the previous attempts at reduction. The present condition of the patient is satisfactory. He is able to walk about all day without pain or tiring and his leg is straight with his body. There is a little over two inches shortening, the limbs measuring thirty-six and a half inches and thirty-four and a half inches respectively (Fig. 2).

FIG. 2.



The position after operation. The patient stands alone and is very little inconvenienced by the two inches of shortening.

The scars in the perineum and groin are quite healthy. There is no movement at the hip and practically no eversion when the patient is lying down, though he throws his foot outwards a little when walking.

Green-street, Park-lane, W.

MEDICAL MAGISTRATE.—Mr. John R. Fox, M.B. Melb., has been appointed a Justice of the Peace for the Southern Bailiwick, Victoria, Australia.

A CASE OF SCARLET FEVER TREATED BY ANTI-STREPTOCOCCIC SERUM.

BY A. KNYVETT GORDON, M.B., B.C., B.A. CANTAB.,
ASSISTANT MEDICAL OFFICER, SOUTH-EASTERN FEVER HOSPITAL (METROPOLITAN ASYLUMS BOARD).

A VIGOROUS boy aged six years was admitted to the South-Eastern Fever Hospital on Nov. 17th, 1896, certified as suffering from scarlet fever. There was a history of vomiting and sore-throat on Nov. 14th, "rash all over" on the 15th, and nasal discharge on the 16th. On admission the boy was semi-comatose, the face was pale, and the respiration stertorous; the trunk and limbs were covered with a characteristic punctiform eruption, which was crimson in the groins but elsewhere dusky—almost purple, in fact; there was commencing desquamation on the face; the pulse was only just perceptible at the wrist and could not be counted. The tonsils and palate were much swollen and brightly injected; there was some viscid blood-stained mucus covering the mouth and fauces, but when this was cleared away the tonsils were seen to be free from any deposit. The temperature was 104° F. He was ordered milk and eggs only, with two ounces of brandy in the twenty-four hours. On the next day (Nov. 18th) the temperature varied from 103° to 101·5°, the pulse was very soft (140), and there was superficial ulceration of both tonsils, but less swelling and no deposit or sloughing. The heart and lungs were normal. On the 19th the temperature was 103°; the rash was not so dusky, and there was slight general improvement, the patient taking milk more willingly. There were well-marked urticarial wheals on the chest. On the 20th the child was much worse; the rash was very dusky, the fauces were dry and offensive, the ulceration was very slight, there was less swelling, and a little soft deposit on the ulcerated surfaces. The temperature was 103° and the pulse was 180. The heart was dilated to two fingers' breadth outside the nipple line and to mid-sternum; the first sound was very faint and there was no murmur. A fresh specimen from the fauces showed streptococci and staphylococci, no bacilli at all, and none on cultivation. There was diarrhœa. Ten c.c. of the *sérum antistreptococcique* of the Institut Pasteur were injected under the skin of the abdomen at 5 P.M. The brandy was increased to three ounces. On the 21st the temperature was 103° and the pulse 106 and much stronger; the fauces were less offensive, and there was less swelling. The heart extended from mid-sternum to just outside the nipple line; there was a better first sound. Another 10 c.c. of the serum were given at 12 noon. On the 22nd the temperature was 99·5°; the fauces were clean and not offensive; there was very slight swelling; the pulse was 96 and of much better tension. There was no urticaria, the scarlet rash was fading, and there was free desquamation. On the 23rd the temperature was 98° and the child was intelligent, answering questions, and hungry. He was ordered bread-and-milk and the brandy was omitted. On the 24th the left membranum tympani was red; there was a small perforation in the anterior inferior segment discharging odourless pus. The temperature was normal. He was ordered bread-and-butter and pudding. On the 28th he was sitting up in bed and had fish diet. On Dec. 2nd he was given mince diet. On the 3rd he was up in blankets and on the 12th he was up in clothes.

This case has seemed to me to be worth publishing on account of the rapidity with which the improvement followed the administration of the serum. On admission the child seemed moribund, but he rallied from the effects of the journey in the ambulance and commenced to improve a little till the seventh day of the disease; then he grew rapidly worse and was to all appearances dying from septicæmia. He was semi-comatose, with a failing heart, dusky rash, and diarrhœa. After one dose he rallied, and after the second a rapid improvement took place and was maintained, his convalescence occurring very much sooner than is usually the case with patients who have had any septic symptoms.

With regard to the indications for the use of the serum in scarlet fever, I would suggest that it would be valuable in any case that becomes septic, whether the signs exist from the first and are not in proportion to the severity of the throat symptoms—as in this case, where the throat was not

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severely affected—or whether the condition is due to absorption from a sloughing throat or nose—the more common occurrence. In the latter case improvement often begins when the throat is vigorously attacked by constant swabbing with chlorinated soda or some other germicide, but I do not know of anything that has much effect when there is septicæmia with a moderately severe or even a mild throat. In this case the only drug given was brandy, and I do not think the remarkable improvement could be attributed to the stimulant only.

I am indebted to Dr. F. M. Turner, medical superintendent of the hospital, for permission to publish the case.

A NEW METHOD FOR LOCALISING BRAIN LESIONS.

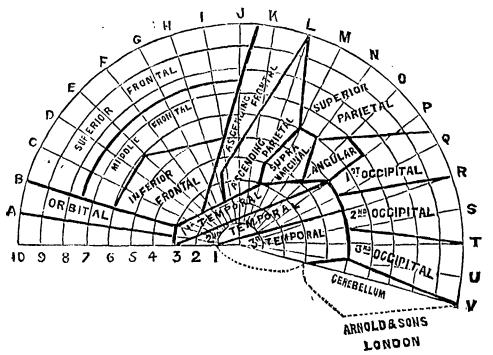
BY ROBERT H. COX, F.R.C.S. IREL.,
SURGEON TO THE IMPERIAL MARITIME CUSTOMS, CHINA.

THAT there is need for a more perfect method of locating the important areas of the cerebral cortex on the overlying surface of the scalp will, I think, be admitted by all, seeing that most of, if not all, the methods generally employed are either limited in their scope or complicated in their application, and many give rise to error by the use of a standard measure—the inch or the centimetre—for varying surfaces. The method which I am about to describe will, I think, be found devoid of these objections. For its use two things are necessary—viz., (*a*) an instrument which I have invented and called (for want of a better name) a cerebro-graphometer; and (*b*) a diagrammatic map of a hemisphere of the brain, prepared from readings made by the use of the same instrument on the cadaver and on casts of the brain *in situ*. This latter may, however, be replaced or augmented by a list of indices made in the same way.

[The author has prepared such a "list of indices," showing in much detail the correspondence between the letters and figures marked on the instrument and various regions of the brain—namely, motor centres (nine in number), sensory centres (hearing and sight), special convolutions (fourteen in number), special fissures (those of Rolando and Sylvius), the middle meningeal artery, and the cerebellum.]

The instrument itself consists entirely of the mechanical device known technically as "lazy tongs" formed into a circle with two accessory loops. The circle or base contains twenty-eight fenestræ and has attached to it

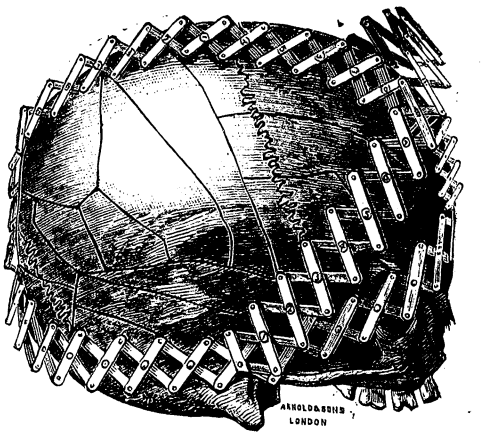
FIG. 1.



A diagrammatic map (on a gnomonic projection) of the external surface of a hemisphere of the brain, showing the boundaries of the lobes and convolutions and the lines of latitude and longitude corresponding to the engraved rivets of the instrument.

externally at four equi-distant parts the two accessory loops by their end rivets (excepting at one place, where the attachment is at the rivet third from the end) in such a way that the loops arch over the circle at right angles to each other, while at the same time they are capable of a hinge-like movement. One loop bears on its central rivets the numerals, beginning at each end with 1 and ending in the middle with 10; while the other loop has the letters A and V in consecutive order from before backwards, the rivet marked T being that connecting the loop with the circle behind. The map (Fig. 1) is made on a gnomonic projection with the radii, or longitudinal lines, marked by letters, and the semicircles, or lines of latitude, by numerals, both of which correspond with the engraved

FIG. 2.



The regions enumerated in Fig. 1 are here projected on the right side of the skull. The illustration also shows the instrument in position for localising.

loops of the instrument. Fig. 2 represents the instrument in position for localising.

To use the instrument it is necessary to extend it in all parts and apply it to the human head, with the rivet forming the junction of the lettered loop with the circle (below that marked "A") on the glabella and the rivet marked "V" (at the extreme end of the same band) to the occipital protuberance, when the loop between these two points should be pressed down to the skull in the middle line; while the circle is also closed on the skull on such a plane that the central rivet, marked 10, of the numbered loop shall lie on the middle line, as shown by the lettered loop. The instrument is thus fixed to the head by the circular band and the lettered loop, while the numbered loop is capable of moving backwards and forwards with a hinge-like motion, during which motion each numbered rivet describes a semicircle of latitude, and the portion of the same band from one of the fixed rivets to the numeral 10, as it extends to each letter, will give the radii of longitude. With the instrument thus in position, to find any given region—say, Broca's lobe—it is only necessary to consult either the map (Fig. 1) or the list of indices for the bearings there given, as $\frac{C}{4}$ (left side), when by moving the 10 of the numbered loop forward to "C" and pressing it down on the scalp the numeral "4" will lie over the part. Rolando's fissure may be found in a similar way by locating each end and joining the two points by a straight line. Localising by this method may be thus summed up: 1. Application of the apparatus. Extend the instrument and apply the end of the lettered loop marked "V" to the occipital protuberance and the other end to the glabella, then press down the loop to the scalp in the middle line. Close the circle round the head so that the 10 on the numbered loop will lie on the lettered loop. 2. Location of part sought for. Consult either the map or the list of indices for the bearings. Place the number 10 on the letter of longitude and press the numbered loop down, when the number of latitude will rest over the part sought for.

Having thus shown the simplicity of the method, for the carrying out of which no recourse need be had to the science of mathematics in any of its branches, and the almost automatic action of the cerebro-graphometer, I would now ask attention while I try to explain its accuracy. As may be seen at a glance, the instrument is equally applicable to all sized heads and forms its own unit of measurement for each, thus eliminating the errors due to the use of standard measure for a varying surface. The two fixed points taken are easily found and are those which have proved most reliable—the glabella and the occipital protuberance. The circular band is placed on that plane of

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which Professor Fraser, in his "Guide to Operations on the Brain," has written: "And, finally, the keynote of all the remarks which are to follow is this, that for normal heads after birth the position of any structure of importance in their cavities varies proportionally with the variations of the circumference as given by the circumferential tapes of the respective heads." If this be true, or even approximately so, it points to this plane as the one most likely to afford the minimum amount of variation in the relative position of the cranial contents. Of course, as the markings of no two brains are the same, therefore no mechanical method can give perfect accuracy; but I hold that this method is the nearest approach yet to that goal, which, indeed, seemed to be reached with regard to Rolando's fissure in the only cases which I had an opportunity of testing it. That some of the bearings given may not prove to be the average when tested by others I am prepared to find, seeing that the material at my disposal has been very limited; but the investigation of those whose opportunities are greater would soon remedy this; yet in no case do I expect the average of others to vary from my own to such an extent as may not be included in the circle of an inch trephine. In conclusion, I would add that the cerebro-graphometer is compact, light, durable, and capable of being rendered aseptic by boiling. Messrs. Arnold and Sons, London, are the makers.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

A CASE OF ACUTE HÆMORRHAGIC PANCREATITIS; FAT NECROSIS OF THE OMENTUM; LAPAROTOMY; NECROPSY.

(Under the care of Dr. L. A. PARRY, Mr. L. A. DUNN, and Dr. G. NEWTON PITT.)

A STOUT man aged sixty years was admitted on Aug. 25th, 1895, into the paying ward of Guy's Hospital under the care of the resident medical officer, Dr. L. A. Parry, for constipation and vomiting accompanied by abdominal pain. Thirty years previously he had had an attack of inflammation of the bowels, for which leeches had been applied to the surface of the abdomen, and a year before admission to hospital he had had an attack of rheumatic fever. On Aug. 18th he had a slight attack of abdominal pain, which soon passed away. On the 21st he was suddenly seized with acute pain in the epigastric region, which spread over the abdomen and was accompanied by sickness, the act of vomiting requiring some effort. Absolute constipation ensued; no fæces or flatus passed, but some fæces were removed with an enema. The abdomen became distended. Previously to this the bowels had been opened daily. He vomited throughout the 22nd and the 23rd, but when solid food was stopped and only liquid allowed in limited quantities the vomiting abated. The pain of which he had complained was readily held in check with morphia. On admission he was not at all collapsed; his pulse was 70 per minute, regular, and of rather high tension; the temperature was 99° F., and the tongue moist. The abdomen was uniformly, but not greatly, distended; there was no tumour or other abnormality to be detected either by percussion or palpation. There was a dull, aching pain over the abdomen, which was slightly tender on pressure. The rectum was empty and normal, no hernia could be detected, and the urine on examination was found to be normal. He vomited up small quantities of bile-stained fluid, free from any foul odour. Mr. Dunn, and afterwards Dr. Pitt, were called in consultation. A diagnosis of acute intestinal obstruction without strangulation was made. Internal strangulation was negatived by the absence of collapse, and the same reason, together with the absence of distension, excluded volvulus. None of the ordinary symptoms pointed to intussusception. Obstruction from an impacted gall-stone, inflammation in the upper part of the small intestine, and a complete, following upon a chronic, obstruction were discussed, but the history did not definitely indicate any of these. It was thought that the symptoms were not sufficiently urgent to require immediate laparotomy and that they might subside under treatment. He was ordered a pill containing a quarter of a grain of extractum belladonnæ every four hours. He was fed with nutrient enemata and his mouth was washed out frequently with acidulated water. A soap enema was administered and a small quantity of soft fæces of normal colour was brought away. This treatment was continued for eighteen hours. On the 26th he seemed much better, the sickness had ceased, the pulse-rate was 88, the temperature 100°, and forty ounces of urine had been passed, while the pain and distension had not increased. He was now allowed two drachms of peptonised milk every half hour; this was at once followed by vomiting of bile-stained fluid; small doses of soda-water produced the like result, so after twelve hours everything by the mouth—including the pills, which appeared to be causing slight delirium—was stopped. Soon the vomit consisted of intestinal contents and over a pint of foul bile-stained fluid was brought up. The abdomen became more distended and the patient complained of great weakness. On account of the increasing gravity of his condition it was felt that an exploratory operation should be no longer delayed. At 11 A.M. on the 27th Mr. Dunn performed a median laparotomy; coils of distended small intestine presented in the wound; the hernial rings, the appendix, and the gall-bladder were examined and found to the normal. The large intestine was collapsed, but no seat of obstruction could be found. The small intestine was opened and a Paul's tube tied to drain its contents. The operation lasted fifty minutes. Very little gas or fæces escaped by the tube. After some time he vomited up a quantity of foul intestinal contents and died at 3 P.M.

Necropsy.—A post-mortem inspection limited to the abdomen was made next day, where extensive decomposition had already taken place, precluding any bacteriological research. All the intestines, both large and small, were distended. The ileum had been opened six feet above the ileo-cæcal valve. Nothing abnormal was noticed until most of the intestines had been removed, when numerous small white and orange-coloured spots were noticed dotted over the mesocolon not far from the pancreas, but none elsewhere. The abdomen was free from peritonitis. The pancreas was found to be very large and indurated. On section this was found to be the result of infiltration with blood, which was already partially decolourised and was of some days' duration. The fat in the neighbourhood of the organ for a distance of two inches was dotted with areas of fat necrosis, many spots being stained of an orange colour; but the necrotic areas were not immediately contiguous to the pancreas, and at some distance from one another they were also discrete. The pancreas measured seven inches long, one and three-quarter inches vertically, and an inch and an eighth antero-posteriorly. When hardened the pancreas showed large necrotic areas, in which all the nuclei failed to stain, while the tissue was also infiltrated with blood. The adjacent portions of the pancreas appeared normal and practically free from any cell infiltration or evidence of irritation or inflammation. Calcareous salts appear to have deposited in the areas of necrotic fat.

Remarks by Dr. NEWTON PITT.—This case is an extremely instructive one and illustrates the great if not insuperable difficulty some of these cases present in diagnosis. The primary lesion appears to have been an acute necrosis of the pancreas with hæmorrhage. The symptoms presented by the patient, who had previously enjoyed good health and gave no history of any injury, were a passing attack of abdominal pain on Aug. 18th, and on the 21st an acute attack of abdominal pain with sickness and constipation. These continued for four days until he came under our observation. When admitted the pulse-rate was 70, there was no collapse or evidence of either peritonitis or intestinal strangulation. The symptoms appeared to point to intestinal obstruction, and at first, at any rate, the patient's condition did not appear to be one of urgent danger, and it was thought that the symptoms might subside if the stomach could obtain absolute rest. Had Mr. Dunn performed laparotomy at this early stage it is doubtful whether he would have

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discovered anything abnormal, as the fat necrosis was limited in amount and was not observable even at the necropsy until most of the intestines had been removed. Under treatment the vomiting ceased for eighteen hours, but returned as soon as food was administered by the mouth, and although the patient was again fed for twelve hours by the rectum only, he rapidly became weaker, the pulse ran up to 88 and was very small, the temperature to 100°, and it was obvious that unless the condition was one that was relievable by operative means he would die.

Since Dr. Fitz's Middleton-Goldsmith Lectures on Acute Pancreatitis in 1889, when he collected fifty-four cases besides sixteen cases of extensive hæmorrhage in the region of the pancreas, several cases have been reported, and the lesion must be much more frequent than was previously supposed, as Dr. Thayer has within the last six years observed six cases on the post-mortem table and one at operation. The symptoms which Dr. Fitz found to be most characteristic of acute pancreatitis were sudden and severe epigastric pain without obvious cause, followed by tenderness, vomiting, slight pyrexia, flatulent distension of the abdomen, and complete constipation. These were all noted in the present case. Of the remaining symptoms which he considered characteristic—viz., collapse, prostration, feeble pulse, and the presence of a resonant area with deep-seated resistance lying between the umbilicus and epigastrium and evidences of deep-seated peritonitis—the two latter were never present, and the former only within the last few hours of life. Thayer in 1895 published what he considers to be the second case reported in literature in which a correct diagnosis of acute pancreatitis was made, and the first in which the diagnosis was followed by a successful operation. He also refers to three cases published by Körte, Atkinson, and Cutler, in which an ante-mortem diagnosis was made. The cases in brief are as follows. Thayer's patient was a man aged thirty-four years who had had three or four paroxysmal attacks of epigastric pain with some pyrexia; the presence of a tympanitic tumour in the region of the pancreas was noticed, which, when drained, proved to be a para-pancreatic abscess. Körte has operated upon two cases of hæmorrhagic suppurative pancreatitis, the first of which he diagnosed as an abscess of the pancreas, which he drained, the man dying eight days later. He was aged thirty-seven years, and his illness commenced with sudden severe abdominal pain. The second case was that of a woman who had complained of sudden severe abdominal pain with increased abdominal resistance in the region of the umbilicus. An internal strangulation was diagnosed. When laparotomy was performed a pancreatic abscess was found, which was drained, and the woman survived for twenty-eight days. Atkinson reports the case of a woman aged thirty-five years with a history of attacks of hepatic colic for fifteen months. When seen she had been worse for nine weeks; her urine contained a trace of sugar and there was some pyrexia. She had diarrhœa and vomiting and a tumour above the umbilicus three and a half inches across. The diagnosis was a stone in the common duct with a pancreatic abscess. She died after twelve weeks. Cutler reports a case of a stone impacted in the common duct and hæmorrhage around the pancreas. Fat necrosis was also found with blood-stained fluid in the peritoneum.

In considering the difficulties of diagnosis the group in which there is a tumour in the region of the pancreas, form a comparatively easy group, which, now that attention has been drawn to their occurrence, should generally be capable of accurate diagnosis. A second group is that in which there is evidence of a stone impacted in the common duct, and a third where there is a definite history of abdominal injury, probably affecting the pancreas. Cases which do not fall within any of these groups can but very rarely be diagnosed, as the symptoms are suggestive but not distinctive. The cases of successful diagnosis which have been published belong to one or other of the above groups, with but two or three exceptions. Yet none of the writers have drawn attention to this. In the present instance pancreatitis ought to have been one of the conditions borne in mind, but a positive diagnosis would not have been justified; this uncertainty is also illustrated by the two following cases which have occurred within the past year with practically identical symptoms. The first was a woman aged fifty-eight years, who was seized with sudden abdominal pain, which came and went in paroxysms, abdominal tenderness, vomiting which at first increased in severity, but was relieved when all food by the mouth was stopped, constipation after the first day, a pulse of 100, and subnormal temperature. For some days the patient's condition did not appear to be one of great gravity as there was no collapse and the pulse remained fair; but upon laparotomy a gall-stone was found, as was suspected, obstructing the ileum and was removed. The second case was that of a man aged forty-nine years, who was about to leave the hospital convalescent from an attack of abdominal colic when the pain returned severely and was accompanied by tenderness, vomiting, and complete constipation. The temperature varied from 100° to 103° F. He became very prostrate, collapsed, and his pulse was 114. There was a markedly increased resistance and tenderness in the abdomen above the umbilicus. He died at the end of six days, when an acute membranous enteritis was found involving some six feet of the jejunum and ileum. The symptoms in all three cases were very similar, but in none would a positive diagnosis have been justified. The causation of these cases of acute pancreatitis has yet to be determined. Possibly, as has been pointed out, the process may be an acute infective one similar to that affecting the parotid in mumps, or it may be an inflammatory process spreading to the duct from the gastro-duodenitis. Some cases are undoubtedly due to traumatism and others to secondary changes ensuing on impaction of a calculus in the duct. With regard to the fat necrosis which is so commonly associated with the pancreatic disease, the affected areas are generally irregularly distributed, and it is probable that in many cases, and almost certain in most of those associated with traumatism, that it is due to contact with extravasated pancreatic secretion. The view that the necrosis is the result of a trophic nerve influence remains unconfirmed by further experience.

Literature.—Fitz: Medical Record, New York, vol. xv., pp. 197, 225 and 253; Thayer: American Journal of Medical Sciences, vol. xc., p. 396; Atkinson: Journal of the American Association, 1895, vol. xxiv., p. 999; Korte: Semaine Médicale, April, 1895, p. 193; Cutler: Boston Medical and Surgical Journal, 1895, vol. cxxxii., p. 354; Rolleston: THE LANCET, March 14th, 1896, p. 705; Langerhans: Berlin Medical Congress, 1891, and Festschrift, R. Virchow, Berlin, 1891; Cayley: Brit. Med. Jour., 1896, vol. ii., p. 1; Kennan: Brit. Med. Jour., 1896, vol. ii., p. 1442.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

A CASE OF NECROSIS OF THE OS CALCIS IN A CHILD; OPERATION.

(Under the care of Mr. EDMUND OWEN.)

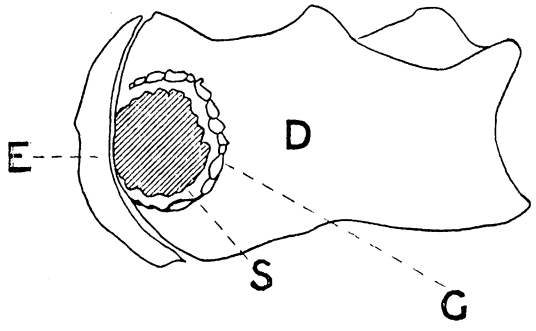
For the notes of this case we are indebted to Mr. G. Templeton, surgical registrar to the hospital.

A boy seven and a half years of age, the son of a labourer, was admitted to the Louise Ward of the Children's Hospital on Nov. 19th, 1896. His mother said that he had "rheumatic fever" in December, 1895, but he had had no other illness. After this so-called rheumatic fever—which was in all probability a severe attack of pyæmic necrosis—an abscess formed over the back of the lower end of the left ulna, and for fourteen weeks subsequently the child was an in-patient at a country hospital. He was a delicate-looking boy. The right leg was swollen and unhealthy and along the inner aspect there were seven sinuses leading down to the tibial diaphysis, which seemed to be necrosed throughout. This was surrounded by an involucrum of new bone which had given way a little above the middle of the leg. Another sinus existed over the inner side of the right os calcis, through which a probe could be passed to the bare bone. The lower third of the left tibial diaphysis was also necrosed and was surrounded by an involucrum through which two sinuses extended and the lower third of the left ulna could be made out to be necrosed by examining through two sinuses which led down to it. Under chloroform Mr. Owen removed the sequestra from the tibiæ, whilst Mr. Templeton operated in a similar manner upon the ulna. Mr. Owen then enlarged the sinus over the os calcis, and having gouged away some of the surrounding bone extracted a sequestrum of the size of a pea from the interior. The boy's general condition greatly improved after this, all the wounds filling up with healthy granulation tissue, but at the date of the last note (Dec. 3rd, 1896) he was still in hospital.

Remarks by Mr. OWEN.—The case is an ordinary one of acute septic osteo-myelitis, beginning, as is usually the case, at the end of a diaphysis and ending in necrosis. The feature, however, to which I desire to draw particular attention is the necrosis in the os calcis. The association of this necrosis with a similar condition in several of the other

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diaphyses suffices to indicate its pathology; but when an os calcis is affected by itself the actual state of affairs may not be so readily understood. Throughout childhood the os calcis consists of a diaphysis of spongy bone, with a cartilaginous epiphysis at the posterior surface. At the tenth year this—the epiphysis—begins to ossify, and it becomes fused with the rest of the bone just after puberty. From time immemorial the hinder end of the heel has been peculiarly vulnerable, and if a boy happen to have it struck or otherwise hurt the vitality of the delicate bone-tissue recently deposited at the growing end of the diaphysis—that is, immediately anterior to the junction-cartilage—is lowered. And if it so happen that at this time there are staphylococci circulating in the child's blood they will probably seize upon that tissue, determine a localised Haversian thrombosis in it, and an almost inevitable



Necrosis of os calcis. D, Diaphysis of os calcis. E, Epiphysis. G, Wall of granulation tissue lining cavity. S, Sequestrum.

necrosis. The heel then becomes extremely tender and in a short while the skin over it is found to be red and hot; after a time the acute symptoms subside. The presence of the dead portion of the diaphysis determines a growth of granulation tissue in the surrounding bone, and in due course the pea-like sequestrum is detached by it and then lies loose in a suppurating cavity which is walled in with granulations. If the case be allowed to drift on nature will have to arrange for the extrusion of the sequestrum, which she generally does by forming an abscess on the inner or outer side of the calcaneum. But sometimes she is not so skilful in her operation, but by clearing an upward track for the evacuation she involves the posterior astragalo-calcanean joint in septic inflammation, the destructive process extending thence into the ankle-joint itself. I have had to perform Syme's amputation in such a case and have subsequently been able to trace out the pathological sequence of events described above with the utmost clearness. For clinical purposes the os calcis must be regarded as one of the long bones, with a shaft and a single epiphysis like the clavicle. The delicate tissue at the growing end of the diaphysis is very apt to become, especially after injury, the area of cultivation of staphylococci, which determine septic thrombosis and necrosis. Persistent deep-seated tenderness in the os calcis of a child, with, perhaps, swelling and œdema or redness about the heel, should suggest exploration. For if art does not come to the assistance of nature it is possible that the septic disease may extend into or around the astragalus and wreck the ankle-joint.

RADCLIFFE INFIRMARY, OXFORD.

A CASE OF COMPOUND FRACTURE OF THE ROOF OF THE ORBIT; TREPHINING; RECOVERY.

(Under the care of Mr. A. WINKFIELD.)

RECOVERY after punctured wounds of the base of the skull with cerebral injury inflicted through the orbit is so rarely seen, even at the present day, that we are pleased to bring before the notice of our readers the account of one which is an exception to the rule. The reason for this fatality was well put by the late Mr. Hulke[1]: "In no class of cases is the surgeon more likely to be put off his guard as to the exact nature and extent of the injury. At first all that may be apparent is the slight injury of the external parts—a trifling wound of the upper lid, and sometimes not even this, for the instrument may have slipped under the lid and left merely a patch of ecchymosis in the conjunctiva. Brain symptoms there may be none. Two or three days may pass over, during which the patient goes about as usual; then brain symptoms make their appearance, sometimes suddenly, and the patient dies in the course of a few hours or days and the true nature of the case is revealed only in the post-mortem room." This class of injury combines the dangers of a punctured wound with the introduction of foreign bodies and septic material and the dangers of a wound of the brain substance. There is no doubt that it is not the wound of the brain alone, for wounds of the frontal lobes are less dangerous than those of other parts of the brain, and injuries resulting from the lodgement of a gun breech in the orbit and brain injury are less fatal than punctured wounds from sticks or umbrellas, which cause far less injury to the brain. These cases must be treated on the same principles that guide us in the treatment of punctured fractures in other parts of the skull. The wound must be thoroughly examined for foreign bodies (surgical literature contains too many examples of inefficient search), thoroughly cleansed, and provision made for thorough drainage. The importance of these remarks will be apparent when we remind our readers that when investigating this subject some years ago we found that seventeen out of eighteen persons suffering from this kind of injury died. Yet there are recorded cases in which recovery resulted ultimately; two of these are quoted by Sir Prescott Hewitt[2] in his lectures on injuries to the head, whilst others were under the care of Beaumont,[3] Hulke,[4] Laplace,[5] Godlee and Pope,[6] A. F. Hawkins,[7] and Palaillon.[8] We are indebted for the report of this case to Dr. W. L. Fry, house surgeon.

A boy aged twelve years was admitted on the afternoon of Sept. 14th, 1896, with a history that whilst running with a short joint of fishing-rod in his hand he had fallen on the ferrule end, which had penetrated his eye. Upon examination a ragged punctured wound about half an inch in length through the inner part of the right upper eyelid was found. A probe passed some inches through the wound in a backward direction and fragments of bone could be felt and brain matter was seen in the wound; the conjunctiva was bruised and the eyelids were swollen. Under chloroform Mr. Winkfield examined the wound, and with the little finger a fracture could be felt in the roof of the orbit extending far backwards, but no foreign body or depressed or loose bone could be detected; brain matter was escaping freely through the wound, which was cleansed and bound up. On the next day the swelling of the eyelids had increased; the boy's condition was fairly good, but with some twitchings of the left arm. On the 16th the temperature was 100° F.; there was some sanguineous discharge from the wound. Urine was passed involuntarily; the boy was drowsy, but answered questions rationally. On the 17th the temperature was 100°. There were twitchings of both arms and a good deal of restlessness at times. On the 18th the boy's condition was not improving and the discharge from the wound was becoming offensive. Mr. Winkfield trephined with a large-sized trephine just above the supra-orbital margin and enlarged the opening in the bone with cutting forceps. The dura mater projected tensely when the disc of bone was removed. A finger was introduced through the opening and passed along the upper surface of the orbital plate of the frontal bone and detected the fissure fracture, its edges being a little uneven, but no foreign body or depressed bone could be felt; some fœtid fluid escaped when the finger was withdrawn. The dura mater was punctured with a small knife and some fœtid matter escaped. A drainage-tube was introduced through the trephine opening and the disc of bone replaced. Another drainage-tube was passed through the wound in the eyelid. The temperature, which was 102° before the operation, dropped to 99° and remained normal for several days. The tubes were frequently removed and cleansed, and a free discharge took place of clear fluid resembling cerebro-spinal fluid. Shortly after the operation a large crop of herpes appeared symmetrically on

[1] Holmes's System of Surgery, third edition, vol. i., p. 585.

[2] Medical Times and Gazette, 1858, vol. i., 137.
[3] THE LANCET, June 14th, 1862, p. 626.
[4] THE LANCET, July 4th, 1891, p. 15.
[5] THE LANCET, Dec. 19th, 1891, p. 1405.
[6] THE LANCET, June 19th, 1886, p. 1159.
[7] THE LANCET, July 17th, 1886, p. 144.
[8] Bulletin de l'Académie de Médecine, Paris, August, 1891.

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both upper arms, the boy got very thin, and some boils appeared upon his back which were opened freely under an anæsthetic. On the 29th he had a rigor, with a temperature of 103°, and he became very ill for a week, complaining of headache, which was relieved by the flow of fluid, he grew noisy and restless, resisted all interference, and became very emaciated. There was great difficulty in feeding him. When the tubes were taken out the fluid continued to flow at intervals, and when the wound was closing a copious discharge of similar fluid came from the nose; he would raise himself upon his pillows and allow the fluid to pour from his nose in a stream. As the fluid escaped the head symptoms were relieved, and when the flow from the nose ceased the scabs over the frontal wound would break down and the flow began then again. The temperature remained slightly above normal until Oct. 13th, when it rose to 103°, with symptoms of recrudescence of the meningeal trouble. The attack lasted three days and then quieted down. The discharge gradually ceased, the boy became bright in himself although very fretful, and he could not recall what had happened the previous day, but he could answer questions with intelligence. After Oct. 18th the temperature remained normal; the boy is able to walk alone, and has laid on flesh, and can read with enjoyment. His temper, which was very irritable, is now quite good and he has a fair memory. There are still granulations over the frontal wound and a piece of bare bone can be felt with a probe. This is probably a portion of the bone replaced after the trephining.

On Dec. 12th the opening was enlarged and this disc of dead bone removed, after which the wound healed kindly.

Medical Societies.

EPIDEMIOLOGICAL SOCIETY.

The Spread of the Plague.

A MEETING of this society was held on Dec. 18th, 1896, the President, Professor LANE NOTTER, being in the chair.

Dr. CANTLIE addressed the society on the Spread of the Plague. We publish the beginning of his lecture in our present issue.

Dr. LOWSON said that his experience of plague extended to over 5000 cases. He had made many observations and never found plague bacilli in the soil, although a smaller dumb-bell shaped bacillus was almost invariably present and had, he thought, been mistaken for it by other observers. He admitted that the upper layers of the soil might ultimately become infected by dejecta. He thought that dissemination by fomites was of great importance, but this dissemination did not seem to take place over long distances. At the close of winter the Chinese pawned or sold their warm garments, and they also sold the clothes of those who died from the plague without any previous disinfection. These customs had a great influence in spreading the infection. Carriage through the air was of slight importance. The infection usually spread slowly and along trade routes. He believed the popular idea that an epidemic among rats preceded each epidemic among men was unfounded. Both men and rats were affected simultaneously, but the disease ran a more rapid course in rats, and hence the epidemic would spread more quickly among them. Pigs were liable to plague, typical bacilli being found. He had been unable to communicate it to pigeons or hens. When calves were inoculated there was a reaction, the temperature rising to 103° F., but no bacilli were found in the blood. The serum of animals so treated appeared to have some prophylactic effect on rabbits. There had been some striking differences between the course of the disease in 1894 and 1896. In 1894 buboes were chiefly in the groin. Convulsions, intermittent pulse, and heart failure were common. In 1896 the glandular enlargements were chiefly abdominal, and nephritis was a frequent complication, while nervous and cardiac symptoms were rare. He thought the recent outbreak at Bombay had come by trade routes, probably from Singapore. There was an epidemic raging at Merv which might possibly be plague, and the disease might have come by that route. The mortality was lowest among western-born persons (18 per cent.), while the mortality of Eurasians was as great as that of the Chinese (80 per cent.). There was little spread except by direct contagion from the patient or from the dust and dirt of the room. The soldiers who volunteered for sanitary duty from the Shropshire regiment were not attacked after it was the practice to disinfect the soil thoroughly before it was cleared out from the houses. He thought that direct inoculation through abrasions was common in 1894, but escaped notice because pure cultures give rise to no inflammatory reaction at the site of inoculation.

Dr. PAYNE said that the description of these recent epidemics corresponded closely with those in Europe in former centuries. It had always been held that a persistent high temperature had the effect of stopping an epidemic. He thought the practical immunity of India was accounted for by the fact that the iso-thermal line of 78°, which involved the plague districts of China, only just touched the north of India. He agreed with what had been said about pestis minor, and considered that there was much evidence of such a modified form of plague in Astrakhan and Mesopotamia. He deprecated the suggestion of giving a new name to the disease.

Dr. MANSON said it must be remembered that non-venereal buboes were very common in the East. Buboes were also common in the "river fever" of Japan, which might possibly turn out to be pestis minor. He thought that cases where the disease appeared on board ship long after leaving an infected port might be due to infection from clothes which had been unpacked in the course of the journey.

Dr. WASHBOURN remarked on the resemblance of plague bacilli to those of various forms of septicæmia in animals. The mode of infection might vary just as in the case of anthrax, being sometimes inoculated by way of the skin, sometimes inspired, and sometimes taken with the food.

Professor CAYLEY (Netley) thought that the absence of the spread of plague in India was due to the cleanly habits of the natives, at any rate in country districts.

Dr. K. MACLEOD doubted if plague even in a modified form was ever present in Calcutta.

Dr. CLEMÓW (Cronstadt) said that the epidemic which was mentioned as raging at Merv had decimated the population, but so far as he could gather it was a malignant form of malaria and not plague.

Dr. CANTLIE, in reply, agreed with Dr. Lowson as to the change in type of the second epidemic. He thought there was no doubt about the existence of mild cases, running an atypical course, in which bacilli indistinguishable from those of plague could be demonstrated.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Hysterectomy.

A MEETING of this society was held on Dec. 10th, Dr. CLEMENT GODSON, President, being in the chair.

Mr. E. TENISON COLLINS (Cardiff) showed a specimen of Strangulated Ovarian Cyst, and read notes of the case.

Dr. G. ELDER (Nottingham) showed three specimens of Pyosalpinx.

Dr. PURCELL, Dr. ELDER, and Dr. EDGE showed specimens illustrating their papers on Hysterectomy.

Three papers were read on the subject of Hysterectomy:—(1) Fibro-myoma Removed by Pan-Hysterectomy, with a Review of Different Methods, by F. A. PURCELL, M.D.R.U.I.; (2) Remarks Suggested by Four Recent Cases of Hysterectomy, by G. ELDER, M.D. Glasg.; and (3) Fibro-myomatous Uterus Removed by Doyen's Method of Abdominal Pan-Hysterectomy, by F. EDGE M.D. Lond., F.R C.S. Eng.—In the discussion that followed Mr. MAYO ROBSON (Leeds) said that he was much interested in the subject of shock, referred to by Dr. Elder. Some time ago he read a paper on the Treatment of Shock by Transfusion before the Clinical Society. He was led to adopt this treatment by the resemblance between death from shock and death from hæmorrhage which had been pointed out by Dr. Lauder Brunton. In shock the blood was not actually lost, but it was lost to the circulation owing to its collecting in the abdominal vessels. If this stagnant blood could be set circulating again the patient might recover and transfusion had that effect. It was sometimes necessary to transfuse a second and even a third time, for there might be recurrence of shock just as there might be recurrence of hæmorrhage. He had often been disappointed with the

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microscope in diagnosis and he preferred to rely on clinical signs. No microscopist could tell with certainty whether a case were one of fungous endometritis or of malignant disease. The subject of hysterectomy was always interesting, for they were getting nearer to a perfected operation. Jessett's, Lebec's, and Doyen's methods were all the same in principle though worked out independently, and some such procedure would come to be the recognised operation. For his own part he had mostly adopted the intra-peritoneal method, based on Schroeder's, with this modification, that after suturing the peritoneal flaps he brought the stump up to the abdominal wound, fixing the parietal peritoneum round it, and the aponeurotic structures over it. By this means the uterine cicatrix was extra-peritoneal, and there was no chance of adhesions between intestine and stump such as might lead to intestinal obstruction. The only patient he had lost died on the fourteenth day from intestinal obstruction. He had no doubt that the method of the future would be one of the three above mentioned.—Mr. BOWREMAN JESSETT believed that a question of great importance in the future would be the early treatment of myoma by operation. At present patients were told to wait for the menopause; no doubt at this time a few myomata disappeared, but many were not affected. Early removal could be accomplished with safety, but in later stages it was often difficult and dangerous. The most difficult case he had had was a recent one, where the tumour weighed 24 lb. There were universal adhesions. The patient died from shock. Had the operation been performed some years earlier her life might have been spared. This case was very like the second one of Dr. Elder. The shock was largely due to the removal of a large mass of tissue, but perhaps even more to the separation of intestinal adhesions. He had been much impressed by Mr. Mayo Robson's remarks on the subject of shock and its treatment by transfusion and thought they would all do well to bear them in mind. He believed that before long total extirpation would become the recognised method of dealing with myoma of the uterus; the shock was much less, and in this respect the case closely resembled one of vaginal hysterectomy. Doyen's and Lebec's operations were practically the same as his own, but he believed that all three were worked out independently, well illustrating the tendency of operators in different parts of the world. He had sometimes sent down scrapings for examination from cases where the clinical features pointed to a benign condition, and the report had been that they indicated malignant disease. But he had trusted the clinical signs and found that they went on well. There was the difficulty that the part curetted might not be the diseased part because the scraping did not go deep enough. He noted that Dr. Elder in his vaginal hysterectomies left the appendages behind. He thought that in younger women it was usually better not to remove them, for otherwise the patient was subject to much pain and discomfort at the monthly periods for some time after.—Dr. HEYWOOD SMITH, referring to Mr. Mayo Robson's remarks, said he thought it was generally better in intra-peritoneal cases to leave the stump free in the pelvis, for by this means tension was lessened; and, moreover, he believed that when adhesions occurred the site was usually the place where the ovarian vessels were tied. In spite of the success of pan-hysterectomy he believed that a perfected intra-peritoneal method would give even better results, because it was most important to shorten the duration of the operation. He thought that in young women it was better to leave the ovaries and tubes, if healthy, even if the patient suffered some temporary discomfort with the molimina, because, as Dr. Routh had maintained in a paper read before the society, the ovaries seemed to exert a special action independent of the function of ovulation.—Dr. HERBERT SNOW said that microscopic examination was a fetich to many men. As a matter of fact, clinical data were far more reliable. Many errors were possible, even if a large piece of tissue were available. The microscope could prove a positive but not a negative condition.—Dr. BALDWIN (of Ohio, U.S.A.) said that he had read a paper on Hysterectomy at the last meeting of the Ohio State Medical Society, describing what to many was a new procedure, and based on over fifty cases. He proceeded as follows: After opening the abdomen the most accessible broad ligament was clamped outside the ovary down to the uterus. A short clamp was placed on the ovarian artery close to the uterus. Then with a single cut of the scalpel the broad ligament was divided within the first clamp. The procedure was repeated on the opposite side. Peritoneal flaps were then made, front and back, in the usual way. The uterine artery on each side was seized with forceps and the uterus amputated just above the internal os in a wedge fashion, so as to give two uterine flaps. Each uterine artery was then tied, without including any tissue besides in the ligature. The ovarian artery was drawn out, and similarly tied alone. Occasionally an aberrant vessel would bleed and also require ligature. A piece of gauze was passed down through the cervix into the vagina and left for drainage. The cervical flaps were then brought together after bringing down the round ligaments between them; the peritoneal surfaces were turned in and sutured over. The round ligaments held up the uterus and two new ligaments were formed by the folding in of the peritoneum. When there had been much dissection required or separation of adhesions he drained through the vagina or removed the cervix and passed iodoform gauze into the vagina. Notwithstanding antiseptic precautions he always felt safer if the vagina and peritoneal cavity were separate; and for this reason he generally left the stump formed by the cervix. By attention to the above details the risk of subsequent intestinal obstruction was minimised. He was much pleased to hear Mr. Jessett's remarks as to the early treatment of fibroid tumours. Formerly patients with ovarian cysts were often left till they were moribund before being operated upon; and similarly the practice with fibroids was generally to wait till bad symptoms developed. But the tendency was now certainly to operate earlier. As regards vaginal hysterectomy, they were by no means satisfied in America with the after results—there was too much recurrence. They were, therefore, beginning to adopt a combined vaginal and abdominal operation and to remove the whole of the broad ligaments. At the Johns Hopkins Hospital they were doing even more; they were dividing the pelvic peritoneum posteriorly, and removing the sacral glands. But this, he thought, was carrying operative zeal too far. If the disease were so advanced as to require this treatment it was too advanced, in his opinion, to be touched at all. By the combined method he had so far had no recurrence, but as it was not yet three years since he began it it was too soon to form conclusions. By the ordinary vaginal procedure it was impossible to get beyond the gross disease.—The PRESIDENT observed that he could quite corroborate what had been said by Mr. Mayo Robson, Mr. Jessett, Dr. Snow, and Dr. Baldwin as to the unreliable character of the evidence concerning malignancy supplied by microscopic examination.—Dr. ELDER, Dr. PURCELL, and Dr. EDGE briefly and suitably replied.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Dec. 10th, 1896, the President, Mr. WILLIAMSON, being in the chair.

Dr. G. MURRAY showed a case of Locomotor Ataxia with Charcot's Joint. The patient was a man thirty-three years of age, whose illness commenced three years ago with weakness in the knees and lightning pains in the legs. He had now marked ataxia and double optic atrophy. His right hip was swollen and there was a tense, elastic swelling in the joint, with marked grating on movement. The leg was shortened by two inches and a dislocation could be readily produced.

Dr. G. MURRAY showed a Case of Tetany in a child thirteen months old, with characteristic flexure at the metacarpo-phalangeal joints, the flexed elbows, and the adducted thumbs of tetany. The condition exactly resembled that produced in the monkey by the removal of the thyroid. The child improved by taking thyroid gland.

Mr. PAGE showed a girl seven years of age and a specimen of a tumour successfully removed from her lower jaw. The tumour was a central sarcoma (noticed for eight months) which had grown rapidly and was causing great deformity.

Mr. PAGE showed a woman and a Four Months' Fœtus and Placenta removed from her abdomen. She was the mother

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of two children, the last being born in 1891. Menstruation had always been irregular since the birth of her first child, so that no diagnostic importance could be attributed to it. A fortnight before her admission to the infirmary she was seized with severe abdominal pain and vomiting. She did not know that she was pregnant. Since the attack of pain there had been a dark hæmorrhagic vaginal discharge. A cystic tumour was felt in the left of the pelvis separate from the uterus. On opening the abdomen a dark-coloured swelling came into view, with a hole in it plugged by clots; there was no blood free in the abdominal cavity. The swelling contained a good deal of fluid and clotted blood along with the specimen exhibited. She made a straightforward recovery.

Mr. PAGE also showed a man fifty-eight years of age who was seized with a sudden severe pain in his abdomen in April of last year. On this occasion he had a frequent desire to micturate, but could pass very little urine. Soon after he had a second attack of pain, which passed off in a few hours. Early in September a swelling was noticed in the epigastric and left hypochondriac region. It steadily increased and he became thinner and had constant pain. On admission to the infirmary a rounded, elastic, smooth swelling could be seen and felt on the left side of his upper abdomen. The abdomen was opened in the left linea semilunaris and a dark-coloured tumour was exposed. It could not be delivered and was incised *in situ*. A considerable quantity of laminated clot such as is found in an aneurysm was turned out of it and no fresh hæmorrhage occurred. The tumour was now seen to be in the lesser peritoneal sac. The opening in it was stitched to the parietes and the cavity plugged with gauze. The fluid removed was tested, but had none of the properties of pancreatic fluid. The patient had much improved in condition and the wound was now superficial. The most probable cause was rupture of a varicose vein.

Dr. CLAY showed a man who after being tapped five times for a purulent pleural effusion had his chest incised and drained. He was sent home cured five months previously, and had returned with all the signs of an extensive pleural effusion on the same (the left) side. On tapping him the fluid was found to be the ordinary clear effusion of simple pleurisy.

The PRESIDENT showed a child who was admitted to the infirmary with a Suppurating Tuberculous Knee. The operation consisted in dissecting out the whole of the diseased structures. The wound had only been dressed once again at the end of six weeks, when it was found to be entirely healed.

Dr. LIMONT showed a middle-aged man who fell from a scaffold three and a half years ago and gave his chest a severe wrench. He then noticed a swelling over the sternum which had gradually increased in size since. Except for some pain in it when at work he has had no symptoms. A large swelling was visible under the upper part of the sternum and the left second, third, and fourth costal cartilages. The skin over it was unaltered and there were no dilated veins. The tumour felt solid and appeared to be slightly moveable. It had eroded the sternum. There was no pulsation in it and no murmur was present. The heart sounds and breath sounds were normal. There were no previous symptoms. Was it an aneurysm filled with clot or a new growth in the mediastinum?

Mr. RUTHERFORD MORISON showed a young man on whom he had recently operated for a Calculus in the Pelvis of the Right Kidney. The incision scar was T-shaped, the vertical portion in the linea semilunaris, the transverse running back into the ilio-costal space as far as the edge of the quadratus lumborum. This was the incision he had introduced for all kidney operations some years ago and still advocated. The advantages of it were that the patient could lie on his back during operation, making anæsthesia easier; that the diagnosis in cases of tumour was verified when the abdomen was opened in the linea semilunaris and a mistake could then be more thoroughly compensated for; that the opposite kidney could be ascertained to be present and fairly normal before the diseased one was removed—a very essential precaution; that better access to the kidney was obtained by this than by any other incision; and that dependant drainage could be secured by this, but not by the abdominal incision alone.

A number of pathological specimens were exhibited by Dr. JAS. MURPHY, Mr. W. MARTIN, Mr. RUTHERFORD MORISON, and Mr. PAGE.

Reviews and Notices of Books.

Diseases of the Eye and Ophthalmoscopy, a Handbook for Physicians and Students. By Dr. A. EUGEN FICK, University of Zürich. Authorised translation by ALBERT B. HALE, A.B., M.D., one of the Ophthalmic Surgeons to the United Hebrew Charities, with a Glossary and 158 Illustrations, many of which are printed in colours. London: H. Kimpton. 1896. Pp. 488. Price 21*s.* net.

THE volume before us has been written by the author because he is of opinion that the best text-books of ophthalmology are too exhaustive, and he has endeavoured to supply the student with a compact treatise in which pathological statements and hypotheses as well as authorities should be referred to only so far as they may be necessary to illustrate diseased conditions and which might prove supplementary and complementary to the clinical study of diseases. The translation we may say at once is creditable to Dr. Hale of Chicago. It reads easily and is as a rule satisfactory, though sometimes needlessly hard words are used, as "diagnosticated" for diagnosed and "ectropionising" for everting, whilst a more elegant rendering of the original might have been given than is contained in the following sentence. Speaking of inflammation of the lacrymal sac the translation given is: "I cannot now discuss the treatment of the nasal mucous membrane; that of the tear sac must first attempt to secure a free passage into the nose, and, second, to restore the mucous membrane to its normal condition." Again, it is hardly correct to say that "a catarrh or a blennorrhœa is due to occlusion of the lacrymal passage into the nose."

The treatise is divided into two parts, the first dealing with the methods of examination, including the means of determining the acuteness of vision and errors of refraction, the sense of light and of colour, the field of vision, and the tests for binocular vision and for strabismus, and giving also an account of the objective methods of examination, such as keratoscopy, oblique illumination, and the use of the ophthalmoscope. The second part is devoted to the diseases of the eye, which are considered in the usual topographical order, each being preceded by a short account of the histology of the part. The observations made by the author are, as a rule, those of an unprejudiced mind, and although they might in some instances have been extended with advantage, yet they are sufficiently intelligible. He calls attention to the treatment of trachoma suggested by Keining, which consists in a firm massage applied to the exposed conjunctiva of the upper lid with a wad of cotton soaked in a solution containing 1 in 2000 of sublimate, but prefers himself massage with iodoform, which does not leave behind the grey coating that may on the following day lead to the postponement of the treatment. Iodoform massage is also less painful. In determining the degree of tension that an eye presents the author speaks in high terms of commendation of his namesake's, A. Fick's, tonometer, but it requires in use an amount of precaution and care that will render its introduction into practice, however trustworthy the results obtained may be, more than doubtful. The fingers are probably still the best tonometer. The dioptrics of the eye and the theory of the ophthalmoscope are fully entered into, and are illustrated by numerous diagrams, some of which are rendered more intelligible by being coloured. For the determination of astigmatism he gives the perference to the shadow test over other methods.

The observations on the lacrymal apparatus are sufficiently sensible. He slits up the canaliculus in cases of constriction of the canaliculi or mal-position of the puncta, and in cases of suppuration of the sac and nasal duct of a chronic character uses a solution of chloride of zinc of the strength

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of 10 per cent. He admits, however, that precautions must be taken and that the reaction is very intense. The difficulty of limiting the effects of the remedy seems to be the chief objection to its employment.

In regard to cataract extraction he has always operated with iridectomy and intends to confine himself to that method. The details of the precautions he takes to avoid infection are to be commended. We have arrived at the conclusion that sport in the form of shooting is not pursued by the inhabitants of Chicago, for in the course of a very good chapter on Wounds of the Globe and Orbit, as well as in sections devoted to Wounds of the Cornea, Choroid, and Conjunctiva, scarcely a word is said in regard to gunshot wounds, although these have some special features of their own that deserve comment. As a working man we should like to have Dr. Fick, in the event of injury occasioning slight damage to the eye, on the jury empanelled to award damages. He considers that if the injured person "suffers a loss of 30 per cent. of his working power, and has, therefore, been injured 30 per cent. in his wage-earning capacity, there should be paid him for the remainder of his life 30 per cent. of his wages (income) as compensation." This is preposterous. A very slight injury may impair a man's power to perform certain kinds of work—for example, the cutting of intaglios of superior quality; but it would be, in our opinion, extremely unfair to burden the unfortunate man who has inflicted a slight injury on one eye of such a worker with a charge of 30 per cent. of his previous income for the rest of his life. The natural changes of advancing age prevent any man doing his best work in old age, and other branches of work can be taken up and excelled in, and the opposite eye can be exercised. Suppose a man to be earning £3 a week as a skilled cutter. He receives at thirty-five years of age a slight blow, impairing the transparency of the cornea or his power of accommodation. He expects to live to seventy. Is he to have £1820 or its equivalent given to him? The fact is, no such hard-and-fast rule can be laid down. Circumstances must be taken into account in all such accidents. The subject, which is not often mentioned in ophthalmic treatises, is one of importance and is here well discussed. The problem is mathematically presented by the following formula: $E = V\sqrt{G} \times \sqrt[4]{B} \times \sqrt[x]{K}$, when E signifies the earning capacity, V is the visual acuity, G the visual field, B the excursional field, and K the competitive element—that is, the capacity for obtaining a situation in the labour market. In the appendix there is a curious table for converting metric weights into troy weights, which seems quite out of place in a work on ophthalmology. A table on the relative value of English and metric measures for lenses would have been more serviceable. There is also a glossary of terms used in ophthalmology, with their etymology, which, however, is very incomplete.

As a whole the book is a valuable one and represents truthfully and well the present state of ophthalmic science and practice.

Surgical Diseases of the Ovaries and Fallopian Tubes, including Tubal Pregnancy. By J. BLAND SUTTON, F.R.C.S. Eng., Assistant Surgeon to the Middlesex Hospital, &c. With 146 Illustrations. New and Enlarged Edition. London, Paris, and Melbourne: Cassell and Company, Limited. 1896. Price 21*s*.

MR. BLAND SUTTON has taken advantage of the demand for a new edition of his work on the Surgical Diseases of the Ovaries and Fallopian Tubes to make several alterations, most of which are improvements, among which may be mentioned the addition of a new section on the Diseases of the Pelvic Peritoneum, and a considerable increase in the number of illustrations. As an example of the well-known principle that second thoughts are not always best, we may quote a sentence from the first edition. "*Microscopically examined*, menstrual fluid consists of blood-corpuscles and epithelial cells." In the edition before us this reads: "Menstrual *fluid* consists of blood-corpuscles and epithelium furnished by the mucous membrane of the uterus and vagina." The italics are ours. There are some practical points in the chapter on Irrigation and Drainage as to which other authorities hold somewhat different views from those here expressed. Thus in cases where a drainage-tube is used it is mentioned as a proper procedure that the fluid should be sucked up from it by means of a syringe. It is considered much better practice by many operators to simply empty the drainage-tube with a piece of glass tubing without any suction, which increases the chance of omentum getting into the drainage-tube. Nor do we see in this chapter any mention of the use of iodoform gauze instead of a drainage-tube.

The author seems to us, as might have been anticipated, to be at his best in Part III., which deals with Tubal Pregnancy. The book undoubtedly ranks as one of the best among the standard works on this subject.

Physiologie des Menschen und der Säugethiere. Lehrbuch für Studirende und Aerzte. Von Professor Dr. IMMANUEL MUNK, Abtheilungs-Vorsteher am Physiologischen Institut der Universität in Berlin. Vierte Auflage, mit 120 Holzschnitten. Berlin: Verlag von August Hirschwald. (*Physiology of Man and the Mammalia.* A Text-book for Students and Practitioners. By Professor IMMANUEL MUNK, Director at the Physiological Institute of Berlin University. Fourth edition with 120 Woodcuts. Berlin: August Hirschwald.) 1897. Pp. 633. Price 14*s*.

THE appearance of a fourth edition of Professor Munk's treatise is an indication that it meets the requirements of the German students, and he has done well in correcting and in rendering the teaching of the text-book more precise instead of attempting to make any considerable addition to its size. As the title indicates, the author has introduced many physiological facts that have been drawn from animals, but which illustrate or explain those which are more particularly characteristic of man. Thus, in the account of the blood, the phenomena occurring during the process of coagulation in the blood of the horse are given in some detail, attention being directed to the formation—owing to the slowness with which clotting occurs in this animal, especially if the blood be exposed to cold—of a third layer consisting chiefly of leucocytes intermediate between the plasma above and the mass of red corpuscles below. The rapidity of clotting is given in different animals at four to five minutes for the dog and rabbit, eight minutes in the case of the pig and ox, and fifteen minutes in that of the horse. It is added that, according to Boll, the blood does not coagulate in the chicken before the twelfth or fourteenth day of development. He appears to coincide with the view of Pekelharing and Lilienfeld that the nuclein derived from the leucocytes produces a substance from fibrinogen which does not itself coagulate, but upon the addition of lime salts yields typical fibrin. He gives the proportion of plasma to corpuscles as two-thirds to one-third.

In regard to the restitution of blood after blood-letting he quotes the experiments of Tolmatscheff, who found that in a dog weighing about 24 lb. he was able to take away in seventy-one days, by bleeding the animal about every fortnight, as much as it could be estimated to have possessed at the beginning of the experiment. The body weight of the animal and the quantity of hæmoglobin in the blood rose between the bleedings, whilst the food was kept at the same standard. Hence in seventy-one days it might be accepted that the dog can renew the whole of its blood. A horse can lose upwards of 50 lb. of blood in eight days without harm. On the disputed point of the cause of the first sound of the

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heart Professor Munk regards it as due essentially to the sudden tension of the auriculo-ventricular valves, but accepts an additional cause in the muscle bruit, whilst he notices the conclusion of Krehl that it is mainly a muscle sound.

The process of gastric digestion is given, not only in man, but in various animals, and especially in the horse, and a curious reason is given to explain why the horse digests meat badly to the effect that it is because the food is retained for so short a time in the stomach, but the author must have forgotten Ellenberger's observations, which show that the remains of the previous meal, and even of the one antecedent to that, may be found in the stomach of that animal. He mentions, however, that in the Steppes the horses are fed on flesh. In the account of the nervous system we observe that Professor Munk does not fully accept the recent views advanced by Cajal, for, although the text speaks of terminal arborescences, the drawing exhibits direct communications between the cells of the anterior and posterior cornua of the cord.

The urine is discussed in the same general manner as the other subjects. A comparison is drawn between the urine of herbivora and carnivora. That of man is then given in full and contrasted with that of the horse. The senses are considered at moderate length, and it is pointed out that th tapetum in the eye is present in carnivora and especially in nocturnal predaceous animals, in the horse and ox, but is absent in man, monkeys, the pig, and generally in omnivora. It occupies an intermediate position between the vascular and the capillary layer of the choroid.

It will be understood from the foregoing comments that Professor Munk's work, whilst it is primarily addressed to the medical student, has also a secondary object which it very well fulfils of being serviceable to veterinary students and to those who are receiving their education at agricultural colleges. To these it will be exceptionally valuable and may be read with advantage in connexion with Meade Smith's and Captain Smith's treatises as giving the most recent results of physiological inquiry.

Analytical Records
FROM
THE LANCET LABORATORY.

(1) DIGESTIVE BISCUITS; (2) NUTRITIVE BEEF BISCUITS.
(G. VAN ABBOTT & SONS, 6, DUKE-STREET MANSIONS, GROSVENOR-SQUARE, W.)

A MICROSCOPICAL examination of the digestive biscuit shows at once its composition and affords some explanation as to why it is called digestive. The biscuits are made entirely from meal and contain the branny particles in a finely divided state, so that while serving as a mild laxative the otherwise irritating property of the bran is reduced to a minimum. The biscuits are desirably crisp and of good flavour and form a very agreeable food when taken with butter. They are useful where a mild laxative is in constant requirement and preferable in many cases to the continuous employment of drugs. The nutritive beef biscuits are said to contain 20 per cent. of Mosquera beef meal, which is a pre-digested meat powder. Our examination fully confirms this statement, since we found the biscuits to possess a high nitrogenous value, while peptones were easily extracted and recognised by simple treatment with cold water. They afford, therefore, a source of reliable and convenient sustenance.

FILMOGEN.
(THOMAS CHRISTY AND CO., 25, LIME-STREET, E.C.)

Filmogen is a clear, mobile, colourless fluid, which has the same boiling point and other characters as acetone. Acetone is, therefore, the probable vehicle for the material, which on evaporation forms a thin, non-sticky, and flexible film, which does not peel off and is not easily removed by simple washing in water or by any chance rubbing. It affords an excellent protective coating for wounds and possesses the advantage that the ordinary antiseptic remedies are generally soluble in the volatile fluid employed. It is useful, therefore, for applying those drugs which are employed as remedies for the skin. A paper on the employment of filmogen was read by Dr. E. Schiff at the recent third International Congress of Dermatology in London.

NORFOLK FOOD OF STRENGTH.
(GOODRICH, HAZEL, AND CO., METHWOLD, NORFOLK.)

This food possesses a pleasant biscuit-like flavour and, consequent upon its method of preparation, contains a very large proportion of soluble carbo-hydrates. It has been carefully cooked, which process improves its flavour besides rendering it more digestible. In addition to wheat flour it contains a definite proportion of oat flour, which, of course, enhances its food value chiefly in regard to nitrogenous and mineral substances. This cereal food enjoys the advantage of being at the same time not only palatable but unquestionably nutritious.

BROMOSAL.
(JOHN RICHARDSON AND CO., LEICESTER, LIMITED.)

This is a brown alcoholic fluid smelling distinctly of tincture of orange and possessing a strong saline taste. As our analysis showed it is a combination of the bromides of lithium, ammonium, and potassium. It is well known that a combination of the alkaline bromides serves more satisfactorily as a nerve sedative or in the treatment of epilepsy than when a single unmixed salt is employed. The above formula, therefore, is one presenting obvious advantages.

FORMOGELATINE.
(KNOWLES AND PHILLIPS, 47, MINORIES, E.)

Formogelatine is a dry, white, crystalline powder, which is, according to our experiments, quite insoluble in water. As its name indicates it is a true compound of formaldehyde with gelatin containing neither an excess of the one nor other ingredient. It is offered as a substitute for iodoform in the dressing of wounds. For this purpose it is well adapted as a drying powder, while doubtless it possesses latent antiseptic properties from the fact of its being a derivative of the powerful antiseptic formaldehyde.

NEAVE'S FOOD.
(J. R. NEAVE AND CO., FORDINGBRIDGE.)

This cereal food is characterised by an excellent rich proportion of nitrogenous food substances and of valuable mineral ingredients, while the carbohydrates are largely soluble and therefore of easy digestibility. It is not deficient in the all-important phosphatic constituents. The flavour of the prepared food is decidedly acceptable and indicates the care and completeness with which the food has been prepared by dry cooking. It presents in acceptable form all the available nourishing constituents of high-grade cereal food.

(1) RESIDUUM RUBRUM TABLOIDS (VENOUS AND ARTERIAL); (2) CASCARA AND BELLADONNA TABLOIDS.
(BURROUGHS, WELLCOME & CO., SNOW HILL BUILDINGS, E.C.)

Blood as a therapeutic agent was reported favourably upon in an original article in THE LANCET of Nov. 28th. In this contribution it was stated that the administration of dry blood residue, in cases of osteo-arthritis was followed by marked improvement. The preparation was given in the form of Residuum Rubrum Tabloids, which consist of the blood residue obtained by evaporating ox blood in vacuo at a temperature not exceeding 100° F. It is suggested that the value of such a preparation must be referred to

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the secretions of the various ductless glands which blood prepared in this way must of necessity contain intact. We find that the residual blood tabloids behaved chemically exactly as blood dried in the manner indicated. It should be added that tabloids are also made containing the residue of arterial blood, and clinical trial is being made with these and the results should prove of interest. The Cascara Sagrada and Belladonna Tabloids are based upon the following formula: Cascara sagrada extract, 2 gr.; nux vomica extract, ¼ gr.; belladonna, ⅓ gr.; capsicum, ½ gr. Thus the tabloid is designed as a useful intestinal stimulant, while possessing also tonic and laxative properties, which together make the combination well suited in cases of habitual constipation in delicate persons accompanied by feeble digestive functions.

(1) SITOZOEN FLOUR; (2) FARO FLOUR; (3) MALTED INFANTS' FOOD.

(W. HAY, GROSVENOR-STREET, HULL.)

"Sitozoen" flour is nothing lacking in the nourishing food constituents of flour of proper quality. It is enriched by the addition of 20 per cent. of wheat germ, which not only contributes to its nutritious qualities, but makes its flavour more attractive. The preparation, again, is moderately malted, so that there can be no doubt of its high dietetic value. "Faro" flour consists of finely grouud wheat meal and contains, as our microscopical examination showed, the branny particles in a fine state of division. The flour is slightly dark in colour, due to the retention of the germ. It is evidently prepared with care and forms not only a useful food, but one of value also in promoting the normal functions of the intestinal tract. Lastly, the Infants' food is strongly malted, a fact which is evident from the strong and pleasant malty character of the taste. It thus contains a rich proportion of soluble carbohydrates, amongst which may be reckoned malt, sugar, and dextrine.

HANSEN'S DISINFECTANT FLUID AND POWDER.

(HANSEN AND CO., 19, ST. DUNSTAN'S-HILL, S.E.)

There can be little doubt of the disinfectant property of this fluid, since it consists of certain active derivatives of coal-tar dissolved in alkali, and on shaking with water a milky fluid is obtained. A microscopical examination of this fluid shows the active agent to be in a very finely divided state, but not, strictly speaking, soluble. In this condition it is admirably adapted for all disinfectant purposes. A noteworthy feature of the preparation is the freedom from dirty colour of the emulsion produced; it looks, in fact, very like milk. The powder contains a small percentage of the fluid as basis. The absorbent consists chiefly, according to our analysis, of crude sulphate of lime, which to a limited extent is soluble in water. The powder is somewhat fine, so that in distributing it a part floats as dust in the air. This is a probable advantage and due most likely to the dryness of the powder used. The fluid is described as non-poisonous and compared with carbolic acid it is probably considerably less poisonous, but we are not prepared to accept that it is absolutely so.

(1) BEEF AND MALT WINE; AND (2) COCA WINE.

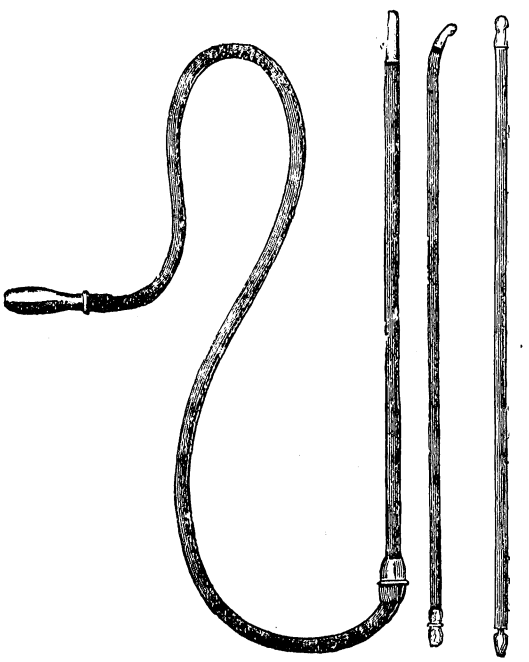
(W. GLENDENNING AND SONS, 9, GRAINGER-STREET, NEWCASTLE-ON-TYNE.)

The results of analysis of the beef and malt wine were as follows: absolute alcohol, by weight 15·83 per cent., by volume 19·49 per cent., equal to proof spirit 34·14 per cent.; extractives, 15·28 per cent.; containing 0·53 per cent. nitrogenous constituents; and ash 0·38 per cent. The ash proved to contain an excellent proportion of phosphates, and the extractive matters on ignition yielded a mixed odour of malt and meat extractives when burning. The presence of a large proportion of phosphates is distinct evidence of the presence of both malt and beef, while the important quantity of nitrogenous extractives affords further confirmation. In the nature of things such a preparation can hardly be expected to contain any important amount of the real nutrient qualities of either beef or malt, but at the same time there can be little doubt but that the wine is of enhanced value from the fact that the extractives of both these foods are present. On this account the wine is distinctly useful as a stimulant and restorative, and it is certain to present an additional dietetic quality over ordinary port wine. Moreover, the wine is said to be made from genuine Alto Douro port. It is evidently prepared with care and with good materials. The analysis of the Coca wine gave the following results: alcohol, by weight 15·08 per cent., by volume 18·58 per cent, equal to proof spirit 32·56 per cent.; extractives, 11·62 per cent.; and mineral matter, 0·33 per cent. We have no doubt that the wine has been made from the leaf of the erythroxylon cocoa and is not merely a cocain preparation. On incineration of the extractive matters a peculiar leafy odour was evolved. On extracting the wine after suitable treatment with ether the alkaloid cocain was obtained. The basis is stated to be real Alto Douro port, as in the former preparation. The wine is therefore prepared from an excellent formula and is well suited where its administration is indicated.

New Inventions.

AN ACOUSTIC BLADDER SOUND.

PROBABLY every surgical instrument maker has been called upon from time to time to make bladder sounds connected with one or two ear-tubes. We have received from Messrs. Krohne and Sesemann a set of three which were made for the late Mr. James Adams, at that time assistant surgeon



at the London Hospital, upwards of thirty years ago. The makers state that they have since frequently made similar sounds to their clients' own designs, varying in form but not in principle.

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THE LANCET.

LONDON: SATURDAY, JANUARY 2, 1897.

IT has been our custom in the commencing number of each New Year to devote a few lines to a review of the work that has been done by us in the immediate past as well as to the setting forth of plans for the future, so that the good understanding which we know to exist between our readers and ourselves may be reinforced by comprehension of our motives. Such brief explanation of our editorial proceedings is the more due because of the magnitude of our claims. For we speak as the recognised organ of the medical profession as a whole. No class, no clique, no private interests are subserved by us, but our welfare depends upon a continuance of the support that for over seventy years has been extended to our efforts by the medical practitioners of the United Kingdom. Two things follow directly upon this position. Firstly, we owe to our supporters as well as to ourselves periodical statements of the manner in which we have discharged our great and honourable trust, as well as indications of how we propose to discharge it in the future. Secondly, it is right that we should avail ourselves of any good opportunity that offers itself to invite our readers to tell us of any directions in which they consider our work might be extended with benefit to them.

During the past twelve months the columns of THE LANCET have been replete with the discussion of two sets of grievances far-reaching in their effects, complicated in their causes, and proportionately difficult of remedy. We refer to the troubles that have fallen upon the profession through the abuse of hospitals by the affluent, and through the abuse of medical service by medical aid institutions. Upon a large class of the profession these two sets of abuses have fallen with exceeding heavy hand, and so serious have the effects been in certain districts that we have considered it our duty to make personal enquiry into the matter. The result of our researches into the working of medical aid institutions reached a definite stage on the publication of the book entitled "The Battle of the Clubs," which may be regarded as an *ad interim* report upon the subject and must not be looked upon as our last word. There remains much to be said. We have been able to prove without the shadow of a doubt that certain of these institutions supply bad medical attendance to their clients, appeal for charity on false grounds, provide their rich members with gratuitous treatment to the detriment of their poorer subscribers, and live chiefly upon the talents of their medical officers, whom they sweat and bully. Examples of every one of these disgraceful facts have been forthcoming, and that the administration of certain institutions is free from blame does not affect the important truth that the administration of others is most faulty. We observe that some of our conclusions have been contradicted. We should have paid more attention to our opponents had they elected to contradict the statements upon which the conclusions were founded, and had not officials of the institutions written with unconscious kindness in our columns and proved by their admissions and their language all that we have ever advanced. During the coming year we shall continue to urge on the profession the importance of combining against these institutions. Let thrift among the poor be encouraged. Let the poor man when sick have the same chances as his richer brethren. But let some of the charity come out of the pockets of the various people who masquerade as almoners under quaint titles, but who, so far from giving anything to the institutions, derive from their working the medical attendance for which they can well afford to pay.

The abuse of hospitals by the affluent is the second subject to which we shall specially devote our columns during the coming year, and upon which we shall endeavour to throw light by personal investigations similar to those undertaken in the matter of medical aid institutions. That the out-patient departments of our great hospitals are terribly abused there is no gainsaying, while special hospitals of all sorts, good and bad, necessary and unnecessary, truly eleemosynary or as truly selfish in their foundation, spring up every day and compete under the name of charity with the general practitioner, offering aid to all sick persons not under treatment at the general establishments. Here again we conceive it to be our duty as far as lies in our power to supply facts to the profession. These facts are very difficult to obtain. When we look back on the past prosperity of the medical profession, observe the present, and forecast the impending future, we know that the abuse of hospitals must be rampant. The increase of charitable or semi-charitable hospitals in number, and the increase of the numbers of out-patients at many of them, prove alike the increase in the tendency of the public to desert the family practitioner and to obtain the gratuitous advice which—being more specialised—they consider to be more valuable. There are proofs of the existence of the abuse, but what are wanted are facts to show on whose side the evil lies, so that we may know upon whom to call for the setting in motion of therapeutical action against a deplorably pathological condition. We beg our readers to coöperate with us in an attempt to deal with this difficult subject. To arrest, if only in some degree, the present abuse of hospitals will be to relieve charity from much imposture, to afford the overworked staffs of the honest charities opportunity of doing their appointed work, to divert to the general practitioners the patients whose care should rightly be theirs, and to place the public in a much sounder as well as a much more honourable position for obtaining proper medical relief. If between us we can effect any portion of this great programme we shall deserve what it is our hope that we may all obtain—A Happy New Year.

THE authorities of medical aid associations and of the various commercial companies look on medical work as if it were a purely mechanical routine. Possibly they do not intend to demoralise, degrade, or ruin the relations between a medical man and his patient. But, all the same, such is the tendency of their methods and of the

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system of medical attendance on the cheap which we have thought it our duty to investigate very specially in the last two years, and on which it is our intention still to throw all the light that patient and continuous inquiry will yield. Medical attendance, to be of real use must be a private and personal matter between the patient and his medical man. All attempts to systematise it in every detail must rob it of half its value. The old club system was liable to this criticism, but not so much as the new attendance on thousands by one man, the servant of a committee of laymen and liable to dismissal on giving any of his many masters offence. On this ground alone we are opposed to medical aid associations and to the exploiting of medical men in such clubs as those worked commercially by laymen in Birmingham and elsewhere and on a huge scale by insurance companies which throw in cheap medical attendance as bait to catch their own sort of business. Instead of huge associations which tend to throw all medical work into the hands of one or two, men and to sweat them out of all health and leisure, everything should be done, in the interest alike of the working classes and of the medical profession, to promote a personal relationship between families and their medical men that will imply some continuity of attendance, some knowledge of the family "constitution," and some human interest such as does not attach to crowds.

The present year is likely to be one of great importance in determining the relations of the profession to the working-classes—not that other classes are excluded from the medical benefits of friendly societies, but that we do not care about discussing the relations of the profession with persons mean enough to pose as fit objects for charity to the detriment of the truly poor. The subject is now, for better or for worse, fairly before the public. Some of our leading papers have opened their columns to it, and we cannot doubt that the public discussion of it will show three things. Firstly, that there is no chance of the poorest person not getting consideration from the medical profession, and, if necessary, gratuitous attendance in an emergency; secondly, that the profession, while determined to assert its claims to be paid better by the working-classes, in accordance with the increased wealth of these classes and the increased demands made by them on their medical attendants, is perfectly ready to abate its ordinary charges in accommodation to those who depend on weekly wages of a modest amount; and thirdly, that the just claims of the medical men to be treated as a profession, at once learned and liberal, must be recognised. It will amaze the public to learn—as they will learn from these discussions in the columns of our contemporaries—that friendly societies which count their savings by millions, and which represent classes that organise, and organise effectively, for better pay, have been trying to reduce medical remuneration to a minimum which would degrade a labourer, not to say a mechanic; and that in order to do this they become huge dispensaries for the medical treatment of the public. It will further surprise the public to learn that in order to carry out such a wholesale scheme of medical attendance they employ hundreds, probably thousands, of canvassers, who do not hesitate to invite the patients of other medical men to join a new club to be officered by some young and impecunious medical man. All this will come to light, and we confidently look to our contemporaries to vindicate the claims to fair treatment of a profession so costly to enter and so arduous to pursue, and to which the public looks at all hours by night or day for services on which life or death depends.

We call on medical men in every town and in every country district to be true to their profession. Medical aid associations and all others that depend on canvassing are to be avoided and condemned. No medical man would directly employ a person to canvass for patients. He is not in a better position if he takes the patients of other medical men procured by the canvassing agent of an association. *Qui facit per alium facit per se.* It is a sorry commencement for a young man entering the profession to accept a position which his seniors have declined in self-respect and in vindication of their rights. He may by so doing get an immediate advantage at the cost of his profession. But he will never look back on such an entrance into practice with satisfaction. What is wanted is a united profession. There are many towns where such union is realised and where this trouble has consequently been avoided. There are others where disunion prevails and the profession is being degraded. No action of the medical authorities will avail if medical men do not stand together in their respective spheres of influence or if they individually do things and countenance methods which are opposed to the traditions of the profession.

PROFESSOR CROOKSHANK has done so much to call attention to the disease known as actinomycosis that his article which we publish on another page will be read with great interest. It is an admirable review of the subject both from the historical and pathological points of view. There can be little doubt, as Professor CROOKSHANK points out, that many cases of actinomycosis escape recognition and are treated as cases of tuberculosis, sarcoma, or one of the many forms of chronic granulomata. It will probably be within the recollection of many of our readers that when the parasitic nature of the disease was demonstrated by Dr. ACLAND in a case which had occurred in St. Thomas's Hospital there were not wanting those who expressed their belief that the lesion was tuberculous, and who at any rate refused to acknowledge its parasitic origin. That cases have occurred in this and in other countries which have been observed and recorded, but of which the true nature has not been recognised, is evident from the fact that LANGENBECK in 1845, LEBERT in 1848, and Mr. T. SMITH in 1855 made drawings of radiating bodies found in pus or granulation tissue which were without doubt actinomycetes. It is only one more instance of the comparative frequency of rare diseases—"rarity" in many cases, at any rate, depending more on the non-recognition than on the non-existence of a malady. The study of actinomycosis from the point of view of comparative pathology is full of interest, since not only is the disease common to man and cattle, but it is probable that it affects horses, dogs, pigs, and elephants. Sufficient evidence has not yet been collected to enable us to state with anything like precision whether the organism found in

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these different species of animals is identically the same, and whether the small variations in structure are only due to the fact that the conditions of growth are not in all cases identical; but it would seem to be certain that a considerable number of granulation tumours which are found widely distributed in the animal kingdom are due to specific organisms which, if not identical, are at any rate closely allied. The relation of actinomycosis to "Madura foot" has occupied the attention of many writers, and though it is probable that the two diseases are closely related, it is, as far as present knowledge goes, improbable that they are caused by the same organism, and this supposition receives confirmation from the experiments quoted by Professor CROOKSHANK, which lead him to the conclusion that the streptothrix Maduræ has not been proved to be transmissible to the lower animals.

Professor CROOKSHANK speaks as a pathologist rather than as a physician, and he does not therefore go into the question of treatment. It is important that as soon as the diagnosis of actinomycosis is established the part should if possible be removed, and this for two reasons: firstly because the disease is, by removal, capable of cure, and secondly because its method of spread is but little limited by anatomical boundaries. The organism infiltrates and penetrates all tissues with which it comes into contact, affecting indiscriminately bones, soft parts, and viscera, so that if left to itself its spread is little likely to be checked, and the foci of disease may be rapidly and widely disseminated by metastasis through the vascular system. If the parts affected are inaccessible to operative measures iodide of potassium should be administered in increasing doses up to the limit of tolerance, for the organism appears to be of low vitality, and there are grounds for believing that its spread may be checked, and possibly entirely prevented, by the use of this drug, especially if associated with the free use of antiseptics, such as iodoform or perchloride of mercury, applied locally to the diseased structures.

THE biography of THOMAS WAKLEY[1] completed in our last number is far from completing the record of one of the most remarkable personalities in the medical history of this century. Endowed with brilliant talents as an orator, indomitable courage, and original enterprise, he started an era of reform in the constitution of our medical schools, hospitals, and colleges of which the last chapter can never be written. The man who, by devotion to science and by assiduous clinical study, adds a new discovery in fact or law to medicine assuredly confers a benefit on mankind; and if a scientific discovery be prolific, as every truth is, so it may justly be said that the man who clears away the obstacles which harass or block the path of medical instruction also does work prolific of good. No man has surpassed WAKLEY in this work. He undoubtedly deserves the credit of being the greatest of all medical reformers. Every medical practitioner of the present generation owes more than can be well expressed to his clear, intuitive genius, to his bold, vigorous, and successful struggle against the abuses which marked the administration of our hospitals and other medical institutions when he began his career. The road to distinction and emolument lay at this time through nepotism, sycophancy, and jobbery of the most ignoble kind. Such a road was naturally repulsive to men of sterling merit and independent spirit. And one direct consequence was that medical instruction, hampered from the very beginning, necessarily imperfect, often simply dogmatic, made a bad foundation for the growth of science. It is certainly true that in spite of all the difficulties interposed by the narrow, irrational policy so rampant in WAKLEY'S time, many gifted men, breaking through the trammels of that policy, distinguished themselves and made important contributions to science. But it is not less certainly true that the diffusion of sound, practical clinical knowledge and skill through the body of the profession, whose immediate duty it was to apply the resources of science to the relief of suffering man, was most seriously obstructed. Thus the growth of science was terribly nipped at the very source. The number of those who might aspire to scientific achievements was unduly limited, and the mental equipment and physical training for the task was thwarted by imperfect, often bigoted, teaching.

The man who led the way and took a resolute part in removing the obstacles to sound and free education is therefore justly entitled to an honourable place amongst those who have earned the gratitude of mankind by diffusing and enlarging the blessings of science. WAKLEY opened the road to many which before was only trodden by a few. A glance back at the early chapters of the biography will reveal the abuses which he so successfully assailed. Some of these abuses still exist in diminished force and still invite steady and persistent attack; and this movement we are happy to see has been taken up by the Associations of Fellows and Members of the Royal College of Surgeons of England, for medical reform is a prime condition of scientific progress. It was through THE LANCET that WAKLEY'S most effective blows were struck. It was a weapon always to the front, giving no rest to the enemy. His next step towards the emancipation of the profession from the tyranny of the corporations and the hospital incumbents was his contention for the special fitness of medical men to be coroners. And he proved his contention by his personal example. He turned his experience as coroner to good account in asserting and advancing the just claims of his medical brethren to reasonable fees for attendance as witnesses and for performing necropsies. Before his time a coroner's inquest was often a sorry farce. The cause of death—the first object of inquiry—was often assumed, declared, or evaded on the most flimsy and arbitrary grounds. The appeal to science was not only a means of safety to the public, but, as he always said it would be, an opportunity of advancing science. He not only opened up a new field of learning, usefulness, and dignity to the profession, but extended the sources of knowledge, for it is before the coroner's court that the science and art of forensic medicine find the most frequent and often the most useful application. A third great event in his career was his election to Parliament. If this event gratified personal ambition it also gave him further power in proving that the interests of the public were closely linked with those of the medical profession. In the House of Commons he was conspicuous as

[1] See also page 55.

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an earnest reformer, not alone in medical affairs, but in general politics. He attracted the attention of the House by his zeal, his ability as a politician, and by the force and charm of his eloquence. In doing this he again advanced the claims of his professional brethren to public esteem and fuller representation.

Flagrant wrong is not to be righted by silken, smooth-tongued appeals to the wrong-doer, but by fearless denunciation and strong persistent action. No man more thoroughly believed in this axiom than THOMAS WAKLEY and no man ever gave it more resolute action. No wonder, then, that an opponent so outspoken, so uncompromising, did not fail to arouse envy venting itself in rancorous slander. But any man might well be proud of the generous and noble testimony to his work publicly given by a political opponent, the Leader of the House, the great statesman, Sir ROBERT PEEL. It may be said that in founding THE LANCET, in getting made coroner, and gaining a seat in Parliament he sought and satisfied personal interests and ambition. But to rest here is to take a narrow view of the career of a man fired with the enthusiasm of genius, labouring to uproot evil and to establish truth. Every successful combatant in civil, military, political, and scientific warfare in a great measure selects his own battle-fields and fashions or makes his own weapons. These weapons are an integral part of his being. Rightly viewed, then, THE LANCET, the coronership, and the seat in Parliament were essential weapons for accomplishing the work upon which he had set his soul. And all these weapons are still at work by inheritance, by example, and by trust. We may well say, "He lives in fame, though not in life."

Annotations.

"Ne quid nimis."

SEASONABLE CLEMENCY.

COLONEL WHITE and Colonel Grey were released from Holloway Prison on Saturday morning last, their sentences having legally expired. No excessive soft-heartedness, no political bias of one sort or another, and no particular disposition of investments will be required to make general the feeling of pleasure that two more of the Transvaal offenders are free; for whatever the individual complicity of Dr. Jameson's officers in plots, whose existence has yet to be proved before a Select Committee, we cannot escape from the feeling that all but one of the raiders acted under orders. They were seconded from the army to obey those orders, and if they had not done the thing for which they have been punished they would have been disobedient servants. They were caught in a logical dilemma, where the alternatives presented were equally conclusive against them, and without discussion of what punishment, if any, they deserved, we can all rejoice as each one goes through the ordeal and emerges safely. But there is a reason which will particularly appeal to readers of THE LANCET for being glad to learn of the freedom of one of these officers. Confinement had told terribly upon Colonel Grey. He went into Holloway last July weighing fourteen stones; he has left Holloway weighing eleven. What this loss of weight indicates where the loser is not a gross man, but, on the contrary, in hard fighting trim, can be told in a few words. It indicates that confinement has dealt too severely with Colonel Grey, and that what was designed to be salutary chastisement has proved to be torture. It indicates more certainly than streams of supplication from a prisoner's lips a sickness of heart as well as a sickness of body. It indicates that if Colonel Grey's sentence had not fortunately expired Government would have been compelled to relent towards him. With diffidence, but with certainty that we are speaking from sound medical judgment, we would put forward in behalf of the two remaining prisoners a plea for clemency which we know that they will never bring themselves to utter. It would be a terrible thing if the punishment of these unfortunate officers should result in a permanent injury to their physique, yet this may result despite the assiduous and undoubted skill of the medical officer of Holloway Prison. Justice must be done, and the law for the rich must be the law for the poor. This is the wisdom of every sound social scheme, to which no one should lightly ask a Government to run counter. But having regard to the sufferings that Colonel Grey must have endured, we wish to know whether it would not be possible to anticipate the occurrence of such mischief in the cases of the remaining two prisoners. Sir John Willoughby is understood to be a tougher subject than Major White and to be more able to bear his punishment phlegmatically. We are in a position to state that Major White's condition gives grave cause for anxiety. He is weak, nervous, and sleepless, and the ordeal of imprisonment has proved too much for him. Has not the cause of justice been vindicated sufficiently? If so, we would earnestly beg the Government to let these two remaining victims of their obedience go free. It was not intended to punish them in such a way that even the remotest chance of a permanent break-down of health should occur. Justice has been done: let clemency begin with the New Year.

THE QUEEN'S COMMEMORATION FUND.

THE unparalleled length and glory of Her Majesty's reign is a matter for commemoration in the most impressive manner. Money should be forthcoming in any needed quantities, but it is very desirable that it should not be given hastily. There is a tendency to "rush" in this matter. To be first in the field is an obvious advantage, and those with pet schemes are already acting on this principle. Still, those who have the means and the disposition to contribute to some object that will worthily signalise an unprecedented event in English history will take time to think. The object should be one which expresses the progress and the humanity which have been the notes of Her Majesty's reign and to which she and her family have made the most helpful and sympathetic contributions. It may well be that more than one great object will be proposed. But it is sincerely to be wished that some central body of wise and influential persons in whom the public have confidence may be chosen to invite contributions to a central fund to be devoted to certain objects. The use of such a central body would be to define these objects and to try to define the proportional importance of them. All, of course, would have to be done with the approval of Her Majesty, but doubtless that would be forthcoming for any purpose which seemed to commend itself to the public mind. There is one purpose pre-eminently calculated to excite public interest, the achievement of which would shed a lustre on the Queen's reign and the century which is nearing its end. We mean the removal of the debt on our public voluntary hospitals. If any institutions represent the progress and the humanity which have marked the Victorian era they are our hospitals, where the pain of operations has been annihilated and the success of measures for the saving of life has been developed to a degree

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scarcely equalled in all the previous centuries. The debt on these hospitals is having a discouraging and in some cases a demoralising effect on them. They are ceasing to be institutions only for the poor, but are catering for those who are not poor, and are even trying to make a little money out of such catering to maintain what remains ostensibly for the use of the poor. Half a million of money would go far to free these institutions from debt and give them a new start for a new century. We urge this great claim on the people of England and especially of the metropolis. We do not wish to be drawn into any disparagement of nursing institutions, which have been somewhat prematurely put forward as a primary object for the loyal enthusiam of the subjects of Her Majesty in this memorable year. We cannot admit that they have any such claim as hospitals have. They spring out of hospitals and find in hospitals the training which makes them useful. Every district with a little self-sacrifice and without any heavy responsibility can secure and can pay for its own trained nurse for the poor. To put nursing institutions before hospitals at a supreme moment like this will be robbing Peter to pay Paul. Besides they have had their turn. At the Queen's Jubilee Her Majesty most graciously gave £70,000 to found the Institute for Nurses for the Poor, and a great impetus to the supply of this want has been given by her generosity. About 600 nurses have been so supplied to places all over the country. It is now the turn of hospitals and their claims are overpowering and unanswerable.

OYSTERS AND DISEASE.

MR. WYNTER BLYTH, medical officer of health of Marylebone, refers in his monthly report for November to a series of six cases of gastro-enteritis, one of which subsequently developed enteric fever, in which the evidence pointed strongly to the consumption of oysters as the cause of the mischief. The six persons in question dined at a well-known London restaurant and the only articles of diet which they consumed in common were beef and oysters. The oysters are stated to have come from Colchester, and Mr. Blyth refers to Dr. Bulstrode's detailed report on that locality to show that thereabouts there are "layings" liable to sewage pollution. It is, however, necessary to differentiate in the matter of layings in the vicinity of Colchester, since the fattening beds of the Colchester Oyster Company, as well as their storage pits, appear from the Local Government Board report to be practically free from pollution. Unfortunately, however, in that part of Essex there are certain pits and layings which do not belong to the Colchester Oyster Company, which were at the time the report was written liable to contamination in a high degree, and it is, too, further pointed out in the report that no oysters should be despatched direct to market from the bed of the river Colne itself. We would especially insist upon the importance in all cases such as those referred to by Mr. Blyth of ascertaining, if such be possible, the exact whereabouts of the pits or layings from which the suspected oysters were obtained. Unless this step be taken injustice may be done to oyster merchants and others whose beds, &c., are free from pollution. Mr. Blyth also states that in some other cases of enteric fever notified in November the sufferers were in the habit of consuming considerable quantities of oysters. In connexion with the general question of oysters and disease, Mr. Blyth points out that accidents such as those to which he has referred may be obviated by a proper supervision of the oyster industry. This subject we recently dwelt on in a leading article in our columns,[1] and we can only reiterate that fresh measures of control must follow upon the Local Government Board report. We notice that in some quarters the oyster merchants even go so far as to deny the existence of layings and pits liable to pollution. Those who do thus are simply aiding and abetting the destruction of an important national industry; but, on the other hand, those—and they consist of the more intelligent men in the trade—who are anxious to bring about the closure of the polluted layings and pits are taking the proper steps to re-instate the industry in the confidence of the public.

[1] THE LANCET, Dec. 12th, 1896, p. 1695.

PRIVATE HOSPITALS *v.* MEDICAL PRACTICE.

IT would appear from some of the methods employed in the name of medical practice that one of the least essential aids in this department of work is the practitioner himself. Mutual interests depending on long acquaintance and intimate technical knowledge are no longer needful, it would seem, to bind together his patients and himself, nor indeed for that is any personal bond of value. Such, at least, is the impression conveyed to a casual reader by such circular addresses as that lately issued by "The London Galvanic and Massage Hospital." This institution, which is, of course, self-supporting, represents the newest departure in medical touting. It is virtually a pay-hospital, of the kind which its title suggests, in which the fee is regulated by the pocket of the patient. The hospital, according to its published prospectus, is under the control and supervision of a solitary director, who is responsible to no authority but his own. The nurses employed are, moreover, as regards their training, native to the establishment. As a bid for the patronage of credulous persons this venture may have some success. The attempt, however, is at least a bold one in times when our national intelligence is supposed to be increasing, when the competence of medical practitioners is as general as it is admittedly high, and when massage and electricity form part of the well-worn armament of medical skill. There can be no doubt, therefore, that touting such as appears in every line of the comment before us, when viewed in connexion with such considerations as these, ought to be utterly discredited by rational people.

TRAUMATIC CANCER.

MANY parts of the East of London are infested by gangs of roughs, who attack wayfarers, maltreat and rob them, and yet, so far as police-court cases show, it is only occasionally that any punishment follows these deeds of violence. It is easy to understand that the police find great difficulty in apprehending any of these men, for they disperse rapidly in the dimly-lighted streets and as readily reassemble. Numbering often more than a dozen, they can without any anxiety as to the result set upon anyone they may meet, and unless he submits quietly to be robbed they quickly render him insensible by blows and despoil him of his money and valuables. The danger is a growing one, and in our opinion needs exceptional measures for its repression. Some of the accounts read more as if they had occurred at the commencement than at the close of the nineteenth century. These remarks are called forth by the report of a recent inquest, at which it was stated that the woman on whose body the inquiry was held had been severely kicked by a gang of men about four months before death. A fortnight after receiving the injury a cancer appeared in the right breast, and from this she died. The question whether mechanical injury can cause malignant disease is a very interesting one, but in this case it may be definitely decided that the injury had nothing whatever to do with the appearance of the cancer. The short interval—two weeks—between the blows and a noticeable growth is far too short, and, moreover,

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at the necropsy it was found that secondary deposits had appeared "all over the body," but "especially in the lungs"; such widespread extension of malignant disease must certainly have taken more than four months. But apart from this case there exists a very general opinion both among the public and in the profession that a local injury, such as a blow, is a very common starting point of a malignant growth. That mechanical injury, such as the rubbing of a rough tooth, may lead to the appearance of epithelioma of the tongue is, of course, certain; but the proof that a blow on the breast without any skin lesion can give rise to cancer is not satisfactory. If such an injury has any influence in predisposing to the appearance of malignant disease it is probably due to the production of a *pars minoris resistentiæ* which is favourable to the development of a new growth. The frequency with which a blow is put forward as the cause of a cancer of the breast is probably to be attributed partly to the popular belief in its efficacy and partly to the satisfaction which most people feel in accounting for any disease from which they may suffer. Blows on the breast are far from rare, and the probability of a blow having preceded the development of a new growth is very great.

SYSTEMATIC POISONING.

WE read from time to time of systematic traders in murder and robbery and professional poisoners, but we question whether it would be easy to beat the history of crime in this direction recently brought to light in the trial of a native prisoner at a court in Cawnpore. The criminal in this instance is a native of India, one Bhadaiyan Kori, who systematically carried on his trade as a professional poisoner for a considerable time for the purposes of plundering his victims. He employed the agents usually adopted in India for the purpose—viz., dhatura and probably arsenic also. His method was to join travelling natives and to mix his drugs with their food in order to rob them of their clothing and effects. The evidence against him was of a conclusive kind, and as he made a complete confession of his crimes there is no room for doubt about the matter. It is, we believe, a curious fact that in cases of poisoning by dhatura in India a difficulty sometimes arises from the poisoner cunningly simulating illness and imitating the symptoms of the poisoned so that a medical man is likely to be deceived and to apply the same remedies to all alike—to the criminal poisoner and his victims. But there was nothing of this sort in the present case.

VACCINE VIRUS IN LIQUID FORM.

OUR New York correspondent writes:—"The Health epartment of New York has determined the most valuable part of a vaccine vesicle by the following experiment. A typical vesicle was chosen, and the crust, the underlying pulp and base and the serum exuding after the former were removed were collected separately. Each was mixed with glycerine in the proportion of 60 per cent. vaccine matter and 40 per cent. glycerine, then thoroughly comminuted in a mortar, and the products were used in the multiple vaccination of children. The pulp showed by far the best, the crust the next, and the serum the poorest results as determined by the percentage of successful vaccinations. It was concluded that the largest proportion of the active virus is contained in the pulp. Therefore the virus now used is in the form of a glycerinated vaccine pulp. Before using the virus derived from an animal, first, the animal from which it was obtained is sent to necropsy and the organs are examined for any evidences of disease; and, secondly, two samples are given, one to the bacteriologist and the other to the medical tester of virus, and no virus is issued unless the reports of the pathologiist, bacteriologist, and clinical tester are all satisfactory. In all the primary vaccinations made during September and October by the department vaccinators in which the results are known, more than 700 in number, there was not a single failure. The virus is a syrupy, opaque, brown emulsion of uniform consistency. It is put up in capillary tubes containing each enough for a single vaccination and in phials of two sizes, one containing one-fifth of a cubic centimetre for ten vaccinations, and the other containing one cubic centimetre for fifty vaccinations. In using the new virus the skin is scarified in the usual way and a drop of the liquid virus (discharged from a capillary tube by blowing out the contents with a rubber tube furnished for the purpose) is then thoroughly rubbed into the scarified area with a slip of wood, which accompanies each tube."

PUERPERAL MORTALITY.

WE have received a little pamphlet by Dr. W. Williams, D.P.H., on Puerperal Mortality, reprinted from the Transactions of the Epidemiological Society of London, and although, as he tells us, he has nothing exactly fresh to communicate, nevertheless, the fact that 4000 mothers in England and Wales still die in childbed every year is one that more than justifies renewed efforts to elucidate the causation of such a lamentable mortality with a view to its prevention. Puerperal mortality may be divided into two classes—the mortality due to puerperal fever, and that due to what is called "the accidents" of childbed, such as placenta prævia and eclampsia. During a period of forty-eight years—from 1847 to 1894—the mean annual mortality rate for puerperal fever has been 2 per 1000 registered births, and that for the "accidents" of childbed has been 2·9. If the period of forty-eight years in question be divided into four periods of ten years each and one period of eight years, and the mortality during each such period for puerperal fever and for the accidents of childbed be tabulated, it will be seen that while during the period 1847–1854 the puerperal mortality from "accidents" of childbed was 3·01 per 1000, it subsequently declined till during the period 1885–1894 it stood at 2·41. On the other hand, as regards the mortality from puerperal fever, the rate which during the period 1847–1854 was 1·72 had increased till during the period 1885–1894 it had reached 2·53. There is no doubt that to some extent this apparent increase may be accounted for by the fact that since 1881 the Registrar-General caused letters of inquiry to be sent in cases where women of child-bearing age were certified as dying from peritonitis, pyæmia, &c. Still, as Dr. Williams says, this improved certification has now been many years in operation, and we might have expected to see some decline in the rate; but, on the contrary, the fact is that from 1881 to 1894 "there has been a higher sustained mortality (from puerperal fever) than in any other previous or corresponding period." That puerperal fever is both more liable to attack primiparæ, and is also more likely to prove fatal in them than in multiparæ, appears to be certain. No doubt the explanation of this as suggested is the right one—viz., that tears and lacerations are always present to a greater or less extent in primiparæ, while in multiparæ this is not so. Every laceration is a possible source of danger, since it may allow of the entrance of septic matter. As regards the greater mortality of puerperal fever in primiparæ, Dr. Williams is able to speak of an epidemic that came under his personal investigation. In twelve cases in which primiparæ were affected eight (or 67 per cent.) died, while in fourteen cases where multiparæ were affected four (or 28·6 per cent.) died. Full particulars of this epidemic are given and are well worth attention, though the main points are sufficiently familiar.

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Thus, for instance, nearly all the fatal cases in each locality were attended by the same midwife. An interesting point is that a number of cases attended by the infected midwives escaped; but this may be easily accounted for by supposing that in such cases there were no lacerations suitable for the entrance of septic poison, or that, owing to the midwives' hands being accidentally cleaner than usual, the supply of septic matter was temporarily deficient. Dr. Williams in investigating this epidemic interviewed some of the midwives concerned, who were so ignorant that they admitted that they did not even know that they might have been the means of spreading the disease, and of course they knew nothing of the means of disinfecting themselves. Yet puerperal fever has been clearly shown to be a preventable disease. It has been practically banished from the best managed lying-in hospitals, where, apart from the antiseptic system, the conditions are necessarily extremely favourable for its prevalence. The sustained mortality due to the prevalence of puerperal fever *outside* lying-in hospitals shows that the conditions under which women are confined outside these hospitals have not shared to the same extent in the improvements effected inside them. The great point to be insisted on is that in all cases personal responsibility should be felt as regards puerperal fever. If adequate antiseptic precautions are adopted by the person attending a midwifery case, in the way especially of thoroughly scrubbing the hands and nails with soap and hot water, and subsequently, after rinsing off the soap, scrubbing them in a solution of corrosive sublimate 1 in 1000 *before* making any examination, then the mortality from puerperal fever will steadily decline outside lying-in hospitals as it has done inside them—and not till then.

"CHEAP CONSULTANTS."

AN edifying correspondence has recently (Dec. 24th, 26th, and 28th) appeared in the *Times*, following a leading article in that journal in which the writer deplored the frequency of errors of diagnosis in medical practice. Dr. Balmanno Squire, with an enthusiasm which reminds one of "nothing like leather," recommends as a remedy the calling in of a consultant as a routine practice to settle the diagnosis, considering that "practitioners of even less than the average attainment are competent when once the question of diagnosis has been accurately solved to conduct the treatment of the case on, at the least, fairly sound lines." Without stopping to discuss whether treatment of a recognised disease is even comparatively such a simple matter, we may examine the way in which Dr. Balmanno Squire proposes to put his remedy in the way of everyone. The well-to-do are still to go to the senior consultant with fees as at present, while for others an intermediate class of "cheap consultants" should be formed composed of younger men who have "taken up some speciality and would see patients at a half or a quarter of the fee charged by the present consultant." He thinks that "the practitioner need not fear that he will lose his patients to the cheap consultants." But there seems even now to be a widespread conviction among practitioners that they do lose many of their patients to high-priced consultants. We regard the suggestion as an undesirable and impracticable one, which would intensify the jealousy which from time to time shows itself, and the development of specialisation which is implied has probably more drawbacks than advantages. The ranks of consultants are now filled by those who have achieved success and those who, hoping ultimately to do so and having facilities for clinical study, are endeavouring to create a reputation. The lowering of fees for these junior men might give them less leisure for the investigation and study which render their opinion valued later; it would certainly lower their own status and would lead to incessant friction between all classes of the profession. But it seems to us that Dr. Balmanno Squire, and perhaps the general public, unduly belittle the general practitioner. The mistakes in diagnosis do not always lie at his door, and many of the alleged cases of wrong diagnosis are due to misunderstanding, the consultant speaking of "displacement of bone" where the practitioner had spoken of "dislocation," or of "facial paralysis" when the local medical man had diagnosed "Bell's palsy." The reprehensible practice of patients going on the sly to obtain a consultant's opinion, without letting him have the advantage of even a written statement of the previous history, is responsible for many of these misunderstandings and supposed "mismanaged cases." The value of a second opinion is often extreme, but its full value can only be obtained by a consultation in the full sense of the term. The frequency of these "mismanaged" cases seems to be much exaggerated and to be daily diminishing as the education of each practitioner is now so wide and complete, and we believe that the way to remove the reproach is to improve the practical teaching of the student and not to adopt some revolutionary measure, such as the creation of a large class of "cheap consultants," with a boundary line between them and general practitioners even less definite than that which now separates the two classes.

SYRINGOMYELIA WITH ARTHROPATHY.

IN the December number of the *American Journal of the Medical Soiences* Dr. Dercum and Dr. Spiller record a very important case of this rare and interesting disorder. The patient was a man aged forty-five years, a native of Sweden, unmarried, and a labourer by occupation. There was nothing significant in his family or personal history until about three years before his admission to hospital, when he strained his back with some heavy lifting. He was in bed for a day, but experienced no subsequent ill effects until about the time he was admitted in 1883, when he began to have pains in his legs, a tight feeling round his waist, and weakness in his lower extremities. He gradually after this developed the usual signs and symptoms of spastic paraplegia, rigidity and powerlessness of the legs, loss of control over the sphincters, exaggeration, followed by disappearance on account of excessive rigidity, of the deep reflexes, and marked impairment of sensibility on the legs. It was also found that the sense of temperature was entirely lost in the right arm and the right side of the neck, and there was some analgesia over this limb. In 1888 it was observed that his right shoulder had become swollen, the joint surfaces grated, and there was some effusion into the joint. There was no pain associated with the changes and the effusion went on increasing, and finally there was rupture of the capsule and infiltration of the subcutaneous and muscular tissue. There were no other peculiar clinical features in the case except the occasional development of small abscesses and of bed-sores. The psychical condition was one of considerable irritability. He finally died from exhaustion in 1895, nearly thirteen years after his admission. On examination of the spinal cord after death there was found to be in the terminal part a considerable area of gliosis around a small central cavity. In the sacral cord the cavity was larger, but this was not an extension of the central canal, which was occupied by a mass of proliferated cells. In the lumbar region the cavity was larger and there was degeneration in the crossed pyramidal tracts. There was now considerable thickening of membranes extending as high as the upper dorsal region. Throughout the thoracic region the cavity extended through the posterior horns to the pia mater, and above the first thoracic segment the cavity became limited to the right posterior horn; the

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degeneration in the lateral columns was still present, but much more extensive on the right side than on the left. The right anterior column was also degenerated and so were the columns of Goll. The details of the description are very interesting and so is the interpretation of them which the writers offer; and not the least important part of the paper is the description of the condition which was found in the affected shoulder-joint. There was complete disappearance of the head and surgical neck of the humerus and minor alterations in the other bones. Such a case as this carefully observed clinically during a prolonged period and systematically examined after death is extremely valuable, and we congratulate the writers on the important results which they have achieved by the care and accuracy with which they have made and recorded their observations.

ARSENICAL SOAP.

WE are glad to see that the manufacturers have been touched by the recent prosecutions in regard to Arsenical Soap. In the *British and Colonial Druggist* of Dec. 25th are two advertisements which show very well the harm which such contradictory decisions as were given upon Dec. 6th and Dec. 12th bring about. Advertisement No. 1 says:—

ARSENICAL SOAP.
DR. MACKENZIE'S.

DEAR SIR,—With a view of preventing any possible further prosecutions under the Food and Drugs Act, Wholesale and Retail Houses are requested to immediately exchange all Dr. Mackenzie's Arsenical Soap which they have in stock for that which we are now manufacturing under a new formula, and which is guaranteed, amongst other ingredients, to contain a uniform though small quantity of Arsenic easily found by Analysis. ..... I am of opinion that it is better to immediately exchange all present stock for that which we are now manufacturing with, amongst other ingredients, an increased amount of arsenic, and which will fully comply with the Food and Drugs Act. Chemists can send what they have in stock direct to me, and also advise by post the quantity returned, and I will, of course, pay carriage, and exchange it. The new soap will in future have printed on the labels "New Formula," so that there shall be no chance of retailers selling by mistake any more of the old stock. I will indemnify all chemists and druggists against prosecution, provided that they will exchange their present stock immediately, and sell only that which bears the imprint on the outside of label "New Formula," and where required will give a warranty that Dr. Mackenzie's is a genuine arsenical toilet soap.

S. HARVEY.

Possibly now if this soap is used indiscriminately by the public there will be some cases of arsenical poisoning. That, however, is for the public to guard against. Advertisement No. 2 says:—

ARSENICAL SOAP.
JAMESON'S.

The Proprietor of the above preparation calls the attention of the Chemists of the United Kingdom to the decision given at Brentford on Saturday, 12th December, 1896, in which it was held that the presence of Arsenic, even the minutest quantity, was sufficient to exempt dealers from prosecution under the Food and Drugs Act. In the manufacture of Jameson's Arsenical Complexion Soap the machinery is so perfect that not only is Arsenic to be found in each tablet, but severe testing has shown that the percentage is also uniform, and consequently each and every tablet may be sold with the utmost assurance; and in order to make the trade feel as confident as does the Proprietor, he takes this opportunity of informing them that he will in every instance defend them and indemnify them should action (which after the judgement quoted is not very likely) be taken against them, and, further, he is prepared to give them a warranty with each delivery of the Soap, which the trade has only to show to the authorities to immediately quash the indictment. It is not for the Proprietor of Jameson's Arsenical Complexion Soap to instruct the trade as to the manner in which it shall conduct its business, but he takes this opportunity of declaring that he will, after this notice, defend any Chemist against prosecution under the Pharmacy Act, provided he has himself fulfilled the statutory obligations.

Please note that the holders of Jameson's Arsenical Complexion Soap are requested to send a post-card notifying the same, and a warranty, which, as before stated, is a certain protection against prosecution, will, with a supply of labels for complying with the Pharmacy Act, be forwarded per return.

W. JAMESON, * * * * * *

We cannot see why sellers of mixtures should not be compelled to label their preparations—e.g., "Arsenical soap. This soap contains $\frac{1}{10'000}$th (or whatever may be the proportion) of a grain of arsenious acid to the pound." "Finest East India coffee. This coffee is a mixture of three parts of chicory to one of coffee. It draws a fine, rich, syrupy liquor, &c., &c. It goes much further than Mocha." If this were made the law purchasers would at least know what they were buying.

THE ROYAL INSTITUTION OF GREAT BRITAIN.

THE programme of lecture arrangements before Easter has just been issued. The Christmas lectures by Professor Silvanus P. Thompson commenced on Dec. 29th The subject is Light, Visible and Invisible. The lectures will be continued on Jan. 2nd, 5th, 7th, and 9th, 1897. Professor Augustus D. Waller will commence a series of twelve lectures on Animal Electricity on Jan. 19th and Lord Rayleigh will discourse on Electricity and Electrical Vibrations in a series of six lectures commencing on March 6th. The Friday evening lecturers embrace the names of Professor Dewar, Professor John Milne, Mr. Shelford Bidwell, Sir Wm. Turner, and others. Among the subjects to be dealt with are The Properties of Liquid Oxygen on Jan. 22nd, Recent Advances in Seismology on Feb. 12th, and Curiosities of Vision on March 5th.

THE LANCET RELIEF FUND.

THE report of the almoners of THE LANCET Relief Fund appears to-day in another column and shows that the modest but, as we trust, serviceable charity which they dispense is still drawn upon to the full extent of the resources placed at their disposal. A comparison of the present report with those of previous years shows that of the two classes of benefits provided gifts tend to prove more serviceable than loans. The loans, though less numerous than the gifts, are on an average larger in amount, and at the end of their first year of administration the almoners reported that they had actually exceeded the gifts—by a few shillings—in their aggregate sum. That, however, has not happened in any subsequent year, and taking all the eight years together we observe that out of a total disbursement of £2531 there has been given £1488 10*s*., lent £1042 10*s*. Repayments on account of these loans have now come to be a source of income to the fund, which was in this way augmented during the past year by £25 10*s*. As the loans are made free of interest these repayments represent only the return of capital, and do not form a source of income in the ordinary sense of that word. A very satisfactory feature of the present report is, that although the number and amount of the benefactions have been as great as ever, the number of applicants has been smaller than on some previous occasions, and notably than in 1895. This has a double significance. In the first place it follows from this that the number of cases in which it has been necessary to turn an applicant away unrelieved has been less. In point of fact, out of thirty-seven applicants twenty-nine, as already mentioned, have been relieved. This is of itself matter for congratulation and it also conveys the suggestion that the scope and purpose of the Fund are coming to be better understood than was at first the case. We have had repeatedly to ask our readers to note that only cases of pressing and temporary necessity are eligible and to beg them when asked to recommend an unsuitable case to explain the difficulty at once to the intending applicant and so save further and more serious disappointment. The almoners draw attention to this point again in the present report, and we are glad to draw from their figures the inference that their observations made on previous occasions have produced to some extent at least the desired impression. This work is so intimately associated with THE LANCET that we feel ourselves privileged when noticing it to express our heartfelt thanks to the almoners and auditor who have during the past year officiated in the administration of the fund. Sir John Russell Reynolds has passed beyond the echo of our acknowledgments, but to Dr. Wilks, his

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successor in the chair of the Royal College of Physicians of London, to Mr. Christopher Heath and Sir William Mac Cormac, who have presided in succession at the Royal College of Surgeons of England during the past year and to Sir Richard Quain, the President of the General Medical Council, who have assisted in the disbursement of the Fund and personally interested themselves in its work of charity, to Sir Henry Pitman, who from the commencement of the Fund has audited the accounts, and to the many brother practitioners throughout the country who have undertaken the duty of investigating on the spot and advising upon the merits of applications we tender our hearty thanks for their valuable and gracious help in the cause of our distressed brethren and their dependents.

THE CHIEF RABBI AND VACCINATION.

THE Chief Rabbi has only done his religion and his co-religionists justice in causing a contradiction to be published to the statement reported to have been made by a Jew that there was a religious objection to vaccination. The Jews are too sensible in their religious views to hold such an opinion. The Chief Rabbi disclaims it altogether through the medium of the *Jewish Chronicle*, and says, with a force that all Christian teachers would do well to imitate: "Since this process [vaccination] has been proved by the most eminent authorities to be a safeguard against small-pox, and inasmuch as an Act of Parliament renders its use obligatory, a Jew who refuses to have his child vaccinated at the proper time is guilty of a grave infraction both of the Divine law and of the law of the land."

J. PICKERING, F.R.G.S., F.S.S., F.S.A., ETC.

THE gentleman possessed of the above array of letters has recently confided in an interviewer at Leicester concerning his treatment of fever. The interview has been published and very interesting reading it is. Mr. Pickering was asked "if he had had opportunities of testing the accuracy of his conclusions ..... and in answer he mentioned a number of cases which may thus be summarised:—

"1. In January, 1895, two cases of chicken-pox were cured in one day by the application of baths.

"2. The same month he was called into the country to see a young woman who had recently nursed a married sister through an attack of scarlet fever. She was sickening for the same disease. Baths were administered at the house of a friend. The first stopped the fever, the patient partook of gruel, a wet compress was applied round the head, and the patient slept quietly. Next morning at 11 she had a second bath, she was down to tea at 5 o'clock, and out the next day.

"3. The next month a maid-servant was seized with fever symptoms. After three baths her health was restored, and during the treatment she attended to her household duties.

"4. In March, 1895, a young girl residing with her parents near Leicester was suffering from all the symptoms of scarlet fever; temperature 102 degrees, bad throat, pains in neck and back, prostrate, sleepless, and depressed. A bath was administered by the mother, which removed the pains, and enabled the girl to swallow better. She had some food and slept; next morning she had a second bath, and in the afternoon a tepid bath. At 4 P.M. she was out with her father for a stroll in the lane."

"Mr. Pickering mentioned other cases of a similar nature, and gave the names and addresses of the persons concerned. Further instances, as stated, have come to our knowledge since from independent sources. In the course of the interview Mr. Pickering spoke of the law of cure. Asked to describe the law, he said:—

"It is the law of elimination, discharging at the skin the special poisons which had gained access to the blood, just as bile is discharged at the liver."

We like the physiology, and we should much like to know whether Cases 2 and 4 had scarlet fever, and if so how many people they infected afterwards. Mr. Pickering is gracious enough to say that it would be better to have a physician at the sanatorium, but he also says "you do not want a medical man to give you a morning bath; the thing is absurd. Then why do you want one to give a bath at any other time?" It would be a pity to spoil this singularly logical argument by any comment. We see by the daily press that the Leicester Corporation Sanitary Committee have decided that "this treatment should, subject to the discretion of the medical officer of health, be fully applied to patients in the hospital." According to Mr. Pickering, "extremes of temperature are destructive of germ or organic life in the blood. Cold water at hot water 36° F., or at 102°, are conditions under which no fever can live." As Mr. Pickering's patient No. 4 had a temperature of 102°, why did he give her a bath? We had thought that 212° or so was the germicidal temperature.

THE PLACE OF CORPORAL PUNISHMENT IN OUR LEGAL CODE.

NOTWITHSTANDING that there still lingers in the minds of some persons an aversion to the use of the lash as a means of punishment, there are not wanting on all hands utterances like the recently expressed opinion of Mr. Justice Day, which advise corporal punishment in certain cases. We admit our sympathy with this latter view on the subject. A sense of degradation is frequently attributed to sufferers from the corporal penalty. But this is in many, probably in most, of the cases in which it has been inflicted an imaginary association. It is hard to understand how so fine a feeling of personal propriety should reside in the violent and criminal assailant of man or woman. The association of such ideas with such practice is itself ludicrous because so forcibly unnatural. Juvenile offenders, on the other hand, must, we should say, be positively benefited by the short and sharp lesson of personal chastisement. They are thus spared that corrupting and enervating contact with prison life which is to their youth like a moral poison. In view, therefore, of the fact that the number of this class of offenders has lately much increased and that by habitual evildoers prison life is even sought for as a species of livelihood we should not be sorry to have an extended trial afforded to the more drastic and more expeditious method of correction. In the case of one cowardly form of crime—garotting—it has already been employed, as our readers are aware, with distinct benefit.

"APHASIA OF THE RIGHT HAND IN A DEAF MUTE."

UNDER this heading Professor J. Grasset of Montpellier publishes[1] a brief but explicit account of a remarkable disability which recently came under his observation. Charcot described agraphia as "aphasia of the hand," says Professor Grasset, but the comparison, though striking and to a certain extent apt, is not absolutely precise. The only true aphasia of the hand is when a deaf mute who has never learned oral speech loses the faculty of conversing manually. Such cases are necessarily extremely rare, and they are likely to become still more so, because intelligent deaf mutes who have not acquired speech are becoming fewer and fewer every day. In order that true aphasia of the hand may be differentiated three factors are necessary. First, an intelligent deaf mute who cannot speak orally; secondly, the incidence of the aphasic condition upon that individual; and thirdly, the non-existence of brachial paralysis sufficient *per se* to account for his inability to converse manually. These three factors are co-existent in the person whose case is given in detail. The patient, aged about fifty years, is a gouty subject and presents all the signs of general arterio-sclerosis. Two years ago the symptoms of progressive cerebral softening set in gradually in consequence of thrombosis of certain arterial branches in the left hemisphere. That there is no sensorial aphasia is evident from the patient's ability to read his newspaper and to understand questions when formulated in the ordinary deaf-and-dumb alphabet. If asked to point out printed words or letters he invariably does so correctly. Formerly he was very active and capable in the conduct of his affairs, and although his memory and

[1] Le Progrès Médical, Oct. 31st, 1896.

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quickness of comprehension have both failed considerably he still exhibits a fair amount of intelligence. Owing to a combination of circumstances he never acquired oral speech, but it is said that he was able to converse by means of the manual alphabet with exceptional volubility, using his right hand almost exclusively. He could also write very well in the ordinary way, but at present he is incapable of shaping letters with his right hand either symbolically or on paper. When asked to go through the deaf-and-dumb alphabet he can make an A after several attempts, and sometimes a B, but never has any further success; whereas with the left hand he experiences no difficulty whatever. His right forearm is partially paralysed, but far from sufficiently so to account for the agraphia. He uses it when eating and drinking, can grasp an object firmly, raise his hand to the top of his head, &c. The movements of the limb are only partially impeded, whereas the patient's power of expressing himself therewith is totally destroyed. He may consequently be said to furnish an example of true aphasia of the right hand. Professor Grasset finally comes to the conclusion that in a deaf mute a centre becomes developed in the cerebral cortex which presides over manual language, but is distinct from the centre whence the ordinary movements of the upper extremity are controlled. The two centres must be separate from, and independent of, each other, inasmuch as they are susceptible of artificial dissociation through disease. The manual language centre is physiologically allied to that for writing: are they likewise allied anatomically? and ought they to be located in the second frontal convolution rather than in the third? Professor Grasset is of opinion that his case supports these hypotheses, but does not establish them.

MEDICAL PRACTICE IN SOUTH AFRICA.

A CORRESPONDENT writes to us:—"The following facts may prove useful to those who look on South Africa as a good field for practice and who intend to emigrate there. The profession here, as at home, is vastly overcrowded, and a man coming out here must be prepared to bring enough money to keep himself for a year or so until he either obtains some appointment or his practice becomes lucrative. I can confidently state that every small village and town in Cape Colony and Natal is well supplied with medical men, and in the principal towns—such as Capetown, Johannesburg, and even in Buluwayo—the supply largely exceeds the demand. Everything here, as elsewhere, is obtained by local influence, and an outsider naturally has no chance against the colonial. This fact applies to every trade and profession out here. Locum tenencies and assistancies are extremely difficult to obtain as they are few and far between. Moreover, it is essential to have a good knowledge of the Dutch language, and besides there are always plenty of experienced men ready to take up these appointments, as I have found more than once to my cost. Fees certainly are higher, but then living costs at least double, even in Capetown, and in Johannesburg about treble the amount of that in England. An English practitioner can have no idea of the isolated rough life which one is forced to lead in the up-country districts, the centre of which may be 100 miles from the nearest railway station, and even there professional competition is frequently quite as keen as at home. The majority of medical men here are either of Scotch or German nationality. In view of the following facts I must advise men in quest of practice not to come here just now or they will be doomed to disappointment:—(1) Rinderpest, which by devastating the country must affect medical fees; (2) the unsettled relations between the Dutch and the English all over the colony; (3) the depression in the Transvaal; and (4) the uncertainty of the future of Rhodesia, all Stock Exchange reports notwithstanding. I am writing this letter chiefly to catch the eye of the junior members of our profession, and I shall feel sufficiently repaid if I am the means of preventing disappointment in the minds of those who think that South Africa is an El Dorado for the medical man as well as for the artizan."

IS CYCLING HEALTHY?

THE lengthy correspondence which has recently appeared in the columns of a contemporary has, as might have been expected, elicited a wonderful diversity of opinions. Some have nothing but good to say of the cycle; others record all sorts of aches, pains, and nervous affections coming on after a ride. One rider attributes these entirely to the use of the bicycle as apart from the tricycle owing to the unconscious strain involved in keeping the former upright. The plain truth seems to us to rest upon a very simple basis. Cycling is not good for everybody, and if abused is good for nobody. Within the last two years people of all ages have rushed into cycling in the most haphazard way. They have regarded neither age nor previous habits nor their physical condition. Small wonder then that many have found evil rather than good come from an exercise which inevitably demands a heavy expenditure both of nervous and muscular force. Probably just the same outcry would have arisen if the same class had suddenly taken to running or rowing or mountain climbing without any previous preparation. It is easy to preach moderation, but it must be remembered that moderation is a term varying with the individual, and everyone finds for himself how much he can do. With regard to the strain involved in keeping up a bicycle and keeping a look out it is probably no more than that involved in walking down the Strand without "cannoning" against others, but many of us have done the one from childhood while the other is but a newly-acquired accomplishment. There is no need to make a bicycle a very wheel of Ixion, especially with a "safety," for it is easy to get off and equally easy to remount; therefore the cry "You must go on or you will fall" seems to us to ignore the fact that we are reasoning animals.

THE RELATION OF SCARLET FEVER TO INSANITARY CONDITIONS.

THAT scarlet fever is infectious in a degree which probably varies in different years and outbreaks is a sufficiently obvious fact, but as to the exact channel by which infection is given off and conveyed there is not only considerable difference of opinion but also a lack of reliable evidence. That the disease is infectious during at least certain periods of the desquamative process is clear, but it is not altogether established whether infection is carried by the separated particles of cuticle or whether possibly desquamation is only associated in point of time with infection. Similarly with regard to the acute stage of the disease there are many who assert, upon what evidence it is not easy to ascertain, that the disease during this stage is not infectious; but, on the other hand, cases have been recorded which tend to show that even the pre-eruptive stage is not free from infective power. In a word, the evidence upon which beliefs are founded is somewhat scanty and unsatisfactory. Dr. Niven, the medical officer of health of Manchester, in his current annual report, while accepting the usually accredited means of spread, discusses as to how far scarlet fever may at times be disseminated by means of insanitary conditions, such, more especially, as defective privies and pails, which lead to soil pollution. Dr. Niven has collected information from a large number of houses which had been invaded by scarlet fever, and he finds that conditions of filth such as those referred to are more intimately associated with scarlet fever than they are, in Manchester at least, with diarrhœa and

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enteric fever. He thinks that the frequent presence of albuminuria in scarlet fever, as also at times of nephritis, together with the not infrequent occurrence of diarrhœa and the swelling of the solitary and agminated glands of the intestine, all point to the infection of the disease being given off by the excreta, and that the pollution of the soil by this means may lead to the spread of the disease, a theory which would seem to receive some support from the seasonal prevalence of scarlet fever. Dr. Niven's views are, so far as we are aware, original, but they nevertheless deserve attention. Perhaps, if infection be thus given off by means of the excreta it might naturally be expected that a polluted water-supply will at times be found responsible for an outbreak; but again it may be that the micro-organisms of scarlet fever have but a very limited vitality in water.

THE BIOGRAPHY OF THOMAS WAKLEY.[1]

IN another column will be found a leading article suggested by our recently concluded Biography of the Founder of THE LANCET. We think it seemly, in view of the kindly eulogistic terms in which it is written, to state that it is from the pen of an old and valued contributor who was a member of the staff of THE LANCET when Mr. Wakley was the Editor and who was entrusted by Dr. James Wakley with the duty of writing the "In Memoriam" leading article on his father which appeared in THE LANCET of June 7th, 1862, page 605. It will be evident, therefore, to our readers that the writer, from his long personal knowledge of Thomas Wakley, is eminently qualified to render a tribute to his work and its influence on the medical profession. For this tribute we, the present Editors of THE LANCET, son and grandson respectively of its Founder, offer him our cordial thanks. Our gratitude is also due to the biographer, whose long and difficult task is (at all events, in its serial form) now concluded. We hope, however, to have an opportunity of expressing more adequately our sense of our indebtedness to him when the Biography is republished in book form.

"A CASE FOR THE MEDICAL COUNCIL."

SUCH is the heading of the report in the *Standard* of an inquest held on Dec. 24th by Dr. Wynn Westcott on the body of Bertram Lett, aged eleven years, the son of a gardener. The evidence showed that he was pushed downstairs on a Monday while playing at a neighbour's house. The leg became inflamed, and the boy's mother called in "Dr." Taylor, 240, Hoxton-street. On the Saturday "Dr." Taylor said the inflammation was spreading to the brain. On Sunday he called with another gentleman, whom the mother did not know. On the Monday the boy died. It transpired at the inquest that Taylor had attended the family for nine years, and that the mother believed he was a "qualified doctor." She paid him 3s. for five visits. The coroner's officer tendered an order for a post-mortem examination to Taylor, which he declined on the ground that he was not qualified. This officer said the name on the premises was Dr. Watts, who died eleven months since, but that Taylor lived there now. Mr. Hewitt Oliver, L.R.C.P. Lond., &c., deposed that he made the post-mortem examination and found septic pericarditis. "Dr." Taylor, on being examined, admitted having attended the deceased and family for eight or nine years. He said he was Dr. Hooper's assistant, having formerly been Dr. Watts's assistant. He attended people whose cases were not serious in Dr. Hooper's absence. This evidence was confirmed by Mr. Edmund Hooper, who said he had every reason to rely upon Taylor's treatment, and attributed his not being registered to the death of his father. The coroner asked Mr. Hooper why he did not remove "Dr. Watts's" name. Mr. Hooper said "he did not like to destroy it, it was so beautifully done." The coroner pointed out to the jury that the mother believed that Taylor was a "doctor." He intimated his intention to report the case to the General Medical Council. The jury added to their verdict of "Accidental Death" that Taylor ought not to have attended without disclosing the fact that he was unqualified. And they also said he was deserving of censure. The offence is a very real one, and it is amazing that any medical man should be found to associate himself as a principal with one who commits it.

[1] See also page 47.

"THE TRAINING OF NURSES IN RELATION TO REGISTRATION."

IN THE LANCET of Dec. 26th, 1896, we referred to a protest by certain members of the Royal British Nurses' Association against the registration of asylum attendants. Through the courtesy of Dr. Outterson Wood we are now in a position to place before our readers some facts relating to the other side of this question which must materially influence any decision upon it. We cannot do better than quote from Dr. Wood's letter. The attendants whose registration is desired are, he states, "thoroughly trained in their special branch of nursing." Furthermore, their qualifications are to include "three years' training in a hospital or asylum for the insane containing not less than forty beds, the certificate of the Medico-Psychological Association for Proficiency in Nursing (a certificate we may remark which entails a searching examination into the general principles of trained nursing), and a certificate of moral character." The education of these attendants is carried on under direct medical supervision. It is intended to register them as a distinct class of nurses and thus to afford the public a reliable guarantee of their proficiency. We are pleased to recognise in the course of training here explained those provisions for a sound, general, as well as special knowledge of nursing principles which, as we have already stated, are sufficient, and alone sufficient, to confer a title to registration.

CHILD LIFE DURING THE REIGN OF QUEEN VICTORIA.

AFTER a very fitting manner the National Society for the Prevention of Cruelty to Children proposes to celebrate the sixtieth anniversary of the Queen's accession. The same appropriateness appears in the place of meeting chosen for this purpose—namely, the Albert Hall, London. The object of this celebration will be to make public the conditions affecting the life and work of children at the beginning of Her Majesty's reign and to trace the legislative processes acting up till the present time which have brought order, decency, and happiness out of what was once a chaos of neglect and cruelty. The factory, the mine, the sea, the field, the street, the circus, and the home have each and all been invaded by the same terror, and have alike learned the healing power of a national will instructed and refined by the compassion of kindly feeling. It is a glory of this reign that during its continuance a work so eminent in its humanity should have been so far completed. None should feel more deeply than our Gracious Sovereign and the not forgotten Prince her Consort in all good deeds, were he present with us, the joy of having added so much happiness to human life. In spite of considerable difficulty arising from social or economic opposition legislation in regard to this matter has proved an efficient corrective, even when applied in cases which required the direct invasion of the home. We need hardly remind our readers that it is in cases of this

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latter sort that the National Society for the Prevention of Cruelty to Children has been most active. Its increasing popularity may be taken as indicative of the manner and the spirit in which its difficult functions have been discharged. We would also note the fact that every other project of a like nature has been either aided in part or entirely carried out by the State Executive, while this is maintained solely by the provident liberality of voluntary contributors. It is only right, therefore, that the coming celebration should bring to the society, as it is hoped that it will, a fresh mandate and vote of confidence in the form of a marked increase in that liberality.

THE PURITY OF LAKE WINDERMERE.

IT is satisfactory to find that the statement made some weeks ago by a member of the Lancashire County Council that Lake Windermere was becoming a vast cesspool is shown by Dr. A. Hamilton, in a letter to the *Times* of the 29th ult., to be without foundation. Typhoid fever and diphtheria are practically, and have been for some time, unknown in the district, a result which may safely be attributed to the excellent attention which the local authorities give to sanitary requirements. Dr. Hamilton proceeds to show from a series of analyses made during the last twenty years that the quality of the water of the lake has not deteriorated. We note, however, that the analysis made in 1884 was not quite so satisfactory as that made in 1875, but the county analyst, in summing up his report on the results of analysis of samples of water taken from the lake in November last, says: "The water is now purer than in 1894 and in 1884 and almost as pure as in 1875." Of course the lake is liable to some pollution since there are three urban districts situated in its immediate neighbourhood, but it is evident that the authorities of these districts spare no pains to keep the lake clean, from the fact that they have recently spent £18,000 on purification works. The authorities are to be congratulated on taking these desirable measures to maintain the historic purity of the waters and Dr. Hamilton for having established a case against the allegation that more sewage is now being sent to the lake than hitherto or that the waters of the lake are less pure than formerly.

THE INDIAN FAMINE.

THE latest telegraphic intelligence from India gives a somewhat brighter prospect. The winter rains, although light at present, are becoming more general, and the extent as well as the severity of the famine will, it is hoped, be less grave than was at first anticipated. Bombay and Madras Presidencies may be considered safe; and the prospects for the North-West Provinces, Oudh, the Berars, and part of Bengal have improved, while there is still much anxiety as regards the Punjab. There are large tracts, however, where famine is being felt and where the outlook is a serious one. The food prices in Bengal, the Central Provinces, some parts of the North-West, and the Punjab are very high, and the prospects in Upper Burma are bad. Relief works have been opened at a large number of places, and vigorous efforts are, of course, being made to curtail or mitigate the extent and severity of the threatened disaster. The Anglo-Indian papers are naturally full of descriptions of the famine, of the distress and sufferings of the people, and of the increased sickness and mortality that are being caused by it, which are sad enough in all conscience to read, but far worse to witness, as those of our countrymen who have served in India under such circumstances know full well. There is no lack of energy in the strenuous efforts that are being made for the relief of the sufferers and in the organisation that has been devised for the distribution of food supplies to the native populations of the affected areas. The Indian Government and the governing classes of that country have to cope with enormous difficulties at the present time, but they have had previous experience to guide them and happily they always rise to the occasion.

THE committee of St. Martin's Town-hall have granted the free use of the large hall to the Charing-cross Hospital for Mr. Bancroft's reading of Charles Dickens's "Christmas Carol," on Friday, Jan. 22nd, in aid of that institution. Tickets can be obtained only at the hall or of the secretary at the hospital.

WE understand that a promise of £500 has been made to the University College Hospital conditional upon nine other persons promising the same amount, or £100 each per annum for five years.

THE LANCET
Special Sanitary Commission
ON THE
USE OF ANTISEPTICS IN FOOD.

THE increasing use of antiseptics as food preservatives demands attention. At present there exists no law providing for the suppression or control of the practice, unless it can be proved that the substance in question in the amount present is injurious to health, in which case it comes within the meaning of the present Food and Drugs Act. Otherwise it is futile to institute legal proceedings. The addition of a preservative to foods such as milk and butter, can hardly be regarded as fraud in the same sense as when their bulk is increased by the addition of water in the one case and foreign fat in the other, although on the other hand an antiseptic may be employed to preserve articles in incipient decomposition for some time, giving them the appearance of freshness and thus directly deceiving the purchaser in regard to their actual condition. It would, however, be obviously difficult to establish a clear case of this kind in court. The injuriousness of preservatives in food should afford a more satisfactory basis to proceed upon, but in regard to this, the most important aspect of the subject, we are confronted with the very serious difficulty of a strong conflict of opinion.

It was not to be expected that the Select Committee on Food Products Adulteration, which finished its labours and drew up a report in July last year, would offer any pronunciation upon these points, since not a single member of this committee could be properly described as a scientific authority, but on the other hand the committee consisted largely of traders and politicians. We have commented upon this fact before, which is one to be deplored. In connexion with a very important section of the subject, therefore, the committee were content to refer such matters to a court of reference of experts the creation of which they were led to recommend. They did not, however, leave the subject entirely alone, for in the report they remarked that although the adulteration of food with substances injurious to health had diminished greatly during recent years, and that whereas (in the old days of THE LANCET Commission) people were poisoned, now they are cheated; but at the same time the evidence taken in the proceedings showed that aniline dyes were employed very largely in colouring food-stuffs and that antiseptics were added to almost all perishable foods. Some of these dyes and preservatives, the committee went on to state, are said to be poisonous and their use would therefore appear to be prohibited by Section 3 of the Act of 1875. Again, "your committee understand that it would be difficult to prove that some agents, colouring, and antiseptics are injurious to health, but the opinion has been expressed that some limits to their use should be imposed. Your committee are informed that in France the sale of any article to which antiseptics have been added is absolutely prohibited, and a similar course appears to have been taken in Germany, Italy, Spain, Brazil, and the Argentine Republic. Your committee

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think the matter is one which deserves further investigation by recognised scientific authorities with the view to the expression of an opinion that would be regarded as authoritative." In another section of the report relating to the proposed functions of the new court of reference there occurs the sentence that "among the matters referred to (for the consideration of this court) may be mentioned such questions as the wholesomeness of ingredients used in the preparation of food, and the legitimacy of the use of colouring agents and preservatives."

Finally, in regard to the attempts which have been made to bring legislation to bear upon those who have employed antiseptics in articles of food, it is interesting to notice that the Local Government Board said, when appealed to upon this question, that "the question is one which the board have no authority to decide" and referred to note "d" appended to the form of certificate provided in the Act, according to which the analyst may say whether, in his opinion, the mixture was for the purpose of preserving the article and whether it was excessive in quantity. Allusion was further made to the report of the Local Government Board 1890–91, in which it was stated that "there is no doubt that boric acid if taken in large quantities would be injurious to health, but we have not sufficient information to show whether such minute amounts as are generally added as preservatives could be regarded as having that effect, and more exact information is wanted before it can be decided whether a process which *primâ facie* may be regarded as intended to prevent the loss of valuable foods must be held to be prohibited by law."

It is obvious from all this that the English law as it stands at present does not prohibit the use of preservatives so long as they are not shown to be injurious to health. This being so, it is futile to institute proceedings against the vendors of articles of food so treated without some evidence of this kind. Much public time and money has, however, been wasted over this matter in proceedings which have been instituted chiefly on the ground that the substance employed has been injurious to health. Even in the majority of these cases, if not in all, this argument has generally failed to convince the magistrate in view of the sharp conflict of views presented before him upon this subject in the evidence of expert witnesses. It may be here remarked that unless he is a duly qualified medical man the public analyst cannot be regarded as competent to give an opinion as to whether the preservative in question is injurious to health or not. His duty, we take it, has ceased under the present administration when he has stated in his certificate the fact of the article being preserved and if possible the quantity of the preservative, but of course if the use of certain preservatives should come to be entirely prohibited by law then he could pronounce definitely and decidedly against that food being fit for consumption which has proved to contain a preservative scheduled by the law as objectionable. It is on the question of injury to health upon which it is alone possible, it seems to us, to demand the aid of legislation, and no approach in this direction can be made until very definite evidence is forthcoming of actual injury to health having been caused by the consumption of articles of food preserved with those antiseptics which are now so commonly met with. At present there is very little evidence of experience available that any serious injury has been caused to health by the use of antiseptics in food, but it is possible that in certain obscure cases of illness the chances of injury to health by this means may have been overlooked. Cases, it is true, have been reported from time to time, but not one has evinced any grave importance, while in some instances the arguments in favour of a preservative agent having done the mischief have not been as conclusive as might be desired. There was apparently a serious case reported comparatively recently by the medical officer of health to the East Kent Joint Committee in which milk that had been twice treated with borax, or its basis, boric acid, would seem to have led to a serious and sudden outbreak of illness. On considering the facts of the case, however, it is by no means clear that the injury was caused by the preservative in question. The symptoms pointed to ptomaine poisoning rather than to the effects of borax. This fact, however, may even afford an indirect argument against the use of preservatives, since possibly the unwholesomeness of the food may be covered by means of a preservative. In the notes of this case it is remarked by the writer, Dr. M. K. Robinson of Dover, that the results indicate the necessity for precautions being taken when prescribing this drug for medicinal purposes, and also in respect to its use as a food preservative. On the contrary, it is well known that considerable amounts of borax are frequently prescribed and are found to be borne with impunity.

The extreme importance of this subject has appealed to us for a long time, especially with a view to ascertaining whether legislation on this subject was in the first place called for, and in the second whether it could be made practicable. The aid of legislation would, of course, be called in either to restrict the practice altogether, or else, recognising its necessity, to place it under some control. In any case it is very undesirable that the legislative use of drugs in food for preserving purposes should be left without admonition in the hands of those who are quite ignorant of the nature of these drugs. The vendors' chief object in employing antiseptics is for the purposes of preserving for his own gain, and it is conceivable that he may be tempted to use a far greater amount than is necessary, so as to be quite certain of securing the food against a change which would render it unsaleable.

The question to be decided, therefore, is as to how far the use of preservatives can be held to be objectionable on hygienic grounds, and this, as the Food Products Committee puts it, is a matter "which deserves further investigation by recognised scientific authorities, with a view to the expression of an opinion that would be regarded as authoritative." It is obvious that this expression of opinion must rest entirely on the evidence and experience of medical men of recognised authority. The main purpose of the present article is to put before our readers representative views of members of the profession in regard to this important subject. The opinions expressed in the letters printed below were kindly furnished to us in response to the following letter.

THE LANCET Offices, Strand, W.C.

DEAR SIR,—We venture to bring under your notice the following facts regarding a very important subject and shall be greatly obliged for any information or advice which you can give us.

During the last few years attempts which have very generally proved abortive have been made at great expense to the public authorities to obtain convictions under the Food and Drugs Act in connexion with the use of certain antiseptics in the preserving of foods, beverages, &c. These cases have generally broken down because it has been held that articles of food so treated are not injurious to health in view of the small quantity of the preservative employed. A very definite pronouncement is wanted on this point and would be particularly opportune just now since the use of preservatives in food and various preparations (very often intended for the use of invalids and infants) is, there is reason to believe, largely on the increase. Not long ago a case was heard in which a British wine was proved to contain two or three grains of salicylic acid per pint. The prosecution failed because there was no evidence forthcoming as to the injuriousness of that small quantity. Milk and butter constantly contain boric acid and no conviction has ever been obtained on the score that the preservative used had any prejudicial effect upon health.

Is the presence of small quantities of salicylic, boric, benzoic acids or "formalin" in food in sufficient quantities to preserve it injurious to health? Should the use of antiseptics for this purpose be forbidden by law altogether, or should legislation be brought to bear on the restriction of the amount, or should the law insist that when preservatives are used the fact should be stated on the label?

We understand that public analysts are most anxious to have definite medical opinion on these points and we desire to help them to obtain such an opinion. We shall be deeply indebted to you if you will be so kind as to give us the benefit of your knowledge on the subject.

We are, Dear Sir, yours faithfully,

THE EDITORS OF THE LANCET.

Sir HENRY THOMPSON wrote:—"I have long held the opinion that the practice of adding antiseptic agents to articles of food which are daily and habitually consumed by individuals of all ages, including even infants in arms, is a most undesirable practice. I cannot produce evidence to prove that any one of these agents has given rise to deleterious action on the persons taking them. So great a number of concomitant circumstances

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exist in connexion with the diet and management of people at large that the attempt to isolate the precise influence of the antiseptic drug must almost certainly be impossible. Some five or six years ago I was especially consulted by the municipal authorities of Kensington relative to this subject and strongly advised their limiting the employment of antiseptics on the part of dairymen and others, who, it appears, were using them freely, and I laid special stress on the undesirability of feeding very young children on milk thus 'preserved.' But on general principles I entertain a very strong objection to the *dietetic* use of any drugs; and thus I object greatly to the large general use of mineral waters containing them, as they all necessarily do, to a larger or less extent. I am not speaking of their medicinal use or of aperient waters, but of *drinking* waters containing often considerable quantities of mineral salts, such as carbonate of lime, soda, and magnesia. I infinitely prefer for the general consumer the use of distilled water aerated. It is, in fact, the most perfect drink for habitual use, especially amongst dense populations, where local wells or other sources are liable to become contaminated. Where the use of alkaline carbonates is necessary or desirable it is easy to take a known quantity, and at a suitable season of the day, which is certainly not generally at the time of taking food, when such mineral waters are mostly consumed. Certainly I am of opinion that in every case of articles offered for public sale containing an antiseptic agent the name and quantity of the material employed, and thus added, should be stated by label when possible; or at all events should be expressed on a paper, setting forth also the maker's or vendor's name."

Dr. PAVY wrote:—"Pray excuse this tardy reply to your letter regarding antiseptics and food, but I have not been able to give thought to the matter before. Because no tangible evidence is forthcoming of injury to health arising from the employment of antiseptics in small quantities for the preservation of articles of food I do not consider that our knowledge can be regarded as sufficiently extended and complete upon the point to permit its being absolutely taken for granted that no injury is producible. By the use of antiseptics it is the vendor and not the consumer that is benefited. An article that may have been kept for some time is made to present the appearance of one in the fresh state. To countenance this without the distinction being made known would be clearly unjust to the purveyor of the fresh article and calculated to lead to a relaxation of general effort to supply in the fresh state. Encouragement will also be afforded to insufficient attention being given in the fabrication of an article to secure self-maintaining goodness. Reference, for instance, is made in your letter to the addition of salicylic acid to British wine. A good and properly made wine does not require such addition, and by its agency inferiority may be covered and an unfair semblance of quality which does not exist be given. The same remark applies to beer, and an article in the preparation of which care is bestowed so as to give it self-preserving power is placed on a level with one that would become unsound on keeping if it were not for the antiseptic used. Justice, I consider, all round demands that antiseptics should not be allowed to be used without the fact of their employment being made evident so that the purchaser may know the nature of what is supplied to him. With respect to the question of restricting by legislation the amounts of antiseptics I consider it would be unwise for the legislature to incur such a responsibility. If it defined the amount that might be used it would be establishing, as it were, by legislation that no harm can accrue from the employment of such an amount. The onus, I am of opinion, should be thrown upon the vendor. He should not only reveal the fact of the presence of an antiseptic but at the same time should be required to specify its nature and amount. In other words, the onus should be made to rest upon the vendor with respect to the addition both as regards nature and amount being injurious or not to health. At the same time he should be made liable to prosecution for any deviation given regarding the antiseptic introduced. With the public interest thus safeguarded I think advantage might be taken of the power of antiseptics in preserving articles of food."

Dr. F. J. ALLEN, Professor of Physiology in Mason College, Birmingham, wrote:—"The substances used as antiseptics in food may be classed under two headings:—(1) those that are foreign to the animal organism, and (2) those that are unusual, but not foreign, since they are occasional constituents of normal food. Among the latter may be named benzoic and salicylic acids, which we take in minute quantities in vegetable foods, and which a healthy body can dispose of without disturbance of its functions. On the other hand, boric acid and its compounds are quite foreign to the animal body and their presence must necessitate a departure from the normal chemistry of life. The departure may be expected to consist partly in the formation of inert compounds of boric acid with calcium and magnesium (perhaps also iron), and the consequent removal of these indispensable metals from the economy. Whatever antiseptic may be used, it should be remembered that in order to obtain its due effect there must be enough present to exert a decided influence on photoplasmic activity. This effect can hardly be expected to be beneficial to the tissues of the alimentary canal. Even the disinfection of the contents of the canal is a doubtful blessing in most cases, because the beneficial organisms are thereby destroyed. However harmless an occasional dose of boric acid (or one of its compounds) may be, it is evident that the case may be different when nearly every article of diet contains it. If we take boric compounds with our bacon, sausages, fish, butcher's meat, preserved meat, milk, cream, butter, preserved fruits, jams, beer, cider, and wine, the result may be daily accumulation quite sufficient to produce a considerable constitutional disturbance and a gradual lowering of the standard of health. I am of opinion that if any article intended for food contains any added antiseptic the fact and the nature of the antiseptic should be required by law to be distinctly announced at the time of sale. The name antiseptic should not, of course, include common salt, nitre, spices, or wood-smoke."

Dr. G. SIMS WOODHEAD wrote:—"It is a somewhat difficult matter to give a very definite opinion on the points raised in your letter. In the first place I hold that the onus of proof rests on those who use those preservative substances in the preparation and preservation of food stuffs. As a matter of fact, we know that the question of idiosyncracy or personal constitution enters very largely into the question as to whether the substances used—salicylic acid, boric acid, and the like—are dangerous; and what may be comparatively harmless in 99 cases out of 100 may be exceedingly harmful in the hundredth case. Then it must also be borne in mind that what may be comparatively harmless when given in a single dose, or for a very short period, may have very serious effects if continued over a lengthened period, and the physiological effects of multiple doses, especially if the substance have any 'cumulative' action, may be exceedingly harmful. Then, again, we do not know as yet what effects certain of these drugs—formalin, for example, which acts very directly on albuminoid substances—may have upon food stuffs, especially as regards their actual digestibility, and until these points are settled it should certainly be illegal to add them. One would have thought that the taste given to foods by the addition of certain of these substances would be sufficient to exclude their use, but unfortunately this is not the case. These substances, whatever they are, are adulterants, and the milk or other foods to which they are added are to the extent of their addition adulterated. If it can be proved that such substances can be used safely then let permission be specially granted, but it is certainly inadvisable to allow anyone to use substances to preserve his wares simply because he thinks they are innocuous. The last point to be considered is that allowing the use of such preservatives is a direct incentive to the distribution of 'doctored' articles of food. Taking milk as an example, it is possible, as we know, by the use of chalk and other substances, to render sour milk saleable as fresh milk, and it is imaginable that by the addition of chalk and, say, formalin that such milk may remain saleable for some time after it has been 'doctored'; but no one would convince anyone who has studied the question of milk as a food for children or would contend that such milk is fit for food for any but the most robust digestion. The same theory should be carried into every question connected with food-supply. Let food be sold as pure, fresh food, free from chemicals of any kind, or if chemicals are used make it illegal to use them unless a full description of their nature and quantity be made known by means of a label or placard printed in large type."

The late Sir BENJAMIN WARD RICHARDSON wrote:—"I have read your letter carefully respecting the use of antiseptics in foods, and my opinion is that they, in foods, are not only necessary at this moment, but that when used

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in proper form and quantity they are perfectly correct—that is to say, they cause no injury whatever to the consumers. There ought, therefore, to be a licence given, permitting, in every case where it is necessary to preserve, a certain fixed and not dangerous quantity of an antiseptic; and I think it ought to be stated on the label what that antiseptic may be and what is the quantity of it used."

Dr. T. LAUDER BRUNTON wrote:—"I think one must draw a sharp distinction between substances added to foods, condiments, or other articles intended for consumption for the purpose of simply increasing the profit of the vendors, and such substances as are added for the purpose of preserving perishable articles from the changes which would otherwise take place in them. As an example of substances added for the mere purpose of increasing the sale of an article, I may instance salts of copper added to tinned peas in order to give them a greener and fresher colour. The question of copper as an agent for this purpose has been a subject of much discussion, some holding that the copper is not injurious and others that it is; but whether it be so or not, I think that with such conflicting evidence the purchaser ought to have a chance of taking such risk as there might be, or avoiding it at his discretion, by having a clear statement upon every tin of peas that they contain copper if copper has been added, and that peas to which copper has been added, and which are not said to contain copper, ought to be regarded as adulterated and the vendors should be liable to a fine.

"The same rule ought, I think, to apply to all substances about which there may be the least doubt and the use of which is not actually prohibited by law, such as the use of alum in baking-powder, &c. In regard to substances which are simply added for the purpose of preventing such changes in perishable articles as would naturally occur without their addition, I think one must remember that poisons are actually formed from foods by their spontaneous decomposition, and that foods which might be perfectly good and harmless at the time they were sold might be allowed by the purchaser to remain lying in a warm place for such a time that spontaneous alterations might occur in them, and illness, or even death, might result from their consumption. This, of course, we know to be the case with meat, but even with butter we know such changes may occur as will render it rancid, and the fatty acids which are then present may act as violent irritants and produce severe indigestion. Similar changes may occur in other articles of food, and the question really comes to be whether the acids, salicylic, boric, or benzoic, which are added to prevent decomposition are likely to be more injurious to health than the natural products of decomposition which would be formed were the preservative not added. My own belief is that the preservative acids are likely to be considerably less injurious to health than the natural products of decomposition, but this is a point upon which considerable divergence of opinion might occur, and I think that here also the purchaser should be allowed the chance of judging for himself, and that where any preservative is added the fact of its addition and the amount added ought to be stated by the vendor. This would enable the purchaser either to avoid the article altogether, if he thought that it was likely to harm him, or to avoid any risk such as might occur from his taking such a quantity of the article as would contain an injurious amount of the preservative. For example, in the case of British wines, which contain two or three grains of salicylic acid per pint, this quantity could not do the person who consumed it any harm; but if he were to get through a dozen pints in the course of a hot summer's day the quantity of salicylic acid might possibly be then enough to harm him. In answer to your questions, then, I should say that the use of antiseptics should not be forbidden by law. Secondly, it is doubtful whether legislation should be brought to bear upon the restriction of the amount, because this will probably be settled by the quantity actually necessary to prevent decomposition. The makers of an article will in all probability use the minimum amount of antiseptic sufficient for their purpose, and legislation in regard to the amount might be simply meddlesome and injurious. Thirdly, it ought to be most stringently insisted upon by law that whenever preservatives are used the fact should be stated on the label as well as the amount used."

Sir WILLIAM ROBERTS wrote:—"I take it that there is really no reliable information available on the subjects embraced in your circular, and I doubt very much whether the opinions of medical practitioners on the points in question are of any value and they might be very misleading. What is wanted is an inquiry, and it would be a very long and difficult one."

Dr. W. D. HALLIBURTON wrote:—"I regard your letter as one on a subject of great importance, though I regret I am not able to give you much information from my own experience on this matter. On general *a priori* grounds it can hardly be doubted that the continued use of even small quantities of antiseptics is injurious, though it is difficult to put one's finger on any definite symptoms or recall any case in which it would be positively stated that the ill-health is due with certainty to the use of foods uncontaminated in the way you describe. On the other hand, I and all of us are continually taking such food (especially milk treated with boric acid) without any appreciably bad results. Professor Allen, Mason College (Physiological Department), Birmingham, was speaking to me about boric acid in milk the other day and said he was acquainted with cases of ill health in children due to its use. He told me the antiseptic prevented the proper action of re-union, which appears to be essential in the digestion of milk. I fancy it must want rather a large amount of boric acid, however, to prevent rennet action, as in the west country essence of rennet is generally kept sweet with this substance."

Dr. J. B. BRADBURY (Cambridge) wrote:—"No case has come under my notice in which I thought small quantities of antiseptics used in the preservation of foods, beverages, &c., have been prejudicial to health, and I am disposed to think that the presence of small quantities of salicylic, boric, or benzoic acids, in sufficient quantities to preserve it is not injurious to health. In my opinion it is not necessary to forbid by law the use of antiseptics altogether, but the amount should either be restricted or the fact of preservatives having been used should be stated on the label."

Dr. WHITELEGGE wrote:—"I am scarcely prepared to speak positively upon this matter. I have no doubt that large proportions of such antiseptics are harmful, but I do not know enough of the facts to affirm that there is no antiseptic which could be employed in a proportion so small as to be harmless.

"It seems clear to me that the law ought to insist upon a plain statement on the label if any 'preservative' or antiseptic, or, indeed, foreign material of any kind, be added."

As will be seen from these communications there is considerable diversity of opinion as to whether antiseptics in the quantities used for preserving food are injurious to health, and also whether legislation could satisfactorily deal with the subject, although on the whole the conclusion appears to be not altogether unfavourable to the use of preservatives with certain restrictions. The majority agree in one thing, and that is that should the practice be tolerated it should be placed under some control, so that, for instance, where the addition of antiseptics is practised it should be notified to the purchaser. Very few of our correspondents, it is important to note, are able to quote cases within their experience of injury to health having been caused by preservatives in food.

Although, to sum up, it would be difficult for the legislature to lay down hard and fast lines as to the quantity of antiseptic permissible, yet there seems no reason why the purchaser should not be entitled to demand an article free from certain preservative which could be scheduled. We certainly think that if the practice is to be permitted at all it should be subjected to control in regard to the amount and kind of preservative to be used, but it is difficult to see how legislation regulating the precise quantity of preservative could be made practicable. If legislation is to step in at all it must be either to allow or not to allow the use of preservatives, or certain of them, in food, and in the event of the former course being decided upon it should be insisted that the vendor should notify by label or in some other way the fact of a food being so preserved. At the same time, it is desirable that the public should be able to demand an article free from preservatives just as now under pain of penalty they can demand pure coffee unmixed with chicory. Similarly when a purchaser asks for fresh beef he does not expect to get beef preserved with salt, or pickled pork when he asks for fresh pork, tinned fruit for fresh fruit, and so on. There are certain preservatives in common daily use which nobody can suppose for a moment to be injurious; such are, for instance, salt, sugar, acetic acid, wood-smoke, &c.; but these, it is

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argued, with of course the exception of the last-named, are not foreign to the animal organism. (The "curing" property of wood-smoke, it should be remarked, is dependent upon the presence of creasote bodies). It is probably, after all, merely a question of degree of preserving power; boracic acid, salicylic acid, and formalin are infinitely more powerful antiseptics than salt or sugar, and consequently to effect a certain preserving property may be used in infinitely smaller quantities.

It seems to us that in some cases preservatives may have their legitimate use, as unquestionably there would be much good and valuable food lost and wasted, especially in the hot summer months, if there were no easy and convenient means of preserving it against change. Unfortunately, where there is a legitimate use for a thing or method abuse is bound to creep in. It is the possibility of this abuse against which legislation should be directed.

MEDICAL ADVERTISEMENTS TAKEN FROM OLD NORWICH NEWSPAPERS.

BY CHARLES WILLIAMS, F.R.C.S. EDIN.

THE newspapers of the latter portion of the seventeenth century contain many extraordinary advertisements respecting the healing art. The following curious examples are taken from Norwich newspapers of that period. Not only were they inserted by quacks and barbers, but by surgeons and apothecaries who did not consider it derogatory to advertise the power of their drugs and the marvellous skill they possessed in being able to cure, without question, every possible complaint that man is subject to. Women did not despise the same means of making known their medical and surgical capacity. So far back as 1390 they appear to have dabbled with medicine; one of the ordinances issued by the barbers of London authorises the masters to make scrutiny, not only of men, but of women undertaking cures or practising the art of surgery. On the other hand we see in 1568 the Bishop of Norwich licensing Cecily Baldrye of Great Yarmouth to practise the art of chirurgery, and the widow of Nicholas Colman was licensed in 1596 by the Privy Council "to minister her best skill and cunning to women, children, &c.," and this practice was also recognised by the Mayor of Norwich, who paid Frances Bush 5*s.* towards the cure of Goodwife Woolsey (1673), and in the register of St. Benedict is an entry under date 1666, "Paid to Mrs. Scarfe for setting of Mary Usher her leg, 10*s.*" And now in the nineteenth century we find history repeating itself, and women again intermeddling in matters surgical.

Mrs. Taylor's advertisement.—"This is to give notice that the Widow of the late Dr. Taylor, deceased, still continues her Practice of Physick, and has by the Blessing of God lately cured several of the Rheumatism, Dropsie, Scurvey, and several other diseases incident to human bodies. She has also an infallible Remedy for the Stone and Gravel which gives immediate Relief to the Patient in less than an hour after taken. She likewise bleeds and gives judgment on Urin."—*Cosgrove's Gazette*, 1710.

Mrs. Dimes's advertisement.—"The Original Stone and Gravel Pill being a medicine so well known and approved of by all people who have try'd it, to be the only Remedy to cure the Dropsie, Wind, Collick, Scurvey, and Rheumatism, which by God's blessing it never faileth to perform, if curable, in both sexes and of all ages tho' never so far gone (without let of time), is made and sold only by me, Mary Dimes, Wid., at my house near St. Simon's Church, Norwich."—*Ibid.*, 1710.

"John Bennett, near the 3 Cranes in the Cathedral Close in Norwich, Chirurgeon and Student in Physick, cures after a new, speedy, and safe method the lues venerea, or French disease, of the longest date with the worst of symptoms, without let to business, as is well known to some hundreds, after given over by others, and has a large Testimony allowed to show the Incredulous. A clap he cures in a few days and desires nothing for his pains; cures the Asthma, Catarrh, Rheumatism, Green Sickness, Dropsies to admiration, Feavers, any sort of Agues in a few hours, inveterate pains, Rickets in children even to a wonder, cures Tumors, Wounds, Old Ulcers, Cancerated Breasts, Dislocations, Fractures, Ruptures in any part of the Bodies of Women, Children or Men, if so born, or of 30 or 40 years' continuance (and where all Remedies hereunto has failed), as more than 500 can testifie since 8 years past, and 50 more within 3 months. He cures many other diseases gratis and directs the poor in the cure of any disease gratis. His being gone to Sea again in the Navy is as false as his being dead last year when in Spain."—*Cosgrove's Gazette*, June 10th, 1710.

Sir William Read, Kt.—"Notice is hereby given that Sir William Read, Kt., Her Majesty's Principal Oculist and Operator of the Eyes, and in that Quality Sworn Servant in Ordinary, as he was to King William. His occasions call him to Norwich, where he has several patients to attend, and in the adjacent Parts, So he will be to be advised withal for some time at Mr. George Bussey's at The Angel, in Norwich Market Place, from the 25th of October, where all people shall be served with honourable and fair Practice. As he has made demonstrations among you several times after 35 years' Experience, which is beyond Pretenders, especially to cure of the eyes, who know nothing of the matter more that to trick people out of their money, for these bold pretenders are as dark of their understanding as they leave most of their patients of their sights after they have tried practice upon them to the ruin of most they undertake. Note.—Sir William cures Hare-lips and Wry Necks, tho' never so deformed, and prevents Cancers and Catarrs in the beginning, and takes off all sorts of Wenns and Tumors."—*Cosgrove's Gazette*, October, 1710.

The learned Knight was "hindered in his intention of coming on account of having to attend to some persons of quality in distempers relating to the eyes." However, in a short time there appears the following announcement:—

"This is to satisfie the Publick that Sir William Read, Kt., Her Majesty's Principal Oculist and Operator for the eyes, and in that quality Sworn Servant in Ordinary, does design (with God's assistance) to be at Mr. Bussey's, at the Angel in the city of Norwich from the 1st of January for some months, where the Poor shall have his advice gratis and others kindly used; and all persons blind of Cataracts shall pay for their cures after the success of his operations. He thinks it necessary to give this publication, that the City and County may not be imposed upon by Pretenders, who are as much strangers to the practical part of the Eyes as they are to the persons they so boldly attempt their cures upon."—*Cosgrove's Gazette*, Dec., 1710.

John Pell, Lythotomist.—"Lythotomy being supposed here as distinct from Surgery, and I being thought one of those Surgeons that do not cut for the stone, do find myself obliged from that consideration as well as from the Persuasion of my Friends to make this Public declaration for the benefit of miserable Mankind, that all who are afflicted with the stone may by my cutting them (and by the Divine Blessing) be cured of the same, I having had the good fortune to be instructed in that dangerous and difficult operation of Cutting for the Stone by the Great Mr. Salter of London, the most Ingenious and successful lythotomist now in England. Note.—All that are truly poor may have advice and be cut gratis by me, John Pell."—*Cosgrove's Gazette*, July, 1710.

Dean Prideaux, who suffered from stone, evidently had no great opinion of John Pell, for he "sent for the famous lithotomist, Mr. Salter, from London, to perform the operation, which he did with great dexterity, drawing out the stone, which was the size and shape of a sheep's kidney, in less than three minutes' time." The dean recovered and lived fourteen years, but nearly lost his life in the cure.

Mrs. Hacon's advertisement.—"All persons indebted to Hubert Hacon, Surgeon, lately deceased, are hereby desired to pay in all their respective debts forthwith to the Widow, his sole Executrix, or they will be sued for the same. She lives near the Cardinal's Cap in St. Swithin's and cuts hair for either Gentlemen or Ladies to the greatest Nicety. She lets blood very finely and to the poor for threepence. She has also an excellent Sear-cloth for pains and strains which she sells for ninepence a quarter; and for the Rheumatisme she has the same infallible remedies which the Doctor himself always made use of."—*Cosgrove's Gazette*, 1716.

Mr. John Harmer's denunciation.—"Whereas one Mr. Charles Haynes, a Stranger, has been in this City a considerable time as a Man Midwife, but having little practice here in that way has that charitable disposition of mind (towards himself) as to offer to the Court of Guardians, as advertised in last week's paper, to deliver the poor gratis. Now I, John Harmer, who have received Money of the Court of Guardians for the same work and am a Native of this City, and have performed several acts of Charity here in the Art of Surgery,

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should be ashamed to be outdone by a Stranger in those acts; therefore, I give public Notice that I will attend and assist Gratis in this necessary work all such poor women as are not able to pay.—Witness my Hand, John Harmer, Surgeon, St. Clement's, Norwich.

"N.B.—As Mr. Haynes is a young man and a Batcheler I advise him to marry as a necessary qualification, for I believe it was never known (neither is it decent) for a Batcheler to perform such operations."—*Cosgrove's Gazette*, 1729.

Mr. John Harmer was a well known surgeon and lithotomist in this city. He was evidently much nettled with the conduct of the young man Haynes. On the other hand Harmer was, like most *medici*, very fond of seeing his name in print, as the following notices, taken from the *Norwich Gazette* of that period, amply prove:—

"On Sunday last was cut for the stone by Mr. John Harmer, Surgeon in this City, Peter Riggs, a lad about 17 years of age, and was extracted from him (to the great surprise of the Spectators) an iron shuttle-spire 4 inches long. He had some time before a stoppage, endeavoured to relieve himself with a shuttle-spire, let it drop into the passage through which it conveyed itself into the bladder, and occasioned the same symptoms as a stone. He underwent the operation and at the same time concealed the cause thereof. He is in a fair way of recovery."—*Norwich Gazette*, Sept. 22nd, 1744.

"On Sunday last was cut for the stone by Mr. John Harmer, John Howse, gardener, from Porland, aged 49, from whom he extracted a stone of a prodigious magnitude, measuring 12 inches one way and 8 the other, and weighed upwards of 14 ounces and a half, and is said to be the largest ever extracted from any one person who recovered the operation, as this man is likely to do, he not having yet had one bad symptom. In my next I shall insert a further account of this operation, in which the Publick shall be informed whether the patient be living or dead. The same gentleman about three weeks since cut a kinsman of the above-named person and extracted a very large stone from him who is recovered."—June 7th, 1746.

"John Howse, the Gardener who, as mentioned in my last, had the large stone (which weighed upwards of 14½ ounces) extracted from him is in a fair way of recovery and judged to be out of danger. The above Mr. Harmer has cut for the stone upwards of 170 persons, and that with as much success as any man living, but never extracted one so large before."—June 14th, 1746.

This case still remains on record as the largest stone removed by lithotomy from which the person recovered. Howse lived five years afterwards. The stone is preserved in the museum of the Norfolk and Norwich Hospital.

"On Monday last Mr. John Harmer, Surgeon, extracted from the bladder of James Ruston, in St. Mary's parish, two stones, each of them about the size of a pullet's egg, and notwithstanding its being the different season of the year for performing this operation in, the man is in a fair way of recovery, as is the man who had the large stone of 14½ ounces extracted from him some weeks since by the same gentleman."—July 5th, 1746.

Daniel Nelson, Loddon.—Dr. Palmer, of Loddon, being lately deceased, who used the art of Midwifery, having served his apprenticeship some years since with the late famous Dr. Havers, of Stoke Holy Cross, by Norwich, well known by his skill in that practice. ..... I Daniel Nelson, Surgeon in Loddon aforesaid, having faithfully served as an apprentice with the said Dr. Havers, and having by pains and study as well as Anatomical courses made himself Master of the said Art so necessary for all Women Labouring under any difficulties in child bearing, he advertises this that he is ready at any time when wanted, at the most reasonable charges. N.B.—He undertakes to cure all Lunaticks if curable."—*Cosgrove's Magazine*, 1732.

This advertisement is exceedingly interesting because of the mention of the name of Dr. Havers, who was the Rev. Thomas Havers, but better known by the former title, to whom there is a monument on the outside of the south wall of Stoke Holy Cross Church, and on which he is described as being learned in theology, physics, surgery, and lithotomy, as well as "pauperibus et ægrotis semper amicus." The designs of various surgical instruments are carved in stone at the bottom of the inscription. He appears to have had a considerable reputation as a surgeon, and one is surprised that with his ability and love for the profession he did not leave Stoke and seek a larger scope for his talents in Norwich. In 1683, at the age of twenty-four years, he was presented by the Duke of Norfolk to the living of Framingham Earl, from which he retired in 1701 to devote his time and energies to the practice of medicine and surgery at Stoke Holy Cross, the village he never left, but ended his days in in 1719. He was in the habit of taking pupils and teaching them surgery and midwifery, as is exemplified in Daniel Nelson's advertisement. In his will, dated 1719, he left £20 to the poor of Stoke and his "instruments of chirurgery to his nephew, Robert Bransby of Hapton Hall, Norfolk." This Robert Bransby, whose aunt Havers had married, was a surgeon. He subsequently removed to Shottesham, and there died in 1748. His daughter Elizabeth became the wife of Benjamin Gooch, the most celebrated surgeon of his day, who in 1771 greatly assisted to establish the Norfolk and Norwich Hospital, his patron, William Fellowes of Shottesham Hall, distinguished by his friends as the "man of Shottesham" from his resemblance to Pope's "Man of Ross," being the actual founder of that institution. This gentleman some years previously had recognised the value and advantage of such places, and had erected at his own expense in Shottesham a cottage hospital for the benefit of the poor in that neighbourhood. With this Gooch was for many years connected as surgeon. It gave him the opportunity of acquiring an amount of surgical practice which subsequently enabled him to write three very interesting volumes of "Cases and Observations in Surgery." This is the first instance of the existence of a village hospital in England; the next was founded eighty-eight years later at Cranleigh in Surrey in 1859.

Benjamin Gooch's only daughter Sarah was engaged to Lord Chancellor Thurlow. Lord Campbell, in his "Lives of the Chancellors," informs us that "she was afraid of him and would not have him." Ultimately she was married to Dr. D'Urban, who had succeeded Gooch at Shottesham, and became the mother of General Sir William D'Urban. Sir Astley Cooper's father was the Rev. Dr. Samuel Cooper, rector of Shottesham. He married a daughter of James Bransby, second cousin to Mrs. Gooch. In this way the families of Bransby, Havers, Gooch, and Cooper became intimately connected. Dr. Cooper's eldest son was Bransby Cooper, M.P. for Gloucester.

THE PLAGUE IN BOMBAY.

THE latest intelligence regarding the plague epidemic in Bombay is very far from satisfactory. The number of cases is increasing and the disease is extending; it has advanced to the suburbs and also to Bandora. According to a telegram of the 28th ult., through Reuter's agency, the health of the Europeans, however, is very satisfactory, no deaths having been recorded among them from any cause during the past week. Up to the present time the plague statistics give 2004 cases and 1494 deaths, but it is believed that these numbers do not really include all the cases that have actually occurred. Since the outbreak of the disease in Bombay there has been an enormous exodus of the population, which still continues. The week's mortality up to Dec. 28th from all diseases was 1416, which is in excess of all previous records for Bombay. The estimated mortality, calculated at the ratio of the reduced population, reaches the very high figure of 109 per 1000. A later telegram from Bombay of the 29th ult. states that 177 cases of plague with 130 deaths have been registered in that city in the past two days. The local press, it is stated, animadvert strongly upon the apathy displayed by the special plague committees and the members of the corporation. They also condemn the revoking of the regulations regarding segregation under the pressure of the sanctity of caste, and warn the people of the possibility of a military *régime*. The experience of Hong-Kong, it is urged, is in store for Bombay unless things take an unexpected turn. Cases of plague have also been reported as having occurred at Poona and Karrachi.

The great difficulty in making a successful effort to stamp out epidemic diseases everywhere, but especially in the East, arises from the fact that all attempts of the kind are made too late to be effective; the earlier cases are not segregated and the disease spreads during a period of inaction; and, for the same reason, sanitary works and measures that should

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have been taken in anticipation and with a view to the prevention of disease, cannot obviously be undertaken and executed with the necessary promptitude when the epidemic is already present. But there is no other way of dealing with disease-causes, and the sooner the authorities at Bombay learn the lesson the better. It is the old story of increasing dirt, overcrowding, and neglected sanitation until the day of retribution comes in the shape of an epidemic which soon obtains a firm foothold under such circumstances.

The Municipal Commissioners of Calcutta have no time to lose if they are to turn to any practical account the warning they have received from Bombay. The *Pioneer Mail*, in adverting to the trenchant remarks of the Lieutenant-Governor of Bengal regarding the disgraceful state of certain districts in Calcutta, gives the following description of the sanitary defects of the worst parts of that city, where happily up to the present time the Medical Board are able to state that no case of true bubonic plague has yet occurred :—

"London with its population of over four millions has about 36,000 people to the square mile. In the thirteen wards of Calcutta there are only four below this figure; the remainder have from 46,000 to 144,000 per square mile, three wards being actually over the 100,000. Colootolah is most densely populated, and the houses are literally crammed with people. One case is quoted where 250 persons were living in space that should accommodate only fifty. In a hut seven feet in length, breadth, and height, five men were found, and several instances are given where similar conditions obtained. In our barracks 600 cubic feet per man is the minimum space allowed. In these *bastis* the space runs from 157 to 49 cubic feet. This would be bad enough if everything were clean and sweet in and about the huts; but as the Medical Board put the case: 'Here we find an allowance per head going as low as practically one-thirtieth of that given in barracks, and no ventilation; with filth *ad lib.* both in the room and in its surroundings, to say nothing of the filthy persons of its occupants, the sewage round in the adjacent drains and the accumulated filth in the neighbouring latrines, and to this may be added the fact that the subsoil on which the huts are built is soaked through and through with sewage matters and littered with garbage and filth of all kinds.' The narrow gullies which give access to these huts are in keeping with the general character of the *bastis*, and we may well wonder that epidemic disease is not always present."

We entirely concur with the medical authorities and the *Pioneer Mail* in thinking that the speedy application of wholesale sanitary measures is required in Calcutta; that wide roads and open spaces should be substituted for these overcrowded areas; that filthy huts and habitations should be cleared away and foul tanks and wells closed, and in that way the people compelled to have recourse to the good and wholesome water now accessible and almost carried to their doors; and that the drainage, food-supply, and other measures for improving the public health should be carried out as rigorously and promptly as practicable in the interest of all concerned. All this means money no doubt, but there is a rich community in Calcutta and the local Government must compel them to spend it.

THE LANCET RELIEF FUND.

EIGHTH ANNUAL REPORT OF THE ALMONERS.

THE LANCET Relief Fund, which has for its Almoners the President of the Royal College of Physicians of London (Dr. SAMUEL WILKS, M.D., F.R.S.), the President of the Royal College of Surgeons of England (Sir WILLIAM MAC CORMAC), the President of the General Medical Council (Sir RICHARD QUAIN, Bart., M.D., F.R.S.), Mr. THOMAS WAKLEY, F.R.C.S., and Mr. THOMAS WAKLEY, jun., L.R.C.P. Lond., with Sir HENRY PITMAN, M.D., F.R.C.P., as Honorary Auditor, came into operation on the 1st of February, 1889.

In presenting the eighth annual report the Almoners think it well again to direct attention to the object for which the Fund was established.

The Fund is sustained solely by the Proprietors of THE LANCET, who provide every January the sum of at least £300, and is administered free of cost, with the object of affording immediate pecuniary assistance to registered medical practitioners, or to the widows or orphans of members of the profession in cases of distress and emergency, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

When the Fund was inaugurated considerable misapprehension existed as to the precise objects for which it had been established; and as a result the majority of the earlier applications, being cases of *chronic* distress, and not coming, therefore, under the designation of *emergency*, could not be entertained. Attention was called to this fact in THE LANCET of Feb. 16th, 1889, in the following words :—

"We are requested by the Almoners to state that, from the character of a number of the applications received, both personally and by letter, for relief, it is evident that in many cases the object for which this Fund has been established is not quite clearly understood; and if relief had been afforded in the cases of those who suffer from chronic distress the Fund would have been completely exhausted within the first few days of its existence. They would therefore be greatly obliged if those readers of THE LANCET who may be asked to endorse applications would carefully peruse the Application Form and explain the precise object of the Fund to those applicants whose cases do not seem to come within the scope of the purpose for which the Fund has been established, which is to afford prompt aid to registered medical practitioners, or to the widows or orphans of members of the profession, who, in consequence of the supervention of some unexpected emergency, which is not likely to recur, have pressing need of immediate and temporary pecuniary relief"—and who, it may once more be pointed out, are likely to be permanently benefited thereby.

The balance in hand at the end of 1895 amounted to the sum of £77 19*s.* 10*d.* On Jan. 2nd, 1896, the Proprietors of THE LANCET placed to the credit of the Fund the sum of £300. During the course of the year repayments of loans to the amount of £25 10*s.* have been made. The sum of £350 has been granted in relief either by way of loan or of gift, leaving a balance of £53 9*s.* 10*d.* as per bank pass-book.

There have been considered altogether during the twelve months ending Dec. 31st, 1896, 37 applications for relief (the number the previous year having been 56). In 29 cases assistance was awarded, either as a loan or as a gift, according to the request of the applicant, the amounts of the grants ranging this year from £5 to £25.

In some cases of extreme urgency the application has been considered by the Almoners, the grant sanctioned, and a cheque for the amount forwarded to the applicant on the same day the application was received.

The following are extracts from letters received from some of the recipients of the Fund :—

305.—"I thank the Almoners very sincerely for their kind gift. To Mr. Wakley please present my thanks for his kindness and generosity in providing the Fund."

307.—"I am deeply grateful to the Almoners of THE LANCET Fund for their very valuable gift—how valuable only those can know who have gone through the wretched worry that I have—nearly five months without a berth, my slender stock of savings long ago exhausted, incurring debts to friends and others. Had I not been a strong man and always abstemious I must have fallen into ill-health and even destitution. I acknowledge the wisdom of the Almoners in making to me a gift instead of a loan, the repayment of which might press heavily and be a source of anxiety, whereas now should I ever become in a position to repay it I trust that I may be allowed to do so, and in that way be the means of benefiting others through the agency of your charitable work."

308.—"Kindly express our heartfelt thanks to the Almoners for enabling us to discharge the balance of the account. I can hardly express adequately the extent of our grateful feelings in thus saving our home."

321.—"Allow me to express my grateful and most sincere thanks for your kind letter. The generous and extremely benevolent gift can never be forgotten amid the painful and cheerless hours I have to pass. I shall ever feel deeply indebted to the Almoners for their kind and considerate view of my unfortunate position."

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326.—"I thank the Almoners for the cheque, which comes to me much needed. I think it most kind and considerate of them to be so prompt in sending it."

330.—"I am extremely grateful to the Almoners for the generous present I received this morning. I cannot adequately express my deep thankfulness for your most timely assistance. I pray that God's blessing may be with you and that your Fund may increase and continue to extend its help to those who, like myself, are in great need."

336.—"I have much pleasure in sending you first instalment of loan. The loan that the Almoners granted me has been of the greatest good to me. I again thank them for their great kindness."

344.—"I gratefully acknowledge with sincerest thanks the receipt of cheque. Your remittance reached me within twelve hours of the time my application was received. This promptitude has relieved me of immediate embarrassment."

(Signed)

RICHARD QUAIN. THOMAS WAKLEY.
SAMUEL WILKS. THOMAS WAKLEY, Jun.
WILLIAM MAC CORMAC.

Statement of Accounts for the Year ending Dec. 31st, 1896.

DR.

	£	s.	d.	£	s.	d.
To Balance at Bank, Jan. 1st, 1896				77	19	10
,, Proprietors of THE LANCET				300	0	0
,, Repayment of Loans :—						
Case No. 276	£2	10	0			
,, 247	10	0	0			
,, 276	5	0	0			
,, 308	2	10	0			
,, ,, ...	2	10	0			
,, 336	1	10	0			
,, ,, ...	1	10	0			
				25	10	0
				£403	9	10
To Balance at Bank				£53	9	10

CR.

	£	s.	d.	£	s.	d.
By Loans :—						
Case No. 308	20	0	0			
,, 309	25	0	0			
,, 322	20	0	0			
,, 336	15	0	0			
,, 339	25	0	0			
,, 341	20	0	0			
,, 344	20	0	0			
				145	0	0
By Gifts :—						
Case No. 305	10	0	0			
,, 306	10	0	0			
,, 307	15	0	0			
,, 310	10	0	0			
,, 311	10	0	0			
,, 313	5	0	0			
,, 314	10	0	0			
,, 316	10	0	0			
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,, 330	10	0	0			
,, 332	15	0	0			
,, 334	15	0	0			
,, 335	10	0	0			
,, 337	5	0	0			
,, 342	10	0	0			
,, 343	10	0	0			
				205	0	0
,, Balance at Bank, Dec. 31st, 1896				53	9	10
				£403	9	10

I find by the Bankers' Book that the actual balance on Jan. 1st, 1896, to the credit of the Fund was £77 19*s.* 10*d.*, to which the sum of £300 was added by the Proprietors of THE LANCET on Jan. 2nd, 1896.

The balance at the Bankers' at the present date is the sum of £53 9*s.* 10*d.* I have also checked the receipts for disbursements and find the above account strictly accurate.

December 24th, 1895. HENRY A. PITMAN, Hon. Auditor.

LOUIS PASTEUR.

THE last stage in the obsequies of Louis Pasteur was reached on Dec. 26th, 1896, when the mortal remains of the illustrious deceased were deposited in their final resting place. His death occurred on Sept. 28th, 1895, and at the funeral, which took place on Oct. 5th, the French nation honoured his memory with an impressive ceremonial and other tokens of respect displayed only when the last offices are being rendered to those who have held an exceptional position in their country's service. The President of the Republic was among the company assembled at the Cathedral of Notre Dame, the Governor of Paris was in command of the imposing military force which formed the escort, the officiating clergy included two archbishops, and the Minister of Public Instruction took a prominent part in the proceedings. The body was then deposited in the Cathedral, only, however, to remain there until a tomb or crypt suitable for its permanent reception should be constructed at the Pasteur Institute. This work having now been completed the removal of the remains was accomplished last week in presence of the family of the deceased, the staff of the Pasteur Institute, and a numerous assembly comprising men eminent in various departments of knowledge, representatives of the Government, members of learned societies, and visitors from several foreign countries. The English representatives were Sir Joseph Lister, President of the Royal Society, Sir Dyce Duckworth, Sir William Priestley, Professor Evans of Edinburgh University, and Professor Crookshank. Soon after eight o'clock in the morning mass was celebrated in the Cathedral, and on the conclusion of the service the body was conveyed in a hearse to the Pasteur Institute in the Rue Dutot, where it was received by M. Bertrand, the president, and M. Duclaux, the director. The crypt is reached by a flight of steps leading from the main entrance hall; it is ornamented with appropriate mosaic designs and has a cupola in which are emblematic figures representing Faith, Hope, Charity, and Science. Over the crypt is the inscription, "Heureux celui qui porte en soi un Dieu, un idéal de beauté, et qui lui obéit—idéal de l'art, idéal de la science, idéal de la patrie, idéal des vertus de l'Évangile." After the ceremony of consecration was completed and the coffin laid in the place prepared for it several speakers addressed the company. M. J. B. Pasteur, on behalf of the family of the deceased, formally committed the care of the tomb to the council of the Institute.

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M. Rambaud, Minister of Education, enumerated some of the benefits which Pasteur's discoveries had conferred on humanity, and was followed by M. Baudin, President of the Municipality, and several others.

Sir JOSEPH LISTER said: "Je suis chargé de représenter la Société Royale de Londres, le Collège Royal des Chirurgiens d'Angleterre, et la Société Médico-Chirurgicale de Londres. Aussi j'ai fait déposer, de la part de l'Institut Britannique de la Médecine Préventive, fille de l'Institut Pasteur, une couronne ici. Il y a quatre ans, à l'occasion du jubilé de Monsieur Pasteur, j'ai eu le suprême honneur de lui présenter, au nom de la Médecine et de la Chirurgie du monde entier, l'hommage de leur reconnaissance. Aujourd'hui j'assiste à ses funérailles! Cette cérémonie est noble et imposante, digne de la mémoire de notre vénéré maître. Mais elle nous remplit d'une profonde tristesse, puisqu'elle nous rappelle que cette grande lumière de la science, si ardente et si claire, est éteinte; que ce caractère, si noble et si aimable, a disparu de notre monde."

Sir DYCE DUCKWORTH, who represented the Royal College of Physicians of London, and also, as past president, the Clinical Society of London, said: "Au nom du Collège Royal des Médecins de Londres, j'ai l'honneur de témoigner la vive sympathie avec laquelle les médecins d'Angleterre s'associent à cette touchante cérémonie. Je porte l'hommage de nos confrères à ce grand génie créateur, à ce noble caractère de Louis Pasteur. Pour nous il est un des prophètes de la science, il en est un des avant-coureurs les plus éclairés et les plus intrépides. Vénérons ensemble ce bienfaiteur de l'humanité! Vénérons ce Chrétien loyal et convaincu, dont la foi a résisté à toutes les influences matérialisantes de ses études! Que l'œuvre de Pasteur, dont les cendres reposeront désormais dans ce sol consacré par son travail, reste une des gloires impérissables de la France et du monde."

Sir W. PRIESTLEY said: "I have been appointed to represent here to-day the two Scottish Universities of Edinburgh and St. Andrews in token of respect for the memory of one who has done so much to advance the interests of science and who has conferred such signal benefits on mankind. The University of St Andrews is the most ancient in Scotland, and its authorities have in grateful recollection the kindness extended to some of its students in Paris by a committee of which M. Pasteur was chairman. The connexion of M. Pasteur with the University of Edinburgh is a more intimate one. At the celebration of the tercentenary of the University it conferred an honorary degree on M. Pasteur and received a reflected honour in enrolling so distinguished a name on its list of graduates. Those who were present on that occasion will not readily forget that magnificent ceremonial. France was represented, in addition to M. Pasteur, by Caro, Mézières, Guizot, Ferdinand de Lesseps, and my dear and lamented friend, Henri Gueneau de Mussy. I sat beside M. Pasteur, and the enthusiasm with which he was greeted knew no bounds. I had the privilege of receiving an honorary degree at the same time, and considered its value greatly enhanced by being in such company as the celebrated Pasteur and his *confrères*. Both the Universities which I represent desire to show their sincere appreciation of M. Pasteur during his lifetime and to do all honour to his memory now that he is no longer with us."

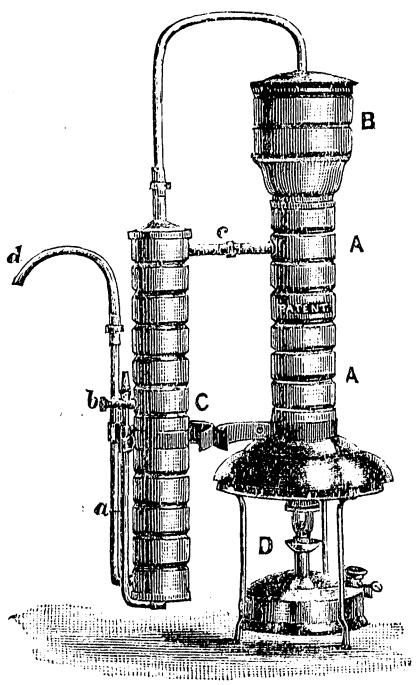
Professor CROOKSHANK spoke in the name of King's College, London.

It was observable that places of honour were assigned to the Englishmen. The public were admitted to the crypt during several hours on Sunday, an opportunity which was taken advantage of by an immense number of visitors.

THE LAWRENCE PROCESS OF SOFTENING AND STERILISING WATER.

So far as regards rendering a water absolutely safe to drink there is little doubt that heating it up to boiling point or to a slightly higher temperature and keeping it at that temperature for a time is the most trustworthy method. Filters are easily liable to accident, and defects in their construction may easily occur, while the conditions under which they can only be expected to work efficiently often fail to be secured through neglect, and that perhaps at a time when their efficient working is in special request, but boiling the water admits of no such possibilities. Satisfactory, however, as boiling the water may be from the point of view of killing pathogenic organisms, yet, as everyone knows, it deprives the water of certain of its most important qualities for drinking purposes. It becomes vapid, tasteless, and devoid of those qualities expressed by the terms "fresh," "bright," "crystal," "palatable," &c. In other words, boiling renders the water safe but not in a strict sense fit to drink. Then, again, the expense of boiling every drop of water we drink would be a somewhat formidable factor in the accounts of the household.

The boiling of water in a comparatively open vessel, as in an ordinary kettle, is obviously an extravagant proceeding; the loss by evaporation is enormous, objectionable salts that may be in solution are concentrated, and heat would be dissipated to no purpose. In the ordinary process of distilling water the heat that is expended in converting the water into steam is subsequently absorbed and lost in the water of the condenser, which is commonly run to waste. The desideratum, therefore, of a process of this kind, it seems to us, would be an apparatus in which the water could be distilled—i.e., converted into steam—and the steam condensed in the water supplying the boiler of the still, so that it would be raised to such a degree of temperature as to require but a little augmentation of heat to bring it completely to boiling point. In short, instead of losing the latent as well as the indicated temperature of the steam it should be utilised in such a way as to heat up fresh quantities of cold water preparatory to entering the boiler. In this manner the outgoing water would be cooled, softened, and of course sterilised, and the incoming water raised substantially near the boiling point, thus effecting a very important economy in the heat required. It is practically this principle which is adopted in the Lawrence apparatus, and the satisfactory application of which promises to make this method of the utmost importance and value on both economic and hygienic grounds. The accompanying illustration will make its construction and



the manner of its working clear. It represents one form of the apparatus for domestic use and consists of the following parts:—(A) The outer boiling-vessel containing an inner boiling cylinder (B) with enlarged top. (C) A heat-interchanger by means of which the heat is transmitted from the boiled water to the crude inflowing water. (D) The lamp or heater which serves to supply the few degrees of heat not interchanged by the apparatus (C).

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In action the water flows in cold through the small supply-pipe *(a)*, the rate of flow being regulated by the cock *(b)*, and enters the heat-interchanger at the bottom. Rising upwards, internally, it arrives at the top of the interchanger (C) at about 180° F., and passing into the top chamber of the inner boiling-vessel (B) thence passes downwards through all the chambers or locators, about twenty in number, where it is met constantly by the ascending steam or vapour of ebullition. These chambers, in series, really constitute a sort of "scrubbing tower" in which the ascending steam is brought into very intimate contact with the water. In addition, the tower is packed with a column of discs in a vertical position, which in shape are not unlike the screw propeller of a ship. Their function is to bring about complete contact of the steam with the water, while the slight resistance which they offer to the upward passage of the steam is calculated to raise the temperature somewhat above boiling point.

The water having become successively deposited in these locators arrives at the lowest chamber, whence it takes an upward course between the inner and outer cylinders, flows back to the heat-interchanger, through the pipe (C) and, becoming cooled by the inflowing water, makes its escape at *(d)* in a cooled state. A certain amount of aeration is effected in this pipe by means of a small hole at the top of the bend, bubbles of air being sucked in by the action of the descending stream. The temperature at which it emerges depends upon the rate of flow; about 20° of difference is practically maintained between the inflowing and outflowing water where the quantities of each are equal. Thus, if the crude water enter at 50° F. the softened outflowing water will be 70° F. or thereabouts. When, however, a portion of the water is required as hot water and the remainder as cold these temperatures are modified. A domestic apparatus of twelve gallons per hour power, with additional interchanging power when worked at eighteen gallons rate of flow, delivering hot water at seven gallons and cooled water at eleven gallons, gives, as found by experiment, the hot water a temperature of 160° and the cold 8° only above that of the inflowing water, which, supposing it was originally at 50°, would give 58° for the softened water.

The prevention of incrustation is provided for by the inner boiling cylinder being removeable as well as the boiling and depositing chambers contained in it. The incrustation being soft and friable is quickly shaken off.

The softening effect of the apparatus upon hard water can be modified to suit individual requirements. Water such as that in the hard chalk districts and the London tap water may be reduced, as our experiment showed, to 6° or 7°. This applies to the London tap water with an initial hardness of 16° or of other water showing a hardness of 20°.

Applied to industrial purposes the following is the statement of the inventor of this apparatus in regard to cost. The few degrees of heat necessary to transform the water from hard to soft can usually be found in the shape of waste heat, and where both warm and cold water are required the cost of treatment is reduced to *nil*. Where, however, no waste heat can be provided and the heat has to be obtained from the steam boiler the cost is as nothing compared with the saving effected in fuel by the prevention of incrustation and wear and tear and cleaning out of boilers. The accepted estimate of cost for fuel for evaporating 1000 gallons of water is 7*s*. 6*d*. and the cost of bringing the water from 50° F. to boiling point is 1*s*. Given this rate the cost of softening by the Lawrence process would be about one-eighth that of boiling in the ordinary way—that is, 1½*d*. per 1000 gallons in lieu of 1*s*. per 1000 gallons. And, moreover, practically the whole of the heat is returned to the boiler. Since, however, the accepted saving in coal where a boiler is always kept in a perfect condition of efficiency is at least 15 per cent. the economy of the Lawrence process, apart from the saving of wear and tear, is still more manifest.

For domestic drinking purposes, in particular, this apparatus, it is said, has the advantages of being cheap, light, very portable, and not liable to get out of order. To give some idea of its lightness and portability an apparatus capable of heating and cooling 150 gallons per hour, specially designed for military purposes, may be carried by one man. Further, a very important application of the method is to milk, which can be sterilised in large quantities in a modified form of this apparatus and delivered partially cooled.

Our own experiments with the Lawrence apparatus have been directed chiefly to ascertaining its softening power upon hard waters and as to how far it could be trusted to produce a pure and sterile effluent. We have already recorded an experiment establishing its capacity for greatly reducing the hardness of chalky water. Thus in the case of the New River (London) supply the hardness was reduced from 16° to 6°, a reduction of 10 degrees, and in some cases somewhat lower.

In regard to bacteriological experiments the action of the apparatus was first tested on the ordinary tap water which was supplied by the New River Company to ascertain whether the ordinary water organisms were destroyed and the fluid thus rendered sterile. An emulsion of the common pus organism, staphylococcus pyogenes aureus, was then mixed with this tap water and subjected to the sterilising process. As this organism exhibits a resistance to heat and antiseptic substances somewhat greater than that manifested by the bacillus typhosus and Koch's cholera bacillus, the two most important disease organisms usually supposed to be transmitted through drinking-water, we may conclude that if the pus organism is destroyed the disease organisms referred to would share a similar fate. As a final and severe test an emulsion from a potato bacillus culture containing very resistant spores was passed through the apparatus. In the experiments with New River water the following results were obtained:—

Number of colonies present per c.c. in original water, from 60 to 80; number of colonies present per c.c. in water after process, none. It will be seen from this that the water was rendered absolutely sterile as it issued from the apparatus. In the experiment with staphylococcus aureus the following results were obtained:—

Staphylococcus pyogenes aureus.—Staphylococcus aureus present in 1 c.c. original fluid, many colonies; staphylococcus aureus present in 1 c.c. of fluid after process, none. We may conclude from this experiment that the disease germs transmitted through drinking water, which are non-sporebearing, would by this process be rendered innocuous. In the experiments with potato bacillus the following results were obtained:—

Potato bacillus.—Potato bacillus present in 1 c.c. original fluid, many colonies. Potato bacillus present in 1 c.c. of fluid after process, none. This experiment would seem to indicate that these very resistant spores had been completely destroyed; but this conclusion is rendered doubtful by a further test to which this fluid was subjected—viz., a larger quantity of the fluid was taken and added to a flask of broth and incubated at 30° C. for three days. When examined it was found that a film of the potato bacillus had grown over its surface. In this experiment where we are dealing with a larger quantity of the fluid the possibility of the entrance of this organism (which is a very common chance contamination) is not absolutely excluded, but it seems more probable that all the spores are not destroyed during this process. It is, however, probable that by making the column of the boiling chamber higher an increased columnal pressure of water acting upon the rising steam would be obviously obtained, and accordingly the temperature would attain several degrees above 212° F., in which case the sterilising efficiency of the apparatus would be absolute. The experiments made with a small domestic apparatus indicate as a whole, however, that this process would render a water harmless so far as regards the transmission of specific infective disease by means of water.

The apparatus offers not the slightest difficulty in working, it is perfectly continuous, and the source of heat may be gas, oil, or an ordinary coal fire. The fact of it reducing to a very considerable extent the hardness of hard waters is alone important both from an economic and hygienic point of view. We understand that the plant is already in use producing soft water on a large scale for industrial purposes where the danger of incrustation in steam boilers must be most carefully avoided. We are more concerned with its merits as a purifier of water for drinking purposes, and our experiments have established that for this purpose its action is excellent. The water it yields is perfectly clear and bright, palatable yet soft to the taste, while, above all, it gives absolute security against the possibility of water for domestic drinking purposes becoming a source of infection or disease

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Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Manchester Sanitary District.—Dr. Niven's report for the year 1895 is, as are all his reports, full of interest, and it bears indication of an enormous amount of work. The statistics of Manchester are dealt with in a manner which is highly instructive, and the figures relative to age and district distribution will be of great local value. With reference to the vital statistics of Manchester as a whole it is encouraging from a commercial standpoint to note that the marriage and birth rates both show a considerable increase on the rates for 1894; but, on the other hand, it is to be remarked that the death-rate allows, as Dr. Niven terms it, of no such cheerful reflection, since this rate was exceeded only by those of Liverpool and Salford. There was, indeed, a net loss, as compared with the figures of 1894, of over 1000 lives, the increased mortality being chiefly recorded under diarrhœa, certain infectious diseases not directly controlled by the sanitary authority, constitutional, circulatory, and respiratory diseases. The figures for 1895, however, showed marked diminution from diseases of the nervous system, and Dr. Niven thinks that the decrease under the heading "convulsions" may be due to the improved methods of infant feeding. Respiratory diseases Dr. Niven regards as partly due to the atmosphere of certain parts of Manchester and to the habits of the people, and also to the effluvium arising from the insanitary condition of the ground; in fact; the filthy state of the soil, which is caused by defective pails and privies, is matter for special condemnation at the hands of Dr. Niven on several accounts. The infantile mortality of Manchester for 1895 rose with that of the whole country and amounted to no less than 203 per 1000, diarrhœa, measles, and wasting diseases being chiefly responsible for the deaths. The section of Dr. Niven's report which deals with scarlet fever is of considerable originality. Space is also devoted to the interesting subject of "return" cases of scarlet fever, a matter to which Dr. Niven has paid much attention. He is inclined to think that the storing up of infection in the nasal cavities, and possibly also the lungs, of discharged patients, is the most frequent source of mischief, and he considers that the inhalation of a highly-infected atmosphere, such as is met with in hospital wards, is more likely to lead to the storing up of infection than would be the case in a child isolated at home. The figures, too, which Dr. Niven adduces tend to show that the "return" cases in Manchester are due to something connected with the discharged patient, and he is not inclined to think that the unpacking of some imperfectly disinfected article on the return of the patient from hospital is a very potent agent in the causation of "return" cases—at any rate, under the conditions of disinfection which are now practised in Manchester. The conclusion at which Dr. Niven arrives has led him to advocate that all children shall pass through the relatively little infected atmosphere of a convalescent ward before discharge, and that the mouth and nostrils should be carefully sprayed with some non-irritant antiseptic. The methods adopted for the bacteriological examination of cases of diphtheria in Manchester are such as must facilitate enormously the work of medical practitioners. It is possible, it seems, to telephone to the Health Office for a tube, to have it conveyed to the medical man's residence or to the patient's home by special messenger, and to despatch the charged tube by means of the same messenger to the bacteriological laboratory. It is furthermore arranged that in the event of the bacteriological examination yielding negative results the notification fee is nevertheless paid to the medical practitioner. All these facilities have been so appreciated by the profession that a bacteriological examination is made in almost every living case and occasionally in instances where death has taken place. It is interesting to note that out of a series of 106 cases examined, in thirty-five only were positive results obtained. One of the effects of these bacteriological examinations will be, Dr. Niven points out, to modify very materially what was previously the apparent distribution of diphtheria in Manchester, as it has been shown that the majority of cases which were not diphtheria were scarlet fever. In connexion with the subject of diphtheria Dr. R. W. Marsden contributes a report upon the use of antitoxin, and he speaks most highly as to its value, more especially in the direction of aiding the disappearance of membrane and in reducing the effects of toxæmia. Dr. Marsden has never seen serious results follow the injection of the serum. Dr. Niven devotes considerable space to the subject of enteric fever, and although there is much difficulty in detecting the origin of many cases he finds that the condition of the privies and of the ground connected with them has in Manchester a decided effect in the production of typhoid fever; and he further shows that the middens assert their influence chiefly in autumn — i.e., when the activity of the soil in relation to germ multiplication is probably at its highest. We notice, by the way, that the privies in Manchester are disinfected when necessary by a solution of chloride of lime, three ounces to the gallon. Under Dr. Niven's advice measles is not yet notifiable in Manchester, but a system is in force by which the school attendance officers diffuse information and advice in respect of this disease and of whooping-cough. The subject of the notification of tuberculosis is again discussed by Dr. Niven, and he reports his recommendation of last year that Manchester should lead the way in this matter.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 4780 births and 3545 deaths were registered during the week ending Dec. 26th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 19·4 to 18·2 per 1000, further fell last week to 17·0. In London the rate was 15·1 per 1000, while it averaged 18·4 in the thirty-two provincial towns. The lowest rates in these towns were 11·0 in Croydon, 12·3 in Derby, 12·5 in Brighton, and 13·4 in Birkenhead; the highest rates were 21·5 in Preston, 21·7 in Blackburn, 22·0 in Hull, and 31·8 in Plymouth. The 3545 deaths included 279 which were referred to the principal zymotic diseases, against 356 and 357 in the two preceding weeks; of these, 68 resulted from diphtheria, 64 from whooping-cough, 60 from measles, 32 from "fever" (principally enteric), 29 from scarlet fever, and 26 from diarrhœa. No death from any of these diseases was recorded last week in Croydon or in Swansea; in the other towns they caused the lowest death-rates in Brighton, Bolton, Burnley, and Oldham; and the highest rates in Salford, Nottingham Blackburn, and Plymouth. The greatest mortality from measles occurred in Nottingham, Gateshead, Bradford, and Plymouth; and from whooping-cough in Birkenhead, Salford, Huddersfield, and Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 68 deaths from diphtheria included 38 in London, 6 in West Ham, and 3 in Liverpool. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns. There were no small-pox cases under treatment either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital during the week ending Saturday last, Dec. 26th. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3763, against numbers declining from 4164 to 3868 at the end of the nine preceding weeks; 219 new cases were admitted during the week, against 350, 353, and 291 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined in the six preceding weeks from 492 to 302, further fell to 284 last week, and were 318 below the corrected average. The causes of 60, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Oldham, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns,

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which had increased in the three preceding weeks from 20·4 to 21·0 per 1000, further rose to 22·1 during the week ending Dec. 26th, and exceeded by 5·1 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·0 in Perth and 14·0 in Leith to 23·5 in Dundee and 26·0 in Glasgow. The 644 deaths in these towns included 106 which were referred to the principal zymotic diseases, against 68 and 98 in the two preceding weeks; of these, 48 resulted from measles, 26 from whooping-cough, 16 from diarrhœa, 8 from scarlet fever, 4 from diphtheria, and 4 from "fever." These 106 deaths were equal to an annual rate of 3·7 per 1000, which was 2·4 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 40, 37, and 54 in the three preceding weeks, declined to 48 last week, of which 41 occurred in Glasgow, 4 in Paisley, and 3 in Aberdeen. The deaths from whooping-cough, which had been 9 and 7 in the two preceding weeks, rose again to 26 last week, of which 20 were recorded in Glasgow and 3 in Edinburgh. The 8 fatal cases of scarlet fever exceeded the number registered in any recent week, and included 5 in Glasgow and 2 in Dundee. The deaths from diphtheria, which had been 9, 2, and 7 in the three preceding weeks, declined to 4 last week, of which 2 occurred in Greenock. The 4 fatal cases of "fever" included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 170 and 121 in the two preceding weeks, rose again to 152 last week, and were 10 above the number in the corresponding period of last year. The causes of 31, or nearly 5 per cent., of the deaths in these eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·8 and 27·3 per 1000 in the two preceding weeks, declined again to 26·5 during the week ending Dec. 26th. During the past thirteen weeks of the current quarter the death-rate in the city has averaged 26·3 per 1000, the rate during the same period being 17·9 in London and 17·5 in Edinburgh. The 178 deaths registered in Dublin during the week under notice showed a decline of 5 from the number in the preceding week, and included 21 which were referred to the principal zymotic diseases, against 21 in each of the two preceding weeks; of these, 15 resulted from whooping-cough, 3 from scarlet fever, 2 from measles, 1 from "fever," and not one either from small-pox, diphtheria, or diarrhœa. These 21 deaths were equal to an annual rate of 3·1 per 1000, the zymotic death-rate during the same period being 1·0 in London and 0·8 in Edinburgh. The fatal cases of whooping-cough, which had been 4 and 12 in the two preceding weeks, further rose to 15 last week, and exceeded the number recorded in any week since February, 1886. The deaths referred to scarlet fever, which had been 10 and 5 in the two preceding weeks, further declined to 3 last week. The mortality from "fever" was also below that recorded in any recent week. The 178 deaths in Dublin last week included 30 of infants under one year of age, and 32 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the numbers returned in the preceding week. Thirteen inquest cases and 8 deaths from violence were registered; and 58, or nearly a third, of the deaths occurred in public institutions. The causes of 10, or nearly 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN THOMAS has been posted to Hounslow for duty. Surgeon-Captain Jackson has embarked for foreign service. Surgeon-Captain M. P. Holt has left for India. Surgeon-Captain J. W. Jennings has been selected for employment with the Egyptian Army. Surgeon-Captain H. A. Haines has been posted for duty to Cork. Surgeon-Major White has taken over charge of officers, women, and children, and female hospital at the Curragh Camp, from Surgeon-Major G. T. Trewman. Surgeon-Captain V. H. W. Davoren has been posted for duty to the Royal Infirmary, Dublin.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain R. M. Moir, Resident Surgeon, Presidency General Hospital, is appointed to act as First Resident Surgeon of that institution until further orders. Surgeon-Captain F. O'Kinealy is appointed to do general duty at the Presidency and to act as Second Resident Surgeon, Presidency General Hospital, until further orders. Surgeon-Major G. Jameson, Civil Surgeon of Tippera, is appointed, on return from furlough, to act as Civil Surgeon of Nadia, and Surgeon-Major J. F. Tuohy, Civil Surgeon, to the Saharanpur District until further orders. Surgeon-Major G. M. J. Giles, Civil Surgeon, is transferred from Saharanpur to Sitapur. Surgeon-Major E. S. Brander, Civil Surgeon, is transferred from Sitapur to Jhansi. Surgeon-Major G. Shewan, Officiating Civil Surgeon, is transferred from Jhansi to Bijnor. Surgeon-Captain Daly, on arrival from England, has been posted to the Bombay District.

NAVAL MEDICAL SERVICE.

Deputy Inspector-General Robert Hay, M.D., is appointed to Bermuda Hospital, vice Deputy Inspector-General Thomas Browne, time expired, who has been appointed to Stonehouse.

The following appointments are announced: — Fleet-Surgeons: Valentine Duke to the *Vivid;* Thomas C. Hickey to the *Thunderer;* Edward W. Luther to the *Repulse;* Alfred T. Corrie to the *Durham;* and Archibald M'Kinlay to the *Resolution.* Staff Surgeons: Donald Hoskyn to the *Centurion;* and Harold R. Osborne to the *Hermione.* Surgeons: C. H. Upham to the *Torch;* Bernard Ley to the *Lapwing;* Murray P. Jones to the *Resolution;* John A. L. Campbell to the *Stork;* and Richard H. Way to the *Sharpshooter.*

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant Alexander Macdonald, M.B., the Queen's Rifle Volunteer Brigade, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: The Tynemouth (Western Division, Royal Artillery): John Cromie, gent., to be Surgeon-Lieutenant. 1st Cornwall (Duke of Cornwall's Western Division, Royal Artillery): Surgeon-Lieutenant Leonard Frank Houghton is appointed Second Lieutenant. *Rifle:* 5th Volunteer Battalion the Royal Scots (Lothian Regiment): Surgeon-Lieutenant T. Wood, M.B., to be Surgeon-Captain. 3rd (Dumfries) Volunteer Battalion the King's Own Scottish Borderers: Surgeon-Major A. D. MacDonald, M.D., to be Surgeon-Lieutenant-Colonel. 5th Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Major H. Arthur, M.D., resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement.

SANITARY STATE OF CALCUTTA.

The very trenchant remarks of Sir Alexander Mackenzie, the Lieutenant Governor of Bengal, in his late speech as to the state of some of the worst districts of Calcutta have not, we hope, been without their effect on the municipal authorities of that city. The report of the Calcutta Medical Board has roused the attention of the Local Government to the subject, and it is certain that some action will have to be taken to improve the existing state of things. The Medical Board has begun to take evidence regarding the sanitary condition of the city. They are empowered to call any witnesses they may desire.

MILITARY INVALIDING FROM INDIA.

The *Times of India* of Dec. 12th states that, in spite of the agitation of a few months ago, the arrangements for invaliding seem to be more faulty than ever. Invalids who passed a medical board as far back as September last were many of them still at Deolale awaiting passage home. Our Indian contemporary asks, how long it will take the authorities to learn to bow to the inevitable, and to provide special accommodation for the sick? There can be no doubt, we think, that steamers specially fitted and provided for the purpose should be set apart for the sick returning from India.

DEATHS IN THE SERVICES.

Surgeon-Lieutenant-Colonel Francis Cobham Nicholson, A.M.S. (retired), on Dec. 24th, aged fifty-one years. He

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entered the Army in 1869, and reached the rank of Brigade-Surgeon-Lieutenant-Colonel in 1894. He served with the Looshai expedition, and received the medal with clasp.

DR. YERSIN'S ANTITOXIC SERUM.

It is stated that a small quantity of Dr. Yersin's antitoxic serum, to the use of which in the treatment of plague we have more than once referred, is on its way to Bombay and will be employed in the treatment of cases in that city.

GOOD SERVICE PENSIONS.

The Queen has approved of the grants of £100 a year as Good Service Pensions to Surgeon-Major-General J. Jameson, M.D., Director-General of the Army Medical Department, and to Surgeon-Major-General C. H. Giraud, retired pay.

Correspondence.

"Audi alteram partem."

"THE ELECTION OF DIRECT REPRESENTATIVES TO THE GENERAL MEDICAL COUNCIL."

To the Editors of THE LANCET.

SIRS,—I am unwilling at this season of peace and goodwill to write anything which could give umbrage to any of those from whom it is my fate to differ, or which could fan into flame the expiring embers of a finished controversy. I therefore propose to leave unnoticed such passages in the letters contained in THE LANCET of Dec. 26th as may either be, or appear to be, provocative, and to content myself with offering a few words of simple disclaimer or explanation. In the first place, I do not quite know what Dr. Drage means by the "success of" my "friends." The word "friends" is not used, I imagine, to express personal friends, but only persons with whom one has been working for the attainment of some common end. With reference to the election, there are no persons who stand to me in this relation. Except in the case of Dr. Glover, I have yet to become acquainted with the successful candidates, and I took no part in promoting their election. I neither advocated nor depreciated the claims of any candidate and I did not vote. I have never voted at a Council election and I do not intend ever to vote at one. I was indifferent as to the result. There was no candidate whose published opinions were sufficiently like my own to induce me to accept him as my representative; and I felt entire confidence that the gentlemen elected, even if they held erroneous opinions about the duties of the Council at the time of their election, would soon have such errors corrected by experience and responsibility.

I expressed my feeling that the Medical Defence Union had been unwise in meddling at all with the election, and I pointed out the light in which, as it seemed to me, its action might be viewed by impartial persons. But I did not even suggest the view of the case which Dr. Drage repudiates, that the candidates favoured by the union were partners to any bargain restrictive of their entire freedom of action. They were presumably selected by the union on account of views which they were supposed to hold; but I did not even go so far as to say that, from the union point of view, the selection had been judicious.

Dr. Drage's concluding paragraph contains an expression of thankfulness to practitioners who voted for him, "notwithstanding the virulent attacks of *such men* as Mr. Carter and his friends." Here, again, I am perplexed. The construction of the sentence does not make it quite clear whether the "attacks" referred to were made actually by me and by my friends or by other persons our congeners; but it seems plain, from the use of the word "notwithstanding," that they were made before the election. In this connexion, as already explained, I have no "friends." I have never made any attack on Dr. Drage, either virulent or otherwise, in my life, nor have I seen or heard of any attack or attacks upon him by others; nor can I conjecture why he should have been attacked by anybody. Dr. Drage continues that my "enmity" and that of my "friends" is a "compliment." On this point I hope there may be differences of opinion; but my "enmity" is at least a compliment which has never been paid to Dr. Drage. My knowledge of him is insufficient to afford a basis either for enmity or friendship, and I have never thought of him at all except as a professional brother of some distinction, with whose views, as far as I knew them, I did not always agree. May I add, in reply to other correspondents, that the reason why I think direct representation a farce is because the functions of the Council, which depend upon Acts of Parliament and judicial interpretations, and not, as supposed by Mr. Dickinson, upon the "views" of the members, do not include any in the discharge of which direct representatives have any advantage over other people? I think that the leaders of the movement for direct representation confounded a means with an end. They obtained their representatives without reflecting how little there would be for them to do. They should first have sought to increase the powers of the Council and only afterwards to modify the composition of the body by which the powers were to be exercised. Either they did not perceive this or they found that any attempt to obtain increased powers would be fruitless. All that they gained was an illusory concession, which left the Council with its original duties of protecting the public against inadequate medical education and against unworthy members of the profession, but which gave it no means of doing anything more. As for the reasons for the retirement of Sir Walter Foster and Mr. Wheelhouse I should like to remind Mr. Colin Campbell that a general understanding is often only a misunderstanding, and to quote to him your own statement, that the reasons which actuated these gentlemen "have never been fully understood." I believe I am acquainted with some of them, but only from private conversations which it would be indecorous to repeat, even if I could be sure of repeating them correctly. Finally, it is not quite accurate to say that I "think little" of the votes cast in favour of the successful candidates. The truth is rather that I look at both sides of the balance and that I think also of the votes which were cast against them. It will be time enough to compare the votes given for direct representatives with those given for corporation representatives when any members of the latter class are found to rest their claims for consideration upon the numerical magnitude, instead of upon the character and the fitness, of their respective constituencies.

I am, Sirs, your most obedient servant,

Harley-street, W., Dec. 29th, 1896. R. BRUDENELL CARTER.

To the Editors of THE LANCET.

SIRS,—Lest silence on my part, under the circumstances, should be misconstrued, will you also kindly allow me through the medium of your columns to cordially thank the 564 members of the profession in Scotland for the honour which they did me in giving me the very substantial and perfectly spontaneous support which they did? Late of appearing in the contest as I was, and with no organisation, not even the services of a law agent, the election in Scotland clearly demonstrated two things—first, that there is a large feeling of dissatisfaction in Scotland with the present state of medical economy; and secondly, contrariwise, that there exists a remarkable indifference to the remedying of it. Out of a constituency of close upon 4000, not 50 per cent. took the trouble to return their voting papers, so that the present representative may be held as personifying the views of about one-third of the constituency. If absolute demoralisation and disintegration of the profession, which imminently threaten, are to be averted the first step to be taken is in the direction of a new Medical Act, and with a united profession throughout the kingdom this could soon be an accomplished fact.—I am, Sirs, yours faithfully,

Glasgow, Dec. 29th, 1896. D. CAMPBELL BLACK.

To the Editors of THE LANCET.

SIRS,—Mr. Brudenell Carter's analysis of the poll[1] is both useful and instructive, but when he uses his figures for the purpose of condemning the principle of direct representation his deductions are somewhat startling. That he, of all men, should argue that none of the gentlemen recently elected represents an appreciable number of the profession is very curious. I believe Mr. Carter holds his seat through the patronage of a few wardens of the Apothecaries' Society, the election to this position, as in the case of the "Worshipful Masters" in the other like City companies, such as the Tallow-chandlers, Cutlers, Plumbers, &c., being conducted after the

[1] THE LANCET, Dec. 19th, 1896, p. 1789.

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doctrine of "Apostolic Succession," with the difference that on this principle the Church ensures the undoubted merit and high position of the members upon whom honour is conferred. In the case of the companies, however, there is no such guarantee; the most popular member socially and the man who knows best how to dine well is generally pushed to the front. That the Apothecaries' Company happens to be represented on the General Medical Council by so able an advocate of its peculiar claims as Mr. Brudenell Carter is quite an accident, and the power behind him is practically represented by the votes of probably five electors, more or less, and of the value of their judgment and capacity for selection we know but little. Dr. Rentoul will be able to enlighten the Council and the profession upon this matter, for Mr. Carter will find in his new colleague an expert in knowledge of all *the little ways* of the "close corporations." Mr. Carter assures us that direct representation is now removed from the range of practical politics. I would remind this gentleman that it is but a short time since this was said of the Parliamentary franchise, and he may be perfectly satisfied that universal direct representation of the profession upon the General Medical Council will be adopted in the near future, for the Statute of Limitation has no place in such matters.—I am, Sirs, yours faithfully,

Old Trafford, Dec. 22nd, 1896. JAMES BRASSEY BRIERLEY.

THE EIGHTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY: PUBLICATION OF TRANSACTIONS.

To the Editors of THE LANCET.

SIRS,—I beg to inform you that the Transactions of the Eighth International Congress of Hygiene and Demography held at Budapest in September, 1894, are now ready for publication, and the remaining seven volumes will be sent out early in January, 1897. As many members might have since changed their residence, I would feel greatly obliged if you would kindly publish this note in your valuable periodical in order that members might be able to send in their addresses in time to the Editor (Dr. Sgmd. de Gerlóczy, St. Rochus Hospital, Budapest). An extra copy of the Transactions will be also sent to you for your own use.

I remain, Sirs, yours obediently,

Budapest, December, 1896. Dr. GERLÓCZY (The Editor).

THE REPORT OF THE ROYAL COMMISSION ON VACCINATION.

To the Editors of THE LANCET.

SIRS,—A weak result of a weak-kneed Commission, or as you better, certainly more Parliamentarily, put it, "Once more we have to point out that the omission to recommend re-vaccination as an administrative duty constitutes the one great flaw in the very valuable deliverance of the Commissioners." It would be well, if vaccination is to be saved to us in its whole utility, for some sound-minded member of the profession, with good time on his hands and living near the British Museum, to work through, from the time of Jenner's stupendous discovery, a dozen newspapers—say six London and six provincial ones—and to give the public in cheap pamphlet form quotations from each newspaper for each year, especially those with reference to the delight of the public in the gradual diminution of the effects of small-pox—viz., mortality, loss of noses and eyes, and general pitting of the faces—also noting the reports from foreign countries which show equal delight in the use of vaccination and, as the years went on, the value of re-vaccination. Injury from vaccination—such as erysipelas and syphilis—I take it, would be avoided if no vaccination was made except from calf vaccine supplied by Government or their recognised agents, or possibly, by public vaccinators—in this latter case with lymph only *once* removed from calf. I say, "possibly," because I have reason to believe from my small experience that vaccination with calf lymph sometimes fails and that vaccination only succeeds when humanised calf lymph is used.

I would say let Parliament make vaccination and re-vaccination compulsory, and each for the first time to be made with calf vaccine; on failing to repeat with calf vaccine; but on second failures that once humanised calf lymph should be used. I am, Sirs, yours faithfully,

Canterbury, Dec. 25th, 1896. PUGIN THORNTON.

"THE NEW SYDENHAM SOCIETY'S MEDICAL LEXICON."

To the Editors of THE LANCET.

SIRS,—Mr. Kesteven's letter on the slow rate of publication of the New Sydenham Society's Medical Lexicon deserves some attention from the council of the society. I attended the last annual meeting of the society and urged that an attempt should be made to conclude the Lexicon before the close of the century. There was not a large meeting of members, only about half a dozen being present; but this, I am informed, is the usual number who attend on such occasions. The society has a president, 16 vice-presidents, 32 members of council, 1 treasurer, 3 auditors, and 1 honorary secretary, but none of these officials were present and no one could explain the slow rate of progress in the publication of the Lexicon. The chairman, however, promised to forward a strong representation of the wishes of the meeting that some effort should be made to bring the publication to a conclusion.

I am, Sirs, yours faithfully,

Carlisle, Dec. 28th, 1896. HENRY BARNES, M.D. Edin.

"ALLEGED ARSENICAL POISONING."

To the Editors of THE LANCET.

SIRS,—Dr. Murrell has written his letter[1] under a misapprehension. I stated that the fabric to which he refers contained approximately $\frac{1}{10000}$th of a grain of arsenic per square yard. In this I was supported by Mr. W. Thomson, who found the same proportion. This is only one part in 1,300,000 of the fabric. Hence Dr. Murrell's criticisms on what he supposes I said fall to the ground. Every point to which he refers was fully before the court—the delicacy of the tests for arsenic and for determining its amount when admixed with organic matter, the proper doses when taken by the mouth, and the influence of inhalation upon the dose.

I am, Sirs, yours faithfully,

Guy's Hospital, Dec. 29th, 1896. THOMAS STEVENSON.

"THE TRAINING OF NURSES IN RELATION TO REGISTRATION."

To the Editors of THE LANCET.

SIRS,—If you had waited to hear the other side of the story your correspondent has told you you would have found that the feeling of discontent to which you refer as arising among the members of the Royal British Nurses Association is limited to a small minority. The facts are these. A proposal was laid before the council of the association in July last to admit *properly trained and qualified* mental nurses into the association. This matter was referred to a committee of the council who reported strongly in favour of the proposal, and the report was unanimously adopted. Now before the details have even been discussed by the executive committee a letter has been sent out signed by Sophia Wingfield, protesting against the admission of "*untrained asylum attendants* as members of the association," and stating that once the "asylum attendants are admitted as registered members of the corporation of trained nurses the public will have no means of protecting themselves against untrained persons." This is not the case. The proposal is that none but mental nurses of not less than three years' training in a hospital or asylum for the insane with not less than forty beds shall be admitted to registration, and it will be necessary for each nurse to possess the certificate of the Medico-Psychological Association for proficiency in nursing. This certificate can only be procured after a rigid curriculum of instruction and practical tuition and training in the nursing of the sick and insane now carried on in every hospital and asylum in the kingdom under the direction and practical instruction by the medical staff and attendance upon courses of lectures and demonstrations followed by stringent

[1] THE LANCET, Dec 26th, 1896.

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examinations inferior to no examinations for hospital trained nurses—nay, vastly superior to many.[1] These are the nurses it is proposed to admit to the register as a distinct class with a separate department in the register, a separate and distinct badge, and to be enrolled as M.N.R.B.N.A.—that is, mental nurses of the association—to distinguish them from the purely hospital trained nurses. It is for the protection of the public that this proposal is brought forward. No nurses are more urgently required than those specially trained and educated to nurse mental cases. The ordinary hospital trained nurse will not, and could not if she would, undertake them; and it is by placing all those who are worthy of the confidence of the public upon the published register of the association that the public will be enabled to ascertain whether they are properly trained and qualified for their work.

The royal charter of the corporation especially provides for them "to affiliate to themselves or amalgamate with themselves or enter into any arrangements for wholly or partially working in conjunction with any person or any body of persons, corporate or unincorporate, formed for all or any of the purposes for which the corporation themselves are formed or for any purposes analagous or corresponding thereto. As a matter of fairness to those highly qualified mental nurses and of justice to the public it is proposed to place them on the published register of the association.

I am, Sirs, your obedient servant,

T. OUTTERSON WOOD, M.D. Durh.,
Member of the Executive Committee and of the Registration Board of the Royal British Nurses Association.

Margaret-street, W., Dec. 26th, 1896.

*** Our remarks on Dr. Wood's explanation, which appears to us entirely satisfactory, will be found in an annotation dealing with this subject.—ED. L.

"GUAIACOL AND CREOSOTE IN PULMONARY PHTHISIS."

To the Editors of THE LANCET.

SIRS,—Some of your readers may be glad to know that a considerable reduction has been effected in the prices of carbonates of creosote and of guaiacol, so that it is now possible to prescribe them in cases where formerly the cost was prohibitive. A letter appears in THE LANCET of Dec. 19th, 1896, from Dr. Jones-Humphreys which calls for a few remarks. I am pleased to see that he is able to confirm my statements as to the value of this group of remedies; but I think he fails to prove a "specific action" of guaiacol on the kidneys in albuminuria. No doubt it has an action on some kinds of albuminuria, as his own case shows. But this action is probably indirect and depends on the destruction of some other irritant; and it would be unsafe without more evidence to conclude that the drug will be equally useful in albuminuria, say, after scarlet fever. The formula which he gives will answer well when small doses of guaiacol are prescribed; but such a mixture would have to be taken by the pint in some cases, which would be inconvenient, to say the least. There are few remedies with a wider range of dosage, and the best dose in each case is very much a matter of experience.—I am, Sirs, yours truly,

F. R. WALTERS, M.D., M.R.C.P. Lond.

Welbeck-street, W., Dec. 28th, 1896.

HOSPITAL REFORM ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—At the request of the Hospital Reform Association Dr. W. Knowsley Sibley and Dr. Ernest Snape have kindly undertaken to make a report on the special hospitals of the metropolis. The association will feel grateful if the officers of these institutions will afford them facilities for making their report as complete as possible.

I am, Sirs, yours faithfully,

Cardiff, Dec. 28th, 1896. T. GARRETT HORDER, Hon. Sec.

[1] There are now about 2000 of these certificated nurses on the register of the Medico-Psychological Association, but the register is not published.

"MIRROR SPEECH."

To the Editors of THE LANCET.

SIRS,—Dr. Marcel Baudouin, whose signature is appended to a short article[1] on Dr. Doyen's unique case,[2] informs his readers that he himself is a born *gaucher*, and confirms an observation made some time ago in THE LANCET,[3] that to many markedly left-handed persons mirror writing comes naturally. I happen to be likewise a born "kithogue," as they say in Ireland, and having now for the first time essayed the mirrorwise feat beg to add my humble testimony to that of the distinguished Vendean writer. The term left-handed is generally regarded as depreciatory; in fact, according to the dictionary, its synonyms are in English awkward, clumsy, stupid, insincere, malicious; while in French *gaucherie* is the usual word for uncouthness. From the point of view of a kithogue this philological syllepsis is a genuine grievance—an injustice foisted on the few through the overweening complacency of the majority. There is nothing essentially awkward or uncouth in making use of the left hand for actions ordinarily performed with the right. The uncouthness really exists in the eyes of the right-handed multitude, who vainly imagine that their way of doing a thing must necessarily be the only correct way. Of course, a left-handed person may be awkward, &c., but so are many of the so-called dexterous. Practically, it is advantageous to a man, and especially when he is a surgeon, to be born left-handed, for custom and prejudice compel him to exercise his right hand while nature inclines him to use the left on every possible occasion. In this way, yielding equally to both forces, he becomes ambidextrous. So far from being victims to awkwardness, &c., it will be found that kithogues are for the most part adepts in games wherein the hand takes a prominent part—such as cricket, racquets, billiards, and so on. No sooner does the cry "left hand" resound across the sward than the fielders prepare themselves for leather hunting; and, although he certainly does look uncouth, a sinistrous coachman may be trusted not to let his horses down. It cannot be denied that the complaints of the kithogues against philologists have in reality a genuine foundation. It is, therefore, high time that their sylleptic grievances should be remedied.

I am, Sirs, yours faithfully,

Dec. 22nd, 1896. KITHOGUE.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

V.—MANCHESTER.[1]

An Attack on the General Practitioners and a Defence of the Hospitals and the Consultants.

THE impression prevails that the general practitioner is the victim of hospital abuse, that his professional standard is lowered and his income very much affected by the competition of hospitals, which rob him of his patients. This, in a measure, is all true; but there are two sides to every case, and if the hospitals lay themselves open to criticism the general practitioner may be not altogether free from blame. It so happens that in commencing my inquiry at Manchester I heard more against the general practitioner than in his favour. Subsequently the arguments on the other side were brought forward, and I think the truth will best be attained by taking both in due order. My first visit was to a leading consulting surgeon of a large hospital. His opinion was very emphatic. The general practitioners were themselves the authors of much of the hospital abuse that prevailed. General practitioners were constantly sending well-to-do patients to the hospital. For instance, a person suffering from empyema was recommended to him the other

[1] Le Progrès Médical, Nov. 28th, 1896.
[2] THE LANCET, Dec. 19th, 1896, page 1173.
[3] THE LANCET, Aug. 3rd, 1895, page 273.
[4] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *continued*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; and (4 *continued*) Dec. 12th, 1896, Liverpool.

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day. The medical man had a big bill against this patient, so big as to be unmanageable and he feared that he might not be paid at all, so this general practitioner sent the case to the hospital in the hope that the patient might be more rapidly cured and also have time to recover himself financially. The hospital surgeon or physician is thus, it is alleged, called upon to work gratuitously so as to enable the general practitioner to recover his fees from a fairly well-to-do patient. In this incident the secretary of the hospital refused to admit the patient unless he paid 10s. a week towards his maintenance. This constituted a small compensation for the hospital, but it was no compensation at all for the medical staff. The majority of in-patients admitted to the hospital were sent by medical men because they generally gave the preference to cases thus medically recommended. As a practical result the outcome amounted to this—that if the hospital occasionally robbed the general practitioner of a patient the general practitioner very frequently robbed the consultant of patients by sending them to the hospital. The consultant, however, must suffer quietly. He cannot complain, otherwise he would be boycotted by the general practitioners. Thus, as another case in point, my informant saw a little while ago at his hospital a woman who was suffering from a dermoid cyst of the ovary. The medical man who had attended her knew that she could afford to pay a consultant's fee and might have gone to the consulting surgeon's private operating home. The charge at such homes varies from three to six guineas a week. Perhaps an outlay of some £30 might have been necessary. The general practitioner fears that if he advises his patient to incur such expense his own bill will not be paid, therefore he writes a letter to a consulting surgeon and asks him to use his influence so that the patient may be admitted in the hospital. As the operating surgeons depend for their paying and better-class patients on the good will of the general practitioners they do not complain. If, however, one hospital more careful and scrupulous than is usually the case refuses to take the patient in, some other hospital will be less rigorous and then the general practitioner most inconsistently complains that there are too many hospitals. It is just because there are so many hospitals and because their rules of admission are somewhat lax that the general practitioner is able to utilise them to get himself out of a difficulty with regard to his patients and to prevent any of the money they are able to pay for medical advice going to anyone else but himself. At the hospital, where my informant acts as operating and visiting surgeon, the managing committee met to discuss the abolition of the recommendation system. Some general practitioners had objected that it made them lose time to obtain recommendations for those of their patients whom they wished to send to the hospital. They urged that if they sent their patients with a card that should suffice. The committee, however, objected that the hospital would then become a mere dumping-ground for old chronic cases and non-paying patients.

Calling subsequently on one of the visiting physicians of the Children's Hospital he declared that he had no knowledge of cases where general practitioners had sent patients to hospitals who could afford to pay for treatment in a private home. As a physician this grievance had not come under his notice, and it was much more likely to affect operating surgeons. A gentleman did, however, come to the hospital whom he knew to be in receipt of £5000 a year. He reproached this gentleman for seeking to abuse a charity, and the gentleman in question became one of his private patients, often paying five guinea fees. Undoubtedly there was considerable abuse among the out-patients, but this was rare among the in-patients. To his infinite regret it seemed to him that the profession, as a whole, was losing tone. Many medical men had introduced a shoppy element into their professional behaviour and practised "undercutting" and invented "tricks of trade." Thus in this very agitation against hospital abuse a selfish and sordid tone, he considered, prevailed that was damaging to the cause and humiliating to the profession. It seemed as if medical men were only concerned about their pockets. Let those who aimed only at a money result stick to business or trade and not invade the ranks of an honourable profession, which should strive after a much higher ideal. The public were interested in this matter of hospital abuse, and it was their interests rather than the sordid motives of medical men that should be pressed forward. Doubtless many persons who could afford to pay for medical advice went to the hospital. This story had been told, and told pretty often; but how many people were there who could not afford to pay for medical advice, and yet, by dint of many and painful sacrifices, did pay rather than go to the hospital? The general practitioner profited perhaps as much from this class as he lost from the other and meaner class, though very little was heard about it. The general practitioner complained of the hospitals, of the consultants, and of the specialists; but what did he do when he fell ill himself or any member of his family fell ill? Did he call in a general practitioner or trust to his own treatment? On the contrary, and often only for trifling ailments, he sent for the consultant or specialist. In protesting against every institution that deprived him of a patient, that is to say, of a fee, the general practitioner was too apt to forget that his patient's welfare had also to be considered. It was the shoppy element in the hospitals, among the consultants, the specialists, and the general practitioners that constituted the foundation of the present grievances. We had to drive the spirit of commercialism away and revive the higher professional ideals, treat every patient as we should wish to be treated ourselves if we were patients, and not allow sordid motives to exercise any influence. There might then be less complaints about patients going to consultants, specialists, or even hospitals. Thus the visiting physician to the Children's Hospital. Of course, the general practitioner may retort that when a medical man has reached the highest grades of the profession it is easy to indulge in these fine sentiments. Sitting in a luxurious consulting-room, awaiting, with the certainty of realisation, the receipt of numerous guinea and of occasional five-guinea fees, it involves no great effort or trying self-sacrifice to proclaim the above altruistic principles. Besides, though undoubtedly beautiful and true, it so happens that this little sermon promotes, under the mantle of moral teaching, the financial interests of the consultant.

Other consultants on whom I called likewise put their own case and that of the hospitals very forcibly before me and were unsparing in their criticisms of the general practitioner. One of the most prominent operating surgeons of Manchester declared that he was convinced that many general practitioners drove their patients to the hospitals by objecting to call in a consultant. An anxious patient might suggest the advisability of such a course, but the general practitioner would angrily inquire whether the patient could afford to pay two guineas. The patient, in despair, went to the hospital, where he obtained advice from the consultant for nothing. Many patients required to be under the temporary care of a consultant, but could not afford to pay a guinea a visit. If, to meet these cases, the consultant reduced his fee to half a guinea the general practitioners immediately organised a boycott against the consultant. So great was the antagonism between the general practitioner and the consultant that the former not unfrequently allowed his patients to continue suffering indefinitely rather than allow them to go to a consultant. Not long ago a Manchester general practitioner complained because a consultant had in a special case taken a half-guinea fee. Practitioners also complained that the address of specialists was given to patients by the secretaries or clerks of hospitals. Patients who can afford to pay come to the hospitals to obtain these addresses because, it is alleged, their ordinary medical attendant is so much opposed to seeking a consultant's advice that he will not himself give the address. It may happen that persons living in neighbouring towns are under the care of their family medical man for several months and no progress is made. Nevertheless, the local practitioner sneers at the idea of a consultation and the patient is afraid to ask his medical man or the name and address of a consultant. Consequently when the patient's patience is exhausted he takes the train and goes to Manchester. On arriving he asks the way to the infirmary. He has no intention to defraud that charitable institution, but knows that there he will obtain the best advice. The secretary inquires as to the applicant's wage limit and expostulates when he finds that he has ample means; but the applicant replies that he came fully prepared to pay, all he wanted was the best advice. The secretary then gives the addresses of the members of the hospital staff. The very stubbornness of the general practitioner in refusing extra help or a consultation causes the patient to find out that this is necessary. Then the patient comes and is treated either at the hospital or, if he can afford to pay, as a private patient of a consultant. On returning to his home he naturally spreads the news of

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his recovery and the tendency to resort to specialists or consultants is thus becoming more and more general. The great difficulty is with that numerous class of patients who can afford to pay but cannot pay guinea fees. There it is that hospital abuse arises. They are dissatisfied with the general practitioner and cannot afford to go to the consultant, yet the latter dare not reduce his guinea fee to meet the financial position of this numerous class. The consulting surgeon with whom I was discussing this matter expressed his conviction that he could triple his income if, during two days in the week, he were able to give consultations for 5s. fees and this would prevent much of the hospital abuse. It was his conviction that many patients died prematurely because they could not afford the guinea fee for the consultant and did not like to go to the hospital. In his practice he had seen many cases, notably of cancer, which had come to him only in the last extremity when it was too late to do any good. Such patients died prematurely because they could afford to pay 3s. 6d. fees. Had they been poorer they would have come to the hospital sooner and their lives would have been saved or at least prolonged. Hospital abuse was not so grave as the general practitioners made out; but it was the old story of the two men who quarrelled as to who should milk the cow. While the general practitioner and the consultant were disputing as to what should be done with regard to the patient who could not afford a guinea, but would gladly give 5s., the patient took himself off to the hospital, with the result that both general practitioner and consultant lost their fees.

In almost the same terms as those employed by the consulting physician I had previously seen, the consulting surgeon I was now interviewing laughingly remarked that when the general practitioner's wife was ill telegrams came pouring down upon the specialists. They were to take the train, they were to come at once; and, after all, as often as not, it turned out to be quite a trivial case. In a more earnest tone he lamented that general practitioners too often failed to treat their patients as they would like to be treated themselves. Rows and commotions arose because patients were not always advised to their best interests. If a general practitioner, after two or three weeks' attendance on a special disease, found that there was no improvement the patient should be sent to the hospital with a note from his medical attendant demanding not general treatment, but advice. At the same time, if this were rendered too easy patients who could afford to pay guinea fees for the same advice would be sent to the hospital, and this would not be fair to the consultant. There was no disguising the truth, he said, that the ordinary medical qualifications did not suffice for special cases. This was best proved by the fact that general practitioners, when they were themselves afflicted, resorted to specialists. After all, patients were not made for the medical man, but the medical man was made for the patients. The best medical man was he who freely transferred his own patients to better men, if necessary. It was preposterous for a medical man to imagine that he was competent to do everything. But in speaking of better men it did not follow that the consultant was superior to the general practitioner. My informant, though considered one of the most prominent consulting and operating surgeons of the town, frankly admitted that he would be quite incapable of doing a general practitioner's work. He had not put up a fracture for the last eighteen years or more and would not like to be called upon to reduce a dislocation. He would consider it little short of a crime if he attempted to remove a cataract. Many of his patients had sufficient confidence to let him attempt any sort of operation, but thought none the worse of him when he refused a fifty-guinea fee and sent them to a better man. The public were not so ignorant and could understand that a man who was skilled in removing an ovarian tumour might be less successful in operating upon the eye. At the hospital with which he was connected there was at the present moment a woman who was married and the mother of children. The income of the family amounted to £5 a week. The operation in this case would cost £100. The general practitioner who attended this family had not the special skill necessary to perform this operation, and a family with £5 a week could not be expected to pay a £100 fee to a consultant. It was no use complaining because this woman had come to the hospital. Patients with private means did not generally come to the hospital till they had tried other means. After all, inquiry should be made of the public as to what the patients themselves have to say and how they explain their conduct. It was no pleasant matter to pay even half-crown fees throughout a long and wearisome illness and feel that there were at the hospital specialists who would, in all probability, effect a cure in a much shorter time.

Such were some of the arguments adduced by consultants and members of the staffs of the Manchester hospitals. It now remains to be seen what measures are taken at the hospitals to prevent abuse and what the general practitioners have to say on the subject. I have given the views of the consultants first, but no one must prejudge the case. Before my readers make up their minds on the subject of hospital abuse at Manchester they must hear the other side.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Sanitary Inspectors' Association.

A MEETING of the Lancashire and Cheshire Branch of the Sanitary Inspectors' Association was held on Saturday, Dec. 19th, at the Manchester Technical School. The members first inspected a number of technical appliances lent by the school authorities and were afterwards addressed by Mr. J. Ratcliffe, chief lecturer on sanitary science at the Manchester Technical School, on a Sanitary Inspector's Duty with regard to House and Drainage Inspection. He said that some authorities, under the impression that no skill was required, "were in the habit of choosing for such places policemen, railway porters, unsuccessful tradesmen, or men who had failed in every other walk of life." He said that the sanitary inspector was the guardian of the public health, and he thought had reform in this matter in his own hand. Above all things, he must have a good knowledge of the scientific portion of his work and be ready to put it in practice. "These were the men who would be dreaded by the jerry-builder and the owner of old-fashioned property." After impressing on his audience the necessity of a close acquaintance with natural laws he explained the main principles of sanitation, illustrating his subject with lantern views and diagrams. It is probably true, as the lecturer thought, that the sanitary inspector is much undervalued by the general public whom he serves, which is not to be wondered at if the authorities appoint ignorant, unskilled men. Considering the importance of his work, and the fact that much of it is concerned with what is usually out of sight, it is necessary that there should be not only the requisite knowledge but character and high principle. Manchester, it is only fair to say, does not come in the category of "certain authorities," for great care is taken to obtain the services of efficient, trustworthy men.

Manchester Geological Society.

On the 18th inst. an interesting paper by Messrs. Barnes and Holroyd was read at a meeting of the Manchester Geological Society on Some Effects of High Pressure on Decomposing Vegetable Matter. The experiments were first suggested by Wheelton Hind of Stoke-on-Trent. The first was made with freshly cut moist peat, which was placed in an iron cylinder 3 in. deep and 3 in. in diameter, the wall being 2½ in. thick. An iron ram was placed on it having a diameter just sufficient to allow of its passing smoothly into the cell. Hydraulic pressure was applied until it had reached about one ton to the square inch, when the iron cell burst, owing probably to the incompressibility of the water contained in the peat. The broken cell was strengthened and another attempt was made on thoroughly desiccated peat, which was subjected to a pressure of twelve tons to the square inch, and at this it was allowed to remain for twelve or fourteen hours. When the peat was withdrawn it had decreased to about one-fifth of its original bulk, and at the periphery, where it had been in contact with the interior of the cylinder, it had a shining black appearance very much resembling coal. "When broken it showed that in a great measure the fibrous vegetable structure was much reduced or destroyed and the mass had a distinctly lignitic appearance." Its specific gravity was found by calculation to be 1·5, that of coal being from 1·2 to 1·8. In another experiment dried autumn leaves of ash, sycamore, oak, elm,

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and hawthorn were exposed to a pressure of 20 tons to the square inch. The margin of the compressed mass presented the same coaly appearance, with shining particles on the upper and lower surfaces, and its specific gravity was 1·42 An experiment with sycamore leaves gave similar results. In another experiment with peat, at a still greater pressure, the degree of mineralisation at the point of contact with the iron was still greater. When burnt the compressed peat behaved very much in the same way as coal. It did not ignite at once, "but after a short time burst into flame, emitting streams of volatile and inflammable gas." The deduction from the various experiments was that pressure must have played a very important part in the changes from vegetable decomposing matter to mineralised coal, which, perhaps, scarcely needed showing; but, nevertheless, the demonstration was most interesting.

Manchester and Salford Sick Poor and Private Nursing Institution.

The annual meeting of the above institution was held on Friday afternoon in the Lord Mayor's parlour in the Manchester town hall. The report states that the object of the institution was "to provide throughout the length and breadth of the city wherever sickness and poverty were found together the careful ministrations of the district nurse." There are 25 thoroughly trained and efficient private nurses and 47 district nurses. During the year 8233 patients had been attended and 210,500 visits paid by the nurses. But, as we hear so often, "the general financial state of the institution gave rise to feelings of anxiety," for during the year there had been a considerable excess of expenditure over income, and but for a legacy of £1000 from the late Mr. Berry, about £400 of which "had been absorbed in meeting the deficiency," and, as Mr. W. Mather said, "without the bequests received, they would not have been able to go on." He suggested that those who employed the private nurses should contribute to the general fund "in however small a degree." During the year 1200 home patients of the various hospitals had been tended by the district nurses, who had paid 31,000 visits "under the direction of the hospital medical staffs." Others had been nursed for the medical officers of the provident dispensaries or for private practitioners. Surely more liberal support should be given to this useful society.

The Proposed Rebuilding of the Royal Infirmary: Result of the Poll of Trustees.

The votes of the trustees of the Manchester Royal Infirmary on the question of a rebuilding and extension on the site in Piccadilly, in accordance with the plan submitted by the Grand Committee, were counted on Wednesday, Dec. 23rd, 1896. The number of voting papers issued was 1349, and of these 853 were returned. The counting took place yesterday morning, Sir Frank Forbes Adam and Mr. E. S. Heywood being scrutineers representing those in favour of the motion, and Sir John Harwood and the town clerk (Mr. W. H. Talbot) acting in the same capacity for those against it. The result of the poll was declared as follows: For the motion that the infirmary should be rebuilt on its present site, 449; against, 403. The result will be submitted to a special meeting of trustees to be held in the middle of January.

Dec. 24th, 1896.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Christmas at the Hospitals.

THE usual festivities of the season lacked no enthusiasm this year in the efforts to make the time appreciated by the inmates of the various hospitals. At the General Hospital an attraction was secured by the presence of Mrs. Chamberlain, who kindly gave away the toys from a huge Christmas tree, to the delight of the younger inmates. The older ones were treated to songs and music by various members of the staff, and the occasion was an enjoyable one in every respect. At the Children's Hospital Father Christmas distributed toys and gifts to a number of children amid much excitement and pleasure. An amusing incident in connexion with the Jaffray Hospital shows that sometimes even the ever watchful press slumbers. That branch of the General Hospital has been closed for some months for cleaning and repairs and still remains untenanted, yet in the descriptive narrative of a local paper the inmates were regaled with roast beef and plum puddings and spent a happy and enjoyable Christmas-time. Truly imagination plays a prominent part in the minds of some reporters, excusable, perhaps, by the good intentions of the season.

The Queen's Hospital.

The resignation of Mr. Wilders, one of the surgeons of this institution has been received with much regret. For nearly forty years Mr. Wilders has been connected with the hospital, first as assistant house surgeon and for twenty-eight years as senior officer. In the words of the chairman of the hospital: "During that time he has served the hospital with fidelity and zeal, ever working in harmony with his professional and lay colleagues." The grateful thanks of the authorities were accorded to him unanimously with the hope that his long illness would eventuate in recovery and that his life would long be spared.

Neglect of Children.

Too common an occurrence in the midst of our boasted civilisation is the deplorable neglect of the youngest branches of the community. The Society for the Prevention of Cruelty to Children does a good work in the city by occasionally prosecuting in the most flagrant cases. An instance lately occurred in which a mother who is stated to have borne sixteen children in nineteen years grossly abused the attributes of maternity. Four of the children were insured for an aggregate sum of £22 10*s*. One of them died after great neglect. The mother, of drunken habits, was seldom in a fit state to attend to the wants of the youngest; and in a deplorable condition of disease and dirt one of them died. The magistrates marked their disapproval of her conduct by a term of three months' imprisonment, during which period, no doubt, time for reflection and reformation will be afforded to this unfortunate victim of the great destroyer drink.

Dec. 29th, 1896.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Outbreak of Swine Fever at Ruinhill.

SWINE FEVER has broken out at the County Asylum at Rainhill. A new order with regard to the sale of swine comes into operation on Jan. 1st, which will have the effect of preventing the public sales of fat swine without permission, and for which licences will have to be obtained. Also, where swine have been on premises twenty-eight days a sale of store swine will not be permitted.

Liverpool Medical Institution.

The following nominations have been made by the Council of this society, subject to confirmation at the annual meeting, which will be held on Jan. 14th:—Vice-Presidents: Dr. A. C. E. Harris and Dr. Karl Grossmann. Hon. Treasurer: Dr. James Armstrong. Hon. Librarian: Dr. T. R. Bradshaw. Dr. Harris's period of office as President of the Birkenhead Medical Society has recently terminated, a post which he filled in a highly creditable manner. The President of the Liverpool Medical Institution (Dr. Caton) will deliver his inaugural address on Jan. 7th. The subject of the address will be the Results of Recent Excavations at Epidaurus and Athens bearing on Medical Treatment as carried out in the Temples of Asclepius, with lantern illustrations. The presidential address will be followed by a smoking concert.

Liverpool Royal Infirmary.

It is an open secret that at the approaching annual meeting of the trustees of the Royal Infirmary a vacancy on the senior honorary staff will be declared.

Christmas at the Liverpool Hospitals.

At the Royal Infirmary the wards and the chapel were tastefully decorated with evergreens, sent by kind friends for the occasion. Roast beef and plum pudding were served at mid-day to the patients in the wards; tobacco was also distributed to smokers. Presents of fruit, plants, and toys, besides articles of clothing, have been received from friends of the institution. On Christmas evening, carols were sung in each of the wards under the direction of Dr. Livsey, honorary organist to the chapel, who accompanied by means of a harmonium. The wards were visited during the day by

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several members of the Committee and their friends. At the Northern, Royal Southern, Children's and Workhouse Hospitals the festivities were on similar lines.

Dec. 29th, 1896.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Memorial to the late Mr. G. E. Alford of Weston-super-Mare.

THE formal opening of the "Alford Memorial Ward," furnished with funds raised by friends and patients of the late Mr. G. E. Alford, M.R.C.S. Eng., L.R.C.P. Lond., who had been for several years an honorary surgeon to the institution, took place on Dec. 23rd. The ward contains an excellent portrait of Mr. Alford and will shortly be provided with a memorial tablet and with a stained window depicting St. Luke, the physician. There was a large attendance, and the President (Mr. T. Mullens, J.P.) in declaring the ward open said that Mr. Alford was a gentleman who had done noble work in the improving of the hospital, and it had been thought that the best way of testifying their appreciation of his efforts would be in the forming of a memorial ward in the hospital in which he had shown so much interest.

The New Hospital for Newport (Mon.).

Up to the present the promises of support to the new hospital at Newport amount to about £8000, and this, in addition to the gift of Dr. A. Garrod Thomas, makes altogether about £13,000.

Isolation Hospitals in Glamorganshire.

At the meeting of the Glamorganshire County Council the solation hospitals sub-committee recommended that notice should be given to the Oystermouth, Gower, Briton Ferry, Caerphilly, Glyncornwg, Pontypridd, and Maesteg District Councils that they must adopt definite plans for isolation hospital accommodation by March 1st, or the council will proceed to make compulsory orders.

The Preservation of Dartmoor.

At a meeting of the Plymouth borough council, held on Dec. 14th, the question of the acquisition of Dartmoor by the county of Devon in order to prevent further encroachments was discussed. This scheme, which was submitted by the Dartmoor Preservation Association, was unanimously approved of, and the council pledged itself to bear its fair share of the cost of purchasing 130,000 acres of Dartmoor from the Duchy of Cornwall, provided that the county authorities have power to preserve all objects of archæological and antiquarian interest and the indigenous plants and animals. The other Devonshire authorities have also promised their support to the scheme.

Death of Mr. G. F. Schacht of Clifton.

Mr. George Frederick Schacht, the well-known chemist of Clifton, died suddenly on Dec. 26th. Mr. Schacht, who was seventy-three years of age, had been for twenty-five years a member of the council of the Pharmaceutical Society, and on his retirement from that office last autumn was presented with an address acknowledging the useful work he had done for the society. He had been vice-chairman of the society and also a member of the examining body, pharmaceutical education being a matter in which he was greatly interested. He was honorary treasurer of Bristol University College, and at the recent annual meeting of the governors he spoke highly of the chemical work done at that institution.

Dec. 29th, 1896.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Edinburgh.

THE following are the numbers of the students who attended the several classes of systematic lectures in the Faculty of Medicine in Edinburgh University during winter and summer sessions, beginning in October, 1895, and ending in July, 1896: Chemistry, 281; botany, 228; zoology, 215; physics, 267; anatomy, 213; physiology, 443; surgery, 213; materia medica, 246; practice of physic, 230; midwifery, 178; medical jurisprudence, 174; mental diseases, 99; and ophthalmic surgery, 55.

Clinical Demonstrations to Medical Practitioners.

The physicians and surgeons of the Glasgow Royal Infirmary, with the consent of the managers, have arranged to give during the winter and summer sessions weekly demonstrations of cases in the wards, open to all members of the profession who care to attend. It is proposed that every Friday afternoon one of the physicians or one of the surgeons shall be responsible for the demonstration, and the members of the staff have unanimously assented to the arrangements. There can be little doubt that these demonstrations will be most valuable to practitioners, giving them opportunities to renew their acquaintance with hospital methods and to become practically familiar with the more recent improvements in diagnosis and treatment. Both the managers and the staff are to be congratulated on a departure which indicates a keen perception of the duties and opportunities attached to those responsible for the policy of the hospitals as centres for clinical instruction. And it can only be for the public benefit that the practitioner shall be encouraged to continue to some extent his hospital attendance even after entering on private practice. The first demonstration is to be given by Mr. Henry E. Clark, senior surgeon to the infirmary, on Friday afternoon, Jan. 8th, at four o'clock.

Glasgow University.

The register of the General Council for the year 1897 has now been made up. It shows the addition of 189 new members, whilst 106 names have been removed, making a net gain of 83. The present total is 5406. The Christmas holidays commenced on Dec. 21st, and are to be continued until Jan. 5th, when the classes will be resumed.

Police Appointment.

The sub-committee of the Corporation appointed to deal with the vacancy in the casualty surgeonship of the Northern police district, Glasgow, have decided to recommend the election of Mr. R. Bain Lothian, M.B., C.M. Glasg. The salary is £50 per annum and there were seven other candidates.

New Fever Hospital for Stirling County.

The new hospital erected near Camelon by the Eastern District Committee of the County Council was opened on Dec. 22nd Mr. Geo. Ure of Wheatlands presiding at the formal ceremony. The cost of the hospital has been £7500. It is arranged in four blocks and includes, in addition to the usual accommodation, observation wards for the admission of doubtful and suspicious cases. After the opening ceremony the committee entertained the visitors to luncheon.

Professor Gairdner on Samaritan Hospitals.

The recent institution in Glasgow of a hospital for diseases of women, calling itself the "Samaritan" Hospital, has, it appears, led to some confusion in the minds of the benevolent in consequence of the fact that for many years there has existed in connexion with the Western Infirmary a Samaritan society, having for its object the supply of clothing and other necessaries to patients on leaving the infirmary. To prevent misconception the President of the Samaritan Society (Mrs. Berry) wrote to the newspapers explaining the position. This led to some correspondence, amidst which appeared a letter from Professor Gairdner containing the following passages: "Without prejudice as regards any particular institution in Glasgow or elsewhere which calls itself a 'Samaritan' hospital allow me to ask ..... if there is anywhere any good authority in Scripture or out of it, even the smallest grain of common sense or etymological propriety, in a special hospital for women appropriating to itself distinctively the name and credit of the 'Good Samaritan'—for I suppose it is the Good Samaritan and not the Woman of Samaria or the ungenial and bigoted type that we read of, and to which the Good Samaritan was a brilliant exception, that is here in question? The Samaritan Society of the Western Infirmary does well to be so called because its work is purely good Samaritan work on the strictest lines of the great original in the parable and not limited in its motive by any consideration of age and sex and condition. But when one or more able and enterprising gynæcologists contrive, with much canvassing, bazaars, &c., to have a special hospital erected for the diseases of women, we may even approve their object and are not to be held as in any way assailing their enterprise if we ask, What has the Good Samaritan, or any other Samaritan that we know about, specially and distinctively to do with gynæcology? ..... The Woman of Samaria, we are told, had five

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husbands; but notwithstanding this undue allowance of male support and protection there is not a word or a hint of her having ever been in the hands of a 'gynæcologist.' ..... It will be difficult, I suspect, to turn the Woman of Samaria to the account of gynæcology. Whence, then, the name? The promoters of 'Samaritan' hospitals owe an explanation to the public on this subject."

Aberdeen University.

On Dec. 28th there was presented to Aberdeen University Court the portrait (painted by Sir George Reid, P.R.S.A.) of Mr. David Rennet, LL.D., a successful private teacher of mathematics and natural physiology in Aberdeen. At the same time a replica was presented to Dr. Rennet. Subscriptions came largely from Dr. Rennet's old pupils, and the balance of the fund will be handed to the University Court for the foundation of a gold medal, to be awarded annually for distinction in some branch of mathematical study.

Aberdeen Hospital for Incurables.

During 1896 16 patients were admitted to Morningfield Hospital, 12 died, and 3 were discharged, leaving 67 in the institution at the close of the year. The ordinary expenditure was £1727, being £383 11*s.* 3*d.* above the ordinary income. Legacies produced £387 14*s.* 10*d.*, leaving a small balance in hand. Part of the hospital fees duty has been redeemed by a payment of £490 out of capital.

Aberdeen Royal Infirmary.

In reminding the citizens that Sunday, Jan. 3rd, is Hospital Sunday in Aberdeen, the directors state that the expenditure for the current year may be set down as £8000 and that the outlay grows with the increase of buildings. When the new medical block is opened in May next, it is stated, the infirmary will, as regards comfort and general equipment for the treatment of the sick and injured, be one of the finest hospitals in the United Kingdom. At Jan. 1st last 161 patients remained in the hospital. During this year to Dec. 23rd 1929 patients were admitted, making a total of 2090, of whom 979 recovered, 603 had improved, 196 had been discharged as unfit, at desire, &c.; 152 had died, and 160 remained in the infirmary. In addition 5399 casual cases had been treated. Dr. P. Blaikie Smith has, owing to the state of his health, resigned his post as one of theordinary physicians and has been appointed a consulting physician.

Dec. 30th, 1896.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Memorial Statue of the late Surgeon-Major Parke.

THE event of last week in Dublin was the ceremony of the unveiling of the statue of the late Surgeon-Major Parke, the companion and friend of Stanley in Darkest Africa. The statue, which is of bronze, is placed on a stone pediment in the Leinster Lawn, an admirable site which contains already a handsome bronze allegorical group erected in memory of the late Prince Consort, and a statue of the late William Dungan, who founded the Irish Industrial Exhibition of 1853. There was a distinguished and representative assembly present, the military and medical professions being, of course, well represented. After Dr. Wheeler, as one of the former teachers of Surgeon-Major Parke, had delivered a brief panegyric of the deceased, Field-Marshal Lord Roberts, the Commander-in-Chief in Ireland, said that although he had not had the honour of knowing the late Surgeon-Major Parke, he had felt a great admiration for that officer's character, and was proud to remember that he belonged to the Army Medical Department. The statue, which is an admirable likeness, was then unveiled and exhibited to the view of a large and distinguished audience.

Death of Sir George Owens, M.D.

Sir George Owens, M.D. Glasg., died at his residence in Dublin upon Dec. 29th. He took the degree of M.D. at Glasgow University in 1850. In 1876 he was Lord Mayor of Dublin and was knighted during his year of office. In 1881 he filled the office of High Sheriff.

The Richmond Lunatic Asylum.

The epidemic of beri-beri in this institution does not seem to have undergone much abatement. Mr. O'Conor Donelan, the acting resident medical superintendent, reported at the last meeting of the board of governors that the number of cases had reached 113, but that there was a decline in the number of fresh seizures during the last few weeks. Arrangements are at last being made to remedy the overcrowded state of the asylum, and block No. 1 of the temporary buildings at Portrane is now finished and ready for occupation. The cost of this, with the two other blocks now in course of erection, has been estimated at £10,900. Dr. Courtenay, inspector of the Board of Control, suggested for the consideration of the board of governors that it would be advisable, instead of concrete houses, to build cottages which might, after the construction of the asylum at Portrane, be used as residences for the attendants. A patient of the Richmond Asylum named Cluskey was recently—Dec. 21st—returned for trial on a charge of having murdered another inmate by striking him on the head with the iron grating of a sewer trap. The injured man was brought to Jervis-street Hospital, where it became necessary to trephine his skull, after which he improved so much that he was able to return to the asylum. An abscess ultimately formed in his brain and proved fatal.

Mercer's Hospital.

The board of governors of this hospital, as will be remembered, adopted some months ago the very unusual course of requesting the resignation of all the members of their medical staff. It is said that one medical man, fearing that he would not be re-elected, refused to obey the request and legal proceedings seemed at one time imminent. It is now, however, stated that a conference between the board of governors and the medical staff has been arranged to take place about the middle of January.

The New Belfast Hospital.

Dr. W. A. McKeown, who is surgeon to the Ulster Eye, Ear, and Throat Hospital, at the annual meeting of that institution, spoke of the great advantage the new general hospital would be to the Belfast Medical School, and quoted some statistics of great importance as coming from one who is an original senator of the Royal University of Ireland and a member of the Medical Committee of that body. The four institutions in Ireland specially connected with the Royal University were Queen's College, Belfast, Queen's College, Cork, Queen's College, Galway, and the Catholic University School of Medicine, Dublin. From an official return he found that the respective numbers of medical students sent up from these institutions in 1895 were as follows:—Queen's College, Belfast, 205; Queen's College, Cork, 113; Queen's College, Galway, 44; and the Catholic University, 93; so that the Belfast School of Medicine supplied nearly as many as the other three schools put together—205, as against 250. Belfast was, indeed, as regards these institutions, the predominant partner, and hence the necessity for good facilities for training the students. The 205 students do not, however, by any means represent the full strength of the Belfast Medical School, as many others went to the licensing bodies in Scotland. These figures also demonstrate, I may add, another fact that Belfast is not at all fairly represented on the examining boards of the Royal University. To give an example, at the M.B. board of the Royal University there are twelve examiners, and of these only two come from the Belfast School of Medicine, which, as Dr. McKeown points out, sends nearly as many medical students as the other three schools put together.

Prevention of the Spread of Infectious Diseases.

At the Londonderry Petty Sessions, on Dec. 28th, a military lieutenant residing outside Ebrington Barracks was summoned by the executive sanitary officer and fined 2*s.* 6*d.* and £1 13*s.* 8*d.* costs for allowing his son to attend school, contrary to the provisions of the Public Health Act, within a fortnight of the date on which it was certified he had scarlet fever.

Health of Belfast.

At the present time there is a great deal of illness in Belfast, especially scarlet fever and influenza. Some of the public schools have had to be closed owing to the former, and the latter is very widespread, many children being attacked in this epidemic. In the present outbreak of influenza throat complications are common and occasional rashes (making the diagnosis difficult as between influenza and scarlet fever)

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are seen, but no desquamation follows, and in all cases of the disease there is the well-marked after-depression.

Ulster Eye, Ear, and Throat Hospital.

At the annual meeting of this hospital, held on Dec. 22nd, it was reported that during the year there were 1493 extern and 235 intern patients. The total receipts of the hospital from all sources were £610 10*s.* 10*d.* and the disbursements £609 17*s.* 11*d.*

Dec. 31st, 1896.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The late Emile Du Bois-Reymond.

ON Dec. 26th the University of Berlin lost one of its oldest and most valued members, Emile du Bois-Reymond, Ordinary Professor of Physiology, Director of the Physiological Institute, and Honorary Secretary of the Royal Academy of Sciences. It was by the labours of Helmholtz, Virchow, and Du Bois-Reymond that the claim of medical men to have their special subject reckoned among the sciences was first vindicated in a conclusive and satisfactory manner, and of these three, to whom we owe so much, Professor Virchow is now the sole survivor. The sorrowful event was not unexpected either by the friends of the deceased or his students, as he had for a considerable time been suffering from cardiac failure, which eventually compelled him to cease lecturing last summer, but he hoped to be able to resume his work, and therefore did not seek to be relieved from the duties of his appointment. The principal points in his personal history, considered apart from his scientific investigations, may be stated in a few lines. His father was a native of the canton of Neufchâtel in Switzerland, but came to reside in Berlin before the birth of his son, which took place in that city in 1818. Du Bois-Reymond spent almost the whole of his life in Berlin. His medical curriculum occupied him from 1837 to 1843. He became assistant at the Anatomical Institute in 1844, *privat-docent* in 1846, and extraordinary professor in 1856; in 1858 he was promoted to be ordinary professor. His name is, and always will be, associated with one branch of physiological observation and research—namely, the special physiology of muscles and nerves, a field which before his time was almost unexplored. His attention was first directed to these questions in 1841, when Professor Johannes Müller, observing the bent of his mind towards original inquiry, suggested to him a critical examination of the observations made by Matteucci on the electrical phenomena presented by animals. The advice was immediately followed, and the researches then commenced were destined to occupy him during the remainder of his life. So engrossed did he become in these pursuits that, as he himself used to say, frogs and the multiplicator for studying electric currents were his only companions during many years. His first publications were too aphoristic to find favour with the scientific world, but his "Researches on Animal Electricity," which appeared in 1848 and 1849, brought him at once to the front. His discovery of the existence of electric phenomena in connexion with muscles and nerves inaugurated a long series of animated discussions, which are occasionally revived even now. His great celebrity, however, was mainly due to his having been one of the foremost protagonists in the struggle between materialism and vitalism. In the beginning of his career vitalism was still a recognised theory in natural science, but jointly with the brothers Weber, Helmholtz, Meyer, and other eminent men he was one of the first to maintain that all the processes of life depend exclusively on those of physics and chemistry. This he held to be an established fact, not admitting of any doubt or question, and when not long ago a modification of the old vitalistic theory reappeared under the name of Neo-vitalism, suggested by Professor Rindfleisch and others, he at once took the field against what he deemed to be false opinions. One of his last communications to the Royal Academy of Sciences was a reply to an address delivered by Professor Rindfleisch at Frankfort before the Association of German naturalists and medical men, but he did not go so far as to imagine that all problems must be regarded from the point of view of natural science exclusively. His essays on the Limits of Knowledge and on the Seven Mysteries of the World, in which he conscientiously made the avowal "Ignorabimus," excited the hostility of the more "advanced" group of thinkers, especially those of the Jena school. Du Bois-Reymond was possessed of great natural gifts both as a teacher and a speaker. His hearers were charmed both by the easy clearness of his style and the finished polish of his phrasing—a combination of qualities not always found in a German professor, and perhaps partly attributable to his French origin. This serves to explain the well-known fact that not only were his professorial lectures on physiology most regularly attended by the students from the beginning to the end of the session, but his popular addresses on topics of general interest, delivered once a week in the *auditorium maximum* of the University, always drew large audiences including both sexes and all classes of society. Physiological teaching and research in Berlin are indebted to him for the providing of an establishment worthy of the science so important as one of the foundations of medical knowledge. Visitors to the Quartier Latin of Berlin will be struck by the palatial appearance of the new Physiological Institute, built and fitted in precise accordance with his ideas and provided with every requisite. This is the place where Du Bois-Reymond and his pupils, the late Professor Baumann (not long since deceased), Dr. Sachs, Professor Fritsch, Professor Krenacker, Professor Goltz, and many others, have contributed so much to the development of physiology and the progress of natural science.

Dec. 29th, 1896.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Brain of a Brigand.

THE literary "hit" of the month is Professor Cesare Lombroso's article in the *Nuova Antologia* on the brain of Tiburzi, the brigand chief who for nearly twenty-five years levied contributions on Central Italy with a boldness and success explained only by his having been no merely vulgar malefactor, but in his way a hero of romance, a "rectifier of the financial frontier" between rich and poor, and as far removed from meanness as he was superior to moral scruple. The whole countryside was devoted to him: no informant could be found to guide the agents of the law; no jury could be "packed" even if he ever fell into the hands of "justice." At last he met a brigand's death in open conflict with the *carabinieri*, and at Professor Lombroso's request his brain was preserved and duly subjected to anthropological analysis. It is Professor Lombroso's report and commentary on this that give the article in the *Nuova Antologia* its fascinating interest, to say nothing of the fact that the occasion proved a welcome one for him to "put himself right" with the Russian and German critics who at the last Anthropological Congress accused him of attaching to physical conformation a significance properly shared with early associations and moral environment. Tiburzi's brain, he admits, presented nothing abnormal; every organ was duly developed, the hands especially being beautifully proportioned, while, as to his physiognomy, it strongly resembled that of one of the ablest and mildest of recent Italian statesmen, his Excellency Cesare Correnti, some time Minister of Public Instruction! This finding seems awkward for the upholder of the "uomo delinquente" or "criminel-né"; but Professor Lombroso is quite equal to the dilemma. Unable to bring home to the deceased brigand any transmitted taint, his father and mother having been "brave persone," he elevates him into a social enthusiast impressed with the unequal distribution of fortune's favours—one who in an age more propitious for such types would have rivalled a Sforza, a Piccinino, or a Medici delle Bande Nere. As it was he pursued his *métier* in his little world with an intelligence, an administrative—nay strategic—ability, a temperance, and a faculty of inhibition quite foreign to the "criminel-né," qualities that relegate him to a category for which Professor Lombroso has to coin a term—the "criminaloid"—a man, that is to say, who from motives not bad in themselves (nay, to some extent laudable) becomes a social pariah and, in legal technicality, an outlaw. The whole article has even more interest for the romancist than for the professional student, and may be recommended for artistic purposes to a man of letters who combines both capacities—for instance, Dr. Conan Doyle.

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Precautions against the Pestis Bubonica.

Dr. Baccelli presided at an "urgency meeting" of the Consiglio Superiore di Sanità held the other day to approve prophylactic measures against the importation from East Indian ports of the pestis bubonica. All the members residing in Rome, to the number of fourteen, were in attendance, and the reporters were Signor Comandù, member of the Chamber of Deputies, and Dr. Panizza. After due consideration of the precautions taken by the Minister of the Interior on the first announcement of the plague from Bombay the council had to weigh objections advanced in the interests of commerce, which, it was represented, might be compromised by the rigid enforcement of the said precautions. The conclusion come to was a unanimous approval of what the Minister of the Interior had already done, and seeing that the plague in India shows small sign of abating the council further empowered the two reporters and the "Capo-Divisione della Sanità" to recommend to the Minister such supplementary precautions as the future course of the epidemic might necessitate.

Honours to Italian Medicine.

Scientific amenities are "in the air." The Royal Society of London had scarcely awarded its Darwin medal to Professor Grassi for his researches in confirmation of the law of evolution, when the Académie Française conferred on Dr. Francesco Todaro, Professor of Anatomy in the Roman School, its gold medal in recognition of his anatomical and embryological work, and of the very important part he has borne in the resuscitation of morphological studies in Italy during the last thirty years.

Death of Professor Luigi Calori.

In Italy death has, on the whole, been sparing of men of light and leading in the profession during 1896, but among those who have "gone over to the majority" Bologna has to deplore her able and accomplished Professor of Anatomy, Dr. Luigi Calori, member of the Academy of Sciences and corresponding fellow of numerous other scientific bodies, Italian and foreign. To the last he kept up his interest in the nature study in which he was early proficient, and, while an admirable teacher of his special subject, he left his mark on physiology, pathology, and morphology, in all of which he read and published papers embodying much independent and ingenious research. He was in his ninetieth year and leaves behind a reputation for industry, sagacity, and expository power but partially recognised in the many royal and civic honours conferred on him during his long and useful life.

Medico-Military Heroes.

If there is a subject that has yet escaped the all-utilising man of letters it might be found under the above title. I speak not now of such episodes in the army medical service as those of the Peninsular campaign, in which, according to General Sir George Napier, the English-speaking surgeons acquitted themselves with a courage only equalled by their professional skill. In Africa the service has a history exceptionally honourable—witness the heroism of Dr. James Ormiston McWilliam on the Niger, which so impressed Thackeray that in his "Lectures on the Humourists" he singles it out as an example of what is possible to British pluck. Even in the day now passing the humiliating reverses of Italy on Ethiopian soil have been redeemed by the splendid self-devotion of her medico-military staff—"the only, or almost the only, consolatory feature on the disastrous days of Amba Alagi and Abba Carima," said an Italian statesman to me lately. I gave some account in a recent letter of gallant young Alfredo Smuraglia of Orvieto who fell in the massacre of Mogadiscù in the Somali country. Since then details have come to hand which place the heroism of the "tenente-medico" in a specially significant light. Captain Cecchi's expedition, of which he was the professional adviser, had, after four hours' march, reached at 8 P.M. a giant forest, in the shadow of which the force, in the highest spirits, halted for the night. By 11 P.M. all were asleep; but about 3 A.M. a piercing cry aroused the slumberers—the Ascari sentinels had been assassinated by the Somalis. Then began a hand-to-hand encounter with the assailants in the dark which lasted till daybreak, when Captain Cecchi, without as yet the loss of a single European, began his retreat. At 7 A.M. the force got involved in an ambuscade and was at once the target for a shower of arrows. Captain Cecchi, ably seconded by Dr. Smuraglia, made a determined stand, and the whole party were doing deadly execution with their rifles and revolvers, till at last their ammunition gave out. "Il nostro dottore," says one of the three surviving eye-witnesses, "ferito da due freccie nella schiena se ne strappò con un coraggio inaudito" (our doctor, wounded by two arrows in the spine, wrenched them out with unprecedented pluck), and continued the struggle hand-to-hand till the force fought its way to a garden whence they were able to resume their retreat. But one by one the wounded fell out of the ranks by the wayside, and on each of the fallen—among them the doctor—the pursuing Somali pounced, dedicating them to Allah as they butchered them barbarously. The same evening from Mogadiscù sallied forth a company formed from the crews of the *Volturno* and the *Staffetta* to rescue the bodies; but, hard pressed by the Somali hordes, they brought back only an instalment, at the cost of two of their number wounded. It is not yet known whether Dr. Smuraglia's corpse has been recovered, but no effort will be wanting in the renewed endeavour to wrest from the Somalis the mortal remains of the young medical hero who, in the cause of science and professional duty, faced death as bravely as any combatant officer who "carries his life in his hands."

Dec. 27th, 1896.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Student Disorders in the University of Moscow.

SOME account of the student disturbances which about three weeks ago created some excitement in Moscow has been telegraphed to the English papers; but the explanation of those disorders, which has been very fully set forth in a document issued by the Government, has apparently not yet found its way to the English press. It is always difficult, if not impossible, for a foreigner to form a just judgement upon the questions involved in such entirely domestic affairs as these recurring conflicts between the students and the authorities. While the probability is that there is something to be said on both sides of the question the more desirable course seems to be to keep an open mind on the subject rather than express those crude and usually anti-Governmental opinions which too often disfigure foreign criticism of Russian affairs. At the same time it is well to record impartially the evidence on both sides. The document already referred to, which now lies before me, states with most unusual detail and apparently without *animus* the circumstances which led up to the recent disorders. It would appear that for many years past there has been a gradual growth in all Russian universities of student societies. These societies are generally known as *zemliatchestvos* (from *zemlia*, territory), as they usually consist of students coming from one and the same district. Thus there would be a Siberian, a Riazan, or an Ukraine *zemliatchestvo*. Originally formed on the principle of mutual aid societies, many of them have gradually altered their character, and admitting political agitators and revolutionists to their membership have become openly revolutionary. A few years ago most of the societies in the Moscow University united to form a "League Council of United *Zemliatchestvos*," consisting of forty-five societies and 1500 individuals. This council very soon showed that it intended to deal with matters quite outside the University by passing violent resolutions on all sorts of social and Imperial matters. At the time of the Toulon *fêtes* it sent messages to the French students of "disapproval of the servility of a free nation before the representatives of an autocratic *régime*," and it voted sympathy with, and sent money to, men on strike in different parts of the country. A number of other matters in which it interfered need not be mentioned here; suffice it to say that the authorities last year felt themselves bound to take action, and they interrupted one of the meetings and seized the papers. From these and other documents since seized it was clear that the "League Council" was practically a hotbed of sedition. The first article in a scheme of action drawn up only on Oct. 21st of this year runs thus: "The League Council declares that the chief end of the Union of *Zemliatchestvos* should be the preparation of 'fighting-men' in the political struggle." The council demanded the repeal of the present University Act (1884) and the re-enactment of the milder one of 1863; and it also tried to organise a general and simultaneous rising of students in all the Russian Universities. In this

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it failed. However, on Nov. 18th (old style) it took advantage of the semi-anniversary of the terrible disaster at the popular fête at the time of the Coronation to organise a demonstration. Five hundred students marched out towards the cemetery where the "victims of a careless administration" lie buried, but they were prevented from reaching the cemetery by the police. The students returned to the University, and refusing to disperse were arrested in a body and taken to the large Manége opposite. All but 36 of the ringleaders were soon liberated. On the following day 400 students held a meeting and sent a deputation to the Rector of the University, who, however refused to meet them. On the next two days meetings were held and many arrests took place. In all, the police arrested 711 students. Of them 662 were tried by the ordinary University court, but the remainder, 49 in number, will be tried by the general law as more serious offenders. Those tried by the University court were divided into three groups; those of the first two groups were sentenced to be dismissed from the University, but with the right of admission to other universities at the beginning of the next academical year; those of the third group (461 in number) were also sentenced to dismissal, but with the right of re-entering the Moscow University next year. Students of the second and third group were further recommended to mercy, as they appear to have acted under compulsion; but not those of the first group (26 in number). These recommendations have been approved by the Ministry of Education, and on the 25th, 26th, and 27th of November (old style) the whole 636 students of the second and third groups were liberated with a reprimand. On Nov. 27th the Rector published a notice that students who in future should take part in similar disturbances would be at once sent down without appeal; but that students who do not wish to submit to the present University regulations might receive back their papers and be written in as "retired from the University at their own request." Thus has ended what threatened to be a somewhat serious domestic trouble, in which the authorities, so far as may be gathered, seem to have acted with most commendable moderation. Before closing this brief record it may be stated that the total number of students in the University of Moscow is about 3500, of whom a third belong to the medical faculty.

Postponement of the Jenner Celebration.

The Russian Jenner Commemoration, which was to have been held on Nov. 24th (Dec. 6th), but had to be postponed, is now fixed for the 15th (27th) of December.

Dec. 14th (26th), 1896.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Treatment of the Epileptic in Colonies.

THE progress of the colony for epileptics in the State of New York becomes more and more interesting. Although it has been opened for the reception of patients little more than a year, the results of this method of treating epileptics have been most pronounced. The annual report of the superintendent shows that nearly every case has gained in weight and in general health. In all cases the epileptic seizures have diminished in frequency to a marked degree, and in some instances this has been even extraordinary. The expression of the inmates has altered, so that, instead of the dull, hopeless look of the alms-house epileptics, one sees on all sides happy faces in which intelligence and hope are being re-awakened. The school has been successfully started for fifteen or twenty of both sexes. Much of the printing of the colony is now done by two or three epileptics in the colony's own printing office. Carpentry, sewing, painting, &c., are being carried on by the patients. They have their own epileptic blacksmith. The chief work of the inmates of both sexes is in the field and garden, and this labour also has a great effect upon the income of the colony. In regard to the effect of colony life upon epileptic seizures it may be noted that the first fifty patients who were under treatment five months and over before the close of the fiscal year had collectively 708 seizures. The same fifty cases, after five months treatment, had collectively, during the fifth month, 315 seizures. During the first month each case averaged fourteen attacks; during the fifth month, each case averaged six attacks.

An Ambulance Ship.

Surgeon-General Tryon of the United States Navy has proposed to add to our ships one or more suitably constructed vessels, the duty of which shall be to save and care for all wounded and drowning men during an engagement. It is recommended that this vessel shall be of such size as to render it easy of control in action and swift and efficient in rescuing the large number of sailors who are swept overboard in every naval conflict. Such a ship should receive the same courtesies accorded to the wearers of the Red Cross by all civilised nations. The advantages of such a plan have been so impressed upon the minds of all who entertain a proper regard for the lives of our brave sailors that the equipment and trial of these ambulance ships may be expected as one of the early improvements in the United States Navy.

Abuse of Dispensaries and Hospitals of New York.

The new President of the New York County Medical Society, Dr. Gray, in his inaugural address states that at the present time there are 26 hospitals and 114 dispensaries in this city. In the former, during the year 1895, 75,368 patients have been treated free and in the latter 661,803, making a total of 737,171, in a population of 1,851,060. In other words, the proportion of such free patients to the whole community is 39 per cent. There have been 92,529 free visits of patients to hospitals in 1895, and 1,387,170 free visits of patients to dispensaries. Out of 1,104,381 prescriptions that have been dispensed, there is no means of knowing exactly how many have been without charge, because 52 of the dispensaries have made no report to the State Board of Charities, while of the 62 that have been reported 16 make no charge for their medicines and 46 make nominal charges of from five to fifty cents, or nothing when the patient is unable to pay. Of these 114 dispensaries 60 take certain precautions to weed out the unworthy, such as making inquiries, questioning the patients, judging by their appearance and by the statements of physicians sending them, while the remaining 54 either make no inquiries or have made no report. Efforts were made to ascertain how many of the patients were non-residents, but the answers were usually very indefinite, one institution stating "Very few, if any," others "From 1 to 10 per cent.," while ten had treated 2124.

Carriers of Sick Passengers.

The Apellate Court of Indiana has decided that if a carrier accepts a passenger knowing that he is sick or infirm ordinary care must be used in seeing that he is transported safely and is given a reasonable time and proper assistance in getting on and off its cars. A carrier will not be required to accept or transport one having a contagious disease, or to accept as a passenger one who is physically disabled or unable to take care of himself. If a person desiring to become a passenger is unable, on account of extreme youth or old age or any mental or physical infirmities, to take care of himself he must be provided with an attendant to take care of him. The carrier is not bound to furnish him with an attendant.

Dec. 16th, 1896.

ROYAL COLLEGE OF SURGEONS OF ENGLAND: THE MEETING OF FELLOWS.

AT the meeting of Fellows to be held on Thursday next, Jan. 7th, at 4 o'clock, Mr. Timothy Holmes has set down upon the agenda the following motion:—"That this meeting desires to call the attention of the Council to the published reports of the proceedings of the General Medical Council in the case of Mr. R. B. Anderson and to the remarks and action of Mr. Bryant on the occasion, and to ask the Council whether their representative has, in this instance, correctly construed their instructions."

Mr. Rivington will also move:—"That this meeting submits to the Council that no objection can apply to an advance from the funds of the College to prosecute Mr. Anderson's Appeal to the Privy Council, and therefore trusts that the Council will sanction a grant for that purpose."

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Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Fellows of the College in the order of their seniority as Members of the College :—

Quick, William Henry (Surgeon-Major, I.M.S.), L.S.A. Lond.' Westminster and King's College Hospital; membership dated July 26th, 1880.
Harris, Herbert Elwin, M.B. Camb., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; Oct. 28th, 1885.
James, George Thomas, L.R.C.P. Lond., Westminster Hospital; Feb. 13th, 1890.
Jaffrey, Francis, L.R.C.P. Lond., St. George's Hospital; May 8th, 1890.
Nall, John Frederick, L.R.C.P. Lond., St. Bartholomew's Hospital; July 28th, 1890.
Riley, Frederick Ratcliffe, L.R.C.P. Lond., London Hospital; July 28th, 1890.
Elsworth, Richard Cogswell, M.B., C.M. Edin., Edinburgh University and Royal College of Surgeons of Edinburgh; July 30th, 1891.
Gladstone, Reginald John, M.D. Aberd., L.R.C.P. Lond., Aberdeen University and Middlesex Hospital; Aug. 1st, 1892.
Howat, Robert King, M.B. C.M. Glasg., L.R.C.P. Lond., Glasgow University and St. Mungo's College; Feb. 9th, 1893.
Castellote, Ramon Horace, M.D. Lond., L.R.C.P. Lond., University College Hospital; May 11th, 1893.
Davies, Hugh, M.B., B.S. Lond., L.R.C.P. Lond., University College and Guy's Hospital; July 27th, 1893.
Hall, Charles Beauchamp, L.R.C.P. Lond., St. Mary's Hospital; July 27th, 1893.
Scott, James Andrew Neptune, M.D., C.M. Glasg., L.R.C.P. Lond., Glasgow University and London Hospital; July 27th, 1893.
Pendred, Vaughan, M.B. Durh., L.R.C.P. Lond., Guy's Hospital and Durham University; Nov. 9th, 1893.
Ryall, Charles, L.R.C.P. Lond., L.R.C.P. Edin., Westminster and King's College Hospital; Feb. 8th, 1894.
Grace, John Johnston, M.B., B.S. Durh., L.R.C.P. Lond., Otago University, Dunedin and St. Bartholomew's Hospital; May 10th, 1894.
Pinch, Albert Edwin Hayward (Indian Medical Service), L.R.C.P. Lond., University College, and Royal United Hospitals and St. Bartholomew's Hospital; May 10th, 1894.
Hewer, Cecil Mackenzie, L.R.C.P. Lond., St. Bartholomew's Hospital; July 30th, 1894.
Every-Clayton, Leopold Ernest Valentine, M.B., B.S. Lond., L.R.C.P. Lond., Guy's Hospital; Feb. 7th, 1895.
Giles, Leonard Thomason, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; Feb. 7th, 1895.
Willis, William Morley, L.R.C.P. Lond., University College and General Hospital, Bristol, and St. Bartholomew's Hospital; May 9th, 1895.
Shaw, Harold Batty, M.B., B.S. Lond., L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds, and University College Hospital; July 29th, 1895.
Savage, Ernest Smallwood, M.B., B.Ch. Oxon., L.R.C.P. Lond., Oxford University and London Hospital; May 14th, 1896.
Bruce, Herbert Alexander, M.D. Toronto, L.R.C.P. Lond., Toronto University and General Hospital, and University College Hospital; Aug. 4th, 1896.
Melsome, William Stanley, M.D., B.C. Camb., Cambridge University and St. Thomas's Hospital; not previously a member.

Five other gentlemen passed the Examinations, but not having yet attained the legal age (twenty-five years) will receive their Diplomas at future meetings of the Council. Twenty-one gentlemen were referred for six months.

The following gentleman has previously passed the necessary examinations, and having now attained the legal age (twenty-five years) was also admitted a Fellow :—

Fraser, Forbes, L.R.C.P. Lond., St. Bartholomew's Hospital.

The following gentlemen having passed the necessary examinations, have been admitted Licentiates in Dental Surgery :—

Amphlett, Donald, Mason's College, Queen's and General Hospitals and Dental Hospital, Birmingham.
Anderson, Charles Frederick, University College, Royal Infirmary and Dental Hospital, Liverpool.
Anderson, Jonathan Harrison, University College, Royal Infirmary and Dental Hospital, Liverpool.
Carter, Charles Edward, Middlesex and the Dental Hospital of London.
Chatterton, Guy, Guy's Hospital, Dental Department and School.
Cribb, Harold Ernest, Charing Cross and the Dental Hospital of London.
Dalby, Charles Burkitt, Owen's College, Royal Infirmary and Victoria Dental Hospital, Manchester.
Donston, John Alexander Malin, Guy's Hospital, Dental Department and School.
Doyle, Clement Needham, Guy's Hospital, Dental Department and School.
Ellis, George Garnett, Guy's Hospital, Dental Department and School.
Evans, Sydney James, Guy's Hospital, Dental Department and School.
Goadby, Kenneth Weldon, Guy's Hospital, Dental Department and School.
Goodman, Thomas Dawson Edwin, Guy's Hospital, Dental Department and School.
Green, Walter, Charing Cross and the Dental Hospital of London.
Halliday, Alfred Reginald, Charing Cross and the National Dental Hospital.
Harding, George Herbert, University College, Royal Infirmary, and Dental Hospital, Liverpool.
Harrison, Arthur Edward, University College, Royal Infirmary, and Dental Hospital, Liverpool.
Hartnoll, Percy O'Bryen, Charing Cross and the Dental Hospital of London.
Hounsell, Ludlow Strangways, Guy's Hospital, Dental Department and School.
Humphrys, Jack Edmund, Charing Cross and the Dental Hos- of London.
James, John Joseph, University College, Royal Infirmary, and Dental Hospital, Liverpool.
Jeffery, Ernest, Middlesex Hospital and Dental Hospital of London.
Jones, William, Middlesex Hospital and the National Dental Hospital.
Knowles, Charles Heygate, Guy's Hospital, Dental Department and School.
Malone, Charles Albert, Charing-cross and the Dental Hospital of London.
Matthews, George Frederick Cole, Mason College, Queen's and General Hospital, and Dental Hospital, Birmingham.
Myers, Thomas Cyrill, Charing-cross and the Dental Hospital of London.
Naish, Godfrey, Guy's Hospital, Dental Department and School.
Parrot, Ernest Garner, Charing-cross and the Dental Hospital of London.
Pearse, Francis Henry, Middlesex and the National Dental Hospital.
Phillips, Charles Brooking, Middlesex and the National Dental Hospital.
Reece, Thomas Cadarn, Middlesex and the National Dental Hospital.
Ralph, Arthur Ernest, Middlesex and the National Dental Hospital.
Robertson, John Henry, Charing-cross and the Dental Hospital of London.
Simpson, Graham Scales, Guy's Hospital, Dental Department, and School.
Smith, Bernard, University College, Royal Infirmary and Dental Hospital, Liverpool.
Smith, Sidney, University College, Royal Infirmary and Dental Hospital, Liverpool.
Stephenson, John, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester.
Turner, Henry Watson, Middlesex and the Dental Hospital of London,
Wale, Samuel Thomas, Middlesex and the Dental Hospital of London.
Wheeler, Ernest Alfred, Middlesex and the National Dental Hospital.
Whittington, William Borrett, Charing-cross and the Dental Hospital of London.
Young, Ralph Littlewood, Middlesex and the Dental Hospital of London.

Twenty-nine gentlemen were referred back to their professional studies for three months.

UNIVERSITY OF CAMBRIDGE.—At the examinations for medical and surgical degrees in the Michaelmas term, 1896, the following were successful in the subjects indicated :—

FIRST EXAMINATION.

Part I.—Chemistry and Physics.—H. Ackroyd, Gonville and Caius; J. F. Alexander, Trinity; Barton, Pembroke; Bennion, St. John's; Bottomley, Christ's; Butler, Emmanuel; Byles, King's; Clapham and Cohen, Emmanuel; Cole and W. H. Dickinson, B.A., Trinity; Dudley, H. Selwyn; Edwards, Downing; T. R. Elliott, Trinity; Frere, Pembroke; E. Gardner, Gonville and Caius; Goyder, St. John's; G. W. Greene, Downing; Hallstone, H. Selwyn; A. W. Harvey, St. John's; Haynes and Heath, Downing; Holtzmann, Christ's; E. G. Kelgren, Trinity; Kirk and Lanchester, King's; G. C. Lawson, Trinity; Leighton, St. John's; Leslie, Pembroke; Leveaux, St. John's; Lowe, Lucas, and Matheson, Gonville and Caius; Metthews, Downing; Molteno, Pembroke; Muspratt, Christ's; Nathan, B.A., and Noon, Trinity; Norman, L. Orton, and Paramore, St. John's; Paton, B.A., Gonville and Caius; H. Robinson, Trinity; Salzmann, Pembroke; Sapwell, B.A., Corpus Christi; Scarborough, St. John's; E. J. Scott, B.A., Trinity; A. V. Sedgwick, B.A., Gonville and Caius; Shone, Emmanuel; Snell, B. Spearman, and Spurrier, Gonville and Caius; Stiebel, Trinity Hall; Tonge, Emmanuel; Trigg, Christ's; Wakefield, Trinity; Wales, Sidney-Sussex; F. Whitaker and L. Wigram, Trinity; Wiltshire, St. John's; Woolley, King's; and Wylie, Pembroke.

SECOND EXAMINATION.

Part I.—Pharmaceutical Chemistry—Andrews, St. John's; Aveling, Christ's; L. E. H. R. Barker, Gonville and Caius; Bentley, St. John's; Bowdler, Sidney-Sussex; Bréhaut, B.A., H. Selwyn; H. S. D. Browne, Trinity; J. M Brydone, Jesus; Burrows, B.A., Emmanuel; E. M. Clark and H. H. Clarke, Trinity; A. J. Clarke, Emmanuel; Colyer, M.A., Catharine; Cooke, B.A., Sidney-Sussex; Deeping, Trinity; Elliston, Catharine; Emerson, Gonville and Caius; Eve, B.A., Emmanuel; W. M. Fletcher, B.A., Trinity; Franklin and Gayner, King's; Gilbart-Smith, B.A., Trinity; Greene, B.A., Corpus Christi; C. F. Hardie, Queen's; Heap, Sidney-Sussex; J. P. Hedley, King's; Hill, B.A., Emmanuel; Hodder and Hodgkin, King's; Holroyde, A. C. Hudson, and Ingram, Trinity; Kempthorne, St. John's; Kitchin, Downing; Laycock, St. John's; Le Lacheur, Trinity; Linnell, B.A., H. Selwyn; Naish, B.A., Emmanuel; Norton, Trinity; Nothwanger, St. John's; Parker, Pembroke; J. S. Pearson, Trinity; Perkins, St. John's; Phillpotts, Christ's; Rashleigh, B.A., and Reynolds, B.A., Trinity; Rob, St. John's; Roper, Gonville and

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Caius; St. Clair Smith, Trinity Hall; Simey, B.A., King's; Skrimshire, Jesus; Smedley, Pembroke; Stockwell, King's; Taylor, Non-Collegiate; Thornton, Trinity; Wacher, St. John's; Wales, Downing; Walker, B.A., King's; Whale, Jesus; Wharton, St. John's; Wilgress, H. Selwyn; G. R. Wilson, Trinity; J. A. Wood, St. John's Wood, Downing; and Worthington, Gonville and Caius.

UNIVERSITY OF LONDON.—The following candidates were successful in the examinations indicated:—

M.D. EXAMINATION.

Medicine.—Edward Buller Allan, University College and University of Melbourne; Henry Russell Andrews, London Hospital; George Henry Barker, B.Sc., University College, Bristol; Stanley Mewburn Brown, Owens College and Manchester Royal Infirmary; John Alfred Codd, B.Sc., Yorkshire College; James Stansfield Collier, B.Sc., St. Mary's Hospital; *Francis Graham Crookshank, University College; Edward Meade Cuffe, St. Bartholomew's Hospital; Wilfrid Edgecombe, University College, Liverpool and London; Leopold E. V. Every-Clayton, B.S., Guy's Hospital; Henry George Felkin, London Hospital; Samuel Ernest Gill and John Howell Griffiths, B.Sc., St. Bartholomew's Hospital; Ed. M. Hainworth, B.S., B.Sc., St. Thomas's Hospital; William Sampson Handley, B.S., Guy's Hospital; John Owen Harvey, St. Bartholomew's Hospital; Ralph Hopton, B.S., Yorkshire College; Gerald Stanley Hovenden, B.S., Guy's Hospital; Arthur William Kirkpatrick-Pickard, University College; William Edward Lee, St. Bartholomew's Hospital; Alfred Goodman Levy, William Britain Morton, and Frederic Layton Orr, University College; Leonard Arthur Parry, B.S., Guy's Hospital; Charles Herbert Perram, St. Bartholomew's Hospital; Frederick John Poynton, St. Mary's Hospital; Matthew Henry Raper, Middlesex Hospital; Ernest Noel Reichardt, St. Bartholomew's Hospital; A. John Rodocanachi, B.S., B.Sc., University College; Alfred Salter, B.S. (gold medal), Guy's Hospital; Edmond Wallace Selby, B.S., University College; William Shears, St. Bartholomew's Hospital; Ernest Jackson Smyth, B.S., B.Sc., University College; Robert Hunter Steen, St. Mary's Hospital; and George Harold Cawley Way, B.S., University College.

* Obtained the number of marks qualifying for the gold medal.

M.S. EXAMINATION.

Hamilton A. Ballance, M.D., University College; Harold Leslie Barnard, London Hospital; Julius St. Thomas Clarke, M.D., Guy's Hospital; George Hebb Cowen, London Hospital; John William Frank Jewell, M.D., Guy's Hospital; William Prior Purvis, M.D., B.Sc., St. Thomas's Hospital; Mary Ann D. Scharlieb, M.D., London School of Medicine for Women; and Thomas Morrell Thomas, Guy's Hospital.

B.S. EXAMINATION.

First Division.—John Howard Cook, University College; Edward Guy Dru Drury and James Henry Hugo, St. Bartholomew's Hospital; Arthur William Jenkins, University College; Hugh Mallinson Rigby, London Hospital; Herbert John Scharlieb, University College; and Ethel May Vaughan, London School of Medicine and Royal Free Hospital.

Second Division.—Wilfrid Allport, Queen's College and General Hospital, Birmingham; Emile Dupont Aubin, Middlesex Hospital; Cecil Banting and Charles Bolton, B.Sc., University College; William Francis Victor Bonney, Middlesex Hospital; Eustace Bernard Bostock, Mason College and General Hospital, Birmingham; Margaret M. Traill Christie, London School of Medicine and Royal Free Hospital; Walter Ernest Dixon, B.Sc., St. Thomas's Hospital; Archibald R. J. Douglas, St. Bartholomew's Hospital; George Gilbert Genge, St. Thomas's Hospital; Tom Harold Hunt, Yorkshire College; Charles Ernest Mackenzie Kelly, Owens College; Octavia Margaret Sophia Lewin, London School of Medicine and Royal Free Hospital; Carlton Oldfield, Yorkshire College; Norman Howard Pike, Guy's Hospital; George Basil Price, Bristol Medical School and St. Bartholomew's Hospital; Charles Roberts, Middlesex Hospital; Arthur Richard Harrie Skey, St. Bartholomew's Hospital; Arthur Herbert Spicer, Guy's Hospital; Arthur Stanley, M.D., St. Mary's Hospital; Frank Butler Thornton and Edward Owen Thurston, St. Thomas's Hospital; Francis Thomas Waldron, London Hospital; Lizzie Wilks, M.D., London School of Medicine for Women; and Francis Kenneth Wilson, Westminster Hospital.

FOREIGN UNIVERSITY INTELLIGENCE.—*Breslau:* Dr. L. Mann has qualified as *privat docent* in Neurology.—*Kazan:* Dr. V. Rasumovski has been appointed Professor of Clinical Surgery in succession to Professor Kusmin, who has resigned.—*Rome:* Dr. Vittorio Ascoli has qualified as *privat docent* in Medical Pathology.—*Zürich:* Dr. W. Feliz, prosector in the Anatomical Institute, has been appointed Extraordinary Professor.

ST. LUKE'S HOSPITAL.—The Steward appeals for subscriptions on behalf of this institution. Last year the appeal funds, added to the amount voted by the committee of Governors, enabled a regular series of weekly entertainments to take place throughout the winter months, extending late into the year. The entertainments for the present season commenced in the first week of October, 1896, and have been carried on weekly up to the present time. The list will be kept open until the end of March, and the smallest amount will be gratefully appreciated.

THE COLONY OF EPILEPTICS.—On Saturday, the 19th ult., a handsome recreation hall, presented to the Colony of Epileptics at Chalfont St. Peters by Mrs. Cash, was formally opened by the donor. The hall is designed not only as a social meeting place for the colonists, but as a chapel wherein services can be held by the ministers of various denominations who visit the institution. After an entertainment, which included two solos on the violin by Miss Buzzard, Dr. Buzzard proposed a vote of thanks to Mrs. Cash, which was warmly received. The arrangements for the entertainment were in the hands of the honorary secretary of the colony, Miss Burdon Sanderson.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Committee of Management of Queen Charlotte's Lying-in Hospital, London, has received £100 from Messrs. C. J. Hambro and Sons, £100 guineas from Messrs. J. S. Morgan and Co., £1000 from the Dowager Lady Howard de Walden, and 100 guineas from Mr. P. Reid.—The treasurers of the Middlesex Hospital have received from "M. H. S." £100, £100 (annual subscription) from the Delwar Charitable Trust towards the maintenance of the Cancer Wards, and £100 from the executors of the late Sir A. A. D. Sassoon.—The committee of the Mary Wardell Convalescent Home for Scarlet Fever, Stanmore, has received £100 from Mrs. Allan.—The Board of Management of St. Mary's Hospital, London, has received under the will of the late Miss Ruth Watson £325 7*s.* 4*d.* and £1000 from Mrs. Arnold Gabriel to endow a bed in memory of her late husband.—The Board of Management of the East London Hospital for Children, Shadwell, has received from "G. S. B." £100 and £100 bequeathed by the late Mr. Joseph W. Prince of Croydon.—The Croydon General Hospital has received £100 bequeathed by the late Joseph W. Prince.—Mrs. George Holt of Sudeley, Mossley Hill, has sent a donation of £500 towards the funds of the Stanley Hospital, Liverpool, in memory of her late husband.—The Worshipful Company of Skinners has contributed £100 to King's College Hospital, London, being the fourth instalment of their promised donation of £500 in five years.—A donation of £105 has also been received from Mr. Charles P. Johnson.—The late Mr. Henry Wilson of Cottingham House, Yorkshire, has bequeathed 100 guineas to the Hull General Infirmary.—Mr. E. T. Hooley, of Risley Hall, Derby, has sent a donation of £1200 to the Derbyshire Infirmary.—The late Mr. Benjamin Goodman of Leeds has bequeathed £1000 to the Leeds Infirmary, £500 to the Leeds Public Dispensary, and £500 to the Women's and Children's Hospital.—Under the will of the late Mrs. Cuppage of Doddington, Whitchurch, the Whitchurch Cottage Hospital becomes entitled to a legacy of £200 free of legacy duty.—The treasurer of Charing-cross Hospital, London, has received a donation of £1000 from the Rev. Francis Jacox to endow a bed in the hospital.—The governors of the London Lock Hospital and Rescue Home have received £105 from the Worshipful Mercers' Company.—The Corporation of London has contributed 100 guineas to the Chelsea Hospital for Women and Convalescent Home at St. Leonards-on-Sea.—The late Miss D. Dixon of Broughton has bequeathed £1000 to the London Cancer Hospital, and £500 each to the Preston and County of Lancaster Royal Infirmary.—The Treasurer of the Montague Cottage Hospital has received £127 10*s.* under the will of the late Mr. Robert Elliner of Sevinton.—The Board of Management of the National Hospital for Consumption, Ventnor, Isle of Wight, has received a donation of 100 guineas from Mr. Chas. S. Burroughes.—The executors of the late Sir A. A. D. Sassoon have forwarded £100 to the Hospital for Sick Children, Great Ormond-street, Bloomsbury.—The treasurer of the National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen's-square, Bloomsbury, has received a donation of £100 from "E. M. E."—The Committee of Management of the North London Consumption Hospital, Hampstead Heath has received £350 from Mrs. Cash, to endow a bed in the hospital.—The late Mrs. Roxburgh of Bath has bequeathed £500 to the Bath Royal United Hospital and £100 to the Bath Ear and Eye Hospital.—By the death of Mrs. Memmoth, widow of Mr. George F. Memmoth, the following legacies become payable—namely, £250 each to the Bristol Royal Infirmary and the Bristol General Hospital, and £100 each to the Bristol Eye Hospital and the Hospital for Women and Children.—Mrs. Tubbs has contributed a donation of £100 to the New Hospital for Women, Euston-road, London.—

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THE AMMONOL CHEMICAL CO.,
N. Y.

Ammonol
THE STIMULANT; IN LA GRIPPE.

CONSULTATION NOTES, NO. 3.

DEAR DOCTOR:—

More than a year ago we respectfully submitted to the physicians that we would be glad to consult with them concerning the use of AMMONOL STIMULANT IN DISEASE.

Of course we do not mean to say that we wish to usurp the place of a brother practitioner in such consultation.

Our intention is merely to present our views and claims from the manufacturer's standpoint, and as we have always received THE KINDEST CONSIDERATION FROM THE PROFESSION when stating our case, we feel confident now that you will listen patiently to us.

THIS IS THE SEASON OF LA GRIPPE.

From now until next summer this DISEASE or its SEQUELAE WILL RAVAGE THE COUNTRY.

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The public press is loudly calling attention to the fact that the COAL FAMINE WILL LARGELY INCREASE DISEASE, AND WANT through the length and breadth of the United States during the next eight months.

May we not feel assured that beginning with LA GRIPPE we shall RUN THE WHOLE GAMUT OF CONCOMITANT DISEASES;—

PNEUMONIA, PHTHISIS, BRONCHITIS, LARYNGITIS, NEURALGIA, ETC.

In all these cases we can CONSCIENTIOUSLY URGE you, DOCTOR, as you value the welfare of your patients to make liberal use of



Ammonol

STIMULANT, ETHICAL.

THE ONLY STIMULATING ANTIPYRETIC AND ANALGESIC.

We take pleasure in enclosing for clinical test a sample of our 5 grain Ammonol Tablets.

The Ammonol Chemical Co

Manufacturing Chemists,

OFFICES: No. 366 WEST 11TH STREET.

LABORATORY: 366 AND 368 WEST 11TH STREET, NEW YORK, U. S. A.

London, 12|& 16 Coleman St. **Paris,** 46 Rue de Saintonge. **Bruxelles,** 147 Chaussé d'Anvers. **Karlsruhe,** 64 Stephanienstrasse. **Amsterdam,** 31 Looiersgracht.

PARKEWOOD, N. C.

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The late Rev. Carr J. Glyn of Whitchampton Rectory, Dorset, has bequeathed £100 each to the Dorset County Hospital and the Wimborne Cottage Hospital.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BENTLEY, W. L., L.S.A., has been appointed Medical Officer for the Second Sanitary District of the Oldham Union.

BROWNE, D. G., M.D., Ch.M. Irel., has been appointed a Public Vaccinator for the District of Gisborne, New Zealand.

BRYANT, T., F.R.C.S., has been appointed Consulting Surgeon to the Hospital for Epilepsy and Paralysis and other Diseases of the Nervous System, Regent's-park, vice Sir John Erichsen, deceased.

BUCK, L. A., M.R.C.S., has been re-appointed Medical Officer for the Bolton Workhouse.

CLELAND, W. L., M.B., C.M. Edin., has been appointed a Colonial Surgeon and Resident Medical Officer to the Adelaide Lunatic Asylum, South Australia.

CRAIG, W. J., M.B., Ch.B. Melb., has been appointed Officer of Health for Fern Tree Gully Shire, Victoria, Australia.

DANIEL, W. P. T., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer for the Kirkburton Sanitary District of the Huddersfield Union.

DODSWORTH, F. C., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Chiswick District Council.

FOX, J. R., M.B Melb., has been appointed a Public Vaccinator at Rokewood, Victoria, Australia.

FRY, A. CRADOCK, M.A., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the Royal Berkshire Hospital, Reading.

GIBB, W. ALEXANDER, M.B., C.M. Edin., has been appointed Junior House Surgeon to the General Infirmary, Gloucester.

GOWLAND, G. R., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the No. 7 Sanitary District of the Chorlton Union, vice F. Milland, resigned.

HODGE, ALBERT, M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Manchester Hospital for Consumption and Diseases of the Throat, vice John Penny, resigned.

JOHNSON, J. H., M.B., Ch.M. Edin., has been appointed Medical Officer to the Hospital at Alexandra, Victoria, Australia.

KING, W. M., M.R.C.S. Eng., has been appointed a Surgeon to the Hospital at Boulia, Queensland.

LEWERS, T. R., M.B., Ch.B. Melb., M.R.C.S. Eng., has been appointed a Member of the Public School Board for the Sub-district of Berry, New South Wales.

LIVINGSTONE, JOHN, M.D., C.M. Glasg., has been appointed Medical Officer of the Royal Naval Reserve for the Port of Barry.

LOVEGROVE, T. H., M.R.C.S. Eng., has been appointed President of the Central Board of Health, West Australia.

MACDONALD, A. H. W., M.B., C.M. Edin., has been appointed Medical Officer for the Old Ford Sanitary District of the Poplar Union.

MACDONALD, R., M.B., C.M. Glasg., has been appointed Health Officer at Leederville, West Australia.

PACKER, W. H., M.D. Brux., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer to the Atcham Union Workhouse and Infirmary, Shrewsbury.

PADBURY, G. J., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Hawkchurch Sanitary District of the Axminster Union.

PARKINSON, C. H. W., M.R.C.S., D.P.H. Edin., has been appointed Medical Officer of Health by the Wimborne and Cranborne Rural District Council.

PRENDERGAST, J. J., M.D. Irel., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed a Medical Officer to the Hospital at Bardoe, West Australia.

SHAW, F. C. S., M.B Syd., has been appointed a Medical Officer to the Emmaville (Vegetable Creek) Hospital, New South Wales

SHEAF, C. A. E., L.R.C.P., F.R.C.S. Edin., has been appointed a Government Medical Officer at Levuka, Fiji.

SPURR, JAS., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Lyme Regis.

TAYLOR, D., M.B., Ch.M. Aberd., has been appointed Health Officer at Cue, West Australia.

THOMPSON, JOHN A., M.D. Brux., D.P.H. Camb., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Chief Medical Officer of, and Medical Adviser to, the Government of New South Wales.

TOTHILL, F. O., M.B., C.M. Edin., has been appointed Medical Officer for Ashford, the Staines Union.

WICKS, CHAS., L.R.C.P., L.R.C.S. Edin., has been appointed Resident Medical Officer for the Gascoyne District, Public Vaccinator for the Urban and Suburban Districts of Carnarvon and Rural Districts of Gascoyne, and Quarantine Officer for the Port of Carnarvon.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon. Salary £150 per annum, with an allowance of £30 per annum for cab hire, and furnished rooms, fire, lights, and attendance.

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—District Surgeon.

COSFORD UNION, Suffolk (Layham District).—Medical Officer and Public Vaccinator for this district. Salary £44 3*s.* 8*d.* per annum and certain extra medical fees, &c. Applications to the Clerk to the Guardians, Union Offices, Hadleigh, Suffolk.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary commences at £100 per annum, with prospect of increase to £250, together with furnished apartments, board, attendance, and washing.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Senior Resident Medical Officer. Salary £70, with board and washing. Also Surgeon to Out-patients.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn-circus, London.—Honorary Physician.

HOSPITAL FOR WOMEN (the London School of Gynæcology), Soho-square, W.—Clinical Assistants.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Physician.

MIDDLESBROUGH NEW ASYLUM.—Medical Superintendent. House (unfurnished, with rates and taxes free), coal, gas, water, and washing will be allowed. Salary required to be stated.

QUEEN'S HOSPITAL, Birmingham.—Third Casualty Surgeon for three years. Honorarium £50 per annum. Also Second Physician for Out-patients, for three years. Honorarium £50 per annum.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—Assistant House Surgeon. Salary at the rate of £20 per annum, with board and lodging.

SHEFFIELD ROYAL HOSPITAL.—Honorary Dental Officer for three years.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House Surgeon. Salary £100, with board and residence.

SUNDERLAND AND NORTH DURHAM EYE INFIRMARY, Sunderland.—House Surgeon. Salary at the rate of £10 per annum, out-door.

THE URBAN DISTRICT OF YSTRADYFODWG.—Medical Officer of Health, for one year. Salary £450, including travelling expenses. Applications to Mr. W. H. Morgan, Clerk, Treforest, Glamorganshire.

UNIVERSITY OF EDINBURGH.—Examiners.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Physician for twelve months. Honorarium £50, and board and lodging in the hospital provided.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant, qualified, for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

AUBREY.—On Dec. 21st, at Dunelm, The Grove, Wandsworth, S.W., the wife of A. Reuben Aubrey, M.D., M.B., M.R.C.S., of a daughter.

BAMPTON.—On Dec. 24th, at Brookfield, Ilkley-in-Wharfedale, the wife of Dr. Augustus H. Bampton, of a daughter.

BRYDEN.—On Dec. 28th, the wife of Richard J. Bryden, M.R.C.S. Eng., L.S.A. Lond., of 21, Harmer-street, Milton-next-Gravesend, of a daughter.

CAIGER.—On Dec. 23rd, at the South-Western Hospital, Stockwell, the wife of Frederick Foord Caiger, M.D., M.R.C.P., of a son.

JACKSON.—On Dec. 25th, at 216, Great Dover-street, S.E., the wife of Philip J. Jackson, M.R.C.S. Eng., of a daughter.

STEWART—On Dec. 25th, at Walton House, Lordship-lane, S.E., the wife of H. M. Stewart, M.A., M.B., B.C., of a daughter.

WALKER.—On Dec. 22nd, at 320, Hoe-street, Walthamstow, the wife of Alfred Walker, M.A., M.D. Cantab., of a daughter.

MARRIAGES.

LANE—REINDORP.—On Dec. 29th, at St. James's Church, Clapham-park, William Byam Lane, Surgeon-Captain, Indian Medical Service, eldest surviving son of the Hon. Edgar H. Lane, of Antigua, West Indies, to Edith Kate Westlake, eldest daughter of John Edmund Reindorp, of St. Hubert's, Abbeville-road, Clapham-park.

WARREN—BULLIVANT.—On Dec. 19th, at St. Luke's, Wolverhampton, John Monteith Warren, M.D., of New Zealand, to Helen Emma, second daughter of Edmund Bullivant, of Wolverhampton.

WHITEHOUSE—WATSON.—On Dec. 16th, at St. Andrew's Church, Calcutta, John Whitehouse, M.B., C.M. Ed., to Margaret, second daughter of Walter Watson, Esq., M.D., 54, Mayfield-road, Edinburgh. (By cablegram.)

DEATHS.

BROADBENT.—On Dec. 29th, suddenly, at his residence, The Green, Easington, county Durham, Samuel Winn Broadbent, M.R.C.S.E., for forty-six years Medical Officer to the Easington Union, aged 76.

INNES.—On Nov. 2nd, at Gisborne, New Zealand, John Fraser Innes, M.D., eldest son of the late Surgeon-General Francis William Innes, M.D., C.B., aged 44.

MCCULLOCH.—On Dec. 28th, at the Waterloo Hotel, Bettws-y-Coed, North Wales, L. B. McCulloch, F.R.C.S. Ed., aged 54 years.

NICHOLSON.—On Dec. 24th, at Farquhar-road, Upper Norwood, Surgeon-Lieutenant-Colonel Francis Cobham Nicholson, M.D., Indian Medical Service (Retired), aged 51.

WILKS.—On Dec. 22nd, at Stanbury, Torquay, George Augustus Frederick Wilks, M.D., aged 85.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 31st, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 25	30·08	W.	42	40	62	49	35	...	Fine
" 26	30 31	W.	47	46	53	53	41	0·14	Cloudy
" 27	30·29	N.W.	46	45	65	49	44	0·13	Fine
" 28	29·92	S.W.	45	44	58	52	43	0·15	Raining
" 29	30·32	N.W.	38	37	49	49	37	...	Foggy
" 30	30 07	S.W.	49	48	56	53	38	0·06	Overcast
" 31	30·02	W.	47	46	65	50	46	...	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the half-year ending Dec. 26th was given in last week's issue, which completed the second volume for the year 1896. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 will be ready shortly. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are now ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

"HOSPITAL REFORM."

MR. R. HILL SHAW, M.B. Dub., writes us a letter, for which we regret we cannot find room, on hospital reform. He observes: "We wage war not against charity but against the meanness of a large section of the public who 'sponge' on the kindly aid which is voluntarily and charitably contributed to help in sickness the deserving poor and needy man's misfortune, and who take an undue advantage of the want of unity and of greater independence throughout the medical profession in general, and in particular of the lack of a broad sympathy and of a wider unselfishness on the part of its members one towards another." Dr. Shaw has in these passages hit on the two parts of the explanation of the evils from which the profession is suffering. He will see that we have pointed this moral in our editorial columns.

W. J. L. G.—(1) A review of the book will appear shortly. (2) "Medical and Surgical Diseases of Children," by Ashby and Wright (Longmans), third edition, 1896, price 24*s.*

QUACKERY.

WE commented in THE LANCET of Dec. 19th upon the publications of the worst sort of quacks. The following letters are examples of another kind; they are not obscene or canting, but are nevertheless to be condemned. Letter No. 1 is from the patient to his proper physician. Letters 2, 3, and 4 are from the quack. The patient, we may add, had been treated at Brompton Hospital.

Letter No. 1.]

"DEAR SIR,—Pardon me for not having answered your kind note of October 13th before, but I have been very queer indeed since I have been here, otherwise I should have answered it before. I thank you very much for same and for your advice as to placing myself under a doctor here, but I am sorry to say they are very expensive here and I cannot afford the money as I have a young family. I am at present taking Owbridge's Lung Tonic, although it does not seem to benefit me much. I have taken two bottles.

"I answered an advertisement in the newspaper (enclosed) and the circulars I enclose are the result. I shall esteem it a very great kindness if you will give me your advice as to whether you think it would be any use placing myself under the treatment, as you know exactly how my health is and if it is likely to be of any standing benefit to me. The reason I trouble you is because I am not in a position to throw £2 2*s.* away if it would not do me any good, and thinking you may know something about this cure I venture to ask your advice on same.

"Thanking you, Sir, for an early reply and apologising for troubling you, "I am, Sirs, yours obediently,

"—— ——."

Letter No. 2.]

"Specialist Pulmonary Institute Dir. Paul Weidhaas, Proprietor of the Institute for the Cure of Asthma and Pulmonary Diseases, Nieder Wessnitz, near Dresden, Germany.

"Oct. 29, 1896.

"Your inquiry concerning my treatment to for asthma to hand I thank you for your confidence and will try to justify it every respect. The instigation to introduce my cure in proceeded from Professor Dr. Sawyer in Brighton, whose son I cured from a long standing suffering of asthma, after change of climate and all other cures had been unsuccessful and the disease threatened to develop into consumption. I have used my cure in thousands of difficult cases with complete and lasting success, not merely ephemeral. It can be followed without interference of the daily occupations and at home; and consists besides prescriptions of a physiatric nature in the employment of an instrument for atomisatrie, by the use of which the vessels of the lungs charged with blood are contracted and emptied; and further of a specially composed tea of special and excellent general effect. The results are as already mentioned lasting for I do not only try to conquer the particular symptoms of the disease as is usually the case in other treatments but I strive to remove the causes this is proved by my wonderful results which I have attained by patients who had been given up as incurable. The total fees including instrument, information and the direction of the cure amount to 2 guineas, no matter whether you claim my advice for only a short or a longer time. One half of the fee is due at the beginning the other half at the completion of the cure. The only other expenses are at the beginning of the cure 3*d.* per day for the tea. "Yours faithfully

"Specialist

"Pulmonary Institute

"Dir. PAUL WEIDHAAS."

Letter No. 3.]

"DEAR SIR,—Enclosed I send you a list of questions which you will please fill out, the answers of which will determine more securely the position of the diagnosis and the fixing of the necessary correct directions, than a personal physical examination, by which very frequently all sorts of errors occur.

"After receipt of the list thus filled out, and half the cure-fees, I will send you at once all you require for the cure, and would ask you to report to me progress of recovery, so as to enable me to make the analogous further arrangements. "Yours truly,

"PAUL WEIDHAAS."

Letter No. 4.] "Nov. 7.

"DEAR SIR,—Though your sufferings are as you know your self, not to be called slight it is to be recommended to make a last trial I can tell you to your satisfaction that I have cured many who were at death's door. In consideration of your present position I am willing to meet you as to the fees, what do you say to ½ a guinea for the first instalment? For the rest I would give you time to pay when it suits you as my chief aim is to effect a cure. If you agree to these terms I will send you everything you require for the cure.

"Yours faithfully,

"PAUL WEIDERHAAS."

Letter No. 3 is particularly interesting as an example of illogical reasoning.

H. E. T.—No standard work has come under our notice upon this extremely limited subject. We recommend our correspondent to consult two or three standard works of anatomy and physiology and some good manual of dental surgery and mechanics.

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RECOVERY OF MEDICAL CHARGES.

AT Clerkenwell County Court a few days ago Mr. Charles Jeffrey Morgan, L.R.C.P. and L.M. Edin., M.R.C.S. Eng., 546, Caledonian-road, sued Mr. Charles R. Townley, clerk, of 9, Richmond-place, Russell-road, Holloway, for £13 4s. for professional attendance and medicines in the autumn of 1895. The patients attended were three children of the defendant suffering from diphtheria, two of whom died, the defendant's wife, who also suffered from that disease, and himself for sore-throat. The services included a tracheotomy and the administration of antitoxin. The charge was at the rate of 2s. 6d. a visit with medicine. When the account was sent in a reduction was asked for and the plaintiff agreed to take off £1, whereupon the defendant brought a charge of negligence and the plaintiff naturally refused to make any reduction. This charge was reiterated in court, but withdrawn by Mr. Randall Moore, the defendant's solicitor. The jury found for the plaintiff for £7 10s. over and above £1 10s. paid into court by defendant. We regret this reduction of charge, but the defendant will get little satisfaction from the rider of the jury or the just remarks of the judge. The jury expressed regret that a charge of incompetency had been brought against the plaintiff, and the judge said he "had a strong opinion about the case. He had some experience of illness in the household and knew how much doctors were in the habit of doing for their patients and how little they charged." The reduction in the bill by the jury was clearly due to the appeal *ad misericordiam* of the defendant, who said he had only £2 10s. a week.

"DISINFECTION OF BOOKS AFTER SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—In reply to "A. B. S." books must be disinfected by hot (moist) air; steam will entirely destroy the leather binding and sulphuring is not reliable. I would advise "A. B. S." to get the disinfection done by some skilled person—such as Mr. W. C. Lacy, Town Mead Wharf, Wandsworth Bridge, Fulham, S.W.—and damage will be less likely to occur.

I am, Sirs, yours truly,

Dec. 23rd, 1896. J. GAY.

IN RE "DR. WILLIAM BEDELL BENISON, DECEASED."

THE *Birmingham Daily Mail* has an advertisement in regard to the course to be taken by persons having claims on the estate of the above gentleman, deceased, in which is curiously and prominently announced the fact that "Dr. Harris, L.R.C.P., &c., &c., who attended the late Dr. Benison in his illness and has since conducted his practice, will continue Dr. Benison's practice at Valentine-road, King's Heath, for the present." Such an announcement would have been better made by circular to individual patients and with strict adherence to proper titles.

X. Y. Z.—One tabloid night and morning is not an excessive dose. It is too early in the history of the preparation to speak with any certainty from a clinical standpoint; but we publish an analytical note upon it this week.

INSANITY AND TUBERCULOSIS AMONG NEGROES.

"PREVIOUSLY to the abolition of slavery," writes a correspondent, "there was very little tuberculosis or insanity in America amongst the negroes of the Southern States, who were observed to enjoy a remarkable immunity from both affections. After emancipation they appeared to quickly lose this immunity, and at the present time are exceedingly susceptible to both. Formerly, although in a state of slavery, they are said to have been well cared for, compelled to lead orderly, regular lives, and kept from dissipation and excess. Freedom removed these restraints, and they quickly plunged into riotous and vicious habits. A physician who has investigated the subject writes in a transatlantic contemporary that "the rapid increase of insanity and consumption in this race is due to a combination of causes and conditions. They have developed a highly insane, consumptive, syphilitic, and alcoholic constitution which predisposes them to diseases they were formerly free from. In this disturbed and unstable condition they seem to be totally unable to resist the slightest excitement. Recent mortality returns show that the death-rate of the coloured people from tuberculosis is three times as high as that of the whites."

R. N.—Mr. ——, Fleet-Surgeon, R.N., appears to us to be the preferable style.

"SERIOUS CHARGE AGAINST A MEDICAL MAN."

WE have before now had to protest against the misuse of this title in connexion with paragraphs in the lay press. It is constantly employed when the person charged has no legal claim whatever to the position of a "medical man." In the case of the individual arrested at Devonport just before Christmas we have been unable to find the name of Edwin Alfred Cormack upon the Medical Register, while we cannot ascertain that anyone of this name has been removed from the official list.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (6th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (7th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2 30 P.M.).

SATURDAY (9th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (5th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Papers:—Dr. A. A. Kanthack and Mr. T. W. Connell: Some Points in the Morphology of the Tetanus Bacillus.—Dr. D. Drew: Villous Papilloma of the Kidney, Ureter, and Bladder.—Mr. J. R. Lunn: (1) Excision of Knee Joint; (2) Femur which had been Trephined; (3) Duct Carcinoma (?) in a Man aged ninety-one years. Card Specimens: Dr. Parkes Weber: Cardiac Thrombosis.—Dr. Th. Fisher: Broncho-pneumonia with Dilated Tube in Child aged five years.

WEDNESDAY (6th).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. C. H. Roberts, Dr. A. Routh and others. Dr. Macnaughton Jones: Note on a Case of Eclampsia. Papers:—Dr. W. S. A. Griffiths and Dr. A. W. W. Lea: On Breech Presentation with Extended Legs.—Dr. Giles: The Cyclical, or Wave, Theory of Menstruation, with observations on the Variations in Pulse and Temperature in relation to Menstruation.

FRIDAY (8th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Mr. R. Brudenell Carter: Case of Gunshot Wound of the Eye.—Dr. W. P. Herringham: A Case of Paroxysmal Tachycardia in a Girl aged thirteen years.—Mr. C. S. Wallace: A Case of Fracture of the Axis.—Mr. J. E Lane: Two Cases of Gastro-enterostomy illustrating the use of Murphy's Button.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

FRIDAY (8th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury). — 3 30 P.M. Dr. James Taylor: Electrical Testing and Treatment.

During the week marked copies of the following newspapers have been received:—*Worcester Herald, Hull Times, Daily Mail, Bolton Chronicle, Manchester Guardian, Rocket, Glasgow Evening News, Leicester Post, Dundee Advertiser, Admiralty and Horse Guards Gazette, Birmingham Argus, Sheffield Telegraph, South Wales Daily News, Times of India, Pioneer Mail, Newbury Weekly News, Hereford Times, Leeds Mercury, Forfar Herald, Midland Free Press, Eastbourne Chronicle, Gravesend Standard, Sussex Daily News, Bucks Herald, Liverpool Daily Post, Gray's Standard, Colchester Gazette, Northampton Mercury, Portsmouth Times, Yorkshire Post, Halifax Courier, Whitehall Review, Liverpool Courier, Oldham Standard, Lincoln Gazette, Sheffield Independent, Keene's Bath Journal, Somerset County Herald, Essex Telegraph, Architect, Bristol Mercury, Chatham News, Builder, Scotsman, Grocers' Journal, Newcastle Journal, South Eastern Gazette, East Anglian Weekly Times, Royal Cornwall Gazette, Grimsby Observer, Folkestone Express, Launceston Weekly News, Wakefield Express, Surrey Comet, Reading Mercury, Birmingham Daily Post, Sanitary Record, West Middlesex Herald, Surrey Advertiser, Mining Journal, Brighton Gazette, Local Government Journal, City Press, Hertfordshire Mercury, Le Courrier de la Presse, Local Government Chronicle, The Australasian Medical Gazette, Evening Express, Liverpool Daily Telegraph, The Stock Exchange, Educational Times, Luton Reporter, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. F. S. Amley, Halifax; A. B., Lond.; Antikamnia Chemical Co., St. Louis, U.S.A.; Mr. C. M. Anderson, Christchurch, N.Z.; Messrs. R. Anderson and Co., Lond.; Dr. W. C. Alexander, Wellington, N.Z.

B.—Mr. J. H. Busteed, Romford; Mr. P. S. Bridgeford, Lond.; Dr. C. Bodon, Budapest; Messrs. F. B. Benger and Co., Manchester; T. B. Browne, Ltd., Lond.; Mr. C. Birchall, Liverpool; *British and Colonial Druggist*, Lond.; Mr. L. Browne, Lond.; Dr. S. A. Bontor, Great Berkhamstead; B. R. A., Cape Town, South Africa; Dr. I. Banks, Aberdare; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. R. Baker, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Dr. J. Blyth, Attercliffe Common; Dr. Lauder Brunton, Fleet.

C.—Dr. E. Carmichael, Edin.; Messrs. J. A. Carveth and Co., Toronto; Messrs. J. W. Cooke and Co., Lond.; Messrs. T. Christy and Co., Lond.; Messrs A. H. Cox and Co., Brighton; Calcutta Medical School, Asst. Sec. of; City of London Hosp. for Diseases of the Chest, Sec. of; County Borough of Oldham, Med. Off. of Health of; Cortland Wagon Co., Lond.; Central London Throat and Ear Hosp., Sec. of; Cornwall County Asylum, Bodmin, Med. Supt. of.

D.—Dr. A. Duke, Broadwater; Messrs. Duncan, Flockhart, and Co., Edin.; Messrs. Down Bros., Lond.; Messrs. A. Durant and Co., Lond.; Department of Health, City of Chicago, Commissioner of; Dr. H. J. Davis, Lond.; Messrs. Davies and Co., Lond.; Messrs. S. Deacon and Co., Lond.

E.—Messrs. Evans, Sons, and Co., Liverpool; Messrs. Evans, Gadd, and Co., Exeter.

F.—Mr. R. Favell, Sheffield.

G.—German Hosp., Lond., Supt. of; Dr. J. Griffiths, Cambridge; Messrs. D and W. Gibbs, Lond.; Dr. A. Gamgee, Montreux.

H.—Mr. T. Holland, Lond.; Messrs. C. J. Hewlett and Son, Lond.; Home Trading Co. (The), Lond.; Surg.-Maj. E. Hopkins, Army Medical Department; Hosp. for Consumption, Lond., Sec. of; Hosp. for Women, Soho-square, Dean of; Mr. Geoffrey Hungerford, Lond.; Mr. J. Heywood, Manchester; Mr. J. C. Humphreys, Tunbridge Wells; Mr. P. Hayes, Bury; Mr. W. C. Hughes, Lond.

J.—Dr. F. Jordan, Birmingham; Messrs. W. and A. K. Johnston, Edin.; Johns Hopkins University, Baltimore, Librarian of; Dr. O. Jennings, Paris; Johannis, Ltd., Lond., Asst. Manager of.

K.—King's College Hosp., Lond.; Mr. D. S. Kemp, Lond.; Messrs. Kilner Bros., Lond.

L.—Dr. Patrick Letters, Valentia Island, co. Kerry, Ireland; Locum Tenens, Leicester; J. F. Lehmann's Verlag, München; Liq. Carnis Co., Aston Clinton; Mr. J. W. Lewis, Brynamman; London Temperance Hosp., Sec. of.

M.—Dr. W. Murrell, Lond.; Mr. J. Moore, Cootehill, co. Cavan; Dr. J. C. McVail, Glasg; Medicus, Chiswick; Maypole Co. (The), Lond., Advertising Manager of; Messrs. J. Maythorn and Son, Biggleswade; Mr. A. MacLennan, Runcorn; Middlesbrough Corporation, Town Clerk of; Maison Pinet, Lond.; Messrs. Margrave Bros., Llanelly; *Mineral Water Recorder*, Editor of; Dr. J. L. Morse, Boston, U.S.A.

N.—Messrs. Newton and Co., Lond.

O.—Mr. W. H. Owen, Tipton; Mr. Edmund Owen, Amiens.

P.—Mr. Y. J. Pentland, Edin.; Dr. J. V. Pestana, Singapore; Paddington Green Children's Hosp., Lond., Matron of; P. E. G., Lond.; Dr. G. N. Pitt, Lond.

Q.—Queen's Commemoration Fund, Lond., Committee of; Queen's Hosp., Birmingham, Sec. of.

R.—Dr. R. R. Rentoul, Liverpool; Mr. E. St. V. Ryan, Lond.; Rainhill Co Asylum, Clerk of; Royal Hants County Hosp., Winchester, Sec. of; Messrs. Robertson and Scott, Edin.; Mr. C. Ricker, St. Petersburg; Mr. F. R. Roberts, Carnarvon; Col. R. D. Richmond, Stanway; Prof. Rutherford, Edin.; Sir W. Roberts, Bryn, near Dinas Mawddwy, North Wales; Royal Orthopædic Hosp., Lond; Dr. J. M. Rattray, Frome; Radcliffe Infirmary, Oxford, Sec. of; Messrs. Roger & Chenoviz, Paris; Messrs. G. H. Regan Co., Newspaper Advertising Agency, Philadelphia, Manager of; Royal College of Surgeons, Lond., Asst. Sec. of; Messrs. Ridges and Sons, Wolverhampton; Lady Reynolds, Lond.

S.—Mr. G. B. Stocker, Lond.; St. Andrew's Hosp., Northampton, Sec. of; St. Luke's Hosp., Lond., Sec. of; Mr. E. C. Smith, Ingatestone; Mr. J. C. Stevens, Lond.; Mr. G. Stoker, Lond.; Mrs. Saunders, Linden; St. George's Hosp., Lond.; Dr. T. Stevenson, Lond.; Mr. A. H. Sutherland, Lond.; South Devon and East Cornwall Hosp, Plymouth, Asst. Sec. of; Messrs. Street and Co., Lond.; *Stock Exchange*, Lond., Editor of; Sanitas Co., Lond., Sec. of; Messrs. E. Shaw and Co., Manchester; Sheffield Royal Hosp., Sec. of; Messrs. S. Smith and Co., Lond.

T.—Dr. W. E. Tresidder, Nottingham; Mr. C. Taylor, Lond.; Rev. A. Tooth, Woodside; Taunton and Somerset Hosp., Sec. of; Mr. W. P. Thornton, Canterbury; Typewriter Co. (The), Lond.; Dr. R. S. Thomas, Exmouth.

U.—University of London, Registrar of.

W.—Mr. J. Wand, Leicester; Dr. J. W. White, Glasg.; Messrs. W. Wood and Co., New York; Westbrook House, Alton, Med. Supt. of; Dr. A. Whitelegge, Lond.; Messrs. Whittaker and Co., Lond.; Messrs. J. Woodward and Rowley, Swadlincote; Mr. J. C. W. Wilson, Blantyre; Mr. J. Wiblin, Wimborne; Mr. C. Wilkes, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. J. Ashton, Carno; A. M. Z., Lond.; Assistant, Lond.; Aldershot Medical Officers' Library, Librarian of; Dr. W. T. Ainsworth, Shipley; A. C. M., Sunderland; Mons. J. Astier, Paris; Æneas, Lond.; Messrs. J. Allen and Son, Lond.; A. R., Lond.

B.—Dr. Bruce, Aberdeen; Mr. W. Brass, Lond.; Mr L. Blaver, Lond.; Dr. T. Lauder Brunton, Lond.; Mr. W. Bernard, Londonderry; Mr. F. B. J. Baldwin, Rotherham; Dr. W. Benthall, Derby; Mrs. Buxey, Southampton; Dr. J. M. Bright, Lond.; Baillie's Institution, Glasg., Librarian of; Mr. J. B. Binns, Addlestone; Mrs. Bostock, Haslington; Birkenhead Borough Hosp., Treasurer of.

C.—Mr. W. T. Clarke, Morley; Messrs. J. Cowen and Co., Lond.; Coton Hill Hosp, Stafford, Sec. of; Mr. T. Colston, Glasg.; Mr. D. Cliften, Stockport; Messrs. A. L. Chatterton and Co., New York; Mr. W. Corkey, Glenanne; Messrs. G. Curling, Wyman, and Co., Lond.; C., Lond.; Messrs. S. Clark and Son, Lond.; Mr. J. Carter, Lond.; Mr. B. K. Coomar, Calcutta; Mr. F. De B. Collenette, Guernsey.

D.—Dr. A. H. C. De Silva, Ceylon; D. W., Lond.; Delta, Leicester; D. C. F. M., Belfast; Dr. W. Dowson, Clifton; Dunelm, Lond.; Mr. B. J. Daniels, Beckbury; Dr. H. B. Donkin, Lond.; D. M. P., Lond.; Dr. W. Duff, Wishaw.

E.—Dr. J. V. Ellis, St. John, N.B., Canada; Établissement Thermal D'Uriage, France, Director of; Mr. H. T. Evans, Blockwood; Mr. M. M. Earl, Stoke-on-Trent; Mr. H. T. Eve, Lond.; E. J. A., Lond.; Dr. E. Allen, Hawes.

F.—Dr. W. B. Fergusson, Painswick; Mr. L. Franklin, Thaxted.

G.—Dr. E. Goodall, Carmarthen; Genuine, Lond.; Mr. A. B. Griffith, Lond; G., Bradford; Gamma, Liverpool; Dr. A. M. Gossage, Lond.; Mr. W. Graham, Watford; Dr. F. W. Garrad, Starbeck; Glasgow Samaritan Hosp., Sec. of; Galignani Library, Paris; Mr. E. H. Griffiths, Lampeter.

H.—Dr. S. Hyde, Buxton; Messrs. Hertz and Collingwood, Lond.; H., Lond.; Holloway Sanatorium, Virginia Water, Clerk of; Miss Fanny Hall, Grantham; Mr. W. A. Higgs, Castle Combe; Mr. M. L. Hughes, Frodsham; Dr. F. S. Hardwick, Charing; Hatton, Lond.; Mr. V. X. Harcourt, Maidstone; Dr. G. S. Hatton, Newcastle, Staffs.

I.—Inga, Lond.

J.—Dr. W. Jamison, Penrhiwceiber; Mr. C. H. Jackman, Lond.; Mr. P. J. Jackson, Lond.; Mr. F. Jordan, Birmingham; Mr. Y. M. Jones-Humphreys, Cemmaes; Mr. E. James-Gibbs, Heckmondwike.

K.—Mr. J. W. Kerr, Edin.; Mr. A. Kelsey, Redhill; Messrs. Knight and Co., Lond.

L.—Dr. A. H. Laver, Sheffield; Mr. T. S. Lacey, Chorlton-cum-Hardy; Mr. C. Lund, Newcastle-on-Tyne; Mr. B. Latham, Lond.; Dr. H. J. Ley, Handsworth; Prof. A. Loisette, Lond.; Dr. F. H. Lewis, Senghenith; Mrs. Lappin, Gilford, co. Down; Mr. H. K. Lewis, Lond.

M.—Dr. W. B. Moir, Glasgow; Dr. J. Macintyre, Glasg.; Dr. J. McCaw, Belfast; Mutual Life Assurance Co. of New York, Lond., Sec. of; M. O. H., Southampton; Mr. T. Marshall, Bury St. Edmunds; Mr. E. Margetson, Lond.; Mr. J. W. Moore, Lond.; Dr. G. H. Mapleton, Goudhurst; Dr. A. Mitra, Kashmir; Mr. H. W. Mills, Ruardean; Mr. C. T. B. Massey, Manchester; Mr. T. Malwood, Chingford.

N.—Mr. J. B. Neal, Lond.; Nottingham Borough, Accountant of; Newcastle-on-Tyne Corporation, City Treasurer of; Mr. J. E. Naghton, Luton; Dr. D. M. Nairn, Blenheim, N.Z.

O.—Dr. J. W. Ogle, Lond.; Mr. J. V. Owen, Llanidloes; Omega, Lond.

P.—Mr. H. J. Palmer, Long Eaton; Messrs. Parke, Davis, and Co., Lond.; Messrs. J. Parker and Co., Lond.; Dr. H. A. Perkins, Tunbridge Wells; Dr. H. Pye-Smith, Lond.; Plymouth Royal Eye Infirmary, Matron of; Messrs. J. Poole and Son, Lond.; Dr. W. H. Price, Newbridge; Dr. W. H. Packer, Cressage; Podagra, Lond.

R.—Messrs. J. Rugg and Son, Lond.; Dr. G. J. Robertson, Oldham; Dr. T. H. Redwood, Rhymney; Dr. G. Rankin, Lond.; Rex, Lond.; Mr. H. A. Rooke, Nannerch.

S.—Mr. H. Silver, Southampton; Statim, Lond.; Dr. J. Shaw, Lond.; Dr. E. Sutcliff, Great Torrington; Mr. F. Surrey, Lond.; Stethoscope, Lond.; Messrs. A. Salamon and Co., Rainham; Scotus, Edin.; Dr. S. Saunders, Exminster; Messrs. Stubbs, Lond.; Mr. A. Stenhouse, Glasg.; S. Y. Lond.; Messrs. J. Smith and Sons, Lond.; Mr. J. Startin, Lond.; Mr. M. W. Symington, Handsworth; Mr. F. W. Smith, Lond.; Salus, Lond.

T.—Dr. W. Turner, Lond.; Mr. D. Thomas, Lond.; Dr. W. B. Thorne, Lond.; Mr. C. Taylor, Lond.; Mr. J. Thin, Edin.

V.—Mr. C. S. Vale, Arcachon, France.

W.—Dr. J. Wallace, Stonehaven; Mr. J. Watt, Manchester; Mr. H. S. Webb, Welwyn; Wire Wove Waterproof Roofing Co., Lond.; Dr. E. Wills, Pretoria, S.A.R.; Mr. C. S. Wallace, Lond.; Dr. J. R. Woodcock, Abberley; Mr. J. Warn, Tetbury; Mr. A. Walker, Walthamstow; Mr. R. Welbank, Banbury; Messrs. H. K. Wompole and Co., Philadelphia, U.S.A.; Miss Woodward, Folkestone; W., Barking; Mr. J. Ward, Lond.; Dr. H. W. Wise, Poynton.

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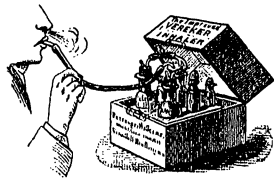
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A Lecture
ON
THE SPREAD OF PLAGUE.

Delivered before the Epidemiological Society on Dec. 18th, 1896,

BY JAMES CANTLIE, M.B. ABERD.,
F.R.C.S. ENG.,
LECTURER ON APPLIED ANATOMY, CHARING CROSS HOSPITAL MEDICAL SCHOOL; LATE OF HONG-KONG.

(*Concluded from page 7.*)

WHAT has been termed the "miasmatic" method of infection bears distinctly upon the maintenance and epidemicity of plague. Miasmatic infection implies a soil-bred disease—a disease existing, as we assume malaria does, in the earth itself, in the water, or in some particular form of fermenting or decomposing material in which the germ finds a nidus. In a neighbourhood so infected the disease is endemic, as manifested by the fact that again and again the disease recurs—that after a few months of seemingly complete disappearance the disease crops up and runs a more or less severe course. The time of its disappearance may be merely one of hibernation, or the climatic conditions may be unsuited to the activity or the evolution of the bacillus of the disease; but when a sufficiency of time elapses or the requisite quantity of heat, moisture, and whatever else is necessary to the growth of the bacilli are attainable the revival of its infective power is speedily manifested. Whilst comparing malaria and plague as miasmatic disease it is not to be inferred that there is any bearing in the relation of the one to the other. In fact, Dr. Mouchard, writing from Yunnan, cites the cases of Mentz, a town on the hills, and Manhao, a town on the river 3600 feet lower. In the former plague is endemic, but in Manhao malaria is so great a scourge that the Mentz muleteers refuse to spend the nights in the town.

Infection of, and by, animals.—In support of plague being a soil-bred—a miasmatic—disease is the fact, so often announced, that rats are invariably affected. From Canton, Hong-Kong, Macao, Pakhoi, Yunnan, from hills in the north-west provinces of India, and, most recently of all, from Bombay the observation is constant, definite, and most pointed. The first time particular notice is taken of the death of rats in connexion with plague is in Mr. Rocher's report on the Yunnan plague, some twenty years ago. The Chinese firmly believe the poison emanates from the soil; so far is their conviction carried that they estimate with mathematical precision its gradual rise above the ground. The graduation is estimated by the successive animals that are attacked. The sequence is affected apparently by the height of the animal's breathing apparatus from the ground, the small animals being the first seized and the larger or more elevated animals the last to be attacked. Rats, poultry, pigs, dogs, goats, sheep, cows, buffaloes and last of all man as being the tallest of these is their scale of infection. This is not to be taken seriously but the infection of some of these animals is undoubted.

Rats.—On all hands rats are reputed to behave peculiarly and with a wonderful constancy. Before, or it may be during, an epidemic of plague, or before the individuals in any particular house in an infected locality are stricken, the rats leave their haunts and seek the interior of the house. They seem careless of the presence of man and run about in a dazed way with a peculiar limping jerk or spasm of their hind legs. They are frequently found on the bedroom floor, or on the tables, but not unfrequently their death is known by the putrefactive odour of their decomposition arising from beneath the flooring. So pertinent has this rat affection become, that during the epidemic in Macao in 1895, the Chinese and Portuguese left their houses when the diseased rats invaded their premises. The cause of the rats' behaviour is undoubtedly disease, and the symptoms tally wonderfully with plague symptoms of man. Dr. Rennie examined them carefully in Canton and noted the following post-mortem appearances: (1) the stomach was distended and filled with particles of food, sand, and indigestible substances, and the mucous membrane was red and inflamed towards the pyloric end; (2) the liver was much enlarged and congested and contained ova of tænia and distoma: (3) there was congestion at the base of the lung present in about 40 per cent.; and (4) glandular enlargement was present in 30 per cent. of those examined. There is no doubt now that the disease in the rat and man are identical. The bacillus of plague has been met with in every case of rat disease of this description where it has been searched for. The infection of the rat is raised from being a mere popular belief into one of scientific precision, and we must now accept the rat at any rate as one animal liable to plague. Whether the rat is affected previously to, coincidently with, or subsequently to, man being attacked is open to question. Is the disease amongst rats a forerunner of its outbreak in man, and, if so, are they a means of infection? These are, of course, two separate questions.

Surgeon-Major S. J. Thomson, Deputy Sanitary Commissioner, North West Provinces, India, who made excellent reports on the outbreaks in Ghurwal and Kumaon in 1886 and again in 1888, writes as follows[1]: "A fact mentioned in the Hong-Kong epidemic by Dr. Cantlie is the great mortality amongst rats. This is also most marked in the case of outbreaks of *matra-mari*, a hill plague; but I should add that it is generally observed *before* the appearance of the disease amongst human beings. So well is this recognised by the people that they will sometimes vacate their villages for fear of an outbreak of matra-mari when once this rat mortality has become distinctly noticeable." In Canton, Dr. Rennie writes that "from districts of the city where the diseases had lasted for some time rats entirely disappeared; but in other parts to which plague subsequently extended the rat mortality was most marked. So convinced were the Chinese of the power of the rat to infect that certain officials took steps to have all the dead rats collected, and at one gate as many as 22,000 rats were collected by May 8th, which, taking into consideration the date of the outbreak, must imply that the collection was made in a few weeks. The *Times of India*, Sept. 30th, 1896, contains the following:—"It was known *more than a month ago* to all the people of Mandvi (the district in Bombay where plague first broke out in September, 1896) and to all the municipal sweepers in the district that the rats were dying in thousands all over the districts. They were found dead and dying almost everywhere and in places where dead rats were never found before. The children amused themselves every morning by throwing them from the staircases into the streets and gulleys. The great rat mortality only became known recently and yet what a volume of information was it capable of conveying if it was only rightly used. It is universal history that rat and plague mortality go together; the merest tyro in hygiene knows the fact," &c.

The rat therefore seems to be infected before the human being; and the fact of dead rats being found about the house during the plague epidemic is a true warning that the inmates of the house will in all probability be affected. How is the rat infected? 1. Experiment proves (*a*) that the rat is inoculable and dies from a disease identical with bubonic plague in man; the inoculation of both the blood and inflammatory fluids of the plague-infected is effective; and further, a pure cultivation injected hypodermically also sets up signs and symptoms of rat plague and causes death within a few days; and (*b*) that supplying the animal with plague-infected food, whether flesh or cultivated germs, causes plague in rats. How does the rat in his natural state become infected; by inoculation? We cannot assume that every rat has a scratch or open wound by which it is infected. It is more likely he inhales or inbibes the poison either as a miasm in concentrated form or he ingests it with his food. It may be both forms of infection are at work; and, further, it must not be forgotten that rats are cannibal in their habits, and direct contagion must play a large part, if not the major part, in the general infection of their tribe. That it is some general infection and not a chance inoculation is manifested by their sudden and simultaneous seizure—a seizure so sudden that scores of dead and diseased rats will be found in a single house of any size within a few hours. An interesting observation in connexion with the Calcutta affection is "that although Calcutta was believed to be the seat of plague and the plague bacillus was pronounced to have been proved in six cases no rats died." This was

[1] Brit. Med. Jour., Sept. 8th, 1894.

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regarded as a peculiar and, shall I say, an unprecedented condition, but the explanation is simple enough. The rats did not die, as true plague did not exist in Calcutta, the cases of fever with bubonic swellings being found to be minus a toxic bacillus. This is in accordance with all previous experience. The Calcutta form of disease is benign and no record of rats dying during its prevalence has ever been made. Are we to doubt our belief in the diagnostic value of the bacillus or admit a new disease into our category—a benign polyadenitis? It may be we are called upon to do neither, for we have evidence to show that non-virulent forms of the bacillus can be cultivated and that a bacillus can be found in the soil and cultivated which behaves like the non-virulent bacillus extracted from true plague cultures. These points will be discussed later. 2. An observation by Dr. Thomson in the North-West Provinces of India is worth recording. "In these hill tracts the huts are usually double storeyed, the upper storey being occupied by human beings, and the lower by cattle, goats, &c. It is the custom of the villagers to store the grain in pits under the floors of the huts, and the soil is very foul from the excrement of animals &c. The theory among the people is that the rats eat the grain which is often musty. Most of these hill people are very poor and would consume such grain, which is their principal food, even when musty and clearly affected with fungoid disease." It is some widespread source of infection by which the rat is infected. Dr. Rennie tells us that the places from which the exodus takes place are left without a rat to be seen.

If not from grain or from inoculation, whence comes the poison. From the soil? Dr. Rennie found sand and indigestible material in the contents of the dead rats' stomachs. May this sand have been the source of infection? I kept guinea-pigs on soil from the grave of a plague patient who had been dead for two months; the guinea-pigs were not infected, but perhaps the earth had hardly had time to become infected. If the poison is miasmatic and emanates from the soil as a gas or cloud the rat in his close stifling quarters is exposed to a concentrated inhalation. I have already mentioned the soldiers employed in digging out the filth from plague dwellings being seized and the infection was presumed to be brought about by the intensity of the virus. Therefore, we cannot presume that the rat can be infected by a miasm merely. Of the three forms of infection discussed we may safely lay aside inoculation. We may hesitate over the infection by fungoid grain, but although the musty grain would render the disease endemic it could not account for an epidemic spreading to districts where the grain is sound, unless we assume the rat is the carrier. We are left, therefore, either with actual consumption of poisoned material or the concentrated emanation from an infected soil as the means of introduction into the rat's economy.

Snakes.—Dr. Thomson remarks[2]: "Moreover, when rats are thus dying dead snakes also are said to be found about the site in unusual numbers" Later he remarks: "The snakes eat the rats." From the North-Western Provinces of India we also have record of snakes being affected during plague outbreaks. The snake is not observed as one of the animals affected in the list given by the Chinese, but the infection is natural and the infection through their consumption of the rat is feasible. The possibility, however, of direct miasmatic infection must not be lost sight of.

Dogs.—In the *Chinese Customs Medical Gazette* in the forty-seventh and forty-eighth issues we read that dogs died during an epidemic of plague. The observer ascribes it to the dogs eating the flesh of human beings or any other animal dead from plague. In the same paper it is described that in Yunnan the dying are removed out of the houses to repose in the streets in accordance with Chinese customs, and that those dead and dying from plague are found outside the dwellings or even outside the town walls. He has, moreover, seen the dogs eating the flesh of those dead from plague. In Hong-Kong we had no special mortality amongst dogs, nor have Canton or Macao anything to say on the subject, but the dead were better cared for than in Yunnan and no dog could get at them. It would seem as though the dog were infected by eating the flesh. In the places mentioned such an opportunity was not afforded him, but in the town of Mentz, Yunnan, the custom as to the disposal of the dying seems to explain the infection of the dog.

[2] Brit. Med. Jour., Sept. 8th, 1895, p. 560.

Pigs.—It is even more important to ascertain whether or no the pig is infected. Pork is largely consumed by Chinese; and, moreover, Europeans in the East seldom or never eat Chinese-fed pork. The Chinese died from plague, whilst the Europeans enjoyed an immunity from the disease; nothing seems more conclusive than that pork was the infecting food. Moreover, most of the pork brought to the Hong-Kong market comes from Pakhoi, a town where plague has been endemic for years. The first point to be settled is—Does the pig suffer? Not as a rule. The pigs from Pakhoi showed no falling off in numbers, and they were not sickly; the former condition would have obtained had plague thinned their numbers in Pakhoi, and the latter would have been found out when they reached Hong-Kong, where careful inspection of all food supplies is made. Dr. Mouchaud writes that the pigs died in Yunnan, and he states that "we saw on some roads dogs and pigs feeding undisturbed on corpses which no one cared to bury. These animals fell victims to their greed and succumbed to the scourge." Further, plague has been produced in the pig experimentally, all of which goes to prove that pigs die from plague after consumption of corpses dead from plague and inoculation; but that pigs are not primarily liable to plague in the same way as rats and pigeons seems conclusively shown.

Oxen, sheep, and *goats* are not known to be subject to a disease allied to plague, nor are they affected by any fatal malady during the time plague is epidemic. As regards sheep, Custaldi states that plague in Kurdistan was preceded by a fatal epizootic among sheep; that they had plague, however, is not stated.

Jackals are known to be subject to the disease in Yunnan. They are more prone than either dogs or pigs to consume exposed human bodies, and therefore are very likely animals to be affected.

Pigeons.—Dr. Surveyor, in a private letter to me dated Nov. 13th, 1896, Bombay, asks: "Did you notice any mortality amongst *pigeons* from this disease?" In reply I have to state that I did not, nor did any observer in China, so far as I know, draw attention to the infection of pigeons. If stored grain is the source of infection it is easy to imagine that pigeons would be perhaps one of the most likely species of birds to be affected, and it but draws attention to the disease of grain still more pointedly than before. Several observers in India are most decided in their statements as to the grain source of the disease, and that the rat and pigeon are the sufferers seems to point somewhat in that direction. On the other hand, it must be remembered that the ordinary barnyard fowls are not (except in the London Plague of 1111 A.D., and it is so long ago that it may be discounted), so far as we know, struck down by any disease resembling plague, so that, although the grain origin of the disease may be worth investigating, we cannot turn towards it with any *a priori* hopes of elucidation. It will be seen at once that the infection of birds will render the possibility of the rapid spread of plague on its appearance in isolated districts easily explainable. It is not comfortable news that we have a winged distributor of plague.

To sum up our knowledge, we find that pigs, dogs, rats, snakes, jackals, and pigeons are affected by a fatal malady, whilst plague is epidemic amongst human beings. Pigs and dogs are believed to be attacked only after consumption of plague flesh. Snakes by the swallowing of rats, and possibly jackals, are infected in the same way. None of the purely herbivorous animals, horses, donkeys, oxen, sheep, goats, or rabbits, are attacked. It is the flesh-eating animals which are the sufferers. Of course, the rabbit, guinea-pig, and a number of animals can be inoculated experimentally or made to consume plague-diseased food, but no herbivorous animal acquires it by the natural processes of infection. If it is by consumption of flesh that animals are infected, how do human beings get it? The animals affected seem to become infected from flesh: the snake from the rat, the jackal, pig, and dog from eating the flesh of persons dead from plague; but how does the rat become infected? Could we find that out we should likely know how man is infected. One animal missing in the scale is the cat; if rats perish from plague surely the mortal enemy, the cat, would be diseased. Perhaps the instinct of the cat teaches it to avoid the diseased rat. [In Hong-Kong during 1894 many cats died in a peculiar way—the chief symptom being paralysis of the hind legs.]

In the discussion about the rat infection it must never be forgotten that if we take it for granted that the disease attacks rats before human beings become victims, we must consider the question, "Has the rat ailment to do directly

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with the subsequent outbreak in man?" It is very difficult to see how the rat could affect man except by *infection;* and one may hesitate to believe, from what we know of the concentration of poison necessary to infect, that such is possible. It might be that the diseased rat, by *treading*, or dropping upon, or biting the food of man, would thereby poison the food. It will at once occur to one that sick rats, like sick men, would not eat. This we have no proof of; in fact, it is the other way, for Dr. Rennie states that in his post-mortem examinations on rats in Canton he found the stomachs pretty full of food, and rats during incubation and first days of illness from experiment eat fairly well. What we may conclude from the study of the infection of animals is: (1) that the rat is the animal most liable to be attacked by plague; (2) that rats suffering from, or dead from plague may infect other animals, such as snakes and jackals, who consume them; (3) that rats are always affected by a disease similar to plague at the same time man suffers; (4) that the rat may infect man, but the means of conveying the contagium is not known; and (5) that during the prevalence of benign plague, pestis minor, rats do not die.

Incubation.—The time intervening between exposure and the development of plague has been carefully observed and noted throughout many epidemics of this century. The conclusions arrived at by all who have written an account of their Hong-Kong experience gives from three to six days as the period of incubation. Dr. Lowson makes it seldom under three or over six. Professor Aoyama gives it at from two to seven days. If by that statement he means from the end of the second until the beginning of the seventh day his recorded observations agree exactly with Dr. Lowson's and others. Only one case seems to break the record: it is a case referred to by both Dr. Lowson and myself. A Chinaman in the gaol at Hong-Kong developed plague after being nine days under lock and key. From June 11th until the 20th he was apparently well, but on the evening of the 20th he became feverish and developed plague. This case gives nine days as the apparent period of incubation and may be taken as the limit in that direction. Dr. Lowson states, however, that the man complained of being ill for two days before being placed on the sick list, thus reducing the period to the seventh day; and although the man was put in the cells on the 11th it was not until the 12th that he was really beyond contact with the outer world. Further, during an epidemic of any kind, isolated cases occurring here and there in the infected centre, where contagion seems difficult to explain, must not be taken as sufficient to seriously arrest attention even when a gaol wall intervenes. An infected area is one in which any dweller may succumb to the disease despite all precautions of isolation. Whilst mentioning this case I do not think we have evidence to place the period of incubation of malignant polyadenitis beyond the end of the sixth day after exposure. Be it observed, however, this extends only to plague infection during an epidemic.

There is a notification of two or three cases of plague as having occurred at the Seamen's Hospital, Greenwich.[3] The following is a statement of the facts: "About the middle of September a man, a Portuguese-Indian steward, was taken into the Branch Seamen's Hospital and died there very suddenly. He was only in about forty-eight hours and no suspicion of plague arose. On the last day in October there was reason to consider that another patient at that time in the hospital was suffering from plague; the previous case was thought of, and it was agreed that if one was plague the other in all probability was of the same nature. The man died; but the medical authorities were not in entire agreement. As a precautionary measure, however, the body was buried in a leaden coffin. The matter was referred for bacteriological examination, the glands of the body were examined, and a bacillus which presented the known characters of the plague bacillus was found." In connexion with this subject there are one or two points calling for comment. 1. The dates given (if correct) would show the vessel, in which the infected persons were, left Bombay about the end of August. Now, we have no direct medical evidence that plague existed in Bombay during August. The earliest official intimation of plague in Bombay was when Dr. Viegas reported, at the meeting of the Sanitary Committee on Sept. 23rd, 1896, that the disease had prevailed in the locality for a fortnight, thereby assigning Sept. 9th as the date of commencement. The first case, therefore, at the Greenwich Hospital could apparently not have been infected from that source, as the vessel could not have been less than seventeen days on the way. Either it is not plague we are dealing with at Greenwich (I firmly believe it is) or the infection must have come from some other source than Bombay; or yet a third condition may obtain, which heretofore we recked not of—namely, an indefinite period of incubation, during which period "benign" plague may become malignant. This subject will be discussed later.

In elucidation of these cases and the source of their infection I think I can throw some light. I stated above that there was no official evidence of the presence of plague in Bombay before Sept. 9th, 1896—that is, ten days after the first Greenwich Hospital patient sailed from Bombay. This, however, may not be quite correct, for I find in the *Times of India*, Sept. 30th, 1896, the following statement:—

"In Bombay for two months certainly, in all probability longer, the native inhabitants of the neighbourhood of Maudvie, when plague broke out in Bombay, seemed to have been alive to the fact of the existence of a malady resembling plague before the malignant type developed. They had organised processions in August to propitiate the goddess of Plague. This either proves that true plague was present long before the authorities knew of its existence or that a disease resembling plague was mistaken for the malignant type." According to this evidence plague may have existed in Bombay in July, 1896. This evidence will, I hope, help those who are dealing with the Greenwich Hospital cases to disentangle the incubation period difficulty. The second case reported from the Greenwich Hospital had been on shore fourteen days before falling sick. Therefore, allowing seventeen days for the voyage, thirty-one days must have intervened between exposure in Bombay and the illness.

The occurrence of several cases of pestis minor in Calcutta, in which the bacillus was found, indicates a more cautious acceptance of diagnosis resting solely on bacillary evidence than we have heretofore contemplated. The first case dealt with and reported upon in Calcutta gives an instructive history. The patient, a lad aged seventeen years, came from Bombay, where evidently he had been exposed to infection, as his sister, who accompanied him, had seen several cases of plague in Bombay. Fifteen days before leaving Bombay he had noticed swellings first in one groin and then in another, but never felt ill until his arrival in Calcutta on Sept. 24th. He was seen and carefully examined in Calcutta by honest observers, and a diplobacterium identical with the Kitasato bacillus was found in his blood. Not only so, but the clinical symptoms of plague were most manifest. It would, therefore, seem from these two well-authenticated cases that glandular swellings may attack a dweller in a district where true plague rages, and that at a subsequent period (a period which in the Calcutta patient was not less than twenty days and in the Greenwich Hospital case could not be under seventeen days) may become virulent and kill the patient by a true plague; in fact, that a pestis ambulans may become a malignant polyadenitis in the same person, even although the patient is removed from the infected zone. This may be true, although it is not at all a comfortable doctrine; but I can come to no other conclusion having regard to the evidence before me. The incubation period of plague, therefore, may be fixed as from three to six days whilst an epidemic rages, but the evidence to hand, within the last few weeks from Calcutta and from London, renders the period of incubation of ambulatory plague uncertain.

Invasion.—The onset of the disease in malignant polyadenitis is known to be usually sudden and severe. The patient is seized with headache, fever, and prostration and compelled straightway to seek his bed. In a few hours or a few days a swollen gland develops and the disease runs its course. But we have on record many cases where high fever existed and the patient did not even feel ill, or where a gland swells up with no general feverish state. Dr. Lowson in his valuable report states: "In one case I took the temperature of an Indian who *looked* ill, but who had merely come to see about the burial of a friend and who complained of no unpleasant symptom. He was rather amused at my using the thermometer, but I found he had a temperature of 103° F. and at the same time discovered a small cervical bubo." Be it observed, as bearing upon the intensity of the virus, that this was a non-fatal attack of plague. In many cases a

[3] Brit. Med. Jour., Dec. 12th, 1896.

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bubo may precede the fever, the patient suffering no inconvenience even. Such a case is that recorded from Calcutta, where "the patient, a boy from Bombay, had had for fifteen or twenty days before developing fever a swelling in either groin. Subsequently he developed the ordinary symptoms of plague and the diplococcus was found in his blood." These two cases are sufficient to show that fever or plague may exist and the patient not be aware of it, and that glands may be affected for a fortnight before the disease declares itself in the usual way by headache, fever, and prostration. The onset of the disease, therefore, even during a plague epidemic, may not be so definite as we should like to believe, and as yet we have no charts recording the condition of the patient between the time of exposure and the invasion.

Varieties.—It is not my intention to mention merely the varieties of symptoms which predominate at any one time or throughout any one epidemic, but to draw attention to varieties which are so pronounced in their character as to justify the belief that whilst dealing with this subject we are actually attempting to bring in line under one heading diseases which may be even separate species. The commonly accepted types are these: (1) abortive (or larval) plague; (2) typical plague; and (3) fulminant plague. The two latter are so well understood and have been so largely and fully dealt with elsewhere that there is no advantage in recapitulating what can be read in any text-book; but I wish to draw attention to the first-named. The abortive form is sometimes styled larval, ambulatory, or pestis minor. The names partly declare the character of the disease and create a condition so apart that it has at all times been separately described. It is at the same time so indefinite in its duration, so unstable in its relation to malignant plague, and so uncertain in its onset and departure that up to the present no scientific precision has been assigned to the relationships. As long ago as the year 1666, when plague ravaged London, we have it on the authority of Sydenham that "at times tumours may break out without either fever or any important symptoms. . . . Those to whom this happens may walk about in public as usual and attend to the common duties of life. . . ." Foderè, writing of plague in 1820, observes: "In the Levant and in the Marseilles epidemics of 1820 cases were to be seen which were not ushered in by any alarming symptoms and where the natural functions were undisturbed and where buboes and carbuncles appeared without fever or only with slight fever, or the buboes went on to a healthy suppuration more or less prompt, or even disappeared and went on to resolution without the help of art, without any inconvenience, and with a perfect integrity of all the functions. This state is comparable to benign small-pox, during which children play together and walk in the streets without any precautions, no care being taken of their treatment and yet terminating favourably. It is the benign plague of authors which is observed when the disease commences and when it is at its end, though it is rarely seen in the middle period, which is entirely devastating, *but it is not less plague and it no less merits the attention of physicians and magistrates.*" Again, in all recent epidemics in Tripoli, Mesopotamia, and Astrakan non-fatal, mild bubonic disease occurred both before and after the epidemic. We have it on the authority of Dr. Dickson that in Mesopotamia, previously to the manifestation of plague, glandular swellings free from fever prevailed. All this evidence seems to indicate a close connexion between benign and malignant polyadenitis; but we have some evidence of the separate existence of the two diseases. 1. In Mesopotamia Tholozan records: (*a*) that mild non-fatal bubonic plague existed from 1856 to 1865, during which period (nine years) no malignant type was observed; and (*b*) that after the epidemic of malignant plague (1866-67) passed over the same form of mild plague existed. Did it exist during the epidemic? This is not known, for it is not likely that persons suffering from so mild an ailment would present themselves for treatment to foreign medical men at a time when all swellings were viewed with suspicion. There is, therefore, no evidence to show that the two diseases did not co-exist seeing that it existed nine years before and perhaps as long afterwards. The present belief is that the mild develops into the malignant type, and when that subsides it is once more deprived of its malignancy and becomes benign. We have no evidence of any disease behaving in such a manner to such an extent as claimed for plague. 2. In Calcutta six years ago an outbreak of mild, non-fatal plague occurred in the fort amongst the troops, but it was not followed by the malignant variety. 3. At the present moment in Calcutta there is reported to be a form of fever with glandular swellings, and also a form of glandular swellings without fever, and it is further stated that these are constantly met with in medical practice in Calcutta. 4. In 1890 the variety of idiopathic buboes, of glandular swellings with fever, and of mumps met with in Hong-Kong before referred to was not followed until four years afterwards by plague. These records go to prove:—1. That long periods of time may intervene between the prevalence of specific glandular swellings and the outbreak of malignant plague. 2. That glandular swellings may exist for nine years before malignant plague appears, and continue for years after it has disappeared. 3. That independent outbreaks of glandular swellings (pestis minor) may come and go and no plague supervene.

The latest evidence we have from Calcutta is conflicting in the extreme. We have it to hand on trustworthy evidence that people are suffering from fever with glandular enlargement, that the disease is regarded as pestis ambulans—a mild bubonic plague—and that *the diplo-bacteria of plague are found in the blood.* We have hitherto regarded the presence of the bacillus in the blood as the one token of the disease being malignant in type; but we have now contrary evidence to consider, and if we are to accept it, we must believe that specific glandular swellings in the plague belt may be caused by a definite bacillus, and at the same time admit a varying degree of malignancy to that bacillus. Professor Cunningham—a most competent observer—declares that the bacillus found in the Calcutta cases is non-infective, and that probably it is not the same bacillus as that described by Kitasato in 1894. This is stated in the face of positive evidence by careful observers which cannot be set aside thoughtlessly. Time alone will answer this question. In the meantime, however, it is feasible to suggest that there may be but one bacillus, and that according to its state of development, or in consequence of its evolution, different types of the disease may prevail in the human body, each associated with a definite train of symptoms, characterised in the one by glandular swellings merely and in the other by a toxic infection of extreme intensity.

The bacillus. — The bacteriology of plague began with the advent of Kitasato from Tokio during the Hong-Kong epidemic of 1894. On June 14th, 1894, Kitasato demonstrated the bacillus, which was confirmed afterwards by Dr. Yersin of the Pasteur Institute in Saigon, working in an independent manner. The bacillus has been variously described as (1) a diplococcus; (2) diplococcus enclosed in a delicate capsule; and (3) a short bacillus with the ends somewhat rounded and a clear space or band in the centre. Professor Woodhead writes:—"The size varies considerably according to the staining method employed, the organism appearing rather smaller in the watery gentian violet solution than in the glycerine fuchsin solution. It is plain that the size of the capsule and its staining capacity vary very considerably, and it is quite possible that this appearance of a capsule is like that which is sometimes met with around the bacillus of anthrax stained in special solutions in that it may be simply a refraction from the albumin from the constricted bacillus due to the drying and other processes of preparation." In the figures drawn by Woodhead an organism was met with in some specimens which seems to indicate a development after death. The last statement may be the most important of all, and its confirmation will be anxiously looked for during the present outbreak in India. It may be the first step towards a knowledge of the life-history of the bacillus in the same manner as the flagella of the plasmodium malaria are found to develop in the field of the microscope some half hour after removal from the body. Dr. Yersin undertook some experiments to test the truth of the infection of the soil, the results of which elucidate the toxic nature of the bacillus. He found (1) that a bacillus in some respects resembling in its appearance that met with in the human body was found in the soil of Hong-Kong during the plague epidemic; (2) that the bacilli of the soil and body occasionally behaved similarly in culture experiments; and (3) that the culture specimens of soil bacilli were, however, innocuous, possessing no virulence when injected into mice or guinea-pigs. Dr. Yersin further found that in his cultures of human plague bacilli there were microbes of different virulence, some mildly powerful and some altogether powerless to infect either mice or guinea-pigs. Dr. Lowson, in conjunction with Dr. Takaki, Dr. Kitasato's assistant, found a

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bacillus in the soil of the garden near his house which closely resembled the human plague bacillus, possessing most of its microscopic attributes, but showing none of its toxic properties. The district whence the soil was obtained lay within the plague-stricken area, but considerably removed from any infected house.

The conclusions to be deduced from the above rehearsal are:—(1) That plague bacilli vary in size; (2) that cultivation experiments produce bacilli identical in appearance but possessing different toxic and infective powers; and (3) that a somewhat similar bacillus is found in the soil (whether at all times or not is not known) which resembles the non-virulent form the result of bacteriological culture.

Infection of the soil.—The preceding remarks upon finding the bacillus in the soil are pregnant with suggestion. Whether the soil bacillus be virulent or not, whether it be completely identical with the human bacillus met with in plague or not, the fact of a microbe having on the one hand a close resemblance microscopically and on the other hand a structure and behaviour analogous with certain of the non-virulent culture products of human plague bacilli, is sufficiently important and brings the elucidation of the matter within the sphere of practical investigation. The dominant idea before even the bacteriologist or microscopist studied the matter was that the infection arose from the soil, and there seem no facts to go upon to reject the creed. The Chinese grade the scale of animal infection by their height from the ground, and the modern scientist lends some weight to the suggestion. The medium of the soil may be to the infection of animals as the medium of water bearing the carcase of the dead mosquito is to the filarial-infected human being. Not only may it serve as a mere vehicle, but as a host, in which the parasite passes through a stage of its evolution. Bearing closely upon this subject is the question of the *medium* of spread of plague. I previously discussed this shortly when dealing with contagion. Contagion—that is, intimate prolonged contact, as mother or nurse and child—no doubt is a factor, a potent factor, it may be the only factor, in the transmission of the disease, but few admit it to be more than a small element in distributing plague broadcast over a community. The slow progress of plague and its peculiar paths of selection must be considered if the subject is to be fairly dealt with. Plague is perhaps the slowest travelling disease known; it may take months and even years to extend a few miles. From the City of London it took nine months to reach Soho, and more recently it took ten months to travel from Hong-Kong to Macao—a distance of thirty miles. The lines of communication will not explain this, for in Macao thousands of persons sought shelter in 1894, when Canton and Hong-Kong were plague-stricken. Steamers and Chinese junks and fishing-boats passed freely between the ports, yet Macao did not become infected until nine months after Canton and Hong-Kong were pronounced clear. How did the parasite reach Macao—by sea from Hong Kong or by land from Canton? If by sea, in all probability it would have been in Macao long before. If by land, how did it travel—by human or animal carriage or by the soil? If by human beings, it means intimate prolonged contact of the carriers, if by the soil it means a bacillary infection of the soil, spreading from a centre and extending by a continuous margin of active growth along paths favourable to its nutrition. As a gangrene spreads from a centre, or a patch of ringworm starts to spread and gradually involves an ever-increasing zone, so may the soil become sown with the germ of plague, and animals that have their habitat thereon fall victims. Some show of testimony towards such a view is afforded by the fact that plague confines its working to the Old World and does not cross the ocean, and travels backwards and forwards in the belt of its selection; but it cannot be the only means of travel, otherwise how did the islands of Britain and the Canaries ever become infected at one end of the Old World and the islands of Hong-Kong and Formosa at the other? Were the soil only the producer or infector all islands in the area ought to be immune. This not being so, it comes that the poison must be carried by human beings, by animals, by clothing, or by food. That the poison conveyed by them may require the soil as a medium to reproduce the infecting bacillus may be quite possible; but that some other medium than the soil capable of transmitting the disease is quite evident. is As noticed above, the bacillus found in the soil, according to Dr. Yersin, agrees in most points with the plague bacillus except that when introduced artificially into the bodies of animals it is non-virulent. This may indicate, of course, that they belong to another group of the bacterial family altogether.

THE ACCOMPANIMENTS OF PLAGUE.

Climate—The weather does not escape blame for a share in the presence of plague when it rages in the midst of a community. Be it dry, the drought is mentioned as a cause; be it wet, the floods which ensue are held to have damaged the crops and the grain supply is spoiled, or the miasm resulting from the subsidence of the swollen streams is connected with the outbreak. In south-east China the epidemic of plague developed at the end of a prolonged and exceptionally dry season. The rainfall was so deficient that most of the wells throughout the district were exhausted, and the crops suffered severely. Without driving the argument of drought too deeply home it must, however, be observed that in Bombay we find a similar condition of things before the present outbreak. The rainfall over a wider area of country has been so greatly deficient that widespread famine has followed. Without recording any more examples we must consider whether there is any probability of connexion between drought and plague. The bacillus of plague flourishes best in a warm, moist atmosphere; dry, hot air kills it. In many marshy countries, however, the epidemic has been found to disappear the moment the rain ceased and the dry season set in. In Mesopotamia and in Egypt the epidemic dies out in summer, when the nights and days are more alike in temperature, and the fall of dew is therefore less pronounced. The absence of rain means, of course, dirt in the houses, in the streets, and on the clothes and bodies of the inhabitants; and dirt is held to be the foster-parent of plague. But the absence of rain means dryness of soil, and if the bacterium is dependent on a sufficiency of moisture it would seem as though a small quantity satisfied it.

Rain.—In Hong-Kong it was hoped in 1894 that with the advent of rain the epidemic would abate. The rains delayed their onset until well on in May, by which time the epidemic had got a hold in the town. With the rains came an accession—a marked accession—of the number of plague cases. The flushing of the drains and gutters and the replenishing of the wells with a plentiful supply of water were attended by an increase in the outbreak. Before referring this positively to the effect of procuring a more moist nidus for the bacillus to develop in, the effect of rain on the habits of the people has to be noticed. In all warm climates a number of the male portion of the inhabitants sleep out of doors—on the roof, in the street, or in verandahs. The effect of rain is to drive all such sleepers within the house, to shut the windows and doors, and to generate all the evils of overcrowding. The good effects of the flushing of sewers are undone, in the opinion of the climatological argument, by the overcrowding which it causes.

Heat and cold.—In Canton the plague commenced when the temperature averaged about 60° F. and continued when the average daily temperature reached 90°. Further, it must be noted that the disease *disappeared* when heat and moisture were about 90° throughout the district, so that with regard to the common statement that it thrives best at a temperature between 80° and 85°, it must not be forgotten that whilst thriving it also disappears at the same temperature. It dies out when the conditions which we believe to be suitable for its propagation, heat and moisture, are at their best. But heat does not seem to be an essential to the appearance of plague. In Russia it has appeared again and again in winter with deep snow on the ground and the thermometer in the neighbourhood of zero. In Astrakan in 1878 the disease raged during severe winter weather. We are at a loss, therefore, to connect warmth with plague or cold weather with its check. We may experimentally show how the bacillus behaves under the abnormal medium which must necessarily surround it in the microscopic field, but that in its natural state it is so affected we have direct antagonistic proof.

Overcrowding.—The argument of overcrowding might be at once set aside by the sweeping statement that just as plague flourishes in crowded cities, so likewise it flourishes in barren deserts, where the population is sparse in the extreme. An analogous disease, typhus fever, behaves in well-nigh the same way, and typhus fever is looked upon as the direct outcome of overcrowding. Now overcrowding may take place in a country house as readily as in a town house, and the

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poorer the country the greater the overcrowding. Typhus fever prevails in isolated houses on the west coast of Galway, where the air around is of the purest; but eight or ten people or more in one room, not only sleeping there for warmth but residing there well-nigh all day when the weather is inclement in winter, will foster any disease that foul air is capable of producing. As with typhus fever, so with plague. The rains in warm climates drive the inhabitants within their poor dwellings, the snows of winter do the same in colder climates, and the ailments attending overcrowding are most likely to appear. In other countries, as in Mesopotamia, the cessation of rain brings the cessation of plague, as the people can issue forth to sleep and open their casements without fear of being drenched. The close, intimate contact believed to be necessary for the propagation of plague is therefore brought about by two entirely opposite conditions which have overcrowding in common; and taking all the effects of weather into consideration it would seem that not the meteorological conditions but the mechanical results of weather generally are to be reckoned with. Castaldi's account of a dwelling-house in the highlands of Kurdistan, where one might expect that fresh air would be plentiful and overcrowding unknown, confirms the above statements. "Whatever is most afflicting in poverty, whatever is most revolting in filthiness, is accumulated as if designedly around these infected dens in the interior of which live—or rather vegetate—from fifty to sixty men, women, and children." Perhaps the effects of overcrowding are more frequent in the colder latitudes of Western Asia and Eastern Europe than anywhere else in the world.

Poverty.—Plague is ever associated with scarcity and want. Sometimes it is famine caused by the destruction of crops by floods, sometimes by drought; but from whatever cause plague and scarcity of food are frequently allied. Not only is the grain scarce, but it has often been commented upon that it is bad, musty, covered with blue mould, and fermented. The two conditions may be to each other as cause and effect. The grain is gathered before it is ripe owing to the people's necessity, and the unripe grain not only yields insufficient nourishment but is apt to undergo fermentation and be attacked by vegetable parasites. In South-East China there was no question of famine before the 1894 outbreak, but the price of grain was high. This was caused by the prolonged drought in the district and by the failure of the crops in Siam—Bankok, the capital of Siam, being the chief source of rice supply to Canton and district. The rice was subsequently obtained at a fairly cheap rate from Saigon, the capital of Indo-Chine, and the price of grain fell. In India at the present moment a serious scarcity prevails and famine threatens. The prolonged drought is the cause of the failure of crops, and, moreover, the consumption of diseased grain is universal. Three elements are in evidence—drought, famine, and diseased grain; but they are really co-partners and inter-dependent. No one can be upheld as the cause to the out-voting of the others. It may be none of these have aught to do with the presence of plague, as it may be argued plague exists when famine is unheard of; but the combination which also means overcrowding of houses must be a factor, if not the chief factor, in the propagation of the disease. In the towns, and in the poorest parts of the towns, would be the most likely spots where the combined effects of want and overcrowding would show; and it is invariably in such neighbourhoods plague develops and stays. In the densely packed cities of Asia the poor exist for ever on the fringe of destitution and the least rise in the price of food brings scarcity, so that the term "the poor's plague" holds good for all time.

Sanitary conditions.—The preceding remarks prepare the way for the recognition of all possible sanitary evils and neglects as accompaniments of plague. Chinese towns are at all times ready to generate any filth disease and Hong-Kong itself is but little better. The city was hastily built about fifty years ago, when all too hurriedly tens of thousands of Chinese sought occupation and habitation under the British rule. From that rush of people and feverish haste to build without proper control the city never recovered, and to this day presents sanitary aspects of the most flagrant description. The public sewers are well built on the separate system; the water-supply is most excellent in quality, although, when rains are delayed, deficient in amount; the public latrines are under Government control; the removal of excreta is by the bucket system and is admirably controlled. Here, however, the bestowal of praise must cease, for beyond them there is much to condemn. House overcrowding is rife and surface crowding to the extent of 2500 persons to the acre holds sway over the chief area of the native quarter of the town. Dr. Lowson states graphically what is known to every resident in Hong-Kong: "The majority of the houses of the infected district being in a most filthy condition . . . when to a mixture of dust, old rags, ashes, broken crockery, moist surface soil, &c., is added fæcal matter and the decomposing urine of animals and human beings, a terribly insanitary condition of affairs prevails." At another part of his report Dr. Lowson remarks: "To over-paint the pitiable surroundings associated with plague work at the commencement of the epidemic would be impossible. I have entered a long low cellar, without any window opening, and with the air entering only by a square open shaft from the level of the roof three or four storeys high. Down one side of the shaft ran a broken earthenware drain-pipe leaking freely, the contents streaming down the wall of the air shaft to a shallow pool of filth which crossed the undrained floor of earth. Although it was broad daylight outside a lantern was necessary to see one's way. On a miserable sodden matting soaked with abominations there were four forms stretched out. One was dead, the tongue black and protruding. The next had the muscular twitchings and semi-comatose condition heralding dissolution. In searching for a bubo we found a huge mass of glands extending from Poupart's ligament to the knee-joint. This patient was beyond the stage of wild delirium. Sordes covered the teeth and were visible between the parted and blackened lips. Another sufferer, a female child about ten years old, lay in the accumulated filth of apparently two or three days, unable to speak owing to the presence of enlarged cervical glands. The fourth was wildly delirious (the conjunctivæ intensely congested) and was constantly vomiting. The attendant (*sic*), the grandmother of the child, had a temperature of 103° F. and could only crawl from one end of the cellar to the other. She was wet through and was herself doomed. This is no fancy sketch, but a true picture of how we found some of our patients at the outbreak of the scourge in Hong-Kong." The evidence from Bombay is similar to the Hong-Kong report, and but confirms the state of overcrowding and filth to which Oriental cities, even when partially under British control, may attain.

Caterpillars.—At the time the plague broke out in Hong-Kong and Canton the district was infested by a caterpillar which covered the trees in myriads and destroyed the foliage of many. So threatening was the pest that the Colonial Government in Hong-Kong granted a reward of so much per basket to the collectors of these animals. The accident of their presence may be fortuitous merely and have nothing to do with the presence of an infective bacillus; but there can be no doubt that the destruction of plant life on the mainland of China from this cause had to do with the high price of grain which prevailed at the time plague broke out.

Diseased grain.—That one is justified in looking to grain as a source of infection we have collateral confirmation from other diseases arising from grain. 1. Ergot of rye—the mycelium of Claviceps purpurea infecting common rye—is capable of producing epidemics attended by a great mortality. In France, Russia, and Sweden, even during the present century, outbreaks of what the Germans style "Kriebelkrankheit" have occurred. 2. The pellagra of Lombardy is a disease of modern times, but corresponds closely in time with the introduction of an inferior kind of maize as the staple food of the peasantry. This disease is at times epidemic, and although it can be traced to want of care in the drying and preparation of the grain, once it breaks out in a neighbourhood it takes hold of members of the community who feed on the best kind of materials. 3. Acrodynia has so close a resemblance to ergotism and pellagra that it is presumed to be connected with bad grain, although the connexion has not been traced. 4. Pelade—a disease met with in Columbia, South America—is traced to the ergot parasite of maize. 5. Actinomycosis is due to a fungus—probably of the order Cladothricæ,—is even better known than either of the preceding, and the general evidence is that it is introduced with the food. 6 In the uplands of Kurdistan the four following conditions co-existed or followed in sequence during the 1870-71 outbreak: (1) bad grain; (2) ergotism; (3) epizootic amongst sheep; and (4) plague. 7. At the present moment in Bombay diseased grain is plentiful, and it would seem that Dr. Watson has succeeded in proving a connexion

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between plague and diseased grain. With the help of modern methods of investigation and the accumulated knowledge of the disease gathered during the last few years the matter should not be difficult to settle. These instances might be multiplied, but they are sufficient to show that the search for the cause of plague in grain is not a blind hunt, but has creditable precedents.

Differential diagnosis.—In all cases nowadays the microscope is regarded as the one test whereby to test the presence or absence of plague. Rightly or wrongly this conclusion has held good ever since Kitasato discovered the bacillus in June, 1894. The names given in an earlier part of the paper indicate the diseases held to be closely analogous to plague. They are "typhus," "adynamic typhoid," and "intermittent fever"; but the word "bubo" is affixed to all. Still the name gives the drift of its applications and enables us to apportion its place in the category of disease.

Typhus fever.—The resemblance to typhus fever, in many signs, symptoms, methods of spread, and circumstances of development, is worthy of more than a passing remark. It has been noted how overcrowding, whether in town or country, is a potent factor in plague as in typhus fever. Hæmorrhages—so characteristic of typhus fever—are so frequent in some outbreaks of plague as to occasion the use of the synonym of "hæmorrhagic fever." The infectious nature of the two diseases appears so similar, so markedly "catching" to all inmates of an infected house, so sparing in their seizure of visitors. Such instances of the resemblance between the diseases might be multiplied with the result that we might become converts to the opinion expressed by Murchison that "Plague is perhaps the typhus of warm climates, the two diseases being generated from similar causes and differing only in intensity from the effects of climate and other collateral circumstances." The specially characteristic sign of plague is the presence of buboes; the specially determining sign of typhus fever is the rash. Both may be absent in either; or we may find buboes in typhus fever and petechial eruptions in plague. The eruptions met with in the Hong-Kong epidemic were never characteristic, although many cases showed spots on the skin. These in most instances were no doubt mosquito bites, but the occurrence of a pink blush around them gave a specific appearance to these petechiæ. Further, the distribution of typhus fever corresponds in many ways with that of plague. Typhus fever has a southern limit, not being met with within the Tropic of Cancer in either the old or the new world. Typhus fever has never reached Australia or New Zealand, or appeared south of the Equator. Typhus fever, however, is accredited to have reached the United States and Canada, where plague has never been. With this solitary exception the distribution of the two is synonymous. The pursuance of this subject would lead me far beyond the limits of time at my disposal; but there can be no doubt that we have two diseases generated by a common cause, overcrowding and personal filth; and, if we assume the supervention of a specific microbe upon such states, typhus fever or plague, as the case may be, may arise.

I have yet another disease to add to the list which may be mistaken for plague. On June 26th, 1894, when the plague was at its height, I saw a Parsee patient dwelling in a house in which plague existed, suffering from fever (104° F.) dry tongue, headache, backache, and large swollen glands in the left groin which had suddenly appeared. Plague seemed the only diagnosis, and the man, much against his will, was sent to the plague hospital. In two days he came back again quite well, and on examining him I found his urine thick and milky. That night I found filaria in the man's blood, and knew I had made a mistake in the first instance. Of course, the mistake is most likely to happen, but nevertheless it is not pleasant to think that we had subjected the man to the terrible danger of plague infection.

The conclusions drawn from a study of the spread of plague are:—I. Varieties: 1. The varieties of plague known under the names (*a*) fulminant, (*b*) typical, and (*c*) pestis minor, are allied. 2. The cause of fulminant and typical plague is a diplobacterium in the blood and tissues. The cause of pestis minor may be an allied diplobacterium, but with a lesser toxic power. 3. An appropriate name for the fulminant and typical plague is "malignant polyadenitis." An appropriate name for the mild variety (pestis minor) is "benign polyadenitis." II. Infection and contagion: 1. Plague is infectious chiefly by the dust arising during the cleansing of dwelling houses which plague patients have occupied. 2. Plague is contagious by prolonged and intimate contact with the plague-stricken, as in the case of a nurse carrying a child ill of the disease. III. Distribution: 1. Plague is met with in a definite area of Asia which may be termed the "plague belt." 2. That the home of plague at the present day is Mesopotamia and the countries adjacent. 3. From Mesopotamia as a focus the plague may spread northwards to the Caspian Sea, westwards to the Red Sea, southwards as far as Bombay, and eastwards as far as (Formosa) the China Sea. 4. During the present century plague has shown a western retrocession and an eastern accession of virulence. IV. The bacillus. 1. Typical plague (malignant polyadenitis) is associated with pestis minor (benign polyadenitis). 2. A bacillus of somewhat similar appearance microscopically is reputed to be found in both.[4] 3. The bacilli differ in their toxic powers only (?). 4. A benign polyadenitis may run its course without being preceded or followed by the malignant variety. 5. Malignant polyadenitis may run its course without being preceded or followed by the benign variety. 6. The bacillus of the benign variety attains malignancy by passing through some intermediate host, possibly, but not probably, the rat.

NOTES ON STONE IN THE BLADDER.

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I.—LITHOLAPAXY IN GIRLS AND WOMEN.

THE great majority of vesical calculi which are met with in girls and women are best removed by litholapaxy. I take it for granted that no one nowadays would dream of employing the ancient method of rapid dilatation of the urethra, with subsequent extraction of the calculus, if called to treat a young girl the subject of stone in the bladder, unless, indeed, the calculus were a very, very tiny one. Dilatation of the urethra with extraction was always a somewhat rude surgical procedure even in adult females, but there was much to be said for it in the days which preceded Bigelow's brilliant innovation in the treatment of stone in the bladder. Any surgeon, however, who at the close of the nineteenth century adopts as a routine practice the old method of rapid dilatation of the female urethra with extraction is behind the age and is hardly to be tolerated. There remain two other methods of removing a stone from the female bladder—viz., vaginal lithotomy and suprapubic lithotomy; but the cases in which they should be employed are few and far between. In most surgical text-books the subject of vesical calculus in the female is usually dismissed in a very cursory and somewhat perfunctory fashion. The scanty attention accorded to it is in some measure due to the fact that stone is so rare in girls and women as compared with its frequent occurrence in boys and men, and partly to the ease and safety with which a stone is removed from the female bladder as compared with the difficulties and dangers which surround its extraction from the male bladder. It falls to the lot of very few surgeons in Europe to treat many females for stone in the bladder, and hence few are warranted in expressing any very decided opinion as to the comparative advantages of the different methods of dealing with stone in females. Mr. Cadge, in his admirable lectures on the surgical treatment of stone in the bladder delivered at the Royal College of Surgeons of England in June, 1886—lectures, which, by the way, everyone interested in the surgery of the urinary organs would do well to study—stated that in 1125 operations for stone in the bladder at the Norwich Hospital there had been only 50 in females, and that in his own experience of 300 cases of vesical calculus he had only met with six in the female. Surgeon-Lieutenant-Colonel Freyer in 864 cases of stone in the bladder has met with only 17 cases in females. Brigade-Surgeon-Lieutenant-Colonel Forbes Keith amongst 1993 cases of stone in the bladder which came under his care in the Civil Hospital, Hyderabad, Sindh, treated 57 cases in females. During the last fifteen years about 900 patients have been admitted into the Indore Hospital, Central India, for stone in the bladder, and there were but 20 females amongst this number. From

[4] This is under discussion now (Dec. 18th, 1896).

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these figures, which are sufficiently large to warrant safe deductions, we may conclude that stone in the bladder is about thirty times as common in the male as it is in the female. Appended is a table giving the particulars of the twenty cases of stone in females admitted into the Indore Hospital, and a glance at it will show that 18 out of the 20 were treated by litholapaxy. The last three operations recorded in the table were carried out since I left India. To show what an eminently satisfactory operation litholapaxy is in females of all ages I will very briefly give the histories of some of the more interesting cases in this series.

TABLE I.—SHOWING PARTICULARS OF TWENTY CASES OF STONE IN THE BLADDER IN FEMALES TREATED IN THE INDORE CHARITABLE HOSPITAL, CENTRAL INDIA, BETWEEN MARCH, 1882, AND DECEMBER, 1895.

No.	Age (years).	Caste.	Date of operation.	Nature of operation.	Time occupied by operation in minutes.	No. of lithotrite used.	No. of catheter used.	No. of times lithotrite was introduced.	No. of sittings.	Composition of stone.	Duration of disease in months.	Weight of stone in grains.	Number of days in hospital after operation.
1*	4	H.	23-3-'82	Litholapaxy.	No record.	7	No record.	No record.	1	No record.	No record.	No record.	2
2*	40	H.	1-10-'82	,,	,,	No record.	,,	,,	1	Phosphatic.	,,	,,	12
3*	80	H.	18-3-'86	,,	67	15	16	6	1	Fawn-coloured uric acid with covering of oxalate of lime.	24	395	11
4*	5	H.	27-3-'86	,,	33	7½	7	4	1	Uric acid.	12	23	2
5*	4½	H.	17-10-'87	,,	12	6	10	2	1	Oxalate of lime and uric acid.	24	20	4
6*	3	H.	30-10-'87	,,	45	6	8	6	1	Phosphates with nucleus of oxalate of lime.	12	183	3
7*	30	H.	2-6-'88	Vaginal lithotomy.	No record.	—	—	—	—	Phosphates and urates.	36	1140	24
8*	7	H.	12-3-'89	Litholapaxy.	57	6	6, 7, 8, 12, 14, & 15	9	1	Phosphatic.	24	225	1†
9†	7	H.	19-4-'89	Urethral lithotomy.	No record.	—	—	—	—	Phosphatic.	60	335	54
10*	3	H.	29-11-'90	Litholapaxy.	48	4 & 6	6	5	1	Phosphates and urates.	15	72	21
11*	50	H.	28-12-'90	,,	14	10½	16	3	1	Fawn-coloured uric acid with phosphates.	12	115	3
12*	7	H.	7-1-'91	,,	49	5½ & 9½	10	7	1	Urates and phosphates.	12	200	3
13*	4	H.	15-4-'93	,,	50	7, 7½, & 10½	10 & 12	14	1	Fawn-coloured uric acid.	30	391	8
14*	40	H.	17-4-'93	,,	21	10½ & 15	18	3	1	Phosphates, with uric acid nucleus.	24	211	6
15*	5	H.	30-4-'93	,,	43	4 & 6	6, 7, & 8	5	1	Oxalate of lime, phosphate of lime, and urates.	36	86	4
16*	13	H.	28-7-'93	,,	70	8, 13, & 15	15, 16, & 17	9	1	Fawn-coloured uric acid.	36	702	5
17*	5	H.	18-12-'93	,,	38	5 & 7	6 & 8	7	1	Uric acid and phosphates.	24	86	2
18*	60	H.	11-5-'95	,,	34	7, 10, 15, & 19	14 & 29 French	7	1	Fawn-coloured uric acid.	36	480	3
19*	5	M.	12-11-'95	,,	25	4 & 8	6 & 8	4	1	Fawn-coloured uric acid.	24	139	3
20*	9	H.	30-12-'95	,,	17	8 & 10	14	2	1	Phosphates.	6	120	3

* Successful. † Relieved.

CASE 5. — A Brahmin girl aged four and a half years was brought to the Indore City Dispensary on Oct. 17th, 1887, suffering from complete retention of urine. Her friends gave the following history: "The girl has laboured under stone symptoms for the last two years, and latterly these symptoms have become aggravated, so much so that she cries and rolls on the ground from paroxysms of pain at each effort of micturition; passes urine about thirty times in the twenty-four hours; was seized with retention of urine early this morning." The native assistant at the dispensary, finding the stone firmly wedged in the urethra, at once sent the girl to me at the hospital. Chloroform having been administered I returned the stone into the bladder with some difficulty, and easily disposed of it by means of a No. 6 lithotrite, which I passed into the bladder twice. A No. 10 evacuating catheter passed readily into the bladder and the operation lasted twelve minutes. The stone, a mulberry one, consisted of oxalate of lime and uric acid and weighed twenty grains. Next day she was walking about the ward of the hospital, and the day after she had no urinary symptoms and passed urine seven times in the twenty-hours. She went home on Oct. 21st, having been in hospital only four days. These mulberry calculi grow very slowly as a rule. Nearly half of this patient's young life had been spent in pain and misery. For how much longer she might have suffered had she not been seized with retention of urine it is difficult to surmise.

CASE 6.—A Rajput girl aged three years was admitted into hospital on Oct. 29th, 1887, with well-marked symptoms of stone in the bladder of one year's standing. Her condition was most pitiable. She was thin and anæmic. For six months she had suffered from great irritability of bladder accompanied by prolapsus ani at each effort of micturition, having no rest at night, and passed urine about forty times during the twenty-four hours. On Oct. 30th I placed her under the influence of chloroform, and passing in a No. 6 lithotrite seized a large stone readily. The bladder resented the presence of the lithotrite and spasmodic contraction of the viscus was very violent, although she was

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deeply under the influence of the anæsthetic. A No. 8 evacuating cannula passed readily into the bladder. Whilst working the lithotrite and aspirator my assistant pressed the wall of the urethra against the instruments so as to retain as much urine in the bladder as possible. Nevertheless, a good deal of fluid leaked out of the bladder. I was obliged to use the lithotrite on six separate occasions, and after three-quarters of an hour's work I had extracted the entire calculus. The débris, when dried, weighed 183 grains, and consisted of phosphates and a small nucleus of oxalate of lime. The straining and the very irritable state of the bladder made the operation a very prolonged one. The after history of this case was briefly as follows. On Oct. 31st the patient did not cry when passing urine; there was no prolapse of the anus; she slept well, had passed urine seven times since the operation, and had wetted her bedclothes. There was no pain on pressure over the region of the bladder. On Nov. 1st the morning temperature was normal. The patient had slept soundly during the night. On the 2nd she ate well and had sound sleep, had full control over the bladder, and passed urine eight times in the twenty-four hours. On the 3rd she played about the hospital grounds and seemed quite happy. The change in her condition in so short a time was very remarkable. Her mother took her home in the evening.

CASE 8.—A low-caste Hindu brought his daughter aged seven years to the Indore Hospital on March 12th, 1889, suffering from very urgent stone symptoms. She had suffered for two years and as she had lost control over the bladder was in a very miserable condition. She was at once placed under the influence of chloroform, and I struck a large, soft stone, which I crushed with a No. 6 fully fenestrated lithotrite. The lithotrite was introduced on nine separate occasions owing to the straining of the bladder. No difficulty was experienced in passing a No. 14 evacuating catheter, and on two occasions I passed a No. 15 straight catheter, to which I attached a Berkeley Hill's aspirator. The débris weighed 225 grains and the operation lasted fifty-seven minutes. The girl resided in the city of Indore, and her father took her home the same evening much against the advice and wishes of my assistant, saying, as he left the hospital, that he could not afford to spend any more time on his daughter. If his son had undergone a litholapaxy he would doubtless have spent three or four days in looking after him in the hospital. After all, there is much to be said for woman's rights, and even something for the new woman. My assistant paid the girl a visit four days after the operation and found her playing outside her hut. She had regained perfect control over the bladder and was perfectly well.

CASE 16.—A young woman aged eighteen years, a Bhîl by caste, came to the Indore Hospital on July 28th, 1893, with urgent symptoms of stone in the bladder, which had existed for three years. I broke the stone—a hard one—with a No. 15 lithotrite and finished the operation by means of a No. 13 and a No. 8 lithotrite. Evacuating catheters, Nos. 15, 16, and 17, were employed. The patient strained violently during the greater part of the operation and the fluid in the bladder was rapidly expelled, although my assistant pressed the urethra against the lithotrite while I continued the crushing process. I was compelled to introduce the lithotrite into the bladder on nine different occasions and the operation was therefore a prolonged one, lasting seventy minutes. The débris consisted of fawn-coloured uric acid, and when dry, next day, weighed 702 grains. There were no untoward symptoms of any kind after the operation and she remained only five days in hospital.

There are but two cases in the table appended which were not amenable to litholapaxy and their histories are briefly the following.

CASE 7.—A weak anæmic woman was admitted into the Indore Hospital on June 1st, 1888, with symptoms of stone in the bladder of three years' standing. She gave her age as thirty, although she looked more like fifty years. During the previous six months she had suffered from constant dribbling of urine and her life was a burden to her. Next day, having been placed under the influence of chloroform, a stone was found bulging into the vagina. On passing a small steel sound into the urethra it at once impinged on the stone, which was pressing against the meatus. I tried to pass a small lithotrite, and in endeavouring to do so the urethra gave way at the meatus and the rupture extended backwards for half an inch, so thin and weak had the urethra become by the constant pressure exerted on it by the stone. I therefore extended the rupture by a clean cut of a scalpel for another inch, which included the neck of the bladder, and exposed the stone, which I then found was tightly grasped by the bladder and was perfectly fixed in position. I now endeavoured to crush the stone with a large lithotrite, but this I found not feasible, as there was no room in which I could work the instrument. I accordingly extracted the stone by means of an ordinary lithotomy forceps, but this I accomplished with very great difficulty. Indeed, I was obliged to peel the bladder from the stone by means of a broad director, while my assistant made traction with the lithotomy forceps, so intimately united were the bladder and stone. On extracting the calculus, which weighed 1140 grains and was composed of phosphates and urates, I found it to be a perfect cast of a very contracted female bladder, and on the inferior and posterior aspect of the stone were two well-marked deep depressions, or blind holes, corresponding to the openings of the ureters into the bladder. I then washed out the bladder with an irrigator and brought the margins of the incision together with stout ligatures. The after-history of this case was as follows. On June 4th the ligatures were in position; the wound looked healthy; and urine passed drop by drop. On the 8th one or two of the the ligatures near the meatus had given way; the remainder of the incision co-apted well. On the 13th the greater part of the incision was well joined; there was some gaping near the meatus; the dribbling of urine was much less. On the 16th the patient had more control over the bladder; the anterior portion of the wound in the urethra was refreshed by the scalpel and new sutures were introduced. On the 19th the urine could be retained for two hours at a time. The patient, however, occasionally passed a small quantity of urine involuntarily. On the 22nd urine was passed voluntarily three times during the day and twice during the night. There was no dribbling of urine during the day time, but sometimes a few drops of urine were passed in her sleep. The patient's health was much improved. On the 24th the urine could be retained for four hours at a time and was passed only twice during the night. The patient's husband, who accompanied her to the hospital, insisted on taking her home as the monsoon had set in and he was obliged to look after his fields and the sowing of crops. The patient promised to return to the hospital in a month's time. As a matter of fact this woman never did return to the hospital for treatment, but I have little doubt that she ultimately regained perfect control over the bladder. I question very much if a suprapubic lithotomy would have given any better results than those which followed the operation I was forced to perform. A suprapubic lithotomy in such a case would have been a very difficult operation, for no water could have been injected into the bladder, and fixed as the stone was there would have been considerable danger of wounding the peritoneum in extracting it by the suprapubic route. Indeed, the peritoneum in a case of this kind, where the size of the bladder had been reduced to the dimensions of a small pear, would have descended much lower than it usually does. I showed the calculus removed from this patient's bladder to the Fellows of the Medical Society of London in March, 1891, and a more perfect specimen of its kind does not exist.

CASE 9.—A Hindoo girl aged seven years was admitted into the Indore Hospital on April 19th, 1889, in a most miserable condition, suffering from stone in the bladder and incontinence of urine. Her mother, who brought her to the hospital, stated that the girl had suffered from stone symptoms from her infancy. Placing her at once under the influence of chloroform I found the calculus sticking in the meatus of the urethra. There was a large hole in the bladder into which I could readily insert my index finger. This hole was about an inch from the meatus. I therefore slit up the urethra, and seizing the stone with a lithotomy forceps endeavoured to extract it. In doing so the stone, a phosphatic one, parted in two, and the anterior half came away in the jaws of the forceps. The posterior half of the stone I found firmly attached to the bladder wall and I removed it by means of the scoop and forceps. The bladder and vagina were well washed out by an irrigator and she was removed to bed. The stone weighed 335 grains—a large one for a child of her age. Her health improved after the operation, and with care and rest and good feeding she rapidly grew plump. On May 24th I performed an operation for vesico-vaginal fistula. Such operations in young girls are extremely difficult owing to the limited space

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afforded for manipulating instruments, and in order to give myself more room I divided the perineum almost to the anus. Silver wire sutures were employed; a gum elastic catheter was retained in the bladder, and the legs were tied together with bandages. On the 27th the perineal incision and wounds of the urethra and bladder had seemingly healed. Urine was passed by catheter. On the 30th the patient's health had much improved; when the catheter was removed for a few minutes there was dribbling of urine. On June 3rd the catheter was removed for an hour; meanwhile, urine was passed by stream. On the 9th the sutures were removed; urine passed by stream, and the catheter was removed for good. On the 13th the urine could be retained for half an hour, and then was passed by stream, but a few drops came by vagina. On examination it was found that a pinhole existed in the vesico-vaginal septum. The patient's mother, becoming weary of staying in hospital, took the child home, promising to return some months later. She, however, did not keep her promise. Bearing in mind the child's age I am inclined to think that she ultimately made a complete recovery, but to be on the safe side I have noted the result as "relieved" and not successful.

To recapitulate; adding together Surgeon-Lieutenant-Colonel Freyer's cases and those admitted into the hospitals at Hyderabad, Scind, and Indore, Central India, we get a total of 3757 cases of stone in the bladder in patients of all ages and of both sexes. Amongst this number there were 94 females, 88 of whom were treated by litholapaxy, with a successful result in 87 cases. Brigade-Surgeon-Lieutenant-Colonel Forbes Keith treated all his female stone cases, 57 in number, by litholapaxy and lost only one patient. Surgeon-Lieutenant-Colonel Freyer treated 13 female patients out of a total of 17 by litholapaxy, and in no case did he perform a suprapubic lithotomy on a female. A glance at Table I. should convince the most sceptical that litholapaxy is capable of dealing most successfully with large stones in young girls and women, but judging from much that has been written about litholapaxy in boys I am quite prepared to see it gravely stated that litholapaxy should be adopted only in cases of small calculi occurring in girls, and that when the stone is of considerable size it should be removed by a suprapubic lithotomy. Such is certainly not my opinion. I think that in these days of aseptic surgery a vaginal lithotomy in an adult female will offer quite as good a chance of success as a suprapubic lithotomy. The clean incision made by a scalpel is readily stitched together, and if the vagina be rendered aseptic by filling it with iodoform gauze and a soft catheter be tied in the bladder perfect union should take place in four or five days. But the perfection of treatment for the vast majority of calculi in girls and women is unquestionably litholapaxy, and it is the ideal to which we should aspire if we are to obtain the maximum of success. For those who are being continually afforded opportunities of crushing stones in boys and men the operation of litholapaxy in girls and women is an extremely facile one. The route to the bladder in females is short and straight; there is no hypertrophied prostate to bar the way of the lithotrite into the bladder nor a post-prostatic pouch, that bugbear to successful litholapaxy in males, to be dealt with, and pouched bladders must be rare indeed in females. The instruments employed are the same as we use in boys and men, and as cases of stone are so rare in girls and women it would scarcely be worth while to fit oneself out with a supply of short evacuating cannulæ. I have always employed the same instruments in girls and women as I use in boys and men, and have found them in every way satisfactory. In some cases where girls and women strain very violently during the operation the bladder soon becomes empty of fluid, and then it will be a wise precaution to withdraw the lithotrite and inject some more water. Much aid will be given to the operator if his assistant presses the urethra against the lithotrite and cannula while they are being employed. The general surgeon in Europe is afforded but few opportunities of learning how to use a lithotrite with precision and with safety to his patient. This is his misfortune and not his fault. Bearing in mind the superiority of litholapaxy to all other methods of extracting a stone from the female bladder he will, I think, be acting wisely if he entrusts the few cases of calculi in females which he may meet with to one skilled in the use of the lithotrite.

Cresswell-gardens.

(*To be continued.*)

TREATMENT OF

A CASE OF ADULT HYDROCEPHALUS BY SUPRA-TENTORIAL AND SUB-TENTORIAL OPERATIONS.

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WHEN we recommend trephining for the relief of intracranial pressure it cannot be a matter of indifference whether the opening be above or below the tentorium, even when we do not aim at the removal of the cause. When the cause is situated below the tentorium this is especially obvious because the sub-tentorial space is so small compared to the general cranial cavity, its walls and roof are so unyielding, its outlets above and below so narrow, and a portion of its contents so vitally important and so sensitive to compression.

Adult internal hydrocephalus, apart from acute meningitis, is almost always due to sub-tentorial tumour, and is, indeed, a very common consequence of such a tumour. The tumour causes the hydrocephalus either (*a*) by compressing the veins of Galen; (*b*) compressing the outlet from the lateral ventricles; or (*c*) compressing both. There is a certain number of cases where, at the necropsy, the mechanism has seemed uncertain, but one of the above appears in most instances to be the correct explanation. From this it follows that in order permanently to remove the hydrocephalus in a case of tumour (at all events, in most instances) the tumour must (1) be removed, (2) subside, "be absorbed," or (3) become arrested at the same time that relief is afforded by some means to the compression already set up before arrest occurred.

1. *Removal.*—In the first case the opening would naturally be made below the tentorium. But such cases are few, because at present there are few sub-tentorial tumours which admit of removal. Some are undiscoverable from lack of exact localising data, and cerebellar tumours are very apt to belong to this class; some are inaccessible on account of their remoteness from the trephine hole; some are untouchable because either of their position amongst vital structures, their extent, their nature, their attachments, or their complications. The statistics show this. Dr. Hale White's series of 100 brain tumours[1] include 41 in which there was a sub-tentorial growth, 27 in the cerebellum, 2 in the cerebellum and pons, 6 in the pons, 1 in the pons and medulla, 1 in the medulla, and 4 growing from the dura mater. Of these 41 Dr. Hale White considered that 6 cerebellar tumours and 1 growing from the dura mater could probably have been removed. That is about 17·5 per cent., a percentage which seems to contrast very favourably with his estimate for the whole brain—viz., 10, or at most 14, per cent. There is, however, a further consideration on which Dr. Hale White lays emphasis. How many of these were discoverable? Cerebellar growths, which form the majority of those removeable, are apt to be latent or to give little more than so-called "general symptoms"—e.g., headache, vomiting, and optic neuritis. But the optic neuritis in cerebellar cases is remarkably constant,[2] more so, perhaps, than in tumours of any other part of the brain, usually early and often obtrusive, because loss of sight is often an early event. If, therefore, optic neuritis were absent I cannot but think that we should hesitate to trephine for the removal of a supposed cerebellar growth unless we had other very pronounced evidence of its existence. Now in 123 (81) of Dr. Hale White's series there was no optic neuritis, and therefore probably one would not have operated, although from the strictly pathological point of view it was to be regarded as removeable. Again in 36 (77) it is stated that the cerebral symptoms were masked by those of pyæmia, so that we can scarcely consider it. Omitting these two cases we have only 5 left which we can say were both diagnosable and removeable—i.e., 12·5 per cent. But how many of these

[1] Guy's Hospital Reports, vol. xliii., 1885, p. 117.

[2] Edmunds and Lawford: Transactions of the Ophthalmological Society, vol. iv., 1884, p. 172.

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could have been so exactly localised as to be discovered at the operation? On this point the notes of the cases did not allow Dr. Hale White to come to any conclusion. Dr. Allen Starr[3] lays special stress on the difficulty of diagnosing cerebellar tumours unless they actually present at the posterior surface. Of 16 cases operated on in 9 the tumour was not found, in 2 it was found and could not be removed, and in 2 it was removed and the patient died. In 3 only—i.e., in 19 per cent.—was its removal a success. We cannot, of course, apply this percentage to the percentage deduced from post-mortem observation, but at least it suggests that the 12·5 per cent. of diagnosable and removeable tumours would be greatly reduced by the number which would be undiscoverable at the operation. We have, therefore, to consider what can be done in the great majority of cases when no removal can be hoped for.

2. *Subsidence.*—We may secure the subsidence of the tumour. Whether this ever applies to any tumour except a gumma is doubtful, but in any case subsidence requires time, and when symptoms are severe time cannot be afforded. Sudden death may intervene and is far from uncommon. It is, indeed, rather startling to note that out of 7 cases which Dr. Hale White considered removeable 3 died suddenly. Sight may be lost while we are waiting, and the combination of optic neuritis due to tumour and compression of the chiasma due to hydrocephalus is apt sometimes to act rapidly. Lastly, it is conceivable that the cortex may suffer from long-continued pressure. What can we do in the meantime? Two operations are open to us: we may trephine above the tentorium and tap or even drain the lateral ventricles (bearing in mind the two main risks of sepsis and over-quick escape of fluid) or we may trephine below the tentorium and allow the sub-arachnoid space to empty itself. All we want is temporary relief and either may afford it.

3. *Arrest.*—But few cerebellar tumours are syphilitic, and cerebellar tumours form the majority of sub-tentorial tumours, therefore presumably this majority will not subside under iodide and mercury or otherwise. We can then only hope for arrest, and fortunately arrest is not very rare, especially in the case of tuberculous masses. But we must manage more than a mere arrest of the growth, for there is pressure already set up and we have to relieve it, and relieve it permanently. For this purpose a supra-tentorial opening will not do, since tapping the lateral ventricles is plainly out of place, and permanent drainage is too dangerous to be thought of. But another possibility presents itself. May not an opening made below the tentorium effect what we require? It will certainly relieve the general sub-tentorial pressure and even when skin and muscle are closed over it it will continue to give additional space. By thus relieving the general pressure, may we not fairly expect it also to relieve the local pressure on the veins of Galen or the outlet from the lateral ventricles? If so, the cause of the hydrocephalus should disappear and the hydrocephalus disappear with it. In the following case the conclusion that something of this sort has occurred can scarcely be escaped.

The patient, a rather strumous-looking girl aged seventeen years, was admitted to the Devon and Exeter Hospital on Dec. 28th, 1894, with complete blindness, well-marked double optic neuritis, headache, and a history of vomiting. She was not anæmic, had no symptom of plumbism, and her urine was normal. She gave the following history, which her mother confirmed. Up to the preceding March she had been perfectly well, but about that time she noticed that when out walking in the dusk a dark shadow would suddenly come over her sight, and "for one or two minutes" she could not see. At first this was very occasional, but gradually it became more frequent, occurring several times in the same evening, and the loss of sight became longer, "three or four minutes at a time." Later (she was very indefinite about her dates) this began to occur in the daytime as well, and soon looking at any bright light would take away her sight for several minutes. In the intervals vision was becoming progressively worse. She had always been subject to "bilious attacks" of headache and vomiting, but since March these had become more frequent—about once a fortnight, usually in the morning, and accompanied by vertigo. On Nov. 5th, 1894, she went to the West of England Eye Infirmary, being then almost blind. Pronounced double optic neuritis was found and the following note was made: "Vision of the right eye, shadows; of the left, $\frac{1}{60}$. She has had for the past week shaking attacks all down the right side, occasionally only the arm being affected. These attacks came on on alternate days and she was sick the whole day. The attacks did not begin in any particular spot and she did not lose consciousness. There is constant headache, most acute over the left ear; no tenderness of head discoverable, no paralysis of motion or sensation." She was put on a mixture of bromide and iodide of potash, and for a time the headache and sickness disappeared, nor were there any more "shaking" attacks. On Christmas night she was awakened by intense headache all over her head, with violent vomiting and "shaking" all over, with great tenderness of the skull. She was admitted to the Devon and Exeter Hospital on the 28th. As regards past illnesses, she had had none lately. She had had scarlet fever as a child, but it left no sequelæ. She had never had a blow on the head or any discharge from, or pain in, either ear and had never been deaf. Her father and mother were both alive and well, aged forty-six and forty-four years respectively. A brother and sister (twins) died in infancy from convulsions. Her mother's sister died from what appears to have been phthisis. There was no evidence of syphilis. The patient was a fairly-nourished but somewhat strumous-looking girl with a drowsy expression. She was absolutely blind and could not tell where the windows were. Her speech was clear but deliberate; her answers were quite intelligent but delayed, and then commencing rather suddenly in an unnecessarily loud tone. Her memory seemed to be unaffected. She walked easily and well when guided. There was slight headache on the left side of the head between the ear and the occiput; there were no sickness and no giddiness and the patient slept and ate well. She was given thirty grains of iodide three times a day with small doses of mercury. There was a very slight tremor of the right arm, which movement did not increase. No paralysis of motion or sensation was present. The right knee-jerk was greatly diminished, the left being normal. The condition of the cranial nerves was as follows: 1. There was complete bilateral anosmia (practically no coryza was produced by the iodide). 2. Absolute blindness existed for the last week. 3, 4, and 6. The pupils were equal, but sluggish in reacting to light. No strabismus or nystagmus was present, but both lateral conjugate movements of the eyes seemed feeble. 8. Normal. 5, 7, 9, 10, 11, and 12. Normal. The heart, lungs, and abdomen were natural and the temperature was normal. The optic neuritis was very intense and the swollen papillæ were rather pale. The diagnosis was intra-cranial tumour. The early blindness, occipital headache, early and sometimes severe vomiting and vertigo, with absence of motor or sensory paralysis (anosmia and sluggish lateral movements of the eyes excepted), favoured the suggestion that it was cerebellar. The "shaking attacks" in the arm and the persistent slight tremor in it, taken with the sluggish ocular movements, might have raised a suspicion of its being pontine, but pressure on the pons from above might, it was thought, explain these. The drowsiness, slow speech, and delayed answers, with the early blindness, were regarded as suggesting distension of the lateral ventricles. Putting everything together it was considered that the tumour was certainly sub-tentorial and probably in the fore and under part of the cerebellum. As iodide and mercury were evidently useless and it was possible that operation might in some measure restore the sight and relieve the headache it was decided to trephine. It did not then occur to me that trephining could prove to be more than a palliative measure and therefore the position of the opening seemed immaterial.

Operation 1. Supra-tentorial.—Accordingly, on Jan. 1st, 1895, my colleague, Mr. Bankart, trephined. The centre of an inch trephine was placed on a line drawn vertically from the external auditory meatus at a point about four and a half inches above the external meatus and three inches from the antero-posterior mid-line of the skull. The dura mater bulged and scarcely any, if any, pulsation could be perceived, and on incising it the brain bulged out so forcibly that to prevent an immediate and considerable hernia it was necessary to push a small trocar and cannula into the ventricle. About six drachms of clear, slightly albuminous fluid were drawn off. The brain bulged less and pulsation could be seen in it. The flaps were replaced and sutured. The patient rallied well and the wound did admirably. On the 3rd some slight amnesia was noticed, and this was more marked next day, when some slight weakness was observed in the right side of the mouth and the right side

[3] Starr: Brain Surgery, p. 216.

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of the tongue. These symptoms were considered to be due to the position of the opening and soon disappeared, so that on the 7th they were noted to be gone. The temperature had remained normal since the operation and the headache had completely left her. There was also no further vomiting or vertigo. The sight, however, had not returned and did not do so subsequently. Other symptoms now began to make their appearance. The speech became blurred and sibilant as if she was speaking with her mouth full of saliva; slight divergent squint was observed, apparently from weakness of the internal recti, and there was some nystagmus on looking towards the right. On the 8th there was slight proptosis, more marked on the right side, and slight nystagmus on looking either right or left. She was drowsy, with a furred tongue and offensive breath. There was defective sensation to touch over the lower part of the face on the right side, complete loss of sense of touch all over the right arm (the sense of pain was retained), and allochiria over the left arm; on the legs and trunk there was patchy anæsthesia. The right leg felt "sleepy and tingling." On the 9th some weakness was noticed in the right hand, and next day the right hand became absolutely palsied. Both knee-jerks were completely lost. There was no weakness of either leg. On the 11th the hand began to recover power, but there was slight ptosis noted on the left side. On the 14th, although there was no weakness of legs, she could not stand on attempting to do so (for the first time since the operation), as there was marked incoördination, the legs being thrown wildly about. On the 17th the left pupil was noticed to be larger than the right, the right reacted slightly to light, but the left not at all. The relative size of the pupils after this date was somewhat variable, but when unequal the left was always the larger. On the 20th the hernia cerebri, which had been steadily increasing, had become so large that it was feared the skin over it might give way, and therefore an exploring needle was pushed through it into the ventricle and eleven drachms of fluid drawn off. On the 26th the patient was very drowsy and said her right leg felt sleepy and tingling again. Next day she complained of severe pain in the right side of the abdomen, which was extremely hyperæsthetic. Her temperature rose to 103·2° F. with a slight rigor, and the right arm and leg became flaccid and powerless. With this the right knee-jerk, which, like the left, had been completely abolished, returned and became excessive with ankle clonus, the left knee-jerk remaining absent. On the 30th she was very irritable and lay curled up on her right side. There was some occasional retraction of both sides of the mouth. On Feb. 3rd she was almost unconscious, scarcely recognised her mother's voice, and passed her motions under her. The temperature had again become normal. From this date she improved, the hyperæsthesia and irritability passing off and some return of power showing itself in the arm and leg (not in the hand). But the hernia was again increasing and drowsiness became very marked. At last, on Feb. 12th, this almost amounted to unconsciousness; she evinced no interest in her surroundings and seemed steadily passing into coma. So serious did her condition appear that it was thought admissible to run the risk of draining the ventricle and a small hydrocele trocar and cannula were again passed in through the hernia. Before withdrawing the cannula a very small (No. 1) catheter was pushed in and afterwards tied in place, large dressings being applied over it. A great quantity of fluid drained away, the catheter being kept in for three days. The effect of this drainage was unmistakeable. Improvement at once set in, and on Feb. 18th a note was made that "she is much better, lies straight in bed, and is bright and cheerful." Her movements became brisk again and the drowsiness vanished. After the catheter was removed the drainage did not cease, but merely lessened, the fluid continuing to escape apparently along the track the catheter had left. On Feb. 25th the "hernia less tense, greatly better." The drainage now ceased, and with its cessation drowsiness began to return, so that on Feb. 28th "she is very drowsy again; no drainage." On March 1st free drainage through the hernia re-commenced spontaneously and went on intermittently for a fortnight, one or two days at a time with intervals of two or three days. With this the drowsiness again disappeared and remained absent, and she began to regain the flesh which she had lost. On March 11th it was noted that there was some weakness of the conjugate lateral movement of both eyes towards the right. Then came a week during which there was no drainage and drowsiness again became very marked. It now occurred to me that a sub-tentorial opening might have the effect referred to above, and accordingly on March 21st (Mr. Bankart being away) my colleague Mr. Harris operated.

Operation 2. Sub-tentorial.—After raising the soft parts a three-quarter inch trephine-hole was made over the left cerebellar hemisphere which bulged considerably. It was thought possible that the tumour might be cystic, and so a small trocar was passed in two directions forwards, inwards and upwards, but no fluid was found. The flap was replaced and sutured; the patient rallied well and the wound did excellently. Without giving detailed notes it will be sufficient to say that since this second operation there has never been the slightest return of drowsiness. An attack of headache and vomiting occurred about four months ago which rapidly subsided under iodide and mercury, but no drowsiness accompanied it.

On Dec. 14th I saw the girl at her home. She was perfectly intelligent, cheerful, and happy; she showed no trace of drowsiness, her answers were not delayed, and she only occasionally hesitated for a word. There had been no return of drainage through the hernia, and the hernia was greatly reduced in size and quite flaccid. This reduction was no doubt largely owing to a gentle continuous pressure applied by Mr. Harris. There was a considerable but soft bulging over the sub-tentorial trephine-hole. Smell was absent, but taste was present (said to be variable). Sight remained absent and the discs were white and filled in, but without much change in the calibre of the vessels. The conjugate movement of both eyes was to the left (it used to be to the right), was weak, and there was some nystagmus in all directions. The pupils were large and equal, reacting slightly to light. There was no proptosis. Sensation to touch was normal on the face. There was very slight weakness of the right side of the mouth and the tongue deviated slightly to the light. Her right hand was powerless, but she could move the arm fairly. Both legs were very weak and she could not stand, but there did not seem to be much difference between them except that flexion of the ankle was weaker on the right than on the left. Sensation was lost on the right leg from the foot to slightly above the knee and on the right hand and half way up the forearm. The plantar reflexes were normal, the left knee-jerk was lost, and the right exaggerated, and there was ankle clonus on the right side. The sphincters were normal. She had no pain of any kind and no sickness, had an abnormally good appetite, and had decidedly gained flesh. The growth seems to have been arrested. Whether the arrest is permanent remains to be seen. If it was, as I was inclined to think, tuberculous tubercle might show itself sooner or later in the lungs. She had an occasional slight dry cough, but no physical signs in the chest.

I have given the case practically in full, and it will be obvious that the position of the first trephining by its effects greatly confused the symptoms; but the following points seem clear, and it is to these I wish to draw attention: (1) the case was clearly one of intra-cranial tumour; (2) it was also clearly, I consider, one of sub-tentorial tumour; (3) internal hydrocephalus was marked and increasing; (4) a supra-tentorial trephining was a means of gaining time; and (5) a sub-tentorial trephining appeared to remove the hydrocephalus permanently. I am glad of this opportunity of expressing my great indebtedness to my colleagues, Mr. Bankart and Mr. Harris, for so kindly undertaking the surgery of the case, and also to the house surgeon, Mr. Andrew, for the skill and care he bestowed on the after treatment.

Exeter.

THE GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN.—This hospital, designed by Messrs. Roumieu and Aitchison, honorary architects, now being erected at the south corner of Vincent-square, Westminster (the foundation stone of which was laid by Lady Kortright in July last, who has been a munificent donor to the building fund), is to be constructed upon the latest lines of efficiency. The materials are red brick and red terra-cotta, the style of architecture aimed at being that of Free North Italian Gothic. It is expected that the Princess Louise will open the hospital next season. The cost of the building is nearly £9000, exclusive of the out-patients' department lately erected at a cost of £3000.

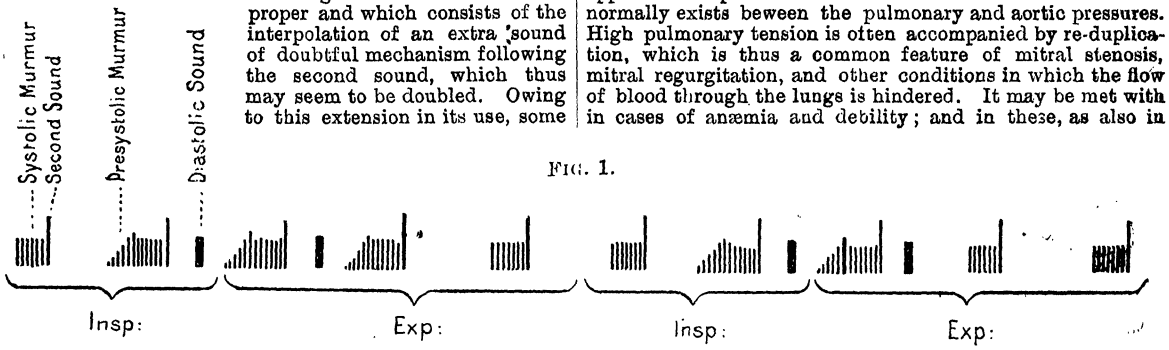
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ON RE-DUPLICATION OF THE SECOND SOUND.

BY ARTHUR G. PHEAR, M.D. CANTAB., M.R.C.P. LOND.,
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THE closure of the semilunar valves is associated with a sound which under ordinary conditions is single. Under special circumstances the sound becomes divided into two parts and is described as re-duplicated. The term "re-duplication of the second sound" has, however, been extended to denote a phenomenon which is quite distinct from doubling of the second sound proper and which consists of the interpolation of an extra sound of doubtful mechanism following the second sound, which thus may seem to be doubled. Owing to this extension in its use, some ambiguity has arisen in regard to the significance of the term, an ambiguity which may best be avoided by employing it only in its strict meaning—i.e., when an actual doubling of the second sound exists. It is a matter of importance to differentiate the genuine from the spurious forms of re-duplication, and in the course of this communication an attempt will be made to indicate briefly how this distinction can be drawn. In the event of the second sound appearing to be doubled the following points should be ascertained: (1) The area over which the double sound is audible as such, and of this area the special point at which the double nature of the sound is most distinct; (2) the rhythm of the double sound, whether one part follows the other in the closest proximity, or leisurely after an appreciable interval; and (3) the quality of the two sounds, whether they are alike (each one resembling the normal second sound), or one only with the special character of the second sound, the other notably differing.

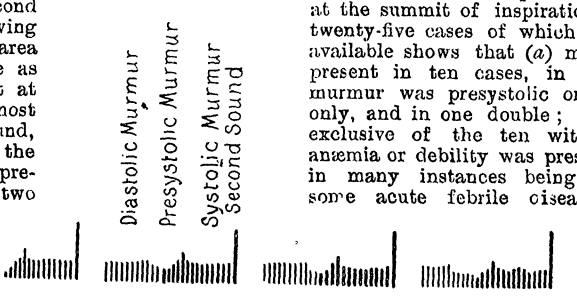
FIG. 1.



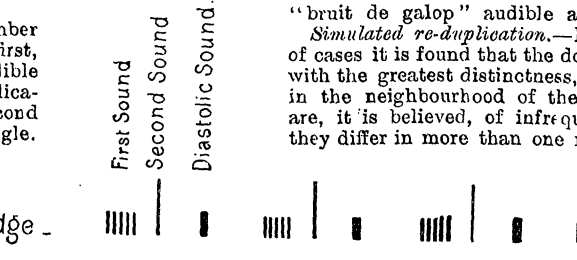
Genuine re-duplication.—In a large number of cases such an investigation shows, first, that the doubled sound is most clearly audible at the base. In many instances the re-duplication is limited to this region, the second sound at the apex, if audible, being single. In other cases, but less commonly, a double sound is heard at both apex and base, but with much more distinctness at the base than at the apex. Secondly, the two elements of the double sound are in close proximity, the interval by which they are separated being exceedingly short. Thirdly, the two elements, although they may differ in loudness, in other respects are similar, both possessing the special qualities by which the normal second sound is characterised. Re-duplication which conforms to the above description in every respect of distribution, rhythm, and quality is of frequent occurrence, and it is difficult to regard such cases in any other way than as examples of true doubling of the second sound, in all probability produced by the asynchronous closure of the pulmonary and aortic valves. The clearness with which the double sound is heard at a spot where presumably both aortic and pulmonary elements share in the composition of the second sound is in accordance with this view, which is further favoured by the similarity of the two parts of the double sound, and by the shortness of the interval by which they are separated. The re-duplication is often still more limited than has been indicated; it is frequently audible only to the left of the sternum, the second sound as heard to the right of this bone being single, or only indistinctly doubled. From this it would appear, as has been pointed out elsewhere,[1] that the pulmonary element of the second sound is singularly circumscribed in its conduction, as compared with the sound of aortic origin.

The circumstances under which a genuine re-duplication of the second sound may be produced are numerous. It appears to depend on a disturbance of the relation which normally exists beween the pulmonary and aortic pressures. High pulmonary tension is often accompanied by re-duplication, which is thus a common feature of mitral stenosis, mitral regurgitation, and other conditions in which the flow of blood through the lungs is hindered. It may be met with in cases of anæmia and debility; and in these, as also in cases of mitral disease, there is present in addition to the re-duplication, an accentuation of the second sound as heard to the left of the sternum. Re-duplication is by no means so commonly associated with high systemic pressure; it is occasionally heard, however, in cases of chronic interstitial nephritis, with hypertropied and strongly acting left ventricle. In many healthy persons it is produced when a deep breath is taken and held at the summit of inspiration. An analysis of twenty-five cases of which detailed notes are available shows that (*a*) mitral murmurs were present in ten cases, in five of which the murmur was presystolic only, in four systolic only, and in one double; (*b*) in twelve cases, exclusive of the ten with mitral murmurs, anæmia or debility was present, the individuals in many instances being convalescent from some acute febrile disease; (*c*) two were cases of acute lobar pneumonia; and (*d*) in one case there was hypertrophy of the heart, with high-tension pulse and "bruit de galop" audible at the apex.

FIG. 2.



Simulated re-duplication.—In a certain number of cases it is found that the double sound is heard with the greatest distinctness, not at the base, but in the neighbourhood of the apex. These cases are, it is believed, of infrequent occurrence and they differ in more than one respect from the re-duplicated second sound just now described. If the stethoscope be placed at the second left intercostal space, close to the sternal edge, a single second sound is heard. As the stethoscope is shifted downwards in the direction of the apex another sound becomes added to the normal second sound, occurring subsequently to it and after a definite interval. The quality of this interpolated sound varies; it is usually short and abrupt, but can be clearly distinguished in some respect of pitch or timbre from the second sound which precedes it. It is limited in distribution, being distinctly audible only in the neighbourhood of the apex-beat—as a rule between this point and the left border of the



[1] The Clinical Significance of Accentuated Second Sound By Ringer and Phear. THE LANCET, Sept. 29th, 1894.

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sternum, in the fifth or fourth interspace. Whatever be the mechanism by which such a double sound is produced, it can hardly be attributed to the asynchronous closure of the pulmonary and aortic semilunar valves; its area of audibility, the length of the interval which separates the two elements, and the dissimilarity of these elements are all opposed to such a view. The phenomenon cannot be regarded as a true re-duplication of the second sound; it differs, in its clinical features so widely from this that it can hardly be described as simulating genuine re-duplication very closely. By its position in the earlier part of diastole the abnormal sound may readily be distinguished from that which constitutes the "bruit de galop," and which in cases of interstitial nephritis with hypertrophied heart may give rise to an apparent doubling of the first sound. The rhythm indeed produced by the sequence of first sound, second sound, and early diastolic sound resembles more closely that of a canter than of a galop. It has been compared with a dactyl – ∪ ∪; but it may be more accurately indicated in musical notation, thus, a crotchet, two quavers, and a crotchet rest, the crotchet representing the first sound, the two quavers the second and interpolated sounds, and the crotchet rest standing for the pause before the cycle recommences. The two following cases are of interest in connexion with this subject.

CASE 1.—The patient was a man aged thirty-six years, who gave no history of rheumatism, but in the course of his life had been subjected to severe strain. He was very anæmic. The pulse was 80, small, and compressible, but regular. The apex beat was located in the fifth interspace in the nipple line. The impulse was weak; no thrill was felt. With the stethoscope a systolic murmur was heard at the apex, followed by the second sound; these two were constant. In addition two further signs were frequently audible, a presystolic murmur preceding and running up to the systolic murmur, and a short valvular sound in diastole, of a quality quite distinct from that of the second sound and dividing the interval between the second sound and the presystolic murmur into two approximately equal parts. On taking note of the relation of the respiratory movements to the presystolic murmur and the diastolic sound it was found that the murmur and sound were produced only during the later part of inspiration and the earlier part of expiration; they were thus heard in two or three beats of every five. These facts may be rendered clearer by a diagram. (See Fig. 1.) The diastolic sound was audible at the apex and between this point and the sternal margin in the fourth and fifth interspaces, but no higher than the fourth interspace. Although with none of the qualities of murmur it was not so sharp and clearly defined as the second sound which preceded it.

CASE 2.—This patient was a man aged fifty years. There was a history of more than one attack of rheumatic fever. The pulse was 40, regular, of slow rise, long duration, and gradual fall. The apex beat was in the fifth space, immediately to the left of the nipple line; the impulse was localised and heaving. A thrill, of presystolic rhythm, was felt in the region of the apex, at times continued into the early part of systole. Over the same area there was heard a presystolic murmur, running up to a long soft systolic murmur, which was terminated by the second sound; this was followed by a pause, but of short duration only, since the greater part of diastole was occupied by a long drawn-out murmur continuous with the rough presystolic reinforcement alluded to above. The auscultatory signs were specially easy to study by reason of the infrequency of the heart-beat. On shifting the stethoscope along the fifth interspace as far as the sternal margin the signs were materially altered. No murmur was audible at this spot. The first and second sounds were heard and, following these in the first half of diastole, a sound of short abrupt quality, not a murmur, yet quite unlike the second sound. (See Fig. 2.) The abnormal diastolic sound was plainly audible in both fifth and fourth interspaces close to the sternal edge, less distinctly in the third, and very indistinctly in the second interspace, where it was preceded by a loud accentuated second sound, very much louder than over the fifth interspace.

An interpolated sound similar to that which forms the chief point of interest in the above cases has been noticed by several observers, most of whom insist on its connexion with mitral stenosis. It is probably that described by Bouillaud[2] as the "bruit de rappel"; he compared it in rhythm to "the noise of the hammer which, after striking the iron, falls on the anvil, rebounds, and falls again motionless." Sansom drew attention to the sign in association with mitral narrowing in 1880,[3] and more recently[4] he has stated that it is to be found in at least one of every three cases of mitral stenosis; he regards it as especially a sign of the earlier periods of the history of the disease. It is also described by Potain[5] under the name of "claquement d'ouverture" of the mitral valve; he believed it to be evidence of a somewhat advanced degree of mitral stenosis, but short of great rigidity of the mitral valve.

It is not intended to discuss the mechanism of this abnormal sound. An endeavour has been made to indicate the features by which it may be distinguished from a true re-duplication of the second sound, and it is urged that, by whatever name it be designated, one be chosen which is descriptive of the phenomenon and may serve for its clinical recognition, without involving any unproved theory as to its mode of production, concerning which our knowledge is at present so deficient.

Welbeck-street, W.

[2] Traité Clinique des Maladies du Cœur, second edition, 1841, vol. i., p. 213.

[3] Proceedings of the Medical Society of London, vol. v., 1881, p. 191.

[4] The Diagnosis of Diseases of the Heart and Thoracic Aorta, 1892, p. 217.

[5] Clinique Médicale de la Charité, 1894, p. 36.

NOTE ON THE SMEGMA BACILLUS: ITS DIAGNOSTIC IMPORTANCE AND ITS CULTIVATION.

BY ALBERT S. GRÜNBAUM, M.A., M.B. CANTAB, M.R.C.P. LOND.

(FROM THE CLINIC NOTHNAGEL, VIENNA, JUNE, 1896).

THE smegma bacillus was discovered in 1885 by Matterstock,[6] and by Alvarez and Tavel,[7] independently. During the succeeding three years a large number of papers was written on the relations of the bacilli of smegma, of syphilis, and of tubercle, but since then the subject has been comparatively neglected. Although even at that time some writers indicated the possibility of its occurrence in the urine, and of its being mistaken for the tubercle bacillus, a possibility emphasised by Lustgarten and Mannaberg[8] when they found the smegma bacillus to be a normal inhabitant of the male urethra, the question does not seem to have been systematically examined[9] or thoroughly appreciated by most text-books on clinical diagnosis or on the examination of the urine, especially in this country. That the smegma bacillus frequently occurs in the urine, especially of females, had been known for some time in the Clinic Nothnagel when, at Dr. Mannaberg's suggestion, I undertook to determine the actual frequency and attempt the cultivation of the bacillus. Whilst my work was in progress a discussion in the Berlin Verein für Innere Medicin[10] showed that, although many clinical observers were aware of the facts, they considered them insufficiently well known, so that I have the less hesitation in partially repeating the observations there made.

Fifty specimens of urine from forty-seven individuals affected with various diseases (some with cystitis) were examined, ten from males and forty from females. The specimen was centrifugalised, the deposit spread on a cover-glass and stained in the usual way for tubercle bacilli with the Ziehl-Neelsen and Gabbett solutions. No smegma bacilli were found in any of the specimens obtained from males, but they have occasionally been found by other observers. Of the other specimens eleven were obtained by catheter; in none of these were any bacilli found. In the remaining twenty-nine specimens obtained in the ordinary way bacilli were found in seventeen; in the remaining twelve none were detected.

In the above numbers are included eight specimens obtained in the following way. A portion of urine was first

[6] Mitteilungen aus der Medicinischen Klinik der Universität, Würzburg, Band ii., p. 367.

[7] Alvarez et Tavel: Archives de Physiologie Normale et Pathologique, 1885, vol. vi., p. 303.

[8] Lustgarten und Mannaberg: Vierteljahrschrift für Dermatologie und Syphilis, 1887, p. 905.

[9] Except, perhaps, by Lésnik and Mayzel, in the practically inaccessible Gazeta Lekarska, 1891, No. 36. The abstracts give no information.

[10] Berliner Klinische Wochenschrift, 1896, p. 378.

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passed in the normal manner and the remainder then withdrawn by catheter. In the case of two patients no smegma bacilli were found in either portion; in that of the other two the urine passed in the normal manner contained them, whilst the portions obtained by catheter did not.

From these numbers it would appear that the smegma bacillus is to be found but rarely in the urine of males (in spite of its presence in the urethra) and in about 59 per cent. of females (in whose urethra I was unable to demonstrate the presence of the bacillus in six specimens examined). This percentage is probably rather too low, since some of the urines, by the kindness of Professor Schauta and his assistant Dr. Wertheim, were obtained from the gynæcological out-patient room, where patients have usually washed the external genitals before presenting themselves for examination.

In tabular form the results are as follows:—

	Normal.		Catheter.	
	Found.	Not found.	Found.	Not found.
Males	—	10	—	—
Females	15	10	—	7
(Separate portions from four patients)	2	2	—	4

For purposes of diagnosis various colouring methods have been proposed and recommended by various observers, most recently of all by Grethe,[11] who recommends the use of alcoholic methylene-blue solution for decolourisation instead of an acid solution. It appears to me that erroneous results are obtained by considering the colour-capacity of the smegma bacilli to be the same whether in smegma or in urine, since they are much more easily decolourised in the latter; and also that it is unpractical to now recommend a new method for staining tubercle bacilli when, in England, at any rate, the Ziehl-Neelsen and Gabbett solutions are in almost general use. As a matter of fact, one minute's immersion in absolute alcohol is sufficient to decolourise the smegma bacilli in urine, but, *as a rule, careful catheterisation eliminates all sources of diagnostic error*. This had been previously shown by Lustgarten and Mannaberg to hold good for the male, and the above results indicate that it applies equally for the female. It is therefore unnecessary, except to localise disease when present, to catheterise the ureters as was done in the case upon which the discussion in the Berlin Society arose. On that occasion Leyden stated that the smegma bacillus could be found in nearly every urine and that it never showed the irregularities of the tubercle bacillus. I was not fortunate, or, perhaps, not industrious enough to confirm the first statement by very thoroughly examining two cover-glass specimens in each case where no bacilli were found. The second statement is certainly not absolutely correct, for irregular specimens of the smegma bacillus exactly resembling the tubercle bacillus are to be found. As a rule, however, the former have a regular contour and more angular extremities than the latter, and, as has been frequently pointed out, occur in small groups or on shed epithelial cells. So that, all points taken into consideration—viz., their shape and grouping, their easy decolourisation by alcohol, and, principally, their absence in the urine obtained by catheter—the distinction does not present insuperable difficulties.

So far as I am aware no bacillus which gives the colour reactions of the tubercle bacillus has hitherto been cultivated from smegma. After trying many culture media I succeeded in growing in milk (but not in obtaining a pure culture) a bacillus which stained red with carbol-fuchsin, and was not decolourised in two minutes by Gabbett's solution. Although it may be that the fat in the culture medium assists the growth and composition I do not think that it causes the colour reaction, as suggested for other bacilli by Bienstock[12] and Gottstein,[13] because the other cocci and bacilli (one of which, a short, slender bacillus, easily isolated on gelatin, causing coagulation of milk, and constantly present) do not retain the red stain. Some effect may be due to the culture medium, since a bacillus, resembling that of smegma, which grows on agar serum, gives the colour reaction partially. This side issue is the more interesting since latterly tubercle bacilli (dried) have been found to contain 37 per cent. fat. In milk the bacillus assumes the short, rather plump form found in the smegma of the male, as compared with the rather more slender form found generally in the smegma of the female. Unfortunately, cultivation cannot be used for diagnostic purposes, since it will not grow from every urine in which it is present.

Vienna, June, 1896.

[11] Grethe, Fortschritte der Medicin, p. 328, 1896.
[12] Bienstock, ibid, 1886, p. 193.
[13] Gottstein, ibid, 1886, p. 249.

CEREBELLAR ABSCESS FOLLOWING MASTOID DISEASE; DEATH; NECROPSY.

BY J. BROOKE RIDLEY, M.D. EDIN.,
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INTRA-CRANIAL lesions the result of ear disease are of such marked interest owing to the important progress surgery has made in this direction, more especially with regard to cerebellar abscess, that any additional case in which this lesion has existed must necessarily be of considerable interest, for, so far as I am aware, the recorded cases are not numerous.

A schoolboy, fourteen years of age, had suffered from a discharge from the right ear for seven years, the result of acute otitis media during an attack of measles. About four years previously to his being seen by me the discharge ceased; he then had severe earache for some days, which got well without any treatment; beyond this he had had no trouble till the present attack, which started with the usual history given—cold, then cessation of the discharge. He had been confined to bed for a week suffering from severe earache together with the invariable concomitant symptoms which generally attend sudden stoppage of a discharge in this region, whether set up by a catarrh, polypus, granulations, or inspissated pus. As he was daily getting worse I saw him first on Jan. 7th, 1896. He looked very ill and was evidently in great pain; the face had a worn and anxious expression; the temperature was 105° F., and the pulse 125; the tongue was covered with a thick brown fur, the breath being most offensive; there was a cough, with bronchial catarrh of both lungs. He complained of acute pain in the mastoid region, radiating down the neck and towards the frontal, parietal, and occipital regions, severe headache, anorexia, retching, and insomnia, with a certain amount of delirium at night. There was marked tenderness over the jugular vessels; no redness or œdema over the mastoid presented, but slight pressure caused intense agony. Otoscopic examination of the right ear showed the external meatus free, with flakes of green pus adhering to the walls, the membrana with the malleus and incus were absent, and the tympanic cavity was clear and not inflamed. The left ear was normal. There was no photophobia, optic neuritis, or paralysis of any nerves present. He was quite conscious. To save reiteration I may here state that at no time was there any evidence of photophobia, optic neuritis, inequality or sluggish action of the pupils, or paralysis of any cranial nerves present, although repeated and careful examination was made upon numerous occasions throughout the illness. The diagnosis was acute inflammatory suppuration of the mastoid cells due to blocking of the exit from the antral cavity and possibly starting sinus thrombosis. The extreme gravity of the case and danger to life, with the benefits to be gained by the recognised surgical procedure of the day, were laid before the parents, but they refused to give consent to any operation, seeing that he had got well in the former attack without such being necessary. This being the case the line of treatment adopted was of a palliative nature and such as would relieve the most urgent symptoms—a calomel purge, quinine, and spongio-piline as hot as could be borne applied to the mastoid region hourly. Needless to say, there was no change in his condition during the first twenty-four hours. The meatus was well syringed out daily with warm antiseptic lotion. In the course of the next few days a sub-periosteal abscess appeared at the back of the right ear and above the level of the meatus. Much against the parents' wish this was opened by a free incision down to the bone, giving exit to a quantity of foul-smelling green pus. Bare and roughened

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bone was felt. A probe could be passed along a sinus into the antral cavity, whilst a steel director was easily pushed through the necrosed portion into the mastoid cells, giving free exit to more pus. The beneficial effect of this was kept up by linseed-meal poultices. The temperature fell to 100° and the pain abated. On Jan. 12th rigors began, followed by profuse sweating, copious diarrhœa, and vomiting. He looked very anæmic; the temperature was irregular; he was obviously much worse and in a condition of danger. These symptoms pointed strongly to, and were highly suggestive of, a pyæmic involvement of the system or that of abscess formation. The rigors varied from three to six a day and the temperature from 99° to 105°. The mother stated that she had noticed twitching on the right side of the face, but this I was never able to verify for myself. On Jan. 19th the wound behind the ear was closing up, but still discharged pus. The pain in the head was gone. He did not complain when firm pressure was made over the mastoid, digastric fossa, or jugular vessels, but he was restless, with irritability of temper and fits of depression. On Jan. 26th the vomiting, which had been of daily occurrence, was more marked and occurred several times a day. The diarrhœa ceased; the tongue was quite clean; there was a certain amount of emaciation present; the temperature was subnormal; there were no rigors; there was retraction of the abdominal walls and *tache cérébrale* was well marked. The pulse and respiration were slow. Cerebration was sluggish, the patient taking a long time to answer a question. Upon percussing the head no pain was complained of beyond that of a well-defined area over the right occipital region; here slight tapping caused great pain. On making him walk staggering gait was quite apparent, and on the patient closing his eyes there was a tendency to fall forwards; this together with the other symptoms was evidence in favour of cerebellar abscess. On Feb. 1st the incision behind the ear had quite healed; he sat up in bed, played with toys, and amused himself drawing pictures. Vomiting was still marked. The pulse was 40, the temperature sub-normal, and respiration slow but regular. There was no change in his condition till Feb. 7th, when he did not take so much notice of things and seemed difficult to rouse. He lay on his left side huddled up in bed, with the legs and thighs flexed. Constipation was present. The pulse, temperature, and respiration were as before; the vomiting was more frequent. On Feb. 12th violent paroxysms of acute pain set in over the vertex of the skull, causing him to clasp his hands over his head and scream during the attacks. Purgation and opium diminished their intensity and frequency. It was quite evident the end was slowly approaching. He was getting very emaciated. There was never any retraction of the head or Cheyne-Stokes respiration. On Feb. 22nd he sat up in bed to ask for a drink and fell back dead. The vomiting never abated and the temperature remained subnormal. After great difficulty permission was granted for a post-mortem examination of the head only.

Necropsy.—The skull cap came away easily; the dura mater was not adherent in any part; a degree of fulness was apparent as though there were increased intra-cerebral pressure; the dura mater stripped off easily, and with the exception of the veins being somewhat distended the surface of the brain looked healthy. There was no sign of meningitis, no caries of the petrous bone, a slight increase in the amount of cerebro-spinal fluid at the base, but no meningitis. The right tentorium cerebelli was seen to be distinctly bulged. On dividing it a large abscess was to be seen occupying the anterior and outer portion of the right lobe of the cerebellum evidently on the verge of bursting. The membranes were not adherent, neither was there any healthy layer of brain tissue seen to be intervening. On attempting to remove the brain the abscess burst and a quantity of offensive green pus escaped. There was a distinct limiting membrane encapsuling the abscess from the neighbouring brain tissue, but no channel of communication with the mastoid cells was to be found. There was no localised abscess beneath the dura mater covering the bone in this region; in fact, the membrane came away easily in the posterior fossa, leaving to all appearance a healthy surface. There was no thrombosis of the lateral sinus. The pons and medulla, with the remainder of the cerebellum, were healthy. On cutting into the brain the lateral ventricles were markedly distended and filled with clear fluid. Beyond this no other lesion was to be found. The mastoid cells and antrum were found to be free from pus; the incision wound was quite healed.

St. John's, Woking.

REMOVAL OF A
RAPIDLY GROWING OVARIAN CYST WHICH HAD BURROWED BETWEEN THE UTERUS AND THE BLADDER

IN A PATIENT WHO HAD BEEN RECENTLY CONFINED, AND ON WHOM OVARIOTOMY HAD BEEN PERFORMED EIGHTEEN MONTHS PREVIOUSLY.

BY A. C. BUTLER-SMYTHE, F.R.C.S EDIN.,
SURGEON TO THE GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, AND SURGEON TO OUT-PATIENTS AT THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.

A MARRIED woman aged twenty-four years consulted Dr. Seccombe of Terrington, Norfolk, in March, 1892, on account of pains in her stomach which were at first thought to be due to flatulence. On examination a tumour was discovered which was diagnosed, in consultation with Dr. Plowright of King's Lynn, to be an ovarian cyst. The patient was sent to the Samaritan Free Hospital and was admitted under my care on April 30th, 1892. The following history was elicited from her. Menstruation first appeared at twelve years of age, and since then the periods had been regular though scanty. She had been married two and a half years, but had not become pregnant. In June, 1891, she had influenza, and in the following August very nearly succumbed to an attack of measles which left her in a delicate state of health. Her first experience of abdominal pain occurred in February, 1892, and as it became worse she sought medical advice. On admission the patient, who was much emaciated, flushed, and feverish, complained of great tenderness in her abdomen and was evidently suffering from extreme distension, the circumference at the umbilicus being forty-eight inches. Her breathing was rapid and shallow, the pulse was 120, and the temperature was 101° F. The tongue was coated; the urine was acid, of specific gravity 1015, clear, and contained no trace of albumin. The abdomen was œdematous and the vulva and thighs were swollen. Her appetite was fair, but she had been losing flesh steadily for the last few months. Of late she could not lie on her right side because of a dragging pain in her abdomen to the left of the umbilicus. The abdomen was distended by a tense swelling which fluctuated freely. There was dulness up to the ensiform cartilage and in both flanks. The tumour was adherent to the parietes. Per vaginam the uterus was found to be behind the tumour, which almost filled the pelvis. The uterine cavity measured two and a half inches and the uterus could be moved laterally. On May 4th Mr. Stormont Murray administered ether, and assisted by my colleague Dr. Rutherfoord (Dr. Seccombe and other visitors and colleagues being present) I opened the patient's abdomen, separated the parietal adhesions and tapped the tumour, thirty-four pints of dark, viscid fluid being drawn off. After a tedious operation, owing to the universal adherence of the cyst in the abdomen and pelvis, I succeeded in removing the tumour, the pedicle of which was doubly twisted and adherent to the large intestine. The right ovary was then brought to the surface and carefully examined, and as it appeared to be healthy and was not enlarged it was returned into the abdomen. The peritoneal cavity was then washed out and a drainage-tube inserted and the wound closed with silkworm-gut sutures. The patient made a good recovery, though the pulse was never less than 120 and the temperature kept above 100° till the end of the second week. She left the hospital on June 4th and went to her home, where she remained in good health up to November, 1892, when she became pregnant. Her health was excellent up to July 20th, 1893, at which date she was delivered of a still-born male child which weighed over 11 lb. The presentation was a breech one and the labour very tedious. The child was alive at the commencement of labour; but owing to the unusual size and the marked deficiency of expulsive power, notwithstanding the administration of ergot, it was impossible to save his life. The placenta came away easily and the patient went on well and got up on the eleventh day. It was remarked after delivery that the mother was as slight as ever she had been, and Dr. Seccombe is confident that no swelling other than the contracted uterus could be detected in her abdomen. On the fifteenth day, however, when up and about she had an attack of pain in her right

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side which compelled her to go back to bed, where she remained a couple of days, when the pain passed off and she thought no more about it. A month after her delivery she noticed that her abdomen was rapidly becoming enlarged, and later she sent for Dr. Seccombe, who examined her and found a large cystic swelling on the right side of her abdomen. He wrote at once to me, and on Sept. 1st I saw the patient with him and confirmed his diagnosis. It was decided that the patient should wait till October, when she could go into the hospital. She was brought to town on Oct. 4th and re-admitted into the Samaritan Free Hospital, where I examined her and found that the tumour had increased so rapidly in the month as to double its size. There was also much free fluid in the peritoneal cavity, and the patient had again become emaciated and was even in a worse condition than when she came up for her first operation. On Oct. 6th she was put under chloroform by Mr. Murray, and assisted by my colleague, Dr. Bantock (Dr. Seccombe and others being present), I opened the abdomen and disclosed a dark-coloured swelling which was adherent to the abdominal parietes and covered by adherent omentum in its upper part. These adhesions were separated and the tumour tapped, thirty pints of dark thick fluid being withdrawn. It was then seen that the tumour had burrowed into the broad ligament and had passed across in front of the uterus between that organ and the bladder, completely stripping off the peritoneum from the anterior surface of the uterus. This portion of the tumour was enucleated and the broad sheet of peritoneum in front of it tied in four pieces, cut across, and dropped back into the peritoneal cavity. The rest of the cyst was then separated from the surrounding adherent intestine and the pedicle transfixed and tied, and the tumour having been cut away the abdominal cavity was thoroughly washed out and drained. The peritoneum was then dissected off for about an inch round the incision and the scar tissue cut away. The wound was then closed with three layers of sutures, a continuous suture of thin catgut for the peritoneum, interrupted sutures of thick catgut for the aponeuroses, and silkworm gut for the skin. The patient made a rapid recovery and went out on Nov. 4th quite convalescent. Curiously enough, after the second operation the pulse and temperature kept above 120 and 100° respectively for the first fortnight, this condition being due to a small abscess in the lower angle of the wound where the tube had rested.

Remarks.—This is the only instance in which I have met with an ovarian tumour burrowing in front of the uterus and displacing the peritoneum between that organ and the bladder—in other words, completely stripping off the peritoneum from the anterior surface of the body of the uterus. Tumours burrowing behind that organ and raising the peritoneum from its posterior surface are not infrequently met with, but the former condition is, I believe, uncommon. It is not often that the growth of an ovarian tumour can be dated with any degree of certainty, but in this case it is certain that, so far as one could judge by sight and touch, the right ovary was healthy on May 4th, 1892. Dr. Seccombe states that after the patient's delivery in July, 1893, no swelling other than the contracted uterus could be felt in her abdomen. A fortnight later the patient had severe pain in the right side, and about a month or six weeks after her confinement her abdomen began to get big, when on examination a cystic tumour was discovered, and this growth increased so rapidly that when seen a month later it was as large again. I presume the disease started during pregnancy, and that after delivery the pressure having been removed the growth rapidly developed, as such tumours usually do under similar circumstances. The first tumour was a large multilocular growth with dermoid material in parts. The second tumour was very similar as regards size, fluid contents, and, so far as one could judge from the history, in the duration and rapidity of growth, but no dermoid material was observed in it. The patient was in excellent health on Feb. 23rd, 1896.

HIS ROYAL HIGHNESS THE DUKE OF YORK has consented to preside at a dinner in aid of the funds of the Association for the Oral Instruction of the Deaf and Dumb, 11, Fitzroy-square, W., on Wednesday, March 17th, 1897, at the Hôtel Métropole. An appeal is made for the £7000 required to free the association from debt and to purchase the freehold of the premises.

THE INSIDIOUS MARROW-INFECTION OF MAMMARY CARCINOMA.

BY HERBERT SNOW, M.D. LOND.,
SURGEON TO THE CANCER HOSPITAL.

Prevalence.—Secondary deposit within the bone-marrow is a pronounced event in 8 out of every 10 cases of carcinoma mammæ passing to a fatal termination. Whether the remaining 2 are completely exempt to the end is at present doubtful. Of 150 seen in the out-patient room at an average duration of from ten to twelve months, 90 showed well-marked symptoms of this peculiar condition at their first visit, 22 showed symptoms in a slighter degree, and 8 developed them subsequently under observation; total 120, or 80 per cent. The physical signs were absent or doubtful in 30, which fall into two classes, those too recent to betray them, and "atrophic" cases. Thus 12 were of from six weeks to six months' duration only and 4 from six to twelve months. Of the remainder, 12 were extremely chronic forms of the disease, which had already existed from two to sixteen years, 5 out of the 12 having grown slowly for more than nine years. It is these "atrophic" cases in women that alone show prolonged exemption from the marrow lesion; the breasts are previously scanty or shrivelled, approaching the male type; life is not terminated for a long term of years, sometimes for more than twenty or thirty, and the exemption aforesaid largely accounts for this peculiar chronicity.

Mechanism of the infection.—Average examples of mammary scirrhus in women infect the lymph glands within the corresponding axilla in from six to twelve weeks from inception. The malignant cells quickly block the lymph sinuses and diversion of the current takes place in abnormal directions. These glands receive lymph from the marrow of the adjoining humerus; when they become cancerous regurgitation ensues, and thus deposit takes place within this bone, ordinarily the first affected. Again, from the inner edge of the mamma a few lymphatics normally pierce the thoracic wall and convey lymph to the mediastinal lymph glands and also to the thymus, a lymphoid organ whose rudiments are never wholly obliterated, but persist through life as a fatty mass immediately behind the sternum at the junction of its upper and middle portions. Thus malignant cells reach the thymus, and, there proliferating, directly invade the sternum. In the third place, and usually after a considerable lapse of time, fragments of cell-protoplasm pass from the marrow into the blood-current and thence invade other bones, the opposite breast, or the viscera. The above is the ordinary route; but as the infection is a mechanical process it is to be noted that interference with the normal lymph-current (as by an operation and its resulting scar in the axilla) may preclude infection of the humerus, the flow then passing wholly to the mediastinum and thymus.

Symptoms.—The physical signs of marrow-infection are rarely evident until the disease has existed eighteen months and may be delayed much longer. They are threefold, and to be classified in relation to (*a*) the humerus, (*b*) the sternum, and (*c*) the quasi-rheumatic pains in the loins and scapulæ. The upper third of the humerus becomes tender on pressure, apparently from irritation of the periosteum; the bone also feels slightly thickened in comparison with that on the opposite side. The sternum displays a very slow and gradual bulging forward at the junction of the upper and middle portions; it is painless and is seldom noticed by the patient until her attention is directed thereto. It proceeds only to the development of a sufficiently conspicuous prominence and then stops, resulting in actual tumour formation only in from 2 to 3 per cent. Lastly, the quasi-rheumatic pains are a late phenomenon and are referred to the lumbar region, scapulæ, and arm of the same side as the lesion. They are deeply-seated, described as "gnawing" or "aching," are, like ordinary rheumatism, worse at night and alleviated by salicylates, but, unlike that, do not affect the articulations. In advanced cases there is extreme physical weakness with emaciation, due seemingly to the cytogenic function of the marrow.

Diagnosis.—The sternal prominence may be simulated by

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natural conformation of the part. It is only when this occurs in association with the gnawing lumbar and scapular pains, and particularly when its gradual development has taken place under observation, that full reliance can be placed thereon as pathognomonic of the infection.

Morbid anatomy.—Deposit within the medullary canal of a long bone results in "white" marrow. That substance is converted into a relatively firm material as white as note-paper; the existence of this suffices to indicate carcinoma without microscopic examination. With the cancellous tissue of short and flat bones the test does not hold; the marrow is not altered in colour or in consistency, even when full of cancer-parenchyma, and the presence of the latter can only be established by the microscope. Decalcification takes place, however, under all circumstances, when there is cancer deposit in a bone. On exposing the head of a humerus so affected the point of the scalpel can be readily pushed into the greater tuberosity—a rough test I have not yet known to fail. In advanced cases, those, for instance, in which brawny œdema of the arm is present, the bone can be sliced with the knife as readily as the soft parts.

The following are typical cases showing the clinical course and the average chronicity:—

CASE 1.—A woman aged forty years had her left breast with enlarged axillary glands removed in June, 1887, for scirrhus of a year's duration. No marrow symptoms were then present. She was not seen again till December, 1892, when the sternal condition with the quasi-rheumatic pains were present, but there was no other trace of cancer. In December, 1893, two small nodules were found close to the sternum, and shortly afterwards a third, while the patient's health became impaired.

CASE 2.—A woman aged fifty-four years in January, 1881, underwent excision of the left breast and enlarged glands for scirrhus of one and a half years' duration. In March, 1884, the sternal symptom was conspicuous, but there was no other indication of cancer. In February, 1885, the original scar was still perfectly healthy, but there was a mass of enlarged glands in both axillæ. The patient is still strong enough to work as a domestic servant.

CASE 3.—A woman aged sixty-one years had a large carcinoma of about two years' duration excised in July, 1886, the size of a small orange; the axilla was also cleared. There was no re-attendance until June, 1893; then the sternum was so prominent as almost to constitute a tumour; there were a small subcutaneous nodule over the xiphoid cartilage and a cluster of enlarged glands in the opposite axilla, but the scar was healthy. In July, 1893, the patient died from paraplegia through deposit in the vertebræ.

CASE 4.—A woman aged sixty-four years was seen in August, 1888, with a breast scirrhus of eighteen months' duration following on cyst of twenty years' duration. Operation was declined till August, 1892, when there were a large sore and a mass of glands in the axilla, and the sternal prominence was well marked. In June, 1895, a nodule the size of a bean appeared under the scar, there were lumbar pains and sternal prominence, but otherwise the patient was in good health.

CASE 5.—A woman aged sixty years had the left breast excised in October, 1888, for a large acute carcinoma of probably two years' duration. In January, 1889, the sternal symptom had developed, with no other palpable deposit. This was followed in the succeeding July by implication of the opposite breast.

Non-insidious cases.—I have only five or six times seen the sternal protuberance proceed to actual tumour-formation with subsequent ulceration. In a small percentage only of the total cases does the marrow infection betray itself in this way by tumour growth, or, secondly, in a long bone by spontaneous fracture, or, thirdly, in the vertebræ by distortion or paralysis. All the specimens so far preserved in museums belong to this non-insidious category, in which some obvious lesion has induced examination of the particular bone in question. The bones, again, have often been mounted as "dry" specimens of "fragilitas ossium," or absorption of lime salts, the actual presence of cancer-parenchyma not having been recognised. Torok and Sprengel found palpable lesion in 12 out of 467 cases = 2·56 per cent.[1]

Inferences and conclusions.—The most suggestive point about this condition is its peculiar chronicity and latency, with the bearing these have on some other obscure diseases in whose phenomena the bone marrow is probably concerned. We find that even in a malady ordinarily so acutely progressive as carcinoma the deposits here may grow unnoticed for from four to five years or more, and they cause hardly any appreciable impairment of health until finally culminating in general diffusion by the blood. The marrow is practically never examined at necropsies unless some palpable lesion there exists; my investigations invite much closer attention thereto. Many of the cases recorded as mollities ossium and osteitis deformans have been found associated with a malignant growth, usually sarcomatous, somewhere in the osseous system,[2] and it seems likely that all will eventually fall into the same category. In malarious countries the bone-marrow of birds is found pervaded by the hæmatophyllum malariæ when absent from the blood. The filaria sanguinis hominis doubtless retires to the same obscure resting place during the corresponding remission period. As a routine symptom marrow infection is shown only by carcinoma of the female breast—this for mechanical and anatomical reasons. It, however, may ensue upon any other form of malignant growth directly implicating the marrow, as in primary sarcomata of bone or in rectal cylindroma adherent to the sacrum. Under none of these latter conditions, however, is it so far known ever to be "insidious."[3] Volkmann's claim of a cure by operation when there have been three years' apparent exemption is of course negatived, unless marrow-deposits can be confidently pronounced absent.

Gloucester-place, Portman-square.

[1] See paper by Mr. S. Paget in THE LANCET, March 23rd, 1889, showing that marrow-symptoms were not then recognised as due to actual cancer-deposit, or the infection as a routine event.

[2] See list of such in Cancers and the Cancer Process, p. 303.

[3] The above condition was first described in THE LANCET of March 7th and 14th, 1891; subsequently in the *British Medical Journal* of March 12th, 1892, where the detailed cases traced to a necropsy may be referred to.

AMPUTATION STATISTICS AT THE LONDON TEMPERANCE HOSPITAL.

BY W. J. COLLINS, M.S., B.Sc. LOND., F.R.C.S. ENG.,
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THE following table has been prepared for me by Dr. Leonard Wilde, the registrar to the London Temperance Hospital. It includes all the amputations which I have performed there since my appointment as surgeon to the hospital in succession to Mr. Pearce Gould in 1888.

Table showing Amputation Mortality from July 1st, 1888, to Dec. 31st, 1896.

	For disease.		For accident.	
	Cases.	Deaths.	Cases.	Deaths.
At hip	4	—	—	—
Of thigh	9	1	2	—
Of leg	7	—	5	—
Of foot	6	—	—	—
Of toes	12	—	—	—
Of arm	—	—	2	—
Of forearm	2	—	—	—
Of hand	—	—	1	—
Of fingers	19	—	6	—
Total	59	1	16	—

The grand total is 75 cases with 1 death.

The following are the notes of the one fatal case, in which amputation of the thigh was performed for sarcoma of the ham, and in which the post-mortem examination showed pre-existent secondary growths in the liver and pelvis.

A man aged forty-nine years was admitted on March 27th, 1891, on a medical certificate stating that he was suffering from phlebitis. He had been ill for six weeks with pains behind the left knee and down the leg, with œdema of the

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foot and lameness. On admission to hospital the left knee was flexed and could not be straightened, and movement of it occasioned some pain. There was a swelling as big as a duck's egg occupying the site of the head of the fibula and extending into the popliteal space. The patient had lost flesh lately, looked more than his age, had had recent trouble (having lost his wife), and wandered a little at night. The case was diagnosed by me as sarcoma of the ham, and amputation at the thigh was recommended should an exploratory incision into the tumour confirm the diagnosis. On April 3rd amputation at a little below the middle of the thigh was performed under chloroform. He bore the operation very well. For a week following the operation the temperature fluctuated between 98° and 103°F. The delirium at night was more marked. On the 11th he had intractable diarrhœa, was delirious, and was losing ground. On the 13th he was passing urine and motions involuntarily. Ether (6 drachms in the twenty-four hours) was ordered. On the 14th the temperature was running higher; there was continuous involuntary diarrhœa unchecked by opium, and he was busily delirious and sleeping badly. The pulse was very rapid—140 and more. Spiritus vini rectificatus was ordered, one drachm to be given every four hours with egg and milk unless he was drowsy. On the 15th he had no sleep; he still took food fairly well. There was no bed-sore. The alcohol was continued every six hours. On the 16th he died.

Post mortem secondary deposits of sarcomatous nature were found in the liver; a large cavity containing new growth occupied the iliac region; there was also an abscess in the *right* inguinal region. There was scarcely any tendency towards repair in the flaps, but there was no osteomyelitis or tracking of pus. The other organs were healthy.

In two of the above cases only was alcohol in any form administered, the case just related being one of the two. The other case was one of amputation of the leg for embolic gangrene in a flabby woman aged forty-nine years with cardiac disease, who recovered. Full details of this and of all other cases in which alcohol is administered are set out in the annual reports of the hospital in accordance with Rule XV. of its constitution, which provides that: "It shall be incumbent on the prescribing medical officer, in any case where alcohol in any form is ordered for a patient, to enter in a book kept for that purpose the full particulars of the prescription, including the time, quantity, and reasons of administration. The effect of the dose also shall subsequently be noted."

Albert-terrace, Regent's-park, N.W.

SCHOOL-MADE INSANITY.

BY LL. HARRIS-LISTON, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.,

ASSISTANT MEDICAL OFFICER, HOSPITAL FOR MENTAL DISEASES, COTON HILL, STAFFORD.

THE classical statement made by the old-time surgeon, that no injury to the head which produces insensibility is too trivial to be disregarded or too serious to be despaired of, is one the truth of which is frequently in evidence. A case which has recently been under my observation may be quoted as an example, and for other reasons is, I think, worthy of record. It is a case in which a few blows given with the open hand on the side of the head by one boy to another was the exciting cause of attacks of insanity of some years' duration. Although no cause for an attack of insanity is more frequently assigned by parents than a fall or blow on the head during infancy, on investigation some more probable factor is generally to be found. In the report of the Lunacy Commissioners for 1896 3 per cent. only is the proportion of cases in which injury is given as the predisposing or exciting cause in all cases admitted into asylums, hospitals, or licensed houses during the five years 1890–94. In this case the hereditary history is remarkably clear of all nervous diseases, the only instance being an attack of senile dementia in the patient's paternal grandfather at an advanced age.

The first attack began when the patient, then sixteen years of age, was at school, the symptoms being mental depression, sleeplessness, pain in the head, unsociable habits, and loss of nutrition coming on within two months of the injuries. He was taken from school, and after spending a few months at home recovered his natural spirits, became a clerk, and remained well for two years. Then, at eighteen years of age, he had an attack of acute mania, for which he was treated at a lunatic hospital and from which he recovered in eight months and resumed his work as a clerk. For six years he remained well, spending the last year of this period in Canada farming. Then, becoming depressed, fearing that he was about to have another attack, and feeling self-conscious amongst strangers, he lost all interest in his work and, without giving his relatives any warning, suddenly arrived at home. He gradually got worse in mind and body, became despondent, silent, morose, lost all energy, avoided society, refused food, and became emaciated and weak; therefore, he was certified again and admitted, at the age of twenty-five years, to a lunatic hospital, where he became more confused and obstinate and in a few months sank into a state of stupor. After twelve months' residence in this hospital, as he became no better, a change of environment was advised and he was transferred to another asylum, where I first saw him. He was then in a state of melancholic stupor, being resistive and conscious, with a miserable, furtive expression, standing in one place and in the same attitude for hours, with a hand pressed to the head or stomach, taking food unwillingly and sparingly, answering no questions unless repeatedly urged, and then only giving a monosyllabic reply. He was unsettled, restless and sleepless at night, thin, with flabby muscles. The pulse was 64 and weak, the temperature 97° F., the bowels constipated, the extremities cold, and the circulation poor. He remained in this state for two years longer, the state of stupor having lasted altogether for three years, then he gradually began to take some interest in his surroundings and answer simple questions in a whisper. He was then induced to do some outdoor work, and in three months gained flesh and some confidence, but still thinking badly of himself and of his bodily condition. Questioned as to his past state of stupor he said that he remembered everything that had happened around him and that he had often crept away to avoid observation when strangers visited the hospital, that he had feelings altogether different from, and bodily sensations strange to, those he had when in health. In a few months more he still further improved, getting strong in body, slightly hypochondriacal, but having some hope of regaining a position in the outside world. He was discharged as recovered. The treatment of his last attack consisted of giving quinine and strychnine in large doses, malt extract, plenty of food and alcoholic stimulants, warm baths, cold douches, and latterly of manual work out of doors, bicycling, golf, swimming, cricket, &c.

The causation of this case is its interesting feature: blows on the head with the open hand severe enough to cause unconsciousness on at least two occasions, without a lesion of the bone, but producing some molecular disturbance of the brain sufficient to excite insanity. The injury was inflicted as punishment for some minor offences by one of a body of boy prefects, who at the school the patient attended were allowed disciplinary powers, one being to strike a boy on the head, apparently as often and as hard as they deemed advisable; surely a dangerous power to entrust to boys. There are other contributory conditions in the case only prevailing at this period of life, and which exist at many other schools, and which have caused me to call the case "school-made": the age of puberty, one of the periods of life at which nervous diseases are prone to appear; the reprehensible practice of working scholars in the early morning before breakfast and after a long fast; and the emotional influence of constantly recurring religious services carried out in some schools to a ridiculous extent.

Stafford.

THE secretary of the East London Hospital for Children calls attention to the need of funds for current maintenance, and of from £1000 to £1500 to complete the estimated cost of the Convalescent Home which the managers are about to erect at Bognor.

THE total of the subscriptions for the Memorial erected over the grave of the late Mr. Reese of Ystradgynlais, who was killed by lightning on July 21st, 1895, has reached the sum of £102 0*s.* 11*d.*

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF IRIDECTOMY SUCCESSFULLY PERFORMED BY ACCIDENT.

BY HAYDN BROWN, L.R.C.P., L.R.C.S. EDIN., L.F.P.S. GLASG.

A FEW weeks ago two children were playing together near a garden seat. One of them had a pair of scissors in her hand, with the points sticking out, when the other toppled over in some way and brought her left eye in contact with a point of the scissors, which were held firmly in the hand as it chanced to lean on the seat. The result was that the eye was pierced at the corneo-sclerotic junction, or perhaps a line above it. A cut was made one-third of an inch long and slightly curved. The point of the scissors entering the anterior chamber went so far as to hook down the iris into the opening, and on withdrawal left it there. I saw the child about an hour after the accident, and having put in an atropine lamella ordered boracic lotion to be used three times a day, ice pretty frequently, and the eye to be kept closed by a bandage. The inflammation of the conjunctiva and iris was rather severe for a few days. The chances of the fluid coming out of the eye had already been so great—and there probably had been some escape, but I did not see it—and the appearance of the cut was such, that I decided at the outset not to attempt to put back the hooked-down iris, which seemed to be cut a little also. This portion, trapped as it was in the wound of the cornea, eventually became absorbed in the cicatrix. There has been complete union for four weeks and entire absence of inflammation, whether of conjunctiva, cornea, or iris. The present condition of the eye is quite indistinguishable from one on which an iridectomy has been most skilfully performed; indeed, it would be difficult to find a case more neatly and perfectly done, and the sight is correspondingly excellent.

Buckhurst Hill.

A CASE OF MERCURIAL POISONING.

BY T. GREENWOOD HALL, M.B., B.S. DURH.

ON Nov. 27th, 1896, I was summoned to a female patient whom I had a week previously attended for a miscarriage. I had ordered injections of perchloride of mercury (one soloid in 40 oz. of water = 1:2000) on Nov. 20th night and morning and again on the 26th. I found her on the 27th collapsed and pale, with the pulse rapid, intermittent, and weak, the jaws tightly clenched, and the eyes dull and anxious. She was unable to speak and I could obtain no history of the seizure. There were twitchings of the fingers and facial muscles and she frequently fainted. During the day acute diarrhœa set in, the motions being stringy and containing blood. I discovered that, not having had a motion for two days, she had on the morning of the 27th injected half of the perchloride solution per rectum and half an hour afterwards was seized with cramping abdominal pains, causing the collapse in which I first saw her. She recovered within a week, though complaining of her teeth and gums. Salivation never occurred. The interesting points are the rapidity of action (less than one hour), the smallness of the dose (not more than 5 gr. per rectum), and the fact that the previous injections per vaginam had no deleterious effects.

Koffyfontein, Orange Free State.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SURBITON COTTAGE HOSPITAL.

A CASE OF ACUTE PANCREATITIS; NECROPSY.

(Under the care of Mr. ARTHUR C. HOVENDEN.)

IN THE LANCET of Jan. 2nd we published the account of a case of acute hæmorrhagic pancreatitis in which abdominal section was performed, but without relief. Dr. Newton Pitt in his remarks on the case gave a very useful summary of the present-day knowledge on this subject. The symptoms which are considered by Dr. Fitz to be characteristic of the disease are sudden and severe epigastric pain without obvious cause, followed by tenderness, vomiting, slight rise of temperature, flatulent distension of the abdomen, and complete constipation. To these he added collapse, prostration, feeble pulse, and the presence of a resonant area with deep-seated resistance lying between the umbilicus and epigastrium, and evidences of deep-seated peritonitis. Relief has been afforded by operation in a limited number of cases—in one a tympanitic abscess was opened and drained and the patient recovered; in two others in which collections of pus in the pancreas were similarly treated the patients were only relieved for a time. The close resemblance which is presented to cases of intestinal obstruction by acute pancreatitis makes a correct diagnosis almost impossible, but the condition has been diagnosed correctly during life and the possibility of its presence must be considered when symptoms similar to those mentioned are met with.

A man aged thirty-five years was admitted to the Surbiton Cottage Hospital on Aug. 7th, 1896. His family history was unimportant. He had enjoyed good health, but was somewhat given to alcohol. On Aug. 2nd and 3rd he was quite well, and on the latter day he went to a theatre in town. On the 4th he felt a little out of sorts and took "six" liver pills, but they did not act. On the morning of the 5th he sent for a black draught, which was vomited, and during the morning he was in such pain that a medical man was sent for. When seen by Mr. Bowring the patient was in great pain, which was referred almost entirely to the umbilical region. There was no tenderness or rigidity of the abdominal walls and no tumour or dulness could be made out. Attempts were made to cause an action of the bowel by enemata, but without success. During the whole of this day (the 5th) everything given by the mouth had been rejected. On the 6th he was seen again by Mr. Bowring in conjunction with Dr. Taylor. There was still no rigidity and there had been no movement of the bowels. Dr. Taylor thought there were increased resistance and loss of note in the left hypochondriac region and suggested a dose of calomel in the hope that it might be a case of impacted fæces. This was retained, but although several enemata were administered nothing except flatus was passed. In the evening, however, the patient felt better and several times got out of bed to go to the closet, but passed nothing. On the 7th the patient was evidently worse and was sent to the Surbiton Cottage Hospital. On admission the patient lay on his back in considerable pain; the abdomen was rigid and distended; there was no tumour or dulness to be made out; and a few hours after admission he vomited some dark-brown stercoraceous matter. When on the table for operation he again vomited and stopped breathing during the administration of ether, dying before the operation was commenced. The patient had lived only three days from the time he felt unwell; his temperature was normal throughout.

Necropsy.—On post-mortem examination some early peritonitis was found on the anterior portion of the abdominal wall, the small intestine was a little distended, and the descending colon was flaccid but contained grey-coloured

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fæces. The pancreas was very much enlarged and of a uniform deep-red colour; the tail of the organ was the size of the closed fist. The liver was large and rather fatty. The kidneys showed a little interstitial change and a couple of cysts. The spleen was healthy.

PRESIDENCY GENERAL HOSPITAL, CALCUTTA.

A CASE OF LOBAR PNEUMONIA FOLLOWED BY GANGRENE OF THE LUNG, AND ONE OF LIVER AND LUNG ABSCESS, IN BOTH OF WHICH OPERATION WAS SUCCESSFULLY PERFORMED.

(Under the care of Surgeon-Captain D. M. MOIR, I.M.S.)

THESE cases further confirm our recent statement of the successful practice of surgery in our colonies, of which we published instances during the past year. They belong to a branch of surgery which has made considerable advance of late, and show what can be done for patients whose condition would have been hopeless only a short time ago. They confirm the conclusions arrived at by Mr. Godlee as to the line of treatment which should be followed. 1. Gangrenous cavities in the lungs should always be sought and if possible opened, and the prognosis, if the operation be successful, is not bad. 2. The same may be said in regard to abscess caused by rupture of purulent collections from other parts into the lungs—at least, as regards the pulmonary complication. The results of treatment in cases of pulmonary abscess in Hofmokl's clinics referred to in the remarks appended to the cases are as follows:—42 cases, 14 cures, 3 had a fistula remaining, 24 died, and in 1 the result was unknown. Five cures resulted after treatment of tuberculous cavities by operation.

CASE 1. *Lobar pneumonia; gangrene of the lung; operation; recovery.*—A man aged twenty-three years had an attack of acute pneumonia of the left lung at Jamalpur on Feb. 13th, 1896. As he did not improve he was taken to Calcutta, a distance of 300 miles, and was admitted into the European General Hospital on March 8th, the twenty-fourth day of his illness. From the symptoms on admission the case appeared to be one of lobar pneumonia, in the stage of resolution, accompanied by slight pleural effusion. He looked and felt very ill and prostrate, and the clearing up of the pneumonic consolidation seemed to be unnaturally delayed. In the course of the first week in hospital his sputa became intensely fœtid, greenish-grey in colour, purulent and nummular. He passed restless nights owing to frequent distressing paroxysmal cough. In the second week he suffered a good deal from diarrhœa and profuse perspiration. It was evident that septic absorption was going on and the physical signs pointed to gangrene of the lung. The temperature was irregular, rising from normal to 103° F. In the third week attacks of hæmoptysis supervened. The cough was very troublesome; the sputum was very offensive, copious, and coffee-coloured, with exhausting sweats and intense prostration; and the diarrhœa recurred. However, the patient's dread of chloroform and of the knife was so great that he did not consent to undergo an operation until his condition had become almost hopeless. The operation was performed at noon on March 28th—i.e., the twenty-first day in hospital and forty-fifth day of his illness. From the physical signs, which were best marked in the axillary and infra-spinous part of the scapular region, it was evident that the gangrenous portion of lung was on a level with the mammary region (from the third to the sixth ribs), and that the most suitable place for incision and drainage would be between the fifth and sixth ribs in the axillary area. Accordingly, a horizontal incision two inches long was made in the fifth intercostal space of the left side, which was followed by the escape of a small quantity of fœtid purulent fluid and débris. By the finger it was ascertained that the axillary part of the pleural cavity corresponding to the area of gangrenous lung had been shut off by adhesions from the rest of the pleural sac. On exploring with a Wheelhouse's straight-grooved urethrotomy staff the instrument was found to pass far into the lung so as almost to touch the pericardium; in fact, the impulse of the cardiac systole was transmitted to the staff with startling force and distinctness. Portions of gangrenous lung and pleura-débris and blood-clot were removed with the aid of the fingers, dressing forceps, and a long Volkmann's spoon. A drainage-tube four inches long and three-quarters of an inch in diameter was introduced and an absorbent antiseptic dressing was applied. As so frequently happens in India after an operation the temperature rapidly rose. It had been 97·2° (taken in the mouth) at 9 A.M., 98·2° at 1.30 P.M. after the operation, and by 5.30 P.M. it rose to 103·4°, the highest temperature recorded throughout his stay in hospital. After the first day his temperature caused little or no anxiety, rarely rising to 101°, more usually fluctuating between 98° and 100° during the first fortnight, subsequently to which it gradually returned to the normal. At first the dressings were changed twice daily owing to the profuse discharge, and frequently pieces of slough were removed. The drainage-tubes were gradually shortened and replaced by tubes of smaller calibre, the last of which was finally removed on April 21st, and the wound was quite healed on the 30th. The patient's health rapidly improved and he gained ten and a half pounds in weight between April 21st and May 8th. When he was discharged from hospital on the latter date the following note was recorded: "The percussion note is clear and slightly hyper-resonant in the left axillary region. The breathing is harsh and an occasional moist sound is audible near the incision scar in the fifth space. The lung is soundly healed and he may leave hospital." The patient's mother, who had recently been operated on by Surgeon-Captain Moir, on Sept. 3rd told him that her son resumed work exactly a month after leaving hospital, and that he was then away on a shooting expedition.

CASE 2. *Liver and lung abscess; operations; recovery.*—A man aged thirty-four years, a slim Eurasian of poor physique, was admitted to hospital on Jan. 27th, 1896, complaining of fever, cough, pain in the liver, and enlargement of the spleen. Some years ago while in the Punjab he used to suffer much from malarial fever. In 1888 he had gonorrhœa and a perineal abscess. In 1892 he was treated for abscess and fistula in the perineum. On July 19th, 1895, he was in this hospital for balanitis and diarrhœa. The latter was rather obstinate and continued till the end of the month. On Aug. 1st acute dysentery suddenly supervened lasting for three days, during which time he passed mucus, blood, and a few small sloughs. He left the hospital on Aug. 8th before he had thoroughly recovered. During October and November he was in the Medical College Hospital, Calcutta, suffering from fever and pain in the region of the liver. From Jan. 3rd to 13th, 1896, he was treated in the General Hospital, Calcutta, for hepatitis and was discharged apparently cured, but he returned on Jan. 27th with the symptoms detailed above. The case proved most puzzling. During the first week he appeared to be suffering from ague, with congestion of the liver and spleen—common accompaniments in malarial subjects. From the 27th to the 31st the temperature was intermittent, but it seldom rose above 100° F. In the beginning of February the hepatic pain disappeared, and the temperature remained normal until the 4th, when it rose to 101°. From the 5th to the 20th there was no fever. Notwithstanding this it was quite evident that the man was seriously ill, because he continued to lose flesh and strength. The frequent short dry cough led to numerous examinations of the lungs, but nothing definite was found. The antecedent dysentery and hepatitis early caused a suspicion of liver abscess and the liver was examined nearly every day, but with a negative result. During the first three weeks of February the hepatic pain came and went capriciously. Even the site of the pain varied in an extraordinary way; at one time it was in the right lobe, high up or low down, deep-seated or superficial, whilst at another time it was in the left lobe. Since there was no fever and the symptoms were so obscure it was not considered expedient to make any exploratory punctures in the liver. However, Nature settled matters in her own way. On the 21st he began to cough up pus owing to a liver abscess having burst into the right lung. On the 20th his highest temperature was 99°, and on the 21st 99·4°, after which it remained normal until the 26th, when it rose to 101·4°. There were also slight rises on the 27th and the 28th. As many cases have been recorded in which recovery has followed the discharge of a liver abscess into either the lung or the bowel, and as there were no unfavourable symptoms, it was decided that no operation was necessary. In March, however, his symptoms became unfavourable and gave cause

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for anxiety. Between the 1st and the 13th the temperature remained normal most of the day, but usually there was an evening rise between 5 and 9 P.M. to 99° or 99·6°. In fact he was suffering from hectic fever. The cough became very troublesome and the expectoration copious and he had profuse perspirations with restless nights, consequently it seemed advisable to try to drain the liver abscess. On March 13th after using the exploring needle, a horizontal incision two and a half inches long was made in the sixth intercostal space two and a half inches below the right nipple. On pushing the finger through a thickish layer of liver substance the abscess cavity was reached. Ten ounces of pus were evacuated and a large-sized drainage-tube was inserted. It was not possible to palpate the aperture of communication through the diaphragm into the lung. On the next day his temperature was normal and he had neither cough nor expectoration. The drainage-tube was gradually shortened and changed and was finally removed on the 24th, at which time the track was scarcely more than an inch long. On the 30th he weighed 105 lb.—a gain of 2 lb. since the last weighing. four days prior to the operation. During the first week of April the cough again became troublesome and the sputa were viscid, greenish, and nummular. At this time the percussion dulness began one and a half inches above the right nipple and merged into the liver dulness. By the 9th the wound was completely healed. The temperature remained normal and he gained steadily in weight. On the 21st he weighed 114 lb.—a gain of 11 lb. since the weighing previously to the operation. After this date, however, there was a relapse. The fever returned and the temperature varied from normal to 102°. The cough became most distressing and the expectoration very copious and purulent, and there were occasional attacks of hæmoptysis. His feet became œdematous, he suffered from exhausting sweats and restless nights, and his appetite failed. The physical signs indicated excavation of the right lung in the axilla and about the mammilla. Accordingly on May 5th an incision was made far back in the right axilla over the fifth rib, one inch of which was resected. After puncturing the lung and dilating the passage a small cavity was found which extended upwards and inwards above the level of the nipple. This communicated with another cavity, below the nipple, which led down to the diaphragm. By introducing a metal bougie, the curve of which was convenient, a counter opening was made in front in the fourth space below the nipple and above the scar of the incision into the liver abscess. Some lung débris, pus and blood were evacuated from the lower cavity in the lung. Through the axillary incision a drainage-tube over three inches long and half an inch in diameter was introduced into the upper cavity. A drainage tube nearly five inches long and three-fourths of an inch in diameter was passed in from the anterior incision, through the lower cavity and towards the lateral incision. He passed a restless night and complained of great pain in the epigastrium. On the next day (the 6th) the dressings were soaked with copious discharge, and the expectoration contained blood and pus. The highest temperature was 100°. After another restless night his temperature was normal (on the 7th) and the discharge and expectoration were much diminished. He began to improve, but the drainage-tubes were a constant source of trouble from the difficulty of retaining them *in situ*. They were gradually shortened and changed for smaller ones and were finally removed on the 23rd. The wounds closed rapidly. On the 29th he was carried downstairs and weighed for the first time since April 21st. It was found that he had lost 20 lb. 8 oz., his weight having fallen from 114 lb. to 93 lb. 8 z. During June he steadily gained weight and on the 26th he weighed 108 lb. 8 oz. His fingers and toes became markedly bulbous or clubbed. There were various ups and downs in the progress of his convalescence, which was very gradual and tedious. In the second week of July he was able to be out of bed and it was noticed that he tended to lean over on the right or affected side in walking. The expansion of the right side of the chest was defective. On July 24th his weight was 113 lb. 11 oz., which was nearly as much as it had ever been while he was under observation. During the latter half of July he improved rapidly in every way, so much so that he was fit to be discharged from hospital and to be sent to the Eden Sanatorium at Darjeeling on the 29th. At this time there was comparative dulness over most of the right side of the chest in front, and the pectoral muscles on this side were atrophied. The expiration was prolonged and the breathing slightly harsh, but there were scarcely any accompaniments, except some medium râles at the anterior border of the axilla on a level with the nipple, and also posteriorly about the same level. The expectoration was very scanty, greenish, and muco-purulent. The ungual phalanges of the fingers and toes were distinctly clubbed. Since the patient left the hospital Surgeon-Captain Moir has had good accounts of him from time to time. The last report, dated Sept. 9th, was from the assistant surgeon in charge of the Eden Sanatorium, who stated that "he is doing very well, has no bad symptom of any kind at present, and weighs 127 lb."

Remarks by Surgeon-Captain MOIR.—As regards Case 1, gangrene is not a common sequel to acute pneumonia, and when it does happen it is usually in the case of an alcoholic or aged person or when pneumonia is an intercurrent complication of some other exhausting disease. But pneumonic gangrene in a previously healthy young adult must be of rare occurrence. This patient was a strong young man leading a healthy life as a fitter in the railway workshops, who devoted most of his spare time to out-door sports. In his case the excision of a portion of a rib was distinctly contra-indicated, nor did it seem advisable to syringe out the cavity, although this procedure is advocated on good authority. One practical difficulty in the treatment of such a case is the great tendency there is for the drainage-tube either to slip out or be extruded, and also the rapidity with which the track of the tube contracts once the latter is expelled. Nevertheless, it is essential to maintain effective drainage until both expectoration and discharge have ceased. Regarding the statistics of operation for gangrene of the lung Dr. Pendleton Dandridge[1] makes the following statement: "Of the result in gangrenous cases Lopez reports seventeen cases of gangrene treated by opening the cavity, followed by ten cures, six deaths, and one 'unknown'; Hofmokl, twenty-four cases, with seven cures, one unimproved, thirteen deaths, and two unknown, whilst in one a fistula remained."

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Biology and Morphology of the Tetanus Bacillus.—Exhibition of Specimens.

A MEETING of this Society was held on Jan. 5th, the President, Mr. H. T. BUTLIN, being in the chair.

Dr. A. A. KANTHACK and Mr. W. T. CONNELL read a paper (with lantern demonstration) on the Biology and Morphology of the Tetanus Bacillus. On gelatin the colonies are numerous but very minute and give rise to liquefaction in seven to eight days. On agar-agar there are also numerous and minute discrete colonies which do not coalesce, the surface ultimately having a beautifully crystalline appearance. Impression specimens show that the colonies consist of a close network of filaments sending out branches in different directions. Some of the bacilli are clubbed. The clubbing and the filamentous arrangement point to a mycelial ancestry of the tetanus bacillus. In old broth cultures spore-bearing bacilli are common, the bacillus having a drumstick shape, the terminal knob of the drumstick staining faintly or having a deeply stained central dot. True mycelial forms are common in young cultures, resembling those of the bacilli of tuberculosis and typhoid fever described by Klein. The tetanus bacillus has not one terminal flagellum as usually described, but from twenty to thirty situated all over the bacillus are seen in young cultures; they are long and tortuous, two or three being much coarser than the rest. The flagella gradually disappear when the spore is formed. The drumstick often shows a sheath perforated by numerous channels through which the flagella had passed.—Professor CROOKSHANK had for years observed many of the appearances described and had figured the filamentous forms. After staining by the Ziehl-Neelsen method he had seen the variations in the position and size of the spores. The flagellation of the spores had been very beautifully demonstrated by Dr. Kanthack and Mr. Connell and was a new

[1] Annals of Surgery, xix., No. 2, February, 1894.

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observation. He thought that the branching forms indicated a tendency for lower organisms to develop into the higher streptothrix group rather than that the organisms were degraded from a mycelial ancestor.—The PRESIDENT asked what was the cause of death of the animals into whose peritoneum the cultures were inoculated.—Dr. KANTHACK, in reply, said that he thought the bacilli directly caused death, but without characteristic symptoms, because care was taken that no toxins were injected at the same time. He did not claim any priority for his observations on the filamentous forms, but was not aware that mycelial forms had been described before.

Dr. DREW showed a specimen of Villous Papilloma becoming Malignant, situated in the Pelvis of the Kidney. It occurred in a man aged fifty-six, who had pain and hæmaturia, suggesting renal calculus, and nephrotomy was performed. At the necropsy a few months later there was great enlargement of the left kidney by an internal growth which infiltrated the cortex, with enlargement of aortic and lumbar lymphatic glands. There was also growth extending into the ureter and another papillomatous growth in the bladder. The growth in the kidney was formed of a fibrous stroma enclosing spaces containing spheroidal cells and often papillomatous projections. A similar condition was found in the lymphatic glands, but the growth there was more definitely carcinomatous. He referred to eight other recorded cases of papillomatous tumours in the pelvis of the kidney. In several of these a calculus was also present.—On the suggestion of Mr. CLEMENT LUCAS the specimen was referred to the Morbid Growth Committee.

Mr. J. R. LUNN showed: (1) a specimen showing Excision of the Knee removed three years after operation; (2) Femur of a woman aged seventy-two years, whose external condyle had been trephined and the button of bone replaced thirty days before death; (3) Breast of a man aged ninety-one years removed for a fungating growth. Sections showed it to be one of duct carcinoma.—The PRESIDENT said that in a case of his own referred to recurrence occurred three years later. As a rule, recurrence was less rapid in duct carcinoma than in other forms of mammary cancer.—Mr. RAYMOND JOHNSON gave reasons for regarding the tumour as a duct cancer. Villous cancer was a term that led to confusion. He thought that duct cancer was more malignant than was generally taught. — Mr. SHEILD was inclined, after careful examination, to regard the specimen as a scirrhous cancer. He thought that the absence of cysts was against the diagnosis of duct cancer.—Dr. KANTHACK agreed with Dr. Johnson that the hardness of the tumour did not exclude columnar-celled cancer. He also had often noticed that in rapid growths, and in secondary growths the columnar character of the cells was often lost. He thought the sections were those of columnar-celled carcinoma —Dr. ROLLESTON thought the specimen was a columnar-celled carcinoma of an aberrant type —Mr. SHATTOCK took the same view.—The PRESIDENT referred to the transition of type of cells seen in Paget's disease of the nipple. He thought the case was clearly one of columnar-celled carcinoma..

Dr. CALVERT showed a Tooth-plate which had been impacted in the œsophagus of a young woman for eight months with scarcely any symptoms. She suddenly vomited some blood and died a few hours later. It was found that one flange of the plate had ulcerated into the thoracic aorta.

The following card specimens were exhibited:—

Dr. PARKES WEBER: Cardiac Thrombosis without Valvular Disease.

Dr. TH. FISHER: Broncho-pneumonia with Dilatation of Bronchus.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Some Points in Abdominal Surgery.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 16th, 1896, Dr. W. B. RANSOM, President, being in the chair.

Dr. TRESIDDER read a paper on Some Points in Abdominal Surgery. Referring to shock in operations on the peritoneum he first drew attention to the peculiarities of the peritoneum —viz., its considerable surface, its great sensibility, its remarkable powers of absorption, and its wonderful powers of healing. The amount of shock in operations on the peritoneum, among other things, would depend on (1) whether it had been previously operated on; (2) the region of the operation; and (3) whether the membrane was inflamed. With reference to abdominal cysts he thought that it was important clinically to ascertain (1) whether they were unilocular or multilocular; (2) whether they were pedunculated or sessile; and (3) whether adhesions existed. In the treatment of cysts deep in the pelvis he had found Trendelenburg's position very valuable. Lastly, with reference to uterine cancer. He had recently performed four operations of vaginal hysterectomy for cancer; in two of these mental complications had occurred, one patient dying from melancholia and the other with recurrence with marked mental depression; the remaining two patients were alive, but one now had recurrence, five months after the operation, and the other was well still, eleven months after. He considered that the limits of complete vaginal hysterectomy were very narrow, and he now preferred supra-vaginal amputation of the cervix, as mental complications were much less likely to follow this operation and, moreover, anatomically the disease tended to spread not upwards to the body of the uterus but in the line of the lymphatics outwards into the broad ligaments. He illustrated points in his paper by a table of seventeen cases of various abdominal diseases that he had recently treated by operation.—The PRESIDENT and Mr. A. R. ANDERSON made remarks on the paper, and Dr. TRESIDDER replied.

Dr. TRESIDDER also showed the following pathological specimens—(1) Stomach showing Healed Gastric Ulcer after Operation; (2) Double Uterus with Pyosalpinx; (3) Five Ovarian Cysts; (4) two specimens of Double Pyosalpinx; (5) Carcinoma Cervicis Uteri; (6) Carcinoma Corporis Uteri, and (7) Microscopic Specimen showing Alveolar Carcinoma of the Body of the Uterus.

The PRESIDENT showed a microscopic specimen of an Alveolar Sarcoma of the Skin.

Mr. ANDERSON showed (1) a specimen of Double Pyosalpinx; and (2) Primary Lympho-sarcoma of the Inguinal Glands with microscopic specimen. He gave also a short clinical history of this latter case, which ran a rapid course, destroying life in two months.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens.

A MEETING of this society was held on Dec. 17th, 1896, Dr. PORTER being in the chair.

Mr. PYE-SMITH showed a woman, aged fifty-eight years, with a large Cystic Tumour of the Neck probably congenital. The tumour was first noticed when the patient was seventeen years of age. It grew to the size of a child's head, and burst when she was forty-nine years of age, discharging fluid blood and continuing to bleed for three days, greatly reducing her strength. It healed and burst again when she was fifty-six years of age and again (twice) a year later. Since then it has never quite healed and now fresh openings are appearing. It always became inflamed before bursting and at present it is somewhat inflamed.

Mr. PYE-SMITH also showed a case of Staphylorrhaphy in which he had used a continuous instead of an interrupted suture.

Dr. ARTHUR HALL showed the following cases: (1) Pityriasis Rosea in a man aged twenty-eight years—the duration of the disease was three weeks; (2) Circinate Papulo-squamous Syphilide of the Chin and Cheeks; and (3) Aortic Stenosis in a young woman with an extremely loud rough systolic murmur, the secondary effects and symptoms being practically nil.

Dr. CUFF showed a case of Tuberculous Lymphadenitis. The glands on the opposite side of the neck were also involved.

Dr. ALFRED ROBINSON (Rotherham) showed a Tongue which had been removed from a two-year-old bullock suffering from Actinomycosis. The case occurred in the winter months, and several other cattle from the same farm had been suffering from a similar complaint. The diagnosis was verified by microscopical examination.

Mr. CYRIL FLORY showed a case of Left Pneumothorax in a man aged fifty years, a silver turner by occupation. The patient's account was that whilst at work on Nov. 1st he felt as if something had given way. He became suddenly very short of breath and broke out into a sweat. There was a history of winter cough for several years, but no injury or any evidence of tuberculosis. The heart was much displaced,

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the apex being on the right nipple line. Though the condition had existed for over six weeks there was no fluid in the chest.

Mr. CONNELL gave particulars of a case of Primary Ventricular Cerebral Hæmorrhage and showed the specimen. The subject, a man forty-six years of age, was found in a fit about half an hour before he came under Mr. Connell's observation in the Casualty Room of the General Infirmary. His face was cyanosed, the breathing stertorous and purely diaphragmatic, and the pulse 66, full and bounding. The pupils were dilated and did not react to light, and the limbs were markedly flaccid. The specific gravity of the urine was 1010 and it contained a large quantity of albumin. Uræmia, hæmorrhage into the pons, alcoholic intoxication, opium poisoning, and injury to the spine were thought of, and the diagnosis of hæmorrhage into the lateral ventricles was made during life. This was confirmed by the necropsy. The kidneys were slightly granular and the cortex thinned. The left ventricle was hypertrophied.

Dr. BURGESS showed a girl aged six years with Pulmonary Regurgitation from Congenital Heart Disease. There was a diastolic thrill and murmur in the pulmonary area. The murmur was conducted to the left and heard down the left side of the sternum. Over the aortic area and along the vessels the click of the valves could be made out. The apex was displaced outwards and there was epigastric pulsation. The heart affection was first noticed when the child was about a year old. There was no family history of rheumatic fever.

Dr. PORTER, Dr. HALL, Dr. WHITE, Dr. CUFF, Mr. MAKEIG JONES, Mr. PYE-SMITH, and Dr. BURGESS made remarks.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Acute Intestinal Obstruction

A MEETING of this section was held on Dec. 11th, 1896, Mr. WILLIAM THOMSON, President, being in the chair.

Mr. M'ARDLE read a paper on the Operative Treatment of Acute Intestinal Obstruction. The cases quoted were forty-one in number, of which seven were fatal, and included instances of obstruction by bands, intussusception, volvulus, acute enteritis, perforative peritonitis, and appendicular disease. Mr. M'Ardle pointed out that the delay occasioned by trying medicine and enemata often placed the patient beyond the reach of surgery. Prolonged medical treatment was not justifiable, because, as noted by Treves, of 1000 deaths from intestinal obstruction only sixty were from causes removeable by medical means. The chances are all in favour of the obstruction being of such a nature that surgical interference can alone avail. It is therefore to be regretted that some modern writers advocated persistent efforts with enemata, even after dangerous symptoms had shown themselves. Mr. M'Ardle did not advocate indiscriminate laparotomy, but after calling attention to many cases of acute intestinal obstruction in his hospital and private practice in which death occurred before he had an opportunity of operating on the cases he held that with the present safe methods of dealing with abdominal wounds and the rapidity with which Paul's tube, Murphy's button, and such appliances enable us to deal with lesions of the bowel, the intestines should be exposed much earlier and with greater frequency. The points on which greatest stress was laid were—(1) that all fluids should be removed from the pelvis and loins by irrigation with sterile water; (2) that the circulation in the intestines should be restored and peristalsis established by irrigating with boiled saline solution before returning them to the abdomen; and (3) that a tube passed through the rectum should be guided by the hand within the abdomen until flushing of the colon could be thoroughly carried out, so as to reduce the intra-abdominal tension and assist the return of the protruded bowel. When a surgeon is called to a case of complete obstruction of the bowel which has resisted judicious medical treatment and in which evidence of peritoneal effusion exists it is his duty to operate at once.

The PRESIDENT said he was sorry that Mr. M'Ardle had not described the symptoms or methods by which he arrived at the conclusion that those particular cases were cases for operation and not suitable for treatment by ordinary methods.

Mr. TOBIN said that if they applied to all cases of obstruction the rule that they applied in strangulated hernia, they would do well. Who now hesitated to do taxis for the cure of strangulated hernia before any serious disturbance had taken place? An early operation in a great many cases of intestinal obstruction would effect a radical cure. The persons who were most afraid of laparotomy were those who began it too late.

Mr. CROLY was entirely an advocate for early laparotomy in cases of acute intestinal obstruction.

Dr. ALFRED SMITH said that he assisted Mr. M'Ardle in operating on a case in which the patient was so bad that it was not necessary to administer ether before the operation; and he was greatly impressed by the remarkable change that was produced in the intestines by the use of the hot saline solution. It was exactly like the recovery from a cyanosed condition of a patient who had been given too much ether, after the ether bag had been withdrawn from his face. Mr. M'Ardle's experience as to the great advantage of saline solutions bore out that of everyone who had anything to do with abdominal surgery.

Reviews and Notices of Books.

Traité d'Electrothérapie Oculaire. Par le Dr. P. PANSIER (d'Avignon), avec une Préface de M. le Dr. VALUDE. (*Treatise on Ophthalmic Electro-therapy.* By Dr. P. PANSIER (of Avignon), with a Preface by Dr. VALUDE.) Paris: A. Maloine. 1896. Pp. 479. Price 6 francs.

THE employment of magnetism and of electricity in the diseases of the eye is not a new thing; indeed, the application of electricity is briefly mentioned in most of the larger treatises on ophthalmic medicine and surgery, but such notices altogether fail in stating the kind of current that should be employed, whether continuous or interrupted, the strength suitable for the purpose, the position of the poles, and many other details, leading to the suspicion that those who recommend it have seldom or never attempted to use it. Dr. Pansier tells us in the introductory chapter that the magnet has played an important part in the history of superstition. It was held to excite affection, to calm jealousy, to discover adultery, and to re-unite those who have ceased to love. According to Anselm de Boodt, the ingestion of six grains of a magnet so deranges the economy of those who have had the misfortune to swallow them that they are impelled to leave their homes and even to abandon their country. In surgery we learn from Pliny that a powdered magnet was beneficial in diseases of the eye; others tell us that it was used in cases of epiphora. Mylius declares that a magnetic plaster is capable of extracting every kind of venom from wounds. Held in the hands it was believed to facilitate delivery. It was employed in epilepsy and in many other affections, sometimes apparently with success. A second chapter deals with the history of electricity, and the various forms of machines that have been devised for the production of statical and current electricity are described. An account of the electric phosphene is then given—that is, of the luminous sensation that is felt in the eye on opening and closing the constant current; and it is noted that Darier found it serviceable as a means of diagnosis, since in the normal state and in cases of amblyopia without lesion a luminous impression is produced by a current having an intensity of less than a tenth of a milliampère, whilst when the optic nerve is atrophied no phosphene is perceived till the intensity is greater than three-tenths of a milliampère. Dr. Pansier proceeds to consider the effects of electrical currents in numerous diseases of the eye, as in the various kinds of amblyopia, including those of traumatic, hysterical, nicotinic, alcoholic, and strabismic origin; in hemeralopia, in atrophy of the optic nerve, in diseases of the iris, choroid,

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and retina, in glaucoma, in keratitis and its sequelæ, in paralysis of the ocular muscles, in exophthalmic goitre, and in various affections of the lids, as trachoma, ciliary blepharitis, chalazion, and distichiasis; and there is a section devoted to the use of the magnet. In nearly all these affections references are given to the operator who has employed the remedy, and in many instances a short history of the case is given, with details of the strength and kind and direction of the current employed. In some affections where electricity is rarely employed in this country excellent results have been obtained elsewhere. Thus Driver, Seeger, Meyer, and Adler, as well as the author, have effected the removal of leucomata. On the other hand, great caution is required in accepting the tsatements of enthusiasts. Cataracts, for example, seem to have been occasionally dissipated by electricity. The author cites the case of a woman aged sixty-nine years in whom a cataract in each eye was diagnosed by Professor Agnew. Constant currents were applied by Neftel, the anode being placed on the neck and the cathode on the eye for a period of ten or fifteen minutes. After twenty-five sittings the cataract disappeared and the patient recovered his vision, wearing his former glasses. Unfortunately for this remarkable story, Professor Agnew himself followed up the case and found the cataract *in statu quo*. No change had occurred. It was only an ordinary case of slowly developing cataract. Better results have no doubt been obtained in cases of ocular paralysis and especially in those of exophthalmic goitre, several examples being on record of great amelioration being effected by galvanisation of the sympathetic. The want of a soberly written and critical treatise on the place of electricity in ocular therapeutics has long been felt, and we venture to recommend Dr. Pansier's book as a trustworthy exposition of the present state of our knowledge on the subject.

Life in West London: A Study and a Contrast. By ARTHUR SHERWELL. London: Methuen and Co. 1897. Price 2*s.* 6*d.*

"SUNT lacrymæ rerum, et mentem mortalia tangunt." Mr. Sherwell's book involuntarily reminds us of the above untranslatable line. Here are to be found depths of misery and wretchedness which most of us probably had never dreamed of. Mr. Sherwell mentions in his introduction that Soho, the quarter with which his book chiefly deals, possesses the pathetic interest that always belongs to a neighbourhood that "has seen better days" and incidentally he forecasts the same future for Kensington. In our opinion no future in store for Kensington could be worse than the present state. The old church is gone and in its stead is a Gothic building absolutely correct and as absolutely lifeless. The Terrace has been carted away and its site covered with monstrous shops, and the old High-street is being rapidly converted into a sort of Westbourne-grove. Remain only Kensington-square, the one or two old houses in Church-street, and, we trust, the unique South-end Buildings. Soho never suffered this degradation. She passed straight from being the home of wit and fashion to poverty and slumminess, but was never vulgarised. It is better to see a fine old house turned into a human rabbit-warren than for its place to be taken by a packing-case composed of walls, iron girders, plate-glass windows, and stuffed to the roof with "cheap lines," representing the very evils Mr. Sherwell complains of; for the lost house can never be replaced, while the rabbit warren may, by dint of care and good legislation, be made at least sanitary. Mr. Sherwell's figures on the state of overcrowding which obtains in Soho and in other parts of West London are simply appalling. Thus the percentage of the total population of persons living four or more to one room 10 in Soho and 4 in Kensington, compared with 3 in Bermondsey. Mr. Sherwell remarks that it would probably startle nine-tenths of the inhabitants of Kensington to know the amount of overcrowding in their sanitary area. We do not know how it may be now, but some seven years ago there were houses in Kensington which for dirt and poverty surpassed anything that could be seen in St. Luke's. This overcrowding is, of course, responsible for much of the misery and want in the district; but it is not to be wondered at when single rooms rarely let for less than 5*s.* or 6*s.* a week and three rooms from 14*s.* to 25*s.* a week, and this, too, when efforts have been made to remedy this defect by the erection of "models," but even these have not solved the problem of rent.

Comparing them with the Peabody Buildings we find:—

Soho.

Single rooms	6*s.*	per week.
Two small back rooms	7*s.* 6*d.*	,,
Three small back rooms	10*s.*	,,
Two front rooms	10*s.*	,,
Two front rooms and one back ...	16*s.*	,,

Peabody Buildings, Shadwell.

One room	2*s.* to 2*s.* 3*d.*	per week.
Two rooms	3*s.* 3*d.* to 3*s.* 6*d.*	,,
Three rooms	4*s.* 3*d.* to 4*s.* 6*d.*	,,

The results of overcrowding are well known—easy spread of infection, propagation of disease, and a high mortality, especially infantile, are among them. We may at present leave morality out of the question.

To take an example, the deaths per 1000 in 1894 from phthisis were: 3·2 in the Strand; 3·1 in St. Giles-in-the-Fields; 2·3 in St. George-in-the-East; 1·5 in Kensington; and 1·3 in St. George, Hanover-square.

Soho and neighbouring districts suffer, as, in fact, all large towns do, from the uncertain character of the work. During the season there is an enormous pressure of work, while from August to November nothing is done. Another unfortunate feature is the variety of trade carried on. The people are apparently a sort of industrial Ishmaelites; there is no cohesion, no pride in their work. There are, of course, dressmakers and tailors, but they work under conditions which make it impossible to be a good craftsman, and as for waiters, kitchen porters, supers, cab touts, and sandwich men, how can any of these work with any idea of the dignity of labour or feel that if a thing has to be done it is best to do it as well as possible? We have not space here to go into Mr. Sherwell's analysis of the tailoring trade in West London, with its appalling revelations, and we think he lays a little too much stress upon the follies, vices, and pleasures of wealthy West London. We cannot think that this is the major cause of the poverty of Soho. So complicated a problem is not easily solved. If more model buildings—not great barracks, but three- or four-storied buildings—were to be erected and properly managed, we believe they could be let at moderate rents, would soon be self-supporting and would go some way towards meeting the overcrowding difficulty. Lord Rowton has solved the problem and so, apparently, have the Peabody trustees. There is the Guinness Trust; and, to deal with miscellaneous monies, there were in 1894, according to Mr. Burdett, some £13,000,000 raised in Great Britain for charities. Of this sum £5,000,000 odd were received by London institutions. Surely it would be possible out of this pile of gold [and it must be remembered that in addition there is an enormous amount of charity which never finds its way into subscription lists, for the above figures do not include any money for so-called "Church work"] to arrange better times for workers, better houses, better homes, and happier lives. It is no good teaching Board School children physiology, or, indeed, anything, until they have decent homes and food. Mr. Sherwell does not offer

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any solution of the problem he puts forth, but such a sombre picture has never been drawn since Mayhew's "London Labour and London Poor." The craftsman, poet, and worker who has so recently passed from us, managed to get good work done, to pay his men well, and not to lose money. If one man could do this it is not impossible that others may do likewise.

Eléments d'Ophtalmologie Journalière. (*Elements of Everyday Ophthalmology.*) Par les Drs. A. PUECH et C. FROMAGET, ex-Chefs de Clinique à la Faculté de Médecine de Bordeaux. Paris: Société d'Éditions Scientifiques, 4, Rue Antoine-Dubois. Pp. 246.

THIS is a compact little book giving a short but correct description of the chief affections of the eye with the simple treatment at the command of a practitioner who has not devoted himself especially to ophthalmic work; but the authors have wisely refrained from entering into any details of such surgical operations as are required for entropion, ectropion, strabismus, and the like, and although extraction of the lens in cases of cataract and iridectomy are described few would venture to operate with no more information than can be found in its pages. We are somewhat surprised to see jequirity recommended for pannus, since it is a remedy which, though it may be efficacious in practised hands and in a properly selected case, is yet liable to set up uncontrollable inflammation and would require more careful watching than is here suggested. The authors strongly recommend sub-conjunctival injections in cases of hypopyon-keratitis, using 1 part of sublimate and 2 parts of sodium chloride in 2000 of water. They state that they have had good results from large injections, but that they are apt to produce pain, chemosis, and considerable œdema of the eyelids, symptoms which would tend to shake the confidence of the patient in the surgeon, especially if he were young, and, therefore, should not have been mentioned here. In speaking of wound of the cornea with prolapse of the iris the use of eserin during the first few hours should have been mentioned if the prolapse is near the periphery of the iris. There are no illustrations, but the work, being reliable and written in short and clearly expressed sentences, might well be used as a primer for a student who wishes to learn to read an easy book in French.

At the Court of the Amîr. A Narrative. By JOHN ALFRED GRAY, M.B. Lond., late Surgeon to H.M. the Amîr of Afghanistan. London: Richard Bentley and Son. 1895.

AFGHANISTAN, apart from any question of politics, is an intensely interesting country and its present ruler a very remarkable man, so that any book dealing with life in that country is generally worth reading. Dr. Gray was, of course, on terms of great intimacy with the Amîr and saw a great many things which are hidden from the eyes of the casual traveller. Dr. Gray's first introduction to the hospital at Kabul was rather amusing. He found about eighty Afghans waiting to be cured by the "Feringhi doctor," and a guard with fixed bayonets had to stand at the door to keep back the crowd. This system might be introduced over here, perhaps, with advantage as a measure of hospital reform, and we are sure would meet with the approval of many an overworked house surgeon or house physician.

We might go on quoting all sorts of delightful stories from this book, but we have only space for one. It shows at once the best and worst traits of Oriental character, and makes the reader understand how it is that every foreigner who is brought into contact with the Amîr seems to feel a strong attachment for that very remarkable man. "His Highness had heard that I was ill and I told him that I had not with me the medicine I wished to take. His Highness asked, Would I take native medicine if he prescribed it? I said I should be most grateful to His Highness if he would honour me so far. His Highness gave some directions to a Hakim, who presently brought a small jar. The Amîr told me it contained a medicine he was himself taking. With a little silver spoon he took some dark-looking confection out of the jar, made a bolus of it, and gave it to me. It tasted hot and very nice. There was no more in the pot and he sent the Hakim away to make some fresh. It was then that my mind became troubled within me, for I knew the Hakim loved me not. Presently the jar was brought back, and as they were about to give it me His Highness asked for it. He scooped a little out with the spoon, and was raising it to his lips when the Hakim stopped him and whispered in his ear. The Amîr turned and looked at him, and the Hakim hurried away with a very red face. By-and-by he returned with the jar. Again the Amîr took it, and, looking at me, he raised a spoonful to his lips and swallowed it. He then gave the jar into the hands of the Armenian, who immediately brought it to me." It is needless to comment upon the courtesy and kindliness displayed by this act. Our readers will doubtless remember some articles by Dr. Gray, entitled "Afghan Physicians and Surgeons," which appeared in our columns during June, 1894. Several of the incidents therein mentioned have been incorporated in the book we now notice, and we have no hesitation in saying that all those who enjoyed the former articles will equally appreciate this book.

LIBRARY TABLE.

Sell's Dictionary of the World's Press. London: H. Sell, 1897. Price 7*s.* 6*d.*—This now well-known annual appears for the seventeenth time, and has been specially compiled to commemorate the sixtieth year of Her Majesty's reign. The new volume is appropriately styled the "British Empire Edition," and the front cover is embellished with a crowned portrait of the Queen. As is explained in the article "The Queen's Newspapers," the book professes to give "a complete and comprehensive account of the Fourth Estate throughout Her Majesty's vast dominions," and to enable this programme to be carried out the foreign section has been excised from this year's edition. The book contains several useful maps and diagrams and is embellished with some interesting portraits and autographs. The first part of the volume, which now extends to 1226 pages, comprises articles of interest, not only to Pressmen, but to every citizen who—as he should do—takes an interest in the Fourth Estate of the Realm. Many interesting and little known facts are given. For instance, few are aware that in the Press Gallery at Ottawa reporters change sides with changes of the Government just as members of parties do at home. "Leading Lady Journalists with Portraits" gives some idea of the invasion of the journalistic province by the fair sex. Part II. gives a complete list of newspapers, magazines, periodicals, &c., published throughout the British Empire.

JOURNALS AND REVIEWS.

Janus: Archives Internationales pour l'Histoire de la Médecine et pour la Géographie Médicale. (Janus: International Archives of Medical History and Geography.) London: Williams and Norgate. 1896. Price 20*s.* annual subscription.—We desire to call attention to this most interesting periodical issued in Holland, but obtainable in all parts of the world. It is of a strictly international character, the articles it contains being written either in French, German, or English. Issued at bi-monthly intervals, the first two numbers have now appeared, Professor Stockvis of Amsterdam leading off with an interesting article entitled "*Janus* Redivivus"; for it appears that this is not the first time that a journal of like name and purport has been published. Half a century

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ago Dr. Henschel, Professor of Clinical Medicine at Breslau, conceived the idea of an international journal dealing with the history of medicine, and obtained the coöperation of some of the best scholars in different countries. He called the journal *Janus*, but it failed to receive the support it merited and ceased to exist after three years. It was revived in 1851 by Dr. Henschel in collaboration with Professor Heusinger, and this time was published at Gotha. This second venture did not, however, exist more than a few years. Professor Stockvis hopes that the new revival will meet with a better fate, and his wish will be echoed by many both in the New World and the Old who take an interest in the subjects with which the journal deals. Besides original articles each number contains bibliographical notices from all countries. Amongst the contributions are articles on Variolation and Vaccination, by Dr. J. Petersen of Copenhagen; an account of his second Visit to Iceland to Study Leprosy, by Dr. Ehlers; and a Study of the Cerebral Cortex and the Physical Substratum of the Mind, by Dr. Adamkiewicz of Vienna. Dr. A. Calmette writes on Snake-poison and Prophylactic Treatment of Snake-bite. An interesting paper (in English) is that of Dr. J. Carlson of Copenhagen upon the History of Diphtheria in Denmark. Dr. Peypers, the editor, reproduces the text of an essay on the Cause of Diseases, written in 1726 by an English physician, who is styled by Dr. Peypers a "pseudo-precursor of Pasteur." In the second number Dr. Fiessinger gives a curious account of the precautions against the contagion of plague adopted in the seventeenth century, illustrated by a quaint drawing of the mask and clothing worn by the medical attendant. An account of "Burnt Substances" taken from Alexander Trallianus is given by Dr. E. Trosse of Neuenahr; and a description of Epidemics of Ergotism in Russia, by Dr. A. Grünfeld. Altogether, *Janus* is a notable addition to periodical literature.

The third number of the *Journal of Experimental Medicine*, edited by Professor Welch of Baltimore and published by Messrs. D. Appleton and Co. of New York and London, fully keeps up the standard promised in the first two numbers. It contains ten articles dealing with Physiology, Pathology, Therapeutics, and Hygiene. The first article is by Messrs. J. J. Abel and Walter S. Davis on the Pigment of the Negro's Skin and Hair. They have been able to collect the pigmented granules of the negro's skin and hair and submit them to chemical examination. They consider that both pigments are identical and are probably the same as the pigment found in the hairs of the white races, the difference being merely one of quantity. In an article on Hæmorrhagic Cysts of the Thyroid Gland Dr. W. I. Bradley maintains that the gross cysts of the thyroid which possess fluid contents are essentially of hæmorrhagic origin. Dr. A. C. Abbott's paper on the Significance of Pathogenic Spirilla in American Surface Waters is of considerable interest. Dr. Abbott has gone very fully into the pathogenic action of a spirillum, not the cholera organism, found in American surface waters. The same author has a very interesting note on the Influence of Acute Alcoholism on the Normal Vital Resistance of Rabbits to Infection, from which he concludes that, with few exceptions, alcoholised animals are much more susceptible, and at an earlier date, to streptococcic inoculations than are non-alcoholised rabbits. Dr. Adler and Dr. Meltzer make an Experimental Contribution to the Study of the Path by which Fluids are carried from the Peritoneal Cavity into the Circulation, and Dr. Meltzer has a Note on Absorption of Strychnine and Hydrocyanic Acid from the Mucous Membrane of the Stomach. Dr. Beyer, in a paper on the Influence of Exercise on Growth, gives records taken from 605 cadets as a standard and compares them with records of 188 observations in a gymnasium, from which he finds that between the years of sixteen and twenty-one there is an average increase of weight in the cadets of 268 kilogrammes and in the gymnasts of 1176 kilogrammes, and he concludes that the "wonderful performance of most of our strong men are well within the reach of the majority of healthy men if such performances were a serious enough part of their ambition to make them do the exercises necessary to develop them." Dr. Mead Bolton and Dr. Herbert D. Pease have apparently fallen into the error of assuming that the fluid developed in electrolysed toxin is a true antitoxin and not Hermite fluid. Dr. Mead Bolton also has a note on the Presence of Antitoxin in Horses that have not been Treated by Diphtheria Toxin in which he finds one-thirtieth of a normal antitoxin unit. Dr. Simon Flexner contributes an interesting study of Terminal Infections which is well worthy of careful reading.

The Scottish Medical and Surgical Journal.—The first number of this new monthly is an excellent beginning, and the list of contributors who have promised literary support is almost a guarantee that a high standard will be maintained. In one of our previous allusions to its forthcoming appearance attention was directed to the fact that the profession in Glasgow was inadequately represented in an undertaking which aimed at being comprehensively Scottish; but this defect has now been satisfactorily remedied. The original articles are eight in number. Professor Stephenson of Aberdeen discusses the Management of Labour in Twin Pregnancies, and concludes that it is safer for the mother and the second child that the labour should be ended as soon as possible, and that in head presentations of the second child it is preferable to turn at once than to incur the risks of delay and the necessity of using forceps. Dr. Clouston of the Royal Edinburgh Asylum writes on Cortical Stimuli. Dr. A. Ballantyne, President of the Edinburgh Obstetrical Society, has a long paper on the Use of Chloroform in Midwifery Practice. Dr. Alexander James of Edinburgh describes a case of Rickets beginning at the age of seventeen years; this paper is accompanied by illustrations reproduced from ordinary and Roentgen photographs. Dr. J. Crawford Renton of Glasgow gives an account of four cases of Sciatica in which exposure of the nerves and removal of adhesions were followed by recovery. Mr. D. M. Greig of Dundee describes a case of Complete Extirpation of the Gall-bladder, with removal of part of the liver; the patient regained good health and could attend to her usual household duties. Dr. Alexander Bruce of Edinburgh has an illustrated paper on a special tract in the Limiting Layer of the Spinal Cord. Dr. David Newman of Glasgow gives details of five cases of Disease of the Kidney which required operative treatment, but presented difficulties in diagnosis. There is also a "Digest" by Dr. George Dean of Aberdeen on the Serum Diagnosis of Disease. Reports of the meetings of societies in Edinburgh, Glasgow, Aberdeen, and Dundee, reviews, abstracts from recent literature, and a section on Scottish medical news fill up the remainder of the ninety-six pages. The editor is Dr. William Russell, assistant physician to the Royal Infirmary, Edinburgh. The publisher is Mr. W. F. Clay, 18, Teviot-place, Edinburgh, whose London agent is Mr. Henry Kimpton. The annual subscription is one guinea.

The Practitioner.—The opening paper is by Mr. Butlin on Sarcoma of the Lower End of the Femur and is illustrated by skiagraphs as well as by an engraving of a longitudinal section. Dr. Patrick Manson describes recent investigations on Bubonic Plague. Dr. John Macintyre of Glasgow has an elaborate article on the Use of the X Rays in Diseases of the Nose, Throat, and Thorax. By large focus tubes and powerful coils he has "succeeded in sending the rays 16 ft. across a room, then through a thick door into the next chamber, and this in sufficient force to show the contents of

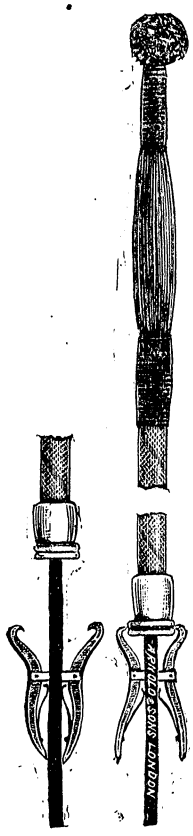
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a surgical case on the fluorescent screen." For examination of the structures of the nose, throat, &c. he employs fluorescent screens in the form of a tongue depressor put into the mouth. The "Hero of Medicine" this month is Ephraim McDowell of Virginia, the "Father of Ovariotomy"; he performed the operation in December, 1809, and the patient survived for thirty-two years.

New Inventions.

AN IMPROVED ŒSOPHAGEAL PROBANG.

THE extraction of foreign bodies which have become impacted in the œsophagus is an operation frequently required, and one for the performance of which many expedients have been devised. Fragments of bone hastily swallowed at meal times are perhaps the most usual examples of this kind of accident; artificial teeth sometimes also lose their hold and slip down the throat, children swallow portions of their toys, and coins, pins, nails, &c., held between the lips not infrequently disappear in the same way. In many cases these foreign bodies may be caught and pulled out by means of the ordinary œsophageal probang, tipped with a piece of sponge and with an expanding ring of bristles. This instrument, however, is somewhat difficult to pass down into the œsophagus because it must be held by the outer tube, and the sponge-end being pressed back by coming in contact with the back of the throat causes the ring of bristles to open out and thereby impede its entrance into the gullet. To obviate this Messrs. Arnold and Son, London, at my suggestion, have fastened a clip on to the free end of the whalebone to catch the bone end of the catheter, the outer tube. This holds perfectly fast while the probang is being passed, and directly it has gone far enough the finger and thumb open the clip and withdraw the probang with its ring of bristles expanded.



E. MANSEL SYMPSON, M.D., B.C. Cantab., M.R.C.S. Eng.,
Surgeon to the Lincoln County Hospital.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons of England was held at 5.30 P.M. on Dec. 30th, 1896, at 25, Grosvenor-street. In the unavoidable absence of the President, Mr. George Pollock, Mr. F. J. Gant took the chair.

The minutes of the preceding meeting were read and confirmed.

Mr. H. P. Dunn, the honorary secretary, reported that owing to various causes it had not been possible to arrange for the holding of the annual general meeting of the association, and at the same time pointed out that it would be expedient to call a general meeting of the association at an early date in the New Year. This suggestion was accepted by the committee and the settlement of the exact date was left for subsequent determination. The question of raising the subscription of the association from 2*s.* 6*d.*, as at present, to 5*s.* was then discussed. Various opinions were expressed upon the subject and the general view was in favour of the change. It was ultimately agreed to submit the matter to the annual general meeting for decision.

In accordance with the resolution passed at the last meeting of the committee the honorary secretary read a special address drawn up by a sub-committee for circulation among the Fellows of the College, inviting them to join the association and to take an active part in forwarding its objects.[1] The report was approved and unanimously accepted. Mr. R. B. Anderson, one of the honorary secretaries to Mr. Rivington's election committee, brought up a report to the Association of Fellows of the Royal College of Surgeons of England, on behalf of the representatives of the association, on Mr. Rivington's election committee. The report was approved and adopted.

Mr. Rivington reported that in accordance with the request of the committee conveyed to him at the last meeting he had given notice to the secretary of the College that he would move the resolution in favour of a grant from the Council to the appeal of the Privy Council on behalf of Mr. R. B. Anderson and had received an acknowledgement from the secretary.

Mr. Rivington then called the attention of the committee to the fact that no report of the proceedings of the association had been issued since 1892, and expressed his opinion that it would be very desirable to bring the account of those proceedings up to date and issue a copy of the report to members and others, more especially as there was some prospect of the subscription to the association being raised. He then moved the following resolution, which was seconded by Dr. Barnes and carried unanimously:—

"That a sub-committee consisting of the president, two vice-presidents, and honorary secretary, be appointed to draw up a report of the proceedings of the association from the date of the last report to the present time for transmission to the members of the association."

This concluded the business of the meeting, and the committee adjourned.

[1] The address will be found printed in full at page 126 of our present issue.

PRESENTATIONS TO MEDICAL MEN.—At a meeting held on the 21st ult., in the District Hospital, West Bromwich, Dr. A. P. Steavenson, until recently senior house surgeon to that institution, was presented by the honorary secretary, on behalf of the patients and officials, with a valuable case of surgical instruments.—Dr. R. W. Lethbridge has been the recipient of a handsome testimonial on his departure from Alexandria, Victoria, Australia.—On the 23rd ult., at a meeting in the Council Chamber at Luton, Mr. W. R. Phillips, J.P. (vice-president of the Bute Hospital), in the chair, Dr. David Thomson, on the occasion of his leaving the town, after many years' residence there, and specially in recognition of the great work he had done for the Cottage Hospital during eighteen and a half years, was presented by Mr. W. R. Phillips, on behalf of the subscribers, with a handsome gold keyless chronometer, which was thus inscribed: "Dr. David Thomson.—In remembrance of generous service at Bute Hospital, Luton, and other good work. December, 1896."—Presentations have been made to the following gentlemen, in acknowledgement of gratuitous instructions on First Aid—namely, to Mr. J. K. Goodall, L.R.C.P., L.R.C.S. Edin., of Brimington, a silver-mounted walking stick, from the members of the Midland Ambulance Class at Whittington; to Mr. W. Crooke, L.R.C.P. Lond., M.R.C.S. Eng., of Egremont, a beautifully inscribed barometer from the Ambulance Class in connexion with the Seacombe Technical Institute; to Dr. Llewellyn A. Morgan of Liverpool, a handsome teapot from the members of the Ambulance Class, recently organised, at the Central Station of Ambulance Work on the Cheshire Railway Lines; and to Dr. W. George Willoughby of Eastbourne a malacca cane walking stick, with ivory handle, and a silver band bearing the inscription, "Presented to Dr. Willoughby by the Eastbourne Borough Police Ambulance Class. 23rd Dec., 1896."

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THE LANCET.

LONDON: SATURDAY, JANUARY 9, 1897.

THE elevation of Sir JOSEPH LISTER to the Peerage is an event to be regarded with unqualified satisfaction. Nothing is more noticeable than the universal approval which it has called forth from all quarters. The press of every party and shade of political feeling has been hearty in its praise of the creation of the new peer and so far from regretting the departure has pleaded for an even wider recognition of the claims of medicine. The fact is a very significant one and will go far to encourage our statesmen to be less timid in extending, or rather in using, the Royal prerogative to create peers at pleasure—a prerogative which has never been disputed. Though the unanimity of the press and of all parties in this matter is very gratifying it is satisfactory to notice that the new departure has been taken by a Conservative Minister—or, to speak more accurately, by the Conservative head of a Unionist Ministry. When the party taking such a step forwards is one which is supposed to stand on ancient ways, and one most apt to see the difficulties and the objections to innovations, there is the more assurance that the advance will not be retraced, but that with favouring circumstances it will be succeeded by others in the same direction. HER MAJESTY'S appreciation of the services which medicine has rendered to humanity is well known. Her loyal and constant confidence in those distinguished members of the profession by whom she has been faithfully served has been an example to the public. In the many anxious times of her history when she, and her people in sympathy with her, have been awaiting the issues of life and death she has ever known how to support her medical advisers by her trust and to reward them with her favour. We are quite sure, therefore, that when her responsible Ministers came to be of opinion that medicine should be honoured by a representative in the House of Lords they found no difficulty in getting HER MAJESTY'S gracious consent. That such a proposal should have been made by the Marquis of SALISBURY will enhance the satisfaction of Sir JOSEPH LISTER. His Lordship is not only at the head of a powerful Ministry, but his knowledge of science, and the fact that he has himself been President of the British Association for the Advancement of Science, increase the value and significance of a medical peerage granted upon his recommendation. Sir JOSEPH LISTER may well dwell on the fact of his progression in honours and the division of the credit of them between the two most conspicuous statesmen of the country. It was Mr. GLADSTONE who, under HER MAJESTY'S authority, conveyed to Sir JOSEPH LISTER the intimation of his baronetcy, and who did so with every expression of personal satisfaction. And now it is the Marquis of SALISBURY who, in full sympathy with the public opinion of Sir JOSEPH LISTER'S merits and his world-wide fame, calls him into that branch of the Legislature where his rare knowledge and foresight may serve to guide legislation in ways of safety on questions deeply affecting the health and happiness of the empire.

We have treated this action on the part of Lord SALISBURY and his Ministry so far from a purely public point of view, conceiving the admission of members of the medical profession into the House of Lords as an obvious advantage to the public and the House. There is a deep faith in the Second Chamber, which faith will be strengthened by the addition of men of commanding character and wisdom, who have not been called to it by the accident of birth. To Sir JOSEPH LISTER himself this elevation will bring strange associations and varied thoughts. He is too deeply absorbed in the great problems of modern medicine, which excite hopes beyond the dreams of our immediate predecessors, to be spoiled or dazzled with the conventional grandeur of his new position. But he may well be trusted to appreciate the honour to him and to his profession which it implies, as well as the responsibility. We do not expect him to develop any new ardour in party politics or even to hear of his frequent participation in debate. But for all that we expect him to be a power on occasion in defence and furtherance of the health and happiness of the people and, if need be, of the profession of which he is a most distinguished leader and ornament. To that profession at large the event is very pleasing. Had a *plébiscite* of all British medical men been taken for the nomination of one man the vote must have been unanimous in favour of Sir JOSEPH LISTER. He was one of the most careful of surgeons and one of the most successful. Whether his patient was a hospital patient or a private patient he had the same care for him. But beyond his solicitude for individual patients he was ever the scientific seeker after those truths the bringing to light of which resulted in the establishment of the antiseptic treatment, with its splendid results. For thirty years at least he has unceasingly pursued this end with a result in the saving of life comparable only to that effected by EDWARD JENNER.

In conclusion, we have only to say that our own gratification is complete. For years we have urged this step on successive Ministries as eminently indicated by the wants of the public and the importance of the profession. Very lately we even ventured to suggest both the step which Lord SALISBURY has so happily taken and the individual name which he has selected. We have waited long to see the realisation of our wishes and have been conscious sometimes of almost impatience; but this is not the time to complain. Lord SALISBURY has, indeed, made this year a notable one for medicine and infused fresh encouragement into the hearts of those who pursue it, and he will long enjoy the gratitude of the profession for a new and truly statesmanlike departure.

RATHER more than ten years ago[1] we drew the attention of readers of THE LANCET to the importance which thrust

[1] THE LANCET, July 17th, 1886, p. 143.

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wounds of the orbit possess from the very great fatality which follows their infliction. The extreme thinness of the bones forming the roof and inner wall of the orbit makes penetration of the cranial cavity by a slight thrust from an umbrella, walking-stick, foil, pipe-stem, &c., easy of attainment, whilst the elasticity of the skin and orbital contents causes the wound of entrance to appear of far less consequence than it really is. We can find excuses for the surgeon of bygone days, who was chiefly dependent on the few cases of surgical interest which could be seen when walking the hospital of the period for the experience which was to guide him in future life and who could obtain but limited information from books. To-day the conditions of professional training and practice are quite changed. For years the medical press has been accumulating cases of the rarer diseases and injuries until almost all that can be known about them has been placed before the profession. At intervals we have considered it advisable to make a *résumé* of our knowledge on some subject and take thought of our position with regard to it. As regards the subject of which we are writing now no advance has, in our opinion, been made during the time which has passed since we last drew the attention of our readers to it. When investigating the subject a few years ago[2] we found the mortality from these injuries to be over 90 per cent., and we think this excessive mortality to be the result of the policy of non-intervention which was formerly the bane of abdominal surgery. If the surgeon is aware, as he should be, of the dangerous character of wounds inflicted by thrusts of the kind under consideration, harmless though they appear, he has no excuse for not treating the case in the same manner as he would treat a punctured fracture of any other part of the cranium with probable injury to the brain. Careful examination of the wound must be made, the track rendered as far as possible aseptic, foreign bodies and bone splinters removed, and adequate provision made for drainage. This need not involve the loss of the eye unless that organ has been irreparably injured by the instrument which caused the damage. Nor need the scar which must result from the operation cause much disfigurement; this must not, however, be allowed to weigh with the surgeon in the face of the great danger to life. "Waiting for symptoms" cannot be too strongly condemned in the light of our present knowledge; this course, which is so much the easier in the presence of a wound which is apparently of trifling extent, is almost invariably a fatal one. Sometimes, however, brain substance escapes from the wound and there is no doubt that the brain has been penetrated and severely injured. The indication is then clear, but not always followed. We know of two or three cases of thrust wound of the orbit which have been recently under treatment in hospitals in which it was decided to wait for symptoms; all proved fatal. As the late Mr. HULKE[3] wrote some years ago of the course of events after such injuries: "Of brain symptoms there may be none. Two or three days may pass over, during which the patient goes about as usual; then brain symptoms make their appearance, sometimes suddenly, and the patient dies in the course of a few hours or days, and the true nature of the case is revealed only by the post-mortem examination." The portion of brain usually injured is not very important in the carrying on of the ordinary cerebral functions, and the inflammatory mischief may be too extensive for repair when the symptoms which are supposed to justify interference are first noted; the surgeon may not find the abscess should there be one (as in a recently published case); or the fatal event may supervene too rapidly although the symptoms are delayed for a week. The cases of recovery to which we have access are not very numerous. Sir PRESCOTT HEWETT,[4] in his lectures on injuries to the head, mentioned two. The first was that of a boy aged four years who fell with a cheese knife in his hand. The point of the knife entered the orbit, and on its withdrawal, which required force, brain substance followed. He recovered and was well seventeen years afterwards. The second case is taken from MORGANI. A young man received a punctured wound in the left orbit, became paralysed on the same side, and had fits on the opposite side with aphasia and delirium. He then complained of pain in the right ear, and in three weeks there was discharge from the ear; after the cessation of the discharge he recovered. LAPLACE[5] had under his care a man who received the end of a foil in the left orbit. Coma with paralysis of the right side of the body and left side of the face rapidly ensued. The pulse rose to 140 and the temperature to 104·5°. On the fourteenth day the left temporal region was trephined; the dura mater was found to be congested; a platinum wire was passed to the cavernous sinus and about a drachm of blood clot removed. The trephine opening was plugged, and a tight bandage applied. He recovered, but with some anæsthesia around the orbit and internal squint. It was supposed that the foil had entered the sphenoidal fissure. HULKE[6] had a patient aged thirty-six years under his care, with the vulcanite mouth-piece of a pipe embedded in the orbit, who recovered; but it is not certain that the dura mater was wounded. BEAUMONT'S[7] case is historical. A man who was watching the firing of a rocket felt a sudden blow in the left eye. A piece of wood five and a half inches long, the transverse section of which was four-tenths of a square inch, was extracted with difficulty. A profuse gush of blood followed, but was arrested with the application of iced water. He suffered severe headache and vomiting for the first twenty-four hours, but was not rendered unconscious. He lost vision in the eye on that side and had anæsthesia in parts supplied by the infra-orbital nerve. Three years afterwards he was in good health, but had an impaired memory. Mr. A. F. HAWKINS[8] removed a piece of broken knitting-needle nearly three inches in length from the orbit of a child three years of age who had fallen on it. The child appeared somewhat dazed for a moment, but went on with her work. On the fourth morning there was paralysis of the left side, more marked in the upper than in the lower extremity. The end of the needle was about three-quarters of an inch from the puncture in the

[2] THE LANCET, July 4th, 1891, p. 15.
[3] A System of Surgery, vol. i., p. 585 (Holmes), third edition.
[4] Medical Times and Gazette, 1858, vol. i., p. 237. See also THE LANCET, 1827-8, vol. ii., p. 817.
[5] THE LANCET, Dec. 19th, 1891, p. 1405.
[6] THE LANCET, July 4th, 1891, p. 15.
[7] THE LANCET, June 14th, 1862, p. 626.
[8] THE LANCET, July 17th, 1886, p. 144.

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skin. The paralysis continued for ten days after removal of the needle, then began to subside, and afterwards rapidly passed off. She was quite well a year later. Mr. GODLEE and Dr. POPE[9] had a patient under their care who had received a stab from the point of an umbrella in the left orbit. Much shock and vomiting followed. Later he had aphasia, epileptiform seizures, paralysis of the right side of the face and tongue, and somewhat irregular temperature. He recovered. A horse-hair drain was placed in the wound about the third day and replaced by a small drainage-tube on the eighth day, which was shortened on the thirteenth. The wound was twice explored and the question of trephining considered. POLAILLON'S[10] case was that of a boy aged eighteen years who had the point of an umbrella thrust through the roof of the orbit. He was found in a state of coma; the foreign body had been removed with difficulty. An incision was made in the forehead and a portion of the frontal bone chiselled away; the dura mater was incised and some blood and cerebro-spinal fluid escaped; five splinters and a portion of damaged brain-substance were removed and a small artery tied with catgut; the débris of the eyeball was enucleated and a drain passed from the frontal wound through into the orbit. The patient became conscious in a few hours and had no bad symptoms afterwards. Healing took place well and quickly. In THE LANCET of Jan. 2nd, p. 38, will be found the account of a case under the care of Mr. A. WINKFIELD, where the wound was carefully drained at first, and on the occurrence of symptoms at a later date trephining was resorted to with much benefit. HULM'S[11] statistics on the subject show the diminished mortality which follows surgical interference in all cases of foreign bodies in the brain when the surgeon operates at the present day and observes modern precautions.

THE increase of longevity is one of the main objects of all work in the field of preventive medicine, and the question "Is longevity increasing?" is only another form of the still more pertinent question—"Has the recent development of preventive medicine yielded any tangible results on the duration of human life?" At this season of the year industrious paragraphists in some of our lay contemporaries often exercise their ingenuity by tabulating the ages of persons whose deaths were announced in their obituary columns during the recently completed year. It may be interesting to some of the readers of a newspaper to learn, for instance, that during 1896 its obituary columns contained notices of 7743 deaths, 1141, or nearly 15 per cent., of which were of persons aged upwards of eighty years, and that 165 were deaths of nonagenarians. It is scarcely necessary, however, to point out the absolute futility of this class of statistics, even when we are further told the proportion of the announced deaths of octogenarians in a given newspaper in a series of years. A high proportion of deaths of aged persons may be due to the epidemic prevalence of influenza, or be the result of exceptionally severe weather, but this would not prevent this class of statistician from claiming it as evidence of so-called "longevity."

If we would seek an answer to the question "Is longevity increasing"? we must consult a very different class of statistics. The series of Life Tables published by the Registrar-General during the last fifty years clearly prove that the mean duration of life in England is steadily increasing and that this increase is an increasing rate of increase. During the thirty years 1841–70 the English death-rate was practically stationary at 22 per 1000; in other words, preventive medicine was only able in that period to counteract the deleterious effect of the constantly increasing aggregation to towns. Under the stimulating sanitary influence of the Public Health Acts of 1872 and 1875 the national death-rate fell in 1871–80 to 21 per 1000 and further to 19 per 1000 in the decennium 1881–90. The effect of this marked decline in the English death-rate is clearly shown by the three principal Life Tables published by the Registrar-General. For instance, the mean duration of the life of males, according to Dr. FARR'S Life Table, based upon the mortality statistics of the seventeen years 1838–54, was forty years; according to Dr. OGLE'S Table, based upon the ten years 1871–80, it had increased to forty-one years; and by Dr. TATHAM'S Table, based upon the more recent decennium 1881–90, it had further increased to nearly forty-four years. Thus the mean duration of life among males has increased under the influence of preventive medicine by four years during the past fifty years. The increase of longevity among females has been still greater. Thus the mean duration of life of females, which was not quite forty-two years by Dr. FARR'S Table, rose to nearly forty-five years by Dr. OGLE'S Table and to forty-seven years by Dr. TATHAM'S Table, showing a total increase of five years in the same period.

Some are inclined to depreciate the value of this increase of the mean duration of life in England in recent years, because it is mainly due to the reduction of mortality in childhood. It is indeed true that after middle life the expectation of life has not increased, and has, indeed, slightly declined. The effect of this is, however, far more than counterbalanced by the largely increased proportions of persons who survive childhood and reach middle life. Thus, as has been pointed out, there has been a very considerable increase in the proportional number of years lived by succeeding generations between the most useful age-period of from twenty to sixty years. This may clearly be claimed as one of the results of the labours of preventive medicine. It remains to be seen whether further sanitary progress will make it possible to entirely counteract the effect of the increasing intensity of competition and the struggle for existence and survival which undoubtedly are now depressing the expectation of life after middle age. If, therefore, longevity signifies mean duration of life there can be no doubt about its increase in England in recent years. If, however, by longevity is meant the chance of middle-aged persons reaching extreme old age, English Life Tables do not supply so satisfactory an answer to our question.

So far back as Oct. 17th, 1885, we referred in an annotation headed "A New Objection to taking Oath," to the possible risk of infection from kissing the Book when taking the oath in a court of law. Allusion was made in that

[9] THE LANCET, June 19th, 1886, p. 1158.
[10] Sajous: Annual of the Universal Medical Sciences, vol. iii., A38.
[11] University Medical Magazine, Philadelphia, 1892, vol. i.

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annotation to the circumstance that a medical man, Mr. STRATHEM of Middlesbrough, on being summoned to give evidence in a case of drunkenness objected to swear on the Testament, not for the ordinary reason, but on account of the risk of infection. The objection astounded the legal authorities, who ruled that it was not a conscientious objection within the meaning of the Act. The witness at length swore under protest. Remarking on these facts it was observed at the time that "it must be allowed that there is something in the objection." In the following year we published a letter from Dr. HARKNESS of Derby complaining that when giving evidence in the Divorce Court he had been required to kiss the same book which had just previously been handled and kissed by two common prostitutes. His objection to do so on the very possible, not to say probable, grounds of infection afforded much amusement to the late Mr. Justice BUTT and some members of the Bar present, while other members supported the witness in his very reasonable objection. Ultimately, at the suggestion of the learned judge, Dr. HARKNESS kissed the open Book, though, as he urged in his letter, this did not prevent his handling an unclean thing. Many more letters, annotations, and articles too numerous even to summarise followed, and then the Oaths Act, better known, perhaps, as Bradlaugh's Act, was passed. This Act, as is well known, relieved all persons who, like its author, had no religious belief from taking an oath, permitting an affirmation instead of it. It continued to relieve also from the necessity of taking an oath those to whose religious belief it was contrary. It also contained a section (the fifth) which has already become memorable and promises to become more so. This section permitted any person to whom an oath is administered who desired to do so to swear with uplifted hand in the form and manner in which an oath is usually administered in Scotland. When this section became known to us, we used every effort to make it known to our readers and to induce them to take advantage of it. Here a serious difficulty occurred. Though the Act had for some time become law its fifth section was wholly unknown to many of those whose duty it wa to have had it at their fingers' ends—legal coroners, stipendiary magistrates, judges of county courts, recorders, registrars, and magistrates' clerks. Medical witnesses on claiming their rights under this section were treated not only illegally by being asked questions clearly contrary to the words of the section, but were also treated with rudeness and incivility. Indeed, such was the prevailing ignorance that Mr. ASQUITH, then Home Secretary, was moved to issue a circular to all coroners' and magistrates' clerks, calling their attention to the section and its provisions. Even this did not prevent some magistrates from acting illegally, as duly recorded in our pages. Fortunately a change for the better is at hand. The *Times* in its issue of last Saturday published a letter from Mr. FRANCIS A. STRINGER, of the High Court of Justice, author of "Oaths and Affirmations," and an undoubted authority in all that relates to the oath. In this letter he, with a courage and boldness much to his credit, condemns the English form of oath as liable to spread syphilis. He gives the forms in use in France, Belgium, Austria, Spain, and Italy and shows that kissing the Book is unknown in any of these countries. He also shows that the Scotch form, like the French, is much more solemn than the English one, and that though anyone may take it, not one witness in a thousand knows of the existence of the section of the Act which permits it. Consequently the uncleanly English oath remains in general use, for unless a witness asks to be sworn in the Scotch form the usher has no choice but to administer the usual English one. Mr. STRINGER concludes a most able letter by suggesting the bringing in a Bill to provide a short simple form of oath similar to that of Scotland and so making it uniform in the United Kingdom. The *Times* of Monday had an excellent leading article supporting Mr. STRINGER'S views and condemning the English form of oath on all grounds. What will, we trust, prove to be the beginning of a most interesting correspondence has commenced in the columns of our contemporary, and will, it is to be hoped, aid in the reform for which we have so long contended.

Annotations.

"Ne quid nimis."

NEW YEAR HONOURS TO THE MEDICAL PROFESSION.

THE New Year has brought to the medical profession, in the person of Sir Joseph Lister, the honour of a peerage. This is a departure in the bestowal of titles which all will welcome—and welcome not only because of the spirit which has suggested the offer of nobility to Sir Joseph Lister, but because of the undoubted deserts of the recipient. We make further reference to this grateful topic in a leading article. Dr. Richard Douglas Powell has received the honour of a baronetcy. Dr. Powell has for many years been a leader in the profession. He is physician to the Middlesex Hospital, consulting physician to the Brompton Hospital, and author of an excellent book on pulmonary disease. He is Senior Physician Extraordinary to Her Majesty the Queen and his well-merited title was expected for him by all his friends. Mr. William Raymond Kynsey, C.M.G., receives the honour of a knighthood. The Hon. Sir William Raymond Kynsey, a retired surgeon-captain in the army, is a member of the Legislative Council of Ceylon and Inspector-General of Hospitals and Asylums in the island. Deputy-Surgeon-General Charles Benjamin Mosse, C.B., receives a Companionship of the Order of St. Michael and St. George. The new C.M.G. is the superintending medical officer of Jamaica.

THE FIGURES OF THE MEDICAL PROFESSION.

THE Medical Directory for 1897 shows the numbers of the profession to have again increased, as they have done steadily for the last decade. This time the number of names included is greater by 958 than it was last year, the increase being the largest but one that has ever occurred in the course of one year. The exception occurred in 1894, when the number of practitioners was greater by 1062 than the number in 1893. The increase is fairly distributed between town and country and between the respective countries of the United Kingdom. The London list has gone up from 5835 to 5992; the provincial list for England from 14,702 to 15,081; the list for Wales from 1028 to 1062; the list for Scotland from 3264 to 3369; and the

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THE LANCET RELIEF FUND.

For Members of the Medical Profession and their Widows and Orphans when in Distress.

——:o:——

ALMONERS.

THE PRESIDENT OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.
THE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.
THE PRESIDENT OF THE GENERAL MEDICAL COUNCIL.
THOMAS WAKLEY, F.R.C.S. Eng.
THOMAS WAKLEY, Jun., L.R.C.P. Lond.

HON. AUDITOR.

SIR HENRY PITMAN, M.D. Camb., F.R.C.P.

——:o:——

THIS FUND will be provided year by year in the month of January to the amount of at least £300 solely by the Proprietors of THE LANCET, and administered free of cost, for the purpose of affording immediate pecuniary assistance to Medical Men, or their Widows and Orphans, *in cases of Distress and Emergency*, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

Applicants must satisfy the Almoners of the Fund that they are qualified under the following regulation:—

* "The recipients shall be such persons as satisfy the Almoners that they possess one or other of the following qualifications—that is to say: (*a*) That the applicant holds a registered medical qualification, and that he has fallen into pressing need of immediate pecuniary relief; or (*b*) That they are persons who have been, previously to the date of application, legitimately dependent upon some person holding a registered medical qualification, and that they have pressing need of immediate pecuniary relief."

To ensure the utmost despatch, the "Application Form" upon the other side should be filled up and forwarded (in an envelope superscribed "THE LANCET Relief Fund") to the Secretary, Mr. EDWARD DAVIES, THE LANCET Offices, Strand, London, W.C.

The application should be accompanied by two separate testimonials, one from the Clergyman of the Parish or other resident Minister of religion, and one from a registered Medical Practitioner, stating—that the application addressed to the Almoners has been read, how long they have known the applicant, and that they believe the statement to be perfectly truthful, and such as may be acted upon without further inquiry.

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Private and Confidential. *No.* .....

APPLICATION FORM.

To the Almoners of the Lancet Relief Fund.

The applicant should here state shortly:—

1. The nature of the emergency that has arisen.

2. The circumstances out of which it has arisen.

3. The amount of the grant desired, and whether by way of loan (free of interest) or of gift.

4. If by way of loan, state when the loan will be repaid; and from what source the funds to repay it are expected to be forthcoming.

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5. Whether the applicant is entitled or able in the circumstances which have arisen to look to any other source of assistance and if so, what is the expected nature and extent of such assistance.

6. Whether the applicant is receiving, or has received during the past six months, pecuniary aid from any Medical Charity.

7. State how the applicant is qualified to receive assistance; vide regulation* on first page.

8. Particulars of:

Applicant's age

Number in family

How many are self-supporting

How many are partially dependent

How many wholly dependent

Applicant's Signature

Address

Date

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*No.*_____

THE LANCET RELIEF FUND.

*Name*_____

*Address*_____

_____

*Received*_____

*Considered*_____

*Result*_____

*Date*_____

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list for Ireland from 2563 to 2598. There are in the 1897 list 3652 names of registered practitioners resident abroad, as against 3453 names in the 1896 list; and 2510 names of officers in the Naval, Military, and Indian Medical services as against 2451. The totals, 20 being added to the present year and 24 to the past year under the heading "Too Late List" are as follows: 1896, 33,326; 1897, 34,284. The following averages are not calculated out to decimals. In the English provinces there is 1 medical man to every 1700 of the population. In London the proportion of medical men is about double as high. In Liverpool and Manchester, on the other hand, there is 1 medical man to every 1200 of the population, and this proportion prevails for the whole of Scotland. In Edinburgh, however, the proportion rises to 1 medical man to 500 of the population, while Glasgow, like London, possesses 1 medical man to every 850 or so of its laymen. In Ireland there is 1 medical man to every 1800 of the population, the medical men in Dublin amounting to about 1 in 600 of the population. In Wales there is 1 medical man to every 1500 of the population. The Directory is, as usual, an admirably edited and invaluable book of reference, doing credit to its well-known publishers, Messrs. J. and A. Churchill.

ARMY EXAMINATIONS.

WITH the exception of an occasional, and all too rare, promotion from the ranks the commissioned officers of the Army are selected by competitive examination in a great number of more or less abstruse subjects, and according to recent writers in the daily and weekly press—notably the *Broad Arrow* and the *Morning Post*—the consequence has been the alarming evolution of the crammer. The general tenor of the correspondence is unfavourable to the existing system. Most of the writers over such signatures as "A Retired Officer," "A Father of a Family," and so forth, contend that the brains of the candidates are unduly stimulated at the expense of their bodies, the result being a parcel of etiolated doctrinaires, admirable possibly as theorisers, but totally unfitted for the duty of leading men in action and controlling them in time of peace. "If there must be competition for the Army, as there is in every other profession," says the writer of a forcible letter in the *Morning Post*, "let it be in professional subjects as is the case in every other calling. First, let the lads who choose the army as a profession have the all-round education of gentlemen at their backs, including running, jumping, cricket, football, and all the English sports which are compulsory so long as they remain at school. Appeal to the colonels of regiments, to the parents of boys at school, to the public school masters, and to the boys themselves, and you will quickly ascertain which they would vote for, school and discipline or cramming, London music-halls, seaside watering-places, cigarettes, and late hours." There is much food for reflection in the above extract, and, indeed, the whole letter is worthy of the attention of the Civil Service Commissioners. The alleged enormous expense of the cramming process is another fruitful source of complaint, and that it must in reality be unduly expensive the lavish use of the advertising columns in many of our contemporaries goes far to prove. When the purchase system was abolished the idea was to throw open the army to all educated and well-behaved young men, whether they were possessed of means or not, but apparently the cost of a commission is indirectly just as prohibitive now as ever it was. Hundreds of fine, able-bodied youths, full of military aspirations and admirably constituted by nature for the exercise of command, are said to be rejected because their friends cannot afford the costly preparation necessary to ensure success, among them being many scions of military families, who are thus debarred from following in their fathers' footsteps. These in every respect unexceptionable candidates fail to score as many marks as their crammed competitors, but, on the other hand, the latter obtain credit for subjects which they have in no wise mastered. Thanks to the skill of their instructors, these forced pupils are enabled to retain temporarily in their memories a certain number of formulæ and answers to probable questions, but no sooner is the ordeal surmounted than at once their ephemeral learning begins to evaporate. From a purely sanitary point of view there is not a good word to be said for the system of cramming. A brain, like a stomach, requires food, but it must be judiciously administered in moderate quantity and at suitable intervals. A *pot-pourri* of indigestible matter poured well-nigh continuously into an immature brain, even during a period measurable by weeks, cannot possibly be assimilated, and must inevitably exercise an injurious effect on the over-stimulated organ. An officer above all things should be endowed with unfailing endurance, so that he may continue to lead and direct his men to the last. A system of education which over-stimulates the brain while neglecting the still unformed body can only be characterised as intrinsically bad. In this connexion it is impossible to improve on the concluding sentence of the letter from which we have quoted: "Let the qualifications be ample; only do leave our boys at school till they are grown up."

THE DANGERS OF ARTIFICIAL TEETH.

ON Dec. 28th an inquest was held at St. Bartholomew's Hospital with reference to the death of a patient from hæmorrhage caused by an artificial denture which had been swallowed some eight or nine months previously during a fainting fit. The patient was at the time seen by a medical man who, being unable to remove the denture by the mouth, forced it down towards the stomach presumably with the hope that it would be passed per rectum. Death from swallowing artificial teeth is more common than is generally supposed, and many cases are to be found recorded in the various journals devoted to dental practice. Artificial teeth properly fitted and secured are in themselves quite free from danger, and it is only when people persist in wearing small, loosely fitting dentures that trouble is likely to arise, as a fit of coughing or fainting or even drinking may dislodge them and so allow them to be swallowed. Should such an accident occur prompt treatment is necessary and if it is found impossible to remove the denture by the mouth or it fails to pass per rectum œsophagotomy or gastrostomy should be performed, for if the plate be allowed to remain ulceration and hæmorrhage are certain sooner or later to supervene, leading invariably to a fatal result.

HOSPITAL REFORM.

OUR hope that the discussion of this subject in the lay press would bring out the principal facts in the case and with them the sympathy and support of our lay contemporaries is being fulfilled more quickly even than we thought. In the *Times* of Saturday is a leading article expressing hearty satisfaction on the elevation to the Peerage of Sir Joseph Lister. The writer goes on to show that the fortunes of the profession have been much injured by the very labours of medical men which, in a degree unparalleled in any other calling, have tended to diminish the amount of demand for their own services. The article then proceeds to deal with the question of hospital reform and practically admits everything which the labours of our Special Commissioner and the efforts of hospital reformers have brought to light. There is a generous admission of the fact that the reformers have no intention of injuring hospitals so far as the relief of deserving cases goes. "Nothing is more curious," says the *Times*, almost paraphrasing our own words, "than the way in which

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persons who would be ashamed either to ask for charity in any other form or to receive it feel no compunction in entering a hospital where their board and lodging are paid for by the subscribers." The out-patient abuse is stated with equal clearness. "Of the out-patients a considerable number are people earning good wages." The demoralisng effect on the unfit patients is well brought out: "the first visit leads to subsequent ones, until at last the very notion that it is part of their duty to provide themselves with medical attendance seems to drop out of their consciousness." One deep root of the evil is shown to be in the rivalry of the hospitals to show numbers and in the desperate struggle for existence. The special hospitals are proved, by the very nature of their origin, to be special sinners. The article ends by approving of the formation of a central board as advocated by the Lords' Committee and the Charity Organisation Society. The letters published in the papers equally support the contention of reformers. "One who has been driven to the Hospitals" writes in the *Times* that the increase of consultants' fees is a great factor. But there are younger consultants whose fees would be quite practicable to such patients who have no business in hospitals and who take up beds which are meant for the poor.

WHAT CONSTITUTES PLAGUE?

THE highly interesting paper on the spread of plague, by Dr. Cantlie, read recently before the Epidemiological Society of London, which was partly reproduced in our columns last week and which is completed in our present issue, raises, together with the discussion which followed it, some important points. From an epidemiological standpoint the more practically important question is as to what is the precise nature of certain glandular swellings, with or without fever, which there is evidence to show are at times not uncommon, when what is recognised as true plague is prevailing, but as to the nature of which there is much difference of opinion. Dr. Cantlie's mental attitude towards the question is clearly an open one, but he has obviously been much impressed by the recent news from Calcutta of the discovery of a bacillus strongly resembling that of plague in cases to which the name of "pestis ambulans" is given by some, and he referred also to certain peculiar glandular swellings, whether of the groin, armpit, or neck, which were noticed among persons at Hong-Kong and elsewhere, but which were, it appears, never accurately diagnosed. By some observers, however, certain of these glandular swellings have been regarded as being venereal in character, but it is not at all clear from the evidence forthcoming whether the glandular swellings in question may not have been of more than one sort; that, in fact, there is truth in all the observations. Dr. Manson, for instance, pointed out that in the East non-venereal buboes are very common, and he raised the question whether possibly "river fever," which is frequently accompanied by buboes, might not turn out to be a phase of "pestis minor." It is clear that if during certain prevalences of plague there exist glandular swellings which are not regarded as due to the poison of plague, but which, for aught we know to the contrary, may be potent for infection, the preventive measures with regard to the disease will have to be much extended. That there should occur during epidemics of plague a number of more or less anomalous cases is what, upon general epidemiological principles, is, perhaps, to be expected. A similar condition of affairs is frequently observed in epidemics of diphtheria, scarlet fever, typhus fever, and enteric fever. The question is certainly one of great practical importance, as may be inferred from the fact that the exodus from Bombay has now amounted to between 100,000 and 150,000 persons. Dr. Lowson's valuable observations as to the bacteriology of the disease were very full and suggestive, and he threw much doubt upon the discovery of the true plague bacillus in the soil of Hong-Kong as also upon the value of certain methods of treatment. His experiences with regard to the inoculation of pigeons with plague bacillus were somewhat reassuring, as if, as has been stated, these animals can act as the winged messengers of plague it would be necessary to limit their movements as far as practicable. The question of the infection of rodents is one upon which more light is needed, as it seems doubtful whether rats are, as has been believed, infected prior to the human species or whether only the incubation period in rats is shorter than in man. In this connexion Dr. Cantlie's observations as to the similarity in geographical distribution between plague and a certain sub-family of rats seem to call for further investigation. The question raised by Dr. Lowson as to the presence of plague at Singapore is one which may have a very material bearing on the spread of the disease eastward.

AN INTERNATIONAL JOURNAL.

WE notice elsewhere the contents of the first issues of a new literary venture of a peculiarly attractive and interesting nature, for which we hope much practical support will be given by the medical profession in this country. We refer to the revival of the periodical *Janus*, which in the Fifties obtained a notable position from the character of its contributions and the eminence of those who wrote in it. That it did not then obtain a permanent footing is, perhaps, explicable on the ground that its subject-matter—that dealing with the history of medicine—failed to attract a sufficiently large circle of readers. At the present time, when students of medical literature have so vastly increased in number, we may hope that no such drawback will be found to exist. The editor of the new series of *Janus* is Dr. H. F. A. Peypers of Amsterdam, and the basis on which the journal is established is strictly international. Amongst the names of those in this country who have coöperated in its foundation are Sir Joseph Fayrer, Dr. J. F. Payne, Dr. C. Creighton, and Dr. A. Davidson. It must not be supposed that it is intended to limit the scope of the journal to matters of purely archaic interest, for it is expressly stated that medical geography as well as history will be represented in its pages. Thus there should be found in this review articles written in all parts of the world concerning the distribution and character of endemic diseases that may be of great value. As we have indicated, the numbers already issued augur well of the success which should attend an enterprise that ought to stimulate and extend the study of questions in which all medical men cannot fail to feel an interest.

SUFFOCATION IN A WELL.

A FATAL case of asphyxia has occurred at the waterworks of the Hastings Corporation at Brede. The well, which had been sunk for two years, was sixty feet deep and was lined with iron cylinders for twenty feet, with brick-work for the remaining forty feet. There were fourteen feet of water, and the well was left open, but was under a shed. At a depth of seventeen feet one of the workmen named Williams, was suddenly overcome and fell into the water. Another man followed to help him and got down about forty feet when he was overcome and was hauled up by the feet unconscious. Suspecting foul air, the men sent to Hastings for a fan and then got the body out. Men who had been in the well "hundreds of times" said they had never before known foul air to be in it. It was usual to let a lighted candle down to test the air, but on this occasion this small formality had apparently been omitted until after the catastrophe, when it was repeatedly extinguished at a depth of twenty feet. The man Britt, who went to the rescue, said he smelt "damp air" about thirty or forty feet down,

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and feeling "very funny" was about to call to be pulled up when he suddenly lost consciousness. The medical evidence pointed to death by drowning with evidences of carbonic acid poisoning, and the jury, being satisfied with the precautions that were taken and of opinion that the gas had suddenly been generated, returned the usual verdict. To this verdict should have been added, we consider, the rider that the simple precaution of testing the air of deep wells and similar places by means of a lighted candle should never be omitted, and it is the duty of those authorities connected with such undertakings to insist upon this test being applied before a descent is made. We are not inclined to accept the theory of sudden generation. At any rate such an occurrence is rare. The gradual accumulation of carbonic acid gas in wells situated in chalky districts is, on the other hand, a not uncommon event. We think in the present instance some further inquiry should have been made as to why on this particular occasion the simple but, as it often proves, life-saving test was neglected.

HENOCH'S PURPURA.

IN a recent number of *Pediatrics* an interesting paper by Dr. G. A. Sutherland appears, dealing with this curious and somewhat unusual disease and giving particulars of three cases of what he considers to be the same condition which have come under his own observation. The first was that of a male child aged three years and nine months, who had had, three months before his admission to hospital, a rash which had been supposed to be measles. Ever since he had been dull and languid with occasional pain in the stomach, and a month after the first rash appeared he began to suffer from sickness after food and a rash came out on his arms and legs, which had disappeared and appeared several times afterwards. A few days before admission he had become drowsy and had complained of abdominal pain. He had also vomited some chocolate-coloured material and passed bright red blood per rectum. There was nothing important or significant in his previous health or in the nature of his food, and on admission he was well nourished and of good colour. There was an eruption on his arms, feet, and legs, and a few spots on his back, buttocks, and abdomen. The gums were healthy, and physical examination revealed nothing abnormal except pain on pressure over the abdomen. During his four and a half months' stay in hospital hæmorrhages on the skin appeared abruptly on several occasions—twenty-five in all. The spots did not disappear on pressure; they were small and sharply defined, sometimes not elevated, but sometimes papular. They were not irritable, and although the eruption was wide-spread and general the parts chiefly affected were the extensor surfaces of the arms, the buttocks, the front of the legs, and the dorsa of the feet. There were, also, on eleven different occasions attacks of severe abdominal pain accompanied or followed by vomiting of blood-stained matter or the passage of blood from the bowel. The urine contained albumin and sometimes blood, and hyaline and blood-casts were present in great number. One curious point is that the knee-jerks were not obtained during the first seven weeks of his stay in hospital. He was seen two months after his discharge and had remained free from abdominal pain or hæmorrhagic outbreaks. The second case was that of a girl aged seven years, and the clinical history was characterised by attacks of abdominal pain, with vomiting of blood, melæna, bleeding from the nose and gums, together with repeated outbreaks of purpuric eruption, chiefly on the arms and legs, and albuminuria and hæmaturia. In this case also the knee-jerks were not obtained. She was in hospital for three months and was discharged recovered. She relapsed, however, two months later, and developed symptoms of intussusception with suppurative peritonitis, of which she ultimately died. Dr. Sutherland offers as an explanation of the final accident in this case that advanced by Werlhoff in reference to a similar case—viz, that there had been a hæmorrhage into the wall of the intestine causing paralysis of that part and increased muscular contraction in the adjoining part, leading to invagination of this into the paralysed and hæmorrhagic part. The condition found post mortem agreed with such a view, but nothing was found to throw any light upon the occurrence of the hæmorrhagic eruption of the skin. A third case, similar in many ways, is also detailed. The patient was a girl aged ten years, who had attacks of abdominal pain, sickness, epistaxis, and melæna, with purpuric skin eruption and the presence of blood and albumin in the urine. She also had articular pain and swelling, but she recovered. Dr. Sutherland, in conclusion, sums up the chief characteristics of this disease and points out the differences between it and other forms of purpura. The paper altogether is interesting, and it is embellished with two beautiful illustrations from photographs which show the character and distribution of the eruption in a very satisfactory manner.

THE FLANNEL SHIRT CLUB.

HOSPITAL patients who are sufficiently recovered to be discharged are only too often sensible of a painful contrast between the warm clothing to which they have become accustomed and the scanty habiliments resumed at the time of their return home. A Flannel Shirt Club has, therefore, been formed by an association of ladies, of whom the Countess of Strafford is president, its object being to supply good flannel shirts to needy male patients when they are discharged from London hospitals and infirmaries. Mrs. H. H. Clutton, the honorary treasurer, will receive and acknowledge subscriptions and donations of money sent to her at No. 2, Portland-place, W. All shirts and materials should be sent to the honorary secretary, Miss Lamport, No. 52, St. John's-wood-road, N.W., from whom information and forms of membership may also be obtained. The particular form of charity which this association will dispense is obviously both judicious and philanthropic.

INFANTILE PARALYSIS.

IN the last number of the *Neurologisches Centralblatt* an abstract of a very interesting paper by Professor Medin is given, the original having appeared in a Swedish paper. In an epidemic in Stockholm in 1887 the writer had collected 43 cases, and between 1888 and 1894 29 sporadic cases, and again in an epidemic in 1895 21 cases. The immediate cause of the disease he believes to be a poison, but infection from one patient to another, although possible, is very rare. No particular conditions can be regarded as predisposing, although children under four years of age seem to be most affected, and both epidemics occurred in late summer. Most cases began with fever and sickness, pain and sensitiveness of the body, rarely convulsions, but occasionally sighing and crying out. Of 50 cases, the legs were affected in 45, the arms in 14, and in 4 cases the face or the external rectus or muscles supplied by the third nerve were affected. Six cases of acute polyneuritis were observed in the 1887 epidemic, but only two in that of 1895. In that disease the onset was sudden, with high temperature, and the pain was severe; sometimes there was cutaneous hyperæsthesia, and in one case this followed anæsthesia in the lower limbs. Poliomyelitis affecting the nuclei in the bulb and pons was found in several cases and a lesion in the cells in

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this region was in several cases demonstrated, practically identical with that of the anterior horn cells. Professor Medin has also seen polio-encephalitis occur in the same epidemic, indicating an apparent identity of the poisons of the two diseases. The prognosis is worst if the lumbar cord is affected, less if the cervical is the part affected, and is more favourable in polyneuritis than in polio-myelitis. The conditions found post mortem were the signs of general infection proceeding from bloodvessels and causing acute inflammation in the anterior horn, with consequent degeneration of the ganglion cells and of the nerve fibres. Professor Medin regards the disease as an independent and peculiar one and separates from infantile paralysis all paralytic conditions which occur in association with other infective processes.

GLOUCESTER AND THE NATIONAL MEMORIAL TO JENNER.

WHILE the exact form of national memorial to Jenner is yet undetermined it is proper to remember that the Jenner Society of Gloucester has been in the field as a local society for purposes similar to those of the committee in London now organising a national movement. Gloucestershire has a peculiar place in this question. It was in Gloucestershire that Jenner's immortal discovery was made and confirmed. Alas, it was in Gloucester itself that the light of Jenner's discovery went out almost completely, with the result that hundreds died during last year for want of vaccination, but with the effect of scaring the survivors into a rush to the vaccination stations. A society of enlightened citizens of Gloucester, calling themselves the Jenner Society for promoting the honour of Jenner and a knowledge of the real truth about vaccination, was formed at an early stage of the epidemic which has so terribly afflicted Gloucester. Dr. Bond, the honorary secretary of this society, has forwarded to us a printed statement of the objects of the society and especially of its plans for circulating sound and instructive literature on the subject. We sincerely hope that the London Committee for the national memorial will consider the claims of this society to affiliation and will apportion a grant from its funds for the literary defence of vaccination as provided for in the publications issued by the Jenner Society.

THE PLAGUE AT BOMBAY.

AS regards the epidemic of bubonic plague at Bombay it is always difficult to ascertain the figures representing the exact prevalence of the disease at any given time, but there does not seem to be any doubt that the state of affairs in Bombay is very serious. The Government returns are reliable as far as they go, but they do not usually afford the latest information, for which we have frequently to depend upon telegraphic intelligence from other sources. There has been an enormous exodus of the population from Bombay, and it is still going on; business is temporarily paralysed and more or less panic prevails among the native population. The total number of cases of plague returned to the end of December last amounted to 2430, with 1735 deaths; and during the first two days of the present year 130 fresh cases occurred, of which 120 are stated to have proved fatal. The general death-rate of Bombay is also excessive; nearly 1000 of the deaths that occurred during the last week of 1896 were attributable to the various kinds of fevers and 90 to bubonic plague. Altogether, 11 Europeans are stated to have been attacked since the outbreak, 2 of whom had died, and there were, according to the Central News Agency, 3 Europeans in hospital on Dec. 31st suffering from the disease. Cases of plague have, as we said last week, likewise been reported as having occurred at Karachi and Poona. At the former place the disease is stated to be assuming a very virulent form. Surgeon-Major Robert Manser, who held the post of senior physician to the principal native hospital in Bombay, is, we regret to say, reported to have died from plague on the morning of the 6th inst. The health of Calcutta, according to the latest intelligence that has reached us, seems to be fairly satisfactory, but the news from Bombay is rather alarming. It is stated that at Karachi the plague is taking an extremely virulent form, and that the panic in Bombay is increasing. Surgeon-Major-General Cleghorn, Director-General of the Medical Service, has left Calcutta for Bombay to report upon the plague. We print in another column (p. 131) a very interesting account sent us by an eye-witness in Bombay.

PUBLIC HEALTH AT MONTREUX AND TERRITET.

THOSE of our readers who may have friends residing at Montreux and Territet will welcome the announcement that the rumours as to the existence of typhoid fever in that well-known health resort are quite unfounded. Our information is derived from a most trustworthy source and refers not only to the town itself but to the surrounding district. Last year there was an epidemic of very mild scarlet fever, in the course of which there was only one death, and not a single case has occurred since last spring. The water-supply is of the purest description, being derived from Les Avants. The water reaches Montreux under a pressure of about six atmospheres, and there are no cisterns in the town the service being constant.

STREET NOISES.

THE agitation against totally unnecessary noises is slowly growing and we begin to see some likelihood of, if not relief, at any rate legislation towards that desirable end. The Parliamentary and General Purposes Committee of the Islington Vestry have approved of the adoption in London of a by-law suggested by the Home Secretary. This by-law, which is most admirable, is in force in various provincial towns and runs as follows:—

"No person shall, for the purpose of hawking, selling, or distributing any newspaper or other article, shout or use any bell, gong, or noisy instrument in such a manner as to cause nuisance or annoyance to the residents or passengers."

The County Council are we believe considering the subject as well, so we have hopes that even if we cannot

"Forget six counties overhung with smoke
* * * * * *
Forget the spreading of the hideous town"

the said town may be made less hideous by the silencing of the demon "winner" shouter, the even more offensive fog-horn voiced ruffians who howl in pairs, and the snuffly infant who comes out on Sundays.

HÆMORRHAGIC PANCREATITIS IN AN INFANT.

MCPHEDRAN[1] records what he claims to be the only case in an infant of this rare disease. Of all previous cases the youngest was twenty years of age and the majority about forty-five years. The patient was a male infant, in good health, with a tendency to constipation. In the ninth month the mother became pregnant, and he failed slightly in general condition. Weaning was attempted and peptonised milk given. He vomited and refused everything but the breast. Therefore the attempt was abandoned. On resuming suckling he vomited profusely, became prostrate, and was attacked with colic. On the next day he was in great distress and pallid. All attempts to give nourishment were followed by vomiting. He was constipated, and calomel followed by repeated doses of fluid magnesia failed to produce effect. Only a smal green motion, chiefly mucus, was passed. The abdomen was slightly distended. In the region of the ascending colon was an elongated mass about the size of the middle finger,

[1] Canadian Practitioner, September, 1896.

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extending from the costal margin to the iliac crest. It was firm, dull, and moved with respiration. Intussusception was suspected and laparotomy performed. The mass was found to be an accessory lobe of the liver. The intestines and peritoneum were healthy. Death occurred next morning. Only partial necropsy was allowed, which took place forty hours after death. The middle third of the pancreas and its immediate surroundings were found deeply infiltrated with blood. Microscopic examination disclosed nothing more, as the organ was so much decomposed. Bacteriological examination showed the presence of only one form, a bacillus resembling those of the proteus group. The bacillus coli communis was carefully sought for.

MEDICAL STRIKE IN PARIS.

THERE is a "doctors' strike" in Paris which opens out the whole question of fees for attending the poor and indigent. The Prefecture of Police had established what was called a night medical service, and certain practitioners appointed for this purpose were to hold themselves ready to go out at night whenever called upon for some emergency. As this service was to be rendered only to poor people the medical officers were to receive a fee of 10 francs from the municipality. The authorities, however, did not calculate on the great number of poor who dwell in Paris and on the frequency with which these emergencies arise. Thus it has been found that these 10 franc fees amount in all to a very large sum, and the Prefect proposes to replace them by a regular income. This has been fixed at 600 francs, or £24, per annum, a sum which is quite sufficient for the medical men who live in wealthy districts, where there are not many poor people who would require their services. In the eleventh arrondissement, however, this would reduce the medical fee from 10 francs to an average of 3 francs and the four medical officers of this district have given in their resignations rather than submit to be constantly called out at night for a fee which is little less than half-a-crown. The Prefect laughs at this strike, for he thinks that for one medical man who resigns there are scores of others who will only be too glad to take up the position. It remains to be seen, however, what the Paris Medical Syndicate, with its 600 members and its seventy provincial branches, will have to say on the matter. Perhaps, in spite of this syndicate, the medical men will be defeated; but, whether they win or lose, the incident will in any case teach them the value of organisation.

THE CAUSES OF APPENDICITIS.

SOME points of interest in connexion with the pathogeny of appendicitis were discussed at a recent meeting of the French Société de Chirurgie. The view of M. Dieulafoy, that the disease is a consequence of constriction with closure of the appendix and the consequent retention of morbid material within it, did not find much favour. On the contrary, several speakers referred to the frequent existence of this condition without appendicitis, and at the same time mentioned cases in which they had found a perfectly permeable appendix to be the seat of inflammation. The general opinion of those who took part in the discussion was that appendicitis is usually only the local expression of a more or less general enterocolitis. The theory of M. Reclus is worth quoting as a more detailed statement of these opinions. According to him the problem of causation is capable of a double solution—(1) as being related to the presence of an actual foreign body in the appendix, a condition of course hostile to spontaneous recovery, and (2) as explained by a "theory of stagnation." This view regards the appendix and in a less degree the cæcum as diverticula which readily allow the accumulation within them of organic fluids, these in turn becoming the seat of fermentative changes. Inflammation follows as a natural consequence. In this comprehensive and moderate statement we shall probably find the nearest approach to explanation of a malady the clinical aspect of which is, as a rule, sufficiently obscure.

"THE LANCET" RELIEF FUND.

THE "Application Form" of THE LANCET Relief Fund will be found in our present issue, and can be readily detached should occasion arise for its use. We again take the opportunity of asking those of our readers who may have occasion to employ the form or to sign one of the required accompanying certificates to carefully note the conditions on which applicants become entitled to a participation in the benefits of the Fund. All applications should be made to the Secretary, Mr. Edward Davies, THE LANCET Offices, 423, Strand, London.

A NEW THEORY OF CANCER.

A CORRESPONDENT sends us a pamphlet printed at Glasgow entitled, "A New Theory of Cancer, with its probable Cause and Cure; or, the Answer to a Twelve Years' Prayer." This effusion, which is, we believe, written by Mr. Coyle, L.F.P.S. Glasg., is a compound of some medical knowledge intermixed with passages of the sort of stuff we find in "Dreams" or "The Book of Mormon." As Mr. Coyle is, we fancy, the defendant in an action in which the statements contained in the pamphlet in question are to be brought forward we must at present refrain from any further comment.

DEATH FOLLOWING VACCINATION.

THE *post hoc ergo propter hoc* fallacy has never been more abundantly exemplified than in alleged deaths from vaccination. Again and again inquiry has shown that the real cause of the death of an infant has not the remotest connexion with a vaccination which has been performed at a date more or less approximate to the fatal illness. On the other hand, it is well to recognise that injuries are caused by vaccination, and that this operation, trivial as it may appear, should never be undertaken in a weakly subject or without every safeguard. A case was recently investigated by a coroner's jury at Southampton where a child five months of age died on Dec. 21st after a brief illness from what the medical evidence showed was septic poisoning. The infant had been vaccinated on Dec. 9th, having six weeks previously suffered from bronchitis. There was no inflammation of the arm, but the site of vaccination became discoloured, and the medical witness who made the post-mortem examination considered that this was the cause of the septicæmia. We are bound to say that there is very little evidence to support this theory, especially as there was proof of exposure to inhalation of sewer air.

RAPIDLY GROWING OVARIAN CYST.

A POINT of great interest in the case of ovarian cyst detailed by Mr. Butler-Smythe in another column is the evidence which it affords as to the rapid growth of an ovarian cyst. At the earlier operation the right ovary was taken into the hand and carefully examined and nothing was then seen to be wrong with it; and fourteen months later, when the patient was confined, the ovary was still apparently normal, for though a small cyst might easily have escaped notice unless the abdomen had been specially examined, yet a large cyst could not possibly have been overlooked. About ten weeks after this the tumour had attained a size sufficient to hold thirty pints of fluid. We are so little acquainted with the laws governing the secretion of liquid in cystic tumours that we are utterly unable to say why in one case a cyst may be several years in reaching this size, and in another, such as the

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one reported in another column, the whole process has not lasted more than a few weeks. Undoubtedly the rapid diminution of abdominal pressure occurring after labour may be credited with some influence. Another point worthy of note is the tendency seen in this case and observed in so many others for both ovaries to become cystic successively. The removal of a cystic tumour of one ovary appears to have some influence in determining the cystic degeneration in the other. Probably the effect is only apparent, the correct explanation being that both ovaries have the tendency to become cystic, but do not manifest this tendency synchronously.

DANGEROUS SOMNAMBULISM.

A SENSATIONAL case of somnambulism is reported from Brussels, which happily ended without any disastrous results. The individual concerned was a pupil in one of the religious educational establishments of that city. In the middle of the night he was found walking about clad only in his sleeping garments, and on being followed he was seen to have a large kitchen knife in his mouth, and was occupying himself in passing his hand over the throat of one of the sleeping pupils. He was at once awakened and so possibly prevented from doing some terrible damage. It is said that the lad is a son of a butcher, and he states he dreamed he entered into his father's business and that he went into the kitchen for a knife, with which he wanted to kill the pigs. Midnight somnambulists of this class are very dangerous and there seems every probability that some of the sleepers would have lost their lives had not the would-be butcher been found in time, for in these cases the special senses usually perceive things only in relation to their dream, and so, while being able to see the things connected with his object in view, he would be oblivious to the other surroundings and fail to realise his position. The disorders of sleep are probably in most cases due to differences of functional activity between different parts of the cerebrum; thus, while some are inactive others remain active and, indeed, in some cases become overactive. Talking during sleep is one of the simpler examples of activity of some parts of the nervous system while others are out of action; but walking and doing definite actions is far more complicated and may be dangerous both to the individual concerned and others who may chance to come in his way.

ANTI-STREPTOCOCCIC SERUM.

THE results obtained hitherto in the treatment of septicæmia by means of the antitoxic serum of Marmorek have been very much less marked than those which have followed the antitoxin of diphtheria. Its use in the treatment of puerperal fever has not been attended with brilliant success. It is to be remembered, however, in this connexion that the serum has in some, and probably in many, instances been injected after the disease had become well-established in the system of the patient. In view of the very rapid absorption of the septic poison in these cases, and of the large uterine surface available for this purpose, the significance of such delay should not be overlooked. It is probable, too, that the disease under treatment has not always been the effect of the streptococcus alone, but primarily sapræmic and a consequence of putrefaction in retained coagula. It is, however, encouraging to note that even in the treatment of puerperal cases a distinct amelioration of symptoms after injection has been noticed by some French observers (Patru, Maillart, Ribemont, &c.). M. Boucheron[1] speaks highly of his results in the treatment of purulent dacryocystitis by this method, injections of 5 c.c. repeated at intervals of a few days having a marked effect even in chronic cases of this disease. He employs the serum also as a preventive of possible suppuration after cataract operations. As yet it would seem that the antitoxic power of this remedy is not great, and it may be that the secret of success in acute cases lies, not only in the promptitude of its employment, but in the frequency of its repetition. The most that can be said so far is that past experience, though indecisive, is encouraging rather than otherwise, and lends some colour to the hope that with a purer and more powerful serum better results may be expected. Practitioners who have had to combat the horrors of puerperal septicæmia are not likely to undervalue even such hope in this connexion.

[1] Presse Medicale, Nov. 18th, 1896.

HOUSE SURGEONS' FEES.

ON Jan. 3rd an inquest was held at the Croydon Hospital on the body of a patient who had died in the institution. It appears that the coroner "consented" to a post-mortem examination being made, as he said, "in the interests of science," but whether he issued an order for the same is not stated. That, however, matters little. It is strange that it is not universally known by this time that a medical man who has attended a patient at a hospital, workhouse infirmary, or other public institution—the death having occurred in such place—cannot recover fees for making a post-mortem examination or for giving evidence at an inquest. At the inquiry referred to we learn that the locum tenent for the house surgeon complained that he was not allowed remuneration, and according to the newspaper reports there was a sharp passage of arms between the medical gentleman and the coroner, which culminated in the latter threatening to commit for contempt of court, The incident is to be regretted, but whatever the ethical merits may have been it is clear that the coroner was legally right. It is sometimes difficult to obtain an order from a coroner for a post-mortem examination. To make one without his order or consent is to be guilty of an assault on the body—a punishable offence. In this case the coroner allowed a necropsy "in the interests of science," and for this the profession should be grateful. Anything which tends to clear up the mystery of the cause of death is desirable. We cannot see on what grounds a medical man can take offence when he is not paid for work which the Act of Parliament distinctly says shall be done without fee.

THE FAMINE IN INDIA.

AMID the conflicting statements that have been made from time to time regarding the extent and severity of the famine to be anticipated or actually existing at the present time, it is a very puzzling problem for the perplexed newspaper reader to form a correct estimate of the real condition of affairs in India in respect of any present or prospective famine in that country. It is generally admitted, however, that there is a very large and unusual amount of distress among the natives of India at the present time owing to the scarcity and high prices of food, and that this distress threatened at one time to be enormously increased and aggravated in its area and intensity by a failure of the cold weather rains. Rain has, however, fallen to some extent over most of the affected districts, and the Government of India should soon be in a position to form some idea of the estimated dimensions of the scarcity and the proportions of the disaster that will have to be dealt with. Wherever rain has fallen at all copiously the prices of food have also fallen, but the amount of rainfall has, in many parts of the country, been quite inadequate, and we are still unable to form a correct estimate of the situation. We gather from the *Times* that the Government of India have, however, now secured full reports from all local administrations regarding the famine and the

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state of the crops, and that an early opportunity will be taken to make a public statement in the Legislative Council on the subject. Meanwhile, close attention is being paid to the question of food supplies in areas where famine already prevails. We should consequently soon be in a position to form some notion of the extent of charitable aid that will be required from this country for the distressed natives of India and the organisation that is proposed for dispensing it in the most effective way. From the latest accounts we infer that the famine is likely to be severe and widespread, and that the sooner the Famine Fund is started in this country the better. A very large proportion of the populations of India are at the best of times miserably poor and the daily struggle for a bare subsistence is hard enough. Famine or any increased scarcity of food is immediately followed by an increased amount of sickness and mortality.

THE HEALTH OF LORD ROSEBERY.

WE are glad to be able to give a favourable account of Lord Rosebery's condition. On Thursday he was practically convalescent; the temperature was normal, there were no complications, and he was allowed to get up. As from this it will be seen that the attack has been but a slight one it is reasonable to hope that Lord Rosebery will escape the wearisome insomnia which resulted in 1895.

MEDICINE will rejoice with the other sciences to learn that Mr. Herbert Spencer has consented to sit for his portrait in response to a circular letter signed by some eighty well-known leaders of thought. The effect which the System of Synthetic Philosophy has had upon modern intellectual development can be exaggerated with difficulty, and to the student of more than one side of medicine this fact is very well known. An account entitled "The Herbert Spencer Portrait Fund" has been opened at the Western Branch of the Bank of England, Burlington-gardens, W.

THE fifth award of the Reuben Harvey Memorial Prize will be made on July 1st, 1897. The competition is open to all students, licentiates, and graduates of the various schools of medicine in Dublin which are recognised by the medical licensing bodies in Ireland, and is of the value of £25. Further details will be found in our advertisement columns.

THE annual general meeting of the Neurological Society of London will be held at the rooms of the Medical Society, 11, Chandos-street, Cavendish-square, W., on Thursday, Jan. 14th, at 8.45 P.M., when Dr. G. H. Savage, the President-elect, will deliver his inaugural address on Heredity in the Neuroses.

DR. G. SIMS WOODHEAD, F.R.S. Edin., Director of the Research Laboratory of the Conjoint Board of the Royal Colleges of Physicians and Surgeons, has been elected President of the British Medical Temperance Association in place of the late Sir B. W. Richardson.

THE Council of the British Institute of Public Health have awarded the Harben medal for 1897 to Professor M. von Pettenkofer, Emeritus Professor of Hygiene in the University of Munich, in recognition of his distinguished services to the public health.

BACTERIOLOGY IN 1896.

IN the year 1896, though much valuable and permanent work was done in the department of bacteriology, there has been no event comparable in importance to the anthrax, tubercle, cholera, or diphtheria discoveries of some recent years. It has not, however, been a year of "marking time," and some of the published investigations are of such solid character that they must be looked upon as really important contributions to bacteriological science. What strikes the observer most is that an attempt has been made, not to start fresh and striking theories, but to gain an appreciation of those that have been advanced and to see how far well-recognised facts fit in with them.

The application of observed bacteriological facts and rules to therapeutics has had a much wider and more far-reaching influence than could at one time have been anticipated, whilst the relation of bacteriology to the etiology and diagnosis of disease has during the last year become closer and more and more important since various modifications of Pfeiffer's reaction have been brought into use. Almost all the new work that has been done bears on the action and inter-action between micro-organisms and living animal tissues, either as seen in the animal body itself or as resulting in the storage of certain active products in the blood, and separable from the serum of animals affected with certain specific diseases or treated with the products of the bacteria associated with these diseases.

Early in the year Dr. Louis Cobbett confirmed the observation that even the blood serum of normal horses may possess definite antitoxic power against diphtheria poison. He also supported the suggestion that there are two different therapeutic agents present in the serum of immunised animals, one acting against the toxin and the other against the bacilli by which the toxins are formed, and that the formation of this antitoxic serum is in great measure independent of, though often necessarily running parallel with, immunity of the tissues, either locally or generally. A few months later Dr. Cartwright Wood read a communication (a full abstract of which appeared in our columns) to the Royal Society, in which he reported a most important improvement in the method of producing antitoxins rapidly and in large quantities. By using the diphtheria "albumoses" described by Dr. Sidney Martin and injecting them in large quantities at short intervals he was able to obtain diphtheria antitoxin of considerable potency (125 units per c.c.) in twenty-eight days, a result never hitherto obtained, whilst by combining injections of ordinary broth toxin with his "albumose" injections he, as recently reported in our columns, obtained diphtheria antitoxin of greater potency than has, so far as we are aware, yet been obtained in large quantity. The importance of this investigation is apparent when the advantages of this method, as brought forward by Dr. Wood, are considered: (1) that powerful diphtheria antitoxins can be produced without risk in a much shorter period than has been previously possible; (2) that much more powerful antitoxins can be easily produced, so that the amount necessary to be injected into a patient can be greatly reduced, and one of the great objections to its introduction into private practice in this country can be removed; and (3) that the greater strength of the serum will permit of the patient receiving at the beginning of treatment a sufficient quantity of the serum at one injection, when, as is universally recognised both by animal experiment and clinical experience, its curative action is exerted most markedly.

From the reports that we were constantly receiving from members of our profession it soon became evident that owing to the difference in standards of measurement and nomenclature much confusion existed as to the relative strengths and desirable doses of the various anti-diphtheritic serums on the market. We therefore appointed Special Commissioners to inquire into the whole question of strength of these serums in order that the relative doses might be fixed. These results were in many cases remarkable; but as the relative strength of each was obtained a medical man, taking Behring's serum as a standard, could calculate what dose of any other serum must be injected in order to introduce a dose of a certain number of units. We have reason

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to believe that the information thus afforded has been of considerable assistance to those who have to work with anti-diphtheritic serum and has contributed in some measure to the improvement of the serum treatment in this country and to putting the dosage on a rational and intelligible basis. Before leaving the serum question it must be pointed out that anti-streptococcic serum and anti-tetanic serum have both been successfully prepared at the laboratories of the British Institute of Preventive Medicine, but as yet the cases treated with them are not sufficiently numerous to afford any very satisfactory statistics. Quite recently Dr. Washbourn has announced that he has been able to produce a serum which exerts a distinct protective action against the streptococcus of pneumonia. In connexion with this work, too, he has been able to produce what must be looked upon as a saprophytic or non-malignant form of the pneumococcus and from old cultures an extremely resistant and persistent form of the same.

One of the great questions of the year has been the value of the various modifications of Pfeiffer's reaction in regard to the diagnosis of various diseases. The reaction first indicated by Bordet and worked out by Durham has, in the hands of Widal, Grünbaum, Wyatt-Johnston, Delépine, and others, given most accurate results in the case of typhoid fever, and there is every prospect that this method will, before long, come into very general use and give as accurate results as have been obtained in diphtheria by microscopical and cultural examinations. Durham observed that the action of dilute serums of highly immunised animals on susceptible microbes was to cause them to become aggregated into clumps even *in vitro* and observable with the naked eye, the clumps falling to the bottom of the tube and leaving a clear supernatant fluid. Using this method for diagnostic purposes in the case of typhoid fever the reaction can be observed under the microscope and also *in vitro*. All the observers who have done work on this point have come to the conclusion that the antitoxic property of typhoid serum is developed at a comparatively early stage of the disease, and that once developed it enables the diagnosis to be made with a comparative degree of certainty.

The outbreaks of typhoid fever that have been supposed to be associated with infection through the ingestion of oysters from beds or "layings" contaminated with typhoid-laden sewage have led to the appearance of two important reports on this question of infection through oysters. Dr. Cartwright Wood in his report brings forward most important evidence as to the possibility of infection by oysters contaminated with typhoid sewage. He shows that cholera organisms may be demonstrated experimentally as continuing within the oyster for eighteen days, whilst in infected water in which oysters were placed they could be found for as long a period as two months, whilst typhoid organisms under similar conditions remained for three months. Dr. Klein says that these organisms may persist in sea-water tanks for two or more weeks, the typhoid bacillus retaining its characteristics unimpaired. In one case Dr. Klein found Eberth's typhoid bacillus actually within the oyster. All this evidence goes to prove that disease germs are much more persistent in sea-water than has been generally imagined, and although it may be, as Dr. Thorne Thorne insists, that it is only under special conditions that we find typhoid fever and cholera ensuing as the result of consuming oysters laid in polluted waters, such cases as are traced to this source necessarily form a very small percentage of the cases actually so infected, whilst these, again, bear a very small proportion to the cases that are infected by them. The whole bearing of these reports on the question of infection is extremely important, and the bacteriological investigations published during this year will have a wider bearing on the subject of the contamination of water, whether fresh or salt, than has any work that has been done for a considerable period.

The outbreak of bubonic plague in India affords a most striking object lesson or demonstration of the modification of a pathogenic organism, as evidenced by the virulence of the disease set up by it at different periods of an epidemic. When first it was announced that the plague had broken out in Bombay the percentage of deaths was exceedingly low, and for some time a large proportion of the cases attacked were comparatively mild. Recent reports, however, indicate that not only has the number of cases increased at an alarming rate, but the percentage death-rate has gone up in a corresponding fashion, whilst we have further evidence of the increased virulence of the organism in the fact that Europeans, who in the first instance were not affected, are now attacked in considerable numbers. Metschnikoff's experiments on cholera and on the exaltation of the virulence of the organism, the difference between infection by the blood and infection by the alimentary canal, and his observations on the toxins produced by cholera organisms are of very great interest; whilst the observations made by numerous other observers on the production of cholera and typhoid toxins and antitoxins continue to add to the sum of our knowledge on these subjects.

The filtration of water, especially in relation to the elimination of bacteria, during the year occupied considerable attention; whilst, as was pointed out in the Report of our Special Commissioner on the Utilisation of Micro-organisms in the Purification of Sewage,[1] certain advances have been made as regards the conversion of sewage materials into inert substances by the action of bacteria. This question, started on a practical scale by Mr. Scott Moncrieff, had been suggested as a possible method by chemists some fifteen years ago. Mr. Dibdin of the London County Council has proved that the chemically treated sewage may be further enormously improved by passing it through coke breeze filters in which numerous organisms have been allowed to grow; whilst Mr. Cameron, borough surveyor of Exeter, has carried out a long series of experiments in which he has been able to confirm the results obtained by other workers, starting, as Mr. Scott Moncrieff does, with the crude sewage. In all these cases the purification, as indicated by the amount of oxygen absorbed, amounts to something like 75 per cent., and the whole of this is put down to the action of bacteria.

During the year the Royal College of Physicians of Edinburgh opened its magnificent new laboratories for the carrying on of pathological, bacteriological, and general experimental research. A well-equipped pathological and bacteriological institute was, under the direction of Professor Joseph Coats, added to the Western Infirmary, Glasgow, in connexion with the teaching of these subjects in the Glasgow University. Among the more important books issued during the year may be mentioned Pearman and Moor's "Applied Bacteriology"; the fourth edition of Crookshank's "Text-book of Bacteriology"; Clifford Allbutt's "System of Medicine," by various authors, in volume 1 of which is an admirable account of infectious diseases, immunity, &c.; and finally Sternberg's "Text-book of Bacteriology," which contains, revised and brought up to date, that portion of his "Manual of Bacteriology," published in 1892, relating to pathogenic bacteria, omitting the detailed descriptions of non-pathogenic forms and the extensive bibliography included in the larger work. The bacteriological work of the year together forms a solid and permanent contribution to scientific and applied medicine and surgery and it certainly offers a most powerful argument to those who wish to see the subject of bacteriology made part of the curriculum of every medical student.

CHRISTMAS AT THE HOSPITALS.

SPECIAL efforts are made at Christmastide on the part of the medical and nursing staffs to brighten the lives of the inmates of our various hospitals. The wards are gaily decorated with evergreens and flowers, gifts are presented, entertainments are provided, and as far as practicable the dietary scale is added to and made to resemble somewhat the festive fare enjoyed by those in health at this period of the year.

King's College Hospital.—In the early morning of Christmas Day a suitable gift was placed by the bedside of every patient in the hospital. These gifts were provided by many kind friends and consisted to a considerable extent of articles of warm clothing and many toys for the children. For dinner there were turkeys, plum pudding, &c., for all the patients who were well enough to enjoy such fare. During the afternoon the patients received their friends. After tea there was a special musical service with carol singing in the chapel, which was decorated with excellent taste. On Boxing Day in the wards, which were also decorated admirably and illuminated with hundreds of candles and fairy lights, there was festival tea for all the patients at half-past four o'clock and an entertainment

[1] THE LANCET, Dec. 5th, 1896, p. 1631.

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in each ward. The entertainments were given by the resident medical officer, students, and nursing staff, assisted by friends. All passed off most successfully, and both on Christmas Day and Boxing Day the spirit throughout the whole institution was that of happiness, good temper, and enjoyment. The resident medical officers and nursing staff were untiring in their efforts to give pleasure to others.

St. George's Hospital.—On Christmas Day, the wards being very prettily decorated by the nursing staff, the patients who were able to partake of such "good cheer" were provided with roast beef and plum pudding. On the evening of Dec. 28th a "Christmas Tea" took place for all the patients in their several wards, presided over by the lady visitors and their friends, and on Jan. 2nd an entertainment for the patients was given in the Board-room, consisting of "animated photographs," music, &c. Entertainments for the nursing staff have been arranged for Jan. 7th and 8th (to-day, Friday), comprising a dramatic performance given by one of the visiting surgeons and his friends; and on Jan. 14th and 15th entertainments will be provided by the resident medical staff.

Victoria Hospital for Children, Chelsea.—The usual Christmas tree was given to the children on Christmas Day. The annual treat will be given in the second week in January. The wards were prettily decorated for Christmas Day, and the usual dinner of game, turkeys, and plum pudding was partaken of by the patients.

Hospital for Sick Children, Great Ormond-street.—No efforts were spared at this institution to make Christmastide as bright and happy a time as circumstances would allow. The wards were charmingly decorated, and, needless to state, the little ones were not forgotten by Santa Claus. On Dec. 26th a Christmas entertainment was given for the patients and on Monday the out-patients were entertained.

City of London Hospital for Diseases of the Chest, Victoria Park.—On Christmas Day the usual Christmas dinner was provided for the patients, at which some members of the committee of management and other visitors were present. Christmas cards, books, periodicals, &c., were distributed, together with dolls and toys for the young patients. In the evening a musical entertainment was given, which afforded much amusement and pleasure to the inmates of the hospital.

German Hospital, Dalston.—Christmas trees were placed in all the wards, and there was a distribution of useful presents to patients and inmates on Christmas Eve. The carol singing was much appreciated.

Chelsea Hospital for Women.—On Christmas Day, from a fund collected by the ladies' committee, each nurse and member of the household staff received a present, and the Christmas dinner and tea for both patients and staff were provided from the same fund. Each patient was allowed one visitor to tea, during which time the nurses sang carols. On Boxing Day the nurses and their friends gave the patients a concert, consisting of part-songs, solos, and Haydn's *Toy Symphony*, which had been carefully rehearsed. On Jan. 12th the ladies' committee will give a variety entertainment, to be preceded by a tea.

Middlesex Hospital.—On Christmas Day all the patients who were able to do so partook of turkeys or geese, plum puddings, &c. There was a monster Christmas tree in the board-room, from which each patient able to attend received a present; for those unable to leave their beds a bran-pie was provided. The wards were decorated and the patients' friends were allowed to visit them for two hours in the afternoon. In each of the children's wards there was a special Christmas tree, the one in Princess May Ward being lighted by electricity.

Brompton Hospital.—The Christmas festivities at this institution gave, as in many former years, great pleasure to the inmates and were as successful as willing hearts and hands could desire. The various wards and galleries were elegantly decorated by the sisters and nurses with coloured lights, mottoes, and evergreens. The creature comforts included turkeys, with port wine, oranges, and tobacco. During the festive season a Christmas tree and a concert were given.

Paddington-green Children's Hospital.—The Christmas treat and entertainments to the little patients in this hospital were given on the 6th inst. at 4 o'clock. The wards were tastefully decorated with coloured ribbons, &c., by the matron and nurses. A Punch-and-Judy show was provided in one ward and a lantern display in the other. Following this the large cracker twelve feet long, filled with toys, was "pulled" and the toys were distributed amongst the children. The number of patients then in the wards was 37. The parents took tea with the children on Christmas Day.

Royal Orthopædic Hospital.—As usual at this season, the various wards were decorated for Christmas, the material for which had been kindly supplied by a member of the medical staff. On Tuesday evening, Dec. 22nd, an entertainment was given to the patients and nurses by the Tudor Black and White Minstrels, under the direction of Mr. W. H. Harris, consisting of choruses, songs, banjo solos, &c. The programme concluded with a Christmas carol, rendered in good style by the whole troupe. On Christmas Day each patient received a present through the kindness of a member of the committee and the usual Christmas fare was provided. In the evening the patients met together in the Victoria ward and had "high tea."

National Hospital for Diseases of the Heart, Soho-square.—On Christmas Eve an entertainment for the patients was given in the women's ward. Tea was given in the day ward. The room was decorated with holly, mistletoe, and chrysanthemums. At one end a small stage was placed on which Beauty and the Beast, the merchant, the wicked sisters, and the Fairy Silver-star duly appeared. This was preceded by songs, recitations, and dances. Christmas carols were admirably sung by the St. Anne's choristers. Proceedings were for a short time interrupted by the arrival of Father Christmas.

London Hospital.—The patients in the London Hospital thoroughly enjoyed their Christmas. Before daybreak on Dec. 25th the nurses bore fairy lamps round the wards and sang carols. As soon as breakfast had been finished Father Christmas (one of the medical staff) made a joyous progress through the wards, bringing in his train a much appreciated and valuable distribution of gifts. Warm clothing for nearly all, knives, books, and other small presents and toys for the children had been freely provided, and were most gratefully appreciated by the poor patients to whom they were given. The wants of these sufferers are well known to the sisters and none were left out. The patients' friends were specially admitted from 2 P.M. to 3.30 P.M., and at 4 P.M. tastefully arranged teas were provided. From then onwards to 8 30 P.M. happiness reigned supreme. The Christmas festivities concluded on Monday, Dec. 28th, when the annual Christmas trees were provided in Queen and Beatrice wards.

East London Hospital for Children, Shadwell.—The usual Christmas entertainment for the in-patients was held at the Children's Hospital, Shadwell, E., on Dec. 30th, when a large number of subscribers and friends of the charity were present. The wards were tastefully decorated and were inspected by the visitors between 3 P.M. and 4 P.M. A Punch and Judy show and two very large Christmas trees formed the chief items in the programme and afforded the greatest pleasure to the children. During the afternoon a selection of popular airs was performed by a military band.

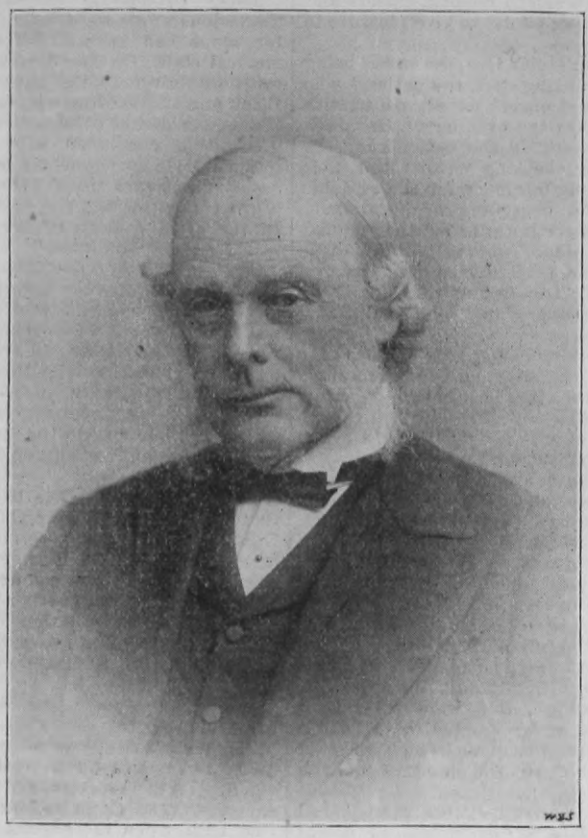
St. Thomas's Hospital.—All the wards were prettily decorated with festoons of holly and evergreens and gay with artistic coloured drapings, Chinese lanterns, and fairy lights. On Christmas Day the patients' fare consisted of ribs of English beef, Christmas pudding, and ale for those able to take it. Pipes and tobacco were supplied for the men. Each patient was permitted to invite one friend to tea with him or her. On Boxing Day the matron was "at home" in the Nightingale Home at 4.45 P.M. At 6 P.M. a band of the nurses, led by the Home Sister, went from ward to ward singing Christmas carols. On the other days there were various musical entertainments given in the different wards by residents in the hospital and their friends. On New Year's Eve the Christmas tree entertainment was held in the Children's Ward (Victoria). This ward is for children under six years of age, but on this day the sister invited all the older children.

University College Hospital.—The Christmas entertainment to the patients at this hospital was given on Dec. 30th, the cost of the entertainment being defrayed out of funds raised by means of a special appeal made to the members of the staff, the committee, and supporters of the charity. The children's and other wards were prettily decorated and illuminated. After tea there was a distribution of toys and other things, and there was a presentation to each patient of a parcel of warm clothing. In the course of the evening a concert was given.

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SIR JOSEPH LISTER: THE FIRST MEDICAL PEER.

WE have pleasure in presenting to our readers a portrait of Sir Joseph Lister, the first medical peer. Sir Joseph Lister, Bart, President of the Royal Society, was born in 1827, and educated at the University of London, where he took the degree of B.A. in 1847 and M.B. in 1852, in which year he also became F.R.C.S. Eng. He was appointed Regius Professor of Surgery in the University of Glasgow and later Professor of Clinical Surgery in the University of Edinburgh, taking the degrees of F.R.C.S. Ed. in 1855 and F.F.P.S. Glasg. in 1860. Since these dates the following honours have been awarded him: — F.R.S. Lond. and Edin., LL.D. Edin., M.D. (*hon. caus.*) Dub., LL.D. Glasg., D.C.L. Oxon., LL.D. Cantab., M.D. (*hon. caus.*) Würzburg, and M.D. (*hon. caus.*) Bologna. In 1880 Sir Joseph Lister received the Royal Society's medal in recognition of his magnificent discoveries in scientific medicine, and in 1883 he was created a baronet. In 1897 he becomes the first medical peer, the honour now done him by Her Majesty being received with unanimous applause by the whole country. In the spring of 1896 we wrote as follows upon this point:—"It would have afforded us the greatest satisfaction and pleasure ..... if the recent list of peers among the Birthday Honours had included the name of one whose services to the nation and to humanity in the introduction of antiseptic surgery have received universal recognition. Such services are indeed beyond reward, but the admission of the President of the Royal Society ..... would add lustre to the peerage. It is from such men that the second estate of the realm should be reinforced if, as it should, it is to contain the real nobility of our land." Sir Joseph Lister married a daughter of James Syme, the celebrated Edinburgh surgeon, but has no issue. Lady Lister died in 1893.



SIR JOSEPH LISTER: THE FIRST MEDICAL PEER.

SPECIAL ADDRESS OF THE COMMITTEE OF THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND:

INVITATION TO FELLOWS OF THE COLLEGE TO JOIN THE ASSOCIATION AND TAKE AN ACTIVE PART IN FORWARDING ITS OBJECTS.

WE have been desired by the Committee of the Association of Fellows of the Royal College of Surgeons of England to publish the following address to the Fellows of the College:—

On the Fellows of the College at present devolves the election of the governing body and consequently the control of the policy and work of the institution. Since this control, limited as it is, was conferred in 1843, when the order of Fellows was instituted, it can be claimed with satisfaction that in important particulars the Fellows have widened the policy, improved the work, increased the utility, and advanced the development of the College.

During the first thirty years of this control none of these results became apparent, but during that time the recognition of existing abuses and imperfections was forming and growing—the necessary preliminary of all improvement. During the last twenty years several distinct advances and definite improvements have been effected, some of which have come from without, the result of concomitant advances in professional and public requirements—as, for instance, the gradual improvement in our system of education and methods of examination, in which we have played rather a passive than an active part; but others influencing our collegiate vitality and activity have arisen within the College and are distinctly due to our exercise of our electoral functions and to the more or less consistent selection of members of Council pledged to promote those advances. Other factors than the desire to attain these objects often interfere, such as the elements of personal and hospital influence, and to that extent our course has been wavering and inconstant.

Among the advances may be mentioned the institution of the annual general meeting of Fellows and Members and of the annual report of the Council submitted to that meeting; the provision made for extraordinary general meetings; the use of voting papers at the annual election of members of Council, and, more recently, the simplification of the rules originally framed by the Council for their distribution and return; and the institution of separate half-yearly meetings of the Fellows for consultative purposes, by all of which advances the Council is brought into touch with its constituency, free discussion of interesting topics is elicited, and moral support afforded in matters of doubt and difficulty, such as the admission of women to its diplomas. A degree of vitality and of communion of thought and interest has thus been imparted to the whole collegiate body corporate which before was entirely wanting.

The policy which has effected these improvements and advances found its expression and the force of systematic action in the formation of the Fellows' Association in 1884, and since its organisation the association has systematically and undeviatingly promoted such improvements with no slight measure of success, and has resolutely supported the maintenance of concessions from the Council to the Fellows and Members whenever such concessions appeared or

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actually were in danger of being withdrawn. The work already done the association considers but as part of a consistent whole, and the advances already secured but as stages to a definite goal. That goal is the embodiment in a new Charter of the concessions to the Fellows and Members by the Council and such other provisions as may be settled by the Council and the constituency.

One effect of the concessions which the association has been instrumental in securing for the Fellows from the Council has been the growth of opinion among the Fellows in favour of extending and strengthening the sense of collegiate life within the institution by giving to the Members a share in the franchise and representation on the Council. How spontaneously this feeling has spread is shown by the fact that when the Council referred for the consideration of the half-yearly meeting of Fellows in January, 1896, a resolution passed at the annual meeting of Fellows and Members in 1895, asking for the addition of eight representatives of the Members to the Council, a very large majority of the eighty-six Fellows present voted for the principle of the representation of Members of the College on the Council, and without any previous concert in any way seven members of the association spoke in favour of the concession. The subject had forced itself to the front and had to be dealt with; about half of the Council itself was known to be prepared to grant representation to the Members; and it was felt that the time had come when a long-vexed question should be set at rest in a moderate, reasonable, and practical way; and that by giving to the Members some share in the control of the body corporate, some voice in its management, and some interest in working for its welfare, the undivided attention of the Council and of the Fellows and Members would be turned to other questions of the highest importance to the College, the profession, and the public.

In consequence of the vote at the half-yearly meeting of the Fellows in January, 1896, the Council referred the matter for decision to the whole body of Fellows. The poll will close on Jan. 31st, 1897, and as many Fellows have not yet returned answers to the questions put before them the association would strongly urge on every elector who has not yet done so to vote for a concession which will harmonise all interests and greatly add to the strength, stability, power, and influence of the College both within and without the profession.

In taking up the well-known case of Mr. R. B. Anderson, whose professional rights as a Fellow and Member of the Royal College of Surgeons of England were wantonly and grossly infringed in Tobago and Trinidad, and appointing representatives on the Civil Rights Defence Committee the association has followed the lead of the Council of the College. Guided by the sense of its obligations under By-law XV., by which the Council "undertakes to protect and defend every Fellow and Member of the College who may be disturbed in the exercise and enjoyment of the rights, privileges, exemptions, and immunities acquired by him as a Fellow and Member or Member thereof," the Council appointed representatives on the Civil Rights Defence Committee in June, 1894, and its coöperation has been of signal service to Mr. Anderson. In accordance, also, with a recommendation of the Fellows at the half-yearly meeting in July, 1896, the Council instructed its representative on the General Medical Council "to forward in every way that seems feasible the objects of the Civil Rights Defence Committee in the case of Mr. R. B. Anderson." The resolution on this matter passed by the Fellows was moved by Mr. Holmes and seconded by Mr. George Jackson of Plymouth at the direct instance of the committee of the association, and marks an epoch inasmuch as it illustrates the principle that the representatives of corporations on the General Medical Council should represent effectively, not merely the views of their governing Councils, but the interests of the constituents of those bodies, and so far as the College is concerned the adoption of the resolution by the Council constitutes a precedent of the utmost value to the Fellows and Members.

Whilst warmly acknowledging the sympathy and moral support of the Council of the College in the case of Mr. Anderson, the committee of the association must point out that the only way to redress Mr. Anderson's wrongs and to re-establish his professional rights as a Fellow and Member is by a grant of money for the prosecution of his appeal to the Privy Council. The connexion of the Council with the appeal to the House of Lords, though strictly logical and demonstrable, is less obvious, and therefore the committee is not surprised that the Council has not perceived it or felt justified in voting funds for the appeal to the House of Lords. This latter appeal had to be taken up by the Civil Rights Defence Committee after the College had appointed delegates on that Committee, and in addition to that appeal to the Privy Council which the Civil Rights Defence Committee was originally formed to promote. The obligation of the Council of the College to assist in this appeal to the Privy Council for the purpose of securing the abrogation of the unjust and iniquitous decisions against Mr. Anderson, the result of judicial corruption which a Royal Commission has emphatically condemned, appears to the committee to be very clear; for, notwithstanding the opinion of its solicitor, the Council virtually decided, in June, 1894, that Mr. Anderson's rights as a Fellow and Member have been infringed, and it is only through this appeal that Mr. Anderson can be restored to his former position and become free to practise in Tobago and elsewhere and to enjoy those rights as a Fellow and Member which the Council has undertaken to defend. For this reason and because the committee recognises the obligation of the Council of the College in regard to both appeals promoted by the Civil Rights Defence Committee the committee of the association has furthered resolutions at meetings of the College asking the Council to grant a sum of money for the prosecution of Mr. Anderson's appeals. That such a grant would be a new departure and without precedent is true; but then Mr. Anderson's case is without precedent, and combines principles of so great importance, both to the public and to the profession, that its settlement by the intervention of the greatest of our professional corporations would materially add to the prestige and power of the College, and justly establish for it, in default of any action on the part of the General Medical Council, the position of a vindicator of professional rights and a leader of professional opinion.

If a favourable response to the claims of the Members of the College to representation on the Council should be given by the Fellows—and this would be assured if the Fellows who have not voted would vote for the concession—a new Charter would be required to confer such representation. It would then become necessary to embody in it the privileges and advantages which now depend only upon the good pleasure of the Council, such advantages, for instance, as the annual general meeting of Fellows and Members, the annual report of the Council, and the half yearly meetings of the Fellows. An organisation like that of the Association of Fellows must be of great service as a medium of communication with the Council, and therefore the committee earnestly invites the coöperation of all Fellows who recognise the services which the association has rendered to the Fellows during the last twelve years and who approve of the principles and policy which the association is upholding and steadily pursuing in the best interests of the College.

Signed on behalf of the Committee,

H. PERCY DUNN, Hon. Sec.

54, Wimpole-street, Dec. 30th, 1896.

THE HOUSING OF THE POOR AT MANCHESTER.

FIVE years have elapsed since we published a special report on the re-housing of the poor at Manchester.[1] We then described a somewhat bold scheme which the corporation were about to carry out, but we also indicated that the good which might reasonably be expected to accrue from this undertaking was likely to be marred by flaws in the detail of application. An area measuring 19,271 square yards where 1250 persons lived, had been condemned, together with three other smaller areas that had between them 620 inhabitants. On the largest (Oldham-street) area it was proposed to build a municipal common lodging-house after the model of those that have been so successfully erected at Glasgow; then on the other portion of the land model tenement dwellings and artisans' cottages were to be likewise erected by the municipality. Thus the city authorities were to set an example in the three forms of dwellings—the cottage, the tenement block building, and the common lodging-house.

[1] THE LANCET, July 18th, 1891.

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This municipal property was to serve as a menace to all private property owners. The latter were to be told that if they did not make their houses as good in every respect as the houses, &c, owned by the municipality they would in their turn be expropriated and the town would itself erect proper dwellings. We pointed out, however, at the time that both the text of the law and the character of some of its administrators did not favour the realisation of this bold scheme. The compensation to be paid by the sanitary authority to the owners of the condemned property had to be fixed by an arbitrator, who might take into consideration not merely the actual worth of the property, but what might be its value at some future period. Further, the owners of the condemned property were at liberty to engage the most expensive counsel to defend their rights and the sanitary authorities were obliged to pay these legal advisers. Thus the costs of compensation and the legal costs were likely to be so great as to make it impossible for this municipal enterprise to succeed from a financial point of view. We protested at the time that if a house was so insanitary as to be condemned as unfit for human habitation, the owner should receive only a very small compensation. If the owners of unwholesome property could be expelled at a comparatively small cost to the sanitary authority and at some loss to themselves and if, on the other hand, the property thus municipalised was a source of income, of profit, to the town, then indeed speculators in slum property and in jerry-built houses would be seriously menaced. Honourable *bonâ-fide* private enterprise might still prosper; but that form of speculation which is founded on the extreme misery and helplessness of the poorest classes would receive a death blow. As matters now stand, however, the speculators in slum property know that the threats made against them are not likely to be realised. What with legal expenses and the compensation to be paid the execution of such threats is too costly to be carried out on anything like a large scale. Nor does it much matter if they are enforced since ample compensation is given. Thus are the owners of unwholesome house property encouraged and the purpose of the law on the housing of the poor evaded.

There was another ugly feature in the state of affairs in Manchester. Much of the poorer class of house property had passed out of the hands of its original owners—men of position and standing, who could afford to deal generously towards their tenants—and was now in the hands of former rent collectors—a harsh, rough class of self-made men. These rent collectors had lent money on mortgage to their former employers and thus became owners where they had been but collectors. Such persons are naturally opposed to sanitary reforms and at election times can exercise very strong pressure on their tenants. This has told at the municipal elections, and the interests of slum property owners is far too well represented on the town council. Such was the position of affairs described in the report we published in 1891.

Under these circumstances we are not surprised to find that the progress achieved since then has been slow and somewhat disappointing. On two of the areas condemned under the Housing of the Working Classes Acts in the years 1889–91, blocks of artisans' dwellings have been built which can house 1250 persons and 450 persons respectively. These dwellings are full of tenants. Many complaints have been made against them. They have been qualified as "barracks" and as altogether opposed to the love of privacy and independence and to the customs and tastes of the Manchester population, but the fact remains that the tenements are let easily and that many persons are waiting impatiently for vacancies so as to come into these block buildings. Nevertheless these dwellings do not pay, and this financial failure is attributed by most of the electors to blundering or perhaps to jobbery on the part of the town council. The real fault, however, rests with the law and with the consequent excessive compensations and legal costs that had to be paid so as to clear the land of its former owners. This has not been sufficiently explained to the Manchester electors. Indeed, one of the most eminent town councillors was not re-elected at the last elections principally because he neglected to give sufficient information to his constituents.

Discouraged by the little success which has met the building of tenement houses the town council has, for the moment, abandoned the project of building a common lodging-house. Nor has any other large scheme been brought forward. There are many areas remaining that should be condemned, but the town council now seems afraid to take up the subject. For the moment, the policy seems to be that of proceeding very slowly. Thus it is thought to avoid the necessity of re-constructing in the immediate neighbourhood of condemned dwellings. This, it is urged, is not necessary, unless a large number of persons are simultaneously driven out of their homes, because many of the poor go of their own accord to live in the outskirts of the town. Then, also, the well-to-do classes are migrating to the suburbs and the houses which they inhabited in central districts thus became available for a poorer class of tenants. Another, and an excellent, manner of dealing with this difficulty is to build colonies in the outlying country to be reached by cheap trams or railways; but, as this would deprive the municipality of both rate-payers and of electors, it cannot be expected that town councillors will take the initiative in such a movement.

In respect to back-to-back houses, which are so numerous in Manchester, the policy now pursued is to pull down one out of four houses so as to create a back yard. This, however, is bitterly resented by the owners of back-to-back houses; yet the result is not so much opposed to their interests as might be supposed at first sight. They lose a house, it is true, but the remaining three houses are so much improved by the possession of a back yard and the possibility of through ventilation, that an augumentation of rent naturally follows. Then it is the turn of the tenants to complain. Hence hostility is created against the town council, either amongst the owners or the occupiers, and this is another reason for proceeding slowly. All these circumstances mitigate sadly against the cause of sanitary reforms. It is questionable, also, whether it is wise to improve these back-to-back houses. That they are bad in principle admits of no doubt. Also it must be noted that most of them are very old. They overcrowd the site on which they are built. They stand on bare ground, the floors are damp and cold, and the walls and fittings are dilapidated. To improve is, perhaps, to grant a new lease of life to property of a character that should not be allowed to exist in so great, wealthy, and prosperous a town. Better by far secure the condemnation of entire areas of this bad, unwholesome property, pull everything down, and build anew according to modern sanitary principles. But in the present frame of mind of the Mnachester Town Council and perhaps also of the Manchester electorate there is little or no chance that such sweeping measures will meet with approval. The law offers good excuse for deferring any such action. If slums cannot be pulled down and sanitary dwellings erected in their stead without imposing a permanent burden on the ratepayers, the Housing of the Working Classes Act is likely to remain a dead letter. But more light is required on this subject. Some statement should be issued setting forth what the property in the condemned areas was really worth and what was actually paid in legal costs and in compensation. Nor does it seem fair that the value of slum property should be estimated by the amount of rent paid by the tenants. It is notorious that the rents paid by the poor are exorbitant and altogether in excess of the accommodation they receive. In a respectable middle-class house or villa, the same amount of accommodation, the same cubic space, can be rented for half or a quarter the price. The value of slum property should not be based on the number of tenants who can be crowded into a small space; this would be the offering of a premium to overcrowding. It would be more equitable to take as a standard a good house in a well-to-do quarter and calculate how many cubic feet of internal space is given. If the rent of this good, high-class house is £50 a year, and if the house in the condemned area contains only half the cubic space, then its value should be estimated at £25 a year. There should be a costless method of ascertaining the value of slum property. If the method just suggested is not thought practical then a radius might be drawn round the condemned area. This radius should comprise a district where the value of house property is proportionately the same or where the price of the land is the same. Then, measuring the cubic capacity of both the high-class and low-class dwellings within this radius, by comparing them with the total rental, it could be ascertained what was the average rental value per cubic foot of internal space of the houses in the district. Subsequently it would only be necessary to measure the cubic capacity of the houses in the condemned area to ascertain what should be their rent value according to the average of the district. Compensation estimated at so many years' purchase would

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TOMB OF LOUIS PASTEUR AT THE INSTITUT PASTEUR.

REPRODUCED BY PERMISSION OF MONS. J. B. PASTEUR FROM A PHOTOGRAPH BY CHEVOJON, PARIS.

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be given in keeping with the result of this measurement. There would be no need of arbitration. Each owner would receive the average value of house space in his neighbourhood. If, as would undoubtedly often be the case, this sum represented less than he had been in the habit of extorting from his helpless, poor, overcrowded tenants, such an unwholesome condition of things need not be taken into consideration by the law. Because unscrupulous slum-property owners overcrowd their houses and overcharge their tenants, that is no reason why the community at large should be taxed to compensate them for these extortions. The public can only be called upon to pay the just value of the property which for the public good is about to be destroyed. That just value can be ascertained by establishing a comparison with surrounding property which is not slum-property. To pay more than this renders sanitary improvement difficult, if not impossible, and offers a premium to those who exploit the extreme poor and cause them to crowd together in unwholesome and immoral surroundings.

THE TOMB OF LOUIS PASTEUR.

LAST week we published an account of the imposing ceremony of the removal of the remains of M. Pasteur to their final resting-place at the Pasteur Institute. This week we are able to present to our readers a description of the tomb and, through the kindness of Monsieur J. B. Pasteur, a reproduction of a photograph of the mausoleum of the great French *savant*. This tomb ought to be visited by every medical man who has an opportunity of doing so, not only on account of Pasteur's great services rendered, directly and indirectly, to medicine and surgery; not only on account of the great interest attached to a visit to the laboratories of the Institute, which may be made at the same time, but because the mausoleum is well worth seeing as a beautiful work of art, exquisite in taste and design and perfect in the finish of the workmanship. The Pasteur Institute is an imposing building situated in its own grounds in the Rue Dutot, but as it may not be easy for those to whom Paris is not well known to find it the best plan is to drive there; a carriage from the Place de la Concorde will reach it in about half an hour.

The mausoleum is built at the end of a long corridor in the Institute and is shut off by magnificent gates of wrought iron. Before describing it, it is interesting to note that it was built by the Pasteur family, and Monsieur J. B. Pasteur, the son of the great *savant*, suggested as a model the well-known tomb of Galla Placidia at Ravenna, which he had visited in the course of his travels in Italy.

This tomb was built about 440 by the Christian Empress Placidia, the daughter of Theodosius the Great. It is in the form of a Latin cross 49 ft. long and 41 ft. broad, and we may refer to it in some detail to show how it inspired the architect of Pasteur's tomb, Monsieur Girault. The interior of Placidia's tomb is covered by mosaics, on a blue ground. Above the entrance are garlands of fruit and foliage; and in the dome the symbols of the Evangelists. In the four arches which support the dome are figures of eight apostles, and between them is seen the familiar representation in mosaics of doves drinking out of a vase. Under the vaulting of the right and left transept are the other apostles and, between them, stags drinking at a spring in the midst of golden foliage. There are also designs in mosaic of branches of vines; and two subjects, full of grace and dignity, the *chef-d'œuvres* of Christian art in the fifth century, the first representing the Good Shepherd with His sheep and the second representing the triumph of the Christian faith. The altar is constructed of oriental onyx and behind it is the large marble sarcophagus which was at one time enriched with plates of silver.

Turning now to the Pasteur mausoleum, we find the archway over the gates decorated in mosaic with irises on a gold ground, and there is also the simple inscription—"*Ici repose Pasteur*," and on either side of it the dates of his birth and death—1822 1895. Passing through the gates, the crypt is approached by a flight of nine steps of white statuary marble. The pavement of the crypt is of marble mosaic on which are represented large wreaths of laurel. The crypt is formed by four arches which support a cupola, and in the centre is placed the sarcophagus, which is carved out of a single block of dark-green porphyry. The arches are supported on four groups each of three columns, two of green porphyry and one of red, with Byzantine capitals of white marble. The walls of the crypt are lined with pavonazza, a cream-coloured marble richly veined in black, and above it are beautifully executed mosaics. On the marble which fills the arches on the right and left are inscriptions indicating Pasteur's discoveries in historical order as follows:—

1848.
Dyssymétrie Moléculaire.
1857.
Fermentations.
1862.
Générations dites Spontanées.
1863.
Études sur le Vin.
1865.
Maladies des Vers à soie.
1871.
Études sur la Bière.
1877.
Maladies Virulentes.
1880.
Virus Vaccins.
1886.
Prophylaxie de la Rage.

Beyond the sarcophagus is an apsidal chapel containing an altar of white marble enclosed by a balustrade of the same material. Above the staircase is the following inscription from the oration delivered at the reception of Pasteur into the Academy of Science: "Heureux celui qui porte en soi un dieu, un idéal de beauté, et qui lui obéit—idéal de l'art, idéal de la science, idéal de la patrie, idéal des vertus de l'Évangile." In the apse is another inscription containing the name of the architect and other interesting particulars: "Ce monument fut élevé en MDCCCXCVI. à la mémoire de Pasteur par la piété de sa veuve et de ses enfants. Charles Louis Girault composa l'architecture et la décoration; il dirigea les travaux. Luc Olivier Merson dessina les figures de la coupole. Auguste Guilbert Martin exécuta les mosaïques."

In the mosaics are representations of fowls, cattle, sheep, and dogs, indicating Pasteur's researches on chicken cholera and attenuation of virus, on anthrax, on *clavelée* or sheep-pox, and on rabies. There are also beautiful designs of hops, vines, and mulberry trees with silkworms and moths, illustrating respectively his researches on the so-called diseases of beer and wine and on the silkworm disease. Pasteur was a devout Roman Catholic, and the religious side of his character is indicated in the mosaics by angelic figures of Faith, Hope, Charity, and Science, and, above the altar, by the figure of a dove descending, representing the Holy Spirit, and on either side the Greek letters A and Ω. At the top of the cupola light is admitted through slabs of oriental onyx.

Such is the magnificent resting-place of Louis Pasteur, and it was a happy idea that this tomb should be placed where his successors carry on his great work and where students from all parts of the world may be reminded of the example he set of a life of untiring devotion to science and humanity.

PROVIDENT DISPENSARIES AND THEIR CLAIM ON THE MEDICAL PROFESSION.

A SPECIAL meeting of the Council of the Charity Organisation Society was held on Jan. 4th at the Royal United Service Institute, Whitehall, S.W., when Mr. C. H. WARREN (secretary of the Metropolitan Provident Medical Association) read a paper on "Provident Dispensaries and their Claim on the Medical Profession." There was a good attendance.

The Earl of STAMFORD, who presided, in introducing Mr. C. H. Warren said that there had been a feeling in the medical profession against certain abuses which had arisen in connexion with medical clubs. All were agreed that the provident dispensary system was a thoroughly good one and tended in the direction of thrift and self-help.

Mr. C. H. WARREN said coöperation between provident dispensaries and hospitals might be termed the root idea of all writers and authorities on these questions for many years past. As a means towards this end an association was established some sixteen years ago. One of its objects had been and still was: "To coöperate with the governing bodies of the metropolitan hospitals in order that they might be relieved of the large number of ordinary cases of illness which at present overcrowd their out-patient departments, and also have referred to them from the provident branches cases which required special hospital treatment or were suitable for clinical instruction." How far this coöperation had been attained might be gathered from the following facts.

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When the association was started there were, so far as he had been able to ascertain, about forty provident dispensaries or medical clubs worked on the provident system in the metropolis. There were now fifty-six, and in addition some of the old free dispensaries had adopted a semi provident or part-pay principle. Of these fifty-six it was scarcely possible to point to a really successful provident dispensary in the neighbourhood of a great general hospital or free dispensary. What was more, on two or three occasions provident dispensaries had been closed because of the severe competition of neighbouring hospitals or free institutions. The abuses of the hospitals' out-patient departments might be classed under two heads. First, persons were admitted who were well able to pay something for their medical treatment, and secondly, slight cases of illness were admitted which were not proper cases for hospital treatment at all, and could be as well treated at the patients' homes or in a medical man's surgery. To remedy these abuses there have been some feeble attempts on the part of the hospital authorities. In many of the hospitals the attention of the out-patients was directed, by means of posters, cards, &c., to the existence in the neighbourhood of provident dispensaries, but the numbers in the out-patient departments were not in consequence reduced.

At the Royal Free Hospital a more systematic attempt was being made in connexion with the Charity Organisation Society to deal with the matter. Here an almoner had been at work for some time inquiring into the position and circumstances of persons in the out-patient departments, with a view of transferring suitable cases to provident institutions. In furtherance of this work a provident institution has been established in Islington on the medical club system; that was, without dispensary premises, the patients attending at the medical men's surgeries when advice or medicine was required and receiving home treatment when necessary. Each case sent from the hospital was followed up and visited, and of the total cases sent about 17 per cent. had been enrolled members of the provident institutions and of the neighbouring Bloomsbury Provident Dispensary. In other hospitals the plan had been adopted of admitting only a certain number of new cases each day. So far as these efforts went they might be considered perfectly satisfactory, but he did not think the same could be said of the system of charging a fee to out-patients, which was the practice in one or two hospitals. This appeared to aggravate the evil. The neediest, and frequently most deserving cases, had to pay for what should be charity, and the well-to-do were encouraged to come under the impression that they were paying for the treatment they received. The great defect of these schemes seemed to be that they began too late—they were attempted cures rather than preventives. What was required was to keep unsuitable cases out of the hospitals rather than try to weed them out after the mischief was done. He believed one condition essential to the success of any scheme for reforming the out-patient departments was the abolition of the letter system as at present understood, and when that was accomplished to admit cases for out-patient treatment only on the recommendation of a medical man who knew the case, in connexion with some organised association, or in private practice. Something on these lines had been recently attempted by coöperation between the Metropolitan Provident Medical Association and the Hospital Saturday Fund. The results of the experiment for the first two months, from Aug. 1st to Sept. 30th, was that 464 applicants were supplied with certificate forms. Of these only 226 were returned with the medical man's opinion; the remaining 238 applicants for some reason or other did not see fit to submit themselves for examination. Of the 226 cases examined 124 were sent to chest hospitals, 74 were treated at the various dispensaries of the association, and 28 were considered suitable for treatment at general hospitals. Taking the total number of those who applied for hospital letters (464) only 152 were considered proper cases for hospital treatment. The remaining 68 per cent. had been kept away from the hospitals because of their unsuitability, and for those treated at the dispensaries the medical men had received proper remuneration. In addition to this these people had been brought into touch with provident institutions. The success or failure of such an arrangement must necessarily be judged from three points of view—that of the hospital, the medical men, and the persons treated. The numbers dealt with were at present so insignificant compared with the million or more cases which annually crowded into the out-patient departments that it was too early to get an opinion from the hospital point of view. From the medical men concerned he had received nothing but praise of the arrangements. Up to the present the provident dispensary movement had been only partially successful; one of the reasons was the lack of support from the medical profession. In the out-patient departments of hospitals persons were admitted for free treatment who were well able to pay for their medical attendance. A similar objection had been raised in the case of provident dispensaries. He was not prepared to recommend a general wage limit, which must be determined to a large extent by the district in which the dispensary is situated, and also by the scale of payments charged to members. A reasonable view of this matter appeared to have been taken by a committee under the chairmanship of Sir Spencer Wells in 1887, which consisted of twenty-five medical men and eleven laymen. To carry out this principle of insurance this committee made the following recommendations:—That all candidates for membership should be approved by the medical officer under whom they wished to be registered. That they should be free to benefit in four weeks from the date of joining. That the rates of contribution should be: single persons, male and female, 6*d*. per month; man and wife without children, 1*s*. per month; man and wife with children, 10*d*. per month; children under sixteen years of age, 3*d*. per month each, not charging for more than four in one family. That applicants for membership must make a declaration that their average earnings do not exceed, in the case of a single person, or man and wife, 30*s*. per week, or of a family 40*s*. per week. The committee were of opinion that provident dispensaries established with this scale of charges and wage-limits would be supported by the medical profession and would meet the wants of the working classes. Speaking of the competition which the provident dispensaries had to meet from the medical aid societies of insurance companies, he said the principles underlying them were totally different. The medical aid society was a business concern carried on for purposes of profit, which was gained at the expense of the medical man, and without any of the safeguards attaching to the provident dispensary. In conclusion Mr. Warren said the difficulties surrounding medical practice had been largely created and were being perpetuated by the want of union in the profession, and it was only by a strong combination that these difficulties would be overcome.

Mr. G. H. BROADBENT said he came to the meeting with a verdict adverse to the practice outlined in the paper. In Manchester, where a Provident Dispensary Association had been established for over twenty-one years to promote the very objects indicated in the paper, the system had proved to be a vast abuse.

Mr. T. R. ATKINSON expressed the belief that it was the medical profession which was to blame for the wrecking of the provident system in Manchester by their apathy.

Dr. ALDERSON spoke of the abuse of medical aid societies.

Mr. A. BOUSFIELD (chairman of the Metropolitan Provident Medical Association) said he was very much in favour of properly conducted provident dispensaries within the reach of the working classes of London, and if a very slight reform took place he believed the system would admirably work in with that of the hospitals. He thought that provident institutions should be largely under the control of medical men, but difficulties would certainly be created unless all parties combined.

Dr. GUSTAVE MICHAEL strongly advocated the principles of the provident system. The insurance system aided the medical man in many ways; a wage limit was fixed, and no man was admitted unless he had been examined and passed by a medical man whom he had himself chosen. All medical matters, too, came before the medical men who were on the committee. All the profits went to the medical man, the subscriptions being divided between him and the working of the institution.

Dr. O. F. WUNDERLICH said it was the managers of hospitals who were to blame for the abuse which obtained there, and if they had to pay for the medical attendance which was given they would soon see that the abuse was put an end to.

Miss PLACE gave her experience as secretary of a provident dispensary.

Dr. BARKWELL advised medical men to have nothing whatever to do with any association where the laity sat upon a committee and dictated to them.

Dr. F. J. L. HART had every sympathy with the terms of the address, but he asked whether the system advocated was to be a compromise or whether medical men were to manage

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their own affairs. He was sure they could do so if there was more unanimity among them.

Mr. GEORGE BROWN thought that the Charity Organisation Society was entitled to the thanks of the medical profession for convening a meeting in order that a matter of the most pressing importance to the profession and the public might be discussed. It might do a great deal to crystallise the subject and bring about a proper solution. The organisation, however, had not fulfilled the hopes which the profession had reposed in them when the subject was taken up. It was hoped that they would succeed in taking away patients who abused the out-patients' department of hospitals, and if possible put them into the surgeries of the private medical man. But this they had not done. He maintained that the medical profession must have absolute veto over the admission of patients into the provident dispensary. He objected to several remarks made by the writer of the address, disagreeing with the writer's idea of proper remuneration, and maintaining that patients should be taught to know that the medical men were not being adequately paid for their services.

After some remarks from Mr. ATKINSON, who favoured the general principles of the address,

Mr. TIMOTHY HOLMES explained that the provident dispensary movement set forth in the address was started, he believed, by Sir George Trevelyan and his friends a great number of years ago with the object of providing the working class with proper medical attendance on such terms as was possible and to give the greatest remuneration possible to the medical attendant. The Provident Medical Aid Association had kept the object in view, and he had no hesitation in saying that the chief obstacle of raising the standard was the action of medical men themselves in underselling each other. Supposing the remuneration at one dispensary was fixed at 6*d*., another dispensary would be started in the next street where the remuneration would be 4*d*. This was what the profession came to when it professed to manage its own affairs. If medical men would fall more generally into the ranks of the provident association and would admit the laity to a fair share of the management, he believed that they would find that they would get such remuneration as was possible out of the class of persons for whom the association existed, and they might see for themselves that no persons above that class were admitted into the association. He believed the plan proposed was entirely a fair one, and if carried out methodically it would mean a satisfactory solution of the problem, always with one most material stipulation—namely, that some reasonable arrangement could be made with the out-patient departments of hospitals. That would be possible if the medical profession and the laity would work honourably together.

Other speakers continued the discussion.

THE PLAGUE IN BOMBAY.

INFORMATION under date of Nov. 20th from Bombay brings news of the state of that city from the point of view of one of the oldest medical practitioners addressed to a friend in England. He says: "You are well out of Bombay just now, for we have fallen on troublous times. Our grand system of sewerage, the working of which the engineers refused to verify in the cocksureness that it was profoundly, and even scientifically, perfect, has landed us in an outbreak of plague. The epidemic has been with us for eight weeks and continues. Twenty attacks were reported yesterday. The plague and an increase of remittent fever and of respiratory diseases—all germ diseases—came together. The two latter have nearly doubled their usual mortality. Now, as these three have risen up and are progressing together and arise from the same cause—viz., a putrid atmosphere—you will see at once that they all come from the same source. The poison germs that enter the blood in plague, that enter the lungs in pulmonary diseases, and that enter the system in remittent fever, may all be distinctive germs, but they are bred in the same laboratory—the sewers and house connexions. All this is so plain to you that I need not say one word more. If microscopes are required to hunt for the bacilli they should be applied to the gaseous escapements from the sewers, drains, and house connexions. More than a fourth of our population have bolted from Bombay and we are all suffering from loss of business. And, lastly, there is a great famine looming in the distance." The state of the sewers and drains referred to has been the subject of much desultory inquiry and discussion in the corporation of Bombay, but so far the science of the work has received but scanty recognition from that body. This excites little surprise among those who know the quality of the average member and the method of appointing him. An Indian municipality is neither better nor worse than the similar governing bodies in England of fifty or sixty years ago, but in sanitary matters the results of mismanagement are much more palpable and severe in India than in England for reasons which may be easily explained.

Bombay has a mean temperature of 79·13° F., which is 30° higher than that of London. Its maximum recorded temperature is 100·2, with a minimum of 53·3°. The mean relative humidity is 77 per cent, while that of London is 82 per cent. at mean temperature; but when the quantity of vapour in suspension of the two places is compared, the London atmosphere would contain 0·51 lb. per 1000 cubic feet, while Bombay would have 1·135 lb.

In England the temperature of main sewers is generally under 55° F., so low, in fact, as to greatly retard putrefaction; and visitors to the London sewers are often surprised at the absence of foul smells, which they usually expect to meet underground. In Bombay the lowest recorded temperature in the main sewer in the cold season was 75·2°. In the summer the water-supply enters the city at from 82° to 84°. It will therefore be no matter of surprise if the sewage should be the foulest in the whole world, or that dead organic matter, whether animal or vegetable, begins to decay immediately, and putrefaction follows rapidly in Bombay.

The difficulties of sanitary administration arise from the rapidity of decomposition of organic matter, the density of population, and the primitive habits of the people, which have never been brought in line with the necessities of a closely inhabited town having in certain wards a density of 760 per acre. In addition to the fixed population there is a constant current of immigrants coming from the mainland, mostly of the labouring class, who remain for a time to benefit by the well-paid labour of the city and who return to agricultural occupations. These people know nothing of sewers, latrines, waterworks, or conservancy regulations. They seek lodgings in the densely crowded parts of the town, and the men will often join, eight together, in the hire of a single room, ten feet square and eight feet high, in which they will sleep together with door and window-shutter closed during the rainy season. In a city with the climatic condition of Bombay, and with such a dense population, the sanitary rules should be stricter and the individual compliance with them more complete than is the case in England if the death-rate is to be kept within reasonable limits. The reverse, however, is the case and the city appears always to exist on the verge of an epidemic of some sort. The sewers were made many years ago upon English models when there was no Indian experience to go upon, and the water-supply has been increased to meet the wasteful habits of the people until, at times, the sewers will not carry the volume flowing into them. There are thus extreme fluctuations of volume of the sewer air which is expelled with every rise of the water. This air is exceedingly foul, and must of necessity always be so on account of the temperature of the sewers, and as the fundamental data for the proper ventilation of Indian sewers have not yet been properly worked out the state of the atmosphere at ground level along the line of sewers is anything but wholesome. No analysis has ever been made of the sewer gases of Bombay, although many deaths have taken place of labourers who have had to work in them.

More work and better organisation would be necessary to keep an Indian city clean and wholesome than is requisite in Europe, for reasons attributable solely to climate, and when resistance, active or passive, of the native is added the task of administration becomes herculean. The health officer and the municipal engineer are regarded with tolerance, if not with open hostility, and they are often expected to do their work without that individual aid or compliance with rule on the part of citizens which is the very foundation of successful working in Europe. There is no educational standard in an Indian municipality, and it frequently happens that in the constitution of these bodies a much greater number of men is called for than the town can furnish

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of the right sort. Then follows the anomaly of an active and intelligent minority doing the work of the municipality, which they must then submit to the approval or disapproval of a very incapable majority. This will explain many of the serious errors that have been made in municipal sanitation in India, and when, as in Bombay, the corporation is averse to scientific research in matters of vital importance, such as an analysis, ventilation of sewers and drains, and other works, which for successful execution must be based on local facts and figures, the prospects of public health are anything but good. The precautions of Europeans against disease, and especially that of a contagious character, are always in danger from the interference of domestic servants who belong to the lower classes and whose ideas regarding hygiene have been little influenced by their relations with Europeans. In the preparation of food, the cleansing of vessels, the frequentation of sick persons, and in the wearing of second-hand clothing of deceased persons that ought to have been destroyed the native servant is a constant, although unconscious, source of risk, although he may all the time adhere strictly to his traditions of ceremonial purity. The Europeans, as a rule, are too careless of sanitary precautions and they often suffer in consequence of their neglect of the claims of the climate.

The wholesome influence of a good water-supply seems to have been generally impressed on the native mind, but every departure from his customary habits in other respects is met with dislike and, if it involves the least extra trouble, with hostility, which makes itself felt in municipal affairs.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 7451 births and 4634 deaths were registered during the week ending Jan. 2nd. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 19·4 to 17·0 per 1000, rose again last week to 22·3. In London the rate was 20·8 per 1000, while it averaged 23·3 in the thirty-two provincial towns. The lowest rates in these towns were 16·6 in Bradford, 16·8 in Croydon, 17·2 in Bristol, and 17·8 in Burnley; the highest rates were 29·6 in Birkenhead, 31·2 in Norwich, 31·4 in Cardiff, and 31·8 in Plymouth. The 4634 deaths included 436 which were referred to the principal zymotic diseases, against 357 and 279 in the two preceding weeks; of these, 106 resulted from whooping-cough, 97 from measles, 93 from diphtheria, 53 from scarlet fever, 47 from diarrhœa, and 40 from "fever" (principally enteric). The lowest death-rates from these diseases were recorded in Norwich, Halifax, Sunderland, and Portsmouth; and the highest rates in Cardiff, Plymouth, Gateshead, and Nottingham. The greatest mortality from measles occurred in Cardiff, Bradford, Gateshead, Nottingham, and Plymouth; from scarlet fever in Oldham; from whooping-cough in Birkenhead, Huddersfield, Nottingham, and Swansea; from "fever" in Gateshead; and from diarrhœa in Blackburn. The 93 deaths from diphtheria included 49 in London, 8 in West Ham, 8 in Cardiff, 8 in Birmingham, 4 in Sheffield, and 3 in Liverpool. No fatal case of small-pox was registered in any of the thirty-three towns. There were 3 small-pox patients in the Metropolitan Asylum Hospitals on Saturday last, the 2nd inst., all of whom had been admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3707, against 3971, 3868, and 3763 on the three preceding Saturdays; 271 new cases were admitted during the week, against 353, 291, and 219 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 302 and 284 in the two preceding weeks, rose again to 348 last week, but were 254 below the corrected average. The causes of 88, or 1·9 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Manchester, Leeds, Newcastle-upon-Tyne, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the five preceding weeks from 20·3 to 22·1 per 1000, further rose to 22·4 during the week ending Jan. 2nd, and slightly exceeded the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·8 in Greenock and 19·5 in Aberdeen to 23·7 in Glasgow and 23·8 in Dundee. The 655 deaths in these towns included 60 which were referred to measles, 16 to diarrhœa, 15 to whooping-cough, 5 to scarlet fever, 4 to diphtheria, and 3 to "fever." In all, 103 deaths resulted from these principal zymotic diseases, against 95 and 106 in the two preceding weeks. These 103 deaths were equal to an annual rate of 3·5 per 1000, which was 1·2 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 37, 54, and 48 in the three preceding weeks, rose again to 60 last week, of which 44 occurred in Glasgow, 9 in Aberdeen, and 4 in Paisley. The deaths referred to whooping-cough, which had been 7 and 26 in the two preceding weeks, declined to 15 last week, and included 12 in Glasgow. The 5 fatal cases of scarlet fever showed a decline of 3 from the number in the preceding week, and included 2 in Glasgow. The deaths from diphtheria, which had been 7 and 4 in the two preceding weeks, were again 4 last week, of which 2 occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 121 and 152 in the two preceding weeks, were 151 last week, and slightly exceeded the number in the corresponding period of last year. The causes of 50, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·3 and 26·5 per 1000 in the two preceding weeks, rose again to 44·1 during the week ending Jan. 2nd. During the fourteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 27·6 per 1000, the rate during the same period being 18·1 in London and 17·8 in Edinburgh. The 296 deaths registered in Dublin during the week under notice considerably exceeded the number in the preceding week, and included 36 which were referred to the principal zymotic diseases, against 21 in each of the two preceding weeks; of these, 23 resulted from whooping-cough, 5 from measles, 4 from diarrhœa, 3 from "fever," 1 from scarlet fever, and not one either from small-pox or diphtheria. These 36 deaths were equal to an annual rate of 5·4 per 1000, the zymotic death-rate during the same period being 1·8 in London and 2·1 in Edinburgh. The fatal cases of whooping-cough, which had increased from 4 to 15 in the three preceding weeks, further rose to 23 last week, a considerably higher number than in any preceding week during the past ten years. The 5 deaths referred to measles exceeded the number recorded in any week since February, 1894, while the mortality from scarlet fever showed a further decline from that recorded in recent weeks. The 296 deaths in Dublin last week included 75 of infants under one year of age and 62 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded those registered in the preceding week. Twelve inquest cases and 9 deaths from violence were recorded; and 78, or more than a fourth, of the deaths occurred in public institutions. The causes of 23, or nearly 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR-GENERAL W. NASH took over the appointment of Principal Medical Officer, Royal Victoria Hospital, Netley, from Brigade-Surgeon-Lieutenant-Colonel Fairland on the 1st inst. Surgeon-Captain R. E. Kelly is posted to Woolwich for duty, and Surgeon-Major N. Leader has assumed medical charge of the Station Hospital, Cardiff. Surgeon-Colonel R. P. Ferguson has joined at Woolwich for duty.

Surgeon-Lieutenant Howell has been placed under orders for service in India. Surgeon-Lieutenant-Colonel Henry Haldane Stokes to be Brigade-Surgeon-Lieutenant-Colonel,

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vice H. T. Brown. Surgeon-Lieutenant-Colonel Reginald William Mapleton to be Brigade-Surgeon-Lieutenant-Colonel, vice J. P. Rooney, promoted. Surgeon-Lieutenant J. A. Murison is placed on temporary half-pay on account of ill-health.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major-General James Cleghorn has proceeded from Calcutta to Bombay in order to make a special report for the Indian Government upon the plague.

Surgeon-Captain G. B. Stainstreet, A.M.S., to be Personal Assistant to the Principal Medical Officer, Punjab Command, vice Surgeon-Captain J. Thomson, A.M.S., transferred to the Home Establishment. The services of Surgeon-Captain D. G. Marshall (Bengal) are replaced at the disposal of the Military Department. Surgeon-Captain J. C. S. Vaughan, Deputy Sanitary Commissioner, Western Bengal Circle, is placed on special duty in connexion with anti-cholera inoculation. Surgeon-Lieutenant E. S. Peck, on special duty under the Medical Board, is appointed to act as Deputy Sanitary Commissioner, Western Bengal Circle, during the absence, on deputation, of Surgeon-Captain J. C. S. Vaughan, or until further orders.

The Queen has approved of the following promotions:—Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels: *Bengal Establishment:* Joseph O'Brien, Alexander Crombie, and William Reed Murphy, D.S.O. *Bombay Establishment:* Randolph Caldecott. Surgeon-Majors to be Surgeon-Lieutenant-Colonels: *Bengal Establishment:* James Moorhead, Charles William Owen, C.M.G., C.I.E., and Gilbert Saunders Griffiths. *Madras Establishment:* William Alexander Lee and Montague Stokes Eyre. *Bombay Establishment:* Osborne Henry Channer, Edward William Young, and Hugh McCalman. Surgeon-Captains to be Surgeon-Majors: John Tasman Waddell Leslie, David Prain, Arthur Thomas Bown, Upendra Nath Mukerji, and William Locking Price. The Queen has approved of the transfer of the under-mentioned officers to the Half-pay List:—Brigade-Surgeon-Lieutenant-Colonel Woodforde Finden (Bengal Establishment); Surgeon-Lieutenant-Colonel Maurice Henry Smith (Madras Establishment); and Surgeon-Lieutenant-Colonel John Macgregor (Bombay Establishment). The Queen has approved of the resignation of Surgeon-Captain Townsend Wharton Shaw (Bombay Establishment).—*London Gazette.*

NAVAL MEDICAL SERVICES.

The following appointments are announced:—Fleet-Surgeon John Dudley to Yarmouth Hospital. Staff Surgeons: John D. Henwood to the *Empress of India;* Samuel W. Johnson to the *Devastation;* and Bassett C. E. P. Gunn to the *Flora*, for duty on the way home. Surgeons: Edward T. P. Eames to the *Karakatta;* Robert F. Bowie to the *Flora*, for duty on passage, and afterwards to the *Tauranga;* Arthur W. B. Livesay to the *Blenheim;* William Belt to the *Britannia;* Richard F. Bato to the *Halcyon;* and Edward Sutton to the *Wildfire.*

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant H. P. Job, 4th Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment), to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Cinque Ports (Eastern Division, Royal Artillery): Edward Charles McMurrogh Murphy, gent., to be Surgeon-Lieutenant. 2nd Cinque Ports (Eastern Division, Royal Artillery): Surgeon-Lieutenant C. Wiggins resigns his commission. *Rifle:* 1st Volunteer Battalion the Bedfordshire Regiment: John Wardle Bone to be Surgeon-Lieutenant. 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment: Surgeon-Major F. M. Beckett resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement. 1st Volunteer Battalion the East Yorkshire Regiment: Surgeon-Lieutenant-Colonel H. Thompson resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement. 2nd Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant William Frederick Brook is appointed Second Lieutenant. 1st Volunteer Battalion the King's (Shropshire Light Infantry): Francis Henry Thompson, gent., to be Surgeon-Lieutenant. 3rd Middlesex: Surgeon-Major F. Orton to be Surgeon-Lieutenant-Colonel. 2nd Volunteer Battalion the Prince of Wales's (North Staffordshire Regiment): Surgeon-Major W. G. Lowe to be Surgeon-Lieutenant-Colonel; and Surgeon-Captain H. J. Fausset to be Surgeon-Major. 1st (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders): John Nairn Marshall to be Surgeon-Lieutenant.

A FRENCH CRITICISM OF THE LATE ASHANTI WAR.

Under the rubric "Revue des Guerres" Surgeon-Major of the First Class P. Grivet fills twenty pages of the *Archives de Médecine et de Pharmacie Militaires* for December with an extremely appreciative and accurate account of the second English expedition against the Ashantis. His opening sentence is to the following effect:—"After an interval of twenty years England has just renewed—in the same theatre and with the same success—the experiment of that 'doctor's war,' whereof the brilliant sanitary results, vulgarised by Inspector-General L. Colin, are so often quoted. The military and political results of that rapid campaign are already well known." With the exception of the French Gaboon, continues our friendly critic, quoting Gerville-Réache, there is no more insalubrious portion of the black continent than that which was traversed by the expedition, but thanks to the admirable management anticipative as well as current, everything went off without the slightest hitch. Surgeon-Major Grivet's commendation is doubtless as just as it is generous, for it is likewise clear that when occasion arises he is capable of apportioning blame discriminately. With reference to the serge clothing, for instance, he describes the quality as indifferent and the construction as unsuitable. The stuff wore out at the elbows and knees with disgraceful rapidity, while the stiffening that had been added to the collars and cuffs caused needless irritation of the neck and wrists. The helmets, too, were far from perfect, as they failed to protect the ears and temples. The Pasteur-Chamberland filters were by no means a success. The tripods they rested on sank into the ground when the receptacles were full, and the bougies were so fragile that, even with the greatest care, they were frequently broken in cleaning. The exhaustive way in which all the details of the expedition had been worked out beforehand seems to have somewhat surprised the French critic. Amongst other things he highly extols the tin packing cases, which were hermetically constructed in two sizes to hold 45 lb. and 60 lb. respectively. Having been carefully moulded to fit the backs and shoulders of the native carriers, they could be transported with the utmost facility. The Maconachie ration, which was frequently issued and highly esteemed, likewise comes in for special mention. In conclusion Surgeon-Major Grivet expresses his surprise that a complete history of these successful operations has not as yet emanated from our army medical headquarters. It is certainly a subject for regret that the medical history of the late Ashanti expedition has not so far seen the light, but if we consider the extremely exiguous clerical staff at the disposal of the Director-General, the wonder is that reports of this description, when at length they do appear, should be so admirably compiled and edited.

DEATHS IN THE SERVICES.

Surgeon-Lieutenant-Colonel Alexander McGregor, I.M.S. (retired), recently from the effects of disease originally contracted in India. He entered the Indian Medical Service in 1872 as assistant surgeon, was promoted Surgeon-Major in 1884, and Surgeon-Lieutenant-Colonel in 1892. He served with the Punjab Frontier Force in medical charge of the 4th Punjab Cavalry. He was subsequently in medical charge of the following regiments:—5th Bengal Cavalry, at Bareilly; 2nd Goorkhas, at Dehra Doon; and the 8th Bengal Cavalry, at Nowgong. On the occurrence of the Black Mountain expedition he was selected for the medical charge of the Native Field Hospital, and at the termination of the campaign was mentioned in despatches and received the medal awarded for the expedition.

ENTERIC FEVER AT QUETTA.

We regret to learn that there has been a recrudescence of enteric fever among the European troops stationed at Quetta, our strategic post situated at an altitude of over 5000 ft. above the sea level near the entrance to the Bolan Pass in Beloochistan. The outbreak appears to be strictly confined to the garrison, not one case having occurred outside the fortifications. The total mortality from typhoid fever up to November amounted to twenty-three, distributed as follows: Ten deaths in the Lancashire Fusiliers, seven in the Border Regiment, and six, including one officer, in the Royal

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Artillery. At the time of the latest report eight fresh cases of enteric fever had been admitted to the Quetta Hospital.

ARMY BOOTS.

"Marcellus," in his Military Notes in a Worcester contemporary this week, says: "The Mayor of Droitwich, Mr. H. Shirley Jones, has offered a pair of prize army boots to each of the two best recruits of the Droitwich company of volunteers." A medical officer of the battalion describes the boots to our contemporary, the *Droitwich Guardian*, in enthusiastic terms. There is not a point in military equipment of more importance to the soldier than his boots, and if Mr. H. Shirley Jones (who is a member of the medical profession), while encouraging the shooting of the Droitwich volunteers, can give the War Office authorities an improved pattern of boot he will do well.

NEW YEAR HONOURS FOR THE SERVICES.

Among the names in the list of New Year Honours will be noticed those of the Hon. William Raymond Kynsey, C.M.G., who received the honour of knighthood, and of Deputy-Surgeon Charles Benjamin Mosse, who has been made a Companion of the Order of St. Michael and St. George. The Hon. Sir William Raymond Kynsey is a retired Surgeon-Captain in the Army, a member of the Legislative Council of Ceylon, and Inspector-General of Hospitals and Asylums in that island. Deputy-Surgeon-General Charles Benjamin Mosse, C.B., C.M.G., is the superintending medical officer of Jamaica.

THE "ADMIRALTY AND HORSE GUARDS GAZETTE."

Our contemporary the *Admiralty and Horse Guards Gazette* announces that its first number for the New Year has been reduced in price to 3*d*., while the size, form, and scope of the paper remain as hitherto. In the new number there is an interesting leading article in reply to a letter from Mr. Maxim, in which he defends himself against a charge of egotism in connexion with his recent lecture on "The Automatic System of Firearms, its History and Development."

MOVEMENTS OF TROOPS.

Notification has been received intimating the departure of the transport *Britannia* from Bombay and the transport *Cephalonia* from China and Straits Settlements with the under-mentioned invalids for Netley: *Britannia*, 145; *Cephalonia*—from China 33, and from Straits Settlements 12, making a total of 45.

Correspondence.

"Audi alteram partem."

A QUESTION OF COPYRIGHT AND A QUESTION OF COURTESY.

To the Editors of THE LANCET.

SIRS,—I would be pleased to have an expression through you from the members of the medical profession as to the relations of the lay publishing firms of medical journals and the profession. The request is suggested by the fact that Messrs. Wm. Wood and Co. of New York refuse to permit the editors of "The American Year-book of Medicine and Surgery" to use in their abstracts of medical progress articles and illustrations first printed in the *Medical Record* and the *American Journal of Obstetrics*. This decision seems to me to be wrong for the following reasons:—

1. It prevents the dissemination of medical knowledge. The "Year-book" condenses, systematises, and criticises the year's medical work in a shorter space and more permanent manner than the journals and has thousands of readers no single journal can claim or hope to reach. Every physician writes and publishes articles in order that every member of the profession may, if possible, learn of his work and that science and progress may thus be furthered and humanity benefited. To interfere with such dissemination of our literature in reputable publications is, I think, discourteous and unjust to the profession and an injury to medical science.

2. This injustice and injury to medicine become all the more striking when physicians do not receive a cent of pay for contributions, from the publication of which the lay-publisher is supposed to make considerable financial profit.

3. No other publishers in the world, not even those who pay authors for their contributions, have in the least objected to our reproduction of quotations, abstracts, and illustrations from their journals.

Does the medical profession wish to limit the dissemination of contributions to medical science by such an exclusion of them on the part of publishers from reputable publications? *Is this literature the property of the author and of the profession or not?* Does your gift of it to a journal make it the private property of the publishers of that journal? Is it not rather a loan for temporary use only? Will you not hereafter demand that there be printed with your article a statement that the right of abstracting the text or reproducing illustrations is guaranteed?

I am, Sirs, sincerely yours,
GEO. M. GOULD.

South Seventeenth-street, Philadelphia, Pa., Dec., 1896.

*** As far as British copyright is concerned, Dr. Gould's letter confuses questions of courtesy with questions of law. Unless author and editor or publisher or proprietor or any necessary combination of them contract themselves out of its operation their mutual relations are definitely regulated by law. The literary property upon publication becomes so vested that the author cannot republish or sanction re-issue of the work without the proprietor's permission, nor can the proprietor do so without the author's permission. By courtesy on each side or by special business arrangement all proper facilities for re-issue are usually given.—ED. L.

"THE TRAINING OF NURSES IN RELATION TO REGISTRATION."

To the Editors of THE LANCET.

SIRS,—I note in THE LANCET of Jan. 2nd that, in light of the facts placed before you by Dr. Outterson Wood, you reverse the verdict previously given in favour of those who are opposed to the admission of certificated asylum attendants to the Royal British Nurses' Association. I trust you will permit me, with your usual impartiality, to criticise the facts in question and Dr. Wood's method of handling them. In stating that the feeling of anxiety with regard to his scheme is limited to a small minority Dr. Wood takes it for granted that his opponents are those, and those alone, who have in the past disapproved of various matters in connexion with the management of the association. This is not so. I myself have been seldom in agreement with the dissatisfied members, particularly as regards their methods of expressing dissatisfaction, and there are many members who have hitherto been thick and thin supporters of the managers of the association who feel that in the matter under discussion they must reluctantly rank themselves on the other side. The reason is not far to seek. The question at issue is not one of domestic management, but involves a reversal of the fundamental policy of the association. It is a question, moreover, which the general nurse has little difficulty in grasping, since it appeals directly to her sense of self-preservation. It is well known that any woman who pleases to do so can at present wear a uniform and call herself a sick nurse. Indeed, incompletely trained women are competing with fully-trained nurses to an extent which is only realised by those having business in the byways of nursing work. In these circumstances, and when competition was even less acute than at present, the Royal British Nurses' Association was formed as a protection both for the public and the general nurse. The very purpose of its existence would therefore be destroyed by admitting incompletely trained nurses to its register. The principle is bad, and, consequently, it is unnecessary to withhold criticism until "the details have been discussed by the executive committee."

It is necessary to emphasise the fact that arguments in favour of the scheme which deal with the thoroughness of asylum training are immaterial, since such training, however thorough, must be incomplete. Nevertheless, in order to prevent the continued reiteration of the irrelevant argument that the certificate of the Medico-Psychological Association "can only be procured after a rigid curriculum" and "stringent examinations inferior to no examinations for hospital trained nurses, nay, vastly superior to many," I venture to quote the following significant paragraph from a severely impartial article appearing in the current number of

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the *Hospital*: "After a study of the report of the committee appointed to consider the question (i.e., asylum training), and with some knowledge of the working of an asylum, we are reluctantly forced to believe that while some of the men and women holding these certificates are perfectly well equipped for their work there must be many who have little practical acquaintance with some of the most important and every-day duties of a nurse. In these cases the certificates can have little more value than the St. John's first-aid and nursing certificates."

"Properly trained and qualified mental nurses" would no doubt be benefited by association and registration. Let them, then, organise themselves. Amalgamation with general nurses would be of doubtful value to them as regards their special work, while it would do incalculable harm by destroying the distinctive position at present conferred by the Royal British Nurses' Association on its members. It is true that certain precautions are suggested to prevent confusion, but everyone having a practical knowledge of the disadvantages under which the general nurse already works must be aware that such theoretical distinctions would prove ineffective. What this confusion between incompletely and fully trained nurses means to the medical profession and the public one has only to look round to realise.

I am, Sirs, yours faithfully,

West Ham, Jan. 2nd, 1897. JOHN BIERNACKI.

VACCINATION OFFICERS AND THE PROPOSED AMENDMENT OF THE VACCINATION LAW.

To the Editors of THE LANCET.

SIRS,—I think it may interest a majority of your readers and be of advantage to many who are starting in life to relate the experience of a lifetime in the Poor-law service. After serving as deputy (being in partnership with a Poor-law surgeon in the country) for three years, I was appointed to a newly-formed district, which I worked for nine months, when the office of resident medical officer to the Birmingham Workhouse Infirmary became vacant, to which I was appointed, there being seventy-two candidates. For upwards of eight years I performed all the duties solely, which were satisfactorily done, as proved by the Local Government Blue-book and testimonials received from the board of guardians and Poor-law inspectors. The late Dr. Seaton of the Local Government Board in the year 1868 recommended to the guardians of Birmingham, and the Local Government Board adopted the recommendation, that a specialist for vaccination be appointed for the whole of the parish, devoting all his time to the duties and not to accept any other engagement. I was induced by the representations made to me of the emoluments (which proved fallacious) and the permanency of the appointment if after the first twelve months the duties were satisfactorily performed to undertake the office. I have now for twenty-eight years fulfilled the duties without any other engagements, except being a licensed teacher of vaccination appointed by the Privy Council and a supplier of vaccine to the National Vaccine Establishment, making nearly forty years' consecutive service. I am approaching the time when failure of accuracy of nerve touch and eye-sight may occur, and am now informed that although the vaccination officers who have been appointed to register the certificates issued by me, and paid by fees, are eligible for superannuation as Poor-law officials, I, the medical officer, for some reason am excluded and thus debarred from receiving a retiring pension under the Poor-law Superannuation Act. Therefore, I presume I must continue against conscience to perform duties of very grave responsibility or fail to meet the requirements of a family by being kicked out, all fame as a medical man having been knocked out by the prolonged sitting of the Royal Commission and the prejudice aroused thereby.

I am, Sirs, your obedient servant,

EDMUND ROBINSON, M.D. St. And., M.R.C.S. Eng., L.S.A.

Birmingham, January, 1897.

"ALLEGED ARSENICAL POISONING."

To the Editors of THE LANCET.

SIRS,—I am much indebted to Dr. Stevenson for his courteous reply to my communication and regret that I cannot accept his suggestion that my letter was written under a misapprehension. I carefully guarded myself by saying that I had no personal knowledge of the case and that my remarks were founded solely on the report which appeared in THE LANCET. Dr. Stevenson thinks that my criticisms must fall to the ground, but, on the contrary, they are materially strengthened by his statement that the fabric contained approximately only $\frac{1}{1000}$th of arsenic per square yard. The facts are perfectly simple. A specimen of linette was sent to Mr. Bernard Dyer, who found that it contained $\frac{1}{160}$th of a grain of arsenic in the square foot, or approximately $\frac{1}{20}$th of a grain in the square yard. The same linette was sent to Dr. Stevenson and Mr. W. Thomson, and they found only $\frac{1}{1000}$th of a grain in the square yard. A statement such as this does not require criticism, but it would be all the better for a little explanation. Then we are told that Dr. Stevenson cannot detect less than $\frac{1}{200}$th of a grain of arsenic, but Dr. Luff can very readily detect $\frac{1}{5000}$th of a grain, and finds that even $\frac{1}{10000}$th of a grain produces a distinct stain. Arsenic is by no means a rare drug, and I was under the impression that its recognition, even in the most minute quantities, presented exceptionally few difficulties. Most of us have been in the habit of availing ourselves from time to time of the services of our chemical colleagues in the belief that their methods were capable of a very considerable degree of accuracy. If, however, they can get no nearer a definite result than the difference between $\frac{1}{20}$th of a grain and $\frac{1}{100}$th of a grain, or between $\frac{1}{200}$th of a grain and $\frac{1}{500}$th of a grain, I am afraid that a severe blow will be given to our confidence in the value of expert testimony. This divergence of opinion must be capable of some explanation and cannot present such difficulties as to baffle the acumen of the distinguished authorities whom I have named.

I am, Sirs, yours faithfully,

Welbeck-street, W., Jan. 4th, 1897. WILLIAM MURRELL.

"INGUINAL ORCHECTOMY."

To the Editors of THE LANCET.

SIRS,—I am indebted to the letter of Dr. Zum Busch which appears in your current issue, and to a courteous private letter from Mr. Harold J. Stiles, the translator of Kocher's "Operative Surgery" (Edinburgh, 1895), for the information that the inguinal method of orchectomy is not a new one, but was described by Kocher some years ago. I am thus placed in the unpleasant position of having unwittingly claimed as my own what belongs to another. Professor Kocher describes his incision as follows: "A transverse incision is carried downwards and inwards over the inguinal canal a finger's breadth above and parallel to the inner half of Poupart's ligament." It will be seen that this incision does not differ essentially from the one described in my paper—"An incision of from one inch to one and and a half inches long, and slightly curved with its concavity looking downwards and outwards, is made over the external abdominal ring in the line of the spermatic cord." I trust that my paper will not be valueless if it directs increased attention to the value of Kocher's method. Mr. Stiles informs me that since he began to use it he has had no hesitation is excising tuberculous testicles in children attending his out-patient department, without admitting them to the wards at all.

I am, Sirs, yours faithfully,

Guy's Hospital, S.E., Dec. 30th, 1896. W. S. HANDLEY.

THE ISOLATION OF CASES OF TYPHUS FEVER.

To the Editors of THE LANCET.

SIRS,—Am I justified in sending typhoid fever patients to a hospital where typhus fever cases are treated in the same wards? An immediate answer will confer a favour on

Yours faithfully,

Dec. 30th, 1896. A SUBSCRIBER.

*** The propriety of sending cases of enteric fever into a ward in which typhus fever was also being treated would be regulated by special circumstances. Speaking generally, it is no doubt always wiser to treat typhus fever in a ward by itself if the means for doing so are available. There should, however, be but little risk in placing the patient in a

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ward with typhus fever cases, provided (1) that the typhus fever cases represented a relatively small proportion of those under treatment; (2) that the ward was not overcrowded—i.e., possessing a minimum allowance of 144 square feet of floor space per bed, together with ample ventilation; and (3) that a reasonable amount of care was exercised over the movements of the patients when convalescent. Experience shows that if the foregoing points be insisted upon there is but small chance of harm resulting.—ED. L.

"THE NEW SYDENHAM SOCIETY'S MEDICAL LEXICON."

To the Editors of THE LANCET.

SIRS,—May I suggest the cause of the delay in bringing out the Lexicon of the New Sydenham Society? Is it because the work is in the hands of a general practitioner who has a very large and tedious practice to conduct?

I am, Sirs, yours faithfully,

Jan. 5th, 1897. M.R.C.S. Eng.

"PRIVATE HOSPITALS *v.* MEDICAL PRACTICE."

To the Editors of THE LANCET.

SIRS,—In your annotation in THE LANCET of Jan. 2nd you write that it is suggested in the prospectus of this institution that "long acquaintance on the one side and intimate technical knowledge on the other are no longer needed to bind together the patient and practitioner, nor, indeed, is any personal bond of value." I challenge you to quote a single sentence, or even a word, in the prospectus suggesting anything of the kind. Massage and electricity undoubtedly "form part," as you write, "of the well-worn armament of medical skill," and, that being so, the greater the necessity that masseurs, masseuses, and electricians should be taught their "technical knowledge" with completeness and thoroughness and by a competent teacher. That, as a rule, they have not been so taught is recognised by all practitioners who have had experience in applying these methods of treatment as well as in prescribing them (*and the two are very different*), and they alone can form an adequate idea how the most explicit directions are frequently misunderstood or carried out incorrectly or imperfectly, and what a comfort it is to know where to obtain experienced and skilled assistance. To provide such assistance and to thoroughly train masseurs and masseuses is the chief object of this institution.

I am, Sirs, yours faithfully,

THE GENERAL DIRECTOR.

The London Galvanic and Massage Hospital,
Praed-street, W., Jan. 2nd, 1897.

*** Clearly this place should not be called a hospital, but a training institution for masseurs.—ED. L.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

V.—MANCHESTER (*continued*).[1]

House-to-House Inspection of Hospital Patients.—The Provident Dispensaries and the Prevention of Hospital Abuse.—Dissatisfaction among General Practitioners.

THE five principal hospitals of Manchester differ from the other hospitals I have visited in so far as they have attempted to establish a wage-limit. It is true that many general practitioners complain bitterly that this principle is very inefficiently applied. Some even go so far as to say that the measures taken do more harm than good, for they only serve to render the abuses that exist less obvious. Nevertheless, whether successful or not, I cannot help thinking that these hospitals deserve some credit for having at least attempted to deal with this question. Naturally the most important among them is the Manchester Royal Infirmary. According to the last statistics published there were in 1895 in all 4518 in-patients, 35,569 out-patients, and 1118 home patients. At the convalescent homes of Monsall and Cheadle there were 4375 patients, making a grand total of 45,580 patients, as compared with 43,458 in the year 1894. Out of this number enquiries were made into the financial circumstances of 15,931 and it was found that 584 were not entitled to claim medical relief from the hospital. These figures are given as a proof "that every effort is made to prevent an abuse of the charity."

On inquiring into the details I found that with regard to accidents the prevention of abuse depended upon the perspicacity of the nurse and the surgeon. If the patient seemed in good circumstances his name was marked with a cross and an application would be made to him for a subscription. If the patient is strong enough when his wound has been dressed to go away, he is, if apparently in good circumstances, told not to return to the hospital, but to see for further advice a private medical man. Thus it is maintained at the hospital that even in the case of accidents abuse can only arise for the first emergency, the first dressing, and that after this first care has been given then the patient is sent away or asked to subscribe. The weakness of this arrangement is obvious, for the surgeon and the nurse are not competent to detect all cases of abuse, and even where the well-to-do patient does subscribe to the hospital this is of no benefit to the medical profession. The precautions are more effective and better organised for dealing with ordinary out-patients. The latter have first to apply at an inquiry office situated close to the entrance of the hospital. Here a clerk notes down the applicant's name, age, social state, whether married or not, the number of his family, the earnings of the whole family, and his individual earnings. If he is an adult and single, but living with his family, then the circumstances of the family must be taken into consideration. After all this has been duly noted down the applicant receives an out-patient's card, which bears a number, and he is directed to the medical or surgical side and receives advice and medicine. Twice a week the list of new patients is forwarded to the Manchester Charity Organisation Society, who send their officers to inquire at the patient's home and verify the statements given as to income, &c. Should these statements prove incorrect the out-patient's card is withdrawn, marked, and sent to the hospital. If the patient, nevertheless, returns to the hospital then he must explain why he has come without a card and why he considers himself entitled to relief though the card has been withdrawn. It is then for the hospital authorities to decide whether they will make an exception in his favour and give him back his card. Should the patient refuse to give up his card to the inspector who calls upon him at his own home, the inspector writes and informs the hospital of the fact, and the medical officer's case-book which corresponds with the number on the patient's card is withdrawn from the shelf. Thus, when the patient comes and presents his card it is found that his book is missing, and this has the same meaning as if he had no card. To gain admission as an out-patient a recommendation from a subscriber is of no use, it secures no extra advantage, and at best it is but a matter of form. In-patients, however, must get a recommendation from a subscriber of at least three guineas. Twenty-five per cent. of the in-patients come from the out-patients' department, 20 per cent. come with recommendations from subscribers, and 55 per cent. are accidents, urgent cases, or re-admissions. With regard to the latter some inquiry is made at the bedside as to their means and circumstances. Then the patient, if not very poor, is asked to contribute towards his maintenance. The contributions given by the patients vary from 2*s.* to two guineas per week. Last year they amounted in all to £880.

Seeing that the work of inspection is entrusted to the Charity Organisation Society it was necessary to inquire into the detail of the operations of this association. At the very onset there arises a complication. This is not merely a Charity Organisation Society, but it is the District Provident and Charity Organisation Society of Manchester and Salford; that is to say, the work of preventing the abuse of charity is combined with the work of organising a huge provident dispensary. The theory originally propounded was at least ingenious and sounded very fair. The sick were to be divided into four categories. Those who possessed absolutely no financial resources were to be referred to the Poor-law

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *continued*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *continued*) Dec. 12th, 1896, Liverpool; and (5) Jan. 2nd, 1897, Manchester.

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authorities. The second category consisted of very poor persons and were sent to the hospitals. The third category were persons who, though poor, yet were able to pay a penny per week, and they were made to join the provident dispensary. If they were ill and had not joined the provident dispensary they were called upon to pay an entrance fee of five shillings and then only were they entitled to immediate medical attendance. Finally, the fourth category consisted of those who, on inquiry, were considered able to pay for a private medical man. This so-called upwards wage scheme was, however, ultimately abandoned, the excuse given being that it was too complicated. It is now thought that medical interests are sufficiently guaranteed in the Provident Dispensary by the fact that the medical officers are allowed to sit on the Board of Management. This, however, is quite another question.

To return, therefore, to the hospital patients, I found that the Charity Organisation Society do the work of inspection for the five leading hospitals of Manchester. Twice a week they receive a list of all the new patients that have applied at these hospitals and at whose homes it is desired inquiries should be made. These lists comprise annually from 50,000 to 60,000 names. The actual number of cases inspected last year was 55,000. Out of this number 21,549 cases were from the Royal Infirmary. The fact is pointed out that the concentration of the work of inspection into one hand greatly facilitates its execution. No one hospital could afford to keep a sufficiently large staff of inspectors, nor could one or two inspectors ever cover the ground in so large a place as Manchester and Salford. The wonder is how the work can be done by the five inspectors who are actually engaged upon it. Each inspector inspects simultaneously for all the five hospitals, and he only inspects in his own district, where he lives and knows every house. He is well acquainted with the rate of wages in the principal trades, mills, &c. It suffices for him to ascertain where a man works and whether he works full time to know exactly what he earns. As this method of inspection was started some twenty-one years ago the inspectors are wonderfully experienced in their duty and the task is comparatively easy, for it is only necessary to find out what is the patient's income at the time of the visit. This may often be ascertained in a few minutes, whereas if it was a case of financial charitable aid it might require half a day or more, because it would then be a matter of character, of past history, and of future prospects. For the hospitals the wages question alone need be answered.

Concerning the cost of this system of inspection the hospitals are supposed to pay half; and, on the grounds that it is a means of preventing the abuse of charity, the Charity Organisation Society pay the other half. Thus the Royal Infirmary has paid £69 for the investigation of 21,549 cases. This, it seemed to me, was a very inadequate payment; and, under the circumstances, I was not surprised to hear that the inspectors in their turn were also insufficiently paid. The senior inspector receives 30*s*. and the other inspectors 25*s*. a week. When we consider the delicate, difficult work they have to do, the tact and diplomacy they should display, and the possibilities of bribery to which they are exposed, it will be admitted that the salary given is very small. Besides, one visit does not always suffice. A patient may declare that he does not belong to a sick fund or to a trade union or that his union does not give him a sick allowance. In that case the inspector must go to the offices of the trade union or to some likely sick club to verify if this is true. Even the porters who stand at the corners of streets on the look-out for some casual employment have clubs of their own. During the last week of my stay in Manchester the inspectors visited 850 cases, or 141 in each of six days. This makes an average of twenty-eight visits per day per inspector—a wearisome and desponding work to perform. I was not surprised to hear that complaints had been made against these inspectors who it was thought by some persons treated the poor people on whom they called rather roughly. How far this complaint is justifiable or not I had no opportunity of ascertaining, but in any case it is impossible to expect all the virtues for 25*s*. a week.

The next great question is the wage limit itself. This I found to be very low—namely, 12*s*. a week for single men or women, 18*s*. for married couples, and 1*s*. 6*d*. extra for each child. Should the inspector ascertain that the patient's income is above these limits, then he must expostulate and urge that the patient is quite well enough off to pay 1*d*. a week and join the provident dispensary. Thus it will be seen that inspecting for the hospitals resolved itself into canvassing for the provident dispensary. Naturally medical men, especially those who were not attached to the dispensary staff, loudly complained, and the Royal Infirmary has now abolished the system. For this purpose it has raised the wage-limit to 15*s*. for single men or women, 21*s*. for married couples, and 1*s*. 6*d*. for each child. If this income is exceeded the inspector must withdraw the hospital card, but he must not suggest that the patient should join the provident dispensary. The inspector must not distribute circulars concerning his institution to the patients of the infirmary, but he may do so to the patients of all the other hospitals. This is undoubtedly apt to cause confusion. It was thought that the two institutions would work harmoniously together; that the provident dispensary would send to the hospitals cases for which a consultation was needed and keep away from the hospitals many of the trivial cases that encumber the out-patients' department. But in practice the provident dispensaries do not like to admit their failure to treat patients, and very generally send merely chronic and incurable cases. Or else the provident dispensary will recommend a patient to the hospital while he is paying his five shillings entrance fee in slow instalments and then take him under their charge. Sometimes, however, they admit members at once and without entrance fee.

The Royal Infirmary, by accepting as patients those who exceed the wage limit, but who contribute something towards their maintenance, naturally takes away from the Provident Dispensary many persons who otherwise would be members. The provident dispensary on its side, having no wage limit, takes in publicans, tradesmen, and others who could afford to pay a private practitioner. An amusing case was related to me of a woman who was surprised to find that her medical man called to give medical advice to her servant. On inquiry she discovered that he was one of the medical officers to the Provident Dispensary and that her servant was a member. Thereupon the woman in question also joined the Provident Dispensary and thus obtained the advice of her usual medical man, but instead of paying him 5*s*. a visit she paid 1*d*. a week, of which magnificent sum her medical adviser received half! A consulting physician also described to me how he applied at one of the offices of the Provident Dispensary, and though he wore a silk hat and frock coat, and certainly did not look poor, no objection whatsoever was raised and all the indications were given so that he might join. Another consultant told me he frequently received a guinea fee from a publican at Deansgate who at the same time was a member of the Provident Dispensary, where he went when troubled by smaller ailments. The poorer general practitioners complain bitterly that their private patients receive leaflets from the Provident Dispensary showing how much cheaper it would be to join and be attended by perhaps better-known medical men. In the face of these assertions it seemed to me a strange anomaly to find that, though the Provident Dispensary is accused of committing many abuses, this organisation should have been entrusted with the mission of preventing the abuse of hospitals. Many of the new medical men in Manchester commenced practice under the auspices of the Provident Dispensary; their object being to gain popularity and to lay the foundations of a private practice they were not likely to prevent abuses. It was in their interest to increase the number of members on their list, and thus abuses inevitably arose The hospitals, instead of going to this institution to help in the prevention of abuses, would act more consistently if they constituted a central hospital board and employed their own inspectors.

It has been suggested that in the same way there should be but one subscription list, and that instead of each hospital incurring very great expense in collecting money one single staff under a central board would suffice for all the hospitals. This, it is true, would destroy the special spirit that animates the patrons and subscribers of each hospital—the sort of fatherly interest they take in their favourite hospital—and thus perhaps lower the sum total of the subscriptions. Doubtless there is much truth in this objection; but whatever may be said with regard to the collection of subscriptions it is only by collective action that a method of inspection can be efficaciously and economically carried out. As it is, even with the 50,000 to 60,000 visits paid per annum by inspectors organised from one common centre there is a large class of patients who altogether escape control. The inspectors cannot possibly go beyond the limits of the

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boroughs of Manchester and Salford. If a patient comes from beyond the hospitals must trust to his statements. Some years ago an inspector was appointed to investigate these country cases, but the distances were enormous and the cost of travelling so great that it was impossible to visit a fair proportion of the cases. Then the hospital authorities wrote to the clergy, the registrar, and the relieving officers of these distant rural and urban districts to inquire concerning the financial position of patients who had come from their neighbourhood; but, as a rule, no answer was sent. This is all the more awkward as Manchester is the centre of the largest working population of the United Kingdom, and from all the surrounding manufacturing centres and towns patients come pouring in upon the Manchester special and general hospitals. It is always so easy to get a train to Manchester. On the other hand, the very fact that patients come from such distances as, for instance, Rochdale, Bolton, Derby, Windermere, &c., proves that they are not very poor. The railway fare often costs much more than the local practitioner's fee. At the Royal Infirmary, when the clerk, on questioning these patients who come from a distance, finds that they are not poor he makes them pay a 6*d*. or 1*s*. fee before allowing them to obtain advice. This, again, is very good for the hospital, but it is of no help to the medical profession. A patient who could pay a medical man is thus lost so far as the economic interests of the profession are concerned.

Such facts show how widespread an organisation is needed so that an effective control can be established. Not only is it necessary to have a perfect system of inspection within the town, but there should be some established authority in all outlying districts to whom application could be made by town hospitals for information concerning patients that come from these distant districts. Nothing of the sort exists at present and it could only be established by some very powerful organisation, such as a federation of hospital boards or a medical union which counted in its ranks the immense majority of the members of the medical profession. This end is far from attained at present; yet it must be acknowledged that the medical men of Manchester have made several notable efforts to organise the profession. Apart from the local branch of the British Medical Association special bodies have been constituted, such as the Medico-Ethical Association and the Medical Guild. Even the medical men employed by the provident dispensaries have formed themselves into an association which of late has shown signs of awakening. The Provident Dispensary has ten district dispensaries or branch establishments, more than 20,000 members, and employs thirty medical officers. One of these medical officers, Mr. G. H. Broadbent, has been most active in the denunciation of abuses. In the Ethical Section at the annual meeting of the British Medical Association, held at Carlisle (1896), Mr. Broadbent read a paper on the Manchester Provident Dispensaries, which he accused of sweating profits and creating a reserve fund of £1450 out of the labour of its medical officers. The dispensary also sapped the practice of general practitioners to the extent of thousands of pounds by accepting as members people who could well afford to pay ordinary medical fees. Mr. Broadbent related that two years after this provident dispensary had first been established on the upward wage system, which I have already explained, about seventeen medical men had joined. They soon found, however, that unsuitable persons were allowed to become members, so the medical officers decided to resign in a body. The Provident Dispensary thereupon imported two new medical officers and gave them a guarantee for a fixed income. With good management and the aid of these two medical officers the dispensary proved a success, grew, and has now branch establishments. Mr. Broadbent adds: "These provident dispensaries have not picked up those they were intended for. And why? Is it not likely that that mighty man, the collector, will prefer to go for his money to people who always have it ready, to houses that are clean rather than to those which are dirty, where payments are not made regularly? And will it not be more agreeable to the medical men to go to clean, respectable houses, even if they are robbing their fellow practitioners of their legitimate patients? Cases have been known where medical officers have paid the collector a commission for increasing the number of cases on their list."

Nevertheless, and as already remarked, the medical men in the service of this dispensary are awakening, for in the course of the year 1895 the Manchester and Salford Provident Dispensaries and Medical Officers' Association met and unanimously passed the following resolution:—

"That this meeting of the Association of the Medical Officers to the Manchester and Salford Provident Dispensaries protests in the most earnest manner against the methods of propagating the provident dispensary system by advertising and canvassing practised by some of the committees of the branch. Such methods are directly opposed to the ethics of the medical profession and are not calculated to promote the real welfare of the dispensaries, and if persisted in will make it impossible for any self-respecting medical officer to retain his connexion."

In the face of this resolution and of these denunciations I cannot but repeat that it does seem strange that the hospitals of Manchester should have called upon this very institution to help them to check abuses. Yet such is the fact, and it is fully set forth in the "Twenty-first Annual Report of the Manchester and Salford Provident Dispensaries Association" (1895). On page 12 this report states:—

"The payments from subscriptions, sick fees, and entrance fees of the members of the several dispensaries amounted during the year to £4422 9*s*. 9*d*., and the sum paid to the medical staff was £2612 15*s*. 11*d*., as compared with payments of £4383 17*s*. 10*d*. in 1894, when £2600 15*s*. 6*d*. was paid to the medical staff."

Then on the very next page appears the following statement:—

"The officers of the District Provident Society report that the investigations conducted by them into the circumstances of the applicants for charitable medical relief at the various hospitals in connexion with the association have been continued during the past year, the number of cases received for investigation being slightly in excess of those for 1894. The percentage of those found to be entitled to gratuitous medical treatment was 93·84, being out of the total number visited 2·02 less than in 1894. At the Royal Infirmary the percentages of those who were found to be able to subscribe to a provident dispensary have been as follows:—1891, 9 per cent.; 1892, 6 per cent.; 1893 5 per cent.; 1894, 3 per cent.; 1895, 4 per cent. At the Clinical Hospital the percentages have been as follows:—1891, 7 per cent.; 1892, 6 per cent.; 1893, 4 per cent.; 1894, 3 per cent.; 1895, 6 per cent. At the Children's Hospital the percentages have been as follows:—1891, 9 per cent.; 1892, 7 per cent.; 1893, 8 per cent.; 1894, 7 per cent.; 1895, 9 per cent. At the Ancoats Hospital the percentages have been as follows:—1891, 4 per cent.; 1892 and 1893, 3 per cent.; 1894, 2 per cent.; 1895, 6 per cent."

Finally, the report concludes by giving a table which shows "the percentages from year to year of those applicants to the medical charities coöperating with this association who were found, on investigation, to be ineligible for gratuitous medical relief, and who were in consequence referred to the Branch Provident Dispensaries." It was in 1875 that the system of inspection was first applied and then the proportion of ineligible cases found was truly startling, for it amounted to 42·32 per cent. of the applicants. The inspectors must have acted as a wholesome scare to the people who too freely availed themselves of medical charities, as the next year the proportion exceeding the wage limit fell to 24·50. In 1879 it further fell to 13·61 per cent. The following year the proportion rose to 14·76. Then, with some fluctuations, the percentage fell to 9·29 per cent. in 1887. After that it was always below 7 per cent., and this has continued up to the present time, excepting, however, the year 1891, when the proportion amounted to 7·49 per cent. From these figures it would appear that a very great reduction of unsuitable cases has been effected, but I found that many general practitioners challenged these figures. They pointed out that originally the wage limit was 10*s*.; then it was raised to 12*s*., and finally to 15*s*. What would be considered a proper case to-day was an improper case a few years ago. Also, the inquiry was declared to be perfunctory and of no real value. "It did more harm than good," exclaimed one general practitioner, for it conveyed the impression that precautions were employed. It was not possible that there should be so many persons in the town in receipt of such small wages. The inquiry was only a test of the patient's memory. The patient had only to repeat to the inspector the same details which he had given to the clerk of the hospital. If the applicant was able to tell the same lie twice running he secured admission as a hospital patient. Only recently one of his patients, a woman in receipt of an income of £50 a year and whose husband was earning 15*s*. a week, had been admitted into the infirmary. A warehouseman earning more than 21*s*. a week and a maidservant in the employ of a wealthy family had been quite recently accepted at the infirmary. A child had just concluded a month's treatment as an in-patient at the Children's Hospital, though her parents pay £22 a year rent and had re-furnished their house throughout at the very moment their child was in hospital. Such were some of the cases mentioned to me by different general practitioners so that I might realise that abuses still existed in spite of the inspections; they also objected to the inspectors because instead of telling the applicants who had means to call in

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a general practitioner they advised them to join the Provident Dispensary. Finally, it was suggested that the proper thing would be to hold, if it were only for one day, an independent inquiry. In spite of these criticisms I cannot but think that the authorities of the Manchester hospitals have done more to prevent abuses than those of any other town I have yet visited, nevertheless it will be seen how far from perfect are the methods they have employed. Abuses undoubtedly still exist and dissatisfaction is keenly prevalent.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Death of Alderman Clay.

ON the 14th of last month, at the special meeting of the trustees of the Manchester Royal Infirmary, Alderman Clay attacked the scheme for the rebuilding of the Royal Infirmary from the Corporation point of view with a vigour and warmth that testified to his own convictions on the matter. On the 16th he "caught a chill," pneumonia developed, and he died on the 24th ult. at the comparatively early age of fifty-six years. He was a man of great energy, much of which was devoted to municipal work. As chairman of the Improvement and Building Committee he did good service, indirectly at all events, in aid of sanitation, not more, perhaps, in the clearing and opening out of old thoroughfares and dealing with the lines of new streets than in seeing to the carrying-out of the "building by-laws," which, though cavilled at by a few, place salutary obstacles in the way of the jerry-builder. He looked at the infirmary question too exclusively from the corporation standpoint, the preservation for the city of an open space, while somewhat unmindful of the fact that it was the duty of the trustees to make the best of the property for the benefit of the patients. The alternative schemes propounded after the meeting showed, however, that he did not oppose simply for opposition's sake or from hostility to the infirmary board, but that he thought another solution of the question would be best in the interests of all. He was a power in the city council, and the large attendance at his funeral of men of all views, creeds, and parties showed how much he was respected and regretted.

"Home made Whisky."

At Darwen last week an ingenious hawker was charged with hawking and selling methylated spirits. He appeared to have been carrying on the business for more than four years. "In his rooms a quart bottle containing methylated spirits was found and also a kind of filter made of charcoal and brown paper, through which spirit diluted with water was passing. The effect was that the nauseous smell was removed." Some spirit already treated was also found. The prisoner said he had got the idea from a paper and "had carried on the business since he had lost his eyesight." His customers were chiefly women. One woman said she bought a pint of this whisky, as the prisoner called it. He told her it was for outward application, and was "good for rheumatism," but she and three other women drank it. Another said she had bought a pint of "home-made whisky" every week for the past six months. "And you are still alive?" asked the clerk. "We used to rub with it and sometimes we drank it." Another woman who had bought eight or nine pints of it had now ceased to do so "because it had made her ill." He told one man to whom he sold it that "the spirits were good for sciatica," from which he was suffering. He did not sin from want of knowledge, for he had been convicted of a similar offence at Bolton in 1893. "He now pleaded guilty, and was fined £25 and costs in each of two cases for selling and £1 and costs in two other cases for exposing the spirits. In default of payment he would be imprisoned for six months." It is not stated as to whether or not his profits enabled him to pay the fines.

Manchester Literary and Philosophical Society.

The above society is said to be the oldest, and is assuredly one of the most distinguished, of its kind. In its early days its title was appropriate and characteristic of its objects, but it is questionable whether it can claim to be so now. And, indeed, we may go back to the names of Joule and Dalton as indicating the fact that physical science has brought it more renown than literature and philosophy, while now more than ever is it given up to applied science. Manchester has grown into a huge city, and most of those who care to do so live beyond its confines. The character of its membership, therefore, has altered with the times. There are fewer literary and scientific amateurs, according to a document dealing with its own archives recently issued by the society, and "while the number of members professionally engaged in scientific pursuits, either as investigators or teachers, has increased, there is a considerably smaller number engaged in business who either possess a taste for scientific knowledge themselves or are desirous of encouraging others in its pursuit." This statement ignores literature and philosophy and everything but "science," and doubtless, as the *Manchester Guardian* says, "the present council would be rather surprised by the offer of papers on the Pleasures Arising from a Survey of Nature, on the Application of Natural History to Poetry, or even by those delightful illustrations of Sterne which were supplied by that keen critic, Dr. Ferriar." These changes are, no doubt, inevitable. Science is well represented, but literature and art have sought other abodes, while no one seems to know whither philosophy has fled.

Merchants and Adulterated Butter.

A firm of butter merchants was summoned the other day at the county police-court for "giving a false warranty relating to certain Irish butter," the prosecution being arrived at by "retrograde progression." First of all a retail dealer was summoned for selling butter containing an excess of water. He put in a warranty given by the defendant firm and the case was dismissed. The butter on analysis was found to contain 21·08 of added water. For the defence it was pleaded on behalf of the firm that the butter was purchased as pure, and unless every cask of butter sent to them was analysed it was quite impossible to discover if there had been adulteration. There is always some water in butter, and those engaged in the trade say that if there were none it would not be good, but it is difficult to arrive at what they consider the correct amount. The magistrate said it was clear that the butter contained 21·08 parts of water as stated, "whereas it should not have contained more than 17 or 18 per cent." He did not believe that the Manchester trade added water to the butter, but sold it as they received it. So the fraud, if it is a fraud, is put back a stage further to the farmer or the butter-factory. Mr. Yates imposed the minimum penalty of twenty shillings and costs.

Jan. 5th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Cardiff.

THE Cardiff Health Committee have been taking into consideration the necessity for increased accommodation at the sanatorium and the borough engineer has prepared plans and estimates for a new wing which will cost approximately £20,000. It is proposed to provide for two additional male wards and one paying patient's ward. A porter's lodge is also included, although some of the members considered this unnecessary. There have recently been three interruptions in the supply of the electric light at Cardiff. The first occurred on Nov. 27th owing to a mistake made by an engine-driver, but this was rectified in three minutes. The second was on Dec. 4th and was caused by a transformer burning up. The last occurrence was on Dec. 12th, when about 4 P.M. owing to a fire at the switchboard the electric light failed throughout the districts of Cardiff. In about a quarter of an hour the greater portion of the private consumers were supplied, but it was 11 P.M. before the remainder were provided.

Erith House Home for Invalid Ladies, Torquay.

At the forty-second annual meeting, held at Torquay on Dec. 18th, the annual report showed a deficit of £178 on the past year as against a profit of £27 on the previous year. The number of ladies visiting the home has of late years steadily decreased; during the past season only twenty ladies availed themselves of its privileges, as against thirty in the previous year. The chairman said that it would be necessary to seriously consider whether the home should be carried on. It was mentioned that the institution had been advertised in various papers, but that not a single lady had been admitted as the result. Dr. Hamilton Ramsay acknowledged a vote of

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thanks to the medical officer, and said that in spite of things looking dark he hoped they would avoid closing the institution. Erith House Home is doing an excellent work, and doubtless if its advantages were more widely known it would be more liberally supported.

Death of Mr. H. R. Hudson of Newport, Mon.

Mr. Henry Rochfort Hudson, L.R.C.P., L.R.C.S. Irel., of Newport, died in Ireland on Dec. 16th. Mr. Hudson was much esteemed in Newport, where he had been for over twenty years. He was public vaccinator for the Newport and St. Woolas District of the Newport Union and surgeon to several clubs. Mr. Hudson was a native of Arklow, county Wicklow; he had been in failing health for the past year, and last summer he became worse and went to Ireland. He was forty-eight years of age at the time of his death, and leaves a widow and six children, for whom great sympathy is felt.

Death of Mr. Thomas Browne Anstie, J.P., M.R.C.S. Eng., L.S.A.

Much regret is felt in Devizes at the death of Mr. T. B. Anstie, J.P., M.R.C.S. Eng., L.S.A., which occurred on Jan. 3rd. Mr. Anstie was one of the oldest inhabitants of the town and had been in practice in Devizes for over half a century, when he retired. He was a magistrate for the borough and honorary consulting surgeon to the Devizes Cottage Hospital. Mr. Anstie was educated at St. Thomas's Hospital and took the qualification of M.R.C.S. Eng. in 1841 and the L.S.A. in the following year.

Jan. 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary.

THE annual meeting of the subscribers to the Edinburgh Royal Infirmary was held on Monday last, the Lord Provost presiding. The annual report showed that the total number of in-patients treated during the year was 9478. Of these there were dismissed cured 3945, relieved 3482, and on other grounds 807. There died in the hospital 596. The medical and surgical cases were about equal in number. The average daily number of patients in hospital was 707, and the average time under treatment for each patient was 27·3 days. The number of deaths within forty-eight hours after admission was 150. In the out-patient department 28,110 patients had been attended to. The total ordinary receipts amounted to £30,682, which was a decrease of £403 compared with the previous year. Contributions and legacies under £100 amounted to £17,515. Regret was expressed that there had been a falling off in church collections, while contributions from employés in public works had increased. On fees from students there was a falling off of £180. The ordinary expenditure amounted to £39,282, being a decrease of £113 on that of the preceding year. The cost of maintenance was 1*s.* 6½*d.* more, and the medical expenditure 2*s.* 2¼*d.* less, per occupied bed. The cost for the year of each occupied bed was £55 11*s.* 2¾*d.*, which is 3*s.* 0¾*d.* above last year's rate. This rise was attributed to a higher contract price for butchers' meat and bread. The Lord Provost, in speaking to the report, pointed out the increase in the number of out-patients, and suggested that persons went to the infirmary for advice who ought to go to their private medical attendants. Dr. Batty Tuke raised the question of the site of the proposed new laundry and objected to its being built in Lauriston-lane. He also drew attention to the out-patient department and dwelt upon the need of increased accommodation. Miss Louisa Stevenson also spoke of the discomfort to which out-patients were exposed and held that it was of the utmost importance that a new out-patient department should be established. This led to considerable discussion and the matter was remitted to the committee of contributors. Five managers were re-elected and a second lady was also added to the board in the person of Mrs. Marcus Dodds, wife of an eminent theological professor in the Free Church College.

Annual Report of the University of Edinburgh.

During the past year the total number of matriculated students, including 188 women, was 2825. In the Faculty of Medicine there were 1421 students; of these 616 belonged to Scotland, 431 were from England and Wales, 91 from Ireland, 55 from India, 202 from British colonies, and 26 from foreign countries. The number of women attending extra-academical lectures with a view to graduation in medicine at the University was 68. The McEwan University Hall is likely to be completed and inaugurated during the coming spring. Reference is made in the report to various incidents in the history of the University during the past year, all of which have already been noticed in THE LANCET from time to time and need not now be repeated.

Dairy Prosecution in Dumfries.

An important decision in a dairy prosecution case was given in Dumfries last week. The charge was against a dairy farmer for employing in his dairy a woman who was "suffering from a dangerous infectious disorder—namely, infectious tonsillitis," and also three other women to milk, in whose families there were cases of a similar nature. The action was taken by the local sanitary authority presumably on the recommendation of their medical officer of health who was a leading witness in the case for the prosecution. Several local medical men and others appeared for the defence who seem to have taken up the position that the persons referred to were not suffering from an infectious disorder. The medical officer for Midlothian gave it as his opinion that tonsillitis, except where it existed as a symptom of scarlet fever, diphtheria, or typhoid fever, was not infectious. The sheriff dismissed the complaint and found the local authority liable in expenses.

Re-opening of Medical Classes in Edinburgh.

Most of the medical classes re-opened on Tuesday after the Christmas vacation, but it is needless to say that all the students have not yet returned to work.

University of Glasgow.

A statement showing the number of students in every one of the University faculties has just been published, together with the numbers of the previous seven years. It appears that, whereas in 1889 the number of students was 2101, in 1896 it had fallen to 1602, a diminution of 499. This decrease has been mainly amongst the arts students, the numbers in this faculty in 1889 being 996 and in 1896 571, and is, no doubt, due to the increased severity of the entrance examination and to the more severe conditions demanded of the student who desires his class attendance to count towards graduation. In medicine the numbers have fallen from 818 to 621; this is, in part, however, only an apparent decrease, as in 1889 students attending chemistry, natural history, and other medical classes, with a view to graduate in science, were counted in the faculty of medicine, whereas now they are placed in the newly-formed faculty of science. In so far as the decrease is real it appears to be due to the institution of the five years' curriculum and the increased stringency of the preliminary examination. It is generally allowed that this examination has been in certain respects too severe, and the student has now the option of taking it in two sections instead of being compelled to pass in all the subjects at a single sitting. The above figures do not include women students of whom during the present session there are 245.

Glasgow Maternity Hospital.

Mr. John Edgar, M.A., B Sc, M.B. Glasg., Professor of Midwifery in Anderson's College Medical School, has been appointed assistant physician to the hospital, in succession to Mr. R. Jardine, M.D. Edin., promoted to be physician.

Glasgow Eastern Medical Society.

At a recent meeting of the society Professor Gairdner paid an eloquent tribute to the memory of the late Dr. Mather, first president of the society, speaking of him as a sound, honest, and honourable practitioner, careful of every rule of medical honour, and a man of fine instincts and sympathies.

Christmas at the Glasgow Infirmaries.

The annual meeting of the nurses was held on Dec. 26th, when an address was delivered by Mr. Jas. Boyd, vice-chairman of the board of management, and a musical programme, under the direction of Mr. Allan Macbeth, Principal of the Athenæum College of Music, was submitted. Afterwards the gifts for the patients from the annual Christmas tree were distributed and the visitors had an opportunity of seeing the wards, which for the most part were brightly decorated. At the Royal Infirmary there was, as usual, a meeting on New Year's Day, addresses being delivered to the nurses by the Lord Provost and others. Dr. Peace, organist

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to the cathedral, together with members of his choir, gave a number of musical selections.

Glasgow Hospital Reports.

It is understood that a movement has been inaugurated with a view to collect and publish in an annual volume the most important results of clinical and pathological work at the various Glasgow hospitals. There is a general feeling in favour of the movement, and the promoters have received promises of sympathy and support from the leading physicians and surgeons. It is probable that an official statement will shortly be issued.

Aberdeen Royal Hospital for Sick Children.

The expenditure last year amounted to £2633 9*s.* 5½*d.*, 653 patients having been treated at an average daily cost of 2*s.* 3*d.* The new buildings for the accommodation of nurses (29) and servants (9) are expected to cost £3000, and the directors appeal to the generosity of the public of Aberdeen and districts for subscriptions, of which £1050 from six donors have already been intimated.

Hospital Sunday in Aberdeen.

On Sunday (Jan. 3rd) the church collections in Aberdeen for the benefit of Aberdeen Royal Infirmary amounted in the aggregate to £932 10*s.* 9*d.*, but several congregations have yet to send in a return.

Jan. 5th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Main Drainage of Dublin.

A REALLY serious effort to improve the sanitary condition of the city and to lower its death-rate is now being made by the Dublin Corporation. The main drainage works were commenced on Aug. 24th last. After prolonged delay caused by a building strike the first two contracts were undertaken by Messrs. H. and J. Martin. These cover the construction of the sewers and auxiliary works for intercepting the sewage from the river Liffey and from the smaller streams, the Toltga, Camac, and Poddle. Six gangs of men are now at work, four of these on the north quays, one at St. Michael's Hill, and one near the Kingsbridge Station. The works at present cover in the aggregate about a mile of ground, the average number of men employed being between 300 and 350. The cuttings along the quays are necessarily very deep, and many difficulties have already been encountered owing to leakage of water from the Liffey alongside. Every precaution to prevent serious interference with traffic is being taken, and at various positions, such as the southern end of Sackville-street, the sewers are being constructed in tunnels.

The Trial of the Maguires for Murder.

Two long and also strong letters have recently appeared in the Dublin daily papers in connexion with this case—one from the solicitor to the prisoners and the other from Dr. Thompson of Omagh, one of the witnesses for the defence. Mr. F. J. O'Connor reminds the public that there were two trials in which he acted for the prisoners, one at Omagh in July, and the other recently in Belfast. He then goes on to complain strongly of the expressions used at the latter trial by the Attorney-General in his opening address, in which he attributed vanity, pretension, and ignorance to the medical men—namely, Dr. Thompson of Omagh, Dr. Henry Bewley of Dublin, and Dr. Lorraine Smith of Belfast. Dr. Thompson in his letter bitterly resents the observation by the judge, Sir Peter O'Brien, to the jury that "he hoped that he (Dr. Thompson) was an honourable man and that he would be successful with his patients in the district to which he belonged." This remark seems certainly to have been, to say the least of it, uncalled for and, moreover, proved that the learned judge was not at all familiar with the north of Ireland, where Dr. Thompson has been for many years very well known and very highly esteemed.

The Funeral of the late Sir George Owens.

The funeral of the late Sir George Owens, M.D., J.P., which took place on Saturday morning, was very largely attended and testified to the high esteem in which the deceased was held by the citizens of Dublin as well as by the members of his own profession. The Lord Major, the high sheriff, Lord Ardilaun, Sir William Kaye, C.B., Sir Andrew Read, Sir Robert Forster, the Solicitor-General, the Dean of the Chapel Royal, Sir Frederick Falkiner, Sir Francis Brady, Sir William Porter, Bart., Sir Robert Sexton, D.L., &c., &c., were present, while among medical men there were the Presidents of the Royal Colleges of Physicians and Surgeons and the best-known members of the profession in Dublin.

The Sanitary State of Belfast.

At the Belfast police courts on Dec. 29th, the owner of property in Hopp's-court was summoned by the Belfast Corporation for having premises in a state injurious to health and unfit for habitation, and the magistrates made an order closing them. It is stated that there will be an appeal.

The New Infirmary for Omagh.

At a meeting of the executive committee, held on Dec. 30th (the Duke of Abercorn in the chair), it was reported that the contractor refused to take the contract on the original terms, whereupon it was decided to increase the contract by £234, which would raise it to a total of £8000, added to which the architect's fees and heating would bring the total cost of the Infirmary to £10,000. This would leave a deficit of £4000, which it is hoped that subscribers in the county of Tyrone will make up.

The Notification of Infectious Diseases.

The city corporation of Belfast at their first meeting this year adopted the Notification of Infectious Diseases Act, 1889, by 18 to 8 votes. At the same meeting it was announced that the annual death-rate, calculated on a population of 300,000, was 22 5 per 1000, the lowest for many years past. In the previous year it was 24·8, calculated on the same population. In his address, reviewing the events of the previous year, the Lord Mayor spoke of the desirability of granting a portion of the site of the present District Lunatic Asylum as a site for a general hospital, and he thought that the corporation might make a grant out of the gas profits under Section 59 of the Act of 1874, which says: "In any year in which the average price charged for gas shall not exceed 3*s.* 9*d.* per 1000 feet the surplus profits from the manufacture of gas may be applied by the corporation to public purposes." He thought there could be no more beneficent purpose to which to apply them.

Progress and Prosperity of Belfast.

Belfast has made great advances in the past year. The number of buildings for which plans were approved was 3118, as against 3011 in 1895; the number of streets constructed was eighty-five, as compared with forty-three in the previous year; and the valuation of the city has increased by over £53,000. The great shipping firm of Harland and Wolff, of which the Lord Mayor is a partner, has launched the largest amount of tonnage that has ever been produced by one firm in a year, the record including the largest vessel afloat. The five great Government dockyards of England have only produced 71,000 tons, against 81,000 tons by Harland and Wolff.

Untrained Midwives.

At an inquest held in Belfast on Dec. 21st in reference to the death of an infant a woman was examined who said that she was a housekeeper and practised as a midwife. She could read, but could not write. She attended as a midwife at the birth of the child whose death was under consideration. The child was born in a dying condition, but she did not send for a medical man, and she did not advise that one should be sent for. She could not say what was the matter with the child; at birth the infant simply gasped. She did not understand the term "artificial respiration." Dr. S. Alexander, dispensary medical man of the district in which the child died, said the father of the child and the midwife came to register the infant's death with him, and as they had no certificate he refused. Subsequently the father brought him a letter from a medical man stating that he saw the child seven hours after death and that he believed death was due to natural causes as far as he could judge from a superficial examination of the body. He (Dr. Alexander) then gave information to the police. Dr. Alexander said a large number of so-called midwives practised in Ireland without qualifications of any kind. He had reason to believe that many children who were buried as stillborn had been born alive and owing to want of proper treatment they had died and were registered as stillborn. He thought the best remedy would be to have all women

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practising midwifery registered under a proper certificate. He thought the child died from asphyxia. It might have lived if medical attention had been procured. The coroner commented strongly on the fact that Belfast was overrun with a class of persons calling themselves midwives who were ignorant of the very rudiments of midwifery which they presumed to practise, and he illustrated this by the circumstance that the midwife examined in this case did not know the meaning of the word "respiration," and when he (the coroner) explained what restoring respiration artificially was she replied, "What did she know about children's ailments?" He also referred to the non-registration of stillborn children, which he thought was a serious matter. The jury found that the infant died from asphyxia, and that if medical attendance had been provided the child's life in all probability would have been saved, that the neglect on the woman's part was not criminal, and that the coroner be requested to bring the midwifery subject before the Belfast Dispensary Committee and to take such steps in the matter as he (the coroner) might consider necessary.

Jan. 5th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A Rare Complication of Whooping-cough.

PROFESSOR BERNHARDT reports in the *Deutsche Medicinische Wochenschrift* a case where whooping-cough was complicated by spinal symptoms. A girl aged five years, who had been suffering from whooping-cough for about ten days, was after a severe paroxysm suddenly seized with tonic rigidity of the lower extremities so that walking or even standing became impossible. The power of speech and the functions of the sensory nerves continued normal. The tendon reflexes were increased and the adductor muscles of both thighs were strongly contracted. Neither fever nor cerebral symptoms were present. In the course of several weeks the child's state gradually improved so that after two months she could move her legs and flex her knee-joints fairly well, but the spasms of the muscles and the exaggeration of the reflexes continued. After four months the power of walking was regained. A year after the first illness the child was attacked with double parotitis and the spinal symptoms once more appeared, so that she could only walk with difficulty and by a succession of spasmodic movements; slight urinary troubles also developed themselves. A course of baths at the Oeynhausen springs proved beneficial, and when Professor Bernhardt saw the child some weeks ago she was able to walk, run, and jump, but the reflexes were abnormally strong and micturition was more frequent than natural. No atrophy of the muscles or other symptoms of degeneration were present. Professor Bernhardt points out that the case is probably to be classified as spastic spinal paralysis owing to myelitis caused by the specific virus of whooping-cough. He does not consider that there was hæmorrhage into the medulla because the muscular paralysis which is characteristic of this affection did not follow the spastic symptoms. He is also opposed to the view that the case might be a severe manifestation of hysteria, because the child shows no other hysterical indications whatever. Cerebral troubles complicating whooping-cough have been sometimes described, but affections of the spinal cord and the peripheral nerves are extremely rare in this disease. Möbius published two similar cases in 1889; the first occurred in a boy of three years of age who after whooping-cough suffered from a paresis of the arms, the legs, the cervical muscles, and the diaphragm. The tendon reflexes were diminished, but sensation and the functions of the brain and the intestines were normal. The lesion was evidently slight, no atrophy ensued, and all the symptoms soon disappeared; it is not improbable that the case was only one of peripheral neuritis. In the second instance a girl aged two and a half years on the sixth day of whooping-cough was seized with paresis of the legs, loss of the tendon reflexes, and incipient degeneration of the peroneal muscles. The nervous affection began with high fever, the paresis of the legs did not entirely disappear, and the case proved to be one of myelitis. It is evident, therefore, that whooping-cough is practically free from any tendency to originate affections of the spinal cord and the peripheral nerves.

The Toxins of Diphtheria and Tetanus.

Professor Brieger and Professor Boer announce in the *Deutsche Medicinische Wochenschrift* that they have succeeded in separating the toxins of diphtheria and tetanus in an amorphous form. It is easy to precipitate these toxins from their solutions by means of zinc salts, but the further treatment of the compounds formed in this way presents some difficulties, for many of the usual chemical re-agents have a destructive effect on the toxins. It would be too long to describe all the details of the rather complicated procedure, but it may be mentioned that in the preparation of the toxin the bacilli must be cultivated in a medium containing no albumin; human urine was the fluid selected. The specific toxin of diphtheria is described by the investigators as not giving the re-actions of an albumin or a peptone; it must, therefore, not be classified as an albuminous substance. Alcohol, ether, acetone, and acids destroy it, but weak alkalies do not affect it. Oxidising substances, such as potassium permanganate, also destroy the toxin, but reducing substances have no injurious influence on it even after twenty-four hours' contact. The indifference of the toxin to substances which have a reducing effect is very important, for according to the researches of Ehrlich such substances are continually produced in the organism. It appears, moreover, that the pathogenic action of the bacilli is quite different from that of the toxin. Subcutaneous injections of the bacilli produce an intense necrosis at the place of injection without the internal organs undergoing the alterations characteristic of diphtheria. It was already known that diphtheria bacilli produce local necrosis, but it is now pointed out for the first time that this necrosis depends, not on the toxins elaborated by the bacilli, but on the actual bacilli themselves.

Jan. 2nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Bacillus of Yellow Fever.

THE Roman Accademia di Medicina is now in possession of the monograph in which Professor Giuseppe Sanarelli, a distinguished *alumnus* of the University of Siena, founder and director of the Istituto d'Igiene Sperimentale at Montevideo, claims to have discovered the infective microbe or bacillus of yellow fever. The discovery will ere long be made *publici juris;* meanwhile, a word or two as to Dr. Sanarelli himself will not be without interest. Last year, when the first cases of the fever in an epidemic form were reported in Brazil Dr. Sanarelli repaired to the lazaretto on the island of Fleres and subjected to minute post-mortem examination every accessible victim to the disease. Having, by numerous preparations, provided himself with the *matériel* for his preliminary studies, he next proceeded to Rio Janeiro and took up his abode in the very midst of the infected locality—in a part of the city, in fact, where yellow fever is endemic. There he continued at work for two months, prosecuting his researches minutely and steadily, till he himself was struck down by the malady, remaining for a week in much danger. He recovered, however, by treatment of his own devising, and returned to his post at the Istituto d'Igiene Sperimentale at Montevideo greatly enriched in *matériel* and experience for the work he had undertaken. His year's work has resulted in the monograph above referred to, and he is now understood to be employed in supplementary investigations, the detailed account of which will, he believes, enable the profession to check his conclusions and, it is hoped, to confirm them.

The Bressa Prizes.

In terms of the will of Dr. Cesare Alessandro Bressa the Reale Accademia delle Scienze of Turin offered a prize for the best scientific work achieved by an Italian savant or inventor during the quadrennium 1893-96. The competition closed on the 31st ult. and the name of the successful competitor will in due course be announced. Another prize, under the same auspices (value 10,000 lire—that is, less income-tax, 9600 lire, or £384), offered to competitors of all nationalities (Italian members of Turin Academy being alone excluded) will be closed to competition on Dec. 31st, 1898. It will be awarded "to any savant of any nation who during the quadrennium 1895-98, in the judgement of the Academy of

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Sciences of Turin, shall have made the most important or the most useful discovery, or produced the most distinguished work, in physical and experimental science, or in natural history, or in mathematics pure and applied, or in chemistry, or in pathology, or in physiology, not excluding geology, history, geography, or statistics." Intending competitors, I may add, will have to send in their names and work within the term indicated, accompanied by a letter addressed to the President of the Academy. The work must be printed, manuscript not being received, and in the event of its not gaining the prize will not be returned to its author. The Academy, I may further mention, reserves to itself the right to adjudge the prize to the savant whom it deems most worthy, even if he has not entered his name among the list of competitors. The prize has hitherto been the object of keen competition, and this will, in 1899, when the name of the successful candidate will be announced, be the eleventh award since its foundation in terms of the will of Dr. Cesare Alessandro Bressa.

The King and Dr. Baccelli.

King Humbert during Christmas week had been suffering from the familiar "cold in the head," or *costipazione di testa*, as Italians call it, and having, like all members of his family, a horror of posing as a "patient," let it run its course. On one of the last days of the year he went down for winter sport to the Latin shore, where he has a shooting-box at Castelporziano, near the site of the younger Pliny's villa, described incomparably by its *dilettante* owner. The day was very fine, the sun powerful, and His Majesty, still with the cold on him, was insufficiently clad. After some good sport in company with the Crown Prince the King, warm from the exercise and with a steady *tramontana* blowing, stopped to chat a little with an old gamekeeper just come back from South America. On returning to the Quirinal His Majesty felt he had paid for his imprudence, had several mild rigors, but would not "give in," and on the evening of the 30th ult. remained standing while receiving in audience the corps diplomatique till past midnight. On the morning of the 31st he wanted to get up to hear the customary report of his Ministers, but General Ponzio-Vaglia saw him just in time, noticed that he was still a prey to the rigors of the day previous, and prevailed on him to keep his bed. He would, however, see no one but the Queen, who remained beside him all day, at the end of which his state was such that the usual receptions of the Capo d'Anno were countermanded. By this time telegrams poured in from every European capital, the Emperor of Germany wiring twice, in affectionate urgency, for information. On the morning of the 1st inst. His Majesty's self-denying ordinance was overcome, he consented to see his physician, and, accordingly, Dr. Baccelli was in attendance at the Quirinal. The King smiled as he rose in bed to greet his medical adviser, saying, "Badi, onorevole Baccelli, che io la ricevo come amico, non come medico, perchè, grazie a Dio, sto bene, checchè ne dicano i giornali" ("You see, honourable Baccelli, I receive you as a friend, not as a physician, because, thank God, I am well, whatever the newspapers say"). The physician and ex-Minister, equal to the occasion, replied that his visit was not professional, but only to wish His Majesty a happy New Year. The King, however, detained him at his bedside for nearly half an hour, during which Dr. Baccelli (incidentally, of course) diagnosed the malady to be "rheumatic febricula," which with due attention to the "ingesta" would pass off in from two to three days, provided His Majesty kept his bed. The advice was taken; the prognosis has proved correct; no bulletin has had to be issued; and all the rumours as to the King's suffering from "pleuritis," or "pneumonia," or worse have not sufficed to cause a flutter on the Bourse.

Jan. 4th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Quarantine against Plague.

THE continued reports of plague at Bombay and the exit of 200,000 people from that city have excited no little interest in Egypt, for it is not forgotten that this country was once its headquarters. It is true that there has been no plague in Egypt since 1845, but if it were accidentally re-introduced it might be even more difficult than was the case with cholera to eradicate it from its former haunts. No one knows quite why plague suddenly left Egypt, for it can hardly have been due entirely to the sanitary precautions of that day. Perhaps it was merely an extension of the eastward recession of the disease, which began in the latter half of the seventeenth century and helped, with other causes, to free Europe from its ravages. Quarantine may be quite unnecessary in England, protected by its insular position and by the millions spent upon the country's sanitation, but one cannot help feeling that Egypt is still somewhat like a powder magazine from which the tiniest spark has very jealously to be excluded. The quarantine regulations of 1878 against plague have just been revised by the International Board in Alexandria. In accordance with modern notions ships are divided into three classes—clean, suspected, and infected. In the case of clean ships coming from a plague-stricken port seven days must have elapsed, linen and bedding must be disinfected, and drinking-water must be renewed. Suspected ships are defined as those on which there has been plague, but not for the last nine days. Ships carrying a medical officer and a disinfecting stove will be allowed to traverse the Suez Canal in strict quarantine, while other ships will be kept long enough to disinfect clothes and personal effects and to satisfy the sanitary officer that there are no fresh cases on board. Passengers destined for Egypt will be kept under observation for two days while their effects are disinfected. Lastly, there are the infected ships, meaning those which have had a case of plague on board during the last nine days. Passengers suffering from plague must be isolated in a hospital on shore. Healthy passengers are to be divided into small groups and kept in quarantine long enough to allow eleven days to have elapsed since contact with the last case. The whole ship and its contents are to be disinfected, and, as in all other cases, the drinking water is to be renewed and the bilge water disinfected and discharged.

Quarantine against Cattle Diseases.

Recent science has made the regulations of 1881 somewhat archaic, and after three years' anxious deliberation the representatives of the Powers have now agreed on all vital points and the new measures have been applicable since Dec. 1st. The regulations against cattle plague have been made more severe and include for the first time sheep and goats. Horses and mules suspected to be suffering from glanders or farcy will be inoculated with mallein before being admitted into the country. The other chief diseases from which Egypt desires to be guarded are charbon, pleuro-pneumonia, foot-and-mouth disease, sheep pox, swine fever, and scabies.

The Lunatic Asylum.

The number of patients here has lately been reduced from 480 to 420, chiefly because many quiet patients have been allowed to go home to their friends. All the inmates are now kept out-of-doors all day, except those who are actually confined to their beds in the infirmary. Nearly five acres of desert land adjoining the asylum has already been annexed and probably more will be wanted by the Government in the future. Among recent improvements carried out this year a modern system of locks and keys has been fitted, with necessary master keys, a lift for food has been built, and a second bath-room specially for female patients has been opened. Ventilation has been further improved, some 300 new windows have been made, and many of the old apertures have been glazed to keep out the winter cold. New drains and cesspools outside the grounds are now being finished. The extra space provided by the new wards and the airing courts has already resulted in a considerable diminution in the number of accidents to patients. The gradual improvement in the treatment of excited patients since the English occupation of Egypt is noteworthy. All troublesome patients used to be manacled for years together both by day and night. Camisoles were substituted for chains in 1884, though this was considered by the native medical men to be a dangerous proceeding. A padded room was built later, and the resident physicians trusted chiefly to narcotics to tranquillise the excited. Now the padded room has been done away with, the camisoles have disappeared, and narcotics are very rarely employed. Better results are now obtained by means of outdoor occupation and exercise. Dr. Warnock's reforms, effected in less than two years, have elicited the highest praise from all English visitors, and it is greatly to his credit that his work of reformation has been carried on without European assistants and even without

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any regular interpreter. It has long been known that general paralysis is rare amongst Egyptians, but when all lunatics came to be examined by an expert the disease was not infrequently found. At the present moment there is a room full of general paralytics, and in the year 1895 seventeen males and two females were admitted to the asylum, and of these nineteen paralytics fourteen were Egyptians. Another interesting point for English observers is that the number of cases of melancholia admitted in Egypt into the asylum is about five times less than the number under similar circumstances admitted in England.

Cairo, Dec. 28th, 1896.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Difficulty at the Adelaide Hospital.

IN a former communication[1] it was stated that the house surgeons at the Adelaide Hospital had resigned and their resignations had been accepted by the board of management, but that no details had been made public. The proceedings of the board on this matter and also in the inquiry into the charges made by Dr. Leith Napier against Professor Watson have been presented to the House of Assembly and printed. In resigning the resident staff charged Dr. Leith Napier with incompetence, but when called before the board individually declined to give evidence except as a body and when all were present, and in consequence the board accepted their resignations. Subsequently a Select Committee of the Legislative Council was appointed to inquire into the affairs of the hospital, and after some preliminaries examined Dr. Cecil Corbin, one of the late resident surgeons, who was dismissed by the board. He explained that the refusal to give evidence before the board was due to the conviction of the resident surgeons that the board, as constituted by the Government, was not an impartial tribunal, but would uphold Dr. Napier and Dr. Ramsay Smith, and as the sittings were held in private the residents would have no corroboration of their statements. Dr. Corbin charged Dr. Leith Napier with performing operations unskilfully; with coming to a decision about operations incorrectly; and with ignorance of the nature of the cases and the proper treatment necessary. He instanced, among others, a case of supra-pubic lithotomy in which the peritoneum was opened and the operation generally bungled, the patient dying from peritonitis; a case of hydatid of the liver diagnosed as multiple hydatids and treated by a large abdominal incision away from the tumour, thus allowing escape of the cyst contents into the peritoneal cavity; a case of supposed renal calculus, in which the abdomen was opened in the middle line and the left kidney dragged out through the incision and cut into, no stone was found, and Dr. Napier was proceeding to do the same with the right kidney when Professor Watson interfered; a case of amputation of the forearm, in which damaged tissues were left and the bones cut too long, and more bone had to be taken away; and another case, that of a man with a lump under the tongue, which Dr. Napier diagnosed as "rhinolith" and cut into, but found no stone, the case being probably cancer. Of course, these are only Dr. Corbin's statements, and Dr. Napier has not given his version yet. The charge made by Dr. Napier against Professor Watson, of misrepresenting a case that occurred in the hospital, was investigated by the board of management in public. The case was that of a woman aged fifty years with a femoral hernia and symptoms of strangulation. Dr. Napier asked Professor Watson to operate, but he declined. Mr. Shepherd then operated, assisted by Dr. Napier, Professor Watson looking on. The sac was found to be filled with omentum, and Mr. Shepherd and Dr. Napier passed a finger into the crural canal and could feel no bowel. A portion of the omentum was ligatured and cut off and the wound closed. The patient died. Professor Watson, meeting Dr. Rogers, a member of the board, just after the operation, expressed his disbelief in Dr. Napier's surgical competence and asked him to be present at the post-mortem examination, as he was certain that the patient would die, the strangulation not having been relieved. As to what was found at the necropsy statements differ, Dr. Napier alleging that Professor Watson's description was incorrect and that the professor attempted to mislead the spectators and misrepresent the actual facts. Professor Watson's statement is that he found the omentum fastened by sutures to the margin of the saphenous opening, adherent to the sac, and tightly stretched over the small intestines, and a loop of small intestines fifteen inches long bound down and strangulated by this omental band, which had not been freed from its attachments to and in the neck of the sac at the operation. Professor Watson, before making the necropsy, stated that he expected to find a knuckle of gut strangulated at the crural ring, and this condition he admitted was not found. Dr. Napier asserts that there was no obstruction of the bowel, and that no further operative interference was required, while Professor Watson asserts that the operation was incomplete, no attempt having been made to release the adherent omentum or pass a finger into the peritoneal cavity and discover the real condition. Dr. Ramsay Smith supported Dr. Napier's statements as to the result of the necropsy, as did also Mr. Shepherd, the operator, and Dr. Hill and Dr. Rogers, members of the board. Subsequently, Professor Watson, who was suffering from a severe cold and unable to speak, requested that he might be represented by counsel to cross-examine the witnesses and that he might call the students who were present at the necropsy and might call expert medical evidence on his behalf. These requests were refused and the board decided that Professor Watson misrepresented the facts concerning the operation, and that his action in doing so was ill-judged; that the operation was skilfully performed by Mr. Shepherd, assisted by Dr. Napier; and that the post-mortem examination fully justified the treatment by the operators. The board was of opinion that Professor Watson's remarks had been most unjust to Dr. Napier and that the best interests of the hospital required that Professor Watson be requested to immediately resign his position as honorary consulting surgeon and pathologist.

[1] THE LANCET, Nov. 7th, 1896.

Unskilful and Horrible Treatment by a Midwife.

Margaret Grainger, a midwife, was found guilty of manslaughter and sentenced to penal servitude for five years at Rockhampton, Queensland, on Sept. 15th. The facts elicited at the trial were that Grainger attended a Mrs. Day in her confinement. The labour was normal, but the placenta not coming away the midwife attempted to remove it by pulling on the cord and inverted the uterus. Still dragging on this, which she mistook for the placenta, she tore the uterus away, and the woman died from hæmorrhage and shock. The judge, in addressing the prisoner, said that the case was the most dreadful and horrible in the criminal records of the colony and that the prisoner had shown the grossest ignorance. The prisoner had acted as midwife for thirty years both in India and Queensland, and in consequence of her age the sentence was not so heavy as the judge said he would have imposed had she been a young woman.

Insanity in New South Wales.

The report of the Inspector-General of the Insane for New South Wales for 1895 shows that on Dec. 31st, 1895, there were 3720 insane persons under official cognizance, an increase of 133 during the year. Dr. Manning states that the causes which led to the unusual increase during 1892, 1893, and 1894, appear to have been still in operation in 1895. The chief moral causes of insanity during 1895, as far as can be ascertained with accuracy, were:—mental anxiety, worry, and overwork; domestic trouble; and adverse circumstances, including pecuniary difficulties. The chief physical cause was intemperance in drink. The cost to the State for each patient was £24 6*s.* 4*d.*

Leprosy in New South Wales.

The report for 1895 of the New South Wales Board of Health upon the administration of the Leprosy Act has been presented to Parliament. At the beginning of 1895, 40 persons were under detention at the lazaret. During the year 10 persons were reported to the Board as suspected lepers, and three of these were eventually detained. Five patients died and one was discharged.

A Hospital Medical Officer charged with Assault by a Hysterical Patient.

Dr. Sheldon of the Sydney Hospital was sued for £30 damages for assault at the Sydney District Court on Nov. 12th. The plaintiff, a girl slightly under twenty-one years of age, stated that from childhood she had been subject to fits and went to the Sydney Hospital for treatment. While waiting in the out-patient room she fainted, and Dr. Sheldon came to her and pressed her forehead with much

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severity; she ran away, but was brought back by the doctor, who applied the electric battery and otherwise ill-used her. She suffered great pain at the time and had never been well since. Dr. Binnie, the medical superintendent, the porter, a nurse, and a constable gave evidence that the girl was suffering from hysteria and was violent and that nothing but the ordinary treatment was used. The verdict was for the defendant.

Successful Operation for Intra-peritoneal Rupture of the Bladder.

In the November number of the *Australasian Medical Gazette* Dr. Charles Ryan records a case of intra-peritoneal rupture of the bladder. The patient, when drunk, had been wrestling and was taken to the lock-up. While there he became very ill and was removed to the Melbourne Hospital, where six ounces of blood-stained urine were drawn off with a catheter. The lower abdomen was very tender and efforts to pass urine were futile. Abdominal section was performed seventeen hours after the accident. The peritoneal cavity was full of blood-stained fluid, and a rectangular tear four inches long was found in the upper part of the bladder. This was closed with a continuous suture of fine chromicised cat-gut and the peritoneum thoroughly flushed out. Perineal section was performed and the abdominal incision closed. The bladder was drained for sixteen days by a tube through the perineal wound and recovery was uneventful. Dr. Ryan believes this to be the first case of the kind brought to a successful issue in Australia.

Excision of the Clavicle.

At the last meeting of the Victoria Branch of the British Medical Association, Mr. F. D. Bird read notes of two cases in which he had excised the clavicle. The first was for sarcoma of that bone and the second was to gain access to an exostosis of the first rib. Both cases were successful and the patients had remarkably good movement of the arm, and in the second case a new clavicle had formed from the periosteum which was left.

Ankylostomiasis.

Dr. L. N. Ashworth read before the Medical Society of Queensland the notes of a typical case of ankylostomiasis completely cured by large doses of thymol, and in the discussion which followed Dr. Jefferis Turner stated that every case of this affection treated properly by this method at the Brisbane Children's Hospital had recovered; but it should be understood that the treatment must be carried out in the right way. Repeated small doses did no good and probably accustomed the worms to the drug so that subsequent large doses failed. The correct method was to empty the upper bowel by preliminary low diet and purgation and then to give a dose of thymol sufficient to kill the worms, no solid food being given on the day of treatment, the excess of drug and dead worms being removed by a saline aperient.

Nov. 24th, 1896.

Obituary.

JOSEPH BARTON CARTER, L.R.C.P. EDIN., M.R.C.S. ENG., L.S.A.

A LARGE circle of friends have learned with regret of the death on New Year's Day of Mr. J. B. Carter of Chapel-Allerton, Leeds. Mr. Carter, who qualified in 1849, was one of the oldest practitioners in Leeds. He was born in Beverley, to which place his father (who served under Lord Nelson as a surgeon in 1803) had retired. For nearly half a century Mr. Carter conducted an extensive practice in North Leeds and his loss is keenly felt by all classes of patients. His kindly, hearty manner endeared him to all and his ready sympathy and sound advice caused him to be regarded as a friend to be relied upon in all emergencies. His long hours of professional work sat but lightly on him and did not prevent his keeping up a close acquaintance with the Latin and Greek authors with which in his earlier days he was so familiar. Many who read these lines will recall occasions when amongst his professional brothers he would quote line after line of the classics as bearing upon the subject under discussion. Wonderful as it is to us nowadays, here was a man working hard in general practice, who still kept up his classical knowledge. A widow, three daughters, and three sons survive him. Two of his sons were associated with him in practice and one, also in the profession, is in practice at Shipley. Only those who knew Mr. Carter will feel how his death has made a gap in the profession not to be easily filled. He was a man liberal in hospitality, unsparing in kindness, at once a "doctor and a friend."

JOHN LEITCH, M.B., C.M. EDIN.

ON Dec. 22nd, 1896, at the early age of forty-seven years, John Leitch died at Silloth, Cumberland. As late as Dec. 19th he had been seeing patients, although quite unfit to do so by reason of cardiac failure, for which he had been under treatment. His death came as a shock to all his friends and patients. Dr. Leitch was born at Monimail Manse, his father being then parish minister of Monimail in Fife. Educated at Merchiston Castle School and the Edinburgh Academy he studied at the arts classes in St. Andrews University before going to the medical classes in Edinburgh, where he took his degree in 1871. He afterwards went several voyages to America as medical officer in the Cunard Line and later became resident surgeon at Leith Hospital. In 1872 he settled down at Silloth and remained there until the end. For many years Dr. Leitch was medical officer to the Silloth Convalescent Institution, and amongst other interests he took an active part as chairman of the School Board. His great hobby was botany, and he spent the whole of his spare time, both as a student and afterwards, in the pursuit of botanical researches. This led him to leave Silloth every year, and sometimes twice a year, for a month or more, travelling through Scotland, England, Ireland, and the Channel Islands on foot and examining the flowers of the different districts. His collections of plants are in many respects unique and perfect, and he was well known as an authority on botany. Dr. Leitch never cared to bring himself forward and never published anything other than short notes and contributions to journals, and these often anonymously. He was fond of travelling, and spent some time in Russia and Norway, where he pursued his favourite study. Dr. Leitch married a daughter of the late Rev. J. Redford of Silloth. Seven children survive him, the youngest being two years of age.

Medical News.

UNIVERSITY OF OXFORD.—At the examination for medical and surgical degrees in the Michaelmas term, 1896, the following gentlemen were successful in the subjects indicated:—

FIRST EXAMINATION.

Materia Medica.—J. M. Fortescue-Brickdale, Christchurch; A. F. S. Kent, Magdalene; C. R. Moss, Keble; and S. Wellby, Trinity.

Anatomy and Physiology.—H. W. Crowe and H. S. French, Christchurch; F. O. Stoehr and S. Wellby, Trinity; and J. A. Willett, University.

SECOND EXAMINATION (M.B. EXAMINATION).

H. G. L. Barlow, Trinity; A. A. Bathe, Christchurch; W. Bosanquet, New; J. S. Fairbairn, Magdalene; J. C. Fisher, Brasenose; A. L. Ormerod, New; W. Ramsden, Pembroke; J. B. Tombleson, Corpus Christi.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bucharest:* Dr. Buiciiu has been appointed Professor of Clinical Medicine.—*Budapest:* Dr. A. Landauer has qualified as *privat-docent* in Physiology.—*Clausenburg:* Dr. Koloman Hönez and Dr. Gerhard Rudas have qualified as *privat-docenten* of Odontology.—*Christiania:* Dr. Laache has been promoted to the ordinary professorship of Internal Medicine.—*Lille:* Dr. Surmont has been appointed to the chair of Hygiene.—*Giessen:* Dr. Robert Sommer has been promoted to the ordinary professorship of Psychiatry.—*Heidelberg:* Dr. Franz Nissl has qualified as *privat-docent* in Neurology.—*Tübingen:* Dr. Dennig has been appointed Professor of Internal Medicine.

PORTSMOUTH HOSPITAL SATURDAY.—The result of the Hospital Saturday collection at Portsmouth this year has established a record, the total sum available after paying all expenses being £1095. Of this the sum of £1030 goes to the hospitals, £15 to each of four other institutions, and £5 to a sixth.

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BIRKENHEAD MEDICAL SOCIETY.—At a meeting of the above society on Dec. 11th, 1896, Dr. Sidney Marsden, president, being in the chair, Mr. Francis Johnson read notes and showed photographs and charts of the following cases;—1. Hydrops Articuli of both Knee-joints in an otherwise healthy child, treated successfully by tapping and elastic pressure. Mr. Shears drew attention to the fact that hydrops articuli is frequently seen in children suffering from congenital syphilis. 2. Lupus of the Nose and Face treated by scraping and thyroid gland and followed by great improvement. 3. A case of Herpes affecting the area of the Scalp supplied by the left great and small occipital nerves. 4. A Sporadic or Myxœdematous Cretin greatly benefited by thyroid gland. This case gave rise to an interesting discussion on rhe methods of administering the thyroid gland. Dr. Blood showed a set of gall-stones removed by operation from a patient who had suffered from symptoms for twelve years.

FOOTBALL CASUALTIES.—In a football match at Bristol on Dec. 25th, 1896, between St. George's and Wamley, a member of the latter team fractured his clavicle.—During a match at Weston-super-Mare on Dec. 26th, between Weston-super-Mare and Cardiff Harlequins, a member of the former team fractured his clavicle.—While a local team called the Sun Albion were playing a game at Llanerchrugog-park, Ruabon, on the 25th ult., a youth aged seventeen years (right half-back) received a severe injury to the abdomen, and was removed to his home, where he died the next day.—During the progress of a match between the Lincoln Lindum team and eleven Christmas visitors, at Lincoln, a player sustained a fracture of the right ankle.—In a match on the 31st ult., at South Shields, between the Westoe and Harrogate Rugby fifteens, a Harrogate forward sustained an injury to his right leg and was removed to the South Shields Infirmary.—While playing in a match on Saturday last at Hebden Bridge against Castleford one of the home team forwards fractured his skull and was taken to the Halifax Royal Infirmary.—A half-back, of Beeston Hill, who was injured six weeks since while playing in a match, is now lying in an unconscious state at the Leeds Infirmary, suffering from concussion of the brain.—On Saturday last, during a match between Great Harwood and Blackburn Park-road teams, a player of the home team fractured his leg.—On the same day, in a match at Widnes, a player fractured his leg; and in a match between the Shipley and Menston clubs a player, a left wing forward, sustained a fracture of the ankle.

DIPHTHERIA IN LONDON.—During the two weeks ended on Saturday, Dec. 26th, the deaths registered from diphtheria in London showed considerable difference in the sum total per week. In the first of the two weeks the deaths numbered 58, as against 48, 60, and 52 in the three weeks preceding, the 58 deaths being 18 in excess of the corrected decennial average for the fifty-first week of the period 1886–95. Of the 58 deaths, 10 belonged to Camberwell, 6 each to Lambeth and Islington, 4 to Shoreditch, and 3 each to Fulham, Chelsea, Mile End Old Town, Poplar, and Battersea sanitary areas. All but 2 of the deaths were of persons aged from one to twenty years. On the closing day of the week, Dec. 19th, there remained in the London hospitals 838 patients suffering from diphtheria. In the succeeding week, including the Christmas holidays, the registered deaths from the disease fell to 38, this total being 4 below the corrected decennial average for the week. Four of the deaths belonged to Lambeth, 3 each to St. Marylebone, Islington, and Bermondsey sanitary areas. On Saturday, Dec. 26th, 850 patients suffering from diphtheria remained in London hospitals, the admissions in the week having numbered 129. During the fortnight the deaths registered from the disease in Outer London amounted to 24, of which 12 were of persons belonging to the West Ham registration district. Thus, in Greater London in the two weeks the deaths registered from diphtheria were 120 in number. In the concluding week of the the year ended on Saturday last—the year 1896 having, for registration purposes, fifty-three weeks—the deaths registered in London as due to diphtheria rose again to 49, and were 7 above the corrected average. Islington, Lambeth, and Camberwell were each of them credited with 5 deaths, and St. Pancras and Poplar sanitary areas, each with 3 deaths. The patients in hospital on Jan. 2nd numbered 845, there having been 115 admissions during the week. The same excess of fatal incidence in the ages one to twenty years was witnessed, as is now usually seen. Outer London suffered heavily in the week, 22 deaths having been registered, of which 11 occurred in the West Ham, 4 in the Edmonton, and 3 in the Hendon registration districts, making an aggregate of 71 deaths in Greater London.

THE DIFFUSION OF SMALL-POX.—There was an entire absence of fatal small-pox in London during the fourth quarter of the past year, but three admissions to hospital were chronicled in the closing week of the year, these three patients alone remaining under treatment on Saturday last. At Redruth the epidemic seems to be quite at an end, no fresh case having been reported since mid-December, the end of the year finding only some ten patients in hospital. At Cadoxton three cases of small-pox were last week sent to hospital, the patients being the keeper of a lodging-house, his wife, and child. Importation of the disease to the house in the person of a sailor is thought to have been the probable source of infection. The cases are said to be of mild character.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

AYMER, JAMES, M.B., C.M. Aberd., has been re-appointed Medical Officer of Health by the Johnshaven Parish Council.

BENNETT, WILLIAM EDWARD, F.R.C.S. Eng., has been appointed Resident Surgical Officer to the General Hospital, Birmingham, vice C. Leedham-green.

CARRUTHERS, D. A., M.B., C.M. Edin., has been appointed Medical Officer for the Parish of Kinnoull, Perth.

EVANS, CHAS. W., M.D. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Bakewell Urban District Council.

FORBES, DUNCAN M., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health, by the Eastwood Urban District Council.

FRANEY, EDWARD, M.R.C.S., has been re-appointed Medical Officer of Health by the Banbury Rural District Council.

GOLLAND, A., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Altrincham District Council.

GREEN, C. DAVID, M.D. Lond., B.S., F.R.C.S., L.R.C.P., D.P.H., has been re-appointed Medical Officer of Health by the Edmonton Town Council.

HANSON, E. R., L.R.C.P. and S. Edin., has been appointed Medical Officer of Health for the No. 8 Sanitary District of the South Molton Union.

HARKER, W. E., M.D. Durh., B.S., has been re-appointed Medical Officer of Health by the Tyne Port Sanitary Authority.

JONES, FRED. F., M.R.C.S., D.P.H., has been re-appointed Medical Officer of Health by the Llanfyllin Urban District Council.

KEER, J. C., M.R.C.S., has been appointed Medical Officer for the Workhouse and the Wickham Market Sanitary District of the Plomesgate Union, vice G. Keer, resigned.

KNAPP, E. M. M., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Ross Rural District Council.

LLOYD, DAVID, M.B., C.M. Glasg., has been appointed Medical Officer for the Llanrhaiadr Sanitary District of Ruthin Union, vice J. Caithness.

MAC LENNAN, DONALD U., M.D., C.M. Edin., has been re-appointed Medical Officer of Health, by the Widnes Town Council.

MAPLETON, G. H., M.B., C.M. Edin., has been appointed Medical Officer by the Cranbrook Board of Guardians.

MARSH, J. H., M.R.C.S., L.R.C.P., has been appointed Medical Officer and Ambulance Lecturer to the Macclesfield School Board.

PARKINSON, THOS. W., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Edzell Parish Council.

PEPPER, H. W., M.R.C.S., L.R.C.P., has been appointed Assistant Medical Officer to the Workhouse Infirmary, Birmingham.

PURVES, A. S., M.D., C.M. Edin., has been re-appointed Medical Officer for the Lesbury Sanitary District of the Alnwick Union.

SMYTH, WM. A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Sanitary District of Ashstead, Surrey.

SPRENT, W. S., L.R.C.S., L.R.C.P. Irel., has been appointed a Deputy Medical Officer by the Helmsley District Council.

TEMPLE, G. H., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Weston-super-Mare Sanitary District of the Axbridge Union, vice V. Hitchins, resigned.

THOMAS, EVAN C., M.B., C.M. Edin., has been appointed Medical Officer of Health by the Lampeter (Cardigan) Rural District Council.

WALLIS, PERCY E., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the East Grinstead Urban Council.

WEBB, HENRY L., M.R.C.S., has been appointed Medical Officer of Health for the Cheadle Rural Sanitary District.

WEST, GEORGE F., L.R.C.P., L.R.C.S. Edin., has been appointed by the Lord-Lieutenant, Resident Medical Superintendent to the Kilkenny District Lunatic Asylum.

WILDE, L., M.D. Durh., L.R.C.P. Lond., M.R.C.S., D.P.H. Glasg., has been re-appointed Medical Officer of Health for Bedfordshire.

WILLIAMS, WALTER C., has been appointed Analyst for the Blackburn County Borough.

WYLLYS, HENRY J. M., L.R.C.P., L.R.C.S. Edin., has been appointed Junior House Surgeon to the Norfolk and Norwich Hospital.

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Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—District Surgeon.

CLEOBURY MORTIMER, ROCK, TENBURY AND BURFORD RURAL DISTRICT COUNCILS.—Medical Officer of Health for the above districts for three years. Salary £75 per annum, to include travelling and all other expenses. Applications to the Clerk, Cleobury Mortimer.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary commences at £100 per annum, with prospect of increase to £250, together with furnished apartments, board, attendance, and washing.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge road, S.E.—Senior Resident Medical Officer. Salary £70, with board and washing.

FLINTSHIRE DISPENSARY.—Resident House Surgeon. Salary £120 a year, with furnished house, rent and taxes free, also coal, light, water, and cleaning, or in lieu thereof the sum of £20 per annum. Applications to the Secretary, Board-room, Holywell, North Wales.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Physician.

LINCOLN GENERAL DISPENSARY.—Resident Medical Officer for two years. Unmarried. Salary £150 per annum, with furnished apartments, coals, and gas provided.

MIDDLESBROUGH NEW ASYLUM.—Medical Superintendent. House (unfurnished, with rates and taxes free), coal, gas, water, and washing will be allowed. Salary required to be stated.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Resident Medical Officer for six months. Salary £30 per annum, with board, attendance, and washing.

QUEEN'S HOSPITAL, Birmingham.—Third Casualty Surgeon for three years. Honorarium £50 per annum. Also Second Physician for Out-patients, for three years. Honorarium £50 per annum.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon, for six months. Board, lodging, and washing provided.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—Assistant House Surgeon. Salary at the rate of £20 per annum, with board and lodging.

ST. GEORGE'S HOSPITAL, London, S.W.—Physician and Assistant Physician.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House Surgeon. Salary £100, with board and residence.

UNIVERSITY OF EDINBURGH.—Examiners.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Physician for twelve months. Honorarium £50, and board and lodging in the hospital provided.

Births, Marriages, and Deaths.

BIRTHS.

AUDLAND.—On Dec. 30th, at Oxford-street, Wellingborough, the wife of W. E. Audland, M.R.C.S., L.R.C.P. Lond., of a son.

CAMERON.—On Jan. 5th, at Elms-road, Clapham-common, S.W., the wife of Albert Cameron, M.B., C.M. Edin., of a daughter.

DAVIES.—On Jan. 5th, at Finsbury-square, the wife of Arthur Templer Davies, M.D. Cantab., F.R.C.P., of a daughter.

HOWARD.—On Jan. 1st, at Walworth-road, S.E., the wife of John A. Howard, M.D. Lond., of a son.

ROGERS-TILLSTONE.—On Dec. 28th, at Ditton, Maidstone, the wife of J. M. Rogers-Tillstone, M.R.C.S., L.R.C.P. Lond., of a daughter.

STANLEY.—On Jan. 4th, at Brabourne, Kent, the wife of Hubert Stanley, M.B. Cantab., M.R.C.S., L.R.C.P., of a son.

SYKES.—On Jan. 3rd, at York-road, Birkdale, Southport, the wife of J. Herbert Sykes, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

BARTON—FOX.—On Dec. 23rd, at the parish church, Norbiton, Percy Frederic Barton, B.A., of Camb., M.R.C.S. and L.R.C.P., to Annie S. Fox, eldest twin daughter of the Rev. Henry Elliott Fox, Hon. Sec. of the Church Missionary Society.

FERGUSON—MALONE.—On Jan. 1st, at St. Peter's, Eltham-road, Lee, George Gunnis Ferguson, M.B., C.M., of Holmdale road, West Hampstead, N.W., to Ada Bertha, daughter of the late Captain Joseph Malone, V.C., Enniskillen Dragoons.

HACKEN—MASON.—On Oct. 29th, 1896, at St. Andrew's Church, Braidwood, N.S.W., by the Rev. J. S. Dobson, Helen S., third daughter of Frank Mason, Esq., J.P., of Yately, Braidwood, to J. Preston Hocken, M.D., M.R.C.S., L.R.C.P., L.S.A., J.P., of West Wallsend, N.S.W., eldest son of J. Hocken, Esq., Liverpool, England.

DEATHS.

CARTER.—On Jan. 1st, 1897, at Elm House, Chapel Allerton, Leeds, Joseph Barton Carter, M.R.C.S., L.R.C.P., L.S.A., aged 73 years.

LEITCH.—On Dec. 22nd, at Monimail, Silloth, Cumberland, John Leitch, M.B., C.M. Edin., aged 47 years.

JAMESON.—On Jan. 1st, at his residence, Knollys-road, Streatham, Thomas Jameson, M.D., R.N., aged 59.

MACGREGOR.—On Jan. 4th, at his residence, Pembridge-villas, Southfields, S.W., Surgeon-Lieutenant-Colonel Alexander Macgregor, Indian Medical Service, Retired.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (13th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (14th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (16th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (11th).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Communications:—Mr. H. L. Albert: Two cases of Transplantation, with a third case of Transplantation of a Root subsequently Crowned.—Mr. E. Balding, jun.: A Case of Retarded Eruption.—Mr. H. Baldwin: Cement and Amalgam Fillings. Papers:—Mr. A. Pearce Gould: Means taken to prevent subsequent Deformity after Excision of Portions of Lower Jaw.—Mr. J. H. Badcock: Copper Amalgam, its Merits and Demerits.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Bland Sutton: Wandering Spleens.—Dr. S. West: The Prognosis of Pneumothorax, with a series of Cases of Recovery.

TUESDAY (12th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. E. C. Kingdon and Dr. J. S. R. Russell: Infantile Cerebral Degeneration, with Symmetrical Changes at the Macula.—Mr. T. S. Ellis: On some Points in the Surgical Physiology of the Foot.

WEDNESDAY (13th).—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Annual General Meeting. Report of the Morbid Growths Committee: (1) Sarcoma of Nose; (2) Spheroidal celled Carcinoma of Vocal Cord, and Perichondral Sarcoma of the Cricoid Cartilage; (3) Rapid Destruction of Face. Cases and Specimens:—Some Presentations to the Society from Dr. Lefferts (New York) and from the President.—Dr. Semon: (1) Demonstration of Dr. Betz's plaster-of-Paris models of the Nose and its Accessory Cavities; (2) (for Dr. Macintyre) Some new Skiagraphs relating to Laryngology and Rhinology.—Dr. St. Clair-Thomson (for Dr. E. Brown, Montreal): A Nasal Snare.—Dr. Kanthack: Demonstration of some Morbid Specimens—(1) Microscopic and (2) Macroscopic.—Dr. P. W. Williams (Bristol): Case of Unilateral Abductor Paralysis in a Medical Student.—Mr. C. A. Parker: Unilateral Abductor Paralysis in a Boy.—Dr. W. Permewan (Liverpool): (1) Case of Double Abductor Paralysis in a Child; (2) Drawing of a case of Tubercular Ulceration of Larynx.—Mr. de Santi: A Man with a Pharyngeal Pouch.—Dr. J. M. Hunt (Liverpool): Drawing and Microscopic Specimen of Early Malignant Disease of the Larynx.—Dr. J. Horne: Dropping of Fluid (cerebro-spinal) from one side of the Nose. 7.45 P.M. Annual Dinner (Café Monico).

SOUTH-WEST LONDON MEDICAL SOCIETY (Town Hall, High-street, Wandsworth).—8.30 P.M. Mr. H. Marsh: Studies of Diagnosis in Difficult Cases, with illustrations.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8.30 P.M. Pathological Evening. Mr. Openshaw: Uterine Fibroid removed by Abdominal Hysterectomy.—Mr. Targett: Carcinoma of Body of Uterus.—Mr. F. J. Smith: Large White Kidneys. Other specimens will also be shown.

THURSDAY (14th).—SOCIETY FOR THE STUDY OF INEBRIETY (11, Chandos-street, Cavendish-square, W.)—4 P.M. Paper: Mr. J. J. Pitcairn: The Prison Treatment of Habitual Drunkards. Mr. E. T. Aydon-Smith will exhibit specimens of Japanese Opium Pipes.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. Purcell: New Form of Intestinal Clamp.—Mr. Taylor (Birmingham): (1) Pan-hysterectomy by Kelly's method; (2) Sarcoma of Bladder. Annual Meeting.

FRIDAY (15th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-st., Cavendish-sq.).—8 P.M. Dr. Hamer: Age Incidence in Relation with Cycles of Disease Prevalence.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (12th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—Dr. Buzzard: Clinical Demonstration.

FRIDAY (15th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—Dr. W. S. Colman: On Case-taking.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 7th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 1	30·30	N.	46	45	57	47	45	...	Raining
,, 2	30·54	E.	35	34	42	42	34	...	Foggy
,, 3	30·41	S.	42	42	50	46	35	...	Cloudy
,, 4	30·13	S.W.	37	36	44	44	36	0·07	Cloudy
,, 5	29·95	S.W.	44	43	48	45	37	0·15	Raining
,, 6	29·71	S.E.	38	37	61	49	37	0·07	Cloudy
,, 7	29·70	S.E.	45	45	51	47	38	...	Foggy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

AN "INCANTMENT."

To the Editors of THE LANCET.

SIRS,—To the various interesting remedies for diseases favoured by the medical fraternity in former times which have been published in the correspondence columns of THE LANCET the following, extracted from Herr Heim's recently published "Incantamenta Magica Græca Latina," may be worthy of a place: "Ad febres. Morionis manum unam collige cum oratione dominica, tere cum aquâ frigidâ, bibe, probatum est."

I am, Sirs, yours faithfully,

Jan. 4th, 1897. JOSEPH OFFORD.

AN EXTEMPORISED ARM BATH.

MR. RICHARD SLOCOCK, of Goldwell, Newbury, Berkshire, writes to us that a galvanised iron vessel called a "seed lip," used for holding seed and carried by a man who is sowing, makes an excellent arm bath for use in cases of poisoned hands or arms. Its shape is adapted to that of the body; it is not too deep nor does the edge hurt the arm. It is kept in stock by country ironmongers.

"THE UNQUALIFIED ASSISTANT."

To the Editors of THE LANCET.

SIRS,—I had hoped to see ere this an answer to "Student's" plea for the unqualified assistant, which appeared in THE LANCET of Dec. 16th, 1896. But as none has appeared may I venture to write a few words on the matter? I presume that the great fundamental moral objection to the employment of unqualified assistants is the undoubted, and often proven, fact that these assistants hold themselves forth, and are held forth by their employers, as being duly qualified men. The fact that they have failed in their examinations or that they have not yet received the minimum of instruction which would entitle them to sit for examination is most carefully withheld. They are therefore impostors, only less guilty than those who make money by employing them. "Student" protests against the unqualified man being prevented from earning his living by practising the profession which he hopes to enter, but to which he does not belong, and asks, "In what other profession in the world does such a state of things exist?" I venture to reply, "In every other profession." If a man took a curacy without having been ordained what does "Student" think would happen to him? If a law student acted as a solicitor without really being one he would certainly find himself in prison before very long, and "imagination boggles at" the idea of the fate that would befall the man who, not being a barrister, should assume wig and gown and "address the Court" in any but his own cause. Lastly, if a man presume to practise the "profession of arms" without due authority from some acknowledged potentate, he will find himself hanged as a murderer or shot as a filibuster. In medicine, and in medicine alone, Sirs, has the unfair competition of the unqualified man ever been tolerated. The law student may earn an honest pound or two by doing law clerk's work, the divinity student by, say, tutorial work; but neither may trespass one inch upon the field of the members of the respective professions. And so it should be with the medical student. Nobody objects to his acting as dispenser or to his keeping the books of some busy practitioner, but it is an outrage to the profession and a gross fraud upon the public that he should be allowed to visit and treat the sick. "Student," in my opinion, misrepresents the gentlemen who swell the ranks of the unqualified assistants. Here and there may, perhaps, be found one whose position is his misfortune, not his fault. But the very great majority of them are not worthy young fellows who, after a successful but all too brief career at a hospital, find themselves stranded through paternal indiscretions or disasters. They are mostly good-for-nothing idlers who, having dawdled away some eight or ten years pleasantly enough at a medical school, hear at last the just but terrible paternal fiat, "Earn your own living!"

I am, Sirs, yours faithfully,

Jan. 3rd, 1897. A PRACTITIONER.

M.B.—We do not consider the advertisement seemly, but hope that the medical men themselves are not responsible for it. The mistake in the description of the first gentleman named would seem to show that he had no knowledge of the matter.

ADVERTISEMENT.

WE understand from a correspondent that the following card has been publicly circulated:—

NORTH KENSINGTON DISPENSARY,
152, WALMER ROAD,
NOTTING HILL, W.

(Close to where the four roads meet: Walmer Road, Lancaster Road, Clarendon Road, and Silchester Road).

EXPERIENCED DOCTOR
At any Hour, Day or Night.

MINIMUM CHARGES.
(For Cash Down).

Midwifery...	10/6
Medicine	6*d.*
Medicine (3 times in a week)...	1/-
Visit	1/-
Visits and Medicine for a week	2/6

"Experienced Doctor" must know that it is unprofessional to press his claim upon the public in any way so as to attempt to undersell his fellow practitioners or detach their patients from them.

A WARNING TO MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me through your columns to warn the medical profession against an individual who is presenting cards bearing my name, and obtaining loans of a few shillings to, as he states, pay his fare home to Croydon, he having either lost his ticket or run short of money and he does not want to return to the office? He promises to repay the money next day but, of course, does not do so. I would point out that this person in no way represents me and is an impostor. Thanking you in anticipation,

I am, Sirs, yours truly,

WALTER MAYS,

Old Kent-road, Jan. 2nd, 1897. Cork Merchant and Manufacturer.

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"DISINFECTION OF BOOKS AFTER SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—My attention has been directed to THE LANCET of Dec. 19th, wherein "A. B. S." asks for information on disinfecting books used during an attack of scarlet fever. During the epidemic of small-pox in Sheffield in 1887 the Corporation Free Library Committee found that books were often taken from the public libraries for the use of persons suffering from small-pox. As a result the issue of books was stopped for a time to prevent, if possible, the spread of the disease through the circulation of books from the libraries. A sub-committee was formed, of which I was a member, to consider the subject. The committee decided, after experiments, to have constructed a sheet iron oven about two and a half or three feet square, with an inner and outer chamber and a space of two inches between them. Within the two inch space and on the bottom of the oven a circle of Bunsen gas burners was inserted, which heated the air in the space surrounding and interior of the oven to from 180° to 220° F. On the bottom of the inner chamber was placed a small vessel containing No. 4 Calvert's liquid carbolic acid; the heat dissipated the acid into fumes, which penetrated the leaves and the whole texture of the books previously placed into the oven in an open state, resting upon their own front binding in grooved recesses. The oven had regulating dampers, a thermometer to register the heat, with flues to pass off both heat and fumes as generated into an adjoining chimney. Neither the leaves nor the binding were injured, and the result was most satisfactory and believed to be effectual. Since that time all books belonging to the free libraries of the city found in certified infected houses by the medical officer of health are notified to the city librarian. All are disinfected by passing through the carbolic oven before they are again issued into circulation. The oven and its appliances can be seen at the Free Central Library, Sheffield.

I am, Sirs, yours faithfully,

Dec. 30th, 1896. A LATE MEMBER OF THE SUB-COMMITTEE.

Inquirer.—If our correspondent can prove his case he ought to have no difficulty in recovering his fee against one or other of the parties in the county-court. We are not so clear as to the nurse, unless our correspondent is liable to pay, and has paid, her.

Ignoramus will find the exact information he requires in the Students' Number of THE LANCET, published on Sept 5th, 1896.

". . . . A SIMPLE CHILD THAT LIGHTLY DRAWS ITS BREATH."

UNLESS, as we suspect is the case, the "infant phenomenon" hereinafter described be the offspring of the American reporter's brain, the "phenomenon's" parents deserve the sincerest pity. The following details are reproduced by our contemporary the *Globe* from the *New York Journal*:—

"A BOY SURGEON.

"Though less than five years old little Will Gwin knows the name of every bone in the human body, knows the location of the various organs, and talks learnedly of the most intricate surgical operations. He knows more anatomy than most medical students. And not only this, but he can wield the scalpel as deftly as many surgeons. The boy's father is a physician and the little one almost always accompanies him on surgical cases. He has frequently seen the human body dissected, and has watched the gleaming knives at their gruesome work with intense interest. Frequently he has been with his father when called to attend persons mangled by the electric railways in New Orleans and has exhibited a boy's keen interest at so novel an experience. Once, when the injured man had been placed under the influence of chloroform, the boy looked up at his father and said, 'Papa, does God make chloroform so that people can be fixed not to feel the knife when the doctor uses it?' Again, the little fellow placed his hand in one of the gaping wounds and told the doctors his idea of the injury that had been inflicted.

* * * * * * *

Dr. Howell B. Gwin, the boy's father, explains how it happens that the child comes to know so much about anatomy. Dr. Gwin says: 'In romping with my boy on the bed I used to amuse him by calling out some difficult name of a bone in the body and taunting him with not being able to repeat it. He very readily caught the words and, strangely enough, retained them without any effort. He then began to associate the name of the bone with its location, and it was not long before he knew a great deal of anatomy.'

* * * * * *

Not so very long ago this youngest of all surgeons paid a visit to New York and thoroughly inspected the larger hospitals there, paying particular attention to the cases of interest in the surgical wards. He also took a look at the hospitals of Philadelphia, Washington, Cincinnati, St. Louis, and of other cities."

After this we can but express our sympathy with "little Will's" parents and commend him to the notice of Dr. Ibsen as a specimen of the younger generation.

Fair Play.—The demand for an addition to the salary would be reasonable, but we are not aware that any legal decision can be quoted in its support.

THE PREVENTION OF THREAD WORMS: A QUERY.

To the Editors of THE LANCET.

SIRS,—I should feel much obliged if any of your readers would kindly give me a permanent remedy for thread worms in a little girl seven years of age who has suffered from them for two years. Ordinary remedies are of only temporary relief as they recur again and again.

I am, Sirs, yours truly,

Jan. 4th, 1897. PERSEVERE.

Subscriber.—Alabone, Edwin William, registered as Mem. R. Coll. Surg. Eng. 1870. His name and qualification were erased from the Medical Register on Nov. 16th, 1886, by order of the General Medical Council in consequence of his name having been removed from the list of Members of the Royal College of Surgeons of England. There is no one on the current Medical Register bearing the name.

NATIVE SURGERY IN NEW BRITAIN.

THE Rev. John A. Crump, Wesleyan missionary in New Britain, has described in the *Auckland Weekly News* some extraordinary surgical operations performed among the natives of that Polynesian island and asserts that they are followed by very satisfactory results. Fractures of the tibia, both simple and compound, are treated by cutting away the soft parts, and removing any splinters of bone. Then a piece of the green taqete stalk (Cordyline terminalis) about four inches long, and half an inch in diameter is forced into the central cavity of the upper part of the broken bone for two inches of its length. The limb is then violently extended, the lower part of the bone fitted on to the projecting taqete stalk, and the two fractured surfaces thus brought together. A piece of the midrib of the cocoanut leaf is then securely tied over the limb, and in a very short time the patient is about again. Mr. Crump was not successful in his endeavours to ascertain what became of the piece of stick inside the bone. After depressed fracture of the skull the scalp is incised with a piece of shell or obsidian and the fragments of bone are picked out, perhaps leaving the brain freely exposed; the wound is then closed and dressed with bruised leaves and strips of banana stalk, and in a month recovery is complete. Mr. Crump obtained possession of several skulls which had been treated in this manner, all of them showing evidence of the commencement of new growth.

R. T.—We do not know anything of any correction of our statement. At all events what we said was right, and any contradiction of it is entirely wrong. The name is *not* upon the current official roll of the profession.

MASSAGE OF THE EYEBALL BY A QUACK.

A MUNICH quack who was brought up as a tailor was recently prosecuted for having caused damage to a patient with detachment of the retina by his treatment, which consisted in practising massage on the eyeball. In defence two other quacks who styled themselves *Naturheilärzte*, "natural cure doctors," were called, and these gentry affirmed that massage was by no means contra-indicated in retinal detachments. The court, however, preferred to accept the opinion of two well-known ophthalmic surgeons that the tendency to loss of sight had been increased by the manipulations of the prisoner, who was accordingly sentenced to a month's imprisonment.

Baynham.—The matter will receive our immediate attention.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Scottish Highlander, West Lothian Courier, Woking Mail, Newcastle Chronicle, East Anglian Daily Times, Glasgow Evening News, Bradford Observer, Indian Engineer, Times of India, Lowestoft Standard, Pioneer Mail, Banbury Guardian, Scotsman, Liverpool Daily Post, Manchester Courier, Dewsbury Reporter, Speaker, Carlisle Journal, Preston Herald, Builder, Rochester Journal, Cheltenham Herald, Architect, Somerset County Herald, Worcestershire Chronicle, Leeds Mercury, Sussex Daily News, Leicester Post, Essex County Standard, Liverpool Courier, Yorkshire Post, Hampshire Telegraph, Wolverhampton Chronicle, Surrey Times, Darlington Times, Bristol Mercury, Birmingham Post, Western Morning News, Durham Chronicle, Barnsley Chronicle, Cornish Telegraph, Devizes Gazette, Stratford Express, Sanitary Record, Weekly Free Press and Aberdeen Herald, The Morning, City Press, Reading Mercury, Hertfordshire Mercury, The Sun, Local Government Chronicle, Mining Journal, Local Government Journal, Surrey Advertiser, Heckmondwike Reporter, Yorkshire Weekly Post, Daily Chronicle, Exmouth Journal, The People, Buckingham Express, Galignani Messenger, Kentish Mercury, West Middlesex Herald, Prescot Reporter, Keighley Herald, Jackson's Oxford Journal,* &c, &c.

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Communications, Letters, &c., have been received from—

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B.—Mr. C. Birchall, Liverpool; Messrs. Burroughs, Wellcome, and Co., Lond.; Mr. W. G. Burcombe, Lincoln; Miss Boulthee, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. E. M. Bowden, Lond.; Mr. G. P. Butcher, Plymouth; Mr. W. L'Heureux Blenkarne, Leicester; Birkenhead Medical Society, Hon. Sec. of; British Institute of Public Health (The), Lond., Sec. of; Birmingham General Hosp., House Governor of; Messrs. Brady and Martin, Newcastle-on-Tyne; Bank House, Greenlaw; Mr. F. E. Bennett, Lond.; Mr. W. F. Frook, Swansea; Surg. R. F. Bate, Deal; Mons. O. Berthier, Paris; Mr. L. A. Bidwell, Lond.; British Balneological and Climatological Society, Hon. Sec. of; Blackburn Infirmary, Sec. of.

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N.—Dr. James Niven, Manchester; Neurological Society of London (The), Sec. of.

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W.—Mr. H. C. Wilson, Lond.; Mr. R. R. Williams, Hastings; Messrs. J. Wright and Co, Bristol; Dr. H. Ward, Paignton; Miss Wells, Nagpur, India; Miss Walker, Lond.

Letters, each with enclosure, are also acknowledged from—

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T.—Mr. C. H. Taxler, Broseley; Dr. H. C. Thomson, Lond.; Dr. Lilian Trewby, Amaroti, Berar, India; Trident, Lond.; Thom, Lond.; Mr. J. Thin, Edin.

V.—Victoria Medical Society, Melbourne, Hon. Sec. of; C. S. Vines, Newport, Mon.

W.—Mr. C. E. Winckworth, Shefford; Messrs. H. J. and C. Wilkes Bros., Lond.; Mr. C. E. Whitcher, West Brighton; Dr. J. J. Welply, Bandon; Messrs. G. Waterston and Sons, Edin.; Mrs. Whitehead, Woolston; W., Barking; H. T. Woodd, Calstock; Dr. F. G. Wallace, Lond.

X.—X., Lond.

Y.—Mr. T. Yeomans, Lond.

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Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

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An Address
ON
STUDIES IN DIAGNOSIS, ILLUSTRATED BY DIFFICULT CASES.

Delivered before the South-West London Medical Society on Jan. 13th, 1897,

BY HOWARD MARSH, F.R.C.S. ENG.,
SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

GENTLEMEN,—In the daily routine of practice, whether in a hospital or elsewhere, there is only time for a careful examination of each patient and the selection of the treatment that is most likely to be efficacious; but on occasions of greater leisure—at such a meeting, for example, as the present—it may be useful to turn from individual cases to the subject of diagnosis as a whole and to inquire how it is that the mistakes which we all have to regret are so common as they are, and to endeavour to ascertain by what general considerations and rules of procedure they may as far as possible be avoided. When I received your invitation to read a paper this evening I thought it might be appropriate if I brought under your notice some studies in diagnosis illustrated by difficult cases. It need scarcely be said that diagnosis at the present day is more important than it ever was before, because upon the diagnosis formed will depend the treatment that is adopted, and treatment may involve very important operative procedures in the use of which it is highly desirable that no error should be committed.

1. *In some cases an accurate diagnosis is impossible, because the disease from which the patient is suffering is unknown; it has never been named, described, or even recognised.*—Doubtless there are still many such, just as a few years ago syphilitic affections of the joints, osteitis deformans, actinomycosis, and infantile scurvy were unknown. This source of failure in diagnosis steadily diminishes as a result of crucial clinical observation, laboratory research, and post-mortem examinations, but much remains to be done.

2. *Diagnosis may be practically impossible because the condition present is one which previous experience would not lead us to anticipate.*—This is illustrated by a remarkable case published by Mr. R. W. Parker.[1] Case 1 is that of a child twelve months old who, while being carried in the mother's arms, was attacked by sudden dyspnœa, as if there were a foreign body in the air passages. The mother, however, was sure that the child had not swallowed anything. Tracheotomy was performed, but gave no relief, and the child died in two hours. On post-mortem examination the symptoms were readily explained. An abscess had formed round some bronchial glands and had burst into the trachea just above its bifurcation, and through the resulting opening a caseous gland had slipped so as to project into, and almost occlude, the lumen of the trachea.

3. *Symptoms which would be characteristic, and which are generally present, may be absent.* Thus (Case 2) there is a renal calculus in the Museum of St. Bartholomew's Hospital of very large size. It was removed post mortem from a patient who had been in the hospital several weeks, but in whom no symptoms whatever suggesting renal calculus had been observed. In Case 3 a man aged sixty-seven years was recently admitted into St. Bartholomew's Hospital with "spontaneous fracture" of the right femur, which occurred as he was walking in a room. It seemed highly probable that the bone had been weakened by a new growth, but no enlargement could be detected at the seat of the fracture and no primary carcinoma could be anywhere found. He was in very feeble health and could take no solid food, but he swallowed fluid foods easily. He died from exhaustion in ten days. On post-mortem examination it was found that he had far advanced epithelioma of the œsophagus, yet, though he had been carefully watched, he had presented no symptoms whatever of this condition. He swallowed such food as he was able to take quite readily; there was no regurgitation and no pain. It may be interesting to mention that not very rarely, even in advanced epithelioma of the œsophagus, no difficulty in swallowing is present.

4. *The same symptoms may be produced by widely different conditions, so that the data for a differential diagnosis may be absent.*—This is illustrated in cases in which the question is whether the patient is suffering from stone in the kidney or tuberculous disease of that organ. (Case 4): In a young man aged twenty-three years the following symptoms were observed. Severe pain in the left lumbar region, extending down to the testis and the upper part of the thigh, and always aggravated by exercise, tenderness on pressure, blood and pus in the urine, and frequent micturition. In this case I believed that the patient probably had renal calculus, and one of the most sagacious physicians who have practised in London in recent years, and a surgeon of the highest authority in such cases, agreed with this view. But on exploring the kidney I found that the case was not one of renal calculus, but of tuberculous disease. Probably there is no other organ in the body the diseases of which present, by reason of the similarity of their symptoms, such difficulty of diagnosis as the kidney. Some years ago I met with the following remarkable case. (Case 5): A woman aged twenty-four years had the symptoms of renal calculus in the left kidney. When the kidney was exposed it was found to contain four or five small stones and to be extremely atrophied. It was therefore removed. A few months later the patient complained of severe pain in the right kidney and a small stone was passed with the urine. Soon after this her symptoms became much more severe. She had intense pain in the region of the right kidney, violent sickness, and faintness, and complete suppression, lasting for twelve, twenty, or even on some occasions for forty hours. On one occasion not a drop of urine came down into the bladder for fifty hours. This was clearly ascertained by the use of a catheter. After these periods of suppression she passed large quantities of urine mixed with blood. These attacks were often brought on by exercise. While she was lying in bed she was generally free from them. These symptoms were believed to indicate the presence of a calculus in the kidney, which became from time to time impacted in the orifice of the ureter. On two separate occasions the kidney was explored, but no stone was found. As the symptoms continued, and as two of the attacks had threatened to be fatal, it was determined once more to explore the kidney as thoroughly as possible. It was therefore exposed and opened and a long probe was passed down the ureter, but no stone could anywhere be detected. She died three days afterwards and on post-mortem examination it was found that she had fæcal extravasation, produced by rupture of adhesions around a former appendicitis. On examining the kidney it was found to be hypertrophied, but it structurally was perfectly healthy. The ureter was normal and no stone was present. It seemed clear, therefore, that the case was one of intense vaso-motor disturbance of the circulation, strongly resembling Raynaud's disease. The case was published in the Clinical Society's Transactions, vol. xxv., p. 195. In this instance the symptoms were completely misleading, and on looking back it seems difficult to see how the mistake could have been avoided.

In their early stage I believe it is not rarely impossible to distinguish between tuberculosis, osteo-arthritis, and syphilitic disease of the knee-joint; and in some cases even urethral arthritis affecting this joint may very strongly resemble tuberculous disease. (Case 6): A man aged twenty-six years was admitted into St. Bartholomew's Hospital with an affection of the knee of three months' duration. He was pale and thin. The joint presented swelling clearly mapping out the synovial membrane, which felt thickened and pulpy. Little or no fluid was present. The limb was flexed, the joint was painful and warmer than the other knee, and the muscles of the thigh were wasted. These appearances exactly corresponded with the view that the disease was tuberculous. It was found, however, that the patient had urethral discharge. The case was therefore treated as one of urethral arthritis, and in the course of two months almost recovery had taken place. Great difficulty is sometimes met with in forming a diagnosis between tuberculous caries of the spine and new growth, whether primary sarcoma or carcinoma secondary to primary disease elsewhere. The symptoms of caries and of new growth may be at first quite identical. (Case 7): Two years ago I saw a patient, aged forty-two years, with well-marked angular curvature in the mid-dorsal region. For five months she had been complaining of weakness of her back, gradually increasing difficulty of movement, and severe girdle pains. But the

[1] Transactions of the Clinical Society, vol. xxiv., p. 6.

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symptoms which she presented differed in no particular from those of tuberculous caries till a few days before I saw her, when her left leg was noticed to be paralysed. On examination it was ascertained that she had carcinoma of the breast, and on being questioned said she had known of a swelling in the breast for eleven months. There was now extensive disease of the glands of the axilla. She died three months later with secondary deposits in the lungs and other internal organs. I would venture to remark that in any instance of disease of the spinal column, especially in patients of middle age, the presence of severe pain which is not relieved when the spine is kept at rest should raise the suspicion that the case is one of new growth.

5. *It is important to observe that though the salient or obvious symptoms may be common to quite different conditions, yet if we go a stage further and look more closely we often find in other symptoms or features of the case, which had at first sight appeared trivial, evidence that will guide us to a correct conclusion.* For instance (Case 8) a child aged ten years is lame, walks on his toe, complains of pain in his knee, has limited movement of the thigh upon the trunk, pain after exercise, and wasting of the muscles of the thigh. Moreover, it is observed that his pain is relieved by rest. Now these are all symptoms that are present in a case of hip disease, but they are also the symptoms of disease of the lumbar spine attended with iliac abscess. We have to ascertain, therefore, from which of these two conditions the patient is suffering. On proceeding further we may find some alteration of outline or some stiffness of the lumbar spine, together with a swelling in the iliac fossa, and we may further ascertain that the enarthrodial movement of the hip-joint within a limited range is quite free. He has, therefore, not hip disease, but disease of the lumbar spine.

Again (Case 9), a child aged five years was suddenly attacked with pain in the left lower limb, extending down the thigh to the knee. The limb was flexed, abducted, and rotated outwards; the child screamed when the limb was moved and his temperature was raised. The case, in the presence of these symptoms, was regarded as acute hip disease, but this conclusion was quite erroneous, for on close examination it was found that the hip-joint was quite freely moveable, and this symptom showed that the joint itself was unaffected. The case was now regarded as one of acute anterior poliomyelitis, attended with pain and fever. The ultimate course of the case completely confirmed this view. Take another example. A man aged forty years (Case 10) finds that his shoulder gradually becomes painful, especially at night, and he is unable to lie on that side. The joint becomes so stiff that he cannot dress himself or put his hand into his trousers pocket. Any movement or jar is extremely painful. The muscles around the joint become markedly wasted. A diagnosis is formed that he is suffering from rheumatic disease of the shoulder-joint. On critical examination, however, it is noticed that within a limited range the enarthroidal movement of the joint is perfectly free and smooth. This test proves that the shoulder-joint itself is free. The patient, in fact, is suffering from adhesions outside the joint, which produce all the gross symptoms of disease of the articulation itself, and it is only when we go a stage further, and observe that enarthroidal movement within a limited range is free, that a correct conclusion is arrived at. This example is worthy of attention in reference to the cases which bone-setters may cure. For the manipulative treatment of these adhesions outside the capsule is very much the same as that which bone-setters often adopt.

6. *Some very grave disease may be present, the symptoms of which are very slightly marked and are completely obscured by those due to some other condition.* For instance (Case 11), a girl aged fourteen years, whom I was seeing for hip disease, was constipated and her mother gave her an aperient. This was followed by severe abdominal pain. The bowels did not act, but there was persistent vomiting, followed by great exhaustion, almost amounting to collapse. The eyes were sunken and the countenance indicated great distress. These symptoms strongly suggested acute obstruction such as might be produced by strangulation of a loop of the small intestine by a band. But as the abdomen was quite free from distension and nowhere tympanitic, and as no localised swelling could be felt it was determined to postpone laparotomy, for which every preparation had been made. A few hours sufficed to show how fortunate it was that this course was adopted. The child proved to be suffering from acute tuberculous meningitis. It was to this that the urgent sickness was due. The pain was mere griping from the aperient. The collapse was produced by the constant vomiting. This case was extremely misleading, for at first there were no cerebral symptoms whatever to be observed. The child had no headache and no photophobia, convulsions, strabismus, slow pulse, or irregularity of the pupils.

7. *The circumstances under which the symptoms are developed may render them extremely deceptive.*—Thus (Case 12) a girl aged five years had been suffering for many months with discharge from the right ear. This discharge had ceased three weeks before her admission into the hospital. When she was first seen she was suffering from severe pain in the head, alternating with periods of partial unconsciousness. There soon followed convulsions, starting in the hand, but spreading so as to become general. There was retraction of the head and also great restlessness. The previous history of the case suggested that an abscess in the cerebellum or the temporo-sphenoidal lobe in connexion with ear disease had led to meningitis. The question of trephining was discussed, but as the convulsions had become general and there was such marked retraction of the head the operation was postponed. The child died a few hours afterwards, and on post-mortem examination it was found that the ear mischief was quite quiet and that the symptoms depended upon intercurrent acute tuberculous meningitis.

8. Every surgeon is familiar with cases of *nervous mimicry, or neuromimesis.* A notable case was in St. Bartholomew's Hospital three years ago (Case 13). A girl aged seventeen years was admitted with, as it was thought, hip disease. She had been treated by weight-extension for several months. The limb was so much adducted that there were three inches of apparent shortening. As the deformity of the limb was so marked she was placed under an anæsthetic in order that a thorough examination might be made, and the limb placed without the use of force in as favourable position as possible for further weight-extension. When she was asleep, however, it was found that the limb passed into a perfectly normal position and was freely moveable. This patient perfectly recovered under massage and electrical treatment, combined with the moral control exercised by the sister of the ward.

But neurotic patients may entrap the incautious practitioner into some serious error. In a spinal case, for instance, the surgeon finding that the patient is obviously neurotic, and forgetting the fact that the presence of neurotic symptoms cannot be taken as any proof that tuberculous disease is absent, may come to the conclusion that no caries is present. (Case 14): I lately saw a woman aged twenty years who was said to have merely a neurotic spine and dyspepsia. She was undoubtedly highly neurotic. It was, however, found that there was distinct, though slight, angular curvature at the level of the sixth dorsal vertebra; that the spine was somewhat stiff; that coughing produced sharp pain; that she could not stoop easily; that the pain in the pit of the stomach of which she complained was increased by exercise and relieved as soon as she lay down. It was clear, therefore, that the case was not one of mere neurotic spine, but that the patient was suffering from early spinal caries.

9. *Sometimes it may happen that there is some element in the case which is not taken into account.* (Case 15): Thus a patient returned from Burmah convalescent from typhoid fever, but with periostitis of the ribs which had gone on to suppuration. The abscess was opened, scraped, and drained. The patient seemed to be doing perfectly well up to the third day, when the temperature suddenly went up to 104° F. and he had a severe rigor, such as might suggest septic absorption; but as he had been in Burmah he was asked whether he had ever had malarial fever. Answering in the affirmative he was put upon large doses of quinine. His temperature soon came down and no further unfavourable symptoms occurred.

10. One of the greatest and most embarrassing mistakes that can be made in respect to diagnosis is the omission to procure a skiagraph in cases of doubtful injuries of the skeleton, and other instances of which we are all aware, but which we do not always bear in mind in actual practice. I must not enter upon this question now, but when diagnosis is being discussed I feel that it ought, at all events, to be pointedly mentioned.

It would be easy to follow the subject of this paper further, but neither time nor your patience will permit me to do so. I will only add a hope that the cases related may serve to remind us all that the task of arriving at a correct diagnosis is often surrounded by grave difficulties: that the

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various sources of these difficulties must be kept in view: and that they can be overcome only by our being constantly on the *qui vive*; by taking a wide survey of all the possibilities of the case; by taking a full account of every symptom that is present—remembering that it is often the apparently trivial symptoms, or those which we are most apt to overlook and ignore, which are the most important—and by being careful to repeat our examination when circumstances may have become more favourable, and by revising our diagnosis, so as to make it certain that nothing is being forgotten or overlooked.

An Address:

IS IT IN THE BEST INTERESTS OF PUBLIC HEALTH AND OF PUBLIC SAFETY THAT THE PROPOSED PLAN OF SUPPLYING POORER WOMEN ONLY WITH MIDWIVES SHOULD BE OPPOSED;

AND, IF SO,

HOW ARE MIDWIVES TO BE DONE WITHOUT?

BY ROBERT REID RENTOUL, M.D. R.U.I.,

MEMBER OF THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION OF THE UNITED KINGDOM.

GENTLEMEN,—During the last five years very great discredit has been cast upon medical practitioners owing to the action of a few practitioners, who contend that the wives of the poorer and wage-paid classes should have no one to help them during their confinements but midwives. I refer to the four Midwives' Registration Bills. The first Bill was introduced into the House of Commons in February, 1890, by Mr. H. Fell Pease, M.P., who is now dead. Clause 5 of that Bill was so degrading in its proposals that I shall quote it. It proposed to enact as follows: "A person registered under this Act shall be entitled to practise midwifery in any part of England or Wales for gain, and from and after the first day of January, 1891, a person shall not be entitled to recover any fee or charge in any court for the performance of any midwifery operation or for any midwifery attendance or advice unless she be registered under this Act." This clause proposed to hand over all confinements—natural and abnormal—to the sole control of the midwife, and also attempted to empower her to perform "any midwifery operation" and to give "advice." Had it passed it would also have debarred medical practitioners from practising midwifery. Fortunately for the public safety this Bill was "talked out" in the House of Commons on its coming up for its second reading by Mr. J. R. Kelly, Mr. Brunner, Mr. Bradlaugh, and Dr. Tanner. When the gross proposals of this Bill had been pointed out its promoters introduced other Bills; in these they tried to limit the midwife to conducting "natural labours" only. But as they persistently refused to define the term "natural labour," or to provide any punishment for those who conducted labours other than natural these Bills were also vigorously opposed. All practical practitioners know that no labour can be definitely defined as "natural" until some hours or days after the labour is over; and, further, that no right-minded jury would fine or imprison any midwife whose sole offence was that she had saved the life of a mother and infant by performing some obstetric operation. In other words, they would refuse to place a penalty upon the saving of a life. I trust so would any practitioner. This proposal to supply the poorer classes with an inferior order of midwifery practitioners is retrograde, death-dealing, and injurious to health and crime-producing.

First, it is retrograde because it proposes we should revert to that death-dealing state of affairs which existed before and after 1858. You will remember that by the Medical Act, 1858, three separate classes of practitioners were recognised by Statute—(1) those educated and licensed to practise midwifery only; (2) those licensed to practise medicine only; and (3) those licensed to practise surgery only. Now I need not, when addressing an educated audience, state that to practise midwifery with the greatest protection and benefit to the public the practitioner so practising must not only be thoroughly educated in midwifery, but also in medicine and surgery. This is a truism. You will also agree that if you are called in to treat a pregnant woman or one recently confined, who is suffering from some fever or some disease of the heart, lungs, kidneys, or other organ of the body, you are a danger to that woman's life and health if you are educated in midwifery only, and not also in medicine and surgery. This great fact is due to the universal law that disease will recognise no boundary, and the affection which to-day is purely "medical" may to-morrow become a surgical complaint. The various puerperal maladies have a fearfully high death-rate, while the various midwifery operations require surgical skill of the highest kind, good nerve, and a quick perception. Some surgeons affect to smile at obstetric operations; chiefly owing to their ignorance. True, obstetric operations have often to be performed at a moment's notice and unattended by a demonstration of assistants and nurses and without much of the preliminary parade.

From these facts you will see that this threat to supply the poor with midwifery practitioners only partly trained in midwifery, and wholly untrained in medicine and surgery, is a distinctly retrograde proposal. The uneducated practitioner was denounced as a public danger by the Royal Commissioners on the Medical Acts of 1882 when they reported as follows: "Another grave defect of the licensing system lies in the fact that nearly all the medical corporations grant diplomas in medicine alone or in surgery alone. There is no point of medical reform on which there is so general an agreement as that the holding of a Licence ought to imply the possession of a complete qualification for practice—that is to say, the attainment of a sufficient standard in all the three essential branches of medical practice—medicine, surgery, and midwifery. It is our opinion that the holding of a Licence ought to be conclusive evidence of sufficient proficiency in medicine, surgery, and midwifery." Also, when in 1877 the Royal College of Surgeons of England reported to the General Medical Council regarding "women candidates for Licences in Midwifery" they did so in the following important words: "As regards any revival of the old system, whether it were for male or for female candidates, the President and Vice-President would report to the Council that in their opinion the objections to such a course are insuperable—not referring exclusively to the difficulty in which the College has been placed by the retirement of the examining physicians of its Board; but, looking also to its public interest in this matter, the President and Vice-President would remind the Council that the registrability of midwifery licences independently of qualifications to practise medicine and surgery has been brought under the notice of Her Majesty's Government by the General Medical Council as a serious error in the Medical Act ..... calculated to be injurious to the public interest, and an error which should be corrected by legislation." I need only add that this error has been corrected by the Medical Act, 1886, which provides that if any person wish to lawfully practise any part or branch of midwifery, or of medicine, or of surgery, such person must be fully educated in all these three subjects, although he practise only one of them. Yet, because a few practitioners connected with a small self-constituted and voluntary body—a subscription of 21*s.* being the sole necessity—known to its members only as the London Obstetrical Society, and having no more status than any one of the hundreds of medical societies throughout the country, have sold over £1300 worth of unauthorised "diplomas" to midwives, and this, too, in direct opposition to the requirements of the Medical Act, 1886, we have been asked to allow this society to make legal its illegal conduct and to support a Midwives Bill. Is it little wonder that with such a degrading example we should lately have had some herbalists establishing a "General Council of Safe Medicine" and selling "diplomas"? Fortunately in 1876, owing to the resolute action of Dr. Robert Barnes, the Royal College of Surgeons

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of England ceased to grant their single qualification in midwifery. But when this College did so—to the deep disgrace of the practitioners forming the Obstetrical Society, be it recorded—this society took upon itself to take up the cast-off clothes of the College and to grant these single midwifery diplomas—a downgrade example which, I rejoice to say, neither the Irish nor the Scottish Obstetrical Societies have followed.

Secondly, the proposal to establish a partially trained class of midwifery practitioners for the poor only is death-dealing and injurious to the public health. If the proposal were not so very serious it would be amusing to read some of the remarks made regarding the supposed triviality of a confinement. Fortunately, statistics throw a deep and serious cast over their contention. During 1893 the deaths of 569,958 persons were registered in England and Wales. Of this number at least 5950 deaths were due to puerperal fever and the accidents of childbirth. From this it follows that 1 death in every 95 of the total deaths registered was due to a confinement—to an act which some evidently extremely ignorant persons are pleased to term "quite a natural occurrence." From statistics which I have collected from the annual reports of the Registrar-General of births and deaths I find that from 1871 to 1893 the appalling number of 48,375 women died from puerperal fever and 50,211 from the accidents of childbirth; or a total of 98,586 women, all in the prime of life. Now, if these fearful statistics related to deaths in mines or some other industrial callings, we should have questions asked in Parliament and a Select Committee at once appointed to inquire into the causes which bring about so great a loss of young lives. But woman and her offspring would appear to be a glut in the market and so they are left to perish; while others, refusing to needlessly sacrifice their lives, refuse to have any children. Unfortunately, the above high death-rate falls far short of the actual number of maternal deaths. McClintock said that one-fourth of the deaths of women after confinement were not recorded. Newsholme in his work upon "Vital Statistics" makes similar statements; while the Registrar-General in his fiftieth annual report says, "At the same time, it must be admitted that child-birth mortality is, in all probability, very much understated in our official returns." This is largely due to the fact that practitioners refuse to carry out the rule which provides that when the mother's death occurs within one month after confinement the fact should invariably be stated in the certificate of the cause of death. Some years ago Matthews Duncan startled the profession by producing statistics which proved that one woman in every fifteen died in her first confinement. This is a statement of his which has never yet been proved false; in fact, if Duncan was noted for one thing more than another it was for his love of truth. Again, if at least 5950 women died during 1893 it also follows that *every day* in England and Wales not less than 16 women lose their lives in childbed. Sixteen lives lost every twenty-four hours on an average, and this, too, in performing what some faddists—dangerous faddists—are pleased to refer to as "a perfectly natural act"! Did 16 persons lose their lives each twenty-four hours from football, bicycling, or some other "perfectly natural act," we should soon have the daily papers vigorously and persistently calling attention to this sad and needless loss of most valuable lives. You will note I do not refer to the number of women who lose their lives during pregnancy nor do I more than refer to the sick-rate and maimed-rate which follow confinements. But do not the many women whose health has been crippled in a confinement, who are physical wrecks, and who are incapacitated from attending to their household duties, show to us that the number of disasters which fall short of death after childbirth are far too numerous? Do not the large number of hospitals devoted to the treatment of women's complaints often emphasise the fact that the illness dates from the confinement? It is surely for each of us to try to lessen this great maternal death- and sick-rate following confinement. I have tried to do my small share by preventing, for so far, the passing of a Midwives Bill. I have also induced the General Medical Council, after working from 1891 to 1896, to withdraw its death-dealing and disease-producing rule, which recommended to the medical examining bodies that a student who had personally conducted only five confinements should be admitted for his final medical examination—a recommendation which Sir W. Foster described as being the subject of scoff and satire. In 1896 the General Medical Council altered this recommendation, and now each student must personally conduct at least twenty confinements before being licensed. I have further induced the General Medical Council to take up the important question of the granting of midwifery certificates which pretend to empower women to act as midwives. I have referred, for so far, to this proposal in the manner by which it would affect the life and health of women. But how does it threaten the lives and health of infants? When we think of the many causes, quite distinct from the purely obstetric, which lead to premature birth, and when we know that anyone who wishes to be able to not only detect but to treat such causes must have a very complete training in medicine as well as in midwifery, we must surely recognise the absolute necessity for the practitioner of midwifery to possess a complete knowledge of all the three branches of physic. If we fail to detect either the maternal or fœtal causes of premature birth we shall not only frequently lose many infants, but, what is still worse, we would fail to recognise and remove those medical causes which produce disease in future infants. Again, it is a recognised fact (one stated by Dr. K. Grossman) that at least 30 per cent. of the total blindness which affects persons in this country is due to infant ophthalmia. This is a disease which calls for medical training upon the part of the obstetric practitioner. I need not enlarge upon these facts to show that the practice of midwifery is most intimately bound up with our public health—that it brings us into very much closer relationship with the public than do the practice of medicine or surgery; that it is of the greatest importance from the national point of view that pregnant women and also infants shall have the very highest and not the very lowest medical skill; that in this respect National Health means National Wealth, and that it is contrary to the spirit of this country to supply the poorer people with a class of inferior midwifery practitioners—a class who would on no account be employed by the well-to-do. No doubt those few practitioners who are at the beck and call of some society ladies, or who put money in their pockets by the sale of bogus midwifery diplomas, will plausibly assert the opposite. But if it were suggested that we should register bone-setters and "medical" herbalists—the co-equals of the midwife—and empower such to treat "simple" medical and surgical patients, some would, perhaps, more readily see the gross absurdity of their proposals to register and qualify midwives to treat "simple" cases of midwifery.

Thirdly, the proposal to establish a partially trained class of midwifery practitioners for the poor only is a crime-producing proposal. When the first Midwives Bill was introduced I recognised that it would constitute a great danger if midwives were given statutory power to issue and sign certificates of the fact and cause of stillbirth or of the cause of maternal deaths. I then wrote to a number of burial boards and found that at seventy-one such cemeteries 6321 supposed stillborn children had been interred during twelve months. Sir C. Cameron, M.P., in the House of Commons called the attention of the President of the Local Government Board (Mr. Ritchie) to these figures and asked for a return. This Parliamentary return showed that during 1889 no less than 17,335 supposed stillborn children had been interred in such burial board cemeteries. No evidence is called for to show that these infants were really stillborn. In this respect it is to be remembered that it is not uncommon to bury infants as "stillborn" who have died some hours or days after birth. You are aware that one of the chief causes of stillbirth is delay in the progress of the confinement; and that if midwives are to be employed because their charges are lower than medical men it follows that midwives will refuse to increase the charge by calling in a medical man. In fact, we might make a rough rule, as follows—that the number of healthy infants stillborn will be about equal to the number of times upon which the forceps and turning should be used.

As a crime-producing factor we must also refer to the large number of illegitimate births which occur in this country, and also to the fact that the proportion of illegitimate stillborn infants is very much greater than among legitimate infants. From 1871 to 1893 no less than 1,062,618 illegitimate births were registered in England and Wales. This shows there is a very large field open for the criminal stillbirth business as well as for the abortion-monger—a business which is on the increase. Tons of abortion drugs are swallowed each year by married and unmarried pregnant women, while the daily and "religious" papers—to the

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disgrace of their proprietors be it said—teem with cures "guaranteed to remove all obstructions." No practitioner of any number of years' standing fails to be requested by some man or woman to kill the infant in the womb, while the number of women, mostly midwives, who keep certain "herb shops" is greatly upon the increase. When we consider these grave facts; when we remember how readily a life may be taken without the danger of this being detected; when we know that only those present at a birth can tell whether the infant was or was not legally born alive, we can recognise the great truth which is contained in the statement of Dr. R. Barnes in his letter to the *Times* upon this question when he said: "There is no department of medical practice in which so many moral, social, legal, and criminal complications arise as in midwifery." Are we, therefore, to hand over this great and important branch of the practice of physic to semi-educated persons, whose poverty, if not their will, would press them to perform illegal operations? Is the Medical Act of 1886 to be repealed at the bidding of a number of faddists, and is the practice of midwifery to be divorced from that of medicine and surgery? In the interests of the public health, in the interests of women and children, and in the interests of a profession which must have a real practical education and which must not be steeped in poverty, if it is to keep its place among moral and learned bodies, I have contended, and shall continue to contend, that midwifery, medicine, and surgery are a sacred trinity which must not be dissolved.

Sir J. Paget has shown, in his address to the International Health Congress in 1884, that the people of this country, and within the ages of fifteen and sixty-five years, lose at least 20,000,000 of weeks' work each year owing to sickness, and that this, calculated at £1 per week, means a loss of £20,000,000 each year. A very great amount is lost through sickness and death of confined women and of infants—a fact which is shown by the premiums placed upon married women's lives by insurance companies and by the inability of a large number of friendly societies to admit women.

In October, 1896, Sir W. Priestley, M.P., when delivering the winter opening address to the students of the Liverpool University College, made some very glaring remarks upon the number of women attended by midwives, the number of midwives, and the maternal death rate. First, he said there were from 10,000 to 15,000 midwives in England and Wales. This is far from the fact, because the 1881 census shows that there were only 2800 midwives! It does seem unaccountable that the supporters of midwives' registration cannot agree among themselves as to the actual number of midwives, because only a few weeks after his address (Nov. 11th, 1896) Miss C. Ellis read an address before a Leicester meeting of the Women's Liberal Association, when she stated there were only 4500 midwives in England and Wales, and that these conducted 450,000 confinements each year, no less than 3000 of whom died each year! Thus we have the figures, 2800 4500, and Sir William Priestley's 15,000! Who is right? Secondly, Sir William Priestley said that midwives attended 500,000 confinements each year. Let us look into this very startling assertion. During 1894 there were 890,289 births registered in England and Wales. In the same year there were 21,055 registered practitioners practising in England and Wales; therefore, according to Sir William Priestley, each practitioner conducted on an average only eighteen confinements each year, or a little over one per month. Any established practitioner can at once detect the absurdity of his mythical assertion. Again, if midwives conduct 500,000 confinements each year this gives each midwife a maximum on an average of thirty-three confinements each year, or only about three each month. From these latter figures we can further deduct the most instructive fact that a midwife with about three confinements each month, and obtaining a fee of 10*s.* for each, or 30*s.* a month, could not make a fair and honest livelihood among the poorer classes alone—she would have to act among the well-to-do. Thirdly, Sir William Priestley gravely asserted that women delivered in hospitals are much safer and less exposed to danger than those delivered in their own homes.

Unfortunately, I had, when giving evidence before the Select Committee of the House of Commons, to show how sadly unreliable and wide of the truth these hospital statistics are. I pointed out that in most lying-in hospitals (*a*) all unmarried women are rigidly excluded, thus keeping out the illegitimate class, who have an exceptionally high death-rate; (*b*) that in others, those women pregnant for the first time are excluded, thus shutting out those who give the highest death-rate of all—1 in 15; (*c*) that women who had no child living were refused help, thus excluding those malformed or who had some maternal disease which had caused the infant's death; (*d*) that a large number of women leave the lying-in hospital within from seven to ten days after confinement, and are afterwards lost reckoning of; (*e*) that confined women attacked with fever, &c., are removed from the lying-in to a medical or surgical ward or to a fever hospital and are thus lost sight of; (*f*) that the rule of the Registrar-General is frequently ignored which requires that when a woman dies within thirty days after her confinement this fact should be stated in the certificate of the cause of death; and (*g*) that when lying-in hospitals have a low death-rate this is due altogether to the fact that medical practitioners are called in to assist by operation, &c. It is a great pity when Sir William Priestley lends himself to the circulation of any statistics which cannot bear one moment's honest criticism. Medical and surgical statistics are frequently scoffed at, and I think any practitioner who lays his profession open to public contempt should be severely dealt with. Every intelligent practitioner knows that we have more than sufficient practitioners with their assistants and students to conduct all the confinements in this country. In 1883, there were, on an average, 57 births to each practitioner; in 1893, 44; and in 1894 only 42 to each practitioner, or not one per week. Moreover, the birth-rate is steadily falling each year. It is decreasing, while the number of practitioners is increasing—or as the General Medical Council in their Fourth Statistical Report, 1886, states:—"The net increase of the profession in England during the quinquennium ..... was not less than 826 beyond what was requisite to keep pace with the population, showing an annual excess above average requirements of more than 150."

It is quite evident, therefore, that Sir William Priestley has been misled by being supplied with very fallacious statistics. Not only do the above figures show this, but I may further mention that in 1895 the Honorary Secretary of the "Affiliated Benefit Nursing Association" sent a circular letter to sixty-two districts situated in agricultural localities in many counties. The replies from the local secretaries showed that 779 women had been confined, and that of this total, 629 women had engaged a medical practitioner for their confinement; 29 sent for a practitioner not previously engaged; 32 were managed by a cottage nurse alone; while only 26 had a midwife. Do these figures bear out Sir William's wonderful statistics? Perhaps he is not altogether an impartial authority, because, not only was he chairman of a small committee of the Royal College of Physicians of London which reported to the Medical Council in favour of the registration of midwives (this being fortunately neutralised by the statesman-like report from the Royal College of Physicians of Ireland against registration), but because in his address above referred to he says: "The medical profession should be on its guard against agitators, whether it be on medical defence, midwives bills, or direct representation of the profession." Further, when in 1876 Dr. R. Barnes refused to continue to act as an examiner at the Royal College of Surgeons of England in the granting of the single licence in midwifery his co-examiners, Sir William Priestley and Dr. A. Farr, were also pressed to resign. Why, therefore, does Sir William Priestley place himself in this ambiguous position of having refused to grant licences in midwifery at the College, while, on the other hand, he insists upon backing up a few practitioners outside the College who privately grant these licences in midwifery? Is consistency neither a virtue nor a necessity among us all? Surely any practitioner, even one who has never been known to hand over one of his well-to-do patients to a midwife, must recognise that this country's and her colonies' success depend very largely upon population and that, if it be necessary, the public rates must pay for proper attention to pregnant women of the wage-paid and poorer classes, just as now fever and workhouse hospitals are supported by rate aid. If half of the total women confined (445,144) are unable to pay £1 each for a medical practitioner during their their confinements, this would mean a public rate of only 1*s.* 6*d.* per annum upon each head of a family in England and Wales.

I shall next discuss the question—Is it in the best interests of the public health, and of the public safety that the proposed plan of supplying poorer women with midwives, should be opposed; and if so, how can midwives be done without? I am strongly of opinion that the poorer classes can do without midwives. I have shown that the public health and

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the public safety would be improved if every woman in her confinements were provided with a medical practitioner and a common-sense nurse. Long ago midwives, bone-setters, and medical herbalists may perhaps have had their uses, but now there is ample provision for all pregnant women of the poorer classes, by means of the Poor-law medical service, lying-in hospitals, maternity clubs, and provident dispensaries, and practitioners who accept small fees varying from 4*s.* to 15*s.* I shall refer in some detail to those means by which every pregnant woman belonging to the poor and to the wage-paid classes can now, with the greatest facility, secure the services of a medical practitioner and a practical nurse during her confinement. These conditions being in existence there will be no necessity to describe vague proposals.

I. *The Poor-law Medical Service.*—Articles 182 and 183 of the order of the Poor-law Commissioners of July 24th, 1847, are as follows (they refer to the subject of extra fees for attendance upon midwifery poor-law patients): "The cases in which any medical officer, either for the workhouse or a district, shall be called on by order of a person legally qualified to make such order to attend any woman in, or immediately after, childbirth, or shall under circumstances of difficulty or danger without any order visit any such woman actually receiving relief or whom the guardians may subsequently decide to have been in a destitute condition, such medical officer shall be paid for his attendance and medicine by a sum of not less than 10*s* or more than 20*s.*, according as the guardians agree with such officer." "Provided that in any special case, in which great difficulty may have occurred in the delivery or long subsequent attendance in respect of some puerperal malady or affection may have been requisite, any district medical officer shall receive the sum of 40*s.*" This humane order (a copy of which may be obtained from the Local Government Board, London) is in full force in many unions of England and Wales; it does not apply to Ireland or Scotland. In some unions, such as Liverpool, the medical officers have been "contracted out" of this order by the guardians, although such action by the guardians is distinctly illegal. I regret that any practitioner should be so destitute of common sense as to sign such a contract. Why should he lower a public and life-saving order as this to a purely personal item? I think before doing so he should have considered those who come after him and of the evil results likely to follow when other guardians adopt his standard for their guidance. Before doing so such practitioners should have called their local brethren together in council and asked them for their advice. Instead of this existing rights have been betrayed and surrendered, an evil precedent has been established—an illegal precedent which, I would suggest to those who have made it, should at once be set aside by their giving notice to the guardians (having first obtained the support of the local profession) that after a fixed date they will not be bound by it. I am glad to say that I know of guardians who pay not only their district but their workhouse medical officer the fee of 20*s.* for conducting a natural labour and not the minimum fee of 10*s.* I have been told that some medical officers abuse this order by using instruments too often so as to secure the fee of 20*s.* This is one of those vague charges which any uneducated person can make and without the slightest proof. It has been suggested to me that a uniform fee of 20*s.* should be paid for each confinement, whether natural or abnormal. I would urge, on the other hand, that the fee should be uniform for all kinds of labour and that such fee should be 40*s.* I am fully convinced that if Poor-law medical officers will exert themselves the Poor-law medical service can be made the supreme medical service in this country. The days when it was preached, and unfortunately practised, that it was a disgrace for any poor woman out of work to ask for help from the Poor-law in her time of trouble and trial are, thank God, gone, and gone for ever. Our Poor-laws, especially as they affect the sick poor, are becoming more humane and more sympathetic each year. Thinking men are recognising the fact that this question of looking after the poorer women during confinement is of national and not of purely personal importance. Our fleet must be manned, our army must be recruited, our colonies must be populated, and the loss through death more than made up. There is therefore a national reason, and it is one which has received but scant attention, why we should take extreme care of what some unthinking persons term the "surplus population" and the "residuum."

The various reports lately published relating to the sick poor have done much good. By the Medical Relief Disqualification Act, 1885, it is enacted that—"When any person in the United Kingdom receives for himself or for any member of his family any medical or surgical assistance or any medicine at the expense of any poor-rate" such person shall not be deprived of his municipal or Parliamentary vote. Section 4 of this Act defines what is meant by "medical assistance" or "surgical assistance." As it does not specifically mention the words "obstetric assistance" I communicated with the Local Government Board and asked if the Board would hold that these words included "obstetric assistance." Under date of Jan. 10th, 1896, the Board replied as follows: "It seems to the Board that the attendance of a medical practitioner in cases of midwifery at the cost of the poor-rate may properly be considered medical attendance within the meaning of the Medical Relief Disqualification Act, 1885." Does it not seem strange that a British Parliament up to 1886 considered it a crime, punishable with disfranchisement, for a working man to suffer from an illness which by placing him out of work compelled him to ask for Poor-law medical relief for himself or his wife? Many have no idea of the large number of women confined under the Poor-law medical service. Sir F. Mouatt, late Local Government Board inspector, in 1881 delivered an address in which he showed that during the ten years 1871 to 1880, no less than 87,726 women were confined in 644 workhouses in England and Wales. These figures do not include those confined outside the workhouse but under the district Poor-law medical officers; therefore on an average 8772 confinements occurred in the workhouses each year, and these calculated at £1 each would cost the poor-rate only £8772 per annum in fees to their medical officers—8772 infants for so small an expenditure! I am at present engaged in trying to induce some member of Parliament to move for a return showing the total number of Poor-law confinements, &c., which occurred last year in the United Kingdom. I think the above facts go to prove that with the existing arrangements of our Poor-law medical service, and without establishing any partially educated midwifery practitioners, we have now the means by which all poor pregnant women can be supplied with fully-educated medical practitioners.

But it may justly be asked, How are these poor women to be nursed? The present in-door Poor-law patients have nurses. In connexion with those confinements which occur in the district Poor-law service I would earnestly call your attention to the General Order of the Local Government Board, Jan. 27th, 1892 (No. 26,978), which relates to the appointing of district nurses by boards of guardians. This order is of the greatest practical importance and I shall quote its chief provisions. (Copies may be obtained from the Local Government Board, London.) Article 1.—"The guardians of the poor of any union or separate parish in England or Wales may, from time to time, as they think fit, with our approval, appoint one or more persons to act as nurse or nurses to the sick poor relieved by the guardians out of any workhouse, such persons to be termed district nurses.' Article 4.—"The duties to be performed by a district nurse shall be: (1) To attend duly and punctually as a nurse upon any poor person or persons in receipt of medical relief when directed by the guardians or upon receipt of a written or printed order from any relieving officer, in any case in which such officer may be authorised by regulations to be prescribed by the guardians to give such order; (2) to obey any directions of the district medical officer in attendance upon any poor person in regard to the nursing and treatment of such poor person." Article 5—"No district nurse shall undertake the duties of a midwife." This order has been sent by the Local Government Board to each board of guardians in England and Wales. I regret to find that it has not been discussed by all medico-ethical societies and that Poor-law medical officers have failed to request the guardians to put it into force. Some guardians, I am told, instead of appointing such nurses subscribe a stated sum to nursing associations in order to obtain the services of their nurses.

Does it not seem strange that all guardians do not put these two life-saving and health-saving orders of 1847 and 1892 into active operation? I think it is the duty of each medico-ethical society to take such important subjects up, to go as a deputation to their board of guardians with the view of inducing them to adopt these two orders, and, further, to see that a number of their members are elected as guardians. No doubt some guardians, caring more for the

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Poor-rate than for the health of the poor whom they are appointed to "guard," opposed these two orders. This was the case at Leicester, when in 1895 the guardians there appointed a midwife to the place and to perform the duties of their district medical officer in confinement cases. Fortunately, the Local Government Board must confirm or reject the appointment of such persons. The result is that the following important letter was sent to the Leicester guardians:—

"Local Government Board,
"Whitehall, S.W., April 15th, 1895.

"SIR,—I am directed by the Local Government Board to advert to your letter of the Feb. 28th informing them of the appointment of Miss Masters, a fully trained certificated midwife, to devote the whole of her time to the parish midwifery cases in the Leicester Union, at a salary of £65 per annum. The Board, having given the subject their careful consideration, direct me to state that they can only recognise Miss Masters as a midwifery nurse on the understanding that she must in all cases act under the direction and supervision of the medical officer, who must still be held responsible for all cases and who must visit the cases himself.

"I am, Sir, your obedient servant,
"W. E. KNOLLYS, Assist. Sec.

"T. Mansfield, Esq., Clerk to the Guardians of the Leicester Union, Leicester."

The result of this letter now is that the guardians have been compelled to do their duty to poor pregnant women. Naturally, the Local Government Board recognise a time might come when some low-class practitioners would start selling diplomas in medicine and surgery as well as in midwifery, and that some guardians might, in their desire for rotten cheapness, appoint bone-setters and herbalists to look after the sick poor when suffering from surgical and medical illnesses.

Following the example of Leicester, the Peterborough guardians on Nov. 12th, 1895, adopted the following resolution and sent it to all the guardians in England and Wales asking them to adopt it. It is as follows: "That the members of the board are of opinion that it is desirable that boards of guardians should have the discretionary power of appointing duly qualified midwives for attendance at childbirth in place of the district medical officer, subject to the condition as laid down in the Poor-law Board's official circular No. 88." I may mention that there is no such circular. However, the wording of the resolution shows the real meaning of the midwives' agitation—to dismiss medical officers and to place midwives in their stead. It is evident that these incapable Leicester and Peterborough guardians of the poor, prompted by a few society ladies who have been attempting to foist a so-called Midwives Bill upon Parliament, attempted to do an illegal act and one most unworthy of their official position. To their evil influence we may truly attribute the action of the committee of the Liverpool lying-in hospital, which dismissed their visiting medical staff and appointed a midwife to take their place—an action which, I am glad to say, the practitioners of Liverpool, led by Dr. W. M. Banks, resented with such contempt that the busybodies forming this committee gave up the fight and reinstated the staff. An action such as this shows that we must always depend upon local effort only, and that we must not look to central bodies in London. Decentralisation is the order of to-day, and local effort alone can bring success.

In connexion with the great powers which guardians possess of supplying not only obstetric, but also medical and surgical treatment to the poor, I shall digress for a few minutes so as to call your attention to a most interesting action taken lately by the Whitechapel Board of Guardians, London. It was found in that union that some poor people in sudden illness died before an order from the relieving officer could be obtained. Therefore these guardians wisely sent the following letter to all medical practitioners resident in their union:—

"DEAR SIR,—I am directed by the board of guardians to state that, in the event of your being called to a case of urgent sickness of a destitute person within the area of the Whitechapel Union, under the circumstances of the attendance of the district medical officer not being immediately available, they will be prepared to pay you a fee for one visit and medicine, according to the following scale, upon condition that notice is given to me by post or otherwise within twenty-four hours of the time of such visit. Scale of fees: From 10 P.M. to 8 A.M., 7s. 6d.; from 8 A.M. to 10 P.M., 3s. 6d. The present arrangement being experimental I am to add that it will extend only to the 31st of December.—Yours faithfully,

"July, 1895." "W. VALLANCE, Clerk.

I consider this a good plan for supplying destitute persons in urgent sickness with one visit and medicines. It resembles the "Night Medical Service of Paris," a full description of which will be found in my book, "The Reform of our Voluntary Medical Charities." Mr. Vallance informs me that he leaves it absolutely to the practitioner called in to decide whether the patient is actually "urgent" and "destitute." I hope each medico-ethical society will bring this plan before their guardians of the poor, with the view of inducing them to adopt it, if only for a few years' trial. The Whitechapel guardians, in order to be thoroughly certain of their position, asked the Local Government Board for their advice, when the Board replied as follows:—

"Local Government Board, Whitehall, London, June 6th, 1895.

"SIR,—I am directed by the Local Government Board to advert to your letter of the 13th ultimo, and in reply to your inquiry upon the subject of medical attendance in urgent cases of sickness, &c., among the poor, to state that the guardians are empowered, by Section 2 of the 11th and 12th Vict., Chap. 100, to pay for any medical assistance rendered to any poor person, by reason of any accident, bodily casualty, or sudden illness, although no order shall have been given by them or their officers or overseers; and the Board considers that it would be lawful for the guardians to inform medical practitioners in the union that they would be prepared to make payments under the powers so given to them in cases coming within the terms of the Section above referred to, stating at the same time the amounts which they would be ready to pay for such assistance.—I am, &c.,

"W. E. KNOLLYS, Assistant Secretary.

"W. Vallance, Esq., Clerk to the Whitechapel Board of Guardians."

Another improvement which might be effected in medical Poor-law administration is that to which Mr. Colin Campbell has called my attention in his union—that of Saddleworth, Yorks. They have adopted an enlightened system; in it all the medical practitioners resident therein may be appointed Poor-law district medical officers. At present four local practitioners act as such. Their appointment is made by the guardians and submitted for confirmation to the Local Government Board. The patient, on obtaining an order from the relieving officer, selects whatever practitioner he or she wishes. Each order carries a payment of a fee of 7s. for each case of illness, no matter whether it be for extracting a tooth or for treating a case of pneumonia. A "case" of illness is defined as one which does not last for more than three months; if it does, then another 7s. is paid to the medical officer. Mr. C. Campbell states that the advantages of such a plan are to the poor very marked. I therefore hope each medico-ethical society will bring this plan before its local board of guardians. By the Act of George III., Chap. 59, 1819, and by the Poor-law Act, 1834, guardians are empowered to grant relief on loan to the poor and to attach their wages in repayment. In this way the guardians can check abuse and at the same time help the genuine poor.

If guardians and Poor-law medical officers will adopt the above suggestions, and if we can have Poor-law infirmaries opened for the clinical instruction of senior students in practical obstetrics, &c., nothing but good will result. By Section 29 of the Metropolitan Poor Act, 1867, it was provided that students could be so educated. Unfortunately, this section was repealed by Section 20 of the Metropolitan Poor Amendment Act, 1869. Neither, however, apply to the provinces. Since 1886 the Cork Union Infirmary with its 1200 beds has been opened to students. In 1888 the Select Committee of the House of Lords upon Poor-law relief strongly urged the opening of these infirmaries, while the Select Committee of the Lords upon Metropolitan Hospitals in 1892 reported similarly. By the Poor-law Act, 1889, Section 4, the London fever hospitals under the Metropolitan Asylums Board may be used for the education of students, while the Galway Hospitals Act, 1892, makes similar provision. If to this it were provided that the visiting medical staff of the workhouse infirmaries were made to include several practitioners the inmates would benefit.

At the Birmingham Workhouse Infirmary there is one visiting physician and one surgeon, one senior and two junior assistant resident medical and surgical officers, and one resident clinical clerk. I feel I have proved that by a proper working of our poor-law, by means of *(a)* each board of guardians adopting the extra midwifery fee order; *(b)* by adopting the order relating to the appointing of district nurses; *(c)* by appointing all the practitioners established within the union as district medical officers; *(d)* by their paying a fee of seven shillings opposite each case of illness; *(e)* by adopting the scheme of the Whitechapel guardians relative to the payment of one fee to any practitioner for a visit to an urgent and destitute case of illness; *(f)* by opening the Poor-law infirmaries for the education of students; and *(g)* by appointing a large staff of visiting practitioners to the infirmary, we now possess the means, and the very ample means, of supplying every poor pregnant woman in this country with an efficient medical practitioner and practical nurses.

II.—I shall next refer to the second method by which the

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poorer classes of pregnant women can obtain efficient medical aid without midwives. I refer to the voluntary medical charities. In 1891 I found that 51,049 women received aid from such charities in the United Kingdom. I would suggest that the system in force at the Newcastle and Oxford lying-in hospitals be adopted by all lying-in hospitals and dispensaries. At Newcastle they have ceased to employ midwives. The town is divided into two districts, a practitioner being appointed to each. Each practitioner is paid £40 per annum and also 10*s.* 6*d.* for each confinement conducted by him. At Oxford each of the two practitioners is paid £70 per annum and also 10*s.* for each confinement conducted. A district nurse is also appointed to nurse the women. Now, if every lying-in hospital had such paid medical officers and nurses; if each practitioner in the neighbourhood formed one of the staff; if each poor pregnant woman were permitted to select whatever practitioner she wishes; and if each medical officer had a senior medical student as his apprentice—one who had passed his preliminary and first and second professional examinations and who had completed his dissections and post-mortem classes—great good would follow to all concerned.

III.—The third system, which now allows the poorer classes to do without midwives, is by using and developing maternity clubs and provident dispensaries for the benefit of those women who are willing to pay a part of the medical fee. In London there is the St. Barnabas and St. Paul Maternity Club, managed by a few ladies. The patient pays 10*s.* and the club committee 10*s.*, the practitioner receiving the 20*s.* A similar club exists in Burnley. In Liverpool the parson of a church has established a maternity club. The patient sends for the midwifery nurse and the latter sends for the club's medical man, who stays if necessary with the patient. The vicar has adopted an excellent plan for obtaining the salary of the medical man. In the English Church a mother after confinement is "churched," and she pays a fee for this varying from 12*s.* 6*d.* downward. The vicar uses such fees to pay the medical man. The patient pays 10*s.*, this being collected by the sisters of the church and not by the medical man. The latter is paid a fixed salary provided the confinements do not exceed a fixed number. Now if practitioners will present such an illustration to their local clergy, and if their wives will only take the trouble to explain this to their ladies' meetings, I feel sure maternity clubs will—if reserved for the deserving poor who can and will help themselves—continue to increase.

I need not do more than call your attention to the means offered by well-conducted provident dispensaries. By means of these a woman can, by paying about sixpence per week during her nine months of pregnancy, secure the services of a practitioner. In June, 1887,[1] I compiled a table in which I gave statistics of eighty-eight provident dispensaries. I would also refer you to the Hearts of Oak and the Royal Standard Friendly Societies which provide for the payment of a lump sum, varying from 30*s.* to 40*s.*, to their club member when his wife is confined.

In connexion with this scheme a most important question remains to be answered. I refer to the supplying of pregnant women with good, sensible, and practical nurses. The "trained" hospital nurse, with her high charges and much higher notions, is not in any way suited to the requirements of the wives of the artisan, agricultural, and wage-paid classes—that is, the larger portion of the people of this country. In April, 1896, Sir D. Duckworth, when writing to Dr. W. Banks, said: "In truth, it is a very serious matter, and it rests with us to put a stop to this absurd movement. Nurses are now taught far too much and are ceasing to be of the use they are intended for. Nurses are now taught a smattering of medicine and much else that unfits them to do the plain duties of a nurse. I have good reason to know all that is in the air just now *re* women in relation to all parts of our profession, and I feel sure we must make a firm stand at once and stop this cant and nonsense that is so prevalent." For my part I can never understand the action of those practitioners who lecture nurses upon uncalled-for subjects and who put nonsense into their heads, unless it be done in the hope that such nurses will act as touting agents for these young lecturers who seem to have little else to do than "deliver" lectures. This absurd conduct is only on a par with that of those who lecture to policemen, "medical" herbalists, and others on surgery, and then bestow "diplomas" upon which it is prominently stated that the person named is "qualified to render first-aid," no matter evidently whether a practitioner be present or near at hand; and at a time too when the Commissioner of the London police has issued an Order authorising the payment of a fee of from 7*s.* 6*d.* to 3*s.* 6*d.* to any practitioner called upon by the police to an accident or case of sudden illness. If the above description of medical or surgical nurses be true it is more than true of those midwives who are also supposed to act as monthly nurses. The ordinary midwife does not act as a nurse or live with the confined woman. She tries to act just as like a medical practitioner as possible; she pays a few visits for five or seven days, and, perhaps, washes the mother and infant, but as to making herself useful in the house, cooking the patient's food and that of the husband and children, or actually nursing the mother and infant, she scorns the idea—in fact, she requires a nurse or maid to look after her. In order to neutralise the great blanks of the present nursing arrangements the "Holt-Ockley" system of nursing has been established. Its full title is "The Benefit Association for Providing Nurses for the Sick in Country Parishes," and its central office is at 12, Buckingham Palace-road, London. It was founded in 1883, and in 1896 there were 89 societies of this type in England, these supplying 379 parishes with 280 nurses. It is based upon the provident or insurance system, each person paying during both health and sickness. The people of a parish or group of parishes in which a branch is established are divided into four classes, viz.: (1) labourers who pay an annual subscription of 2*s.*; (2) artisans and servants who pay 3*s.*; (3) farmers and tradespeople who pay 5*s.*; and (4) gentry who pay 10*s.* When a nurse is required, a weekly fee of the same amount is charged—i.e., 2*s.*, 3*s.*, 5*s.*, and 10*s.*, according to the class. These charges are very moderate. Rule 14 shows the practical nature of the system:—"When attending a cottager's wife, the nurse will be expected to do all that is required for the care of her patient's family, with the exception of the washing." Miss B. Broadwood, hon. sec. and founder, writes to me as follows:—"Our great object is to enable cottage women to afford good nursing in addition to the services of a medical man and we are continually encouraged by finding that everywhere these women keep a cottage nurse until the baby is a fortnight old and that consequently they make really good recoveries." Nurses are supplied to patients who reside within two miles of the nurse's residence, and her journey to and from the patient is paid by the patient. The patient also provides board and lodging for the nurse. A nurse is paid a fixed salary of from £26 to £30 per annum. In confinement cases double charges are made if no practitioner is engaged. Each local committee of ladies agrees to collect £8 per annum opposite each parish included in the local branch and an additional £1 for every 100 persons in the district over 800. If such Holt-Ockley nursing societies were put into force in connexion with maternity clubs and provident dispensaries a very fine system would be provided for a very large portion of the wage-paid classes. To obtain a good nurse for 9*s.* for two weeks is only fair exchange. And here I would say, Does it not seem strange that people will willingly expend much more money for seeing an infant out of this world than they will for helping it to enter, just as many husbands will spend £10 in burying a wife to whom he has refused 20*s.* to help her in her confinement? It is a sad reflection upon the besotted condition of some men's minds.

IV.—The fourth and last system which allows the public to do without midwives is that large number of practitioners who conduct a confinement for a fee varying from 4*s.* to 15*s.* Do not think that there is but a small class of practitioners who are now compelled, owing to the competition with medical charities, medical aid associations, and midwives, to accept so small fees. In my own practice 30*s.* is my lowest confinement fee, but I find that when I have to visit the patient and her infant for about two weeks my average fee for the confinement is about 3*s.* 6*d.*, the remainder being placed opposite the visits. But how degrading must the inference be when some obtain a fee of from 4*s.* to 5*s.* 3*d.* for both confinement, visits, and vaccination included.

I hope my address proves completely that it is in the highest interests of the public health and public safety that the suggested supplying of the poor and the wives of the

[1] Brit. Med. Jour., June 18th, 1887.

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working classes with midwives, whom we would never dream of employing for our own wives or for the well-to-do, should be dropped. The poor and the wage-paid classes are already more than amply provided for. Let medico-ethical societies and others interested see that the existing powers are put into force and honestly administered. Our duty as medical practitioners to the public, to pregnant women, and to infants in this great obstetric question is truly enormous. The fact that, with our parrot-like garrulity and boasting of the results of "antiseptic midwifery," the number of women who die now is, even with "cooked" statistics, very little less than the number who died years ago, should appeal to us, not only as men but as obstetric practitioners, and should make us shun those who would divorce the study and practice of obstetrics from that of medicine and midwifery. Such persons would have us return to those death-dealing days when pregnant women were not given the benefit of educated practitioners. In 1827 the Royal College of Physicians of London described midwifery as "an act foreign to the habits of gentlemen of enlarged academic education," while later it had actually the effrontery to refuse its highest diploma to those who dared to practise midwifery. These are the predecessors of this College who in 1891 humiliated themselves by reporting to the General Medical Council in favour of midwives registration, evidently showing by their action that "the evil which men do lives after them." In 1843 even the Royal College of Surgeons of England refused their Fellowship to those who practised midwifery; while in 1733 the Royal College of Physicians of Ireland earned an historical disgrace by refusing their Fellowship to Sir Fielding Ould, a practitioner whose "base crime" was that he had been guilty of saving the lives of thousands of women and of infants. It is seldom the bright pages of medical science have been so bedaubed; but it only shows that history repeats itself when in 1896 we have a few practitioners forming a private obstetrical society and selling pseudo-diplomas to midwives, and when a few others, trying to make legal their illegality, try to smuggle a Midwives Bill through the House of Commons. To-day we are threatened with a revival of medical Pharisaic cant—the worst and most dangerous of all cant. The question is, Are we medical practitioners to range ourselves on the side of humanity and of justice to poor women; or are we, like mendicants, to be dictated to by a number of faddists, by a few society ladies who have nothing to do, and by a few self-styled "leading" practitioners who have so far forgotten themselves as to attempt to repeal the life and health-saving provisions of the Medical Act of 1886? It is for practitioners and for them alone to decide. If each practitioner when a new Midwives Bill is introduced will at once write to the Member of Parliament representing his division and ask him earnestly to oppose such Bill, this will prevent it from passing. I would ask that practitioners do not lend themselves or be parties to a revival of that atrocious cant and hypocrisy which has left a permanent stain upon the colleges, upon those supposed to be the leaders of a humane calling, and which has been the means of causing the death of an immense number of women and infants. Each year women, and especially women residing and working in cities and towns, seem to be becoming weaker and less fit to undergo the great trials of maternity and nursing their young infants. The supposed "natural" act of confinement and good recovery therefrom are becoming more "unnatural." Therefore I ask, Is it fair that under all these circumstances women should be denied a full share of all the improvements in our knowledge of obstetrics? If it be fair, then I reply to those who say so that to be consistent they should when ill not share in the advancements made in medical and surgical science, but should call in the aid of only the "medical" herbalist or bonesetter.

As the General Medical Council will be again called upon by me to deal with those who issue bogus diplomas in midwifery, &c., I wish to ask each medical society to adopt the following motion:—"At a meeting of the ....., composed of ..... members, duly convened and held at ..... on the ..... day of ....., 1897, Dr. ..... in the chair, the following motion, proposed by Dr. ....., seconded by Dr. ....., was agreed to, 'That on and after June 1st, 1897, whenever any registered medical practitioner or any practitioner entitled to be registered (other than practitioners empowered by the Medical Act, 1886), either directly or indirectly issues, or sanctions, or takes part in the issuing of, any instrument or document which professes to empower the holder of such instrument or document to practise, or ot hold themselves out as being in any way entitled to practise, any part or branch of the practice of medicine, or of surgery or of midwifery, such practitioner so doing shall, on due proof being given, be judged by the General Medical Council to have been guilty of infamous conduct in a professional respect and his name shall be erased from the Medical Register and any registerable qualification taken from him to the body or bodies which granted such.' That the secretary forward a copy of this resolution to the President of the General Medical Council, 299, Oxford-street, London, to the medical journals, to Dr. R. R. Rentoul, and the four other Direct Representatives."

If the majority of practitioners object to adopt this motion, then it must follow that as their direct representative upon the General Medical Council I must let this most vital question drop. But if they adopt this motion and send it to the General Medical Council then I can say, and say fearlessly, that I speak for and in the name of my constituents and in the interests of the public health.

CREOSOTE IN THE TREATMENT OF PLEURO-PERITONEAL TUBERCULOSIS IN CHILDREN.

BY PROFESSOR THOMA.

PERITONEAL tuberculosis in children has for several years been treated by laparotomy, and the results are often very good. We have learned, also, to distinguish the different forms of this disease, so that its diagnosis and treatment are easier than formerly. Laparotomy is no doubt the best and quickest of all methods for dealing with those cases in which the peritoneum is covered with miliary tubercles; but it is always a serious operation and one also which not every medical practitioner is competent to perform. Moreover, the parents of the little patients are usually averse to surgical interference and anxious for the employment of some other means, so that it is not surprising that physicians should welcome a non-surgical treatment of this dangerous illness. In former years general tonics, painting with collodion, and the local application of iodine were principally relied on; but the results were often bad. Ichthyol has been employed of late years; it is certainly a good remedy, and in spite of its disagreeable smell I have many times used it with satisfactory results in acute inflammations of the peritoneum. It has frequently happened, however, that these various methods were either ineffectual or else so tedious that children were obliged to stay too long in the hospitals.

Not long ago the idea occurred to me that in these cases creosote might be advantageously administered in enemata. The first writer who recommended this treatment was Dr. Revillet of Cannes, but he employed it only for the treatment of phthisis, and after him many physicians have had favourable results. Sometimes this substance disagrees with the patients, causing diarrhœa and pains in the abdomen, so that it has either to be discontinued or combined with acetum opii ("black drop"), but this adjunct does not always succeed and is often contra-indicated. Another difficulty is the necessity for the patient's retaining the enemata as long as possible, in order that the creosote may be completely absorbed. With very young children this is hardly possible, but with my two little patients it was very easy. The enema was given each evening when the child was quiet and before putting the patient to bed. At first the child could not retain the enema more than three or four hours, but after some days the child slept well and on many occasions only a little oil was found in the morning along with the first motion of the bowels. Dr. Revillet directed the enemata to be prepared with water, a small quantity of almond oil, and the yelk of one egg. Recently, however, it has been proposed by a chemist of Grenoble to administer creosote in milk; forty-three drops of creosote are mixed with a quarter of a glass of milk and water is afterwards added. This method is evidently more simple and has the advantage that the milk is taken by the mouth, for everybody knows the difficulty of feeding an unwilling child. Nevertheless I prefer the association of

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cod-liver oil with creosote. In an interesting memoir presented to the Faculty of Medicine in Geneva, Dr. Loppino, confirming the experimental researches of Professor Schiff, has proved that fat is very well absorbed by the rectum, and that oleaginous injections are highly important agents in combating emaciation and cachectic states. Dr. Loppino has never seen any bad effects resulting from the practice; the best results were obtained in the case of neurasthenic and tuberculous patients, and it is a useful mode of carrying out the treatment by over-feeding introduced by Dr. Weir Mitchell. This circumstance induced me to try enemata composed of a mixture of cod-liver oil with creosote. At the outset each enema contained 150 grammes (about four ounces) of emulsified oil and 0·5 gramme (8 grains) of creosote, but after from eight to ten days I gave 1 gramme (=15½ grains) of creosote. In the first case the child took in the course of some days 1·5 grammes of creosote; diarrhœa ensued, and the enemata had to be discontinued. After the treatment has been continued for some weeks it is a good plan to suspend it for five or six days and begin again. I have not noticed that the taste of creosote was perceived by the children; their appetite was somewhat impaired at first, but it was not lost and it subsequently improved. By this method it is possible to relieve the disorders of the bowels so frequent in this illness. I think that the antiseptic action of creosote is valuable against intestinal fermentations; it is not unusual to find constipation alternate with diarrhœa in the first stage of tuberculous peritonitis, an important cause of that condition being weak digestion and the slowness or rapidity of the movements of the intestines. The antiseptic action of the mixture of cod-liver oil and creosote is very efficacious against these troubles and after some days an improvement will be seen. The absorption of the creosote was unquestionable, for on many occasions the urine was dark-coloured. It is possible that creosote may have a curative effect on tuberculous deposits.

The first of my cases was a boy, eleven years of age, whose father and mother were alive and in good health; one sister of the mother died from tuberculosis some years previously; the child had often been to see her and was kissed by her. In August, 1894, he fell ill with pleurisy on the right side; the attack lasted fifteen days but he seemed to recover perfectly. In November he suffered from cough; in February, 1895, he lost his appetite, became very weak, suffered from abdominal pains, and went into the hospital on March 1st. On admission he was thin and feverish, his evening temperature being 38·5° C. His tongue was thickly coated and he had no appetite, but there was no vomiting. The abdomen was distended, but not very painful; there was retraction of the hypogastrium, but no indication of ascites. Some obstruction was felt on deep palpation, and there was diarrhœa. The urine was normal. The patient had a little cough, and on the left side there was weak respiration with ægophony; the breath sound was rough and the expiration prolonged at both apices. Milk diet was given, a blister was applied over the left lung, and ichthyol on the abdomen. On March 7th the signs of pleurisy were increased. An enema containing nine grains of creosote was administered. On the 14th the enema was retained for eight hours and caused no pain. On the 16th an enema containing 15 grains of creosote was given. The diarrhœa had now ceased, and the condition of the left lung was also better. On April 10th slight ascites was recognised, but the abdomen was less distended and more yielding. On the 20th the amount of creosote was raised to eighteen grains, and the patient's state, both general and local, improved. On the 27th slight diarrhœa necessitated the temporary discontinuance of the creosote, as the last dose had been too large; but after a few days the treatment was resumed, and on June 25th the patient's general state was very good, the lungs and abdomen being normal. He then went into the country. I saw him on Aug. 17th, and found that the improvement was fully maintained; on Oct. 5th he set out for Cannes in perfectly good health.

My second case was that of a girl, seven years of age, whose father and mother were in good health. In 1890 she suffered from influenza and bronchitis and from frequent cough since that date. In March, 1895, her strength and appetite failed. On March 26th fever and cough set in and on the 29th she was admitted into the hospital. She was at that time anæmic and thin and had symptoms of general bronchitis; on the right side there was a harsh breath sound, with bronchophony and signs of slight dry pleurisy. There were also diarrhœa and loss of appetite, but there was no vomiting. The abdomen was distended, with some retraction in the lower part; there was no ascites; the intestines seemed to be matted together. The treatment consisted in the application of ichthyol to the abdomen and the administering of an enema with nine grains of creosote, but after some days the dose was raised to fifteen grains. The symptoms of bronchitis gradually subsided and on May 30th the abdomen was less distended, but it was necessary to make an application of collodion to it. On July 1st the abdomen was yielding and free from pain, the diarrhœa had ceased, the appetite was good, and the general health was excellent. The child weighed 20 kilogrammes (= 44 lb.), being a gain of 3 kilogrammes (= 6½ lb.). She then went home, but returned to the hospital in the month of August, having partaken too freely of fruit, which had caused diarrhœa. After some days of ordinary treatment the diarrhœa ceased and at the end of September the patient's health was very good.

Of course it is inexpedient to generalise from two cases, especially as these children were not very ill and were treated promptly; but, keeping in mind the comparatively short duration of the treatment and the necessity for preserving the appetite and the digestive functions as unimpaired as possible, it seems to me that enemata of cod liver oil and creosote are well tolerated and give good results.

Geneva.

A NOTE ON THE GLANDULAR FEVER OF CHILDHOOD.

BY DAWSON WILLIAMS, M.D., F.R.C.P. LOND.,
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UNDER the name "glandular fever (Drüsenfieber)" E. Pfeiffer,[1] in 1889, described a condition observed in childhood which he contended was an acute specific fever hitherto unrecognised. The symptoms of the disorder as noted by him and elucidated by subsequent writers are briefly as follows: The patient, a child under fourteen years of age, becomes suddenly ill, the temperature is found to be raised—101° to 103° F.—there is anorexia, nausea, sometimes vomiting, coated tongue, constipation, and, perhaps, some ill-defined abdominal pain. The most prominent and characteristic symptoms, however, are stiffness of the neck, tenderness in the anterior triangle, and some pain on movement of the head and on deglutition. There may be some undue redness of the pharyngeal mucous membrane, but throughout the whole course of the illness nothing like definite pharyngitis or tonsillitis. On the second or third day a swelling is noticed in the neck, which is found to be due to three or four enlarged lymphatic glands, which can be felt beneath the sterno-mastoid muscle and along its anterior border. The temperature becomes higher and usually touches 104° F., and the ordinary symptoms of pyrexia are present. The glands, which are tender, remain swollen for from two to five days and then begin to diminish. The glands first affected are as a rule those of the left side, and the pain on movement may lead to the head being flexed towards that side. Before the glands on the left side have begun to subside those on the right begin to enlarge and in a day or two attain a size corresponding to that reached by those on the left side when at the maximum. Tenderness of the abdomen may be a very marked symptom, and in a large proportion of cases the mesenteric glands can be felt to be enlarged. The liver is enlarged almost invariably, and the spleen in more than half the cases. The other cervical glands may also become enlarged, the axillary and inguinal glands less often. The disease is mild and is seldom or never the direct cause of death, but it leaves the child in an anæmic and depressed state, which may last long after all trace of enlargement of the lymphatic glands—which has usually ceased in ten days or a fortnight—has disappeared.

It is obvious that the specific characters of the disorder are not well marked. Enlargement of the cervical glands secondary to various local lesions is of so common occurrence in childhood that the specificity of Pfeiffer's "Drüsenfieber" has not met with general acceptance. It can hardly

[1] Jahrbuch für Kinderheilkunde, Band xxix. According to Protassow (loc. cit., Band xxxii., s. 365), the condition had been described by Filatow of Moscow at an earlier date.

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be asserted that his arguments have been refuted, it would be more correct to say that they have for the most part been ignored. I have for some years strongly suspected that this attitude was mistaken. I have seen in the out-patient department of the Shadwell Children's Hospital during the last few years a considerable number of cases answering to the description of glandular fever, but it is difficult in London to trace a history of infection in connexion with any of the diseases of childhood, such as, for instance, measles and whooping cough, owing to the immense number of possible opportunities of infection. Occasionally, however, I have observed several children of the same family to be affected in succession. In March, 1896, a girl aged five years was brought to the out-patient department on account of a stiff neck and swollen glands. The child looked ill, had a temperature of 102·8° F. carried her head stiffly, and on the left side there was a swelling about the size of a hen's egg by which the sterno-mastoid was bulged forward. On palpation the swelling was found to consist of three glands lying beneath the muscle. They were tender, but the child appeared to suffer more if the head were moved than when the glands were manipulated gently. She had refused food, but had not complained of pain in swallowing. On examining the fauces no acute process could be observed, the tonsils were not enlarged, the pharynx was not injected and contained only a few chronic granules. Chronic granular pharyngitis is, however, so commonly present in children inhabiting the East-end of London that it is quite the exception to find a child over three years of age free from it. The child complained of pain in the abdomen; the liver was enlarged, the spleen could not be felt nor any enlarged glands in the abdomen. There was no enlargement of the glands in the axilla or groin. The cheeks were flushed, but there was no rash, no coryza, and no cough. I saw the patient again forty-eight hours later. The swelling on the left side had decreased, but there was now a large tumour in the corresponding situation on the right side. No other glands were enlarged. The temperature was 102·5°. She complained bitterly of pain in the abdomen, for which I could discover no cause. The bowels had acted once after a dose of castor-oil, but she was till constipated, refused food, and complained of headache. Five days later I was asked to see her brother aged three and a half years. He presented a swelling on the left side in the same situation as that from which his sister had suffered. It was felt to be due to three enlarged glands beneath and near the anterior border of the sterno-mastoid muscle. There were a few granules in the pharynx, but no active mischief and no tonsillitis. The temperature was 102° and he complained of pain in the abdomen. Two days later the glands on the right side of his neck were enlarged. The temperature was raised on this day, but I have no note of its height. His illness was altogether much milder than his sister's. She remained anæmic for five or six weeks and the cervical glands subsided slowly. Eventually she made a complete recovery. On questioning the mother I ascertained that a week or more before the girl was taken ill an elder brother had suffered from a very similar but mild attack, the glands first on one side of the neck and then on the other having become enlarged. He had not been very ill with it and had had no medical treatment.

The girl's case was fairly characteristic and of average severity. The most distinctive point is that the swelling and tenderness of the glands occur without obvious lesion of the pharynx and tonsils, and are altogether disproportionate to any slight pharyngitis which may be present. The several glands can be distinguished on palpation; the skin moves freely over them and is little, if at all, reddened. The spontaneous subsidence of the adenitis is also noteworthy. I have not met with a case in which suppuration occurred, and, according to all writers on the subject,[2] this is an accident which does not occur, or occurs very rarely. The glands affected are, no doubt, those which are liable to become enlarged in affections of the pharynx; but according to my observation tonsillitis causes at first enlargement only of the highest of the deep cervical glands—that which lies on a level with the angle of the jaw. If the lower glands become enlarged it is at a later date and to a less degree. The glands which first become enlarged in association with dental disorders are those which lie transversely along the inner aspect of the lower border of the body of the inferior maxilla. Even in acute pharyngitis it is, according to my observation, very unusual to observe an enlargement, sudden and almost or quite uniform, of all the deep cervical glands. Moussous[3] lays stress on the severity of the general symptoms, which in one of the cases he records, raised a suspicion of typhoid fever. In both the cases, which he gives at length, the child, on the third or fourth day of its illness, suffered from a paroxysmal cough ending in vomiting, but without the characteristic whoop or glairy expectoration of whooping cough. This appears to indicate that the tracheo-bronchial glands may be enlarged during the course of the illness.

Pfeiffer observed that the disease occurred in very limited epidemics generally affecting a single family, but attacking most of the members who had not passed childhood. Those writers who, after Pfeiffer, have described cases have laid stress upon the absence of any discoverable local lesion capable of accounting for the adenitis. The pain on swallowing is attributed to the enlargement of the glands, for pharyngitis, even when present, is only in very rare cases severe. Hesse,[4] one of the most recent writers on the subject, reports three cases in the same family, all of whom suffered from severe nephritis. Heubner, Starck, and others have recorded cases in which the same complication occurred. Hesse argues that the existence of this complication is strong evidence in favour of the specific theory, and argues that the lymphadenitis is either a manifestation of an acute specific disease *sui generis*, or of an abortive form of one of the exanthemata. He dismisses the second alternative rather lightly, but it may be observed that rubella is believed by some to occur occasionally without rash but with marked swelling of the glands along the sterno-mastoid muscle. Further, some evidence exists to show that mumps may occasionally affect the lymphatic glands of the neck without any discoverable inflammation of the parotid or other salivary glands. It is, however, unnecessary to labour this point, because a recent communication made by Dr. Park West to the New York Academy of Medicine[5] seems to me to refute all objections of this order. The epidemic which he describes affected a sparsely populated district of Eastern Ohio. It began in the spring of 1893, continued in the cooler months of 1894 and 1895, and ended in the spring of 1896. Altogether 96 cases were observed in the district (all in the practice of Dr. F. A. Korell); about 40 others were known to have occurred, but the attacks were so mild that medical advice was not sought, and the disease was heard of also in adjacent districts. The 96 cases occurred in forty-three families; the youngest patient was aged seven months, the oldest thirteen years. In the families infected about twenty children between these ages escaped. The characteristic feature in all the cases was enlargement of the cervical lymphatic glands. The patient was seized suddenly with fever; on the second or third day an elongated swelling, uniform to the eye but on palpation found to be due to three or four enlarged glands, was perceived beneath and towards the front of the sterno-mastoid muscle. It was first perceptible in most cases on the left side, reached its maximum in from two to four days, and then began to subside. A little before the enlargement of the glands on the left side reached its maximum the corresponding glands on the right side began to be swollen and tender. Other glands in the immediate neighbourhood were slightly swollen, and in three-fourths of the cases either the post-cervical, the axillary, or the inguinal glands became enlarged also. In thirty-seven cases, or nearly two-fifths, the mesenteric glands could be felt to be enlarged, while in three-fourths abdominal pain and tenderness were present. The spleen was enlarged in more than half the cases, the liver in nine-tenths. In the mildest and shortest cases only was there diarrhœa. In the severer there was constipation, the beginning of convalescence being marked by the passage of thin greenish fæces mixed with mucus. The more active symptoms lasted from four to seven days, but the total duration of the illness varied from nine to twenty-seven days, the average being sixteen days. The glands did not suppurate in any case, and no permanent enlargement remained. For some days

[2] Except Neumann; but it is, I think, clear that many of his cases were examples of ordinary secondary adenitis, and he himself did not consider that the disorder he described was identical with Pfeiffer's "Drüsenfieber" (quoted in Jahrbuch für Kinderheilkunde, Band xxxvii., s. 430, from the Berliner Klinische Wochenschrift, 1891, No. 53).

[3] Revue Mensuelle des Maladies de l'Enfance, June, 1893.

[4] Jahrbuch für Kinderheilkunde, Band xlii., s. 28.

[5] Archives of Pediatrics, December, 1896.

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after defervescence the pulse remained rapid and the patients were depressed. In 4 cases only was there severe pharyngitis; in 29 others there was increased redness of the mucous membrane of the throat and mouth, but it was not attended by swelling, was not marked, and did not last long. Only 1 patient died, a delicate child convalescent from scarlet fever. The suggestion that the epidemic might have been an aberrant form of mumps was considered, but was rejected; neither the parotid nor any other salivary glands were affected in any of the cases; no case of ordinary mumps occurred in the district during the time these cases of glandular fever were occurring, and 57 of the 96 children had mumps before, or at some date after, the fever. A dull flush of the skin was noticed, but no eruption in any case, and it is difficult to believe that so many cases of rubella could have occurred without the rash being noticed in any of them.

The incubation period cannot be stated positively. Hoerschelmann[6] thought it was usually from eight to ten days in his cases, with extremes of five and fifteen days. Park West states that "many more children came down on the seventh day after exposure than upon any other day."

As to the pathology of the condition there is, in the absence of any bacteriological investigations, much room for difference of opinion. Comby[7] suggests that it is due to "an attenuated streptococcic infection, of which the point of entry is probably the surface of the tonsils." He would therefore appear to be opposed to the view that the condition should be considered an acute specific infection, and this seems to be the view also of Ashby and Wright.[8] Comby, however, relies, I gather, largely upon the observations of Neumann, who found staphylococci in certain glands which suppurated, and Comby also speaks of cases in which suppuration occurred. All other writers, however, comment on the absence of suppuration as a characteristic of the disease. The constant presence of obstinate constipation led v. Starck[9] to advance the theory that the general symptoms and the adenitis might be due to infection derived from the intestines or to the absorption of a toxin from the retained fæces. Dr. Henry Koplik, in the discussion at the New York Academy of Medicine, suggested that the earlier affection of the glands of the left side of the neck, which has struck most of those who have published notes on the disease, might be due to passage of the infective agent from the thoracic duct to the glands on the same side. On the whole, however, it seems probable that the infective agent, whatever it may be, obtains entrance by the pharynx or tonsils without producing a local lesion there, as is sometimes the case with the bacillus tuberculosis.

The condition presents certain analogies to the "non-venereal bubo," which has recently attracted a good deal of attention in the Far East, and has been the source of not a little perplexity to the medical officers of the army and navy.[10] In connexion with the theory that the glandular fever of childhood is due to intestinal infection and toxæmia it is interesting to note that Surgeon-Major Skinner[11] has suggested that as the "non-venereal buboes" in the cases he observed invariably occurred in the inguinal glands, and as the patients always had irregular action of the bowels and sometimes dysentery, and in others apparently constipation, the enlargement of the inguinal glands may be due to secondary infection from the mesenteric lymph glands.

Since the body of this paper was written I have read with much interest Dr. Cantlie's statement, in his address published in THE LANCET[12] that in Hong-Kong he had become familiar with an idiopathic glandular enlargement occurring in children in an epidemic form. The enlargement, he states, involved usually only one gland in the neck over the sterno-mastoid, but at its anterior border. Apparently, therefore, the adenitis affected the superficial and not, as in Pfeiffer's "Drüsenfieber," the deep cervical lymphatics. Whether this difference is important, and whether the Hong-Kong cases are more nearly allied to the form with which I have been dealing, or to "pestis minor" it would be useless to speculate, but the observation is interesting and may turn out to be of much epidemiological importance.

Though the pathology of glandular fever is unknown, it is of practical consequence to recognise that children are liable to an affection such as I have endeavoured to describe; that it is communicable; and that, though acute and accompanied often if not usually by high temperature, it is almost invariably benign, and does not lead to suppuration of the affected glands; but that it leaves behind it marked anæmia and general deterioration of health from which the child does not completely recover for a month or two.

There is one other point in which the affection resembles a specific fever. Treatment does not, so far as I have observed, or so far as can be gathered from the literature, exercise any influence over the course or duration of the malady. A cold compress to the neck or, in the more severe cases, belladonna fomentations relieve the local symptoms but do not prevent the onset of adenitis on the opposite side. The bowels respond readily to laxatives, but the constipation soon returns. Purgatives, such as calomel, do not produce any more permanent effect, and Dr. Park West states that in some of the cases in which resort was had to this practice it seemed to be responsible for greater depression and a more prolonged convalescence.

Harley-street, W.

[6] Jahrbuch für Kinderheilkunde, Band xxxviii., s. 35.
[7] La Médecine Infantile, tome i., p. 1.
[8] The Diseases of Children, London, 1896, p. 255.
[9] Jahrbuch für Kinderheilkunde, Band xxxi., s. 459.
[10] Conf. Godding, Brit. Med. Jour., Sept. 26th, 1896, p. 842. It appears from his cases and remarks that suppuration is rare.
[11] Brit. Med. Jour. Jan. 9th, 1897, p. 78.
[12] THE LANCET, Jan. 2nd, 1897, p. 5.

A CASE OF EXCISION OF THE UPPER HALF OF THE RECTUM FOR CANCER.

BY J. JACKSON CLARKE, M.B. LOND., F.R.C.S. ENG.,
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SINCE 1885, when Kraske described a procedure by which the upper part of the rectum and as much of the sigmoid flexure as might be wished could be removed, this operation has been frequently performed. In this country Swinford Edwards,[1] Paul,[2] and Littlewood[3] have published cases. The present position of the treatment of rectal cancer has been recently dealt with by Heidenhain,[4] who says: "The rule that rectal cancer can only be dealt with successfully when the upper limit of the growth can be reached by the finger introduced at the anus no longer holds good. The only local contra-indication to the operation is the extension of the growth to the prostate, bladder, or ureter." As a contribution to the literature of the subject the following case may be of interest.

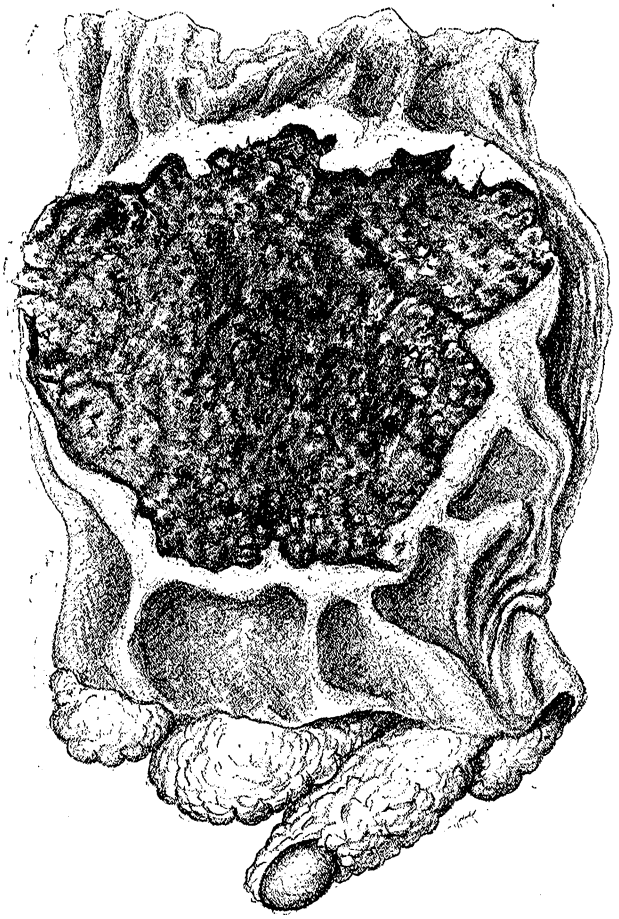
The patient, a man aged fifty-one years, was sent to me at the North-West London Hospital on Dec. 5th, 1895. He had had no important illness until he began to suffer with intestinal symptoms five months before he came to me. First he noticed streaks of blood in the stools; then followed attacks of troublesome constipation which alternated with diarrhœa. On digital examination from the anus the lower margin of a typical cancerous ulcer could be felt. It appeared to be about an inch above the base of the prostate. Although pale and thin the patient appeared to be sound save for the local disease. In order to make sure that the growth had not extended to the bladder or ureters a median abdominal incision was made on Dec. 19th, and it was found that though the growth was of considerable size it had not extended through the peritoneal aspect of the bowel and was moveable. The median opening was then closed and a left inguinal colotomy done; the sigmoid was drawn well down and its uppermost portion was fixed in the wound. The bowel was opened on the fifth day. Both the median incision and the colotomy wound were firmly united on the tenth day. It was found that though most of the fæces escaped by the colotomy opening still some went down by the rectum, and no means we could devise were found to obviate this. I had performed the operation by Harrison Cripps's rather than by Maydl's method, because the latter might take up too much of the sigmoid and so render it difficult to draw down the rectum later. An attack of influenza, which weakened the patient, delayed the next step. On Jan. 18th, when the patient was well again, he was anæsthetised and placed on the left side. An incision was made from the tip of the coccyx. The lower part of the incision lay in the middle line, and the upper inclined to the left edge of the sacrum below the

[1] Medical Society's Proceedings, 1891, No. 48, p. 942.
[2] Brit. Med. Jour., March 9th, 1895.
[3] THE LANCET, Sept. 12th, 1896.
[4] Fortschritte der Medicin, Band xiv., 1896.

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posterior inferior spine. The coccyx and the tip and the left edge of the sacrum as far as the level of the third sacral foramina were removed. In doing this the sacro-sciatic ligaments, some fibres of the gluteus maximus, the left lateral, and the median sacral arteries were divided. There was smart hæmorrhage, which yielded to pressure of cloths, wet with hot carbolic lotion. The posterior surface of the rectum was now exposed, and it was found that the lower end of the growth was opposite the fourth sacral vertebra. The peritoneum was opened on each side of the bowel below the growth and the affected part of the bowel was drawn down into the wound; the fat and glands in the hollow of the sacrum having been removed indiarubber tubes were passed round the bowel above and below the growth and the section of the bowel including the growth and three-quarters of an inch of sound gut above and below it were removed. The divided ends of the rectum

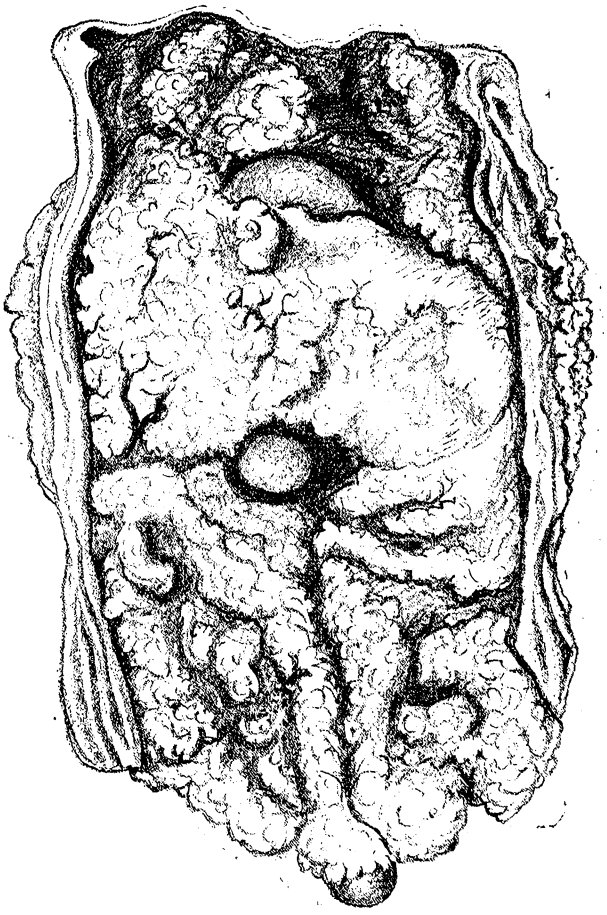
FIG. 1.



Shows the appearance of the excised segment of bowel from the front. A gland is seen in the fat at the lower end of the specimen. (Natural size.)

in the anterior three-fourths of the circumference were carefully united by silk stitches, which passed through the whole thickness of the gut, the posterior fourth being closed by Lembert's sutures. The peritoneum was then stitched in front of the rectum, and the skin-wound was stitched in its upper three-fourths, the lower fourth being packed with sal-alembroth gauze. There was nothing noteworthy in the progress of the case until the fourth day, when a distinct rise of temperature (103° F.) was observed, and it was found that some of the Lembert's sutures had given way, allowing the escape of fæcal matter. The wound was cleansed and glycerine and iodoform syringed into it. After this the wound healed rapidly by granulation, but left a large fistula. Two attempts to close the latter by a plastic operation having failed a linear proctotomy was done under cocaine infiltration in order to join the fistula and anus together. There remained only to close the artificial anus in the groin. After freshening the edge of the mucous membrane at the opening the latter was closed by a continuous silk suture passing through mucous membrane alone. The peritoneum was next opened all round the orifice and a row of Lembert's sutures placed outside the continuous suture. After this had been done a high-pitched, whistling note was heard, due to wind escaping from the bowel, so a second row of Lembert's sutures was placed outside the first. The bowel was then dropped back into the peritoneal cavity and the parietes were closed over all. The patient only complained of not being allowed enough to eat after this operation. I showed the patient at the North-West London Clinical Society on Oct. 21st, 1896, nine months after the operation. The patient was then in perfect health and for the last three months had been working full time as a carpenter, his employment being in making the roof of a house eighty feet high. He has one

FIG. 2.



Shows the posterior view. There is an enlarged gland embedded in fat opposite the middle, and a second at the lower end, of the preparation. (Natural size.)

good motion daily and by means of a hollow rubber colotomy plug suspended by rubber bands the opening below the sacrum is comfortably closed. He can relieve himself of flatus without removing the plug. I have to thank my senior colleague for much valuable counsel in the conduct of the case and Mr. Stroud Horsford, house surgeon, for great care and diligence in watching the case.

I am informed by Dr. W. M. Whittaker, who put the case in my hands, that he saw the patient a month ago, eleven months after the removal of the growth, in apparently perfect health.

Remarks.—1. The preliminary exploratory operation. In most cases this would be advisable, as in my opinion it is, with few exceptions, in all cases of cancer of the colon. The information thus gained may decide as to whether a palliative or a radical operation is to be done. In many cases the growth is adherent to neighbouring parts, and any traction

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results only in rupturing the bowel and allowing fæcal matter to escape into the peritoneal cavity. Such a condition can only be ascertained by an exploratory operation, the only contra-indications to which are (1) when the growth can be fully explored from the anus and (2) when acute obstruction is present and the position of the block is localisable. 2. The preliminary colotomy. In the case under consideration this proved to be almost useless, and the experience suggests that unless necessary to relieve distension of the bowel it would be better omitted. 3. The operation. The great drawback is the tendency to the formation of a fistula. This is not due to any want of vitality in the rectal tissues, but to the fact that the state of the patient towards the end of the operation does not usually allow time for doing a linear proctotomy and then carefully stitching the ends of the bowel by Maunsell's method. If some method safer than that by Murphy's button and equally rapid could be applied there need be no hesitation in closing up the whole wound, and then in conditions such as that described above I should be inclined to preserve the coccyx by turning it down in a skin flap and to apply one of the methods of osteoplastic section of the sacrum, so that no important muscular or ligamentous attachments need be interfered with.

Old Cavendish-street, W.

THREE CASES OF LEAD POISONING,

WITH A NOTE ON A SIMPLE METHOD FOR THE DETECTION OF LEAD IN ORGANIC FLUIDS.

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(FROM THE CHEMICAL PATHOLOGY DEPARTMENT, UNIVERSITY COLLEGE, LIVERPOOL.)

I HAVE had the opportunity during the past year of observing three cases of lead poisoning which are of some interest. The following is a condensed report of the cases, two of which were of the cerebral type and were under my care in the Liverpool Royal Infirmary.

CASE 1.—A man, aged twenty-six years, was admitted on July 2nd, 1896, suffering from "choky" pain in the abdomen, cramps in the legs, and fits. He had been a house painter for eleven years. He stated that he was temperate. In August, 1895, when working on the interior of a church, he had an attack of colic and eight fits. In December, 1895, while painting on board ship, he again had colic and four fits. The present illness began while he was working on the outside of a church. He was seized with pain in the abdomen, walked home with difficulty, and at once went to bed. He had several fits before his admission into the Infirmary. The patient was a well-nourished man, slightly anæmic. He was in a very collapsed condition, the pupils were small, and did not react to light. He complained of temporal headache and of sleeping badly. The legs and feet were painful and there was some tenderness on pressure. No distinct wrist-drop was present, though there seemed to be some extensor weakness. The plantar reflexes were active; the knee-jerks were absent. There was no optic neuritis. The teeth were poor and ill-kept. A well-marked lead line was present. The breath was very foul, the tongue was coated, and there was marked thirst. The bowels had not acted for forty-eight hours. There was general pain in the abdomen, which was relieved by steady pressure. The radial artery was not thickened and the pulse showed rather poor tension. There was no hypertrophy of the heart. The specific gravity of the urine, which was loaded with albumin, was 1025. It contained no sugar or casts. On the night of admission the patient was delirious, and on July 3rd he had a typical epileptiform convulsion, in which the tongue was bitten, and urine passed. He had two similar fits in the course of the day. On the 4th the bowels were cleared out by an enema and kept acting by saline purgatives. From this time he had no further return of the pains or fits and he left the hospital on July 13th practically well. The urine, I may add, was free from albumin. At no time was there any œdema.

CASE 2.—A man, aged thirty-three years, was admitted on Sept. 8th, 1896, for colic. He had been a plumber all his working life. For the last four years he had had repeated attacks of colic, usually accompanied by vomiting. For the last year he had had headache with the attacks. On admission he was found to be emaciated and anæmic. There was no œdema; the muscles were flabby; there was no paralysis; the knee-jerk was present; and there was no headache or optic neuritis. The patient slept badly. His teeth were poor and there was a well-marked blue line. He had pain in the abdomen, which was relieved by pressure and not aggravated by taking food. The bowels had been costive for three days. Vomiting was a troublesome feature of the case; the vomited matter was frothy, green, sour-smelling, and contained lead. The urine was of specific gravity 1011, neutral, and contained a trace of albumin and lead. The urea amounted to 400 grains per diem. He remained in this condition in spite of treatment (no iodide of potassium was given) until the 24th, when he was found to have become semi-comatose. On the 25th he had slight hiccough. The coma gradually deepened and he died on Oct. 1st.

Necropsy.—Slight thickening of the dura mater along the superior longitudinal fissure was found. The sub-arachnoid fluid was excessive. The brain appeared to be healthy. The lungs were congested and œdematous. The heart was normal. The mucous membrane of the stomach was dark in colour and deeply congested. The liver was rather firm and the kidneys were slightly fibroid. Microscopic examination of the liver revealed a slight amount of degeneration in the cells. In the kidney there was a slight interstitial and chronic inflammation. A chemical examination of some of the organs was made by Mr. Marsden and myself in the usual manner, and Dr. Kohn kindly determined the exact amount of lead present by the electrolytic method. The results of our examination may be contrasted with those obtained in Dr. Davidson's case[1] and the first reported in Thorpe's "Dictionary of Applied Chemistry" as follows:—

	Thorpe.	Davidson.	Abram.
Brain	29·9	29·9	20 parts per million.
Grey matter	40·9	—	22 ,, ,,
White matter... ...	18·9	.....	18 ,, ,,
Liver...	47·7	—	8 ,, ,,
Kidney	15·5	—	2 ,, ,,
Stomach	—	—	13 ,, ,,

The similarity of the amount of lead found in the three cases is striking as regards the brain, but the disagreement in the case of the liver and kidney is very marked and I can offer no explanation for it.

CASE 3.—One of my colleagues at University College, who had been working with red lead, suffered from griping pain in the abdomen and slight diarrhœa. The urine was found to contain lead. I report this trivial case for reasons I shall give in the last paragraph of my paper.

Cases 1 and 2 are examples of the cerebral forms of lead poisoning, the first the epileptiform and the second the comatose variety. As is not unfrequent in these cases colic was present. A feature of Case 1—viz., the contracted insensitive pupils—has been noted in encephalopathia saturnina by Tanquerel des Planches.[2] The general prognosis, as given by Tanquerel, that the epileptiform variety is more dangerous than the comatose is just reversed in my two cases. The treatment adopted in both cases was expectant—that is to say, the further ingestion of lead was checked for the time at any rate, milk diet was given, and the bowels kept open by saline purges. In Case 2 various remedies were tried to relieve the vomiting. In neither case was iodide of potassium given, so that "unlocking" of fixed lead cannot be given as the cause of the fatal coma of Case 2. I lay stress upon this, as iodide of potassium is alleged to give rise to cerebral symptoms in this way in rare cases. The expectant treatment was adopted in consequence of Tanquerel's statement that, in cerebral lead poisoning at any rate, it gives far better results than a vigorous line of treatment, blistering, venesection, and so forth. Careful questioning of the patients and relatives brought to light no trace of any neurotic inheritance, so that I can offer no suggestion as to the reason why these two patients should have suffered from cerebral symptoms. The considerable quantity of albumin present in the urine in Case 1, must, I think, be attributed to the convulsions, as it speedily disappeared when they

[1] The Liverpool Medico-Chirurgical Journal, July, 1896.
[2] Lead Disease, Dana's transl., 1848.

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ceased, and there was no evidence of any organic affection of the kidneys.

It will have been noticed that in Case 1 there is no mention made as to the presence or absence of lead in the urine. This is due to the fact that at the time I did not know of any accurate and rapid method for the detection of lead in urine, and I had not time to carry out the ordinary procedure—viz., the destruction of the organic matter by boiling with hydrochloric acid and chlorate of potash, the resulting solutions being subjected to the ordinary tests or preferably, as Dr. Kohn[3] has shown, to electrolysis. Dr. Kohn has informed me that in urine the preliminary destruction of the organic matter may be omitted. This is a great advantage; nevertheless, it requires a certain amount of apparatus, platinum dishes, and so forth, and I have come across in Von Jaksch's "Klinische Diagnostik" a method both simple and accurate. The method seemed so simple and so little known that I confess I mistrusted it. I therefore proposed to Mr. Prosper Marsden that we should test the method thoroughly; this we have done, and can vouch for the accuracy and delicacy of the modified method[4] we now adopt. "A strip of pure magnesium is placed in the fluid to be examined. Ammonium oxalate in the proportion of about 1 gramme to 150 c.c. is added. If lead is present it is deposited on the magnesium. A deposit is seen within half an hour, but we have usually left it twenty-four hours. The slip is then washed with distilled water and dried. Confirmatory tests: (1) warm the slip with a crystal of iodine—yellow iodide proves lead, cadmium may be ignored; (2) dissolve deposit in HNO_3 and apply usual tests." The magnesium can be used again after careful washing with acid and distilled water. The surface of the magnesium must be bright—free from oxide—when used. The delicacy of the method has been tested with aqueous solutions containing known quantities of lead, also with normal urine to which known quantities of lead have been added. In all cases a control experiment was performed to ensure the freedom of the materials from lead. Without going into details I may say that we have been able to detect lead when present in the proportion of 1 part to 50,000, whether in simple aqueous solution or in urine.

It is hardly necessary to add that this simple and accurate test may be of the greatest value in certain obscure cases when, as Dr. Oliver[5] says in his Goulstonian Lectures, "So insidiously are the symptoms [of chronic lead poisoning] developed, and so variable, that not only do we, as physicians, occasionally fail to refer the illness to its proper category, but medical men, the authors of pamphlets on lead poisoning, and who, therefore, have had practical experience of the poison in others, have themselves suffered from the malady without being aware of the nature of their illness." Again, when there is no tartar on the teeth, the blue line on which such stress is laid as a diagnostic feature may be absent, and this, too, in cases which are usually obscure. This affords a further, and, in my opinion, a stronger reason for bringing forward such a simple method as the one described above.

Liverpool.

NOTES ON STONE IN THE BLADDER.

By D. F. KEEGAN, F.R.C.S. Eng.,
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II.[6]—Comparative Safety of Litholapaxy and Lateral Lithotomy in Boys.

Mr. H. Gilbert Barling of Birmingham has published some valuable statistics[7] on the comparative safety of suprapubic lithotomy, lateral lithotomy, and litholapaxy in young males in England. The figures he deals with are not very large; nevertheless, his statistics go to prove that lateral lithotomy and litholapaxy are safer operations in boys than suprapubic lithotomy is at present, and Mr. Barling is of opinion that if suprapubic lithotomy is to be adopted as a routine practice in the future in boys, it must be shown that it gives better results than it does now. Mr. Barling's opinion will, I think, be shared by all those who have had a large experience in the treatment of stone in the bladder, and, as a matter of fact, surgeons in India had long ago arrived at the same conclusions as Mr. Barling, for the operation of suprapubic lithotomy in boys has made no way whatever in India, and I may add that it is never likely to do so. At the beginning of last year my friend, Surgeon-Colonel O'Connell Raye, Inspector-General of Civil Hospitals in the Punjab, issued a circular to all civil medical officers serving in the circle of his administration calling for the submission of returns showing the number of operations performed for stone in the bladder on boys up to the age of fifteen years during the year 1895. Knowing the interest I have taken for many years in the question of the relative mortality of litholapaxy and lateral lithotomy in boys, he has very kindly placed at my disposal all the returns forwarded to his office in response to his circular, and the information contained therein is embodied in the table appended:—

TABLE II.—*Showing Number and Nature of Operations for Stone in the Bladder performed on Boys up to Fifteen Years of Age, in the Punjab, during the Year 1895.*

Nature of operation.	Number of operations.	Average age of patients (in years).	Average weight of stone removed (in grains).	Average stay in hospital after operation (in days).	Percentage of mortality.
Litholapaxy	509	6·35	151·54	6·53	2·35
Lateral lithotomy	267	6·90	201·07	24·01	5·24
Suprapubic lithotomy ...	2	10·0	996·5	38·0	*Nil.*
Median lithotomy	2	6·0	155·0	18·0	*Nil.*

Seven hundred and eighty operations were performed on boys for stone in the bladder during the year under review, and the returns submitted were received from forty-eight civil hospitals and branch dispensaries scattered throughout the Punjab. The first thing which strikes one on glancing at the table is that there were but two suprapubic lithotomies and two median lithotomies performed in the year. It will be as well to dispose of these four cases at once before proceeding to an analysis of the litholapaxies and lateral lithotomies. A boy aged thirteen years with a stone weighing 3 oz. and 108 grains, and which was adherent to the wall of the bladder, was submitted to operation of suprapubic lithotomy in the Mayo Hospital, Lahore, on June 5th, 1895. He remained in hospital fifty days and was discharged cured. I think there can be little doubt that the operation selected was the correct one. A boy aged seven years was submitted to suprapubic lithotomy in the branch dispensary of Jellalabad in the Ferozepore District on Sept. 11th, 1895. There were no small lithotrites in this Branch Dispensary, and the choice of operation lay between a suprapubic and a lateral lithotomy. The stone, uric acid, weighed 445 grains, and the boy remained under treatment twenty-six days and left the hospital cured. In this case I should say that a lateral lithotomy would have answered equally well. The two median lithotomies may be dismissed in a few words. Both operations were performed at the Civil Hospital, Amritsur, and in both cases litholapaxy was contra-indicated for the following reasons. In one case a lateral lithotomy had been performed elsewhere eighteen months previously; there were a number of stones in the prostatic urethra and one large one in the bladder. The calculi removed weighed 290 grains, and the boy aged five years left the hospital cured nineteen days after operation. In the second case lateral lithotomy had been performed twice elsewhere; there were a fistula and an urethral stricture present. The stone, 20 grains in weight, was half in the bladder and half in the prostatic urethra; the boy's age was seven years; he was discharged cured seventeen days after operation.

And now to consider the litholapaxies and lateral lithotomies. The table speaks for itself. A glance at it shows that the litholapaxies were nearly twice as many as the lateral lithotomies. The average age of the patients was

[3] Report of the British Association, Section B., 1895.
[4] Report of the British Association, Section I., 1896.
[5] Lead Poisoning, p. 2.
[6] Part I. was published in THE LANCET of Jan. 9th, 1897, p. 91.
[7] Brit. Med. Jour., May 5th, 1894, and March 9th, 1895.

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nearly the same in both operations; but the stay in hospital after lateral lithotomy was four times as long as that which followed litholapaxy. The average weight of stone removed by lateral lithotomy and litholapaxy was in the proportion of four to three respectively, and the percentage of deaths after litholapaxy was less than half of that which followed lateral lithotomy. A percentage mortality of 2·35 in 509 litholapaxies in boys is, I consider, a most creditable result, and it must not be forgotten that not a few of the operators were native assistant surgeons and hospital assistants. I may state for the information of those who are unacquainted with the rules laid down in India regarding the submission of hospital returns, that the results of all surgical operations are arranged under four separate columns or headings—viz., "cured," "relieved," "discharged otherwise," and "died." My experience has been that when the result of any operation is tabulated in the "discharged otherwise" column it may be pretty safely concluded that the patient was *in articulo mortis* when removed from the hospital by his friends or relatives. Occasionally it happens that a patient discharged "otherwise" will recover, but the exception only proves the rule. And, therefore, in estimating the rate of mortality expressed in the table appended, to be on the safe side, I have counted all cases "discharged otherwise" as deaths. The table appended shows that year by year litholapaxy is ousting from its pride of place the time-honoured lateral lithotomy in boys, and doubtless when the branch dispensaries throughout the calculous districts of India are fully equipped with lithotrites, evacuating cannulæ, and efficient aspirators, lateral lithotomy, even in boys, will seldom be performed. To fully equip numerous branch dispensaries throughout India with these necessary instruments costs a large sum of money; but no doubt in time they will be supplied. Had all the branch dispensaries in the Punjab been amply supplied with small lithotrites the number of litholapaxies in boys would have been considerably greater in 1895 than it was. The superiority of litholapaxy in boys over its two rivals, lateral and suprapubic lithotomy, is now fully established throughout the length and breadth of India, and to show how it has risen in the estimation of those best qualified to appraise its value I shall quote the deliberate opinions of some of the most experienced surgeons in the Punjab when submitting the returns of stone operations for the year 1895. One surgeon who has treated a very large number—several hundreds—of stone patients during his career writes: "I consider this [litholapaxy] the only legitimate operation for removal of stone from the bladder when the conditions are suitable." This surgeon was obliged to perform a lateral lithothomy on a boy aged four and a half years, and he writes: "In this case the urethra was so narrow that the smallest lithotrite, No. 6 (Weiss), could not be passed and lithotomy became a necessity. *I consider lateral lithotomy infinitely superior to suprapubic lithotomy when the stone is of small or moderate size.*" Another very experienced surgeon writes: "If I may give an opinion I should say that an operator of experience, with good instruments, would remove stone by litholapaxy in 19 children out of 20." In this surgeon's district 34 boys were treated for stone in the bladder during the year 1895, and one and all were cured. Again, a third surgeon writes: "Out of 33 cases, litholapaxy was performed in 29, lateral lithotomy in 3, and lateral lithotomy with lithotrity in one case, with very successful results—i.e., 1 death in 33 cases. The operation of litholapaxy in children is generally resorted to in cases where there is a likelihood of an easy removal of débris within a reasonable time, and the stone can be caught by the lithotrite that could be passed through the urethra into the bladder. The advantages in experienced hands are little danger and speedy recovery. Moreover, the patients and their friends do not like the cutting operation and often go away without relief if they come to know that lithotomy will be necessary." Were it necessary to do so I might quote similar opinions held by several other experienced surgeons in the Punjab. The Indian peasantry are now fully alive to the advantages which litholapaxy possesses over lateral lithotomy, and they have begun to manifest a very decided aversion to any cutting operation for the relief of stone in the bladder. And hence it is that patients living in out-of-the-way villages undertake long journeys to the well-equipped hospitals in the large towns and cities of the Punjab when they learn that branch dispensaries are not supplied with the instruments necessary for the crushing operation. The hospitals at Rawal Pindi, Multan, Amritsur, Jullundur, and Lahore have acquired a great reputation for the successful treatment of stone, and patients flock to them in great numbers from distant places. And the same holds true of other provinces of India.

Mr. Jonathan Hutchinson, in his address in Surgery at the annual meeting of the British Medical Association held in London in 1895, did me the honour of citing me as an example of personal specialism in crushing stones in children. Some eight or ten years ago, before the operation of litholapaxy in boys had been placed on a firm and lasting basis in India, and when I was combating theoretical objections to its extension to children, and before others had followed my example as they have done of late years, it is possible that I may have been more expert at crushing stones in children than some of my fellow workers in India. But I am happy to think that I cannot now lay claim to any such distinction, for there are scores of surgeons in India at the present day who can crush a stone in a child's bladder as well, if not better, than I can. To give the reader some idea of the popularity of litholapaxy in boys I may mention that in the year 1895, in the Multan district alone, 69 boys were treated for stone in the bladder. In 64 of these cases litholapaxy was successfully performed and the 5 remaining were treated by lateral lithotomy. Surgeons in India are not, and never have been, enamoured of suprapubic lithotomy in its application to small uncomplicated stones in young males, and they have steadily refused to follow in the footsteps of their brethren in this country and in Europe generally.

The history of the revival of suprapubic lithotomy in England is in some of its aspects a curious one. Submitted to the favourable consideration of British surgeons by its distinguished advocate, Sir Henry Thompson, as the best method of dealing with very large stones in adult males and youths, it was suddenly seized upon by a number of inexperienced lithotomists, as the safest method in their hands, of dealing with small stones occurring in male children, and the good old lateral lithotomy which had stood the test of time and had proved so successful in boys, had to give way to its fashionable rival. But the pendulum has swung back, and Cheselden's operation will regain the position it should never have lost in the treatment of stone in young males. But brilliant and successful as lateral lithotomy has proved itself in dealing with the great majority of calculi which the surgeon meets with in young males, it must not be forgotten that in three very important respects it is an inferior operation to a well-performed litholapaxy. The cure is more rapid and the percentage of success is greater in litholapaxy than in lateral lithotomy, and litholapaxy can claim the additional advantage that it is an operation in which the knife is not used. Any surgeon who in the present day is compelled to cut a young boy for a small, uncomplicated stone is, in my opinion, not to be envied; for with the good example set him by surgeons in India he cannot but feel that either through the lack of suitable instruments or by his own inability to use them with precision and safety, his young patient is being deprived of the benefits of a very distinct advance in surgery. He cannot but be aware that such a stone would be best extracted by a successful litholapaxy, and still from want of practical familiarity with the use of the lithotrite he hesitates to crush the stone and consigns his little patient to the dangerous ordeal of the knife. Mr. Reginald Harrison, in the "Twentieth Century Practice of Medicine," vol. i., in discussing the relative advantages of lateral lithotomy and litholapaxy in male children, comes to the rescue of such surgeons and gives them some crumbs of comfort in the following remarks: "Many practitioners who are expert lithotomists would fail to find the same success in their application of the crushing operation to male children. Some instances have been recorded where the bladder was ruptured in performing lithotrity, and it is probable that we should have further examples of this if the practice were much extended." True, deplorable accidents have occurred in the course of a litholapaxy in boys, but the number of such has not been very great. As well might one discountenance the operation of lateral lithotomy by enumerating the occasions on which some very distinguished surgeons have missed the route to the bladder in its performance. The fact of the matter is that hitherto, in discussing the relative advantages of lateral lithotomy and litholapaxy in male children, the subject has been viewed too often from the surgeon's standpoint when by rights, it should be considered from the standpoint of the little patient and his friends and relatives.

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The best operation for a boy, say, of seven or eight years with an urethra of normal calibre suffering from the presence of a small uncomplicated stone is unquestionably litholapaxy. Such being the case, the question arises, Is a surgeon justified in cutting such a boy because he happens either not to have the necessary instruments for performing litholapaxy or, having them, does not know how to use them? I unhesitatingly answer, No, if by any possibility such a patient can be transferred to the care of one skilled in performing litholapaxy. The crushing of a stone in a boy's bladder is not an operation which every general surgeon in this country is expected to be able to perform. It is an operation for those who have enjoyed unusual opportunities of perfecting themselves in the use of the lithotrite, and it is not on all fours with operations of emergency, such as tracheotomy, the arrest of hæmorrhage, an amputation, or an operation for strangulated hernia. No surgeon who has been deprived of opportunities of learning the practical use of the lithotrite need be ashamed to confess that he feels himself unequal to peforming litholapaxy on a young boy. The extension of litholapaxy to cases of stone in boys has reduced the mortality following stone operations among this class of patients in India by more than 50 per cent. to what it was ten or twelve years ago. This is a fact, and a very important one, and one, moreover, which cannot be any longer ignored. It would, therefore, be well if surgeons in all civilised countries were to carefully note the very important work which is being done at the present day in India in the surgery of stone in the bladder, and it would also be well if they would shape their practice in accordance with the methods which obtain in this unrivalled field for experience in this special branch of surgery.

Cresswell-gardens.

THE PATHOLOGY OF ALBUMOSURIA AND PEPTONURIA.

BY JAMES KENNETH WATSON, M.D., C.M. EDIN.,
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VERY little information has been forthcoming of a definite nature to explain the occurrence of these morbid phenomena, and in discussing their pathology we must rely on conjecture to a considerable extent. There are three possible sources of albumosuria and peptonuria. In the first place they may be derived from the gastro-intestinal tract; in the second place it is possible that the albumoses and peptone may be formed in the blood itself; and thirdly, morbid conditions in the tissues may result in their formation and excretion in the urine.

In considering their derivation from the intestinal tract we are at the outset beset with a difficulty, for we do not really know the precise change by which the albumoses and peptone are regenerated into the proteids of the blood; in other words, the exact physiology of the process has not yet been revealed. We have to be content to say that the change takes place during the actual process of absorption, that the gastric and intestinal mucous membranes effect the change, and that the change is a vital one. If, then, we do not know precisely how the change is brought about, it is not easy to formulate deviations from what normally takes place.

Faults may arise in connexion with the absorption process and these may come about in many different ways. By an excess of peptone being formed we can understand that the "equilibrium" of metamorphosis, so to speak, might be put out of gear, resulting in either the excess of peptone or possibly even all the peptone being absorbed, more or less, unchanged. Again, by faulty chemical processes the albumoses might fail to be completely hydrated and be absorbed either in the primary or the secondary stage as such. It is quite reasonable to suppose that diseases of the stomach or intestine, such as inflammation, degenerations of various kinds, or malignant disease, might so interfere with the vital action of the cells concerned in the metamorphosis as to render them more or less functionally inactive; as a result of such a condition absorption, ceasing to become a vital act, might become merely a mechanical or passive process. Even where there is no organic lesion in the gastric or intestinal mucous membrane it is possible that functional neuroses may modify the process of the metamorphosis of peptones materially, for there can be little doubt that the vital action of the absorbing cells is completely regulated by the nervous system. Reflex inhibition of the action of these cells, therefore, such as might arise from mental emotions of various kinds, or even from unsuitability in the quantity or the quality of the food ingested, in fact, from all causes of functional dyspepsia, might, we may argue, allow of peptone, or even of the albumoses, being absorbed more or less unchanged. That such has not yet been proved to be the case speaks very highly for the wonderful way in which the stomach and intestines do their work. The passage of the albumoses and peptone unchanged through the gastro-intestinal mucosa constitutes, then, one of the possible sources of albumosuria and peptonuria.

The theory already brought forward might serve to explain some cases of chronic dyspepsia with dilated stomach where peptonuria has been found, and also some cases of malignant disease in which it has been found to occur. Can this theory of the absorption of the albumoses and peptone, more or less unchanged, serve to explain some cases where chronic dyspepsia is associated with anæmia, toxic headache, and constipation, these bodies acting as poisons in the blood? The chief argument against such an hypothesis would lie in the fact that albumosuria and peptonuria have not been described, so far as we know, in this class of cases; but the detection of these bodies in the urine has only lately been perfected. Although so far this conjecture has nothing to support it from the clinical point of view, yet it is permissible. We shall consider later the question as to the possibility of these bodies which have been absorbed into the blood being destroyed there, and on this account not being able to be detected in the urine.

Let us next turn to the tissues as a source of albumosuria and peptonuria. We shall find that most of the cases which have been described have been referred to morbid conditions in the tissues. In this connexion we must remember that Hofmeister[1] and others believe that during digestion some of the peptone is absorbed unchanged. Probably extremely little peptone passes into the blood as such, and therefore this may for all practical purposes be eliminated under normal conditions. If we grant, however, that some peptone does become absorbed unchanged, we may ask, Does the amount absorbed vary under normal conditions, and if it does vary, what are the limits and how is the quantity kept within these limits? In considering the tissues as a source of albumosuria and peptonuria we are supposing that the gastro-intestinal tract is doing its work and that these bodies are undergoing their normal metamorphosis. Under what circumstances, then, may the albumoses and peptone be formed in the tissues? Hofmeister[2] points out the affinity shown by peptone towards the white blood corpuscles, for he considers that the peptone absorbed from the alimentary canal is contained in this element of the blood and not in the serum. When, as a result of inflammation, or more especially of suppuration, disintegration and death of the leucocytes takes place with formation of pus, then it is probable that the cell proteids, which are identical with, or closely allied to, the blood proteids, are converted into albumoses and peptone. Just as this action takes place in the stomach and intestines in the presence of a ferment, so it is reasonable to suppose that the same process may occur in the tissues. What is the exciting cause here? We may suppose that the change may be set up by bacteria contained in the pus or else by ferments, possibly allied to the digestive ferments, set free by the disintegrating and dying leucocytes.[3] Albumoses and peptone have been described in pus by Eichwald[4] and Hofmeister[5] among others; but Sidney Martin[6] has, however, shown that the methods adopted by these workers were not entirely trustworthy; he recommends that the pus be kept under excess of alcohol for several weeks, when after drying and extracting the albumoses and peptone remain in solution, the other proteids becoming coagulated. If, then, pus contains, or may contain, albumoses and peptone we have a clue to their presence in many

[1] Archiv für Pathologie und Pharmacie, Band xix., p. 23, 1885.
[2] Ibid
[3] Martin: Quain's Dictionary of Medicine, vol. i., p. 37.
[4] Verhandlungen der Physiologisch-Medicinischen Gesellschaft, Würzburg, 1864, p. 335.
[5] Zeitschrift für Physiologischen Chemie, Band ii., p. 295.
[6] Brit. Med. Jour., vol. ii., 1890, p. 234.

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of the diseases where albumosuria and peptonuria have been described as occurring.

We may probably go further than this and say that in cases where there is not actual pus formation, but where a great cell-disintegration takes place, there we may have the formation of these bodies. Hence we may include not only such cases as abscesses, empyemata, and purulent inflammations of such serous membranes as the peritoneum, but also diseases where we know a great cell-disintegration takes place, such as phthisis, malignant growths, pneumonia, the specific fevers and phosphorus poisoning (where peptonuria has been described as occurring[7]), and, indeed, all, or nearly all, those diseases where albumoses and peptone have been found in the urine. On the same grounds we can explain the presence of hetero-albumose or Bence Jones's albumin in the disease known as osteomalacia or mollities ossium, where it has been described as occurring both by him,[8] Kuhne,[9] and others; in this disease a prominent feature is the osseous disintegration whereby the bones become gradually decalcified.

In such cases as the ones we have been considering why should we have both albumoses and peptone formed? We must probably look on the formation of the albumoses as a stage towards the final formation of peptone, as we do in digestion, the complete change depending on the activity of the bacteria concerned in the process. It would be interesting to bear out Oertel's[10] observations by examining the urine of men engaged in severe manual labour, such as blacksmiths, navvies, &c., with a view to ascertaining if the cell disintegration dependent on their work resulted in the formation and excretion in the urine of albumoses and peptone. We can hardly believe that these bodies are formed in every case where great cell disintegration occurs, or else albumosuria and peptonuria could not fail to be far more common than they are. We can only say, therefore, that when excreted in the urine there is either a probability of pus formation or great cell disintegration in the body—that is to say, when we have reason to believe, as we usually have, that their derivation is from the tissues. The relation of the albumoses and peptone to the fever process is one full of interest. There is no doubt that the immediate cause of the heat generated in fever lies in the increased blood and tissue oxidation, which signifies a rapid metabolism. It is an enticing theory to assume that the micro-organisms associated with the majority of the different fevers with which we are acquainted act on the tissues, setting free or giving rise to the formation of the albumoses and peptone, and that the rise of temperature is proportional to the dose of albumose and peptone absorbed into the blood, the temperature thus forming an index to the amount of cell disintegration taking place. The artificial introduction into the circulation of albumoses and peptone produces a rise of temperature which gives support to this view. Probably poisonous constituents derived from these bodies play an important part in causing this rise of temperature.

Lastly, the blood itself must be considered as a possible source of the albumoses and peptone. There is, however, little or no evidence to show that albumosuria or peptonuria may arise from the formation of these bodies in the blood or to prove the dependence of these symptoms on their derivation from the tissues. Yet we may argue that bacteria act upon the blood proteids, transforming them, as in the case of the cell proteids in the tissues, into albumoses and peptone. If this does occur we must believe that it takes place under much the same conditions as govern the formation of these bodies in the tissues. It is more probable, however, that the action of the blood towards the albumoses and peptone is a hæmolytic rather than a hæmogenic one; and this conclusion is based upon the comparative infrequency of albumosuria and peptonuria when contrasted with the frequency and variety of those diseases in which these phenomena have been described as occurring. This can largely be accounted for by insufficient and inaccurate analysis of the urine in those diseases where we might expect to find albumosuria and peptonuria were a systematic and accurate examination carried out. Yet it is hard to believe that the occurrence of albumoses and peptone in the urine is proportional to their absorption into the blood from the alimentary canal or from the tissues in disease. We know that a portion of the peptone produced in the alimentary canal is further acted upon by the pancreatic juice and is split up into leucin and tyrosin, &c., and that this is designated "hemi-peptone" to distinguish it from the remainder of the peptone, "anti-peptone," which resists this action. Why, we may ask, should not this change occur in the tissues or even in the blood? If the agent is present which can transform the cell proteids and even the blood proteids into albumoses and peptone, why should not the process go a stage further? We know that putrefaction is not necessary for the formation of leucin and tyrosin, although their formation is favoured by it. Is it not possible that the hemi-peptone formed in the tissues is in whole or in part further acted upon by the agent which produced it, while the anti-peptone resists this change and is excreted in the urine? Or, to go a step further, it may be suggested that where peptonuria occurs, there the peptone is present as anti-peptone; whereas in many cases where we should expect to find peptonuria we fail to do so, for only hemi-peptone has been produced and has been broken up into simpler bodies which we cannot detect in the urine. An objection to such a suggestion is the absence, in most cases at any rate, of leucin and tyrosin and those bodies into which hemi-peptone is split up from the urine in those cases where, expecting to find peptone in the urine, we fail to do so.

It is highly probable, however, that leucin and tyrosin have some relation to the excretion of peptone in the urine, for tyrosin and peptone have both been found in the urine in at any rate one morbid state—namely, in acute phosphorus poisoning,[11] where we know a great cell disintegration takes place. It is probable that the morbid anatomy of the liver in cases of acute phosphorus poisoning closely corresponds with that of the liver in acute yellow atrophy or malignant jaundice, where we know a prominent feature in the disease is the occurrence of leucin and tyrosin in the urine. One might argue, therefore, that in certain diseases of the liver, characterised by great parenchymatous degeneration with disappearance of the liver cells, peptone may be found in the urine, but where it is absent then the bodies formed from its disruption would replace it. So far as we know, however, leucin and tyrosin have not been found, at any rate at all frequently, in poisoning by other agents, such as arsenic, antimony, or alcohol, or even in malignant disease of the liver, where the morbid anatomy of the organ corresponds to a greater or less extent in its broader features—namely, the degeneration and sometimes the ultimate destruction of the liver cells—with that of acute phosphorus poisoning, although peptonuria has been described in at least one morbid condition of the liver.

The clinical side of this question requires further investigation. We shall then be in a better position to understand the pathology of the excretion of the albumoses and peptone in the urine and their relation to disease.

Byfleet, Surrey.

[7] Schultzen und Reiss: Annalen der Charité Krankheiten, Band xv., p. 9.
[8] Bence Jones: Philosophical Transactions of the Royal Society, vol. i., 1848, p. 55.
[9] Zeitschrift für Biologie, Band xix., p. 209.
[10] Ziemssen's Handbuch der Therapie, 1884.

TRAUMATIC TETANUS TREATED BY HYPODERMIC INJECTION OF CARBOLIC ACID; RECOVERY.

BY ARTHUR EDDOWES, M.R.C.S. ENG., L.S.A.

A MARRIED man, aged forty-one years, received a punctured wound on the inner side of the ball of the left great toe from a boot nail on or about May 19th. Little notice was taken of the wound at the time and he continued his work. On the 26th he got very wet and thought he had contracted a chill. About June 2nd the wound was observed to suppurate slightly, but he still did his work. On the 9th he felt slight stiffness of the lower jaw and of the nape of the neck; the latter sensation was described "as if something was constantly pulling his head backwards." On the 10th the symptoms being slightly worse, he consulted his medical man, who prescribed for him. He visited the practitioner again on the 11th and 12th, but he still continued his work.

[11] Quain's Dictionary of Medicine, vol. ii., p. 1144, and reference No. 7.

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On the morning of the 13th he was advised by the medical man to go home and go to bed, but he did not do so till 6 P.M. During these days the symptoms had been steadily increasing in severity and by the 13th his condition was as follows. The patient's jaws were quite closed, so that slops only could be taken. The muscles of the back were slightly rigid, sufficiently so to make movement difficult. By the next morning (June 14th) there was fully-developed trismus with severe aching pains in the muscles around the lower jaw, rigidity and arching of the neck, rigidity and slight arching of the back, and some contraction of the abdominal walls; the lower extremities were not much complained of except for shooting pains round the knees; the upper extremities were free. The urine passed normally; the bowels were acted upon by two grains of calomel given the previous evening; the surface of the body was somewhat clammy. The pulse was 66 and of good volume and the temperature was 98° F. His intellect was clear; the power of swallowing was not perceptibly affected, the patient being easily fed with slops owing to the absence of several teeth. Treatment consisted in the administration of chloral hydrate and bromide of potassium every four hours and liquid food. On the 15th the arching of the neck and trunk was somewhat more extreme; the trismus was still marked, and there was some degree of risus sardonicus observable. Also there was considerable pain complained of, beginning in the spine and shooting forwards. The power of the extremities, however, remained good; the urine passed normally, but the bowels were not open. The pulse and temperature were the same as on the 14th. On the 16th his condition remained unchanged. On the 17th occasional momentary convulsive movements of the trunk, simulating hiccough, were observed, the arching of the neck and trunk was increased, and the power of the lower extremities was slightly lessened. There were considerable pain and some tenderness of the spinal column. The pulse was 72 and the temperature was normal; the urine passed normally, but it was highly concentrated and loaded with urates; the bowels were opened by an aperient and enema. On the 18th the rigidity of the neck was less extreme, the convulsive twitchings were more frequent, and intense fœtor of the breath was noticed; otherwise the condition remained the same as on the 17th. A consultation was held and the following treatment was adopted. Highly nourishing diet was ordered, consisting of eggs with milk and brandy, milk with soda water, jellies, and cocoa, frequently administered in small quantities. Ten grains each of chloral hydrate and bromide of potassium were administered every two hours. Five minims of carbolic acid (2 per cent. solution) were injected hypodermically morning and evening. The chloral and bromide of potassium were given at 8 P.M. and were followed by intense excitement with numbness in the extremities half an hour later, which continued during the greater part of the night. The carbolic acid was injected at 10 P.M. and no after-effects were noticeable, the pulse being 102 and the temperature 100·8°. On the 19th, at 10.45 A.M. the pulse was 96 and the temperature 100·8°. The patient had become quieter, the convulsive movements were less frequent and less severe; he took his food well; his intellect was somewhat clouded, but he was conscious of his surroundings. There was less rigidity of the back, chest, and abdomen, and more power in the legs; there was no change in the degree of the trismus. The bowels were inactive, and an aperient and enema had to be resorted to. On the 20th the pulse was 90 and the temperature was 99·8°. The convulsive movements were very slight during the night, but the patient was very restless. The rigidity of the back, chest, and abdomen was much lessened, the back completely resting on the bed; there was greater power in the lower extremities, but little change in the rigidity of the neck. The mouth could be slightly opened, but not sufficiently to allow of protrusion of the tongue. The bowels were still inactive, and an enema was given. The patient's condition considerably improved by the afternoon and the treatment was slightly changed, the hypodermic injection of carbolic acid being reduced to once daily and the chloral and bromide being given every three hours instead of every two hours as before. On the 21st the pulse was 72 and the temperature normal. The patient had had a restless night, but less so than the preceding one. The rigidity of the muscles was lessening, with the exception of those of the neck, which remained firm. The movement of the jaw was more complete and there was less risus sardonicus. The bowels, however, had not been opened, in spite of a dose of castor oil. The hypodermic injections were discontinued and fifteen grains of chloral hydrate were given three times a day. On the 22nd the pulse was 78 and the temperature 98·2°. The rigidity had almost disappeared except in the neck and jaw. The patient was still restless, evidently from being confined to bed, and the bowels were still inactive, but the patient's condition was improving. On the 23rd the pulse was 73 and the temperature normal. He had had a good night, but felt depressed. There were no paroxysms, but there was some pain in the back. The rigidity had considerably diminished and the lower jaw was slightly more moveable. As the bowels remained inactive, an aperient was given. Food was well taken. A tonic was prescribed. From this time the patient made a steady and uninterrupted recovery, and after a month at Scarborough returned in perfect health.

Loughborough, Leicestershire.

NOTES ON THE PHOTOGRAPHY OF RENAL AND VESICAL CALCULI BY THE X RAYS.

BY A. P. LAURIE, M.A., D.SC.,
AND
JOHN T. LEON, M.B., B.SC. LOND.

OUR first experiments were made on museum specimens with a view to determining how far different calculi were opaque to the x rays and comparing their opacity with flesh and bone. The resulting plate[1] showed conclusively that calculi composed of oxalate or phosphate of lime were more opaque than bone, uric acid calculi of almost the same opacity, and gall-stones very slightly more opaque than flesh. We note that Mr. Henry Morris in THE LANCET of Nov. 14th, 1896, has substantially confirmed our results. These results seemed to show that there should be no serious difficulty in photographing stone in the kidney or bladder.

After some inconclusive experiments on living subjects we next inserted a uric acid calculus of about ⅝ in. in diameter into the kidney of the cadaver of a man about fifty years of age. This was done with as little disturbance of surrounding parts as possible. We used to photograph the stone, a "focus" tube and an induction coil giving a 6 in. spark with four storage cells connected to the primary circuit, and took the photograph on a "Lightning Cadett" plate. After an exposure of thirteen minutes with the body lying on its back the plate was removed and developed and showed a faint but distinct image of the stone, though the spine itself was very faintly indicated.

The next experiment on a living subject gave a negative result which was subsequently confirmed by operation. The next case was that of a boy aged eight years who came to the out-patient department of St. Mary's Hospital in November, 1896, with the symptoms of vesical calculus. On this occasion we used the same induction coil and the same number of cells and an xxxxx Paget plate, the exposure to the rays being seven minutes. The accompanying collotype A (taken from the untouched negative) shows the result, the calculus being apparently a little over an inch in diameter. Within the next few days lithotrity was performed by Mr. Silcock, a No. 9 lithotrite being used and the detritus weighing ninety-eight grains. It was composed principally of uric acid and was oval in shape. Within a few days of the above case we had another, that of a boy aged about fifteen years, in whom a skiagraph showed the presence of a calculus in the bladder quite distinctly.

[1] Brit. Med. Jour., April 4th, 1896.

A MEETING of the profession is to be held to discuss Hospital Reform on Feb. 4th in St. Martin's Town Hall, at 4 P.M., under the auspices of Hospital Reform Association. Mr. Holmes, Dr. Isambard Owen, Mr. Victor Horsley, Dr. Glover, Dr. Lovell Drage, Dr. Gilbert Barling, Mr. Jordan Lloyd, Dr. Major Greenwood, Dr. S. Woodcock, and Dr. J. Ward Cousins among others have promised to take part in the proceedings.

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL AND THERAPEUTICAL.

"A NOTE ON THE OCCURRENCE OF METRORRHAGIA AFTER THE MENOPAUSE IN CASES OF OVARIAN TUMOUR."

BY J. B. HENDERSON, M.D. BRUX., L.R.C.P., L.R.C.S. EDIN.

IN the interesting paper by Dr. Lewers in THE LANCET of Jan. 2nd under the above heading I notice the following sentence: "It may fairly be concluded that the occurrence of bleeding from the uterus after the menopause in cases of ovarian tumour is a somewhat rare event"; and I therefore feel justified in sending you the following note of a case at present under my observation. A woman aged sixty-one years, in whom the menopause occurred about fourteen years ago, has noticed a swelling in the abdomen for two or three years, and although she thought that it might be something serious for the last two years, she only complained of it about a month ago. I then examined her and found signs of a large cystic tumour probably connected with the right ovary and about the size of a seven months' pregnancy. She says that the tumour has been growing more quickly during the last few months, and that within the last eight months she has had on three or four occasions a hæmorrhagic discharge, which lasted for about two days and made her think that her monthly periods were returning.

Glasgow.

A CASE OF LAND SCURVY.

BY S. HAMILTON, B.A., M.B.R.U.I.

THE following case is interesting from the rarity of such a condition at the present day and also from the fact that the usual causes of scurvy did not exist. The patient was a man aged forty-one years, tall and thin, who had worked underground in the Ferndale Collieries for years. His previous health was not robust; he was a sufferer from chronic dyspepsia, but was able to work till April, 1896. His habits were fairly regular, except a partiality for whisky and snuff. The first symptoms of scurvy appeared about the end of last April. The gums were swollen, soft and spongy, and bled on the slightest friction. His face had a peculiar sallow yellowish hue and was anæmic, with puffiness under the eyelids. He complained of lassitude and pains in his limbs, stiffness of his joints, and dyspnœa on fatigue. At this stage a satisfactory diagnosis could not be arrived at. Shortly afterwards he took to his bed and fresh symptoms appeared. Large irregular, ecchymotic patches were seen on his legs from the knees downwards; there was œdema of the legs, feet, and ankles; the pains in the legs and thighs were more severe; the gums became more turgid, spongy, and tender, and bled more easily; the teeth became loose; his breath had a remarkably offensive odour, which could be perceived outside his bedroom; hard swellings, very painful on palpation, were to be felt in the calves of the legs. At this stage there could be no doubt as to the nature of the case. All the most approved remedies for scurvy, both dietetic and therapeutic, were administered one after another without any improvement in the symptoms. The patient became gradually more emaciated and exhausted; the pulse was slow, weak, and thready; the first sound of the heart and the impulse were weak; the urine was scanty and dark red in colour and had an ammoniacal odour; the alvine evacuations were generally free and offensive; and towards the end melæna was present. During the last month of his life the only food tolerated by the patient was fresh eggs beaten up in a little brandy. At this period the œdema of the legs and ankles disappeared—this being the only symptom that showed any improvement. Towards the end of July the patient died from exhaustion, about three months after the first symptoms appeared.

Sporadic cases of land scurvy of this nature and of such severity are rare. In this patient none of the usual causes of scurvy could be traced. He had never been to sea and had always used fresh vegetables as part of his food. The circumstances that he was a sufferer from chronic dyspepsia and that he was thus reduced to a state bordering on starvation may have been factors in the causation of his malady.

Ferndale, Glamorganshire.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

EDINBURGH ROYAL INFIRMARY.

A CASE OF ENORMOUS PRIMARY SARCOMA OF THE LIVER IN WHICH A LARGE BLOOD CYST SIMULATING A HEPATIC ABSCESS WAS DEVELOPED; ASPIRATION, ETC.; NECROPSY.

(Under the care of Dr. BYROM BRAMWELL.)

THE carefully observed record of the case which we give this week will be much appreciated by our readers, for it is of much value from many standpoints. The occurrence of sarcoma as a primary growth of the liver is very rarely observed, and a complete account of such a case, with the addition of the bibliography on the subject is a gain to medical and pathological literature. The majority of cases which have been observed of primary sarcoma of the liver are mentioned in this paper; there are two others which are referred to by Sajous.[1] 1. That of a girl, aged twenty-two years, under the care of Dr. G. Wach,[2] in whom the growth was mistaken for hydatid cyst. 2. A primary sarcoma in a child, aged four months, reported by Dr. Lendruf.[3] The abdomen was enormously distended; there was no jaundice. The liver contained numerous disseminated tumours of a light red-brown colour.

A married woman aged twenty-five years was admitted to Ward 5A, Edinburgh Royal Infirmary, on June 23rd, 1894, complaining of debility, emaciation, shortness of breath, and pain in the lower part of the right chest at a point two and a half inches below, and slightly external to, the right nipple. The patient stated that she was quite well until her marriage, three months before. Since then she had suffered from pain in the right side in the position described above. She thought it was worse in wet weather. At first it was intermittent and of a dull, aching character, but lately it had been more constant, sharp, and boring. The patient attributed her illness to catching cold. At the commencement of the attack she was troubled with a dry cough, but there was no expectoration; the cough continued for two or three weeks and then disappeared; the pain, however, remained. In other respects she had been fairly well, though getting weaker. Her appetite and her digestion had been good, though she had been somewhat troubled with flatulence. She had noticed that the right side of the chest had recently become more prominent than the left. The patient stated that until the present illness commenced she had always enjoyed good health. She had never lived abroad and had never suffered from dysentery, diarrhœa, or any affection of the bowels. She last menstruated some six weeks previously. The patient was one of a family of five; four were living, being strong and healthy, and one died at the age of six years from tuberculous meningitis. Her father and mother were both alive and well. So far as she knew none of her relatives had suffered from any liver affection. On admission the patient was pale and thin; she looked extremely ill. She lay on her right side; she said that the pain was worse when she attempted to move or when she lay in any other position. There was no jaundice. The evening temperature was about 100° F. and the morning temperature

[1] Annual of the Universal Medical Sciences.
[2] Bulletin de la Société Anatomique. Paris. 1892.
[3] Universal Medical Journal. Philadelphia. 1893.

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A.—Radiograph of calculus in the bladder of a boy aged 9 years. Exposure 7 minutes. Distance of tube from plate 13 inches. Patient supine.



B.—Radiograph of same patient after litholapaxy, to shew absence of calculus.

TO ILLUSTRATE THE PAPER BY DR. F T LEON AND DR. A P LAURIE. FROM UNTOUCHED NEGATIVES.

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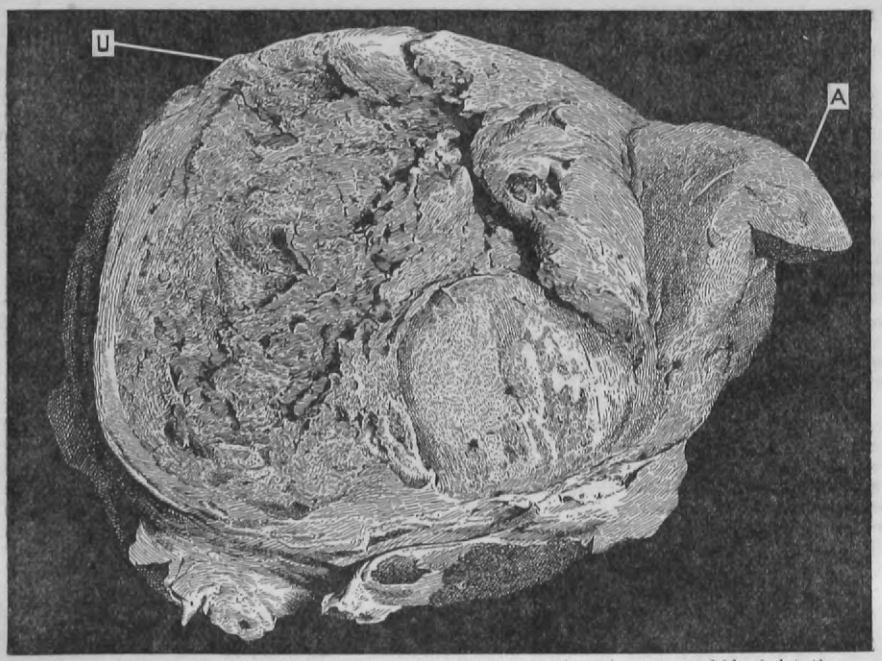
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98°; the pulse varied from 110 to 120. The right side of the thorax over the region of the liver (infra-mammary and hypochondriac regions) looked fuller than the left. The bulging was most marked in the position of the fifth, sixth, and seventh interspaces in the anterior axillary line. The sternum appeared to be pushed forward and there was some fulness in the epigastrium. A localised tender spot was present in the sixth right interspace in the anterior axillary line. The apex of the heart was displaced upwards and to the left; it corresponded to a point slightly outside, and on a level with, the left nipple. The liver dulness was greatly increased. In the mammary line it extended from the third rib above to a point an inch above the umbilicus. Posteriorly there was marked dulness over the lower part of the right chest; the dulness extended as high as the spine of the scapula; its upper border was curved and corresponded in shape to Garland's S-shaped curved line representing the upper limit of the dulness in a moderately large pleuritic effusion. The breath sounds, vocal fremitus, and resonance were absent over the dull area. On the left side of the chest the breath sounds were harsh and bronchial in character and the vocal fremitus was well marked. The heart appeared to be normal. The splenic dulness also seemed to be normal. The tongue was red, congested, and dark-looking, not furred or tremulous. The appetite was good. The patient was troubled occasionally with flatulence. The bowels were costive. The urine was of a dark reddish-brown colour, clear, acid in reaction, and its specific gravity was 1014. The deposit, which was considerable, consisted of amorphous urates and uric acid. The urea equalled 1·3 per cent. The urine contained no bile, blood, albumin, or sugar. On the evening of the patient's admission to hospital a diagnostic puncture was made by the house physician into the right pleural sac, but no fluid was withdrawn. On June 25th a hypodermic needle was passed into the right chest at the tender spot between the fifth and sixth ribs and some dark anchovy-paste-like fluid, highly suggestive of an abscess of the liver, was removed. On microscopical examination it was found to consist of red blood corpuscles, leucocytes, and broken-down cellular elements, apparently liver cells. On the 26th fifty-three ounces of dark anchovy-paste-coloured fluid were withdrawn with the aspirator; the needle was passed into the liver at the position of the tender spot between the fifth and sixth ribs. The fluid which was withdrawn consisted of white blood corpuscles, red blood globules, broken-down cells, granular débris, and a few large cells, apparently liver cells in process of necrosis and fatty change. The amount of blood which the fluid contained was much larger than one expects to find in an abscess of the liver. The removal of the fluid was followed by marked relief both to the breathing and the pain. On the 27th the patient felt better; she was quite free from pain; her expression was less anxious-looking, but she was very pale, and the pulse was quick (120), the respiration was 32, and the temperature 98·8°; there had been little or no rise of temperature during the night. The tongue was moist, red, and speckled with a white fur. On the 28th it was noted that during the night she suffered a good deal from pain in the right shoulder. She still complained of pain and the cavity in the liver appeared to be filling up. There was some œdema of the skin in the right hypochondriac region. On July 1st the distension of the right side of the thorax was quite as marked as it was before the aspiration; the cavity in the liver had evidently filled up. The pain and difficulty in breathing were very troublesome. The patient was very pale and weak; the pulse ranged from 114 to 120 and the respirations from 38 to 40. The feet were slightly swollen. Mr. Cotterill saw the patient with Dr. Bramwell and it was agreed to incise the cavity and to insert a drainage-tube. The operation was performed on the 2nd. Fifty ounces of anchovy-paste-coloured grumous fluid, which was more bloody than that removed by aspiration, were evacuated. On the 3rd the patient had passed a very good night. She was quite free from pain and said that she felt better. The tongue was clean and moist. The temperature was 97°, the pulse 108, and the respiration 106. On the 7th the wound had been dressed several times; there was a considerable quantity of bloody discharge. The patient was very pale, but in other respects looked better. She said that she had been much relieved since the operation. The tongue was clean. The appetite was so good that the nurse said the only difficulty was to satisfy her, for she was ravenously hungry. She was sleeping well. On the 9th the bloody discharge still continued in considerable quantity and the patient was more anæmic. In other respects she was well. She was ordered to have one of Robertson's (No. 3) Blaud's pill capsules three times daily. On the 10th the bleeding still continued; ice-bags were ordered to be kept continuously applied to the region of the liver. On the 17th the bleeding still continued, notwithstanding the local application of ice and the subcutaneous injection of ergotine. The patient was so profoundly anæmic that it was decided, after consultation, to close the wound. Mr. Cotterill accordingly sewed the edges of the wound closely together with horsehair and painted collodion over the surface of the wound. On the 18th the patient had suffered a good deal of pain in the region of the liver during the night. There was now some oozing through the dressing. Five minims of turpentine were ordered to be given every eight hours. On the 20th not a drop of fresh blood had escaped through the dressing since the previous morning. She had only had two doses of turpentine, one in the evening of the 18th and a second on the morning of the 19th. She felt sick; the turpentine had therefore been stopped. She complained of pain in the tip of the right shoulder. The cyst had again filled up; the right side was again much more prominent than the left; the breathing was very rapid, and the patient was profoundly anæmic and prostrate. With the object of relieving the pain and distress of breathing the cyst was again aspirated and twenty ounces of dark bloody fluid containing some pale coagula were withdrawn. On microscopical examination the fluid consisted of leucocytes, red blood corpuscles, granular débris, and a few large cells, apparently liver cells. On the 24th the patient felt very weak and prostrate, but was free from pain. There was a little leakage from the puncture. On the 26th the breathing had been so distressed during the night that the house surgeon again aspirated the cyst in two places. On percussion an area of tympanitic resonance was now present on the right side between the fourth rib and the seventh space anteriorly. On the 30th the patient died.

Pathological Report by Dr. LEITH.—The necropsy was made on July 31st, 1894, some twenty hours after death. The body was somewhat emaciated; post mortem rigidity and lividity were slight. There was a recent linear cicatrix in the sixth right interspace. It ran parallel with the ribs for about one inch from the nipple line outwards. Its outer extremity showed a small aperture about the size of a crow-quill. This led by a short sinus downwards, backwards, and inwards into a large cavity. A probe could be passed into this cavity for fully six inches and could be moved freely about in it. On opening the abdomen the peritoneum was seen to be normal, but the membrane was drawn upwards and over to the left side. The liver was more prominent than usual and projected for fully two inches below the costal margin in the line of the gall-bladder. The left lobe extended further into the left hypochondrium than usual and also projected further downwards. The right lobe just below the costal margin showed a deep groove formed by the uprising margin of a prominent, smooth, tumour-like swelling of a whitish, glistening, and fibrous appearance. This was seen over the whole lower margin of the right lobe and passed upwards beneath the ribs as a large dome-like swelling. On opening the thorax and removing the sternum with the rib cartilages, the upper surface of the liver was found to be extensively adherent by recent easily separable adhesions to the anterior part of the diaphragm. These were strongest and oldest opposite the level of the fifth rib. The large dome-like tumour already referred to was now seen to occupy the whole of the upper surface of the right lobe of the liver and to project considerably into the left lobe, displacing the suspensory ligament fully three-quarters of an inch to the left. It was uniformly round and had a glistening fibrous appearance. It rose gradually upwards, reaching a considerable height above the ordinary level of the liver in the middle of the right lobe. The appearance of the groove at its lower margin was partly due to the colon, &c., pressing the thin, inferior, lower liver border forwards. Two small apertures were seen in the anterior surface of the tumour a little above and to the right of its centre. These led into cavities in the tumour, apparently separate from one another, and a probe could be passed from the upper of the two through a small aperture in the middle of the diaphragm into the right pleural cavity. This perforation in the diaphragm was due to the puncture of an aspirator

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needle shortly before death. The right pleural cavity contained a small quantity of recent lymph. On palpation of its upper surface the whole tumour gave a sense of semi-fluctuation more marked towards the right side than inferiorly and to the left. On removing the liver the inferior vena cava at its place of exit from the organ was free from clot, but at its entrance into it and for fully two inches downwards in the abdomen it contained a pale-greenish lateral thrombus adherent to its right side. It was comparatively recent, not very firm or adherent, and below passed gradually into an ordinary black clot. The vein in its course through the liver was free from clot. The structures of the anterior layer of the gastro-hepatic omentum, the hepatic artery, bile ducts and portal vein were normal and in no way obstructed. The portal vein contained no clot even in its main lateral branches. The liver weighed 9 lb. 6 oz. and measured 11½ in. transversely, 10 in. antero-posteriorly, and fully 4½ in. in thickness. The tumour was now seen more fully, and occupied, as already mentioned, nearly the whole of the right lobe and a part of the left. It projected above the upper surface of the organ though it hardly reached its under surface, which presented practically a normal appearance. It measured 7 in. in transverse diameter, 7½ in. in antero-posterior diameter, and about 4 in. in thickness. The gall-bladder was small and contracted and did not show below the lower liver border. It contained a small quantity of olive-green viscid bile. An antero-posterior section was made through the middle of the right lobe (see Figure) It showed the tumour mass occupying the whole of the right lobe, replacing the proper liver tissue everywhere except for 1 to 1½ in. towards the inferior border and a mere shell on part of the under surface. It was everywhere encapsuled by a firm, fibrous-looking capsule of varying thickness. The main mass of the tumour was composed of a structureless, red, granular, and friable material, obviously crumbling blood-clot. The rest showed lobed and irregularly rounded masses of a soft whitish-yellow, gelatinous-looking substance, reminding one somewhat of a gelatinous blood-clot. These were situated towards the inferior and posterior part of the liver. They were seen on the one hand to be clearly defined and bounded by the limiting external capsule, and on the other hand to irregularly mingle with the hæmorrhagic mass. The largest area was about the size of an ordinary orange, oval in shape, with a clearly defined fibrous-looking wall around it separating it from the hæmorrhagic mass. The same capsular appearance was seen elsewhere, but not so distinctly; and in all cases the contained gelatinous material could be easily detached and suggested the idea of a multilocular cyst into which the jelly-like substance had grown as solid ingrowths from part of the wall. Other antero-posterior sections were made both to right and left of this section and showed irregular and rounded areas of the gelatinous substance mixed up with red areas, evidently consisting of pure blood-clot or of the gelatinous material infiltrated more or less intimately with blood. What appeared to be white fibrous septa penetrated the whole tumour in several directions. Everywhere towards the left the encapsulation seemed to be perfect, but near the right border there were a few places in which it was scarcely detectable. In fact, this part showed an appearance as if separate roundish centres had become confluent. A comparison of the appearances presented by all these sections led to the opinion that the more actively growing part of the tumour lay towards the right and the oldest part to the left. The liver substance where it was still visible outside the tumour showed a distinct fatty change. It was paler than normal and presented irregular areas of congestion, but nothing else abnormal. The branches of the portal vein throughout were free from clot and the other structures of the portal spaces presented normal appearances.



Antero-posterior section through the middle of the tumour, showing a large mass of blood clot, the soft yellowish-white-looking gelatinous areas, and the well-defined capsule. The letter A points to the anterior surface of the liver. The letter U points to the upper surface of the liver. At the posterior surface the capsule is well seen. Almost the whole of the liver substance has disappeared.

None of the bile ducts were dilated. Some of the sublobular veins showed small recent thrombi in the neighbourhood of the clot evidently secondary in their nature. No growth of any kind was found anywhere else, either in any of the thoracic or abdominal viscera. The spleen weighed 5 oz. It was firm and pale, but healthy. The left kidney weighed 4 oz. and the right 4½ oz. They were both small and paler than usual, but beyond a slight waxy degeneration affecting some of the Malpighian bodies they appeared to be healthy. The stomach and intestines were quite healthy, as were also the mesenteric and retro-peritoneal glands. The bladder, vagina, uterus, ovaries, &c., were all carefully examined and found to be normal. The heart weighed 7 oz. Its valves were competent and healthy. The myocardium was somewhat atrophied and pale. The left lung weighed 14 oz. and the right only 10 oz. The upper lobe in both was anæmic and the lower œdematous. There was some collapse on both sides, but especially on the right towards the base and root. There was also some recent lymph on the base of the right lung and on the corresponding surface of the diaphragm around the puncture. The brain weighed 48 oz. It was healthy and no other lesion of any kind was found in any other structure in the body.

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Microscopic examination.—Sections of the margin of the tumour showed a well-defined fibrous capsule separating it from the condensed and somewhat cirrhosed liver tissue. The structure of this marginal part of the tumour was mainly cellular, consisting of spindle and irregularly-shaped cells in a recticular-looking matrix of finely fibrillar connective tissue. The cells varied much in size and resembled sarcomatous cells of a somewhat aberrant type. Some of them were very large, with convoluted or multiple nuclei. Such giant cells, however, are not infrequently found in spindle-celled sarcomata. Many persistent bile ducts were to be seen in this part of the section. Sections of any of the gelatinous areas showed a structure characteristic of a medium-sized, spindle-celled sarcoma. The cells were long and spindle-shaped, the nuclei oval and almost rod-shaped in places. Indeed, here and there the cells closely resembled non-striped muscle cells. The intercellular substance was scanty and the bloodvessels rudimentary. Sections of the material in the large blood cyst or hæmorrhagic-looking area proved to be ordinary blood-clot. Towards its margins it became mixed with tumour cells. Many small, branched cysts lined with a single layer of endothelium were seen both in the typical sarcomatous part and at the margin of the hæmorrhagic area. They were free from contents, except here and there where the hæmorrhage around them had passed into them and partly filled them. Microscopic hæmorrhages were also plentifully seen in nearly every part of the tumour. The tumour was undoubtedly a sarcoma, tending towards the spindle-celled variety. On account of its numerous bloodvessels and the multitude and magnitude of its hæmorrhages it might be called an angeio-sarcoma. The cysts were hardly numerous or important enough to entitle it to be called a cystic sarcoma.

Origin of the tumour.—After sections of many parts of the periphery were made some were found showing an early stage of the growth. They showed columns and islands of liver tissue surrounded by the tumour cells. The latter were seen pushing themselves outwards between the columns of liver cells, and as the endothelial cells of the bloodvessels could sometimes here be made out the tumour cells apparently occupied the place of the perivascular lymphatics. This naturally suggested an origin in the connective tissue-cells lining the lymphatics. If any safe deduction can be made as to the origin of any sarcoma from the behaviour of its growing margin, then there is clear histological evidence in this case of the tumour having originated in the connective tissue cells lining the perivascular lymphatics of the intralobular capillaries of the liver. Block believes that the origin in his case was from the endothelium of these capillaries; while Hörup, in his case, traces it from the adventitia of the hepatic arteries.

Remarks by Dr. BRAMWELL.—The above case presents many points of pathological and clinical interest. The more important pathological features are: (1) The rarity of primary sarcoma of the liver; (2) the large size of the tumour; and (3) the fact that a large blood cyst was developed in the interior of the tumour. Clinically, the case is chiefly interesting from a diagnostic point of view. The physical signs exactly simulated those of an abscess of the liver. The liver was greatly enlarged; the dulness extended chiefly in the upward direction; the upper limit of the dulness was a curved line corresponding to the S-shaped curved line of a moderately large pleuritic effusion; the apex beat of the heart was displaced upwards and to the left; the right side in the infra-axillary and hypochondriac regions was enlarged and bulging. A tender spot was present in the sixth right interspace in the anterior axillary line (indicative of the "pointing" of the fluid collection). An aspirator needle introduced into this spot entered a large cavity, and from this cavity fifty-three ounces of anchovy-paste-coloured fluid (highly suggestive of an abscess of the liver) were withdrawn on aspiration. But against the diagnosis of hepatic abscess were the facts that there was no history of dysentery or other cause of hepatic abscess, and that the fluid removed from the cavity in the liver contained a much larger quantity of blood (red blood corpuscles) and a much smaller quantity of pus (leucocytes or pus cells) than a hepatic abscess usually contains, or, so far as my knowledge and experience enable me to judge, ever contains. When, after incision and drainage, the oozing of red blood continued, the original diagnosis of a hapatic abscess, which was made before and after the first aspiration, seemed negatived. I was then at a loss to account for the nature of the condition. The most likely lesion seemed to me to be a large angioma of the liver which had broken down and formed a suppurating blood cyst. And looking back at the clinical features which the case presented during life I still think that this was the most feasible diagnosis which could have been arrived at to account for all the facts of the case.

Bibliography by Dr. LEITH.—The literature of primary liver sarcoma is not very satisfactory. I have found a record of twenty-five cases, few of which, however, can be regarded as true examples. Of these, six were melanotic and three lympho-sarcomas more or less diffused. All except three of them presented the appearance of many nodules scattered more or less widely throughout the liver substance. In these three there was a large mass in the right lobe, partly gelatinous and partly mixed and infiltrated with blood. One was in a child, eight months old, recorded by West. He speaks of it as a cancer and says there were secondary nodules in the lung. From its description I think it may be justly regarded as a sarcoma. The second case is recorded by Roberts under the title of a Case of Fungus Hæmatodes of the Liver. It occurred in a girl aged twelve years, and formed a large mass weighing about 8lb. in the right lobe. The third case is recorded by Hörup of Copenhagen. It occurred in a woman aged twenty-six years and formed a mass in the right lobe measuring about five inches in all directions. It was a small, round-celled sarcoma.

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BEQUESTS TO SHEFFIELD CHARITIES.—One of the executors of the late Mrs. William Overend, of West Retford House, has announced the following list of legacies left by the deceased lady to local charities:—Sheffield General Infirmary, £5000; Sheffield Royal Hospital, £5000; Sheffield Girls' Charity School, £5000; Sheffield Boys' Charity School, £2000; Sheffield Jessop Hospital for Women, £2000; Sheffield Blind Institution, £2000; Sheffield Deaf and Dumb Institution, £2000; Sheffield Children's Hospital, £1000; Sheffield Nurses' Home (corner of Hounsfield-road), £1000; Sheffield Aged Female Society, £1000; Sheffield Church of England Educational Institute, £1000; Sheffield Scripture Reader's Society, £500; Sheffield Female Protection Society, £500; Sheffield Soldiers' Home, Langsett-road, £500. The *Sheffield Daily Telegraph* reminds its readers that Mrs. Overend was not content with practising posthumous philanthropy, but that in her lifetime she gave freely to objects which commended themselves to her sympathy and judgment. For example, in 1883 she gave £10,000 to found a convalescent patients' fund to provide means for sending to suitable homes patients ready to be discharged from hospital but not sufficiently recovered to go straight to work. This fund has proved of the greatest service in supplementing the services of the General Infirmary.

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Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Infantile Cerebral Degeneration, with Symmetrical Changes at the Macula.

A MEETING of this society was held on Jan. 12th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

Dr. KINGDON (Nottingham) and Dr. RISIEN RUSSELL read a paper, illustrated by lantern slides, on Infantile Cerebral Degeneration, with Symmetrical Changes at the Macula, a rare and fatal disease of infancy, which commences in the early months of infant life by muscular enfeeblement, associated with distinctive ophthalmoscopic appearances, complete paralysis resulting later, with a fatal issue about the end of the second year. Four cases of this affection had been under the observation of Dr. Kingdon and Dr. Russell; the children were born of healthy Jewish parents, and of three other children of the family two are healthy, but one died from the disease. Of the four cases that have been under observation three are dead and one is still alive. An account was given of the clinical history of the four cases, together with a description of the morbid changes met with post mortem in the central nervous system and eyes in the three cases which died. This account was supplemented by that of another placed at their disposal by Dr. F. J. Smith. Dr. Kingdon and Dr. Russell detailed the characteristic features of the disease, their description being based on the conditions met with in the cases reported in the earlier part of their paper, in conjunction with a study of all the recorded instances of the disease. Male and female children are affected and no exciting cause can be assigned. There is no apparent relation to syphilis, consanguinity of marriage, or any of the usual hereditary diatheses; but there is a marked racial peculiarity in that all the cases recorded have occurred in Jewish children. More than one child in the same family is usually affected. The symptoms and progress of the disease occur in three stages. In the first stage a child, born at full term and healthy, begins to show signs of muscular enfeeblement and of failure of sight about the end of the third month. About the fourth or fifth month definite and characteristic changes in the region of the macula lutea can be detected on ophthalmoscopic examination. The second stage of the disease is characterised by such marked muscular enfeeblement that the child is unable to sit up, its head falls backward if unsupported, and its grasp is feeble; when in the recumbent posture there is inability to turn from side to side. It is generally apathetic and the face bears an expression of mental enfeeblement. Vision is almost abolished, but there is still perception of light, while hearing remains acute, and the sense of taste is preserved. In the third stage the enfeebled muscles become atrophied and general emaciation progresses and becomes most marked. The deep reflexes are exaggerated, and still later there is rigidity of the extremities and retraction of the head, while occasional spasmodic contractions cause the child to start and cry from pain. Convulsions are not the rule, but have been noted in two exceptional cases. The temperature remains normal throughout the course of the disease. The heart, lungs, and abdominal viscera are also normal. The characteristic ophthalmoscopic appearances consist in symmetrical changes at the macula lutea, in which situation there is a whitish-grey patch but slightly raised above the surface of the retina, with a few retinal vessels visible on it at the periphery. In the centre of the patch the fovea centralis is seen as a dark cherry-red spot. In the early months the optic papilla shows no decided changes, but later in the course of the disease there is definite optic atrophy. Subjects of this disease usually die within two years, but the duration of life varies from one and a half to two and a half years. Death is sometimes unexpectedly sudden. On macroscopic examination of the central nervous system after death little that is abnormal can be detected, but most profound changes are met with on microscopical examination. There is a widespread degeneration of the pyramidal cells of the cerebral cortex which is progressive in character, extensive degeneration of the fibres of the corona radiata and of the pyramidal tracts throughout their whole course in the pons, medulla oblongata, and spinal cord. Similar but less extensive degeneration occurs in the fillet, descending root of the fifth nerve, and superior cerebellar peduncles. As in the pyramidal system, so in these tracts, the degeneration is quite symmetrical on the two sides. With regard to the eyes, which were examined microscopically by Mr. Treacher Collins, the retina at the yellow spot is much thickened, this being due to enlargement of the outer molecular layer, the tissue of which is spaced out, the most marked changes occurring in the neighbourhood of the fovea, and becoming less evident towards the periphery of the affected area. The optic nerve is atrophied, with increase of interstitial connective tissue and a large increase of round cells in the nerve. There is cupping of the optic disc the result of atrophy of the nerve fibres. There is no inflammatory exudation between the dural and pial sheaths of the nerve. The pathology of the disease was discussed, and the possible relationship between the ocular changes and those met with in the central nervous system was considered. Dr. Kingdon and Dr. Russell had not found any treatment of value in these cases, but suggested certain lines of treatment which may possibly influence the course of the disease after it had commenced or prevent its occurrence in children liable to it. The paper was copiously illustrated by photographs representing different stages of the clinical course of the disease, and by photo-micrographs of the changes met with after death both in the central nervous system and in the eyes, and sections of the degenerated cortex were shown under the microscope.

Dr. FLETCHER BEACH had seen a similar physical and mental condition in idiots twelve years of age at Darenth Asylum. Post mortem the cases showed a degenerative condition of the cerebral cortex exactly like that described by Dr. Kingdon and Dr. Russell.

Dr. TOOTH commented on the retention of acuteness of hearing in spite of degeneration of the temporo-sphenoidal lobes.

Dr. KINGDON, in reply, considered that the retinal change which occurred in all their cases marked them off from those quoted by Dr. Fletcher Beach.

Dr. RISIEN RUSSELL said that the changes in the temporo-sphenoidal lobe were much less marked than in other regions of the brain, which probably explained the fact that hearing was unaffected.

MEDICAL SOCIETY OF LONDON.

Wandering Spleens.—Prognosis of Pneumothorax.

A MEETING of this society was held on Jan. 11th, Mr. REGINALD HARRISON, President, being in the chair.

On the motion of the PRESIDENT, which was seconded by Sir DYCE DUCKWORTH, the congratulations of the society were offered to Sir Joseph Lister on his elevation to the Peerage.

Mr. BLAND SUTTON read a paper on Wandering Spleens. He referred to their extraordinary mobility and their tendency to sink into the pelvis and simulate tumours in that position. The cause of the increased mobility was little understood, but it was noteworthy that wandering spleens usually occurred in women, and in the majority of cases the patients had had children. The effects on the spleen were:—1. Engorgement, often to an extraordinary degree, which varied from time to time. He had seen great diminution occur from contraction of the organ when exposed to the air at the time of operation. 2. Axial rotation, which again by strangling the vein led to increased engorgement. The same symptoms accompanied acute rotation as were met with in acute rotation of an ovarian cyst and in strangulated hernia. 3. Atrophy.—If the torsion was so acute as to obliterate the splenic artery atrophy of the spleen ensued, as demonstrated by Rokitansky. Effects were also produced on neighbouring viscera. The pancreas might become involved in the pedicle and forcibly elongated. He had seen a case, and Richelot had published another, in which pancreatic tissue was included in ligature of the pedicle when the organ was removed. The stomach might be drugged on, causing dilatation, along with kinking of the duodenum, and recurrent attacks of jaundice might result from tension on the common bile duct. Adhesions were apt to form with intestines. Since wandering spleens tended to gravitate into the pelvis they occasionally caused

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acute retroflexion, and in one case recorded caused complete prolapse of the uterus, vagina, and bladder. This pressure also seriously disturbed menstruation. A wandering spleen might jeopardise life through causing rupture of the stomach or duodenum, intestinal obstruction, or from rupture or suppuration occurring in the spleen itself. The diagnosis was often difficult, and from their so frequently reaching the pelvis, from their shape and firmness, together with the disturbances of menstruation they caused, they were most frequently mistaken for uterine myomata. On the other hand, ovarian and uterine tumours when moveable might closely simulate wandering spleens. In one case a myoma with a long pedicle so closely resembled a spleen when the abdomen was opened that it was only by feeling the spleen in its normal position that spectators were satisfied that the tumour was not a displaced spleen. Its dark colour was due to engorgement from twisting of the pedicle. In another case he had operated on for a very moveable tumour with a notched margin the tumour was found to be an ovarian cyst, the largest loculus of which had ruptured. Smaller loculi on the surface had given the impression of splenic notches. In both cases the tumours were successfully removed. He considered that splenectomy for wandering spleen was not only justifiable, but was a highly successful operation, the rate of recovery being equal to that of ovariotomy in skilled hands. He had succeeded in collecting a score of cases performed within the last twenty years without a death. Attempts had been made by Pouwer and others to secure the spleen in the left hypochondrium by means similar to those adopted for moveable kidney, but the results showed clearly that the patients ran much greater risks and had a longer confinement to bed than if the spleens had been removed. The great difference between splenectomy and splenopexy was that in the former case the individual was deprived of an organ, and although it was not known with any degree of precision what its real use was, the surgeon was, nevertheless, bound to display caution in dealing with it. So far as his own cases went he had failed to find any evil manifestations. He regarded the spleen as a highly developed and specialised lymph gland, and at present there seemed to be no greater reason for hesitating to remove it when "wandering" and troublesome in so far as remote consequences were concerned than to excise a crowd of enlarged glandulæ concatenatæ. It was a fact that many, if not all, individuals with a wandering spleen were very thin and often gaunt, and as far as his observations went they retained this character when spleenless.—Mr. BALLANCE had seen a case two years ago with Dr. Cullingworth in which the wandering spleen was situated in the pelvis. There were great variations in bulk from time to time and acute abdominal pain and vomiting at the menstrual periods. The spleen was removed and the patient rapidly recovered from the immediate effects of the operation, but after about ten days began to suffer from a curious train of symptoms. There was some pyrexia, quick pulse, emaciation, complete anorexia, loss of strength, increased quantity of urine, and griping pains in the abdomen. There was also great increase in the leucocytes. He had seen the same train of symptoms in two adult males after excision for rupture. In a boy in whom he performed excision of the spleen the operation was not followed by any symptoms. Similar symptoms followed excision in old dogs, but young animals did not seem to be inconvenienced by the removal. In some of the cases he had fed the patients on spleens, either raw or slightly toasted. He thought the bone pains might be due to the yellow marrow becoming converted into red, the marrow taking on the function of the spleen pulp, while the lymph glands undertook the work of the Malpighian bodies. The condition of the blood became normal in about ten weeks, and all the patients completely recovered their weight and health.—Mr. BLAND SUTTON, in reply, said that none of his cases had shown the symptoms described by Mr. Ballance. He was inclined to doubt whether the administration of spleens had anything to do with the ultimate recovery. His cases were all thin before operation, but did not show any increased emaciation afterwards.

Dr. SAMUEL WEST read a paper on the Prognosis of Pneumothorax (which will appear in full in a future number), and referred to the natural course of the disease so far as it was indicated by the mortality and duration. The statements were based upon three sets of statistics: (1) 101 cases from the records of the Hospital for Diseases of the Chest, Victoria-park, published some years ago; (2) a set of 43 cases from the registers of St. Bartholomew's Hospital; and (3) 20 cases of his own (the last two series had not yet been published). The first series yielded a death-rate of 77 per cent.; the last two a rate of 60 per cent. Saussier's figures placed the mortality at about 90 per cent. In respect of duration, out of the first two series of 74 cases 45 died within the first month—i.e., 60 per cent.; and 9 more died within the second month—i.e., 71 per cent. The causes of death fell into three groups: (*a*) those in which death was the direct result of the pneumothorax itself; (*b*) those in which death was the indirect result of it and due to the complication which followed—i.e., empyema; and (*c*) those in which death was the result of the original disease to which the pneumothorax itself was due—e.g., phthisis. The three considerations usually embraced by the term prognosis required in the case of pneumothorax to be separately dealt with. They were: (1) the immediate risk to life; (2) the possible duration of life; and (3) the chances of ultimate recovery. The immediate risk to life depended upon many conditions:—(1) the urgency of the symptoms; (2) the effect produced upon the opposite lung and the amount of previous disease in it; (3) the effect upon the heart; (4) the general strength of the patient; and (5) the nature of the cause. These were briefly considered. The duration of life was next dealt with. In respect of recovery most statistics gave a percentage of not more than 10 per cent. The figures derived from St. Bartholomew's Hospital yielded over 25 per cent., and his own were more favourable still. It was of these cases of recovery that he wished to give an account. The most favourable cases were those in which no effusion took place, but the air was simply absorbed. Of this there were five instances. In another set of cases effusion formed, but it was serous, and recovery took place with or without paracentesis, just as it did after ordinary serous effusion. When the effusion was purulent the prognosis was much more grave, but even some of these cases might recover in time. The following cases illustrated recovery:—A. *Without effusion.*—Case 1. A woman, aged nineteen years, was affected with phthisis for about three months. Pneumothorax of the left side developed in the hospital, but completely disappeared without special treatment in five weeks. The phthisis made rapid progress, from which the patient died shortly afterwards. Case 2. A healthy man, aged forty-six years, was sent up by Dr. Parry-Jones of Pinxton, who discovered the pneumothorax on examination of the chest. The onset had been quite latent and there had been nothing to direct attention to the chest, the man having been at work till admission. No effusion formed and in a few weeks recovery was complete, and ten years later he was still well. Case 3. A man, aged twenty-four years, had very doubtful signs of phthisis. Right pneumothorax developed, which was tapped, but recovery took place without effusion in the course of five weeks. No physical signs developed, and the patient was known to be in his previous health for at least twelve months afterwards. Case 4. A man, aged twenty-two years, a football player, was admitted with what was apparently his third attack of right pneumothorax. This last attack resolved rapidly, and in four weeks the patient was well and remained so for months, when he passed out of observation. Case 5. An apparently healthy young woman, aged fifteen years, seen with Dr. Waldo of Clifton, developed pneumothorax without any very urgent symptoms. She recovered in the course of some weeks and remained in good health to date, seven years later. B. *After serous or sero-purulent effusion.*—Case 6. A man, aged twenty-two years, was admitted into the hospital with right hydro-pneumothorax of probably three months' duration. Three weeks later forty-three ounces of clear serous fluid were removed, and again after three weeks twenty-two ounces were taken away. From that time, nearly fourteen years ago, he had continued in perfect health. Case 7. A man, aged twenty-four years, presented well-marked signs of phthisis at the left apex. While under treatment left pneumothorax developed. Effusion formed and twenty-two ounces were removed. In a fortnight all signs of air had disappeared. A week after this there was a sudden recurrence of the pneumothorax, which also rapidly subsided, and in three weeks after the second attack the patient had lost all signs of it. Case 8. A man, aged twenty-one years, was seized with left pneumothorax without very urgent symptoms and without obvious cause. A good deal of fluid formed, but it was all spontaneously absorbed, and he made a complete recovery. Six months

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later he came again under treatment with pneumothorax of the opposite side. A little fluid formed, but that was also absorbed, and again the patient recovered, and was still in good health six years after the attack. Case 9. A man, aged thirty-one years, was admitted to hospital with pneumothorax with effusion. Three weeks later eighty ounces of clear serum were removed. The fluid re-accumulated, but the patient feeling better refused any further treatment and left the hospital. C. *With purulent effusion.* Case 10. A man, aged forty-six years, was admitted with pneumothorax of fourteen days' duration. Ten days after admission he was tapped and seventy-four ounces of clear serous fluid were withdrawn. Two weeks later he was tapped again, but this time no fluid could be obtained. Shortly afterwards the puncture suppurated and a clear sero-purulent fluid was discharged. The patient improved slowly, but the sinus never closed completely, and he died from phthisis a year later. Case 11. A man, aged twenty-nine years, came under observation with left pneumothorax with some effusion. The attack had originated without definite symptoms so that its duration could not be fixed. In the course of two weeks he improved greatly and had gained three pounds. He then began to spit up pus and from this time made more rapid progress. Six weeks later he left the hospital greatly improved in general health, but expectorating some ounces of pus daily. It would have been better, Dr. West thought, to have laid the side open, but the patient refused operation. He thought that its share in the diminished mortality of other diseases of the thorax might fairly be claimed for pneumothorax, and he attributed this to the better comprehension of the true nature of the affection and its dangers and to the better treatment of the cases, especially during the early days of the attack, when the risks to life are greatest.—Sir DYCE DUCKWORTH considered the paper the most complete and important of recent years and congratulated Dr. West on his results. The most serious cases were those associated with empyema. He thought that the presence of pus in the pleural cavity was much less harmful than might be expected, and he endorsed the teaching of Sir Andrew Clark and others, that interference in such cases was usually harmful and led to rapid extension of the lung mischief.—Dr. DE HAVILLAND HALL considered the prognosis of cases occurring in the apparently healthy to be very good, the air being absorbed in about six weeks and the amount of discomfort caused surprisingly little. Many, however, developed phthisis in later life. Rest in bed, with the administration of laxatives to prevent straining at stool, was the only treatment required.—Dr. KINGSTON FOWLER believed it best to leave cases of pyo-pneumothorax alone. In one case, in which the pus contained abundant streptococci, he was obliged to draw off the fluid to relieve pressure. Death occurred not long after from rupture of one of several aneurysms of the internal mammary artery. Possibly the character of the organisms present in the pus might be of importance in deciding the course to pursue in each case. He had seen one case in which the necropsy appeared to show that the pneumothorax had been due to the bursting of an emphysematous bulla.—Dr. H. W. HUBBARD considered interference inadvisable.—Mr. G. R. TURNER mentioned a case in which pneumothorax occurred from rupture of the œsophagus during an attack of vomiting. The rarity of the condition after fracture of the ribs was curious, but he saw one case in which it occurred on the day after the accident; in this case, also, while the patient was vomiting.

Dr. WEST, in reply, joined issue with those who deprecated interference in cases of pyo-pneumothorax. He believed that early removal of the pus by modern methods was advantageous in many cases. Good results, however, could no more be expected from a neglected pyo-pneumothorax than from a neglected empyema. He mentioned a case in which a pulmonary aneurysm caused death by rupture into the evacuated pleural cavity.

CLINICAL SOCIETY OF LONDON.

Gunshot-wound of the Eye.—Paroxysmal Tachycardia.—Fracture of the Axis Vertebra.

A MEETING of this society was held on Jan. 8th, the President, Dr. BUZZARD, being in the chair.

MR. BRUDENELL CARTER reported a case of Gunshot-wound of the Eye, in which two pellets of shot were retained and encapsuled, with preservation of sight. The patient was a boy aged fourteen years who received a charge of snipe shot in his face from a gun, the muzzle of which was only three yards away, on Dec. 14th, 1895. Most of the charge entered the mouth and the jaws were much injured, but two pellets passed through the left lower lid and entered the eye, piercing the sclera below the cornea, one just to the nasal side of the vertical meridian, the other on the same horizontal line and four or five millimetres nearer the nose. Mr. Carter saw the case two days after the accident, and after dilating the pupil was able to see that the retina had been wounded. An expectant treatment was pursued, and the eye recovered without inflammation or trouble of any sort. He thought the pellets had been sterilised by heat and possibly cleansed by passing through the lower eyelid. By Feb. 4th, 1896, all the blood effused within the eye had been absorbed; and it was then seen that the retina and choroid, having been wounded below the optic disc, had disappeared from an extensive region, probably by retraction, leaving the internal surface of the sclera exposed to view, while on the temporal margin of the gap thus occasioned two pellets of shot were lodged and encapsuled, one slightly above the other, producing elevations which were about a millimetre above the general level of the fundus. Central vision is now equal to $\frac{1}{12}$ths of the normal, and the gap in the upper part of the field is too remote from the fixing point to occasion any inconvenience. Since the accident the boy has passed into a public school, and he now takes part in all the games and pursuits suitable to his age and position.—Dr. KINGSTON FOWLER asked what Mr. Carter would regard as indications for expectant treatment. He had an impression that excision was too hastily decided on in these accidents, which were not uncommon among sportsmen.—Mr. MAKINS asked if there was any danger of the retained pellets setting up mischief.—Mr. R. J. PYE-SMITH asked if any accurate investigations had been made as to the actual temperature of shot.—The PRESIDENT remarked on the many points of interest raised by the paper and asked to what extent passage through the skin could be relied on to make an object aseptic.—Mr. BRUDENELL CARTER, in reply, said that as a matter of experience heated missiles always acted as sterile bodies when they injured the eye. He did not know of any precise observations as to their temperature. He quoted several cases in which heated pieces of metal had penetrated the lens and remained there without exciting inflammation. He thought it was always safe to pursue expectant treatment for about three weeks, as sympathetic ophthalmia rarely occurred before that time. If the macular region were injured there would be no object in waiting and he would advise the performance of Mules's operation.

Dr. W. P. HERRINGHAM read a paper on a case of Paroxysmal Tachycardia in a girl aged eleven years. The child was under observation from September, 1895, when she was eleven years old, to June, 1896, during which time she had seven attacks of tachycardia. The history showed that she had been subject to similar attacks for at least five years. The attacks were typical in character. They began quite suddenly in a period of perfect health and without adequate cause. The beginning was never witnessed by Dr. Herringham. They lasted for a period which varied from thirty-six hours to thirteen days, and the end of the paroxysm took place during sleep. During the attack the pulse was very small and soft, uncountable at the wrist, of a rate which, taken at the heart, was from 240 to 260; the heart was somewhat dilated beyond its usual size, and the pulsation was very forcible. It was at first productive of some præcordial distress, but not of acute pain. Respiration was rapid and there was occasionally a little cyanosis, but no sign of pulmonary œdema. There was no anasarca of the legs. The urine during the attacks was very scanty, owing doubtless to the low blood pressure. During the paroxysms sleep was restless and did not alter the cardiac rate. Since they ended during the night the actual moment of change was never witnessed, and it could not, therefore, be told whether this was instantaneous or a matter of hours. The pulse, which had been over 200 the night before, was found in the morning to be 90 or thereabouts and the child professed herself quite well. The causes which excited the attack appeared to be either sudden effort or sudden movement, yet neither of a degree likely to produce any ill effect upon ordinary persons. No valvular disease could be detected nor was there any history of rheumatism in the child or in her family. There

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was no sign or history of syphilis and the patient between the attacks was a big, plump, rosy girl the picture of health. The heart, however, is permanently enlarged and Dr. Herringham suggested that there might be adherent pericardium and that the myocardium itself might, as the result of some former disease, be unhealthy. From a study of the literature of the subject and from watching the present case he was disinclined to believe that these hearts were structurally healthy and he thought that the change in them might originate in three ways. In some cases it might be due to acute myocarditis, as in those which had been seen in rheumatic people; in others it might be due to degeneration of the muscle itself, either syphilitic, as probably in two of the recorded necropsies, or fibrosis; and that again in a third class it might be primarily due to nerve degeneration, as in some cases noted after infectious fevers. Various modes of treatment adopted—digitalis, nitrite of amyl, atropine in large doses, pressure upon the vagus nerve, treatment directed to the stomach and intestines—had all proved useless, or if any drug had at one time seemed to cure it failed to repeat the performance. The Schott treatment by baths and exercises neither reduced the size of the heart nor prevented the occurrence of the paroxysm.—Dr. ABRAHAMS thought these cases were of nervous origin and that the attacks were analogous to the respiratory spasm in whooping-cough.—Dr. SAMUEL WEST remarked on the rarity of the disease in children. He had never been able to find any adequate explanation for the paroxysms. He did not agree with those who said that the patients were otherwise healthy. There was in almost all dilatation of the heart. This complaint did not necessarily interfere with work, as illustrated by the case of a policeman who was able to remain on duty. During his attack murmurs developed, loudest at the base, which were distinctly audible a couple of feet from the patient.—Dr. SEYMOUR TAYLOR had seen six cases in adults, two of whom died a few years later from disease of the abdominal viscera, which suggested that the paroxysms might be brought about through the sympathetic. If they were of central origin he would regard them as analogous to epileptic paroxysms rather than to those of whooping-cough, as the patients in the intervals were perfectly well.—Dr. GLOVER thought that arsenic and strychnia were most likely to be beneficial. Had they been tried?—Dr. C. W. CHAPMAN recommended the use of a combination of bromide of ammonium with arsenic.—Dr. KINGSTON FOWLER quoted Dr. Sharkey as having obtained good results with increasing doses of valerianate of zinc, beginning with three-grain doses.—Dr. LUCAS BENHAM had used opium with advantage.—Dr. HERRINGHAM, in reply, said that although the theory of a nervous origin was plausible and tempting there was no proof of it. In three of the six necropsies definite structural change in the heart was found. Compression of the thorax had been employed by Rosenfeld with success, but he had not yet had an opportunity of employing it in the present case.

Mr. CUTHBERT S. WALLACE described a case of Fracture of the Axis Vertebra. The patient, a man aged forty-four years, fell a distance of nine feet and was carried up to bed while unconscious. On the next day the patient sought advice because of the rigidity of his neck. On examination it was seen that the head was protruded and the chin almost touched the sternum. A slight projection was felt in the cervical spine on examining the posterior wall of the pharynx, but this was not tender. The patient was laid on a flat bed and the head fixed with sand-bags. Rigidity passed away and good movement returned by the eighth day; on the afternoon of this day the patient was suddenly seized with dyspnœa and died. Post mortem a fracture of the axis was found that separated the two superior articular parts with the odontoid process from the inferior part of the body. No injury of the cervical cord was found.

OBSTETRICAL SOCIETY OF LONDON.

The Etiology of Eclampsia.—Breech Presentation with Extended Legs.—Exhibition of Specimens.

A MEETING of this society was held on Jan. 6th, the President, Dr. F. H. CHAMPNEYS, being in the chair.

Dr. MACNAUGHTON JONES read a note on the Etiology of Eclampsia. After referring to the well-known theories of the causation of this disease he proceeded to relate an instance in which induction of abortion was necessary for albuminuria. The patient had well-marked eye symptoms, much sickness, and headache. After abortion took place further fits occurred, followed by coma. He had administered two subcutaneous injections of pilocarpine. The patient recovered.—Dr. JOHN PHILLIPS, while agreeing with the treatment adopted in inducing abortion, considered that the use of pilocarpine was attended with grave danger. He called attention to his paper on the Value of Pilocarpine in Pregnancy, Labour, and the Lying-in,[1] in which the whole subject had been carefully considered, and thirty-nine cases in which pilocarpine had been used in convulsions reported. In nine of these cases dangerous symptoms followed shortly after the exhibition of the drug and seven died. His experiments showed that rapid œdema of the lungs took place sometimes within a few minutes of the injection, and he ventured again to warn his fellow practitioners against its use.—Dr. HERMAN said that pilocarpine was a dangerous drug in puerperal eclampsia; it made the skin sweat, but it also made the bronchial tubes sweat. One of the dangers of this disease was the liability to pulmonary œdema and inflammation after the fits had ceased, and this danger was increased by the use of pilocarpine. He approved the induction of abortion in this case, and to it and not to the pilocarpine he attributed the good result.

Dr. W. S. A. GRIFFITH and Dr. A. W. W. LEA read a paper on Breech Presentation with Extended Legs. This paper was the result of seventeen cases, which were briefly described, and the following conclusions were arrived at:—1. The extension of the legs in incomplete breech presentations may be either primary or secondary. 2. In the primary variety, which occurs before labour has begun, the breech engages readily in the brim and the diagnosis can be made. 3. In the secondary variety the extension occurs during labour. This form is more frequent than the primary. 4. This complication is more frequent in primiparæ—viz., 70 per cent. of the cases. 5. The prognosis with regard to the child is not worse than is that in pelvic presentations in general. 6. Cephalic version is advantageous before labour is advanced. It is not usually possible in the primary, but may be so in the secondary variety. 7. Most cases are delivered naturally. 8. Prophylactic reduction of the leg is only required in exceptional cases. 9. It is probable that flexion of the leg on the thigh is preferable to pulling down the leg into the vagina. 10. If aid is required in the lower part of the pelvis the soft fillet will usually effect delivery.—Dr. AMAND ROUTH congratulated Dr. Griffith and Dr. Lea on their very valuable paper. He doubted very much if their statement that the prognosis as regards the child was no worse when the legs were extended than in ordinary breech cases was correct. This might be so in a hospital, where an exact diagnosis would be made early in labour, but in general practice he believed the result was very different. He had seen cases where a correct diagnosis of the cause of the delay had not been made and others where a diagnosis had been made but efforts to bring down the legs had failed. He also thought that prolapse of the cord in breech cases was not so serious as had been stated in the paper.—Dr. C. HUBERT ROBERTS asked Dr. Griffiths and Dr. Lea if they could explain the cause of the curious primary extension of the legs in these cases, as nothing had been written at present on the matter. With reference to the cases, Dr. Roberts thought that the question of diagnosis was very important, and if this were always possible and certain (because it was evident that interference was necessary in such cases) the question arose, When ought they to interfere? Dr. Roberts congratulated Dr. Griffith and Dr. Lea on the small mortality of their cases. With regard to the children he had been led to believe that the mortality was very much greater. He considered that the use of the forceps was dangerous treatment.—Dr. SPENCER did not think that primary extension of the legs could be diagnosed from the fact that they assumed that position after birth. The great majority of children tended to extend the legs after a difficult birth in that position, but he did not think it proved that the limbs had occupied this position before labour. The child presenting by the breech was known not infrequently to lie with the legs stretched out towards various parts of the uterus, but he did not think the feet were forced up to the shoulders till labour occurred

[1] Transactions of the Obstetrical Society, vol. xxx., p. 354.

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except in the rare cases of *genu recurvatum*, in which, however, the joint was not ankylosed, as he understood Dr. Griffith and Dr. Lea to state, but subluxated.—After remarks from Dr. BOXALL the PRESIDENT said that he had seen a case of primary extension of the legs with vertex presentation lead to difficult delivery. A patient with a normal pelvis and a small child fell in labour which could not be terminated by natural efforts. On examination a presentation of the vertex in the first position was found together with presentation of the left arm and the left foot. He suspected twins and thought that the foot at least was contributed by a second fœtus. The child was delivered by forceps and no twin was present. The legs after birth lay on each side of the neck. The newness of the subject might be illustrated by the fact that so careful and learned an observer as the late Dr. Matthews Duncan told him that he had never seen a case of primary extension of the legs. As to the question when to interfere, interference should always be resorted to when in a case of breech presentation delay took place at any stage, even in the first stage. The paper illustrated the fact that the subject is still not thoroughly understood. It might be thought that the cases of difficulty would be those of large children, contracted pelves, and primiparæ. But, on the one hand, many large children were delivered easily, many primiparæ even with large children experienced no difficulty, and contracted pelves counted for a very small number of difficult cases. On the other hand, difficulties not infrequently occurred with normal pelves and small children. One mode of delivery was not insisted on in any book that he knew, though it might be mentioned casually, that was pressure from above. In any really difficult case where the breech was too low for the bringing down of the foot this pressure, applied judiciously and firmly by a skilled assistant, the patient being in the lithotomy position, was of the greatest service and he always used it.—Dr. LEA briefly replied.

The Reports of Committees on Dr. Remfry's and Dr. Lewers' specimens exhibited at a previous meeting were read.

The following specimens were exhibited:—

Dr. AMAND ROUTH: Case of Hysterectomy for Malignant Papilloma.

Dr. GOW: The Uterus from a case of Cæsarean Hysterectomy for Fibroids.

Dr. ARNOLD W. W. LEA: Broad Ligament Cyst with Twisted Pedicle.

Dr. C. HUBERT ROBERTS: Calcified Fibroma of the Broad Ligament, with drawings and microscopic sections.

HARVEIAN SOCIETY OF LONDON.

Some Notes on Ovarian Tumours.

A MEETING of this society was held on Jan. 7th, Mr. ROUGHTON (Vice-President) being in the chair.

Dr. W. J. GOW read a paper on Some Notes on Ovarian Tumours, his remarks being mainly founded on a series of forty-seven cases in which he had performed ovariotomy. He dealt first with the symptoms of ovarian tumours, and after alluding to the frequent absence of any symptoms other than those of progressive abdominal enlargement he showed that disturbances of menstruation and pain were comparatively common. Menorrhagia and metrorrhagia were more often met with than amenorrhœa. He alluded also to procidentia uteri as a condition which was sometimes associated with the presence of an ovarian tumour, and stated that in six cases of complete procidentia in young virgins which had come under his notice three of them were complicated by tumours of the ovary, and therefore it seemed probable that in young unmarried girls there was some distinct causal relation between the development of ovarian new growths and the occurrence of procidentia. He also discussed briefly the etiology of suppurative changes in ovarian cysts, and the symptoms of rupture, as well as certain difficulties in the differential diagnosis of ovarian tumours from pregnancy and uterine fibroids. He described a case in which he had performed ovariotomy on a patient who was the subject of diabetes mellitus. He stated that among his forty-seven cases there was no mortality, and concluded by briefly alluding to certain important points relating to the operation of ovariotomy.

Mr. ALBAN DORAN never trusted to menstrual disturbance as diagnostic of ovarian tumour. Amenorrhœa was usual in sarcoma of the ovary. Menorrhagia was possibly due to shortness of the pedicle irritating the uterus. Violent attacks of pain were not rare in cases of ovarian cyst where no adhesions or torsion of the pedicle could be found at the operation. Perhaps the pain was caused by temporary torsion. Mr. Doran was still in favour of short incisions, but diagnosis sometimes required a large wound, else the operator's fingers might do damage in the dark, and when the incision was too small the tissues of the wound got badly bruised and a weak scar was the result. Ligature of the pedicle in several sections was not advisable. Even in a very broad pedicle, when the outer and inner borders were secured separately, a single transfixion was sufficient. Penrose even omitted the transfixion in oöphorectomy, and believed that the tying of the vessels in the borders was sufficient in ovariotomy. The outer border should always be tied separately. Double transfixions were sometimes followed by suppuration around the ligatures.

Dr. BOXALL remarked on the difficulties of diagnosis occasionally met with and endorsed the advice given by Dr. Gow to be always prepared for hysterectomy even in what appeared the most straightforward case.

The CHAIRMAN, Mr. DUTCH, Mr. JACKSON CLARKE, and Dr. CORK joined in the discussion and Dr. GOW replied.

NEUROLOGICAL SOCIETY.

Presidential Address on Heredity in Neurosis.

A MEETING of this society was held on Thursday, Jan. 14th, in the rooms of the Medical Society, when Dr. G. H. Savage delivered his Presidential address.

Before commencing his paper he referred to the death of Dr. Hack Tuke, which had placed him as representative of the Psychiatric Branch of the society. He considered first heredity and the present ideas in relationship to it, next the meaning of the terms "neurosis" and "neurotic," then he traced the relationship between the various neuroses, and pointed out how they were related to neuroses in the parents. He then discussed the special liability of the insane neuroses to recur and gave his explanation why certain insanities were more likely to be transmitted than others. To go more into detail Dr. Savage began by tracing the ideas of heredity from the Darwinian to the Weismann period. He could not admit that there was no power of transmitting acquired capacities. He felt that great misunderstanding had arisen from the idea of the direct transmission of fully developed habits or faculties, whereas all that was transmitted was a capacity or predisposition for developing these habits. He said that the very existence of species which bred true and yet were seen to be related with other species was proof of a power to vary and a power slowly to acquire even specific characteristics. Time prevented man from watching such processes. The transmission as far as man was concerned was seen, not in increased mass of nervous tissues, but in increased adaptability of the tissues and organs already existing, and this power to develop in adaptability allowed increased power of going wrong—that is, not fitting into the developing surroundings. There is a fair comparison between the nucleus which clothes itself with germinal matter and the individual mass of germ plasm which clothes itself with an appropriate soma which is suited to the future needs of the animal. The transmission of the simpler parts and the simpler instincts are allowed to take place, and it is only from their complexity that the more elaborate cannot equally be traced and investigated. In the transmission of instincts it was shown how some were transmitted but were perhaps never developed—that, in fact, there may be potential abilities which are never evoked because no stimulus has been present. It is thus, too, with some neuroses which seem to lie dormant till special conditions give rise to their appearance. Later Dr. Savage referred to cases in which tendencies to special forms of mental disorder only occurred at certain ages. Neurosis was defined as the morbid instability which caused most of the bodily disturbances to be represented too rapidly or in too great a degree along the nervous lines—that is, the undue nervous expression of bodily states. He showed that this might, in fact, generally did, depend on causes of physical weakness in the progenitor or in the individual, and he

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pointed out how often similar states of nervous instability and of disorder resulted from either previous disease of a similar kind in the parent, or in the patient, at an earlier period of life. All neuroses are not to be considered as insanities, and some of the most confirmed neuroses never pass into insanity. It is thus with true hypochondriasis. The relation of heredity to the neuroses has to be traced in various ways, one of the best being the consideration of the nervous disorders which commonly occur in the offspring of the insane and markedly neurotic. These consist of defect of nerve power of various degrees shown by defect of one or other of the mental factors, which may give rise to various forms of idiocy, or lesser degrees of defect which may give rise to smaller degrees of mental weakness. Then there is marked want of stability, which gives rise to irregular development—onesidedness, which may be seen in idiots, savants, and in some prodigies; in impulsive acts, which are in many cases exaggerated reflexes; convulsive attacks, which are readily started in the neurotic child and may lead to habitual convulsions (epilepsy) or to permanent mental weakness; defective control leads to various other symptoms in the neurotic, such as somnambulism, wetting of bed, sexual precocity, &c. Due to similar causes are some forms of mimicry with peculiar forms of morbid expression, such as stammering, grimacing, and the like. Next in the neurotic there is a special tendency to irregular rises in temperature in childhood, and with this there is special danger of severe and easily started delirium. Other connecting links in the neurotic chain were given and then Dr. Savage pointed out that it was of interest to note how the same nervous symptoms might occur in patients who had insane parents and in those who in youth had had attacks of insanity themselves. This was well seen in some cases of so-called moral insanity. The children of some insane or highly neurotic persons had either no recollection of punishment or else were unable to associate certain acts with certain pains; in some cases the criminal acts were simply uncontrolled impulses pending on original nervous weakness. Lying of different kinds was described both as occurring alone and associated with thieving. Cruelty, the uncontrolled exercise of power in some cases and in others a mere uncontrolled reflex, and precocious sexuality, with its varieties and possible causes, were referred to. The next part of the subject was on the relationship of the various forms of insanity to heredity. Dr. Savage pointed out that ordinary mania was not a form of neurosis which bred true, that it did not seem to have a sufficiently definite physical basis for it to be transmissible, but there was the form of acute delirious mania which was interestingly allied to the early delirium in childhood which was easily evoked in neurotic subjects and was a very grave disease. Melancholia, on the other hand, being specially associated with general bodily ailment, was a disorder which was often met with in generation after generation in certain families. Thus certain families tended to die out in mind before body, in some the individuals living to extreme old age, and in some of the nervously unstable there seem to be capacity for passing on a tendency to recurring melancholia, which in the end became chronic. Dementia in a similar way was often associated with the old age of certain families. The way in which the mental decay occurred generally followed the same lines in members of the same family. The next point in the part of this subject was the relationship of systematised delusional insanities to heredity. It was pointed out that in nearly all these cases there was either neurotic heredity or a history of previous attacks of insanity in the individual. The occurrence of similar imperative ideas in parent and child was referred to and explained as possibly only like the recurrence of muscular tricks under similar conditions. The various monomanias were spoken of and the relationship which exists between heredity and general paralysis of the insane. It was said that in general paralysis the neurotic heredity was not often strongly marked, but that if it occurred it seemed to affect the course of the disease, in some cases leading to frequent remissions and in others to a chronic course in the disease. It was suggested that where there was a history of syphilis and heredity locomotor ataxy was not uncommon, while under similar conditions without the heredity general paralysis was more common. What in some cases looks like direct heredity is, after all, the result of nervous instability associated with dread and expectancy; this is well seen in some cases of puerperal insanity and the suicidal tendency recurring in certain families. Heredity is an important factor in the production of neuroses; it is an important element, too, in their transmission, but the transmission depends as much on the stimulus which evokes the symptoms as on the heredity, and it is this which is so important for the consideration of the physician. There is no absolute tyranny of the organisation any more than there is tyranny of the surrounding. There is, therefore, hope in changing the surrounding of the neurotic and thus breaking morbid habit or preventing its development. There are no specific differences between the neuroses; they are links in the same chain. There is evidence that acquired neuroses will lead to a changed condition in the offspring, so that it was not true, in his opinion, that nervous acquisitions or defects cannot be transmitted.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

Transplantation.—Retarded Eruption.—Methods of Preventing Deformity after Removal of Portions of the Mandible.

THE ordinary monthly meeting of this society was held on Jan. 11th, Mr. R. H. WOODHOUSE, President, in the chair.

Mr. H. L. ALBERT read a communication on two cases of Transplantation, with a third case of transplantation of a root subsequently crowned. He referred in detail to the three cases and then explained the method of procedure he usually adopted, which was as follows. A tooth was first selected of suitable colour and shape with a root slightly wider than the one to be removed; the tooth was then denuded of its periosteum and any deposits which might be attached to it. The apex of the root was then cut off and the pulp chamber sterilised and filled. The tooth to be removed was grasped at its neck and as much rotation as possible employed in its extraction in order to avoid deflecting the alveolus. The socket was then washed out with an antiseptic, and the tooth to be transplanted forcibly pushed into position, care being taken that the bite was clear. He laid stress upon the avoidance of ligatures and splints, as they were, he thought, only traps for bacteria and therefore likely to lead to periosteal trouble.

Mr. E. BALDING recorded a case of Retarded Eruption in a girl aged eleven years and eight months. All the milk teeth were present with the exception of the left upper and lower second molars and the right upper central, the latter having been shed consequent on the eruption of its permanent successor; the four first permanent molars were also erupted, but beyond this there were no signs of any permanent teeth.

Mr. A. PEARCE GOULD read a paper on Methods of Preventing Deformity after Removal of Portions of the Mandible. He first of all referred to the fact that the surgery of the lower maxilla differed materially from that of the upper, for while removal of a large portion of the upper maxilla would leave only a trifling deformity removal of a large portion of the mandible caused considerable external deformity as well as great interference with its function in mastication. He stated that comparatively little effort had been made to deal with this question and referred at some length to the attempts made by Liston and Fergusson in former days and by Boyd and Stokes in recent times. He then related in detail three cases which had come under his care and in which he had endeavoured to overcome the deformity resulting from removal of portions of the mandible. The first was a case of recurrent epithelioma in a man aged fifty-two years. He removed a considerable part of the left half of the mandible and between the extremities of the remaining portion he inserted a stout silver wire. As long as the man remained in hospital the result was excellent, but during his stay in a convalescent home the wire became shifted and appeared through an aperture in the cheek, the patient removing the wire himself. The second case was one of epithelioma of the gums on the right side. A piece of the mandible, about two and a half inches long, was removed, and between the extremities of the remaining portion a stout steel bar was inserted by means of screws turning in different directions. The skin and mucous membrane were then stitched over the rod. The result was excellent. The external deformity was but slight and the

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mandible moved in one piece. The third case was one of recurrent epithelioma involving the floor of the mouth and the greater part of the tongue, as well as the neighbouring lymphatic glands. A portion of the mandible from canine to canine was removed, in addition to a large amount of the adjacent soft tissues. A steel bar with reverse screws at the ends was inserted, but after a few days the right end became loose and was replaced. A few days subsequent to this the left end became dislodged and was found to have slipped right into the left half of the mandible. The steel bar was accordingly removed. In commenting upon his three cases Mr. Gould remarked that what they wanted was something rigid, yet easily adaptable, and he thought that the best method to adopt was a question for the future to decide.—Mr. STANLEY BOYD stated that in one case he had operated upon he simply put a knitting-needle between the extremities of the remaining portion of the mandible, fixing one end of the needle into the dental canal, and the other end into a hole drilled in the bone. The needle, however, became displaced. He thought, with Mr. Gould, that the material to be used must be easily adaptable, and he knew of nothing better than polished steel. It was strong, could be broken if desired, was non-absorbent, and in his experience did not rust. To prevent displacement it was needful for the extremities of the bar of the material used to have a shoulder. A point of importance was in his opinion to obtain speedy union, for as the amount of granulation tissue increased, so did the amount of contraction to be overcome.—Mr. STORER BENNETT, Mr. CUNNINGHAM, Mr. DENISON PEDLEY, Mr. REDMAN, Mr. LLOYD-WILLIAMS, Mr. COLYER, Mr. NEWLAND-PEDLEY, and Mr. BALDWIN also took part in the discussion.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

A Plea for a more Precise Classification of Disease.—Six Cases of Strangulated Hernia in Infancy and Early Childhood.

A MEETING of this society was held on Jan. 8th, Mr. W. BRUCE CLARKE, President, being in the chair.

Dr. W. J. TYSON (Folkestone), read a paper entitled "A Plea for a more Precise Classification of Disease." He pointed out that with increasing knowledge many causes of disease hitherto classed as "predisposing" or "exciting" must give place to others more precise. He criticised the frequency with which cold or chill is alleged as a cause of disease and showed how recent advances in bacteriology had furnished proof of the real causation. He urged that the known causes of diseases should have a proportionate value put upon them, and that no prominent symptoms should be classed as a disease if it be possible to put a causative or defining adjective in front of it. He illustrated his contention by referring to three diseases—viz., pneumonia, peritonitis, and meningitis. —Dr. TRAVERS agreed with the remarks made in the paper. He thought it would be better to differentiate more carefully the type of a disease such as pneumonia.—Remarks were also made by Mr. LLOYD and Dr. THUDICHUM.—Dr. TYSON, in reply, said that the main object he had in view in presenting the paper was to try to differentiate clinically many of the diseases which were placed under the title of one word, and under this word were included many diseases which in their symptoms, prognosis, and treatment were clinically distinct. The subject was an important one practically, for the treatment of the disease could not be satisfactorily carried out until the form or the variety of the disease had been determined.

Mr. STEPHEN PAGET read a paper on Six Cases of Strangulated Hernia in Infancy and Early Childhood. The six cases all occurred in male children; three of them were three months old, one seven months, one a year, and one between two and three years. All were examples of inguinal hernia, five being on the right side and one on the left. In three of the six cases the cæcum was in the sac. Two of the infants died, and in one case the wound broke down after the operation. The cases were described in detail.—Mr. KEETLEY said that the escape of intestines through the wound and beneath the dressings in the case of infants operated on for hernia has not been a very uncommon accident. It is one not likely to have been always reported. He advocated careful suturing of the wound in layers as an effectual means of preventing the accident. He formulated the following rules:—(1) Operate from the front with the full intention of doing a radical cure; (2) cut straight down upon the neck of the sac, open it and the peritoneal cavity at the same time; and (3) after returning the bowel separate the sac high up from the cord, tie it there, and then sew up the hernial opening so tightly that it will only first permit (if the child be a male) the cord to pass through. The child should be kept warm with cotton-wool and hot cushions. The amount of anæsthetic given should be reduced to a minimum.—Mr. MCADAM ECCLES remarked that he did not consider strangulation of congenital inguinal hernia in male infants uncommon, but that operation for such was a rare necessity, unless there was evidence of gangrene or part of the contents was irreducible. Inversion of the patient would usually lead to reduction of the contents. He alluded to the occurrence of the cæcum in the sac as the outcome of its being dragged by the gubernaculum behind a patent processus vaginalis. This might become the seat of inflammation rather than strangulation.—Dr. MCCANN referred to his experience of strangulated hernia at the Hospital for Sick Children, Great Ormond-street. He firmly believed that very few cases ever required operation, as he had seen well-marked examples completely recover after suspension of the child. He was strongly opposed to repeated taxis, whether under an anæsthetic or not, as the taxis was an important cause of gangrene of the bowel. The suspension or inversion of the child should be resorted to at once before any attempts at taxis were made. He thought intestinal distension from improper feeding an important cause of hernia and strangulation.—The PRESIDENT remarked that he thought the reason why the difficulty of reduction of these cases of strangulated hernia on the right side in male infants occurred was a condition which was well shown in one of Mr. Paget's specimens. The testicle was adherent to the cæcum, having acquired this adhesion probably *in utero*. In one or two adults on whom he had operated, and also in one case of a child, this condition was very obvious, and no sooner was the connexion severed than the difficulty in reduction vanished. In two such instances he had found it necessary to remove the testicle, which, he might remark, was atrophied and presumably useless.—Mr. PAGET, in reply, urged that an early operation avoided the danger of returning gangrenous bowel, several instances of this disaster being on record.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

The Method of Serum Diagnosis in Typhoid Fever.—Exhibition of Cases and Specimens.

A CLINICAL and pathological meeting of this society was held on Jan. 6th, Dr. W. B. RANSOM, President, being in the chair.

The PRESIDENT dmonstrated the Method of Serum Diagnosis in Typhoid Fever. He had used an emulsion of a gelatin culture of typhoid fever bacilli, a peptone bouillon culture, and a culture of human ascitic fluid. The blood was drawn from the ear either into a sterilised pipette or small sterilised bottle, or allowed to form a dry clot on glazed paper, a drop of water being added to the clot when the test was applied. In a case of tuberculous meningitis and one of diabetes no agglutinative action was obtained, and the bacilli moved freely without clump formation in the ascitic fluid until typhoid fever serum was added to it. Four cases of typhoid fever had been tested: 1. A man in the third week (severe case; temperature 104° F.) gave clumps in five minutes. 2. A man in the third week (mild case; temperature 101°) gave clumps in twenty minutes. 3. A woman in the third week (mild case; temperature 100°) gave clumps in thirty minutes; on the twenty-sixth day, her temperature being 99°, clumps occurred slightly in one hour. 4. A woman on the thirty-fifth day (fairly severe case; temperature 100°) gave clumps in thirty minutes; on the forty-second day no clumps were obtained.

The PRESIDENT showed a woman aged thirty years, single, the subject of Acromegaly. For seven years she had had constant headache, amenorrhœa, gradually increasing weakness, and loss of visual power, with enlargement of the extremities and face. There was bi-temporal hemianopia,

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and in the right eye considerable contraction also of the nasal field. Vision was $\frac{6}{9}$ in the nasal field of the left eye, and $\frac{6}{24}$ in the nasal field of the right eye. The optic discs showed atrophic changes. There was no glycosuria. The thyroid gland was not enlarged. Treatment had failed to arrest the disease, though a free purge relieved the headache for a time.—The PRESIDENT also showed the organs removed from a patient, a case of Acromegaly,[1] who died from coma in October, 1896. The pituitary body was much enlarged, being three and a half inches by one and a half inches in size, and formed a soft, friable, vascular tumour which excavated the sella turcica and formed a large depression in the lower surface of both frontal lobes. The gland tissue appeared to be entirely replaced by an angio-glioma. The thyroid gland was enlarged and showed microscopically simple hypertrophy. The liver contained an angioma which had a fibrous stroma and in which a few cells like those of the pituitary tumour were found. In this case there were glycosuria and marked bi-temporal hemianopia. The optic nerves were much flattened.

The PRESIDENT also showed the Stomach and Liver of a man who in life had symptoms somewhat resembling Pernicious Anæmia. There was a large carcinomatous ulcer in the stomach infiltrating both liver and pancreas, shreds of which organs were found in the gastric cavity. The patient had been ill a year, vomiting only at the commencement, and during his stay in hospital for the last month of his life showing no gastric symptoms. There was irregular pyrexia, moderate loss of flesh, lemon-yellow skin, and extreme anæmia. Red corpuscles equalled 30 per cent., hæmoglobin equalled 20 per cent., and there were a few poikilocytes. When first observed the leucocytes were not increased, but a week before death there was one leucocyte to fifty red corpuscles. The increase was entirely due to the polynuclear or finely granular oxyphile cells, no eosinophilous and myelocytes being found. At the necropsy the medulla of the tibia was of the normal pale yellow colour.

Mr. CHICKEN showed Two Urinary Calculi. The first, which weighed 1700 grains, was removed by suprapubic lithotomy. The second, which weighed 1075 grains, was treated by litholapaxy, the operation occupying one and a half hours.

Mr. SMITH showed:—(1) The Organs from a case of Hydatids in the Liver and Lungs; (2) a Malignant Growth causing Intussusception; (3) the Intestine from a fatal case of Obstruction caused by a constriction formed by a thickened and contracted mesentery; and (4) an unusual form of Supernumerary Toe.

Mr. WILLIAMS showed a specimen of Tubal Gestation with the Fœtus *in situ* which he had operated on and removed before rupture occurred.

Mr. TRESIDDER showed Microscopic Specimens from a case of Epithelioma of the Rectum occurring in a girl aged seventeen years. The symptoms had lasted one year.

LIVERPOOL MEDICAL INSTITUTION.

President's Address.

A MEETING of this society was held on Jan. 7th, Dr. RICHARD CATON, President, being in the chair.

The following vote of congratulation to Sir Joseph Lister, proposed by the President and seconded by the Senior Vice-president, was passed with acclamation:—

"The members of the Liverpool Medical Institution beg to congratulate Sir Joseph Lister on his approaching elevation to the Peerage, and desire also to express their satisfaction that the medical profession is gaining in him so esteemed and distinguished a representative in the upper chamber of the legislature."

The PRESIDENT then gave his inaugural address on the Results of Recent Excavations at Epidaurus and Athens bearing on Medical Treatment in the Temple of Asklepios. After referring to the existence of hospitals and of a medical cult in Egypt as early as 3500 B.C., as proved by the reseaches of De Morgan, the President described the Asklepian sanctuary at Hieron near Epidaurus, the temples, the abaton or sleeping portico for the sick, the tholos, the baths, library, theatre, stadium, and grove. He also gave a description of the smaller temple of Asklepios at Athens and a summary of the more important points contained in the 300 inscriptions recovered at Hieron and Athens narrating some of the miracles attributed to the god; also details of medical treatment. The address was illustrated by fifty lantern slides, representing the existing remains and also restorations of the shrines.

After the address the President entertained the members at a smoking concert.

[1] Vide Brit. Med. Jour., June 8th, 1895.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Widal's Method of Diagnosing Enteric Fever.—Concurrent Scarlet Fever and Enteric Fever.

A MEETING of this section was held on Dec. 18th, 1896, Dr. G. F. DUFFEY, President, being in the chair.

Dr. MCWEENEY gave a demonstration of Widal's Method of Diagnosing Enteric Fever. The apparatus he used was a Pasteur pipette consisting of two wide parts separated by a very narrow one. The end intended for aspiration was plugged with cotton wool and the other end was drawn out to a fine capillary point and the whole pipette sterilised. He generally sterilised the finger of the patient from which the blood was to be drawn. The skin was pricked with a lancet needle, and the drawn-out end of the pipette, after the extremity was snapped off with sterilised forceps, was introduced into the drop of blood. A sufficient amount to fill the tube was easily obtained by pressure and aspiration and then both ends of the tube were sealed by fusion. Conditions necessary for success in the diagnosis were that the bacterial cultivations should be pure, typical, and young, the most important characteristic being motility of the bacilli. When serum taken from a typhoid fever patient was added to such a cultivation an almost instantaneous agglutination was seen under the microscope, large masses of bacilli becoming stuck together in masses in which the outlines of the individual bacilli were hardly distinguishable. In some cases all the bacilli appeared to be massed together. In other cases of equally undoubted typhoid fever type a considerable number of individual bacilli—even a large minority—remained pursuing their motions between the agglomerated masses. They seemed to be attracted by some force, as it were, to the massed collections. If the serum was not that of a typhoid fever patient the bacilli moved about amongst the blood corpuscles and a swaying movement of the latter could be seen, occasioned by their contact with the bacilli. The blood of the typhoid fever patients agglutinated and paralysed the bacilli, and the blood of the non-typhoid fever patients did not. Dr. Johnston of Montreal adopted a different process in applying the test—viz., by taking the drop of blood on a sheet of sterilised paper and afterwards dissolving the scrapings of the drop in water, which he then tested. It might be alleged that the blood of persons not suffering from typhoid fever might cause the bacilli to be agglomerated; but he had made the experiment with the blood of as many diseases as possible—scarlet fever, pneumonia before and after the crisis, synovitis, phthisis, and a number of other diseases—and had placed blood from them in contact with typhoid fever bacilli, and the typhoid fever bacilli exhibited no alteration in their motility. It might also be objected that bacilli which were not typhoid might become agglutinated if mingled with the serum of a typhoid fever patient. But he had found that non-typhoid organisms having active motility exhibited no alteration whatever in their movements when brought into contact with typhoid serum. — Dr. COLEMAN said that he tested the blood of eleven typhoid fever patients on twenty different occasions and in every case there was immediate "clumping" of the bacilli with loss of motility. In one case a few bacilli remained motile for five minutes, though the clumping was very obvious. The age of the patients varied from nine to thirty years and the cases from mild to severe, whilst the dates of their illness included from the beginning of the second week to advanced convalescence. One patient gave the reaction although the temperature had been normal for eighteen days. He tested the blood of three healthy persons, and also that of persons suffering from acute croupous pneumonia, rheumatic fever, gonorrhœal synovitis, measles, scarlet fever, and phthisis, and in none of these cases did the bacilli lose their motion or become agglomerated. The method which he adopted in the greater number of cases was to obtain a drop of blood from the patient's finger, to touch the blood with a clean cover-glass, and then with a

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sterilised platinum loop to convey a few drops of the broth culture to the cover-glass, to mix the blood and the culture on the cover-glass with the platinum loop, and to examine immediately under a high power. In that way it was possible to examine three or four cases in a quarter of an hour in the hospital ward.—Dr. DEMPSEY said he had been concerned in the trial of this method in eighteen cases. Of these, fourteen were presumably typhoid fever, and in twelve of them there was instant re-action, and agglutinisation rapidly followed.

Dr. E. MACDOWEL COSGRAVE read a paper on Concurrent Scarlet Fever and Enteric Fever. He stated that in 1859 Murchison wrote saying that no cases had up to that time been published showing the possibility of scarlet fever and enteric fever co-existing; but some years afterwards, in his work on Fevers, he mentioned that he had seen eight cases in which the two rashes co-existed. Two of these cases he gives in detail; in each the scarlatinal eruption came out in the third week of enteric fever, most of the other cases of co-existence recorded by other observers of scarlatinal infection being taken during the progress of enteric fever. True co-existence of incubation stages has been recorded by Mr. S. A. E. Griffiths in 1893 and by Dr. Caiger, Dr. Payne, and Dr. E. Carmichael in 1894. The five cases dealt with in Dr. Cosgrave's paper were in Cork-street Fever Hospital, Dublin, in 1895 and 1896, four being under treatment at the same time. All were cases of well-marked enteric fever and all had well-marked scarlet fever followed by free general desquamation. In four of the cases the incubation stages co-existed, the scarlatinal infection being secondary to the enteric, so that the invasions were almost simultaneous, the earlier prominent symptoms being those of scarlet fever, the rose spots developing on the thirteenth, tenth, eighth, and ninth days respectively. In the fifth case the invasion of enteric fever occurred on the tenth day of scarlet fever, so that the scarlet fever infection was simultaneous with, if not earlier than, the enteric infection. The coexistence of the diseases, so far from increasing the severity of the symptoms, had rather a mitigating effect; severe scarlet fever quickly became mild, and the enteric fever, though at first severe, tended to abort at the end of the second week.—Dr. JOHN W. MOORE said he remembered seeing, with Dr. Pollock, a case of enteric fever which suddenly developed scarlatiniform symptoms, the rash being only that scarlatiniform one which sometimes developed after three weeks of typhoid fever. Very often in cases of the kind, owing to the great determination to the skin, there were destruction and shedding of the cuticle and a copious desquamation; he had seen it more than once in cases of typhoid fever.

Reviews and Notices of Books.

The Modern Treatment of Stone in the Bladder by Litholapaxy. By P. J. FREYER, M.A., M.D., M.Ch. R.U.I., Surgeon-Lieutenant-Colonel, Bengal Army (retired). Second Edition. London: Ballière, Tindall, and Cox. 1896. Pp. 120. Price 5*s*.

THE history of the treatment for the removal of stone in the bladder is probably the most interesting of any in surgery. At the beginning of this century lithotomy was the only method employed, and in this country the lateral operation was chiefly practised. The mortality was not very great when large numbers of cases are considered; for instance, according to the statistics collected by Sir Henry Thompson, there were 229 deaths amongst 1827 cases; this is equal to a death-rate of 12 per cent. for all ages, but of these there were 1028 patients who were under sixteen years of age in whom the mortality was only 6·6 per cent. This may fairly be taken to represent the condition of things up to about 1835, when Civiale's operation of lithotrity began to be employed for selected cases; a necessary consequence of this was that the mortality from the cutting operation was higher than when it was the sole method of treatment; and we find that from 1835 to 1870, during which period the two operations were about equally applied, the death-rate from lithotomy had risen to 24 per cent. (71 deaths in 290 cases), while the mortality from lithotrity was about 9 per cent. (20 deaths in 229 cases).

The later statistics of lithotrity up to 1878 show the application of the method to an increasing number of cases of stone; and by some surgeons, as Sir Henry Thompson, the method was applied to a very large proportion of the cases, and with a really low rate of mortality, amounting to less than 7 per cent., but by most surgeons, if they employed lithotrity at all, the operation was used for small stones only, under an ounce in weight, and even then only when occurring in adults in fair health.

In 1878 Bigelow introduced to the profession his operation. It was, indeed, a form of lithotrity as has been much insisted on by some English authorities, but the methods employed and the aims of the new operation were so very different that a new name was surely required for it, and though "lithotrity at one sitting" describes it fairly well, yet litholapaxy is more suitable, even if a little awkward in utterance. The complete removal of the stone at the operation itself was the most essential point in the new procedure. It must be acknowledged that at first there was in England a tendency to look askance at the new operation, and dire were the results which were prophesied would follow the introduction of the method; but as time went on litholapaxy was tried and proved to be a decided improvement on the older operation, and to-day the majority of surgeons maintain that litholapaxy is the most satisfactory method of treatment of stone in nearly all cases. The volume we are now reviewing records the personal experience of Surgeon-Lieutenant-Colonel Freyer in the employment of litholapaxy in India, by far the greatest field in the world for cases of vesical calculus. Dr. Freyer tells us that he had hesitated to try the new method, as it had been discountenanced by leading London surgeons, but he finally decided to make trial of it when he heard that good results had followed its employment in England. The book commences with a description of the lithotrites and the evacuators which are used in the operation by various surgeons. As to the lithotrite Dr. Freyer urges most strongly that non-fenestrated and partially fenestrated lithotrites should never be employed, as there is always a danger in these instruments of débris getting impacted in the jaws and thus often materially increasing the size of the instrument as it is withdrawn. This impaction can never occur with fully fenestrated instruments when properly used, for in these the male blade, when screwed home, comes flush with the hinder border of the female blade. Bigelow's handle and lock are recommended in preference to Weiss's pattern as being simpler and requiring less movement of the hands. The form of evacuator preferred by the author is one of his own designing and it certainly appears to be very simple, and we should think it would prove very effective, but the form of the evacuator is not of much importance so long as it has good suction power and so long as the current does not tend to carry back into the bladder the débris which has already been brought away. The description of the operation itself is good and full, but, as is well observed, more information will be gained by seeing the operation once well performed than by any amount of reading. Statistics come next, and we learn that since Dr. Freyer did his first lithotomy in 1877 he has operated on 864 cases of stone; of these, 244 were treated by perineal lithotomy, 6 by the supra-pubic incision, 1 by vaginal lithotomy, 3 by rapid dilatation of the urethra in females, and 610 by litholapaxy. In THE LANCET in 1885 he published full details of his first 111 cases, and this paper had undoubtedly a great influence in increasing the popularity of Bigelow's operation. At first Dr. Freyer adopted litholapaxy in selected cases only in adults, but gradually he extended it to most of the adult

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cases. In 1886, influenced by the satisfactory results obtained by Brigade-Surgeon-Lieutenant-Colonel Keegan, he extended the operation to male children. At the present time he has practically abandoned lithotomy in favour of litholapaxy, as among the last 300 cases of stone he had only six lithotomies. The detailed statistics of the 610 cases of litholapaxy are of much interest. There were 439 adults, of whom 7 were women and 171 children, 6 of the latter being girls. The youngest patient was only eighteen months old, and the oldest was ninety-six years of age. The average duration of treatment was for adults six and a half days, and for children less than six days; in many cases the patient was quite well by the end of the second day. In 9 instances the disease recurred once and in 1 case twice; but in all these a long interval had elapsed between the first operation and the recurrence of the symptoms of stone, and so they were very probably all cases of true recurrence and were not due to fragments left behind from the first operation. The infrequency of recurrence in this series of cases is in striking contrast to the results which were obtained by the older method of lithotrity. Although an anæsthetic was employed in the majority of the cases, yet Dr. Freyer has on several occasions performed the operation without an anæsthetic. It is interesting to notice that kidney disease, even if severe, is considered to be no bar to the operation. Among the 610 cases, 11 deaths occurred, a mortality of only 1·8 per cent. As to the size of the stones removed 31 weighed over two ounces each and one reached the great weight of six and one-eighth ounces. Many of the stones were small, and in a few instances were evacuated by the cannula without crushing. In this connexion it is well to remember the discussion that occurred a few years ago as to what constitutes a vesical calculus when an attempt was made to fix twenty grains as the minimum weight, but it was well answered that any vesical concretion which requires operative interference for its removal is a stone. Dr. Freyer finds no difficulty in crushing many encysted calculi, though in some cases it is found necessary to crush the stone in the cyst when the mouth of the sac is too small to permit the calculus to be drawn out. The youngest child operated on was, as we have already mentioned, only eighteen months old, and this is, we believe, the youngest patient on whom litholapaxy has as yet been performed. The longest time taken in the operation was two hours, in the case mentioned above, where the stone weighed over six ounces. Many of the operations were very short, and one two-ounce stone was crushed and removed in seventeen minutes. We welcome the second edition of this little treatise and congratulate the author on his extensive and successful series of cases of litholapaxy.

A Practical Guide to Meat Inspection. By THOMAS WALLEY, M.R.C.V.S. Third Edition. Edinburgh and London: Young J. Pentland. 1896.

THE subject of meat inspection is one of such immense importance to the health of the community that a third edition of so excellent a work is thoroughly welcome. Owing to the death of the author this edition has been prepared by other hands—fortunately, by the very able ones of Professor M'Fadyean,—but no important changes have been made since the last edition. The book remains, as before, a concise but trustworthy guide to a difficult subject, the value of which is enhanced by a large number of good coloured illustrations. Full directions are given for the inspection of carcasses, with an account of the appearances presented by the flesh of animals which have died from the ordinary forms of disease or violence. No part of the book is of more importance or will be read by the medical man with more attention than the chapter dealing with tuberculosis. Here we find a very thorough account of tubercle as it affects bovine and other animals used as food, with a full appreciation of the bacteriological and experimental side of the question and a record of the various opinions which have been held as to the harmfulness of the flesh of tuberculous animals. Much difference of opinion has prevailed on this matter, but we gather, although the author does not express any dogmatic view on the subject, that he considers danger to exist even when the tuberculous lesions are localised in the viscera. There is a good chapter on ptomaine poisoning and the dangers of preserved or pickled meats. The book is a thoroughly scientific yet practical exposition of the subject, and can be heartily recommended to all who desire an acquaintance with a matter of such vital importance to sanitary science.

LIBRARY TABLE.

Roentgen Rays and Phenomena of the Anode and Cathode. By EDWARD P. THOMPSON, M.E., E.E. New York: D. Van Nostrand & Co. Price $1.50.—The author of this handy volume has gathered together all those materials which may be regarded as constituting the steps in the evolution of the x rays. It forms a complete history of the subject, beginning with Faraday's experiment in 1831 on induction and concluding with paragraphs dealing with Crookes's, Lenard's, and Roentgen's researches, and with later developments and applications of the x rays to anatomy, surgery, diagnosis, &c. The last chapter contains some excellent "skiagraphs" by Professor Goodspeed of the University of Pennsylvania. The x rays are very properly treated as part only of the subject of the radiant energy developed within, and from, a discharge tube. The plan adopted—namely, that of recording the historical experiments seriatim by means of numbered paragraphs containing cross references and sketches—renders the book admirably adapted for reference, while it affords the reader bent on further advance the opportunity of making analogy, contrast, or suggestion. The volume contains some excellent illustrations, and so far as the literature of the x rays in a collective form is concerned is the first really good contribution.

Practical Radiography. By H. SNOWDEN WARD, editor of the *Photogram*. Dawbarn and Ward, Limited, 6, Farringdon-avenue, E.C. 1896. Price 1*s*. 6*d*.—This book will be found useful by intending "radiographers" who have but a hazy practical acquaintance with electricity and photography. In short, it amounts to a popular exposition of the practical side of the subject. It is well illustrated and the directions given are trustworthy. The author has made out a simple story, and the book should afford just that assistance which those beginning the study of practical radiography would require.

Diagramettes (Hygiene). By W. H. KNIGHT, Associate of the Sanitary Institute and Member of La Société Française d'Hygiène. London: Chapman and Hall, Limited. Price 1*s*.—This is a collection of "diagramettes" reduced from twenty-four large diagrams which are designed for demonstrating the principles of sanitation. Attached to the miniature diagrams are notes on the subject and a short but clear description of the drawings. The whole range of sanitary science is thus included, the series concluding with illustrated articles on disinfection, clothing, and foods. The subject is ably treated and the descriptions and recommendations appear to be trustworthy. The illustrations are decidedly good and should do excellent service in conveying an accurate idea of efficient sanitary construction. The author is to be congratulated on having included with no apparent sacrifice of detail practically every branch of the subject. With these drawings and explanatory details before him the student should get a correct notion of the practical minutiæ of sanitary construction, so that for educational purposes the study of these diagrams should serve as the next best step to

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the actual inspection of both good and bad existing systems. Every medical officer of health should possess a copy; he will find it very helpful. On the subject of cost (which is not treated in the "diagramettes") THE LANCET Commission on The Relative Efficiency and Cost of Plumbers' Work may, we venture to add, be consulted with advantage.

Cheese and Cheesemaking. By JAMES LONG and JOHN BENSON. London: Chapman and Hall, Limited. 1896. Price 3*s.* 6*d.*—Connoisseurs will read this little volume with considerable interest, and especially those chapters referring to the manufacture and character of continental fancy cheeses (Gorgonzola, Brie, Port du Salut, &c.). It contains chapters of not less interest also to the technical expert as well as to the scientific man. Thus the methods of manufacture are described as well as the principles involved. The popular, but apparently wrong, idea that Gorgonzola cheese is sometimes "greened" by means of copper wire finds explanation in the following: "When the texture of the cheese is found to be too close, so that blue mould will not grow freely, the cheese is pierced with metal skewers which admit the air, and with it oxygen, which the fungi require, for they are unable to grow in its absence." Mr. Long contributes an excellent chapter on the milk industry, and his remarks on what should be the quality of milk are, coming from one thoroughly acquainted with the technical side of the subject, well worth repeating. "There is practically no milk," he says, "the produce of a well-fed herd of cows, which contains at any time less than 3 per cent. of fat, but there are thousands of herds in which the average milk contains from 3·5 to 5 per cent." At present the analyst is bound to regard as genuine, milk containing 2·75 per cent. of fat, so that milk of good quality may be obtained by mixing rich milk with separated milk, and the product would come well up to the standard just referred to. Mr. Long gives good reasons for this standard being raised to 3·25 per cent. Of this section of the question he has had considerable experience, and as a result he finds that where a high standard has been enforced by law the consumption of milk, as well as its quality, has immensely increased, and he is satisfied that we should benefit the dairy industry of England in a high degree by instituting such a standard for ourselves. The same author contributes a chapter written on a similarly high level on the principles of butter-making. There can be no hesitation in bestowing praise upon a book which, like the one before us, is calculated to place certain home industries upon a more satisfactory basis and to elevate our standards of food.

The Medical Environment. By D. CAMPBELL BLACK, M.D. Glasg., F.R.S. Edin. Glasgow: Hugh Hopkins. 1896. Pp. 56.—The contents of this little book are two addresses delivered before a medical students' society, the subjects being respectively the Hospital Question and Medical Ethics or Etiquette. The author is well known as a controversialist who does not stand in awe of his opponents and is not slow to denounce unconvincing arguments. He seems, however, to be unnecessarily severe on hospital physicians and surgeons, who are described as "great purists in the matter of medical advertising. The secret of this virtue is that they do not require personally to advertise, as this is effectually done for them by reports and through the large *clientèle* which passes through their hands." On the other hand, the average feeling of the profession is distinctly in accordance with what he says in respect of the injustice done to general practitioners by the indiscriminate treatment of patients at hospitals.

Rough Notes on Remedies. By WILLIAM MURRAY, M.D. Durh., F.R.C.P. Lond. London: H. K. Lewis. 1897. Second edition. Pp. 104. Price 3*s.* 6*d.*—The favourable reception and consequent rapid sale of the first edition of this little book is the best possible testimony to its merits, so that it is, in fact, hardly necessary on the present occasion to do more than refer to the notice which appeared in our columns last July.[1] Arsenic, belladonna, mercury in various forms, and nitrate of silver are the drugs selected for illustration, the most remarkable of the cases quoted being an apparently hopeless one of dilated and hypertrophied heart in which a very protracted course of blue pill was undoubtedly the means of procuring ten or eleven years of comfortable and useful life.

JOURNALS AND REVIEWS.

Science Progress.—This publication is now a "quarterly," whereas previously it was issued monthly. Amongst the contents of the number before us is a remarkable paper with the paradoxical title Liquid Crystals, by Professor Miers, F.R.S., of Oxford. The title reminds us of the heading "Solid Solutions," which appeared in connexion with an interesting article in a previous issue. Yet both terms are justified by facts. As the author asks in this paper, How can a liquid be a crystal and how can a crystal be a liquid? However, under certain conditions drops of certain substances are found to behave just as crystals do, especially in regard to polarised light. They appear to be "doubly refractive drops which possess a symmetrical disposition of their peculiar optical properties, and are unlike any other drops or any other liquid previously described." The existence of these drops must lead to a new acceptation of the word "crystal," which will detract rather from the force of the word "crystallised," used so often and conveniently now as a figure in speech. "Condensation and Critical Phenomena" forms the interesting theme of another paper in the present number, while of particular interest is the paper on the Causes of Variation, in which the differences in form and structure which individuals of a species show among themselves are considered.

Cornhill Magazine.—Among the contents of the January number we can specially commend one advocating the setting apart of extensive tracts of land for the preservation of our indigenous wild animals and birds by Mr. C. J. Cornish, under the title, "The Making of a Paradise." These woodland or forest preserves, of which the New Forest in Hampshire is our best example, have already to some extent been provided by various landed proprietors—as in Wicklow by Lord Powerscourt, at Horsham, in Sussex, by Sir Edmund Loder, at Haggerston Castle, in Northumberland, by Mr. Christopher Leyland, &c. With quaint pedantry he calls a large preserve of this kind a "paradise," using the word as employed by Greek writers, such as Xenophon, who adopted it from the Persian. No reference is made to what was long ago done in this direction by Waterton, the naturalist. Under the heading of "Famous Trials" Mr. J. B. Atlay reviews the details of the Road mystery and the confession of Constance Kent, who committed the crime.

Westminster Review.—The most interesting article is one analysing the psychology of Anarchist conspiracies by Dr. Olindo Malagodi, who concludes that the danger from such agitations and conspiracies is much less than appear at first sight. "Predominance of the imaginative faculty, inaction, and mutual psychological excitation are the three fundamental elements of the colossal imaginings of anarchical conspirators." Successful plots have usually been carried out, not by Anarchists, but by Fenians or Nihilists, who have more definite aims. Mr. W. F. Bailey discusses the South-African question and predicts the establishment of a confederation more or less analogous to that existing in Canada. He also gives an account of the reasons which deter the Boers from granting full political privileges to the very mixed population of

[1] THE LANCET, July 4th, 1896, p. 31.

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foreigners whom the goldfields have attracted to the South African Republic.

The Ludgate Magazine.—The opening pages are taken up with Chapter IX. of the Octave of Claudius. Fiction predominates in the present number, but there are many entertaining biographical details in Black-and-White Artists of To-day, and an article called Vignettes of the Invisible is illustrated by numerous photo-micrographs, chiefly entomological; nothing, however, can be said in favour of the one which professes to represent "a slice of a Londoner's lung, showing the smoke."

The January number of *Knowledge* has a well-written article from the pen of Mr. John Mills, F.R.A.S., on the Dawn of a Brilliant Era, being Part I. of the Science of the Queen's Reign. The article is embellished with the portraits of nine illustrious philosophers, including Edward Jenner and John Hunter, and there is a reproduction of a quaint engraving of George Stephenson's "Rocket," the forerunner of the modern locomotive engine.

The Quarterly Medical Journal for Yorkshire and adjoining Counties.—Mr. T. Pickering Pick (London) contributes a thoroughly practical paper on Intussusception in Children, recommending in the first place inflation with air, which may be effected by means of an ordinary enema pipe and a pair of common bellows; in the second place the introduction of fluid by irrigation or hydrostatic pressure, and immediate laparotomy if these fail. Dr. James Braithwaite (Leeds), who has performed symphysiotomy three times, discusses the operation from the general practitioner's point of view. The articles on Health Resorts are continued, Droitwich being selected this month.

The Contemporary Review.—Among other articles is a well-written paper entitled Bacteria and Butter, by Mr. G. Clarke Nuttall, giving an interesting summary of the results obtained by Dr. Weigmann of Kiel, who found that Pasteurised cream mixed with pure cultures of the acidifying bacteria yielded butter which was pure and could be kept for a long time, but was flavourless. He then prepared pure cultures of a milk bacterium which has the property of imparting flavour to butter, and by treating cream with a mixture of the two cultures a very superior quality of butter was obtained. It appears that such bacterial cultures are now on sale, both in the liquid form and as a dry powder.

The Journal of Pathology and Bacteriology.—In the second part of Vol. IV., published in December, J. B. Leathes and E. H. Starling contribute a paper on Some Experiments on the Production of Pleural Effusion, especially in connexion (1) with the effects of raised capillary pressure, (2) the effects of injury in the vessel walls, and (3) with the place of origin of the effused fluid, and they come to the conclusion that so long as the vessels are healthy no change in the pressure of the blood in the capillaries supplying the pleura is able to bring about pleural effusion; that in the exudation of pleurisy the chief factor is the increased permeability of the walls of the vessels in the subpleural and mediastinal tissues from which the fluid makes its way in the direction of least resistance—viz., into the pleura—and that in every case where effusion into the pleura is produced diminished absorption is associated with the increased exudation of fluid from the bloodvessels. E. A. Peters contributes a detailed but unconvincing paper upon Diphtheria and Pseudo-Diphtheria Bacilli, and Louis Cobbett and G. C. Phillips attacking the question from a somewhat different point of view are little more successful in throwing light on this subject. Sydney D. Rowland makes a contribution to the Study of Immunity in Guinea-pigs and P. Horton-Smith describes two new bacilli, one of which he names the Bacillus Proteus Urinæ, the other the Bacillus Excavans. Samuel G. Shattock has an interesting contribution on Calculi of Calcium Oxalate from a Cyst of the Pancreas, in which he discusses the modes of formation of these calculi and also their chemical composition. A Tumour of the Anterior Mediastinum arising from the Thymus Gland is described by H. D. Rolleston as partly a cystic adenoma of mucous glands and partly a hæmorrhagic chondro-sarcoma bearing considerable resemblance to certain tumours in the parotid region, but in this case the tumour arose from the thymus glands, although Hessall's concentric bodies were not present. T. N. Kelynack describes a Malignant Papilliferous Cyst-adenoma of the Kidney. An interesting and well-illustrated paper on Leukæmia with special reference to the Pathological Histology of the Blood and Marrow, is contributed by J. M. Buchanan. T. W. Eden continues his Study of the Human Placenta, Physiological and Pathological, in this part describing the ripe placenta, giving both the changes in the fœtal and maternal structures and arriving at the conclusion that the ripe placenta is a worn out and decadent or senile structure, the stages of development, maturity, and decay succeeding one another with great rapidity, and to some extent, overlapping. He goes on to say that the degeneration of vessels and atrophy plus degeneration of epithelial structures are changes associated with old age in all parts of the body, and that they are no more pathological phenomena than are the thickened arteries and wasted skin of aged persons. Joseph Griffiths contributes a paper on the Varieties of Ankylosis by Bone in different parts of the Skeleton; in this part of his paper dealing specially with the ankylosis found in different animals under different conditions, and also with the pathological, congenital, or pre-natal ankylosis. Altogether there is in this number a series of most interesting papers.

The *Veterinary Journal and Annals of Comparative Pathology* for December opens with an essay on Diseases of Animals Transmissible to Man, somewhat sketchy in character; a note on Rinderpest in South Africa, and a report of infection of Swine with Anthrax by W. R. Davis, F.R.C.V.S. A short account of a thirty-eight days' fast by a collie dog is given in which it is stated that at the end of a fortnight after the fast the animal was as fat as ever and is now alive and well. W. Williams, F.R.C.V.S., in his report on the Cattle Disease in Jamaica announces that he has come to the conclusion that the disease is a chronic form of Texan fever conveyed from place to place and transmitted from one animal to another through the intervention of the "tick." The infection is conveyed by the progeny of "ticks" which have matured on infected cattle and is inoculated by them directly into the blood of susceptible cattle. It is stated that two mild attacks or one severe one will probably prevent a subsequent fatal attack. In the appendix, or in a couple of appendices, T. A. Williams, M.B., reports on the Morbid Anatomy and Microscopic Appearance of the Wasting Disease. The blood presented the characters of profound anæmia, the number of red blood corpuscles being diminished often to one-seventh of their normal number; the hæmoglobin was also greatly diminished, though in less proportion; there was marked poikilo-cystosis, and in some of the cells there was a faint indication of nucleation. A number of banana-shaped or irregular rounded bodies which T. A. Williams does not classify are mentioned. W. Williams, however, thinks that they have nothing to do with the disease and that the "tick" is the real cause of the anæmia. The changes in the various organs are also described. Fluke disease (liver rot) and lung worms are dealt with in the second appendix. A number of clinical cases are recorded and the opening addresses at the various veterinary colleges and veterinary societies, with veterinary notes, abstracts, and reviews complete the number.

The Journal of Experimental Medicine, Vol. I., No. 4, opens with an article by James Homer Wright on the

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Histological Lesions of Acute Glanders in Man and of Experimental Glanders in the Guinea-pig. He concludes that the glanders nodule in the cases studied by him is in no sense analogous to the miliary tubercle in its histogenesis, and he agrees with Tedeschi as opposed to Baumgarten that there is a primary necrosis of the tissue followed by inflammatory exudation, often of a suppurative character, degenerative changes rapidly ensuing in these inflammatory products. C. F. Martin and W. F. Hamilton describe Two Cases of Sarcomatosis with Purpura Hæmorrhagica in which the principal cause of the purpura seems to be an involvement of the vascular system by the sarcomatous elements. In a paper by John Lovett Morse the Changes produced in the Kidneys by the Toxins of the Staphylococcus Pyogenes Aureus are described and discussed. The observations made by this author go to prove that chronic interstitial processes are those which are specially met with in this condition. The Influence of Acute Alcohol Poisoning on Nerve Cells, by Colin C. Stewart, and the Action of Ether on Contracture and of Positive Kathodic Polarisation of Vertebrate Voluntary Muscle, by F. S. Locke, are both interesting and well-illustrated papers, as is also one by Winfield S. Hall and Marion D. Eubank on the Regeneration of the Blood. These latter observers come to the conclusion that the blood of apparently normal animals undergoes considerable variations within physiological limits; that the regeneration of blood after artificial loss is more rapid if there has been a transfusion of artificial serum, that this takes place less rapidly at first, gradually rising, and that once commenced the process carries the blood qualitatively considerably beyond the established normal; the quantity of hæmoglobin per volume of red blood corpuscles does not remain constant. G. W. Fitz contributes a Study of Types of Respiratory Movements from which he draws the following conclusions: (1) children of the two sexes differ very little in the character of their respiratory movements; (2) between girls and women and boys and men there is little or no difference in respiratory type; (3) child-bearing does not permanently affect respiration; (4) the natural type of respiration for both sexes is one in which the movement is fairly equally balanced between chest and abdomen, the abdominal type being somewhat in excess; (5) in typical unconstricted individuals the chest contributes about the same bulk of air as does the abdomen; and (6) constricting dress causes preponderance of thoracic movement in ratio to its restriction of abdominal movement and to the sensitiveness of the nervous co-ordination. F. G. Novy's paper on the Immunising Power of Nucleo-histon and of Histon is of considerable interest from the fact that Dr. Novy of all American workers has made this subject specially his own. He points out that although when injected separately nucleo-histon does not protect against the action of various toxins, when it is mixed with any one of them and then injected the toxin loses its specific action, but the animals injected are not rendered immune. Nucleo-histon acting on anthrax bacillus leaves it unaffected even after the lapse of eleven days. Histon has a somewhat similar action, whilst similar mixtures of closely related bodies, sero-globulin or albumoses, in Witte's peptone give analogous results. Histon, however, has marked toxic properties which are no doubt due to the hydrochloric acid present. This number completes a most interesting volume, and we congratulate American investigators on having such an excellent organ in which to publish the results of their work.

In the *Veterinarian* for December Mr. John A. W. Dollar, M.R.C.V.S., gives a long report on the Clinical Application of Jeyes' Creolin and Jeyes' Fluid in Veterinary Practice. Ringworm, pruritus, hen-lice, horse-lice, foul wounds, granulating sores, canker, thrush, and a number of similar conditions were all treated with these preparations with excellent results. At the same time it is pointed out that prolonged external treatment with creolin, especially when accompanied by friction, may give rise to somewhat serious results. A very good abstract of the annual report of the Board of Agriculture is given, and Mr. Finlay Dun's introductory address at the opening of the session of the Royal (Dick) Veterinary College is completed. An ambulance and operating table for dogs is figured by B. P. Godfray, M.R.C.V.S., and Mr. E. Wallis Hoare of Cork contributes remarks on Chloroform Anæsthesia. Clinical Cases and the Month's Progress and Reviews are exceedingly good.

Analytical Records FROM THE LANCET LABORATORY.

VALSOL PREPARATIONS (KLEVER).

(W. POPPELREUTER, 54, PORTLAND-STREET, MANCHESTER.)

THE Valsol oils are those which are known to the profession abroad as Klever's "Vaselina Oxygenata," and consist, it is stated, of pure hydrocarbon oils impregnated with oxygen. Their value appears to rest on the fact that they offer satisfactory vehicles for the administration of many medicaments. Thus "valsol" serves as a useful solvent for iodine, iodoform, ichthyol, creasote, creolin, eucalyptol, camphor, thiol, menthol, &c., and the clinical results obtained with the solutions of these agents in the oxygenated hydrocarbons are reported as very satisfactory. Creasote-valsol for example has been used, it is stated, with excellent results as an ointment in cases of pulmonary tuberculosis. The oil appears to be rapidly absorbed, carrying in with it the medicament. Ichthyol has been used in a similar manner in favus, and Iodoform-valsol and Creolin-valsol in gonorrhœa. The iodine preparation would appear to offer advantages, since it is stated that, despite the volatile character of the element, with the oil the iodine is also absorbed, so that a prompt action responding to the administration of iodine is obtained. Iodine-valsol has thus, it is claimed, proved to be a valuable local application in the treatment of syphilis. We have received various specimens of Valsol preparations containing in solution the medicinal agents already indicated. We found no difficulty in obtaining confirmatory evidence of the presence of the active agents stated on the label of each specimen. The preparations appear to be an introduction of importance in therapeutics, and no doubt will receive that trial at the hands of practitioners at home to which they seem entitled.

GLYCERINE PASTILLES OF PHENACETIN AND SULPHONAL.

(CURLING, WYMAN AND CO., 58 AND 59, BUNHILL-ROW, E.C.)

These pastilles consist of soft gelatin lozenges containing a definite dose of the medicaments indicated. They are offered as a convenient and palatable means of administering these drugs. The material is readily soluble and serves as an easy aid to swallowing the measured quantity of the medicament incorporated with it.

FRENCH LASILA.

(THE FRENCH LASILA COMPANY, 231, OXFORD-STREET, W.

Lasila is described as a mixture of "Toka" and chicory. "Toka" is a roasted seed about the size of a small nutmeg, which is offered as a substitute for coffee. The mixture yields a full-bodied, syrupy liquor with sweet taste, while it possesses certain aromatic characters derived from the highly roasting of the peculiar seed employed. It may serve to some extent as a substitute for coffee for those to whom coffee may be reasonably denied. Coffee, of course, like many other articles of food, leads, when immoderately indulged in, to gastric disturbances and other objectionable results; but

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when used reasonably it affords an excellent beverage, serving, as is well known, as a decided stimulant to the nervous centres and augmenting the functional activity of the muscles. This effect is to be ascribed partly to the volatile oils which are developed in the roasting process and partly to the important proportion of caffeine it contains. "Lasila," on the other hand, contains no caffeine at all, although it possesses a strong aroma suggestive of the volatile oils of coffee. As might be expected, it yields a comparatively large amount of extractives soluble in hot water, but contains absolutely no alkaloid. It may be valued, perhaps, for its flavour, but for little else. It is probably harmless in moderate quantity, but it cannot be regarded as a true substitute for coffee, since it cannot possess those peculiar properties for which coffee is esteemed and chiefly consumed. From this point of view it is questionable whether it offers any advantage over pure chicory.

PRESERVED PEAS, BEANS, AND SPINACH.

(AGENCY: S. DUSSELSMA AND CO., 2, GRESHAM-BUILDINGS, BASINGHALL-STREET, E.C.)

We have carefully tested these preparations with the view of ascertaining whether any exception can be taken to the method adopted for the purpose of preserving. Not only did we find on experiment that the vegetables were free from copper salts, which are so frequently employed as a greening agent, but also that they contained no objectionable preservative or any form of metallic contamination. No objection, therefore, can be reasonably urged against the employment of these articles as really wholesome food. The original flavour of the vegetable appears to have depreciated but little, while the appearance is not unsatisfactory. In these preparations we find an instance of certain articles of food being satisfactorily preserved for general consumption without the aid of chemical substances. We are, therefore, justified in speaking of them in terms of praise.

BAYER'S SPECIAL DRUGS.

(AGENCY: THE ELBERFELD FARBENFABRIKEN CO., LIMITED, 19, ST. DUNSTAN'S-HILL, E.C.).

Although English chemists were chiefly concerned in the discovery of the building up of organic compounds, yet Germany now takes the lead in the manufacture of the great number of synthetic remedies which are at the disposal of the medical practitioner. Foremost amongst those who have made practical application of synthetical chemistry are the above well-known firm, whose laboratories are at Elberfeld. We have recently received specimens of various drugs to the purity of which special attention is given. Amongst these are the following: Lycetol, the tartrate of dimethyl-piperazine, which is employed to increase the alkalinity of the blood, and, therefore, as a uric acid solvent; Salophen, a yellowish-white crystalline powder, said to be preferable to sodium salicylate or salol in the treatment of rheumatism as an anti-rheumatic and analgesic; Phenacetin, a well-known anti-pyretic and anti-neuralgic, which may with advantage be combined with salophen in influenza; Trional, a hypnotic, said to be without effect on the circulatory, respiratory, or digestive apparatus, while its action on the temperature and secretions is without objectionable effect; Europhen, an iodoform substitute, spoken well of in dermatological and gynæcological practice; Tannigen, a combination of acetic acid and tannin, passing the stomach unchanged, but exerting an astringent action in the intestinal tract; Losophan, an odourless white crystalline compound of iodine and cresol, of high antiseptic power, chiefly serviceable in parasitic and skin diseases; Iodothyrin, the now well-known active principle of the thyroid gland, combined with sugar and milk, in such quantity that one part of iodothyrin is equivalent to one part of the fresh gland; Somatose, a powerful nutritive consisting largely of albumose; Analgen, similar in composition to phenacetin and employed as a powerful antipyretic in neuralgia and acute rheumatism; Aristol, a useful application for burns, parasitic eczema, and ozæna; Sycose, an artificial sugar in several forms, one said to be 300 times sweeter than sugar, another which is much more soluble, 475 times sweeter than sugar, and another which is pure sycose and not a soluble sodium salt, 550 times sweeter than sugar. All these drugs give evidence of careful preparation.

COMPOUND PHENACETIN TABLOIDS.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL-BUILDINGS, E.C.)

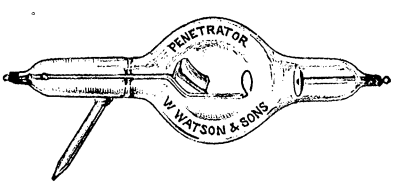
The object of this combination is obvious to our readers. Phenacetin, as clinical testimony has shown, is a useful analgesic and antipyretic, the action of which it may be desirable to modify by means of a cardiac stimulant such as caffeine. The combination is said to be particularly useful in relieving the sick headache of migraine.

New Inventions.

IMPROVEMENTS IN X RAY APPARATUS.

As the conditions under which the x rays are produced are more understood so improvements are effected in the structural details of apparatus required from time to time. The discovery has led to an enormous demand upon the resources of vacuum tube makers, and the makers also of induction coils, while secondary batteries can hardly be made fast enough to keep pace with the increasing requirements, and barium platino-cyanide, once a compara tively rare compound, is now sold in the form of a paint upon a screen in tolerably large quantities. Improvements in one or another of the directions just indicated have been brought to our notice by the following firms.

Messrs. W. WATSON and SONS of 313, High Holborn, W.C., have recently introduced what they call the new "penetrator" focus tube, the construction of which will be seen from the accompanying illustration. Whatever views may be put forward as to the action of



this tube, it certainly gives brilliant results, and that with a minimum of current passing through it. To begin with, one important advantage it offers is the fact that the electrodes to which the wires from the induction coil are attached are as wide apart as possible, so that discharge between them and outside the tube is practically impossible. Then the anode from which the x rays proceed is made quite rigid by means of a small beam of glass across the narrow part of the tube. This is important, since if the deflecting disc or anode vibrates, as is the case with some tubes, good definition either in a photograph or in the shadow on the screen can hardly be expected. The deflector is parabolic in shape and in front of it in the same plane is a loop of wire which is said to serve two purposes—namely, that of directing the rays straight on to the deflector and of absorbing traces of gas in the space, giving them out again on gentle heating, so that the degree of vacuum is easily regulated by this means. We have not tried this tube for producing photographs, but with the screen it gives most

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satisfactory results; the detail is good and the shadows sharp. It is specially well adapted for viewing the deep structures of the body. Moreover, it works well with a current equal to the discharge of a two-inch spark in air, or even less. Lastly, a very important but simple improvement in the tube consists in the fact that the terminals are very strong and not likely to be broken during the constant disconnexion and connexion of the wires.

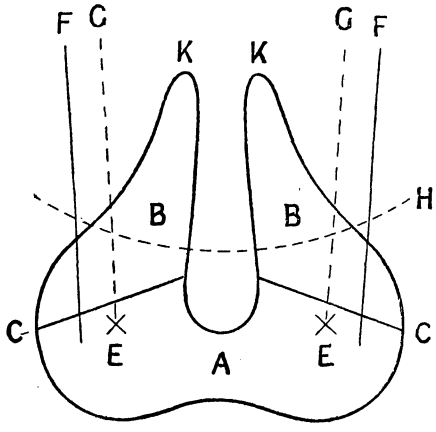
The GENERAL ELECTRIC COMPANY of 71, Queen Victoria-street, are devoting special attention to the requirements of a satisfactory x ray equipment. They have introduced for the purpose a powerful coil of "best Manchester make," in which the important feature consists of a fine adjustment attached to the contact breaker, so that a steady contact is maintained and a uniform discharge in the focus tube. The company provide also focus tubes, fluorescent screens, and secondary batteries.

Messrs. HURST and Co. of 53, Leadenhall-street, are also providing some excellent apparatus which intending purchasers have the advantage of testing at the laboratory of this firm before completing their purchase. They supply best English-made coils and both English and continental patterns of focus tubes. They are introducing an excellent fluorescent screen, the barium platino-cyanide being rendered absolutely homogeneous and uniform by means of amyl acetate. As might be expected, the shadows are remarkably sharp and well defined, making the screen of particular service for viewing the deep structures of the body.

A DOUBLE-PEAKED CYCLE SADDLE.

MR. W. STEPHENSON RICHMOND, M.R.C.S. Eng., writes: "This saddle consists essentially of a fixed back part, A, to receive the main weight of the body, and two moveable flaps, B B, for the support of the upper part of the thighs, and forming at the anterior points the moveable peaks, K K. These flaps are supported beneath by a balance (Fig. 2, D). When one prolongation is pressed down the other one is

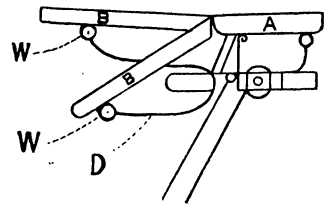
FIG. 1.



A, Back fixed part. B B, Flaps. C C, Hinged joint. E E, Position of tuberosities. F F, Lines of femora. G G, Lines of flexor muscles. H, Line of grip.

forced up, so that in riding they follow automatically the up-and-down movements of the thighs. The entire surface is padded with horse-hair and covered with leather. There are no depressions for the tuberosities of the ischia, but their position on the seat is indicated by the crosses at E E (Fig. 1). There is no central peak, and absolutely no perineal or sub-pubic pressure. The line, H (Fig. 1), shows the grip which is obtained of the flaps, which, by extending to K K, supply the ly useful function of a peak. The advantages claimed for this saddle are—(1) no central pressure; (2) increased sitting surface; (3) support and alternate rest of the muscles of the thighs; (4) alternate relief of pressure on the tuberosities; (5) no friction of the inner surfaces of the thighs; and (6) at the same time all the advantages of a peak with a comfortable seat and absolute protection from injury to the delicate soft parts beneath the pubic arch. The relief from the continual grinding on the tuber ischii so often complained of by cyclists is obtained by part of the weight of

FIG. 2.



D, Balance. W, Small wheels or ball socket endings.

the body being alternately thrown on to the prolongations at the downward thrust, and by the contraction of the semi-membranosus, semi-tendinosus, and biceps in the line G (Fig. 1). Instead of a hinge at C (Fig. 1) and a balance at D (Fig. 2), the saddle may be made of one piece of tempered steel resting on adjustable springs beneath. The saddle is made by Mr. Lycett of Birmingham. A model may be seen at Mr. Alfred Cox's, surgical instrument maker, 108, New Bond-street, S.W."

Of course it remains to be seen how this saddle will work in practice, but theoretically and from an anatomical point of view it would appear to be constructed upon a sound basis.

"HORONIT."

MR. JOSEPH T. SZCK (Hotel de Provence, Leicester-square, W.C.) has submitted to us a specimen of this substance which is made from hoofs and horns and which is said to form an excellent material for stuffing mattresses, cushions, beds and other articles. It consists of white, light, soft, elastic flakes obtained from horn shavings, and its cost of production is, it is stated, less than 1½*d.* per pound. It is certainly well adapted for the purpose so far as its non-conductivity is concerned. One drawback to its use, it might be supposed, would be the fact of its generating an unpleasant smell when slightly warmed, but one important claim in its favour as a stuffing material is, that this tendency to smell disagreeably is completely removed by first treating it with a weak solution of peroxide of hydrogen. Testing the crude material, for instance, by simply warming it or treating it with warm water or even with alkali, a very disagreeable smell, we found, was evolved, which, despite any other satisfactory property, would quite preclude its employment for the purposes already indicated. On soaking, however, the substance in a weak solution of peroxide of hydrogen for twelve hours in the dark the material became quite free from smell even under the most aggravated trial. This is the essence of the patent. The treated material is very well adapted for mattresses and, in fact, in all cases where a non-conducting and at the same time yielding material is requisite. In addition it is absorbent, so that it is proposed to employ it in hygienic bandages. Further, if at any time it should become unsuitable for use the material can be replaced, and the old material, containing a very high percentage of nitrogen, is said to be valuable for agricultural purposes. While we doubt whether this would ever become a practicable expedient or constitute a point in favour of its adoption, yet there is reason for believing that "Horonit" may prove useful for the purposes for which it is designed.

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THE LANCET.

LONDON: SATURDAY, JANUARY 16, 1897.

THOSE who study the overcrowding of the profession and who see in it the chief cause of certain methods of practice which we all lament will not find much comfort in reflecting on the statistics of the profession which we published last week from the Medical Directory. According to this excellent authority the profession includes 958 names more than the year before, a larger increase than has ever before occurred in any previous year, except 1894. The increase is ubiquitous—in England, Scotland, and Ireland, in registered practitioners resident abroad, and in medical officers of the naval, military, and Indian services. It is not likely that there is any serious error in the figures. But before finally concluding that the increase is exactly so great as is here represented we shall do well to wait for the Medical Register. Neither record is infallible. There are numerous defects in the channels of information. One fact alone is significant. In the Assistant Registrar's Report to the Branch Council for England as to the voting in the recent election for Direct Representatives he showed that of the voting papers sent out no less than 1137 were returned through the Dead Letter Office. Of course this in no way represents the mortality of the profession. But it shows how difficult it is to arrive at very accurate results owing to the shifting and migratory condition of a large section of the profession. There is another fact to be taken into consideration in considering these large additions to the profession. They still continue to represent to a certain extent the numbers entering under a four years' curriculum, and may not be sustained when the full effect of the lengthened curriculum comes into operation, as it will shortly do. Still it is obvious that there is a rush into the profession far beyond what is necessary to supply the public with medical assistance or the members of the profession with such employment as will recoup them for years of laborious study. It is noticeable that London has twice as many practitioners (1 in 850) as the provinces. But the place which is blessed with the largest proportion of medical men to population is the Scotch metropolis. Edinburgh has 1 practitioner to 500 people Dublin comes next with 1 to 600. It would seem as if in these places the activity of medical education and the number of medical schools in proportion to the population had an effect of drawing or detaining practitioners, many of them depending as largely on teaching as on practice.

It is interesting, and it is very important, to discover what are the causes of this undue increase in the number of medical men. We say undue, because the increase is out of all proportion to the increase in population and to the needs of the public. Mr. GLADSTONE in his address to a meeting for the promotion of a memorial to Sir ANDREW CLARK magnified the position and the prospects of the profession—it was "a position continually advancing and continually rising." "The position is becoming one," he said, "of vital and commanding importance." Many see in the progress of civilisation and the increase of knowledge the removal of gross causes of disease—bad air, insanitary dwellings, intemperance, vice and crime, unhealthy employments, and long hours of labour. But, according to Mr. GLADSTONE, with the increase of health and invention and discovery will come an increase in "wants" and "enjoyments," and in connexion with this increase in wants "there will be an increase of infirmity and disease," and so an increased demand for the profession that is expected to postpone infirmity and to cure disease. It is a singular tribute to medicine, insensibly paid to it by thoughtful persons, that it has such powers and that it can both postpone infirmity and remove disease. And so it has. But its authority will have to be much more extensively recognised than it is and society will have to place the medical profession on a much higher pedestal that it has yet given it before its powers for good, its full power over "infirmity and disease," can be exercised.

We cannot stay to discuss more fully the reasons why we do not see in Mr. GLADSTONE'S theory the explanation of the growing numbers of the profession. His view is profoundly true. But it is an explanation of the growing importance of the medical art rather than of the growing numbers on the Medical Register. We have still to explain these, and the explanation is not easy. The cases of Edinburgh and Dublin would tend to show that medicine is followed by many as a teaching profession as well as a practising one, and undoubtedly the enormous development of medical education and medical examination makes many registered practitioners comparatively independent of medical practice. Then, again, the progress of general education increases the disposition of young men towards professionalism of some sort. This has been the effect of sound general education in Scotland for generations, so that, although a comparatively poor country, it has supplied the learned professions with a large proportion of members in England and the colonies and the empire generally. A better system of general education, extending through every class, is having a similar effect in England. The Bar attracts many who never expect to live by briefs. Can it be that men are entering the medical profession for its mere status, not expecting practice? We do not so read the signs of the profession. It does not attract, as a rule, wealthy men who can afford to live without much income from practice, as the church and the law have largely done. There are, of course, teachers of medicine and men of research in the profession living on incomes which many general practitioners would despise. As a rule, men entering the profession expect to live by it and to be efficient practitioners. They should be able to live without anxiety, which is not the lot of a large number of those now crowding into its ranks. One circumstance tends to convey to the public an exaggerated idea of the profitableness of the medical calling—that is the faith and frequency with which they see medical men putting their sons into it. It is to no purpose to protest that the medical profession is going to

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ruin while medical men can be found everywhere putting two, three, four, or six sons into it. This is scarcely consistent. We only in these observations touch the fringe of a great subject. We have a high hope of the future of medicine, but this future is not to be realised by mere numbers. Excessive numbers will rather mar than make it and will tend to depress the prosperity and reputation of medical work.

IT is not infrequently desirable, in deference to the claims of expediency, to modify the application of recognised principles. Sometimes, indeed, in a particular scheme it is found that more or less sacrifice of what is in itself excellent has to be made in order to obtain the best available results. With regard to the enlargement or re-building of its Royal Infirmary the city of Manchester appears to find itself in a position of this sort at the present time. Other things being equal, the pavilion system of hospital construction or some analogous system, such as that of circular wards, has well-recognised advantages. It allows all possible benefit to be got out of natural ventilation, and exposes the wards—especially where the buildings are of only one storey or are well separated from each other—freely to the health-giving influences of sunlight and it tends to prevent over-crowding on site. In a large city, however, building-ground is limited in amount and is very costly, while hospital pavilions require much space. An institution intended to serve a whole community may not conveniently be removed too far from a central position, especially if the city itself occupies a wide area relatively to its population, and it would almost seem as if this must be the case in Manchester, with the great majority of the people living in houses on the ground level and not in tenements of flats superimposed on each other. It is alleged—whether following the old adage, "out of sight, out of mind," we know not—that if the Royal Infirmary were removed from its present commanding position subscriptions would largely diminish, and this is a consideration of the first importance where maintenance depends on the goodwill of the public. In the case of a fever hospital, which is chargeable on the rates, the matter is different.

The question of architectural appearance is also receiving notice by those who are discussing the subject in Manchester. It is easy to make too much of this. Even a millionaire does not design his dwelling-house to resemble a cathedral, though a cathedral might be more pleasing to the eye than a mansion. Appearance must always be subordinate to use. Obviously, however, the site occupied by the Manchester Royal Infirmary ought to be the *locus* of a very handsome edifice of some sort, and if the Infirmary is to remain there it must be made an ornament to the city. It is urged by Dr. HARDIE, who advocates the present site, that the pavilion system of construction which, despite the fact that St. Thomas's Hospital is not an architectural failure, does not readily lend itself to building schemes of striking effect, is not now essential for the welfare of patients. He holds that artificial ventilation and antiseptic surgery have altered the conditions of success since the times of FLORENCE NIGHTINGALE and Sir JAMES SIMPSON. With regard to artificial ventilation it cannot be denied that there is much force in his contention. A great deal depends on details of arrangement, but in many places artificial ventilation has been, and is, a success. In populous places artificial ventilation has this distinct advantage, that it alters the standard of purity of the air-supply. With natural ventilation the standard must be the immediately surrounding atmosphere in its existing condition. With artificial ventilation the air can be washed and cleansed before its admission into a building. In smoky Manchester this must be of special consequence. Further, the possibility of safely and pleasantly changing the air of an apartment every six minutes instead of every twenty minutes must be taken into consideration with regard to the air-space required for every patient in a hospital, for within reasonable limits cubic space may be diminished accordingly as air-supply is increased. We say within reasonable limits, and this reservation is necessary if we are to profit by the lessons derivable from the experiences in the hospitals of the Metropolitan Asylums Board regarding the influences of aggregation on the prevalence of post-scarlatinal diphtheria and the spread of small-pox from hospitals, though at the Manchester Royal Infirmary these diseases, needless to say, are not admitted.

It is not so certain that Sir JOSEPH LISTER would agree that Listerism should be made the justification for neglecting any given detail in the whole realm of hygiene. Rather, indeed, does antiseptic surgery demand that fresh air and ample ventilation and an environment of cleanliness shall be considered as parts of its essence. Nor is the question of sunlight so easily settled in favour of those who advocate retention of the present site and the block plan instead of the pavilion plan. Looking to Professor RAMSAY'S brilliant address at the Sanitary Congress in Glasgow last July the value of sunlight as a health agency is coming to be increasingly recognised. What its comparative amount would be at Piccadilly in Manchester and at the other sites in the suburbs only observation could exactly determine, but the fact is that the best way for Manchester to utilise Professor RAMSAY'S teaching would be, not to carry the infirmary into the suburbs, but to carry the sunlight into the city by removing the pall of smoke which there so frequently conceals the face of the sun. In order, however, to get the full benefit of the sun when it does pierce the smoke, or when the smoke is abolished, Sir DOUGLAS GALTON, who is no mean authority on hospitals, holds that the surrounding open zone should be double the height of the buildings. How this may be in the proposed plans we do not know. As regards administration within the wards there should be little difference between a long ward with two rows of beds and a square ward with four rows, but perhaps in the latter case the wards might be brought within easier reach of the administrative centre. Here, again, reference to the plans would settle the point. The relative advantages and disadvantages of the rival sites will, no doubt, be carefully weighed and measured by the Mancunians, whose business instincts—*pace* the Ship Canal—are not likely to lead them astray. All that we contend for is—and in so far we agree with Dr. HARDIE—that they will do no honour to a principle by turning it into a fetich and

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that a cast-iron rigidity of adherence to the pavilion system may cost them too much in other important directions.

A MATTER of great interest has recently been agitating the Adelaide medical world. Dr. LEITH NAPIER, the senior resident surgeon of the Adelaide Hospital, brought a charge against Professor WATSON, the consulting surgeon and pathologist, before the board of management of the hospital, in which he accused Professor WATSON of misrepresenting a case that occurred in the hospital. We have received an *ex parte* statement issued by Professor WATSON, but we have the opportunity of checking all his assertions, as we have also received a copy of the official minutes of evidence taken at the inquiry by the hospital board and published by the Government of South Australia. The evidence is most voluminous, but we have extracted the following chief points. The patient, a woman aged fifty years, was admitted into the Adelaide Hospital, having been sent from the Destitute Asylum suffering from a large femoral hernia, with signs of strangulation (vomiting and constipation), of two or three days' duration. About two hours after admission an operation was performed by Dr. SHEPHERD, assisted by Dr. NAPIER. An incision was made over the swelling in the left groin and the sac of the hernia was opened. It was found to contain omentum, but no bowel could be discovered, though both Dr. SHEPHERD and Dr. NAPIER examined the crural canal with the finger. The mass of omentum was ligatured a little below the neck of the hernial sac and removed. Though no bowel was found and no explanation of the symptoms of obstruction of the intestine was discovered, yet the wound was closed and the patient sent back to bed. The two operators state that the woman was too much collapsed for any further operative procedure. The patient died during the night. Thus far no important differences of statement exist. The accounts of what was found post mortem are less in accord, though both sides agree that no bowel was discovered in the hernia and that the great omentum was firmly adherent to the left crural ring. Professor WATSON states that under this omental band was a loop of small intestine about fifteen inches in length, which was so compressed by the pressure of the band that it was congested and its lumen constricted. To this he attributes the symptoms of strangulation from which the patient was suffering. He had previously to the necropsy expected that a knuckle of bowel would be found in the crural ring. Dr. NAPIER declares that no abdominal condition was found at the post-mortem examination which was sufficient to account for death and that no proof of any intestinal obstruction was discoverable. The evidence of Dr. RAMSAY SMITH was to the effect that the omentum formed a "pretty tight band," from under which was pulled a piece of small intestine much congested, but with no adhesions to any structure. Others present noticed the piece of congested bowel, but did not observe its relation to the omental band.

Looking at the matter from a purely surgical point of view, and taking into consideration only the most essential facts, we can come to no other conclusion than that at the time of her admission into the Adelaide Hospital the patient was suffering from an acute intestinal obstruction. That this was the opinion of Dr. SHEPHERD and Dr. NAPIER is shown by the fact that they operated, attributing the symptoms to strangulation in a hernia from which the patient was suffering. At the operation, finding no bowel in the hernial sac, they appear to have thought that the vomiting and constipation were due to the strangulation of the omentum. Now the symptoms produced by a strangulated omental hernia are exceedingly slight until it becomes gangrenous and it never gives rise directly to signs of obstruction. Having found no sufficient cause for the symptoms present two courses were open to the surgeons. Either they might have followed up the omentum to the crural ring itself or they might have performed laparotomy. The second alternative was undoubtedly preferable, if the patient's general condition had admitted it; if laparotomy were inadmissible, as apparently in this case, we think no surgeon would hesitate to follow up the incision already made to try to discover the cause of the obstruction, unless, indeed, the patient were moribund, and this could hardly have been the case in the present instance, as the woman lived seven or eight hours longer.

As to the post-mortem examination, all agree that the omentum was firmly adherent to the crural ring, and so many of those present agree that a congested loop of small intestine was drawn from beneath the omental band that no other decision can be come to than that the omentum had caused intestinal obstruction by constricting this loop of bowel. This explanation clears up all the difficulties of the case, and we cannot refrain from saying that it appears to us to be intrinsically very highly probable. It is by no means very rare to find that an adherent piece of omentum has caused strangulation of a portion of bowel by holding it down; this is one of the recognised dangers of omental herniæ. Some of those who gave evidence seemed to be under the impression that adhesion of a piece of bowel was necessary to cause strangulation. The Board, after hearing the evidence, called upon Professor WATSON to resign, and without any technical knowledge took upon themselves to decide that "the operation was skilfully performed" and "that the post-mortem examination fully justified the treatment."

IN another part of our columns will be found a detailed account of the arrival of the Royal Mail steamer *Nubia* at Plymouth with cases of cholera and suspected cholera on board, and we think that no one reading this account can doubt for one moment the superiority of the present system as compared with the old one of quarantine. In this case the vessel has been retained but for a short time, and had not Imperial troops been involved the detention would have been shorter still. The sick have been separated from the healthy, and, after careful medical inspection, such persons as could conveniently be allowed to land have proceeded to their destinations, there for a time to remain under medical supervision and to be dealt with at once if any suspicious symptoms should arise. The cholera regulations have long since more than justified themselves, and the disease, although within recent years it has penetrated what may be called our first line of defence, has in all

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cases been rigorously dealt with. In the old days, and in spite of quarantine, both cholera and plague played havoc with our population. All attempts to keep these diseases from us were futile, and on obtaining a footing they spread with an awful rapidity and effect. The present system in no sense professes to keep out every case of cholera from our midst, but it makes provision for dealing with such as arise and for reducing the chances of introduction to such a minimum as is consistent with a due regard to the safety of the persons who may have been shut up in an infected vessel, and with the freedom of passage of the vast mercantile marine of this great empire. In the olden days the travellers on board the *Nubia* would not have reached their homes in this country for many days, perhaps weeks, to come, and it is extremely probable that, had they been left on board shut up with the sick, some would never have seen their homes again. In arriving at Plymouth the *Nubia* reached a port where she could be efficiently dealt with. Mr. WILLIAMS, we are assured on all hands, is a most competent officer, and he has besides, acting under him, an inspector of great experience. In addition to this the port sanitary authorities of Plymouth are an eminently enlightened body, and not only have they supported their medical officer of health, but they have equipped their port with adequate isolation accommodation and with modern disinfecting plant. In this manner not only is the country protected, but, as must come home to every man of Plymouth, the town itself is rendered as secure from invasion as a port doing the large trade which Plymouth does, and situated as she is, can well be. Certainly the Plymouth port sanitary authority have every reason to congratulate themselves upon the provisions they have made. Had they discontinued their preventive measures, Plymouth might at this moment have been pointed at by the nation with scorn, but in so far as the authority is concerned, it, in the matter of the *Nubia*, has done its part well. It is these unexpected visits of cholera-infected vessels which more than justify the Cholera Surveys which were recently undertaken on the initiative of Dr. THORNE THORNE by the Medical Department of the Local Government Board. Instances such as these will show the public the foresight of that department, and the promptitude with which it acts. Let the port sanitary authorities throughout the kingdom mark well what has happened at Plymouth, and let them call upon their medical officers of health for a report setting forth what these officers propose to do with the plant the authorities have provided them with, in the event of their being visited by a ship in a similar condition to that in which the *Nubia* came to port. Let port sanitary authorities, too, remember that cholera may come to them even in January, and let them also take heed lest they find a case of bubonic plague in their midst.

THE SCOTTISH FORM OF OATH.—The West Riding magistrates in the Leeds division have decided to accept the Scottish form of oath. While we are very glad to learn that this bench has thus endorsed our oft-repeated assertions that "kissing the book" is an uncleanly and dangerous habit we wish to point out that the decision of the bench was a work of supererogation. By the law of the land any witness could claim to be so sworn before them, whether they accepted the form or not.

Annotations.

"Ne quid nimis."

THE QUEEN'S COMMEMORATION.

THIS year, we may well hope and trust, will see the completion of the sixtieth year of the reign of Her Most Gracious Majesty. It is natural, therefore, that every loyal subject should wish that a reign of unprecedented length, one so full of welfare to her people and of glory to herself, should be marked by some special and enduring memorial. The Prince of Wales has stated through the public press that he "desires to intimate that Her Majesty still adheres to the decision already announced to refrain from expressing an opinion upon any proposals for doing honour to herself. His Royal Highness is, however, confident that the Queen will readily appreciate any undertaking to celebrate this event which may be the outcome of the wish of the people, whether generally or locally expressed. He feels assured that, on considering the various suggestions, due support will be given to works of mercy among the sick and suffering and to anything which may tend to brighten the lives and ameliorate the condition of Her Majesty's poorer subjects." The matter of the last paragraph covers such a wide field that we may well find it difficult to make a selection with regard to some good work by which to commemorate the occasion. There are, however, two objects which seem to us to have paramount claims. The one, adequate support for hospitals; the other, some provision other than the workhouse for sheltering the deserving poor in the winter of their days. And first, as a medical journal, we must consider the claims of hospitals, and remember that there are at least three important facts connected with the very existence of these institutions. First, it is generally allowed that hospitals do an immense amount of good by relieving pain and suffering, both directly, and indirectly, by training the coming generations of medical men. Secondly, we believe we are right in saying that every metropolitan hospital except St. Bartholomew's is either in debt or has had at some time to close some of its wards owing to loss of income. Thirdly, it will not be denied that the charity administered by hospitals is enormously abused and that those who have no right to such charity come and ask for it in the most unblushing manner; nay, more, that owing to the competition between the various hospitals for the subscriptions of the charitable sufficient care is not exercised in excluding unsuitable cases from a desire, laudable enough in itself, to show a large record of work, and this action not only diverts charity into a wrong channel, but is a chief cause of the ever-increasing load of debt. To free the public hospitals of the metropolis from debt will, it is estimated, require a sum of from £800,000 to £1,000,000, and as difficulties have arisen in the matter of raising such a sum it has been proposed instead to endow the Queen Victoria Jubilee Institute for Nurses. With this proposal we cannot agree; the nurses had their turn in the jubilee year, and it is now the turn of the hospitals. As to raising the sum, there ought to be no difficulty in such a year as this. As to the best way of using the money when collected there may be differences of opinion. The question is a most difficult one, for it is quite likely that, were the hospitals freed from debt, in some years' time they would be just as badly off as they are now, and until the unendowed hospitals are relieved from the dread of losing subscribers if they turn away cases, however unsuitable, there will always be the temptations and environment which dispose towards extravagance and debt. And for our second proposition, we would plead for some means of lightening the declining days of the honest and respectable

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poor. Even one more foundation like the Charterhouse would be something—we do not mean for the same class as Sutton provided for, but for those who have toiled through life for a small pittance, and who dread, and rightly, the workhouse, with its absolute lack of all connoted by the word "home."

THE MEDICAL STRIKE IN PARIS.

THE strike of the medical officers attached to the night service of the eleventh arrondissement of Paris has caused obvious inconvenience to the poor of that populous quarter. From motives of humanity Dr. Bellanger and Dr. Hereck have consented to continue provisionally their service, but this does not suffice. Thus, last week several persons applied to the police station of the district for medical help. The police, on inquiry, however, found that the two medical men were out and engaged attending to other patients, so they had to send away the applicants and no help could be given. M. Pourest, municipal councillor for the district, has forwarded an energetic protest to the Prefect of Police, urging that the service should at once be re-established, as the proposed alterations were causing grave injury to the poorer inhabitants of the district. According to a report submitted to the Paris Municipal Council by M. Edmond Gibert it appears that this night medical service cost 141,106 francs (£5640) during the year 1895. It is much appreciated by the population of Paris, but it is now maintained that abuses have arisen. Persons who have means to pay for medical advice are stated to have availed themselves of this service. Such abuse, it is true, does not, as in the case of hospital abuse in England, represent a loss to the medical profession, for the medical men are paid eight shillings per visit by the municipality, but it is a loss to the ratepayers. The latter are therefore interested in preventing abuse, whereas if the proposal of the Prefect of Police were enforced there would be no check to the abuse. If the medical officers were paid a fixed salary it would not matter to any one except to the medical men themselves how many patients resorted to the night service or whether these persons were rich or poor. As it is, the payment being per visit, the authorities have every interest to watch and see that none but the poor avail themselves of the medical officers' services. It is proposed that the tax collectors should be employed to investigate the cases. They are best informed as to the financial resources of the inhabitants of their districts, and, in any case, know all those whose rent amounts to £20 and upwards, for there is no direct taxation levied from tenants who pay a rent below £20. The fact that the cost of the service has increased rapidly strengthens the supposition that abuses have arisen. In 1891 the night medical service for all Paris cost 110,000 fr. In 1894 it cost 27,000 fr., and in 1895, as already stated, 141,106 fr. No less than 135 medical men are engaged in this service, and it is calculated that if, instead of being paid 10 fr. a visit, they each received a regular income of 600 fr., this would only cost 81,000 fr.; but to this it would be necessary to add the midwifery fees, and therefore the saving on the figure given for the year 1895 would have been, not 60,000 fr., but 45,000 fr. Thus if the alteration proposed had been applied in 1895 it would have saved £1800 out of a total outlay of £5640. For a large and wealthy town like Paris, with a population of two and a half million, was it worth while disturbing an eminently useful service so as to economise the paltry sum of about £1800? If abuses have arisen these certainly should be prevented, but the alteration proposed will, on the contrary, give every facility for their increase. As it is, we can but repeat that every time a medical man is called up in the night it means eight shillings out of the rates; therefore, there are any number of persons interested in seeing that none but the poor avail themselves of this service. When, however, the medical officers in question are paid a regular salary, irrespectively of the number of patients they may have, what will it matter whether rich people or only poor people profit by their services? Besides, as we pointed out last week, it is manifestly unfair that medical officers who live in poor quarters should not be paid more than those who live in wealthy quarters, where there is little or nothing for them to do. We fear the Prefect of Police has looked upon this question purely and solely from the financial standpoint, without any consideration, or perhaps without any knowledge, of its other and indirect consequences. We trust that when these arguments are submitted to the authorities concerned better and wiser measures will be taken.

UNQUALIFIED ASSISTANTS AND THE ROYAL COLLEGE OF PHYSICIANS IN IRELAND.

THE following resolution has been passed by the Royal College of Physicians in Ireland:—"That the College condemns the employment of unqualified assistants by any of the Licentiates, and instructs their Representative on the General Medical Council to urge on the Council to suppress the practice by every means in their power." The Royal College of Physicians in Ireland has shown a disposition to sympathise with its Licentiates in their contest against modes of practice that discredit the profession. It does so here. But it scarcely does all it can. It has powers of discipline over its own Members and Licentiates, and it should exhaust them before calling on the General Medical Council. Men are scored off the Register year after year that might have been saved from such a fate by the timely discipline of their own Colleges.

HOSPITAL ABUSE.

A CASE was tried in the Queen's Bench Division on Jan. 12th which is of considerable interest to those who are anxious regarding hospital abuse. According to the account in the *Daily Telegraph* of Jan. 13th the complainant, who kept three public-houses, received severe bodily injuries. He was first moved to the house of a medical man close by, and from there was taken in an ambulance, not to his own residence, as might naturally be expected, but to the West London Hospital, where he "underwent an operation." Not only did he receive the benefits of the hospital to this extent, but he subsequently attended as an out-patient for "some time." It is interesting to know that this recipient of the benefits of charity had subsequently to sell his public-houses for the "low price" of £21,000, as the takings fell off to the extent of £7 a week! This case happens to come into court, and accordingly stands painted in its full colours. There is scarcely a hospital in London which is not thus weekly abused and in the aggregate the system of gratuitous attendance upon accidents in all classes of society is amounting in London to something like a public scandal. While everyone, be he peer or pauper, has a right to accept or receive at a hospital first-aid in some accidents it is only right to point out that as soon as such patients can be moved they should pass to the care of their own medical advisers and certainly should not attend as "out-patients." Such cases demonstrate a scandalous mismanagement of charitable funds, which should no longer be tolerated. Our London hospitals are in a state of chronic impecuniosity. How can we approach the rich and ask them to bestow their funds to be utilised in this manner? Even supposing that the patient gives a handsome donation to the funds of the hospital, this does not relieve him of the charge of depriving the medical profession of their just fees. The vast majority of accidents, as fractures and the like, could be perfectly well treated by the family medical attendant in occasional consultation with a hospital

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surgeon. We commend this practice of gratuitous attendance upon accidents among the "well-to-do" to the serious consideration of the lay governors of our large hospitals, with whom lies the power to do their duty and put an end to a state of things which, as this case sufficiently demonstrates, undoubtedly exists and much weakens the case of the hospitals in appealing to the wealthy for funds.

SIR JOSEPH LISTER'S PEERAGE.

WE are glad to be able to announce that Sir Joseph Lister on being raised to the Peerage has selected the title of Lord Lister. It is eminently satisfactory to find that he will still be associated with the name which he has made famous throughout the scientific world and that his identity will not be obscured under some territorial designation.

HOSPITAL SHIPS.

IT is stated that ships for ambulance purposes are to be added to the navy of the United States. Their uses will be found described in the pages of THE LANCET in an interesting paper entitled "Hospital Ships" by Dr. Murray Braidwood published on April 4th, 1896, and illustrated by plans. It is sincerely to be hoped that our naval authorities will turn their attention to this subject. One or two of these ships are really wanted, and there is no reason why our nation should be behindhand.

MEDICAL PRACTICE IN ZULULAND.

A GENTLEMAN who has recently accepted a Government medical appointment in Zululand has written to us as follows:—"Medical practice in Zululand, like all Gaul, is divided into three parts—that by the district surgeons (of whom there are five), that by the Kaffir doctors, and, of course, that by the ubiquitous quack. The two former have to obtain from the Government a licence to practise, for which each alike pays a guinea a year. The district surgeons get a salary of £200 per annum and extras, with permission to practise if they take out the licence. The practice and extras amount to about £30 a year, as told to me by one of them, who, however, supplements his income by acting as a missionary, and some have £50 a year for conducting a dispensary, at which they must attend all natives at a uniform fee of one shilling. The shilling goes to the Government, which supplies the necessary medicines; the district surgeon, however, is expected to provide surgical instruments. The dispensary system does away with all chance of native practice, which before its institution used to yield a fair income, as the natives cannot see why they should pay more than 1*s.* for private attendance when they can have attendance and medicine at the surgery for that sum. The term 'extras' means a travelling allowance per mile, outside a six-mile radius, of 1*s.* out and 6*d.* return, to obtain which the practitioner has to keep one or two horses and a groom and must frequently sleep at Kaffir stores, where the charges are from 5*s.* to 7*s.* 6*d.* a night for his horse, 2*s.* 6*d.* for his bed, and 2*s.* 6*d.* for each meal. This item is therefore a source of loss rather than of profit. No allowance is made for evidence in courts of justice, for inquests, or for post-mortem examinations. The white population, including the military, numbered until recently about 700. I do not think that at present it exceeds 500, and the military surgeon at Eshowe takes what private practice he can obtain. No houses are provided by Government, and the district surgeon must build a hut, sleep in a tent, or provide a dwelling-place as best he can. This in the case of a bachelor and a young man (and no other should be appointed to these posts) is not of such consequence; but for an elderly man, a married man, or, above all, one with children, it becomes a serious matter, as a whole family must crowd together in one room which answers for all purposes in a manner which would not be tolerated in the East-end of London, and besides there are no educational advantages whatsoever. The collapse of the Nondweni goldfields (at which place there was until recently a resident surgeon) has sent most of the people there away. This was the only place in Zululand which supported a medical man of its own. Since his departure the N'qutu district surgeon easily combines the practice there with his official duties, although the two places are thirteen miles apart. The cost of living in Zululand—principally on account of the very high rate of freight by rail through Natal and by bullock waggon in Zululand, as well as through the mealie famine, the locusts, and the rinderpest in other parts of South Africa—is extremely high, in addition to which the Government salaries are very disproportionate to necessary expenditure and much below what is usually paid by others. Tradesmen even, carpenters, and blacksmiths can get from £28 to £30 a month—horseshoes cost 10*s.* a set. Even young fellows under twenty are drawing salaries of from £15 to £25 a month at the mines, without any trade or profession whatsoever. The quacks seem to go on the even tenor of their way here as elsewhere and do a roaring trade, not only at extracting teeth at 1*s.* each, but at bone-setting, surgery, and the practice of medicine generally, uninterfered with by the Government. Taking one consideration with another the life of a district surgeon in Zululand is, like the policeman's, 'not a happy one.'"

THE PRESIDENCY OF QUEEN'S COLLEGE, CORK.

THE Presidency of Queen's College, Cork, which is now vacant, is said to lie between Sir Rowland Blennerhassett, Professor Corby, and Mr. Starkie. To our mind Professor Corby's claims completely outweigh those of the other two gentlemen. He is a graduate of the College and at present holds an important Professorship therein—that of Midwifery. He is a man of learning and culture outside the profession, and the esteem in which he is held by his colleagues is shown by the fact that he has been four times elected to the council of the College. This intimate connexion with the College is the finest testimonial that a candidate could possess to his fitness for the vacant Presidency; but in addition to it Professor Corby would represent the body of the College in a way that neither of the other claimants could hope to do. Three-quarters of the students at Queen's College, Cork, hope to enter the medical profession, so that it is very fitting that the President should belong to that profession. If the Presidency had been held on many occasions, or for many years, by a medical man we would willingly admit that a layman might for many reasons be an advisable choice. But this is not the case. It is the turn for a medical man, and a medical man would be a grateful selection to an enormous majority of the graduates and students of the College.

A QUACK AND HIS VICTIM.

AS truly as the earth requires its atmosphere, so the knave requires for success in his duplicity the company of ignorant and foolish neighbours. So long as he can find these he will flourish in some degree, and so long must they serve and suffer for him. If at last there comes an awakening one can hardly be blamed who pities neither him nor them. It is with no deep feeling of regret that anyone endowed with ordinary honesty and good sense will regard the fate of one who was thus duped by a heartless impostor in the name of medical service. The case was tried a few days since at the Burnley Quarter Sessions. The plaintiff, a carter, had been induced to part with over £12 to a travelling "specialist" before he discovered, on seeking the advice of two medical practitioners, that he was himself a fairly healthy

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man, though weak, and that he had been victimised by an unscrupulous quack. The result was no gain to him, though it obtained for his quondam adviser an exchange from the perils of a false position to the security of twelve months' imprisonment. The excuse of ignorance might be pleaded by the sufferer in this case, and there are others like him in every rank of society who should know better, but do not. In their interest we are pleased to find the law as regards fraudulent money-getting so sensibly interpreted. The lesson of experience, which is all in favour of qualified practice, will not, we trust, be missed in this case because it has not been more severely taught.

A GENEROUS GIFT TO THE SOUTH WALES COLLEGE.

GENERAL regret will be felt at the announcement now made that Professor Alfred Hughes will be compelled, owing to the continued ill-health of his wife, to leave the neighbourhood of Cardiff before the end of the winter session and consequently to resign his chair of Anatomy in the University College, Cardiff. Before leaving he has granted to the College the free use of his anatomical collections, on which he has spent large sums of money and many years of labour. In the event of his wishing to remove them at some future period he has placed at the disposal of the College a sum of money sufficient to replace them. Professor Hughes brought with him from Edinburgh the reputation of being one of the most popular and successful of the extra-mural teachers, and during his short tenure of the chair at Cardiff he has added to his former reputation. It is fresh in the minds of many that one of his students obtained only last summer the exhibition and gold medal in anatomy given by the University of London, an honour only twice obtained by a provincial school during the last twenty years.

DERMATITIS CAUSED BY THE ROENTGEN RAYS.

THE *Boston Medical and Surgical Journal* contains several letters on the subject of dermatitis caused by the Roentgen rays. Dr. J. C. White mentions a case occurring in the Massachusetts General Hospital where a young lady was exposed to the rays for half an hour in one day and for forty-five minutes on the next day, the tube being placed about six inches in front of her sternum. On the following day the skin over this region was red; it subsequently became blistered, and three months afterwards there was an area of angry-looking granulations. Dr. E. A. Codman of Boston attributes these effects to the brush discharge from the vacuum tube or possibly to the ultra-violet rays. Professor Elihu Thomson, writing from Lynn, Massachusetts, describes his personal experience. Desiring to test the action of the rays on the skin, he held his left little finger close to a vacuum tube for half an hour, about one and a quarter inches from the platinum source of the rays. For about nine days very little effect was noticed, then the finger became hyper-sensitive to the touch, dark red, somewhat swollen, stiff, and soon afterwards it began to blister. The blistering started at the maximum point of action of the rays and spread in all directions, covering the area exposed. The letter giving these particulars was written by Professor Thomson on the day three weeks after experimenting with his finger, and the blister then covered the whole exposed portion of its back and sides. He estimated that the equivalent exposure at six inches distance would be about ten or twelve hours. He was not prepared to admit that the brush discharges had anything to do with causing the injury, because the potential was low, being obtained from a small 24-plate static machine and there were no perceptible sparks from the tube to the finger. Professor Thomson mentions a case in which a young man engaged in testing Crookes's tubes at an electrical works had to discontinue the employment because his arms began to be affected, even through his clothing; he adds that two similar cases, but of far greater severity, occurred in Mr. Edison's laboratory.

NEW VACCINATION ORDER BY THE LOCAL GOVERNMENT BOARD.

THE Local Government Board has issued a general order dated Jan. 7th, 1897, amending paragraphs 5 and 6 of the "Instructions for vaccinators under contract" contained in the order dated Feb. 28th, 1887. The new order directs that those paragraphs as at present existing shall be replaced by the following:—

"5. Endeavour to maintain in your district such a succession of cases as will enable you to vaccinate with liquid lymph directly from arm to arm at each of your contract attendances. When stored lymph, whether humanised lymph or calf lymph, is used, it should be preserved either dry on ivory points, thickly charged and constantly well protected from damp, or liquid in tubes, hermetically sealed at both extremities. With all stored lymph caution is necessary lest in time it have become inert or otherwise unfit for use.

"6. Consider yourself strictly responsible for the quality of whatever lymph you use or furnish for vaccination. In storing lymph be careful to keep separate the charges obtained from different subjects and to affix to each set of charges the name or number in your register of the subject from whom the lymph was derived. Keep such note of all supplies of lymph, whether humanised lymph or calf lymph, which you use or furnish as will always enable you to identify the origin of the lymph. Do not employ lymph supplied by any person who does not keep exact record of its source."

THE INDIAN FAMINE.

THERE can no longer be any doubt as to the reality of the famine in India and of the great gravity of the situation. Funds are urgently needed to meet the calamity and cope with the distress and suffering entailed upon the natives of India, especially the unhappy women and children of that country. The crisis is a national one, and we make no doubt that the people of this country will respond to the call upon their pity and benevolence in a generous spirit and in the way they have always done when once they have realised the need. To those who have no actual personal experience of India it is difficult to form any adequate picture of the extent and poverty of its population. As we have already said, the struggle for subsistence with the "masses" is a very hard one at the best of times; but in times like the present it is an impossible one; they patiently succumb and die. To the Government of India falls the responsibility of ascertaining, in the first place, the probable extent of any threatened calamity and of organising the necessary machinery for its relief. That has now been done, and it remains for all classes in this country to do their best to aid the Government in their good work—viz., of mitigating at any rate, if they cannot altogether avert, the sufferings of their Indian fellow-subjects.

THE RED CROSS SOCIETY IN RHODESIA.

WE have received the report of the British National Society for Aid to the Sick and Wounded in War, better known as the British Red Cross Society, with regard to its work during the operations in Rhodesia during 1896. The report opens with a *résumé* of the work of the society since 1886 when the last report was published. From this we learn that the society has made grants to various bodies for purposes germane to its work, among which we may note a grant to the fund initiated by the German Red Cross Society to assist M. Henri Dunant, and a special grant to the Italian Red Cross Society for work in Erythræa. On April 21st, 1896, it was decided to dispatch two surgeons to Rhodesia, and the gentlemen selected were

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Mr. W. G. Sutcliffe, F.R.C.S. Eng., L.R.C.P. Lond., and Mr. W. Redpath, M.R.C.S. Eng., L.R.C.P. Lond., who arrived at Bulawayo upon June 4th, having experienced considerable difficulty in the matter of transport on the way. Both surgeons saw a good deal of rough work, being several times under fire, and from sundry letters published in the report their services appear to have been warmly appreciated by the authorities, both civil and military. Mr. Sutcliffe has an interesting little note about the comparative effects of the Martini, Snider, and Lee-Metford bullets. The two first do the most damage to the tissues. "The few Lee-Metford wounds that have come under my charge have done very little actual damage. In one case a man was shot nearly a week ago through the right lung, the bullet coming out behind through the scapula, and making a perfectly clean cut which has completely healed, and the man will soon be fit for work again." It should be noted with approval that the names of these gentlemen have been placed on the Medal Roll of the Medical Staff Corps in view of the possibility of a medal being granted to those who have served in the campaign.

IMMATURE INFANTS IN FRANCE.

THAT the threatening depopulation of France is a most serious misfortune against which our neighbours are striving in a variety of ways and with greater or less success, cannot, unfortunately, be gainsaid, but even in this lamentable case the old proverb, "'Tis an ill wind that blows nobody good," may be applied with perfect accuracy. A persistently diminishing birth-rate might well be looked upon as an evil out of which no benefit could possibly arise, and yet with respect to one fragile, but by no means unimportant, section of the French community the national unfruitfulness has proved itself to be a veritable blessing in disguise. The heretofore forlorn beings who have thus fortuitously derived benefit from the general calamity are the newly born infants, who from various causes, but chiefly by reason of their premature appearance on the scene, are peculiarly unfitted to withstand

> "the thousand natural shocks
> That flesh is heir to."

Formerly no very serious efforts were made to prolong the ephemeral existence of these unwelcome little strangers. They were rather hopelessly allowed to pine away and die, under the impression that they could not possibly survive, but human life has of late become so valuable in France that no breathing waif need now be abandoned as an irretrievable derelict. Little children have ever been esteemed the most precious of human possessions all the world over, but it was reserved for an energetic Frenchman to set the seal upon this preciousness by conserving the immature specimens in glass cases. That this is simply a statement of fact many of our readers are doubtless already aware, but should there be any questioners among them they have merely to pay a visit to No. 26, Boulevard Poissonière, Paris, in order to obtain resolution of their doubts by ocular demonstration. At that address, under the designation "Œuvre Maternelle des Couveuses d'Enfants," they will find a truly remarkable institution, which owes its inception and development to the zeal and philanthropy of Dr. Alexandre Lion of Nice. Ruminating one day on the perilous condition of his country from a demographic point of view, it struck this patriotic and humane member of the medical profession that the holocaust among prematurely born infants would be largely diminished if the helpless atoms could only be kept sufficiently warm. Accordingly, in 1891 he invented his *couveuse*, or modified incubator, which may briefly be described as a woven wire mattress suspended in a glass case, the latter being heated by a water coil and kept sweet and wholesome by a constant inflow of purified filtered air. The success attending on this new departure in infant life preservation has been surprising. A prematurely born child, if exempt from hereditary disease, never dies in Dr. Lion's institute provided it weighs not less than two and a quarter pounds — that is, about one-third of the normal standard—and provided, also, that its installation in the *couveuse* is accomplished with the least possible delay and exposure. At this stage of the untimely bud's frail existence a chill is almost certainly fatal, so the transfer from the lying-in bed cannot take place too soon or be carried out too carefully. The theory that immature infants require exceptional warmth is, of course, not a new one. Every midwife knows the importance in such cases of immediate swaddling; and children born before their time, whose survival was regarded as well-nigh hopeless, have ere now been saved by such devices as enwrapment in newly-flayed skins, the utilisation as cradles of freshly eviscerated sheep and goats, &c. The inventor of the *couveuse*, nevertheless, amply deserves the lion's share of the credit, not merely on account of his ingenious amplification of a well-known principle, but also for his untiring advocacy and capable organisation.

THE IRRUPTION OF TEETH INTO THE NOSE.

IN the *New York Medical Journal* for Dec. 26th Dr. Alexander McCoy publishes a series of cases illustrating the irruption of the teeth into the nasal cavities. This painful and fortunately rare condition, he observes, is attributable, as a rule, either to abnormal development with rotation of the dental germ—the enamel growing upward instead of downward—or to extra-follicular development. A case originating in traumatic displacement of the normally irrupted tooth is also recorded. As a rule, the floor of the nasal passage is the seat of the invasion the enameled crown presenting, though extra-follicular irruption at a higher point is also recorded. As might be expected, the offender is usually a front tooth, incisor or canine, but others as far back as the wisdom teeth have been found thus displaced. The clinical interest attaching to cases of this kind is largely that of secondary disturbances which comprise local necrosis, with suppuration consequent on the boring action of a hard body travelling through previously-formed bone, otitis, and even laryngeal spasm. The journey performed by such erratic teeth is sometimes neither short nor rapid. In one case, as read by the light of symptoms, a wisdom tooth appears to have made its way during a period of thirty years through the alveolus into the antrum of Highmore and thence by ulcerative inflammation through the lateral nasal wall and inferior turbinated bone on to the nasal floor, whence it was ejected.

IN the Court of Appeal, on Jan. 13th, the application for a new trial in the case of Beatty *v.* Cullingworth was heard before the Master of the Rolls, Lord Justice Lopes, and Lord Justice Chitty. Their lordships dismissed the appeal without calling on counsel for the defendant.

THE Russian Academy of Science has elected Lord Kelvin an honorary member and Lord Rayleigh and Professor Bury of Dublin University corresponding members. Dr. Simon Newcomb of Washington, the American astronomer, was also elected an honorary member.

THE death, on the 12th inst., is announced of Deputy Inspector-General (Bengal Army) F. J. Mouat, M.D. Edin., F.R.C.S. Eng. The deceased was formerly also Inspector-General of Prisons, Bengal, and a Local Government Board Inspector.

THE Colonial Office announce that sufficient applications have now been received from candidates for vacant appointments at Lagos and on the Gold Coast.

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THE CHOLERA-INFECTED VESSEL AT PLYMOUTH.

THE arrival of the R.M.S. *Nubia* (Captain Browne, R.N.R.) at Plymouth with cases of cholera on broad was an event hardly anticipated at this period of the year; but, nevertheless, neither the officers of the port sanitary authority nor the Customs were caught hibernating. The *Nubia*, a vessel belonging to the Peninsular and Oriental Company, left Calcutta for London on Dec. 10th, 1896, with her crew and a small number of saloon passengers. On arriving at Colombo on Dec. 17th the vessel took on board some 250 non-commissioned officers and men, as also officers and their wives, and a few soldiers' wives and children. On Jan. 1st the *Nubia* reached Malta, and on the evening of this day the first case of cholera, which ended fatally in twenty-four hours, occurred. Between this date and the 3rd some three other cases of cholera and three or four suspicious cases came to light. Two of the three cholera cases died, one on Jan. 6th and the other on Jan. 9th. On Jan. 8th another case of cholera occurred, and this case also terminated fatally on the morning of Jan. 10th. As to the origin of the outbreak there would seem to be some doubt, for while, on the one hand, cholera is reported to have been prevalent in the native quarters of Colombo at the time the *Nubia* left, no definite case of cholera was recognised until after the arrival of the ship at Malta on Jan. 1st. It is thought, therefore, by some that the disease was contracted from the consumption of fruit purchased independently by the troops at Port Said, but there would appear from the evidence procurable some difficulty in accepting this view, and, moreover, the authorities strenuously deny the existence of cholera in the latter port. As to this, however, it has to be remembered that anomalous forms of cholera may doubtless exist without recognition.

We believe that another view of the outbreak attributes it to the presence of some infected articles taken on board at Colombo, but which may not have been unpacked until after the colder latitudes were reached. There is no question as to the fact that the cases regarded as cholera were typical of that disease. It has, too, to be remarked that before the cases of cholera occurred on board there were several cases of typical dysentery among the Lascars, and that a death, also of a Lascar, took place in the Red Sea from acute diarrhœa. The Lascars, however, occupied a separate part of the ship, and no cases of actual cholera occurred amongst them, such attacks being confined to the unmarried men amongst the troops. With, therefore, the obviously uncertain factors involved it is quite impossible, with a due regard to the elementary laws of logic, to speak definitely as to the means by which the disease was conveyed to the troops. On arrival of the *Nubia* at Plymouth on the 9th with her cholera flag flying she was detained by the Customs, and Mr. Williams, the energetic port medical officer of health of Plymouth, being immediately apprised of the fact, forthwith visited the vessel. It was found that there was then a body dead from cholera on board and also the other cases above referred to. Mr. Williams found that all precautions, as far as possible, had been taken, and that Surgeon-Captain Hardy, medically in charge of the troops, and Mr. Edwards, the ship's surgeon, had done their very utmost under the trying circumstances in which they were placed. Under the provisions of the cholera regulations all hands were mustered and carefully inspected by Mr. Williams, and as a result of this inspection certain of the saloon passengers were allowed to proceed to their destination after they had satisfied Mr. Williams of their condition and of their names and addresses. The vessel was then ordered to steam far beyond the Eddystone to bury her dead; and the captain, while still away from the Sound, was instructed to thoroughly cleanse the bilges of the vessel. Shortly after the return of the *Nubia* from this sad ceremony another patient died, and within a few hours the body was conveyed to sea in a similar manner for interment. On the first arrival of the vessel at Plymouth Mr. Williams telegraphed to the Central Health Authority at Whitehall, and we understand that, such was the promptitude of the Local Government Board, within a few hours Dr. Bulstrode, one of the medical inspectors, was in conference with Mr. Williams at Plymouth. On Sunday morning the *Nubia* was visited by Dr. Bulstrode and Mr. Williams, and these two gentlemen together made a thorough inspection of the vessel and inquired carefully into the history of all the cases. It was then resolved that the remaining cholera patient and the suspicious cases—the former on the previous day having been too ill to be moved—should be transferred from the *Nubia* to the hospital ship *Pique*, which has been so admirably fitted up by the port sanitary authority of Plymouth. This having been safely accomplished, the hospital and other places in which the sick had been isolated were thoroughly disinfected. On Monday morning it was discovered that two fresh cases of suspicious diarrhœa had occurred and these were at once sent to the *Pique*. A communication was then received from the War Office to the effect that they wished to remove the troops to a fort on shore, there to observe them, and to carry out the military details connected with the discharge of the time-expired men. A conference was therefore held between the representatives of the Local Government Board and the port sanitary authority on the one hand, and of the Army, and Army Medical Department on the other, when it was decided that the War Office should take charge of all the unmarried men of the troops (the vast majority) and that the port sanitary authorities should deal with married people and children under the provisions of the cholera regulations. These preliminaries having been arranged the *Nubia* was visited early on Tuesday morning by Mr. Williams, who was accompanied by Dr. Bulstrode. All the troops were paraded on deck and inspected very thoroughly by Mr. Williams, each man being individually interrogated. It is satisfactory to learn that, in so far as cholera symptoms were concerned, all the men were found to be in good health, and, the inspection over, the troops were landed by the Government tug *Scotia* at a spot convenient for access to the fort which had been prepared for them. All the clothing and baggage will be dealt with by the port sanitary authority of Plymouth, who are to be most warmly congratulated on the possession of adequate means for the purpose of submitting the clothing to super-heated steam. After the departure of the troops Mr. Williams mustered the crew on deck and was able to pass them all as healthy. He then gave directions as to the further disinfection and cleaning of the ship, and the *Nubia* shortly after left for Gravesend, where she has now arrived. Several of the passengers who had been dealt with under the cholera regulations left Plymouth by train the same evening. The military authorities, who have been represented at Plymouth by Colonel Elmes, A.A.G., and by Surgeon-Major-General Hamilton, principal medical officer, have, we are informed, acted in complete accord with the port sanitary authority, and where mutual assistance has been possible it has been most cheerfully rendered. The highest praise is due to the officers of the *Nubia*, who have done all in their power to facilitate the precautionary measures.

THE REPORT OF THE ROYAL COMMISSION ON VACCINATION.

AT the meeting of the Society of the Medical Officers of Health, to be held to-day (Friday), Dr. F. T. Bond will submit for the consideration of the society, in connexion with his paper on "How shall we legalise the recommendations of the Royal Commission on Vaccination?" the following propositions:—

1. That the report of the large majority of the Commissioners conclusively shows that in their opinion it is in the interest of the community that the State should continue to promote vaccination, and that it is not expedient that the vaccination of children should be left to the uncontrolled option of parents or guardians.

2. That the report does not contest the absolute and indefeasible right of the State, as the supreme guardian of all children, to enforce their vaccination, but only maintains that it is not expedient, in the interest of vaccination itself, for the avoidance of scandal as well as for the discouragement of mischievous agitation, that the vaccination of children should be enforced in the way now provided for by law.

3. That in the opinion of this society it is expedient that any concession which may be made to what is admitted

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by the Commissioners to be an exaggeration of dangers which are really "insignificant" and which they believe would be largely, if not entirely, removed by the improvements in the practice of vaccination which they recommend, should not be of the nature of a permanent abrogation of the right of the State to enforce the vaccination of the child, as the Commissioners practically suggest, but only of a postponement of the operation until such time as may be considered suitable for reviving the right of the State to enforce it.

4. That the time for revival of such right is to be found when the child is required to attend school, and that it is expedient, therefore, in any amendment of the vaccination law to make explicit provision for such revival.

5. That it should be the duty of the Registrar of Births, in the case of the registration of the birth of every child, to deliver to the person registering the birth a notice of the requirements of the law in regard to vaccination, together with a suitable explanation of the grounds on which the State requires that the child should be vaccinated, and that he should also inform the public vaccinator of the child's birth.

6. That it should be the duty of the public vaccinator at some time, not less than six and not more than twelve months after the birth of the child, to visit it at its registered home, and if he shall find that the child is alive, and that it has not been effectually vaccinated, and that the operation may with safety be performed, to offer so to do; and that if the person in whose legal charge the child shall then be shall refuse to allow it to be vaccinated, or if for any other reason the public vaccinator should think it desirable that the vaccination of the child should be postponed, he should forward a certificate to that effect to the official who may be appointed to receive and record it.

7. That on the receipt of the certificate of the public vaccinator that the legal guardian of a child who had arrived at the age and was fit to be vaccinated had refused to allow the child to be vaccinated, it should be the duty of the officer to be appointed for the purpose to summon such guardian before the magistrates, and that on such guardian satisfying the magistrates that he objected to the vaccination of the child they should be empowered to make an order suspending the compulsory vaccination of the child until further notice, on payment by the guardian of the court costs incurred in the proceedings.

8. That it should be the duty of the public vaccinator to periodically visit all schools for the purpose of inquiring into the state of the children attending them in regard to vaccination and of effectually vaccinating and re-vaccinating such children as he may find in an unprotected or imperfectly protected condition.

9. That the recognition of the propriety of enforcing vaccination during the school period which would be thus established would materially facilitate the promotion of re-vaccination during the same period, at the time when in public elementary schools the child would be leaving, and that it would thus offer a guarantee for the general protection of the whole population which would not be otherwise obtainable.

10. That the delay in enforcing vaccination which would be entailed on such children as might be thus temporarily exempted would not involve any serious risk either to themselves or to the community as a whole, except in presence of an epidemic, when, as the Commissioners advise, vaccination should be compulsory, whilst, on the other hand, it would carry with it great compensatory advantages, amongst which may be especially mentioned that of relieving vaccination itself of most if not all of the risks and objections to which it would still be exposed even by the extension of the period of liability to six months, as the Commissioners propose.

11. That it is desirable that the certificate of successful vaccination and re-vaccination, whether given by the public vaccinator or by a private medical practitioner, should embody a statement of the number and aggregate area of the scars left after the vaccination punctures have healed, and that it should also carry on its face information as to the minimum conditions in regard thereto which can be reckoned on to afford effectual protection.

12. That it is expedient that the present requirements in regard to the re-vaccination of persons employed in the public services should be maintained, and that employers of labour should, if not required, be at least encouraged to promote the re-vaccination of those whom they employ.

13. That it is desirable in any legislation for the amendment of the vaccination law that the general administration of the medical and sanitary provisions of the law should be delegated to sanitary authorities, due regard being had in so doing to ensuring that the work shall be efficiently done, and subject always to the control of a system of proper inspection.

14. That the necessity for reorganising the machinery of vaccination, which legislation in the foregoing directions would involve, offers a convenient opportunity for dealing with the whole subject of the executive of the sanitary and medical public services, so far as regards the duties of medical officers of health, of district medical officers, and of public vaccinators, and also of meeting the recognised need of providing for the medical and sanitary supervision of public elementary schools; that by a proper consolidation and co-ordination of these now unrelated branches of public work both efficiency and economy might be materially promoted.

15. That it is desirable that the Society of Medical Officers of Health should endorse generally the expediency of giving effect to the following proposals of the Royal Commissioners—viz.: (1) to allow public vaccinators to offer calf lymph as a substitute for human lymph in all cases in which it may be preferred; (2) to extend the period within which a child is at present required to be vaccinated; (3) to provide for the medical treatment of children after vaccination so far as may be necessary to ensure good results; (4) to provide for the more effectual supervision of tramps and common lodging-houses; and (5) to ensure better means than now exist for enforcing the provision of proper accommodation in every sanitary district for the isolation of small-pox and other infectious diseases.

THE PLAGUE IN INDIA.

WE regret that we are unable to report any abatement in the epidemic of bubonic plague in Bombay. Whatever might have been accomplished by the prompt adoption and enforcement of a system of segregation during the earlier and initial stages of the outbreak has passed away; the disease seems to have established a firm foothold in Bombay and the enormous exodus of a panic-stricken population has probably ere this carried the disease-cause in many of the directions whither these people have migrated. The latest reports from Karachi show a rapid increase of the plague there and in a virulent form. Out of a total of 220 cases at Karachi there were 214 deaths, and of 52 fresh cases which occurred in two days all proved fatal. The public health of Bombay, apart from the plague, seems to be in a very unsatisfactory state. The number of deaths registered during the week ending Dec. 24th, 1896, was 1416, being 106 more than in the preceding week, and 946 more than in the corresponding period in the preceding five years. The rate of mortality per 1000 of the population was 87·76. Among the deaths 226 arose from bubonic fever and 352 from remittent fever; and the telegraphic intelligence since received shows, as we have said, a large increase instead of any decrease in these heavy death-ratios. It is very probable, too, that owing to the fears and apprehension of the natives regarding any official interference on the one hand and the desire on the part of the officials themselves not to increase alarm on the other, these figures may not represent the whole truth. The state of affairs in the Presidency of Bombay has not only given rise to much alarm in India, but has very naturally aroused much anxious consideration on the part of the Governments of other countries—such as Russia, Turkey, Egypt, France, and Austria, for example. Surgeon-Major-General Cleghorn, the Director-General of the Indian Medical Service, has been ordered by the Indian Government to proceed to Bombay to report on the epidemic there and on the sanitary condition of the city, and to advise the Government generally. Rogers Pasha, the head of the sanitary department in Egypt, and Dr. Bittar, the bacteriologist of the Egyptian Government, have likewise proceeded to Bombay with the view of advising as to the best measures to be adopted for safeguarding Egypt, especially in the direction of the Mecca pilgrims as possible vehicles for carrying the plague infection to that country and to Europe, of which in this respect Egypt may be regarded as a protecting outpost.

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Russia, speaking through a portion of her press, apparently advocates the adoption of some joint international sanitary measures for preventing the spread of the disease to other countries; and the Austrian delegate to the International Sanitary Council at Constantinople (Dr. Hagel) proposed to prohibit this year's pilgrimage from India to Mecca in view of the present prevalence of plague in India, and the remaining members of the council agreed with Dr. Hagel; but the Turkish delegate was opposed to the suggestion because to prohibit the pilgrimage would trench upon an essential part of the Mussulman faith. From a Paris paper we learn that Dr. Netter and Dr. Brouardel regard the outbreak in India as a calamity which is bound to engage the attention of Europe, although these authorities believed that owing to the rigorous measures adopted at the various ports, the European continent would be preserved from contagion. Dr. Brouardel urged that England should discourage the Indian pilgrimage to Mecca and exercise the same strict surveillance over ships in the Gulf of Persia as was done in the case of the Suez Canal. The Government of this country is often called upon to play a part on the international stage that falls to the lot of no other Power, and a most difficult part it is—namely, to practically reconcile very grave questions of State policy with those of international sanitary considerations and public health hygiene.

MEETING OF INFIRMARY TRUSTEES AT MANCHESTER.

A SPECIAL general meeting of the trustees of the Manchester Royal Infirmary was held on Jan. 11th to receive the formal statement of the result of the poll in December last Lord Derby presiding. It may be remembered that of 1349 voting papers issued 853 were returned, one of which was bad, and that of the 852 votes recorded 449 were in favour of, while 403 were given against, re-building. The chairman formally announced the result, a majority of 46 in favour of the resolution of the Board. This was the whole of the business, but many questions were asked and a good deal of discussion took place, the chairman saying that though the meeting was practically dissolved and the business concluded "he had endeavoured to give such satisfaction as he could to gentlemen who had asked questions." An informal meeting was then held, Lord Derby again presiding, on the suggestion of the Lord Mayor. After much discussion it was proposed by Sir John Harwood, who said the city council had done all they could to be conciliatory and "had shown the most friendly spirit in relation to the board and to the trustees," that a committee be appointed in equal numbers from the board and the corporation, and he thought that an agreement might be come to which would be "satisfactory all round." Sir Forbes Adam assured Sir John Harwood that it was the wish of the board, acting for the trust, to meet the city council in the most friendly spirit possible. He suggested that the committee should consist of six members of the city council and six of the infirmary board. Mr. J. W. Maclure, M.P., stated that "there was a time when Sir Joseph Heron (the late town clerk) and the corporation prevented the sale of the site to the Government for Post-office purposes." Lord Derby doubted whether as a matter of form the resolution would carry any weight, the meeting being informal, and suggested that "as they had had very valuable expressions of opinion in favour of it they should accept the assurance of the board of the infirmary on the one side and of the city council on the other, that bodies of gentlemen would be appointed in equal numbers to meet and discuss the subject." And so for the present the matter rests.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF FELLOWS.

A HALF-YEARLY meeting of the Fellows of the College was held on Jan. 7th. Mr. N. C. MACNAMARA, the Senior Vice-President, was in the chair in the absence of the President. At four o'clock, when the meeting should have commenced, it was found that there were not thirty Fellows in the room, and it was not until nearly ten minutes later that the Secretary announced that a quorum was present.

The CHAIRMAN moved a resolution to the effect that, "At this meeting of Fellows of the Royal College of Surgeons held on Jan. 7th, 1897, the Council be requested to forward a letter on behalf of the Fellows to Sir Joseph Lister, congratulating him on his elevation to the Peerage." Sir Joseph Lister was the first member of the profession who had been raised to the Peerage for purely professional reasons. Whatever their views as to his work, he was sure that he expressed the opinion of all the Fellows when he said that they hoped that Sir Joseph Lister would be spared for many years to watch the development of the system which he had taught and which had done so much for humanity at large. He considered that such a letter of congratulation would come much better from the Fellows than merely from the Council.

Mr. LANGTON seconded, and the resolution was carried unanimously.

The CHAIRMAN then reported that the resolution carried at the last meeting of Fellows had been reported to the Council on July 9th, 1896, and that in reference thereto the Council had adopted the following resolution, viz.:—

"That Mr. Bryant be requested to forward in the General Medical Council in every way which seems feasible the objects of the Civil Rights Defence Committee in the case of Mr. R. B. Anderson."

Mr. TIMOTHY HOLMES moved the resolution standing in his name:—

"That this meeting desires to call the attention of the Council to the published reports of the proceedings of the General Medical Council in the case of Mr. R. B. Anderson, and to the remarks and action of Mr. Bryant on the occasion, and to ask the Council whether their representative has in this instance correctly construed their instructions."

He said that he moved the resolution as a member of the Civil Rights Defence Committee, and that he wished to disclaim all idea of finding fault with Mr. Bryant's proceedings in this matter, but he had to think of the prospects of Mr. Anderson in the future. If Mr. Bryant were correctly reported in the journals Mr. Anderson would find additional difficulty in obtaining justice. At a meeting of the General Medical Council Dr. Glover moved a resolution that the Council should memorialise the Government on the case of Mr. Anderson; this resolution was opposed by Mr. Bryant. Now, Mr. Holmes continued, it was not Mr. Bryant's opposition to the resolution that was criticised, as even if it had been passed very little good would have been done, but when speaking in opposition to the resolution Mr. Bryant had made several remarkable statements. He was reported to have said that though there could be no doubt that Mr. Anderson had been badly treated, yet there could be no further action in the courts, as the law would not allow it. And yet at the very time this was said an action was impending in the House of Lords. Again, Mr. Bryant had said that it was not within the scope of the College or the Council to help on the interests of an individual in such a way as to make themselves partisans against the law of the country. Surely the Council could not have instructed Mr. Bryant to this effect. Mr. Bryant had further said "that he hoped that Mr. Anderson would be satisfied with a vote of sympathy on the part of the Council and that the Council would not address the Government on any subject unless their cause was strong and they felt it was a question of principle." Surely the very point of the whole matter was that it was a question of principle. He felt that Mr. Bryant had not acted on the instructions of the Council, for what he had said was calculated rather to harm Mr. Anderson's cause than to further it.

Mr. MANSELL MOULLIN, in seconding the resolution, said that many of the Fellows had hoped that the representative of the College on the Council would assist Mr. Anderson before the General Medical Council. Mr. Bryant had not done so, but he had said that there were some weak points in Mr. Anderson's case, though he did not say what they were.

The CHAIRMAN wished to point out that a great deal had been said about Mr. Bryant's "instructions," but the Council had never given any instructions. The resolution of the Council had "requested Mr. Bryant to forward in every way which seemed feasible the objects of the Civil Rights Defence Committee." It was quite within Mr. Bryant's province to say all he had been reported to have said; he was perfectly free to express his own opinions.

Mr. R. B. ANDERSON asked permission to say a few words. He quite agreed with what the Chairman had said about

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Mr. Bryant's action, and, indeed, he was not sure that even if Dr. Glover's resolution had been carried his cause would have been advanced at all. The cause of the resolution which had now been brought forward was the sweeping character of Mr. Bryant's remarks on the general bearings of the case. Especially had Mr. Bryant declared that the question was not one of principle and that his supporters were acting in opposition to the laws of the country. It was most unfortunate that Mr. Bryant had said this, for his remarks were of more importance than those of the highest judges. He hoped Mr. Bryant would explain his action. He looked to the Council for support in his proceedings to obtain justice.

The resolution was put to the meeting, and as 9 voted in its favour and 10 against it, it was lost.

Mr. WALTER RIVINGTON then moved:—

"That this meeting submits to the Council that no objection can apply to an advance from the funds of the College to prosecute Mr. Anderson's appeal to the Privy Council, and therefore trusts that the Council will sanction a grant for that purpose."

He commenced by pointing out that these meetings of Fellows were instituted for the purpose of bringing the Fellows and the Council into closer relations with each other, and that the Fellows might be consulted by the Council in cases of doubt and difficulty. Mr. Anderson's case involved much difficulty and also some doubt, and as he himself was on the Civil Rights Defence Committee as one of the representatives of the College he had felt that he ought to consult his brother Fellows on the subject. The obligations of the College arose under By-law XV., by which the Council promised to support a Member or a Fellow if his privileges as such were interfered with. Doubts had been felt as to the interpretation of the by-law, but surely it must refer to the external relations of the Fellow, as it could not refer to rights as to lectures at the College, for the only body which could interfere with these rights was the Council itself. The right referred to was the right to practise surgery, and this right existed before the Act of 1858, which merely registered the names of those who were otherwise entitled to practise. The exemptions referred to by the by-law were from serving on a jury or in the militia. Mr. Anderson had certainly been disturbed in the enjoyment of his right to practise.

Mr. CHRISTOPHER HEATH interrupted with the remark that Mr. Rivington had not yet commenced to speak on the subject of the resolution.

The CHAIRMAN ruled that Mr. Rivington was in order, but requested him to come to the special matter of the resolution as soon as possible.

Mr. RIVINGTON, continuing, said that there were three points that he wished to emphasise: (1) that Mr. Anderson had been disturbed in the exercise of his right to practise; (2) that the Council was bound to defend him under By-law XV.; and (3) that the only way in which the Council could assist Mr. Anderson was by the granting of a sum of money towards the expenses of the actions. Mr. Rivington proceeded to recount the particulars of the severe persecution to which Mr. Anderson had been subjected, mentioning that the colonial judge had decided that a medical man had no right to retire from a case under any circumstances. The whole colony had suffered under a tyranny in the form of law, and Mr. Anderson had been sent to England by the colony to bring the matter before the home authorities. In an action in the Queen's Bench Division against the judges of the colony Mr. Anderson had received a verdict in his favour, with £500 damages; but the judge had given judgment against him, saying that a judge could not be proceeded against for a judicial act. A commission was sent out to Trinidad by the Government, with the result that the judges implicated were suspended. In England the Civil Rights Defence Committee was formed, and in 1894 the Council had appointed two representatives on that committee. Mr. Anderson could not practise in Tobago until the judgements which had been given against him were reversed. The Council could assist Mr. Anderson in obtaining justice only by a grant of money. It was true that there was no precedent, but there were very few other cases to which the by-laws could apply. Mr. Anderson would be utterly ruined if the Council did not give assistance, and a few hundreds would add greatly to the reputation of the College as a vindicator of the rights of the profession.

Mr. TIMOTHY HOLMES seconded the resolution.

Mr. CHRISTOPHER HEATH said that while he sympathised very deeply with Mr. Anderson he thought that his cause had got into bad hands. Mr. Anderson was being used as an instrument by which the Council might be attacked. It was an unheard-of thing that a member of the Council should try to force the hands of the Council in this way. The meeting of Fellows had no power to force the Council to do an illegal act, and it would be illegal to advance money for such a purpose. He was no longer treasurer of the College and so it did not affect him, but if he were treasurer nothing would induce him to sign a cheque for such a purpose. He was astonished that Mr. Holmes, who was treasurer of St. George's Hospital and had to deal with public funds, should support such a resolution. The Council were asked to act against their common sense. The by-law did not bear the construction put upon it by Mr. Rivington. It was true they had appointed two representatives on the Civil Rights Defence Committee, but it was more out of good nature than anything else.

Mr. JENNINGS asked what Mr. Anderson's legal advisers said about the chance of a favourable judgment in the House of Lords.

Mr. ANDERSON replied that his own legal advisers said that they thought the action would be successful in the House of Lords, and as to the appeal to the Privy Council no one had any doubt whatever as to its success.

Mr. HOLMES expressed his great surprise at the manner in which he had been attacked by Mr. Heath. Of course, if it were certainly illegal to advance College funds for such a purpose no one would ask it. But was it illegal? Mr. Heath had declared it to be illegal, but he thought it desirable to have the decision of someone whose opinion on legal matters was of a little more value than Mr. Heath's. The solicitor of the College had declared it to be illegal, but he had expressed a similar opinion as to the holding of meetings of the Fellows apart from the Members and he had been mistaken. He considered it very desirable to have counsel's opinion on the matter.

Mr. ANDERSON said that the by-law would be reduced to an absurdity if it were illegal for the Council to use the College funds for this purpose.

Sir ROBERT CRAVEN expressed his opinion that it was time that the subject was closed. The subscribing of funds for such a purpose was a matter for the profession and not for the Council.

Mr. RIVINGTON rose to reply, but the Secretary pointed out that only twenty-nine Fellows were present, and the Chairman declared the meeting at an end.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6938 births and 4084 deaths were registered during the week ending Jan. 9th. The annual rate of mortality in these towns, which had been 17·0 and 22·3 per 1000 in the two preceding weeks, declined again last week to 19·4. In London the rate was 18·5 per 1000, while it averaged 20·0 in the thirty-two provincial towns. The lowest rates in these towns were 10·8 in Croydon, 12·5 in Brighton, 15·1 in Derby and in Leicester, and 15·8 in Hull; the highest rates were 22·7 in Manchester, 23·0 in Plymouth, 25·2 in Bolton and in Leeds, and 23·6 in Liverpool. The 4084 deaths included 415 which were referred to the principal zymotic diseases, against 279 and 436 in the two preceding weeks; of these, 103 resulted from diphtheria, 98 from whooping-cough, 85 from measles, 53 from scarlet fever, 40 from diarrhœa, and 36 from "fever" (principally enteric). No death from any of these diseases was recorded last week in Croydon; in the other towns they caused the lowest death-rates in Brighton, Bolton, Norwich, and Burnley, and the highest rates in Birmingham, Newcastle-upon-Tyne, Birkenhead, Plymouth, and Nottingham. The greatest mortality from measles occurred in West Ham, Portsmouth, Plymouth, Nottingham, Bradford, and Newcastle-upon-Tyne; and from whooping-cough in Swansea, Birmingham, Nottingham, and Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 103 deaths from diphtheria included 71 in London, 7 in Birmingham, 4 in Leicester, 3 in Birkenhead, 3 in Liverpool, and 3 in Leeds. No fatal case of small-pox was registered last week in any of the thirty-three

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large towns. There were 2 small-pox patients under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 9th inst., against 3 at the end of the preceding week; no new cases were admitted during last week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3597, against 3868, 3763, and 3707 on the three preceding Saturdays; 290 new cases were admitted during the week, against 291, 219, and 271 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 284 and 348 in the two preceding weeks, declined again last week to 335, and were 379 below the corrected average. The causes of 60, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Hull, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the six preceding weeks from 20·3 to 22·4 per 1000, further rose to 22·8 last week, and was 3·0 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18·4 in Aberdeen and 18·6 in Greenock to 25·9 in Glasgow and 32·4 in Perth. The 680 deaths in these towns included 45 which were referred to measles, 20 to whooping-cough, 17 to diarrhœa, 10 to scarlet fever, 6 to "fever," and 3 to diphtheria. In all, 101 deaths resulted from these principal zymotic diseases, against 106 and 103 in the two preceding weeks. These 101 deaths were equal to an annual rate of 3·4 per 1000, which was 1·4 above the mean rate last week from the same diseases in the thirty-three large English towns The fatal cases of measles, which had been 54, 48, and 60 in the three preceding weeks, declined again to 45 last week, of which 41 occurred in Glasgow. The deaths referred to whooping-cough, which had been 26 and 15 in the two preceding weeks, rose again last week to 20, of which 14 were recorded in Glasgow and 4 in Edinburgh. The 10 fatal cases of scarlet fever exceeded the number registered in any recent week, and included 5 in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The deaths referred to different forms of "fever," which had been 4 and 3 in the two preceding weeks, rose again to 6 last week, of which 2 occurred in Glasgow, where 2 of the 3 fatal cases of diphtheria were also recorded. The deaths from diseases of the respiratory organs in these towns, which had been 152 and 151 in the two preceding weeks, were 152 last week, and exceeded by 17 the number in the corresponding period of last year. The causes of 58, or more than 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·5 and 44·1 per 1000 in the two preceding weeks, declined again to 35·2 during the week ending Jan. 9th. During the fourteen weeks of last quarter the death-rate in the city averaged 27·6 per 1000, the rate during the same period being 18·1 in London and 17·8 in Edinburgh. The 236 deaths registered in Dublin during the week under notice showed a decline of 60 from the number in the preceding week, and included 40 which were referred to the principal zymotic diseases, against 21 and 36 in the two preceding weeks; of these, 19 resulted from whooping-cough, 9 from measles, 5 from "fever," 4 from scarlet fever, 3 from diarrhœa, and not one either from small-pox or diphtheria. These 40 deaths were equal to an annual rate of 6·0 per 1000, the zymotic death-rate during the same period being 1·8 in London and 1·6 in Edinburgh. The fatal cases of whooping-cough, which had increased from 4 to 23 in the four preceding weeks, declined again to 19 last week. The deaths referred to measles, which had been 2 and 5 in the two preceding weeks, further rose to 9 last week. The 5 deaths from different forms of "fever" showed a further increase upon recent weekly numbers, and the 4 deaths from scarlet fever also exceeded the numbers registered in recent weeks. The 236 deaths in Dublin last week included 31 of infants under one year of age and 54 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the high numbers recorded in the preceding week. Seven inquest cases and 4 deaths from violence were registered; and 81, or more than a third, of the deaths occurred in public institutions. The causes of 21, or nearly 9 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING DECEMBER, 1896.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during December in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 10·7 per 1000 of the population, estimated at 4,421,955 persons. In the three preceding months the rates had been 14·5, 14·6, and 12·6 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in St. George Hanover-square, St. James Westminster, Westminster, St. Pancras, Strand, City of London, and Plumstead; while they showed the largest excess in Clerkenwell, St. Luke, Bethnal Green, St George-in-the-East, Poplar, St. George Southwark, St. Olave Southwark, and Lewisham. Three cases of small-pox were notified in London during December, the cases having declined from 41 to 0 in the six preceding months. There were 3 cases of small-pox under treatment in the Metropolitan Asylum Hospitals at the end of November, against 4, 2, and 1 at the end of the three preceding months; 3 new cases were admitted during the month. The prevalence of scarlet fever in London showed a further decline from that recorded in recent months; this disease was proportionally most prevalent in Islington, Hackney, St. Martin-in-the-Fields, Clerkenwell, Bethnal Green, St. George Southwark, and Battersea sanitary areas. The Metropolitan Asylum Hospitals contained 3601 scarlet fever patients at the end of November, against 3847, 4054, and 3932 at the end of the three preceding months; the weekly admissions averaged 355, against 412, 398, and 356 in the three preceding months. The prevalence of diphtheria in London showed a further slight decline from that recorded in the two preceding months; among the various sanitary areas this disease showed the highest proportional prevalence in Chelsea, St. Luke, Whitechapel, St. George-in-the-East, Mile End Old Town, St. Olave Southwark, Camberwell, Lewisham, and Woolwich. There were 829 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of December, against 774, 780, and 777 at the end of the three preceding months; the weekly admissions averaged 119, against 116, 105, and 110 in the three preceding months. The prevalence of enteric fever in London showed a further decline from that recorded in recent months; this disease was proportionally most prevalent in Kensington, Hackney, City of London, St. George-in-the-East, Mile End Old Town, Battersea, and Lee sanitary areas. Erysipelas showed the highest proportional prevalence in Holborn, St. Luke, Shoreditch, Poplar, St. Saviour Southwark, and St. George Southwark sanitary areas. The 24 cases of puerperal fever notified during December included 6 in Islington, 4 in Greenwich, and 3 in Camberwell sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, Jan. 2nd, the deaths of 7482 persons belonging to London were registered, equal to an annual rate of 17·6 per 1000, against 14·5, 16·5, and 19·2 per 1000 in the three preceding months. The lowest death-rates during December in the various sanitary areas were 10·4 in St. Martin-in-the-Fields, 12·2 in Plumstead, 12·7 in Lee, 12 7 in Hampstead, 14·0 in Stoke Newington, 14·4 in Wandsworth, and 14·7 in Fulham; the highest rates were 22·6 in Holborn, 22·9 in Limehouse, 23 4 in St. George-in-the-East, 23·5 in St. Saviour Southwark, 23·9 in St. George Southwark, 25·4 in Strand, and 26 9 in St. Luke. During the five weeks of December 647 deaths were referred to the principal zymotic diseases in London; of these, 255 resulted from diphtheria, 123 from whooping-cough, 92 from scarlet fever, 71 from measles, 56 from enteric

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—DECEMBER, 1896.

(Specially compiled for THE LANCET.)

Sanitary Areas.	Estimated population in the middle of 1896.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,421,955	3	2143	1404	—	303	8	24	647	—	4532	10·7	—	71	92	255	123	—	56	2	48	647	1·5	7482	17·6	131
West Districts.																										
Paddington	124,838	—	67	40	—	7	—	—	9	—	123	10 3	—	—	3	10	1	—	3	—	1	18	1·5	193	16·1	133
Kensington	170,660	—	84	49	—	17	1	—	30	—	181	11·1	—	—	5	6	2	—	3	—	1	17	1·0	283	17·3	192
Hammersmith	104,551	—	60	19	—	6	1	2	19	—	107	10·7	—	—	3	4	2	—	2	1	1	13	1·3	168	16·8	176
Fulham	115,008	—	56	31	—	6	—	1	10	—	104	9·4	—	—	2	8	3	—	1	—	—	14	1·3	162	14·7	119
Chelsea	96,657	—	49	46	—	7	1	—	10	—	113	12·2	—	—	2	7	3	—	1	—	1	14	1·5	155	16·7	164
St. George Hanover-square	80,041	—	36	12	—	7	—	—	5	—	60	7·8	—	—	—	5	—	—	1	—	3	9	1·2	115	15·0	162
Westminster	53,477	—	12	11	—	3	—	—	11	—	37	7·2	—	1	—	1	1	—	—	—	—	3	0·6	103	20·1	144
St. James Westminster	22,955	—	3	5	—	1	—	—	2	—	11	5 0	—	—	—	—	—	—	—	—	—	—	—	41	18·6	—
North Districts.																										
Marylebone	141,114	1	48	28	—	12	—	—	27	—	116	8·6	—	—	2	5	5	—	3	—	1	16	1·2	260	19·2	134
Hampstead	75,812	—	32	17	—	6	—	—	3	—	58	8·0	—	—	—	2	3	—	1	—	1	7	1·0	92	12 7	120
St. Pancras	241,066	—	93	41	—	13	—	1	32	—	180	7·8	—	1	1	6	12	—	3	—	1	24	1·0	409	17·7	138
Islington	337,639	—	206	106	—	21	—	6	32	—	371	11·5	—	6	7	24	4	—	4	—	3	48	1·5	506	15·6	113
Stoke Newington	33,615	—	15	13	—	—	—	—	5	—	33	10·2	—	—	—	4	—	—	—	—	—	4	1·2	45	14·0	175
Hackney	213,774	—	137	55	—	24	1	1	30	—	248	12·1	—	1	2	10	2	—	6	—	1	22	1·1	309	15·1	106
Central Districts.																										
St. Giles	38,158	—	19	3	—	3	—	—	9	—	34	9·3	—	—	2	—	—	—	1	—	—	3	0·8	82	22·4	105
St. Martin-in-the-Fields	13,003	—	11	1	—	1	—	—	—	—	13	10·4	—	—	1	—	—	—	—	—	—	1	0·8	13	10·4	—
Strand	23,820	—	9	4	—	—	—	—	2	—	15	6·6	—	—	1	—	2	—	—	—	—	3	1·3	58	25·4	294
Holborn	30,932	—	5	8	—	4	—	—	8	—	25	8·4	—	1	—	—	5	—	—	—	—	5	1·7	67	22·6	286
Clerkenwell	66,195	—	38	25	—	6	—	1	14	—	84	13·2	—	1	3	5	4	—	2	—	—	15	2·4	125	19·7	156
St. Luke	41,478	—	23	19	—	2	—	—	15	—	59	14·8	—	3	4	5	3	—	1	—	1	17	4·3	107	26·9	146
City of London	31,409	—	4	5	—	5	1	—	2	—	17	5·6	—	—	2	—	—	—	1	—	—	3	1·0	62	20 6	57
East Districts.																										
Shoreditch	122,265	—	68	31	—	2	—	—	34	—	135	11·5	—	2	3	7	2	—	—	—	3	17	1·5	218	18·6	124
Bethnal Green	129,151	—	84	43	—	8	—	—	23	—	158	12·8	—	—	—	5	—	—	1	—	1	7	0·6	229	18·5	126
Whitechapel	78,886	—	36	36	—	5	—	—	4	—	81	10·7	—	1	3	7	—	—	1	—	1	13	1·7	163	21·5	130
St. George-in-the-East	47,589	1	19	22	—	9	—	—	11	—	62	13·6	—	2	2	1	1	—	1	—	1	8	1·8	107	23·4	174
Limehouse	58,347	—	30	19	—	3	—	—	9	—	61	10·9	—	11	—	4	3	—	—	—	2	20	3·6	128	22·9	137
Mile End Old Town	111,226	—	46	53	—	13	—	—	14	—	126	11·8	—	8	1	9	2	—	5	—	1	26	2·4	203	19·0	112
Poplar	169,379	—	87	78	—	11	—	—	37	—	213	13·1	—	14	1	11	3	—	1	—	3	33	2·0	349	21·5	171
South Districts.																										
St. Saviour Southwark	25,276	—	11	8	—	1	—	—	8	—	28	11·5	—	—	—	—	1	—	—	—	—	1	0·4	57	23·5	274
St. George Southwark	60,301	—	34	22	—	4	—	—	16	—	76	13·1	—	—	1	6	8	—	1	—	2	18	3·1	138	23·9	157
Newington	121,191	—	61	43	—	9	—	—	17	—	130	11·2	—	6	7	6	10	—	—	—	—	29	2·5	245	21·1	121
St. Olave Southwark	11,673	—	5	11	—	2	—	—	3	—	21	18·8	—	—	—	3	—	—	—	—	1	4	3·6	17	15·2	95
Bermondsey	85,508	—	25	36	—	3	—	—	16	—	80	9·8	—	1	3	12	2	—	—	—	2	20	2·4	168	20·5	160
Rotherhithe	40,432	—	14	18	—	—	—	1	7	—	40	10·3	—	6	1	2	—	—	—	—	—	9	2·3	73	18·8	123
Lambeth	296,036	—	138	79	—	18	—	2	39	—	276	9·7	—	—	6	19	16	—	2	1	4	48	1·7	508	17·9	115
Battersea	165,864	—	104	42	—	18	1	—	31	—	196	12·3	—	—	2	8	4	—	3	—	2	19	1·2	237	14·9	72
Wandsworth	188,908	1	103	40	—	9	2	1	26	—	182	10·0	—	—	5	5	2	—	2	—	3	17	0·9	261	14·4	102
Camberwell	253,975	—	92	156	—	18	—	3	35	—	297	12·2	—	1	6	24	6	—	1	—	3	41	1·7	415	17·0	129
Greenwich	176,203	—	89	47	—	10	—	4	18	—	168	9·9	—	4	7	8	1	—	4	—	2	25	1·5	297	17·6	125
Lewisham (excluding Penge)	83,795	—	44	42	—	6	—	1	8	—	101	12·6	—	—	2	6	5	—	1	—	2	16	2·0	126	15·7	133
Woolwich...	41,334	—	8	21	—	1	—	—	2	—	32	8·1	—	—	—	6	1	—	—	—	—	7	1·8	71	17·9	126
Lee	38,714	—	19	2	—	5	—	—	9	—	35	9·4	—	—	1	1	—	—	—	—	—	2	0·5	47	12·7	103
Plumstead	59,610	—	19	11	—	2	—	—	5	—	37	6·5	—	2	1	3	4	—	—	—	—	10	1·7	70	12·2	94
Port of London	—	—	—	6	—	2	—	—	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 43 cases of membranous croup.

† Including deaths from membranous croup.

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fever, 48 from diarrhœa, and 2 from ill-defined forms of continued fever. These 647 deaths were equal to an annual rate of 1·5 per 1000; no fatal case of any of these diseases occurred last month in St. James Westminster; among the other sanitary areas the lowest death-rates from these diseases were recorded in Westminster, St. Giles, St. Martin-in-the-Fields, Bethnal Green, St. Saviour Southwark, and Lee; and the highest rates in Clerkenwell, St. Luke, Limehouse, Mile End Old Town, St. George Southwark, Newington, St. Olave Southwark, and Bermondsey. No fatal case of small-pox was registered in London during December, and it is now six months since a death from this disease was recorded within the metropolis. The 71 deaths referred to measles were less than a fifth of the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in St. Luke, Limehouse, Mile End Old Town, Poplar, and Rotherhithe sanitary areas. The 92 fatal cases of scarlet fever were 26 below the corrected average number; among the various sanitary areas this disease was proportionally most fatal in St. Giles, Clerkenwell, St. Luke, and Newington. The 255 deaths from diphtheria exceeded by 37 the corrected average number; this disease showed the highest proportional fatality in St. Luke, Whitechapel, St. George Southwark, St. Olave Southwark, Bermondsey, Camberwell, and Woolwich sanitary areas. The 123 fatal cases of whooping-cough were little more than half the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Holborn, Clerkenwell, St. Luke, St. George Southwark, Newington, and Lewisham. The 56 deaths referred to enteric fever were 30 below the corrected average number; this disease showed the highest proportional fatality in Mile End Old Town sanitary area. The 48 fatal cases of diarrhœa were 23 below the corrected average number. In conclusion, it may be stated that the mortality in London during December from these principal zymotic diseases was more than 43 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths of children under one year of age to births registered, was equal to 131 per 1000, and was below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. James Westminster, St. Martin-in-the-Fields, City of London, St. Olave Southwark, Battersea, and Plumstead; and the highest in Kensington, Hammersmith, Stoke Newington, Strand, Holborn, St. George-in-the-East, and St. Saviour Southwark.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR J. L. HALL has been ordered to Woolwich for duty. Surgeon-Captain Russell has proceeded to Gibraltar. Surgeon-Major T. Dorman, M.D., has been ordered to Queenstown for duty. Surgeon-Major E. A. Roche proceeds to the Curragh for duty. Surgeon-Major Trewman and Surgeon-Lieutenants Perry, Staddon, and J. Walker, M.B., have been warned to embark at Southampton for Bombay.

The following promotions are announced: — Brigade-Surgeon-Lieutenant-Colonel Napoleon B. Major to be Surgeon-Colonel; Surgeon-Lieutenant-Colonel W. L. Gubbins, to be Brigade-Surgeon-Lieutenant-Colonel; and Surgeon-Major John G. S. Lewis, from half pay, to be Surgeon-Major. Surgeon-Colonel Ferguson, who lately joined at Woolwich from India, has become Principal Medical Officer on the staff of Major-General J. F. Maurice, C.B., commanding the Woolwich district, and he has succeeded Surgeon-Colonel Price, who lately went to India. Surgeon-Colonel Ferguson can only hold his new post at Woolwich about a couple of years, as he will then have to retire on reaching the age of sixty years. He has been nearly thirty-five years in the army, and took part in the Bhootan Expedition of 1864, Afghan War of 1879, and Egyptian Campaign of 1882.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain W. J. Buchanan, Officiating Superintendent of the Bhagalpur Central Gaol, is appointed to act as Civil Surgeon of Burdwan, during the absence of Brigade-Surgeon-Lieutenant-Colonel W. H. Gregg. Surgeon-Captain B. C. Oldham, Officiating Superintendent of the Midnapur Central Gaol, is appointed to act as Deputy Sanitary Commissioner, Metropolitan and Eastern Bengal Circle. Surgeon-Major Henry Hearsey Bathe, East Indian Railway Volunteer Rifle Corps, is appointed Surgeon-Lieutenant-Colonel. The services of Surgeon-Captain H. B. Melville, M.B., C.M. (Bengal), are placed permanently at the disposal of the Government of the North-Western Provinces and Oudh. Surgeon-Captain E. Wilkinson, whose services have been placed at the disposal of the Government of the Punjab, has arrived at Lahore and has been appointed to officiate as Civil Surgeon of Karnal. Surgeon-Lieutenant-Colonel W. H. Cadge, Civil Surgeon, Naini Tal, has been appointed to the Medical Charge of the camp of his Honour, the Lieutenant-Governor and Chief Commissioner, North-Western Provinces and Oudh, and Surgeon-Major A. E. Tate, A.M.S., has been appointed to the Civil Medical Charge of the Naini Tal District, in addition to his military duties. The undermentioned Surgeon-Lieutenants appointed to the Bengal and Madras Establishments, have arrived at Bombay:—*Bengal:* H. J. Walton, H. Ainsworth, H. A. D. Dickson, and J. S. Stevenson. *Madras:* J. W. Cornwall, A. Miller, H. R. Brown, W. G. Richards, S. P. James, A. N. Fleming, P. Dee, F. O. N. Mell, F. D. Browne, and M. Dick. Surgeon-Captain Kebel, A.M.S., who recently left India for Paris for treatment at the Pasteur Institute, is progressing satisfactorily and hopes to return to India soon. Surgeon-Captain L. T. M. Nash, A.M.S., and Surgeon-Lieutenant J. M. Buist, A.M.S., have been posted to the Punjab Command. Surgeon-Captain M. P. Holt, A.M.S., and Surgeon-Lieutenant C. K. Morgan, A.M.S., have been posted to the Bombay Command.

NAVAL MEDICAL SERVICE.

The following appointments are announced: — Fleet Surgeons: A. Patterson to the *Edinburgh;* E. H. Saunders to the *Blake;* and Valentine Duke to Devonport Dockyard. Surgeons: E. H. Meadow to the *Egeria*, and S. H. Youel to the *Penguin*.

VOLUNTEER CORPS.

1st Devonshire (Western Division, Royal Artillery): Surgeon-Lieutenant W. A. Payne, M.B., resigns his commission. *Royal Engineers (Volunteers):* 1st Devonshire and Somersetshire: Thomas Smith, gent., to be Surgeon-Lieutenant. *Rifle:* 3rd Lanarkshire: Surgeon-Lieutenant T. Forrest, M.B., to be Surgeon-Captain. 4th Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Lieutenant G. McIntyre, M.B., to be Surgeon-Captain. 5th Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Captain J. Blair, M.D., resigns his commission; James Kirkland, gent., to be Surgeon-Lieutenant.

DEATHS IN THE SERVICES.

Among the deaths in the Services we regret to record that of Surgeon-General M. F. Manifold (retired), of the Army Medical Department, in connexion with whose name it is to be remembered that the employment of female nurses in the army in Ireland during the great famine year took place owing to the prevalence of small-pox in the garrison. Miss Florence Nightingale found in the late officer a warm supporter at Scutari, where he had charge of the officers' hospital during the Crimean War. Surgeon-General Manifold was the son of the late Major John Manifold, and received his commission as Assistant Surgeon in the 77th Regiment in 1846. After the campaign he was promoted for his services and was appointed to the 34th Regiment, with which he served during the Indian Mutiny in the pursuit of Nana Sahib. Later he attained administrative rank, and at the time of his retirement held the post of Surgeon-General at Netley.

The death is announced of Brigade-Surgeon J. S. Conyers, M.D. Edin. (retired), in Demerara on the 20th ult. He joined the Army Medical Service in 1868 and retired in 1884, after having served in the Ashanti War of 1873–74, and was present at the engagements of Amoaful and Ordahsu, the capture of Beequah and Kumasi.

Surgeon-Major Manser, of the Indian Medical Service, whose death from plague at Bombay was recently reported, has lost his life from his devotion to his professional duties. He entered the Indian Medical Service in 1877 and was promoted Surgeon-Major in 1889. He was nearly forty-seven years of age at the time of his death. In 1879 he served in the Afghan War and took part in the defence of Kandahar. He had also occupied the posts of Professor of Medicine and Therapeutics at Grant Medical College

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and First Physician of the Jamsetjee Jeejeebhoy Hospital, Bombay. The European nurse who attended the late Surgeon-Major Manser during his fatal illness has since died from plague, having, in all probability, also contracted the disease in the execution of her duty.

Dr. Thomas Jameson, eldest brother of Dr. Leander Starr Jameson, died on New Year's Day at his residence in Knollys-road, Streatham, where he was in practice. He was fifty-nine years old. He graduated M.D. at Edinburgh University in 1858, in which year he also obtained the Licence of the Royal College of Surgeons of Edinburgh. He became a Surgeon in the Royal Navy on Aug. 20th, 1858, was promoted to be Staff Surgeon on Nov. 29th, 1869, and retired on April 10th, 1872. Dr. Jameson was in receipt of a pension for wounds.

CIVIL SURGEONS IN BENGAL.

A notification appears in the *Calcutta Gazette* of Dec. 16th, 1896, announcing that, in accordance with the orders of the Government of India in the Home Department, No. 910, dated Oct. 19th, 1896, sanctioning the abolition in Bengal of the present classification of civil surgeons by stations and the substitution in its place of a personal classification under which the higher emoluments now given for the charge of first-class stations will be granted to commissioned medical officers according to seniority and merit without regard to the stations at which they may be employed, the Lieutenant-Governor is pleased to order that the following medical officers shall, with effect from Dec. 1st, 1896, draw the higher emoluments hitherto attached to the six first-class civil stations, Bengal: Brigade-Surgeon-Lieutenant-Colonel W. H. Gregg, Brigade-Surgeon-Lieutenant-Colonel C. J. W. Meadows, Surgeon-Lieutenant-Colonel J. M. Zorab, Surgeon-Lieutenant-Colonel Russik Lal Dutt, Surgeon-Lieutenant-Colonel G. Price, Surgeon-Major A. W. D. Leahy. Officers drawing the higher allowance will in future be styled civil surgeons of the first class, all others being styled civil surgeons of the second class.

THE NEWS FROM WEST AFRICA.

There seems unhappily to be little doubt that the disastrous news from Benin of the massacre of a British expedition is true. The expedition started on a perfectly peaceful mission and unarmed from the coast by way of Sapele to Benin city. According to a Reuter's telegram the Consul-General's yacht *Ivy* brought the intelligence to Bonny that the expedition, with the native followers, had been surprised and massacred by the King's people. Among the names of those who are supposed to have perished we sincerely regret to notice that of the medical officer of the expedition, Dr. R. H. Elliott. The mission to the King of Benin was apparently an important one, as the acting Consul-General, his Deputy-Commissioner, the Commandant of the Niger Coast Protectorate Force, and others accompanied it. Benin city lies about sixty miles inland from the mouth of the River Niger. This treacherous conduct of the King of Benin will no doubt lead to a punitive expedition against him and his people.

AMBULANCE SHIPS IN THE UNITED STATES NAVY.

It is proposed to add ambulance ships to the navy of the United States. The new ships will be fast unarmoured steamers of three decks, fitted with large wards and operating rooms. Each squadron of men-of-war going into action would be accompanied by one ambulance ship, which would gather and collect the wounded during, and after, the conflict and convey them to a distance, where, in comparative safety and quietness, they would receive treatment. Such ships will doubtless be rendered easily distinguishable by means of shape, colour, and flags, and it may confidently be trusted will be respected as far as possible by the combatants.

THE INDIAN TROOPS FROM SUAKIN.

The Indian contingent to Suakin has returned, of course, to India after having had a monotonous and trying time of it in that very hot and uninteresting station. The accounts of the outbreak of scurvy among the troops at Suakin seem to have been somewhat exaggerated, for the number of severe cases was relatively small, although a mild form of the disease was very prevalent among the sepoys and native followers.

ARMY MEDICAL SCHOOL.

The Netley examination for surgeons on probation passing out of the Army Medical School will commence on Friday, Jan. 22nd, and terminate on Thursday, Jan. 28th. The results will be promulgated on Saturday, Jan. 30th, when the Director-General of the Army Medical Department will preside.

THE NIGER COMPANY CAMPAIGN.

The force proceeding on this expedition consists of Hausa troops, with Maxim guns and twenty-six officers, under Major Arnold, two surgeons, and 900 carriers, to march against the Foulah forces at Kabbar, south-west of the Niger.

ROYAL VICTORIA HOSPITAL, NETLEY.

Notification has been received that Surgeon-Captain I. Paterson, M.B. Edin., A.M.S., will arrive at Netley for duty on the 5th proximo.

The Director-General of the Army Medical Staff and Mrs. Jameson, Major-General and Mrs. Maurice, Surgeon-Colonel and Mrs. Ferguson, Surgeon-Colonel and Mrs. Fawcett, and many other officers were present during one of the series of Christmas and New Year entertainments held at the Herbert Hospital, Woolwich.

It has been decided that officers of the Army Medical Staff will be viewed as on separate lists for each of the four Commands in India. Officers of the Indian Medical Service will be viewed as on separate lists for the Madras and Bombay Commands, but collectively as on one list for the Bengal and Punjab Commands.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on Jan. 12th, Dr. W. H. Lloyd, Inspector-General, in the chair, the sum of £85 was distributed among the several applicants.

An examination of candidates for thirty-five commissions in the Army Medical Staff will be held at the Examination Hall, Victoria Embankment, W.C., on Feb. 5th and following days.

Correspondence.

"Audi alteram partem."

MEDICAL FEES IN CORONERS' COURTS.

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET of Jan. 9th you refer to an inquest held by me on Jan. 3rd at Croydon Hospital, when the acting house surgeon declined to reveal the results of his post-mortem examination unless I paid him the fee and until (in answer to his query) I informed him that the consequence of his refusal would be his committal for contempt of Court. I do not wish to deal with this individual case, though acquiescing in your opinion that it was an "incident to be regretted," for the gentleman subsequently apologized for his ignorance of the Law. Such incidents occur from time to time, and it is matter of regret and surprise to me that in most of our text-books on Forensic Medicine no mention is made of the rights and duties of medical men in coroners' courts. You observe that "it is strange that it is not universally known by this time that a medical man who has attended a patient at a hospital, workhouse infirmary, or other public institution—the death having occurred in such place—cannot recover fees for making a post-mortem examination or for giving evidence at an inquest." But even your description is hardly in accordance with the present practice of some coroners—myself among them—who have taken advantage of an exposition of the law a little more favourable to our profession. As the matter is frequently referred to in your correspondence columns, perhaps you will allow me to state the law and practice as at present existing. The law as to "fees to medical witnesses" in a coroner's court is laid down in the 22nd section of the Coroners' Act, 1887, wherein a guinea is awarded for "attending to give evidence at any inquest," and also a guinea "for making a post-mortem examination;" but, "provided that where an inquest is held on the body of a person who has died in a county or other lunatic asylum, or in a public hospital, infirmary, or other medical institution, or in a building or place belonging thereto, or used for the reception of the patients' thereof, whether the same be supported by endowments or by voluntary

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subscriptions, the medical officer whose duty it may have been to attend the deceased person as a medical officer of such institution as aforesaid shall not be entitled to such fee or remuneration."

Amongst coroners there is but one interpretation of these words—viz., that house surgeons are not entitled to such fee. Such "medical officers" are explicitly excluded from the privilege of claiming a fee by the words, "a public hospital," and again by the phrase, "a medical institution—supported by endowments or by voluntary subscriptions." But coroners differ in their practice as to medical officers of workhouse infirmaries. These infirmaries are not supported "by endowments" or "by voluntary subscriptions," but by the rates, and of these there is no mention. Hence, a year or two ago, Mr. Poland, Q.C., gave it as his opinion that medical superintendents of workhouse infirmaries and their assistants were entitled to fees. As soon as I became aware that this was the judgment of so eminent a lawyer, I at once wrote to our town clerk, himself a solicitor, and asked him to consider the matter with the Recorder and to authorise me, if they could accept Mr. Poland's interpretation of the Act, to pay the usual fees to Mr. Wilson, the medical superintendent of our infirmary, who had wisely brought the matter to my notice. And I am glad to say that with their approval from that time I have paid the medical officers of our workhouse infirmary the fees which other medical practitioners receive. All such medical officers elsewhere may well try to persuade their coroners that it has been held by a high authority that they are entitled to fees; but it is surely time that students, ere they leave their hospitals, should be informed that if they seek house-surgeoncies they must be prepared to undertake all the duties of the position and that it is unwise to make demands that coroners, however friendly to them, must firmly refuse.

I am, Sirs, yours sincerely,

THOMAS JACKSON, J.P.,
Coroner for Croydon.

Thornton Heath, Jan. 11th, 1897.

"POST-PARTUM HÆMORRHAGE AND ITS TREATMENT."

To the Editors of THE LANCET.

SIRS,—I am glad to see, both from an article by Dr. Laird in THE LANCET of Sept. 19th, 1896, and from several letters I have received, that the question of post-partum hæmorrhage and its treatment has excited some interest. Most of the letters I have received speak of the method I have advocated with approbation and confidence; one writer, however, agrees as to its value, but considers it a secondary measure, manual compression, injections, &c., apparently holding a primary place in importance. I cannot help thinking that if he discovered a leak in a water pipe in his house from which water was pouring he would have no great opinion of the plumber who on being called in should say: "As a *primary* measure we will dab some putty on this hole and as a *secondary* one we will turn off the main tap."

Some weeks ago a correspondent, signing himself "Rinaldo," wished to know if Davy's lever was used in these cases. May I point out to him that it is of the utmost importance in a matter of this kind, when every moment is of importance, that we should not be dependent upon any instrument which may or may not be there, but that each man should be able at once to control the hæmorrhage, as Hans Breitmann would say, "mit dose dings dat God has gave him." But the most serious contributor to the subject is Dr. Laird and I ask for a little of your valuable space in which to reply to him. In the first place, he will, I am sure, admit that all analogies break down if you push them too far. If he will read my paper again he will see that I never intended the illustration I gave to stand as a parallel in all points; and, indeed, he admits that it stands good "in the sense in which I applied it." However, this is not the main point. If I understand Dr. Laird rightly he advocates pressure near the entrance of the arteries into the uterus. I notice that he does not say how often he has carried out this plan or what were the results. Indeed, he speaks in the old doubtful way about it—"Should bleeding not then be fully controlled"; "the pressure on the arteries may be applied *probably* with better effect," &c. (the italics are mine); and it is this very doubtful tentative condition of mind that, I submit, should be absolutely eliminated when face to face with so serious a condition, so immediate a danger.

Let us consider the method itself. You are to "pass the right hand into the womb ..... to close it, and with the left hand compress the uterine and ovarian arteries against it on either side, the fingers grasping the left side and the thumb the right side." I presume that Dr. Laird seriously means what he says, but it is difficult to understand how the thumb can control two distinct arteries, the one entering at the top and the other at the neck of the uterus. Even if we grant this to be possible when the uterus is small and contracted, how is it to be done in these cases, the essential characteristic of which is that there is little or no contraction, but the uterus is a widely dilated flabby mass filling, in some cases, more than half the abdomen? The power of knowing what is going on, which Dr. Laird claims "as one of the great advantages of this plan," I fully recognise, but it is not necessary, I conceive, that we should *feel* the gushing blood to recognise its presence. Blood is being poured out either into the dilating uterus or through the vagina into the open. If the latter, we can see it; if the former, the hand pressed down upon the aorta above it would be equally conscious of the increasing bulk below. I say would be, because I have never found bleeding to go on when once the aorta was controlled, and therefore can only speak of the sensation given to the hand frequently of a big sloppy mass when compression is commenced. One need not speak of the quick, running pulse, the white, sweating face, the deep, gasping respirations, because these will occur to everyone. Dr. Laird is very anxious about the effect of "practically stopping the blood supply to half the human frame," which I admit is done by the method of aortic compression. From personal experience I can assure him he need not be; but even theoretically there is nothing in the objection. Pressure by far rougher means has been kept up for far longer periods than is here required for aneurysm of the common iliac, the external iliac, and the femoral arteries, and the blood has been shut off an extremely long time by Martin's bandage and a tourniquet in osteoplastic and other operations. It is of the utmost importance to remember which half of the human frame is kept empty and which half is thereby kept full by this manœuvre. The full half contains the essentially vital organs and the empty half contains nothing absolutely essential to life. Were the upper half to lose a sufficient supply the nervous centres of respiration and of circulation cease to act. It is not sufficient that they should have some blood; they must have enough. If they cease it will not matter much whether the patient has legs or not. But practically I have never seen anything worse follow than some coldness, numbness, and paresis of the muscles, which is never more than temporary, except the usual tingling, which may even be painful when the current returns. Is this a heavy price to pay for life?

I confess I cannot follow Dr. Laird or the authorities he refers to in their dread of regurgitation from the vena cava. On what observations or even constituent theory does it rest? Why should it regurgitate? If the patient were erect and walking about it might be possible, but if the foot of the bed is properly lifted the patient is in the directly opposite position. Why should the blood in the vena cava which up to now has always flowed in the direction nature originally marked out for it now all at once turn round and walk the other way? If there were compression of the cava above it would be conceivable, but no veins bleed to any extent if there is free passage for their contents towards the heart and gravity assists, and here there is no obstacle; indeed, the laboured efforts of the heart to fill itself sufficiently tend to empty the cava away from the uterus rather than to overfill it. The whole idea is to me incomprehensible. Moreover, experience, the final test, proves that there is nothing in it. I am glad that Dr. Laird is directing his attention to this subject, but I am sure that the further he follows it up and the more cases he sees the more he will agree with me that we ought all to have one plain, positive dictum based on common consent and common sense, upon which we can all act at once without any doubt or vacillation.

I am, Sirs, yours faithfully,

G. STANMORE BISHOP.

St. Ann's-square, Manchester, Jan. 9th, 1897.

"TRADES UNIONISM AND THE MEDICAL PROFESSION."

To the Editors of THE LANCET.

SIRS,—A "blackleg" may be described as one who may not only refuse to join with his fellows in a demand for higher wages or in resisting additional burdens to his labour,

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but takes advantage of the temporary or threatened cessation of work to sell his labour at a lower rate than his fellows. There is a spirit of antagonism as well as a meanness in the action of such a man, and consequently he comes to be looked upon not merely as a passive objector to their schemes of reform, but as an enemy in their camp. In their contest with the friendly societies medical men are in the position of the employed, and when anything like competition exists professional conduct sinks so low that men will be found to offer tenders for their services. It is generally assumed that medical appointments are made upon the principle of merit and personal fitness, except in some cases, as we all know, where patronage or favouritism of some kind exerts its influence. It is not assumed, however, that medical men shall barter their services after the manner of ordinary commercial contracts. With the growth of coöperation and combination exemplified in the trades unions and the various friendly societies there have developed strained relations between the medical profession and certain public bodies having medical appointments. This has of late become acute in the case of appointments to some of the friendly societies.

Now, it must be borne in mind that the individual practitioner is quite unable to make terms of a satisfactory character against the combined forces or the combined influence of the friendly societies. It is still more hopeless if he has to compete with other medical men for these appointments. What is the remedy? Obviously there is but one course to pursue. The profession must combine and by combination and coöperation lay down certain lines upon which the services of its members may be obtained. Its members must be compelled, either by written or unwritten law, to refuse anything lower than the standard which has been adopted as consistent with professional dignity and honour. Such practices as canvassing and touting by agents must be severely punished. Private medical clubs recruited by the assistance of a collector and canvasser must be abolished. Tendering for an appointment must be considered unprofessional conduct. If men be allowed unrestricted competition with each other against the solid and powerful influence of large corporations and societies the standard of fee will be kept low and some members of the profession will hardly earn a living wage. Are the Yarmouth and Beckenham societies going to succeed by importing blacklegs, or will the legitimate and reasonable demands of the doctors at both these places be acceded to? The new movement so far as the profession is concerned consists essentially in efforts at combination and coöperation. Some of the successful members of the profession dislike the term "trades unionism." They are fortunate to have been able to do without it. It is, however, but another name for collectivism and involves the principles of combination and coöperation. The old adage "United we stand — divided we fall" merely expresses it in different language. What is now wanted in the profession is organisation. Where is the central authority which can take up the interests of the general practitioner and can at the same time compel obedience to its mandates? Except for a few favoured ones the medical profession as a method of business—as a means of earning more than a respectable pittance in life—is a miserable calling. And it must continue so until the wretched terms and the low fees which a large number of struggling men have felt themselves compelled to make shall be improved by legislation protecting the profession from its own suicidal impulses.

I am, Sirs, yours faithfully,

T. FREDERICK PEARSE, M.D. Brux.,
Jan. 4th, 1897. Hon. Secretary, Portsmouth Medical Union.

THE HALF-YEARLY MEETING OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—Believing that the friendly interchange of views between the Fellows of the Royal College of Surgeons of England and the Council would materially assist in the solution of the difficulties attending the prosecution of Mr. Anderson's appeals I consented to move at the last half-yearly meeting of the Fellows the following mild and inoffensive resolution:—

"That this meeting submits to the Council that no objection can apply to an advance from the funds of the College to prosecute Mr. Anderson's appeal to the Privy Council, and therefore trusts that the Council will sanction a grant for that purpose."

In support of this resolution it was necessary to prove (1) that Mr. Anderson had been disturbed in his rights as a Fellow and Member of the College; (2) that under By-law XV. the Council had undertaken to protect and defend Mr. Anderson from such disturbance; and (3) that the only effective way in which the Council can fulfil its obligations is by a grant of money for the promotion of Mr. Anderson's appeal to the judicial committee of the Privy Council to obtain the reversal of the illegal orders and judgements which prevent him from returning to Tobago. Mr. Heath, who followed me, elected to treat my friendly resolution as an attack upon the Council. In addition, however, Mr. Heath made certain statements which I am anxious now to correct because they may have been accepted as facts by some of the Fellows present, and because the untimely end of the meeting from the lack of the requisite quorum of thirty prevented me from exercising the right of a reply which I had just commenced when the Chairman closed the proceedings.

Mr. Heath stated that the Council had on two occasions already negatived the proposal in the resolution; that its adoption would be illegal; and that an opinion to that effect had been given by the solicitor of the College. Mr. Heath has not been careful to distinguish between two distinct appeals—one to the House of Lords and the other to the Privy Council. The appeal to the House of Lords was taken up by the Civil Rights Defence Committee after the Council of the College had appointed representatives on that committee. To this appeal the Council has twice declined to make any grant, and though I voted against the resolution adopted by the Council I fully admit that in the appeal to the House of Lords the professional element is overshadowed by the civil element, and that the obligations of the Council in regard to it are constructive and not very apparent. With regard to the appeal to the Privy Council the position is very different. In June, 1894, Lord Stamford asked the Council to appoint representatives on the Civil Rights Defence Committee to promote this appeal, and Mr. Anderson claimed the protection of the College under By-law XV. The solicitor of the College was consulted, and gave it as his opinion that the by-law was not applicable to Mr. Anderson's case, but he went on to say: "The decision that he was not at liberty to discontinue his attendance on a patient when he thought fit is one which seriously affects the medical profession, and I do not think the College would be exceeding their legal rights in assisting him to obtain the reversal of such decision." On the motion of Mr. Morris, seconded by myself, the Council decided to appoint two representatives on the committee to forward the appeal to the Privy Council. In seconding the motion I stated that I did so because I dissented from the solicitor's opinion and considered Mr. Anderson's claim under the by-law unimpeachable, and from this position I have never receded. As Mr. Anderson's case now stands my experience during the past year convinces me that it is absolutely essential to the success of his appeals that the College should head a list of subscriptions. A subscription of £200 only would exercise an enormous influence on Members of Parliament and others who now hold back because the College only affords moral support; and if the Council would appoint a committee for the reception of subscriptions and dealing with the funds other bodies would contribute Mr. Anderson would be in good hands and success would be assured. To meet Mr. Heath's objections all that is necessary is that the Council should submit the proposed grant to a general meeting of Fellows and Members for approval, in accordance with the principle that the Fellows and Members should be consulted with regard to extraordinary expenditure.

There is one personal matter on which I must say a few words for the justification of others. Mr. Heath challenged a passage in the address of my recent election committee, which stated that I had used every advantage which I possessed as a Fellow, *even to the sacrifice of my collegiate interests*, to advance the claims of the Members to representation on the Council. He then said that this must refer to the time, nearly six years, during which I had been on the Council, that it was an improper statement for a member of the Council to inspire, and was refuted by the fact that I had never during the period applied for any appointment in the gift of the Council. The words in italics to which Mr.

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Heath objected were perfectly correct and refer to the year 1886. The fact that I have not applied for any appointment since I have been a member of the Council should have been sufficient in itself, without other considerations, including the wording of the passage, to convince Mr. Heath that the words in italics could not possibly refer to the period of my tenure of office as a member of the Council. I shall only add that if I had continued to apply for appointments in the gift of the Council after I became a member of that body I should have belied the statement in my election address to the Fellows—"that I came forward for the Council, not to advance any interest of my own, but to assist in making the College more useful to the Fellows, the Members, and the profession at large."

I am, Sirs, yours faithfully,

Wimpole-street, Jan. 9th, 1897. WALTER RIVINGTON.

"ALLEGED ARSENICAL POISONING."

To the Editors of THE LANCET.

SIRS,—Dr. Murrell has again misrepresented me. The facts are not so "perfectly simple" as he states in his second letter.[1] I leave Dr. Bernard Dyer to give his version of his evidence in "Bennett *v.* Grant," being aware that he is quite able to satisfactorily explain his analysis. It is of Dr. Murrell's strictures on myself that I have reason to complain. He says: "We are told that Dr. Stevenson cannot detect $\frac{1}{20}\frac{1}{00}$th of a grain of arsenic." For this statement there is no foundation. What I did say at the trial was that a square foot of the linenette yielded no indubitable evidence of the presence and amount of arsenic, and I defined what I meant by indubitable evidence. This, I said, meant sure evidence by several tests that arsenic was present, and also that the quantity could be approximately estimated. No mere stain obtained by Marsh's test satisfies my requirements of proof. When half a square yard of the linenette was operated on I obtained conclusive evidence of the presence of arsenic and of the quantity present—viz., $\frac{1}{20}\frac{1}{00}$th of a grain, or $\frac{1}{10}\frac{1}{00}$th of a grain per square yard. These results accord with the experience of Dr. Luff, the late Professor Wormley, Otto, and others, who give $\frac{1}{50}\frac{1}{00}$th to $\frac{1}{33}\frac{1}{00}$th of a grain of arsenic as the quantity of arsenic yielding satisfactory evidence. I succeeded with $\frac{1}{20}\frac{1}{00}$th of a grain but failed to detect $\frac{1}{50}\frac{1}{00}$th of a grain in the linenette. The remark of Dr. Murrell that "the difference between ..... $\frac{1}{200}\frac{1}{00}$th of a grain and $\frac{1}{50}\frac{1}{00}$th of a grain," has no bearing upon the question in dispute. As to the delicacy of the tests for arsenic I may state, what I have often deposed, that when the arsenic is mixed with much organic matter the detection and estimation of 1 part of arsenic in 1,000,000 is nearly always reliable, but that when the proportion is much less the results are not always reliable. Of course, when in a pure form very much less than $\frac{1}{50}\frac{1}{00}$th of a grain may yield satisfactory evidence of its presence.

I am, Sirs, yours faithfully,

Jan. 12th, 1897. THOS. STEVENSON.

To the Editors of THE LANCET.

SIRS,—My attention has been called to the correspondence in THE LANCET referring to the case in which Dr. Stevenson and I recently gave evidence. I think undue stress has been laid on the difference between the numerical expression which we respectively gave to our results. What substantially happened was that Dr. Stevenson, working by one process, found what would ordinarily be described as a "small trace" of arsenic, while I, working by another process, found what would ordinarily be described in such a case as a "considerable trace."

Dr. Stevenson employed Marsh's test, using half a square yard of the "linenette," and decomposing the arseniuretted hydrogen by heating the tube, depositing the mirror in the tube by cooling, in the usual way. Under some circumstances, not yet well defined, there is in my experience some degree of uncertainty in Marsh's test, when it is relied upon for the *quantitative* estimation of such very minute quantities of arsenic as these; and though by this test Dr. Stevenson did not obtain more than the $\frac{1}{10}\frac{1}{00}$th of a grain of arsenic per square yard of the material, it does not necessarily follow that this was the whole of the small quantity of arsenic present. I say this as the result of numerous experiments of my own, in which known minute quantities of arsenic have been added to the Marsh apparatus under different circumstances and with different kinds of zinc. Indeed, in the Chemical Society's Proceedings some years ago I drew attention to the fact that when "rod" or "cast" zinc is used very appreciable quantities of arsenic may sometimes be even wholly obscured. On the other hand, it was clearly explained in evidence and understood by the judge that my own figure was the result of a crude estimate formed from the appearance of the sulphide of arsenic precipitate obtained after distilling a square foot of the material with arsenic-free hydrochloric acid. It did not presume to be an accurate estimate, but was rather given as an outside limit. The material was only submitted to me hurriedly on the eve of the trial of the action, for which action, I may observe, my report was not responsible.

While I think Dr. Stevenson's numerical estimate may have been somewhat low it is quite possible, on the other hand, that my own estimate may have been somewhat high owing to some admixture of free sulphur in the small precipitate, although the latter was twice dissolved in ammonia and re-precipitated by acid. Qualitatively, however, I may say that I found no difficulty in obtaining from a piece of the material four inches by eight inches a distinct mirror by the Marsh test, using re-agents so pure that in an hour's "running" alone they had given no mirror; while, on the other hand, a piece of the material four inches square quite failed to give any deposit on copper in Reinsch's test. The question of how small a quantity of arsenic can be recognised, separated, and correctly estimated obviously depends upon a variety of circumstances, such as the form in which the arsenic exists and the nature and quantity of the material amongst which it is diffused, as well as upon the process of analysis employed. The quantitative errors of estimation incidental to the recognition of very infinitesimal quantities sink, however, in experienced hands, into comparative insignificance whenever arsenic is present in anything approaching a materiai proportion; but when only traces are present, diffused in much organic matter, errors of estimation which are absolutely small appear relatively great, and assume numerically a greater apparent significance than really attaches to them.

Reported evidence is not always satisfactory, and if Dr. Murrell had actually heard the "linenette" case I do not think he would have attached so much importance to the discrepancy between Dr. Stevenson's estimate and my own as he has on reading the report. At all events, I think that the impression of the judge was that Dr. Stevenson's evidence and my own were, for all practical purposes, in agreement. The original supposition, as stated in the evidence of the lady's medical attendant, was that the "linenette" was coloured with a copper-arsenic pigment, such as Scheele's green, in which case the arsenic would presumably have been found in grains, and not in minute fractions of a grain per square yard.—I am, Sirs, yours faithfully,

BERNARD DYER, D.Sc., F.I.C.

Great Tower-street, E.C., Jan. 13th, 1897.

MORPHOLOGY OF THE TETANUS AND TUBERCLE BACILLI.

To the Editors of THE LANCET.

SIRS,—Referring to your report of Dr. Kanthack's interesting demonstration at the Pathological Society on Jan. 5th,[1] permit me to point out that the belief in the existence in the tetanus bacillus of a terminal flagellum only, as propounded by Schwarz, is not accepted by the most recent writers of the German school. Lehmann and Neumann, in their work published last year, refer to the flagella in the following terms, and the note of exclamation is theirs: "Eigenbewegung gering oder fehlend trotz zahlreicher langer peritricher Geisseln. Nach Schwarz nur 1 endständige Geissel!" In the discussion which followed I maintained that the branching forms of the tubercle bacillus had been first described by MM. Nocard and Roux, but Dr. Kanthack persisted in the statement that these forms were first described by Dr. Klein. I will, therefore, give the quotation to which I referred:—"Dans une culture vieille de plusieurs mois nous avons rencontré des formes renflées plus longues qu'à

[1] THE LANCET, Jan. 6th, 1897.

[1] THE LANCET, Jan. 9th, 1897, p. 106.

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l'ordinaire, quelques unes d'entre elles présentaient comme un bourgeon latéral branché presque à angle droit sur le bacille principal et terminé quelquefois par un renflement à son extrémité."[2] I am quite aware of Dr. Klein's remarks and of Mr. Pringle's photographs in the Nineteenth Annual Report of the Local Government Board, 1889-1890 (Plate XXVII.) but for the sake of historical accuracy I should be glad if Dr. Kanthack would either publish in your columns the date of any researches prior to those made by my friends MM. Nocard and Roux in 1886-87, or on the other hand verify my statement. I may add that I confirmed Nocard and Roux's observations in cultures obtained direct from human tuberculous sputum.[3]

I am, Sirs, yours faithfully,
EDGAR M. CROOKSHANK.

Saint Hill, East Grinstead, Jan. 9th, 1897.

"THE TRAINING OF NURSES IN RELATION TO REGISTRATION."

To the Editors of THE LANCET.

SIRS,—Permit me briefly to reply to Dr. Biernacki. I have done so at some length on a previous occasion and only a few words are necessary now. It is to do away with the very grievance Dr. Biernacki complains of (to prevent anyone posing as a nurse without sufficient training) that the proposal to register properly trained and qualified mental nurses has been brought forward, and thus to carry out one of the most important objects for which the Royal British Nurses Association was formed—viz., that it should act as a protection both for the public and the nurse. With regard to the paragraph in the *Hospital* he will find it fully dealt with in admirable letters by Dr. Ernest White and Miss East, late lady superintendent to the National Hospital for the Paralysed and Epileptic, Queen-square, W.C., in this week's issue of that paper. I maintain that it is the duty of the Royal British Nurses Association to register these mental nurses as such; I hold that the charter of the association is dead against any such narrow policy as Dr. Biernacki has been led to believe was either the letter or the spirit of that Royal Charter. I thoroughly agree with his concluding paragraph as to "what this confusion between incompletely and fully trained nurses means to the medical profession and the public one has only to look round to realise," and it is after looking round and realising that the medical profession is being convinced it has a right to demand that all nurses employed by the public who are qualified either by asylum or by hospital training shall be registered. We who have to deal largely with nervous and mental diseases know the value of mental nurses, and we ask, and the public has a right to ask, that the Royal British Nurses Association shall act up to its charter and, under certain conditions, place them upon its register. I can assure Dr. Biernacki nothing will be done to unduly force this matter on, time and calm deliberation will prove the value of the proposal I advocate, and from what I know of his fairness and courtesy I have every confidence that ere long he will think as I do.

I am, Sirs, yours faithfully,
T. OUTTERSON WOOD, M.D. Durh.,
Member of the Executive Committee and of the Registration Board of the Royal British Nurses Association.

Margaret-street, Cavendish-square, W., Jan. 11th, 1897.

"THE PARASITE OF MALARIA."

To the Editors of THE LANCET.

SIRS,—The following notes of my observations of the blood in malarial fever in West Central Africa may perhaps interest some of your readers. I commenced this work in September, 1895, and from that time until I left my station on furlough on June 30th, 1896, I examined the blood for parasites over forty times. Excluding my first two examinations in every case of fever, both in European and natives, I succeeded in discovering parasites. Once or twice I succeeded in finding the parasite when headache was the only symptom, but twice when I suspected such symptoms as diarrhœa were due to malaria I failed to find it. My examinations were all with a $\frac{1}{12}$th-inch lens and an ordinary eye-piece, with Beck's student's microscope tube pulled out to its furthest limit. I fully carried out instructions as to examination of fresh specimens, and was very much disappointed in finding no pigmented bodies like those described by Dr. Laveran, Dr. Marchiafava, and others. On my third investigation my attention was directed to some of the red corpuscles manifesting slight oscillatory movements and occasionally rolling over. As they lay flat hardly any difference was noticeable in their outline, but in profile an irregularity in outline was at once detected, one side being straight and on the other side it was convex.

In February a fellow missionary fell ill of malaria, a severe form associated with hæmoglobinuria, which proved fatal. In this case I made daily observations and fully expected to find some different form of parasite. I only found the bodies of the same character, but they were very numerous. The case was fatal in five days. The blood corpuscles before death became exceedingly scarce and the plasma distinctly coloured with hæmoglobin. With my microscope I could not discern the spore when first it attacked the corpuscle; it was apparently too small for my object-glass. I could only suspect it by the suspicious movement of the corpuscle above mentioned. When mature and sporulated the parasite was nearly as large as a red corpuscle. The absence of pigment in these parasites is to me very interesting, as in the part of West Central Africa where I have been stationed for over seven years I have seen no case of melanæmia. Not having, however, had opportunities of making necropsies, I have unfortunately not been able to examine the organs of the body. The splenic enlargement often reaches the umbilicus and is always soft to palpation. The fevers show no regular form, varying in length from a few hours to several days, and a daily variation may or may not be present. Jaundice is sometimes present without hæmoglobinuria, but hæmoglobinuria is always accompanied by jaundice, which is no doubt secondary to the immense amount of free hæmoglobin floating in the plasma.

I am, Sirs, yours faithfully,
WALTER FISHER, M.R.C.S. Eng., L.R.C.P. Lond.

Kavungu Lovale Country, near Upper Zambesi, W. Central Africa.

THE VENTILATION OF HOUSE DRAINS.

To the Editors of THE LANCET.

SIRS,—At a meeting of the urban district council to which I am medical officer of health I suggested this addition to the by-laws—viz., "that the owner of each new house should construct a ventilating intercepting trap to disconnect the house drains from the sewer," but one of the council stated that the district was too flat and the fall for drainage not enough to permit such a course. The district is a flat one and I do not think any of the drains are disconnected. There are no ventilators in the centre of the streets and the only ventilation is by a few soil-pipes carried up here and there and by a 6-in. pipe at the pumping station carried up 20 ft. high; the sewage is pumped to the sewage farm one mile away. Will you kindly say if these conditions are a bar to the employment of intercepting traps, and, if not, should I be doing my duty by bringing forward the subject again and quoting your opinion? I may mention that I have only been recently appointed or should have brought this matter to the fore sooner.

I am, Sirs, yours truly,
Jan. 6th, 1897. BAYNHAM.

*** Without a knowledge of the depth and size of the sewer in the road and the probable distance from the same to the highest point of the house drains it is impossible to give a definite reply to our correspondent's question, but the following particulars may be of service. For a disconnecting trap to act efficiently it should have a fall into it from the drain of six inches, either as a direct cascade or as described on p. 47 of the reprint of THE LANCET Special Commission to inquire into the Relative Cost and Efficiency of Plumbers' Work. The house drains should have a fall of at least 1 in 60. It is certainly desirable, with a sluggish and ill-ventilated sewer such as is described, that something should be done to relieve the pressure of drain

[2] Sur la culture du Bacille de la Tuberculose. Annales de l'Institut Pasteur, Janvier, 1887.
[3] Transactions of the Pathological Society, 1891.

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air from the house drains and traps. With reference to ventilation there is a general impression that a ventilator does not exercise any effect upon the air in sewers beyond 500 feet from the point of insertion; 300 feet away is a common distance for road ventilators. It might, if the houses are situated near together, be more desirable, as an alternative, that each house should carry up a separate ventilating pipe of not less than four inches in diameter (see By-law 4, L.C.C.) to a suitable height. This pipe to be inserted into the drain at a point near to where the drain leaves the premises; there should also be another similar ventilator at the extreme or highest end of the house drain. By this means the pressure of air would be relieved from the house drains. Of course the fact of only a few isolated houses ventilating the sewer, by means of their soil pipes, is obviously very unsatisfactory. If all sewers had an even fall throughout, and were properly flushed and well ventilated, the air in them would be far less objectionable than is commonly the case. One great point is to keep the sewage on the move.—ED. L.

"ARMY EXAMINATIONS."

To the Editors of THE LANCET.

SIRS,—Your annotation on "Army Examinations" in THE LANCET of Jan. 9th is, I think, open to much criticism. The situation is this. For each vacancy in the army there are a large number of candidates and selection is made by competition on certain lines. Whether these lines are judiciously ordered is a point on which great differences of opinion exist. You cannot, however, get rid of the competition. If you make physique a leading feature you will eliminate men of the build of Lord Wolseley and Lord Roberts. If athletics are brought to the front you will soon create a special class of men engaged in training youths for special feats. The fact is that in our large public schools the special education required interferes greatly with the general school studies. Further, there cannot be that individual attention given to each boy which is so essential. The clever or diligent youth or the one who has been put into a proper groove by a thoughtful parent is successful, as at the University of London, whilst the duller and lazier and ill-prepared ones are unsuccessful. The latter leave school and, with those entering the army through the militia, are taken in hand by special instructors, whom it is a gross injustice to stigmatise as "crammers." These instructors, by force of character and experience, by careful study of each individual, and with the assistance of a staff of highly trained assistants, succeed by genuine solid work in many instances where schoolmasters have failed. For years the military authorities have striven to meet the schoolmasters in every possible way, but still the "crammers" survive, and assuredly will continue to fulfil a need. Now the worsted schoolmasters seek the power of nominating candidates. Whether it is desirable to admit officers who are not gifted with very good brains or who are naturally lazy is another question. The candidates passing through the hands of "crammers" are not inferior in physique or athletic accomplishments to others, and you have only to inspect a parade of Sandhurst cadets to see that the present system does not unduly stimulate the brains of the officers at the expense of their bodies. If London is objected to as an educational centre, then there are lots of instructors who live in the country. In such a place I have often seen poor "etiolated doctrinaires" playing cricket, football, lawn tennis, and other games, and each with his bicycle or polo pony or dog-cart; and in the ample vacation I believe hunting and other sports are not neglected.

I am, Sirs, yours faithfully,

Jan. 9th, 1897. PHYSICIAN.

BEQUESTS TO HOSPITALS.—The Rev. Charles Fellowes has bequeathed to the Norfolk and Norwich Hospital £100 and to the Jenny Lind Infirmary £50.—The secretary to th e Victoria Hospital for Children has received promises of 1000 rupees each from the Maharajah of Bhartpur and the Nawab of Bahawalpur towards the *fête* to be held in June next for the benefit of the hospital.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Health Lectures.

DR. W. H. LINE delivered one of a series of lectures under the auspices of the Midland Institute on the 11th inst. before an appreciative audience. He took for his subject the Breath of Life: Pure Air and How to Get It. The Chairman of the Health Committee, Alderman Cook, presided, and in the course of his remarks congratulated the city upon the decline of scarlet fever and some other diseases, and spoke of the advantages to be gained from the number of parks and open spaces. The work of the Health Committee, he observed, was a responsible and arduous one, which was carried out with zeal and energy for the good of the inhabitants. The lecturer was warmly applauded and thanked at the close of the lecture.

Charity Ball.

In aid of the funds of the Birmingham and Midland Counties Hospital for Women a large and brilliant gathering assembled to enjoy themselves on the evening of the 8th inst. The reception was held by the Viscountess Newport—the Lady Mayoress of the city—and Mrs. Chamberlain. The gathering was in every way a success. About 800 tickets were disposed of, giving a sum of £840, while some £460 was received in donations. It is stated that £1700 is required to place the hospital in a sound financial position for the time being. There ought to be no difficulty in a wealthy community like this in raising this sum for so worthy an object. The generous public will have another opportunity shortly of contributing a larger sum towards the completion of the new General Hospital, when the committee intends to appeal for an extra £40,000 for the completion and equipment of the building.

Improvement Scheme.

At a meeting of the town council a proposal by the Improvement Committee to build artisans' dwellings in a certain area and to borrow £6250 for the purpose was rejected by a large majority. Free criticism was expended upon the plans, which were said to contain many infractions of the by-laws with regard to health requirements, and from a financial point of view the project was condemned with equal firmness and determination. While giving the committee credit for the desire to establish some relief in the way of accommodation for this class, it was clearly shown that their proposals would have to be modified considerably before being accepted.

Jan. 12th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Liverpool Stipendiary on the Administration of the Oath.

MR. F. A. STRINGER'S recent letter to the *Times* alluding to the mode of administering the oath in courts of justice and to the dangers attached to kissing a dirty Testament has excited comment in the local press. The subject-matter of the letter is quite in accord with the recorded opinions of the medical profession, and although it must be looked upon as ancient history by the readers of THE LANCET, in the columns of which the subject has been treated in leading and other articles many years ago, yet Mr. Stringer's letter is very welcome and will strengthen the efforts of those who have been advocating the abolition of the uncleanly practice of "kissing the book." In December, 1892, Mr. F. W. Lowndes brought the question to the notice of the members of the Liverpool Medical Institution, and proposed three resolutions which were unanimously carried, the first of which pointed out the dangers of kissing a book in indiscriminate use. The second resolution was to the effect that it was desirable to have the permission to swear with uplifted hand brought to the notice of every juror, witness, and persons required to take an oath; also that copies of those resolutions be sent to the local stipendiary magistrate, the city coroner, and to the press. Speaking from the bench of the Liverpool Police-court last week Mr. Stewart, the stipendiary magistrate, referred to

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the subject, and said that ever since he had sat on that bench any person who desired to take the oath in the Scotch form was always permitted to do so, and if at any time any officer whose duty it was to administer the oath had not had an opportunity of administering it in that way before he had personally administered. Very shortly after the passing of the Act the form of the oath was printed upon a slip of paper, and every officer whose duty it was to administer the oath in that court was furnished with the Scotch form of the oath. It is to be hoped that after these remarks of the stipendiary any witness who desires to be sworn in the Scotch form may be allowed to do so without that preliminary "chaff" which has been indulged in by those whose duty it is to carry out the law and not to ridicule it.

Allegations against a Birkenhead Medical Man.

An inquest was recently held at Birkenhead touching the death of a young coachman aged eighteen years, who died after a few hours' illness. The deceased complained of pains in his head and back. He went to bed, and in the evening of the same day Mr. A. S. Clarke was sent for and prescribed a draught composed of bromide of potassium and chloral. About midnight the deceased became worse, when Mr. Clarke was again summoned. While Mr. Clarke was in the house Mr. G. S. Stansfield was also sent for, who remarked that the young man was dying. According to the evidence of Mr. Stansfield this statement was resented by Mr. Clarke, who replied: "He is not dying; he will be all right. I warn you not to touch my patient. He is my patient." Mr. Stansfield thereupon replied: "The man is dying either from cerebral mischief or from poison." Another witness named Thomas Leyland deposed that when he returned home in the evening he saw the deceased in bed. He was breathing heavily and witness went for Mr. Clarke. A druggist named Joseph Corkson stated that the deceased came to his shop on Saturday and complained of pains in his head and back, and said he could not sleep. Witness gave him a draught of antipyrin and also a bottle containing camphor liniment with which to rub his back. The bottle produced had had very little of the liniment taken from it. Deceased attributed the pains to lifting heavy boxes. Mr. T. R. Jones stated that he made a post-mortem examination of the body of the deceased. There was a slight effusion of blood on the left side of the brain, but not sufficient to account for death. The stomach was much inflamed and presented the appearance of having contained an irritant poison. He concluded that death had resulted from poison, but how administered or what it was he did not know. The quantity of lotion taken from the bottle would not have affected him so even if he had taken it. Mr. Arthur S. Clarke deposed that he was asked to see the deceased on the Saturday night, who, he was informed, was in bed raving. Witness questioned the deceased, but his replies were very incoherent. He had a dread of light and wished to be in the dark. Witness returned to his surgery and made up a draught for deceased consisting of bromide of potassium and chloral. He entered the prescription in his book. He was again called to the house about midnight, when deceased was sleeping heavily, but there was nothing to show immediate danger. The draught was a little below the usual strength and would not set up inflammation. The jury returned a verdict that deceased died from the effects of an irritant poison, but how it was taken or administered there was no evidence to show. The jury were satisfied that the draught given by Mr. Clarke was not poisonous.

The Health Committee and Dairies.

The Health Committee have formulated a new code of regulations for the conduct of dairies which have been ratified by the city council. These require efficient lighting, at least 600 cubic feet of air space for each cow, the internal walls and ceilings to be limewashed twice a year, dung to be removed twice a day, effective drainage, and compulsory notification of any infectious disorder among the persons occupying the premises.

Hospital Sunday.

Collections were made under very unfavourable circumstances in the churches and chapels in the city on Sunday last on behalf of the Hospital Sunday Fund. The morning was raw and cold. The snow which fell during the greater part of the previous day had left the ground in a sloppy condition and largely interfered with the attendance at the various places of worship. It is open to question whether the early part of January, when wintry weather must be expected, is the most suitable month for this collection. Archdeacon Madden, preaching at St. Luke's Church, only echoed the sentiments of many in lamenting the adherence of the Hospital Sunday Committee to the January fixture. He considered that April or May would be more suitable for many reasons. It is feared that the collections, although not all completed, will fall short of those made at the same period of last year.

Hospital Accommodation at Seacombe.

The deficiency of hospital accommodation in the Seacombe and Wallasey districts is engaging the attention of the Wallasey Urban District Council. Dr. Napier, a member of the council, considers that a central hospital is desirable, and suggests a conference between a sub-committee of the district council and the joint committee of the Seacombe Hospital and the Wallasey Dispensary to report on the subject. It is expected that a sum of £6000 will be required to meet the expense of enlarged hospital accommodation for these districts.

The Proposed New Hospital for Phthisis.

After much deliberation the committee of this hospital have decided to first take in hand the building of a branch hospital in the country to accommodate twenty beds, and subsequently to pull down the present houses in Mount Pleasant and build a hospital for the reception of forty patients. In order to carry out the scheme suggested the committee wish it to be known that a sum of £50,000 will be required. Mr. William Rathbone, formerly member of Parliament for Liverpool, is the president of the hospital and is taking an active part in promoting the new scheme. It is probable that West Kirby, which enjoys a most salubrious climate, will be the selected suburb.

Superannuation of Poor-law Officers.

The select vestry of the parish of Liverpool have resolved that, in consequence of the recently-passed Poor-law Superannuation Act, it is of importance that in making fresh appointments the vestry should be satisfied as to the age and state of health of the candidates. This resolution is a reasonable one, and will equally apply to medical candidates for office in the parish of Liverpool.

Jan. 12th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Bristol.

THE committee of the Bristol Dispensary, in their statement of accounts for the past year, report that the work of the institution has been carried on in a highly satisfactory manner. The receipts from subscribers show a slight reduction from the previous year. The premises designed for the branch dispensary at Bedminster are now in course of erection, and during the present year will be ready for the accommodation of patients. This branch dispensary will be of much advantage to those living in Bedminster. A large sum has already been expended on the building, but before its completion £1400 will be required, which will necessitate the selling of some investments. The committee appeal for donations towards this fund.—At the meeting of the Barton Regis board of guardians held on Jan. 1st the chairman stated that during 1896 there had been 3349 admissions to the workhouse and 3266 discharges; 39 children were born in the house and 116 inmates died. It had only been necessary to punish one inmate and to proceed against one in-door pauper before the magistrates; the master had also only inflicted punishment once. This shows that with an average of 1000 in the house only three persons had in the year been guilty of conduct which deserved punishment.—From the report presented at the last meeting of the Barton Regis board of guardians it appears that there are now 156 unvaccinated cases. At the beginning of the past quarter the number was 76. At a meeting of the Horfield urban district council held on Dec. 29th.

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it was decided to erect an isolation hospital at Patchway. The cost of the building will be £5000 and it will contain twelve beds. Horfield, which is practically a northern suburb of Bristol, has long felt the want of a hospital for infectious diseases, and it is satisfactory to see that at last such a building is to be erected.—Mr. Bancroft will give a reading of "The Christmas Carol" on Jan. 28th, the proceeds of which will be given to the Bristol Royal Infirmary. The Duke of Beaufort has consented to preside.—The collection on Hospital Saturday in Bristol amounted to £810, but this is separate from the proceeds of the week's amateur theatrical performance in aid of the hospitals, which account is not yet closed.—A handsome brass lectern has just been placed in Hook's Mills Orphanage Chapel, at Bristol, as a memorial to the late Alderman Charles Highett, M.R.C.P. Edin., who died on April 20th, 1896, and who had been a guardian of that asylum for fifteen years. The lectern is of an artistic character, the figure of the eagle being especially fine.

Cheltenham Town Improvement Committee.

At the monthly meeting of the Cheltenham town council, held on Jan. 4th, Mr. G. H. Ward-Humphreys, M.R.C.S. Eng., L.R.C.P. Lond., on behalf of the Town Improvement Committee, introduced a scheme, the cost of which is estimated at £50,000, for the erection of a "kursaal" and the conversion of the present winter-garden building into municipal offices and a palm conservatory. In an exhaustive speech he reviewed the various schemes which had been suggested for facilitating the use of the mineral waters and providing a spa. Various reasons were adduced in favour of the present scheme devised by Mr. Ward-Humphreys, the borough surveyor, and an architect. As to the spa he contended that local medical men were unanimously in favour of it, and a bright future for Cheltenham had been predicted if the scheme were carried out. Mr. Ward-Humphreys had the subject of his speech thrown upon a screen by limelight. It was eventually decided that the matter be adjourned, but it is hoped that the scheme will be passed and the mineral waters of Cheltenham will be more extensively used than they are at present.

Ambulance Classes in Gloucestershire.

At the quarterly meeting of the Gloucestershire Standing Joint Committee held on Jan. 4th, the chief constable, in applying for a further sum for the St. John Ambulance Classes, reported that 239 of the constabulary, which is rather more than half of the force, now hold certificates of that society, and five members of this constabulary were successful in winning the challenge shield of the Gloucester Ambulance Association on Dec. 3rd.—At the Gloucestershire Quarter Sessions on Jan. 4th the chairman stated that the report of the visitors of the Inebriates Retreat at Kingswood near Bristol was most satisfactory, and the home was, he thought, of advantage to the county. He also stated that the report of the visitors with reference to the private lunatic asylums at Northwood and Fairford showed that these institutions were well conducted.

Barry Accident Hospital.

At a meeting of the executive of the Barry District Nursing Association held on Dec. 29th, 1896, under the presidency of Mr. George Neale, J.P., L.R.C.P. Edin., the honorary treasurer presented a report showing that practically the association would be in debt to the extent of about £300 at the close of the year; and after considerable discussion it was decided, as the continuance of the accident hospital would entail a loss of about £400 per annum, to call a meeting of the subscribers on Jan. 21st, when a resolution will be submitted stating that the association has found that the maintenance of the accident hospital is too great a tax upon its resources, and that it is therefore desirable that the Barry Urban District Council should be asked to undertake its maintenance and control.

Appointment at Devonport Dockyard.

The Admiralty have selected Fleet Surgeon Valentine Duke, B.A., M.B., for the Devonport Dockyard appointment, as successor to Fleet Surgeon M. F. Ryan. For the past three months Dr. Duke has held an appointment on the *Thunderer* for Dockyard service at Pembroke, previously to which he served in the *Hibernia* at Malta. It is not likely that he will retain the Devonport appointment for the full three years, as he has eleven years' seniority as Fleet Surgeon and in a few months may reasonably expect to obtain the rank of Deputy-Inspector-General of Hospitals and Fleets.

Jan. 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Pollution of Scottish Rivers.

DR. JOHN GLAISTER, Professor of Forensic Medicine and Public Health in St. Mungo's College, Glasgow, delivered an address on this subject to the Glasgow Philosophical Society on the 6th inst. After reference to the extensive pollution of rivers in consequence of the enormous development of trade processes and the establishment in populous centres of the water-carriage system of sewerage, he discussed the direct and indirect consequences of such pollution and proceeded to review the various legislative Acts dealing with the subject. Dr. Glaister enumerated the recommendations of the Royal Commission of 1876, which reported after a period of four years spent in examining the principal streams of Great Britain; he then proceeded to point out how the Rivers Pollution Prevention Act, based upon the Commissioners' report, had been a failure. This failure he attributed to the absence from the Act of a standard of purity for effluents or discharges and to the non-prescription of penalties for contravention. The restrictions introduced for the purpose of protecting trade interests had in practice seriously interfered with the value of the Act, so that it had been for years practically a dead letter, and the principal streams of the country are, as a consequence, as foul as, or even fouler than, when the Commission reported. Dr. Glaister advocated the institution of steps by which the Act of 1876 could be amended, and referred to the success which had attended the local powers obtained by the Lancashire and Yorkshire county councils. He especially advocated a legal definition of the standard of purity for discharges. This was recommended by the Commission of 1876 and was endorsed by Liebig and Dumas, the latter proposing to phrase the definition as follows: "Whenever water was so affected by a town or manufacture as to become unfit for supporting the life of fish or of green plants, the pollution, from whatever cause derived, should be considered an insupportable nuisance from whatever cause arising." In addition to such a standard Dr. Glaister argued that the provisions of an amended Act should be compulsory, that committees representing the counties interested should be formed for river cleansing, and that inspectors charged with the duty of supervising the methods of purifying effluents and preventing the entrance of new sources of pollution should be appointed. In support of the latter provision he quoted the success which had attended a similar step in preventing gaseous contamination of the atmosphere by the powers of the Alkali Act. The time, Dr. Glaister contended, was ripe for these reforms, and a determined attempt should be made to press them upon Parliament. The address was illustrated by means of maps of the principal Scottish rivers, which showed the source and incidence of the polluting discharges, and by lantern slides. Dr. Ebenezer Duncan, president of the society, presided.

Scientific Lectures.

On the 8th inst. Professor Cleland lectured in the Corporation Galleries, Glasgow, on the Artistic Treatment of the Human Figure. Professor Cleland argued for the necessity of accurate representation, which could only be attained by a study of the capabilities of the human frame. He insisted upon the importance of giving attention to posture in relation to balance both in the representation of rest and action and described the different forms of the head and face as these vary according to race, sex, and age. The lecture was listened to by a large audience, and upon the proposal of Bailie Shearer a cordial vote of thanks was awarded to Professor Cleland. Lord Kelvin on the 11th inst. delivered in the University of Glasgow the first of a series of free public lectures to be given by members of the Senate. His subject was: "The Molecular Dynamics of a Crystal."

Glasgow Medico-Chirurgical Society.

At the January meeting, on the 8th inst., Dr. Walker

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Downie gave a practical demonstration of the use of Kirstein's "autoscope" in the examination of the larynx. Dr. J. K. Love read a note on the History of Gliomatosis and Syringomyelia; and Professor Joseph Coats demonstrated with the projection microscope a number of slides illustrating the conditions and prepared from four cases by Dr. Love.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Small-pox in Dublin.

AT the meeting of the guardians of the South Dublin Union, held on the 6th inst., the clerk stated that he had received a notice from the office of Sir Charles Cameron that there was a case of small-pox in the city. He telephoned immediately to all the city hospitals, but could obtain no accommodation for the case, which it was accordingly considered best to leave at the patient's residence, while every precaution possible to compass isolation was adopted. After an interview with Sir Charles Cameron and Mr. Stafford, the Local Government Board inspector, he also inquired of the authorities at Cork-street Fever Hospital whether, in the event of the guardians taking over twenty convalescent patients, they would be prepared to allocate a ward for the treatment of this or any other case of small-pox that might arise. Dr. Day, the resident physician at Cork-street Hospital, was in attendance, and stated that his hospital would receive small-pox patients under the conditions mentioned. Mr. Stafford, reported that the patient with small-pox had probably contracted the disease from a brother who had recently returned from South Africa and been exposed to the contagion on his way home. He also stated that the residents at the house had been protected by re-vaccination and a sanitary officer placed on duty to prevent persons entering or leaving the house until such time as the case could be removed to hospital. After some discussion the board passed a unanimous resolution as follows:—

"That the attention of the Local Government Board be called to the fact that the joint action of the boards of both the Dublin unions during the past two or three years, to provide a permanent hospital for cases of infectious disease, has resulted in the conviction that a portion of the Pigeon House building lately purchased from the Government by the corporation would be eminently suitable for the purpose. The chairman of the board of guardians of the South Dublin Union was authorised to make arrangements for purchase of the building required, but the matter is delayed by the fact that the corporation have not yet got possession of the property. Having regard to the urgent necessity of procuring a hospital without delay the board request the Local Government Board to make such representations to the Government and the corporation as will bring the negotiations to a speedy completion so as to facilitate the boards of both unions in getting possession of the buildings so much required."

A very strong letter has appeared in the *Freeman's Journal* from Professor Antony Roche, in which he complains, and apparently with much reason, that the sanitary authorities should now propose to make Cork-street Hospital again a small-pox centre of infection for the South City, as it certainly had proved to be on the occasion of the last epidemic—a fact, he says, which was demonstrated by Sir Charles Cameron's maps of the distribution of the disease.

Surgeon-Major Beevor on Ashanti.

Surgeon-Major Beevor of the Scots Guards delivered a most interesting lecture on Saturday afternoon at the Ancient Concert Hall in the presence of His Excellency the Lord-Lieutenant, the Countess Cadogan, and a distinguished audience. The lecture, which was given in aid of the Soldiers and Sailors Families' Association, was entitled, "The Ashanti People, their Manners, Customs, and Wars," and was fully illustrated by means of lantern slides as well as by a large collection of native articles brought home by the lecturer and his brother officers after the late expedition.

The late Sir George Owens, J.P.

At the meeting of the committee of the Meath Hospital, held on Monday last, the following resolution was proposed by Sir William Porter, Bart.: "That at this the first meeting of the committee since the lamented death of our esteemed friend and valued colleague, Sir George Owens, J.P., we desire to express our deepest regret at the loss of one who for a period of nearly thirty years was one of the most active governors of the hospital, and whose kind and genial disposition had endeared him to all the members of the board as well as to the various officials, and we desire to convey to his son, Colonel Owens, and the other members of his family our deep and sincere sympathy with them in their sorrow, as we place on record our warm appreciation of his long and valued services to the hospital."

The New Belfast Hospital.

About £50,000—that is, one half of the sum required for the new hospital—has already been promised, and on the invitation of the Lady Mayoress (Mrs. Pirrie) a very large meeting of ladies was held in the City Hall on Jan. 12th, when, after some admirable speeches, a large general committee of ladies was appointed, who are to select ten ladies of their number who are to be members of the executive committee, and who are to act along with the gentlemen and to have the same place and powers.

Irish University Education.

The Irish University question is again being very freely discussed at present, and a very strong demand has been made during his recent visit to Ireland by the Lord Chief Justice of England (Lord Russell of Killowen) and by Mr. Justice O'Brien for a Roman Catholic university. The latter judge at a meeting on Jan. 11th in Dublin, said that £50,000 a year ought to be granted for the maintenance of a Catholic university in Dublin, and as this university was not to be a mere examining board, but an institution devoted to the complete control of youth in its education, social advancement, and religion, the sum of £250.000 was, he said, what many considered the least amount Parliament could grant for the establishment of a Catholic university.

The Belfast Asylum.

The report on the Belfast Asylum of Dr. O'Farrell, Inspector of Lunatics, has just been published. He says that all restraint appliances should be retained in the charge of the medical officers and used only by their direct instruction, and that there should be daily and accurate entries of every case in which restraint or seclusion has been employed. The condition of the auxiliary asylum at Purdysburn Dr. O'Farrell regards us most satisfactory. He thinks it the most beautiful site and surroundings for an asylum in the United Kingdom, and he refers to the announcement of the new asylum during 1897 as a charitable commemoration of Her Majesty's most glorious reign. When this new asylum is ready for the reception of patients he trusts the governors may be able through legislative action to convert the Purdysburn manor house into an asylum for the reception of private patients of the middle and lower classes. The necessity for such an institution will be at once apparent, he says, when the large sums annually diverted from this country for the maintenance elsewhere of the wealthier classes of the insane are considered, while there is a very large number of private patients of the lower middle class whose friends cannot afford to pay a rate of board above, or much above, the average cost of maintenance of pauper patients, yet who are unwilling to submit to the stigma of pauperism in order to obtain asylum treatment for them. The provision of accommodation for this class in an institution detached from, but under the same management as, the district asylum would, in the inspector's opinion, meet a most important and charitable want.

The Battle of the Clubs at Cork.

Applications have been received on behalf of some forty members of two benefit societies which at the time of the rupture refused to accept the proposals of the medical profession to be allowed to have the ministrations of their old medical officer instead of being compelled to employ the imported newcomer. The forty members will accept the rules and pay for attendance at the following rates: 10*s.* for medical attendance and 5*s.* for medicine for self and family yearly. The incomes of all are under two pounds weekly. At a large meeting of the medical profession convened on Monday evening last the applications were granted subject to the stipulation that none be admitted except those who were members of the societies at the time of the promulgation of the rules. It is understood that similar applications in behalf of other medical men and their late club patients will be favourably entertained by the profession. In fact, it is clear

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that in Cork those members of the community who have wits to see where their real benefit lies are determined to be just to their medical men and to obtain proper medical treatment free from the tyranny of self-interested officials.

Past Medical Students' Union.

A society for past students of the Catholic University has just been constituted. Its chief objects will be to bring together the students at an annual meeting and dinner and generally to assert their claims and defend their interests, especially in connexion with impending legislation. The following are the officers for 1897:—President: Mr. Laffan. Vice-Presidents: Mr. Dodd (Killorglin), and Mr. Duigenan (Edenderry). Chairman of Council: Mr. Kenny (Tallow). Secretary: Mr. Hourigan (Freshford). Council: Mr. J. J. Duigenan, Mr. P. S. Duigenan, Mr. O'Bierne, Mr. Clarke, Mr. M'Namara, Mr. Dodd, Mr. Sheedy, Mr. T. J. Daly, Mr. Kerrigan, Dr. Boyd, Mr. Kenny, Mr. Kilbride, Mr. Keating, Mr. Heffernan, Mr. Meehan, Mr. Furlong, Mr. Mr. M'Feely, Mr. O'Dwyer, and Mr. Laffan. Every past student, it is hoped, will join, and all communications should be addressed to the Secretary or President.

The Presidency of Queen's College, Cork.

The not unexpected retirement of Mr. Slattery from the presidency of the Cork Queen's College is now officially announced and three candidates are named as being in the field for the vacant appointment:—Sir Rowland Blennerhassett, Inspector of Reformatories and Industrial Schools in Ireland; Professor Corby, Professor of Midwifery in the College; and Mr. Starkie, of Trinity College, Dublin. The Lord-Lieutenant's choice is awaited with much interest by the general public and especially by the numerous medical graduates. It is believed the appointment will be made at an early date, probably at any moment during the coming three weeks, and as three-fourths of the students at the college are medical there is no doubt as to upon whom they hope the choice will fall.

Jan. 12th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Improvement in Diphtheria Antitoxin Serum.

PROFESSOR BEHRING announces in the *Fortschritte der Medicin* that he has succeeded in improving the diphtheria serum so that any obnoxious influence will henceforth be entirely avoided. The undesirable symptoms observed sometimes, such as exanthems, swelling of the joints, albuminuria, &c., are, in Professor Behring's opinion, due partly to the diphtheritic process itself and partly to accessory products which are present in the serum, pure antitoxin being a definite substance which only acts against the virus of diphtheria and otherwise has no influence on the organism. Professor Behring has not been able either to remove these products from the serum or to prevent their formation; but the strength of the serum, reckoned in antitoxin units, has been increased so much that only a small quantity is required and the unpleasant symptoms referred to are not now produced. This extra potent serum is sold by the Hoechst factory as a dry preparation, which, before being administered, must be dissolved in water. It is very soluble and may be kept for any length of time. It does not contain carbolic acid or any other antiseptic compound, but is simply preserved in hermetically closed bottles. The strength of one gramme is 5000 normal units. Professor Behring points out that the new antitoxin is especially valuable for immunising purposes; the immunity obtained by its administration lasts about four weeks. He hopes that the small number of medical men who are still opposed to the antitoxin treatment will now be persuaded of its efficacy and safety.

An Epidemic of Parotitis.

According to a communication of Dr. Marcuse in the *Deutsche Medicinische Wochenschrift*, an epidemic of parotitis has recently broken out in the northern districts of Berlin. In certain streets there is scarcely any house without patients. The illness rarely attacks adults, but is exceedingly prevalent among children, so that in some schools more than one-third of the pupils are prohibited from attending. The disease is of a mild character, fever lasting only for one or two days. The children seem to catch it at school, the incubation period is about a fortnight, and as a rule the patients recover within a week. In some instances, however, the swollen gland suppurates and high fever and other grave symptoms become developed so that surgical aid is necessary. Acute Bright's disease was also observed sometimes. Dr. Marcuse recommends a collective investigation for the purpose of inquiring into the causes of this epidemic.

University Fees.

In Germany a university student has to pay a fee each half-year for every lecture he attends, and this money becomes the property of the individual teacher. Under this system the professors who lecture on subjects required for examinations sometimes find their appointments very profitable, whilst those who lecture on matters of minor interest are placed at a great disadvantage. It is true that, in addition to the students' fees, the ordinary professors receive a fixed salary from the Treasury, but this salary is by no means adequate to the recipient's position in society, and the great majority of extraordinary professors and *privat-docents* do not get any remuneration from the Government. In order to redress this inequality the Government proposes to introduce a Bill providing that lecture fees exceeding 4000 marks (£200) in Berlin University and 2000 marks (£100) in the provincial universities shall be divided between the lecturer and the treasury. If, for instance, the fees paid by the students of a Berlin professor amount to 16,000 marks he would get only 10,000 marks and the remainder would be claimed by the treasury. The fund thus obtained will be used to increase the remuneration of the teaching staff of the university. The announcement of this contemplated innovation has with good reason caused a sensation among the members of the universities. They point out that the new measures will induce the members to raise the fees, and that the expense of university education, which in Germany is higher than in many other countries, will thereby be increased. The Bill would also restrict the liberty and freedom of action at present possessed by the universities and place them in a position of dependence on the Government. Although it is intended that the new regulations shall only come into operation gradually as new appointments are made, and shall not be applicable to the professors who already occupy chairs, the effect has been to cause so much uneasiness in university circles that the Government may possibly abandon the proposal.

The Medical Directory.

Börner's medical directory, edited by Dr. Julius Schwalbe, appeared last week. It shows that there are now 24,000 medical practitioners in Germany, the number having been 23,099 in 1896 and 16,292 in 1886. This means an increase of 47·2 per cent. There are 14,351 registered medical men in the Kingdom of Prussia, 2643 in Bavaria, 1766 in Saxony, 934 in Baden, 800 in Würtemberg, and 722 in Alsace-Lorraine, the remainder being in the smaller states of the confederation. Of the Prussian provinces the Rhenish province has the greatest number of practitioners—2208; the smallest number being in Western Prussia—449. There were 2077 medical men resident in Berlin at the end of last year, 523 in Munich, 487 in Hamburg, 447 in Breslau, 368 in Leipzig, 354 in Dresden, 292 in Frankfort, 257 in Cologne, 225 in Hanover, 212 in Charlottenburg (a suburb of Berlin), and 179 in Strassburg. The average number of practitioners is 4·59 for each 10,000 inhabitants, but this proportion varies very much according to the locality. In Berlin there are 12·38 practitioners for each 10,000 of the population, but the corresponding ratio is only 2·73 in the province of Posen. Compared with the census of 1890 the general population has increased 5·7 per cent., but the medical profession has increased 22·5 per cent. The number of licensed pharmacies was 5201; there were 5144 in 1895 and 4712 in 1886. Berlin has 152 licensed and controlled pharmacies; these figures, however, do not include the numerous class of druggists who are unlicensed, but nevertheless dispense medicine in defiance of the law, and thus do as much harm to the licensed pharmacists as the unqualified practitioners do to the regular medical men. The directory shows also an increase of dentists. There are now 1154 dentists with legal diplomas, the number having

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been 1071 in 1895 and only 514 in 1886. The number appears somewhat small, but it must be remembered that dentists suffer very much from the competition of unqualified persons. The directory has a list of 3301 hospitals, including under this head the large municipal and University hospitals of Hamburg and Berlin, as well as small village infirmaries, private asylums, and special institutions of every kind. The total number of beds is 193,869. In Berlin there are 84 hospitals with 9000 beds, and in Hamburg there are 38 hospitals with 7000 beds.

Jan. 12th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Latest Views on Phthisis.

THE Associazione Medica Lombarda, as THE LANCET from time to time has shown, is eminent among her Italian sisters for work not more independent than sound, and the "full-dress discussion" the other evening, in which her leading members took part, on Phthisis, its Primary and Secondary Causes, was quite equal to her best traditions. Fifteen years ago phthisis was accepted by most pathologists as co-extensive with tuberculosis. It was an infective disease determined by the action exerted on various organs by the bacillus of Koch. The objection that it could be infective and at the same time hereditary was met by the explanation that not phthisis *per se* but the predisposition to phthisis was hereditary. The children of phthisical parents were thus particularly vulnerable in presence of the bacillus, a neglected "cold" or a slight influenza sufficing to invite the infection. The infective power of the bacillus was, indeed, the most formidable factor in the disease. No one was safe. Laboratory research showed the diffusion of the bacillus to be well-nigh limitless. Not only the air, but the food and drink, nay, the house furniture, the benches of schools, the compartments of railway carriages, the books of library shelves, and banknotes, all were potential or actual transmitters of the dreaded germ. 15 per cent. of the living harboured it; in the dead it was found in the ratio of 30 per cent. Panic at its ubiquity inspired the search for specifics against it. In spite, however, of antiseptic solutions, parasiticidal injections, and immunising serums innumerable the bacillus refused to yield, cropping up mercilessly in the sputum, to confirm what used to be ridiculed as an Italian superstition—viz., the danger of living near, or succeeding to, people given to coughing and clearing the throat. Of late years, however, the panic has died down. Phthisis is acknowledged to be eminently curable. Under sound hygiene pulmonary tuberculosis is daily being arrested. Surgical intervention often suffices to cure a peritoneal phthisis. The sputum is seen to be dangerous only in a state of perfect desiccation. Even the breath of the phthisical may be respired with impunity. The bacillus of Koch, though still a power, is no longer supreme according to many pathologists. According to others there are concomitant bacilli even more dangerous, to which that of Koch is simply the "crossing-sweeper" facilitating their entrance. Thus, these observers explain the fact that in all the more pronounced cases of phthisis there are found other bacilli; while those cases in which the bacillus of Koch is alone detected are generally mild and run an easily tractable course. The hectic fever, symptomatic of the graver forms of phthisis, is accounted for by these concomitant bacilli only. Yet another group of pathological assailants the bacillus of Koch has to confront. These would assign it a simply accidental *rôle*—appearing in local manifestations merely, manifestations well defined and eminently curable. The disease caused by it is nothing more than a scrofulosis, in which the glands, the skin, the cartilages, and the bones disclose its invasion, with a reaction for the most part favourable. The bacillus, for example, may lie hid in some viscus of a healthy subject whose resisting power by a blow or a wound is temporarily impaired, but which soon rights itself, to the expulsion of the intruder. Phthisis according to the consensus of debaters led by Dr. Gatti at the Associazione Medica Lombarda, being not due to the bacillus of Koch, being neither infective nor contagious, resolves itself into what it appeared to be to the former generation—a disease of nutrition, a perversion of hygienic conditions due to causes economic, social, and others having their roots in our *modus vivendi*. The primary, the essential factor in the evolution of the phthisical state is degeneration, organic decay, while the intervention of the bacillus of Koch represents only "un accidente terminale," a modification of a process already determined. In certain subjects, honeycombed by insufficient alimentation, tuberculosis is but an anticipation of the decomposition ensuing after interment. As, indeed, Virchow and Hansemann have shown, there are phthisical patients in whom the bacillus of Koch is "conspicuous by its absence," while there are maladies—diabetes, for example—in which tuberculosis is a complication almost invariably present. We return, then, to the pathology, the prophylaxis, and the therapeutics of our fathers—such, at least, is the outcome of the memorable discussion by the Milanese pathologists and consultants the other evening—and relegate to the first line among the causes and the cure of phthisis those factors and agents which have been temporarily pushed back into the second—factors represented by a violated hygiene, and agents recruited from the resources by which that hygiene is vindicated and restored.

Pellagra.

The "Response to Treatment" has always been valued as an aid to diagnosis, and if any doubt existed as to the nature or presence of pellagra it must have disappeared before the measures taken to combat it of late years. The Ministry of Agriculture has seen to the provision of bakeries, "essiccatoi" (drying apparatus), cheap kitchens, and better house accommodation is the pellagra-visited neighbourhood; and also has erected "pellagrosari," or places for the treatment of "pellagrosi" after the disease had acquired a foothold. For the latter purpose there were spent in 1892-93 5300 lire (£212); in 1893-94 as much as 20,050 lire (£802); and in 1894-95 the still larger sum of 33,922 lire 84 centesimi (about £556 18*s.* above the latter sum). The reports which the Ministero has received from the said neighbourhoods are unanimous in announcing a decrease in the malady consequent on the provisions referred to—all except Perugia, which (for certain local reasons) registers an augmentation. Improved health conditions, notably in the direction of wholesome alimentation, are thus demonstrated to be the one thing needful in preventing pellagra, and so the Ministero contemplates reinforcing itself by a further instalment of the same measures which have already proved their own efficacy and the wisdom of their promoters.

Jan. 9th.

Obituary.

SAMUEL W. BROADBENT, M.R.C.S. ENG.

A STRIKING personality has passed away by the death of Samuel Winn Broadbent, at his residence, Easington, County Durham, on the 29th ult. No man was better known or more respected in the county, and he was the veritable *doyen* of the country practitioners of the North-East of England. Born seventy-eight years ago in India, where his father was a Wesleyan missionary, he came to England at an early age, and after a sound preliminary education he was apprenticed to the late Mr. Henzell, surgeon, of Percy-street, Newcastle-on-Tyne. Later he attended lectures at the Newcastle School of Medicine and subsequently at the Middlesex Hospital, obtaining the M.R.C.S. Eng. in 1850. Of an adventurous spirit, he for some years acted as surgeon to a whaling fleet, and after a few years in practice in various parts of the county of Durham he was appointed surgeon to the collieries of the South Hetton Coal Company, which responsible post he held for over forty years, and when a few years ago he felt that the time had come for him to retire from his onerous duties the Company generously made him a retiring allowance in recognition of his past services. He then went to live at Easington and continued to act as medical officer to the Easington workhouse, an

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appointment which he held from the time it was built until he died. He joined the Volunteers shortly after they were formed, and by resigning only a few months before the V.D. was created missed that distinction, as he had very nearly completed his twenty years' service. He took an active and most energetic interest in the local medical societies and was an ex-president of the North of England branch of the British Medical Association and also of the Northumberland and Durham Medical Society and had been one of the most prominent members of the executive of these societies for many years. He was very regular in his attendance at the annual meetings of the British Medical Association, having been present on thirty-three occasions. He was an occasional contributor to the Transactions of the Northumberland and Durham Medical Society and frequently took part in its debates. Mr. Broadbent was a most hospitable man, a genial companion, and an excellent *raconteur*. The funeral, which took place on New Year's Day, was attended by the whole neighbourhood.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Josef von Gerlach, who may be called the Nestor of German anatomists. After taking his degree at Würzburg he visited London and other medical centres and settled down to private practice in Mayence. He found time and opportunity, however, of continuing his scientific work and published his well-known "Manual of General and Special Histology." He was subsequently appointed to the chair of Anatomy in Erlangen, which at that time implied his teaching pathological anatomy and physiology. He was relieved of the one by the appointment of Professor Zenker and of the other by that of Professor Rosenthal. His microscopical work has been productive of advance in science, especially in the staining of specimens and in the application of photography to the microscope.—Dr. Carl Heitzmann, after taking his degree in Vienna, settled in practice in New York, where he established a laboratory for medical microscopy and published an anatomical atlas of plates. He died in Rome after a protracted illness.—Dr. Asper Stadfeld, Professor of Gynæcology in Copenhagen.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates at the Primary Examination have passed in the under-mentioned subjects:—

PART I.

Biology.—A. E. Brown, Royal Free Hospital; R. Burnham, Charing-cross Hospital; T. M. Burton, A. M. Dodd, E. A. Dunn, A. E. Gilford, K. Heanley, H. M. O. Jones, D. E. Lockwood, L. S. Molony, F. M. Payne, and C. E. Sholl, Royal Free Hospital; and A. Turner, City School of Chemistry.

Materia Medica and Pharmacy—A. L. Bartram, Cambridge and Westminster Hospital; R. S. Elvins, Birmingham; T. B. Haig, St. Bartholomew's Hospital; H. Towers, Leeds; and M. E. Unwin, Royal Free Hospital.

PART II.

Anatomy and Physiology.—A. G. C. Davies and F. J. Featherstone, Guy's Hospital; C. S. Hawes, St. Bartholomew's Hospital; J. E. Howroyd, Leeds; E. Hudson, St. Thomas's Hospital; A. M. Macintosh, St. Mary's Hospital; C. B. Sells, Guy's Hospital; G. M. Smith, St. Thomas's Hospital; N. Walmisley, St. Bartholomew's Hospital; A. J. Watson, St. Mary's Hospital; and T. R. Wilshaw, Birmingham.

Anatomy.—S. K. Cama, Bombay; S. F. Cheesman, Charing-cross Hospital; A. Croneen, Guy's Hospital; G. A. Crowe, London Hospital; G. R. Lucas, Edinburgh and St. Bartholomew's Hospital; T. Morgan, Guy's Hospital; G. Steel, Cambridge; D. L. Thomas, Birmingham; and H. C. Woodward, Cambridge.

Physiology.—W. Alcock, Sheffield; E. C. W. Beasley, St. Mary's Hospital; J. C. S. Dunn, St. Bartholomew's Hospital; F. J. F. Jones, Guy's Hospital; S. Page, Birmingham; and T. M. Talbot, St. Bartholomew's Hospital.

FOOTBALL CASUALTIES.—While playing recently for the Brighton Association in a match against the Portsmouth team a player fractured his right fibula.—During a match on the 2nd inst. between the Old Windsor Club and a team of the *Windsor Chronicle* employés on the "Duke of Edinburgh" ground the Old Windsor back sustained severe injuries "below the ribs and in the abdomen" and was conveyed to the infirmary. He subsequently returned home and is now in a serious condition.—On Saturday last, in a match, Todmorden against Hebden Bridge, on the ground of the latter, a Todmorden player fractured his clavicle.—On the same day, at Lincoln, during a match, the Lincoln City against the Grimsby Town team, the City outside left fractured his ankle.

MR. EDWIN P. GUTTRIDGE, the medical officer of health, has been awarded ten guineas by the Maldon Town Council as an honorarium for extra work in superintending and managing during five months the Isolation Hospital.

LITERARY INTELLIGENCE.—Messrs. Baillière, Tindall, and Cox announce as ready for publication the seventh edition of Dr. Macnaughton Jones's "Diseases of Women and Uterine Therapeutics," which has been re-written and brought up to date; the fifth edition of Professor Delafield's well-known text-book of "Pathological Anatomy and Histology"; the third edition of Dr. Bosworth's "Treatise on Diseases of the Nose and Throat"; the second edition of Mr. Lennox Browne's "Diphtheria and its Associates," the first edition having been out of print for some months; and a translation by Dr. F. Lucas Benham of Professor Brouardel's classic work on "Death and Sudden Death." The same firm has also in the press a third edition of Dr. Ball's "Diseases of the Nose and Pharynx," and a new work by Mr. Mayo Collier on "Chronic Nasal Obstruction."

DIPHTHERIA IN LONDON.—The current registration year has opened in a very unpropitious manner in so far as fatal diphtheria in London is concerned. In the week ended with last Saturday there were registered in the administrative county 71 deaths from the disease, a number as many as 30 in excess of the corrected average for the first week of the ten years 1887–96. The totals for the three closing weeks of last year were severally 58, 38, and 49. Of the 71 deaths there were 68 in young persons aged from one year to twenty years; and the sanitary districts credited with more than one death were numerous, including Islington with 6, Shoreditch, Poplar, Wandsworth, and Camberwell each with 5, St. Pancras, Mile End Old Town, Bermondsey, and Lambeth, each with 4, and St. Marylebone, Whitechapel, Newington, and Woolwich, each with 3 deaths. There were 104 cases of diphtheria admitted to hospital last week, as compared with 125, 129, and 115 in the three weeks preceding, and there were 867 patients still under treatment on Saturday last in the London hospitals suffering from the malady. In addition to the deaths registered in the county of London there were no fewer than 14 last week in the outer ring of the metropolis, of which 3 were in persons belonging to the West Ham and 6 to the Edmonton registration districts. Thus, there were in one week 85 deaths referred to diphtheria in Greater London. The significance of these figures is seen when it is pointed out that in the whole of the thirty-three great towns of the Registrar-General there were only 103 deaths registered from the disease last week, and of the 30 outside Greater London 7 were in Birmingham, 4 in Leicester, and 3 each in Liverpool, Birkenhead, and Leeds.

THE CRAIG COLONY FOR EPILEPTICS.—The third annual report of this American institution, which has just been published, is a very interesting and useful document. The colony has been founded by the State of New York, and funds were available for purchasing a suitable area of land and for equipping it with the necessary appliances for a farm colony. Nearly 150 colonists have been admitted, all of whom take part in the work of the colony. It is not stated in the report to what extent and at what expense this has to be supplemented by skilled persons to direct the labour. As at the Chalfont Colony in this country the improvement in the mental and physical health of the colonists has been very pronounced, while the actual curative effect on the epileptic attacks has been less marked. Three patients had to be discharged on account of insanity. The report is supplemented by interesting analytical tables, showing the supposed cause of the fits in each case, the nature of the aura, the time of day at which fits occur most frequently, and so on. A full and very varied dietary for one week is given, which will be found useful by those who have to advise epileptics. Fresh vegetable food enters largely into the list; meat is allowed once a day. It is satisfactory to learn that the raising of garden produce, the tending of hens and other animals have been so successful that it is believed the colony will

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soon pay its own expenses. Of course this has only been possible by the wise arrangement of spending enough money at the outset to equip the institution thoroughly. The example of the New York State might well be copied by our Poor-law authorities and the epileptic colonies now in existence be taken in hand and generously supported. Excellent work is being done at Chalfont and other institutions, but for want of funds comparatively few colonists can yet be accommodated, and much outlay is still required before suitable employment can be found for all in summer and winter.

FREEMASONRY: THE RAHERE LODGE.—A regular meeting of the Rahere Lodge was held at Frascati's Restaurant, Oxford-street, on Thursday, Jan. 12th, 1897, W. Bro. Alfred Cooper, F.R.C.S. Eng., the W.M., in the chair. Dr. Lovell Drage and Dr. Eddowes were elected joining members of the Lodge; Bros. Owen Lankester, Horton-Smith, Gow, Laming Evans, Sloane, Perran, and McLean were admitted to the second degree, and Bros. Keetley and Newton to the third degree; and Dr. G. V. Worthington was initiated into Freemasonry. Bro. Reece, the treasurer, reported that the condition of the Lodge funds had enabled him to invest £300 in India Three per Cent. Stock. Forty-nine brethren afterwards dined together Bro. Sir Reginald Hanson, Bart., M.P., Bro. Col. Cooke, Bro. Anderson Bates of Grimsby, and Bro. J. E. Lane being amongst the guests.

BOOKS, ETC., RECEIVED.

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The Australasian Medical Directory and Handbook. Edited by L. Bruck. Fourth Edition. 1896.

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Microscopic Researches on the Formative Property of Glycogen. Part I., Physiological. By Chas. Creighton, M.D. Illustrated. 1896. 7s. 6d. net.

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A Manual of Midwifery. By A. L. Galabin, M.D. Cantab., F.R.C.P. Lond. Illustrated. Fourth Edition. 1897. Price 15s.

A Simple Method of Water Analysis. By J. C. Thresh, M.D. Vict., D.Sc. Lond, D.P.H. Camb. 1897. Price 2s. 6d.

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Atlas der Pathologischen Anatomie. II. Band. Von Dr. O. Bollinger. 1897.

Atlas und Grundriss der Traumatischen Frakturen und Luxationen. Von Dr. H. Helferich. 1897.

LEWIS, H. K., Gower-street, London, W.C.

On Ringworm: an Inquiry into the Plurality of its Fungi. By T. C. Fox, M.B. Lond., F.R.C.P., and F. R. Blaxall, M.D. Lond., D.P.H.

LONGMANS, GREEN, AND Co., London.

Diphtheria and Antitoxin. By Nestor Tirard, M.D. Lond. 1897. Price 7s. 6d.

MATE, W., AND SONS, Bournemouth.

Bournemouth Illustrated. Ninth edition. 1897. Reprint from the British Journal of Dermatology. Nos. 93-96, Vol. VIII.

NUTT, DAVID, Strand, London.

Cañba, the Guerilla Chief: a Real Romance of the Cuban Rebellion. By P. H. Emerson. 1897. Price 6s.

PENTLAND, YOUNG J., Edinburgh and London.

The Treatment of Wounds, Ulcers, and Abscesses. By W. Watson Cheyne, M.B. Edin., F.R.S., F.R.C.S. Second Edition. 1897.

SAMPSON LOW, MARSTON, AND Co., Fetter-lane, Fleet street, London.

Twentieth Century Practice. Edited by T. L. Stedman, M.D. Vol. VII.: Diseases of the Respiratory Organs and Blood, and Functional Sexual Disorders. 1896.

SMITH, ELDER, AND Co., Waterloo-place, London.

Dictionary of National Biography. Edited by Sidney Lee. Vol. XLIX., Robinson—Russell. 1897.

THE REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections. Part 6. 1896. Price 10s. 6d.

Monatsschrift für Psychiatrie und Neurologie. Januar, 1897, Band I., Heft I. (Williams and Norgate, Henrietta-street, Covent-garden, London); yearly subscription, 32s.—Cours de Minéralogie Biologique. J. Gaube (du Gers) (A. Maloine, Paris. 1897).—Proceedings of the Incorporated Society for Psychical Research. Part 31, Vol. XII. December, 1896 (Kegan Paul, Trench, Trübner, and Co., Charing Cross-road, London); price 2s. 6d.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALLEN, R. G., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health for Belper.

BARHAM, H. F. H., M.R.C.S., has been re-appointed Medical Officer for the First Sanitary District of the Hollingbourn Union.

BROOK, HENRY D., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed Medical Officer for the Second Sanitary and of the Workhouse of the Fareham Union.

COWEN, G., M.D. Dub., B.Ch., L.M.R.C.P. Irel., has been appointed Medical Officer for the Old and New Malden Sanitary District.

EVANS, HERBERT N., M.B. Oxon, M.R.C.S., has been appointed *pro tem.* Medical Officer of Health for the Seaford Urban Sanitary District.

FISHER, J. C., B.A., M.B. Oxon., has been appointed House Surgeon to the Radcliffe Infirmary, Oxford.

GAYLOR, E., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer for the Belper Rural Sanitary District.

GREEN, A. R., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the Bosbury Sanitary District of the Ledbury Union.

HALL, T. GREENWOOD, M.B., B.S. Durh., has been appointed Medical Officer to the Hospital and to the Board of Health, Koffyfontein.

HENRY, JOHN P., B.A., M.D., B.Ch. Dubl., L.M.R.C.P.I., has been appointed Divisional Surgeon to the Lewisham Police, vice J. Hammersley, deceased.

HOBHOUSE E., M.D., B.Ch. Oxon., M.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Physician to the Sussex County Hospital, Brighton, vice E. Mackey.

JONES, JOHN O., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Holywell Union Workhouse.

KEMPE, A. W., M.D. Brux., M.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health, Exeter Port.

LEE, J. A., M.B., C.M. Edin., has been appointed Medical Officer and Public Vaccinator for the Sanitary District of Eyam of the Bakswell Union.

LEGGE, RICHARD, M.D. Irel., has been appointed Medical Superintendent to the Derby County Asylum, vice J. Murray Lindsay, resigned.

LOTHIAN, ROBERT B., M.B., C.M. Glasg., has been appointed Casualty Surgeon, Northern Division of Police, Glasgow.

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MACKEY, E., M.D. Lond., M.R.C.P., L.R.C.S. Edin., M.R.C.S., has been appointed a Physician to the Sussex County Hospital, Brighton, vice J. Rutter.

RIGDEN, B., M.R.C.S., has been re-appointed Medical Officer to the Canterbury Dispensary.

RIGDEN, G., M.R.C.S., has been re-appointed a Medical Officer to the Canterbury Dispensary.

SHEARER, R. P., M.B., C.M. Glasg., has been re-appointed Medical Officer for the Gotham Sanitary District of the Basford Union.

SHORT, EDWD. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the No. 2 Sanitary District of the Parish of Alston-with-Garrigill.

SMITH, G. FRANCIS, M.R.C.S., L.R.C.P., has been appointed Honorary Medical Officer to the Watford District Cottage Hospital.

STILES, ARTHUR J., M.D. Edin., M.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer for the No. 3 Sanitary District of Deeping, St. Nicholas, and for the West Sanitary of Spalding, vice H. J. Stiles.

VAUGHAN, H. W., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer for Keyworth Sanitary District of the Bingham Union.

WADE, C. H., L.R.C.P. Lond., M.R.C.S., D.P.H., has been appointed *pro tem.* Medical Officer by the Corkington Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASTON UNION.—Resident Assistant Medical Officer at the Workhouse, Erdington, near Birmingham. Salary £100 per annum, together with furnished apartments, rations, washing, &c. Applications to the Clerk, Union Offices, Vauxhall-road, Birmingham.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Acting Physician.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant for three months. Non-resident. Honorarium 13 guineas.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary commences at £100 per annum, with prospect of increase to £250, with furnished apartments, board, attendance, and washing.

COUNTY LUNATIC ASYLUM, Lancaster.—Assistant Medical Officer, unmarried. Salary to commence at £100 per annum, with board, apartments, attendance, and washing.

FLINTSHIRE DISPENSARY.—Resident House Surgeon. Salary £120 a year, with furnished house, rent and taxes free, also coal, light, water, and cleaning, or in lieu thereof the sum of £20 per annum. Applications to the Secretary, Board-room, Holywell, North Wales.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

JAFFRAY SUBURBAN BRANCH OF THE GENERAL HOSPITAL, Gravelly-hill, near Birmingham.—Resident Medical and Surgical Officer. Salary £150 per annum, with board, residence, and washing.

LEICESTER INFIRMARY.—House Surgeon. Salary £120 for the first year, rising at the rate of £10 per annum until the third year. Board, apartments, and washing provided.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £80, to be increased to £90 after the first year's services, with apartments, board, and attendance. Applications to the Secretary, 34, Moorfields, Liverpool.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Board, washing, and residence in the hospital provided.

MIDDLESBROUGH NEW ASYLUM.—Medical Superintendent. House (unfurnished, with rates and taxes free), coal, gas, water, and washing will be allowed. Salary required to be stated.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Resident Medical Officer for six months. Salary £30 per annum, with board, attendance, and washing.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill Stoke-upon-Trent.—Assistant House Surgeon, for six months. Board, apartments, and washing provided.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon, for six months. Board, lodging, and washing provided.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—Assistant House Surgeon. Salary at the rate of £20 per annum, with board and lodging.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Physician.

SUFFOLK COUNTY LUNATIC ASYLUM.—Medical Superintendent at Melton, near Woodbridge. Salary £600 a year, with furnished house (excluding plate and linen), including all rates and taxes in respect of same, fuel, light, garden produce, and laundry. Applications to the Clerk, County Hall, Ipswich.

SUSSEX COUNTY HOSPITAL, Brighton.—House Surgeon, unmarried. Salary £120, rising to £140 per annum, at the discretion of the Committee of Management, with board and residence in the hospital and washing.

Births, Marriages, and Deaths.

BIRTHS.

ANDERSON.—At 5, Rue du Bois de Boulogne, Paris, on Jan. 8th, the wife of Dr. D. E. Anderson, of a son.

ANDRÉ.—On Jan. 7th, at The Gorse, Sidlesham, Chichester, the wife of J. E. F. André, M.R.C.S., L.R.C.P., of a daughter.

COX.—On Jan. 2nd, at Duffield House, Watford, the wife of Alfred E. Cox, M.R.C.S., L.R.C.P., of a daughter.

CROWDY.—On Jan. 7th, at Belvedere House, Torquay, the wife of F. D. Crowdy, M.B. Oxon., of a son.

D'ERF WHEELER.—On Dec. 20th, 1896, at Jerusalem, the wife of Percy D'Erf Wheeler, M.D., F.R.C.S.E., F.R.G.S., of a son.

GOWAN.—On Jan. 9th, at Upper Woburn-place, the wife of P. Gowan, M.D., of a son.

HEATH.—On Jan. 6th, at Cavendish-place, Cavendish-square, W., the wife of Charles J. Heath, F.R.C.S., of a daughter.

PARKHURST.—On Jan. 9th, at Southampton, the wife of Rodie Parkhurst, M.B., of a daughter.

RANDALL.—On Jan. 8th, at Merton-road, Wimbledon, the wife of Philip N. Randall, M.B., Surgeon R.N., of a son.

RUSHWORTH.—On Jan. 4th, at Beechfield, Walton-on-Thames, the wife of Norman Rushworth, M.R.C.S., L.R.C.P., prematurely, of a daughter, who survived her birth only a few hours.

MARRIAGES.

BAKER—MACPHERSON.—At the home of the bride, James Baker, F.R.C.S., late of South Australia, to Flora, eldest daughter of Donald Macpherson, of Ferndale, Riverton, N.Z.

FORT—CARRUTHERS.—On Jan. 9th, at Dorchester Abbey, Oxon., Henry Richard Trecothick Fort, B.A. Oxon., L.R.C.P., M.R.C.S., youngest son of the Rev. Richard Fort, vicar of Coopersale, Essex, to Blanche Isabelle Carruthers, youngest daughter of the late Lieutenant-Colonel G. Travers Sayer Carruthers, K.M., of Cawdry House, Leek, Staffs.

GARDNER—BELL.—On Jan. 6th, at the parish church, Rawdon, James Cardwell Gardner, M.B., B.C. Cantab., of Amersham, Bucks, to Ethel Marion, third daughter of the late Edmund Wilkinson Bell, of Holmehurst, Rawdon, Yorkshire.

HUDSON—DALTON.—On Jan. 9th, at the parish church, Hampstead, Surgeon-Major Harry Chalmers Hudson, of the 16th Bengal Cavalry, to Margaret Frederica, eldest daughter of Cornelius Neale Dalton, C.B., Eskhaven, East Heath-road, Hampstead.

POWELL—WORTHINGTON.—On Jan. 6th, at Northlew, North Devon, John Allman Powell, M.D., of St. Cronan's, Southampton, to Millicent Mabel, elder daughter of the Rev. John Worthington, rector of Northlew.

DEATHS.

CONYERS.—On Dec. 20th, 1896, at the residence of his nephew, Dr. J. E. Godfrey, Littledale, Friendship, Demerara, British Guiana, Brigade-Surgeon James Saltus Conyers, M.D., on the Retired List of the Army Medical Staff (formerly of the 8th Kings).

HYSLOP.—On the 7th inst., at Palmerston-place, Edinburgh, James McAdam Hyslop, M.D., Surgeon-Major, late of the Bombay Army.

JALLAND.—On Jan. 8th, at Rollestone House, Horncastle, Robert Wallace Jalland, M.B., of Horncastle, and Assouan, Upper Egypt.

MANIFOLD.—On Jan. 6th, at Twyford Lodge, Putney, S.W., Surgeon-General Michael Fenton Manifold, late 77th and 34th Regiments, aged 74 years.

MILTON.—On Jan. 9th, at Menzies, West Australia, William Frederick Edward Milton, M.R.C.S., sixth son of the late Sir John Milton, C.B., aged 33.

MOUAT.—On Jan. 12th, at Durham-villas, Kensington, Frederic John Mouat, M.D., F.R.C.S., LL.D., Deputy-Inspector-General Hospital, Bengal (Retired), formerly Inspector-General Prisons, Bengal, and late Inspector Local Government Board.

STARK.—On Jan. 3rd, at his residence, Abbey-road, Barrow-in-Furness, Lancashire, Peter Wood Stark, M.D., aged 67 years.

TAYLOR.—On Jan. 3rd, at the British Home, Streatham, Henry Taylor, M.R.C.S., L.S.A., late of Haydon-park-road, Wimbledon.

UNICUME.—On Jan. 1st, at his residence, Headcorn, Kent, Thomas Unicume, M.R.C.S., L.R.C.P., aged 47 years.

WHITE.—On Jan. 11th, at Springfield, Wigan, James White, M.R.C.S., J.P., third son of the late Joseph White, of Sutton Hall, Cheshire, aged 73 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (20th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (21st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (23rd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (18th).—SOCIETY OF ARTS.—8 P.M. Mr. W. Burton: Material and Design in Pottery. (Cantor Lecture.)

TUESDAY (19th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Papers:—Mr. B. Pitts and Mr. S. G. Shattock: Non-calcifying Plastic Osteitis.—Dr. A. A. Kanthack and Mr. T. S. Pigg: Sarcoma and Carcinoma of Testis, re-examination of a Specimen described by Sir James Paget fifty years ago.—Mr. J. W. W. Stephens and Mr. Parfitt: Three Cases of Hæmorrhagic Diphtheria. Card Specimens:—Mr. E. P. Paton: (1) Fracture of both Bones of Forearm at Epiphyses; (2) Prevertebral Abscess.

ROYAL STATISTICAL SOCIETY (Royal United Service Institution, Whitehall, S.W.).—5.30 P.M. Mr. T. A. Welton: Local Death-rates in England and Wales in the Ten Years, 1881-90.

WEDNESDAY (20th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.).—8 P.M. Annual Meeting. President's Address.

ROYAL METEOROLOGICAL SOCIETY (25, Gt. George-st., Westminster).—7.30 P.M. Ordinary Meeting. 7.45 P.M. Annual General Meeting. Report of the Council; Election of Officers and Council; Address by the President (Mr. E. Mawley): Shade Temperature (illustrated by lantern slides).

SOCIETY OF ARTS.—8 P.M. M. Emile Gautier: The Roller Boat of Mons. Bazin.

THURSDAY (21st).—HARVEIAN SOCIETY (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.P.M. Annual Meeting. President's Address; Election of Officers. Conversazione.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Dr. A. E. Bridger: Disorders Favoured or Produced by Anæsthesia, with Clinical Cases.

FRIDAY (22nd).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening (Living Specimens). Mr. H. Marsh: Two Cases of Coins impacted in the Œsophagus.—Mr. H. G. Croly: Case of Successful Ligature of the Left Subclavian Artery in the Second Part for Aneurysm.—Mr. G. Stoker: Case of Chronic Ulcer and Case of Lupus treated by Oxygen. Other cases will be shown. Patients in attendance at 8 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (19th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Investigation of Cases of Ear Disease.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—Dr. T. D. Savill: On Nervousness, its Causes and Treatment.

WEDNESDAY (20th).—HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Green: Clinical Demonstration in the Wards.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. McAdam Eccles: Cases of Hernia.

FRIDAY (22nd).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Mr. Lennox Browne: Syphilis in the Intermediary and Tertiary Stages.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 14th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 8	29·66	N.E.	42	42	44	44	42	0·62	Raining
,, 9	29·64	E.	41	41	45	45	41	0·05	Raining
,, 10	29·61	S.E.	46	45	51	48	38	0·07	Cloudy
,, 11	29·69	N.E.	40	39	42	42	38	...	Overcast
,, 12	29·71	N.E.	42	41	45	44	40	...	Overcast
,, 13	29·81	N.E.	39	38	45	43	38	...	Overcast
,, 14	30·12	N.E.	40	38	47	41	39	...	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

"THE PREVENTION OF THREAD WORMS: A QUERY."

To the Editors of THE LANCET.

SIRS,—Provided the little girl has no specific ailment rendering the constitution a favourable one for the thriving of parasites, and supposing her to be only suffering from the general debility usually associated with the existence of thread-worms, your correspondent "Persevere" could scarcely do better than administer such a tonic as syrupus ferri phosphatis compositus (Parrish) for some weeks, and give injections of infusum quassiæ, or common salt solution, three times a week as long as any signs of presence of the worms remain, and perhaps once or twice afterwards. I am, Sirs, yours faithfully,

Buckhurst Hill, Jan. 9th, 1897. HAYDN BROWN, L.R.C.P., &c., Edin.

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THE POLICE AND MEDICAL AID.

To the Editors of THE LANCET.

SIRS.—On the 20th ult., coming upon a crowd in Kensington High-street I went as usual to see if medical assistance was needed. I found a ring of six or eight constables proffering some liquid to a man lying on the pavement and looking very ill. Receiving from a constable a merely negative reply to my query as to whether the invalid had been already seen by a medical man, I proffered my services but was brusquely informed "We do not call you in." In the interests of the public I at once reported the matter to the local superintendent, asking him if, in such a case, the police were justified in refusing gratuitous medical assistance on their own responsibility. I have now received a reply and enclose it with this for your editorial comments.

I am, Sirs, yours faithfully,

Jan. 8th, 1897. ROBERT J. COLENSO.

"New Scotland Yard, 6th Jan. 1897.

"SIR,—With reference to your letter of the 20th ultimo I am directed by the Commissioner of Police of the Metropolis to acquaint you that, in cases of emergency it would be the duty of the police to accept the services of any medical man who was kind enough to proffer them. In the case in question, however, there was no such emergency, and, moreover, the divisional surgeon had been sent for and his arrival was momentarily expected. On occasions such as these the police must necessarily act on their own responsibility, and, while acting in the interests of the public, must at the same time, so far as possible, avoid the expense incurred by accepting the services of two medical men in one case.

"I am, at the same time, to add that the Commissioner fully appreciates the kindly feeling which prompted you to offer your services, and to express his regret that the officer in the case was not more explicit in explaining that he was not able to accept your aid because the divisional surgeon had been already sent for.

"I am, Sir, your obedient servant,

"C. L. BATHURST, Chief Clerk."

*** The policemen incurred a grave responsibility in deciding to dispense with the proffered medical services. They should have explained that the divisional surgeon was expected and that the case must be considered as under his charge, and then have availed themselves of the aid at hand. It is not always a good thing "to proffer liquid to a man lying on the pavement," even if the treatment suggests itself to the collective medical wisdom of six or eight policemen. If by any chance, under such circumstances, the wrong sort of "liquid" were administered to the wrong sort of case and a coroner's inquest should result, in what sort of a position would the policemen stand when it was given in evidence that an opportunity of obtaining medical advice had been brusquely ignored?—ED. L.

J. J. H. (Lancs).—The charge made was not in conformity with professional usage, but our correspondent will remember, firstly, that there was no legal obligation upon the medical man to attend the young lady for nothing, and, secondly, that we are expressing an opinion upon the statement of one side only.

"MALT NUTRINE."

THE Anheuser-Busch Brewing Association of New York writes as follows in reference to an analytical notice of this preparation which appeared in THE LANCET of Nov. 14th: "While we have no possible reason to doubt that your examination of 'Malt Nutrine' was conducted with your usual care and precision there appears to us to have been a slight error (probably clerical or typographical) in regard to the reported proportion of alcohol." In spite of the results being higher, as is pointed out, than those obtained by other journals and authorities we find we committed no error, clerical, typographical, or otherwise. On repeating the analysis the result was precisely the same. The sample thus tested belonged to the consignment which was submitted to us at the first.

S. E.—It is our belief that it has been held that such notices should be stamped, but we have been unable to find the decision in a similar case.

"RONTOGRAPHY"?

To the Editors of THE LANCET.

SIRS,—Not only the medical, but the whole scientific world is at present much exercised over Professor Roentgen's great discovery. It seems that he, with that modesty so characteristic of great men, has called the rays the x rays; but no term quite agreed upon generally has been found to describe the images or pictures. Sometimes they are called shadowgraphs—a hybrid name—sometimes skiagraphs, and not infrequently photographs. It has occurred to me that it might be a gain to exact nomenclature, and a worthy tribute to the inventor, if they were called Rontographs, and the process Rontography. The verb would also, of course, be Rontograph. I leave out the mark to show that the vowel in the first syllable is modified, as this sound is more easy of pronunciation to an English ear. I leave this consideration for the opinion of your numerous readers.

I am, Sirs, yours faithfully,

Elgin, N.B., Jan. 11th, 1897. TERMINOLOGY.

"THE UNQUALIFIED ASSISTANT."

To the Editors of THE LANCET.

SIRS,—Now that the election of direct representatives to the General Medical Council is a thing of the past let me ask, What is the use of the Council? It certainly affords the representatives a trip to headquarters twice a year but that is about all. Regarding the question of the unqualified assistant, the Council holds a very peculiar position. It does not recognise such an assistant, but all the same he flourishes. The General Medical Council strikes with one hand and pats with the other. In my district there are four qualified medical practitioners; one of these employs two unqualified assistants who have been here for nearly twenty years. One of the assistants lives near the surgery, while the second conducts a branch practice nearly three miles distant. This is in defiance of the Council, which knows of such a practice but will not take up the case without a local complaint. Surely this is red tapeism with a vengeance. Death and other certificates have been granted by these unqualified men and, what is worse, these papers were accepted by the local registrar.

I am, Sirs, yours truly,

Jan. 10th, 1897. REGISTERED.

Enquirer.—It seems to us probable that the General Medical Council would regard the relation between principal and assistant as one of "covering."

A NEW TERROR.

AT a recent meeting of one of the medical societies a gynæcologist related a story which at once shows commendable forethought on the part of the young woman and the dangers, other than physical or physiological, which may be the price paid for "irregular unions." A single woman, aged twenty-two years, had some two years previously given birth to a child. Of late she had ceased to menstruate, and as her abdomen began to enlarge she thought she was again pregnant, so she accordingly took the precaution of obtaining from the supposed father a weekly allowance. Her next step was to consult the gynæcologist in question, who, finding her symptoms to be due to an ovarian cyst, removed this. We presume that when the putative father finds that the lady, like the widow in "The School for Scandal," has "recovered her shape in a surprising manner," that the weekly allowance will cease, but this is possibly the first case on record where an ovarian cyst has been a source of income to the possessor.

M. D.—The evidence given before the Royal Commission on Vaccination is comprised within five volumes—viz.: First Report, dated August 12th, 1889, price 2*s.* 3*d.*; Second Report, dated May 29th, 1890, price 7*s.* 4*d.*; Third Report, dated August 7th, 1890, price 7*s.* 6*d.*; Fourth Report, dated July 28th, 1891, price 6*s.* 7*d.* The Sixth Report is not yet issued. Those published can be obtained from Messrs. Eyre and Spottiswoode. The Commission held its first sitting in June 1889, and in April, 1892, issued an interim report (Fifth Report, price 1*d.*) dealing with the question of cumulative penalties. Its final report (with Appendices I. and II. and the dissent of Dr. Collins and Mr. Picton, price 1*s.* 10*d.*) was issued in August, 1896. There still remains to be issued as separate volumes Appendices III. to IX. to the final report, comprising reports upon small-pox outbreaks, undertaken on behalf of the Commission, and reports upon vaccinal injuries. We believe that most, if not all, of the outstanding reports will be issued after the meeting of Parliament.

"THE LAWRENCE PROCESS OF SOFTENING AND STERILISING WATER."

THE apparatus described in the article which appeared in our issue two weeks ago under the above heading is made by The Lawrence Water Steriliser Co., Norland Yard Works, Uxbridge-road, W.

M. O. H. has omitted to send us his name and address.

During the week marked copies of the following newspapers have been received:—*Wolverhampton Chronicle, Mid-Surrey Gazette, South-Western Star, Worcester Echo, Daily Mail, Dunstable Borough Gazette, Jackson's Oxford Journal, Times of Ceylon, Pullen's Kent Argus, Newcastle Journal, Brighton Argus, Daily Chronicle, Times of India, Dundee Courier, Hastings News, Birmingham Gazette, Pioneer Mail, Builder, Cambrian, Rochester Journal, Liverpool Daily Post, Tunbridge Telegraph, Architect, Norfolk Chronicle, Thanet Advertiser, Berkshire Chronicle, Bristol Mercury, East Anglian Daily Times, Kentish Mercury, Yorkshire Post, Hull News, Sheffield Telegraph, Manchester Guardian, Leeds Mercury, Scotsman, Leicester Post, Bradford Observer, Sussex Daily News, Auckland Times, Woking Mail, Windsor Express, Lincolnshire Echo, Sanitary Record, Egyptian Gazette, Reading Mercury, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Hertfordshire Mercury, Lincolnshire Chronicle, City Press, Le Courrier de la Presse, Manchester Courier, Mining Journal, Local Government Journal, Surrey Advertiser, Derbyshire Courier, South Africa, Macclesfield Courier, Southend Standard, Kelso Mail, Dereham Standard, Henley Standard, Salisbury Journal, Burnley Express, Inverness Courier, West Middlesex Herald, Daily Argus, Crewe and Nantwich Advertiser, Bucks Standard, Bristol Times and Mirror, &c.*

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Valedictory Address
ON
ANTISEPTIC MIDWIFERY.

Delivered before the British Gynæcological Society on Jan. 14th, 1897,

BY CLEMENT GODSON, M.D. ABERD., M.R.C.P. LOND,
PRESIDENT OF THE SOCIETY, CONSULTING PHYSICIAN TO THE CITY OF LONDON LYING-IN HOSPITAL.

GENTLEMEN,—It has been customary at this meeting of the Society for the outgoing President to deliver a valedictory or farewell address, and the subject not infrequently taken has been a review of the work done by the Society during the past year. Your last two Presidents, Professor Savage and Mr. Jessett adopted this plan, and last January in my address—not a valedictory one, however, owing to your having paid me the compliment of electing me to occupy the chair for a second year—I followed their example. But now, in order not to make this appear an established custom, I am taking a different course. One of your former Presidents, Dr. Grigg, Physician to Queen Charlotte's Lying-in Hospital, at the end of his inaugural address, said "the lateness of the hour prevents my touching upon the question of the influence of antiseptics during parturition. I believe that it will be found that antiseptics have revolutionised the rules of obstetric practice." Another of your past Presidents, Dr. Bantock, quite recently writes[1]: "He asks me to explain the marvellous effects of the antiseptic method in midwifery practice; I say they are due to the adoption of the principle of cleanliness, and on the contrary side would call his attention to the large number of deaths due to poisoning by corrosive sublimate which medical literature affords." The opinions of your two past presidents are so at variance with one another, that I thought I could not do better than take up this subject for my address this evening, and give you some account of the City of London Lying-in Hospital, and the results to the patients, which have not yet been published except in the annual reports of the hospital, in order to corroborate the testimony given respecting the General Lying-in Hospital since corrosive sublimate was introduced there as an antiseptic by Sir John Williams and Dr. Champneys in May, 1884, who followed the example which had been set by Dr. Tarnier in the Maternity Hospital in Paris.

It was the publication of the admirable results obtained by the physicians at the General Lying-in Hospital that decided us to discard carbolic acid in favour of corrosive sublimate as our antiseptic, when the City of London Lying-in Hospital was re-opened on July 1st, 1886, after having been closed for a short period for thorough cleansing, as was the annual custom. The strength of the solution used was 1 in 1000 for the hands of the attendants, and 1 in 2000 for vaginal irrigation. I gave a full account of how it was employed in a lecture I delivered at the Midwives' Institute and Trained Nurses' Club on Oct. 14th, 1887, which was subsequently published and distributed among the midwives and nurses in pamphlet form; and, except in small details, it has been used in the same manner up to the present time, Dec. 31st, 1896, just ten and a half years, on 4608 women, without a suspicion of mercurial poisoning in one.[2] Therefore I think we may at once dismiss the idea of any risk of poisoning in the way in which it is now used, and should be used, and it will probably be found that what Dr. Bantock refers to relates to when intra-uterine injections were employed of a strength of 1 in 1000, or stronger, such as those reported by Dr. Dakin in a paper on Mercurialism in Lying-in Women undergoing Sublimate Irrigation, read at the meeting of the Obstetrical Society of London in December, 1886. Dr. Dakin brought the subject forward not with the view of advocating the discontinuance of its use, but to endeavour to elicit the best means of employing it with safety, for he says, "the results at the General Lying-in Hospital have been such as to make the physicians loth to dispense with it."

In an admirable address[3] by Dr. Cullingworth on "Puerperal Fever a Preventable Disease," he says: "Until the year 1877 this hospital [the General Lying-in Hospital] was scarcely ever free from puerperal fever, and the mortality, always high, occasionally became fearful. In 1838 of 71 women delivered 19 died; in 1861 14 died out of 195; and in 1877 9 out of 63. On several occasions the hospital had to be closed for long periods, and thousands of pounds were spent on the sanitary improvement of the building. In October, 1879, this institution, having been closed for two years, was re-opened, and has since been conducted on antiseptic principles, the details varying from time to time as increased knowledge and experience have dictated. Mark the result," and he gives the following table:—

Period.	Deliveries.	Deaths.	Average death-rate from all causes.
			Per cent.
1833 to 1860	5833	180	1 in $32\frac{1}{4}$ = 3·088
1861 to 1877	3773	64	1 ,, $58\frac{7}{8}$ = 1·696
1880 to 1887 — antiseptic period	2585	16	1 ,, $161\frac{1}{2}$ = 0·618

This last period of eight years takes in three varieties of antiseptics used, first carbolic acid, next permanganate of potash, and finally corrosive sublimate. Dr. Boxall, in a masterly paper read at the June and July, 1890, meetings of the Obstetrical Society, (which I recommend to the attention of you all) gives another period, from the time corrosive sublimate alone was used—May 1st, 1884, to June 30th, 1889, 2150 deliveries, 9 deaths, 1 in 239 = 0·418 per cent.—a much greater diminution in the death-rate.

I propose to contrast the results at the City of London Lying-in Hospital from the time that I became connected with it, in March, 1870, up to the end of April, 1886—a period of 16 years—with that commencing July 1st, 1886, when corrosive sublimate as the antiseptic came into use there, up to Dec. 31st, 1896—a period of $10\frac{1}{2}$ years,—and I think you will find that it thoroughly bears out what Dr. Cullingworth has said in his address and what Stadfelt of Copenhagen has expressed, his opinion being emphatically endorsed by Dr. Boxall in his paper to which I have referred,—"the belief that the hygiene of a maternity depends less upon its construction and its age than upon the hygienic principles upon which it is directed and upon the perseverance with which these principles are carried out in the daily practice." For you will learn that while structural alterations failed to improve the condition at the City of London Lying-in Hospital, hygienic principles and, markedly, the employment of corrosive sublimate produced an extraordinary change for the better.

I will say a few words about the hospital itself, and my connexion with it. The present building was erected in the City-road, at the corner of Old-street, in 1771, and was opened for the reception of patients on March 31st, 1773—so that it is 124 years old. There is not now, nor has there ever been, a house surgeon; the chief resident is termed matron and midwife. There is only one medical officer in charge, who resides in the neighbourhood and visits the hospital daily and whenever required. He is termed the surgeon-accoucheur. I took over the duties of this office in March, 1870, though I was not permanently appointed to fill it till the following July. There are two other medical officers, a consulting physician and a consulting surgeon. These are not complimentary honorary appointments as the term "consulting" often implies. The surgeon-accoucheur is expected to call to his aid the consulting physician whenever he is in difficulty in a delivery or in any case of serious illness, and he has the consulting surgeon to appeal to in any case that is surgical outside midwifery and gynæcology. Both these medical officers have a seat on the managing committee. I resigned my appointment of surgeon-accoucheur in 1871, and in 1872 was elected from among the governors a member of the committee of management, the meetings of which I attended as regularly as possible up to July, 1881, when Dr. Greenhalgh resigned his office of

[1] Medical Press and Circular, Nov. 18th, 1896.

[2] A vaginal douche of 1 in 2000 at a temperature of 115° is given immediately after the delivery of the placenta, and three similar douches subsequently at intervals of night and morning; then iodine douches are given instead of sublimate.

[3] Delivered at St. Thomas's Hospital, London, and published by J. & A. Churchill, 1888.

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consulting physician, and I was appointed in his place; so that it will be seen that for nearly twenty-seven years I have taken an active part in the affairs of the hospital.

In 1870, when I took over the medical charge, the patients were dying in the proportion of 1 in 19—12 deaths occurring among the 227 women delivered—so that as soon as possible, seconded by Dr. Greenhalgh, I appealed to the committee to close the hospital. Its doors were shut on June 15th for three months in response to our entreaty. I immediately set to work to endeavour to discover the defects and get them rectified as far as possible, and what was done is recorded in the Annual Report for 1870. "Your committee have had the building painted and coloured throughout, have done away with all the old bedsteads, and replaced them with iron ones without curtains. Palliasses and hair mattresses have been provided in the place of the old feather beds, and all other furniture likely to retain infection has been removed. In fact, the wards have been almost entirely re-furnished. Your committee have also had all the drains opened and double trapped at all the gratings and down spouts, and all cesspools filled with concrete. The wards have been thoroughly fumigated with chlorine gas and every means has been used to get rid of all infection." The result was that, from the re-opening on Sept. 21st to the end of the year, 103 women were confined with only one death, reducing the mortality for the whole year to 1 in 25. In 1873 it was 1 in 50, and in 1876 and 1877, the two years taken together, 1 in 45, so that, on Nov. 24th, 1877, the medical officers again appealed to the committee to close the hospital. This was done on Dec. 1st. "It was resolved that Dr. de Chaumont of Netley be requested to inspect the hospital, and report on the ventilation and drainage with a view to their improvement." The result of this was that great alterations were made, at an outlay of upwards of £4,500. The hospital, in its reconstructed form, was re-opened on April 16th, 1879, after having been closed for sixteen months—and with what result? 287 women were delivered during the remainder of the year with only one death. But what a crushing disappointment came next year (1880); twelve deaths among 383 women delivered—one in thirty-two; and eleven of these were in the first half of the year, out of 196 deliveries—one in nineteen. Does not this bear out the opinions I have expressed in the earlier part of my address as to structural improvements.

In the following year, 1881, there was again a large expenditure in this way, nearly £600, and with what result? At a meeting of the committee held on April 28th, 1882, the medical staff reported that the sanitary condition of the hospital was very unsatisfactory and recommended that it be closed at once. The committee then resolved forthwith to act upon the advice of the medical officers, and appointed a sub-committee to inquire into the cause of the evil complained of. After several meetings the sub-committee presented a report to a special Court of Governors on June 2nd, recommending that the hospital be pulled down and rebuilt. Fancy this, after a recent expenditure of upwards of £5,000 on the buildings. The special court, however, took exception to this report and passed a resolution appointing a sub-committee from among the governors to coöperate with the committee of management "to report upon the present system of management adopted at the hospital." After several meetings the following report was presented: "It is recommended that the hospital be thoroughly inspected as to sanitary arrangements, and that it be at once cleansed, whitewashed, &c., and re-opened as soon as possible, and that it be closed for thorough cleansing for a month every year. That the back part of the hospital be pulled down and a one-storeyed building be put up, together with other alterations, at a cost not exceeding £1000." This was done and the hospital was partially re-opened on Oct. 1st, after having been closed for five months.

But, little more than five months later, on Feb. 17th, 1883, in consequence of the unhealthy state of the wards, the committee, on the recommendation of the medical staff, again closed the hospital and appointed a sub-committee to inquire into the sanitary condition of the hospital generally. Their report was to this effect: "That, as far as the construction of the hospital is concerned, no alteration is required. That certain improvements recommended by Dr. Pavy, the medical officer of health, be effected as regards the soiled linen shoots. That the wards be at once disinfected, cleaned, and whitewashed, and that the hospital be re-opened as soon after April 1st as possible." There were some other less important recommendations. The hospital was re-opened on April 20th, and between that date and the end of the year 209 women were delivered with but two deaths, 1 in 104, and yet, in the two years 1882-83 taken together, the mortality rose to no less than 1 in 23. In 1884-85 combined it was 1 in 48. In 1886, up to the closure on May 14th, 3 women died out of the 133 delivered, 1 in 44; and now we come to the period when the sublimate treatment commenced.

From the re-opening under its beneficial influence on July 1st, 1886, to Sept. 30th, 1887, 420 confinements took place without any death. From the same date, July 1st, 1886, to Dec. 31st, 1896 (ten and a half years) 4608 women were delivered with 11 deaths: mortality 1 in 419, or 2·387 per 1000. From Jan. 1st, 1892 to Dec 31st, 1896 (five years), 2392 deliveries with 3 deaths—1 in 797 = or 1·250, i.e., 1¼ per 1000, and these deaths were: 1. Sudden death in 1893 from pulmonary embolism on the third day after delivery (patient had shown no signs of illness up to the occurrence; and the report of the necropsy by Dr. Tooth, Demonstrator of Morbid Pathology to St. Bartholomew's Hospital, was "embolism of the pulmonary artery; no septic condition present.") 2. The second death occurred in 1894, from puerperal eclampsia, and took place on the third day after delivery. 3. The third death occurred in 1895 from puerperal eclampsia the day after delivery. So that we have in 1892, 487 deliveries with no death; in 1893, 430 deliveries with 1 death from pulmonary embolism; in 1894, 492 deliveries with 1 death from eclampsia; in 1895, 490 deliveries, with 1 death from eclampsia; in 1896, 493 deliveries with no death. Such a low rate of mortality as this one cannot expect to maintain, when it becomes a matter of fortune how many deaths from non-preventable causes may arise, such as the three from eclampsia and pulmonary embolism met with in the last five years. Only on Dec. 26th last I was called to the hospital to a severe case of eclampsia; the patient has happily recovered, but had she died it would not have enabled me to say we had had no death in the year 1896, and it would have increased the rate of mortality in the last five years.

Thus it will be seen that in the last five years among 2392 deliveries there has been no death in which septicæmia could have borne any part; and there has been also very little illness during this time. In the past year I have only been asked to see one patient who had a high temperature, and she was discharged quite well. I am assured that all the patients have been in a satisfactory state of health before they were allowed to leave the hospital. A total mortality of 1¼ per 1000 is, indeed, I think, something to be proud of—5 in 4000—and no death from septic causes. This seems to justify the title of Dr. Cullingworth's address, "Puerperal Fever a Preventable Disease"; rather different to the time of my introduction to the City of London Lying-in Hospital, when 1 in 19 was dying.

I do not dispute for one instant the great share that cleanliness plays in these results. My late colleague, Dr. Matthews Duncan, spoke of antiseptic precautions as transcendental cleanliness.[4] He had, he said, always defended the good or the better hospitals, and he was proud to know that now, when thoroughly antiseptically managed, they needed no defence. Their mortality was equal to, if not less than, that of private practice. During his whole life he (Dr. Matthews Duncan) had watched the generous and persevering attempts of his brethren to improve midwifery hospitals. Long ago, in Dr. Rigby's time, he came to London and saw a great ventilating scheme which was to work wonders. Architectural arrangements, drainage, ventilation, segregation and drugs had all been tried and all without securing success. The mortality in hospitals was terrible. He did not know what it was in private practice; probably it was as bad, or nearly as bad, as in big hospitals. Antiseptics, and antiseptics alone, had brought success and had sustained success. It was, he knew, common in highly respected quarters in London to attribute this modern success or diminished mortality in general hospitals, as in lying-in hospitals, to many factors—to improved feeding, housing, cleanliness, nursing, and antiseptics; and no doubt all were important, but all had failed till the antiseptic era, and all would fail again were antiseptic precautions—transcendental cleanliness—neglected. In his valuable book, "Mortality of

[4] Transactions of the Obstetrical Society, vol. xxvii, p. 215. Discussion on Dr. (now Sir) W. O. Priestley's paper, Antiseptics in Lying-in Hospitals.

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Childbed and Maternity Hospitals,[5] Dr. Matthews Duncan says: "In a well-managed hospital they die at the rate of 1 in 100; all the country over the mortality is probably not much less, in the best private practice it appears to be greater." "In the years of my private practice of which I have preserved records I find 8 deaths in 736 cases, or 1 in 92." This was written in 1870, before antiseptic midwifery came in practice.

Why the sublimate treatment should not be adopted in private practice as well as in hospitals I am at a loss to understand. In my lecture to the midwives that I have spoken of, given in 1887, I gave them a list of what I order to be ready in the house of every patient who expects me to attend her in her confinement, and amongst the things was what would make half a gallon of sublimate solution (1 in 1000), labelled "To be used with an equal part of hot water as a lotion"; and I have continued this, very much to my satisfaction, ever since, and I have used the irrigation just as in the hospital practice and have never seen a sign of mercurial poisoning. In July, 1881, I had the great misfortune to lose my first private patient, and from puerperal septicæmia. This was before the days of sublimate and sterilising instruments, but not before the introduction of other antiseptics, and every precaution had been taken by the use of carbolic lotion and carbolised cream. It was a forceps delivery after forty hours labour in a primipara; an occipito-posterior presentation; and the perineum was partially ruptured. She became feverish after a rigor on the fourth day and died on the thirteenth day after delivery. The most unremitting attention failed to save her life. I cannot tell you the distress the loss of this patient—a young wife—caused me. Only those of you who have had similar losses can realise what it was. I told you in my address last January of a case of puerperal peritonitis in a patient delivered in December, 1890, who was attended by me under the most strict sublimate lines. It was a genuine case of acute septic peritonitis occurring a few hours after delivery, and although no necropsy was made, I feel convinced, from the reasons I gave you, that it was caused by rupture of a pyosalpinx, as in those cases narrated by Dr. Michie of Nottingham in his paper read before this society in May, 1885.[6] If this case be excepted, no case of septicæmia has occurred in my private practice since I commenced the use of corrosive sublimate. It gives me a feeling of protection I cannot over-estimate. I feel sure if its employment in midwifery were generally adopted by practitioners for their hands and for vaginal irrigation the Registrar-General's reports of the mortality from puerperal septicæmia would very soon show a difference, and in these days of portable compressed drugs there is no reason why it should not be almost universally used, even among the very poor. To my mind it would be a great pity if Dr. Bantock's recent reference to mercurial poisoning were to deter practitioners from employing it. It is only right, however, that it should be pointed out to them what may result if it be *improperly* used.

In the annual report of the General Lying-in Hospital for 1883 the medical report, signed by Dr. (now Sir John) Williams and Dr. Champneys, says that 342 women were confined, of whom 3 died (1 in 114), 2 from septicæmia, quite independent of one another, "a percentage which testifies to the healthy condition of the hospital." This was during the time that antiseptics were employed there, but, you will note, before the corrosive sublimate was commenced, and the committee add in presenting this medical report to the governors: "The committee beg to tender their congratulations to the eminent surgeon to the hospital, Sir Joseph Lister, Bart., to whom this and other institutions are so much indebted for the satisfactory medical results obtained through the system with which his name is associated."

Sir William Priestley concluded his paper read before the Obstetrical Society of London in July, 1885, entitled "Notes of a Visit to some of the Lying-in Hospitals in the North of Europe; and particularly on the Advantages of the Antiseptic System in Obstetric Practice," with these words: "Ample funds and sufficient space are necessarily most potent aids in waging warfare with disease in hospitals, but, even with limited means and space, absolute cleanliness, *supplemented by the antiseptic system*, may in our own country have a large influence for good, and the labours of our illustrious Lister prove of equal value to the obstetrician as to the surgeon. If I am not mistaken some of our Fellows," says Sir William Priestley, "can tell us of triumphs of this kind in the lying-in hospitals of London." I hope you will think that I have this evening succeeded in doing so.

I feel that I cannot conclude my address better than by saying that though numerous peerages have been conferred upon those "waging warfare" resulting in the *destruction of life* and victory (!) never has one been more worthily bestowed than on "our illustrious Lister" for the victory gained by him in "waging warfare with disease in hospitals," resulting in such an enormous *saving of life* among our fellow creatures.

I cannot sit down without congratulating the society upon its selection of my successor in this chair. Professor Mayo Robson will fill it, I am sure, with dignity, eloquence, and good judgement, that have never, at all events, been surpassed by any of his predecessors.

In bidding you farewell, I thank you all for the kindness you have displayed towards me and the assistance you have given me during the two years that I have presided over you, a period in my life of which I shall always have the happiest recollections.

[5] Edinburgh: A. & C. Black, 1870 p. 116.

[6] Pregnancy Complicated by Suppuration in the Pelvis.—British Gynæcological Journal, 1895, p. 160.

SYPHILITIC DISEASE OF THE HEART WALL.

BY SIDNEY PHILLIPS, M.D., F.R.C.P. LOND.,

PHYSICIAN AND JOINT LECTURER ON MEDICINE AT ST. MARY'S HOSPITAL; SENIOR PHYSICIAN TO THE LONDON FEVER HOSPITAL; PHYSICIAN TO THE LONDON LOCK HOSPITAL.

A PROFESSIONAL man, aged fifty-three years, who in his youth contracted syphilis had from time to time been troubled with sores on the tongue, and in 1890 suffered from epileptiform convulsions, of which a grave prognosis was given by the physician whom he consulted, but which gradually ceased to occur. A child of his had been under treatment by a well-known surgeon for psoriasis suspected to be of syphilitic origin. At Easter, 1894, while on a few days' holiday in the country, he went to bed apparently quite well, but was suddenly taken ill in the night. The physician who was called to see him has kindly given me the following account of his symptoms: "He was walking about the room in an agony of pain which he described as unendurable. The lower part of the sternum and epigastrium were the chief seats of pain, which went through to the back and also extended down the left arm; there was no marked pallor, no cyanosis, no laboured breathing; the pulse was 60 and laboured; there were no signs of valvular mischief about the heart and no irregularity of rhythm; there was a sense of distension of the abdomen. I ascertained this was the first attack of severe pain he had had, but there had been previously some discomfort and some pain running down the arm, and that his heart had been suspected of being at fault." Recovering under the free administration of morphia, he returned to town and to work against medical advice; but eighteen days after this attack of pain, on returning home from business, he quietly expired in an arm-chair while reading the evening paper.

I made the necropsy with the medical man who had attended him from time to time in London. There were no signs of disease anywhere, except that there were about two drachms of clear fluid in the pericardial sac and some soft bands of fresh lymph about half an inch long, easily broken across, extending from the anterior wall of the left ventricle just above the apex to the adjacent surface of the pericardium; on the surface of the ventricle beneath the lymph was a small area of ecchymosis the size of a shilling. The heart wall in this situation felt harder than elsewhere, and on section this thickening was seen to be produced by a yellow homogeneous-looking substance much resembling in appearance the almond of a wedding-cake. It was situate between the endocardium within and the pericardium without, entirely replacing the muscular fibre, and formed a nodule with a diameter of that of a florin in the anterior wall of the ventricle, which it thickened and toughened. The rest of the heart and the cardiac valves were healthy, except that the left ventricle was somewhat dilated. Mr. J. J. Clarke, pathologist to St. Mary's Hospital,

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TABLE OF FATAL CASES OF SYPHILITIC DISEASE OF THE HEART WALL.

No.	Reference to case.	Sex and age.	History of symptoms.	Post-mortem appearances.
1	Ricord: Clinique Iconographique, 1851.	M. 41.	Chancre ten years before he came under treatment for tertiary cutaneous ulceration; improved under iodide of potassium for eleven days. Sudden faintness and cyanosis; said, "I feel very ill," and died in five minutes.	Heart hypertrophied; clots in both ventricles; lymph on pericardium; patches of infiltration in the wall of both ventricles, especially of the right; some hard, like scirrhus, others softening, with complete destruction of muscle fibre; old ecchymoses in wall of left ventricle.
2	Virchow: La Syphilis Constitutionelle, 1860.	M. 47.	Chancre fourteen years before; intense dyspnœa; lividity of face and extremities; respirations 48 per minute; signs of moderate hypertrophy of heart: systolic bruit at apex; death after three days of acute illness.	Left ventricle dilated and a diverticulum the size of a nutmeg near its apex with thickened endocardium and adherent thrombus; the two papillary muscles quite shrivelled; general fibroid infiltration replacing the muscle wall in right ventricle, some gummata, and an aneurysmal dilatation below the tricuspid valve, but the left ventricle chiefly affected; pericardial adhesions.
3	Lancereaux.	M. 29.	Syphilis evident from the post-mortem lesions in kidneys and liver; suffered during life great dyspnœa, fatigue, vertigo, giddiness, epileptiform attacks, palpitation, and œdema; signs of enlargement of heart; feeble pulse; ill some months; sudden death.	Left ventricle dilated and thickened extensively by an infiltration chiefly about base of the heart and mitral orifice; columnæ carneæ involved; gummata scattered in the infiltration; endocardium attacked.
4	Lancereaux.	F. 44.	Violent palpitation; fits of suffocation getting increasingly severe; violent pulsations of heart with very feeble pulse; great engorgement of veins; vomiting; systolic bruit; death from right ventricle failure.	Left ventricle healthy; right ventricle dilated and infundibulum the seat of tough infiltration stiffening its wall; in its substance little nodules (gummata) "like small-pox eruption"; rest of ventricle healthy.
5	Burney Yeo: Transactions of the Pathological Society, 1874.	—	—	Gummata involving the musculi papillares and cordæ tendineæ of left ventricle.
6	W. Cayley: Transactions of the Pathological Society, 1875.	M. 28.	History of syphilitic infection some years previously; found dead in bed: he had gone to bed in his usual health after taking from 20 to 30 grains of chloral, which he had been in the habit of doing.	Left ventricle hypertrophied, and in its wall several round nodules were projecting into the cavity of the ventricle as well as externally and involving the bases of the musculi papillares.
7	A. P. Gould: Transactions of the Pathological Society, 1877.	M. 40.	Date of infection unknown; for some time dyspnœa and cardiac pain; fell dead in a public-house after walking across some fields when in apparently good health.	Left side of heart quite healthy; right ventricle normal thickness, all trace of muscle fibre in it replaced by a whitish infiltration; it involved the septum and many of the musculi pectinati.
8	T. Barlow: Transactions of the Pathological Society, 1877.	M. 42.	Three years after infection anginal attacks lasting till death two years later; for one year before death orthopnœa, cough, swelled feet, systolic and diastolic bruits, signs of right heart engorgement.	Syphilitic infiltration of wall of left ventricle around aortic orifice and formation here of aneurysm of heart wall; not ruptured.
9	Mannino: Jornale Italiano, 1882.	M. 36.	Seven years after infection illness with dyspnœa, cough, albuminuria; systolic bruit at apex, especially over right ventricle; diagnosis of syphilitic heart disease from peculiar feeble contraction of heart and empty arteries; syphilitic skin eruption; died suddenly after nine days' illness.	Infiltration of large fibroid patches, creaking on section, in anterior wall of both ventricles; a hard fibrous cord in septum; left ventricle chiefly enlarged.
10	Henderson: Transactions of the Pathological Society, 1882.	M. 30.	Was in good health; suddenly staggered and fell, put hand to heart, and died in a few minutes; no history of angina.	A mass of fibroid tissue in the septum 2 × 1½ inches thick and muscular substance permeated by gummatous nodules; narrowing of lumen of coronary arteries; nodules in pericardium over left ventricle.
11	Goodhart: Transactions of the Pathological Society, 1887.	M. 30.	Date of infection unknown; had had a sore throat and eruptions and node on tibia: after being apparently well and quite cheerful in the evening died in his arm-chair the same night, as if he had been sleeping; a prescription for mercury found in his pocket dated nine months previously.	Gummatous infiltration of the muscle of the left ventricle, which, forming an aneurysm, had ruptured into pericardial sac.
12	Goodhart: Transactions of the Pathological Society, 1887.	F. 30.	Dropped dead in the street; supposed to have been a prostitute.	Left ventricle dilated and hypertrophied; it and the septum the seat of syphilitic infiltration.
13	Turner: Brit. Med. Jour., 1890, vol. i., p. 657.	M. 37.	Infection ten years previously; for some years precordial pain, palpitation, giddiness; increased four days before admission to hospital; cardiac dulness extended to right; rough systolic murmur at base of heart; pulse 52 and getting slower down to 40, when he died from syncope four weeks after admission to hospital.	Infundibulum three-quarters of an inch from the pulmonary valves surrounded by, and considerably contracted by, infiltration and projecting into left ventricle; left coronary artery blocked by a thrombus; gumma in testis.
14	Pitt: Transactions of the Pathological Society, 1891.	M. 28.	Had had slight pain in heart, but not enough to give up work; died suddenly while lifting a weight.	Gummatous cellular infiltration involving both ventricles, especially the left; aneurysm of posterior wall of left ventricle near apex, which had ruptured; syphilitic testis.
15	Holleston: Transactions of the Pathological Society, 1893.	M. 34.	Death from an accident.	In right ventricle and in septum ventriculorum were many gummatous nodules; gummata in testis, and scars on penis and groin.
16	Sharkey: Transactions of the Pathological Society, 1885.	M. 44.	History of syphilis; epigastric pain, cough, short breath, feeble pulse, general dropsy.	Heart enormously hypertrophied, but very thin near apex of left ventricle, and here aneurysmal sac had formed.
17	McNalty: Medical Times, 1870.	M. adult.	Died from aneurysm of aorta.	Heart somewhat atrophied, with numerous gummata in its wall from size of a pin's head to a pea; pericardial adhesions.

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TABLE OF FATAL CASES OF SYPHILITIC DISEASE OF THE HEART WALL—*continued.*

No.	Reference to case.	Sex and age.	History of symptoms.	Post-mortem appearances.
18	Moxon: Transactions of the Pathological Society, 1874, quoted by Fagge, and Guy's Hospital Reports, 1867.	M. (?)	Suddenly reeled and fell dead whilst walking across London-bridge.	Left ventricle, extensive fibroid disease; nodes of tibiæ; gummata in liver and diaphragm.
19	Fuller: Transactions of the Pathological Society, 1868.	M. 45.	Died suddenly ten minutes after having a fit in bed in a workhouse to which he had been admitted a few hours before; had gone to bed apparently well.	Extensive fibroid infiltration of wall of left ventricle completely destroying its muscular tissue; gummata in right ventricle.
20	Haldane: Edinburgh Medical Journal, 1868.	F. 25.	A prostitute who, soon after eating a good supper and appearing well, died while walking downstairs.	The septum entirely destroyed by syphilitic infiltration and so also part of the wall of left ventricle; gummata in right ventricle; no other signs of syphilis.
21	Phillips: Case above recorded.	M. 53.	Infection many years previously; had had syphilitic skin eruption and other symptoms of constitutional syphilis; anginal attack eighteen days before sudden death while reading in an arm-chair.	A gumma the size of pigeon's egg in left ventricle anterior wall close to apex of heart, destroying muscular fibre and setting up slight local pericarditis.
22	Lebert.	——	Date of infection unknown, but syphilitic skin eruption, necrosis of palate and nodes on scalp; a systolic bruit.	In right ventricle close to pulmonary valves two gummata and a third a little way off; endocardium thickened over the gummata.
23	Kronig: Berliner Klinische Wochenschrift, November, 1895.	M. 33.	Oppression eight days; irregular pulse; increased cardiac dulness; systolic brutt at left apex; died whilst getting quietly into bed.	Gummata in left ventricle; aneurysmal bulging and rupture of the left ventricle near septum; the aneurysmal bulging projected septum into right ventricle.
24	London Hospital Museum, No. 1420.	M. (adult).	Distinct history of syphilis. Suddenly dropped dead while singing a song; until that moment was to all appearance in perfect health.	A soft, lobulated, gummatous growth in muscular wall of left ventricle.
25	Sir D. Duckworth: Transactions of the Clinical Society, 1895.	M. 33.	Suddenly fell in the street and expired when carrying his little boy.	Evidences of previous syphilis on tongue and glans penis. Gumma in left lung; recent gummatous growth at base of left ventricle, and an older gumma near heart's apex.

found the yellow material to present the usual appearances of gummatous tissue; the heart is now in the museum of the hospital.

So long ago as 1842 Ricord[1] described two cases of syphilitic disease of the heart wall, and in his "Clinique Iconographique," Plate XXIX., he gives an admirable coloured illustration of a syphilitic heart lesion very similar to that I have just recorded. Virchow in 1860[2] described other cases, and Oppert[3] in 1868 was able to collect eight recorded cases of gummata of the heart. Since then from time to time post-mortem specimens of the affection have been exhibited at the Pathological Society of London and elsewhere. The table given above shows abstracts of the history, where such was obtainable, and of the lesions found in twenty-five cases. In all these cases the pathological changes consisted in a deposit in the muscle of the heart of a substance which in the early stage was soft and yellow in colour and occurred either as nodules, varying in size from that of a pin's head to that of a large marble, or as a more or less widespread infiltration; the substance destroyed and replaced the cardiac muscle so that eventually not a trace of muscular fibre could be detected; it sometimes projected the endocardium lying over it within the heart or the visceral layer of pericardium on the outside of the heart. The infiltration in many cases resulted in a great thickening of the heart wall, producing a false hypertrophy; in other cases it so weakened the heart wall that it yielded to the intra-cardiac pressure and dilatation resulted, the heart wall in extreme cases being greatly attenuated; occasionally there was produced a *local* extrusion of the thinned cardiac wall, giving a cardiac aneurysm. In some of the cases of cardiac syphilis the infiltration became white in appearance and tough in texture, creaking on section, and where widely deposited it caused the heart wall to become stiff and to gape on section. In one recorded case a gummatous nodule softened and discharged itself into the heart's cavity, but such an occurrence is quite exceptional. The deposit, whether nodular or diffuse, occurred in the septum of the heart or in one or both of the ventricles. The cases recorded are not numerous enough to base an estimate upon of any value as to the relative frequency of the affection on the two sides of the heart. Any part of the ventricle wall may be affected; the base, it would appear, rather the most often. In some cases the deposit was close to the heart's apex, as in the case at the head of this paper. The infiltration frequently extended into the columnæ carneæ, softening them or causing their rigidity or contraction, and in one case leading to union of adjacent musculi papillares. The pericardium was occasionally the seat of gummatous nodules, and local pericarditis arose occasionally over these nodules.

The microscopic changes in all these cases were similar to those found in syphilitic fibroid and gummatous changes in other parts of the body. It will have been seen, too, that syphilis produces the same gross changes in the heart as it does in other internal viscera, for example, the testis—viz., a general fibroid infiltration or gummata or both together. In the heart the essential change which syphilis produces is a replacement of the muscular tissue by a round-celled fibroid tissue which, whether it occur as nodules only or as a more widespread change, leads to dilatation or hypertrophy or merely rigidity of the heart wall, and has this uniform result, that it impairs or interferes with the heart's contraction. Now diffuse fibroid change in the heart wall occurs no doubt from other causes than from syphilis, and, as was pointed out by Fagge,[4] it is not possible to tell by examination after death whether the changes are or are not of syphilitic origin, except in those cases where there are actually gummata. But in the cases I have included in the table as the basis of this paper there was in every one a distinct history of syphilitic infection, or there were syphilitic changes in other organs than the heart, or there were actual gummata in the heart wall. These cases, therefore, may be taken as undoubted examples of syphilitic heart disease.

SYMPTOMATOLOGY.

Most of the cases have been recorded to illustrate the pathological conditions produced in fatal cases and comparatively little attention has been directed to the nature of the symptoms produced by syphilitic disease of the heart wall during life; but Ricord, Lancereaux, Mannino, Buchwald, Semmola, and others have written upon the clinical aspects. Lancereaux writes: "Syphilis of the heart is recognisable by a grouping of symptoms, which are palpitation, dyspnœa, and then, as little by little the heart dilates, a systolic bruit develops and later anasarca." Buchwald[5] describes the symptoms as "headache, dizziness, flashes of light, loss of strength, palpitation, dyspnœa, feverishness, sore-throat, and in some cases symptoms of angina pectoris and neuralgic pains like aneurysm; the cases in which the heart insufficiency can no longer be influenced favourably quickly run downhill, developing marked anæmia

[1] Gazette des Hôpitaux, 1845, No. 101.
[2] La Syphilis Constitutionelle, p. 108.
[3] Visceral Syphilis, 1868.
[4] Transactions of the Pathological Society, vol. xxi.
[5] Deutsche Medicinische Wochenschrift, Dec. 26th, 1889.

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and consecutive kidney disease and sometimes pulmonary hæmoptysis. The majority of cases show a great and rapid improvement under anti-syphilitic treatment." Semmola[6] writes: "Syphilis is one of the most troublesome and ill-defined pathogenic diseases of the heart, commencing not with direct functional disturbance, but with vague nervous diffuse phenomena without certain features of recognition; neither percussion nor auscultation will assist the investigator in the incipient stages of the disease; the morbid process is slow in progress, exhibiting manifestations of a change in the ventricular structure without evidence of dilatation or hypertrophy; the absence of the latter makes the clinical picture of the morbid changes difficult to reconcile with the more commonly met with cardiac diseases." These descriptions, though agreeing to some extent with one another, make no distinction between the widely varying conditions producible by syphilitic disease of the heart. There may be only a gumma, or a widespread general infiltration, or extensive dilatation or hypertrophy, or a cardiac aneurysm on either or both sides of the heart, and it is obvious, therefore, that no one description of symptoms can be given which will be applicable to all cases.

In this paper I propose to inquire whether the symptoms of syphilitic disease of the heart wall are sufficiently distinctive to enable us to make an approach to a correct diagnosis of the condition during the lifetime of the patient.

Symptoms produced by gummata of the left ventricle.—In Case 15 in the table, in which death occurred from the effects of an accident, and in Case 17, where it resulted from an aortic aneurysm, numerous small gummata were found post mortem in the heart wall, and in the Museum of the Royal College of Surgeons of England is a very beautiful specimen (No. 2959) of a heart with gummata the size of a pea in its wall; the patient from whom it was taken had been under observation for a considerable period for symptoms of cerebral syphilis, from which he died. In none of these cases had there been any symptoms of heart disease during life, and in none of them did death occur from the heart affection. It is evident, therefore, that very small gummata may exist in the heart wall without giving any recognisable evidence of their presence. So long, however, as they remain so small in size or so situated as to produce no symptoms they do not appear to be dangerous to life or of immediate importance. But the importance of gummata of larger size in the left ventricle is very great, for they may cause sudden death in the prime of life in otherwise healthy persons, as shown by the case at the head of this paper; by Case 24, where a man dropped dead after singing a song, having been to all appearances in perfect health until that moment; and by Case 25, of a man aged forty-five years, who, when walking in the street carrying his little boy, suddenly fell down and expired.

In all these cases there was a gumma in the left ventricle, and it is noteworthy that necropsies show that it is only when the gumma is in the *left* ventricle that it is liable to produce such sudden death and also only when it is situated near the apex of the ventricle; this, indeed, is what might be expected from what is known of the action of the muscular fibres of the ventricles during systole. Now, although persons may thus die suddenly from cardiac gummata in the midst of apparent health, it must not be concluded they had previously suffered from no symptoms or signs of heart disease. In such cases it is often impossible to obtain the patient's previous history or to ascertain if he had suffered from any symptoms, and most of the recorded cases were exhibited as pathological specimens with little reference to the previous condition of the patient. It is, therefore, not justifiable to infer that these patients had suffered from no symptoms indicating heart disease because no evidence of such is forthcoming. The case at the head of this paper, for instance, might have been regarded as one of sudden death without any previous cardiac symptoms had it not been that information was subsequently obtained that the patient had a few days before, when away from home, been seized with sudden intense pain, regarded at the time as of gastric origin, but which the after evidence leaves no doubt was a very acute attack of angina pectoris. And in all the cases recorded of sudden death from a cardiac gumma in which the previous condition of the patient has been ascertainable there have been symptoms, slight it may be, often intermitting, often wrongly interpreted, but which might, if our knowledge of the subject was more accurate, have given rise at any rate to a strong suspicion of cardiac syphilis. It is, therefore, of importance to inquire further what are the exact indications which a cardiac gumma may produce.

The fatal cases of cardiac gummata in the table do not lend much assistance, the patients having died under circumstances which prevented the previous history being accurately ascertained. But in Case 21 the patient had been under careful observation for a long time and there had been nothing more than an attack of angina pectoris, palpitation, and occasional discomfort about the heart, with such slight physical signs of abnormality that it was thought heart disease might be excluded. From this case and from the evidence of other recorded cases in which the symptoms cleared up under anti-syphilitic treatment, and in which it was presumable that gummata existed, the symptoms producible appear to be one or more of the following: palpitation; subjective sensations about the precordium; attacks of angina pectoris; giddiness, faintness, or actual syncopal attacks; epileptiform seizures; and alterations in the force and frequency of the pulse, especially its great rapidity, and in some cases irregularity of the heart's action. The symptoms may be variously associated; there may be only angina, or palpitation and angina, or tachycardia, or palpitation and syncopal attacks, or they may be grouped in other ways. With these symptoms there are no evidences that the heart is enlarged, but there are usually some physical signs of cardiac action being embarrassed—the heart's impulse may be feeble and the first sound weakened, but more often the action is irregular and excited and the impulse abrupt, with a loud first sound; and it is quite possible that a gumma, which is virtually a foreign body in the heart substance, may impede the free action of the muscular fibres immediately around it and give rise to over-action of the healthy fibres of other parts of the ventricle.

None of the symptoms which have been enumerated are pathognomonic of cardiac gummata, but there are two of them—viz., angina pectoris and tachycardia—which merit special attention in this connexion.

Angina pectoris.—Angina pectoris is usually associated with physical signs or symptoms of heart or valvular disease that can leave no doubt that the angina is dependent on the heart condition; but, as many of the cases in the table show, a gumma of the heart wall may produce angina pectoris with scarcely any other symptoms or signs of heart disease. Thus, in Case 8 what was subsequently verified as true angina pectoris was for a whole year the sole symptom of an eventually fatal syphilitic heart lesion, and in Case 21, except for some occasional palpitation, an attack of severe angina pectoris was the sole symptom of a cardiac gumma which killed the patient eighteen days later. When anginal pain occurs then, even though there be no confirmatory signs of heart disease, we should remember that it may be the indication of a gumma in the heart.

There are some other conditions which will produce anginal pain with a similar minimum of confirmatory symptoms of heart disease—viz., fatty degeneration of the heart and, as Sir William Broadbent has pointed out, aneurysm at the very root of the aorta within the pericardial sac; also aneurysm of the cardiac wall, of which an example will be given later. The cases in which angina is due to fatty disease can be distinguished from those in which it is due to a gumma, by the fact that fatty disease occurs for the most part after five years of age and syphilitic heart lesions for the most part much earlier in life. Fatty heart is also usually associated with other clinical evidences of its presence, and in syphilitic gummata there will be evidences, or history, of previous infection. The other condition from which cardiac gumma may have to be distinguished is aneurysm at the root of the aorta. Sir William Broadbent[7] points out that "it is not always possible to distinguish between anginoid pain due to aneurysm in this situation and true angina; in the cases of aneurysm the sense of impending death is not so marked a feature of the attacks, and the pain often radiates down the arms instead of along the left only, occasionally it shoots down the right arm only. In angina there may be no physical signs of disease of the great vessels; in aneurysm there will be the the ringing second sound and very frequently a diastolic murmur."

Angina pectoris, then, must not be discarded as a symptom

[6] Bulletin de l'Académie de Médecine, vol. xxviii., p. 183.

[7] St. Mary's Hospital Gazette, vol. i., No. I., 1895, p. 5.

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of heart disease because it is unaccompanied by any other evidences of heart disease; and where fatty degeneration of the heart and aneurysm of the root of the aorta can be excluded it affords a presumption of gumma or aneurysm of the heart, and when on investigation any syphilitic antecedents are discovered in the patient the presumption becomes a strong probability.

I need not enter into the differential diagnosis between gumma and aneurysm of the heart wall, as they are, in fact, stages of the same affection.

Tachycardia, according to Semmola,[8] is another symptom which sometimes denotes a cardiac gumma, and "it may be," he writes, "the earliest sign of syphilitic disease of the heart wall." He also adds: "The rapid action is constant and not paroxysmal as a mere neurosis; this is important to recognise, because it is at this period that anti-syphilitic treatment is of most avail." A case recorded by the late Dr. Bristowe[9] appears to support the observation. A man, aged thirty-eight years, after contracting syphilis, began to suffer from tachycardia, with epigastric pain, but without physical signs of heart disease. He was little relieved by digitalis or iron, and later developed dyspnœa, anasarca, and dilatation of the heart and died in about a year. No necropsy was made, and the connexion between syphilis and the symptoms does not appear to have been entertained, but the course of the case so exactly resembles that of many of the cases in the table of verified syphilitic heart disease that it appears highly probable that Dr. Bristowe's case was one of syphilitic myocardial change of which the tachycardia was one of the earliest symptoms. I have no case in which tachycardia was verified by post-mortem examination to have been due to gumma; but in a case which I shall describe later, and in which the post mortem examination showed general fibroid change in the heart wall, tachycardia was one of the earliest symptoms and probably, therefore was produced when the fibroid change was quite localised. This case, however, does not bear out Semmola's dictum that in such cases the tachycardia is constant and not paroxysmal.

It is evident that where tachycardia is an early symptom of fibroid heart change it must be very difficult, or even impossible, to distinguish such a case from a mere functional tachycardia, but it is highly probable that many cases of so-called functional tachycardia are really due to some organic lesion, such as a gumma in the heart, and so also are some of those cases described in young soldiers as "irritable heart."

Gummata of the right ventricle.—The post-mortem examinations of the cases in the table show that gummata may occur in the right ventricle as well as in the left. So far as I can ascertain there is no recorded case of death, either sudden or gradual, from a gumma in the right ventricle; it is, therefore, not possible to say, from post-mortem evidence, what symptoms a gumma in the right ventricle may produce. Though not so immediately dangerous to life as gummata of the left ventricle, they are, however, by no means unimportant, for they may interfere with effective action of the right heart, and they tend in time to become aneurysmal and to rupture, or they may become associated with more widespread fibroid disease.

In all the cases in which extensive fibroid disease has been found in the right ventricle *dyspnœa* has been one of the earliest and most constant symptoms; it is, therefore, probably producible when there is only a gumma or fibroid change of limited extent on the right side of the heart. When dyspnœa occurs without lung disease or left-sided heart disease or other obvious cause, such as anæmia, it is well, therefore, to remember its possible dependence on some fibroid change in the wall of the right ventricle, and this becomes all the more probable if on enquiry we find a history, or signs of, previous syphilis. Angina pectoris, too, may no doubt result from such disease in the right, as it may in the left, ventricle.

The following appear to have been instances of cardiac gummata:—

CASE A. *Severe angina without physical signs of cardiac disease; recovery after anti-syphilitic treatment.*—A married man, aged thirty years, came to the out-patient department at St. Mary's Hospital on Aug. 12th, 1887. He had contracted a chancre, followed by a syphilitic eruption, twelve years before. Except for an attack of typhoid fever in 1884 his health had been good, but in 1877, or two years after his primary infection, he began to suffer from pains in the cardiac region; he got better, but for the four years previously to 1887, when I first saw him, he had been subject to attacks of angina which were very severe and in March, 1887, became still more intense. When I first saw him he was very tremulous, having had an attack the same morning; his pulse was 100 per minute, regular, and of good force. He described the attacks as "horrible sensations" felt in the cardiac region and along the course of the left ulnar nerve; during the attack he was afraid to draw breath. The attacks lasted for one or two minutes, but sometimes recurred in a minute or two; when over there was profuse sweating. He said that when the attacks had passed he was not short of breath and could get about very well, but palpitation came on if he walked fast or ran upstairs. The position of the heart's apex was very difficult to exactly localise; it appeared to be in the fifth space, half an inch below and quite one inch inside the nipple and was very feeble, while there was a curious throbbing over the right ventricle, and, indeed, over the whole chest; there was no bruit anywhere except at the right apex and at the base of the heart, where the first sound was covered by a thin, hollow, soft bruit, possibly hæmic, being also heard under the left clavicle; the second sound at the right base was short and clicking; the heart's action was very abrupt and forcible, but the pulse was weak, regular, and 100 per minute and the carotids were throbbing. He had been under treatment in America, in this country, and in Scotland. He showed me a large bundle of prescriptions he had tried, mainly of digitalis, which had at times given him temporary relief. Nitrite of amyl he had repeatedly tried but with no benefit. Of late his angina had been unrelieved by digitalis and he was obliged to give up work, his attacks getting more frequent; he had had four in the last fortnight. I ordered him six grains of iodide of potassium with one-sixteenth of a grain of bichloride of mercury three times daily. He had no attack of angina after this until Sept. 15th or thirty-four days. In this attack the pain was in the chest and down the left arm, but not far down; the attack was slight—in fact, "not worth speaking of"; the palpitation, he said, was much better; he had not been in the same flurried and faint condition as before; and the pulse was 76 per minute, full and soft. The apex of the heart was now one inch below the nipple and one inch inside its line. The impulse was feeble and the jarring tremor over the right ventricle much less; over the left ventricle was heard a weak rather prolonged first sound and a clear second sound with a good interval between them. Over the right ventricle the first sound was louder than before and without bruit and there was re-duplication of the second sound. The first sound was hardly audible at the right base. The heart sounds were not hurried as before and the carotids did not throb so demonstratively. He continued to take the medicine till Sept. 9th and greatly improved. On Sept. 17th, or eight days after he left it off, he "came over very bad, being frightened to draw breath," and the pain went down the arm. His pulse was 96 and there was a soft post-systolic bruit. His medicine was resumed but of increased strength; he again greatly improved. On Oct. 13th the apex was one inch inside his nipple, there was no bruit, and his heart appeared healthy, except that the first sound was weak; the pulse was 72, and he could get about well and take exercise freely. On Feb. 18th, 1888, I saw him again, when he was quite well. I have not heard of him since.

CASE B.—I might add another case in which a policeman suffered so severely from angina that he fell down while on duty. There was no bruit or ascertainable evidence of heart disease; his anginal attacks were of intense severity and occurred once or twice while he was at the hospital, on one occasion so severe that I had to take him indoors. Nothing but hypodermics of morphia relieved him. He had to leave the police force, as I found afterwards meeting him by chance in the street. It then occurred to me to put him on iodide and mercury and his angina soon became very much less.

CASE C.—In another case a gentleman, who suffered from anginal pain so severe as to prevent any exertion came under my care. He had been treated without effect by several practitioners, and as I also failed to relieve him he saw a well-known physician in consultation with me, but he did not improve. Digitalis, strychnia, and all treatment failed to relieve him, till one day he mentioned to me that he had had

[8] Bulletin de l'Académie de Médecine, vol. xxviii., p. 126.
[9] Brain, October, 1887.

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syphilis. Iodide of potassium entirely cured him and he is now in perfect health.

CASE D.—A man, aged thirty-two years, came to the out-patient department at St. Mary's Hospital on Nov. 6th, 1890, complaining of pain in the cardiac region of some months' duration, worst in the early morning. There was a sudden vibratory cardiac impulse, with a drum-like, very abrupt first sound. His pulse was 72 per minute. He said directly he went to work he got palpitation and pain in the heart region. He had a sharply-cut syphilitic ulcer on the side of the tongue and had had a chancre some years previously. I ordered him mercury and potassic iodide, and on Nov. 13th the impulse was less vibratory, the pain and palpitation gradually lessened under the treatment, and he came to see me in reply to a letter of mine on March 4th, 1891; he was then able to work well and suffered no pain. The first sound was duplicated and the pulse 84 per minute.

CASE E.—A man, aged sixty-one years, came to me at St. Mary's Hospital as an out-patient on Nov. 19th, 1894, complaining of giddiness for three weeks, of sleeplessness, headache for fourteen days (very severe at night), and palpitation. The pulse was 138, small and running. The heart's apex was just inside the nipple line in the fifth space; there was a very rapid succession of first and second sounds and now and then a beat was dropped; the arteries were degenerate. The patient was very weak and anæmic and depressed. There was no albumin in the urine, the specific gravity of which was 1010. I ascertained he had had syphilis many years before and he had, indeed, some scarring of an eruption on the back. He took iodide of potassium and bichloride of mercury, and on Nov. 26th the giddiness had become less and he slept better. The headache also was less. His pulse was 160, very short, and with a slight tapping impulse. The heart sounds were regular. He felt much better and wished to resume work, but I advised against this. By Dec. 10th his pulse was 128 and tense; his first heart sound was loud and clear; he felt much better and went to work; and on the 31st the pulse was 104. He looked a different man; he ate and slept well, although there was occasional giddiness when he looked upwards and then suddenly downwards.

Diffuse syphilitic fibrosis of the heart.—Cases of *general* fibroid infiltration of the heart may be divided into two classes—those in which the weakened muscular tissue yields to the intra-cardiac pressure and dilatation results, and cases in which the heart wall becomes toughened, stiffened, and thinned, with much loss of power, but without dilatation.

Syphilitic fibrosis leading to dilatation of the heart.—When the *Left Ventricle* becomes thus dilated the evidences are the same as those of dilatation from other conditions—viz., subjective sensations about the cardiac region, even angina pectoris, giddiness, faintness, or actual syncopal attacks, with alterations in the force or frequency of the pulse, together with the physical signs of dilatation of the ventricle; the symptoms often are more marked than might be expected from the amount of dilatation present, probably because the fibroid change resists the dilatation to some extent, though itself greatly enfeebling the heart power; in these cases death may occur quite suddenly or only after dilatation of the right ventricle, back-working, and all the symptoms of tricuspid regurgitation have been produced; in some cases these right heart symptoms are due to independent involvement of the right ventricle by the fibroid changes. The table contains cases illustrating the effects of dilatation of the left ventricle from syphilitic changes In Case 3 death occurred after some months of well-marked symptoms of heart failure. and the left ventricle was found post mortem to be extensively dilated and hypertrophied, and in Case 12, where a woman dropped suddenly dead in the street, the left ventricle was found dilated and hypertrophied. When the *Right Ventricle* becomes dilated as a result of fibroid change the cases in the table show that suffocative attacks of dyspnœa, ascites, albuminuria with the physical signs and other evidences of tricuspid regurgitation occur, and death eventually takes place, but sudden death in the midst of apparent health does not result from fibroid disease of the right side of the heart. It must be, of course, remembered that where the left ventricle is affected by fibroid disease the right heart dilatation may be only a secondary result of this. Case 4 in the table illustrates the symptoms produced and the fatal results of syphilitic disease of the right ventricle with tricuspid regurgitation. The following cases are examples of dilatation of the heart, probably syphilitic, which improved under treatment.

CASE F.—*Dilatation of the left ventricle and syncopal attacks.*—A man, aged thirty years, was seen with Dr. S. de Butts on Oct. 12th, 1892; he was married and had three healthy children. He suffered in 1883 from a chancre and secondary syphilis. In 1891 he began to experience a dull pain in the lower sternal region with a feeling of constriction of the chest and palpitation; and one evening he had semi-syncopal attacks and had to lie down. He had to remain at home a fortnight. A month or six weeks before I saw him in October, 1892, after feeling much the same sensations as before, he had another semi-syncopal attack and was very breathless; he was just able to get into a cab and go home. No albumin was found in the urine either then or during the previous attack of illness. When I saw him the pulse was 84 per minute and the heart's apex in the sixth space, one inch outside the nipple line. The beat and first sound of the heart were very weak; the aortic sound was clear; the first sound was occasionally duplicated; there was no bruit; the heart was certainly dilated, and as he had not benefited by digitalis or strychnia, was in good general health, but had suffered from syphilis, the diagnosis of possible syphilitic change in the left ventricle was arrived at and he was ordered mercury and iodide of potassium; the signs of dilation rapidly closed up. Dr. de Butts tells me he has been well since then, except that once or twice the symptoms have recurred. Each time he has resorted to the same treatment and soon got well. About August, 1896, he had a sort of anginal attack, which he treated in the same way.

The following case is recorded by Lancereaux in his "Treatise on Syphilis," p. 393:—

CASE G.—A woman, aged thirty-seven years, entered the Hôtel Dieu for exostoses on the tibiæ. She had contracted syphilis six years before and it was evident it was to this disease that the exostoses were attributable; but she was, moreover, pale, emaciated, and her liver projected three fingers' breadth below the ribs. She had shortness of breath, a feeling of oppression in the precordial region, and violent palpitations. Percussion showed that the heart was enlarged and auscultation revealed a slight blowing sound; the movements of the organ were irregular and the pulse feeble and compressible. Not seeing anything to explain the derangements of the heart and liver he suspected that the lesions of those organs might be connected with syphilis and this opinion was afterwards confirmed by the effect of treatment with iodide of potassium.

CASE H.—In a second case recorded by the same author the patient, a young man, admitted to the Hôtel Dieu suffered from greatly enlarged liver, œdema of the extremities, and irregular movements of the heart, which did not appear enlarged, and without any abnormal sounds. For several months he had suffered from oppression on the chest. Despite the absence of any avowed antecedent syphilis he was put on iodide of potassium, and the oppression disappeared, the heart regained its regularity, and the liver diminished in size so as no longer to project by more than one or two fingers' breadths below the margin of the ribs. The cachexia was at the same time replaced by a certain degree of stoutness.

CASE I.—A labourer, aged forty-three years. was admitted to St. Mary's Hospital on June 3rd, 1896. He had been a soldier for twelve years. He had had good health except for venereal disease, for which he was in hospital. About six weeks previously he first had attacks of shortness of breath, especially at night, obliging him to be propped up in bed or to get up and walk about the room. He has been unable to walk more than fifty yards at a time and had to give up work. Not improving under treatment as an out-patient he came into the hospital on June 3rd; his pulse was 90, irregular, both in force and frequency; the apex beat was in the sixth space half an inch external to the middle line, feeble, fluttering, and diffuse, and there was slight epigastric pulsation. There was a blowing, short, systolic murmur. The other heart sounds were clear, the liver was much enlarged; the dyspnœa was considerable, though nothing abnormal was found in the lungs. With complete rest in bed and digitalis and strychnia he improved to some extent, the liver lessening in size, and he felt quite well in himself, but he was unable to walk even about the ward and the heart was most irregular in action. On July 2nd, after he had been up, the heart was beating faster than it had been. Epigastric pulsation was very marked; the cardiac dulness was increased, and frequently the beats did not reach the wrist. On July 7th

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I found that at the apex there was a bruit with some beats, but not with all, that the action of the heart was extremely irregular and the breathing very embarrassed by the slightest exertion, and it was more irregular than ever. As no treatment had given much benefit he was ordered mercury and potassic iodide; he began to improve, and by July 21st said he was better than he had been for years. The apex was in the vertical nipple line; the heart above was more regular, though still at times there was an irregularity and systolic murmur, and the pulse was more forcible, but by no means regular The heart condition was a long way off being normal, but he was so well that he would return to work. and he was able to do the heavy work of a crane driver till about Sept. 17th, when he began again to have dyspnœa, but managed his work without much difficulty. On Sept. 23rd he came to see me; his pulse was 108, very irregular in force and frequency; the first sound had a systolic murmur with it at some beats, but not at others, and the action was irregular. I persuaded him to come in again and by Oct. 4th he was very much better, and his pulse was 92 under specific treatment and rest. This case was one of very marked cardiac degeneration of some sort giving dilatation and much dyspnœa; both sides of the heart were certainly dilated. He got much better in a very short time by specific treatment after resisting other methods.

Diffuse fibroid heart-change without dilatation (a) *in the left ventricle.*—In this condition, exemplified by some of the fatal cases in the table, a gradual and progressive loss of power ensues; where the change is limited in extent little is to be found except that the heart's impulse and first sound are weak and there may be some symptoms of cardiac weakness. In advanced cases the action of the heart may get extraordinarily weak, the apex beat becoming imperceptible and the first sound almost or quite inaudible; the pulse is very feeble, irregular, or very rapid or very slow, or alternating between these two conditions; there is a tendency to giddiness, faintness, and syncopal attacks may occur. At times the cardiac symptoms may become overshadowed by those of extreme debility, with inability for any exertion and great loss of energy, sometimes so marked that the patients have to keep their beds; there may be œdema of the feet and there is marked anæmia. Such cases are gradual in development and may go on in this condition for a long time with exacerbations and improvements; they are often put down as fatty heart or as "weak heart," and weak heart they undoubtedly are, but the weakness is due to organic change. These cases unless relieved by treatment die suddenly or from gradual asthenia. Several cases in the table exemplify the fatal results of syphilitic infiltration of the left ventricle without dilatation. Thus in Case 9 in the table "a correct diagnosis was made of a specific cardiac lesion from the peculiar feeble contraction of the heart and the empty arteries, the left ventricle and septum being found post mortem to be the seat of extensive fibroid infiltration creaking on section"; and in Case 19 in the table a man aged forty-five years died suddenly from extensive syphilitic infiltration of the wall of the left ventricle completely destroying the muscular tissue. Case 20 in the table is very similar. When the *right* ventricle becomes fibrotic without becoming dilated the main symptom would appear to be dyspnœa, as in cases where there is dilatation. Probably such disease of the right ventricle alone is not likely to be fatal, but if it involves the septum it may be, as in Case 7 where a man after walking across some fields fell dead in a public house, the necropsy showing extensive fibroid change limited to the right ventricle, septum, and musculi pectinati.

The following appears to be an example of fibroid disease of the heart without dilatation resulting from syphilis.

CASE J.—A man, aged thirty years, came to me at St. Mary's Hospital on Oct. 30th, 1885, complaining of precordial pain of five or six months' duration, with palpitation, dyspnœa (especially after exertion), giddiness, faintness, languor, and aching pains in the knees and shoulders, worst at night; he also had sweats at night. The pulse was 84, of rather high tension; the arteries of the neck throbbed. The apex of the heart was in the fifth interspace, a little inside the nipple line. There was a re-duplicated first sound, which was very weak over the left ventricle, but no bruit. He was treated with digitalis, with strychnia, with both combined, with tonics, and with ergot successively. He got worse rather than better; he could not sleep; his pulse varied from 104 to 112 per minute and was always feeble; he got very haggard-looking and could not resume work though he refused to become an in-patient. In January, 1886, I discovered that a child under my care at Paddington green Children's Hospital for congenital syphilis was his child. On inquiry from him I found that ten years before he had had a chancre. On Jan. 14th I ordered him iodide of potassium and mercury. On the 21st he was "better than he had been all along." The pulse was 100. On Feb. 2nd his heart sounds were much louder and clearer and his symptoms gone. He soon went again to his employment and I wrote to him on Dec. 16th, 1886, and heard from him that he was quite well and living in the country.

The two following fatal cases also exemplify the results of fibroid change in the heart without dilatation. They have not been included in the table, for their nature not being suspected during life enquiry was not made into syphilitic antecedents. From evidence afterwards obtained I believe they were syphilitic. Fagge has shown that fibroid disease from syphilis cannot be distinguished from fibroid disease from other causes even on the post-mortem table, except where there are actual gummata in addition. The symptoms, then, of syphilitic fibrosis are in all probability identical with those of non-syphilitic fibrosis of the heart, and even if these two cases are not of demonstratively proved syphilitic causation they were certainly cases of fibroid disease such as syphilis produces and may be taken as exemplifying the symptoms syphilitic fibrosis may produce.

CASE K.—This patient, a married woman, aged forty eight years, soon after a confinement in 1877 commenced to feel weakness and languor. She came to me in 1884 as an out-patient and on Sept. 3rd, 1884, I took her into the hospital. She complained of pains in the head and attacks of giddiness, during which she had often fallen but without loss of consciousness. She was very short of breath on going up steps and her voice was very weak. There was no dyspnœa when lying down. There was no albuminuria and no impulse of the heart was perceptible and no "first sound" was audible. The pulse was 64 per minute, very weak. She remained in the hospital till Oct. 8th, during which time the first sound of the heart could at times be faintly heard. She preferred to lie in bed always and showed a peculiar languor and want of energy. She occasionally fainted. She was very anæmic and as it was thought she might be suffering from pernicious anæmia the red corpuscles were counted and were found to be about 70 per cent of the normal. She was given arsenic, iron, ergot, digitalis, &c., with little result except that her gums got rather spongy when the arsenic was pushed. Dr. Broadbent kindly saw her with me and agreed that she was suffering from extreme cardiac debility. There was never any rise of temperature and the pulse varied from 60 to 76 a minute. At times she improved and during such temporary improvement went home on Oct. 8th. I went to see her at home at times after this, being interested in the case, and I was informed, in October, 1885, that she had died suddenly in Kensington Infirmary. I made a post-mortem examination, when all the organs were found to be healthy except that the heart was tough and fibrous and the musculi papillares quite rigid and the edges of the mitral cusps were soldered together.

CASE L.—A woman, aged thirty-eight years, who had been married twenty years, came to me at St. Mary's Hospital as an out-patient in February, 1890. She said that she had for a long time suffered from palpitation and faintness. She had had ten children, of whom five had died in infancy. Since the last confinement, in September, 1889, the palpitation had been worse. There was epigastric pain and once she had fallen to the ground in a faint. Her heart action was very feeble and rapid, and as treatment by digitalis and tonics failed to relieve her I sent her into the hospital on April 15th, 1890. She continued to suffer from palpitation, occasional vomiting, and extreme languor; the pulse was extremely feeble, beating often 160 a minute, at other times too fast to be counted; at times the pulse would suddenly become very slow, sinking to 40 a minute, but the heart was then found to be beating 80 a minute, the apex beat was very feeble, but was inside the nipple line, and the heart did not appear to be enlarged; there were no murmurs. Strophanthus appeared at times to relieve her. On June 17th, being a little better, she went to a convalescent home. She returned as an out-patient on July 4th as bad as ever, with swelled feet, slight œdema of the face, marked sallowness of complexion, and a pulse rate of 180. I sent her in-doors again. She then kept her bed, but

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frequently fainted when she sat up and often became cold and clammy. On one attack on July 18th she was with difficulty revived by stimulants and ether; her face at times flushed up, but she was usually pale; the left leg at times swelled a little; the first heart sound was always very feeble and the second sound often dropped; the action was frequently irregular; usually there was a series of rapid beats with intermission; no diagnosis was made except of cardiac weakness, and digitalis, strophanthus, arsenic, convallaria majalis, and iron were tried without avail. When the hospital was closed for cleaning she was admitted into the Middlesex Hospital, where her husband was a patient with tabes dorsalis. While there a slight systolic murmur was heard and it was noted that digitalis did no good. After being eleven days in the hospital she died in September quite suddenly and unexpectedly when she was thought to be convalescing. At the necropsy there was found a general fibrous myocardial change and œdema of the lungs. For this account of her stay in the Middlesex Hospital I am indebted to the kindness of Dr. Wynter, assistant physician at that hospital.

These two cases illustrate very well the very gradual failure of heart power produced by fibroid heart disease and the languor and weakness to which such patients are reduced, together with the complete failure of cardiac tonics to give relief. During life others besides myself saw the patients and agreed that the one thing that was certain was that there was a condition of extreme cardiac weakness unlike that of fatty disease, and of which the causation was not explainable.

Cases in which there is hypertrophy of the heart.—It will be seen that in several of the fatal cases in the table there was found post mortem considerable hypertrophy of one of the ventricles. In such cases the increased bulk of the heart is produced by fibroid tissue and not by increase of muscular fibre. The diagnosis of such cases rests on the evidences of hypertrophy of the heart without evident cause; where there is no valve disease or albuminuria, and nothing to indicate that the hypertrophy has been set up by great muscular exertion, and where pericardial adhesions are not present, it should be remembered that hypertrophy may result from interstitial fibroses, and this becomes especially probable where the increased bulk of the heart as estimated by the physical signs is not accompanied by evidences of proportionate increase of power. Where the heart-beat is very powerful and the arteries not well filled there is a presumption that the hypertrophy is not a true hypertrophy, and it should be remembered syphilis is a cause of such spurious hypertrophy of the heart. Such cases may terminate fatally quite suddenly, as in Case 5 and Case 16 in the table there was enormous hypertrophy of the left ventricle and an aneurysm near the apex.

CASE M.—A woman, aged fifty-three years, came as an out-patient to St. Mary's Hospital on Oct. 18th, 1886, complaining of palpitation waking her at night, headache, and faint attacks. The pulse was 100 and irregular. The first and second sounds were re-duplicated; the first sound was a little rough, but there was no actual bruit; there was a very forcible heaving impulse over a large area, and the apex itself appeared to be just outside the nipple line. The second sound was loud and clanging. She improved somewhat for a time with digitalis and iron, but at times fainted, and the palpitation continued. In December I noticed a red scar on the chin, and on inquiry found that it resulted from a specific ulceration for which she had attended my colleague, Mr. M. Morris. Her heart symptoms were very soon relieved by mercurial and iodide treatment. Since then they have recurred from time to time and she has frequently come back to me at the hospital and always been relieved by anti-syphilitic treatment. The apex of the heart is in the same position and the impulse forcible, but the symptoms are relieved.

Cardiac aneurysms from syphilitic disease.—The cases in the table showed that in many of the fatal cases aneurysm of the heart-wall had resulted from the syphilitic changes; in some cases death had resulted from rupture of such aneurysms, in others death had occurred from other syphilitic heart lesions. Probably most cardiac aneurysms, when not traumatic, result from syphilitic disease of the heart wall and early recognition of the presence and nature of fibroid cardiac lesions would prevent their formation. In this paper I shall not dwell at more length on these cardiac aneurysms, but the following case, the notes of which have been kindly given me by a military surgeon, is of interest as showing how angina pectoris may be almost the sole evidence of an aneurysm of the heart wall, in this resembling a cardiac gumma (of which it is the later stage) and aneurysm of the aorta at the sinus of Valsalva.

CASE N.—A man, aged twenty-five years, a soldier of seven years' service, was under treatment in 1889 and 1890 for syphilis in a military hospital for 185 days; after that his health was good. He was admitted on Nov. 4th, 1893, into the Station Hospital, Gosport, for indefinite pains in the chest, principally on the right side, whence they extended down the arm. The temperature was normal; there were no physical signs of disease of the respiratory or circulatory organs. On Nov. 5th a severe paroxysm of pain occurred; again on the 6th at 3.30 A.M., and at 8.10 A.M., with vomiting; the extremities became cold, the face pallid, and the pulse imperceptible, and he died in ten minutes. The necropsy showed a small opening concealed by one of the aortic cusps leading into an unruptured aneurysmal sac at the base of the aorta; the wall of the aneurysm was composed of the heart muscle forming a cardiac aneurysm.

DIAGNOSIS.

Of very small gummata in the heart wall, which give no symptoms, the diagnosis is not possible, but they are not of serious importance. Larger gummata in the left ventricle gave rise to physical signs and symptoms. The physical signs are an enfeeblement of the apex beat and the first cardiac sound, or in some cases where the gumma is near the apex evidences of interference with the heart's action, such as abrupt, rapid, apex beat and noisy, short first sound; often the cardiac action is extremely irregular or altered in rhythm. The symptoms are one or more of the following: subjective sensations about the heart, palpitation, giddiness, attacks of faintness or actual syncope, epileptiform attacks, a very rapid or irregular (or perhaps a very slow) pulse, and, above all, anginal seizures. It must be admitted that no one of these physical signs or symptoms—angina excepted—necessarily implies the existence of cardiac disease. Syphilis has been called the "great imitator," and here it imitates gastric or reflex or functional unimportant ailments; and the difficulty in these cases is not so much to decide what form of cardiac disease is present as to decide if there is any heart disease at all. It is not always possible to overcome this difficulty, though it usually is, but I wish to insist on this important fact, that *evidences which we might sometimes set aside as too slight to denote important cardiac disease must not be so set aside in syphilitic persons.* Certainly angina pectoris, with the slight physical signs enumerated above, must be taken as affording strong probability of a gumma in the heart in syphilitic persons, even without another symptom. Of the other symptoms named no one individually is pathognomonic of organic heart disease, but if there be more than one of them—e.g., syncope and palpitation—with the slight characteristic physical signs, there is a similar probability in syphilitic persons. Gumma of the *right* heart may be suspected from dyspnœa unaccounted for by left heart disease or lung disease or dilatation of the heart when with it there is the slightest evidence of right heart difficulty in syphilitic persons. One factor influencing the diagnosis in all cases will be the evidences of previous syphilitic infection and the results of specific as compared with those of non-specific treatment; such evidence is always regarded as important in disease of other parts of the body, and we are not more or less dependent upon it in the diagnosis of cardiac syphilis than we are in the diagnosis of visceral syphilis in general.

Diagnosis of dilatation of the heart from syphilitic disease of the heart wall.—Inquiry into the previous history, the habits, and the general condition of the patient is required in determining whether any dilatation of the heart from which he is suffering is attributable to syphilitic disease of the heart wall. If the left ventricle is found to be dilated without valvular disease, nephritis, or other causes, which produce increased strain upon the heart fibre, it may be concluded that the dilatation is due to parietal weakness. Of the conditions producing such weakness fatty degeneration may be for the most part excluded, for it rarely gives rise to dilatation; but if it is suspected the age of the patient and the usual data which guide us in the recognition of fatty disease must be appealed to. Apart from fatty disease debility of heart fibre can only be due to myocarditis in some form; and if there be no history of acute fever or illness, and there is not present any cachectic state to weaken the heart-muscle, the myocardial change is in all probability a fibrous one; this becomes still more probable if no improvement results from the usual cardiac tonics; and if

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the patient has a history or traces of syphilis, and specific treatment succeeds where digitalis, &c., has failed, there remains very little doubt that the dilatation of the ventricle is the result of syphilitic fibrosis. In certain cases of syphilis the patient becomes cachectic, anæmic, and feeble, with or without pyrexia, and some dilatation of the heart may occur as a result of the general condition. Without any fibroid heart lesion the dilatation and general condition improve together in these cases under anti-syphilitic treatment, but they are readily distinguishable from cases in which, the general health being good, there is dilatation from syphilitic disease of the heart wall. Dilatation of the *right* ventricle from fibroid heart disease is, perhaps, more difficult of detection than of left heart dilatation. This, however, it has in common with dilatation of the right heart from other causes. But that dyspnœa is produced by dilatation of the right heart from fibroid disease and that it is a very constant symptom in such cases is proved by the history and post-mortem appearances in many of the cases in the table; and in syphilitic persons persistent or paroxysmal attacks of dyspnœa without obvious cause, and even with but slight signs of right heart enlargement, should be looked on as possibly resulting from fibroid change.

Diagnosis of diffuse fibroid syphilitic disease of the heart-wall without dilatation.—When the fibroid change is of limited extent, though not forming a gummatous nodule, the only symptoms will be those such as are producible by gummata; in such cases the probability of the heart weakness being due to syphilitic fibroid changes must be adjudged upon by taking into consideration the age of the patient, the results of inquiry into possible syphilitic infection, and the effects of the ordinary cardiac tonics as compared with those of specific treatment. A due consideration of these will in many cases enable the cases of heart weakness from syphilis to be distinguished from those resulting from other causes.

When the fibroid change on the left ventricle is widespread, involving, perhaps, the musculi papillares as well as the ventricle wall, the cardiac debility gradually increases till it becomes extreme and the diagnosis is not difficult; indeed, it is much more readily made than in those cases where dilatation is present, for while many causes produce cardiac weakness with dilatation the causes of great cardiac weakness without it are few—in fact, only fatty disease; but this can only produce such extreme heart weakness as widespread fibrosis causes when present in an extreme degree, and then, as Walshe[10] points out, "its clinical evidences are more or less precise and positive." In addition, the age of the patient and the previous history will often enable us to distinguish between the two conditions. The course, too, of fibroid disease is very different from that of fatty degeneration, for when the latter has once reached such a point as to produce syncopal attacks, and irregular or almost imperceptible pulse, death ensues, whereas in fibroid disease patients may suffer from cardiac weakness sufficient to prevent their moving about and to suffer from a languor and apathy they cannot overcome and to keep them almost to confinement in bed and yet go on for months in much the same state. The distinction between diffuse fibrosis and fatty degeneration of the heart is not usually difficult. (This was evidenced in the two cases K and L, in both of whom it was agreed by those who saw them that there was extreme cardiac debility, but that it was not due to fatty degeneration.) These cases of general fibroid disease of the left ventricle without dilatation may be diagnosed when in persons mostly in mid-life sometimes later on there occur manifestations of a very chronic, gradually increasing cardiac weakness, with an extremely feeble pulse, sometimes very rapid and sometimes suddenly becoming slow, with tendency to syncope and an extreme general feeling of weakness, and with increasing languor and apathy. These cases do not improve under cardiac tonics, though they may temporarily give promise of improvement, especially under strophanthus.

Treatment of syphilitic disease of the heart wall.—This is the same as of syphilis of other internal organs.

CONCLUSION.

1. Syphilis may produce gummata or general fibroid change. 2. Gummata in the left ventricle, except of very small size, are dangerous to life, and when near the apex of the left ventricle may cause sudden death. 3. Gummata in the left ventricle may be suspected if, in an individual with syphilitic antecedents there occur signs of derangement of the action of the left ventricle with symptoms of defective or embarrassed action, especially angina pectoris, tachycardia, syncopal or epileptiform attacks, or in the right ventricle when dyspnœa otherwise unaccountable occurs. 4. Extreme feebleness of the heart without dilatation gradually increasing in young or middle-aged persons who have had syphilis suggests syphilitic disease of the left side of the heart, and long-standing dypsnœa may point to similar disease on the right side of the heart. 5. Dilatation of either side of the heart in syphilitic persons may result from syphilitic fibrosis. 6. Hypertrophy of the heart without ascertainable cause and without corresponding increase in strength of heart suggests syphilis. 7. Aneurysm of the heart wall may result from syphilitic local lesions and may be fatal with or without rupturing. 8. It is probable that gummata and fibroid disease in early stages may be relieved or cured by the usual specific treatment, and there is every reason to believe that syphilitic lesions of the heart wall are not less amenable to treatment in their early stages than syphilitic lesions elsewhere, though no cure can be expected where advanced tissue changes are already produced. In what I have written I have devoted attention only to syphilitic disease of the heart wall apart from valve disease. It is certain that the small number of cases I have given in the table (and I might have added many more) must represent a much larger number of unrecorded fatal cases—cases in which no necropsy was performed or the fibroid condition was not recognised or reported, and a very greatly larger number of cases of persons who have suffered from syphilitic heart lesions without their producing death. It is, therefore, certain that syphilitic heart disease is more common than is generally recognised. And its importance is the greater because it affects persons at an earlier age that the usual degenerative heart conditions and may insidiously advance till it causes sudden death in persons in the prime of life and of apparent health.

There can be little doubt that syphilitic heart affections must affect the administration of anæsthetics, more especially as a life-long disease like syphilis is apt to produce local conditions that require operative interference not infrequently. Certainly cases are brought in of death under an anæsthetic from fatty disease of the heart in which the chief evidence of that condition is that the patient died under anæsthetic, and at the moment I write a case[11] is recorded of death under the administration of the A.C.E. mixture in which "the right ventricle was found dilated with fatty infiltration of its walls; the left ventricle was also dilated and there was some fibrosis of its walls." Dr. Kirk[12] found that chloroform, if we may judge from a few cases, is liable to give dangerous results in syphilitic subjects.

Upper Berkeley-street, W.

[10] Diseases of the Heart, p. 338.

THE REMOVAL OF SUPPURATING PELVIC TUMOURS: ILLUSTRATED BY TWO CASES.

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THE two cases which are related in this communication offer certain instructive features in common. In both the structures which were removed contained pus, and in both the tissues of the pedicle were unhealthy, not from infiltration of any new growth, but from inflammatory changes. Both patients were restored to health, but the details of treatment involve matter for comment. The chief subjects worth consideration are the management of unhealthy pedicles, washing out, and drainage.

CASE 1.—On March 8th, 1894, my friend Dr. Ilott of Bromley consulted me about a girl aged sixteen years who had been under his care for six weeks. She was thin, but had been fairly healthy till the present illness. When Dr. Ilott first saw her she showed symptoms of peritonitis an

[11] Brit. Med. Jour., Feb. 3rd, 1895.
[12] Ibid., Dec. 12th, 1896, p. 1706.

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effusion into the left pleura. A few days later there was evidence of free fluid in the peritoneum, the temperature reaching 104° F. Under appropriate treatment all the acute symptoms subsided; then a hypogastric tumour was detected. The periods had been absent for five months. When I first saw the patient the abdomen was almost flat, excepting below, where a swelling rose above the pubes, reaching half-way to the umbilicus. It fluctuated obscurely and was but slightly moveable. The cervix lay high up close to the pubes, the sound passing two and a half inches upwards and forwards. The tumour, which moved with the uterus, dipped deeply into Douglas's pouch and seemed to be closely related to the posterior part of the cervix. Diagnosis in a case with the above symptoms was difficult, though I suspected either a tuberculous abscess or a suppurating dermoid cyst, the clinical evidence of a low form of inflammation being strong. Sarcoma was improbable, though malignant ovarian growths are proportionately frequent in girlhood and are generally accompanied by amenorrhœa. They grow rapidly and seldom suppurate, whilst in Dr. Ilott's patient inflammatory changes had appeared before the tumour had reached a high stage of development. Menstruation often ceases from any cause of debility, and examination of the uterus showed that pregnancy was out of the question. I operated on March 18th, assisted by Dr. Ilott and Mr. Yolland. The abdominal incision exposed a dull greenish tumour adherent to the parietes and thickened omentum and intestine. Above the tumour the peritoneum and bowels seemed to be healthy, so I protected them with a flat sponge. On puncturing the tumour pus mixed with yellow grease escaped and a few hairs were seen. I injected iodine water into the cavity of the suppurating dermoid ovarian cyst, for such the tumour clearly was, a tooth being discovered as well as hairs. Then I detached the cyst from very intimate adhesions. It lay in a kind of capsule, practically the wall of an abscess. The left tube, obstructed and dropsical, ran over on the surface of the cyst. I succeeded in finding a true pedicle, after detaching the tumour from the back of the uterus. The tissues of the pedicle seemed to be involved in the suppurative process. Having ligatured the ovarian vessels, I transfixed the pedicle and tied it with No. 4 silk, cutting away the tumour. The right appendages were bound down by adhesions, but being otherwise sound I did not remove them. The result showed that this step was right. I simply liberated the ovary and tube from adhesions. As some of the contents of the cyst had escaped into the general peritoneal cavity I thought it right to flush the peritoneum at once with hot water, repeating the process before closing the abdominal wound. Lastly a drainage-tube was passed into Douglas's pouch. Much trouble followed, owing to the condition of the pedicle. After removal of the drainage-tube a few days after the operation I syringed out the cavity with antiseptics. On the fifth day the ligature came away as well as the No. 2 silk with which I had tied the vessels in the outer border. In spite of all precautions there was suppuration of the subcutaneous tissues, preventing primary union of the skin, though the muscular layers united firmly. After discharge of the ligatures the wound began to heal rapidly, the cavity filling up. On May 5th the period returned after an absence of nearly seven months. Dr. Ilott wrote to me in March, 1896, two years after the operation, saying that "the patient is in excellent health, quite plump and strong. There is no yielding of the cicatrix, nor pain at the site of operation. The period is quite regular every month; it is rather scanty, and lasts about three days."

The following case is an instructive example of very chronic inflammatory disease of the appendages.

CASE 2.—In 1886 Mr. Kingston Barton of South Kensington asked me to see in consultation a young married woman then aged nineteen years. She had suffered from acute pelvic pain since a recent miscarriage. I found the right appendages enlarged and tender, but quite moveable, and agreed with Mr. Barton that no operation was justifiable. Under his care the painful symptoms disappeared. The patient married for the second time early in 1890. A few months later she caught a severe chill through travelling by train in damp boots. Pelvic pains occurred and the periods ceased. I examined her in June of that year and found that she was pregnant. I could not detect any inflammatory deposit in the pelvis, but pelvic exploration is difficult in a pregnant subject. Dr. Clapham of Wimbledon attended her when she was confined at term. The child yet lives. In 1893 she bore another healthy child. Severe abdominal pains set in three months later. Dr. Sheppard of Putney kept her in bed for fourteen days. The pain passed away. In 1894 she had measles for the first time in her life. Acute inflammation of the ovary followed. Under the treatment of Mr. Pedler of Knightsbridge her health improved, but she did not rest sufficiently to ensure perfect cure. In February, 1895, a violent attack of pelvic pain occurred at the period, with a great rise of temperature. The patient was now twenty-eight years of age and well nourished, but her face was deeply flushed. I examined her early in April. A soft, tender, fluctuating tumour could be felt in each iliac fossa, the right being the larger. The uterus was three inches long and moveable; the swellings extended low down in the corresponding fornices. The pulse was 144, and the evening temperature 100·6° F. A few days later it rose to 102·8°, and the period appeared. I wished to explore directly it ceased, but was prevented from doing so by several complications. On April 17th one eye became inflamed. Mr. Lindsay Johnson examined her and diagnosed keratitis of bacterial origin. It subsided, but the pelvic condition did not improve. On May 8th the pain was very severe. The swelling in the left iliac fossa was tense and pressed down on the rectum. As I particularly wished to avoid any fistulous tracks communicating with the intestine I tapped the swelling through the vagina, withdrawing about five ounces of pus. The period appeared on May 10th. The patient, who had been kept in bed since April 8th, was now in a more favourable state of health, but the swellings began to increase in size. On May 18th I operated, with the assistance of Dr. Hubert Roberts. An incision three inches long was made in the middle line and was found to be quite sufficient for the subsequent manœuvres. The first thing visible when the peritoneum was divided was the right swelling, a big cyst, which I tapped with a long trocar and cannula. Pus came away; then I used an aspirator, removing a pint of very thick yellow pus free from odour. I protected the parts near the cyst by placing iodoform gauze around the point selected for puncture. By this procedure, repeated on the left side, not a drop of pus strayed into the peritoneum. I washed out the cavity of the cyst with iodine water. Then I separated the cyst from universal surrounding adhesions. It was the right tube converted into a thick-walled abscess and extremely dilated. The ovary was broken to pieces during extraction. I secured the ovarian vessels with No. 3 silk and then transfixed the pedicle and tied it with No. 4 silk. The tissues were infiltrated with inflammatory deposit, but not suppurating. The pedicle was then divided. I touched the raw surface with tincture of iodine, after carefully trimming away with scissors the exposed part of the tubal mucous membrane. On the left I found a similar morbid condition. The omentum was thickened and otherwise unhealthy, so I ligatured and divided it high up, far above the left cyst to which it was strongly adherent. I was much relieved to find after tapping and injecting with iodine that the cyst wall could be detached from the vagina and rectum without damage to either. The pus, owing to the tapping, I presume, was slightly sour. After securing and dividing the pedicle, as on the right side, I washed out the pelvis with iodine water, placed a sponge in Douglas's pouch, and introduced the sutures. As there was no evidence of oozing when I drew up the sponge, and since I felt persuaded that no pus had escaped into the peritoneal cavity I closed the wound. I wished to avoid the evil effects of suppuration of the pedicle and coming away of the ligatures. The drainage-tube is apt to promote that complication. Since the pedicles were not actually suppurating, as in the first case, I considered that closure of the wound was the best way to ensure speedy recovery. Fortunately the patient was spared the annoyance which was probably inevitable in the former case, where the pedicle was already suppurating when it was secured by ligature. Convalescence was protracted, owing to a second attack of keratitis beginning on June 20th. By the end of the month, however, the patient was well. I saw her in December, 1896, when she was in excellent health. The periods had been regular since August, 1895.

There are certain special considerations relating to each of these cases. In the first the right appendages were saved after being freed from the adhesions which bound them down. They showed no signs of disease save what was due to the peritonitis around them, and when liberated they were restored to their functions. The catamenia have returned and the patient is capable of bearing children. Thus the removal of the right appendix would have been wrong. Even in chronic pelvic disease in much older subjects,

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when one tube and ovary have been hopelessly damaged, their fellows may sometimes be spared after liberation from adhesions which keep them bound down low in the pelvis, interfere with their blood-supply, and impede their functions. On the other hand, when, as in the second case, bilateral pyosalpinx is evident, both appendages must be removed, else the operation will be useless and its danger much increased. In the first case the suppuration was unilateral, being confined to the dermoid cyst of the left ovary and its pedicle.

The most remarkable feature in the second case was the long duration of pelvic disease. I observed it nine years before operation. Four years after its first appearance and subsidence it was lit up afresh by a chill. The same phenomenon is familiar to all in cases of dental caries. Yet the patient conceived and bore two children. Four years after the chill, acute exanthematous oöphoritis occurred—a well-established disease. The inflammatory changes extended to the tubes, and the parts through want of care at length became irremediably diseased. The tumours full of pus were the tubes, each bent on itself at a very acute angle, and not suppurating tubo-ovarian cysts. The frequent error of mistaking the latter for the former and overlooking the ovary, often small and adherent to the outer side of the cyst, can be avoided by a little pathological knowledge. The surgeon must ever be sceptical about reported "ovarian abscess."

Of the three general considerations suggested by these two cases unhealthy pedicle must be considered first. In an uncomplicated ovariotomy the pedicle of the cyst is quite healthy, its tissues being free from inflammatory deposit. The tube bears a sound mucous membrane. Experience shows that the ligature is well tolerated in such a case. The changes undergone after the operation are well known. Conditions are from the first clearly in favour of such a pedicle. When, on the other hand, inflammatory processes are in progress in any of its elements the case becomes complicated. The ligatures will lie amongst tissues that will not readily tolerate their presence. The process by which the distal part of the stump is preserved is unfavourably modified when the tissues of the pedicle are infiltrated. A good deep groove with the bulging structures on each side of the ligature accurately in contact with each other is not so easily made as when the parts are healthy. Nevertheless, an inflamed pedicle of a common multilocular cyst rarely gives trouble after operation. The tissues in the stump are placed in a better position for recovery from inflammation. The cutting drains it, and its large vessels, no longer employed in carrying blood to and from a big tumour, close up. The stump shrinks up, though, no doubt, not so quickly as when free from morbid changes, and ultimately passes through the salutary processes which begin earlier in a pedicle healthy from the first.

The case is much less favourable when the inflamed pedicle is connected with a small structure also inflamed, such as a small dermoid or a suppurating tube or ovary. There is much less of that salutary shrinking which takes place when a large pedicle full of engorged vessels is severed from a big tumour. The distal part of the stump is not so early or so readily supplied with nutrition, as the groove is not easily made deep enough when the ligature is tied, nor do the tissues bulge and touch each other so readily, nor does the proximal side so speedily throw out nutritive lymph to save the distal structures. Disease of the tubal mucous membrane is a yet graver complication. Without precautions a patient may feel worse after the removal of diseased appendages than before. The ligature may ultimately lie in an abscess cavity or the stump may develop into a hard, painful, inflamed mass, more or less strongly adherent to adjacent structures. In the first case the pedicle was already suppurating. I was obliged, of course, to secure it with a ligature. The silks came away within a few days. The relation of the management of a pedicle in this condition to drainage is self-evident, so this subject will again be considered further on. In the second case there was no evidence that the suppuration had extended beyond the tubes. The pedicles bore the ligatures well. As there was a pyosalpinx on each side I took care to trim away the mucous membrane of the tube, as it bulged from the cut surface of each pedicle, and to touch the exposed tubal coats with tincture of iodine. Thus was avoided as much as possible the danger of leaving a focus of suppuration in each fornix. When, therefore, a pedicle is actually suppurating it must be ligatured in order to prevent hæmorrhage. In every other respect the ligature is absolutely pernicious. The pelvis must be drained to allow of the escape of fragments of suppurating tissue; the silks will possibly come away within a few days. More often the stump becomes healthy and tolerates the ligature after a time. When the tissues of the broad ligament are inflamed, yet the suppuration is limited to the tube, a ligature may be safely applied and the abdominal wound closed, provided that the exposed tubal mucous membrane be trimmed and the stump of the tube disinfected.

Washing out the peritoneal cavity is necessary after the removal of a large abdominal tumour, where numerous vascular adhesions have been separated, or where blood or the contents of cysts have been scattered about in uncertain directions. This practice is a true process of flushing, by which alone can noxious material be thoroughly dislodged from distant recesses of the abdomen. When an inflamed pelvic tumour or a suppurating tube has been carefully removed, and the operator feels sure that he has prevented the escape of any of its contents into the peritoneum, flushing is not only needless, but it is dangerous. Infection is thereby promoted rather than prevented. In the first case I was obliged to flush out the general peritoneal cavity, since I knew that pus had actually escaped upwards. I regretted having to take that step, but I could not, of course, trust to the disinfecting of the interior of the cyst by the injection of iodine water earlier in the operation. In the second case no pus was allowed to escape into the peritoneal cavity and flushing would have been, in my opinion, criminal. It would simply have carried septic material upwards. The washing out of the pelvis with hot iodine water—true irrigation—counteracted shock and stopped capillary oozing in Douglas's pouch, a grave promoter of sepsis. The iodine was added because an antiseptic was demanded. Drainage was clearly indicated in the first case. I could not have closed in a cavity lined with suppurating granulations deposited on adjacent intestine and peritoneum. Besides, to shut up a suppurating pedicle in the peritoneum would have been bad surgery. The tube was removed within a few days, for there is danger of perforation of the rectum in these unhealthy cases if the tube be kept in too long. The cavity was afterwards syringed out with antiseptics till it closed. The ligature came away, but that accident involved no trouble, and the patient has been free from pain ever since the operation. It must not be forgotten that needless drainage promotes morbid changes around the ligature. Hence I did not use the drainage-tube in the second case, where there was no evidence that the suppuration had extended outside the cystic tubes and the vaginal puncture had closed. In short, when a suppurating pelvic tumour is removed drainage is necessary if any suppurating structures are left behind; but if not, then, other conditions being favourable, the drainage-tube will not be needed.

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VITALITY.

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VI.[1]—VITAL CHANGES IN NERVE TEXTURES (*continued*).

IN the very elaborate structures taking part in special sense and in mental action, as well as in various tissues and organs, the substance, the actual matter upon which origin, development, growth, formation, and action depend, is in a living state. This living matter is invariably found to contain a very large proportion of water, a condition which must permit the very free movement of the particles amongst one another. These movements characterise all forms of living matter and are more active when living matter is in a state of great activity. All the remarkable properties of various tissues and at every period of life depend upon the powers of the living matter from which they originated. The living matter alone renders possible increase and growth in early life, maintenance when fully formed, including the

[1] Nos. I., II., III., IV., and V. were published in THE LANCET of Feb. 22nd, April 11th, June 13th, Aug. 29th, and Oct. 17th, 1896, respectively.

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replacement of the matter which is used up during action while life lasts, and repair in case of injury. By the death of structureless living matter all further normal action is rendered impossible, though wonderful structural arrangements already produced may be intact, readily demonstrable in very minute details, and capable of being indefinitely preserved in many cases. Of all our organs, those concerned in hearing and sight are probably the most complex and elaborate in their minute structure and most remarkable as regards responsive activity. The many different structures with their different properties present in these organs work together in perfect harmony, but the actual particles engaged are so very minute that their form, arrangement, and relations to one another and to tissues has not yet been satisfactorily demonstrated. Organs of sight and hearing and other sense organs of some classes, though appearing to be mainly composed of rigid, hard, and almost dry textures, perhaps differing widely in structure, agree in this—that the active power is invariably due to the presence of matter in a living state, which is always moist.

All the efforts—and they have been many—to discover analogies between the almost perfect organs of living things and the scarcely less striking pieces of apparatus designed and constructed by man for the transformation of energy have signally failed. That such comparisons should have been attempted by anyone who had even but very imperfectly studied the special structure and arrangement of the apparatus in both cases and was acquainted with the general phenomena occurring during action, to say nothing of their so-called evolution, is, indeed, remarkable, seeing the utter want of resemblance in appearance, composition, arrangement of parts, origin, and action between the natural organs and the constructed apparatus. Take, for example, the electric organ of a living organism and any form of of electric apparatus made by man.

The difficulty of making out the exact arrangement of the various anatomical elements, and their precise action in many of the sense organs, even amongst the lowest organisms, is so great that we are still unable to form an accurate idea of their action, and particularly in the class of insects are the arrangements on a scale so minute that it is not possible to clearly demonstrate the details with the highest magnifying powers. And in these cases in which the general arrangement has been demonstrated, the manner in which, say, in a light-emitting organ, the transformation of energy is effected, has not been determined. But there can be little doubt that the matter actually engaged in effecting the re-arrangement of the constituent elements concerned in the process is in the living state. The power by which all the movements and arrangement of the atoms are directed and regulated is vital power, which power, as I have shown, must be placed in a category by itself, being entirely distinct from all known agencies and forces which operate in the non-living world.

No essential points in common between any living form and any non-living mechanism constructed by man have been pointed out, although some distinguished men of science have stated that in certain cases the manufactured apparatus has been more free from defects and more perfect in its action than the natural structure formed from the structureless living matter according to processes which have been in unceasing operation through countless generations in past ages. To adversely criticise, for instance, some parts of the visual apparatus without taking into consideration the fact that every part concerned in sight has somehow during its formation in darkness adapted itself, or has been adapted, for use under varying conditions of distance, light, colour, and the nature of the surrounding medium is surely neither fair nor reasonable. No artificial optical arrangements yet made exhibit any such power of adaptation. Moreover, the latter are for the most part but aids to ordinary natural vision and are useless in the absence of the eye, as well as destitute of any means of being properly focussed without the aid of the hand acting in conjunction with the eye. Nor could they have been constructed without eye and hand and the peculiar endowments of these organs transmitted through countless generations of human beings. How, then, is it possible to compare the eye of a living organism with an optical instrument which is but an artificial aid to the eye in certain cases, and which is made and adapted to suit the natural organ? Nor must we omit to bear in mind that, unlike any optical instrument, the eye comprehends many complex and delicate structures, which differ somewhat in structure and arrangement in the different types of eye. In every case the formation of these tissues was prepared for, and their development commenced, long before any indication of the characters and action to be ultimately attained could be discovered, each one being developed according to a predetermined plan or design and prepared for in the absence of light. Nor are the several tissues, which when fully formed work together in harmony, all developed at a uniform rate or in the same periods of time. Are we not, then, compelled to admit the existence of a peculiar governing guiding power—of a nature quite distinct from any agencies or properties known in connexion with the non-living world? Is it conceivable that in consequence of any advance of our knowledge concerning the non-living, the production of these wonderful structures and their relations to one another will be explained by physics or that they will ever be produced artificially? They all grow out of, and are formed from, the structureless, which has been produced by—has descended from, pre-existing structureless, and in this way only.

Considering, then, that in nature there are several kinds of organs designed and constructed to discharge corresponding offices and also adapted to the particular conditions under which their possessors live, each kind having special powers of its own and working under different conditions as regards temperature, pressure, light, and kinds of foods,—considering that every peculiarity and every variation in structure is due to inheritance from previously existing organisms, and that corresponding tissues and organs are perfected in very different periods of time, at different temperatures, formed from different kinds of food, retaining their activity in some instances for many years, in others for months, weeks, days, or even hours only, is it not unreasonable, at any rate until we learn more than is yet known concerning the actual phenomena proceeding during their formation, to suggest that the time will come when corresponding organs, or any apparatus performing like functions, will be constructed by man?

The living matter from which, through the agency of its wonderful vital endowments, all tissues proceed seems to be composed of comparatively few elements, the properties of which, so far as investigation has yet gone, afford no explanation or clue to the nature of the powers at work or of the exact way in which the results are attained, much less of the series of changes which occur as the positions of the elements with respect to one another become altered and take up new relations, necessitating the production of the particular substances with their special properties predetermined from the first, often in darkness, or at least under circumstances from which the access of all ordinary light rays is excluded.

No differences in chemical composition or in molecular constitution as yet discovered in any form of living matter will account for the production of any tissues or organs. Nor is it in the least degree probable that differences in vital power, upon which the formation of every form of structure and the discharge of function depend, will ever receive an adequate physical explanation. Nothing is known in connexion with the action of any sense organ or any kind of nerve action which would justify the conclusion that ultimately it will be shown that these are consequent upon any form of change not directed and governed by vital action. Why, for instance, the hard matter of some cuticular structures should be produced by one kind of living matter, soft mucus by another, bile by a third, nerve current by a fourth, and so on, has not yet been explained. It is certain that these several forms of living matter, which give rise to the production of such different substances and effects, have all been derived by descent from a form of living matter which did not possess the power of any one of them or any of the several formative powers at length manifested by its descendants. Nor can any one of these differences in power be shown to be due to the influence of external agencies or conditions acting upon them. It seems to me that to vital power temporarily associated with the matter of the living particles and capable of directly acting upon their elements and of altering their relations to one another must be attributed the general and special characteristic activities manifested. The wonderful movements and the re-arrangement and alteration of position and relation with respect to one another of the component elements of every known kind of living matter must, I think, be referred to the exercise of this power alone. And though it may be said that we only assume the existence of vital

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power in causing the changes which ensue in the matter supposed to be under its sway, it is certain that no phenomena at all comparable with those which characterise every particle of matter that lives, whether it be high or low, simple or complex, have been manifested by any form or state of matter which is not living.

All attempts to show that life, vitality, in any living particle, is capable under any circumstances of being converted into, or made to take the form of, heat, light, electricity, or other form or mode of motion have so far signally failed. Indeed, the manifestation of various forms or modes of energy in living things appears to be a direct result of a certain rearrangement of the atoms of living matter, the rearrangement being effected by the operation of vital power upon the material particles with which it is temporarily associated. The change in position and relation of the atoms is no doubt accompanied, though not caused, by chemical action, and in many cases by the evolution of heat, light, or electricity. In the present state of our knowledge, as it seems to me, this is the nearest approach to an explanation that, in strict accord with known facts and reason, can be advanced, and, indeed, the only way in which the rearrangement of the particles, which undoubtedly takes place, can be accounted for.[2]

I submit, then, that so far all the facts adduced and the arguments founded upon them establish the conclusion that the living matter which is directly concerned in the development and formation of the most complex and highest organism, organ, or tissue, be it vegetable or animal—man, an eye or a brain cell—exhibits no special characteristic which would enable us to decide what particular organism, organ, or tissue was about to be produced, or to distinguish it from living matter from which some low and comparatively simple organism, organ, or tissue of the most passive and unchanging kind would be evolved. The results of the influence of life power on matter cannot, in fact, be foreseen. The results may be observed and the resulting structures subjected to investigation, but the power itself is not demonstrable and cannot be isolated. It stands by itself among natural agencies. Its origin is unknown and the means by which it is communicated to non-living particles undiscovered and perhaps undiscoverable. That vital power is transferred without loss is quite certain. Nothing is added to the weight of the matter when it becomes living—nothing taken from it when it ceases to live. Vital power in many cases undergoes certain modification as regards its special characters, probably at a time when it is least active and perhaps at a time when it appears to be in a dormant state, the modification in power being evidenced in the departure from the characters, properties, and action of the tissues and organs formed.

I claim, then, vital power—vitality—as the agency upon which the composition, characters, minute structure, and action of all tissues and organs in every living organism directly depend. In the absence of vital power not a structure characteristic of any living form in nature could have existed. It is the wonderful operation of vital power which distinguishes all living from all non-living. Vital power effects the separation from one another of elements in combination in the various substances which constitute the pabulum of the living, rearranges these elements, and determines their new position, so that new combinations resulting in the formation of particular compounds are occasioned. Such analytical and synthetical operations are of a special kind and are always proceeding, slowly or quickly, in every particle that lives, and many of the products as regards properties, composition, and action—predetermined, as it were foreseen—are inimitable and obtainable only from organisms in a living state or that have lived.

These general conclusions will be further strengthened by observations which will be advanced in the next communication, "On the Interstitial Circulation of Living Organisms in Health and Disease."

(To be continued.)

[2] Seeing that energy is indestructible, while life—vitality—ceases without undergoing conversion into any form or mode of motion, and cannot, therefore, be indestructible in the same sense as that in which matter and energy are held to be indestructible. It cannot, however, be said to be impossible that some life may be destructible and some indestructible, but in this case the supposed destructibility or indestructibility must be due to a potency which can be perpetually multiplied without any addition to, or change of, or subtraction from, any material forces or properties associated with the particles concerned.

THE ACTIVE PRINCIPLE OF INDIAN HEMP: A PRELIMINARY COMMUNICATION.[1]

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Introduction.—The want of uniformity in the preparations of Indian hemp has so often led to serious consequences in practice that many practitioners have discarded the drug as worthless or dangerous. Others, finding it of benefit in certain diseases, have expressed a hope that some means of standardising it would be discovered or the active principle of the plant isolated. Of the two conditions, the isolation of the active ingredient is the more important and its use is more likely to lead to uniform results in treatment. Quite recently such a pure active product has been obtained and the mystery which has hitherto enveloped Indian hemp seems in a fair way to being cleared up. Many points still need investigation, the most important from a medical point of view being the gradual change which cannabis compounds undergo by keeping. Both by practical experience and scientific experiment it has been shown that the active ingredient gradually loses its power, and at present we know of no means of preventing this. A very interesting case of this loss of activity is described by Thomas Smith.[2] He found that cannabin, which, when freshly prepared, produced a narcotic effect in doses of two-thirds of a grain, after exposure to the air for three years became absolutely inert.[3] In India, it is said, dealers in this drug refuse to buy the old crops after the new ones are gathered, and after two years the crops are publicly burnt in the presence of an Excise officer. The cause of this growing inertness is probably due, as Leib Lapin[4] suggests, to the oxidation of the active ingredient. He mentions experiments in support of this view, but these are not sufficiently convincing. Age, however, will not account in all cases for the uncertainty of commercial preparations. More often it is due to the more or less inert natural products from which these preparations are made. That the physiological activity of the hemp plant varies with the locality in which it is grown is well known, and it has been suggested that the gánjá of Bombay and the Central Provinces, which is "infinitely inferior" to that of Bengal, finds its way into European pharmacy. "There is also good reason to believe that the Indian hemp merchants, who deal with the drug in the first instance as an article of excise consumed locally, are in the habit of supplying to the European drug exporter or his agents samples for which, owing to the partial or complete loss of activity, they can no longer find a native market."[5]

Natural products.—The principal natural products obtained in India from the hemp plant, excluding the fibre, oil, and seed, are known as charas, gánjá, and bháng.[6] *Charas* is a resinous exudation found on the leaves, young twigs, immature fruits, and bark of the stem, and is regarded, and with justice, as the most active preparation of the hemp plant. It is gathered by rubbing the flower-tops between the hands, or by men, naked or wearing leather coats or skins, running through the fields; it is then scraped off and made

[1] Suggested by Dr. Walker's letter in the British Medical Journal of Nov. 7th, 1896, p. 1382. The experimental part of this communication was read before the Cambridge Philosophical Society on April 19th, see their Transactions, vol. ix., part iii., p. 149.

[2] Pharmaceutical Journal [3], vol. xv., p. 853.

[3] O'Shaughnessy also found that the extract which he himself brought from India did not produce in England the effects which he anticipated (Pharmaceutical Journal, vol. vi., p. 71). This may have been due, in part at least, to the age of the preparation. Christison (Watt's Dictionary of the Economic Products of India, vol. ii., p. 123), on the other hand, states that he used for some years an alcoholic extract sent to him from Calcutta twenty years before, and which was still as powerful as ever to relieve pain and obtain sleep. Casiccia (Rivista di Chimie, Medicina e Farmacologia, July, 1883, p. 326; Virchow's Jahresberichte, 1883, Band i., p. 438) also quotes a case of poisoning with 2 grammes (30 gr.) of a very old extract.

[4] Ein Beitrag zur Kenntniss der Cannabis Indica. Dissertation, Jurjew, 1894, p. 66.

[5] Imperial Institute Journal, vol. ii., No. 15, p. 105 (March, 1896).

[6] This account has been compiled from Watt's Dictionary of the Economic Products of India, vol. ii., p. 113 et seq., to which the reader is referred for further information, and from a private letter from my friend Mr. John Stephenson, I.M.S. A good account is also given in Flückiger and Hanbury's Pharmacographia, p. 493.

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into cakes or pills. Most of the substance is prepared in Kashmir and is imported into Northern India (the Punjab principally and the North-West Provinces) from there. It varies considerably in activity, being adulterated to a great extent with powdered leaves and other substances. *Gánjá* is composed of the "female flowering tops with the resinous exudation on them." After gathering, these are exposed to the heat of the sun and then left over-night to the influence of the dew; afterwards they are pressed into shape by the stamping of native men. Both gánjá and charas are cultivated products and are chiefly used for smoking. *Bhúng* comprises the mature leaves, and in some parts of India the fruits and very young twigs also, but not the stems. By trituration with sugar and water a beverage is made which is known as haschish or bhúng. It is the least injurious form of cannabis and the one most frequently used. It is often prepared from wild plants growing around the native huts; consequently it is inexpensive and the greater part probably escapes duty. Various other preparations and natural products are known, but with these we are not concerned.

Historical.—The first European to investigate with any degree of scientific accuracy the action of Indian hemd was O'Shaughnessy[7] (1839). He used an alcoholic extract made by boiling freshly prepared gánjá with rectified spirit in a Papin's digester and evaporating the spirituous extract to dryness on a water bath. The substance thus obtained was very active; half a grain produced a distinct effect, and one and a half grains O'Shaughnessy regarded as a large dose. The estimated yield from fresh gánjá was 20 per cent. The process was subsequently modified by Robertson[8] (1846). He used a percolation apparatus, and extracted the drug with distilled alcohol. A green product was obtained, which he stated (probably erroneously) to be six times stronger than O'Shaughnessy's brown extract. The resin in a state of comparative purity was next obtained by T. and H. Smith[9] (1846). They digested bruised gánjá in successive quantities of warm water until the liquid came away colourless, then in sodium carbonate solution for two days at a moderate heat. The residue was next pressed, washed, and dried and then extracted with rectified spirit. The spirituous extract was now treated with milk of lime, filtered, and the excess of lime precipitated by sulphuric acid. A little animal charcoal was added, the mixture agitated, and filtered. Most of the spirit was now distilled off, water was added, and the remaining spirit allowed to evaporate gradually. The residual resin was then washed until free from acidity and bitterness and afterwards dried in thin layers. The yield was 6–7 per cent. Thus obtained the resin, to which they gave the name of *cannabin*, was extremely active; two-thirds of a grain produced narcosis and one grain decided intoxication. De Courtive[10] (1848), independently of Messrs. Smith, also isolated an active resin. This was obtained by extracting the leaves of Algerian hemp with spirit at a moderate heat, precipitating with water, re-dissolving the precipitated resin in alcohol, and evaporating. The yield was 9–10 per cent. Five centigrammes (about two-thirds of a grain) produced a distinct effect. Smaller quantities of a similar though less active product were obtained from plants grown in France.[11] Personne[12] (1857) controverted the results obtained by the brothers Smith. By distilling hemp with water he obtained an oily body[13] which he subsequently separated into two distinct compounds—*cannabene*, a liquid with the formula $C_{18}H_{22}$, and *hydride of cannabene*, a crystalline solid[14] with the formula C_6H_{14}; the latter body is physiologically inactive. Arutinianz believed[15] that he had obtained the hydride of cannabene, but as he concludes, according to Lapin, as to the identity of the two from the percentage of carbon present, this is doubtful. Personne attributed the effect of cannabis in great part to the cannabene he obtained, but on totally insufficient grounds, and he further states that by distilling Smith's resin with soda-lime at 300° C. (=572° F.) the residue was rendered inert. Considering the heroic treatment we may, perhaps, not question this, but as the dose given (from 0·2 to 0·5 *centi*gramme) would be inadequate to produce any effect proof is wanting[16] Messrs. Smith[17] themselves had shown that the activity of the resin was not due to any very volatile compound by exposing it to a temperature of 180° F. (82° C.) for eight hours freely to the air: the product was still as active as before. Vignola[18] (1895) has recently shown that Personne's cannabene is an impure sesqui-terpene. The pure substance he obtained by distilling in a current of steam, extracting the distillate with ether and subsequently purifying by repeated distillation from metallic sodium. It was then found to have the formula $C_{15}H_{24}$, and appears to be the same body as was obtained by Valenti[19] in 1880 from ordinary hemp. Moreover, Roux[20] proved by researches on animals that the ethereal oil was inactive, whereas an alcoholic extract was a decided intoxicant.

Nothwithstanding the investigations of O'Shaughnessy, Smith, and De Courtive it was thought that cannabis might contain some alkaloidal principle. Preobraschensky[21] (1876) obtained nicotine from a specimen of haschish obtained in Turkestan and from the flowering tops of the plants. As cannabis preparations are usually smoked in combination with tobacco, Dragendorff and Marquiss[22] suggested that the nicotine was derived from admixture with this substance—a supposition proved by Siebold and Bradbury[23] (1881) and Kennedy[24] (1886). Although Kennedy failed to obtain nicotine he was of opinion that an alkaloid was present, and Siebold and Bradbury also isolated a varnish-like base which they termed *cannabinine* and which gave alkaloidal reactions. The substance had an odour of coniine, but was not identical with it. Only two grains were obtained from ten pounds of drug. Arutinianz[25] and Masing,[26] on the contrary, obtained no alkaloid. In 1883[27] Hay discovered an alkaloid which produced tetanus in frogs and to which he gave the name of *tetano-cannabine*. It was present in very small amount and its elementary composition was not determined. His results led him to believe that other alkaloids were present, but these do not appear to have been isolated. Denzel[28] (1885) also obtained a tetanising alkaloid from hemp, but Warden and Waddell[29] (1884), working on large quantities of material, obtained no such compound. It is only fair to state that the process employed was slightly different to that of Hay, and a cat instead of a frog was used to determine its effect. A nicotine-like substance was obtained, but this proved to be physiologically inert

7 On the Preparations of the Indian Hemp or Gunjah; Calcutta, 1839. Also, Transactions of the Medical and Physical Society, Calcutta, 1839; Journal of the Asiatic Society, vol. viii.; Bengal Dispensatory, 1842, p. 579; Provincial Medical and Surgical Journal, 1843, pp. 343, 363, 397. The leaves of European hemp had previously (1821) been examined by Tscheepe (Chemische Untersuchung der Hanfblätter, Dissertation, Tübingen).

8 Pharmaceutical Journal, vol. vi., p. 70.

9 Ibid., vol. vi., p. 171 (see also p. 127).

10 Journal de Pharmacie et de Chimie [3], tome xiii., p. 427. Comptes Rendus, tome xxvi., p. 509.

11 Other investigations are also recorded about this time. Foy (Journal de Pharmacie et de Chimie [3], tome xiii., p. 350) extracted haschish with water, alcohol, acetic acid, white and red wines, butter, lard, and olive oil, but did not succeed in adding much to our knowledge. Martius (Gmelin's Handbook of Chemistry, Cavendish Society's edition, vol. xvii., p. 447) obtained a shining clear brown resin.

12 Journal de Pharmacie et de Chimie, tome xxxi., p. 46.

13 Bohlig (Pharmaceutisches Centralblatt, 1840, p. 519) had previously obtained an oily compound with similar physiological properties from European hemp.

14 Personne gives the formula in the old notation—$C_{36}H_{20}$ and $C_{18}H_{14}$. The formula of the last-named body is erroneously given in most books as $C_{18}H_{22}$. Personne gives the percentage composition C. 84·02; H. 15·98, which more closely approximates to C_7H_{16}.

15 Chemischen Untersuchungen des Indischen Hanfs. Dissertation, St. Petersburg, 1881. Quoted by Leib Lapin, p. 35.

16 Personne appears to have fallen into error with regard to the activity of Smith's resin. This is stated to produce a distinct action in doses of 0·05 centigramme. It should have been *gramme*. The dose of residue given, therefore, was too small to produce any effect, even with the original substance.

17 Loc. cit., p. 173.

18 Gazzetta Chimica Italiana, vol. xxv., i., 110. Abstracted in the Journal of the Chemical Society, vol. lxviii., i., 623.

19 Ibid., vol. x., p. 479. Abstracted in the Journal of the Chemical Society, vol. xl., p. 284.

20 Bulletin Général de Thérapeutique, Dec. 15th, 1886, p. 492. Curiously enough, Roux states that an ethereal extract produces insignificant results.

21 Pharmaceutische Zeitschrift für Russland, 1876, p. 705. Also Dissertation, St. Petersburg, 1876. Quoted by nearly all writers.

22 Pharmaceutische Zeitschrift, 1877. Abstracted in the Year-book of Pharmacy, 1878, p 248.

23 Pharmaceutical Journal [3], vol. xii., p. 326; Year-book of Pharmacy, 1881, p. 453.

24 Pharmaceutical Journal [3], vol. xvii., p 453.

25 Loc. cit.

26 Dragendorff: Die Gerichtlich-Chemischen Ermittelung von Giften, zweite Auflage, p. 240.

27 Pharmaceutical Journal [3], vol. xiii., p. 998.

28 Pharmaceutische Centralhalle für Deutschland, 1885, No. 46, p. 540.

29 Indian Medical Gazette, vol. xix., p. 259. I was unable to find the continuation of the paper, but an excellent account is given in the Pharmaceutical Journal [3], vol. xv., p. 594.

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Jahns[30] (1887) also states that *tetanin* does not exist. More recently (1891) H. F. Smith[31] isolated an alkaloid resembling coniine from Indian hemp, but in such small quantity (0·75 milligramme per kilogramme) as to render it therapeutically unimportant. Still more recently (1895) Marino-Zuco and Vignola[32] prepared an alkaloid from various parts of "cannabis indica and cannabis sativa," but neither alkaloid possessed the characteristic action of cannabis compounds. Physiologically they were cardiac depressants, the alkaloid from cannabis indica being much the most powerful. The most recent investigators, Wood, Spivey, and Easterfield[33] (1896), failed to obtain any alkaloid from charas, and the bulk of evidence is therefore against the view that the effects of cannabis are due to an alkaloidal principle. In 1887 Jahns[34] obtained a crystalline base which he subsequently recognised as choline. He pointed out that chemically this body would explain the alkaloidal base obtained by previous observers, but it differs in crystalline form and solubility in ether from Hay's tetano-cannabine; physiologically, also, their action is different.

Of the more recent investigators Warden and Waddell[35] seem to have commenced upon the right lines. They argued that "as many of those addicted to the haschish form of intemperance obtain the intoxicating effects by smoking the plant in a pipe, it is to be expected that destructive distillation of the freshly prepared resin might yield up the active principle." They therefore made an alcoholic extract of the plant, added excess of caustic potash, and distilled. An amber-coloured oil came over, which, by exposure to the air or by the action of alkalies, rapidly assumed a dark brown colour. The oil contained ammonia, phenol, and other products of destructive distillation, and was "devoid of narcotic and irritant properties." One drachm administered to a cat produced no sensible effect. Leib Lapin[36] (1894) isolated a substance which he termed *cannabindon*, and which appears to possess the physiological action of fresh cannabis preparations. This he obtained by warming the plant with milk of lime and extracting with ether. The ethereal extract he treated successively with acetic ether, alcohol, petroleum ether (twice), and water, the precipitate being rejected each time. The second and third fraction obtained by precipitating with water contained impure cannabindon; this he subsequently purified. Last year, Cowan Lees[37] expressed a belief that watery extracts contained some active ingredient of cannabis. He describes good effects from the use of such preparations, but I am not aware that any scientific explanation has yet been given of them.

The most important results of recent years are those of Wood, Spivey, and Easterfield.[38] Working with charas they isolated from an ethereal[39] extract—(1) a terpene, boiling-point from 160° to 180° C., yield 1·5 per cent.; (2) a sesqui-terpene, boiling-point from 258° to 259° C., yield 2 per cent.; (3) a paraffin ($C_{29}H_{60}$?), melting-point from 63° to 64° C., yield 0·15 per cent.; and (4) a toxic red oil or resin ($C_{18}H_{24}O_2$), boiling at 265° C. under a pressure of 20 m.m. Hg., yield 33 per cent. As we should expect from its method of preparation the resin is extremely stable. It yields mono-acetyl and mono-benzoyl derivatives and is unacted upon by alcoholic potash, and, below 150° C. by hydriodic acid and phosphorus. It is insoluble in water, but soluble in alcohol, ether, benzene, and organic solvents generally. It appears to be the active constituent of the drug, and the authors have succeeded in isolating it from several cannabis preparations in the market—viz., from Smith's cannabine, 80 per cent.; Merck's cannabinon, 50 per cent.; Merck's ethereal extract, 26 per cent.; and Merck's cannabis resin, 20 per cent. As the compound contains at least one hydroxyl group the authors recommend the name *cannabinol* for it. Further investigations are being made upon its constitution, but as yet no further communication has been made.

As previously mentioned, all samples of charas are not of the same quality. From a second sample of this substance, undoubtedly inferior to the first, Easterfield and Wood were only able to extract 15 per cent. cannabinol.[40] Another sample of charas sent to me by my friend, Surgeon-Lieutenant John Stephenson, I.M.S., and obtained in the cantonments at Peshawar, was of intermediate quality. Various other preparations of cannabis indica (Merck's. Bombelon's, Denzel's, Gastinelli's, &c.) are known, and even largely used, but as these have not added much to our knowledge of the chemistry of this body I shall not mention them further. By oxidising cannabis resin with nitric acid Bolas and Francis[41] (1868) obtained a crystalline substance oxy-cannabine ($C_{20}H_{20}N_2O_7$), but the physiological action of this compound was not determined. Flückiger[42] failed to obtain it.

Personal experiments.—The substances isolated by Wood, Spivey, and Easterfield were passed on to me for pharmacological investigation. Owing to the pressure of other work this investigation is not yet finished but as soon as time permits it is hoped to complete it and give a full account of the pharmacology of this drug. The present experiments are of a purely personal character and are merely to establish the activity of cannabinol and introduce it into therapeutics. The experiments themselves I intend to comment upon at some future time.

I was under the impression that I had taken a small dose of impure cannabinol some time previously without any effect, when, on the afternoon of Feb. 19th last, whilst engaged in putting up an apparatus for the distillation of zinc ethyl, I took from 0·1 to 0·15 gramme (from 1½ to 2 grains) of the pure substance from the end of a glass rod. It was about 2.30 P.M. The substance very gradually dissolved in my mouth; it possessed a peculiar pungent, aromatic, and slightly bitter taste, and seemed after some time to produce slight anæsthesia of the mucous membranes covering the tongue and fauces. I forgot all about it and went on with my work. Soon after the zinc ethyl had commenced to distil — about 3.15 — I suddenly felt a peculiar dryness in the mouth apparently due to an increased viscidity of the saliva. This was quickly followed by paræsthesia and weakness in the legs, and this, in turn, by diminution in mental power and a tendency to wander aimlessly about the room. I now became unable to fix my attention on anything and I had the most irresistible desire to laugh. Everything seemed so ridiculously funny; even circumstances of a serious nature were productive of mirth. When told that a connexion was broken and that air[43] was getting into the apparatus and an explosion feared I sat upon the stool and laughed incessantly for several minutes. Even now I remember how my cheeks ached. Shortly afterwards I managed to collect myself sufficiently to aid in the experiment, but I soon lapsed again into my former state. This alternating sobriety and risibility occurred again and again, but the lucid intervals gradually grew shorter and I soon fell under the full influence of the drug. I was now in a condition of acute intoxication, my speech was slurring, and my gait ataxic. I was free from all sense of care and worry and consequently felt extremely happy. When reclining in a chair I was happy beyond description, and afterwards I was told that I constantly exclaimed, "This is lovely!" But I do not remember having any hallucinations: the happiness seemed rather to result from an absence of all external irritation. Fits of laughter still occurred; the muscles of my face being sometimes drawn to an almost painful degree. The most peculiar effect was a complete loss of time relation: time seemed to have no existence: I appeared to be living in a present without a future or a past. I was constantly taking out my watch thinking hours must have passed and only a few minutes had elapsed. This, I believe, was due to a complete loss of memory for recent events. Thus, if I walked out of the room I should return immediately, having completely forgotten that I had been there before. If I closed my eyes I

[30] Fischer, B.: Die Neueren Arzneimittel, dritte Auflage, p. 222, footnote.

[31] American Journal of Pharmacy, 1891, p. 386.

[32] Gazzetta Chimica Italiana, xxv., i., p. 262; Abstracted in the Journal of the Chemical Society, vol. lxviii., i., p. 631.

[33] Transactions of the Chemical Society, vol. lxix., p. 541.

[34] Archiv der Pharmacie, 1887, p. 479; quoted in Dymock, Warden, and Hooper's "Pharmacographia Indica," vol. iii., p. 338; also Pharmaceutical Journal [3], vol. xvii., p. 1049.

[35] Pharmaceutical Journal [3], vol. xv., p. 575.

[36] Loc. cit.

[37] Brit. Med. Jour., 1895, vol. i., p. 300.

[38] Loc. cit.

[39] Alcoholic and petroleum-ether extract also (Easterfield and Wood). Proceedings of the Cambridge Philosophica Society, vol. ix., p. 144.

[40] Private communication. Macnamara (1872) determined the amount of resin in various samples of gánjá—Dr. Prain's report on the Cultivation and Uses of Indian Hemp to the Indian Government. Abstracted in the Imperial Institute Journal, March, 1896.

[41] Transactions of the Chemical Society, vol. xxii., p. 417 (1869).—Chemical News, vol. xxiv., p. 77.

[42] Pharmacographia (1874), p. 494.

[43] Zinc ethyl takes fire on contact with air and consequently must be distilled in an atmosphere of carbon dioxide.

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forgot my surroundings and on one occasion I asked a friend standing near how he was several times within a minute. Between times I had merely closed my eyes and forgotten his existence. Another peculiar effect was the occurrence of lucid intervals. They seemed to come on suddenly, sometimes but not always as if the result of an effort of the will. They lasted a variable time, being shorter when the symptoms of intoxication were most marked. In them I could converse in a fairly rational manner and even direct the work of the laboratory to a certain extent. But even in my sanest moments I was deficient in will power. I offered no resistance to being pulled out of the chair and made to walk the laboratory floor, and when asked if a medical man might be sent for I objected, but had no power to say "No." At one time, although walking rapidly, I felt cold and had to adjourn to an adjoining room where a fire was burning. I stood before it and thought how strange things were. I had a hazy notion of having been rational once and I wondered if ever I should be rational again. I was devoid of feeling, fearless of death, and even insensible to the feeling of others: if the friend by my side had died I think I should have laughed. About 5 o'clock a medical man was sent for. I had now been rational for nearly half an hour, but as soon as he appeared I again fell into an acute delirium and performed the same antics I had performed before. I knew I was acting foolishly, but I could not help it. Gradually I became calmer and then I told him what I had done. I could not have been devoid of reasoning power, for when he suggested an emetic I argued that it would do little good, as most of the substance must have been absorbed; I was too happy to be disturbed in that way. I told him I was getting better, but soon afterwards I again lost control. At 6 o'clock I had two cups of coffee and then feeling somewhat better walked home. The street seemed longer than usual and its lamps almost interminable, but although I had looked across the quadrangle previously this was the only illusion of distance that I noticed. The fresh air and exertion revived me. I ate a good dinner, afterwards read a little, and retired to bed at 11 o'clock without having experienced any symptoms of sleepiness. I quickly fell asleep and woke at 7 A.M. My memory had not quite returned to normal, but otherwise I was quite well. At 11.30 slight tenesmus and relaxation of the bowels occurred.

Although these notes were written immediately after the experiment many things which happened are not recorded; of many of them I have not the slightest recollection. I am told that early in the intoxication I drank water frequently, even out of my hand, but I have no remembrance of it. During the action of the cannabinol my pulse rose from 60 to 90 per minute, sensibility as determined by pinching was blunted, and my appearance was described as "ashy pale." The pupils were dilated somewhat,[1] but throughout reacted to light and accommodation. At no time do I remember having had hallucinations; no unpleasant after-effects were experienced, and the drug appears to possess no constipating action.

About three weeks after the last experiment 0·05 gramme (¾ grain) of cannabinol was taken (2.35 P.M.). No effect was felt for four hours; then symptoms similar to those I have described, but less severe, occurred. First, there was dryness, or rather sliminess, of the mouth and a peculiar taste. This was soon followed by weakness in the legs and intoxication. After dinner (7 P.M.) I sat in an easy chair and closed my eyes. A dreamy state supervened and visions of a grotesque character appeared. A regiment of soldiers was seen marching; their movements gradually increased to running, their legs went faster and faster, until finally the whole regiment was lost in a number of rapidly revolving circles. Then visions of ugly boys were seen; from slight ugliness greater ugliness developed, and this increased so as to become ridiculous. Similar hallucinations occurred in a friend. Accompanying—probably preceding—this dreamy state was a pleasurable tingling all over the body, sometimes and in some places (the cheeks especially) becoming almost painful. Time seemed long, but it did not pass with the same rapidity as on the former occasion, or rather I did not experience the same forgetfulness; external relations were more connected. Gradually I grew sleepier, and it was with difficulty that I kept my eyes open. I did not succeed in sleeping in a chair, and at 9 retired to bed. Sleep did not follow for some time and I awoke at 6 A.M. As before, slight relaxation of the bowels occurred. Much smaller doses (0·01 gramme, about ⅙ grain) produced no sensible effect.

A few months afterwards a non-medical friend complained of sleeplessness and at my request took 0·05 gramme (¾ grain) cannabinol made into a pill with starch. He afterwards supplied me with the following account: "The pill was taken at 10.30, just before retiring for the night. I probably dozed a little at first, but I remember hearing the clock chime 11.30 and later 11.45. Almost immediately afterwards I began to see strange sights, which passed so rapidly that I had no time to examine them in detail. One that I remember was a bow-legged boy running with a chest of tea between his legs; another seemed like a procession of females in the distance, but on closer examination turned out to be coffins; these quickly melted away, leaving nothing but confusion. The clock struck 12, then 12.15. I remember nothing further until I awoke refreshed at 8 A.M. from a sound slumber." Cannabinol has been used in a few other cases as a hypnotic and with success, but at present I do not wish to enter into its uses as a medicine or even to recommend it as a therapeutic remedy. Considerable experience is always needed to establish the usefulness of any medicine, and this I have not yet been able to obtain. All that is claimed for this substance is that it is active—as active as any preparation yet made—and pure. Whether it will change by keeping or not time alone can tell. Perhaps when greater leisure enables me to complete the pharmacology of the drug I may be able to speak more definitely upon this point.

Of the other constituents of charas the terpenes are the most important. These have no peculiar action; they act as terpenes and in doses of 0·5 gramme (from 7 to 8 minims) are apparently without effect. It is possible that the good effects obtained by some physicians (Silver, McConnell, Bond, Edwards, &c.) in cases of menorrhagia, dysentery, &c., may be partly due to these constituents, but of this I hope to speak later. In conclusion, I express my thanks to Mr. Wood, Mr. Spivey, and Mr. Easterfield for the material with which they supplied me; to my friend, Mr. Stephenson, for samples of cannabis; and to Mr. Heath for notes of his observations during the time I was under the influence of the drug.

Cambridge.

[1] In the case of the Brothers Smith they were contracted (Pharmaceutical Journal, vol. vi., p. 173).

ON CERTAIN APPARENTLY ORGANIC TUMOURS OF THE ORBIT WHICH DISAPPEAR UNDER MEDICINAL TREATMENT.[1]

BY SIMEON SNELL, F.R.C.S. EDIN.,
OPHTHALMIC SURGEON TO THE SHEFFIELD GENERAL INFIRMARY.

I HAVE for a long time been familiar with the clinical fact that internal medication can in certain instances bring about the disappearance of orbital tumours. This is true, moreover, of tumours which exhibit features rendering differentiation from those of a malignant or certainly organic nature difficult, and but for the effects of treatment the distinction would perhaps be impossible without an examination of their minute structure. Just now I am thinking particularly of orbital growths occurring at about the middle period of life, when those of a malignant nature would be prone to arise. I propose to relate recent instances illustrative of this contention.

Panas of Paris, at the annual meeting in London of the British Medical Association in 1895,[2] brought forward a very valuable and instructive paper dealing with pseudo-malignant tumours of the orbit. He expressed the opinion that because dispersion of these growths followed the administration of iodide of potassium it was a mistake to regard syphilis as the only cause, and he believed that a "number of neoplasms thought to be lymphomas, sarcomas, or syphilomas ought to be attributed to the dyscrasia produced by some toxin." He spoke of a class of infectious tumours, the syphilitic being an example but not the only one. We are of course all familiar with the frequent impossibility of getting a specific history even in

[1] Read before the Sheffield Medico-Chirurgical Society, Oct. 22nd, 1896.

[2] Brit. Med. Jour., vol. ii. 1895, p. 955.

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cases which admit of little doubt of syphilitic taint. My experience in a fairly large number of instances of syphilis acquired in an innocent, non-venereal manner has impressed me with the fact that it is much more possible for an individual to become syphilised without being aware of the nature of the affection than might be supposed. But Panas' observations are, nevertheless, of interest as he recounts instances which have undergone apparent cure with treatment by arsenic and other remedies which can hardly be regarded as anti-syphilitic.

CASE 1.—A short time since I recorded[3] the case of a middle-aged man who was admitted under my care into the Sheffield General Infirmary with what was regarded as inflammatory enlargement of the right lacrymal gland of several weeks' duration. It formed a very noticeable tumour at the outer and upper part of the orbit, rendering the eye somewhat prominent and materially interfering with the movements of the eyelid, which was also somewhat œdematous. The tumour continued to enlarge in spite of the administration of iodide of potassium—in fact, the commencement of the use of this drug was characterised by a somewhat rapid increase in size of the enlarged gland. Later, however, it became more stationary, and after the patient had been in the infirmary for some weeks my surgical colleagues, whose opinion I sought, were disposed to regard the growth as a sarcoma and suggested early removal. Before taking this course, however, as the man was anxious to return to his home he was allowed to do so on his promising to report himself after a short interval. This he did in a few weeks' time. The tumour had then become considerably lessened in size. No treatment had been adopted since his leaving the infirmary. A fortnight later he was again admitted. The edge of the tumour was all that could then be felt. In the course of the next few weeks the whole of the growth had disappeared and the eye had resumed its normal characteristics. There was no history of mumps or any general disorder with which to associate the enlargement of the gland. The only explanation offered was one by the man himself, who attributed the disorder to the fact that as an agriculturist he had been using sheep dip made particularly strong with sublimate, but there was no evidence of any wounds or abrasions on the hands, nor had there been salivation or implication of salivary glands or other symptoms suggestive of poisoning.

The case just related, much as it appeared at one time like a malignant tumour was in all probability only an instance of chronic inflammatory enlargement of the lacrymal gland. The cases to be now mentioned are more pertinent to the object of this paper.

CASE 2.—A woman, aged forty years, was sent to me on Nov. 20th, 1895, by Mr. Tristan of Retford owing to a prominence of the left eyeball due, he feared, to a tumour of the orbit. The prominence of the globe was first noticed about three months before and had recently become rapidly worse. For a considerable period prior to this she had suffered a great deal from headache confined to the left side. Treatment had, however, rendered this much less. On examination I found that the left eyeball was distinctly pressed forward, but that there was no marked interference with the movements of the globe. The upper eyelid was somewhat reddened and a trifle œdematous. A tumour was readily found at the outer part of the orbit; it was detected by the finger running also into the orbit above the globe, but the part where it was chiefly situated was on the floor of the cavity extending to the inner side. Here it was distinctly felt projecting as a rounded, somewhat hard, growth over the edge of the orbit. It was also slightly tender to the touch. The tumour was thus an extensive one, but the ophthalmoscope gave no evidence of interference with the intra-ocular circulation. Vision was unimpaired and there were no indications of parts adjacent to the orbit being affected. The patient had been married for twenty-three years. A son, aged twenty-one years, was living. Inquiry afforded neither myself nor Mr. Tristan any other suspicion of specific history than that many years ago she had had miscarriages, the last being ten years previously. The opinion expressed to her medical attendant was that she had an extensive tumour in the orbit, that it would probably require removal, and to get rid of it entirely it would be necessary to remove also the globe. But notwithstanding the absence of a specific history (which I may say he confirmed) I mentioned that I had seen so many growths disappear under iodide of potassium that I should be disposed to give her a course of that drug before resorting to surgical measures. Mr. Tristan adopted this suggestion. On Dec. 15th he wrote that "the tumour has subsided in a marvellous manner," and this dispersion had continued when she paid me a visit on the 24th. At this date I found that the proptosis had nearly gone and that there was apparently little difference between the two eyes, but along the lower border of the orbit the edge of the tumour could be just felt much reduced in size but still a trifle tender to the touch. Starting with a dose of five grains of the iodide she had for some time been taking sixty grains daily. On Feb. 11th, 1896, she paid me another visit. At this time there was nothing to notice in the appearance of the eye as different from the other. The finger passed along the lower and inner wall of the orbit could no longer detect any tumour.

About the same time that the previous patient first came under observation, another woman, somewhat older, appeared among my patients at the infirmary. She had a tumour in the right orbit, displacing the eyeball forwards, but it was not more extensive than that in Case 2. It involved the inner and lower part of the orbit. The onset had been more gradual and it was of longer duration than in Case 2 and was associated with some pain. It would be about as correct to assume a specific taint in one as in the other, and yet in this patient the iodide, tried for a time, exerted no influence, and it was deemed necessary to remove the growth, a proceeding to do which effectually involved the sacrifice of the globe. The tumour proved to be a sarcoma growing from the inner and lower part of the orbital wall.

CASE 3.—In October, 1894, I had under treatment at the infirmary a man, aged forty-two years, who for several weeks before coming to me had noticed that the left upper lid was slightly swollen, and latterly he had suffered somewhat from aching pain. He had a good family and personal history and denied any venereal taint. In addition to the somewhat swollen condition of the eyelid already mentioned the left eyeball was more prominent than its fellow. The finger carried between the globe and the upper wall of the orbit taught that the space was filled up by some large growth which was firm feeling and somewhat nodular. The movement of the globe upwards was also interfered with and the eyelid drooped, and he was able to raise it very imperfectly. During the short time he attended among my out-patients his condition became rather aggravated. At this period he was shown at the Sheffield Medical Society. The presence of a tumour was recognised and its possibly malignant character was discussed by several members who saw the patient. He was admitted into the infirmary and at once placed upon iodide of potassium. A steady improvement commenced which continued until the tumour had become completely absorbed, the appearance of the two eyes being similar and evidence of the former trouble being altogether removed.

The cases mentioned bear a very close clinical resemblance to tumours regarded as sarcomatous and in which the diagnosis has been confirmed by the microscope after the growth has been removed. There was the same evidence to the touch of a somewhat hard, elastic tumour, not fluctuating or pulsating, and somewhat nodular on the surface as an organic tumour would present. Treatment proved that they could be dispersed without operation, and therefore it appears to me that the lesson to learn is one that Panas enforced in the paper to which I have already directed attention—viz., that before resorting to surgical measures for orbital tumours the effects of internal treatment should be tried. It is not necessary that iodide of potassium with or without mercurial inunction should be employed, for Panas mentions the benefit derived from arsenic and other remedies. Panas also suggests that serum, according to the nature of the infection which has been at work, should be used.

The simplest way of accounting for the presence of such tumours as I have referred to is, of course, to presume that they are syphilomas and very naturally to discount the absence of specific histories. If we are to believe that, as a consequence of dispersion following the administration of the iodide, the nature of the tumour has been proved nothing more, of course, can be said. I confess, however, that my feeling is that such tumours as have been referred to in this short communication are not necessarily syphilitic, and the observations of Panas as to unilateral and bilateral orbital growths afford strong support to such a contention.

Sheffield.

[3] International Clinics, vol. i., p. 236, 1894.

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON DECOMPOSITION OF CHLOROFORM, AND SICKNESS.

BY DAVID NEWMAN, M.D.,
SURGEON TO THE GLASGOW ROYAL INFIRMARY;
AND
WILLIAM RAMSAY, PH. D., F.R.S.

EARLY in the history of chloroform it was noticed that the agent had a tendency to undergo spontaneous decomposition on exposure to air and light, and although within recent years great care has been taken by manufacturers of the drug to produce as pure an article as possible, nevertheless, the fact remains that chloroform is not stable and rapidly deteriorates as an anæsthetic. When freshly distilled chloroform is administered, the vapour is easily inhaled, having a sweetish and not unpleasant taste and odour. It produces little or no irritation in the air passages, little excitement of the patient is observed, and if the agent is carefully given sickness, fainting, and irregularity of the pulse and respiration seldom occur during its administration. But if chloroform is kept in a bottle containing air, exposed even to feeble light, changes are produced in the drug which render it less suitable as an anæsthetic. The change is due to the formation of carbonyl chloride and hydrogen chloride, according to the equation $CHCl_3 + O = HCl + COCl_2$. These substances render the vapour slightly pungent in odour, and on inhalation it produces irritation in the air passages. The period of excitement of the patient is more marked and the liability to sickness during and after anæsthesia is greater.

During the last six months the effects of freshly distilled chloroform and of chloroform supplied in the ordinary way have been contrasted, greatly to the advantage of the former. It has been found, however, that distillation is not necessary, as by shaking the chloroform with slaked lime and filtering the irritating products of decomposition are eliminated, as, indeed, theory would predict; for the hydrochloric acid is, of course, at once acted on by the lime, giving calcium chloride and water, and the carbonyl chloride, to the presence of which the sickness is probably to be ascribed, is resolved into carbonate and chloride of calcium, thus—$COCl_2 + Ca(OH)_2 = CaCO_3 + CaCl_2$. In illustration the three following cases may be mentioned:—

CASE 1.—A man was operated on three occasions. For the two first the chloroform given had been in the wards for not more than ten days, and was kept in a well-stoppered bottle away from direct light; but the bottle contained some air. Each operation lasted fully an hour, and on both occasions the pulse became very irregular and feeble so as to necessitate artificial respiration. While recovering from the effect of the chloroform he was very sick, and the sickness continued for two days after the first operation, and for three days after the second. The third operation lasted for one and a half hours. Chloroform which had been kept with slaked lime in it and filtered before use was employed. The patient, although much feebler through disease, remained well during the operation, and there was no sickness for twelve hours, when he suddenly became sick, but this passed off in a short time.

CASE 2.—A woman had been under chloroform four times and she was invariably very sick while coming out and afterwards, the sickness lasting for twenty-four hours or more. When chloroform treated with lime was used, on coming out of the anæsthetic sickness occurred for a few minutes only.

CASE 3.—A man was under chloroform four times. On the first and third chloroform as supplied by the druggist was used, and it was not more than twelve days old. After both operations there was severe sickness, lasting for thirty-six hours. On the second and fourth administrations freshly distilled chloroform was employed with no sickness resulting.

As a matter of experience it was found that freshly prepared chloroform is more reliable as an anæsthetic, and is less likely to produce sickness during or after administration, and the risks of anæsthesia are probably increased by the decomposition of chloroform when kept for any considerable time exposed to air and light. Even with fresh, chloroform sickness may occur if the patient is allowed to come out during the operation, but the quantity of acrid mucus is very small in amount as compared with what is seen when older chloroform is given. Perfectly pure chloroform is said to be a much less stable body than chloroform containing alcohol. As an instance of the instability of pure chloroform it may be mentioned that a sample left in a half-full stoppered bottle from July till October, 1896, smelt as pungent as hydrochloric acid, gave with baryta water a copious precipitate of carbonate, and was absolutely irrespirable.

Glasgow.

UNUSUAL CASE OF CARCINOMA OF THE BREAST.

BY W. S. CRAWFORD, B.A. CANTAB., F.R.C.S. EDIN.,
SENIOR ASSISTANT SURGEON, LIVERPOOL CANCER AND SKIN HOSPITAL.

IN the beginning of September, 1892, a fresh-complexioned, thin woman, aged thirty-one years, came under my care at the Liverpool Cancer and Skin Hospital. She was unmarried. Some months before admission the patient had received a blow on the right breast which caused her a good deal of pain for some time. She did not notice any swelling. Three months after receiving the blow she found a lump in her right breast about the size of a marble, situated above and to the outer side of the nipple; it was freely moveable and quite free from pain. On the patient's admission to hospital, some four months later, the lump had attained the size of a tennis ball. It was very hard and adherent to the skin. The nipple was retracted. The axillary glands were hard and enlarged. It was a well-marked scirrhus of the breast. The breast was removed and the axilla cleared. The sections were found to be hard, spheroidal-celled carcinoma. On Nov. 25th, 1896 (four years later), the patient again presented herself at the hospital. Her general appearance was but little changed. She gave a history of having wrenched her right arm and hurt her right breast eight months before. There was no lump of any kind then. The present local condition is as follows. There is a large oval-shaped tumour distending the skin, which is ulcerated in a circular patch two inches in diameter over the most prominent part of the growth. The ulcerated area is concave; it bleeds readily on the slightest interference. Towards the axilla a flattened portion of growth is felt extending from the main mass and firmly adherent to the pectoral muscles, but not certainly to the bony wall of the chest. About two inches lower down than the main mass there is a small area somewhat discoloured about the size of a penny, intensely hard, and two or three small nodules in the immediate neighbourhood, evidently recurrences in the superficial lymphatics. The right armpit is clear, but the left contains a mass of enlarged and undoubtedly cancerous glands. The main recurrence commenced, according to the patient's description, immediately above the old cicatrix. It now involves the scar and the tissues on each side.

Remarks.—Her father's sister died from carcinoma of the breast which followed an injury. The patient's primary growth, as well as recurrence, followed definite injuries. In so young a patient it was pleasing to find so long an immunity period—three and a half years.

Liverpool.

NOTE ON A CASE OF RUPTURE OF THE HEART.

BY CECIL ROBERTSON, M.B., C.M. ABERD.

CASES of rupture of the heart from external violence without penetration of the chest are by no means of frequent occurrence. Erichsen, in the last edition of his "Science and Art of Surgery," says that Gamgee was only able to collect twenty-two published cases. In the majority of these cases the blow was directly over the cardiac region. For two reasons I think the following case is not unworthy of being recorded—(1) the small number of recorded cases; and (2) that the heart in this case was ruptured by indirect violence.

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An apparently healthy man aged forty-nine years opened the door of a railway carriage just as the train commenced to move and fell somewhat heavily on his left shoulder. On being asked by the officials if he had hurt himself he replied "No" and proceeded some two or three hundred yards from the station to his work, where he died within three-quarters of an hour of his falling from the train. On post-mortem examination I found the pericardium intact but distended with a mass of blood-clot and fluid blood. In front of the left auricle was a laceration one and a quarter inches long through which a piece of clot protruded. The wall at the seat of the laceration was considerably thinned; both ventricles were very much hypertrophied, the whole organ weighing 22 ozs. Beyond a slight abrasion over the right knee there was no external evidence of any injury, and there is little doubt that the cause of the rupture was the violent impact of the left shoulder on the platform.

Southfields, S.W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

RADCLIFFE INFIRMARY, OXFORD.

A CASE OF SUPPOSED PASSAGE OF THE STOMACH THROUGH A RENT IN THE DIAPHRAGM INTO THE PLEURAL CAVITY, THE RESULT OF AN INJURY; RECOVERY.

(Under the care of Mr. A. WINKFIELD.)

ESCAPE of the contents of the abdomen into the pleural cavity in consequence of injury of the diaphragm is a very rare condition, the symptoms produced by such escape being well exemplified by the careful report of this case. Such hernia (as it is, perhaps, wrongly called) is usually without any proper sac, although it may push some partially-ruptured pleura in front of it, and is nearly always on the left side. The injury to the diaphragm may be caused by a stab which has penetrated the chest wall, as in cases recorded by von Horock[1] and Pestempski,[2] the latter of whom successfully sutured the opening in the diaphragm after returning the protrusion, the wound of the chest wall having been enlarged; or more commonly a rupture of the muscular tissue is caused by a buffer accident, and the protrusion into the chest follows immediately. That such injury is not by any means immediately fatal, though producing profound disturbance at the time and troublesome symptoms later, is shown by the cases of Jacobsen[3] and Farwell.[4] Both patients ultimately died from intestinal obstruction the direct result of strangulation, but this did not take place until eighteen and sixteen years afterwards. Both Nauman[5] and O'Dwyer[6] have operated unsuccessfully for diaphragmatic hernia; the former was unable to replace the escaped contents of the abdomen after operation from the abdomen in consequence of adhesions; the latter, who opened the chest expecting to find an empyema, resected parts of the ninth and tenth ribs, reduced the hernia, and sutured the opening, but the boy, aged three and a half years, died six hours later.

A boy, aged five years, was admitted into the Radcliffe Infirmary under the care of Mr. Winkfield with the history that he had fallen with a heavy iron gate upon him. He was collapsed and cyanotic, and some brandy-and-water was administered by the mouth. The left side of the chest was almost motionless and was tympanitic in resonance; it was at first supposed to be pneumothorax, but an exploring needle passed in the fifth left interspace posteriorly drew off brandy-and-water instead of air, as was expected. There were some bruising and tenderness on the lower part of the right side of the thorax; the breathing on that side was loud and exaggerated; the left side moved but little in respiration. At the apex there were dulness and tubular breathing; below the left apex there were tympanitic resonance and distant metallic tinkling. Posteriorly there was some slight dulness with distant breath sounds. The heart dulness was obliterated; its sounds were most distinct above the sixth interspace on the right of the sternum, where its beat could be felt. Upon giving him liquids to swallow distant metallic sounds could be heard in the left half of the chest. For some three days after admission he was in a state of collapse, he could not sit up, there was marked dyspnœa, and upon any slight exertion he became cyanotic. After a few days he began to improve generally, but the condition of the chest remained the same; he complained of severe pain in his left leg and at the back of the knee, but no injury could be felt in that region, and the hip upon examination was evidently free from injury or disease. He had lost flesh a good deal, but was now (Oct. 6th) able to get about without much dyspnœa, and he took food without pain; the physical signs of the condition of the chest remained much as before. There has been no material rise of temperature throughout the case.

Remarks by Mr. WINKFIELD.—The patient was lately shown before the Oxford Medical Society, when several gentlemen present examined him and agreed that the above diagnosis was probably the correct one. I mentioned two cases which I had previously met with. One was that of a blacksmith who over-reached himself when striking a blow with a heavy hammer, and was brought to the infirmary suffering from severe pain in the upper part of the abdomen. After lying quietly in bed for a few days he was suddenly seized with vomiting and became collapsed and died. Upon post-mortem examination there was found a rent in the left side of the diaphragm; the stomach, spleen, and portion of the large intestine had passed through the rent into the pleural cavity. The second case was that of a boy who had been squeezed between the buffers of railway waggons. He was admitted soon after the last case. His aspect and condition were so like those of the last patient that attention was called to them. Upon examination a very similar condition to that of the boy whose case is related above was found. The patient remained in the infirmary for some weeks and then, leaving the hospital, he was lost sight of.

[1] Sajous: Annual of the Universal Medical Sciences, 1888, vol. ii., 135.
[2] Ibid., 1890, vol. iii., C. 50.
[3] Ibid., 1894, vol. iii., C. 58.
[4] THE LANCET, June 30th, 1888, p. 1294.
[5] Sajous, loc. cit., 1889, vol. iii., B. 62.
[6] Ibid., 1894, vol. iii., C. 59.

NORFOLK AND NORWICH HOSPITAL.

A CASE OF DEATH FROM HÆMORRHAGE FOLLOWING OPERATION FOR TONGUE-TIE; NECROPSY.

(Under the care of Mr. S. H. BURTON.)

FOR the notes of the case we are indebted to Mr. Hamilton A. Ballance, house surgeon.

A male child was born after a natural delivery at 5 P.M. on Dec. 21st, 1896. The mother was attended by a midwife temporarily employed by the Lying-in Charity of Norwich, though she had not obtained its certificate. About an hour after the birth the midwife said that the child was tongue-tied, and using a sharp-pointed pair of scissors she proceeded to liberate it. She did not notice bleeding at the time of the operation, but on the evening of the same day blood was observed by the friends to be issuing from the child's mouth. At noon the next day (the 22nd) as the bleeding continued the father went to the midwife's house and fetched her to the case. The woman told the parents that the child was all right and that there was no need to be frightened. On this day the child passed dark blood by the bowel. The hæmorrhage did not cease and the midwife was, therefore, again fetched on the evening of the following day. She then washed the mouth and the face of the child with warm water. The father requested that a medical man should be called in, but the midwife said that it was unnecessary and that if she was to blame she would take the responsibility. Eventually, however, she took the child herself to a medical man, who, after examining him and giving directions to the friends as to treatment, recommended that he should be taken to Mr. Burton. Mr. Burton found arterial bleeding going on in the anterior part

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of the floor of the mouth and placed two ligatures on the bleeding points. He then sent the child to the Norfolk and Norwich Hospital, where he was admitted at 10 P.M. on the 23rd. On admission the child was pale and weak and the pulse was rapid and feeble. He was small, weighing only five pounds. On examination there was seen to be a cut in the floor of the mouth under the tip of the tongue between one-half and three-quarters of an inch long, and extending from just to the right of the middle line away to the left, along the junction of the tongue and the floor of the mouth and exposing the muscular substance of the tongue. The bleeding seemed to have stopped from the time of the application of the ligatures. The child was put to bed, but died rather suddenly in the early hours of the next morning (the 24th). While in the hospital he passed some dark blood by the bowel, having apparently swallowed the blood as it exuded from the wound in the mouth.

Necropsy.—Post mortem all the organs were found to be healthy, though extremely anæmic. In the stomach and intestines throughout almost the whole of their length there was much dark semi-fluid blood. A ligature was seen on the left ranine vein, but whether this vessel or the artery was the source of the major portion of the blood lost was not made out.

Remarks by Mr. BALLANCE.—The above case may be of interest to medical men owing to the prominence of the midwives question at the present time. An inquest was held and the jury returned a verdict of "Death from misadventure." They also recommended that in future a medical man should be consulted should this operation be thought necessary, and considered that the midwife was deserving of censure for undertaking it. At the inquiry the woman stated that she had frequently performed the operation before, always using sharp-pointed scissors, and that this was the first accident she had encountered.

BRADFORD GENERAL INFIRMARY.

A CASE OF PANCREATIC CYST ASSOCIATED WITH GLYCOSURIA AND GALL-STONES; NECROPSY.

(Under the care of Mr. HORROCKS.)

THE change which has taken place in our estimation of the surgical importance of the pancreas is well shown by a reference to earlier editions of surgical text-books. In France, for instance, in his work on surgery (1877) Tillaux states: "Of all the viscera contained in the abdominal cavity that of least interest to the surgeon is the pancreas, owing to its deep situation." The whole subject was dismissed in a few lines. In a new edition (1888) its importance was considered to justify a whole chapter. In this country one of our text-books[1] (1888) devotes a paragraph to the subject of cysts of the pancreas, and speaks somewhat uncertainly especially as regards treatment. In the last edition (1895) this subject is considered at some length and the treatment clearly laid down. The teaching is less certain as regards the causation of the cysts: "When they are traumatic in origin it seems probable that laceration of the gland with hæmorrhage occurs and that this is followed by escape of the secretion from the torn ducts. In the cases in which there is no evidence of injury it has been suggested that a retention cyst forms as the results of some obstruction of the duct." The account of the post-mortem examination in this case makes it possible that the gall-stone which was found in the common duct was an important factor in the causation of the cyst of the pancreas, and the observation is therefore one of considerable interest. For the notes of this case we are indebted to Dr. Bruce Buchanan Morton, resident dispensary surgeon.

The patient, a man aged fifty-six years, was admitted to the Bradford General Infirmary on Nov. 19th, 1896, suffering from pain of varying intensity in the region of the stomach, with nausea, occasional vomiting, a constant sense of "heaviness" and languor of three months' duration, and a tumour first noticed two months previously in the upper part of the abdomen. Since his illness began he had been a little jaundiced and related the passage of several small greenish stones. He also said that he had lost flesh steadily but had had no injury and could assign no cause to account for his condition. On examination the patient was found to be wasted; his skin was sallow and dry, the conjunctivæ were slightly yellow, and his breath emitted a sweetish odour. The thoracic and abdominal examinations disclosed, as irregularities, a distant sound of the heart at the site of maximum impulse, an encroachment of the stomach note on to the left pulmonary areas, and the presence of a tumour mostly occupying the left epigastric and hypochrondriac regions. It was of the size of a fœtal head presumably, firm, unmoved by respiration, but vibrating with aortic pulsations. Percussion over the tumour gave a dull note continuous with the left hepatic dulness, but it was elsewhere surrounded by a tympanitic note. The urine was pigmented, of specific gravity 1025, and contained casts, epithelial and hyaline; also albumin and sugar—a quantity of the latter. The patient looked ill. His pulse was 140. On the 20th three ounces of greenish-brown turbid fluid were removed from the tumour by aspiration. The fluid was alkaline, albuminous, contained no bile, pigments or sugar, and emulsified oil. Its specific gravity was 1009. All treatment proved unavailing and the patient sank and died at 4 A.M. on Nov. 21st.

Necropsy.—Post mortem a large cyst with walls of tough fibrous consistence (one-fifth of an inch thick) and a potential capacity of about two pints was discovered in the lesser peritoneal cavity, with adhesions to the stomach and to the concavity of the spleen, and occupying the site of the normal pancreas. It had a smooth, pale inner surface with shallow sacculations, some of which and the floor of the cyst were occupied by a green, tough, loose substance of a colour like that of boiled spinach. On the exterior of the cyst no normal pancreas could be found and the duct of Wirsung could not be entered by a probe. At the duodenal end of the cyst, however, a stone the size of a pigeon's egg was felt to be loosely impacted in the contiguous common bile-duct and could only be removed by an incision into the gall-bladder, which was filled with a loosely-packed mass of gall-stones, some of which occupied the common duct. The intestines contained no gall-stones, the kidneys to the naked eye appeared normal, and other organs as well. The microscopical examination of a section of the cyst wall by Dr. H. B. Gladstone showed clearly glandular remains here and there in dense fibrous tissue.

Remarks by Dr. MORTON.—Whether repeated passages of gall-stones causing chronic incomplete obstruction of the intestinal common orifice of the bile and pancreatic ducts can be the cause of the cyst formation, or the gall-stone formation be simply secondary to a cyst of the pancreas (from any other cause), or whether the cyst and gall-stones are unrelated I cannot pretend to adjudicate. No pancreatic stone was found. I am indebted to Mr. Horrocks for permission to publish this case and to Dr. Chapman for his assistance in the physical and chemical examinations.

[1] Erichsen: Science and Art of Surgery.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Non-calcifying Plastic Osteitis.—Report on a Museum Specimen of Malignant Enchondroma of the Testicle.—Exhibition of Specimens.

A MEETING of this society was held on Jan. 19th, Mr. BUTLIN, the President, being in the chair.

Mr. BERNARD PITTS and Mr. S. G. SHATTOCK gave a detailed account of a very unusual case, for which they ventured to propose the name of Non-calcifying Plastic Osteitis. A thin and careworn woman, aged thirty-nine years, was admitted to St. Thomas's Hospital wearing an apparatus for a deformity of the right leg. She could only walk with difficulty and great pain. At the age of thirty-one years she had a fall and struck her right leg. Three months later the knee became stiff and painful; two years later, after a confinement, the knee became much worse. She had since been a patient at several hospitals. On examination the leg was found to be very wasted and flexed at the knee almost to a right angle. There was an apparent displacement backwards of the tibia and fibula. The upper third of the tibia was exceedingly tender, and distinct mobility was detected at what appeared to be the junction of the epiphysis and shaft; this movement was

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without crepitus, but attended with great pain. The knee-jerks of the left leg were greatly increased, but no rigidity or ankle clonus was present. On account of the pain and discomfort amputation was performed in November, 1895. The patient recovered, and at the present time is in fairly good health. No other bones of the body were diseased. The upper half of the tibia had undergone a uniform transformation into a minutely cancellous, bone-like substance, so devoid of earthy salts that the bone itself was as pliable as indiarubber. Precisely similar tissue completely filled the medullary cavity. Microscopic sections were cut quite readily without artificial decalcification. They were stained with carmine and hæmatoxylin. The trabeculæ, which took the carmine stain like bone decalcified artificially, were surrounded with a definite layer of osteoblasts, the amount of re-absorption by osteoclasts being quite insignificant compared with that of new production. The spaces between the trabeculæ were everywhere occupied by a highly cellular connective tissue, which contained but few leucocytes. The sections of the nerves in the periosteum exhibited a perfectly normal structure. In the gross the anatomical result was like that presented by the calvaria in osteitis deformans before sclerosis had supervened, but differed in the absence of calcification. The tissue most closely resembled the uncalcified osteoid tissue seen in rickets around the shafts or upon the flat bones. Rickets in this case was excluded by reason of the clinical differences, the strict localisation of the disease to the upper half of the bone, the filling of the medullary cavity with the osteoid tissue, &c. Mr. Pitts and Mr. Shattock regarded the condition as an osteitis in the sense in which any chronic osteoplastic process could be called inflammatory. Following Virchow's teaching, Recklinghausen, in his recent monograph on fibrous or deforming osteitis, had adopted the view which took osteomalacia to be an inflammatory lesion. In this disease, however, the amount of bone-production was conspicuous by its absence; the osteitis was almost completely aplastic; moreover, the decalcification and metaplasia of the decalcifying bone into fibrous tissue seen in osteomalacia were absent in the specimen under consideration. Recklinghausen had adopted the term osteitis fibrosa as a synonym for osteitis deformans for the reason that in certain cases an obvious amount of fibrous tissue may be met with in the bones, but in none had want of calcification been observed; moreover, there was no fibrous formation in the present specimen. The cases of frontal leontiasis recorded by Mr. Horsley exhibited an inter-trabecular formation of fibrous tissue, but the bone, again, was not uncalcified and the operations for its removal were conducted by means of the trephine and saw. Mr. Pitts and Mr. Shattock, in conclusion, found it impossible to class the specimen under the heading either of osteomalacia or osteitis deformans. The lesion was an osteitis occurring in the adult of a pronounced plastic character, but unaccompanied with calcification of the new osseous tissue, and in all this was so remarkable that they had proposed the term "non-calcifying plastic osteitis," thinking that its etiology might prove to be different from that underlying other better known and commoner anatomical conditions.—Dr. KANTHACK did not think that the possibility of new growth had been satisfactorily excluded. He had found an osteoblastic layer similar to that described almost always present in the new bone of osteoid sarcomas, and here also calcareous salts were often absent. He had seen cases of sarcoma of bone, with secondary growths elsewhere, having macroscopic and microscopic appearances just like those in this case. The long history was against the theory of the change being due to a growth, but it was possible that secondary growths might yet occur.—Mr. SPENCER suggested that possibly it might be a case of new growth arising from the white cells of marrow—"myeloma" or lymph-adenoma of bone. Several of these cases recorded had occurred as single tumours, and had lasted as long as in the present case without giving rise to secondary growths, and in several an injury appeared to have been the exciting cause.—The PRESIDENT hoped that Mr. Pitts and Mr. Shattock would place their case under the heading osteitis deformans. He thought that the specimen illustrated a stage in that disease at which the bones were plastic and the deformity took place. The tumour origin of osteitis deformans had been suggested some years ago by Dr. Goodhart and others, but unless secondary growths should occur there was no evidence for regarding this specimen as a tumour.—Mr. PITTS, in reply, said he did not believe there was a growth. The name was provisional. He regarded the condition as most closely allied to osteitis deformans.—Mr. SHATTOCK also thought there was no evidence of growth. This case differed from the other conditions which had been mentioned, the softness being due here, not to decalcification of pre-existing bone, but to new formation of uncalcified bone.

Dr. KANTHACK and Mr. T. STRANGEWAYS PIGG gave the result of their recent examination of a Specimen in the Museum of St. Bartholomew's Hospital which was described forty years ago by Sir James Paget as one of Enchondroma of the Testicle. The specimens showed to the naked eye a cartilaginous looking tumour of the testis, with growth extending along the spermatic cord and the pampiniform plexus and extending into the inferior vena cava, where there was a mass of new growth projecting into the lumen. Sir James Paget found numerous secondary cartilaginous growths in the lungs, and an intra-vascular growth in a branch of the pulmonary artery. The lymphatic glands were not enlarged. Mr. Butlin in his work on Sarcoma had thrown doubt on whether this were a case of enchondroma. The result of the examination by Dr. Kanthack and Mr. Pigg left no doubt in their minds that this was a columnar-celled carcinoma in which metaplasia of the fibrous tissue into cartilage had taken place, this chondrification being in places so extensive as quite to mask the carcinomatous nature of the tumour. The tumour had extended by the veins and not, as originally described, by the lymphatics. Sections through the pampiniform plexus showed that the lumen of the veins was filled by a fibrous stroma containing alveoli lined by columnar epithelium. There were also (as in other cases of carcinoma of the testis recently described by Dr. Kanthack and Mr. Pigg) masses of squamous-looking epithelium with concentrically arranged cell nests. The fibrous stroma contained much cartilage, usually in round masses, but in places showing gradual transition from fibrous tissue. In some parts the tissue was loose and almost myxomatous in character. In the testis cartilage was predominant, but the existence of columnar epithelium in alveoli could be traced. The occurrence of cartilage in carcinomata and their secondary deposits had been described by Virchow and figured by Ziegler. It illustrated the importance of the stroma as well as the epithelial elements of a malignant growth. Dr. Kanthack and Mr. Pigg referred to the remarkable acumen and accuracy displayed by Sir James Paget in his original description notwithstanding the imperfections of histological technique at his disposal.—The PRESIDENT thought the main point was the malignancy of the tumour. He had been led to doubt its innocence both from the naked-eye appearance of the tumour and from Sir James Paget's description, but had not till now seen sections. He agreed that it was a carcinoma.—Dr. SNOW considered that from the variety of tissues present the specimen should be regarded as a "blastoma" arising from fœtal residua.—Mr. BOWLBY thought the demonstration clearly showed the tumour to be a carcinoma with chondrification of the matrix. The absence of involvement of the lymphatic glands was exceptional. The existence of columnar cells was noted by Sir J. Paget; but, probably owing to the imperfect histological methods of the day, their arrangement and significance had escaped him.

The following card specimens were shown:—

Mr. PERCY PATON: (1) Fracture of the Radius and Ulna at the Epiphysis; and (2) Prævertebral Abscess.

Dr. TURNEY: Intra-pericardial Aortic Aneurysm communicating with the Superior Vena Cava.

HUNTERIAN SOCIETY.

Exhibition of Specimens.

AN ordinary pathological meeting of this society was held on Jan. 13th, the President, Dr. G. E. HERMAN, being in the chair.

Mr. T. H. OPENSHAW showed a Solid Ovarian Tumour—a small-celled sarcoma—removed from a woman who had been confined ten days before admission to hospital. Dr. Herman examined the patient and diagnosed a sarcomatous tumour. There was a large amount of ascitic fluid in the abdomen. The uterine cavity was three and a half inches in length. The interesting points of the case were: (1) the size of the tumour—7½ lb.; (2) its solidity; and (3) the pedicle was twisted.—Dr. HERMAN spoke on the question of recurrence of sarcomatous tumours of the ovary and said that it was by no means certain—Mr. TARGETT alluded to the fact that

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fibroma of the uterus was sometimes associated with ascites.—Dr. F. J. SMITH alluded to two cases of sarcoma of the omentum, one with much ascites which simulated extra-uterine pregnancy, and the second a solid growth with but little ascites.

Mr. OPENSHAW then brought before the society the leg and foot of a boy aged fifteen years. At the age of seven years he had Acute Periostitis of the Lower Half of the Tibia. In the specimen part of the shaft of the tibia had not been reproduced, while the fibula had continued to grow. The inferior tibio-fibular articulation was very loose and, owing to the absence of part of the shaft of the tibia, he could twist the foot in any direction.—Mr. TUBBY, in speaking to Mr. Openshaw's point on the propriety of waiting before removing the dead bone, thought that it was better to remove the sequestrum early and to maintain the cavity of the periosteum by stuffing it with gauze.—Mr. TARGETT alluded to some cases of congenital absence of the tibia simulating the condition seen in Mr. Openshaw's case.

Mr. TARGETT presented two specimens of Malignant Growth of the Uterus: one of villous character and the second a columnar-celled carcinoma.—Dr. HERMAN remarked that it was unusual for a uterus with malignant growth of the body to be of such size as the specimen Mr. Targett had described. Dr. Herman thought that in cancer of the body of the uterus the microscope by itself was not always trustworthy from a diagnostic point of view.

Dr. J. H. SEQUEIRA showed a specimen of Secondary Carcinoma of the Spleen, the primary growth being in the uterus.—Dr. HERMAN remarked that cases of cancer of the body of the uterus do not frequently (10 per cent.) give rise to secondary growths in distant organs.—Dr. F. J. SMITH remarked upon the comparative infrequency of secondary splenic growths.

Dr. SEQUEIRA also exhibited the Head of a Femur from a case of Rheumatoid Arthritis in a man aged fifty-six years. In this instance the ligamentum teres had entirely disappeared and there was lipping of the femoral head and acetabulum.—Dr. SMITH asked if the ligamentum teres were ever congenitally absent, and Mr. OPENSHAW remarked its absence in congenital dislocation of the hip.

Dr. F. J. SMITH brought forward a specimen of large White Kidney from a boy, aged fifteen years, who had been ill for only three weeks. The interest of the specimen lay in the fact that it was in opposition to the generally received teaching of the essentially chronic nature of large white kidney. The case was also of interest from a life insurance point of view, as a life might be accepted and then develop renal symptoms shortly afterwards and a large white kidney be found post mortem.—Dr. ARTHUR DAVIES spoke on the points of cyclical albuminuria and life assurance.—Dr. HERMAN said that he was much interested in the discussion, as it was closely connected with puerperal eclampsia.

Dr. SMITH also showed the Lungs and Trachea from a boy aged nine years who was brought into the London Hospital dyspnœic and moribund. Tracheotomy was performed unsuccessfully. At the necropsy an aneurysm of the descending aorta was found.

BRITISH GYNÆCOLOGICAL SOCIETY.

Annual Meeting.—Election of Officers.—Presentation of Reports.—President's Address.—Exhibition of Specimens.—Pan-Hysterectomy after Clamp Operation.

THE annual meeting of this society was held on Jan. 14th, Dr. CLEMENT GODSON, President, being in the chair.

The ballot was taken for the election of officers for the ensuing year, and the following were elected:—Honorary President: Dr. R. Barnes. President: Professor A. W. Mayo Robson. Vice-Presidents: Dr. G. G. Bantock, Dr. C. H. Bennett, Professor J. W. Byers, Dr. A. E. Cordes (Geneva), Dr. G. Elder, Dr. H. Macnaughton Jones, Dr. Leith Napier (Adelaide), Professor W. L. Reid, Dr. C. H. F. Routh, Dr. F. F. Schacht, Dr. W. Travers, and Professor Hector Treub (Amsterdam). Treasurer: Dr. J. A. Mansell Moullin. Council: Mr. W. Armstrong, Dr. Dudley W. Buxton, Mr. T. Kilner Clarke, Mr. E. Tenison Collins, Mr. W. Dingley, Dr. A. Donald, Dr. F. Edge, Dr. C. Godson, Dr. F. N. Haultain, Dr. W. Balls Headley (Melbourne), Dr. P. L. Hebert, Mr. R. A. Hodgson, Mr. F. Bowreman Jessett, Mr. Skene Keith, Dr. Henry Lewis, Dr. R. Marsden Low, Dr. J. J. Macan, Mr. Christopher Martin, Dr. James Oliver, Mr. H. W. F. Powell, Dr. T. Savage, Professor A. J. Smith, Dr. D. Thomson, and Dr. W. S. Wyman. Editor of Journal: Dr. F. F. Schacht. Hon. Secretaries: Dr. John Shaw and Dr. George E. Keith.

The Treasurer and the Editor of the Journal presented their reports.

The PRESIDENT then delivered his Valedictory Address, which will be found in full on p. 221.

Mr. JESSETT moved, and Mr. J. W. TAYLOR seconded, that a hearty vote of thanks be given to the retiring President for his excellent address, and that he be asked to allow it to be printed in the Journal of the society.

Dr. H. M. MACNAUGHTON-JONES showed for Dr. MACNAUGHTON-JONES a Microscopic Section of a Specimen of Deciduoma Malignum.

Dr. F. A. PURCELL showed a new form of Intestinal Clamp for Compressing a Colotomy Spur.

Mr. J. W. TAYLOR (Birmingham) read a communication on Two Cases of Pan-Hysterectomy after Previous Treatment by the Clamp Operation, and showed the specimens.—Mr. BOWREMAN JESSETT congratulated Mr. Taylor on his successful results and the society on the fact that for three or four years it had insisted that total extirpation was the best treatment for uterine myomata. By using the clamp, one or more myomata might be left behind and need a second operation, as in Mr. Taylor's second case. Kelly's operation was new to him, and this was the first time that it had been brought before the society. Probably the method adopted by Mr. Taylor was the only one that could have been used in that particular case. They had to thank Mr. Taylor for bringing these cases before them; they could not see too many of such specimens, and it was well to have a variety of methods available to choose from.—Dr. HEYWOOD SMITH said that from the description Kelly's method seemed easy, but it appeared to him doubtful whether it could be used in the case of a large tumour blocking up the pelvis, as it would be difficult to tilt the cervix sufficiently to get at it.—Mr. J. F. JORDAN (Birmingham) had had the good fortune to assist Mr. Taylor in his case of Doyen's operation. He had not himself used this method. In the three cases of hysterectomy which he had performed he had used Mr. Jessett's method with successful results. Speaking as one of the younger gynæcologists he thought they were fortunate in that the battle as to the best method of dealing with uterine myomata had been nearly fought out. To him complete extirpation seemed the best treatment. Of course they had to consider the mortality of each procedure; and so far it would seem that the mortality after total extirpation was not greater than that of other methods, but would rather prove to be less. The drawback of Doyen's method was that it did not appear to be available for cases of myomata blocking up the pelvis; but he was still in doubt as to the manner in which such cases should be dealt with.—Dr. F. A. PURCELL observed that Mr. Taylor's communication was an extension of the discussion on hysterectomy which they had had at the last meeting. For his part, he did not yet feel bold enough to strip the sides of a myoma and leave the vessels untied till after they had been secured by an assistant. An allusion had been made to large tumours blocking up the pelvis; in such a case he had adopted the method of separating the broad ligament on each side, slicing the tumour across, then dissecting the remaining portion out of the broad ligaments, and so completing the total extirpation.—Dr. BEDFORD FENWICK asked for information on two practical points: (1) the time occupied by each operation, and (2) the time required for separation of the ligatures. The society was to be congratulated on these cases; there was no doubt that they must come ultimately to adopt an intra-peritoneal method and they were fast advancing in this direction.—Mr. TAYLOR, in reply, said that such operations as he had described must necessarily take some time, varying from a little under one hour to one and a half hours. A careful study of the specimen removed by Kelly's method would answer the questions that might be raised about it. The size of a tumour in the pelvis was necessarily limited by the size of the pelvis itself, and if one side remained healthy and accessible the size of the remainder would probably not matter much. The worst cases they had to deal with were such as Mr. Jordan had referred to, where the pelvis was blocked on both sides; in such a case Doyen's method might be useful. It was also especially applicable to those cases in which the connexions between growth and bladder could not be properly attacked from above.

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BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens and Cases.—Asthma and Hay Fever of Nasal Origin.—Undescended Testicle.

A MEETING of this society was held on Jan. 12th, the President, Mr. G. CARTER, being in the chair.

Dr. EURICH showed a series of sections illustrating the Development of the various tracts of the Spinal Cord and Medulla Oblongata. He pointed out that on section of the cord degeneration of tracts occurred in the order of development.

Dr. A. BRONNER showed a case of Internal Strabismus and advocated advancement of the external rectus, combined with tenotomy of the internal rectus, as opposed to simple tenotomy, in treatment of these cases.—Dr. Bronner also showed cases of Iritis, Glaucoma, and of Interstitial Keratitis, and remarked on the complete recovery which took place, under treatment, of cases of the latter affection due to syphilis.

Dr. A. BRONNER then read a paper on Cases of Asthma and Hay Fever of Nasal Origin. He pointed out that the symptoms might be: (1) a direct result of nasal obstruction; (2) the result of irritation of the endings of the fifth nerve by polypus, by atrophy or hypertrophy of the nasal mucous membrane, by foreign bodies, or by necrosis of the bones of the nose; (3) the outcome of a central neurosis, in which cases the application of the cautery gave relief by acting as a counter-irritant. Dr. Bronner gave details of several inveterate cases of asthma and hay fever cured by treatment directed to the unasal cavity. He advocated examination of the nose in all s ch cases and the removal of any abnormal condition if present.

Dr. JOHNSTONE CAMPBELL showed the Stomach from a case of Diffuse Cancer of that organ which had invaded the head of the Pancreas. The stomach presented great contraction of its cavity. The symptoms during life were rapid wasting, constipation, and vomiting coming on after a few mouthfuls of food had been swallowed. There was no glycosuria.

Dr. C. W. CHAPMAN showed a case of Perforated Ulcer of the Duodenum causing death after only thirty-six hours' illness. There was no history of previous attacks and the patient had gone to his work up to the time of the fatal seizure.—Dr. Chapman also showed a case of Peripheral Neuritis affecting the legs, which was said to be the result of bandaging the limbs in the treatment of severe secondary hæmorrhage from an operation wound. There was no history of syphilis or of alcoholic excess.

Dr. CAREW WEBB showed a case of Peripheral Neuritis coming on after chorea, which latter affection had been treated with arsenic. The patient was a girl eight years old. Eight months previously she had been treated with arsenic for one month and had obtained relief. Three months ago the chorea recurred. Six minims of liquor arsenicalis were given three times a day, and this was increased in the course of ten days to twelve and a half minims thrice daily. After three weeks she was discharged well as to the chorea. She returned in a week unable to walk alone. She had wrist-drop and foot-drop, with loss of sensation over the median nerve area. The knee-jerks with superficial and deep reflexes were absent. No symptoms of arsenical intoxication were present except a slight attack of vomiting lasting one day. There had been slight improvement under treatment.—Dr. GOYDER suggested a rheumatic origin for the neuritis.—Dr. KERR, Dr. JOHNSON, and Dr. MITCHELL discussed the case.

Mr. WILLIAM HORROCKS read a paper on Undescended Testicle. Among the causes mentioned were: (1) intra-uterine peritonitis giving rise to adhesions between the testicle and the cæcum or small intestine; (2) contraction of the external abdominal ring owing to over-development of the transverse fibres; (3) incomplete development of the inguinal canal; (4) absence of the gubernaculum testis; (5) excessive action of the cremaster, due to reflex irritation (phimosis, &c.); (6) undue shortness of the vas deferens or of the vessels of the cord; and (7) long mesorchium, allowing the testicle to wander freely in the abdominal cavity. He mentioned in connexion with the first cause that adhesions to the cæcum may not prevent descent of the testicle, but that the cæcum may descend with the testicle and give rise to a hernia with an imperfect peritoneal covering. With regard to the functional activity of an undescended testicle, it was shown that it was not necessarily sterile, as Curling asserted, but that its action depended less on its position than on its freedom from inflammatory attacks following injuries. The complications of undescended testicle were: (1) inflammation, especially in the inguinal position; (2) special liability to malignant disease, more particularly in testicles lying in the inguinal canal; and (3) hernia, the bowel being sometimes adherent to the testis. Treatment by truss was deprecated as worse than useless owing to the difficulty of getting downward pressure, while at the same time injurious pressure was exerted on the testicle and on the vessels of the cord. Treatment by transplantation and by daily downward manipulation was said to be useless. Operation by drawing down and suturing the testicle to the scrotum, obliterating the processus vaginalis, and suturing the ring was not successful when the cord was too short, being followed either by re-ascent of the testicle or by its atrophy. Dissection of the globus minor from the testicle in order to give greater length to the cord was tried in one case, but the testicle atrophied. Assuming the testicle to be not liable in any given case to attacks of inflammation it was recommended that no operation be performed before the age of thirteen years, as up to that age there was a prospect of the testicle descending normally. In the meantime phimosis or any condition liable to cause reflex action of the cremaster might be dealt with. A hernia co-existing with the undescended testis must be dealt with on ordinary lines, the liability of the presence of the cæcum with an imperfect covering being borne in mind.—Dr. ALTHORP pointed out the intimate relations in position between the cæcum and testis during development.—Dr. LODGE mentioned a case of cryptorchism in which there was perfect functional activity of the testicle.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Agraphia and the Question of the Existence of a Special Graphic Centre in the Cerebrum.

A MEETING of this society was held on Jan. 13th, the President, Dr. ARGYLL ROBERTSON, being in the chair.

Dr. AFFLECK showed a young woman who had been admitted to the infirmary with symptoms of Cerebral Gumma. There was a clear history of syphilis. The third nerve was the first to be affected, after which followed the fourth and sixth nerves. Under treatment the affection of these various nerves had passed off, so that after about two months' treatment there was only a little paresis left.

Dr. MILES showed a man whose Tongue he had removed for Malignant Disease. He had gained much room by the removal of two teeth and the incision for removal of enlarged glands under the jaw was taken advantage of for ligaturing the lingual arteries and thus preventing hæmorrhage. He also showed a boy on whom he had operated by Kocher's method with considerable success for Double Equino-varus.

Dr. MACGILLIVRAY showed a Calculus removed by Nephrotomy from the pelvis of the left Kidney, and the patient from whom it had been removed. He also showed a Kidney from a successful case of Nephrectomy; the kidney was cystic and collapsed, the result of a calculus which lay in the ureter at its junction with the pelvis.

Dr. WILLIAM ELDER then read a paper on Agraphia and the Question of the Existence of a Special Graphic Centre in the Cerebrum. He set himself to inquire whether there was a type of asphasia which could be called graphic aphasia. He referred to the four great types of aphasia—auditory, visual, motor, and conduction. He also referred to Wernicke's sub-divisions of sub-cortical, cortical, and trans-cortical, and that there might be three sub-divisions of any of the first three main groups. He then indicated the graphic symptoms in each variety of aphasia: in the auditory form there was paragraphia and also agraphia to dictation, but the patient was usually able to copy. In visual aphasia the patient can write voluntarily and to dictation, but there were disturbances of copying power. In motor aphasia when subcortical there is no disturbance of writing, when cortical there is loss of voluntary writing and also writing to dictation. In conduction-aphasia there is power of writing voluntarily and to dictation, but there is paragraphia. He

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then examined the question of whether there was evidence to show that there have been cases of agraphia other than those due to lesions of the speech centres and the fibres connected with them, and concluded that no conclusive evidence existed as to the existence of a separate graphic centre. Not satisfied with this he took up the consideration of the question from a theoretical study of writing. He argued that in writing the word-seeing centre guided the hand movements, but while this was so he thought the memories of the fine movements and peculiar shapes were stored in a special centre, and that the fine movements required in many expert manipulations were thus stored. Such a centre was not necessarily a large one for it stored only the graphic image of letters, not of words; the words being combined by means of the psycho-motor speech centres and the auditory word centre. The power of forming letters by the left hand he held was different altogether from the expert writing of the right hand, and if the left hand were guided by the centre in the left hemisphere the writing would be "mirror-writing." He had examined a number of adults and children and found that a certain proportion of them when asked to write with the left hand did it in "mirror" fashion. He gave details of an interesting case of motor aphasia with agraphia in which the former was recovered from while the agraphia was persistent. — In the discussion on this paper Dr. BYROM BRAMWELL argued against the existence of a special graphic centre.—Dr. IRELAND considered that there was too great a desire to sub-divide the cerebral cortex when the function of the cortex as a whole ought to be more regarded.—Dr. CLOUSTON thought a presumption had been established for a special centre, but that if writing had a special centre other movements must also have centres.—Dr. MACPHERSON questioned the practical value of localising such a centre even if it existed.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—Hæmorrhage from Rupture through a Mucous Cyst.—Retention of the Menstrual Fluid.—Extra-uterine Gestation.

A MEETING of this society was held on Jan. 14th, Professor SIMPSON, Vice-President, being in the chair.

Dr. J. A. C. KYNOCH (Dundee) showed a Tumour of the Right Kidney which he had removed by abdominal nephrectomy from an infant sixteen months old. The tumour was about the size of a large lemon and grew from the posterior part of the kidney. All that remained of the kidney substance was a small portion on the summit and another part spread as a capsule over the tumour. The tumour microscopically was found to be adenomatous, consisting of alveoli lined by columnar epithelium with a large amount of fibrous tissue. The child is now (six weeks after operation) quite recovered and well.

Profe sor SIMPSON exhibited an Anencephalic Fœtus with Spina Bifida which had ruptured during intra-uterine life. He also exhibited a Fœtus showing so-called Fœtal Ascites, with lymph deposit on the surface of the liver and pleural effusion. He also showed a Colloid Tumour of the Ovary, the cysts being very small with thin walls; one had burst into the peritoneum before removal; the other ovary was the seat of a similar tumour of small size.

Dr. KEPPIE PATERSON showed a Genealogical Table tracing the occurrence of twins to the male progenitors. In a family of three generations there were nine confinements, and six of these were twin births; one member had twins with both his first and second wife. The table was from Professor Winckel's clinic in Munich.

Dr. R. C. BUIST (Dundee) read a paper on a case of Hæmorrhage from Rupture through a Mucous Cyst. The patient was eighty-one years old and had suffered from complete prolapse of the uterus for many years. Serious hæmorrhage had occurred, and when examined blood was found oozing from the inner side of an irregular protuberance 1 c.m. high close to the os uteri. On grasping it with forceps the mass came away, leaving a base from which blood oozed freely. The bleeding was controlled by a couple of silkworm gut sutures. The case was evidently one where the passive congestion due to the prolapse had produced hæmorrhage into a mucous cyst and secondary external hæmorrhage from rupture of the cyst wall.

Dr. LAMOND LACKIE read a paper on Retention of Menstrual Fluid in one half of a Double Uterus, and recorded a case in which menstruation occurred normally from one half of a uterus septus, while an intermittent hæmatometra recurred in the other. The patient was twenty-four years of age, unmarried, and had menstruated regularly since the age of sixteen years, but she complained of a pain in the right side and of a hæmorrhagic discharge which came on every four months and continued for three weeks. The pain in the side was relieved for a time by the flow, but gradually came on again and increased till it was again relieved after four months by the discharge. Further, she said that every month between two menstrual periods she suffered from an acute exacerbation of pain and felt as if she were about to menstruate, but there was no external sign of this. On examination there was felt a marked bulging in the right fornix and a distinct, well-defined tumour in the hypogastric and right iliac regions. The patient said that she had always observed a swelling in the right side before a hæmorrhage came on, and stated that it disappeared when the flow was established. She was kept under observation for some time, and ultimately the tumour was aspirated per vaginam in order to clear up the diagnosis. The fluid was found to be altered menstrual blood. Later, when the sac had once more filled up, an incision was made into it per vaginam and the cavity explored by a sound, when the diagnosis was easily confirmed. Bougies were then forced through the septum between the two halves at the level of the cervical canal, so as to establish free communication between both cavities. A drainage-tube was then inserted along the cervical canal and into the dilated half. The incision made through the lateral fornix was then stitched up. The patient's subsequent menstrual history was interesting; she menstruated every fortnight alternately from each half of the uterus. This was proved by the fact that every second time the fluid escaped entirely by the drainage-tube, which had been left protruding beyond the vulva. Dr. Lackie remarked that this alternate menstruation in some cases of double uterus had been observed by Emmet, Kussmaul, and others. The case was not one of "uterus bicornis," since clinically no sulcus could be felt between the two horns, but rather one of "uterus septus," in which one half had a very imperfect communication with the common cervical canal. It seemed to require considerable distension of the sac to force the small opening which must have existed, although at the time of operation it could not be discovered. Dr. Lackie then discussed the differential diagnosis, and in conclusion referred to the literature of the subject and appended a list of twenty-four cases to his paper. The mortality following the operation for relief of the condition was very high, being no less than 50 per cent.—Dr. HAULTAIN, Dr. BERRY HART, and others made remarks on the subject.

Dr. C. F. A. MOSS (Antananarivo) sent a paper on a case of Extra-uterine Gestation, which was communicated by Dr. BARBOUR. The patient was thirty-nine years of age and had been three times pregnant, the last ending in abortion fourteen years ago. The menstruation had been regular and normal till six months previously to her admission. The last flow was scanty and accompanied by much pain in the hypogastrium and rectum, so severe as to cause fainting. For four months she had little or no pain, but noticed an abdominal tumour, at first in the middle line, and afterwards passing over to the left side. From that time till her admission two months afterwards she suffered from attacks of pain, dysuria, and diarrhœa, with bloody stools. On examination a tumour was found occupying the lower abdominal region on the right side extending two inches above the umbilicus, rather lower on the left, and bulging into the flanks. Slight fœtal movements were felt and the fœtal heart could be heard. Per vaginam a bony mass could be felt bulging into the posterior vaginal wall close to the ostium vaginæ. The cervix was very high, and a mass resembling a slightly enlarged uterus was felt above the pubes. By the rectum the sagittal suture could be distinguished. There was difficulty in deciding between the diagnosis of an extra-uterine gestation or a retroverted gravid uterus. Three weeks after admission there was false labour with the passage of decidua, and she left hospital a fortnight later fairly strong and without pain. She afterwards returned complaining of intense abdominal pain and menorrhagia, and laparotomy was performed three months from the date of the false labour. The sac was found covered by peritoneum, there were slight

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adhesions to the omentum, but none to the abdominal wall. The uterus was lying to the left and free from the sac. The sac was incised and its edges stitched to the parietal peritoneum. The right side of the sac was completely occupied by the placenta, which was dry and bloodless; the left side was occupied by a full time, but much shrivelled, female child. After extraction of the child the placenta was easily detached and removed. There was a rent in the posterior wall of the sac through which the bowel and omentum had prolapsed, the latter being adherent to the placenta. A small sac was found in the lower part of the large sac. The cavity was washed out, clots were removed, and a drainage tube was inserted. The patient made an excellent recovery. Dr. Moss has seen five other such cases in Antananarivo.

Dr. FREELAND BARBOUR read a paper on Laparotomy for a five months' Extra-uterine Gestation. The patient was thirty-two years of age and had one full-time child and two miscarriages subsequently. Early in the history of this pregnancy she had suffered from sudden attacks of nausea, pain, and vomiting. A tumour showed itself in the right iliac region and gradually increased in size. Fœtal movements were felt for about three weeks, but these ceased after an attack of giddiness, accompanied by vomiting, and followed afterwards by unconsciousness. A day or two after this a pale bloody discharge escaped from the vagina containing shreds like skin. She was confined to bed for some weeks and suffered from exacerbations of the pain, accompanied by vomiting. There was one other uterine discharge. On removal to hospital a large abdominal tumour was found, irregular in outline and reaching to within about one inch of the umbilicus; it was solid at some points and cystic at others. On operation the tumour was found to be covered by peritoneum, but lifted up in the right iliac fossa, while inferiorly it extended into the pelvis. The sac was stitched to the abdominal incision. On opening the sac firm, dry blood-clots were encountered, and from the lower part lumps of dry and bloodless placental tissue were removed. A mummified fœtus twelve and a half inches long was removed from the upper part of the sac with some difficulty; it was lying in a large diverticulum, which extended up into the right hypochondrium. The secondary sac seemed to be intra-peritoneal. The sac was washed out; there was a little bleeding, which was easily controlled. Both cavities were packed with iodoform gauze. The patient recovered satisfactorily. In discussing the question of the best time for operating it seemed to be generally accepted in the later months if the fœtus is dead to wait for a certain amount of atrophy of the placenta to take place; the question of interference in the interest of a living fœtus was still *sub lite*. There is also a difference of opinion with regard to the desirability of immediate operation in cases of rupture during the early months. Dr. Barbour referred to the literature of different cases operated on in the later months and discussed the risk of hæmorrhage from the placenta during operation, as well as the subject of stitching of the sac to the abdominal wall. Professor SIMPSON remarked that if it were possible it was better to see to the peritoneum of the abdominal wall and so diminish risk of peritoneal infection.—Dr. BERRY HART stated that the sac in the extra-uterine gestation was in part extra-peritoneal and with a peritoneal periphery; if the latter portion were opened into it was better to stitch to the abdominal walls, but if the peritoneum was not opened into it was not necessary. The sickness and vomiting occurring with the internal hæmorrhage were evidently due to the resulting cerebral anæmia. He had not experienced any trouble from hæmorrhage in operating on these cases, even if the placenta were cut into, as he had found plugging with iodoform gauze sufficient to control it; if there had been bleeding the tampon could be inserted and the placenta left to be dealt with at a subsequent operation a few days later.—Dr. HAULTAIN remarked that the question of stitching before opening into the sac was a question of diagnosis. If the child were alive and the placenta were opened into it might be difficult to control the hæmorrhage, and he instanced a case where the bleeding could only be controlled by pressure from the outside of the sac at its base; if the sac had been stitched to the abdominal wall at the beginning of the operation there would have been trouble and delay in dealing with the hæmorrhage.—Dr. BARBOUR, in reply, stated that in all advanced cases it was more likely that the sac would be opened through the peritoneum and not through the cellular tissue or extra-peritoneally

Reviews and Notices of Books.

An American Text-book of Applied Therapeutics, for the Use of Practitioners and Students. Edited by J. C. WILSON, M.D., assisted by A. ESHNER, M.D. London: The Rebman Publishing Company. 1896. Price 42*s*.

THIS handsome volume, which in the style of its production leaves little to be desired, forms an excellent example of the now prevalent practice of coöperative authorship. In a subject so vast as that of the treatment of disease it is certainly of advantage to enlist the services of many contributors if the work is to speak with authority and command respect. It is barely possible for a single pen to adequately compass the field or for a single physician, however able, to make himself acquainted with the extensive literature of the subject. The editor of the work before us has been fortunate in securing the services of many well-known American physicians to assist him in the task, together with two contributors from outside the American Continent. These are Professor Laveran, who writes on Malarial Fevers, and the late Dr. Beaven Rake, whose admirable and careful work on Leprosy is here supplemented by what was, we suppose, the last writing of a gifted and able observer. The work of editorial revision has evidently been carefully exercised, for there seems to be rather more uniformity of treatment of the subjects than mostly occurs in compendia of this description. In one respect, indeed, we are prejudiced enough to regard this exercise of editorial privilege with regret. It is that the editor has adopted the "new spelling," which is growing in fashion in American medical literature, but for which we are ourselves unable to assume any enthusiasm. The plan of the work is one which will commend itself to readers, for it takes them systematically through individual diseases and groups of diseases, instead of adopting the less attractive and often wearisome method of the ordinary therapeutic text-book.

Avoiding the discussion of general principles and hygiene, the book opens with articles upon the Treatment of Acute poisoning and on the Resuscitation of the Apparently Drowned, by Dr. J. E. Atkinson of Maryland. Next follows a contribution by Dr. Victor C. Vaughan of the University of Michigan upon the interesting topic of Food Infection. He gives a very good account of ptomaine poisoning, ergotism, and other forms of intoxication from the consumption of articles of diet. We would especially draw attention to the excellent descript on of the Opium Habit and Morphinism given by Dr. Carl Frese of Philadelphia, and we note his preference for the treatment of this vice by the "rapid gradual" method of Erlenmeyer to the more sudden withdrawal of the drug, which, if effectual, is only to be attempted with some risk. He expresses his opinion that these cases are best treated in institutions, but he does not speak very hopefully of permanent results being obtained. Other "drug habits" also receive notice. Alcoholism is dealt with by Dr. R. Edes who, we observe, considers that chloral and bromide of potassium are the most efficient sedatives in the treatment of delirium tremens. Passing to the infective diseases, the article on Diphtheria by Dr. W. Northrup may be cited as being fairly comprehensive and up-to-date. The impossibility of thorough disinfection of the tonsils and naso-pharynx by injections and sprays is frankly recognised, but useful hints are given as to the most effective means of carrying out in the child this essential, and not wholly ineffectual, line of treatment. In dealing with laryngeal diphtheria, much space is devoted to the subject of intubation, for which English practitioners will be grateful. Dr. Northrup considers that (in skilful hands) intubation is much to be preferred to tracheotomy, and it is doubtless with the view of gaining fuller recognition of its merits that

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he has been careful to describe the method in detail, whereas but small space is given to tracheotomy. The question of antitoxin is regarded favourably and is mainly discussed in a notice of a report by Professor Welch. The Exanthemata are dealt with in a single article by Dr. G. Dock of Michigan; and it is interesting to observe how in these diseases the value of bathing is coming to be recognised and full justice being done to Dr. Currie of Liverpool, the pioneer in this line of treatment. This subject also receives extended notice at the hands of Dr. J. C. Wilson in his very excellent article on Enteric Fever. The efficacy of the routine treatment of this disease by bathing has been demonstrated to Dr. Wilson's satisfaction in the wards of the German Hospital at Philadelphia, where the practice has been in vogue since 1890. The studies of Professor Osler of Baltimore in the same direction are familiar to all, but we hardly think sufficient credit has been given by our American cousins to the work done in this subject in England ten or fifteen years ago. It was Dr. Cayley who in his Croonian Lectures before the Royal College of Physicians of London first demonstrated in this country the value of the treatment introduced by Brand, and subsequently adopted with much enthusiasm by Dr. Glenard of Lyons, after witnessing its results when a prisoner of war in Germany in 1870. Although much prominence is given to this treatment, Dr. Wilson covers the whole ground of the course and complications of enteric fever in a manner which is as attractive as it is scientific. He also writes on typhus fever, relapsing fever, and cerebro-spinal meningitis. To Dr. E. O. Shakespeare has been assigned the subject of Asiatic Cholera or "Cholera Infectiosa," as it is termed, and it is notable for the conviction he possesses of the efficacy of the methods of protective inoculation introduced by Ferran and the more recently accepted method of M. Haffkine. The following passage clearly expresses what the writer feels on this question:—

"The destructive severity of cholera epidemics in India is decidedly increasing. During the eight years from 1878 to 1885 inclusive there were in India upwards of 2,000,000 deaths from cholera; during the seven years from 1886 to 1892 inclusive there were in the same country upwards of 3,000,000 deaths from the same disease. This appalling increase of an already frightful mortality due to cholera furnishes the most positive proof that, whatever the official sanitarians connected with the Government of India may assert in international sanitary congresses and elsewhere in laudation of the prophylactic measures said to be enforced in India, at great expense, for the limitation of the movements of cholera there, they are utterly incapable of accomplishing the object. In view of the ineradicable influences of caste and antiquated, abominable domestic customs universally prevalent among the natives of India, one personally familiar with the nearly absolute lack of sanitation among the native populations of Hindostan must be visionary indeed if he can even dream of ever remotely approaching the effectual restriction of cholera epidemics in that country by means of the mode of general prophylaxis in vogue there in the past and at present."—P. 276.

And he goes on to say that he is convinced, from a study of the statistics of cholera in Spain in 1885, that the only feasible plan of restricting the disease is by preventive inoculation such as was practised by Ferran in the villages of that country, the insanitary surroundings of which vie in degree with those of India. In the actual treatment of an attack of cholera stress is laid upon the advantages of lavage of the stomach and the method of enteroclysis with solutions of tannin and opium as practised by Cantani; whilst in the stage of collapse the subcutaneous injection of salt-solution (hypodermoclysis) is recommended. There follow articles on Yellow Fever by Dr. J. Guitéras; on Anthrax, Hydrophobia, Glanders, and Tetanus by Dr. J. Chalmers Da Costa; and on Weil's Disease by Dr. A. Eshner. The subject of Croupous Pneumonia is treated by Dr. I. N. Danforth of Chicago, who, whilst recognising our powerlessness to control the course of the disease, yet shows to what extent relief may be afforded. He advises the practice of venesection in the early stage, provided that the subject is suitable for this procedure, and he deprecates the prescription of antipyretic drugs, but thinks cold affusion and sponging valuable. He does not, however, say much about the use of the ice-bag, and clearly regards all such measures of value only in the stage of hyperæmia, although to say that a considerable number of cases may be "arrested" in this stage strikes us as rather optimistic. He divides the rest of the treatment of the disease into that of the stage of consolidation, of the crisis, and of the period of resolution, and finally alludes to the antitoxin method of the Drs. Klemperer as not unlikely to constitute a great advance in the treatment of pneumonia.

The extensive and important subject of Tuberculosis is in the capable hands of Dr. J. T. Whitaker. This, the most formidable and ubiquitous of human infective disorders, has been the subject of numberless treatises and the object of many a vaunted panacea. The writer of the article has well succeeded in a task which must have involved much labour, and we could wish that space would permit of our presenting a summary of his essay. It must suffice to say that in pulmonary tuberculosis he regards creosote as the remedy which has most established itself, although it cannot be claimed to have any specific action, and as substitutes for it he describes the use of guaiacol, cinnamic acid, and other even less commonly prescribed drugs. Nor does he think that tuberculin should be wholly discarded, although he would limit its employment to incipient pulmonary cases and to glandular and osseous tuberculosis. Full details are given in systematic fashion of the symptomatic treatment of pulmonary tuberculosis, and there is a succinct account of the relative advantages of climatic resorts. The subject of Syphilis is discussed by Dr. Orville Horwitz and there is a somewhat elaborate article on Malarial Fevers by Professor Laveran, which is largely taken up with a minute analysis of the action of quinine and its congeners. Similarly, in dealing with Acute Rheumatism Dr. James Stewart enters fully, if less elaborately, into a discussion of the salicyl compounds, but admits that hitherto no satisfactory explanation of their *modus operandi* has been forthcoming. The value of cold bathing for treating the formidable complication of hyperpyrexia is insisted on, but it would have added to the interest of the subject had the writer discussed the prodromal symptoms which warn the physician of the onset of this condition. The treatment of chronic rheumatism is hardly sufficiently considered, and although it is, perhaps, pardonable to find no mention of the latest method—that of super-heated air—yet some place might have been found for a discussion of the dietetic measure—which certainly succeeds in some intractable cases—which goes by the name of the "Salisbury treatment." The same writer has articles on Gout, Rheumatoid Arthritis, and on Rickets, and we confess to some disappointment in the perusal of the last named, which affords scope for much wider treatment. No allusion is made to "scurvy rickets" either here or under the head of scurvy. Passing to the article upon Diseases of the Stomach, by Dr. C. G. Stockton, it may be said that the writer has endeavoured to treat the subject more scientifically than is the rule by considering first the functional disorders which are mostly grouped as "dyspepsia" under such heads as "hyperchloridia," "lactic-acid excess," "diminished acidity and anacidity," gastralgia, gastric hyperæsthesia, and other familiar symptomatic affections. It is impossible not to be conscious of the enterprise here shown; but as in practice the carrying out of this plan involves the constant use of direct testing of the gastric secretions it is difficult for the practitioner to pursue. In this regard, indeed, science has gone far beyond the capabilities of ordinary practice,

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and it may even be questioned whether the results of the treatment of the great army of dyspeptics on these scientific principles has yielded more relief than is afforded by the old-fashioned, if blinder, ways. Nevertheless, any means whereby the therapeutist can attain greater certainty upon the condition which he endeavours to alleviate ought not to be lightly discarded even at the cost of some trouble to the practitioner and discomfort to the patient. And the treatment of "dyspepsia" has long been one of the stumbling-blocks of medicine. Diseases of the Intestine are discussed by Dr. W. W. Johnston, and Diseases of the Liver by Dr. W. C. Darney, whose account of the treatment of gall-stone calls for special commendation. We note that he is convinced of the value of large doses of olive oil as a means for procuring the passage of biliary calculi, and suggests that the mode of action is partly by increasing the flow of bile and partly by lubrication of the mouth of the ductus choledochus. The important subject of Infant Feeding as well as articles on the Digestive Disorders of Infancy and on Dentition are from the pen of Dr. E. Graham of Jeaffreson College, Philadelphia. Amongst the remaining articles we may note especially that on Diseases of the Pleura, by Dr. A. L. Mason of Harvard University. In this article the measures of treatment are preceded by a brief account of the symptoms of the diseases. The indications for paracentesis are discussed with discrimination, and the methods of operating in serous and purulent effusions succinctly described. Instructive illustrations of the conditions in pyo-pneumothorax and subphrenic abscess are given in the section dealing with the former. The articles on Diseases of the Heart, by Dr. F. Forchheimer, and those on Diseases of the Blood and Ductless Glands, by Dr. Osler, need no commendation—they are what may be expected from such eminent authorities. Dr. James Tyson writes on Diseases of the Kidneys, whilst there is a full account of the general subject of Treatment of Nervous and Mental Diseases by Dr. Eskridge. In this and other articles on the nervous system we miss any extended notice of electro-therapeutics. The volume contains, further, a chapter on Mental Diseases and closes with sections on Diseases of the Skin and on Pregnancy and its Disorders, the respective writers of these articles being Dr. J. M. Chapin, Dr. H. W. Stelwagen, and Dr. T. Parvin. We have thus indicated some of the contents of this bulky volume, sufficiently, it may be hoped, to convey to our readers some idea of its scope and quality. It must not be supposed that the sections not mentioned here are less worthy of notice than those that have been cited, for, taken as a whole, the work is one which fairly reflects modern science and practice. It is, therefore, a book which may prove of service to the practitioner and it certainly has the merit of not being too much overladen with theoretical considerations.

Nouveaux Éléments d'Ophtalmologie. Par H. TRUC et E. VALUDE. En deux volumes. *(New Elements of Ophthalmology.* By H. TRUC and E. VALUDE. In two volumes.) Paris: A. Maloine, 21, Place de l'École de Médecine. 1896. Prix 20 francs. Tome i. pp. 604, Tome ii. pp. 713.

THIS work, though only professing to be an introduction to ophthalmology and intended for students, yet contains sketches and notices of many subjects that in more pretentious volumes are often passed over in silence. One of these, for example, is the history of ophthalmology, in which it is shown that considerable knowledge of the subject was possessed by the ancients. Herodotus, for example, mentions that Cyrus, King of the Persians, solicited the Egyptians to send him a celebrated oculist. Under the Ptolemies, the author tells us, the Alexandrian School was celebrated for its anatomical researches on the eye, though the burning of their magnificent library has prevented their works from descending to our time. The Greeks took up the subject, and some of the precepts as well as the practice of Hippocrates—as, for instance, the use of copper sulphate in conjunctival inflammation—still survive, whilst an altar was raised at Sparta to Minerva of the Eyes. No trace of eye-work can be found in Rome until the date of the Emperors, and the treatises of Celsus and Galen appeared. Soon after these writers the oculists' seals came into vogue, which were stones having one or more prescriptions engraved upon one face and the name of the surgeon on the other. After Paulus Ægineta darkness fell on science, and only in the sixteenth and seventeenth centuries were anatomical studies resumed under Vesalius, Fallopius, Ruysch, Briggs, Stenson, and others. The great French surgeon, Ambroise Paré, wrote a chapter on Wounds of the Eye in his work on surgery, and after him came Brisseau, St. Yves, Heister, and Winslow. All practised ophthalmic surgery. Many well-known names follow. Daviel, Petit, and Demours were celebrated as operators, whilst physiological optics were developed by Descartes, Newton, and Young. In later times it is only right to add, and it is freely admitted by the authors, that the Germans have taken a leading part in the development of scientific ophthalmology, as the names of von Graefe, Helmholtz, Donders, and Leber testify.

Again, there is a short but instructive chapter on the anthropological relations of the eye, dealing with the naso-ocular and orbito-occipital angles in different races, with the colour of the iris, the extent and direction of the palpebral fissure, the refraction, and other points. Short sections are also devoted to the comparative anatomy and to the development of the eye. The authors state very dogmatically that there are no dilator muscular fibres in the iris and maintain consequently that the movements of that membrane are simply those of constriction and relaxation; this theory involves the acceptance of two nerves, the third pair being the constrictors, and the sympathetic the dilator. In a section on the temperature of the eye the authors have brought together the scanty information that has been obtained, which is to the effect that in acute conjunctivitis the rise of temperature is 0·93° C.; in episcleritis, 0·49°; in keratitis with hypopyon, 1·45°; in lime burn, 1·29°; in iritis, 1·5°; in irido-choroiditis, 1·18°; and in dacryocystitis, 0·56°. In speaking of the mechanism of accommodation the authors approve of the explanation recently advanced by Tscherning, which is that in this act contraction of the ciliary muscle, tension of the zonule, and traction made upon the central part of the lens occur. Both the meridianal and the circular fibres of the ciliary muscle contract, the circular fibres recede slightly, press or drag backwards and outwards the zonule, and exert a traction in front on the lens. The radial or meridianal fibres advance slightly, stretch the choroid, and thus support the vitreous, which holds back the lens on which the forward traction of the zonule is being exerted. This theory certainly explains some points which are inexplicable upon the theory of Helmholtz. Thus, an increase in the curvature of the spherical lens of the fish is not conceivable as a result of the mere relaxation of the zonule. In both theories muscular action and the elasticity of the lens are brought into play. It is to be observed also that the ciliary muscle does not simply cause the anterior face of the lens to become more convex, but that, in addition, it draws the choroid forward, as Schäfer has remarked, and facilitates the forward expansion of the lens by opening the canal of Schlemm and permitting the escape of some of the aqueous humour.

The dioptrics of the eye and the various methods of instrumental examination are given in considerable detail. The reader will find an account of most of the apparatus that has been devised for the accurate determination of the functions

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of the eye in regard to colour and refraction. A woodcut exhibiting phosphenes (after Serre d'Uzès) is given in which four crescents with their concavities inwards are depicted, but it seems to us that on pressure being made on the globe with the finger whilst the eye is rolled in the opposite direction as far as possible the demilunes have their convexity inwards. Under the head of Ophthalmoscope in the first volume the appearances presented by the fundus of the eye, with some account of their nature are given, which entails some repetition, both in regard to description and drawings in the second volume; no harm is done, but some space is lost. A good chapter is devoted to the preservation of specimens and to microscopic manipulation. The authors prefer Müller's fluid to alcohol and to corrosive sublimate, but formol is better than either, since it fixes well and does not stain like Müller's fluid. The osmic acid method is also mentioned, in which osmic acid is used in combination with chromic acid and glacial acetic acid. The formulæ for making gelatin-glycerine for preserving and exhibiting sections of the globes and those for staining the tissues of the eye are fully described. The second volume of MM. Truc and Valude's treatise is a clearly written manual. They consider that extraction of the lens in cataract, without iridectomy, is the operation that is now generally practised in France. They are of opinion that depression is a method of treating cataract that may again come into vogue, an opinion in which we entirely concur. In regard to the operative treatment of chronic glaucoma, they consider anterior sclerotomy to be the most appropriate. For the benefit of veterinary surgeons a chapter is devoted to the diseases of the eye in wild and domesticated animals. The work constitutes a very good *résumé* of the present state of the art and science of ophthalmology and is very carefully edited. We have noticed but few errors in the spelling of proper names, either German or English, though apart from the context we should hardly have known what to make of "shokes' Disk," intended for choked disk.

An American Text-book of the Diseases of Children, including Special Chapters on Essential Surgical Subjects; Diseases of the Eye, Ear, Nose, and Throat; Diseases of the Skin; and on the Diet, Hygiene, and General Management of Children. By American Teachers. Edited by LOUIS STARR, M.D., assisted by THOMPSON S. WESTCOTT, M.D. Pp. 1190. Philadelphia: W. B. Saunders; London: F. J. Rebman. 1894.

THERE is a growing tendency to issue medical text-books of large size written by numerous writers. This plan doubtless enables large books to be produced much more rapidly than when a single writer attempts to grapple with a large subject; and if writers of acknowledged authority are engaged on separate sections the plan is distinctly to be commended in representing the latest and most modern ideas of those best qualified to express their opinions. On the other hand, there are some inconveniences attached to this system of publication, the sections frequently overlap, and the methods of treatment and the weight of authority may vary materially in different parts of the work. The book before us appears to have received from the editor a large amount of care so as to eliminate the objections we have mentioned above, and he has gathered about him many writers from the most important medical centres of his country. In fact, he has endeavoured to stamp the work as national rather than purely local.

The introduction on the clinical investigation of disease and the general management of children is written by the editor, and in brief space he deals with several important subjects. Other sections, dealing with the diseases of the new-born infant, with the diathetic diseases, and with acute infectious diseases, follow. The paragraphs on diphtheria, tracheotomy, and intubation of the larynx are of considerable value from the lucidity of their explanations. The section on rickets is written by Dr. Lewis Smith and is rendered interesting by numerous figures and plates.

Where so many writers are concerned it is impossible to make separate mention of each, but reference may be made to the essentially practical character of the article on "Diseases of the Skin," which contains numerous prescriptions in addition to careful descriptions of the appearances.

The book is profusely illustrated with coloured plates, charts, and diagrams. It is to be regretted that the plates are of very unequal value and that in some cases they appear to have very little, if any, connexion with the text. It may further be pointed out that Plates XIX. and XX., although interesting in a work on general medicine, have little relevance to a book devoted to diseases of children. In some of the coloured plates, notably in those of Favus and Herpes Zoster, the colouring is so crude that the condition is almost unrecognisable. The figure on page 656 appears to have been wrongly named, the condition indicating opisthotonos rather than paraplegia.

LIBRARY TABLE.

Annales de l'Institut Pasteur. Edited by M. E. DUCLAUX. Tome X., No. 12. December, 1896. Paris: Masson and Co.—The articles in this periodical record of experimental investigation are of unusual interest: (1) Toxines non Microbiennes, by MM. Calmette and Delarde, dealing with the question of natural and acquired immunity; (2) Recherches sur le Pneumobacille de Friedländer, by M. Grimbert, chiefly dealing with its fermentative effects on various saccharine solutions; and (3) Contribution à l'Étude du Trypanosome des Mammifères, by M. Rouget, an extremely interesting account of a flagellated hæmatozoon which swarms in the blood of animals—horses, rats, donkeys, &c.—attacked with a peculiar disease. No cases in man have yet been recorded, but the disease appears to be prevalent among animals in Algiers and India. There is also an admirable critical editorial article on the Structure of Bacteria.

JOURNALS AND REVIEWS.

The Edinburgh Medical Journal.—With the new year this old-established journal commences a new series under the editorship of Dr. G. A. Gibson. It opens with an interesting retrospective paper by Dr. George Buchanan commencing thus: "Fifty years ago, on Tuesday, the 22nd December, 1846, I made myself insensible to pain by inhaling the vapour of sulphuric ether." He tells how he inhaled the vapour with a very simple apparatus and how his father, to prove that he was not shamming, pushed a lancet under one of his finger nails, which was naturally accepted as a thorough proof of his insensibility, seeing that the "patient knew nothing of the action." Dr. W. R. Gowers reports a case of Paralysis of the Fifth Nerve, "singularly complete and almost isolated." Dr. Lauder Brunton publishes the first instalment of a lecture on Pericarditis, written in his usual clear and incisive style; and Dr. Robert Fleming has a paper on Ascending Degeneration in Mixed Nerves, with Experimental Results. Altogether the new series promises well.

The Dublin Journal of Medical Science.—Mr. R. Glasgow Patteson reports a case of Successful Disarticulation at the Hip-joint. The chief points observed were the prevention of hæmorrhage by an elastic tourniquet and an incision planned so as to divide the femoral vessels last. Dr. A. Birmingham has a note on Asymmetry of the Sternum. Fifty-four sterna were examined, of which twenty-seven showed a diminution of the vertical depth of the manubrium on the right side and twenty on the left, while seven were symmetrical.

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The Journal of Anatomy and Physiology. Conducted by Sir W. TURNER and Professor M'KENDRICK. Vol. XXXI., Part 2. January, 1897. London: Charles Griffin. Price 6s.—This part contains several interesting articles. 1. Alfred H. Young, M.B. Edin.: Abnormalities of the Middle Sacra Artery and their Morphological Significance. 2. Swale Vincent, M.B. Lond., and H. Spencer Harrison, Student, Royal College of Science, London: On the Hæmolymph Glands of some Vertebrates. This paper includes an account of the glands in question in fifteen species of mammals, six of birds, two of reptiles, and in several fishes. 3. Gordon Sharp, M.D. Edin.: On the Action of the Products of the Organism of Diphtheria on the Heart Muscle of the Frog. He finds that diphtheria poison is to be classed with the acids which have as their final action the stoppage of the heart muscle in diastole. Hence he believes that the general line of treatment in diphtheria is stimulation without ultimate depression. 4. Albert A. Gray, M.D.Glasg.: An Investigation into some of the Principles of Auscultation — an article containing the results of many careful experiments and observations deserving the study of physicians. 5. R. J. Lloyd, D. Lit.: The Genesis of Vowels, with a plate. 6. On the Interpretation of the Phonograms of Vowels, by the same author. 7. Herbert Page, M.D.: Post Mortem Artificially Contracted Indian Heads. These are made by the Indian tribes of South America, who preserve them as trophies or idols. About twenty-seven specimens are known to exist, and Dr. Page gives some curious drawings and details respecting them. 8. Leslie Buchanan, M.B. Glasg.: The Glands of the Ciliary Body, with a plate. 9. Joseph Griffiths, M.D. Edin.: A Descriptive Account of the Genital Apparatus in the Boar and in the Pig. 10. R. Broom, M.D. Glasg.: On the Occurrence of an Apparently Distinct Prevomer in Gomphognathus; and by the same author — 11. On an Apparently hitherto Undescribed Nasal-floor Bone in the Hairy Armadillo. 12. T. Wardrop Griffith, M.D.Aberd., Professor of Anatomy, Yorkshire College, Leeds: On an Abnormal Muscle of the Hand, with Remarks on the Course of the Radial Artery. This article relates to the first dorsal interosseous muscle. 13. A. F. Tredgold, London Hospital: Variations of Ribs in the Primates, with especial Reference to the Number of Sternal Ribs in Man. 368 specimens of different animals were examined to enable the author to draw his conclusions. 14. John G. M'Kendrick, M.D.Aberd.: Notes on certain Physical and Physiological Measurements and Estimates. A very useful series of data, to be classed with Vierordt's "Daten und Tabellen." 15. Thomas H. Bryce, M.B. Edin.: Note on Two Useful Accessories in Serial Section-Cutting by the Paraffin Method. 16. David Harris, M.B.Glasg.: Summary of a paper entitled "On the Variations in the Character of the Contractions of Striated Muscle with Periodic Stimulation of some Duration and on Recovery of the Muscle," by Alex. Rollett of Graz. Lastly, the proceedings of the Anatomical Society of Great Britain.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fourth meeting of the session was held on Jan. 13th in the Medical Library of University College, Dr. Aust Lawrence being in the chair.—Dr. Waldo showed a patient with Thoracic Aneurysm, in whom tracheal tugging was well illustrated.—Dr. J. G. Swayne and Mr. W. J. Penny made remarks on the case.—Dr. T. Fisher showed a number of Mounted Pathological Specimens recently added to the Royal Infirmary Museum.—Dr. W. H. Newnham read a paper on Three Vaginal Hysterectomies for Malignant Disease.—Dr. W. C. Swayne, Dr. J. G. Swayne, Dr. Michell Clarke, Mr. Greig Smith, Mr. Morton, Mr. Ewens, and Dr. Aust Lawrence spoke at length on the paper.—Dr. B. Rogers read a paper on a Case of Mediastinal Inflammation.—Dr. Michell Clarke, Dr. Fisher, and Dr. Waldo remarked on the paper.

New Inventions.

(1) A NEW HÆMOGLOBINOMETER AND (2) A NEW HÆMOCYTOMETER.

THE principle of the hæmoglobinometer invented by Dr. George Oliver, and described by him in the last Croonian Lectures, is that of the tintometer—viz., the measurement of colour by means of graded glass standards. Doubly transmitted light is used, the blood being diluted to fill a cell having sulphate of lime at the bottom (under a cover-glass) so as to form a dead-white reflecting background. The glass standards, which match the colour of blood to a nicety, are mounted on a similar white background for comparison. It will be noticed on careful inspection that besides the successive additions of colour in going from one glass standard to the next there is a difference of tint as well. In working out the standards it was found that, although a particular liquid, such as carmine, could be made up to match blood at a particular point of the scale, yet on dilution there was considerable divergence. The reason for this is that every liquid has on dilution or concentration a specific colour curve, which is a characteristic of the substance as its specific heat. Consequently it is impossible to read accurately the variations in depth of colour of one substance by means of a scale composed of a single other substance. This important physical law seems to us to put Von Fleischl's hæmometer, in which a wedge of unicoloured glass is used as the standard, out of court altogether. In Dr. Oliver's hæmoglobinometer each degree of the standard is graduated separately by means of the tintometer against the previously ascertained colour curve of diluted blood. To render the colour easier to read the brilliancy of the diluted blood against the white background is lowered by covering the cell with a pale blue tintometer glass. There are twelve graduations in the standard, ranging from 10 to 120, intermediate points being read by means of tinted glass riders, of which two are sufficient for clinical work, but nine are supplied for physiological investigations. Normal blood reads 100 on the scale, corresponding to 1·5 per cent. of hæmoglobin. Although a daylight set is made, the candle-light set of standards is recommended as being more delicate. The comparisons between the blood and the standards are made through a camera tube so as to exclude all extraneous light. Either a collapsible tube contained in the case holding the apparatus may be used or a sliding tube on a stand, the latter being much more convenient.

When a glass tube is drawn out longitudinal lines or minute ridges are formed in the glass. If the tube be filled with a transparent liquid and a distant light, such as a candle flame, be viewed through it, a tiny image of the flame is formed by each ridge, the whole series appearing as a bright transverse line. This fact is made use of in the hæmocytometer invented by Dr. Oliver. Ten cubic millimetres of blood are washed into a flat graduated tube and diluted with Hayem's solution until the line of light formed by the images of a candle flame about ten feet off is just visible. The level of the liquid in the tube is read off and the graduation corresponds to a definite proportion of corpuscles present in the blood. With a little practice very delicate readings can be obtained. The instrument is intended to be used in conjunction with the hæmoglobinometer noticed above. By combining the results the exact condition of the corpuscles themselves can be ascertained. This is important, as it is possible for the corpuscles to vary considerably in the amount of hæmoglobin they contain, although the state of the blood, taken from a general point of view, might appear normal.

These instruments appear to be the most accurate and by far the most delicate yet designed for the measurement of blood. Both are made by the Tintometer Company, Limited, 6, Farringdon-avenue, E.C., who on application will gladly send a representative to demonstrate their use and working.

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THE LANCET.

LONDON: SATURDAY, JANUARY 23, 1897.

WE cannot wonder that the calamitous news about the plague-stricken condition of Bombay and Karachi claimed a separate paragraph in the QUEEN'S Speech. The epidemic, we are assured, shows no signs of decrease, notwithstanding the precautions adopted by the local authorities; and we can only trust that the stringent measures which the Government have been directed to take for the eradication of the pestilence may prove more effectual. It would, indeed, be difficult to imagine a more lamentable state of affairs than the large, important, and hitherto prosperous city of Bombay presents at this time. The situation has been rapidly growing from bad to worse, and the exodus still continues, according to the latest accounts. We have had graphic and gruesome pictures of the sickness, mourning, and desolation which prevail at Bombay, of the deserted streets, closed shops, unfrequented law-courts, and general paralysis of business, of the wholesale departure of the people, of the difficulty of disposing of the dead, and of the terror of the native medical men, who refuse to visit or touch the sick lest they contract the disease. Europe and the outside world have naturally taken alarm and have almost universally adopted quarantine arrangements against Bombay.

Happily for us we have had in this country no experience of this scourge since the great plague followed by the fire of London, and our knowledge of it is mainly traditional and derived from literature and historical romances. There have, of course, been several descriptions of the outbreaks of Levantine plague, which have now and again occurred in more modern times in the East. The late Mr. NETTEN RADCLIFFE some years ago prepared a summary account of the then existing information, but, speaking generally, people did not occupy themselves with what appeared to be a remote contingency as far as they or their country were concerned. The late epidemic at Hong-Kong and in China aroused, of course, a certain amount of public attention and added to our knowledge of bubonic plague in that a specific micro-organism was discovered in the subjects of that disease. Still, European pathologists have really had but little opportunity of investigating plague by the more modern methods of scientific research. The news, if found to be true, that the lower animals—rats, pigs, and domestic fowls—are affected by the disease, and that ants preying upon the dead bodies of the plague-stricken smaller animals may be the disseminators of a pathogenetic microbe, opens out a new and wide field for investigation. As regards the causes—the foster-mothers and nurses of the disease—which led up to the present epidemic in Bombay, it may, we think, be rightly inferred that these were attributable to a long course of neglect of sanitary precautions. The descriptions given of the state of some of the districts and native quarters of Bombay show that a muck-heap or hot-bed was being slowly but surely prepared for the germs of this and other epidemic diseases when once introduced from without. That there have been opportunities of late years for the introduction of the germs of bubonic plague into the city cannot be denied, notwithstanding that we may fail to trace exactly the "how" and the "when."

What should now be the principles—the common-sense line of action—that should be followed in respect of the plague in India—at Bombay, Karachi, Poona, and whithersoever the disease has been carried and has manifested itself? In the first place it should be a subject for anxious consideration whether, under the circumstances and in view of our international obligations, steps should not be at once taken either to prohibit the pilgrimage to Mecca altogether or, at any rate, to discourage in every way in our power pilgrims from India from undertaking that religious but perilous journey. The great flight from Bombay having already taken place, it is obviously too late to do anything in this respect as far as the rest of India itself is concerned. We must be guided generally in our course of action in this as in the case of other known infectious diseases. What is wanted in Bombay and Calcutta is the purification, as far as practicable, of the foul native quarters of these Eastern cities, and, to be thoroughly logical, their destruction by fire even should be considered. There should be large open spaces provided somehow in the place of the overcrowded foul buildings. Large camps on open, healthy sites might be supplied for temporary occupation so long as the epidemic lasted. Segregation hospitals for the plague-stricken and infected people are required; also, an organisation for a systematic house-to-house visitation, public kitchens or depôts for the supply of food for the famine-stricken natives, and numerous small dispensaries for the supply of medical aid in connexion with a system of ambulance transport might be instituted. There should be available, also, means of ready disinfection by heat or otherwise, and for the burning of infected and fouled clothing at several convenient centres. A central public health committee, composed of some practical sanitary engineers and medical officers, with one or two good organisers and energetic administrators, and a large staff of executive subordinates, should be, and probably has already been, formed with power to devise and carry out what is held to be necessary. We would also counsel that application should be made to Hong-Kong for the temporary services of some medical official of practical experience who is thoroughly acquainted with all that had been done there during the late outbreak of plague. We sketch in outline the principles which should be followed in attempting to arrest or limit the progress of the epidemic. It must be left, however, to the local authorities acquainted with native customs to determine what is possible or practicable.

THE valedictory address on the subject of Antiseptic Midwifery (which is published in full at p. 221) delivered by Dr. CLEMENT GODSON on the occasion of his retirement from the presidentship of the Gynæcological Society should be read by all practitioners of obstetrics,

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whether engaged in hospital or in private practice. The subject is a momentousone, touching the safety of puerperal women, of whom four or five thousand still die annually. Dr. GODSON, in his address, does not pretend to announce anything startlingly new or original. His exposition of the efficacy of antiseptics, and especially of corrosive sublimate, has been anticipated by Sir JOHN WILLIAMS, Dr. BOXALL, Dr. CULLINGWORTH, Sir WILLIAM PRIESTLEY, and many others. But, for all that, it is so clear, so simple, and so practical, it is based on so striking an experience, and is, withal, so just to other obstetric authorities, as to entitle him to the gratitude of the Society and of the profession. The case of the lying-in woman is very familiar, daily in its occurrence, and apt to be regarded as a purely natural or physiological process. Practitioners are thus thrown off their guard in respect of its risks. But the fact remains that somehow or other four or five thousand women each year come by this process to their death, and there is every reason to think that such a mortality of the puerperal cases of the country might be reduced certainly to one-half and probably to a much lower proportion.

Half the interest of Dr. GODSON'S address is in the vividness with which he illustrates the mortality of the lying-in hospitals under the old *régime* and prior to the introduction of the use of antiseptics. He speaks particularly with reference to the case of the City of London Lying-in Hospital, which is now 124 years old. The account he gives of the constant and quickly-recurring outbreaks of puerperal septicæmia leading to such a number as necessitated the closure of the hospital for weeks or months makes us almost wonder how it was possible to get physicians to serve on the staff. His connexion with the hospital goes back twenty-seven years. At that time (1870) the patients were dying at the rate of one in nineteen, so that he soon had to appeal, in conjunction with Dr. GREENHALGH, to have the hospital closed. All that fresh paint and colouring could do, with new palliasses and hair mattresses in place of old feather beds, and repaired and double-trapped drains, was done, and it must be admitted with obvious reduction of mortality, lasting for a time. Then followed a gradual rise till another appeal (1877) was again necessitated, and Dr. DE CHAUMONT of Netley was invited to report on the hospital. Great alterations were made at an outlay of £4500, and the hospital was closed for sixteen months. In the immediately ensuing eight months of 1879 the mortality was reduced to 1 death in 278 cases. But with 1880 came the crushing disappointment of a mortality of death 1 in 19. More money was spent on the hospital and a sub-committee recommended that the hospital should be pulled down and rebuilt. Only the back part of the building was pulled down, alterations were made costing £1000, and the hospital was again closed for five months. In five more months it had again to be closed for cleansing, disinfecting, and whitewashing purposes, with marked *temporary* improvement in results—1 death in 104 cases.

The mortality again began to rise and the closure had to be resorted to in 1886 for a mortality of 1 in 44. But now a new state of matters was to be introduced fraught with new hope for lying-in women and a new lease for lying-in hospitals which were rapidly becoming discredited. An agent that hitherto had been regarded chiefly as a poison came to be known as more potent in the saving of lying-in women—at least, in lying-in hospitals—than all the costly repairs and closures that had chequered the history of the hospital in its past years. The physicians of the General Lying-in Hospital—Dr. (now Sir JOHN) WILLIAMS and Dr. CHAMPNEYS—published in 1884 the admirable results of their use of corrosive sublimate as an antiseptic. It was adopted by Dr. GODSON and his colleagues in the City of London Lying-in Hospital, and in the way he describes in a footnote to his address, with the result that from July 1st, 1886, to Sept. 30th, 1887, no fewer than 480 confinements took place without any death. In the last ten and a half years 4608 women have been delivered with 11 deaths, or 1 in 419. From Jan. 1st, 1892, to Dec. 31st, 1896 (five years), there were 2892 deliveries with 3 deaths, and these, not from sepsis, but 1 from embolism and 2 from puerperal eclampsia. The change is momentous, and, as narrated by Dr. GODSON, most impressive. He was induced to make the statement on which we are commenting chiefly by a remark made by one of his predecessors in the Presidentship of the Gynæcological Society—Dr. BANTOCK—who attributed "the marvellous effects of the antiseptic method in midwifery practice to the principle of cleanliness, and called attention to the large number of deaths due to poisoning by corrosive sublimate." Dr. GODSON assures us that in the City of London Lying-in Hospital not the slightest sign of mercurial poisoning has been observed, and does not see why the system should not be used in private practice also. There is probably not the same risk to the lying-in woman in a private house. But private houses have their own special risks. And it is clear that in private midwifery practice there are frequent cases of puerperal pyrexia, often fatal, which are now rarely seen in well-regulated lying-in hospitals. It is a question for every individual practitioner to consider for himself. Until of late years the results of private obstetric practice would bear a favourable comparison with those of lying-in hospitals. Now it is rather the other way. And it is for private practitioners to maintain their former advantage. Dr. GODSON describes with creditable candour and force the distress he felt in losing his first private patient from puerperal septicæmia. In no part of his address is he more true to the general feeling of the profession than here. He now evidently considers such an experience almost impossible, apart from some internal and accidental source of mischief, as latent pyo-salpinx. Let every practitioner be as fully and justly persuaded that his methods are safe. He will then equally advance the security of his puerperal patients and his own professional happiness.

WHEN the regulations for the conduct of the half-yearly meetings of Fellows of the College were framed we pointed out that inconvenience would be experienced from fixing the quorum at so high a number as thirty, the same number as for the larger general meetings of Fellows and Members. Our objections have been justified by the proceedings at the half-yearly meeting of Fellows held on Jan. 7th.[1] It looked

[1] THE LANCET, Jan. 16th, 1897, p. 199.

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at first as if the quorum would not be obtained, but at the end of a quarter of an hour a small balance over the quorum had been secured, and the meeting was then composed of thirteen members of the Council and twenty-six other Fellows. The quorum, however, could not be maintained till the close of the proceedings.

The *pièce de résistance* of the agenda consisted of two motions by Mr. HOLMES and by Mr. RIVINGTON respectively regarding the case of Mr. R. B. ANDERSON, with which everybody sympathises, even when fatigued by frequent repetition. In Tobago and Trinidad Mr. ANDERSON was the victim of judicial harshness and persecution and denied the right to dispose of his professional services by retiring from a case when circumstances rendered it expedient and possible without injury to his patient to do so. He was also precluded from recovering his reasonable fees for attendance. For the exercise of his professional rights mainly derived from his diplomas from the College he was fined and deprived of his fees, whilst to crush his resistance to illegal proceedings he was subjected to two actions for contempt of court which he successfully surmounted, had exorbitant bail imposed upon him, and not being able immediately to produce it was committed to prison. The verdict of £500 damages he obtained in the action which he brought in the Queen's Bench against the colonial judges has been of no service to him, and he finds himself additionally weighed down by the costs of the action still due to his solicitor and to one of the judges who was acquitted of malicious action. At meetings held in the College, both by the Fellows of the College and by the Fellows and Members together, resolutions have been passed bespeaking the action of the Council in his favour. In July the Fellows of the College requested the Council to instruct the representative on the General Medical Council to forward in every way that seemed feasible the objects of the Civil Rights Defence Committee in the case of Mr. ANDERSON. The Council adopted the identical terms of the resolution, and Mr. BRYANT, the representative of the College, undertook to do what he could. But the net result of his speech, as Mr. HOLMES has pointed out, was that "Mr. ANDERSON would find additional difficulty in obtaining the justice to which he is entitled." It was not, therefore, surprising that Mr. HOLMES, who has displayed a warm interest in Mr. ANDERSON'S case, should have moved to ask the Council whether their representative had correctly interpreted his instructions. The motion was, however, lost by a single vote.

The Fellows and Members of the College last November carried a resolution asking the Council to contribute "a substantial sum towards the defence of the rights of Mr. R. B. ANDERSON, these being the common rights of the Fellows and Members which the College under By-law XV. has undertaken to defend." The Council replied, re-affirming the resolution adopted in August last—"That the Council, while sympathising with Mr. ANDERSON in the circumstances in which he is placed, do not feel justified in devoting any of the funds of the College towards the promotion of his appeal to the House of Lords." This resolution of the Council was evidently no sufficient answer to a general resolution asking for the "contribution of a substantial sum towards the defence of the rights of Mr. R. B. ANDERSON." It is to be observed that the appeal to the House of Lords, though very important for obtaining a declaration of the law and pecuniary compensation for Mr. ANDERSON, is not, like the appeal to the Privy Council, a direct method of restoring to him his former position at Tobago and his right to practise there. To this effective means of securing the redress of Mr. ANDERSON'S disabilities—means stamped with the approval of the Council of the College in June, 1894—Mr. RIVINGTON'S motion was, we presume, intended to draw attention. Without committing itself to any declaration upon the exact scope of By-law XV. or any indication of being prepared to afford pecuniary aid the Council did at that time decide to afford to Mr. ANDERSON, at the very least, the moral support involved in the appointment of two representatives on the Civil Rights Defence Committee to further the appeal to the Privy Council, the only appeal which the committee had then undertaken. If the by-law only carried with it the obligation to afford to Fellows and Members disturbed in their "rights, privileges, exemptions, and immunities" the moral support of the Council there can be little doubt that the applicability of the by-law to Mr. ANDERSON'S case would not only not have been questioned but cheerfully accepted. It is perfectly right for the Council to exercise a jealous vigilance over the expenditure and to be very careful not hastily to commit itself to pecuniary obligations for the protection and defence of the Fellows and Members. At the same time the Council is bound to fulfil its obligations under the by-law even if they do involve a considerable expenditure, and the position of the Council at present is very peculiar and embarrassing. The great majority of the members of the Council, we believe, will not admit any pecuniary obligation under the by-law, and at the same time refuse to submit the by-law with the particulars of Mr. ANDERSON'S case for the opinion of counsel. They will probably not retire from this position unless, and until, Mr. ANDERSON makes formal application to the Council to protect him in the exercise of the rights, privileges, and immunities guaranteed to him under By-law XV. of the College.

IT has been announced in the public press that, on the invitation of the Austrian and Russian Governments, an International Conference will be held as to the prevention and control of bubonic plague should that disease advance towards the confines of Europe, and that Her Majesty's Government have consented to be represented at it. It is further stated that the Conference is likely as assemble in Vienna. We believe the announcement to be in several respects premature, but there is no question but that various Powers—notably, those bordering on the Mediterranean—have practically decided to take some common action in the matter. The attitude of this country becomes, therefore, a matter of primary importance. Hitherto we, as a nation, have based the whole of our public health action and administration on the sound principle that individuals are to be treated as healthy unless they are honestly believed to be sick. We thus maintain, for purposes of public health,

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the sacred traditions handed down to us by our forefathers in the matter of the criminal law—namely, to hold all innocent who are not proved to be guilty. This tradition, in its application to public health, is now at least half a century old, and it has been an inestimable boon in the promotion of public health and in the saving of life. So, also, other nations have advanced in public health just to the extent to which they have acted on the same principle. It was largely the unfortunate abandonment of this principle, which had been internationally proclaimed at the Venice Conference, that led to the breakdown of the Paris Conference as regards action in the Persian Gulf; and it must be a satisfaction to know that that principle, to which Great Britain has consistently adhered, is already definitely established by this country in connexion with her intended dealings with plague. When the last remnant of our quarantine law was abolished last session, the Government, doubtless acting on the advice of the medical officer of the Local Government Board, declared by an official Order that they would deal with plague on the same lines as they had dealt with cholera. This Order is practically the law of the land on the subject; and whatever other nations may do in their ports we trust that the British Government will not, as regards English ports, recede from an attitude which has more than any other tended to raise the standard of health and to save thousands of lives from preventable disease. Unfortunately, we are handicapped. Some of the most retrograde Governments of the world have their sway in the basin of the Mediterranean, and they can now point to the action by which Malta has opened the year of grace 1897 by actually setting the ball rolling with "twenty days' quarantine" on all arrivals from India, even when the highest standard of health has been maintained during the whole voyage. It is this reversion to the days of mediæval sanitary neglect and ignorance of the true laws of health that defeats more than anything else international coöperation and unanimity with regard to action on the only sound laws of health.

Annotations.

"Ne quid nimis."

A CENTRAL HOSPITAL BOARD FOR LONDON.

WE are pleased to see in almost every quarter indications of a serious determination to investigate the faults of our voluntary hospital system, with a view to its perpetuation and improvement. We have no wish to see so fine a feature of English humanity and charity disappear or to have the system exchanged for State- or rate-supported institutions. It is for this reason that we have ourselves initiated a searching inquiry into the working of our voluntary hospital system. For the same reason we welcome every movement conceived in a friendly spirit and having for its object the improvement of the administration of our hospitals. One of these movements aims at the formation of a Central Hospital Board for London, as recommended, it will be remembered, by the House of Lords Committee on Hospitals which reported in 1892. A meeting to further this project is to be held on Monday next, at 4.30 P.M., at the Royal United Service Institution, Whitehall, when Sir William Broadbent, Dr. Lauder Brunton, Mr. G. D. Pollock, Mr. Victor Horsley, and others are expected to speak. The general nature of the scheme is before us, with a list of medical and other gentlemen who favour it, and a preliminary list of a general committee for stimulating public feeling in its support. It must be admitted that this scheme has not been enthusiastically received. Probably this has been due to the nature of the case rather than because of any dissent from the general principle of the scheme. The hospitals are separate units and their disposition is to remain so. They have to fight for their existence and they are apt to think they can best do so by preserving absolute individual freedom. But the result of this utter want of coöperation has been to reduce the hospitals themselves to a state of uncertainty and impecuniosity; to make public opinion critical rather than charitable; and to bring about a rapidly changing sentiment in the medical profession towards institutions to which it has hitherto looked with respect and gratitude. With regard to the meeting to be held on Monday we need not now do more than say that we feel a deep interest in the scheme. We are not blind to the difficulties of carrying it into execution and of creating a central body that shall supervise and inspect our hospitals and dispensaries. But it will do so in no compulsory way and as much in their interest as in that of the public and of the medical profession. We have always hoped that the Council of the Hospital Sunday Fund (with the assistance of that of the Hospital Saturday Fund) might have fulfilled the functions of such a board. It has given much to the hospitals and has had to express strong opinions on evils and defects in the system, and its final word has not been spoken with respect to the monstrous abuse of the out-patient system. It seems almost inevitable therefore, that a body must be created for the purpose of friendly investigation and, where necessary, of correction. One most pleasing feature in the preliminary list of the general committee is the inclusion of members—and much respected members—of the staffs of important hospitals in London, as well as of many influential laymen. We can imagine nothing better for our voluntary hospital system than the appointment of a strong central board, representative of all who support hospitals as well as of the medical profession. The staffs of our hospitals have the responsibility of contributing the indispensable element of all hospital charity and owe it to the public and to their own profession to do so on well-defined and approved conditions.

THE MIDWIFE AS OPERATOR.

"A LITTLE knowledge is a dangerous thing"—unless its possessor knows how little it is. Midwives are, without doubt, of great value to a community when it is fully recognised that they are specially trained nurses and nothing more. The moment a midwife steps beyond the narrow limits of her legitimate sphere of action she becomes a veritable danger. It is quite unnecessary to lay any stress on the point that midwives should not attempt anything that could be called operative midwifery. That is acknowledged by everyone; but it is by no means needless to utter a warning against a tendency which undoubtedly exists for them to take upon themselves the performance of some of the minor operations of surgery. Even the smallest surgical operation is full of risks and requires an amount of technical knowledge which is not possessed by a midwife; and the complications which may occur and the sequelæ which may follow need all the care of a skilled surgeon for their recognition and treatment. Among the many dangers which beset even the most trivial operation may be mentioned especially hæmorrhage and sepsis. Without a knowledge of the course of the arteries it is not in the power of an operator to avoid occasionally

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wounding important vessels and fatal hæmorrhage may occur; and should it chance that hæmophilia is present the danger is increased a hundredfold. From sepsis also the risk is great, for though a midwife may talk learnedly of germs and antiseptics, yet her practice of asepsis is usually very faulty. Should septic complications arise they are often unrecognised until the case is hopeless. A very good example of the harmful effects which may follow even a very simple operation by a midwife is reported in another column. The wife of a labourer was attended in her confinement by a midwife employed by a lying-in charity; on the following day the midwife noticed that the child was tongue-tied, and she divided the frænum linguæ with a pair of scissors. It is said that no hæmorrhage occurred at the time, but the next day blood flowed at intervals from the mouth. At first the midwife contented herself with washing out the child's mouth with a little water, but ultimately, after the hæmorrhage had lasted for twenty-four hours, a medical man was called in, and as the bleeding recurred the child was admitted into the Norfolk and Norwich Hospital, where he died a few hours later. The stomach and intestines contained much blood. The wound is described as having been from half to three-quarters of an inch in length. The midwife urged in excuse that she had done the operation successfully on several other occasions, and the jury at the inquest returned a verdict of "Death from misadventure." Unfortunately, this case does not stand alone, and it would be well if measures could be taken to do away with such unskilled operating.

THE COMMERCIAL VALUE OF A MEDICAL PRACTICE IN FRANCE.

IT has recently been decided by a Parisian tribunal that a medical practice in France possesses no commercial value whatever. We are indebted to *La Presse Médicale* for the following particulars of the case which led to this important decision. In 1885 an unqualified individual named Alliot opened an institution in Paris where he professed to cure cancers of the breast by a secret method of treatment which had been handed down to him from an ancestor of his who was physician to Louis XIV. The business apparently flourished until 1893, when Alliot died; whereupon his widow came to terms with her brother-in-law, Florent Alliot, who agreed to exploit his deceased brother's practice for her benefit. The new cancer curer was an *officier de santé*, and up to January, 1896, all seems to have gone on as well as possible. For one reason or another discord then arose between the pair, and having ceased his attendance at the institution Florent Alliot set up on his own account in another street. The widow, however, being a woman of resource was not easily discouraged. Amongst her acquaintances there happened to be a universal genius named Bernard, with whom she incontinently entered into partnership, and the original cancer-curing concern was soon going on as merrily as ever. Upon this Florent brought an action against the new associates, alleging that his late brother's practice was his exclusive property, and claiming damages to the extent of 4000 francs. The widow and Bernard, in reply to this attack, immediately lodged a counter-claim for 5000 francs damages against the plaintiff, whom they further accused of fraudulently copying the prospectus of their old-established institute and also of appropriating to himself the stock cures belonging thereto. So far the details are sufficiently mean and sordid, but the judicial ruling, being equally applicable to properly qualified practitioners, is worthy of note. A medical practice, said the presiding magistrate, cannot be made the basis of a contract, inasmuch as it reposes exclusively upon the confidence which the medical practitioner's knowledge and experience have inspired. That confidence is not transferable as a gift, still less, being essentially non-commercial, can it be sold. When a medical man dies his practice dies with him; in the eye of the law it has ceased to exist and cannot, therefore, be exploited by the heirs, even though these should associate with themselves a qualified person. The several parties in the present case are consequently nonsuited.

THE ORGANISATION OF PROVIDENT DISPENSARIES BY THE PROFESSION.

A CORRESPONDENT, "Beta," writes on the subject of the organisation of provident dispensaries by the profession as a piece of tactics in the "Battle of the Clubs" and on the supposition of an undisguised antagonism on the part of the old friendly societies towards the profession. In order to checkmate these societies he argues that it would be necessary for the profession, either alone or with the help of insurance companies, to cater, not only for the delicate part of the working-class population, which is the part that supports the medical officer in this controversy, but for the strong young men who need the medical officer but little, but want the benefits of a sick club of assured soundness that will last their lives and yield them 10*s.* or 12*s.* a week in sickness. Moreover, there must be such an organisation of these throughout the country that men migrating from one place to another will be able to carry with them the advantages of their membership. There is much material for consideration in our correspondent's letter. But we would point out that he is proposing a very large undertaking to the profession, which would immensely complicate its anxieties and distract its attention from proper medical work. Coöperation with insurance offices in its present form is liable to the most serious objections of small pay, canvassing, and subjection to commercial companies. Recognition of the provident principle in some form is essential and has been the practice of the profession for generations. But the more the profession keeps clear of commercial companies and associations the better; it should confine itself to strictly medical work on terms honourable to the medical man and considerate to the working-classes.

THE ELECTION OF CORONER FOR THE LOWER DIVISION OF PEMBROKESHIRE.

ALLUSION was made in THE LANCET of Nov. 21st, 1896, page 1477, to the fact that a vacancy had occurred in the office of coroner for the Lower Division of Pembrokeshire, and that the candidates comprised one medical and five legal candidates. The election is fixed for Feb. 2nd, and the issue, we are informed, practically rests between two candidates—Mr. Herbert Price, solicitor, and Mr. Hugh Pughe Jones Price, surgeon. The first-named gentleman bases his claim for the office upon the circumstance that he is the son of the late coroner and is at present acting as deputy coroner. He is about twenty-five years of age and at the present time holds various appointments, the value of which amounts to between £400 and £500 per annum. Now we would strongly urge the county councillors with whom the election rests to make the appointment without fear, favour, or affection. Politics and private friendship ought not to be allowed any weight in the election of such an important office as that of coroner. What are the claims of Mr. H. P. J. Price, the medical candidate? He obtained the qualifications M.R.C.S. Eng. and L.S.A. in 1872, and must therefore be at least forty-five or nearly double the age of his legal opponent, while still being in the prime of life. He is consulting surgeon to the Haverfordwest Infirmary and has held for some time the offices of medical officer, medical officer of health, and public vaccinator of one of the districts of the Narberth Union. He has also been certifying factory surgeon. The vacant district is an agricultural one, but contains the towns

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of Haverfordwest, Tenby, Pembroke, and Milford. It extends thirty miles in one direction and twelve in another. The population is 53,925 and the inquests average about eighty yearly. Mr. H. P. J. Price is the only medical candidate, and though other lawyers are in the field the issue will, it is said, be between the two—Mr. Herbert Price, solicitor, and Mr. Price, surgeon. There ought to be no difficulty in deciding. From what we have already stated the medical candidate is the older and more experienced man. But the county councillors must also bear in mind that the duty of a coroner is not only to hold an inquest as to the cause of death, which of itself is distinctly and essentially a medical function: it rests with him entirely to decide whether a death is natural or unnatural, whether the cause of a sudden death is or is not unknown, and whether a death has or has not been a violent one. These questions can only be answered satisfactorily by an experienced medical practitioner—a most important point. For useless inquests are not only a grievous infliction upon those who have to act as jurors, but they cause much unnecessary pain to the bereaved relatives. The viewing of a body by a legal coroner is an absolute farce; to the medical coroner it is an object lesson which he has studied since his early student days. Then as to the taking of evidence, about which so much capital has been made for legal coroners, there is some misapprehension. A surgeon who has discharged the duties of the appointments held by Mr. H. P. J. Price for years past has had more experience of the sifting of evidence such as is required by a coroner than the most experienced solicitor. The inquisition *super visum corporis* is distinctly a medical inquiry and it is greatly to be hoped that the next amendment of the Coroners Act will be one making a medical qualification essential to the office of coroner. Meanwhile, city and county councillors will do well to elect experienced medical candidates who alone can deal satisfactorily with the important questions submitted to them both before, and during, an inquest.

HAS THE FISH A MEMORY?

PROFESSOR LUDWIG EDINGER is collecting information on this point and writes to us as follows:—"Have fish a memory? A request for information. There is a general opinion that fish have some sort of memory, that they can recognise people, know how to find or to avoid places where they have made formerly some experiences, that fish which have once escaped the rod know the bait, &c. It is highly desirable that all experience of this kind should be collected in the interest of comparative psychology. The reason is that till now we believed the function of memory to depend on the action of the brain cortex. All experience in man and in the higher animals has led to that conclusion. During the last years it has been proved that fish have no brain cortex at all. They are the only existing vertebrates without a brain cortex. Now if we could prove beyond the possibility of doubt that fish really have a memory, that they gain experience and can make use of it, then we shall have to give up the till now general opinion that memory has its seat in the brain cortex. Therefore it is extremely important to have an entirely new set of experiences." Professor Edinger then asks all anglers and naturalists to communicate to him any experiences they may have had, requesting them particularly to take nothing for granted, as the smallest observation may prove of the greatest importance. Professor Edinger's address is 20, Gartnerweg, Frankfurt, Main. Here, then, is a splendid chance for anglers to tell their pet tales and to throw light on this interesting question. Many incidents which commonly occur to anglers would decidedly o against the theory that fish have memories. Thus, a fish which has had a fly broken in his mouth will often immediately take another, and on being captured the broken one may be found still sticking in his mouth, and then it is well known to fishermen that a pike which escapes while it is being played will often again ferociously seize the bait if it be at once temptingly offered him. Such well-known facts as these do not at first sight point to any highly developed powers of reasoning in the fish, but before drawing any conclusions from them, another factor—that of sensibility—must also be taken into consideration. It is highly probable that a fish hooked with a small flyhook in a gristly part of the jaw feels little or no pain, and therefore if the hook immediately breaks, the fish possibly looks upon it as a very slight inconvenience which in no wise need hinder him from continuing his meal. A fish's brain is a very small mass compared with the weight of the body, and is also small in comparison to the spinal cord. We have no doubt that Professor Edinger will receive many interesting communications from people who are in the habit of studying the habits of fish carefully, and it is to be hoped that some reliable conclusions will be drawn from them.

"DOCTORED" TOBACCO.

WHY is tobacco so often highly scented? Is it not reasonable to suppose that in many cases it is to mask an inferior quality which otherwise would be manifest? That the treatment of tobacco with various essences and flavours is practised there can be little doubt, and every intelligent person knows that in by far the majority of instances the peculiar aromatic flavour of the tobacco he buys does not naturally belong to the tobacco leaf at all. We have strong reasons for believing that the dosage of tobacco with highly scented or aromatic compounds may give rise to real injury to health. This matter becomes the more serious when we consider the large quantity of cheap and nasty cigarettes that are smoked by the small youth of the present day. A correspondent recently forwarded us some cigarettes which were described as having been made from best bird's-eye. They cost 1*s.* 10*d.* per 100, and, as might be expected, were excessively nasty, smelling powerfully of an aromatic substance of a totally different character to tobacco itself. Our correspondent said that they made himself and a friend "feel very queer," and we are not surprised. We are only surprised at his hardihood in risking the trial of such obviously under-priced tobacco. Still, this instance is instructive, and we have been prompted to consult some of those mysterious though useful books which are described to contain "several thousand receipts, covering the latest, most important, and most useful discoveries in chemical technology, and their practical application in the arts and the industries"—in other words, those books that deal with trade dodges, and we have been rewarded with some valuable, if not altogether encouraging, information. Here we find various formulæ for the improvement of inferior qualities of tobacco and for the removal of any disagreeable smell and taste that may characterise them. In these interesting operations we find that the use of the following articles is concerned: orris root, Tonquin bean, juniper berries, coriander seeds, storax, cascarilla bark, angelica root, cinnamon blossoms, badiane, cloves, saltpetre, cassia, glycerine, liquorice root, rosewood, sugar, bay leaves, walnut leaves, green oranges, oil of lemon, amber, vanilla, bergamot, nutmeg, balsam, cardamoms, cubebs, sassafras, galangal, calamus root, &c. It is not improbable that one or other of the substances in this really formidable list, especially if used in excess, would, when submitted to destructive distillation in the pipe or cigarette, give rise to volatile products of a much more injurious character than those due to the combustion

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of pure, unscented tobacco. At any rate, it is probable that the objectionable effects described above were due to flavouring agents or to bad tobacco. We are aware, of course, that tobacco must to some extent be treated in order to be presented in a smokeable form, but need this process go any further than depriving the leaves of their stalk and moistening and pressing them prior to cutting? Of one thing we are confident, and that is that a large proportion of the smoking public would prefer to smoke pure, unsophisticated tobacco in preference to the stuff that is highly loaded with foreign flavouring substances. Tobacco leaves without any manufacturing process afford a pleasant and enjoyable enough smoking mixture that is infinitely superior to many manufactured kinds as long as specimens of various growths or of various degrees of strength are mixed in suitable proportion to meet individual requirements. It was the original leaf which Sir Walter Raleigh smoked, of which Charles Kingsley said "divine in a pipe, glorious in a hookah." Why cannot the public obtain the next best substitute—that is, an absolutely unsophisticated tobacco leaf, which has only been treated in order to facilitate its being cut up into suitable form?

FUNCTIONS OF THE LUMBAR CORD.

IN the Proceedings of the Royal Society there is an abstract of an interesting paper by Dr. Page May describing a series of investigations into the segmental representation of movements in the lumbar region of the mammalian spinal cord. The method mainly followed was that by excitation of nerve roots and also of the spinal cord, and as a means of controlling the observations with this method mechanical stimulation (pinching, &c.) was sometimes employed in examining the nerve roots. The dog and the monkey were the animals chiefly experimented upon, and in the dog the excitable area of the cord surface was found to be the postero-external column. Stimulation of Goll's column produced no movement except in the lower lumbar region, where that column is very small or absent, and where the effect was probably due to the stimulus directly affecting the fibres of the postero-external column. The movements, as a rule, were limited to the side stimulated, and movements in the lower limb could be produced by stimulation of Burdach's column from the upper border of the thirteenth dorsal segment to the lower border of the first sacral segment, and the areas, stimulation of which produced movements of limbs, arms, and tail, overlapped one another, the hip area, however, being nearer the cerebrum than the knee area and the knee area higher than the foot area. When the cord was transversely divided above the lumbar enlargement the movements were more easily elicited. It was also found that the point, stimulation of which gave movement of the tail, was placed internal to the point for the hamstrings, this again internal to that for the hip, while most external of all was that by stimulation of which movement of the side of the trunk was elicited. Stimulation of the nerve roots gave very interesting results. Stimulation of an anterior root gave, on the whole, a quick, powerful extension of the whole limb; excitation of the corresponding posterior root resulted in flexion of the whole limb. This result was quite constant, and by many facts it seems to be evident that the path along which the impulses pass, as evidenced by movement elicited in stimulating a certain posterior root, is directed towards a point *below* the level of that posterior root, and not, as might be supposed, in the same segment or above it. The same general results were obtained by stimulation of the spinal cord and nerve roots in the monkey. The area found excitable was the postero-external column, stimulation of which, from the thirteenth dorsal to the second sacral segment inclusive, produced lateral flexion of the spinal column, flexion and adduction of the hip, flexion of the knee, ankle, and toes, and movement of the tail and perineum, and peristalsis. And it was also quite definite that the area, stimulation of which produced movement of the tail, was nearer the middle line than that for the hamstrings, while this area was nearer the middle line than that for flexion at the hip, and so on. The same general effects as in the dog were obtained by stimulating the anterior and posterior nerve roots. The conclusions arrived at are: (1) that any reflex centre derives its chief afferent impulse from a nerve root entering the cord, as a rule, about two segments higher; (2) the fibres of the postero-external column are arranged in a definite order from within outwards, the innermost representing the most distal part of the tail; and (3) stimulation of anterior roots in the dog produces extension, of the posterior roots flexion of the limb as a resultant movement. In the monkey there is not this apparent antagonism, because stimulation of anterior roots brings out a differentiation of flexion and extension, although stimulation of the posterior root gives flexion alone. The paper, as will be seen, forms a valuable contribution to the physiology and anatomy of the spinal cord, and we await with interest the study of the results of similar methods applied to the investigation of the cervical and upper dorsal cord.

PLAGUE, PESTILENCE, AND FAMINE.

IT is a sad falling together of events that the sixtieth anniversary of Her Majesty's useful and beneficent reign should see her splendid Eastern Empire threatened so terribly and tried so sorely. "From plague, pestilence, and famine ..... Good Lord deliver us," is a sad appeal to accompany the universal prayer that is being said this year for the Queen's Most Excellent Majesty, and we feel certain that the kind heart of our Sovereign Lady must feel that this is so. More than a million and a half of our Indian fellow-subjects are in receipt of famine relief at the present time, and although the subscription that has been opened here is being nobly supported, it is inevitable that much terrible misery should go unalleviated. Upwards of £120,000 has been subscribed already (Thursday) and several provincial centres are imitating with successful generosity the movement inaugurated by the Lord Mayor of London. The cause needs no urging upon our readers. Famine and the ills that follow in its train do not require detailed description before their horrors can be comprehended. But much can be done by prompt and orderly action. Let our Indian Government be placed at once in possession of a large sum of ready money, and we know that all human means of arresting the march of evil will be at once employed.

SO-CALLED NON-POISONOUS DISINFECTANTS.

NOT a few cases have been recorded of late of death following upon the swallowing of tar acid mixtures described as non-poisonous. An important case was recently reported from Huddersfield in which it appears a woman took a large quantity of a compound called "germol," which is supplied by a Huddersfield firm of manufacturing chemists. On this occasion the "germol" was contained in a bottle marked sanitas. The evidence at the inquest led to the verdict that death was the result of asphyxia produced by corrosive poison contained in a disinfectant called crude "germol." "Germol," however, as we find from a small specimen submitted to us, is described on the label of the bottle as non-poisonous and for external use only. We have pointed out before that manufacturers are not justified in calling these fluids non-poisonous. It may be perfectly true that they have not the

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same powerful poisonous action as carbolic acid, but still they are poisonous, as in the above instance, in moderately large doses, and therefore it would be more correct to describe them as less poisonous than carbolic acid. There are a great number of similar preparations of this kind in the market at the present time, all of which the public are led to infer are quite non-poisonous. They consist of an alkaline mixture of the phenol derivatives of coal tar. It seems to us that if carbolic acid is to be scheduled as a poison these preparations, which are of a kindred character, should be included, for we have already received sufficient evidence to justify such a course.

NATURAL AND ACQUIRED IMMUNITY.

THE natural immunity of many animals to certain diseases, even when the actual virus is injected, has long been known and various explanations have been given. Quite recently careful investigations have been carried out by MM. Calmette and Delarde in the Pasteur Institute at Lille. In their experiments they made use of the following poisons—viz., an animal virus, serpent's venom, and a vegetable poison, abrine, prepared by macerating jequirity seeds (Abrus precatorius) in water. They found that the immunity of pigs and hedgehogs to venom and of fowls and tortoises to abrine could not be due to the presence of antitoxins in the blood previously to inoculation, for the serum of the normal animals had no protective effect on susceptible animals, nor had it any neutralising effect on the poison when mixed with it outside the body before inoculation, in both these respects differing from serum containing antitoxins. They were also unable to discover any antitoxic substance in the brain, liver, spleen, or other organs of the normal animals. They hold, therefore, that the antitoxic serum is independent of immunity, since that may exist when no antitoxic properties are possessed by the serum. They attribute both kinds of immunity to special characters of the cells of the body.

THE SOCIETY OF PUBLIC ANALYSTS.

THE Society of Public Analysts has now been in existence some twenty-two years and the progress which it has made during that time is a fact upon which it may be warmly congratulated. Though it is an institution which seldom comes prominently before the public notice, yet it is none the less an important one in contributing work devoted to the public service. By means of its monthly publication, the *Analyst*, public analysts in all parts of the kingdom are brought into touch with new developments of fraud and are made acquainted with improved methods of analysis which must be employed in the difficult task of combating new tricks. Of late years the society has been engaged very closely on the question of reform in regard to the present Food and Drugs Act, and their work has been of the greatest possible assistance to those appointed by the Legislature to inquire into the subject, and so much so that practically the recent report of the Food Products Adulteration Committee proved to be in substantial agreement with a draft Bill which was approved and drawn up by the society before this committee commenced its inquiry. From the memorable days of THE LANCET Commission, when the Founder of this journal showed how awful was the nature and extent of adulteration going on, a marked change for the better in the quality of the food supply took place, an improvement which was subsequently subject to control by Act of Parliament. The Act of 1878 is still in force, and it is no matter for surprise that that Act is not found adequately to meet the requirements of food control in the present day. There is no doubt that though people may not be poisoned they are still cheated, not perhaps to the same appalling extent as heretofore, but still, according to the recent Local Government Board returns, "the nature, substance, and quality of the article demanded" by the public fall short to the extent of 10 per cent. of those examined. The proportion of adulteration, however, is probably a good deal higher and many offenders escape. This is due in a very large measure to certain unsatisfactory clauses in the Act with which recent legislative inquiry has been concerned with a view to amendment. This inquiry had its origin in the strong representations calling for repeal made by the Society of Public Analysts, and the good work it has done and is doing in this connexion bears a resemblance to that which the Founder of THE LANCET carried out when he instituted his successful crusade against food adulteration. As might be expected, the proposed new legislation directed towards the more satisfactory suppression of the adulteration of food and drugs, was a subject considerably in evidence in the speeches delivered at the twenty-second anniversary dinner of the society, which was held at the Criterion Restaurant on the 13th inst. The chair was occupied by the newly-elected President of the Society (Dr. Bernard Dyer), who has succeeded Dr. Thomas Stevenson. Among those present were Mr. Kearley, M.P., the Secretary of the Board of Agriculture (Mr. Elliott), the President of the Chemical Society (Mr. A. Vernon Harcourt, F.R.S.), the President of the Institute of Chemistry (Dr. Russell, F.R.S.), the President of the Pharmaceutical Society (Mr. Walter Hills), the Chairman of the London Section of the Society of Chemical Industry (Dr. Messel), the President of the Institute of Brewing (Mr. A. C. Tanqueray), and Professor H. E. Armstrong, F.R.S. The toast, "The Houses of Parliament," was to have been responded to by the Earl of Winchilsea, but in his absence Mr. Kearley, M.P., made suitable acknowledgement, and he congratulated the society upon the admirable assistance it had lent to the members of the recent committee. Professor Thorpe, the Director of the Government Laboratories at Somerset House, replying for "The Various Government Departments," said it would be their endeavour as referees to work harmoniously with the public analysts. The toast of "Our Guests" was responded to in a humorous speech by Mr. J. Fletcher Moulton, Q.C. We observe that no mention occurs in the Queen's Speech of the proposed new legislation, and Mr. Kearley intends to move an amendment to the Address regretting that no intention is expressed in the Speech of promoting legislation in furtherance of the report of the Select Committee on Food Products, which disclosed the existence of unfair and nefarious competition with native food producers by foreigners and others, to the great detriment both of the commercial and agricultural interests of the people of the United Kingdom.

JUSTICES' MEDICINE.

A CASE tried recently at the Limerick Quarter Sessions before His Honour Judge Adams elicited some remarkable views from the bench upon infection, bacilli, and kindred subjects. The medical officer to the Croom Union sued a baker who supplied the workhouse with bread for a certain sum of money due for medical attendance. Among other matters, it came out in evidence that the medical officer had suspended the baker from supplying bread because of the presence of whooping-cough—or, as they call it there, chin cough—in his house. Not knowing any of the circumstances we do not propose to comment upon this action of the medical officer, but what we do take exception to are the remarks with which the judge is credited by the local paper. His Honour is reported as saying: "The doctors went on about the bacilli until they were perfectly mad in their fear. ..... Some time ago he had a physician on the table, and when he was handed the Bible he took it with great care, opened it, and kissed the inside

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leaf. In reply to him the witness said he was afraid of microbes, vacilli, and micracocci (*sic*) (laughter). But he was not afraid of alcohol, for he was blind drunk and in the opinion of the court in a pronounced stage of delirium tremens at the time (laughter)." This sort of stuff may pass for humour in Ireland, but if so the deserved reputation of the Irish for humour must have been sadly over-estimated. Adams is, however, not an Irish name, and we should be obliged to his Honour to inform us why, if the physician was "blind drunk," he permitted him to be sworn? There is a very real danger in kissing a book or anything else that is constantly being kissed by the class of persons frequently to be found in law courts, and the equally impressive and binding Scotch or mediæval form of oath-taking is much preferable to the form at present in use.

THE REMOVAL OF INFECTIOUS CASES IN PUBLIC CONVEYANCES.

A REMARKABLE case has recently been investigated by the East Grinstead (Sussex) Urban Council concerning the removal, by the medical officer's orders, of cases of a diphtheritic nature to hospital in a public conveyance. The matter was brought to the notice of the Local Government Board, who forwarded the letter of complaint to the council. The medical officer reported that the cases in question, being those of membranous croup or diphtheria were removed to the cottage hospital in a cab, every child being enveloped in a clean blanket, and the distance travelled being only half a mile, so that, in his opinion, there was no risk of contaminating the cab. The committee came to the conclusion that in their opinion any case where there was the least suspicion of infection should not be removed in a public conveyance, but in the proper ambulance provided for the purpose. In this view the council concurred, and it was agreed to send the reports to the Local Government Board and to apply to the guardians for leave to use their ambulance in case of emergency.

CONGENITAL ABSENCE OF PATELLÆ.

CONGENITAL absence of both patellæ is a rare phenomenon, and a paper by Dr. A. T. Bristow of Brooklyn, in the *Medical News* of New York of Jan. 2nd of this year, is therefore of considerable interest, containing as it does a report of such a case illustrated with excellent skiagrams, and a *résumé* of the small amount of literature which exists on the subject. In the case under Dr. Bristow's care the child was brought to the Long Island Hospital in the summer of 1895. The patient was a boy, two and a half years old. He had a slight pes varus of the right side and a severe type of the deformity on the left which evidently called for operative interference. While examining the child for the purpose of correction Dr. Bristow's attention was attracted to the case with which a luxation of the knee could be produced. Indeed, at first the peculiar crack with which the dislocation occurred most unpleasantly suggested a fracture. Closer inspection revealed the fact that the knee-joint on each side immediately became dislocated on bringing the axes of the femur and tibia into line, and that the bones could be displaced in any direction almost at will. As the joint looked peculiarly prominent the condyles were examined, and both patellæ were found to be absent. The tendon of the quadriceps, instead of being thick and strong, was very thin, and was spread out over the front of the joint, seeming to be attached in part to the condyles of the femur, as well as to the fibula and tibia. There had been no attempt on the part of nature to supply a patella. There have been cases reported where this bone consisted of a rudimentary cartilage, but there was nothing of the sort to be found by palpation in this case. The most complete account of the cases reported may be found in a paper by Hartigan in the *National Medical Review*, 1879, vol. i., p. 92, but other cases have since been published. In all the cases on record there seems to have been an element of spasm or a contracture of the quadriceps, as it always required more force to bring the limb from its position of extreme anterior flexion backward during the first part of the arc than the last, and much flexion of the limb, or lateral motion, was painful. In many of the cases there seems to have been a nervous element present as a factor in producing the accompanying peculiar deformity in these patients; but it is possible that this was reflex and in the direction of protecting the joint, for the synovial surface would be most exposed in extreme flexion and best protected in anterior flexion. All the cases, without exception, seem to have been subject to other developmental errors, a rule to which the case recorded by Dr. Bristow was no exception, as the patient had a varus on both sides. The skiagrams showed that the tibia on the right side was dislocated outward and backward, with a rotation of the femur inward and the tibia outward. The bones were much more closely approximated in this limb than on the left side, as is evidenced by the skiagram. The inter-condyloid notch on the left side seems much more marked than on the right and the profile of the tibial joint line is more curved.

THE PORTSMOUTH ASYLUM MEDICAL STAFF.

AT the meeting of the Portsmouth Town Council a reference was made to the medical staff of the asylum, it being mentioned that an assistant medical officer had been appointed at a salary of £100 a year and the asylum committee recommended a third at £70. Mr. Emmett congratulated the committee especially on having obtained the services of a qualified medical man with eight years' previous experience at £100 a year. He said it was disgraceful to ask a professional man to accept such a salary, and added that he hoped the committee would think it wise to revise their salaries, for there was a vast difference between £100 with eight years' experience and £600 with no experience at all. On an alderman protesting and saying that the officer got board, lodgings, and washing as well, Mr. Emmett quoted from THE LANCET similar appointments where the sum of £225 was offered. However, nothing was done, the council probably consoling themselves with the suggestions that the place was really worth £250 a year, that the salary was a "progressive" one—we should have thought it decidedly "moderate"—that it would be increased in six months, and that there were seven candidates for the post.

THE MARRIAGE OF FEMALE EPILEPTICS.

IN an instructive note in the *Phonographic Record of Clinical Teaching* Dr. Gowers lays down rules for guidance when the medical practitioner's opinion is sought respecting the marriage of an epileptic female. Commencing with the proviso that the medical man must not decide the question, but content himself with placing before the patient the materials from which a decision can be reached, Dr. Gowers says that to the patient herself marriage and even pregnancy will make little difference, whilst the man who aspires to the hand of an epileptic lady must look to the severity of the disease and the extent to which it threatens mental powers, and must decide for himself whether he will inflict upon himself a wife with such an infirmity. The important question is the influence exerted on future children, and on this the family history, rather than the clinical aspects of the case, will throw most light. In cases which are the result of accidental lesion of the brain, and which are characterised by the severity of the initial convulsions, by their frequent one-sidedness, and by the absence of hereditary taint, fears of inheritance are groundless; but if epilepsy or insanity can be traced in ancestors or relatives the probability is very great that some of the future children will

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have some neurotic affection. If there are six children the chances are against the escape of all, though at the same time the chances are considerably against any individual child suffering. The stronger the hereditary taint the more likelihood there is of its transmission. The well-being of the community would preclude such marriages, but the well-being of society seldom influences the conduct of the individual; and Dr. Gowers has to confess that in most cases submitted for an opinion the devoted couple take the risks and marry.

THE MUNIFICENCE OF BARONESS HIRSCH.

As the daily press has already mentioned, the Baroness Hirsch has given £80,000 to found a hospital in England for phthisical children. This bequest is not only generous, but, eminently sensible and practical. The scheme as at present proposed is as follows. A hospital is to be built by the sea for the reception of three or four hundred children, an endowed fund supplied, and a convalescent home to be built in addition. This is an admirable scheme, especially if, as we hope is the case, the children are to be housed in separate blocks, containing not more than fifty beds respectively. Pulmonary phthisis is pre-eminently a disease which requires for its treatment fresh air and sunlight, and these two factors are impossible of attainment in large towns. It is very far from our purpose to disparage the well-directed work of the Brompton Hospital, but we are sure its work would be even more valuable if the town house could be used mainly as a feeder for sundry country establishments, for besides the benefit to the patients themselves there would be a diminution in the risk of spreading tuberculous infection, which always must exist when tuberculous patients are aggregated together in urban dwellings. We earnestly hope that this noble example of the Baroness Hirsch may be followed by others who are rich in this world's goods, and that other hospitals for the treatment of convalescent patients may be established in suitable situations.

AUTOPLASTY OF THE PREPUCE AMONG THE ANCIENT HEBREWS.

WHEN Christianity became paramount in Syria the Jews who adhered to their pristine customs were exposed to grievous persecution. The following example of the shifts they were put to in order to conceal their identity is related by Dr. Beugnies of Givet in his work on Circumcision in Palestine, and will be found of interest, not only from an historical, but also from a surgical point of view. "While the Grecian dynasty was supreme at Antioch circumcision went through a crisis which may be described as epic. Antiochus Epiphanes formally forbade the practice with regard to the newly born under pain of death to both mothers and offspring, and at least two women convicted of disobeying the royal edict were cast from the summit of the city ramparts with their infants at their breasts. Numbers of Israelites, anxious to propitiate the good graces of their sovereign master, did not hesitate to attempt the re-construction of their ablated foreskins — *sibi præputia fecerunt*. By this we should probably understand that they ceased the mutilation of their male children, for autoplasty of the prepuce is such a delicate operation that before we can believe in its performance at that early date the most ample proof is necessary." Curiously enough, some time after the publication of his book Dr. Beugnies came across the required proof in a short note which he attributes to Broca. According to this authority, rehabilitation of an excised prepuce was quite a common operation in ancient surgery. *Verpi* in Rome were specially taxed, besides being excluded from the privileges of citizenship, and in order to escape from these disabilities they were willing to submit to the following plastic procedure. In the first place the surgeon made a circular incision round the body of the penis at a suitable distance from the end of that organ and implicating the skin alone. He next detached the latter from its subjacent tissues to within a short distance of the corona, and then completed the operation by everting the ring of skin over the exposed glans, where it formed a more or less perfect prepuce. A highly inconvenient cicatrix was naturally the result of this attempt to remedy man's interference with nature, but apparently the patients decided to put up with this disadvantage for the sake of the substantial benefits that otherwise accrued to them.

THE MILROY LECTURES FOR 1898.

DR. MONCKTON COPEMAN has, we hear, been appointed Milroy Lecturer for the year 1898, and the subject selected for the lectures is the "Natural History of Vaccinia and Variola." The subject is one which seems to us to be an exceptionally happy one for 1898, the year which celebrates the centenary of the publication of Edward Jenner's "Inquiry into the Cause and Effects of the Variolæ Vaccinæ ....." Dr. Copeman is especially well qualified to deal with matters relating to vaccinia, and his valuable researches into the effects of storing vaccine lymph in glycerine are likely to have a very far-reaching influence on the future methods of lymph storage in this country. We shall doubtless have, too, from Dr. Copeman in the Milroy Lectures a full account of his interesting investigations into the bacteriology of variola.

THE REGISTRATION OF NURSE CHILDREN.

THE Infant Life Protection Act is not so stringent a measure that any legal safeguards for its application can be dispensed with. Chief among these is the obligation to register which is binding upon the custodians of children. In this requirement we possess the only available guarantee against mismanagement or wilful misconduct on the part of such caretakers. A case recently investigated in the North London Police-court at the instance of the London County Council is of interest, not because misconduct was shown to exist, but on account of a remarkable connexion between the most respectable references, an apparently complete oblivion all round as to the requirements of the law in such cases, and, finally, an abnormally high infant mortality. Martha Taylor, a widow, had had under her care since 1892 fourteen infants, eight of whom had died. She was certified to be respectable, was well known in her neighbourhood, but though registrable was not registered and was professedly unaware that she should be. No neglect or ill-usage was proved against her, but it is worth noting that her weekly allowance for nursing each infant and for her own sustenance was but four shillings. She was at last obliged to seek parish relief, and further inquiries led to the investigation referred to. The children, as a rule, were derived from the "rescue homes" of the Salvation Army and were usually illegitimate. Perhaps the constitutional weaknesses which often come of an unknown parentage had something to do with the deaths which occurred among them; but no suggestion of this kind has been mentioned. Other causes at least as powerful must have been at work in the home of a very poor widow struggling to support an infant and herself on four shillings a week. Such a pittance was clearly inadequate for the performance of the duties required of her. Her capacity as a nurse was not discussed at her examination, but we may safely conclude that it was not of the highest order. From whatever point we regard this incident it can hardly be doubted that the introduction of registration and inspection at an earlier stage of her nursing history would have materially improved the prospects of

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eight children. Not the least singular circumstance about this case is the facility with which the responsible officials of the Salvation Army seem to have accepted as a guardian for their rescued children an unregistered, and therefore a disqualified, person. However fair their intentions, the result is not flattering to their discrimination.

THE HEALTH OF THE QUEEN.

A PARAGRAPH with the above heading and bearing the sub-heading "alarming rumour" has recently appeared in certain newspapers suggesting that Her Majesty is seriously unwell. We are glad to be able to announce on the best authority that the statement in question is absolutely untrue. Her Majesty is in excellent health and her general condition gives no cause for special anxiety on the part of her medical attendants apart from that which naturally attaches to every individual of advanced age. It is most regrettable that circulation should be given to such ridiculous rumours as that to which we refer.

DINNER TO MR. J. H. RUTHERGLEN.

IN recognition of his active and successful exertions which resulted in the passing of the Poor-law Officers Superannuation Act, 1896, Mr. J. H. Rutherglen, chairman of the Superannuation Committee of the Poor-law service, will be entertained at a public dinner on Wednesday, Jan. 27th. Lord Glenesk has consented to preside, and it is to be hoped that the committee which is arranging this well-merited tribute to Mr. Rutherglen's talents for organisation and persuasion will be rewarded by a good attendance of members of every branch of the service and of both sexes.

THE WATER-SUPPLY OF TORQUAY.

THE corporation of Torquay are contemplating a step which might well be followed by the municipal authorities of other places occupying a similar position. For some time they have been considering the question of not only augmenting the supply of water to Torquay, but also of bringing the supply to a standard of higher quality and character. To do this it is proposed to apply for an Act of Parliament for powers to purchase the water-shed from which the water of the town is derived so as to place the administration from beginning to end under the entire control of the corporation. It is believed that the acquirement of this water area, which is situated on a projection of Dartmoor, will provide for an abundant supply of water, not only for existing requirements, but for future demands. Amongst the principal objects for securing the control of this area is the vitally important one of placing the corporation in a position to eliminate all likely sources of contamination. We are glad to find that at the statutory meeting which was held in Torquay on the 15th inst. the council received the sanction of by far the greater majority of those in attendance, so that the necessary way has been cleared for applying for an Act of Parliament

THE EDUCATION OF CHILDREN OF DEFECTIVE INTELLECT.

THE Lord President of the Council has appointed a Committee to report upon the Education of Children of Defective Intellect. The committee is constituted as follows:—The Rev. T. W. Sharpe, C.B., H.M. Senior Chief Inspector of Schools (chairman); Mr. H. F. Pooley, Senior Examiner, Education Department; Mr. A. W. Newton, H.M. Inspector of Schools; Dr. Shuttleworth, late Medical Superintendent, Royal Albert Asylum for Idiots and Imbeciles; Dr. W. R. Smith, Medical Officer of the London School Board; Mrs. Burgwin, Superintendent of Schools for Special Instruction under the London School Board; and Miss Townsend, Member of the Council of the Association for Promoting the Welfare of the Feeble-minded. Mr. H. W. Orange, Examiner, Education Department, will act as secretary to the committee. The terms of reference to the committee are as follows:—To inquire into the existing systems for the education of feeble-minded and defective children not under the charge of guardians, and not idiots or imbeciles, and to advise as to any changes, either with or without legislation, that may be desirable. To report particularly upon the best practical means for discriminating, on the one hand, between the educable and non-educable classes of feeble-minded and defective children, and, on the other hand, between those children who may properly be taught in ordinary elementary schools by ordinary methods and those who should be taught in special schools. To inquire and report as to the provision of suitable elementary education for epileptic children and to advise as to any changes that may be desirable.

THE MEDICO-LEGAL VALUE OF ANTIVENINE IN INDIA.

PROFESSOR HANKIN, director of the bateriological laboratory at Agra, recently had submitted to him cloths which had been removed from the intestines of some cows which had died, apparently, from some acute poisoning. Chemical analysis being impracticable, Professor Hankin macerated the cloths and concentrated the solution obtained. Part of this was inoculated under the skin of a rabbit, which died in less than an hour with every symptom of poisoning by serpent venom. The rest of the fluid obtained from the cloths was then mixed with a small quantity of Calmette's "sórum antivenimeux" and injected into a second rabbit, which showed no symptoms whatever. If this observation proves to be corroborated by further trials, the knowledge that poisoning by serpent venom can be detected by scientific methods may check the use of this agent in India, where it appears to be frequently employed to poison animals. Another agent frequently employed for this purpose is abrine, the albuminoid substance contained in jequirity seeds. A serum antitoxic to abrine has been prepared by Dr. Calmette of the Pasteur Institute at Lille, whose researches on serpent venom are so well known, and it is possible that this also may be of use in finding the exact poison that has been employed and bringing home crime to guilty parties. It is an interesting example of the unlooked-for practical results which often spring from purely scientific laboratory experiments. The whole aniline industry, for instance, arose from the incidental discovery of one of the aniline colours by Dr. W. H. Perkin when carrying out a patient laboratory research in the unsuccessful endeavour to prepare quinine synthetically.

GERMAN COURTESY TOWARDS ENGLISH INVESTIGATORS.

IT would perhaps be hardly correct to say that science recognises no nationality, for the simple reason that friendly international competition has been instrumental in bringing about scientific progress. There is, however, about all honest investigators a feeling in matters of this nature that progress is best attained by freedom of discussion and by mutual help. This spirit has always been especially well marked in Germany, and we hear with pleasure that Dr. Thorne Thorne, the principal medical officer of the Local overnment Board, accompanied by Dr. Monckton Copeman, one of the medical inspectors, while recently investigating the methods of lymph production, storage, and distribution in Germany, have been afforded not only every facility for prosecuting their inquiries, but also have received at the hands of the nation's representatives the most generous hospitality. Germany has nothing to fear in revealing the very scientific

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methods adopted in this particular, but it is nevertheless very gratifying to learn at the present time of representatives from this country being so graciously received. We can only trust that when investigators from Germany next visit our shores on anything like a similar mission that equal facilities and hospitality will be extended to them. We believe, too, that in France and Belgium Dr. Thorne Thorne and Dr. Copeman were accorded every opportunity for observing the methods of lymph production. The result of this mission is not yet known, but it is quite certain that no one could study the excellent practices in vogue in Germany without coming to the conclusion that in England we have yet much to learn in the matter of lymph production and collection; and we shall be much surprised if this inspection of Continental methods does not lead to very material alterations in the production and storage of lymph in this country.

WHILE considerable satisfaction is expressed at the fact of a promise being given in the address from the Throne that a Bill will be submitted to Parliament to improve the arrangements for water-supply in the metropolis, and a Bill also to make better provision for the compensation of workpeople who suffer from accidents in the course of their employment, yet it is a matter of surprise and some disappointment that there is no indication of any immediate steps being taken in regard to the recommendations of the Food Products Adulteration Committee, whose difficult task was finished and whose report was printed some months ago. We understand that this omission will form the basis of an amendment by Mr. Kearley, M.P.

ON Wednesday last, Jan. 20th, Lord Lister was presented in Queen's College, Belfast, with an address from the Members of the North of Ireland Branch of the British Medical Association. The occasion was the opening of the new physiological, pathological, and bacteriological laboratories. In an address which Lord Lister delivered he dwelt upon the advantages which would accrue to medical practitioners by the establishment of central stations where they could send specimens for examination and report.

WE have received a circular from the Guy's Hospital Out-Nursing Fund asking for pecuniary support. The Out-Nursing Fund is a scheme for the nursing at their own homes of convalescent patients from the wards and out-patient department of the hospital. The honorary secretary, who will receive subscriptions and give all information, is Mr. C. L. Josephs, of Broxbourne, Herts.

THE Secretary-General of the Twelfth International Congress of Medicine to be held in Moscow next August has announced that June 1st has been fixed as the last day upon which particulars, titles, and abstracts of communications to be read to the Congress can be received by the executive committee.

IT is with great regret that we announce the death of Dr. Edward Ballard, F.R.S., late medical inspector of the Local Government Board, at his residence, Ravenscroft Park, High Barnet, on Tuesday morning last. We must defer till next week a full notice of his useful and distinguished career.

THE Queen has re-nominated Mr. William Moore, M.D.Dub., Physician in Ordinary to Her Majesty in Ireland, to be, for five years from the 25th inst., a Member of the General Council of Medical Education and Registration of the United Kingdom, for Ireland.

THERE will be a public meeting at the Drill Hall, Cheniesstreet, W.C., on Thursday, Jan. 28th, at 8.15 P.M., to direct public attention to the serious financial condition of University College Hospital. The Duke of Bedford will preside.

AT the general meeting of the Royal Meteorological Society held on the 20th inst. Dr. Theodore Williams, late President, and Dr. Robert Barnes, late Vice-President, were elected members of the Council of the Society.

THE Duke of Connaught will preside at the Biennial Festival of the National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen-square, Bloomsbury, on March 24th.

LORD GLENESK will take the chair at the annual dinner of King's College Hospital, to be held on May 14th, in the Whitehall Rooms of the Hôtel Métropole.

WE have received the Army Medical Report for 1895, but are compelled to defer notice of it until next week.

IRISH POOR-LAW MEDICAL RELIEF SYSTEM: ITS ORGANISATION AND ADMINISTRATION.

BY PATRICK LETTERS, M.D. ABERD., D.S.M. IREL.,
MEDICAL ATTENDANT TO THE STAFF OF THE ANGLO-AMERICAN TELEGRAPH COMPANY, VALENTIA, IRELAND.

THE subject of Irish Poor-law Reform is one to which a large share of public attention has been recently directed, both in the lay press and in medical journals. The exposure of grave irregularities, or, as some of the more pithy writers put it, of barbarities and abominations, has led to the formation of the Irish Workhouse Reform Association—an influential organisation which has set itself to the herculean work of rectifying long-established abuses. Enough has been disclosed to justify this effort to ameliorate the lot of the poor who are forced to seek the shelter of these institutions, and no philanthropist can withhold his sympathy from the movement. It is not my purpose, however, to discuss the mismanagement of Irish workhouses, but to direct attention to that branch of the Poor-law system administered directly by the medical profession, the medical relief department of the Irish Poor-law service. This I purpose discussing from several standpoints, thus: from that of a medical man unconnected, but thoroughly conversant, with the service; from that of the sick poor directly affected by it; and from that of the public, whose interest in it should be a practical and profound one. To understand fully the case of the Irish poor-law medical officer one must live in Ireland and learn by observation the conditions under which official work is carried out, the whole surroundings of the medical man being so unlike those existing in the other divisions of the kingdom.

The Irish Poor-Law Medical Relief Organisation is planned upon a comprehensive basis. The country is mapped out into 159 unions, each of which is sub-divided into a varying number of dispensary districts, usually from four to six, in accordance with the extent of the union. The number of these dispensary districts in Ireland is 721, and their distribution in the provinces is, for Ulster, 214; Munster, 206; Leinster, 202; and Connaught, 99. The workhouse is a central institution, receiving its inmates from the different districts. Besides affording an asylum to the aged and destitute it contains wards for the treatment of medical and surgical cases, also for infectious fevers when a separate isolation hospital is not provided, and there is usually some accommodation for lunatics and idiots. Each dispensary district is officered by a separate medical man. The workhouse medical attendant may, and often

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does, in addition, hold an appointment to one of the dispensary districts, and in large urban workhouses a resident and several visiting medical officers are required. The total number of medical officers in the poor-law service is 813, distributed thus: in Ulster, 238; Munster, 232; Leinster, 229; and Connaught, 114. The sanitary appointments under the Public Health (Ireland) Act are held by the dispensary medical men, who are medical officers of health for their respective districts. The workhouse medical officer is usually, though not necessarily, the consulting or superintendent medical officer of health for the whole union. The dispensary medical officer's work may be estimated by striking average figures for the whole country embracing the following points: (*a*) population, (*b*) area, and (*c*) valuation. Calculated upon official figures the population of an Irish dispensary district is found to be 6525; the area in acres 28,194, equivalent to 44 square miles; and the valuation, in round numbers, £20,000, or exactly £19,658. If the four provinces be separately analysed certain differences are brought out which it is well to remember when estimating to what degree the existing system has succeeded, or is still capable of fulfilling the orginal object of relieving the sick poor on the one hand, and of dealing justly by the medical officers on the other. It is found by calculating averages for the four provinces that the population of a dispensary district in Ulster is 7569; in Munster, 5691; in Leinster, 5880; and in Connaught. 7321. The areas of dispensary districts average—in Ulster, 24,870 acres; Munster, 28,809; Leinster, 23,944; and Connaught, 42,769. To enable the extent to be better grasped these acreage areas reduced to square miles give for Ulster, 39; Munster, 45; Leinster, 37; and Connaught, 67. The next set of figures is the valuation, from which approximately the resources on which a dispensary medical man has to depend to supplement his official salary may be deduced. The average valuation of an Ulster district is found to be £21,343; and of a Munster one, £16,616. In Leinster the figure stands at £23,687; and in Connaught at £13,823.

I now come to the consideration of the official figures showing medical relief work accomplished. This comes under two heads—(*a*) medical attendances and advice at dispensaries, and (*b*) visits to patients at their own homes. The same form of ticket authorises all attendances, advice, or visits, but that requiring attendance at the patient's own residence is printed in red type for distinction, and the familiar "red ticket" is always understood to imply some urgency and that the patient is unable to appear personally at the dispensary station. The medical officer's attendances at the dispensary are at appointed and fixed hours and days, usually twice or thrice weekly where the district contains one station only, or once or twice weekly at each station where for the convenience of the poor two stations have been fixed in the district. Before concluding I shall discuss the alleged abuse of these red tickets, and shall advert to a recent interview between the Chief Secretary for Ireland and a deputation from the Irish Medical Association, representative of the dispensary medical officers, the object being to obtain the redress of certain grievances under which the Irish Poor-law medical officers are said to suffer. In the meantime I must supply figures for medical relief work done. Taking all Ireland again into account and striking an average each dispensary medical man in one year affords medical relief to some 805 cases, not necessarily separate patients, but to that number of distinct illnesses treated to a conclusion. Some of these will give the practitioners no further trouble than a single attendance for advice and medicine at the dispensary station, others will attend on several occasions, while the visits at the patients' homes will be solitary, few, or several, in accordance with the nature of the case, the medical man's responsibility not ceasing until the termination of the case either in recovery, removal to hospital, death, or failure of the patient to attend at the dispensary station, if able to do so. As red tickets form the really laborious part of a medical officer's duty by necessitating often long journeys through bogs and across mountains, I will confine myself to these, leaving the amount of advice-giving and medicine-compounding work at the dispensaries to be understood. Well, taking the average again for the whole country, each dispensary medical officer treats 243 cases annually under red tickets. In Ulster the average is 291; in Munster, 228; in Leinster, 286; and in Connaught, 152. The marked difference between Connaught and Leinster does not prove healthier conditions to prevail in the former province than the latter—it simply indicates the fact that red tickets are issued with greater restriction in Connaught.

[Dr. Letters here criticises the association of poor-law and public health duties in the same individual. He continues:]

What, then, are the grievances which the Irish dispensary medical officers seek to have redressed? As formulated by a representative medical deputation which recently waited on the Chief Secretary for Ireland, they want all abuses of the Poor-law medical relief system to be redressed, they ask pensions to be provided for retiring Poor-law officers, and they call for an improvement of the existing salaries. Mr. Balfour replied to all the points brought under his notice, but failed to satisfy the deputation. In regard to abuses to be redressed, it is worthy of remark that some of the most flagrant of these were not mentioned, and the Chief Secretary's statement, therefore, was limited to the points brought forward to show the injustice and hardship which, according to the dispensary medical officers, operate against them. Replying to the application for increased salaries Mr. Balfour adverted to the fact that the average income of dispensary practitioners from official sources amounted to £171 annually, but at the same time admitted that even were this supplemented by reasonable earnings from private practice the income would be insufficient to maintain an officer and his family in respectability. The income from private practice of dispensary medical men in Ireland is, of course, unknown, but must vary considerably in urban and rural districts as well as in different counties. It may be assumed, on the whole, that it falls short of that of the general practitioner in wealthy and populous England. To make things level the Irish practitioner is obliged to charge higher professional fees than his English *confrère*. Owing to the practical monopoly which his appointment secures him in his own district his demands are not questioned if made upon a moderate scale. Should he, however, attempt in any rural district to enforce the proverbial guinea fee, that can only be complied with in exceptional cases of emergency and indirectly leads to an abuse of the red ticket system, for which there is no one to blame but the medical man himself.

Let us now turn to the red tickets to see in what ways they are abused. They are said to be indiscriminately issued, that books of tickets are signed by the authorised person, but left with shop assistants and others to fill up, who in turn distribute them regardless of the suitability of the applicant for relief. In some cases the tickets are not even signed; in others they are issued without any request from the patient or even against his wish. It is further complained that house-owners issue these tickets unsolicited in order to clear out a case of infectious disease from the premises. It is again said that tickets are issued, not for medical relief, but as an indirect means of procuring out-door relief, &c., for applicants who are quite able to pay ordinary fees, and who are perhaps at the time actually paying fees to another practitioner. Another example of alleged abuse is the issue of tickets to persons dead or dying, when treatment would be useless, and simply to procure a death certificate. The list of irregularities concludes with a statement that tickets are sometimes served upon medical officers by post, in contravention of the regulations. This is the red ticket grievance, as formulated by a letter from the Irish Medical Association to the Local Government Board for Ireland, dated July 31st, 1896.

It will occur at once to those of my readers who have made a special study of State medicine that the tabulated statement of red-ticket grievances is not so solid as it appears. The primary object of the Medical Charities Act, as set out in the preamble to the Act itself, is to provide for the better distribution, support, and management of medical charities in Ireland and to amend an Act of the eleventh year of Her Majesty to provide for the execution of the laws for the relief of the poor in Ireland. It is irrational to expect the Chief Secretary to shut his eyes to his primary duty to the poor in the administration of this Act. It is equally absurd to expect him to forget that which as a statesman he must instinctively feel—viz., that in all such questions he must weigh carefully how much of the country's interests are involved and affected thereby.

Let us just take a glance at the red-ticket abuses from a public health point of view and perhaps we may find some justification for Mr. Balfour's attitude. It is alleged that tickets are issued in the case of dead and dying persons. An assumption is here made that as treatment would be useless it is an abuse to issue a ticket. On such

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a question I do not hesitate to maintain an opposite opinion. Uncertified deaths must be expunged from our national registers as a serious evil, and medical statisticians everywhere should rigidly oppose anything tending to perpetuate these blank records. Rather, therefore, than that this entry should appear in registration, "Death not certified—no medical attendant," let the red ticket be abused—the end justifies the means. It cannot be a frequent occurrence for a house-owner to issue a ticket irregularly for the sole purpose of clearing out an infectious case from his premises, and when it does occur I should justify it on the ground of public health. It is a smaller evil to inflict a trifling injustice on a dispensary medical man than to kindle a flame of epidemic disease in the district. I fail to see the slightest hardship in the service of a red ticket by post. The spirit of the Act is to offer every facility for attendance on the poor, and the regulations properly specify that red tickets may be served upon the practitioner at all times and places. To interfere with this would be to cut at the root of the Act, and the more general employment of rural postmen in Ireland to convey dispensary messages would be advantageous to all parties, and I should think oftentimes most convenient for the medical man. I should regard it as an abuse of red tickets when they are issued for the sole purpose of obtaining out-door relief and without a medical reason. If this form of abuse were at all common I presume more would be heard about it, as dispensary medical officers in such cases, by an appeal to the dispensary committee of management, could, and would, expose the fraud sufficiently to have it abated. There is another form of abuse not mentioned in the letter of the association, but which occasionally occurs. It is this: a dispensary medical man is unfortunate enough to incur the hostility of an unscrupulous member of his committee, who, through pure malice and under cover of his powers, may issue tickets entailing quite unnecessary journeys upon the medical officer. The occurrence is, I should think, exceedingly rare, but when red tickets are abused in this manner the practitioner becomes at once an object of well-merited sympathy—he has a real grievance.

[Dr. Letters here gives a very unflattering description of the manner in which elections to Irish workhouse and dispensary appointments are conducted. "There are more serious irregularities and abuses in connexion with dispensary election contests in Ireland than in any other department of public service into which competition enters." "The electoral bodies are—for workhouse appointments the board of guardians, which have usually from thirty to fifty members, and for dispensaries the dispensary committees, annually elected by the guardians." He continues:]

The Local Government Board cannot but be cognizant of the main features of these evils, and ought to be able, with their powers, to apply a remedy. It may be that the magnitude of the evil is not understood, and yet a strong case exists for interposition of some kind. It is well known that by-laws are often more determinate and prescribe rules with more binding effect than a general statute. Under the Public Health Act convictions are more readily obtained for offences against by-laws, which introduce a question of fact only, than under the sections of the Act itself. Similarly, were the Irish Local Government Board, by departmental regulation, to try the experiment of having some practical share in these elections, the interests of the sick poor and of the general public would be alike advanced, scandals and exhibitions degrading to the medical profession would be prevented, the whole tone and status of the Poor-law medical service would be improved and elevated, and the elected men would enter on their duties with a fuller measure of public confidence than men appointed without regard to professional merit.

It may be felt that this article is incomplete without the offer of something definite and specific in the way of remedy. As a ten years' observer of the working of the Irish Poor-law medical service I feel quite safe of my position in directing professional attention to these defects in its administration, but I would not feel equally sure of the propriety of pressing forward my own individual conclusions as to the correct line of reform. That I have not been a personal witness of the system without coming to definite well-digested ideas, both as to the best remedies to apply and as to the most prudent method of their application, may be inferred. This does not, however, undo the fact that my conclusions are only those of an individual, nor would it entitle me to usurp functions which others are officially commissioned to discharge. The Local Government Board for Ireland has supreme control over the service. Its President, the Chief Secretary to the Lord-Lieutenant of Ireland, is not a minister of health, but he need not go outside the department for any assistance or direction in medical administration. An experienced medical commissioner and a staff of efficient medical inspectors are at his command.

THE JENNER CENTENARY IN RUSSIA.

THE commemorative meeting of the Russian National Health Society in honour of Jenner and the hundreth anniversary of his great discovery was, it may be remembered, to have been held in May last. The Coronation of the Emperor in that month caused the postponement of the celebration until October, and various other causes led to its still further postponement, so that it was not until Sunday, Dec. 22nd, Old Style (Jan. 3rd), that it was finally held. These successive delays, while they were unfortunate from one point of view, had the advantage of allowing the society plenty of time for preparation and of enabling it to gather from all quarters of the earth an exceptionally interesting and representative collection of objects, which for the present remain on view to the public in what is called the "Vaccination Exhibition." The name of Jenner, it will be noticed, has dropped out of the name of the exhibition; but the man himself is very much *en évidence* on the walls and in the glass cases in the Medical Department of the Ministry of the Interior (where the exhibition is held), and the commemorative meeting was one prolonged eulogy of our famous fellow-countryman. That meeting, which was held in the hall of the Medical Department, was a most enthusiastic one. The hall was effectively draped and decorated with palms and other plants. As is customary at all public functions in Russia, busts of the Imperial family occupied prominent positions, but the post of honour was given to a bust of Edward Jenner, the hero of the day. This bust was modelled by a young Russian sculptor from portraits of Jenner, and he has caught with great success the characteristics of his features as they have been handed down to us by Lawrence, Northcote, Smith, and others. At two o'clock the Grand Duke Paul Alexandrovitch, who is honorary president of the National Health Society, entered the hall, while the band played the National Anthem. With him came the Prince and Princess of Oldenburg, two Ministers of State, M. Durnovo, the President of the Committee of Ministers, and M. Goremuikin, the Minister of the Interior, and several other high officials and representatives of medical and scientific institutions who were the guests of the society for the occasion.

After a brief speech by the Grand Duke, who presided over the meeting, Dr. Kudrin, acting president of the society, drew an interesting picture of the change which Jenner's introduction of vaccination had wrought on the incidence of small-pox in Russia. In the course of his speech he said that in the last century, when the population of the country was only 40,000,000, the number of deaths from small-pox each year was at least 200,000. Certain tribes in Siberia had been completely killed off by the disease. He closed his speech by a tribute of praise to Dr. Hubert, who had proposed and organised the present meeting and exhibition, and to whom, in conjunction with Dr. Ragozin, the Director of the Medical Department, the success of both was entirely due.

The next speech was an eloquent eulogium of Jenner pronounced by Dr. Lukianof, the Director of the Imperial Institute of Experimental Medicine (formerly the Oldenburg Institute). The speaker dwelt on the immense significance of Jenner's work. Not only had it saved millions of lives in these hundred years, but it had been of incalculable scientific value. He was the model scientific worker. By his thirty years' careful experimental work he had incontrovertibly proved the value of vaccination. Long before bacteriology was known he had established the principle of preventive inoculation and had thus rendered possible the scientific advances of the present century in this great branch of medicine. He led the way which Pasteur and others had so successfully followed in investigating the subject of immunity.

When the applause and cheers with which this speech was received had subsided Dr. Kormillo ascended the rostrum and gave a historical sketch of the introduction and gradual

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spread of vaccination in Russia during the last hundred years.

The results of the competition for the prizes offered by the society were announced by Dr. Lukianof. A large gold medal was awarded to Dr. Alexandre Layer of Bordeaux, the author of an essay entitled "A la Mémoire d'E. Jenner"; another large gold medal to Dr. Miller, the principal physician to the Foundling Hospital in Moscow, for his handbook on Vaccination; a small gold medal to Dr. Glagolef, a *zemski vratch* (or medical officer of health); and silver medals to Dr. Deloble and M. Kazet, a veterinary surgeon. Of the thirty-two works sent in for competition the majority were of course in Russian; of essays in other languages the English were the most numerous, but unfortunately none of these gained a medal. The society's gold medal and sum of 1000 roubles which had been offered for the best work sent in were not awarded.

The representatives of a number of Russian medical societies and institutions then either spoke or read addresses of congratulation and the meeting was closed by a short speech from the Grand Duke Paul. Over forty letters and telegrams were received from Russia and abroad.

THE EXHIBITION.

A very striking and instructive collection of objects has been brought together and is now open free to the public in the rooms of the Medical Department. Not only is it interesting from a scientific point of view, but the opportunity has not been lost of turning to good account the educational influence of such an exhibition. A number of large diagrams, tables, and maps have been prepared on such a scale that he who runs may read, showing the great influence which the introduction of vaccination has had in diminishing small-pox prevalence. These are hung round the walls of the first room of the exhibition, and in this room are also hung two large pictures; one is a drawing of the Jenner Monument in Boulogne, contributed by the Paris Académie de Médecine. The other is a replica in oils of a picture by an American artist which was exhibited a few years ago on the other side of the Atlantic. It represents Jenner in the act of vaccinating James Phipps—making, in fact, his first successful experiment in vaccination. The scene represented is the garden of Jenner's house; Jenner is seated and holds the boy between his knees, while he inserts the lymph into his arm; and a number of people, gentle and simple, are looking on at the novel procedure, some expressing merely curiosity, while others appear to regard it with anything but approval. In this same room are some interesting historical documents connected with the story of small-pox prevention in the past. Here is the original *gramota* or document signed by the Empress Catherine, conferring nobility on the boy Ospennui, from whom the lymph had been taken for inoculating the Empress in 1768. The famous English medical man, Dr. Dimsdale, it will be remembered, performed this little operation, for which he received the most liberal rewards. The real name of the boy from whom the small-pox lymph was taken was Peter Basof, but Catherine re-named him Ospennui (from *ospa*, small-pox) and raised him to the ranks of the nobility. A somewhat parallel circumstance happened when vaccination was introduced into Russia at the beginning of this century. The Empress Marie, consort of the Emperor Paul, one of the most beneficent and charitable of all Russian empresses, corresponded with Jenner and received direct from him some points or tubes of lymph. These she sent to the great Foundling Hospital in Moscow. The first child to be inoculated was a boy named Anton Petrof, but by command of Her Majesty his name was changed to Anton Vaccinof in memory of the event. Unfortunately, all documents relating to this boy were destroyed or lost during the occupation of Moscow by the French in 1812. Some other papers relating to Ospennui, the vaccinifer of Catherine's time, are shown in the present exhibition.

Among the exhibits are contributions from almost every civilised country, including such distant lands as Japan and Brazil. It is impossible here to mention more than a small fraction of these. They are mostly books, reports, tables, diagrams, prints and caricatures, and instruments. The engraved portrait of Lady Mary Wortley Montagu, sent to the society by our own gracious Queen, naturally occupies a prominent position. Here, also, is a very beautiful little gold and enamel casket, which, according to an inscription it bears, was presented to Jenner by the corporation of the City of London in 1803. This is lent by the Society of Apothecaries of London; it is thought to have been presented at the same time that the Freedom of the City was conferred on Jenner, but it is too small to have contained anything in the nature of a document. It has recently been used as a snuff-box.

There is an interesting little collection of medals and plaster casts from medals. One was struck on the death of Peter II., who died from small-pox in 1730; another commemorates the inoculation of the Empress Catherine; others have been awarded at different times to different people who have been zealous in spreading vaccination. One curious object is a Government "Instruction" of last century, a document instructing people in the value of small-pox inoculation and the method of performing it. It is illustrated by two quaint pictures: the one represents a group of wretched-looking peasants bearing a coffin to the cemetery, and underneath it are the words (in Russian): "Terrible results of small-pox: deformity, disease, short life, death." The other shows in contrast a happy village where inoculation has been practised; the peasants and children are dancing to the twanging of a *balalaika*, and underneath is written: "The salutary results of inoculation: beauty, health, long life!"

In the second room is a collection of portraits of Jenner, varying in size from large prints after Northcote, Lawrence, and others, down to a silhouette, miniature size. Opinions will probably always differ as to which is the best likeness of Jenner. The portrait by Sir Thomas Lawrence, of which some good prints are shown, though by the greater artist, is perhaps less satisfactory than some others. Probably the best-known portrait—and not improbably the best likeness—is that after a coloured print by J. R. Smith, in which Jenner is shown leaning with his right arm on the bough of a tree and showing a cow in a meadow in the background. Here, also, are several portraits of contemporaries, supporters and opposers, of Jenner. A number of caricatures from different countries are instructive evidence of the absurd views and fears to which vaccination, when it was first introduced, gave rise.

On a series of shelves placed round this room is a large collection of small-pox literature. Books, pamphlets, and reports in every language and of every size are here displayed. The collection of English authorities appears to be very complete. All Jenner's works (some in the original edition) are here, and among others are such works as those of Moore, Ring, Willan, Bryce, Aikin, Monro, and Kirkpatrick for the early period, and Ceely, McVail, Seaton, Crookshank, and a host of others for more modern times. Among the reports are several drawn up by the Medical Officer of the Local Government Board, presented by him to the Russian National Health Society, and the reports of the special committee of the Epidemiological Society which were laid before the House of Commons in 1851 and 1854 and led to the passing of our present vaccination laws. These are specially bound in Russian leather and bear an inscription on the cover to the effect that they were presented by the Epidemiological Society to the Russian National Health Society on the occasion of the centenary of Jenner's discovery.

Another room of the exhibition contains objects displayed by firms or individuals. There are models of laboratories and of vaccination institutions, apparatus for disinfection, various instruments used in vaccinating animals and human beings, and different forms of tubes or points for preserving lymph. On the walls are tables showing the varying degrees of receptivity to vaccination in various birds and animals. In the centre of this room is a circular stall in which are placed two calves. These calves have been inoculated. They are swathed in large white stable-cloths and attract a considerable amount of attention.

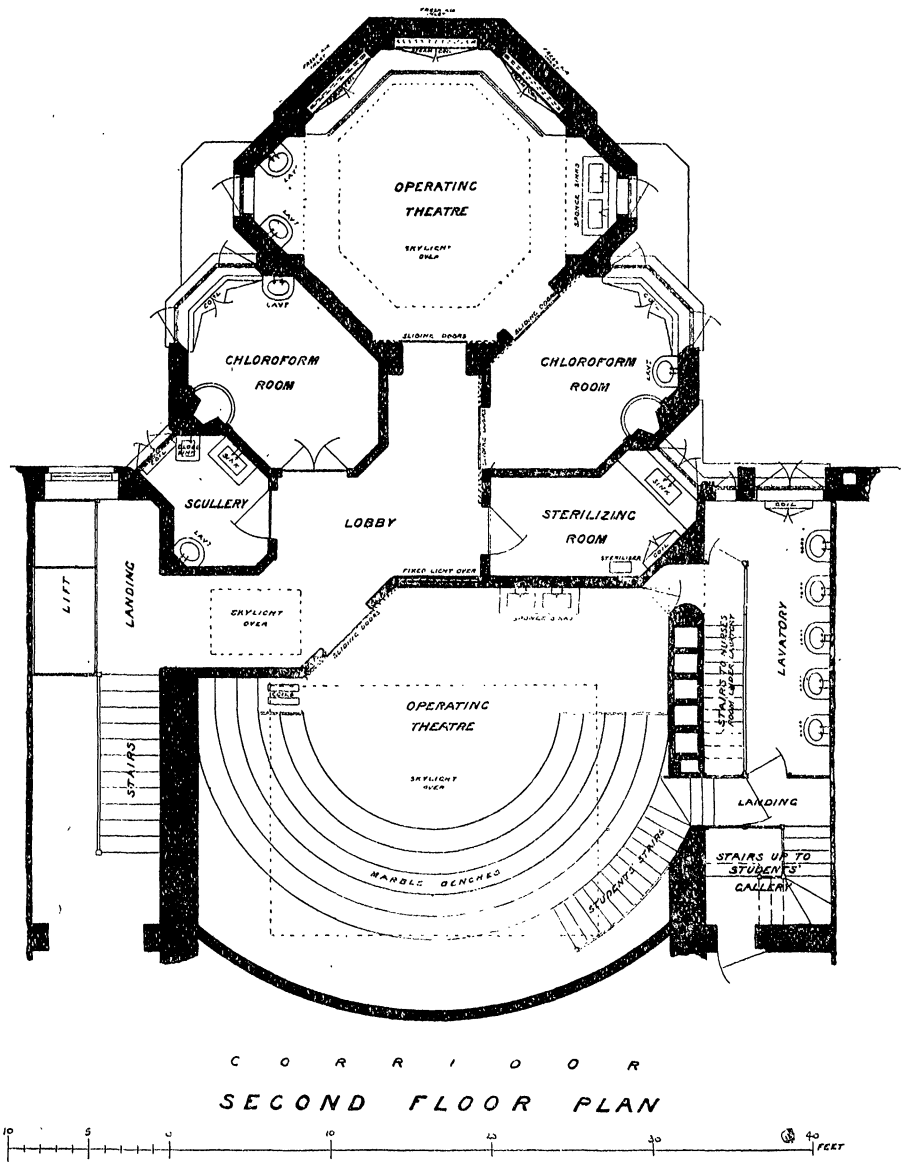
One of the best exhibits in the whole collection is a series of wax models showing the normal development of the vaccine vesicle in a healthy arm and its development in certain morbid conditions. Another series shows the same thing in the calf. They are admirable reproductions. The same praise may be given to a number of large water-colour drawings of small-pox and vaccine vesicles and to others showing their microscopic appearances. The anatomical characters of vaccination are also fully illustrated by a series of photographs and by a number of prints, plain and coloured, gathered from the works of all the best known authorities on the subject.

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THE NEW OPERATING THEATRE AT ST. GEORGE'S HOSPITAL.

THE operative surgical work at St. George's Hospital having increased so much as to outgrow the theatre accommodation it was wisely resolved to remodel the old theatre and, at the same time, to build a new one in addition. This undertaking was completed about three months ago, and the formal opening of these new rooms by His Royal Highness the Duke of Cambridge, which took place on Dec. 23rd, 1896, was duly mentioned in THE LANCET of Dec. 26th. As shown in the accompanying illustration, this important department—as now improved, enlarged, and extended—consists of the large (east) theatre which has been completely remodelled, the small (west) theatre which is entirely new, two chloroform rooms (one in connexion with each theatre), a sterilising room, a scullery, a lavatory, and a store-room, and a nurses' sitting-room situated beneath the lavatory. The whole of these rooms are situated, as in the case of the old theatre, about seven feet above the level of the second floor of the hospital, The main approach from the second-floor corridor is by a teak staircase four feet wide; there is also communication between the same corridor and the theatres by means of a patients' lift, an arrangement which does away with the necessity of carrying patients up or downstairs in bringing them to or from the central wards of the second floor—i.e., the Harris and the Wright, Cholmondeley and Radcliffe—from the central wards of the first floor, and from any of the ground-floor wards.

The walls and ceilings of these rooms are entirely lined with glazed tiles, those of the ceilings being separately screwed up, and each tile being made with a lap joint. In the two theatres and the chloroform rooms the lower tiles are of an olive green colour and form a dado of about four feet high. A skirting of the same coloured tiles about eighteen inches high is continued round the corridors, in the scullery, and the sterilising room. The remainder of the tiling of the walls is of a warm cream colour, the ceilings being white. All the corners throughout are rounded, so as to facilitate cleaning, and the whole of the theatres might be washed down with a fire hose. The floors throughout are of marble mosaic, without a central gully. The benches for spectators in the large theatre and the single row in the small theatre are of white marble. The standards and rails in the large theatre are the same that were formerly in use, but in the small one they are of gun-metal tubing. The skylight of the small theatre is constructed entirely of iron, and with the object of equalising the temperature it is double glazed, the space between the two layers of glass being four and a half inches. The daylight illumination of both theatres is very good. The



heating apparatus for the new (or west) theatre consists of three sets of copper pipe coils, containing forty superficial feet and supplied with steam direct from the hospital boilers. The air-supply is filtered through wet screens and warmed by passing over the coils before it is delivered into the theatre. An extraction shaft carried up from the highest part of the theatre discharges at a level above all the surrounding roofs, by which arrangement it is estimated that the whole of the air can be changed once in every six minutes. In the east theatre the old coils are in use. The artificial lighting is entirely by electricity, but gas is laid on in the sterilising-room, where there is a gas-heater fitted to a Schimmelbusch steriliser. Separate electric mains are carried into the east theatre, and can be used for a motor, for electrolysis, the cautery, &c. The instrument cases are made of plate-glass and brass. In order to prevent dust being carried into these cases by the current of air produced when their doors are opened they have ventilation apertures provided with cotton-wool screens which filter the air and arrest the dust; the small hardwood cupboards in which the mackintoshes, porringers, and such like are kept are fitted with ventilation openings on the same principle.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on Jan. 14th, the President, Sir WILLIAM MACCORMAC, being in the chair.

It was resolved to send a letter to Sir Joseph Lister on behalf of the Council and of the Fellows congratulating him on his elevation to the Peerage.

A report was received from the Dental Section of the Board of Examiners in Dental Surgery in which they recommend a synopsis for the examination in dental metallurgy, and also that the examination in this subject should be conducted by written paper only. The report was approved. The synopsis is given below.

The senior Vice-President reported the proceedings at the half-yearly meeting of Fellows on Jan. 7th, and stated that thirty-nine Fellows were present, including thirteen members of Council.

The thanks of the Council were accorded to Sir Joseph Lister, Bart., F.R.S., for representing the College at the Pasteur Memorial Ceremony on Dec. 26th, 1896. A letter was read from Mr. Howard Marsh, stating that, in anticipation of the expiration on April 8th next of his period of office on the Court of Examiners, he desired to place his resignation in the hands of the Council, to take effect from the end of the Pass examination for the Membership to be held in January. The resignation was accepted, and the President stated that the vacancy thus occasioned, and also the vacancy due to the expiration of Mr. Howse's period of office, would be filled up at the ordinary meeting of the Council on March 11th.

Mr. LANGTON moved: "That it is desirable that no one who has served six years as a representative of this College on the Committee of Management or the Laboratories' Committee shall, on his retirement in rotation from office, be eligible for immediate re-election."—The motion was carried.

SYNOPSIS OF THE EXAMINATION IN DENTAL METALLURGY.

The physical properties of the metals—gold, platinum, palladium, silver, tin, antimony, mercury, lead, bismuth, zinc, cadmium, copper, aluminium, iron, nickel—viz., lustre, tenacity, elasticity, malleability, ductility, conductivity for heat and for electricity, fusibility, specific gravity, specific heat, expansion by heat, brittleness, hardness, crystalline character, change of volume on solidification. Action of air (either hot or cold), of water, of acids, of alkalies and of sulphuretted hydrogen on the above metals and their principal alloys and amalgams. Effect of exposure of the above metals, their alloys and amalgams, in the mouth.

Gold.—Preparation and properties of pure gold. Cohesive and non-cohesive gold. Precipitated and spongy gold. Assay of gold. Calculation of amount of base metal to be added to reduce the fineness of gold to a given carat, or of the amount of fine gold or of gold of high carat needed to be added to raise the fineness of an alloy to a given carat. The detection and estimation of gold in alloys. The purple of Cassius. The effect of impurities on the properties of gold. The properties of the alloys of gold. Composition of solders for gold.

Platinum.—Preparation and properties of platinum. Platinum-black and spongy platinum. Detection and estimation of platinum in alloys. Alloys of platinum with iridium, gold, silver, and other metals. Dental alloy.

Palladium.—Preparation and properties of palladium and its combinations with silver, gold, and mercury.

Silver.—Preparation and properties of pure silver. Assay of silver by cupellation and in the wet way. Preparation and properties of the combinations of silver with copper, gold, platinum, and mercury. Composition and preparation of solders for silver. Electroplating.

Tin.—Preparation and properties of tin. Detection of tin in alloys. Preparation and properties of the alloys of tin. Its combinations with zinc, copper, and mercury. Composition and melting-points of readily fusible alloys.

Antimony.—Preparation and properties. Properties of alloys.

Mercury.—Preparation and properties of pure mercury. Testing the purity of mercury. Vermilion and detection of impurities therein. Preparation and properties of amalgams of the various metals mentioned in this synopsis. Composition and preparation of the principal alloys which have been used for preparing dental amalgams. Methods of testing such amalgams, as to the causes of their change of volume, permanence in the mouth, and change of colour. Effects of different metals in these amalgams. Possible action of amalgam fillings on other metals used in the mouth.

Lead.—Preparation and properties. Effect of alloying on its properties. Solders and soft soldering.

Bismuth.—Preparation and properties. Alloys.

Zinc.—Preparation, purification, and properties. Preparation of zinc oxide, zinc chloride, and the various materials for the oxychloride, oxyphosphate, and oxysulphate cements. Action of acids and alkaline solutions on cements in the mouth. Alloys of zinc.

Cadmium.—Properties, its advantages and disadvantages in alloys and amalgams.

Copper.—Preparation and properties. Effects of impurities on its properties. Alloys. Modes of preparation and properties of copper amalgams. Preparation of Sullivan's amalgam and its modifications.

Aluminium.—Preparation and properties of aluminium and aluminium-bronze. Solders for aluminium and aluminium-bronze.

Nickel.—Preparation and properties. Alloys. German silver. Nickel-plating.

Iron.—Differences between cast iron, wrought iron, and steel. Effect of presence of impurities in iron. Hardening, tempering, annealing, and burning steel.

Methods of testing metals and alloys for their various properties as described in first paragraph.

Methods of testing dental amalgams for changes of volume. Effect of sulphuretted hydrogen, water, air, acids, and alkalies on dental amalgams.

Methods of parting gold from silver; rough tests for fineness of gold alloys (touchstone); of preparation of gold alloy of required fineness; of recovery of gold from scraps; of preparation of solders for gold; of recovery of platinum and silver from scraps; of preparation of pure silver; of preparation of amalgam alloys containing two or more of the following metals—silver, tin, gold, platinum, copper, zinc; of preparation of readily fusible alloys, containing two or more of the metals—tin, lead, bismuth, mercury, cadmium, antimony, and zinc.

Methods of determining melting-points of readily fusible alloys; of preparation of alloys recommended for dies and counter-dies.

Description of furnaces and muffles used in metallurgy.

The blow-pipe; theory and varieties of fluxes.

Colouring and gilding gold.

Purification of sweep or lemel.

THE OUTBREAK OF CHOLERA ON BOARD THE "NUBIA."

BEFORE the outbreak of cholera on board the *Nubia* is altogether relegated to the things of the past and swept out of sight by the stream of succeeding events it seems to us that, in the interest of scientific medicine, it would be as well to inquire a little more closely than has been done into the facts making up the medical history of that outbreak. In the full and lengthy description that appeared in the daily journals there was, so far as we recollect, one important point omitted — namely, the precise date of the vessel's arrival at Colombo. We know from the published account that appeared in our columns last week that it was Dec. 17th, and we also know by a brief paragraph that appeared in the *Indian Medical Record* of Dec. 16th last that "cholera has broken out at Colombo." This information was corroborated by a communication published in the *Times* of the 12th inst., as well as by information we have received from another source; in fact, up to Dec. 22nd, according to papers received from Colombo, there had been 73 fatal cases of cholera in the crowded native quarters at that station.

As regards the way in which the outbreak was dealt with on the arrival of the *Nubia* at Plymouth there is nothing to be said except praise. The measures adopted were those of isolation and observation *not* of quarantine; they were quite wise and reasonable, and, what is more, their adequacy and efficacy have now been ratified by a fair amount of experience, and the local arrangements made for

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applying such measures were promptly and admirably carried out. With respect to the origin and causes of the outbreak on the *Nubia* a good deal of doubt has been expressed, and the view that the source of the cholera was first contracted at Port Said seems to be regarded as the most probable explanation. But is this so? Do not the facts, on the other hand, point to Colombo? In the first place, it is strenuously denied that there was at the time, or had been recently, any cholera at Port Said or in Egypt. If this be so, it is not easy to understand how a disease or anything else can be communicated which neither the place nor the people had to communicate! Moreover, was the fruit consumed exclusively by the troops on board the *Nubia* or by those first attacked? But the period of incubation, it is alleged, fits in with the assumption that the source of the cholera was Egypt and not Colombo. We will touch upon this point subsequently. That cholera existed at Colombo at the time the *Nubia* was at that port may be taken as a fact; that she there embarked a number of troops of the North Lancashire Regiment—and possibly other soldiers—is also a fact; and, still more interesting, the disease seems to have originated among the men of the North Lancashire Regiment and to have been confined to the military on board; in other words, on the assumption that they carried cholera on board with them they seem to have kept it. The date of the first fatal case actually ascribed to cholera is given as Jan. 2nd—a long interval; but it does not at all follow that some of the baggage, stores, or clothing shipped with the troops at Colombo may not have been opened and exposed subsequently to the departure of the *Nubia* from that port. Be this as it may, however—and we only put it forward hypothetically—the occurrence of cholera in vessels leaving cholera-infected ports at dates beyond the recognised and usually short period of incubation of this disease is not by any means an unknown phenomenon. On the contrary, it would not be at all difficult to adduce instances of the kind from the published records of outbreaks of cholera on ships—of the occurrence, for example, of the first fatal case of cholera from the seventh to the sixteenth day of the voyage and even after the twentieth day. To take the well-known case of the *Renown*. Cholera appeared in Gibraltar on Aug. 19th, 1865. On the 21st the headquarter wing of the 19th Regiment went on board that ship. On the 22nd—the third day after the first fatal case of cholera in Gibraltar—a fatal case occurred on the ship. The vessel was hauled out into the bay and retained there for thirty hours; and, no subsequent case having occurred, she proceeded on her voyage to the Cape. On Sept. 5th following, a fortnight after the fatal case at Gibraltar, there was an outbreak of cholera on board the *Renown* which lasted fourteen days, and the period of this outbreak is stated to have corresponded to that of the maximum intensity of the epidemic in Gibraltar. The left wing of the same regiment, which departed from Gibraltar in another vessel on the very day cholera broke out at Gibraltar, altogether escaped the disease. In the case of the ship *Gertrude* again the facts are interesting. On May 21st, 1859, when a severe epidemic of cholera was prevailing at Calcutta, a number of sick and wounded men were embarked for passage to England. On June 15th following—twenty-four days after all communication with land had ceased—the first fatal case occurred, and the outbreak lasted until June 25th—ten days. In the literature that exists on this subject it has been occasionally observed that the crews, troops, and others, if drawn from separate sources and shipped immediately before sailing, showed no community of attack, cholera being confined to those shipped from a definite quarter.

To return to the *Nubia*. It appears that the origin of the outbreak cannot in this particular case be ascribed to the contamination of the water-supply; that vehicle of the disease was thoroughly investigated and eliminated as a cause because it was found to be inconsistent with the facts of the outbreak. No one can have any doubt, least of all readers of THE LANCET, of the great importance that is attached to the view that cholera is a water-borne disease, but that is very different from saying that it is exclusively so or that the poison must invariably be swallowed, with its consequent corollary and obvious moral that the only safeguard is—the kettle!

We do not pretend, of course, to say that the origin of the outbreak on board the *Nubia* is demonstrably attributable to the cause having been embarked at Colombo, but we do say that all the facts require to be ascertained and most carefully weighed before the correctness of that view be discarded, for, so far as we know them at present, and so far as the medical history of the outbreak goes, there seems to be a good deal to be said in favour of it. Where an opinion has to be based on the facts or on assumptions we prefer to range ourselves for the time being on the side of the facts so far as we know them.

CONGRATULATIONS TO LORD LISTER.

WE have received the following letters for publication from the Registrar of the Royal College of Surgeons in Ireland:—

Royal College of Surgeons in Ireland, Jan. 9th, 1897.

MY LORD,—The Council of the Royal College of Surgeons in Ireland have requested me to tender to you on their behalf and my own our earnest congratulations on your elevation to the peerage. We are glad to recognise that on the first occasion on which such an honour has been conferred upon a member of our profession the recipient should be one who has created a new era in surgery and who has thereby saved innumerable lives. There is no place in which your precepts and practice have been more zealously followed than in this country, and we, in common with all other peoples, are your debtors. We rejoice in the honour which has been conferred upon you by Her Majesty, and we trust that you may live long to exercise that influence upon the practice of scientific surgery which has made your name famous.

I am, My Lord, yours faithfully,
W. THOMSON, President.

[REPLY.]

12, Park-crescent, Portland-place,
Jan. 12th, 1897.

MY DEAR MR. THOMSON,—I esteem it a very high honour to receive congratulation from the body which represents my Irish colleagues in surgery, and I feel it to be enhanced by the circumstance that the gratifying message has been communicated to me by yourself, the President of the College.

I well remember the kind part you took in reporting a small address that I gave many years ago in the Richmond Hospital, an act on your part which, I suspect, had no small share in diffusing among your Irish brethren the principles of antiseptic surgery. I beg you to express to your colleagues on the Council the great gratification which they have caused to me, and

Believe me, very sincerely yours,
JOSEPH LISTER.

THE LONDON WATER QUESTION.

AT the meeting of the Society of Chemical Industry on Monday last an important paper on "The Character of the London Water Supply" was read by Mr. W. T. Dibdin, the chemist to the London County Council. The speaker first called attention to a point that has been largely overlooked—viz., the character of the matters held in suspension in presumably pure waters. Although small in quantity these materials were often of such a kind as to throw considerable light on the source and quality of the water in a way that the old methods of analysis failed to do. For a considerable period daily analyses had been made of the water supplied to London by the different companies and of the water of the river Thames at the intakes of the companies deriving their supply from that source. After several improvements in the method of examination a specially constructed micro-filter was at length employed, enabling the quantity of suspended matter to be stated volumetrically as millimetres per litre. A further advantage of this method was that the deposit could be used afterwards for microscopical examination. The quantities of suspended matters present in the Kent, West Middlesex, and New River waters during 1895 were practically the same—0·0011 grain per gallon—and Mr. Dibdin accepted this proportion as the unavoidable minimum due to "rust and dust." The average quantities present in the other London supplies, however, amounted to 0·0033 grain per gallon, leaving 0·0022 grain of avoidable suspended matter. If the West Middlesex was capable of so purifying Thames water as to reduce it to the high standard of the Kent and New River waters there was no reason why the other companies drawing their supplies from the Thames should not do the same. The average quantities of suspended matter in the various waters

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determined on the micro-filter and gravimetrically were as follows:—

Company.	Mm. in micro-filter per litre of water.	=	Grains per gallon.
Kent	0·3	=	0·0007
New River	0·3	=	0·0010
West Middlesex	0·4	=	0·0009
Chelsea	0·4	=	0·0021
East London	0·6	=	0·0025
Grand Junction	0·4	=	0·0023
Lambeth	0·4	=	0·0021
Southwark	0·7	=	0·0039
River Thames at Sunbury ...	12·0	=	0·7569

This table showed that the deposit from the Grand Junction, Southwark, Lambeth, and Chelsea waters was of a much higher specific gravity than that from the Kent, New River, and West Middlesex waters, the large quantities of débris and decaying organic matter present in the former accounting for the difference. Taking the whole into consideration Mr. Dibdin was of opinion that in the case of a water containing less than 1 mm. per litre (using a micro-filter tube of 2 mm. diameter), equal to 0·004 grain per gallon, no notice need be taken of the deposit unless the microscopical examination showed the presence of objectionable matter. The estimation of the percentage of nitrogen in the volatile organic matter brought out strong differences between the waters derived from the Thames—with the exception of the West Middlesex—and the other London waters, as will be seen from the following table:—

Chalk ...	Kent...	...	...	2·12
	Southwark ...	3·44		
	Lambeth ...	3·42		
	Chelsea ...	2·97	...	3·27
	Grand Junction ...	3·66		
	West Middlesex ...	2·86		
New River...	New River	...	...	2·86
Lee... ...	East London	...	...	2·97
Thames Intakes (Sunbury)	... ...	...	...	4·06

A diagram showed clearly that the nature of the deposit from Thames water, judged from this standpoint, closely resembled that from raw Thames water and even polluted river mud. The microscopical examination of the waters showed that 30 per cent. of those derived from the Thames should be classed as objectionable—i.e., containing large quantities of débris infested with bacteria, paramecia, and other infusoria. The quantity of bacteria seemed to be in close relation to the quantity of organic débris, and the discrepancies found between the results of different observers may be due to the variation in the quantity of débris included. The average number of bacteria present, determined by cultivation on gelatin plates, varied from 90 per c.c. in the Kent water to 352 in the Southwark. The Lambeth water gave 294, East London 277, and Grand Junction 170, the others being comparatively low. These results were compared with the figures obtained in 1891-92, when the Kent water gave 4795, Southwark 4594, Lambeth 4626, East London 3387, and the others between 2000 and 3000. Mr. Dibdin ascribed this improvement to the influence on the companies of the evidence given before the Royal Commission.

An interesting comparison was made between the present London supply and the Welsh mountain streams, unfiltered. With the exception of the Kent water the difference between them did not seem to be very marked. Lovibond's tintometer, however, whilst showing no yellow tint in the Kent water and practically none in the Welsh, registered a considerable proportion in the London supply. Mr. Dibdin concluded his paper with a few facts relating to the possibilities and advantages of purifying London water by softening with lime.

In the subsequent discussion, which had to be adjourned owing to the lateness of the hour, Dr. Frankland's assistant, Mr. BURGESS, said that he had a close acquaintance with the analysis of London waters. He did not agree with many of Mr. Dibdin's results, especially his figures for organic nitrogen, which he considered too high. He had had no personal experience with a micro-filter, but suggested that the high figures obtained by Mr. Dibdin for organic suspended matter might be due to the length of main through which some of the water had travelled. Especially he thought this might be the case with the Southwark water. He pointed out that, owing to floods, the year 1891-92 was a very bad one for the water companies, and he disputed Mr. Dibdin's inference that the subsequent improvement was due to the evidence before the Royal Commission.

Dr. DUPRÉ said that, in his opinion, water known to be contaminated should be rejected entirely for domestic purposes. He thought that the principal danger to London lay in the possibility of an epidemic occurring among the population higher up the river. Instancing the cholera epidemic at Hamburg, Dr. Dupré said that the Hamburg people had drunk the water of the Elbe for many years with impunity, but the cholera infection coming down with the river water had caught the city undefended. Altona—a suburb of Hamburg—it was thought was secure on account of its filter-beds, but on one occasion the filter-beds broke down, and the number of deaths that occurred would have been equivalent to 5000 in the London water area. Dr. Dupré said that Professor Koch declared that water containing over 100 bacteria per cubic centimetre should be run to waste, and that if it exceeded this limit, the population should be warned. This, however, was practically useless, as the infection would have two days' start. It would be interesting to compare the statistics of epidemics above the intake with the figures for London itself. Dr. Dupré said that a proper water supply was simply a question of cost. The people of London should be warned, and if they chose to run the risk they should do so with their eyes open.

Mr. FLETCHER pointed out the danger of floods in the Thames. The great advantage of having a Welsh supply would be the security against fæcal contamination of the water supply.

Mr. WM. THORP asked questions about the method of collection and disagreed with Mr. Dibdin's method of recording the amount of the deposit on the micro-filter.

Dr. VOELCKER said that the micro-filter failed to distinguish between quality and quantity, and he thought that the fine earthy material brought down when the river was in flood would interfere with deductions based upon it. He did not consider that the harmony between the quantity of mud and the quantity of bacteria had been established. He thought that too much was made of the presence of bacteria. Until it was known which bacteria were good and which were harmful it was unwise to draw conclusions from the presence of bacteria. The London water was infinitely better than most of the country supplies and he thought that the bad condition of cisterns and pipes inside the houses was far more dangerous to health than the small quantity of impurity that escaped the filter-beds of the companies.

After a few remarks from Mr. NEWLANDS the meeting adjourned.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Enteric Fever at Middlesbrough.—The medical officer of health of Middlesbrough was appointed prior to March, 1880, and hence he is under no legal obligation to submit his annual report to the Local Government Board. The Middlesbrough town council are anxious, it appears, to perpetuate as long as possible this unsatisfactory relation, or, rather, want of relation, with the central health authority. Some of the councillors have, they say, a holy horror of "red tape," while others seem to prefer to keep both their insanitation and their enteric fever to themselves. Unfortunately in the matter of enteric fever this is more easily said than done, and doubtless Middlesbrough has, in some instances at least, been instrumental in conveying the disease outside its own territory. Indeed, the prevalence of enteric fever has of late been so marked in Middlesbrough that the Local Government Board recently decided to ascertain, through one of their own officers, the actual condition of affairs. As the result of this decision Dr. Bruce Low has written an elaborate report upon the subject. From the latter we learn that Middlesbrough, which is built on a flat, low-lying ground contiguous to the Tees, and has a population of some 86,000, has for years been unduly afflicted with enteric fever; in fact, the disease is

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endemic there, and instead of diminishing shows signs of increasing. Dr. Bruce Low deals only with such figures as relate to the five years embraced between July 1st, 1891, and June 30th, 1896. Prior to the first of these two dates there were two notable outbursts of enteric fever in the Tees valley, and Middlesbrough was one of the districts involved. These outbursts, which were sudden and transient in character, were traced by Dr. Barry to the fouling of the Tees water above the intake of the water company which supplied the districts affected. In the present instance Dr. Bruce Low found that although all the ten wards of the borough were invaded four of them showed an exceptional incidence of the disease throughout the period to which the report relates, and in a characteristically lucid fashion Dr. Low discusses how far the causes which are usually held to account for the prevalence of enteric fever have been operative. He dismisses milk and water as failing to account for the prevalence of the disease, there having been no sudden outburst such as was observed in 1890 and 1891 by Dr. Barry, and further, the chief prevalence of the disease has been in wards where exceptionally insanitary conditions obtain; it has, too, to be noted that but little Tees water is now used and that very shortly even this will be discontinued. There have, Dr. Low thinks, been operative in Middlesbrough two agencies which may be held in large part to account for the endemic incidence of enteric fever in certain localities, these agencies being defective privies and sewers. In respect of the former it is to be narrated that situated as they are above the ground level their contents tend to leak out and to foul the superficial layers of the soil and to thus pollute the atmosphere. The sewers in the chiefly invaded districts are defective and inadequate, and during periods of high spring tides and heavy rainfall the sewage is dammed back into the sewers and at times escapes into cellars and yards. The association between the midden privies and ashpits and enteric fever is seen by the accompanying table:—

Table XI., showing the Number of Houses served by Pan Closets, by Midden Privies, and by Waterclosets in Middlesbrough in 1896, with the Incidence of Enteric Fever Cases on Houses served by one or other Method during the last Five Years.

—	Total number.	Enteric fever attacks in houses of each class during the last five years.	Enteric fever attacks per cent. of houses in each instance.
Houses served by ashpans	8,502	603	7·09
Houses served by midden privies	3,274	320	9·77
Houses served by waterclosets ...	1,296	21	1·62
Total	13,072	944	7·22

We have not space to notice more fully Dr. Low's carefully arranged report, but we must endorse its concluding sentences, and express a hope that the town council of Middlesbrough will not refuse to be guided by their own skilled advisers and that the sewers will be re-constructed and the remaining 3000 privy middens be abolished forthwith.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 7127 births and 4055 deaths were registered during the week ending Jan. 16th. The annual rate of mortality in these towns, which had been 22·3 and 19·4 per 1000 in the two preceding weeks, further declined last week to 19·2. In London the rate was 18·0 per 1000, while it averaged 20·1 in the thirty-two provincial towns. The lowest rates in these towns were 9·1 in West Ham, 15·4 in Portsmouth, 15·5 in Brighton, and 15·9 in Leicester; the highest rates were 23·9 in Wolverhampton, 24·9 in Preston, 25·1 in Liverpool, and 28·3 in Plymouth The 4055 deaths included 378 which were referred to the principal zymotic diseases, against 436 and 415 in the two preceding weeks; of these, 90 resulted from whooping-cough, 77 from diphtheria, 73 from measles, 49 from diarrhœa, 45 from "fever" (principally enteric), and 44 from scarlet fever. No death from any of these diseases occurred last week in Norwich or in Bolton; in the other towns they caused the lowest death-rates in Croydon, Brighton, Burnley, and Birkenhead, and the highest rates in Birmingham, Manchester, Bristol, Blackburn, and Nottingham. The greatest mortality from measles occurred in West Ham, Portsmouth, Plymouth, Nottingham, and Bradford; from scarlet fever in Gateshead; from whooping-cough in Bristol, Nottingham, Blackburn, Huddersfield, and Sunderland; and from "fever" in Halifax. The 77 deaths from diphtheria included 52 in London, 9 in Birmingham, 3 in Bristol, 2 in Liverpool, and 2 in Leeds. No fatal case of small-pox was registered during the week under notice, either in London or in any other of the thirty-three large towns. There were 3 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 16th inst., against 3 and 2 at the end of the two preceding weeks; 1 new case was admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 3414, against 3763, 3707, and 3597 on the three preceding Saturdays; 208 new cases were admitted during the week, against 219, 271, and 290 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 348 and 335 in the two preceding weeks, further declined to 306 last week, and were 495 below the corrected average. The causes of 57, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Cardiff, Bradford, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Birkenhead, Liverpool, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the seven preceding weeks from 20·3 to 22·8 per 1000, declined to 21·9 during the week ending Jan. 16th, but was 2·7 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·3 in Aberdeen and 18·0 in Leith to 23·5 in Glasgow and 23·8 in Paisley. The 654 deaths in these towns included 28 which were referred to measles, 26 to whooping-cough, 11 to diarrhœa, 4 to "fever," 3 to scarlet fever, and 3 to diphtheria. In all, 75 deaths resulted from the principal zymotic diseases, against 103 and 101 in the two preceding weeks. These 75 deaths were equal to an annual rate of 2·5 per 1000, which exceeded by 0·7 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 48, 60, and 45 in the three preceding weeks, further declined to 28 last week, of which 25 occurred in Glasgow. The deaths from whooping-cough, which had been 15 and 20 in the three preceding weeks, further rose to 26 last week, of which 23 were recorded in Glasgow and 2 in Edinburgh. The 4 deaths referred to different forms of "fever," showed a decline of 2 from the number in the preceding week, and included 3 in Glasgow. The fatal cases of scarlet fever, which had been 10, 5, and 10 in the three preceding weeks, declined to 3 last week. The 3 deaths from diphtheria corresponded with the number in the preceding week, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 151 and 152 in the two preceding weeks, further rose to 162 last week, and exceeded by 31 the number in the corresponding week of last year. The causes of 34, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 44·1 and 35·2 per 1000 in the two preceding weeks, further declined to 34·8 during the week ending Jan. 16th. During the last quarter the death-rate in the city averaged 27·6 per 1000, the rate during the same period being 18·1 in London and 17·8 in Edinburgh. The 233 deaths registered in Dublin during

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the week under notice were within 3 of the number in the preceding week, and included 47 which were referred to the principal zymotic diseases, against 36 and 40 in the two preceding weeks; of these, 27 resulted from whooping-cough, 9 from measles, 5 from scarlet fever, 4 from "fever," 2 from diarrhœa, and not one either from small-pox or diphtheria. These 233 deaths were equal to an annual rate of 7·0 per 1000, the zymotic death-rate during the same period being 1·7 in London and 1·2 in Edinburgh. The fatal cases of whooping-cough, which had been 15, 23, and 19 in the three preceding weeks, rose again to 27 last week. The 9 deaths referred to measles corresponded with the number recorded in the preceding week. The fatal cases of scarlet fever, which had been 1 and 4 in the two preceding weeks, further rose to 5 last week. The 4 deaths referred to different forms of "fever" were within one of the number in the preceding week. The 233 deaths in Dublin last week included 40 of infants under one year of age and 48 of persons aged upwards of sixty years; the deaths of infants showed an increase, while those of elderly persons showed a further decline from those recorded in recent weeks. Four inquest cases and 3 deaths from violence were registered; and 68, or nearly a third, of the deaths occurred in public institutions. The causes of 19, or more than 8 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF JAMAICA.

According to the annual report of the Registrar-General of Jamaica for the year ended March 31st, 1896, the total estimated island population at the close of the official year was 694,865, the last census taken in 1891 having shown an enumerated population of 639,491. The marriages during the year numbered 3242, equal to a rate of 4·6 marriages per 1000 of the population; this rate shows a decline on those of the preceding five years. The births registered during the year numbered 26,842, giving a rate of 38·8 births per 1000 of the mean population. Of these births, 16,331 were illegitimate; the general illegitimacy rate is therefore 60·8 per cent. of the total births, but in several localities the proportion was higher than this—in the parish of St. Thomas, for instance, it was 73·7 per cent. The deaths registered in the year numbered 15,716, the rate per 1000 mean population being 22·7. Of the total deaths 4791, or 30·5 per cent., were those of children under one year of age; whilst 6819, or 43·4 per cent., were of children under five years of age. Of the 15,716 deaths in the year 11,688, or 74 3 per cent., were registered without any medical certificate of cause of death being obtained. The following are a few of the more noteworthy items in the tables of causes of death: chicken-pox, 3; measles, 9; influenza, 247; whooping-cough, 326; diphtheria, 16; cerebro-spinal fever, 21; enteric fever, 75; small-pox, 0; scarlet fever, 0; typhus fever, 0; yellow fever, 0; intermittent, remittent, and malarial fever, 383; cancer, 115; phthisis, 1182; lepra, 39; elephantiasis, 8; yaws, 25; sunstroke, 3; and lightning, 3. A great many cases are vaguely described—such as fever (undistinguished), 2489; old age, 1374; convulsions, 1462; and "ill-defined and not specified causes," 2059.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR W. F. HEFFERNAN and Surgeon-Lieutenant H. A. L. Howell embark for service in India. Surgeon-Major W. W. Pike has been placed under orders for India.

Surgeon-Major Alexander Sharpe, M.D., retires on retired pay. Surgeon-Major George D. Hunter, D.S.O., from the Seconded List, to be Surgeon-Major, vice W. J. Macnamara, M.D., seconded.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain J. Chaytor-White (Bengal) are placed temporarily at the disposal of the Government of the North-West Provinces and Oudh. The services of Surgeon-Captain J. Davidson, Bengal Establishment, are placed temporarily at the disposal of the Government of the North-Western Provinces and Oudh for employment on famine duty. Surgeon-Captain Narendra Prassanna Sinha, Civil Surgeon of Noakhali, is appointed on return from furlough, to act as Civil Surgeon of Puri until further orders. The services of Surgeon-Lieutenant C. D. Dawes are replaced at the disposal of the Government of India in the Home Department. The undermentioned officers on arrival from England are posted to general duty as follows:—Surgeon-Major Sloggett, to the Nagpore District; Surgeon-Lieutenant Morgan, to the Bombay District; and Surgeon-Lieutenant Dove, to the Bombay District.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Fleet-Surgeon Michael Fitzgerald to the *St. George*, additional for service in hospital ship *Malacca*. Staff-Surgeons: Alexander G. P. Gipps to the *St. George*, additional; William Eames to Plymouth Hospital; and Henry W. D. Walsh to the *Lion*. Surgeons: John Grant, George M'Gregor, Richard H. Way, and Edward Sutton to the *St. George*, additional, for hospital ship *Malacca*, and Richard A. Fitch to the *Excellent*.

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Royal Sussex Regiment: Surgeon-Captain C. W. J. Chepmell, M.D., resigns his commission.

RETIREMENT OF BRIGADE-SURGEON-LIEUTENANT-COLONEL E. J. FAIRLAND.

We regret to announce that news has reached us that Brigade-Surgeon-Lieutenant-Colonel Fairland (at present Assistant Professor of Military Medicine at the Army Medical School, Netley and officer in charge of the medical division of the Royal Victoria Hospital) has been obliged, owing to private affairs, to decline the offer of promotion to the rank of Surgeon-Colonel, the acceptance of which would necessitate his going out to India at an early date. We feel that this intelligence will be received with great regret, not only by his departmental brother officers, but also by the officers and men of the army, for Brigade-Surgeon-Lieutenant-Colonel Fairland has ever discharged his duties in a thoroughly conscientious and most able manner, and his kindness of heart, firmness, and courtesy to those of all ranks have deservedly rendered him one of the most popular medical officers of the army. His retirement is a distinct loss to the Service, and it is to be regretted that private affairs have obliged him to send in his papers at a time when his promotion to administrative rank would have opened up a new field of usefulness and activity. Brigade-Surgeon-Lieutenant-Colonel Fairland was gazetted a staff assistant surgeon on April 1st, 1867. He served in the Abyssinian Campaign from September, 1867, to October, 1868, receiving the Abyssinian medal for his services; and in July, 1869, was gazetted assistant surgeon in the 21st Hussars, with which regiment he remained stationed at Umballa and Lucknow till the warrant creating a unified medical department was issued in 1873. In November, 1873, he was appointed staff surgeon at Lucknow by Sir Henry Tombs, V.C., K.C.B, G.O.C., and he held the post until 1880, receiving the thanks of Government for duty during the cholera epidemic and for his successful administration of the lock hospitals. From 1880 to 1882 he served at Pachmari, and subsequently as staff surgeon at Devonport. In May, 1883, he proceeded to Peshawur, where he was in medical charge of the Station Hospital and staff surgeon until the April of 1887. He was afterwards at Pachmari from 1887 to 1889; in medical charge of Dover Castle, and for many months acting Principal Medical Officer of the South-Eastern District during the years 1889, 1890, and 1891, and at Bermuda from April, 1891, until September, 1892, where he was in medical charge of St. George's and for some months senior medical officer. In 1892 the late Director-General summoned him home to fill his present office. When in the year 1879 Brigade-Surgeon-Lieutenant-Colonel Fairland, then a Surgeon-Major, relinquished his post at Lucknow, the Lieutenant-General placed on record by the hand of his Assistant-Adjutant-General his high approval of Surgeon-Major Fairland's work in these terms:—"The Lieutenant-General considers it a duty to express the very high opinion he entertains of your admirable services as staff surgeon. He desires me to say that no one could excel you in your estimate of the requirements of duty, nor could anyone bring to them more earnest attention or greater singleness of purpose. It is his especial privilege to be the mouthpiece of the members of this community, ladies as well as gentlemen, not forgetting the many members of the non-commissioned grade, all of whom look to you for

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skill and kindness with a confidence which speaks for itself. The Lieutenant-General desires me to particularly dwell upon the devotion with which you daily visit the military prisons. This and the subject of your general discharge of duties are known to His Excellency the Commander-in-Chief." These extracts, although referring to only a few years of Brigade-Surgeon-Lieutenant-Colonel Fairland's work, may be taken as a faithful description, not only of the manner in which he has discharged his duties, but of the esteem in which he has been held ever since he entered the army.

DEATHS IN THE SERVICES.

Deputy Inspector-General Frederic John Mouat, M.D., F.R.C.S., LL.D. (retired), formerly Inspector-General of Prisons, Bengal, and late Inspector, Local Government Board, on Jan. 12th, aged eighty-one years. He was at one time Justice of the Peace for Calcutta, Professor of Chemistry and Materia Medica and Chemical Examiner to the Government, Professor of Medicine and Medical Jurisprudence and First Physician of the Medical College in Calcutta, and Secretary of the Council of Education, Bengal. For two years (from 1890 to 1892) he was President of the Royal Statistical Society, and was a Fellow of the Royal Geographical Society. He was also a Fellow of the Society of Arts, and member of the Faculties of Medicine and Arts of the Senate of Calcutta University. An obituary notice of the deceased officer, who was a valued contributor to the columns of THE LANCET, will be found on page 282.

THE BENIN EXPEDITION.

As we anticipated last week the treacherous conduct of the King of Benin has led to a punitive expedition being ordered to proceed to the West Coast of Africa. Two cruisers, the *Theseus* and *Forte*, have already started, having on board 544 and 318 officers and men respectively. The *Bathurst* has been commissioned for conveying stores. The Oriental Company's steamer *Malacca* has been chartered for service as a hospital ship.

LEAN'S ROYAL NAVY LIST.

The January issue of this up-to-date publication lies before us. It is now too well known to need any description, and we need only remind those who are in any way interested in Naval matters that the new quarterly issue can be obtained from the publishers, Messrs. Witherby and Co., 326, High Holborn, and 4, Newman's-court, Cornhill.

Viscount Wolseley is stated to be recovering from an attack of jaundice. The Commander-in-Chief is expected to be able to resume his post at the Horse Guards almost immediately.

Notification has been received intimating the departure from Bombay on Dec. 24th, 1896, of the transport *Victoria*, with forty-five invalids for the Royal Victoria Hospital, Netley.

LITERARY INTELLIGENCE.—The Rebman Publishing Company, Limited (11, Adam-street, Strand), have ready a small work by Dr. F. W. Forbes Ross on alimentary and digestive derangements in infants and young children entitled "Intestinal Intoxication in Infants."

UNIVERSITY OF CAMBRIDGE.—Dr. James Ward, Fellow and Tutor of Trinity College, and well known for his contributions to psychology, has been appointed to the new chair of Mental Philosophy and Logic. Dr. E. Barclay Smith has been appointed Senior Demonstrator of Anatomy, and Dr. F. C. Kempson, Junior Demonstrator. At the congregation on Jan. 14th the following were admitted to the degrees of M.B. and B.C.: W. Langdon Brown, of St. John's College; A. L. Tatham, of Gonville and Caius College; A. F. Shoyer, of Trinity Hall; and G. A. Auden, of Christ's College. The following took the B.C. degree only: A. G. Butler and C. F. Lillie, of St. John's College; and F. W. H. Hutchinson, of Trinity Hall. Mr. W. Bateson, F.R.S., of St. John's College, is giving this term a series of lectures on the Study of Variation, a subject which he has made peculiarly his own. Dr. Alexander Hill, Master of Downing, will read a paper at the Cambridge Philosophical Society on Jan. 25th on the results he has obtained by staining the brain by the chrome-silver method.

Correspondence.

"Audi alteram partem."

A CENTRAL HOSPITAL BOARD FOR LONDON.

To the Editors of THE LANCET.

SIRS,—I am desired to send you a line in regard to an important meeting which is to be held on Monday next, the 25th inst., at 4.30 P.M., at the Royal United Service Institution. The question under discussion at that meeting will be the desirability of the establishment of a central hospital board for London. How large a measure of support the proposal has already received is indicated by the preliminary list of those who have consented to join the preliminary general committee that may be appointed for its promotion. Judging from this, it would seem that the medical profession in London is now in earnest in its desire to make some very needful reforms in the administration of the medical charities with which they are so closely connected. On points of detail there may be many differences, which can only be met by discussion and concession, but, in spite of these, one or two main propositions appear to receive general acceptance. They may be summed up as follows. That a central hospital board should be established on a representative basis. That in the development of the organisation of medical charity in London reliance should be placed, not on legal measures or compulsion, but on co-operation and publicity. That, with a view to carrying out measures for which there is in some cases urgent need, a central fund should be established in the nature of a permanent endowment for the large and liberal aid of hospitals for special purposes, such as re-building, &c., on lines similar to those already adopted with success by the Charity Commissioners in the establishment of polytechnics in the metropolis. Such a method of aid would not interfere with the voluntary contributions paid to hospitals by the general public year by year.

A further proposal is that, while the body which may be formed should, as representative of the hospitals, settle questions of general policy and discuss reports, &c., a competent executive committee should be created to deal with the various questions of detail that must necessarily arise. Further particulars in regard to the scheme will be found in the accompanying document. The scheme is submitted as a draft, but it is only right to add that it has been scrutinised by many members of the profession, and on various points modified in accordance with their suggestions. At the meeting on Monday a resolution in approval of the plan now suggested as a basis for practical organisation will be moved by Sir William Broadbent, Bart., M.D. Lond., and supported by the following:—Mr. G. D. Pollock, F.R.C.S. Eng., Dr. Lauder Brunton, LL.D., F.R.S., and Mr. Victor Horsley, F.R.S., and a general committee will be appointed. Invitations to the meeting have been sent to medical men throughout London, and I write this line to you in the hope that, in view of the importance of the subject, they may be induced to be present and take part in the meeting, in spite of the many professional engagements that devolve upon them.

I am, Sirs, yours faithfully,

C. S. LOCH, Secretary.

Charity Organisation Society, 15, Buckingham-street, Strand, W.C., Jan. 18th, 1897.

*** The document of which Mr. Loch speaks is reviewed in an annotation upon page 255 of this issue.—ED. L.

THE TREATMENT OF OMENTAL HERNIA WHEN ACCOMPANIED BY SYMPTOMS OF ABDOMINAL OBSTRUCTION.

To the Editors of THE LANCET.

SIRS,—The recent inquiry into the charge against a member of the staff of the Adelaide Hospital raises a question of considerable surgical interest—viz., the treatment of hernia when symptoms of strangulation are present, but where on opening the sac it is found to contain no intestine, but omentum only. Under these circumstances the symptoms

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are generally due, not to strangulation of the omentum, but to constriction within the abdomen of some portion of intestine which is bound down by an omental band continuous with the pedicle of the piece of omentum contained within the sac of the hernia. In the interesting editorial article on the case which appears in THE LANCET of Jan. 16th it is pointed out that under these circumstances two courses of treatment are open—viz., (1) to follow up the omentum to the crural ring; or (2) to perform laparotomy; the latter course being recommended as preferable if the patient's condition will admit it. It is my experience that without proceeding to the more serious operation of laparotomy relief will be afforded if—after ligaturing the pedicle and removing the omentum—the pedicle is carefully separated from all adhesions at the neck of the sac and then allowed to slip back into the cavity of the abdomen. In this way, by liberating the omentum, the strangulation of the intestine within the abdomen is at once relieved. This treatment I have found successful in four cases of strangulated (?) femoral omental hernia, one of which I have reported in detail in THE LANCET.[1] In each instance recovery took place, removal of the omentum in the hernial sac and liberation of the pedicle being at once followed by a subsidence of the symptoms of abdominal obstruction. The condition, which apparently is not very uncommon, I have only met with in old irreducible omental herniæ of the femoral variety.

I am, Sirs, yours faithfully,

F. A. SOUTHAM.

Manchester, Jan. 18th, 1897.

"THE GLANDULAR FEVER OF CHILDHOOD."

To the Editors of THE LANCET.

SIRS,—In calling the attention of the profession to the *primâ facie* reasons for regarding glandular fever as a clinical entity Dr. Dawson Williams has, I think, done valuable service. It is largely on the observation and inferences of those engaged in general practice that further definite knowledge of the subject must depend, for the probable communicability and benignity of the disease must tend to exclude it to a great extent from the scope of ward and consulting practice. I am induced at this moment to write these few lines by having lately seen a child suffering from marked anæmia and other symptoms of ill-health whose ailments dated from an attack which, as described to me, seemed in all ascertainable points to tally with the account given by Pfeiffer of glandular fever. Two other children had suffered in the same way; all had had the glands on the neck enlarged and tender, none had had any marked throat trouble, and the affection was regarded as mumps with a difference, there having been apparently no swelling of the face. In the family, the mother, who was quite young, had also suffered slightly, but soon recovered completely. Most of those who see sick children are aware of cases, of no very infrequent occurrence, with fever and some degree of cervical adenitis which are not to be associated with any marked pharyngeal trouble, but are still (owing to glandular fever being, as Dr. Dawson Williams says, ignored) attributed to a hypothetical tonsillitis or other affection that has escaped observation. The examination, in future, of the lymphatic glands of the body generally and of the liver and spleen, in all such cases may go far towards giving us definite and important knowledge on this subject, to the literature of which Dr. Williams has given so interesting and practical a contribution in THE LANCET of Jan. 16th.

I am, Sirs, yours faithfully,

Harley-street, W., Jan. 18th, 1897. H. B. DONKIN.

To the Editors of THE LANCET.

SIRS,—I have read with interest the paper by Dr. Dawson Williams on Glandular Fever in THE LANCET of Jan. 16th. Four years ago, when registrar to the Hospital for Children and Women, Waterloo-bridge-road, three cases of fever of five or six days' duration, in which abdominal pain and very marked constipation were present, led me to think it possible that there might be an undescribed fever of short duration with constipation as a prominent symptom. I subsequently became acquainted with a description of glandular fever, and although I had not noticed any enlargement of lymphatic glands it seemed probable that these three cases were examples of that disease. That conclusion as to their nature may not have been correct, but they drew my attention to the existence of glandular fever, and since that time I have been on the lookout for it. Not, however, until the last week or two have I seen any case that seemed to be an undoubted example. A fortnight ago I was asked to see a girl aged eleven years who only a few weeks ago returned to Clifton from the house of a medical friend in North Ireland, where she had been laid up with a prolonged attack of rheumatism which seriously affected the heart. I found her looking very ill and disinclined to move, the disinclination being largely due to pain in the neck on turning the head. There was swelling in the region of the anterior triangle on either side of the neck, and on palpation the lymphatic glands lying in front of the anterior border of the sterno-mastoid muscle were found to be enlarged and very markedly tender. The lymphatic glands in the posterior triangles were not then examined, but a few days later it was mentioned that the back of the neck was noticed to be tender when the head was laid on a pillow. The glands in these triangles were then found to be enlarged. Those in the axillæ and groins were not affected. There was some difficulty of swallowing owing to a sense of constriction in the throat, but nothing abnormal could be seen. The temperature was raised for five days, reaching to between 102° and 103° in the evening and falling to 101° in the morning. There was obstinate constipation while the temperature remained raised. Two other children, aged nine years and thirteen years, had previously been similarly affected, but to a much slighter degree. Curiously enough, two adults also, between the ages of forty-five and fifty years, had suffered from tender, swollen glands in the neck, but nothing else had attracted their attention. There apparently had been no indication of fever and no difficulty of swallowing. Another case which I consider to be an example of this disease is at present attending the out-patients' department at the Children's Hospital and I intend to ask other medical men if they have noticed similar cases.

I am, Sirs, yours truly,

Clifton, Bristol, Jan. 18th, 1897. THEODORE FISHER.

"LIQUID VACCINE VIRUS."

To the Editors of THE LANCET.

SIRS,—I have seen an annotation under the above heading in THE LANCET of Jan. 2nd, but owing to my absence from England have been unable to take earlier notice of the matter. The statement is made on the authority of your New York Correspondent that, as the result of a series of experiments, the Public Health Department has decided that the best vaccine material is to be obtained by triturating the vesicle pulp with glycerine. This method of preservation is described as *new*, but I think I may justly claim that this is hardly the case, seeing that I demonstrated this means of producing absolutely pure vaccine lymph as long ago as 1891 at the meeting of the International Congress of Hygiene, held in London. On many subsequent occasions also, and especially in my evidence before the Royal Commission on Vaccination,[1] I have had occasion to direct attention to the value from a bacteriological point of view of this method. When properly applied it ensures the destruction of all extraneous microbes, such as those concerned in the various processes of an inflammatory nature which may happen to be present in the contents of the vaccine vesicle at the time of collection. Although this is the case, the addition of glycerine in no way impairs, but rather increases, the specific activity, as vaccine, of the resulting mixture.

I am, Sirs, yours faithfully,

S. MONCKTON COPEMAN.

Savoy Hotel, Berlin, Jan. 9th, 1897.

DR. R. R. RENTOUL AND THE MIDWIVES BILL.

To the Editors of THE LANCET.

SIRS,—The mis-statements and fallacies in Dr. Rentoul's address have most of them been refuted. As some may

[1] A Case of Intestinal Obstruction Relieved by Liberating the Omentum from an Omental Hernia.—THE LANCET, Aug. 14th, 1886.

[1] Final report of Royal Commission on Vaccination, para. 448.

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still be misled by them, we ask permission to point out a few of the most important. He says: 'Owing to the action of a few practitioners, who contend that the wives of the poorer and wage-paid classes should have no one to help them during their confinements but midwives ....." We know of no one who advocates this. He speaks of a clause which "proposes to hand over all confinements, natural and abnormal, to the sole control of the midwife." There is no such clause. No one ever proposed to do such a thing. "All practical practitioners know that no labour can be definitely defined as 'natural' until some hours or days after the labour is over." Just so. No man can be pronounced healthy till he has been well examined after death, but a man can be pronounced healthy up to a certain point, and so can a labour be pronounced normal up to a certain point. "This threat to supply the poor with midwifery practitioners only partly trained in midwifery and wholly untrained in medicine and surgery ....." There is no such threat. Our effort is to replace untrained midwives by trained midwives. Dr. Rentoul says that Dr. Matthews Duncan states that one woman in every fifteen died in her first confinement. Dr. Matthews Duncan never said anything of the kind. "The proposal to establish a partially trained class of midwifery practitioners for the poor only is a crime-producing proposal." There is no such proposal. The proposal is to replace untrained persons by trained persons. Dr. Rentoul asks if we are "therefore to hand over this branch of the practice of physic to persons whose poverty, if not their will, would press them to perform illegal operations?" We think that the better persons are trained and controlled the less likely they will be to do illegal things.

We observe other mis-statements, but we have mentioned enough. It should not, however, pass without notice that Dr. Rentoul holds the opinion that "the poorer classes can do without midwives," and that the public rates should pay for proper attention to parturient women, "that the fee should be uniform for all kinds of labour, and that such fee should be 40*s*." The midwife already exists in large numbers and cannot be suppressed by any words or schemes of Dr. Rentoul. The only practical question is, not how she shall be supplanted, but how she can be improved.

I am, Sirs, yours faithfully,

ROWLAND HUMPHREYS, L.R.C.P. LOND.,
Honorary Secretary Midwives Bill Committee.

12, Buckingham-street, Strand, W.C., Jan. 19th, 1897.

DR. R. R. RENTOUL'S ELECTION EXPENSES.

To the Editors of THE LANCET.

SIRS,—The result of the General Medical Council election must be gratifying to the supporters of Dr. Rentoul's policy. We, the undersigned, think this an opportune moment for bringing to the notice of these supporters the heavy expenditure in which it has involved Dr. Rentoul, the sum of £85 17*s*. 6*d*. having been spent by him in stamps, stationery, and travelling. We feel that practitioners upon whose behalf he has so faithfully striven should defray this out-of-pocket expenditure. Also, we would state that since 1890 Dr. Rentoul has spent £375 13*s*. 8*d*. in opposing the four Midwives Bills. Of this, £351 12*s*. 8½*d*. has at various times been refunded, thus leaving £24 0*s*. 11½*d*. still owing, exclusive of interest. Dr. Rentoul is, like most of ourselves, in general practice, and we feel it to be unfair to ask him to give not only his time and work (which have been and are invaluable to the cause) but also his money on our behalf. We, therefore, with confidence ask his supporters to subscribe to a fund for the repayment of this £109 18*s*. 5½*d*. By this means practitioners will show practical appreciation of good work done, and will pave the way for more. We would point out that this is not a question of a testimonial, although if the response were as hearty as it ought to be this might also be considered. It is firstly and chiefly a question of paying back money out of pocket, spent—and most cheerfully and usefully spent—in furthering our interests. At the same time we would add that no time should be lost in establishing a Guarantee Fund so as to be ready to fight the next Midwives Bill, and to help in drafting and securing the passing of a Bill for Increased Direct Representation upon the General Medical Council. For these purposes about £1500 will be required, and considering the handsome and prompt response of the profession in many cases—e.g., Dr. Cullingworth's expenses—no difficulty should be experienced in raising this money for such important objects. We have Dr. Rentoul's statement that he cannot advance any more money for these purposes, although he is both willing and ready to give both work and time.

Donations will be gladly received by Dr. A. Cox (Gateshead) and will with your permission be acknowledged in your columns.—We are, Sirs, yours truly,

COLIN CAMPBELL,	FRAS. J. A. WARING,
J. A. MYRTLE,	DONALD FRASER,
CLEMENT H. SERS,	WALTER LATTEY,
J. WHEELER O'BRYEN,	JOHN E. GARNER,
W. E. BARTON,	W. A. WETWAN,
JOHN R. WILLIAMS,	J. B. CLOSE,
J. M. FERGUSON,	ALFRED COX (Hon. Sec.).

West View, Gateshead-on-Tyne, Jan. 20th, 1897.

"THE LATEST VIEWS ON PHTHISIS."

To the Editors of THE LANCET.

SIRS,—I have been very greatly interested in the letter of your correspondent at Rome on the above subject,[1] because in all the editions of my book I have mentioned facts tending to show that phthisis is quite as likely to prove a disease of nutrition as of infection, or a mixture of both; and, as will be seen in my third edition (p. 300), these facts have gained considerably in importance of late years. I should like also to direct the attention of your readers to the recent writings of Professor T. J. Mays of Philadelphia and his treatment of phthisis by excess of albuminous food and large and long-continued doses of strychnia.[2] I have recently had a case under my care which I showed at the Æsculapian Society treated by this method, in which the results appeared to be quite as good as those recorded in America, and greatly exceeded my previous expectations. I am well aware how dangerous it is in a disease like phthisis to build anything at all upon a few cases, and but for your correspondent's letter I should not have mentioned the matter just now. Still, I do think that the above facts are well worthy of the careful attention of those who, like the Milanese and some American pathologists, are prepared to look all round the bacillus.

I am, Sirs, yours faithfully,

Brook-street, W., Jan. 18th, 1897. ALEXANDER HAIG.

QUACKS AND UNCERTIFIED DEATHS.

To the Editors of THE LANCET.

SIRS,—The enclosed cutting from a weekly paper of some standing and with a large circulation in this county may be of interest to you as showing the publicity, and therefore encouragement, at times given by the press to the efforts of quack doctors to hoodwink the public.

In some districts in this county unqualified medical practice prevails extensively; in one urban district, for instance, of 18,000 population over 33 per cent. of the deaths during 1896 were uncertified, as the result of unqualified medical attendance; and the Durham county council, recognising the dangers of such practice and the fact that it interferes with the accuracy of the vital statistics and with the precautionary measures taken against the spread of infectious diseases, have, by representations to the Local Government Board, the Registrar-General, and the General Medical Council, been endeavouring to put a stop to such illegal practice. Such newspaper reports as the enclosed, however, are calculated to encourage unqualified practice and are in my opinion much to be regretted. The "Dr." Steele referred to in the cutting was a year or two ago successfully prosecuted and heavily fined for an offence against the 40th section of the Medical Act, 1858, his occupation to within eighteen months of the date of the prosecution having been that of a coalminer. Such punishment, however, instead of acting as a deterrent appears to have enlisted the sympathy for the offender of many persons in the district, with the result that not only has his practice not diminished, but he was very soon afterwards elected a member of the district council.

At their last meeting, I believe, the General Medical

[1] THE LANCET, Jan. 16th, 1897, p. 214

[2] American Medico-Surgical Bulletin, May 15th, 1894, and May 9th, 1896. See also New York Medical Journal, Feb. 15th, 1896.

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Council decided to call the attention of the Registrar-General to the unsatisfactory practice adopted by some registrars of births and deaths of registering deaths uncertified as the result of unqualified medical practice without communicating with the coroner, and without doubt the holding of coroners' inquests with regard to all uncertified deaths is the most effective, if not the only practical, means of stamping out unqualified medical practice.

I am, Sirs, yours faithfully,

Durham, Jan. 19th, 1897. T. EUSTACE HILL.

*** Dr. Hill encloses a report from the *Durham County Advertiser* of a meeting at which "Mr. J. Tempest, M.D., L.L.D." (*sic*), of Accrington delivered an address on the "History of Medicine." The learned L.L.D. inveighed against the monopoly enjoyed by the medical profession in the treatment of suffering humanity, and against the action of a coroner in refusing to accept a death certificate from a person (not the "Dr." Steele above referred to) practising the "American Reform System of Medicine." The *Durham County Advertiser* must have been sadly in want of readable matter when it printed such mischievous nonsense.—ED. L.

"THE HALF-YEARLY MEETING OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—I have nothing more to say about Mr. Anderson, but as Mr. Rivington has referred to a portion of my speech which was not reported I may say that I pointed out that the same little clique which runs the Association of Fellows had also run Mr. Rivington for the General Medical Council, Mr. Anderson being one of the honorary secretaries of Mr. Rivington's committee. I denied then, as I do now, that Mr. Rivington's efforts on behalf of the Members had led *to the sacrifice of his collegiate interests* as put forth by his committee, and now that Mr. Rivington has supplied me with the date, 1886, I am able to prove it. In August, 1886, Mr. Rivington was a candidate for the post of Examiner, but was not elected because in the opinion of the Council there was a more eligible candidate. I find from your columns that Mr. Rivington took no part in the meeting of Fellows and Members in March, 1884, or November, 1885, and that at the meeting in November, 1886, he made his first speech on behalf of the Members. In a letter of the following week Mr. Rivington mentions that he wrote upon the subject in 1868, and later in his oration at the Hunterian Society and his Carmichael Essay, but I can assure him that none of these literary efforts in any way affected his non-election as an examiner. I am, Sirs, yours faithfully,

Cavendish-square, W., Jan. 18th, 1897. CHRISTOPHER HEATH.

PILOCARPINE IN ECLAMPSIA.

To the Editors of THE LANCET.

SIRS,—I regret that unexpected and unavoidable absence from the meeting of the Obstetrical Society of London on Wednesday, Jan. 6th, prevented my hearing the remarks of Dr. John Phillips and Dr. Herman on my notes of a case of eclampsia occurring at the fifth month, and in which the uterus was emptied. As these notes will be published in full I only take the opportunity of saying here that no one, after eighteen years of its employment, is better aware of the physiological effects of pilocarpine than myself or of the responsibility attaching to its use in certain cases. On the other hand, I desire emphatically to assert that in this particular instance it is my belief that it was the pilocarpine that ultimately saved the patient's life. It was injected but *once*, and in quantity only the tenth of a grain, and its use was followed after the immediate development of its physiological effects by rapid reduction of the high arterial tension, entire cessation of convulsions, which up to that moment had been of frequent recurrence, and the consequent return to consciousness of the patient. But it was not from the therapeutical aspect of the case that I was principally influenced in reporting it. There were several other points of considerable clinical interest—viz., retroversion of the uterus as a cause of the eclampsia, the retinal symptoms and appearances as indications of the approaching cerebral complications, the occurrence of glycosuria from the chloroform administered, and the rapid disappearance of the albuminuria which had been present in such quantity prior to the emptying of the uterus. The administration of such a remedy as pilocarpine must always depend on the circumstances of the individual case in which it is applied and the judgment of the practitioner who employs it. Nothing I said in my short paper could be construed into an advocacy of anything so rash as its routine employment in eclampsia.

I am, Sirs, yours faithfully,

H. MACNAUGHTON-JONES.

"A QUACK AND HIS VICTIM."

To the Editors of THE LANCET.

SIRS,—Will you allow me to state, in reference to your annotation on the prosecution of one George at Burnley for obtaining money by false pretences, that the Medical Defence Union initiated and paid the costs of the case? The result was most satisfactory, as the prisoner was sentenced to twelve months' imprisonment with hard labour.

I remain, Sirs, yours faithfully,

Jan. 19th, 1897. A. G. BATEMAN, M.B. Aberd., Gen. Sec.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

V.—MANCHESTER (*concluded*).[1]

Subscribing Patients.—The Competition of Charitable Provident Dispensaries.—The Lowering of the Standard of Work performed by Town Practitioners.

HAVING described at length what has been done to prevent abuse at the Royal Infirmary I must now consider briefly the position of some of the other large Manchester hospitals. There was, I found, a general consensus of opinion that little or no abuse existed at the Ancoats Hospital. The surrounding population is so extremely poor that one of the difficulties in treating the patients is their inability to obtain sufficient nutriment. For this reason those who could be treated as out-patients have sometimes to be sent to the Poor House Infirmary or taken as in-patients, so that they may receive sufficient food. One visiting physician attached to this hospital did, however, complain that general practitioners were apt to be very generous at other people's expense. If their paying patients were anxious for a second opinion they would give them a recommendation to a hospital, and thus secure for their patient this second opinion free of all cost.

A much better class of patients frequent the Hospital for Consumption and Diseases of the Throat. At this hospital the out-patients are called upon to contribute towards the expenses of the drugs. Most of the out-patients pay for their cod-liver oil and a few subscribe as much as 2*s.* 6*d.* a week for medicines. Some of these are certainly too well off to come to the hospital, but it is difficult to accuse a patient of abusing a charity when he pays half a crown a week. The acceptance of payments greatly complicates the situation, for it is then almost impossible to establish a wage limit or to know where to draw the line. This contribution for drugs is voluntary, but it is so considerable as to defray nearly the whole of the expenses. Thus in 1895 the expenditure for medicines and dispensary expenses is set down at £759 8*s.* 3*d.*, and the receipts of voluntary contributions from the out-patients amounted to £704 18*s.* 6*d.* These are remarkable figures, and whatever fault may be found with the principle involved it would be difficult to persuade the managers of the hospital to abandon a system which gives such advantageous practical

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *continued*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *continued*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; and (5 *continued*) Jan. 9th, 1897, Manchester.

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results. Also, the management naturally objects to the absolutely destitute. What is the use of medicine where there is not enough food? On the other hand, if the patient is not absolutely destitute, why should he not contribute, be it but a penny or two, towards the cost of his medicine? Abuses, however, naturally arise. Thus some patients who pay 2*s*. 6*d*. a week have no special illness. Their complaints are simple complaints. They do not stand in need of a second opinion or the constant advice of a consultant, and with the half-crown that they pay to the hospital they could obtain all that is necessary from an ordinary practitioner. By a more careful inquiry into the financial position of the patients this evil is being reduced; but it still exists. Thus while I was at the hospital a youth presented himself as an out-patient, and, in answer to questions, said he was not at work. On being further pressed he admitted that though he was not in regular employment he did work for his father, who was a joiner and builder. He estimated his father's income at thirty shillings a week which for a master builder was evidently below the mark. This case was referred to the secretary for inquiries. Another evil also results from the system of payment for medicines. An impression has gained ground that patients are not admitted who do not pay. This is very regrettable and quite against the object of the charity. The payments are only voluntary, and those who really cannot pay are welcome. They may even have cod-liver oil free of any charge. Nevertheless, on the day of my visit I found that only 7 per cent. of the out-patients had failed to contribute towards the cost of the medicines, and I was told that this was above the average.

Inquiries are made as to the financial condition of the patients who betray themselves by their language or dress. Yet if they make a fraudulent declaration as to their earnings, and this is discovered too late to prevent the admission of the patient, it is considered that there is no redress possible. Some applicants, however, at once declare they are able to pay, that they are under the treatment of a general practitioner, but want a second opinion. These patients are not accepted. They, however, sometimes further explain that though they can pay for their medicine and for the advice of a general practitioner they cannot pay a guinea for the advice of a consultant. In this case the visiting physician decides what should be done. If such applicants have an income of £3 or £4 a week the clerk, on his own responsibility, rejects them, or, to confirm this verdict, refers them to the secretary of the hospital. The number of applicants rejected is but small. It does not amount to one person per day, though there were 9373 new out-patients in 1894 and 8696 in 1895. Nor is there any attempt to enforce a distinct wage limit, for it is argued that some of the patients have not been working for some time because of their ill-health. For the in-patients of the hospital the inquiry is more strict, and as a consequence the subscriptions paid by the patients is much smaller. In 1895 there were 226 in-patients, showing a decrease on the two previous years. Their average stay in the hospital was sixty-three days. The cost amounted to an average of 15*s*. per week per patient and the average payments made by the in-patients amounted to 1*s*. 3*d*. per week. In 1894 this average was 1*s*. 1*d*. and in 1893 it was 1*s*. 6*d*.

One good point which I noted at this hospital, and, indeed, at most of the Manchester hospitals, is the dead set made against the system of recommendations. One of the consulting physicians related to me how, when he was at St. Thomas's Hospital, London, he had on one occasion to refuse two very urgent cases because some other and quite unimportant cases claimed admittance and had recommendations from a governor. According to the rule, he had no right to refuse the latter, and then there were no more beds available for the former and far more deserving cases. Recommendations are now almost done away with at the Manchester hospitals. The only argument in their favour is that some subscribers would be lost if they were deprived of this cheap form of patronage. But the loss thus occasioned would probably not be very great, and would be fully compensated by the reduction of prevalent abuses.

If the system of recommendations is thus disapproved and combated at the hospitals it is still in high favour with the provident dispensaries. For instance, at Hulme and Salford there are two charitable dispensaries to which employers and others subscribe and get recommendations in proportion to the amount of their subscription. Each recommendation entitles the bearer to three weeks' treatment. A large proportion of these recommendations are given by employers to their workpeople who could afford to pay. Also the public can go straight to the dispensaries, buy recommendations, and then fill up the ticket for themselves. The residential surgeon could certainly object to this; but in practice this is rarely done, especially if the surgeon intends ultimately to establish himself in the district. These dispensaries could not pay their way if they did not sell the recommendations and also sell drugs to the patients. It is a farce to call them charitable institutions when they are run on such a commercial basis. Nor is it surprising that the general practitioners should complain of the competition thus organised against them. As for these dispensaries making any serious inquiry concerning the financial means of their members all the general practitioners with whom I discussed the matter treated the suggestion with scorn. On their side, lay managers of dispensaries complain that medical men are not loyal to their profession or to the dispensaries. The medical men while in the service of a dispensary are interested in increasing the number of patients at their dispensary and are not over anxious to prevent abuses. Then, when the medical man has climbed up on the back of the dispensary and reached an independent position, he turns round and kicks the very institution where he himself created the abuses of which he now complains. As for sweating profits out of the medical profession, so far as the Manchester District Provident and Charity Organisation Society is concerned, the rule is that half the penny weekly subscription goes to the medical men and the whole of the 10*s*. midwifery fees. When all working expenses have been paid, two-thirds of the balance remaining in hand are given to the medical officers, and if there is any sweating it relates to the remaining third, which goes to constitute the reserve fund. Thus the lay managers of the dispensaries maintain that much of the abuse that exists is due to the indifference of the medical officers themselves, who have the power to reject patients. How far the control which the medical officers are said to be able to exercise is real I did not stop to inquire, as this is a question only indirectly connected with my present subject, and could be more appropriately discussed as part of the problem involved in the battle of the clubs. But it is quite certain that if the dispensary medical officers were very strict in rejecting patients who could afford to pay for private advice many disputes would arise between them and the lay members of the provident dispensaries. Such disputes have to be referred first to the board managing the local dispensary, and then can be brought before the Charity Organisation Society, which constitutes a sort of court of appeal. But as the latter is the parent of the former the question arises whether this is a truly impartial tribunal. In any case the complaints against the local provident dispensaries are, as I have already stated, numerous and bitter. They fail, we are told by the general practitioners, to act as a check upon the central hospitals. They do not divert the current of unsuitable cases from these hospitals; indeed, in some instances the belief is encouraged that the best means to gain admission to the hospital is to first join the provident dispensary. This accusation I found particularly applied to the Children's Hospital. Poor people were told to join the dispensary, and then they would get a recommendation from the dispensary to the hospital. Thus the dispensary receives the penny subscriptions from these poor people and the hospital does the work. How far this complaint is based on some isolated case or, on the contrary, arises from a more general and widespread abuse I am unable to say. All I now seek to bring forward is that these complaints, these accusations, have been made in my presence, with a view to my publishing the same. Whether or no these complaints are fully justified or somewhat exaggerated, they in any case serve to show the bitterness of feeling and the widespread discord and diversity of opinion between the medical men and the laymen who are concerned with the administration of medical charities.

In conversing with several general practitioners I noted a number of complaints which it seems to me deserve consideration. Thus one general practitioner insisted that many people now went to the hospital who a few years ago would have contrived to be attended at home. For instance, the general practitioner, often acting at the suggestion of his patient, called in a consulting surgeon, to whom the usual fee of two guineas was paid. Then the consulting surgeon was asked to exercise his influence at his hospital to obtain the admission of the patient, and thus the necessary operation was performed for nothing. But this comparatively

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well-to-do patient occupied a bed which should be reserved for a much poorer class of people. Formerly, even very poor people, when some serious illness arose, were in the habit of gathering their friends together so as to raise a fund, and thus the operation or the expensive treatment was entrusted to a surgeon or physician, who received the usual fees. Now this rarely happened, for it was so much easier and, above all, so much cheaper to gain admission to a hospital. The money which in these cases used to go to the profession is now lost. Certainly some of the very ablest physicians and surgeons were on the staff of the hospitals, but how often was a patient obliged to content himself with the advice given by a student or by a nurse. Thus my informant had sent to the hospital one of his poor patients who was suffering from purulent ophthalmia. Yet though the patient had been there several times he had only seen the nurse. As for the abuse of hospitals one of my informant's patients had died in 1895 from pneumonia. During his last illness he had paid in medical fees the sum of £11. Then a consultant was sent for, to whom the two-guinea fee was given; but the patient recognised the consultant as the medical man who for several years had attended to him gratuitously at the hospital.

Why, I was asked, with some expressions of indignation, could not the medical profession be governed as well as that of the veterinary surgeons? The latter elected their own council and the council elected its own president. There was no confusing multitude of qualifications. The veterinary surgeons had but one diploma. Students in all parts of the country sit down to answer the same written question on the same day and at the same hour. A diploma wherever obtained was of equal value to all other diplomas and the profession was self-governed.

Several general practitioners expressed the opinion that the out-patients' department at the hospitals should be done away with altogether. If patients could wait for several hours in the out-patients' rooms they could not be very ill and, therefore, did not need the superior advice which, it is supposed, a poor man can only obtain at the hospital. Many patients, however, did not go to the hospital for advice; their object was to obtain medicine cheaply or gratuitously. This was unfair to the dispensing chemists. These tradesmen had also much to say against the hospitals. For instance, a person suffering from epilepsy will go to a hospital month after month simply to get his supply of medicine renewed, when it would cost him but little more to buy the same from a druggist.

The fact that the tendency to resort to the hospital is becoming more and more general not only reduces the income of the general practitioner, but it has a direct and disastrous effect in lowering his sense of dignity. The greater number of cases of infectious fever are now removed to the fever hospitals. If there is a fracture, or a special eye, ear, or throat case the patients all rush off to a hospital. Little of interest remains for the general practitioner. In large towns the old family medical man barely survives this competition. When a medical man goes to a family and remembers that he has brought into the world several of its members he feels that he is an old friend of the household. There is a link of affection and interest between him and his patients which converts his profession into a work of love and has an elevating, softening, and humanising effect. The medical man is proud of his calling and devotes his best abilities to his work. Nothing is so stimulating as the sense of respect which he inspires and the feeling of responsibility which weighs upon him. Nothing hurts a medical man more than to be treated as a tradesman. A poor patient who shows proper respect is preferable to the rich patient who thinks there is nothing else required from him but a good fee. It does not suffice to study financial conditions, a psychological analysis of the position of the general medical practitioner is also necessary. A brilliant house surgeon no sooner leaves his hospital to set up in general practice than he finds he has no longer any interesting cases—they all go to the hospital. A striking comparison might be established between the case-list of a town and a country practitioner. Formerly a town practitioner was considered to be the more skilful or the more experienced of the two. The tables have been entirely turned of late. For instance, I was told of a country practitioner who had in one week an amputation of the thigh, an operation for hernia, and a removal of the breast. In a town all these cases would have gone to the hospital. The general practitioner will cease to be a surgeon. In surgical cases he will at most be allowed to advise, to suggest, and to hold the sponge. This will tend to bring a totally different class of men into the profession. Commercial men will become general practitioners, for they will argue that they can earn a living without much trouble. They need not study, they will not assume any responsibility. they will win no glory, but they will not be troubled by any anxiety. They will not respect themselves and they will not be respected; but they may jog along easily, attending only to trivial, monotonous cases, and referring all other cases to the consultants or to the hospitals. The high medical education and training which medical men receive will be altogether useless. These men will have no difficult, responsible work to perform. There will be nothing ennobling about their profession. Yet it is to such a deplorable and degrading condition that the general practitioner is likely to be reduced by the competition of hospitals, specialists, and consultants. Such are some of the grievances of which the general practitioners complain; these grievances are felt very acutely and recently have found voice and expression in the agitation organised by the Manchester Medical Guild.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Board of Guardians.

A PROJECT, which will, no doubt, soon be carried out by the Manchester board of guardians, illustrates not only the humane but the thoughtful and intelligent spirit in which they carry on their onerous work. The visiting committee of the Swinton Schools reported in favour of the erection of a cottage home in the school-grounds. Alderman M'Dougall, in moving the adoption of the proposal, said they knew the special attention that was bestowed on the training of girls who were going out to service, but it was felt that more was needed and that a cottage home would aid in securing more thorough domestic training. It is proposed to provide accommodation for ten girls in training for domestic service and for five infants between the ages of two and four, to be placed under the care of a foster-mother. It will, of course, be under the control of the master and matron. The presence of the infants will, it is thought, be useful in enabling the girls to become accustomed to washing and dressing and the general care of children. A small room is to be provided for each girl, so that she may look after it and acquire habits of tidiness. It is thought that it will be well ultimately to erect two homes. The proposal was seconded by a lady guardian, Mrs. Hyland, and adopted. This is a satisfactory move in the right direction. It was next proposed and seconded that the board's annual subscription to the Manchester Royal Infirmary should be renewed. One of the guardians, however, raised a curious objection. As a trustee of the infirmary "he was present at the recent meetings, at one of which Sir John Harwood stated that the infirmary board had a fund of £200,000, and that but for the possession of that money they would not have entered upon their re-building scheme. Under these circumstances the ratepayers had no right to contribute £74 a year." It was pointed out that every year hundreds of cases were sent to the Royal Infirmary that would otherwise have to be treated at the workhouse hospital. The motion was carried with two dissentients, who apparently ignored the fact, known to most Manchester people, that the question of the re-building and enlargement of the infirmary is an old one which has become more pressing year by year, and would not be less urgent if there were no money in hand wherewith to build. It was also resolved, subject to the approval of the Local Government Board, to give a subscription of £50, as last year, to the Manchester Jewish Board of Guardians, a voluntary association of Jewish gentlemen who do much to relieve their own necessitous poor and thereby relieve the city rates.

Opposition to the Manchester Sewage Scheme.

At the last meeting of the Mersey and Irwell Joint Committee Mr. T. W. Killick presented a report of the consulting sub-committee with reference to the Manchester Corporation Bill, 1897. One of the clauses of the Bill is to the effect that the corporation may discharge into the Mersey the effluent from the sewage works at Davyholme. This is

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objected to on the ground that no provision is made that the effluent, either when turned into the effluent conduit at Davyhulme or when discharged into the Mersey at Thelwall, "shall be satisfactory, or such as the joint committee would allow." Mr. Killick moved that a petition should be presented against the Bill with the view of so amending Clause 25 as to provide specifically that the effluents whether at Davyhulme or at Thelwell, "shall be subject to the provisions of the Rivers Pollution Prevention Act, 1876, and the Mersey and Irwell Joint Committee Act, 1892." After a prolonged and somewhat acrimonious discussion and the rejection of an amendment, which was moved and seconded by the corporation members of the committee, by 12 to 3, the resolution was carried. At the same meeting "Sir Henry Roscoe was re-appointed chemical adviser to the joint committee for one year at a salary of £725, such sum to include travelling expenses." Some sympathy may be felt for the corporation members of the committee, and especially perhaps for Alderman Joseph Thompson, the vice-chairman, who was in the chair at this meeting, but did not vote. Punishing others for their misdeeds must give rise to emotions so very different from those produced when punishing themselves. Warrington seems also to be entering the lists against the Manchester Bill.

A Burial Scandal.

From some facts which transpired at the meeting of the Ashton-under-Lyne Town Council, on the 13th inst., it seems that some of the churchyards there are in a disgraceful and dangerous condition. The minutes of the Sanitary Committee contained a resolution to present copies of orders of the Privy Council regulating burials in Ashton to the rectors and the vicars of Christ Church and St. Peter's Church respectively. It appears that these orders have been ignored for years. A Mr. Pownall said that the orders were "irrational, impracticable, and impossible," and that "the rule that only one body should be buried in one grave was absolute nonsense." Mr. Kelsall spoke from a sanitary point of view and described burials when "from the awful stench the mourners had hurried away from the graves of their departed friends; he had seen foul gases oozing from the graveyard of Christ Church which reminded him of Dante's description of such exhalations being compared to the 'sighs of the damned.'" Allowing for this poetical imagary, it is clear that a bad state of things exists. He spoke of paupers being "buried in trenches, with a very little layer of earth between each, and how coffins had sunk in water and sawdust had been used to conceal the oozings of drainage into graves," which he said was the condition to-day. Cremation was suggested, but public feeling is scarcely ready for it to be made compulsory. The Town Clerk said that the Council was not responsible for the contravention of the orders of the Privy Council. But if the Corporation is the sanitary authority it is surely responsible for allowing this overcrowding of the graveyards to continue unchecked for years.

Manchester Medical Society.

At the annual meeting of the Manchester Medical Society, which was held at Owens College on Jan 13th, the following gentlemen were elected officers for the ensuing year:—President: Dr. Steell. Treasurer: Dr. Glascott. Secretary: Mr. W. Coates. Committee: Dr. Edge, Dr. Faulkner, Dr. T. A. Helme, Mr. H. Lund, Dr. Milligan, Dr. Railton, Dr. Reynolds, Dr. John Scott, Mr. W. P. Stocks, Dr. Torrop, Dr. Wild, and Mr. G. A. Wright. The society has at present 373 members and is in a prosperous condition; seven ordinary and three clinical meetings were held during the past year, with an average attendance of forty-four members. Whilst the phenomena of the Roentgen rays were as yet a scientific novelty the society gave a practical proof of its readiness to encourage research. After the delivery of an address by Professor Schuster in the chemical theatre at Owens College on the Medical and Surgical Aspects of Roentgen's Discovery,[1] the society established a guarantee fund for six months to provide for investigations to be undertaken in Professor Schuster's laboratory. At the end of the six months it was only found requisite to call in a fourth of the £200 which had been guaranteed, and it was not considered necessary to prolong the arrangement.

Jan. 19th.

[1] THE LANCET, March 28th, 1896, p. 892.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

A Conjoint Pathologist for Scottish Asylums.

AN important scheme is being matured in Scotland with a view to the appointment of a conjoint reserve pathologist for Scottish asylums. A meeting of a number of superintendents of asylums was held last month at which a committee was appointed to draw up a scheme; it consists of Dr. Clouston, Dr. Yellowlees, Dr. Urquhart, Dr. Carlyle, Dr. Johnstone, Dr. Macpherson, and Dr. G. M. Robertson. It is proposed that the various asylums should contribute a sum of £500, of which £400 should be paid to the pathologist appointed. It is hoped that accommodation may be obtained in the new buildings occupied by the Royal College of Physicians' Laboratory in Edinburgh. The pathologist's duties are set forth as follows:—1. To examine material sent from the asylums and to furnish reports. 2. To carry on original researches upon the pathology of insanity. 3. To give instruction to members of the medical staff of associated asylums, free of charge, in the pathology of mental diseases and in laboratory methods. 4. To assist, if required, the medical staff of associated asylums in pathological researches. 5. He shall devote his whole time to the duties of his office.

University of St. Andrews.

At a meeting of the University Court, on the 13th inst., plans of a proposed building for the accommodation of the medical classes were submitted. The site selected is within St. Mary's College gardens. It was decided to proceed with the buildings as soon as the necessary funds could be procured. This essential condition, however, was promptly realised, for immediately after the decision was taken the Lord Rector, the Marquis of Bute, announced that, provided a proper guarantee were provided securing the building for the purpose for which it is to be erected he himself would be at the expense of erecting it. This was agreed to and a vote of thanks passed to his Lordship. The Marquis of Bute also intimated his willingness to provide salaries for the lecturers on physiology and modern Greek during the next two years. Miss Umpherston, L.R.C.P. Edin., was appointed to be lecturer on physiology. It was agreed to raise the salary of the Chandos chair of Medicine and Anatomy to £500, exclusive of fees, by addition from the Berry bequest fund.

Maternity Hospital for Dundee.

The sum of £5000 having been devoted to this purpose in the Cobb bequest, the directors of the Dundee Infirmary were approached on the matter and undertook to found and maintain a maternity hospital provided the sum of £10,000 were placed in their hands. The additional £5000 has now been raised by subscription and the entire sum handed over to the infirmary directors.

Presentations to Medical Men.

Mr. H. E. Jones, M.B. Glasg., of Glasgow has been presented with a barometer by the members of the ambulance class he has recently conducted on behalf of the Scottish Girls' Friendly Society.—Dr. Duncan Macartney has also received a presentation from the members of his ambulance class.—At a recent meeting of the members of the Grove-street Institute, Glasgow, an address embodying a vote of thanks was presented to Mr David Dinwoodie, M.B., in acknowledgment of a course of lectures he has recently delivered in the institute.

New Fever Hospital for Dumbarton.

The local authorities of the burgh of Dumbarton and the western district committee of the county council have agreed to the erection of a joint hospital for the reception of cases of infectious disease.

Glasgow University.

The following awards of bursaries and prizes in the faculty of medicine have been intimated: Brisbane bursary of £42 for four years—C. C. Cuthbert, M.A.; Highland Societies Bursaries, £25 each for four years—A. Maclean and J. Stewart, M.A.; Lorimer Bursaries, each £20 for three years—J. D. Lickley and Allen Martin, M.A.; Merchants' House Bursary, £25 for four years—F. J. Henry; Mackintosh Bursary, £30 for one year—T. Hunter, M.A., B.Sc.; Senior Arnott Prize (25) for an examination in physiological physics—A. L. Watson, M.A.; Junior Arnott Prize (£15)—R. M. Clark. At the January meeting of the Queen

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Margaret College Medical Club an address was delivered by Dr. C. O. Hawthorne on "Some of the Aspects of the Mental Discipline associated with the Study of Medicine."

The Scottish Poor-law Medical Officers' Association.

The Scottish Poor-law Medical Officers' Association, which was formed towards the close of 1895, has been several times mentioned in the columns of THE LANCET. Its objects are to raise the status of poor-law medical officers and to provide a channel through which all defects in the poor-law medical service may be brought to light and discussed, with a view to their removal. All past and present poor-law medical officers residing in Scotland are eligible for membership, and all persons interested in poor-law medical reform are eligible for election as honorary members at any general meeting. The first meeting took place on Dec. 9th, 1895, and the council will submit their report on the first year's working at the annual meeting to be held in the North British Station Hotel, George-square, Glasgow, on Jan. 27th. The council made every endeavour to have Scotland included in the scope of the Poor-law Officers' Superannuation Bill, which passed into law last session, but it was found that there were insuperable obstacles of a technical nature. In pursuance of this object deputations to the Local Government Board and to the Secretary for Scotland proceeded to Edinburgh; a deputation also visited London for the purpose of interviewing members of Parliament, and a numerously signed petition was presented to Parliament by Mr. Alexander Cross, M.P. for Camlachie (Glasgow). Much attention has also been given to the subject of tenure of office. Poor-law medical officers in England can only be removed from their appointments with the consent of the Local Government Board, but parish councils in Scotland claim that they can appoint and dismiss medical officers at pleasure without any control on the part of the Local Government Board. This matter was discussed at the British Medical Association meeting in Carlisle, and has been brought before the Local Government Board with a view to a decision being arrived at. Dr. William Bruce (Dingwall), Direct Representative for Scotland in the General Medical Council, is the honorary president of the association, and the secretary is Dr. Alexander M. Murdoch, 17, Broad-street, Mile-end, Glasgow.

Sanitary Work in Aberdeen.

During 1896 the sanitary staff of the city paid 17.890 visits in regard to infectious diseases and disinfected 4314 houses where cases occurred. 1558 patients were removed to hospitals and 4430 patients supervised at their homes. There were 4848 inspections in the unwholesome food branch, and 64¼ tons of meat, &c. (including 88,186 lb. of fish and 45,022½ lb. of beef), were seized and destroyed, or sold for manure, chiefly with the consent of the owners. Of 205 seizures only 6 had to be dealt with by magistrates; legal proceedings were instituted in 5 cases, and the fines imposed amounted to £28. Considering the magnitude of the fishing industry and of the provision trade in Aberdeen there was thus little attempt to dispose of objectionable articles for human food.

University of Aberdeen.

The "squatters" who took possession of the old premises in Longacre and lived there without paying any rent have now all been ejected so as to allow the building of the new south wing at Marischal College to be proceeded with. These poor people are being temporarily housed in the premises which will shortly have to be demolished to permit of the erection of the corporation model lodging-house. The University Court has declined to commit itself at this stage as to the most appropriate mode of celebrating locally the Queen's "diamond jubilee." This attitude is held to mean that a movement to improve the University buildings extension fund will be made. A scheme for erecting, at a cost of £3000, a marine laboratory and aquarium, the scientific work in which would be undertaken by the University, also finds favour.

Jan. 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal College of Surgeons in Ireland.

MR. ROBERT LAFAYETTE SWAN has just been elected Vice-President of the Royal College of Surgeons in succession to Mr. Kendal Franks, who, it will be remembered, resigned that office before leaving Dublin for South Africa. The place on the College council rendered vacant by the election of Mr. Swan was conferred on Dr. Lambert Ormsby. On Saturday evening Mr. William Thomson entertained at dinner his Excellency the Lord-Lieutenant and a numerous company.

Sending Patients to Unqualified Practitioners.

It would seem that at last the objectionable practice which prevails on the part of boards of Poor-law guardians in some parts of Ireland of sending patients threatened with hydrophobia to be treated by unqualified practitioners is about to be stopped. According to the *Newry Telegraph* the Local Government Board have decided that the sending of patients suffering from hydrophobia to McGovern of Cavan for treatment is illegal, and proceedings are about to be instituted in a test case against certain Poor-law guardians of the Newry Union for sending patients of this class to McGovern.

Dublin Hospital Fêtes.

A number of entertainments have recently been given here in support of the smaller city hospitals. On Saturday a performance in aid of the Children's Hospital, Temple-street, was given at the Star Theatre of Varieties under the special patronage of his Excellency the Lord-Lieutenant and the Countess Cadogan, while on Monday evening there was a most successful amateur representation of Mr. Sydney Grundy's comedy, "A Pair of Spectacles," at the Ancient Concert Rooms, the proceeds of which are to be given to the National Lying-in Hospital, Hollis-street.

The Beri-beri Epidemic.

At the last meeting of the board of governors of the Richmond Asylum Mr. Donelan, the acting medical superintendent, reported that the epidemic of beri-beri was distinctly on the decrease, only 1 case having been admitted to hospital since the previous board meeting. The numbers still under treatment are 26 men and 36 women, the total number treated from the commencement of the outbreak to the present time being 115, including 7 nurses. The board authorised the employment of a special nurse trained in the art of massage for the benefit of some of the patients of a paralytic and chronic type, and a skilled "masseuse" has accordingly been obtained from the Mater Misericordiæ Hospital.

The Admission of Cases of Delirium Tremens into Workhouses.

At a meeting of the Belfast board of guardians, held on Jan. 12th, it was decided that persons suffering from the effects of delirium tremens should be admitted to the workhouse and charged the full cost of their maintenance. As an indication of the extraordinarily defective working of the Irish Poor-law system, a guardian stated that a few weeks before a man had died in the Belfast Workhouse, leaving a legacy of £200 to an orphan society and having £4000 in the bank.

Coleraine Cottage Hospital.

At the annual meeting, held on Jan. 12th, the necessity of increasing the accommodation at this hospital was considered, and the committee were empowered to undertake this extension. A plan has been prepared by which two more wards or rooms can be provided for an increase in the rent of £10 yearly.

Curious Charms for Whooping-cough.

Considerable astonishment and amusement has been caused in Belfast by a case investigated at the coroner's court in which the treatment of whooping-cough by the passing of the child affected three times under a donkey was referred to. In his most amusing book, "Seventy Years of Irish Life," W. R. Le Fanu tells of two modes of dealing with the whooping-cough or "chin cough," as it is so generally called by the country people. One is this. If anyone should be seen riding on a piebald horse the father or mother of the person affected runs after him crying: "You that rides the piebald horse, what's good for the chin-cough?" Whatever the rider suggests is procured and given to the sufferer. This remedy is considered a very sure one by the peasantry, but is difficult to procure, as a man riding a piebald horse is not met with every day. The other mode of curing the disease is not considered so certain, but can more easily be procured, that is, passing the child three times over and under a donkey. Some donkeys are better than others. I remember a famous one in the southern part of county Down in which the rustics had great faith, and Le Fanu tells of one in county Cork so famous for curative powers that the owner, Ned Sullivan, supported himself and a large

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family on what this remarkable donkey earned for him. This man used to perambulate the city of Cork and the surrounding neighbourhood with his ass, crying out: "Will anyone come under my ass for the chin-cough?" Two other charms which I have known to be used in county Down for this disease—and it is curious that whooping-cough and erysipelas (the rose, as the Irish peasants often call it) are the affections most treated by charms—are the administration to the patient of two kinds of foods (solid and liquid) obtained from two first cousins who are married, and soup made from the tails of mice. Staying several years ago with an uncle and aunt who were full cousins I was amused at the parents of children with whooping-cough coming to them for two different articles of food for their sick children.

The Forster Green Hospital for Phthisis.

The first annual meeting of the Forster Green Hospital for Consumption and Chest Diseases was held in Belfast on Jan. 15th. On Nov. 2nd, 1896, the Master of the Rolls sanctioned the amalgamation of the Belfast Hospital for Consumption with the Forster Green Hospital. The receipts for current expenses from all sources amounted to £1065 4*s.* 9*d.*, while the expenditure was £1035 8*s.* 9*d.*, leaving a balance of £29 16*s.* in the hands of the treasurer. The endowment fund has been increased by donations amounting to £140. Rapid progress has been made with the alterations and additions at Fortbreda House, the place presented by Mr. Forster Green, for the new hospital. During the year there were 796 new extern and 97 new intern patients. The Marquis of Dufferin and Ava was present at the meeting and made one of his most admirable speeches and stated that in view of the fact that phthisis had been a special scourge and curse to the city of Belfast and the north of Ireland generally he thought he might fairly plead that that hospital for the reception of phthisical patients was at all events as worthy of their support and contributions as, if not more worthy than, almost any other which could be mentioned in the neighbourhood.

The late Mr. James McKee, M.R.C.S. Eng., L.R.C.P. Irel.

I regret to report the death of Mr. McKee of Randalstown, county Antrim, one of the oldest medical practitioners in the north of Ireland, which took place on Jan. 16th.

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ROME.

(FROM OUR OWN CORRESPONDENT.)

"The Accursed Knife."

THE phrase is Antonio Gallenga's, who loved his compatriots too well to spare the correcting rod. Cutting and wounding is the most frequent and also the most fatal of Italian crimes, causing, as the eminent criminal statistician, Baron Garofalo, demonstrated, "a homicide every two hours." It would be a curious and instructive inquiry, that of ascertaining how far offences are aggravated by the medium through which they take effect—drunkenness, for example, being a more brutal phenomenon when the drinker incurs it with ardent spirits and not with wine or beer. Similarly, personal violence is one thing when it takes the form of fisticuffs and quite another when it is inflicted with the knife. A people, not necessarily more depraved, may appear technically more "criminal" by giving vent to its passions or propensities, not in themselves worse, through agencies of deadlier power. Italy possesses an unhappy priority in lethal offences, and Northern exceeds Southern Europe in drunkenness, just because in the one case the knife is used instead of "nature's weapons" and in the other because raw whisky is the available beverage and not the juice of the grape. The Italian Senate last week, on the initiative of the Marchese Vitelleschi, had a full-dress debate on the prevalence, nay, the increase, of "reati di sangue" (crimes of blood) during the last decennium, and many were the causes, primary and secondary, adduced in explanation of the fact. The Marchese Vitelleschi saw much that was answerable for these crimes in the lack of sound education, even where it is given at all, deploring, for example, the total suppression of religious instruction in schools. Again, he thought the abolition of capital punishment directly favourable to homicide. To some of his arguments the Minister of Grace and Justice (Costa) replied, not ineffectively. Admitting the prevalence of lethal crime, his Excellency showed that it was not universally diffused throughout the kingdom—that (as, indeed, THE LANCET put *en évidence* some weeks ago) the Southern provinces contribute to these crimes out of all proportion to their population. This would confirm the Marchese Vitelleschi in his impeachment of defective schooling as a cause, these provinces being far ahead of the north in the number of *analfabeti* (unlettered). On the other hand, his Excellency distinctly "scored" when he drew attention to the striking fact that in Italy alcoholic excess is not attended with increase of violence. The provinces of Italy where homicides are most frequent are, he proved, precisely those where the lower orders are exemplary for their sobriety and abstemiousness. His Excellency was less fortunate in rebutting a charge as to the apathy of the public in presence of such "reati di sangue." Indeed, the supineness of Italians—the absence of all "sense of citizenship"—runs through their whole attitude towards every detail of national life, from representative government downwards. But, again, his Excellency redressed the balance in his favour when he proved that the suppression of religious (as distinct from secular) education in schools had nothing to do with the increase of lethal crime. "Nel 1870," he said, "nel Lazio, ove pure vi era istruzione religiosa più che obbligatoria, vi erano molti più omicidi" (In 1870, in Latium, where there was also religious instruction more than compulsory, there were also many more homicides). But the abolition of capital punishments he did not at all succeed in justifying. Thirty years ago in the House of Commons the whole subject was threshed out thoroughly, one of the most powerful speeches in favour of such punishments being John Stuart Mill's, who, on the ground of humanity, advocated execution as preferable to the slow torture of lifelong imprisonment with, or still more without, hard labour. But the speech of the occasion was Sir George Bowyer's, who, in answer to the plea that capital punishment was not a deterrent, adduced the following fact. A Neapolitan wanted to kill his wife. The guillotine was still the penalty for murder in the kingdom of the Two Sicilies, so he took her to Tuscany, where that penalty had been abolished, and put her to death there. Yet, in spite of that historical debate on the subject—in spite of the fact that Switzerland, having abolished capital punishments, was compelled by sad experience to legalise them once more, the Italian Government (though not without numerous and authoritative dissentients) made the abolition of these punishments the law of the land; and we now find the Minister of Grace and Justice defending that "reform" in presence of "a homicide every two hours"! The truth is that Italy, in many aspects of her life, has not emerged from the Middle Ages; that hardness of living at once inspires crime and robs detention in prison of its terrors; that the administration of justice is so perfunctory that the people, knife in hand, settle their differences among themselves; that, in fact, D'Azeglio's watchword thirty-five years ago—"Now we have to make Italians—" has lost none of its significance; and that Italy's most dutiful sons are those who, like the mass of her medical men, act strenuously in the spirit of that watchword, beginning with the rising generation and so guiding its growth as to exclude the vicious, and give the healthy subjects such advantages of training and environment as can alone form the ground-work of a civilised and progressive State.

Jan. 16th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Syphilitic Sero-fibrinous Pericarditis.

SYPHILITIC changes in the muscle of the heart are not very uncommon, but cases of pericarditis from syphilis are of such rarity that Mracek, who had thoroughly investigated the literature of this question, could state: "Syphilis has hardly ever caused an exudative sero-fibrinous pericarditis." A communication of Professor A. Genersich in the columns of the *Orvosi Hetilap* describing a case of this kind is therefore of great interest. Professor Genersich, on examining the body of a man, aged thirty-two years, who had died from pericarditis, found various syphilitic lesions in different parts of the body, especially in the lung, the spleen, the liver, and the bones. The

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pleura and the heart also exhibited gummatous growths of various sizes. The pericardium was found to be inflamed, its connective tissue being thickened, infiltrated, and full of round and fibroblast cells. The superficial layers of the pericardium showed a fibrinoid structure containing sparse endothelial cells and red blood corpuscles. The diagnosis of syphilis being established beyond doubt by the changes found post mortem in the various organs, Professor Genersich had no hesitation in attributing the signs of chronic inflammation found in the pericardium to the same disease.

Prolonged Anuria.

A highly interesting case was narrated by Professor J. Réczey at a recent meeting of the Budapest Hospital Association. A man, aged forty-five years, who had suffered from renal calculi for ten years, came to Professor Réczey's clinic with the statement that he had not passed urine during the last four days. On introducing a catheter the bladder was found to be empty. On percussion the area of the renal dulness was not found enlarged on either side. The patient being very stout palpation gave no satisfactory result. No operative interference was decided upon, the man feeling no discomfort whatever. Diuretics, such as Salvator water and dilute nitric acid, were freely administered and daily hot baths and injections of pilocarpine given with a view of preventing uræmia. The patient continued under observation at the clinic for ten days without any change taking place, but on the evening of the eleventh day he was suddenly seized with a violent desire to micturate, and four calculi, one of the size of a bean and three of the size of hemp seeds, came away without marked difficulty. During the following night he passed seven litres (= twelve pints) of urine. Professor Réczey pointed out that this case proved that obstruction of the ureter does not necessarily cause renal colic, and that obstruction even of both ureters may continue for some time without giving rise to urgent symptoms.

A Case of Tetanus treated with Antitoxin.

A student of the Budapest Veterinary College who had been bitten by an ape on the palm of his left hand was imprudent enough to dissect on the same day a horse which had died from tetanus, and on the following night was seized with pains in his left hand, but waited till next morning, when he went to Professor Réczey's clinic. The wound of the hand was at once enlarged, thoroughly cleansed with a solution of perchloride of mercury, and subsequently cauterised with caustic potash. He was then sent home, and although advised to present himself at the clinic next day did not do so, but stayed at home, where he was seized on the following night (Nov. 12th) with tetanic convulsions. A neighbouring practitioner who was called in ordered large doses of chloral-hydrate to be taken every two hours. On Nov. 13th the convulsions increased in frequency and intensity. The patient was conscious, his secretions and excretions were normal, he perspired freely, and his temperature was 42° C. (= 107·3° F.). He was now given a subcutaneous injection of pilocarpine, which arrested the convulsions for a few hours, but in the evening he was seized again every thirty minutes with convulsions lasting from a minute to a minute and a half. On Nov. 14th pilocarpine was again administered, giving relief for several hours. On Nov. 15th the pilocarpine ceased to be effective, the convulsion came on again twice every hour, and sometimes respiration stopped owing to the spasm of the respiratory muscles, so that artificial respiration had to be resorted to. It was consequently resolved to give the tetanus antitoxin a trial. The antitoxin was given in doses of 3 c.c. thrice daily on Nov. 15th, 16th, and 17th, and once on Nov. 18th. The patient's nights were quieter from the beginning of this treatment, and the last of the fits occurred during the night between Nov. 17th and 18th. He has been free from convulsions ever since and may be safely considered as recovered. His highest temperature was 43·2° C. (= 109·7° F.) on Nov. 17th, and the lowest was 35·2° C. (= 95·3° F.) on Nov. 20th. The special features of this case were: (1) The early development of the tetanus, the period of incubation lasting generally from eight to fourteen days; this rapid onset may be attributed to the obvious fact that the disease was in this case not due to bacillary infection, but rather to the absorption of toxins; (2) the absence of trismus and the absence of troubles connected with the secretory and excretory functions; and (3) the marked predominance of very violent clonic convulsions, the characteristic tonic contractions being but little marked.

Jan. 15th.

Obituary.

FREDERIC JOHN MOUAT, M.D., LL.D. EDIN., F.R.C.S. ENG.

BY the death of Dr. F. J. Mouat, which occurred at Durham-villas, Kensington, on Jan. 12th, the Indian Medical Service has lost one of the ablest and most distinguished of its older members. Anglo-Indian medical officers have made reputations for themselves in various lines of useful work. Dr. Mouat's principal claims to remembrance will probably be his zeal and success as an educational reformer and the improvements which he was the means of introducing into the prison system in India. Many of his personal characteristics specially qualified him for undertaking such arduous and responsible labours. His mental alertness and versatility, his talents for organisation, his power of making friends, and his knowledge of character all aided him in accomplishing an amount of work in various departments which will give him a permanent place in history among the administrative benefactors of our Indian possessions.

Dr. Mouat was born at Maidstone in 1816, studied medicine in London, Edinburgh, and Paris, and became a Member of the Royal College of Surgeons of England in 1838. In 1839 he graduated as M.D. at Edinburgh University and was appointed assistant surgeon to the Bengal Establishment in January, 1840. He arrived at Calcutta in June, 1840, and was shortly afterwards attached successively to the 21st Fusiliers (then at Fort William), to the 47th Bengal Native Infantry, and to the 1st Battalion of Artillery at Dum-Dum. Towards the end of 1840 he received the appointments of deputy apothecary and assistant opium examiner to the Government, appointments which afforded valuable opportunities to a young man having a taste for practical chemistry. During the year that he continued at this work he made investigations for the Liverpool Chamber of Commerce regarding some lichens which yield dye-stuffs and drew up a memorandum on Indian industrial products. The business capacity and technical knowledge which he then displayed induced Lord Auckland—at that time Governor-General—to appoint Dr. Mouat Professor of Chemistry and Materia Medica in the Bengal Medical College in 1841. With the duties of this chair he combined those of secretary, treasurer, and resident officer, having, in fact, general charge of the institution. Between 1841 and 1853 Dr. Mouat effected important reforms in the Medical College, especially in the introduction of an improved system of clinical instruction. He also obtained its recognition by the Royal College of Surgeons of England and the University of London, improved the finances of the hospital in connexion with it, formed a Bengali class, wrote an Atlas of Anatomy with descriptive letterpress in English and Hindustani, and translated the London Pharmacopœia into Hindustani for the use of the military class. He was also for two years chemical examiner to the Government. Dr. Mouat's chemical knowledge found an important practical application in connexion with the manufacture of percussion caps, field rockets, and other military explosives. While making these experiments he was attached to the Select Committee on Artillery at Dum-Dum, where, in conjunction with Colonel Edward Ludlow, he invented a waterproof varnish for protecting the detonating composition against atmospheric influences. The percussion caps invented by Dr. Mouat were the first that were made in India and were used in the China Expedition under Sir Hugh Gough. Dr. Mouat was also the first investigator of the chemical properties of gutta percha; before this substance was known in Europe he had published an account of it in the Journal of the Agricultural Society of Bengal. In April, 1843, Dr. Mouat was appointed secretary to the Council of Education of Bengal, a position which gave him the control of education in the Lower Provinces, and which he held for ten years, simultaneously with his work at the Medical College. In 1846 he brought forward a scheme for the establishment of universities in India. His proposals were adopted by the Council of Education and were approved by the Government of India, but were not sanctioned by the Honourable Court of Directors till 1854. Dr. Mouat was, therefore, the originator of universities in India, no one before him having succeeded in directing attention to the advantages which would result from such an enlargement

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of the educational facilities of the country. In 1844 he was admitted to the Fellowship of the Royal College of Surgeons of England. In 1845 Dr. Mouat accepted the Professorship of Medical Jurisprudence in exchange for that of Chemistry; in 1849 he became Professor of Medicine and Clinical Medicine, with charge of the medical wards of the hospital, and in 1853 on the opening of the new hospital the designation of this last appointment was altered to that of Professor of Medicine and First Physician to the Medical College Hospital. In 1855 he acted as Presidency Surgeon for some months. In December, 1855, he was gazetted Inspector-General of Gaols in Bengal, and soon introduced remunerative forms of labour into the establishments under his control with such good effect that four of these prisons repaid the whole of their cost, and up to March, 1867, the prison manufactures yielded a net profit of Rs. 31,96,049, after payment of the whole cost of production. Another important feature in his scheme of prison reform was the employment of prisoners to some extent in the maintenance of order and discipline, such employment having a most salutary effect in encouraging the better nature of those who had not degenerated into habitual offenders. In November, 1857, during the Sepoy Mutiny, Dr. Mouat was sent to the Andaman Islands as president of a committee charged with the selection of a site for a convict settlement. The party had to encounter much hostility from the aborigines, and several of them were injured. Dr. Mouat was wounded in the mouth and had two ribs broken, but nevertheless continued his responsible duties as leader of the expedition, which succeeded in its objects and returned to Calcutta without loss. Both Lord Canning and the Home Government expressed much satisfaction with the manner in which the work of the expedition under Dr. Mouat was accomplished. A harbour discovered by the party on the West Coast of the Great Andamans, opposite to Port Blair, was named Port Mouat. Dr. Mouat was twice appointed to conduct inquiries into the subject of coolie emigration and on both occasions he received the thanks of the Government. In 1851 he founded the Bethune Society in Calcutta to promote a more intimate union between educated natives and Europeans. In 1854, when he was about to proceed to England on a year's furlough, he was presented by the graduates of the Calcutta Medical College with an address and a silver vase, and by the members of the Bethune Society with an address and a silver inkstand. In 1870, when he finally retired from the Indian service, he was presented by both the Hindoo and Mohammedan communities of Calcutta with addresses expressing their grateful appreciation of the benefits which he had been the means of conferring on them. On his return to England he was appointed one of the medical inspectors of the Local Government Board and discharged his duties in this new capacity with exemplary thoroughness until in 1887 failing health rendered it necessary for him to seek repose. Even then, however, his activity continued. His address as President of the Royal Statistical Society appeared in THE LANCET in November, 1890, and during the ensuing three years our columns contained long and important contributions from his pen on such varied subjects as the ethics of opium and alcohol and the organisation of medical relief in the metropolis. Dr. Mouat's contributions to the literature of medicine, philanthropy, and social progress include, in addition to the treatises already mentioned, "Prison Discipline and Statistics" (three papers), Journal of the Statistical Society of London; "Prison System of India," Transactions of the International Peniten. Congress; "Prison Labour," Journal of the Society of Arts; "Medical Statistics of Cholera and Syphilis" and "Notes on Medical Statistics" (Public Health Section of the Ninth International Statistical Congress), Transactions of the Epidemiological Society; "Statistics of Childbirth and Deaths therefrom in Workhouse Infirmaries from 1871-80," International Medical Congress; "History of the Statistical Society of London," 1885; "Origin and Progress of Universities in India," 1888; "Boarding-out of Orphans in England" and "International Prison Statistics," International Prisons Congress, 1890; and "Prison Ethics and Prison Labour," 1891. Dr. Mouat was also joint author with Sir Douglas Galton of "Hospital Construction and Management," 1883.

DONALD ALEXANDER FRASER, M.D. BRUX., M.R.C.S. ENG., L.S.A.

DR. D. A. FRASER died at his residence, Pomeroy House, Bridgetown, Totnes, on Jan. 11th, after a short illness. The deceased was the eldest son of Mr. P. Gordon Fraser, late colonial secretary for Tasmania. He was educated at King's School, Bruton, and received his medical education at St. Mary's Hospital, London, obtaining the M.R.C.S. Eng. and L.S.A. in 1880 and the M.D. of Brussels in 1886. Dr. Fraser went to Totnes ten years ago, being taken into partnership by Mr. J. C. Hains, J.P. The deceased was deputy coroner for the southern division of Devonshire and medical officer of health for the borough of Totnes. He also held the appointment of medical officer and public vaccinator for the No. 4 district of the Totnes Union. Dr. Fraser was extremely popular and held in the highest esteem both by the local members of the profession and by his fellow townsmen. He was forty-five years of age at the time of his death and leaves a widow and two young children, for whom much sympathy is felt.

JOHN WILFORD MARSH, M.R.C.S. ENG., L.S.A.

JOHN WILFORD MARSH, for many years connected with the Lincoln County Asylum, died on Jan. 14th, aged fifty-four years, at Bognor, Sussex. Since 1883 he had held the position of medical superintendent of Bracebridge Asylum, but about a year ago his health broke down and he retired to Bognor. The deceased gentleman was an old pupil of the London Hospital Medical School, where at one time he was house surgeon and clinical medical assistant. He was a member of the Medico-Psychological Association.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. T. Plücker, Professor of Special Surgery and Dermatology in Liége. For several months past, it seems, he was aware that he was the subject of a necessarily fatal disease and made various preparations for his death without making his family anxious or betraying his own cognisance of his state. Thus he told his students he should expedite his course of lectures, but that he should not probably be present at the examinations, and he declined various posts offered to him. In his will he particularly requested that those attending his funeral should keep their heads covered, knowing that the weather would probably be cold. He is much regretted by the local profession.—Dr. Thiry, formerly Professor of Surgical Pathology and Rector of the University of Brussels, at the age of eighty.—Dr. Wilhelm Theodor von Renz, Bath Physician at Wildbad. He had written a good deal on the history and therapeutics of the Wildbad springs, and had published a work on Trichinosis.—Dr. Michael of Hamburg, a well-known laryngologist.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated at a meeting of the Board of Examiners on Monday, Jan. 11th, 1897:—

Anatomy and Physiology.—Arthur Greene Brinton, Charles York Flewitt, James Christopher Oates, Oswald Erasmus Ward, and Edwin Edgar Montague Price of Mason College, Birmingham; David Morgan Davies and George Herbert Simpson of St. Mungo's College, Glasgow; Robert James Fyffe of Firth College, Sheffield; William Nichols Blatchford of University College, Bristol; Robert Walker of St. Bartholomew's Hospital; John Samuel Cousins of Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology; Joseph Bernard Thompson of University College, London; Edmund Hudson of Owens College, Manchester, and St. Thomas's Hospital; and William Stuart Low of Royal College of Surgeons and the University, Edinburgh, and St. Thomas's Hospital.

Anatomy only.—Alexander Septimus Arkle, Cambridge University, St. Thomas's Hospital, and University College, Liverpool; Hilt Mussenden Leathes, Cambridge University and St. Thomas's Hospital; Louis Charles Martin, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology; Emilio Frederico Crabtree, St. Bartholomew's Hospital; and Rustom Pestonjee, Ceylon Medical College and Mr. Cooke's School of Anatomy and Physiology.

Physiology only.—William Beck, Aberdeen and Edinburgh Universities, and John Alfred Mellish, St. George's Hospital.

Eighteen gentlemen were referred in both subjects, one in Anatomy only, and one in Physiology only.

Tuesday, Jan. 12th:

Anatomy and Physiology.—Percival Thomas Nicholls, Middlesex Hospital; Harry Norman Rex Child, Otago University, Dunedin, and Middlesex Hospital; Harold Burrows, Henry Warwick Illius-

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John Warwick Illius, Walter Percy Dyer, and Thomas Warren Brown, St. Bartholomew's Hospital; Archibald Douglas Reid, King's College, London; George John Edward Pitman and Charlie Martin Row, University College, London; Thomas Gerald Fenton, St. Thomas's Hospital; Clement Arthur Douglas Bryan and William Murray Thomas, Guy's Hospital; John Richard Griffith, London Hospital; Arthur Herbert Foster and Arthur John Watson, St. Mary's Hospital; and Ridley Ewart Mounsey, St. George's Hospital.

Eighteen gentlemen were referred in both subjects.

Wednesday, Jan. 13th:

Anatomy and Physiology.—Charles Bernard Sells, Charles Edwards, John Brocas Chambers Brockwell, Guy's Hospital; Hugh Caleb Holden, Guy's and Westminster Hospital; Charles Wynn Wirgman, Nigel Frampton Stallard, and Percy Taylor Humphrey Stedman, University College, London; Charles Vaughan White, St. Thomas's Hospital; George Melville Smith, St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; Harry Thwaites and Alfred Jones, London Hospital; Edward Arthur Sanders, King's College, London; and Archibald Malcolm Macintosh and William Richard Power Goodwin, St. Mary's Hospital.

Anatomy only.—John Micklethwait, Firth College, Sheffield, and Mr. Cooke's School of Anatomy and Physiology.

Physiology only.—Frederick Aylmer Hort, Cambridge University, Middlesex Hospital, and Mr. Cooke's School of Anatomy and Physiology; and William Morgan James, Cambridge University and St. Bartholomew's Hospital.

Twenty-five gentlemen were referred in both subjects, two in Anatomy only, and one in Physiology only.

Thursday, Jan. 14th:

Anatomy and Physiology.—Edwyn Gaved Andrew, George Shorland, Albert Edward Cawston, and Remus William John Radley, Guy's Hospital; Walter Edward Cooper, University College, London; Codanda Alpacha Nanjapa, Madras Medical College and University College, London; John O'Hea and George Joseph Alexis Leclezio, St. Bartholomew's Hospital; George Harrison Orton, Cambridge University and St. Bartholomew's Hospital; Edward Wemyss Browne and Cyril Alfred Rankin Nitch, St. Thomas's Hospital; Robert Augustus Greenwood Penny, St. George's Hospital; Charles Edward Etheridge, Middlesex Hospital; John Scarborough Dudding and Frederick James Purcell Daly, London Hospital; Meredith Sedgwick Doubble, Charing-cross Hospital; and Walter Edward Turner, St. Mary's Hospital.

Anatomy only.—Arthur West Walker, Mason College, Birmingham, James Augustus Rooth, St. George's Hospital.

Physiology only.—Thomas Arthur King, Cambridge University and St. Thomas's Hospital.

Sixteen gentlemen were referred in both subjects, two in Anatomy only, and one in Physiology only.

FOREIGN UNIVERSITY INTELLIGENCE.—*Catania:* Dr. Antonio Carci has been appointed Professor of Materia Medica and Experimental Pharmacology.—*Freiburg:* Dr. Kiliani, of Munich, has been appointed Professor of Chemistry, in succession to Professor Eugen Baumann.—*Geneva:* Dr. Johanès Martin has been appointed Professor of Psychiatry in succession to Professor Olivet, who has resigned.—*Giessen:* Dr. R. Sommer has been appointed Professor of Psychiatry,—*Heidelberg:* Dr. Max Jordan has been appointed Extraordinary Professor of Surgery. The university is about to lose the services of Dr. Von Beck, who was only recently appointed Extraordinary Professor, as he has been placed in charge of the Carlsruhe Hospital.—*Munich:* Dr. Karl Seitz has been appointed Extraordinary Professor of Children's Diseases.—*Naples:* Dr. Giacinto Vetere and Dr. Carlo Parascandolo have qualified as *privat-docenten* of Operative Medicine and Surgical Pathology respectively.—*Palermo:* Dr. Giovanni Dotto has qualified as *privat-docent* of Psychiatry.—*Tübingen:* Dr. Dennig has been appointed Extraordinary Professor of Internal Medicine.—*Würzburg:* Dr. A. Hoffa has been appointed Extraordinary Professor of Surgery.—*Vienna:* Dr. H. Peters has been appointed *docent* of Midwifery and Gynæcology.—*Zürich:* Dr. W. Felix has been appointed Extraordinary Professor of Anatomy.

MEDICAL FACULTY OF UNIVERSITY COLLEGE, LIVERPOOL.—The following table shows the number of medical and dental students attending the various classes at University College, Liverpool. Those attending at the Royal Infirmary who have not registered with the Dean this session are not included:—

Preliminary Scientific (Victoria University I.)	24	Conjoint Board, 2nd year... ...	7
Victoria University, 2nd year	16	,, ,, 3rd ,, ...	12
,, ,, 3rd ,,	18	,, ,, 4th ,, ...	6
,, ,, 4th ,,	9	,, ,, 5th ,, ...	6
,, ,, 5th ,,	15	,, ,, 6th ,, ...	4
,, ,, 6th ,,	5	,, ,, 7th ,, ...	1
Dentals, 1st year	15	Other universities and qualified men	27
,, 2nd ,, ...	7		189
,, 3rd ,, ...	5		
Conjoint Board, 1st year... ...	12		

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman having previously passed the necessary examinations, and having now conformed to the by-laws and regulations, has been admitted a Member of the College:—Llewellyn William Roberts, M.B., Ch.B. Melb., Melbourne University and King's College Hospital.

NEW HOSPITAL FOR BEDFORDSHIRE.—At a meeting of the governors of the Bedford General Infirmary on the 14th inst. it was decided to commence to build a new county hospital at a cost of about £33,000. Towards the sum required £27,000 are already in hand, including two donations each of £5000 from the Duke of Bedford and Mr. Whitbread.

FOOTBALL CASUALTIES.—During a match between Frome (Somerset) and Leighside Wanderers, on the 14th inst., a player sustained a fracture of his leg.—On the same day, in a match, St. Helens' Butchers against Theatricals, a player fractured his left humerus.—On the 16th inst., at Castletown, Isle of Man, during a match between King William's College Old Boys and Castletown, a Castletown forward fractured his leg, and another player sprained his ankle.

THE SLAUGHTER-HOUSE QUESTION.—The President of the Board of Agriculture will receive a joint deputation of the Church Society for the Promotion of Kindness to Animals and the Church Sanitary Association asking for further legislation respecting slaughter-houses on Feb. 25th. The Duke of Westminster will head the deputation. Copies of the memorial, which has already been signed by nearly 4000 persons, can be had on application to Mr. W. P. Gledhill, Church House, Westminster, S.W.

PORTSMOUTH MEDICAL UNION.—Mr. Gordon Sparrow, Mr. Emmett, Mr. McGregor, Dr. Sheahan, Mr. Norris, Mr. Malpas, Mr. J. E. P. Sparrow, and Mr. Gaston are each to be presented with an engraving of Mr. Luke Fildes's well-known picture, "The Doctor," as an acknowledgment by the profession of Portsmouth of the united stand they made with the assistance and advice of the Portsmouth Medical Union on behalf of the whole profession in the recent dispute with the Ancient Order of Rechabites. The presentation will be made by Dr. Ward Cousins at the rooms of the Medical Library on Tuesday next, Jan. 26th. A social and musical entertainment has been arranged to commence at 9 P.M.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on Jan. 13th at 11, Chandos-street. The chair was taken, in the unavoidable absence of the President, Sir James Paget, by Mr. Christopher Heath, Vice-president. One new member was elected and the deaths of one honorary and two other members were announced. It was resolved to distribute £1212 10*s.* among the fifty-one widows, thirteen orphans, and five recipients from the Copeland Fund. There were no fresh applications for relief. A present amounting to £368 had been given on Dec. 21st, 1896, among the widows and orphans on the books. The expenses of the quarter were £76.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting of this society held on Jan. 15th, Dr. Sidney Marsden (President), being in the chair, Mr. H. Laird Pearson showed the Bone Handle of a Pen-holder four inches in length which he had extracted from the bladder of a middle-aged married woman thirty-six hours after its introduction. Under anæsthesia after dilating the urethra with Duke's uterine dilator the foreign body was after much manipulation extracted by means of a fine sequestrum forceps. There was no subsequent cystitis, and at the end of three days micturition, although painful, was well under control.—Mr. Stansfield, Dr. Brien, and Dr. Hughes made remarks and referred to cases of foreign body in the bladder.—Mr. C. Thurstan Holland of Liverpool gave an interesting demonstration of the uses of the Roentgen rays, first showing and describing the apparatus, enumerating several of the theories connected with the production of the rays, and then exhibiting a long series of lantern slides illustrating various physiological and pathological conditions of the skeleton as demonstrated by the rays.—A short discussion ensued, in which Dr. Harris, Mr. Stansfield and Mr. Wilkinson took part.

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FREEMASONRY.—The York Lodge.—At the regular monthly meeting of the York Lodge No. 236, held at the Masonic Hall, Duncombe-place, York, on Monday, Jan. 18th, Bro. F. Sidney Gramshaw, M.D. St. And., was duly installed W.M. The banquet, held the same evening at the Royal Station Hotel, was largely attended, and an enjoyable evening was spent.

THE annual meeting of the Worcestershire Medical Society was held in the Library of the Worcester General Infirmary on Jan. 12th. Mr. T. Bates was elected president, and Dr. Stanley L. Haynes of Malvern, vice-president. Twenty-six new members were elected. A short paper was read by Dr. Swete on the History of the Worcestershire Medical Society. Cases were shown by Mr. Bates, Mr. Budd, Mr. Gostling, and Dr. Pollard.

A NOTABLE EXAMPLE.—A praiseworthy instance of consideration for the public service is reported from Southampton. Mr. H. H. Emanuel, to whom the Corporation owed £52 10*s.* as rent of premises which he owns, wrote desiring that the sum might be paid to the Royal South Hants Infirmary, the object being to qualify the medical officer of the county borough for the time being, as a life governor of that institution on behalf of the Corporation.

THE LARYNGOLOGICAL SOCIETY OF LONDON.—At the fifth annual meeting of this society, held on Jan. 13th at 20, Hanover-square, the following gentlemen were elected officers for the ensuing year:—President: Mr. Butlin. Vice-Presidents: Mr. Cresswell Baber, Dr. Bond, Dr. Bronner, Dr. Scanes Spicer, and Mr. Charters Symonds. Treasurer: Mr. Walsham. Librarian: Dr. Clifford Beale. Secretaries: Dr. St. Clair Thomson and Dr. Herbert Tilley. Council: Dr. Ball, Dr. McKenzie Johnston, Dr. Semon, Mr. Stewart, and Dr. Watson Williams.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting, held on Jan. 14th, the following list of office-bearers, Members of Council, &c, was adopted:—President: Richard Caton, M.D., F.R.C.P. Vice-presidents: Robert Jones, F.R.C.S. Edin., *Charles H. Shears, M.R.C.S., K. A. Grossman, F.R.C.S. Edin., and *A. C. E. Harris, M.D. Hon. Treasurer: *James Armstrong, M.D. Hon. General Secretary: R. S. Archer, M.D. Hon. Secretary to Ordinary Meetings: T. B. Grimsdale, M.B. Hon. Librarian: *T. R. Bradshaw, M.D. Council: J. H. Abram, M.D., Hugh E. Jones, M.R.C.S., C. J. MacAlister, M.D, R. Robertson, M.D., *A. Stookes, M.D., *A. Bernard, M.B., *C. T. Holland, L.R.C.P., *T. D. Leigh, M.R.C.S., *L. Morgan, M.D., *G. P. Newbolt, F.R.C.S., *Mr. W. Permewan, F.R.C.S., *R. J. Richardson, M.D. Pathological and Microscopical Committee: Robert Boyce, M.D., J. H. Abram, M.D., W. T. Thomas, F.R.C.S., Frank T. Paul, F.R.C.S., A. W. Campbell, M.D., F. C. Larkin, F.R.C.S., F. H. Barendt, M.D., *R. A. Bickersteth, F.R.C.S., *C. S. Sherrington, F.R.S., and J. Wiglesworth, M.D. Those marked (*) did not hold the same office last year.

DIPHTHERIA IN LONDON.—The closing period of the past registration year consisted of five instead of the customary four weeks. But this circumstance does not render the facts incomparable, as the weekly averages can be considered. The December period of five weeks shows a total of 1442 notified cases of diphtheria in the county of London, against 1160 in the November period of four weeks. In December, the weekly average of notifications was 288, or only 2 less than in November. In December four districts had an aggregate of 432 cases, as compared with five having 416 in the preceding month. All the sanitary districts were invaded by the disease in each of the periods, whilst in the later month the Port of London was also visited by the malady on ship-board to the number of 6 cases. In December there were registered 257 deaths, yielding a weekly average of 51, as opposed to a weekly average in November of 55; and the per case mortality per cent. in the month just named of 19·0 gave place to one of 17·8 in December. There was, therefore, a like amount of disease in the two periods, with a mortality rate on amount of sickness in favour of the closing weeks of the year. Taking the whole year with its fifty-three weeks for purposes of registration, there were 14,224 notified cases, as against 11,426 in the fifty-two weeks of 1895, totals which yield for 1895 and 1896 weekly averages of 220 and 268 respectively. In Camberwell the 912 notifications in the earlier year gave place to 1447, and the 612 in Islington to 1152. The heaviest periods in 1896 were September and October and the lightest were April and January, and in the preceding year the periods were almost identical. Last week the deaths in London from the disease numbered 52, following on 71, but even so they were 17 in excess of the corrected decennial average for the first week of the period 1884–96. Poplar is credited with 6 of the deaths, Shoreditch with 5, and Islington, Hackney, and Bermondsey each with 4 deaths. Of the whole, 48 were those of persons aged from one to twenty years. The admissions to hospital in the week were 108, and last Saturday found 862 patients still under treatment. In the outer ring there were registered 6 deaths, in Kingston, Willesden, Hendon, Leyton (2), and Ilford respectively.

METROPOLITAN HOSPITAL SUNDAY FUND.—A meeting of the council of the Metropolitan Hospital Sunday Fund was held on Jan. 14th in the Venetian Parlour of the Mansion House, the Bishop of Stepney presiding in the absence of the Lord Mayor. Among those present were Archdeacon Sinclair, the Chief Rabbi, Canon Fleming, Lord Stamford, the Hon. Sydney Holland, Sir George Bruce, Sir Savile Crossley. Dr. Hare, Mr. Bloxam, F.R.C.S., Mr. Wakley, F.R.C.S., Mr. Willett, F.R.C.S., Rev. Dr. Marks, and Mr. H. C. Burdett. Letters of regret on account of inability to attend the meeting were received from Cardinal Vaughan, Canon Graham, the vicar of Islington, and others. The business to be transacted was the election of council, committees, and officers for 1897. The council for 1896 was re-elected, with the substitution of Lord Cathcart for Lord Knutsford, Mr. George Drummond for Alderman Sir Stuart Knill, Bart., and the Rev. Mr. Brock (Camden-town) for the Rev. J. Baillie. For the remaining vacancy, caused by the death of Mr. Joseph Fry, two candidates were proposed, and in the result Mr. A. S. Fripp was elected. Sir Stuart Knill and Mr. R. Grey were appointed as members of the committee of distribution to succeed Alderman Sir David Evans and Mr. H. Cosmo Bonsor respectively. Some conversation took place as to the expediency of proposing candidates whose consent was not formally signified. The honorary secretaries (Sir E. H. Currie and Mr. R. B. Martin, M.P.), the auditors, and the secretary (Mr. Custance) were re-elected, after which the proceedings terminated.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Opening of the Session.

THE third session of the present Parliament was opened by Royal Commission on Tuesday, Jan. 19th, the opening proceedings being attended by a large gathering of the Members of the two Houses.

The Queen's Speech.

The Queen's Speech delivered at the opening of the session refers to various matters at home and abroad which have occurred since the prorogation of Parliament five months ago. With regard to the famine in India, it says that the Indian Government are making every effort to mitigate suffering and to lessen the calamity, and that the development of railways and irrigation works and the forethought given through a long series of years to the preparation of the most effective arrangements for alleviating distress caused by famine make their task more hopeful than in previous visitations. Plague, the Speech goes on to say, has also made its appearance in the seaport towns of Bombay and Karachi, and, notwithstanding the precautions adopted by the local authorities, shows no signs of decrease. Directions, however, have been given to the Government to take the most stringent measures at their disposal for the eradication of the pestilence. Among the legislative proposals mentioned in the Speech are Bills to improve the arrangements for water-supply in London and to establish reformatories for inebriates.

Public Health Law in Scotland.

The Government has arranged to introduce in the House of Commons the Bill for the Consolidation of the Law as to Public Health in Scotland, which last session passed through the House of Lords after being considered by a Select Committee.

The Vaccination Question.

There is no reference to this question in the Queen's Speech, but it is understood that the Government are considering it and will come to a decision as to the legislation to be proposed when it has had an opportunity of examining Dr. Thorne Thorne's report as to the state of things in the continental countries he has just visited.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANNINGSON, B., M.D. Cantab., M.R.C.S., has been re-appointed Medical Officer of Health by the Ashwell Rural District Council.

BAILEY, T. R., M.D., C.M. Edin., has been appointed Medical Officer for the No 1 Bilston Sanitary District.

BARNETT, F. S., L.F.P.S. Glasg., M.R.C.S., has been appointed District Medical Officer for the Lewisham Union.

BROCK, JOHN, L.R.C.P. Edin., M.R.C.S., has been appointed House Surgeon to the Beckett Hospital and Dispensary, Barnsley, vice J. Currie, resigned.

BRUSHFIELD, T. N., M.D. St. And., M.R.C.S., has been appointed an Honorary Consulting Physician to the Budleigh Salterton Cottage Hospital.

EDDOWES, ALFRED, M.D., L.R.C.P. Edin., has been appointed an Honorary Assistant to St. John's Hospital for Diseases of the Skin, London.

EVANS T. G. C., L.R.C.P. Edin., M.R.C.S., has been appointed a Medical Officer to the Budleigh Salterton Cottage Hospital.

FARRANT, M., jun., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer by the St. Thomas Guardians and the Rural District Council, Exeter.

GIBSON, E. ARTHUR, M.B., C.M. Glasg., L.M. Rotunda, has been appointed Out-door Physician to the Glasgow Maternity Hospital, vice Professor John Edgar.

KEMPSON, F. C., M.B. Camb., has been appointed Senior Demonstrator of Anatomy to the University of Cambridge.

KITCHEN, J. F., M.D. Edin., C.M., has been appointed Medical Superintendent to the Bradford Fever Hospital, vice A. E. Foster.

LAVER, HENRY, M.R.C.S. Eng., L.S.A. Lond., J.P., F.S.A., has been appointed Consulting Surgeon to the Essex and Colchester Hospital.

LAVER, PHILIP G., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., has been appointed an Assistant Surgeon to the Essex and Colchester Hospital.

LOGAN, R. R. W., M.R.C.S., has been re-appointed Medical Officer of Health by the Ashby Wolds Urban District Council.

MACGREGOR, J., L.R.C.P., L.R.C.S. Edin., M.R.C.S., has been appointed Honorary Physician to the Newspaper Press Fund, vice Sir B. W. Richardson, deceased.

MACKAY, JOHN C., M.D. St. And., L.R.C.P. & S. Edin., has been re-appointed Medical Officer of Health for the St. Columb Major Rural Sanitary District.

MOORE, W., M.B., C.M. Glasg., has been appointed Medical Officer by the Ayr Parish Council.

NEALON, J. A., M.D., M Ch. Irel., has been appointed Medical Officer to the Linton Sanitary District and the Workhouse, vice Wm. Taynton, resigned.

READ, CHARLES S., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the North London Hospital for Consumption and Diseases of the Chest, Mount Vernon, Hampstead, N.W.

RICHARDSON, T. W., M.R.C.S., has been re-appointed Medical Officer of Health by the Erpingham Rural District Council.

SAUNDERS, JAMES F., M.R.C.S., has been appointed a District Medical Officer for the Lewisham Union.

SAVILL, THOMAS D., M.D. Lond., D.P.H. Camb., M.R.C.P. Lond., has been appointed an Honorary Assistant Physician to St. John's Hospital for Diseases of the Skin, London, vice Dr. Barrett, resigned.

SCOTT, E. W. KERR, M.B., C.M. Edin., has been appointed Assistant House Surgeon to the District Hospital, West Bromwich.

SEMPLE, H. F., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer to the Budleigh Salterton Cottage Hospital.

SLADER, GEORGE W. B., L.R.C.S. & L.M. Irel., L.S.A. Lond., has been appointed Medical Officer of Health for the Gainsborough Rural Sanitary District, vice H. Wright, resigned.

SMITH, E. B., M.D. Camb., has been appointed Senior Demonstrator of Anatomy to the University of Cambridge, vice W. S. Melsome, resigned.

STEVENSON, J. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer for the Glasgow Poorhouse by the City Parish Council.

WALKER, ROBT., M.D. St. And., M.R.C.S., has been appointed an Honorary Consulting Physician to the Budleigh Salterton Cottage Hospital.

WATKINS, D. J. G., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed a Public Vaccinator by the Lincoln Board of Guardians.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's inn-road, W.C.—House Surgeon.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Pathologist.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Clinical Assistant to the Out-Patient Physicians and Clinical Clerks in the Wards.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £80, to be increased to £90 after the first year's services, with apartments, board, and attendance. Applications to the Secretary, 34, Moorfields, Liverpool.

LONDON COUNTY ASYLUM, Claybury, Woodford-bridge, Essex.—Assistant Medical Officer, unmarried. Salary £120 per annum, rising £5 a year to £150, with board, furnished apartments, and washing. Applications to the Clerk of the Asylums Committee, Office, 21, Whitehall-place, S.W.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Board, washing, and residence in the hospital provided.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Resident Medical Officer for six months. Salary at the rate of £30 per annum, with board, attendance, and washing.

NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill, Stoke-upon-Trent.—Assistant House Surgeon, for six months. Board, apartments, and washing provided.

POPLAR UNION.—Assistant Medical Officer and Dispenser at the Workhouse, High-street, Poplar. Salary £100 per annum, with furnished apartments and rations in the Workhouse. Applications to the Clerk, Guardians' Offices, Upper North-street, Poplar, E.

ROYAL ORTHOPÆDIC HOSPITAL, 297, Oxford-street, London.—House Surgeon and Anæsthetist, married. Salary, £100 per annum, with partial board and washing.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Physician.

SUFFOLK COUNTY LUNATIC ASYLUM.—Medical Superintendent at Melton, near Woodbridge. Salary £600 a year, with furnished house (excluding plate and linen), including all rates and taxes in respect of same, fuel, light, garden produce, and laundry. Applications to the Clerk, County Hall, Ipswich.

SUNDERLAND BOROUGH ASYLUM, Ryhope, Sunderland.—Resident Clinical Clerk for six months. Board and lodging provided, with a nominal salary.

Births, Marriages, and Deaths.

BIRTHS.

ANDREW.—On the 17th inst., at Hethersett, Hendon, N.W., the wife of F. W. Andrew, M.R.C.S., of a son, prematurely.

ANDREWS.—On Jan 17th, at R. N. Hospital, Haslar, the wife of Surgeon O. W. Andrews, Royal Navy, of St. Briavel's, Gloucestershire, of a son.

ASHBY.—On Jan. 19th, at North View, Castleford, Yorks, the wife of John Ashby, M.R.C.S., of a son.

DREW.—On Jan. 13th, at Water Hall, Oxford, the wife of Arthur John Drew, F.R.C.S., of a son.

GRAY.—On Jan. 16th, at Wadham Lodge, Ealing, the wife of John Alfred Gray, M.B., of a son.

GRINLING.—On Jan. 13th, at Coundon, Bishop Auckland, the wife of Fred. N. Grinling, M.R.C.S., L.R.C.P., of a son.

KENNINGTON.—On Jan 18th, at Burden-Park, Tonbridge, the wife of Edgar Kennington, M.R.C.S., Wisbech, of a daughter.

LESLIE.—On Jan. 16th, at Bexley-heath, Kent, the wife of J. Leith Leslie, M.A., M.D., of a daughter.

ROBERTSON.—On the 15th inst., at St. Andrews, Ventnor, I.W., the wife of Robert Robertson, M.D., of a son.

SUMMERHAYES.—On Dec. 27th, at Dera Ghazi Khan, India, the wife of J. O. Summerhayes, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

FORBES—ROBINSON.—On Jan. 12th, at St. Luke's, Matfield, Kent, Norman Hay Forbes, F.R.C.S. Edin., of Montpelier Lodge, Tunbridge Wells, to Ellen, younger daughter of the late Jason Wilshin, Esq., of Hayes, Middlesex.

GRIFFITHS—HUGHES.—On Jan. 16th, at St. Mark's, Surbiton, Hugh St. D. Griffiths, Surgeon R.N., to Ethel Marian, eldest daughter of Arthur S. Hughes, Esq., of the Rowans, Surbiton.

LITTLE—DE POLLALION.—On the 29th ult., in Paris, Arthur Little, M.B. Lond., M.R.C.S. Eng., to Ara, Marquise de Pollalion (née Stone), of New York.

MACAULEY—JOHNSON.—On Jan. 14th, at the Chapel Royal, Kew, W. G. Ridgeway Macauley, L.R.C.P. Lond., M.R.C.S., L.S.A., of King's Lynn, to Helen Augusta, eldest daughter of the late C. W. Johnson, Esq., of Norwich.

DEATHS.

BALLARD.—On Jan. 19th, at Ravenscroft-park, High Barnet, Edward Ballard, M.D., F.R.C.P., F.R.S., aged 76.

BLAKER.—On Jan. 16th, at Calcutta, Edward Spencer Blaker, M.B., son of the late Edward Blaker of East-hill, Portslade, Sussex, aged 35.

BOULTON.—On Jan. 17th, at High Gate House, Beverley, William Whytehead Boulton, J.P., M.R.C.S., aged 63 years.

BUTT.—On Jan. 13th, at Brading, Isle of Wight, Dr. W. F. Butt, late of Park-street, Grosvenor-square, London, in his 63rd year.

COX.—On Jan. 12th, at Sutton, Surrey, W. A. Cox, M.R.C.S., aged 54.

LAYNG.—On Dec. 12th, 1896, at Swatow, China, Henry Douglas Crichton Layng, eldest son of Henry Layng, M.R.C.S., L.R.C.P., from the effects of a fall, aged 6 years 1 month.

MARSH.—On the 14th inst., at Bognor, Sussex, after a lingering illness, John Wilford Marsh, M.R.C.S., L.S.A., Superintendent of the Bracebridge Asylum, Lincoln, aged 54.

SAVAGE.—On Jan. 16th, at Avonmore-road, West Kensington, James Savage, L.R.C.P., M.R.C.S.

WHITE.—On Jan. 11th, at Springfield, Wigan, James White, M.R.C.S., J.P., aged 73 years.

WILSON.—On Jan. 15th, at his residence, Philbeach-gardens, South Kensington, Thomas Watkins Wilson, M.D., Surgeon-Major, Bengal Army, retired, in his 85th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (27th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (28th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (30th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (25th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. H. Cripps: Three Cases of Intestinal Anastomosis, two of them involving Double Resection.—Mr. S. Bishop: New Operation for Vesico-Vaginal Fistula.

TUESDAY (26th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. Lauder Brunton and Mr. A. A. Bowlby: A Case of Perforating Typhoid Ulcer treated by Operation and Suture and resulting in Recovery.—Dr. W. P. Herringham and Mr. A. A. Bowlby: Typhoid Fever Convalescence, Symptoms of Perforation, Laparotomy, no lesion found, Recovery.—Mr. F. Hawkins: Perforation of the Gall-bladder in Typhoid Fever.

WEDNESDAY (27th).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.)—5 P.M. Dr. Pye-Smith: Varicella Bullosa.—Dr. Stowers: The Antecedent of, and Sequel to, a Case of Paget's Disease of the Nipple.—Dr. Abraham: (1) Extensive Epithelioma of Abdominal Wall; (2) Lichen Scrofulosorum (?).—Mr. Bidwell: Epithelioma of Leg. Cases by the President and others.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8.30 P.M. Mr. A. H. Tubby: Sprains and their Treatment.—Mr. Openshaw: Treatment of Pelvic Cellulitis.—Dr. Levy: Drawings from a Case of Pneumothorax.

THURSDAY (28th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-st., Cavendish-sq., W.).—8 P.M. Card Specimens by Mr. Macnaughton-Jones, Mr. W. Dodd, and others. 8.30 P.M. Papers:—Dr. R. L. Knaggs: A Case of Spontaneous Recovery of a Retinal Detachment.—Dr. A. Robertson: Note on the Further History of a reported Case of Filaria Loa.—Mr. A. Lawson: Cystic Tumour of the Orbit.—Dr. C. E. Shaw: Perforating Wound of the Eyeball followed by Optic Neuritis.

FRIDAY (29th).—BRITISH LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL ASSOCIATION (Medical Society's Rooms, 11, Chandos-street.)—3 P.M. Cases by Mr. M. Collier, Mr. F. Marsh, Mr. Lennox Browne, Mr. W. Wingrave, and Dr. Sandford 4.45 P.M. Adjourned Discussion on Dr. H. Campbell's paper, Breathing in Singers.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (26th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Details of Aural Therapeutics (Manipulations, Minor Operations, &c.).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ormerod: Lecture.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—Dr. H. Campbell: On Cases of Hemeplagia.

WEDNESDAY (27th).—WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.)—5 P.M. Dr. S. Taylor: Urine Testing.

THURSDAY (28th).—HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Barlow: Demonstration.

FRIDAY (29th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Mr. Lennox Browne: Tuberculosis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Tooth: Anatomy of Cranial Nerves.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 21st, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 15	30·10	N.E.	36	35	53	42	35	...	Overcast
,, 16	29·95	N.E.	35	34	40	37	34	0·14	Overcast
,, 17	30·03	N.	35	34	44	37	33	...	Cloudy
,, 18	30·09	S.W.	28	Fzn.	39	38	27	...	Foggy
,, 19	30·07	N.	36	35	43	40	28	...	Overcast
,, 20	30·11	E.	36	35	37	37	35	...	Raining
,, 21	29·98	S.E.	33	Fzn.	37	36	31	...	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

Young Practitioner will not be well advised to attempt to take proceedings. There can be no doubt that from his statement of the case he has a legal claim, but the damage he has suffered is a small one, and to get the reputation of being a man given to take offence early in his career will not stand him in good stead.

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THE RUSH MEMORIAL.

A MOVEMENT is on foot in America to collect funds in order to erect a fitting monument to the memory of Benjamin Rush in Washington. The organisers of this appeal appear to a certain extent to be roused to their present efforts to do honour to Rush by the remarkable success of the homœopaths of America in collecting the sum of $75,000 towards erecting a monument to Hahnemann, and it is rightly contended that it will be to the shame of the regular practitioners of the States if they, outnumbering the entire body of homœopaths by more than 100,000, should allow their gifted and patriotic countryman to be commemorated by an insignificant bust or statue. Rush has peculiar claims on his countrymen; he has claims to their admiration and respect as a great physician, but his memory should be also venerated and loved as a distinguished patriot. As a physician Rush was one of the most noted men of his time; he was a voluminous writer in many branches of literature—of his purely professional writings Medical Enquiries and Observations are the best known—and he was perhaps the first authority on the "epidemic of fevers" of his day. But as a patriot he appeals to all classes and should live in the hearts of his countrymen for ever. He was a great friend of Franklin and was one of the signers of the Declaration of Independence. We believe that the Americans will not forget his services, but will heartily subscribe a sum sufficient to do ample honour to his memory.

THE ORGANISATION OF PROVIDENT DISPENSARIES BY THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—The medical practitioners in towns where friendly societies have recently started institutes rather than adopt a wage or class limit have been strongly advised to organise provident dispensaries in opposition; but there are weighty objections to such a plan, two of which I venture to point out. First, it would be practically impossible for the local practitioners to exclude their supporters in the recent club battles. Amongst these supporters would be found those who have had, and will have, most illnesses; the club members who are never ill and do not know the old surgeon, being the friends of the money-saving institute. The consequence of this would be that the institute would be eased of the bulk of its responsibility by the provident dispensary. Secondly, the provident dispensary would have to be "pushed" to make it successful, with the result of an increase of cheap "contract work" in the town, and a corresponding diminution of regular private practice.

What is obviously wanted is a medical club which will attract young men of the working class, their wants being, firstly, medical attendance at a cheap rate, say 1*d.* a week; secondly, a sick-pay of from 10*s.* to 12*s.* a week during illness for a weekly subscription of about 5*d.*; thirdly, security that the system offering these advantages will last their lifetime or requirements; and fourthly, that a member changing his residence to another town shall have a reasonably good chance of finding a branch of his club, through which he could continue to reap the same advantages.

These are the main attractions offered by Oddfellows and Foresters, and as these societies pay it seems possible that the medical practitioners of the whole country could, either by themselves or in connexion with an insurance society, organise such a club, with the great extra advantage of giving each man his choice of medical attendant. As a member of a local sub-committee appointed to consider the advisability of starting a provident dispensary. I am sure that advice or help in any form on this point would be very welcome from you or any of your readers. Personally, I am convinced that this is the only method of successfully meeting the undisguised antagonism of the old friendly societies to the profession.

I am, Sirs, yours faithfully,

Jan. 15th, 1897. BETA.

METRICAL MEDICINE.

THE first number of the *Guyoscope* has reached us. Our new contemporary does not put itself into competition with the *Guy's Hospital Gazette*, but desires to supplement that record of serious work and effort by chronicling the ephemeral humours of the hospital. The editor has happened on a clever young artist in "Little Billee," and some of the reading is good. We extract the following stanzas concerning the feeding of babies:—

CANTO VI.

"Mixed milk is risky, for on it result you can't rely,
One cow, a well-fed healthy cow, should yield the whole supply;
Dilute with barley water, take equal parts at first,
And add a little sugar, don't let the baby thirst;
And as it thrives, and older grows, in manner as it oughter,
Increase the milk and sugar, and reduce the barley water.

CANTO IX.

"In giving meat, or, better still, meat juice, or broth, or tea,
Don't over-feed, one meal a day is wiser far than three;
At eighteen months the child may have a little solid meat,
Wine, spirits, beer, cheese, pastry, pork, the baby should not eat;
The swallowing of unchewed food must cause you constant fear,
Full very many British babes have died of diarrhœa."

A MEDICAL ENCYCLOPÆDIST.

AMONG the noteworthy *savants* and men of letters who succumbed during 1896 there were few, probably, whose attainments were more varied than those of Dr. Ernest Faligan, who was a native of Anjou, but ended his days at Ostend. Bachelor of Laws, Doctor of Philosophy, and Doctor of Medicine—possessing, in fact, but one degree, or rather licence, less than the distinguished *savant* Alglave—the deceased encyclopædist was likewise an ardent student of history, the classics, and modern languages. His thesis for the degree of Doctor of Philosophy was divided into two parts: the first, written in French, bore the somewhat ambitious title, "La légende de Faust chez tous les peuples et dans tous les siècles"; while the second, which was in Latin, was simply superscribed "Marlowe." Both these dissertations were sustained by the author at the age of fifty-five years. Dr. Faligan was also responsible for sundry romances, of which one called "The Corpse of the White House" was published in *Le Soleil*, as well as for a vast number of press articles on history, philosophy, and finance. He had but one defect, says the writer of an obituary notice in a Parisian medical journal—he was mad! An example of the pernicious effects of over-study and a warning to all geniuses with yearnings after encyclopædic fame.

THE SWALLOWING OF LEAD PELLETS.

To the Editors of THE LANCET.

SIRS,—In conversation the other day with a patient who was formerly in business as a gunsmith he told me a fact which may explain some obscure cases of saturnine poisoning. He said that he had at least a score of regular customers who were in the habit of purchasing half pounds of shot. On asking why they wanted it the answer was that it was for the purpose of keeping the lights down when they came into the throat. Some of them bought the largest shot made in the towers, while others thought that distributing the weight by taking three or four pellets was more effectual. Apparently the time occupied in the consumption of this quantity varied from one to three months. Most of them were women, who all declared that swallowing these pellets did them a great deal of good.

I am, Sirs, yours faithfully,

Burton-on-Trent, Jan. 18th, 1897. PHILIP B. MASON.

THE DEGRADATION OF THE PROFESSION.

"Is there nothing that can be done to prevent such a great lowering of our grand profession?" writes a correspondent, who encloses the following handbill:—

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REHABILITATION BY SHOCK.

CASES are on record of the instantaneous restitution of lost power, chiefly functional, or of recovery from maladies under the influence of sudden and strongly determined emotion; but we doubt if the recent annals of medicine offer a more striking illustration of the phenomenon than that just reported to us, on professional authority, from Italian Switzerland. At Osogna, in the Canton Ticino, an Italian, Luigi Dellosta by name, aged forty-one years, employed in the famous granite quarries of Jemetti and Caretti, had the misfortune five years ago to fall ill of a grave disease from which he emerged with total loss of speech and hearing—a perfect example of the deaf-mute. The other day business took him to the Ticinese capital, Bellinzona, and on his return in the evening he elected to go on foot to Castione, there to catch the train to Osogna. When on the road just where the bridge crosses the Moesa he saw a horse bearing down on him at a wild gallop. He had barely time, with a desperate leap and a cry of terror, to save himself from being knocked down, and a minute afterwards began to breathe freely. The shock due to the approaching danger and his effort to evade it saved him in more senses than one. He got back his speech and hearing, not, we hope, to lose them again.

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THE PLAGUE AND NAPOLEON BONAPARTE'S PREVENTIVE MEASURES.

"IT is interesting," says the *Pioneer Mail*, "to have a decided opinion on the much-vexed question of the contagiousness of the bubonic plague from so acute an observer as the Great Napoleon. His view is given in a curious little book published in 1816 by a Dr. Warden, the surgeon of H.M.S. *Northumberland*, which had conveyed the illustrious exile to St. Helena. It will be remembered that plague of a virulent type broke out amongst the French troops engaged in besieging St. Jean d'Acre in 1799, and that General Bonaparte, as the future Emperor then was called, showed an indefatigable zeal in visiting and consoling the sick. He told Dr. Warden one day that he was convinced that the plague could be communicated only through the organs of respiration; and on the medico saying that he had always understood the disease to be a contagious one Napoleon said, 'No; I visited the hospitals constantly and touched the bodies of the sick in order to give confidence to the attendants, being convinced that the disease can be contracted only through the lungs. At the same time I always took the precaution of visiting the hospitals after a meal and a few glasses of wine and of placing myself on the side of the infected person from which the wind was blowing.'" Our contemporary concludes by endorsing to some extent the great soldier's view. This we cannot do, but we can admire the energy and courage of the man in visiting the sick and trying to find out what might do good in the future.

Primary Exam.—Our Students' Number contains a list of the best books to read upon anatomy and physiology. Quain and Foster are indispensable to most students, and they can be supplemented in different directions if necessary.

"FAME OR ILL-FAME?"

To the Editors of THE LANCET.

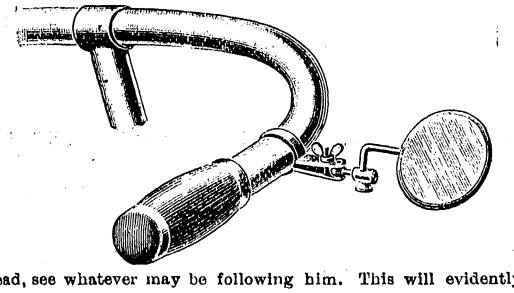
SIRS,—Yesterday morning I woke to find myself on the point of becoming famous. It happened thus: The post brought me a flattering invitation from a well-known firm of photographers to sit for my portrait (free, gratis, and for nothing) that it might be added to a list of members of the medical profession. As I am on what is commonly called the sunny side of forty, and my career in medicine so far has not been noted for any achievement unusually good or bad, I was at a loss to know why my face should appear among those already to be found in the Gallery of the Immortals. Being one of those who think that the orchestra of modern London life is too noisy in the brass I blushingly declined the proffered honour. Who will now deny that we live in glorious times?

I am, Sirs, your obedient servant,

Jan. 13th, 1897. WEST-END.

THE "ARGUS" RETROSCOPE.

THIS ingenious device, due to the inventive talent of Surgeon-Captain Cockerill, consists of a diminishing mirror framed and supported in such a way as to be readily attached to the handle of a bicycle, so that the rider by merely looking into the mirror can, without turning his



head, see whatever may be following him. This will evidently be a great convenience and advantage to bicyclists, and perhaps in even a more marked degree to boating men. The irksomeness of constantly looking ahead will be acknowledged by most scullers, and yet it is just for them that vigilance is necessary on account of the length and instability of an outrigger. The makers of the retroscope are Messrs. R. Field and Co., 142, Suffolk-street, Birmingham.

A Suffering Schoolmaster.—That children's parties may play their part in the dissemination of disease we do not doubt, but to put any embargo upon them of the sort our correspondent suggests would be wrong.

CAKES UNDER THE X RAYS.

THE *Pall Mall Gazette* says:—"A novel use of x rays has transpired in Sunderland. A lady last week, while baking some cakes, lost her ring in the paste, but did not discover the loss until the cakes were out of the oven. Afraid of choking some member of her family she struck on the happy expedient of taking the cakes to a chemist and photographer, who placed them under the x rays, with the result that the ring was immediately located."

DEATH OF A DUBLIN CLERGYMAN BY POISONING.

ON Nov. 21st, 1896, our Dublin correspondent gave an account of the death of a clergyman in that city from accidental poisoning with "Wallace's Specific No. 1," the verdict returned by the jury at the inquest being as follows: "We find that the said Rev. Wm. J. Warren Boyde, LL.B., died on the 11th inst. at 60, Amiens-street, and that the cause of his death was cardiac syncope, produced by a poisonous dose of some preparation of aconite which he had taken about two and a half hours previously by misadventure from a bottle given to him by a friend, Mr. McGuinness, and procured for money by the latter from the address on the said bottle—viz., 4, Albany-terrace, London, N.W.—and bearing the name of 'Wallace's Specific No. 1.' We most strongly condemn the selling of a poison so deadly without being properly labeled and without the purchaser being properly cautioned as to its nature. We also desire to express the hope that the authorities may deal as stringently as the law permits with the vendor of the said poison." We have now received a copy of the *Herald of Health*, published during the current month, and containing the answer of the vendor of the nostrum. The answer is to the effect that the verdict was wrong, that "Mr. Wallace's aconite is comparatively innoxious," and that the death of the unfortunate clergyman was in all probability due to the emetics which were administered. The same paper also contains the remarkable statements—(1) that "Mr. Wallace in years past had both the time and the money to enable him to qualify if he chose, but his contempt for the secret oath and the unscientific position of the medical colleges was such that though constantly pressed to do so he persistently refused," and (2) that the fact of his not being qualified makes him more careful.

AN AMERICAN METHOD OF DEALING WITH MEDICAL AID ASSOCIATIONS.

THE following is extracted from the *New York Medical Record* of Dec. 19th, 1896, and is headed

"NO MORE LODGE WORK.

"The following significant resolutions have been adopted and signed by the physicians of Santa Clara County, Cal.:

"'*Whereas*, Rendering professional services at a stipulated fee per capita per annum is derogatory to the dignity of the medical profession, we, the undersigned physicians and surgeons of Santa Clara County, Cal., enter into the following agreement:

"'First, we mutually, jointly, and individually pledge our word of honour not to enter into any contract or agreement, or renew any existing contract or agreement, either written, verbal, or implied, to render medical or surgical services to any lodge, society, association, or organisation.

"'Second, we will not render medical or surgical services to the members of the above-mentioned bodies for less compensation than we charge the general public for similar services.

"'Third, this agreement shall not be construed to affect existing contracts between physicians and surgeons and the above-mentioned bodies.

"'Fourth, these pledges shall take effect and be in force for a term of three years from and after May 22, 1896.

"'This agreement shall not apply to hospitals and purely public charitable institutions.'"

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Hastings News, Halifax Guardian, Goole Times, Tyrone Constitution, Scottish Highlander, Forres Gazette, Falkirk Herald, Bradford Observer, Manchester Guardian, Scotsman, Newcastle Chronicle, Clifton Chronicle, Brixton Free Press, Hinckley Times, Faringdon Advertiser, Leytonstone Independent, Essex County Standard, Horsham Times, Western Morning News, Worcester Herald, Kent Messenger, Birmingham Mail, Eastbourne Chronicle, Craven Herald, Eastern Morning News, Sussex Daily News, Leicester Post, East Anglian Daily Times, Manchester Courier, Essex Telegraph, Kingston News, Liverpool Courier, Times of India, Pioneer Mail, Bristol Times, Builder, Leeds Mercury, Burton Chronicle, Hampshire Telegraph, Architect, Yorkshire Post, Poole Herald, Sheffield Independent, Bristol Mercury, Wolverhampton Chronicle, Liverpool Daily Post, Oldham Standard, Tonbridge Telegraph, East Grinstead Observer, Brighouse Echo, Sanitary Record, Hemel Hempstead Gazette, Cork Examiner, Galignani Messenger, City Press, Weekly Free Press and Aberdeen Herald, Hertforshire Mercury, Mining Journal, Reading Mercury, Local Government Chronicle, South Australian Register, Adelaide Advertiser, Surrey Advertiser, Blackpool Herald, Gazette News (Blackpool), Beckenham and Penge Advertiser, Tenby and County News, &c., &c.*

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The Action and Uses of some New Synthetic Remedies.

DERMATOL.

SINCE the first communication on Dermatol, appearing in No. 24 of the *Berlin. Klin. Wochenschrift*, 1891, many reports on the new remedy have been published both at home and abroad. Further investigations in various directions seem to have established not only many of the early claims made for Dermatol, but have also indicated fresh fields of usefulness for it.

The physical characteristics of Dermatol are now well known. It is a fine yellow powder, unaltered by exposure to light and air, insoluble in ordinary re-agents, free from taste, and entirely without odour. The latter property is especially esteemed by patients on whom the employment of strong-smelling antiseptic powders like iodoform would entail serious inconvenience. The insolubility of Dermatol prevents its absorption, and it therefore never produces any toxic action whatever. Nearly all the writers in the medical journals remark specially upon the absolute freedom of the remedy from toxic properties, even when employed in large quantities under conditions most favourable for absorption.

A further characteristic of Dermatol is the absence of irritating properties. The unpleasant symptoms that sometimes follow the use of dressings such as iodoform, corrosive sublimate, &c., are never observed with Dermatol. Dr. Bluhm (*Therap. Monatshefte*) has tested its bactericidal power upon twelve different kinds of bacteria, comparing the results with those obtained from Iodoform, and finding the polyseptic action of Dermatol far superior to that of its repugnant predecessor.

It is more especially indicated as an absorbent, antiseptic powder for the treatment of fresh surgical wounds, slight accidental cuts, or old non-purulent wounds. When applied as a dusting powder it rapidly absorbs the secretions from wounds of these types, and forms a very hard, dense, and closely adherent crust, hence it proves extremely useful in all cases in which astringent and drying effects are desired. It has been reported valuable in crushed and lacerated non-septic wounds, burns, and scalds, and in large crural ulcers. Before the introduction of Dermatol it was impossible to close a sewn rectal or fistular wound with any degree of security. Now, this valuable chemical forms a protective crust in a short time, under which primary healing progresses.

In gynæcological practice it is attracting a great deal of attention, in view of the reports presented to the Bonn Gynæcological Congress. Remarkably satisfactory results were reported to have been obtained by its use in the treatment of laparotomy wounds, prevalent carcinomata, myomata, deep-seated tuberculous peritoneal abscess, and in infectious catarrhs of vagina, cervix, or endometrium. This report referred to, after calling attention to the superiority of Dermatol over iodoform, concludes: "Dermatol is absolutely unirritating, powerfully antiseptic, astringent, odourless, stable, and non-hygroscopic."

In dermatological practice it is highly recommended in the form of a 10 per cent. ointment with Lanoline for eczema in children, intertrigo mammæ, and intertrigo ani. It has been tried with excellent results as a dusting powder in dysidrosis of the hands and feet, in balanitis, in operations for phimosis, and, in alternation with antiseptic and stimulating remedies, in the treatment of bubo. For burns the 10 per cent. Lanoline ointment above mentioned is highly recommended.

Dermatol has been used with excellent results in otitis media suppurativa, otitis externa, and in a large number of cases of chronic middle-ear suppuration. The secretion was quickly reduced in quantity, and "most of the cases ceased suppuration after a few insufflations." In otitis externa it was employed (*Therap. Monatshefte*, 1892, No. 12) with excellent results. After two to five applications of the powder the aural cavity was dried, the swelling reduced, and the eczema healed. When used to check a purulent aural discharge, insufflations by means of a B., W. & Co. Powder Insufflator should be alternated with irrigations with an antiseptic solution, such as that made by dissolving a "Soloid" of Iodic-Hydrarg. in a pint of water.

In ophthalmic work it has been used in the after treatment of operations, and Dr. Werther reports successful results with Dermatol in phlyctanular inflammation of the conjunctiva in scrofulous children. It is an advantage that Dermatol can be employed for scrofulous patients simultaneously with potassium iodide, which is contra-indicated in conjunction with calomel.

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An Address

UPON DIAGNOSIS OF TUMOUR OF THE CEREBELLUM.

Communicated to the Società Medico-Chirurgica of Bologna.

BY PROFESSOR AUGUSTO MURRI.

GENTLEMEN,—As from divers personal reasons our colleagues Boari, Cantalamessa, and Melotti cannot fulfil their promise, and the benefit of their instruction must be postponed to a future meeting, I have thought it well to substitute a discussion on the diagnosis of a case which I presented to my students yesterday. The patient has been scarcely four or five days in the clinic, but some colleagues at Ferrara who advised him to come here have sent with him historical data so well arranged that we must all appreciate their worth, and I myself have known them for many years as extremely clever men.

The patient is a young man, aged seventeen years, living at Ferrara. His father, now a man about forty-six years of age, is addicted to drinking, and from the time of the birth of our patient has been unable to work. He suffered then from a serious affection of the respiratory organs the precise nature of which his wife is unable to describe. From this he has partially recovered, except for a bad cough which upon any unusual exertion becomes so intense that he is obliged to remain in bed. The wife has always been very healthy and has borne twelve children, eight of whom died in childhood from inflammation of the intestines. Of the four still living, the two elder are in good health. One younger than they, however, has suffered ever since his childhood from epileptic fits. The patient, with the exception of measles, has never been ill, and grew up strong and active. In June, 1893, while playing ball, he suddenly became so giddy that he fell to the ground. There was no convulsion of any kind, and he did not lose consciousness; on the contrary he distinctly remembers replying to a companion, who was teasing him under the impression that he had thrown himself down for fun: "Leave me alone; I cannot stand on my feet." Notwithstanding, a little later he succeeded in rising and, accompanied by his friends, went home, where he did not even go to bed as he felt perfectly well again. From that day he was troubled by a slight headache, the exact seat and precise duration of which he could not determine; the giddiness returned and nausea and vomiting occurred, which he believed to have sometimes been caused by some indiscretion with regard to diet, but which at other times were independent of any digestive disturbance and manifested themselves especially at night. Sometimes vomiting accompanied the giddiness or occurred when the headache was at its worst, which was always towards evening. At that time he asserted that he had a singing in both ears, but only intermittently. He also observed that his right leg, especially in running, grew tired sooner than the left, and the household in general noticed from the first signs of the illness that he reeled in his walk. The mother said that his walk seemed especially uncertain on the right, whereas until then he had always been direct and quick. All this did not impede the patient in his work, but early in 1894 fresh disturbances evinced themselves. His mother recounted that about this time she began to notice that the boy no longer spoke clearly; in fact, she scolded him for speaking too fast and slurring over his words. The tone of voice did not appear to have been changed. It was also remarked that the lad had grown deaf in the left ear, but the beginning of this deafness cannot be determined, having been noticed casually. The patient himself had not observed it even when the singing in his ears had become more marked on one side. He never suffered any great pain in the left ear, and had never remarked any purulent flow from it, but he began to notice a diminution of hearing on the right side also. It cannot be decided whether it was at this time that facial paralysis began to show itself. The attacks of giddiness became more frequent (from three to four times a day), the headache grew worse, and the nausea and vomiting were more incessant. The patient was attacked with giddiness suddenly, but he was able to give warning of it to his companions, as his sight grew dim first and things appeared to swim round him. He would fall forward without losing consciousness, and could hear a person speaking to him, although sometimes he was unable to answer. He remained three or more minutes with his head bent forward, after which he recovered, remembering perfectly all that had happened during the attack. The headache grew worse, especially towards evening, and by the end of the spring it had become so intense that sometimes when returning from his work he could not walk and was obliged to stop or to walk slowly holding on to the wall, tottering more than usual. The headache was frontal, but it did not last more than from half to three-quarters of an hour. One evening (June 3rd, 1894) he returned home much indisposed, and being very tired he went to bed. When his mother entered the room she found him pale as a corpse, with his muscles in a state of complete relaxation—so much so that for a moment she thought he was dead. He had lost consciousness, and his mother called him in vain. He showed no kind of convulsive movement, but had rather the aspect of a person in a swoon. After half an hour he came to himself, felt his head clear, and rising, he descended to the street. Here, as was his custom, he commenced to smoke, but was attacked by vertigo so strongly that he nearly fell, and he was carried back to bed. A medical man was then called. He examined him and advised his entering the hospital at Ferrara. This he did on June 4th, remaining there till the 25th. During his stay there the following symptoms were noticed. There were paresis of all the left side of the face, slight rotatory nystagmus of the eyeballs, and a halting in the speech, without, however, missing any words. The dynamometer marked—right hand 52, left hand 60; the reflexes of the patella were slightly exaggerated, the pupillary ones normal; clonus of the foot was absent; there were no disturbances either of the bladder or rectum, no pain in the legs, and no loss of memory or other alterations of the mental qualities. At night he dreamed much, so that one night, in flying from some fancied peril, he fell out of bed and broke three teeth. The patient, having left the hospital at his own desire, was in July visited by two other practitioners, who ascertained, beside the above-mentioned phenomena, that pressure produced a pain in correspondence with the left temple and that there were a relaxation of the left side of the face and on the right an enlargement of the pons zygomaticus and temporal prominence. The back of the eye was examined and found to be turgid, the papillæ in the left being red. Finally, in August, 1894, the patient presented himself in the ambulatory of the madhouse of Ferrara. Nothing was noticed then excepting lesions of the nervous system, which were as follows. Total paresis of the left side of the face and atrophy of the muscles of expression on the same side, so that the right naso-labial sulcus was less arched than the left. In the left temporal region was a point which was painful upon pressure. On the left all the branches of the muscles above and beneath the orbit and in the jaw were painful on pressure. There were, also, entire deafness of the left ear and alteration of speech. The patient found especial difficulty in pronouncing words with many labials, but he neither paraphrased nor dropped words. The tongue was well projected, not deviating from the median line, and without tremor. The roof of the palate and position of the uvula were normal and there was a slight lateral nystagmus, sometimes rotatory, in the eye. The upper limbs on the left had a little less force than those on the right. On causing the patient to extend his arm a slight tremor was noticeable on the left, which was augmented when he wished to perform any delicate movement with his hand, such as taking up a needle; the right arm was normal. There was a distinct tottering in his walk; he threw his right leg outwards, especially in the act of putting it forward. When upright he threw all his weight on the right leg, but turned the shoulder of that side a little lower and towards the right. (His mother says that she has noticed this position in her son from the first days of his illness, and it appears that he keeps to this position as the one best adapted to maintain his equilibrium.) The patellar reflexes were a little exaggerated, all the others being normal. An examination of the general sensibility had a negative result, for it was perfect in all ways, tactile, thermal, and algesic. Sight and distinction of colours were good, and both smell and taste were normal. As to the explanation of his

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uncertain walk the patient said he did not feel the ground but seemed to be walking on ice. On Nov. 20th, 1894, returning to the ward, an apparent improvement of the paresis of the face was noticed, while the muscles were in a state of complete repose. In mimic contractions, however, there was an evident deficiency of contractile force in the muscles on the left side, both in the upper and the lower part of the face. His speech was also clearer. The nystagmus was more noticeable, though the dilatation of the pupils was equal. Vertigo was more frequent, the headache and sickness had disappeared, and the intentional tremor of the left arm had become greater. The dynamometer was—right hand 60, left hand 45. His walk was still more tottering, but at the same time spasmodic. The patellar reflexes were much exaggerated and the superficial abdominal and cremasteric ones diminished. On Dec. 4th he presented the usual symptoms, but with graver characteristics. He had more difficulty in assuming an erect position, and his gait was increasingly unsteady and so spasmodic as to necessitate the use of a stick. The facial paresis seemed replaced by a state of contraction, for the angle of the lip was higher on the left side than on the right, as was also the arch of the left eyebrow, while the right muscles had greater power of contraction. The trembling of the extended arm was greater on the left, but was beginning also on the right. The patient complained of a slight headache of a new form which seemed to begin at the occiput and to extend to the forehead. It was especially frequent in the mornings, was not very intense, and disappeared after a short time. The pupils reacted slowly to light, the brain seemed all right, and memory and attention preserved. Perhaps there was a certain euphoria, because the patient was tranquil and often laughed, though he knew the gravity of the malady. Lately he has become much worse; he can no longer walk without a stick, and often leans on the arm of the person who accompanies him. The tremor has become noticeable in the upper limbs and has invaded the lower ones, especially on the left. If while lying in bed you make him lift his leg towards a certain point it shows a species of intentional tremor stronger on the right. In an upright position the body oscillates backwards and forwards, and laterally. When seated on the bed the patient presents the same oscillations and only finds his equilibrium in resting his body at the back and on the right. The tongue projects in the median line, but has longitudinal vermicular contractions chiefly at the edges. The patellar reflexes are still more exaggerated; there are a clonus of the rotula and notable plantar reflexes, but the cremasteric and abdominal ones are diminished. Negative results are obtained in examination of the sensibility, only the muscular sense is not quite exact, especially in the left arm. Sight is intact, but the patient says that the lines and letters run easily together. On a superficial examination the visual field seems restricted. On some days there is a distinct frequency and irregularity of cardiac pulsation. The breathing is usually abdominal, sometimes interrupted by sighs. Lately the patient has suffered much from hiccough, especially at night, and some days he has a noticeable diarrhœa. His temperature is normal. He affirms that he has never contracted venereal or syphilitic diseases, and has been always well-nourished. He has drunk a little to excess, consuming two litres of wine a day, but has not taken spirits. Smoking, which is habitual, brings on vertigo. The functions of the bladder have always been regular, but he has suffered from constipation of the bowels from the beginning of his malady. A certain loss of memory is noteworthy, he forgets many things described in history or which have been narrated by his mother.

OBJECTIVE EXAMINATION MADE IN THE CLINIC ON JAN. 28TH, 1895.

General characteristics.—The patient is of middle height, well formed, in very good state of nutriment. The skeleton is regular, and the muscles well-developed, only some small lymphatic glands, a little enlarged and indurated, were found in the right side of the neck.

Thorax and abdominal organs.—Nothing worthy of note results from the examination of the internal organs, except the first sound at the apex which is a little rough with a tendency to re-duplication. The pulse is between 90 and 95 a minute.

Nervous system.—He has power of movement. When the face is in a state of repose the arch of the left eyebrow is a little more raised and curved than the right; the fossa of the left eyelid is slightly narrower than the right; the left half of the upper lip is more arched than the right, the left naso-labial furrow being more marked than the right; the direction of the visual axis on the left has a slight convergence more marked than on the right. The left temporal region as well as the cheek is a little more depressed than the right one; while, on the contrary, the pons zygomaticus is more prominent, as is the temporal bone in the part above the pavilion of the ear. The muscles of the sterno-cleido-mastoideus are a little strained, especially on the right side. During the action of the muscles of expression the function of the frontalis is well preserved and almost uniform on both sides. The orbicular muscles of the eyelids also contract well on both sides, though perhaps there is a very slight predominance on the right. During a forcible closing of the eyelids the left angle of the lip is drawn up, and the left naso-labial furrow becomes deeper. This inequality of tension in the motor functions is more noticeable after some seconds if the voluntary contractions are continued, because the right muscles have a tendency to relax while those on the left side remain contracted. On being told to show his teeth, laugh, &c., there is seen at first a rather more vivacious action of the muscles on the right, but it soon gives place to the predominance of contraction on the left. The tongue is put out with a certain promptness and generally does not deviate, only sometimes a tendency to the right may be noticed, and it is liable to almost rhythmic movements which easily change its form and position. These involuntary movements are more often visible on the right half. The mucous membrane is smooth and thick, and on observing the tongue within the oral cavity it seems a little convex and more developed in the left half. In a state of repose the left arch of the palate is more arched and elevated than the right; during its function a slight augmentation of contraction may be noted in the left half of the back of the mouth. The function of the masticatory muscles is not equal on both sides, for during mastication the stiffening of the left masseter is less marked than on the right, and the same is the case with the temporal muscles. Also, in opening the mouth wide the upper jaw deviates slightly to the left, yet when fully open it goes back again to the median line. The lateral movements of the jaw are rather limited; however, it cannot be decided with any certainty which side predominates. The forced direction of the visual axes to the right is accomplished without difficulty, although there directly ensues a horizontal tremor of the eyeballs, which ceases when in repose. Voluntary direction of the pupils of the eyes to the left is less easy; besides, the pupils tend to turn slowly back, which produces a horizontal strabismus from right to left. The forced convergence of the visual axes is nearly normal. Sometimes when the sight is strongly directed to the left a slight secondary deviation of the right pupil may also be noted. In repose, and especially when the patient is seated, the head tends to fall a little backward on the right side. Wide and slow oscillations of the trunk take place when seated or standing, irregular oscillations, more often lateral, but at times backwards and forwards. Lateral motions, flexions, and extension of the head are easily accomplished, almost in normal fashion, but it can be perceived that the patient finds it easier to move the head to the right. Active and passive movements of the upper limbs, are made well enough as long as only energetic force and coarse movements are required. If a rather delicate and precise action has to be performed, a slight trembling or a state of incoördination may be observed, especially in the left arm. For example, when desired to touch the point of his nose with the tip of the first finger of the left hand before arriving at the nose he makes one or two oscillations, seemingly more the effect of a slight ataxia than an intentional tremor, for instead of touching the point indicated he touches more often some other spot near it. Being told to put a glass or spoon full of liquid to his mouth, he does so with his right hand without spilling a drop, while with the left he spills the liquid by reason of this same incoördinate motion. Desired to hold his hand and arm firm and extended, no tremor of any sort is visible, except now and then a slow irregular oscillation of the whole limb. Muscular force is well developed in the right arm and the flexion of the fingers as marked by the dynamometer 130 in the grand circle. In the left arm it is less developed, however, there is a certain energy of contraction, and the dynamometer marks 95 on the grand circle. The muscular sense of position of the arms is fairly preserved

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and the muscular sense of force slightly weakened. In regard to the nutrition of the muscular masses a slight difference may be noted between one side and the other, for on the right the muscles are well developed, while on the left they are less so and have besides less tone. In fact, the right forearm at 7 centimetres beneath the olecranon measures 26 centimetres in circumference, the left 24. The right arm at 15 centimetres above the olecranon measures 26½ centimetres, the left 25½ centimetres. In the lower limbs the difference is less perceptible. The active movements of the legs are performed in a very irregular and abnormal manner, for when desired to touch a given spot with his foot while lying in bed the movement is made with distinct want of command, especially over the right leg. On the other hand, being told to touch his left knee with the right heel, he makes a rapid and exaggerated sudden motion that brings his foot half way up the thigh; then, with oscillations more or less wide but irregular, he seeks to reach the knee, on which at first he cannot hold his heel. This ataxy is less intense on the left. Also when desired to lift his legs up from the bed and extend them there were oscillations in all directions which increased curiously when the limbs were tired, which soon occurred. The force of flexion is tolerably well preserved in the lower limbs and with a sensible difference between one side and the other, for on the right the dynamometer shows 58 and on the left only 48 (in the sense of traction on the two poles of the dynamometer). The movements are normal everywhere; muscular sense of position is well preserved in the lower limbs.

Reflexes.—Superficial and plantar reflexes are present on both sides and the cremasteric ones the same. The abdominal reflexes are very evident on the right side and scarcely perceptible on the left. Direct muscular reflexes are well manifested everywhere. As regards the tendon-reflexes the patellar is much exaggerated on both sides—a little more, however, on the left; that of the tendon of Achilles is also very evident; that of the triceps brachialis is exaggerated on both sides, but more so on the left. Clonus of the patella is very evident and prompt on both sides, and clonus of the foot the same, with slight prevalence in the left. The facial reflexes are sensitive to pricking and much more visible on the left. The reflex of eyeballs is normal. The pupils for the most part are slightly dilated, but are of equal size and react well to accommodation. The nasal reflexes are scarcely perceptible. Reflex of the pharynx is nearly gone. Reflexes of the eyelids and cornea are normal on the right, but nearly gone on the left. The function of deglutition is normal; one may almost say the same of those of the bladder and anal reflexes.

Sensibility.—The thermal, algesic, and tactile sensibilities are nearly normal everywhere except in the left half of the face, which is insensible to touch in the frontal region, the left half of the nose, cheek, eye, ear, and orifices of the nose and mouth, as well as the left half of the tongue, palate, and the back of the mouth. This anæsthesia is more profound close to the left of the median line of the face, gradually diminishing on the parotid region and left temple, and eventually disappearing in the pavilion of the ear, and lower jaw. Thermic sensibility on the left half of the face is but slightly less acute than on the right. The sense of pain, on the contrary, is greater on the left than on the right, for even the firm pressure of the finger on the orifices of emergence of the fifth nerve of the left side, or upon the bones of the face, especially upon the zygomatic arch, causes a sense of pain which is not felt in the same regions on the right side.

Special senses.—The sense of sight is sufficiently preserved on the right, while it is slightly diminished on the left. An examination of the visual and chromatic area reveals no alterations worthy of special notice. An examination of the fundus of the left eye shows the papilla to be of a somewhat redder colour than usual, the circumpapillary retina of a grey and cloudy aspect, and the veins slightly dilated, the arteries presenting an ordinary appearance. In the right eye the margins of the disc are less distinct than in the left eye, the red colour exists as upon the left, a grey halo in the peripapillary retina is observed, and the condition of veins and arteries is not noticeably altered. The olfactory organs are normal and acute on the right but a little weakened on the left, and the patient complains of his nose being stopped up, a fact caused by the left nasal orifice not being perfectly free. The hearing is somewhat weak on the right, on which side he complains of an occasional singing in the ear. On the left hearing seems completely gone when tested by the ticking of a watch, for the sound remains unperceived either through the auricle or through the osseous labyrinth. Conversation can be heard on the right at a distance of more than 8 metres; on the left, on the contrary, only at a distance of about 30 centimetres. Singing on the right can be heard at 5 metres distance, on the left not at all. An otoscopic examination shows nothing abnormal on either side. In the roof of the pharynx, which appears almost normal, the left half of the Luschka tonsil shows depressions rather less deep with colour somewhat more vivid than on the right and seems to bulge a little, but the difference is so slight that Dr. Carlo Sacchi who made this part of the examination considers it of little importance in itself. On the left side of the tongue no differences of taste are observed except during the act of deglutition; on the right side also the sense of taste in general is somewhat obtuse.

Standing position.—He can stand on his feet without support and with eyes closed, but there is slight oscillation of the body towards the side, or more often backwards and forwards, and these oscillations increase somewhat when the eyes are closed. On the whole he tends to lean the weight of the body more upon the right leg. He cannot stand on one leg alone; not so much because strength lacks as because the oscillations increase so perceptibly that unless he were supported he would fall. His gait is composed of a mixture of three types: ataxic, spastic, and slightly zigzag. The ataxic character is more noticeable in the right leg. He cannot run, but still less can he walk slowly. The mental faculties are normal; only memory is slightly impaired. His speech is rather unintelligible, because, besides having a nasal tone, clear enunciation of words is very difficult to him and the syllables tend to run together, producing a language very hard to understand; yet some words are pronounced clearly and distinctly. Electrical examination only shows a slight augmentation of galvanic excitability of the muscles of the left side of the face in comparison with the right, but the difference is very slight.

Résumé from the case-book.—The patient was kept under observation in the clinic for five days, during which the following facts were noted. He had scarcely any headache; there was fugitive double vision; he had several attacks of vertigo, one of them a serious one during the discussion in the clinical amphitheatre. After having listened attentively for nearly an hour to the exposition and diagnosis of his disease the patient was attacked with confusion of ideas and sense of extreme giddiness; he became red in the face and had a hard cough, which increased the facial contortions on the left and slackened the pulse, which declined from 90 to 60, still keeping its rhythm. After two or three minutes it all passed away without his consciousness being at all obscured and without any gastric or aural disturbances. The morning of the next day while eating the patient had another nervous attack a little differing from his usual vertigo. His neighbour in the next bed saw him all at once become rigid, with his gaze fixed forwards with a tendency to the left; then the man jumped out of bed to hold him up, seeing he was unconscious and being afraid he would fall. He called and shook him, but he gave no signs of understanding. He did not become pale, but remained rigid for a minute with his muscles relaxed. Then the nurse noted a fugitive tonic spasm in both arms and he came to himself, saying he had a headache and remembered nothing that had happened. He recommenced his meal which had been interrupted and complained of nothing further. The visceral functions are intact; urine on examination proves normal. His temperature is always normal; his pulse beats from 90 to 94, is small, rhythmic, and equal; the respirations vary from 20 to 22 and are regular. The mental condition is good. The patient troubles himself but little about his serious condition. He asks for surgical treatment, from which he hopes either cure or death, which he does not fear.

What is the cause of all these disturbances? The medical man who first examined the patient made the diagnosis of sclerosis disseminated through the cerebro-spinal region; and, in fact, the strabismus, the altered pronunciation, disordered movements, trembling of tongue, age of patient, absence of disorder of the senses, and the multiplicity of symptoms would seem to indicate some wide and varied lesion. But on looking well into the case this likeness vanishes. The motorial disorder is not an intentional tremor, but rather an almost chorea-like movement. If the patient is told to put his finger to his nose or his left heel to his right knee his

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arm or his leg do not tremble, but simply mistake the scope; he succeeds only after repeatedly bringing the finger or foot to the place. If the patient performs a motion with his hands or extends his arms before him the disordered movements are limited to the fingers; there is scarcely any of that trembling in the mass of the limb such as is to be seen in sclerosis. For this reason we have in vain attempted to take a tracing of the movement. The same is the case with the tongue; there is none of that subtle and uniform motion proper to sclerosis, but instead an instability of the tongue which without any rule turns here and there as in chorea. The broken speech is also different; here the syllables hastily succeed one another, are badly pronounced, and some entirely slurred, but there is none of that infantile articulation, that measured speech, which patients present in sclerosis. But even though the principal facts are thus wanting we have plenty of others. The insensibility to touch and hyper-sensibility to pain in the area supplied by the fifth nerves is decidedly unusual, the symptoms of Menière's disease — i.e., violent vertigo, subjective noises, and deafness—which here constituted the first disturbances and after twenty months still continue intensely, is also distinctly unusual. Nor are the paroxysms of accelerated, or of difficult action of the, heart more common. I fully understand that with any imaginary variation as regards locality, number, and extension (disseminated sclerosis not being under any definite laws), one might construct a clinical expression adaptable to our case. But this is not my method. Symptomatology cannot be drawn from anatomy; it is verified by observation. Now analysing the phenomena presented by our patient we find they do not correspond to those which observation has shown to belong to disseminated sclerosis, and therefore we must et aside this diagnosis.

The gait of our patient causes us at once to think of the cerebellum, but even here, looking well into the case, the phenomenon loses its value. The real tottering scarcely exists at all at this stage, though it may have been there at the beginning. Now it is evident that if the patient does not walk absolutely straightly it is chiefly because there are excessive muscular contractions in the limbs and trunk; his gait is a mixture of spasm and ataxia. Now he cannot lift his foot from the ground, then he throws it out in a nervous manner, not with the limb extended, though the foot is turned downwards and the knees bent. And this phenomenon is not confined to the lower limbs; when he is seated his head is at once turned backward and the body is rapidly drawn to one side, although the position must be a very strained one. There are, then, very different traits to those one expects in cerebral disturbance. Add to this that there is no functional disorder in the eye, no strained eyeballs, headache is rare and of short duration, nor is it intense unless it comes on when the patient is walking; the left arm is in a state of atrophy, all symptoms not belonging to tumour of the cerebellum, the only lesion of which we can think. In fact, the only true indication of disease of the suspected organ is the disorder of the movements, but even this is not typical. Indeed, this same phenomenon is noticed also when the tumour, instead of the cerebellar lobe, is located in the quadrigemina, the pons cerebelli, the peduncles of the cerebellum, or the bulb. The tendency towards diagnosis of tumour of the cerebellum, which medical men have whenever they see the ataxic walk, is not founded on good reasons empirically verified, but from the fact that the cerebellum being more often the seat of tumour than are the other parts I have mentioned, the opinion expressed most frequently proves to be the true one, though based on a weak argument.

If, judging from the present derangements, we opine that our patient's injury is in a part of the brain we should at once think of the "pons" or the bulb. In fact, lesions are indicated in the fifth, sixth, seventh, and eighth, probably the ninth, certainly the twelfth on the left, the eighth on the right, the nucleus of the sixth on the left, both the pyramidal tracts, and finally the centre for vomiting, the heart, the salivary secretions, and the bladder. All these innumerable disorders depend certainly on stimulation of the "pons," the bulb, and the floor of the fourth ventricle. Is the tumour, then, situated in this region? I say, without further preamble, tumour, because no one could dream of hæmorrhage or softening of the brain during the course of the malady, and the character of the symptoms is such that a suspicion of nuclear degeneration could not enter one's mind. Nevertheless, I do not believe even in a tumour of these parts, because a tumour which has existed twenty months in that zone must have destroyed some tissue, while, on the contrary, in this case nothing is destroyed. Very many of the functions which depend on that region are disordered, but none abolished. The fifth is insensible to touch, but is, on the other, sensible to pain; the sixth acts less, but the muscle of the rectus externus is innervated, the nucleus which innervates the left rectus externus and right rectus internus acts less effectually than usual, but nevertheless it does act; the seventh is almost normal and its nucleus acts tolerably well, because the nerves to the face muscles are well nourished and scarcely deteriorated and their reflex action well preserved. In short, the same may be said of all the rest. Now I cannot believe in a tumour invading a tissue where there are no latent zones; it develops and increases, as the constant augmentation of symptoms testifies, without abolishing any of the functions, which in a zone so restricted have their centre and paths of transmission. We cannot affirm that a fibre or a cell is wanting, therefore we cannot admit that for twenty months a tumour has exercised its destroying power in that zone.

What must we then conclude? That the pons and bulb are entire, but act badly. Why? Here lies the gist of the question. The morbid phenomena only tell us that innervation of the pons and bulb is impaired; on the other hand, it is impossible to believe that any devastating process whatever exists in these same parts. Hence nothing remain to us but this, that the pons and the bulb, though existing in all their parts, are in a changed physiological condition because they are compressed. And here is a new argument for the tumour, for a tumour can only compress from outside the medulla oblongata (or pons Varolii).

But where is the tumour? Notwithstanding the integrity of the fourth and of the third nerves the compression cannot come from the quadrigeminus; it must come from the base of the skull or the cerebellum. It is not from the base of the skull, because it is more inconceivable than ever how the seventh, being compressed and flattened for so long instead of being quite paralysed, has re-acquired a little of its lost power. Besides this it would be difficult to explain the absolute integrity of the spinal cord; while the hypoglossal, perhaps the glosso-pharyngeal, and probably the vagus nerves are impaired. Finally, the lesion of the fifth, if it were peripheral, before causing numbness would have caused neuralgia. Therefore, the improbabilities are such and so many that we may conscientiously exclude the hypothesis of a tumour arising from the base to compress the pons and medulla oblongata. At first the left zygomatic arch, being a little prominent and painful to pressure, had excited the suspicion that an osteo-sarcoma of the cranium had invaded the cavity; but on one side the rhinoscopic examination showed that no alteration referable to osseous neoplasm of twenty months' duration existed, and on the other side the pain upon pressure was found to depend on sensitiveness of the trigeminus. Knowing how frequently want of symmetry occurs in the two halves of the face we cannot assign too great weight to the greater protuberance of the left, the more so as the apparent enlargement of the zygomatic arch is brought into relief by the slight diminution of volume of the softer parts of the left side of the face.

As a consequence of these considerations we are confined to a diagnosis of a tumour situated in the left half of the cerebellum, comprising the left side of the pons and bulb. To be sure Oppenheim has recently written simplifying the diagnosis of tumours of the cerebellum, yet I maintain that although the supposition of one may be easy the demonstration is difficult. Here, however, the demonstration appears to me impossible, because all the other hypotheses clash against some symptom irreconcilable with them; the hypothesis of a tumour of the cerebellum is the only one which will agree with all the facts.

Yet in considering the foundation of this clinical interpretation of the phenomena presented by our patient one perceives that more assistance is obtainable from physiological and pathological anatomy than from experiment. Of the phenomena so acutely investigated by Luciani the asthenia and atony, as the dynamometric data show, are wanting; the youth develops a force which seems normal. It is true it is less in the left hand than the right, but, if you remember, the left arm is wasted. Besides the atony we have a remarkable excess of tone in all the limbs, and also in the muscles supplied by the seventh nerve on the left. But these facts are not irreconcilable with Luciani's observations,

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since an experimental lesion which lasts twenty months is one thing and a neoplasm is another. The latter has, or may have, a permanent irritative power, and yet not reach that grade of defective action or absence of action verified in cerebellar lesions when the irritative phase has passed. Instead, some phenomena observed in the sitting and standing of our patient tally precisely with the description of asthenia and dysmetria of the animals operated on by Luciani.

Those who would pretend that clinical phenomena coincide perfectly with those observed by experimentalists betray that they do not entirely understand the problem; here we have not only the functional lesion of the cerebellum produced by the tumour, we also have (indeed, as a principal fact, as I have demonstrated) the lesions of the functions of the pons and medulla produced by compression. The excess of tone in all the muscular system is, at least in part, the effect of compression of the pyramidal tract in the pons—the equivalent of muscular hypertonicity which is usually seen below the compressed part of the spinal marrow. It might only seem strange that while the predominant compression is on the left of the pons, as is shown by the disturbance in several nerves of the cranium on that side, the lesion of the pyramidal tract is not crossed, so that it is on the left and not the right that we have a diminution of muscular force, of atrophy of the muscles of the arm, a greater augmentation of the reflexes from the tendons, and a more marked incoördination of voluntary movement. But it would be vain to expect to see the exact condition of an experiment precisely reproduced by a morbid process. On the other hand, Luciani, Russell, and Ferrier agree in attributing to each hemisphere of the cerebellum a direct or at least a predominant action on the corresponding half rather than on the opposite half of the spinal marrow; thus the predominance of certain phenomena on the left in our patient accord more with the existence of a cerebellar tumour on the left than on the right. But there is another noteworthy fact. By this time the existence of a muscular atrophy of cerebral origin is beyond a doubt; we may then admit that a muscular atrophy of cerebral origin in the left arm, and with this a diminution of force is of course associated. In face of this interpretation the objection that the phenomenon ought to be crossed has no more value, because experience has already taught us that the lesions on the right hemisphere, especially at a youthful age, are without comparison more likely to cause muscular atrophy in that part than the left hemisphere—a new instance of the mysterious difference between the two hemispheres. I believe that the atrophy of the left arm really depends on the degeneration of the right pyramidal tract and not the lesion of the left hemisphere of the cerebellum, for I know of no such fact in lesions limited to the substance of the cerebellum. I know that Marchi found fatty degeneration in the muscles of animals deprived of the cerebellum, but here we have a simple atrophy with normal electric reaction and not a degeneration. It might surprise us to see that while the motor fibres which are farther away from the pressure of the tumour manifest disturbance, the sensory ones which are nearer show none. But the surprise might be mostly theoretical, not clinical, for experience has shown in similar cases the same fact which we have observed. Indeed, a recent writer (Brissaud, if I mistake not) ascribes the fact to the motor fibres being driven against a hard body such as the underlying bone. To me this interpretation lacks probability, for the greater compression ought always to be nearest the part which presses. But other interpretations of the fact are not wanting; firstly, the structure above and below the "pons" is not identical; besides, in the mixed nerves the motor and sensory fibres do not feel equally the injury of compression. Ferra has been able to even destroy the cuneiform nucleus corresponding to the posterior cords without sensibility being at all impaired.

All, therefore, agree with the diagnosis which I have formulated, and therefore the observation I made at the beginning as to the slightness of the headache and of the inflamed eyes loses its value, as does that about the walk not being entirely characteristic of lesion of the cerebellum. The fact is that here, in addition to disorder of the cerebellum, we have an accumulation of disturbances caused by the pons and compressed medulla. I do not deny that in tumours of the cerebellum headache and inflammation of the optic nerves are particularly intense; perhaps, however, the intensity of these two symptoms is produced by the great congestion of the meninges and the brain, which depends on the impediment to the circulation of the blood in the vena magna of Galen and in the sinuses below the tentorium, but the headache has also a potent source in the irritation of the meninges by the neoplasm. We might, then, opine that the tumour was situated in the lower part of the left lobe of the cerebellum, a little away from the "dura" and the vena magna of Galen. But this would be to trust to a reasonable conjecture and not to follow the infallible method of clinical experience.

Well, experience teaches that optic neuritis may be wholly wanting—and the same is true of cephalalgia—that, in fact, tumour of the cerebellum can show no symptoms at all. Every year we get new examples of this. Not long since Ackermann noted a case in which nothing existed but gastric disturbances, especially an irrepressible vomiting; the patient was, as usual, treated by lavage. The necropsy revealed a sarcoma in a lobe of the cerebellum. For the rest, none of you are ignorant of the fact that perfectly latent tumours of the cerebellum may exist. It would, therefore, be irrational to assign too great a value to the unusual slightness of some phenomena, and not to accept a diagnosis which all the other considerations agree in demonstrating. To me, indeed, such a judgement seems so much the more confirmed that solely on this point I deemed the case worthy of your attention, and I have laid it before you hoping you may express your own observations and opinions upon it.

I will end by saying here what I have so often repeated, we do not trust of finding truths accidentally, to diagnostic labour we must apply a scientific argument. It would be useless to bring forward a hypothesis of tumour on the cerebellum, but, on the other hand, it is most valuable if one can prove that a tumour which exists on the cerebellum and nowhere else can alone account for the phenomena which we have before us. As to the nature of the neoplasm, we are only able to make a supposition; the age of the patient, the many brothers who have died, the enlarged cervical glands, and the position of the tumour all speak of tuberculosis.

That which we may safely assert is that no therapeutical treatment except surgery can possibly prevent death. Indeed, we may say more. Our patient has suffered now and again from swooning fits, but the one observed in the clinic was more serious and longer than usual, and for the first time it was associated with some convulsive movements of the upper limbs. It is enough to consider the vital importance of the centre situated in the floor of the fourth ventricle to understand how, when the above lying cerebellar hemisphere is swollen, that would be acutely compressed and rendered more than ever anæmic. It is, then, not difficult to interpret the mechanism of these losses of consciousness. But what is more important for practice is to know that they represent almost as many attempts at sudden death. We know that this is frequent in cerebellar neoplasms. Some time or other the compression and anæmia of the centre of the vagus will be increased and the functions of breathing and circulation of the blood will be immediately suspended; that day will no longer be an "attempt" at death, but sudden death itself. To judge by the increasing intensity of these swoons we may believe that this result cannot be far off.

[On the morning of Feb. 2nd the lad wished to return to Ferrara. After about ten days he re-entered the "Ricovero di Mendicità" at Bologna. Here Dr. Guido Bendani performed the operation of craniotomy, and with great skill extracted from the left half of the cerebellum a part of a tumour which the microscope showed to be fibro-sarcomatous. Its total removal was impossible. One month later the boy was still alive and better rather than worse.]

HOSPITAL SATURDAY FUND.—At a special meeting of the board of delegates of the Hospital Saturday Fund, held at the offices, 59, Farringdon-road, on Saturday evening, Mr. R. B. D. Acland presiding, it was unanimously resolved that a sum of £18,018 17*s.* be divided among the 177 participating institutions—viz., 33 general hospitals, £6661 5*s.*; 64 special hospitals, £6218 14*s.*; 37 dispensaries, £962 19*s.*; 20 convalescent homes, £1662 15*s.*; and 23 miscellaneous (including distribution and surgical appliance committees, also institutions for the gratuitous nursing of the sick poor in their own homes), £2493 4*s.* The total receipts for the past year were £21,348, as against £20,039 during the previous twelve months. The awards were more than those of 1895 by £368.

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ON SOME CASES OF

UNUSUAL AND PERSISTENT "SLOWNESS" OF PULSE, PRESUMABLY DEPENDENT UPON INTERFERENCE WITH THE INTRINSIC NERVES AND GANGLIA OF THE HEART.

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IN a comparatively recent paper on the Causes of Bradycardia,[1] Dr. Alexander Morison[2] drew attention to some of the conditions of cardiac innervation which may exist in cases of abnormal retardation of the pulse and heart's action. He regards such retardation as being syncopal in its tendency and considers that in these cases certain factors "capable of accelerating the heart's action are depressed or in abeyance." He concludes "that unknown, but not necessarily unknowable, changes in the nervous endowment of the heart are primarily causal of both transient and permanent bradycardia." He quotes Professor Dehio of Dorpat, who, in a paper on Bradycardia and the Action of Atropine upon the Sound and Diseased Human Heart, considers that the slowness of pulse "is due to nutritional changes in the automatic nerve centres in the heart, dependent in all probability upon local sclerosis of the branches of the coronary arteries leading to such centres." It is as a contribution based on such a line of thought that I venture, in this communication, to re-state and as it were rehabilitate and at greater length utilise certain cases and observations which I brought before the Pathological Society many years ago, and which I then adduced in illustration of the probable relation between peculiarities and modifications of the pulse (such as altered rhythm and rate) and interference with the automatic or intrinsic nerve elements, those distributors of impulses situated in the substance of the heart's walls. In the year 1856 I exhibited to the above-named society a specimen showing the presence of firm, yellowish-white masses of fibrinous deposit of various sizes occupying the septum of the heart's ventricles and confined to the base of the organ. On the right side of the upper part of the ventricle these masses were so prominent as to bulge into the cavity of the right ventricle, but the valves and orifices of the heart were natural. Slight atheroma of the root of the aorta existed. The patient was a man, aged thirty years, who had had rheumatic fever seven years before admission, and shortly before coming into hospital had been the subject of epileptic attacks. Before his death "fainting fits" and giddiness came on. When admitted, the heart's action was very feeble, and his pulse, though regular, was only 48 per minute, and on no occasion was it counted higher than 50. In the same year I exhibited to the society a *second* specimen showing occupation by fibrinous masses of the walls of both ventricles of the heart, and chiefly in their septum, being almost entirely restricted to the upper parts or base of the organ. Part of the fibrinous deposit was in distinct and concrete masses, but it was for the most part diffused or, as it were, infiltrated throughout the muscular structure, rendering it hard and tough. There was a tendency to the formation of an aneurysmal pouch in the ventricular septum, and hypertrophy of the left ventricle, and the aortic valve-flaps and root of the aorta were highly atheromatous. This specimen was found in the body of a woman, aged thirty-five years, who for a long time before admission into the hospital had had heart symptoms; and on admission the pulse faltered at every third beat, being then so feeble as to be almost imperceptible. In remarks on this case I quoted a *third* one—viz., that of a man under the care of Dr. Bence-Jones in St. George's Hospital,[3] and a drunkard, whose pulse on admission was only 36 in the minute. Subsequently the pulse fell to 28 per minute and was naturally the subject of much attention. Before death the pulse fell to 20 per minute. The patient was admitted for "fainting attacks" and giddiness. After death the left ventricle was found to be much dilated and its walls atrophied, and a deposit of firm, yellowish-white, fibrinous material was found on the left side of the ventricular septum, situated beneath the endocardium, which at this part was thickened and opaque.[4] In 1864 I described to the same society a *fourth* case in which the pulse was remarkably slow, and in which, after death, the endocardium covering the left side of the ventricular septum was found to be thickened and opaque; and beneath it was a thick uniform mass of fibroid deposit of a pale yellow colour and of leathery consistency. The patient, a man aged thirty-three years, was admitted into hospital with pneumonia. The pulse was, on an average, only 38 per minute, but the heart's action was regular. Later on the pulse was found to be only 28 per minute. Epileptic attacks came on before death.[5]

Searching for some possible and legitimate explanation of the concomitance of the unwonted and continuous slowness of the pulse with the structural changes in the walls of the heart I was led to the conjecture that in these cases the nerve elements which augment or accelerate the ventricular contraction, and which are, as we know, under the dominion and control of the restraining vagus nerve, were most likely the subject of a degenerative lesion, being embarrassed and interfered with by the presence of the fibrinous deposit, which was found, for the most part, at the bases of the ventricles—a locality where dissection shows that these intracardial nerve-elements are mostly congregated. Consequently, when drawing the attention of the Pathological Society to these cases, I was led to ask how far we might be justified in comparing the condition of the bases of the heart's ventricles containing the fibrinous deposits with those of the hearts of frogs and other animals of a low grade in the zoological scale which had been experimented on, and in which it had been unmistakeably shown that "a very clear and sensible connexion existed between the integrity of the great transverse fissure of the heart and the movements of the ventricles. Thus the amount of interference with the action of the heart may depend as well upon the locality which may be affected by the fibrinous deposit as upon the degree to which the deposit occupies the heart." Since the date when I made the above observations our acquaintance with the neurology of the heart, and consequently of the government and regulation of the heart's beat (that is, of the inhibitory and augmentary mechanism situated in the heart's walls[6]), especially in the case of mammals, has been much extended by physiologists. In mammals a number of small ganglia may be observed (according to recent anatomists) over a large portion of the heart's ventricles, far down towards the apex, and groups of ganglia are found in the walls of the auricles, and it is in the transverse auriculo-ventricular fissure or groove and in the basal portion of the ventricles that they are specially met with.[7] Allowing the probability of a positive and direct relation between the presence of the morbid deposits, described in my cases, in the substance of the heart's walls on the one hand, and, on the other hand, the "slowing" of the pulse, the question naturally arises as to the manner in which the effect is brought about. We know that implication of the intra-thoracic nervous plexuses by the encroachment and pressure of neighbouring intra-thoracic tumours, aneurysms, or dilated bloodvessels,[8] causing irritative lesion, as also interference with the spinal centres from which the component parts of those plexuses are supplied,[9] will, under certain conditions, materially disturb

[1] A term coined by Grob, a German physician, for "slowness" of the pulse. May we not consider any number of the pulse below 50 as being technically a "slow pulse"?

[2] THE LANCET, Nov. 23rd, 1895, p. 1281.

[3] See Hospital Post-mortem Book, November, 1855.

[4] The microscopical structure of the deposit was described by the late Mr. Gray (see Transactions of the Pathological Society, vol. vii., p. 168). It was found to be disposed "as a uniform layer beneath the endocardium and corresponded with those parts of that membrane which presented traces of chronic inflammation." It consisted histologically of "a fibrinous deposit infiltrated in the muscular tissue." It was chiefly granular, with nuclei and nucleated cells embedded in it, whilst "the muscular fibres were found much altered and presented a finely granular appearance; in other parts they were fibrillated and resembled some forms of fibrous tissue."

[5] See Hospital Post-mortem Book, 1855, No. 288.

[6] That is, to use the accepted phraseology, the catabolic and anabolic nerves. Dr. Marshall Hall invented the term *dia*-stolic. I trust that no one will venture to coin the word *dia*-bolic.

[7] It seems that the nerves and ganglia are superficially placed, for the most part, and are situated immediately beneath the pericardium.

[8] See THE LANCET, Feb. 15th, 1896, p 423, for a case in which death was attributed to pressure upon the vagus.

[9] Dr. Balfour (loc. cit. infra., p. 100) enumerates the histories of several cases gathered from medical literature, old and new, in which mechanical injury or disease of the cervical spinal cord has produced remarkable slowness of the pulse. He quotes, inter alia, the well-known

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the action of the heart. May we not, considering these facts, suppose that by the presence of the morbid deposit, acting as a foreign body, the action of the intra-cardial ganglia is greatly impeded, so intimately connected as they are with the above-named intra-thoracic plexuses, and supremely controlling the energy and action of the contractile cardiac muscle? Or is it that by the pressure of the adventitious deposit the nutritional integrity of the muscular fibre is deteriorated, and thus the contractile power which should be responsive to nerve influence, abated, either (*a*) by the coronary vascular system being affected or (*b*) by the trophic nerves and their extremities being impaired[10] and, as it were, supplanted?

With respect to one or two points of "clinical history" in the above-related cases it may be noticed that of the four cases two were males and two females. Of the many instances of slow pulse studied by Dr. Morison (as also by Grob and others which he quoted) the large majority were males, as is the case in patients suffering from angina pectoris.[11] Again, as to "age," all my cases were those of individuals between thirty and forty years old. In two of them epileptic symptoms are said to have occurred. In two cases hypertrophy, and in one dilatation, of the heart was found.

The mention of the above clinical facts recalls to mind the observations of Dr. Balfour in his very useful and attractive volume, "The Senile Heart."[12] In one chapter Dr. Balfour discourses upon morbid slowness of the heart's action in old people under the name of bradycardia, stating that men are more subject to it than women, and concludes that in such cases no one special and inseparable lesion of the heart is to be found, saving dilatation, which, he observes, often associated with hypertrophy, *always* exists. He states that the myocardium in such cases is *not* specially feeble or fatty. Again, Dr. Balfour describes with much exactness the frequent association of epileptiform attacks with senile bradycardia, and refers at great length to those cases in which pseudo-apoplectic and epileptic symptoms existed associated with slowness of pulse, described by Stokes and Adams long ago, in which it appeared to them that the cerebral symptoms were contingent upon the condition of the heart, the result, in fact, of cerebral anæmia.

Of my four cases (as above noted) epilepsy occurred in two, but their ages placed them in a different category to those described as senile. Respecting the coincidence of epileptic or epileptiform convulsions in cases of preternatural retardation of the pulse, I would here refer to two remarkable instances of the same, comparatively recently recorded, to which my attention has only just been called. I allude in the first place to the case related by Dr. St. George Mivart in THE LANCET of Jan. 3rd, 1885, and that by Dr. Gibbings in THE LANCET of Feb. 14th following. Mr. Mivart's case, a man aged sixty-one years, was one of epileptiform attacks of a syncopal character, the pulse being counted as low as 26, 24, and 20 per minute, the heart's beat synchronising with the radial pulse.[13] No after-death examination took place, but it was surmised that there were aortic stenosis and fatty heart. Dr. Gibbings' case, that of a man aged sixty-six years, was also one of epileptiform and syncopal convulsions. The pulse varied from 44 to as low as 12 per minute, being synchronous with the heart's beat, and the temperature at one time was only 96° F. and never reached 98°. The convulsive attacks were so frequent that on one occasion, with the exception of one hour, they continued during the whole night. The patient died suddenly. On post-mortem examination no morbid appearances in the heart or bloodvessels were found.

Regarding the interesting case (one originally of acute syphilitic laryngitis) recorded by Mr. Pugin Thornton,[14] and quoted by Dr. Morison, the heart (as noticed by Dr. Ransom) would cease to beat on several occasions, and on one occasion, during a moderate convulsive attack, it failed to beat for fifteen seconds. His opinion was that the peculiarity of pulse was dependent on an affection of the pneumogastric nerve caused by syphilitic poison. Assuming that the retardation of the pulse has something to do in these cases with the epileptiform or syncopal seizures, there surely must be some additional coöperating influence—some other factors availing in the problem. Most likely some morbid condition of the minute vessels or intimate structure of the brain must be considered to have co-existed; otherwise the seizures would surely be more frequently noticed, and would be more persistent, considering the permanency of the slowness of the pulse.

In the interesting work by the late Dr. P. M. Latham on subjects connected with Clinical Medicine, when referring to the secondary diseases of the brain[15] (quoting from Dr. Burrow's writings on Disorders of the Cerebral Circulation) Dr. Latham refers to the "strange disguise" of cerebral symptoms, such as delirium and convulsions, having their origin in the heart. He observes: "Here surely there is more than we can account for from the known pathology of blood and bloodvessels and from derangements of the circulation." Dr. Latham makes no mention of cases of slow pulse, but says much about the baneful action upon the brain of the vehemence of the heart's action. Dr. Morison quotes the case of Napoleon I. as an epileptic, whose pulse is stated by Dr. Comby, on the authority of his physician, Corvisart, to have been, habitually, only 40 per minute. Dr. Morison, quoting from Dr. Comby, considers it probable that Napoleon's attacks were syncopal.[16]

In the previous remarks the connexion between the abnormally slow pulse and the epileptic seizures has been looked upon as one of cause and effect.

It would appear, however, that a class of such cases exists in which the peculiarity of pulse and the epileptic tendency may be the results or outcome of a general condition common to both—viz., to uræmia. In connexion with this subject I will draw attention to a communication which I have only recently met with in the

case under Mr. Holberton's care (see Transactions of the Royal Medica and Chirurgical Society, 1841, p. 78), alluded to by Dr. Morison, in which inhibitory effects on the heart brought down its pulsations to *seven and a half beats per minute*, and this condition lasted for many years. He also enumerates several instances in which people in perfect health had persistently low pulse. Dr. Morison aptly quotes the remarkable case of Professor Czermak, who is said to have been able to retard or arrest the action of his own heart by producing pressure on the vagus by means of an osseous tumour in the neck. In the volume by Dr. Balfour, to which I shall allude later, p. 103, the case of the Indian Fakirs is quoted, who are said (on the authority of Dr. Braid) to be able to slow the heart's action and diminish the force of its beats by compression of the "accessory" nerve in the neck.

[10] Here it may be well to call to mind that, as research has shown, in some animals other influences on the regulation of the heart's movements, in addition to those from direct nerve influence, exist. We know that the muscular elements of the heart possess, in certain lower animals, an inherent physiological property of rhythmical action, apart from idio-motor nerve or ganglion influence: and that small fragments of those portions of the ventricular muscle of the frog and tortoise which are devoid of nerve cells will, under certain conditions, perform, for a long period, spontaneous rhythmical movements, in all respects the same as the natural and regular beat of the uninjured ventricle.

[11] I have not entered into the consideration of the pathology of the deposits in the heart's walls, as to whether, for example, they were the results of ordinary inflammatory action, or, what is more probable, whether they were of a more specific, and possibly of a syphilitic, nature.

[12] A volume especially interesting as an example of applied physiology, showing full knowledge of the literature of its subject, and rendered the more instructive by lucid and well-made diagrams.

[13] Of course, cases in which the slowness of the pulse is merely the result of the heart's contraction not reaching in its effects the periphery (the blood wave or shock not being propelled as far as the radial artery) are obviously not to be classed as cases of "slow" pulse, in reality. The importance of this caution was long ago insisted upon by Dr. Heberden—viz., in his "Remarks on the Pulse," read at the Royal College of Physicians of London in 1768. Alluding to a patient whose pulse was not above 12 or 16 in the minute he says that in all instances where the pulse is below 40 "I suspect that the artery beats oftener than it can be felt, because such pulses are usually unequal in their strength, and some of the beats are so faint as but just to be perceived, so that others probably still fainter are too weak to make a sensible impression on the finger."

[14] Transactions of the Clinical Society, vol. viii., p 95.

[15] See Lecture XXV.

[16] Napoleon's disease, to which he had for many years been liable, is on several occasions alluded to by Viscount Wolseley in his recent work, "Decline and Fall of Napoleon," and is therein described as being a "mysterious malady," the exact nature of which was not permitted to be known. "When under its influence," remarks Lord Wolseley, "he was incapable of all useful mental and bodily exertion, had great difficulty in keeping awake, and his drawn features and expression bespoke both physical pain and mental depression." During the battle of Waterloo he was for several hours motionless at the table and often asleep, and when flying from the field became so drowsy that he was hardly prevented from falling from his horse. This condition generally followed a period of great mental and physical prostration, sometimes accompanied by great exposure to weather. Lord Wolseley states that Napoleon's disasters in Russia and at Dresden and his final overthrow at Waterloo were accounted for by this mysteriously occurring malady. If Napoleon had epilepsy, as Corvisart is said to have stated, is it not possible that the peculiar mental condition to which Lord Wolseley affirms that he was so disastrously liable, was the immediate result of the epileptic attacks to which he was at times thought a prey? We know how often such attacks, especially those of the "petit mal," leave a hebetude and often even aberration of mind, such as is attributed to Napoleon, and even more serious results. Mahomet is said to have suffered in the same manner and from the same cause—namely, severe indigestion of food. (See Walter Scott's Life of Wellington, vol. vii., p. 344). Was it not also the same with our great Duke of Wellington, where death might probably have been prevented by a timely emetic (see THE LANCET, vol. ii., 1852, pp. 355-6)?

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French journal, *La Semaine Médicale* for 1892, p. 265, by Dr. Comby, entitled "Le Pouls lent permanent." From his own experience, the author describes, and also quotes from others, certain cases of permanently slow pulse in which serious symptoms, such as attacks of dyspnœa, giddiness, epileptic and apoplectic attacks occurred. In all these cases the renal secretion was found to be materially diminished and to contain albumin, and the conclusion arrived at was that the above-named symptoms were uræmic in character, inasmuch as both the slowness of pulse and the grave symptoms disappeared when the patients were restricted to an entirely milk diet by which the amount of urine was increased and the albumin contained therein was reduced in amount. I would also, in conclusion, draw attention to Dr. Regnard's Thèse pour le Doctorat en Médecine presented in July, 1890, entitled, "Etude sur la Pathologie du Pouls lent permanent," based upon a copious French and English literature on the subject. His conclusions are as follows. Every durable lesion causing irritation of any portion of the moderating apparatus of the heart may suffice to cause a permanent slowness of pulse and give rise to the aggregate of symptoms studied. He observes that the nervous irritation may have many causes, as local anæmia (influence of atheroma on the peripheric circulation and blood-supply to nervous centres), deficient blood-supply of the bulbous parts of the pneumogastric, tumours of the coverings of the bulb, or of the mediastinum acting on the vagus, morbid excitation of the laryngeal and gastric branches of this nerve; but most frequently it is some affection of the heart itself, as fatty degeneration, or endocarditis, or coronary atheroma. The predisposing conditions are stated to be artéro-sclerosis (syphilitic, alcoholic, gouty, rheumatic). As to treatment, the indications are to restore the heart's failing energy, to lower arterial tension, which, at the outset, diminishes this energy, to strive against cerebral ischæmia by such remedies as the iodides, nitrite of amyl, trinitrine, caffeine, nux vomica, sparteine, and strychnia. But vaso-constrictors such as digitaline, ergotine, and quinine, are to be avoided.

POSTCRIPT.

With regard to the allegation that Napoleon I. was, as Julius Cæsar and Mahomet were said to have been, an epileptic, and also that his pulse was never known by his medical attendants to have counted more than 40 per minute, I have been at the pains to try to obtain authentic statements on these points. These statements have been copied from one medical work into another, both English and French, rather freely, and are said to be so quoted on the authority of the Emperor's private physician, Corvisart; and quite lately, in Dr. Osler's "Principles and Practice of Medicine," the statement is repeated (page 688). Much has been written in recent times, as well in England and America as in France, about the Emperor's private life, but I have failed to find in any personal memorials, whether in those (assumed to be veracious) of Constant, who as his valet shaved and daily attended to him for fifteen years—viz., from his departure from the Marengo to his taking leave of Fontainebleau before going to Elba—or in those of his secretary, clear proof that he was the subject of epilepsy. The Emperor appears to have been habitually careful as to his food, eating sparingly, though very often too quickly (chiefly mutton and chicken, with Chambertin wine), and able to recruit his strength by falling asleep almost at will, and this often during battles, as at Wagram and Bautzen. After long watching and anxiety (having possibly eaten heartily) he was apt to be affected by "heaviness" and indigestion. Thus after the battle of Dresden he returned to Dresden in pelting rain on horseback; and on the next morning, after three or four days of extreme fatigue of body and mind, having had but scanty food or rest, he is stated to have suffered from eating largely of mutton stuffed with garlic; and at the battles of Borodino and Leipzig his efforts are said to have been paralysed by his attacks of indigestion. Of the various maladies from which in the last years of his life—i.e., whilst at St. Helena—he suffered, a good account is given in the interesting Diary of Dr. O'Meara, who attended him. He is described as being very liable to "colds" owing to his unwillingness to take open-air exercise, to swellings in the face from teeth trouble, to various forms of indigestion, and, finally, to œdema of the legs and to symptoms of enlarged liver (October, 1817), but I find no reference to anything of the nature of epileptic or kindred affections. Dr. O'Meara, however, throws some light on the question of Napoleon's pulse during his attendance. The Emperor had said that very often he could not feel his own pulse or any beating of the heart, and this was thought by O'Meara to depend on obesity.[17] He remarks: "I had observed that the Emperor's circulation was very feeble, rarely exceeding 58 or 60 in a minute, and most frequently was 54." This statement suffices to verify the general opinion as to Napoleon's slowness of pulse, although Corvisart, as above-said, is thought to be the authority. On this point Dr. Huchard,[18] Médecin de l'Hôpital Bichat, informs my friend Dr. Keller of Paris that Corvisart had not *written* anything about the Emperor's pulse, but that his friends had been told of its slowness by him. In a letter to me from a well-known physician in Paris the writer amusingly presumes that the idea of Napoleon's having been the subject of epilepsy is most likely a "*British* invention" (*fabrication Anglaise peut-être*), but admits that his heart's pulsations were below normal in number.

In Dr. Huchard's work, above alluded to, several lectures are devoted to the subject of "Artério-sclérose," and much attention is given to the multiplicity of the localisation of the anatomico-pathological process in various organs, especially of the kidney, liver, lungs, brain, &c. The affection causing the bradycardia, which, along with syncopal and pseudo-epileptic and apoplectic attacks, exists in cases named after Stokes-Adams, he has designated "*cardio-bulbaire*," the lesions not being confined exclusively, as some thought, to the heart, the anatomical cause lying in the cervical spinal cord, or the bulb and the vagus nerve. When there is co-existing affection of the vessels of the kidney we have uræmic convulsions, &c. Dr. Huchard[19] classifies the various forms of bradycardia which may exist, as follows—viz.: (1) physiological; (2) those accompanying convalescence from various diseases; (3) toxic; (4) reflex; (5) nervous; and (6) cardiac in origin.

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NOTES ON STONE IN THE BLADDER.

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III.[1]—COMPARATIVE SAFETY OF LITHOLAPAXY, LATERAL LITHOTOMY, AND SUPRA-PUBIC LITHOTOMY IN PATIENTS AT ALL AGES.

TABLE III.—*Showing the number and result of Litholapaxies Lateral Lithotomies, and Supra-pubic Lithotomies performed on patients at all ages in the Punjab, North-West Provinces, and Oudh, and in the Bombay Presidency during five years ending Dec. 31st, 1895.*

Nature of operation.	Number of operations.	Cured.	Died.	Percentage of mortality.
Litholapaxy	10,073	9,665	399	3·96
Lateral Lithotomy	7,201	6,407	794	11·02
Supra-pubic Lithotomy ...	147	86	61	42·17

THIS table has been compiled from data supplied by the Official Medical Reports published in India, and I have again counted the results of all operations tabulated in the "discharged otherwise" column as deaths. It is somewhat unfortunate that in the official returns of operations for stone performed throughout India the ages of patients are not classified in quinquennial and decennial periods, for if this were done the value of such returns would be much enhanced. The age of the patient and the weight of the calculus are two such very important factors in determining the results of litholapaxy, lateral lithotomy, and supra-pubic lithotomy, that when we are not in possession of such

[17] See Taine Portraits, p. 11. See paper.

[18] Whose recent work, "Traité Clinique des Maladies du Cœur et des Vaisseaux," is a magnificent result of observation and research, and should be known in an English dress. (Octave Doin, Éditeur, 1893.)

[19] Op. cit., p. 321.

[1] Parts I. and II. were published in THE LANCET of Jan. 9th and 16th, 1897.

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factors it is almost impossible to gauge the relative mortality of these three operations. In lateral lithotomy, especially, the age of the patient and the weight of stone removed are most important factors in the solution of this problem. It would, therefore, be well if the ages of patients under fifteen years who undergo operations for stone in the bladder were classified in triennial or, at least, in quinquennial periods, and if the ages of patients between fifteen years and very advanced life were arranged in decennial periods. This is a matter which might profitably engage the attention of administrative medical officers in those provinces of India wherein stone in the bladder is prevalent. The table appended, although unfortunately it does not show the average ages of patients or the average weight of stone removed, is, in some respects, a valuable one and tells its own tale. A glance at it shows that litholapaxy is being practised largely throughout India and that it is gradually superseding the time-honoured lateral lithotomy. A further examination of this table shows that the percentage of mortality following litholapaxy was only 3·96 as compared with 11·02 following lateral lithotomy. In the absence of all reliable information regarding the relative ages of patients submitted to operation, and the weights of calculi removed by these two surgical procedures, it would not be fair to institute comparisons regarding the mortality which followed them. But I think that there can be little doubt that the average weight of calculi removed by lateral lithotomy was greater than that extracted by litholapaxy, and that at the same time there was no great difference in the ages of the patients treated by these two methods. It is certainly a subject of congratulation that the percentage of mortality which followed litholapaxy was but 3·96 in a total of 10,073 patients submitted to this operation—a mortality which incontestibly proves that there are at the present day a large number of skilled litholapaxists in India. Continuing our examination of the table we find that in a grand total of 17,421 operations for stone in the bladder supra-pubic lithotomy was performed only 147 times, and that the rate of mortality which followed it was 42·17 per cent. This rate of mortality is no doubt high, but not so high as it is in England and throughout Europe, when supra-pubic lithotomy is performed for very large calculi. It is true that the official reports published in India give no information regarding the average weights of calculi removed or the average ages of patients submitted to supra-pubic lithotomy; but knowing how unpopular this operation is among surgeons in India, I feel pretty certain that the average weights of the calculi in these 147 operations must have been very considerable. Judging from the information contained in Table II.[2] it is but only reasonable to infer that the great majority of these 147 operations were performed on adult males, because Table II. showed that in the Punjab during the year 1895 there were but two supra-pubic lithotomies performed on boys, and we may reasonably take the practice in the Punjab in 1895 as an indication of the methods which prevailed in other parts of India during the five years under review.

In recent years the trend of surgical opinion in India has been in the direction of restricting supra-pubic lithotomy to very narrow limits. Expert litholapaxists in India nowadays attack a stone weighing between two and four ounces with the utmost confidence, and are therefore seldom obliged to fall back upon supra-pubic lithotomy, and when they do meet with a stone which defies the power of a No. 16 or a No. 18 lithotrite they are more inclined to perform a lateral lithotomy or a perineal lithotrity than a supra-pubic lithotomy. I feel certain that in India perineal lithotrity will within the next decade occupy the place now held by lateral lithotomy in dealing with very large or hard calculi in adult males which resist the power of the largest lithotrites which can be safely introduced into the bladder per urethram. And should this opinion prove true the death-rate of a very important class of cases will be greatly diminished. In the North-West Provinces and Oudh there were twenty perineal lithotrities performed during the year 1895 without a death; but as no information is forthcoming regarding the average weight of calculi removed or of the ages of patients treated, I can only conjecture that these operations were undertaken for the removal of very large calculi from the adult male bladder. Some six months ago I had an opportunity of examining a very powerful lithotrite constructed by Messrs. Weiss and Sons for a surgeon living in a district of the Punjab where very large calculi are frequently met with. This lithotrite was of the fully fenestrated pattern; the stem corresponded to No. 20 (English scale), and at the angle it measured No. 26 (English scale); the length of the blades was 7½ in., or shorter than an ordinary No. 16 lithotrite by about 3 in. It was constructed with a view of crushing large calculi which could not be dealt with by litholapaxy, and I am informed that it answers its purpose admirably. No doubt we shall hear more details regarding the capacity of this giant lithotrite from the surgeon who is so fortunate as to have many opportunities of using it, and full particulars regarding the cases in which it has been used. Such a lithotrite introduced through a small incision in the prostate would readily break up a mulberry calculus weighing between four and six ounces—indeed, few calculi could resist its crushing power. The success achieved by Mr. Reginald Harrison, and more recently by Mr. Herbert Milton, in perineal lithotrity will, no doubt, stimulate surgeons in India to adopt this method in preference to lateral lithotomy. We know how the death-rate following lateral lithotomy increases in direct ratio with the size of the stone to be removed, and that this is especially true when we have to deal with patients at the middle period of life. This mortality is in a great measure due to the large incision made in the prostate, which sometimes unfortunately encroaches on the capsule of the gland, and to the almost inevitable bruising of the neck of the bladder and of the tissues of the perineum in the extraction of a large, unbroken calculus by this route. It was with the intention of counteracting these risks that supra-pubic lithotomy was revived; but experience has taught us that supra-pubic lithotomy is not more successful than lateral lithotomy is in dealing with very large calculi, and, therefore, I think that perineal lithotrity should get a fair and extended trial in these very difficult cases.

As years go by supra-pubic lithotomy will be less and less employed in India, and will be reserved for those comparatively rare cases to which it is so eminently adapted. The heavy mortality which followed 147 supra-pubic lithotomies may come as a surprise to those who have long laboured under the impression that the natives of India bear all operations for stone in the bladder with a truly wonderful immunity from fatal results. The general surgeon in Europe, who through lack of opportunities can hardly be expected to be very proficient in the use of the lithotrite, marvels at the great success which the skilled litholapaxist in India achieves in dealing with large stones in young and old patients; and, naturally enough, he is inclined to ascribe the great success of his Indian *confrère* in the treatment of stone in the bladder to the greater tolerance of operative interference on the part of the native of India as compared with the native of Europe. He is disposed to account for this remarkable tolerance by ascribing it to the placid disposition of the native of India, to the non-stimulating character of his vegetable diet, and to the fact that he seldom, if ever, indulges in alcoholic beverages. And recently, I note, that the marvellous residual kidney power of the native of India has been pressed into the service to account for the excellent results achieved by litholapaxists in India. Mr. Herbert Milton of Cairo, whose recent papers on lithotrity[3] have so deservedly attracted much attention, has referred to the extraordinary tolerance of Orientals to all operations and diseases connected with the urinary apparatus.[4] And no doubt such tolerance does exist among Ethiopians and their descendants, who form no inconsiderable proportion of the native patients who throng the hospitals at Cairo and Alexandria. But the Egyptian Fellahin, Soudanese, Nubians, and Copts are in temperament very different from the Aryan races of India, and I need scarcely point out the great divergence in physical and intellectual characters between the lower classes of the population of Egypt and those who inhabit our great dependency. An acute, intelligent, and keen-witted Hindu is very different in build and temperament from a sluggish inhabitant of the Egyptian Delta; and the male generative organs of the Soudanese, for example, are altogether on a much larger scale than those of the majority of the population of India. Mr. Herbert Milton tells us that he has been frequently able to introduce a No. 22 evacuating cannula (English scale) into the bladders of his patients at Cairo, and that he usually works with a

[2] THE LANCET, Jan. 16th, 1897, p. 165.

[3] THE LANCET, April 18th and 23rd, and May 2nd, 1896.

[4] St. Thomas's Hospital Reports, London, 1891.

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No. 18 or a No. 20 evacuating cannula. Most surgeons who have done much stone work in India will, I think, bear me out when I state that it is but comparatively seldom that a No. 20 evacuating cannula can be readily passed into the bladder of a Hindu. Then how can we account for the great measure of success achieved by the skilled litholapaxist in India, if it be not due to the greater tolerance of operative interference by the native of India as compared to that of the native of Europe? The explanation is very simple. The main reason why litholapaxy is more successful in India than in Europe is that, as a general rule, it is done more thoroughly and more skilfully in the former than in the latter. And the reason why it is done more skilfully in India than in Europe is explained by the frequently repeated opportunities which surgeons in India enjoy of practising this operation. But we surgeons who have passed many years of our lives in the calculous districts of India, must not plume ourselves because we happen to be very expert at working with the lithotrite, and we need not be very proud because we are able to crush a stone in the bladder skilfully and with little danger to our patients. For we have done no more than take advantage of the unrivalled opportunities afforded us in this special department of operative surgery.

Now, if the great success obtained by surgeons in India in litholapaxy depended solely on the peculiarly favourable conditions of their patients, then the novice in litholapaxy in India should obtain as good results as a master of the craft. But this is notoriously not the case. I may cite three examples out of many to illustrate this point. In the July number of the *Indian Medical Gazette* for 1892 I gave an analysis of the first 500 litholapaxies performed at the Indore Hospital, Central India, on patients at all ages. Deducting the litholapaxies in boys there were 286 operations in males between fifteen and ninety years of age, with 11 deaths, or with a death-rate of 3·84 per cent. But when I come to examine this mortality more closely I find that 7 out of the 11 deaths occurred among our first 52 litholapaxies, leaving a balance of 234 litholapaxies with only 4 deaths. The death-rate among the first 52 litholapaxies was 13·4 per cent., while it was only 1·7 per cent. among the last 234. There was no marked difference in the ages, caste, and general health conditions of the patients who constituted the first division of 52 and the second division of 234, and the average weight and composition of calculi removed from both sections of patients did not differ materially. A death-rate of 13 4 per cent. in 52 litholapaxies was certainly not a very brilliant result; but a death-rate of 1·7 per cent. in 234 litholapaxies left little to be desired. The second instance refers to the work done at Hyderabad, Sindh. Brigade-Surgeon-Lieutenant-Colonel Forbes Keith has placed at my disposal a tabular statement of all operations performed by him for stone in the bladder at Hyderabad during five and a half years ending May, 1894. The number of operations was 1933. Eliminating all the lateral lithotomies in boys and men and 57 litholapaxies in females, I find that he performed 676 litholapaxies in adult males with 22 deaths, a rate of mortality of 3·2 per cent.—a result highly satisfactory. He, however, lost 16 patients in his first 111 cases, a death-rate of 14·4 per cent. In his last 565 operations he lost but 6 patients, a death-rate of only 1·06 per cent. As in the case at Indore, there was no marked difference in the ages, caste, and general health conditions of the patients, or in the average weight and composition of the calculi removed in his first 111 and his last 565 litholapaxies. The third instance refers to Surgeon-Lieutenant-Colonel Freyer's experience. In reply to my questions on this subject he writes: "I find that amongst my first 50 litholapaxies there were 3 deaths, or 6 per cent.; but it must be remembered that my earlier cases were selected, the worst cases being subjected to lithotomy. My results have gradually improved as I have gained experience of the operation, so that amongst my last 300 litholapaxies there were only 3 deaths, or 1 per cent., though I rarely use the knife now. As I gain experience of Bigelow's operation amongst Europeans I am gradually coming to the conclusion that the European stands the operation better than the native of India." Then how can we account for the vast difference in the mortality which followed our first and last series of litholapaxies? The answer is easy. We were learning our work at the beginning, and as soon as we had gained experience and confidence in performing the operation, and had learned how to use the lithotrite with skill and precision our success increased most rapidly. And so, after all, it comes to this, that the bladder and urinary organs of the natives of India, like those of the natives of Europe, become tolerant of the use of the lithotrite when the surgeon has learned the art of manipulating it with skill and precision.

It is, perhaps, a somewhat ungrateful task to dispel a fondly cherished and consoling illusion of the unskilled litholapaxist in Europe, when he ascribes the great success achieved by his Indian *confrère* in crushing vesical calculi to conditions in the latter's patients which have only a mythical existence. The truth, however, must be told, disagreeable as it often is to hear it; and now, I trust, we shall read and hear no more about the tolerance of the Indian bladder, and of those mythical Indian patients who, though suffering during a long series of years from stone in the bladder, are lucky enough to retain their kidney power unimpaired. In few operations in the whole range of surgery are constant practice and the personal factor of the operator of greater importance than in litholapaxy. No surgeon need hope to acquire a practical familiarity with the lithotrite until he has performed between fifty and a hundred litholapaxies, and even then, he has still much to learn. In the beginning he may be so fortunate as to get a run of a dozen simple and straightforward cases which may not tax his powers of manipulation too severely, but the difficult cases are sure to turn up sooner or later. Then how, it will be asked, is the general surgeon in Europe, who only meets with cases of stone in the bladder at fitful intervals in his professional career, ever to acquire a practical familiarity with the lithotrite? Again the answer to this question is simple. The general surgeon in England, and throughout Europe, as a matter of fact, seldom, if ever, acquires this familiarity, and he passes away or retires from practice without ever having acquired it. The span of active professional life is too short to learn the art of performing litholapaxy with dexterity and safety to one's patients unless a surgeon has been so favourably placed as to be afforded frequently repeated opportunities of working with the lithotrite. The fact of the matter is that in England and throughout Europe, there are not enough cases of stone in the bladder to go round among the general surgeons, and so if any young surgeon cherishes the ambition of developing into a skilled litholapaxist before middle-age shall overtake him he should go to Egypt or India to learn this special operation. With this object in view, a year spent in the hospital at Hyderabad, Sindh, would be worth a lifetime of practice in England.

Cresswell-gardens.

A CASE OF MUMPS, WITH CEREBRAL SYMPTOMS AND HIGH TEMPERATURE;

WITH A REVIEW OF SOME OTHER CASES PREVIOUSLY RECORDED.

BY F. LUCAS BENHAM, M.D., M.R.C.P. LOND.

THE following are the notes of a case of some interest which I lately attended in conjunction with Mr. H. G. Brigham.

The patient was a lad, barely sixteen years of age, who was at school a little way out of London, where there had recently been a few cases of mumps. On Nov. 1st, 1896, an attack of mumps set in, with ordinary symptoms. The left parotid gland swelled first, then the other became swollen before the first had subsided. He was kept in bed. On the 2nd the parotid glands were still swollen. He was kept in bed part of the day. Some pain was felt in the left testis. On the 3rd he seemed much better and was allowed to go home to London, but had to walk more than a mile to the station. On the 4th he was not so well. The testis was distinctly swollen. He was feverish, but had no rigor or vomiting. The temperature was 104·7° F. in the evening. On the 5th he was still kept in bed and was very feverish. The temperature was 103°. There was no swelling over the parotid glands. The left testis was somewhat swollen and tender and the scrotum was red. There was a fine papular rash, something like that of scarlet fever, on the outer aspect of the left forearm. The buttocks were slightly erythematous,

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but there was no distinct rash elsewhere. The tongue was moist and coated with a thick yellowish fur. There was no swelling or redness of the tonsils or throat. There was some headache, but the patient was cheerful and wished to get up. The pulse was not very frequent. He was still kept in bed. He was ordered three grains of calomel and a diaphoretic mixture. The temperature was 104·8° in the evening. On the 6th the temperature was 105° and the pulse 120. The tongue was moist and thickly coated; the velum palati looked raw and dry and was partially covered with tenacious mucus, but the throat was not red or sore, and the tonsils were not swollen. The rash had quite disappeared. Tache cérébrale was visible on the abdomen. He was thirsty. He had been sick on the previous day after taking the powder. The bowels had been opened two or three times. The eyes were natural and the pupils normal. He had been delirious, wandering, and talkative, asking for beer, &c., at night. The following mixture was ordered three times a day; half a grain of potassio-tartrate of antimony, fifteen grains of carbonate of magnesia, half a drachm of sulphate of magnesia, and peppermint water to one ounce. He was also to be sponged, when hot, with vinegar and water; and he was to have a milk diet. At 9.30 P.M. he had been dull, drowsy, and heavy, almost in a state of stupor, from which he could be momentarily roused without much trouble, all day. The temperature was 103·4° and the pulse 108 and regular. He had vomited two or three times curds and bile. The bowels were opened twice. The testis was more swollen; the scrotum was red and œdematous. There was frontal headache, but not very intense; the patient lay on his side and slept, but sleep was not continuous and was broken by horrible dreams of accidents, &c. The tongue was moist and cleaner; there was no pain in the back or limbs, but he disliked being disturbed. He had perspired freely. On the 7th he had had a restless night, but was brighter and more cheerful in the morning. His head was clearer, the headache was gone, though it was still brought on by movement. The temperature was 102·6° and the pulse 100, dicrotous. The tongue was moist with yellowish fur. There was no more vomiting. The bowels were opened three times. He took milk badly, and was ordered beef-tea, toast, cooked apples, &c., and to continue the medicine, The left testis was more swollen, and tender on pressure. He passed urine involuntarily, as he had done the day before. The temperature was 103·8° in the evening, and the pulse 100. On the 8th he had slept better, though he was restless; he had taken more liquid food. There was no vomiting. The bowels had been opened eight times. In the morning he was much better in all ways. His temperature was 99·2° and the pulse 80 and regular. The headache was almost gone. His mind was clear and he was more lively and natural. The tongue was still coated but was clean at the tip. There was copious epistaxis in the morning. He complained of pain over the lower part of the sternum; on auscultation the sounds of the heart were found to be quite normal. The testis was still very large and tender and the scrotum œdematous. The temperature was 101° in the evening. On the 9th he had slept better, but was still restless. The temperature was 100·2° and the pulse 96. The tongue was slowly cleaning from the tip. The epistaxis was renewed in the morning. The headache was gone. The left testis was smaller, but painful and tender, and there was much œdema of the scrotum. The right testis was somewhat tender also, but was not swollen. The temperature was 102·2° in the evening. The medicine was discontinued. On the 10th the temperature was 97·8°. The tongue was cleaner. The left testis was smaller and the right testis tender; hot fomentations were applied. At 9 P.M. the patient looked well. The temperature was 97·6° and the pulse 72. The tongue was clean. The appetite was becoming ravenous. On the 11th he was still in bed, but convalescent. On the 13th he sat up for the first time. He slept while sitting in a chair; both arms and legs twitched during sleep. The bladder had been irritable during the illness, but this was now all right. On the 15th he left the room for the first time, but was very shaky; he was weak on the legs and had to be assisted on returning upstairs.

The testis subsequently underwent considerable atrophy, as is usual, I believe, in such cases as this.

Remarks.—The nervous phenomena which may complicate mumps are not novelties; they have been observed and remarked upon from time to time for a long while. But all the same they are infrequent, even very exceptional, considering what a common disease mumps is. They are said to be more common in some epidemics than others. The subject is mentioned in standard text-books of medicine, but generally in a vague and inaccurate way. It is, perhaps, because mumps is generally such a trivial complaint that so little attention is devoted to its curious occasional phenomena. But surely it is an error to style the disease, as is done in more than one text-book, "Idiopathic Parotitis," which is quite a different thing. I should like also to raise the question whether meningitis is a possible complication as it is sometimes stated to be. Some writers, by-the-way, think proper to place mumps among diseases of the mouth, &c., instead of with general and infectious diseases. A good many cases complicated with brain symptoms have now been put on record, but they are only to be found here and there in various periodicals, British and foreign; it seems, moreover, that the literature of the subject is more abundant in other countries, especially France and America, than in this. These cases are remarkable, both on account of the striking nature and sudden appearance of the symptoms, and on account of the obscurity of their pathology, which is still a mystery. Fortunately, even although the symptoms be alarming, death very rarely takes place. Moreover, when death does occur in mumps, it seems often to be due to some indirect complication which may almost be called accidental. I will refer briefly to the fatal cases that I have been able to discover, either described or mentioned. Three fatal cases are cited by Haldeman.[1] The first of these, complicated with orchitis, died from acute pneumonia, which set in on the fifth, and was fatal on the eleventh, day of the illness. The author ascribes the pneumonia to embolism. The second case, in which both parotids and both testes were involved, succumbed to the bursting of an abscess of the liver into the lungs and air-passages, causing asphyxia on the thirteenth day. His third case is that of a woman, seven months pregnant, who aborted on the fifth day and died from septicæmia two days later.

A remarkable case of sudden death in mumps is related by Gillet.[2] The patient was a young conscript, in whom swelling of the right parotid gland set in, which spread to the submaxillary gland also; he did not take to bed or rest at once. On the fourth night he suddenly awoke, rose up and tried to walk, but fell in a state of complete syncope; he rallied a little, but soon became collapsed again and died. It is stated that he could breathe and swallow during the attack. Only the parotid gland was examined post mortem. Death was ascribed to embolism of one of the arteries at the base of the brain due to cardiac thrombosis consequent on endocarditis. In a case reported by Hamilton[3] and in another by Shreve[4] furious delirium came on suddenly, with great excitement, and attended in the former with opisthotonos and muscular rigidity, and death ensued in each in two or three days. Other fatal cases have been recorded, two by Lindsley,[5] another by Pollard,[6] a few others (mentioned by Lannois and Lemoine) by various French observers, but no details are furnished when quoted, and I have not obtained access to the sources of information. Niemeyer[7] says: "Cases have also been recorded where, in the course of idiopathic parotitis, fatal meningitis has been developed." Eberle[8] also speaks of a fatal case with convulsions. I am not aware, however, that a post-mortem examination was made in any of the fatal cases referred to or that there was positive evidence of meningitis in any of them. From a survey of all the cases to which I could find a reference and have been able to peruse the details it seems that the cases of mumps with cerebral complications fall into three different classes according as the nervous symptoms are marked by: (*a*) high fever and delirium; (*b*) insanity; and (*c*) paralysis.

A.—The case above related is a characteristic example of the first group. Cases of this sort are met with, I believe, only in males, never in children, and chiefly in lads about the age of puberty or in young men, and is almost always, if not invariably, associated with orchitis, though of course orchitis often complicates mumps without there being any serious constitutional disturbance. Lynch[9] states that high fever and delirium may occur in mumps when the disease is

1 Journal of the American Medical Association, Chicago, 1887, p. 543.
2 Gazette des Hôpitaux de Paris, 1873, p. 1156.
3 Lond. Med. Journal, vol. ix. (quoted by Lannois and Lemoine).
4 Boston Medical and Surgical Journal, 1875, p. 739.
5 Stethoscope and Virginia Medical Gazette, 1851.
6 Bellevue Hospital, Virginia.
7 Text-book of Practical Medicine, vol. i., p. 439.
8 Treatise on Practical Medicine, vol. ii., p. 333.
9 Dublin Quarterly Journal of Medical Science, 1856, xxi., p. 290.

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confined to the parotid glands, but I have not been able to find the account of any such case where the presence of orchitis is not mentioned. It may be that the brain and testes are affected in common simply because of the intensity of the disease, but the constant association of the brain symptoms with severe orchitis suggests the possibility of some causal relation between the two. In some cases—e.g., those related by Trousseau,[10] Hall,[11] Walmsley,[12] Davis,[13] and Lees,[14] the extreme febrile symptoms and delirium supervened on the subsidence of the swelling of the parotids and disappeared on the manifestation of orchitis. It is to this particular feature that Trousseau calls attention, and many readers will most likely recollect his vivid account of the two cases which came under his own notice with an interval of twenty years. But in other cases (and they form the majority, as far as my inquiries go), as in the case related in this paper, also those by Hamilton,[15] Appleyard,[16] Beale,[17] Monro,[18] Parrott,[19] Doudney,[20] Minot,[21] Shreve,[22] Sorel,[23] Janson-Zuède,[24] and Lynch,[25] orchitis appeared first, and was attended either immediately or after a short interval, by high temperature (sometimes reaching 106° or 107° F.) and severe febrile symptoms, such as delirium and other nervous phenomena, and the local inflammation and general symptoms subsided *pari passu*. The nature and pathology of these cases is uncertain and obscure. By some observers and writers the nervous symptoms have been assigned, rather hastily I think, to meningitis; but in almost all the cases referred to above, this cause is, to say the least, very doubtful. The symptoms are hardly those of meningitis, and the cases certainly bear very little resemblance to the description, say, of epidemic cerebro-spinal meningitis. Moreover the difference in mortality is very great. Even in Hamilton's and Shreve's cases *(vide supra)* the symptoms do not point conclusively to meningitis; the inference is rather that death took place from exhaustion consequent on violent excitement, but no necropsy seems to have been held either in these or in any of the reported fatal cases of mumps, and in the absence of such unequivocal evidence it is impossible to affirm the existence of meningitis. In Munro's case—which was a very severe one and accompanied by a very high temperature (107·2°) and great delirious excitement with much prostration — although recovery took place it is stated that for a considerable time after the acute symptoms subsided the patient was excitable and also suffered from difficulty in walking; the gait was unsteady and incoördinate, the speech hesitating and impulsive, and agraphia was marked. This condition is certainly suggestive of cerebral and spinal meningitis, but cannot, I think, be pronounced conclusive. These cases seem to me to be much more closely related to those of acute rheumatism with hyperpyrexia and cerebral symptoms, and the affinity is strengthened by the fact that in some of these cases of mumps certain symptoms of acute rheumatism have been superadded; for example, in a case recorded by Charles Aitken,[26] an attack of mumps with orchitis was immediately followed by "a rather severe attack of rheumatic fever, with pains in the joints, but no cardiac mischief; this was almost immediately succeeded by a short attack of chorea." In Davis's case subsidence of orchitis was attended by general articular rheumatism, with much pain, but without fever. Endocardial murmurs developed in the course of Appleyard's case—a severe one with very high temperature though in this case there may have been pre-existing valvular disease. Metastatic endocarditis was also the chief feature of one of the set of cases reported by Haldeman,[27] which recovered, however, and there was thought to be endocarditis in Gillet's case also, which, as has been already mentioned, ended in sudden death. Thus instead of ascribing any cases of this group to meningitis I think it far more probable—almost certain, indeed—that the grave symptoms are really those of cerebral irritation due to some kind of blood poison which is developed in the course of the disease, especially about the period at which inflammation settles on the testes.

B.—A similar sort of explanation probably applies to this class also. Resembling the former group in the presence of delirium, it differs in the fact that the temperature and febrile symptoms are generally less high; the delirium begins about the same period as in the former class or when the orchitis is disappearing, but does not subside with the natural subsidence of the disease being prolonged, often for a month or two, in the form of insanity either mania or melancholia. Cases of this sort have been recorded—one by Radcliffe[28] and three (one of whom was a woman, but it is not stated whether her sexual organs were affected) by Van Bibber.[29] All these cases recovered.

This occasional sequence of insanity constitutes another point of affinity to *acute* rheumatism.

C.—On the other hand, this explanation will scarcely cover all cases of the cerebral symptoms of mumps. In an able paper by Lannois and Lemoine (Des Manifestations Méningitiques et Cérébrales des Oreillons),[30] three cases are described (one observed by themselves, the other two quoted from Sorel and Janson-Zuède respectively) which presented definite and persistent paralyses, which cannot well be ascribed to nervous debility following the disease. In the first case—in which, by the way, there is no mention of orchitis—there suddenly supervened after the parotid swellings had subsided in the usual way a condition of coma, with right hemiplegia, and hemianæsthesia, as well as conjugate deviation of the eyes, unilateral paralysis of the face and tongue, and aphasia. The hemiplegia and aphasia lasted for some time, but ultimately recovery took place. A closely similar case is reported by Hitchcock.[31] The patient was a woman who, after the subsidence of a severe febrile attack of mumps, was suddenly seized on the eleventh day with cerebral disturbance and vomiting, soon succeeded by coma, paralysis of the right arm, and convulsions. In a month's time the paralysis disappeared and the patient recovered. In Sorel's case (Orchite ourlienne atrophiante; complications cérébrales; aphasie légère mais prolongée)[32] the temperature reached 107° F. while the orchitis lasted, and the attack was severe. Convalescence was gradual, and attended by a variety of aphasia. In Janson-Zuède's case[33] furious delirium supervened during the orchitis and was accompanied by aphasia and paralysis of the right arm as well as anæsthesia and a slow pulse. The patient partially recovered, however. Partial paralysis of the arms is mentioned also in one of Haldeman's fatal cases. The explanation offered by Lannois and Lemoine of the whole class of cases of cerebral complications of mumps is that the cause is probably active hyperæmia of the meninges in the slighter cases, and in the more severe ones, in which some degree of actual paralysis occurs, the hyperæmia is more intense, extending more deeply and damaging the surface of the brain itself. This hypothesis may possibly be the true one, yet it is very doubtful. It seems much more probable from the histories that the paralysis is due to some accident, such as hæmorrhage or embolism, rather than to an inflammatory process. I think it is most likely that the real condition of these cases is embolism, for there is corroborative evidence in certain cases which show a tendency to thrombosis in mumps. Gillet's case, already quoted, was probably fatal by embolism; but instead of its fatal end being brought about by cardiac thrombosis and embolism of a cerebral artery, I would suggest that it might be due to venous thrombosis and embolism of the pulmonary artery. I have seen sudden death happen in an exactly similar way from pulmonary embolism in a case of cancer of the tongue; the cases of endocarditis related by Appleyard and Haldeman also mark a liability to embolism. There is also a remarkable case narrated by Logan (Metastasis in parotitis)[34] in which, about three weeks after the onset of an attack of mumps affecting the parotids and testes, phlebitis set in, first in the left lower limb, involving the

[10] Clinical Lectures, Sydenham Society's Translation, vol. ii., p. 77.
[11] Brit. Med. Jour., 1881, vol. i., p. 966.
[12] THE LANCET, Aug. 31st, 1878, p. 312.
[13] Brit. Med. Jour., 1889, vol. i., p. 648.
[14] Dublin Quarterly Journal of Medical Science, 1854, p. 457.
[15] Loc. cit.
[16] THE LANCET, Jan. 21st, 1882, p. 101.
[17] Medical Times and Gazette, 1875, vol. i., p. 416.
[18] THE LANCET, Aug. 18th, 1883, vol. ii., p. 230.
[19] Brit. Med. Jour., 1889, vol. ii., p. 819.
[20] THE LANCET, Nov. 29th, 1890, p. 1156.
[21] American Journal of Medical Sciences, Philadelphia, 1850, p. 377.
[22] Loc. cit.
[23] Archives de Médecine Militaire, December, 1883.
[24] Annales de la Société Médico-Chirurgicale de Liège, May, 1884.
[25] Loc. cit.
[26] Brit. Med. Jour., vol. i., p. 158.
[27] Loc. cit.
[28] Philadelphia Medical Times, 1873-74, p. 721.
[29] Medical News, Philadelphia, 1885, p. 678.
[30] Archiv de Neurologie, Paris. 1885, vol. xi., p. 1.
[31] Boston Medical and Surgical Journal, 1842, p. 351.
[32] Loc. cit.
[33] Loc. cit.
[34] Medical News, Philadelphia, 1882, p. 569.

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femoral, popliteal, and one-third of the anterior and posterior tibial veins, then the left upper limb, involving the jugular, subclavian, brachial, and part of the ulnar veins; after this, the right lower limb was involved as the left had been, Thus the main veins of three limbs were successively plugged. In each of these attacks of phlebitis the inflammation seemed to start from one of the glands which had been involved. In such a condition it is easy to see what a liability to embolism there must be. This patient recovered. However, in the absence of necropsies on fatal cases it is impossible to do more than conjecture. It is a matter that requires more light to be thrown upon it, and it is with a view to calling attention to the subject that these suggestions are offered.

A last word may be said about treatment. As has been already said, nearly all cases recover, and therefore the prognosis is good. But in the way of giving relief and promoting cure in the feverish, delirious patients, I think no measures have proved so effectual as the administration of cooling, diaphoretic, and aperient medicines, such as were exhibited in the case I have narrated. Narcotics should, I think, be avoided. It was also worthy of note that in a large proportion of the cases here collected the grave symptoms followed and were apparently induced by carelessness and exposure to cold, &c., while recovering from a simple attack of mumps. It may, therefore, be of importance to exercise prudence and to take necessary precautions during convalescence from the disease, especially in the case of adults.

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ON THE PATHOLOGY AND TREATMENT OF CHILBLAINS.

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I HAVE in a recent issue of THE LANCET[1] dealt with the general question of "serous hæmorrhage" (i.e., of increased transudation of the blood fluids into the tissues), and I have pointed out (*a*) that this condition is very often dependent upon a defect of blood-coagulability, and (*b*) that serous hæmorrhage can to a large extent be controlled by increasing the coagulability of the blood. I had in previous papers dealt with this question of serous hæmorrhage in its special relation to urticaria, and had demonstrated not only that urticaria is very often dependent upon a condition of defective blood-coagulability, but also that this affection can often be relieved in a very striking manner by increasing the patient's blood-coagulability. I propose in this paper to adduce evidence to show that what holds true of urticaria holds true also of that very familiar form of serous hæmatoma which we denote by the name "chilblain."

Association of chilblains with a condition of defective blood-coagulability.—I have investigated the condition of blood-coagulability in ten cases of chilblains. *Two* of these cases were cases of aggravated chilblains occurring in adult males. The blood-coagulation times of these patients were respectively *nine minutes*, and *nine and a quarter minutes*. *Four* of these cases were cases of aggravated chilblains occurring in adult females. The respective blood-coagulation times of these cases were respectively *thirteen minutes*, *eleven minutes*, *eight and three-quarter minutes*, and *seven and a half minutes*. Lastly, *four* of these ten cases were mild cases of chilblains occurring in schoolboys. The coagulation times of these cases were respectively *eleven minutes*, *nine and a quarter minutes*, *seven and three-quarter minutes*, and *four and a half minutes*.[2] It is obvious, therefore, when we consider that the normal blood-coagulation time varies between *three and four minutes*, that in all these cases of chilblains, with the exception of the last case, were associated with a very notable defect of blood-coagulability. This fact stands in relation with certain other facts which obtrude themselves more directly upon the clinician's attention. These facts are—(*a*) the superior liability of children to chilblains; (*b*) the fact that chilblains are prone to occur in persons who give a history either of nose-bleeding or of urticaria; (*c*) the occurrence of chilblains in persons who are characterised by a lymphatic habit of body; (*d*) the not unfrequent occurrence of chilblains in persons who are the subjects of malarial cachexia; and (*e*) the not unfrequent occurrence of chilblains in hæmophilic families. We may briefly consider each of these predisposing causes.

Childhood.—The notorious liability of children to chilblains is no doubt in part referable to the fact that the influence of cold makes itself felt more upon the relatively small extremities of the child than upon the relatively large extremities of the adult. Another probable factor in the etiology is the fact that the lime salts upon which the coagulability of the blood depends are in the growing child being continually removed from the blood in order that they may be deposited in the bones.

Predisposition to urticaria and epistaxis.—There is an obvious relation between the predisposition to epistaxis, the predisposition to urticaria, and the predisposition to chilblains, inasmuch as these predispositions have been shown to depend upon a defect of blood-coagulability. In two cases which have recently come under my observation I have seen urticaria alternate with chilblains. Both these forms of serous hæmorrhage were apparently brought on in susceptible patients by exposure to cold.

Lymphatic habit of body.—We shall understand the relation between the lymphatic constitution and a predisposition to chilblains if we consider, first, that the essence of the lymphatic constitution is to be found in a water-logging of the tissues which is dependent upon an excessive transudation of lymph; secondly, that it will require only a very slight increase of transudation to convert such a water-logged condition of the tissues into perfectly definite hæmatomata such as we see in chilblains; and thirdly, that in all probability both chilblains and the water-logged condition of the tissues which we meet with in the lymphatic patient are ultimately referable to a defect of blood-coagulability.[3]

Malarial cachexia.—The subjects of malarial cachexia are not unfrequently also the subjects of chilblains. It is even possible, as I am assured by a medical officer who has experience of the truth of this fact in his own person, to suffer from chilblains on the West Coast of Africa after a severe attack of malarial fever. This liability of the malarious subject to chilblains is in absolute conformity with the fact that the blood of patients, who are the subjects of malarial cachexia, is characterised by a defect of blood-coagulability which is dependent upon a great paucity of white blood corpuscles,[4] especially of polynuclear white blood corpuscles.

Hæmophilic constitution.—I have pointed out in previous papers that the chilblains are of very frequent occurrence in hæmophilic families. This stands in connexion with the fact that hæmophilic blood is, as I have previously shown, characterised by an extreme defect of blood-coagulability which is dependent upon an extreme and hereditary paucity[5] of white blood corpuscles and, in particular, upon a paucity of polynuclear white blood corpuscles.

Treatment of chilblains.—In view of the etiological facts which are thus disclosed, the obvious indication for treatment in a case of chilblains is to take steps to augment the patient's blood-coagulability. In conformity with these indications I placed my patients upon a regimen of calcium chloride (after duly cautioning them against lowering their blood-coagulability by the ingestion of sour fruits, alcohol, or excessive quantities of fluid[6]). Of the 8 cases which are particularised below, six cases (Cases 1, 4, 5, 6, 7, and 8)

[1] THE LANCET, Sept. 19th, 1896.

[2] All these coagulation estimations were made with coagulation-tubes of 0·25 mm. internal diameter, obtained from Mr. A. E. Dean, jun., 73, Hatton-garden, London, E.C. In order to bring the tubes to the standard temperature of 18·5° C. (half blood heat), their butt-ends were first fitted with indiarubber caps, and they were then immersed (point upwards) into a tumbler two-thirds full of water at that temperature. After filling in with blood the tubes were again immersed (this time point downwards and without caps) in the tumbler of water.

[3] It is customary to impute the liability of the lymphatic patient to chilblains to the patient's bad circulation. But in many cases it is, in all probability, not the bad circulation which produces the œdema. It is rather the œdema which impedes the circulation of the blood in the tissues, especially in the tissues of the extremities.

[4] There may in malarial cachexia be as few as 400 white blood corpuscles in the c.mm. of blood.

[5] It is unusual to find more than from 4000 to 5000 white blood corpuscles in the c.mm. of hæmophilic blood, and as few as 35 per cent. of these may be polynuclear white blood corpuscles.

[6] I find that it is quite unnecessary to caution a lymphatic patient against ingesting excessive quantities of fluid, for the typical lymphatic patient, owing probably to that water-logging of the tissues which has been referred to above, is aparently never thirsty. The lymphatic young woman contrasts markedly in this respect with the wizened elderly woman, whose dry tissues seem to require to be irrigated with perpetual draughts of tea.

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responded to this treatment with a marked increase of blood-coagulability. These cases were all completely cured as soon as a sufficient augmentation of coagulability had been achieved. In one of the remaining cases (Case 2) no good whatever resulted from the treatment. In this case, owing perhaps to the maladjustment of the dose of calcium chloride, no augmentation of coagulability was obtained. Finally, in Case 3 only transient and uncertain amelioration was obtained from the treatment. And here, again, only a very transient augmentation of coagulability was obtained.

CASE 1.—The patient was a woman aged twenty-seven years. She suffered every winter from very bad chilblains. On Oct. 31st, 1896, the mean temperature for the day was 38·2° F. The patient's hands were very red and swollen and the skin had a very glazed appearance, especially over the proximal joints of the fingers. The blood-coagulation time was *thirteen minutes*.[7] Twenty grains (1·3 gramme) of calcium chloride cryst.[8] were prescribed night and morning. On Nov. 11th the mean temperature for the day was 44·2° F. The chilblains were almost gone. The skin was no longer glazed, but a certain amount of redness and thickening still persisted. Calcium chloride was ordered to be continued in the same doses. The blood-coagulation time was *nine minutes*.[9] On Nov. 3rd the mean temperature for the day was 40·2°. No notable change occurred in the condition of the hands since the day previous. The blood-coagulation time was *eight minutes, forty-five seconds*. Calcium chloride was ordered to be continued in the same doses until the chilblains absolutely disappeared. The treatment was to be resumed as soon as the chilblains threatened to reappear. On Nov. 11th the mean temperature for the day was 35·1°. The chilblains absolutely disappeared. The fingers are now quite thin and white.

CASE 2.—The patient was a man aged thirty-five years. He suffered very severely from chilblains every winter and was very subject to attacks of urticaria every summer. On Nov. 3rd, 1896, the mean temperature for the day was 40·2° F. Every finger on both hands was markedly stiff and œdematous. The skin over the fingers was reddened and glazed. There was, in addition to the chilblains on the fingers, a tense and painful serous hæmatoma on the hypothenar margin of the right hand. The blood-coagulation time was *nine minutes, twenty seconds*. Forty grains (2·6 grammes) of calcium chloride cryst. at night followed by a 20-grain (1·3 gramme) dose on rising and by another 20-grain dose at midday was prescribed. The mean temperature for the day was 36 2° F. On the 11th the patient reported that the chilblains were better yesterday and that they were as bad as ever to-day. The appearance of the hands bore out the patient's statements. The blood-coagulation time was *ten minutes ten seconds*. Twenty grains (1·3 gramme) of calcium chloride cryst. were ordered three times a day. Owing to a misunderstanding, the patient, however, now took only 20 grains at night and another 20 grains in the morning. On the 9th the mean temperature for the day was 39·1°. The chilblains were said to be no better; they looked rather worse than they were before treatment was begun. The blood-coagulation time was *twelve minutes, thirty seconds*. Owing to external circumstances the observations on this case were now abandoned.

CASE 3.—The patient was a woman aged twenty-five years. She was lymphatic-looking and had suffered severely from chilblains every winter since she was an infant; she had also suffered severely from epistaxis. She had for some time past been taking calcium chloride (30 grains) twice a day somewhat irregularly and with little result. On the whole, however, the chilblains were said to have improved somewhat under the influence of the drug. On Nov. 11th, 1896, the mean temperature for the day was 44·2° F. The fingers were still somewhat swollen and the skin was red and glazed. The blood-coagulation time was *eight minutes, forty-five seconds*. Thirty grains (2 grammes) of calcium chloride cryst. twice a day were prescribed. On the 5th the mean temperature for the day was 41·1° F. There was no appreciable change in the chilblains. The blood coagulation-time was *six minutes, twenty seconds*. Thirty grains (2 grammes) of calcium chloride cryst. three times a day were prescribed. On the 7th the mean temperature for the day was 32·2°. The chilblains were said to be somewhat better. The blood-coagulation time was *ten minutes*. The treatment was continued for some days longer without producing any definite result. It was then abandoned.

CASE 4.—The patient was a woman, aged twenty-seven years, and was a very lymphatic-looking subject; she had suffered very severely from chilblains every winter since her infancy. On Nov. 9th the mean temperature for the day was 36·1° F. The patient's hands presented a very curious parti-coloured appearance, the hand from the wrist to the knuckles being very pallid and all below the knuckles being of a bright boiled lobster colour. The fingers were very swollen and stiff. The blood-coagulation time was *eleven minutes*. Twenty grains (1·3 gramme) of calcium chloride cryst. three times a day were prescribed. This treatment was continued for a week without any marked change either in the blood coagulability or in the chilblains. The patient, however, insisted that she was better and suffered less from itching. After this time the treatment was, owing to external circumstances, very irregularly carried out. On Dec. 21st the mean temperature for the day was 32·2°. The patient presented herself again for treatment. The hands were much in the same condition as before, but were somewhat less swollen. The blood-coagulation time was *eight minutes, forty seconds*. Twelve grains (0·8 gramme) of calcium chloride desicc. three times a day were prescribed. On the 22nd the mean temperature for the day was 32·2°. The fingers appeared not to be so congested. The blood-coagulation time was *seven minutes, thirty-five seconds*. Eighteen grains (1·2 gramme) of calcium chloride desicc. three times a day were prescribed. On the 23rd the mean temperature for the day was 35·2°. The chilblains were said to be rather worse. There was no observable change in the condition of the hands. The blood-coagulation time was *seven minutes, forty-five seconds*. Nine grains (circ. 0·6 gramme) of calcium chloride desicc. three times a day were prescribed. On the 26th the mean temperature for the day was 41·2°. The chilblains were very markedly better. The blood-coagulation time was *six minutes, twenty-five seconds*. Nine grains of calcium chloride desicc. three times a day were prescribed. On the 28th the mean temperature for the day was 43·2°. The chilblains were now practically well. Only a very little redness and a trace of œdema remained. The blood-coagulation time was *six minutes, twenty seconds*. Six grains of calcium chloride desicc. three times a day were prescribed. On the 30th the mean temperature for the day was 39·3°. The fingers had now become perfectly thin and redness had to a very great extent disappeared. The patient expressed herself as perfectly well. The blood-coagulation time was *six minutes*. Six grains of calcium chloride desicc. three times a day till all redness had disappeared were prescribed. Treatment was then to be discontinued and to be resumed on the first re-appearance of the chilblains.

CASE 5.—The patient was a boy aged eleven years. On Nov. 30th, 1896, the mean temperature for the day was 33·1° F. He had chilblains on the feet The little toes on both feet were found to be œdematous and congested. The blood-coagulation time was *eleven minutes*. Fifteen grains (1 gramme) of calcium chloride cryst. morning and evening were prescribed. On Dec. 2nd the mean temperature for the day was 42·1°. The chilblains had quite gone. The blood-coagulation-time was *five minutes, fifteen seconds*.

CASE 6.—The patient was a man aged twenty-two years. He had suffered severely from chilblains every winter. On Dec. 17th, 1896, he had extremely swollen and livid hands; the skin over the chilblains was everywhere peeling off, leaving deep and painful chaps. In addition to the chilblains on the fingers there was a large, tense chilblain of about the size of a walnut over the hypothenar margin of the hand. The blood coagulation time was *nine minutes, five seconds*. Twenty-three grains (1·5 gramme) of calcium chloride cryst. three times a day were prescribed. On the 18th the mean temperature for the day was 30 2° F. The chilblains were less swollen. Itching was said to have been much better than on the previous night. The blood-coagulation time was *eight minutes*. On the 19th the mean temperature for the day was 30·5°. The chilblains were much the same in appearance. The

[7] It is a point worth noting that in connexion with the diminution of blood-coagulability a patient who bleeds freely from the pin-prick which is made in the finger is a patient whose blood-coagulability is considerably abnormal. In such a case it will be unnecessary to examine the condition of the contents of the first capillary tube until an interval of at least from five to six minutes has elapsed.

[8] It is important in ordering calcium chloride to specify either calcium chloride cryst. or calcium chloride desicc., for the first of these preparations is exactly half the strength of the second. I have invariably, unless where otherwise specified in my papers, employed calcium chloride cryst.

[9] In this and in all the following cases the determinations of blood-coagulability were, in order to secure accuracy, made almost at exactly the same hours on successive days.

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itching is said to have been nearly as bad as before. The blood-coagulation time was *eight minutes, twenty seconds*. Fifteen grains (1 gramme) of calcium chloride cryst. three times a day were prescribed. On the 20th the mean daily temperature was 34·1°. The fingers were no longer so swollen. The skin over the chilblains had become quite loose and wrinkled. This was particularly noticeable over the hypothenar margin of the hand. There was no itching whatever the previous night. The blood-coagulation time was *four minutes, ten seconds*. Ten grains (0·6 gramme) of calcium chloride cryst. three times a day were prescribed. On the 21st the mean temperature for the day was 32 2°. There was more itching the previous night; the chilblains were decidedly tenser. The blood-coagulation time was *ten minutes*. Fifteen grains (1 gramme) of calcium chloride cryst. three times a day were prescribed. On the 22nd there had been very little itching the previous night and the chilblains looked very much better. The blood-coagulation time was five minutes, forty-five seconds. Eighteen grains (1·2 gramme) of calcium chloride cryst. three times a day were prescribed. On the 24th the mean daily temperature was 34·3°. The chilblains were almost quite well. There was now no swelling and very little lividity to be seen. The blood-coagulation time was *six minutes*. The patient considered himself perfectly well and considered it unnecessary to pursue the treatment.

CASE 7.—The patient was a boy aged eleven years. On Dec. 19th, 1896, the mean temperature for the day was 30·5° F. He had chilblains on the feet. There was not much to be made out on inspection except a little swelling and lividity. Great complaints were, however, made of intolerable itchiness, and the father said that the boy cried every morning from the pain when he was putting on his boots. The blood-coagulation time was *seven minutes, forty-five seconds*. Ten grains (0·6 gramme) of calcium chloride cryst. three times a day were prescribed. On the 20th the mean temperature for the day was 34·1°. The chilblains were said to be much better and there was no pain on putting on his boots. The blood-coagulation time was *six minutes, fifteen seconds*. Ten grains (0·6 gramme) of calcium chloride cryst. three times a day were prescribed. On the 21st the mean temperature for the day was 32·2°. There had been no further pain or itching. The blood-coagulation time was *six minutes, thirty seconds*; 7·5 grains (0·5 gramme) of calcium chloride cryst. three times a day were given. On the 22nd the mean temperature for the day was 35·2°. The chilblains had absolutely disappeared. The blood-coagulation time was *four minutes, twenty seconds*.

CASE 8.—The patient was a boy aged eleven years. On Dec. 20th, 1896, the mean temperature for the day was 34·1° F. The chilblains on his feet looked very trifling, but great itching was complained of. The blood-coagulation time was *four minutes, thirty seconds*. Twelve grains (0·8 gramme) of calcium chloride cryst. three times a day were prescribed. On the 21st the mean temperature for the day was 32 2°. The chilblains were said to have been less itchy. The blood-coagulation time was *five minutes*. Six grains (0·3 gramme) of calcium chloride cryst. three times a day were prescribed. On the 22nd the mean temperature for the day was 35 2°. There was some itching last night. The blood-coagulation time was *five minutes, five seconds*. Twelve grains (0·75 gramme) of calcium chloride cryst. three times a day were prescribed. On the 23rd the mean temperature for the day was 35·2°. The chilblains were stated to be perfectly well. The blood-coagulation time was *four minutes*.

In conclusion, I would point out that the importance of the facts which have been put on record does not consist solely in the fact that calcium chloride has been shown to be a palliative for chilblains. It consists rather in the fact that these observations contribute to further establish the principle that serous hæmorrhages are often dependent upon a defect of blood-coagulability, and that they may be relieved or prevented in exactly the same way as actual hæmorrhages can be by augmenting the coagulability of the blood.

Netley.

MUNIFICENT GIFT TO THE LEEDS INFIRMARY.—An anonymous donor has given, through Messrs. Beckett and Co., the sum of £4000 to the Leeds General Infirmary. This munificent gift is offered on the distinct understanding that it is used for endowment and not for building purposes, and on this condition the treasurer of the infirmary has gratefully accepted the contribution.

CHOLERA IN PENANG (NOT WATER-BORNE).

NOTES ON MEDIA OF INFECTION, PERIOD OF INCUBATION, RESULTS OF QUARANTINING, ETC.

BY SURGEON-CAPTAIN F. SMITH, A.M.S.,
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DURING the year 1895 cholera prevailed in Singapore, which is only some thirty-six hours' steam from Penang. The disease was several times imported from the former to the latter place among the indentured Chinese coolies who are under Government surveillance; thus a specially favourable opportunity of tracing the history of the cases from beginning to end was afforded. So much has been written and said about "water-borne cholera" of late that other media of infection are in danger of being overlooked, and it is worth noting that experience of the disease in Penang, where the water-supply is excellent, seems to show clearly enough that cholera may be spread about by human intercourse without the agency of water. It also teaches that the much-decried quarantine is *sometimes* effectual in preventing the dissemination of disease, and that the incubation stage—or rather the period between exposure to infection and the onset of illness—may be prolonged much beyond the five days' limit usually given.[1]

On July 29th, 1895, a Chinaman, who had just come direct from his ship to the office of the Protector of Chinese, was sent to hospital, when the disease was diagnosed as cholera. He was at once sent to the Hospital for Infectious Diseases, and the depôt containing the coolie passengers by the same ship was put in quarantine under a police guard. (This course was pursued in each Depôt in which cholera occurred subsequently or in which there were any coolies off a ship which had brought a cholera case.) Two more cases occurred among these men three days later and no more. About the same time a sick coolie sent direct from another Singapore ship to hospital was pronounced to be suffering from cholera. Owing to the above occurrences a five days' quarantine was imposed on vessels bringing coolies from Singapore. The owners of vessels were allowed to land their passengers on Quarantine Island and go on instead of waiting in harbour. The s.s. *Hebe* did this three times, and on the third occasion cholera appeared among the coolie passengers landed by her; there were three cases, all being fatal. On Sept. 4th, five days after the last case had gone to hospital, the passengers were released. Some of the coolies went to Perak, a native State on the mainland, and on Sept. 9th one of them developed cholera. This was ten days after the last case on Quarantine Island and five days after leaving there. Quarantine Island, I should say, is a small island near Penang, used for a leper asylum and for quarantined passengers; it has no connexion with the hospital for infectious diseases which is on Penang Island.

On Sept. 7th the passengers of the s.s. *Ban Hin Guan* were landed on Quarantine Island and released after five clear days as no case had occurred. Most of the coolies went to the "Kia Heng" Depôt and the remainder to the "Sin Seng Hong Chan" Depôt. The morning after the release of these passengers, most of whom were coolies, one of them had cholera in the "Kia Heng" coolie depôt, more than six days after leaving Singapore. The depôt was promptly quarantined. Two days later there were two more cases, and then the disease stopped as far as this depôt was concerned. In the meantime the *Calypso* had come in, and owing to the Government at headquarters (Singapore) having cancelled the order for quarantining Singapore ships just after the arrival of the *Ban Hin Guan*, the coolie passengers of the *Calypso* went direct to the depôt, and on the sixth day from leaving Singapore one of the coolies had cholera in the "Ap Dho" depôt and another in the same place four days later. Here the disease ends in the "Ap Dho" depôt. On Sept. 21st the s.s. *Calypso* again arrived from Singapore with coolies, who were put in the "Sin Seng Hong Chan" depôt, in which, as before stated, there were a few of the men of the *Ban Hin Guan*. This being the seventh day since the last case among the men of the *Ban Hin Guan*, and there

[1] Vide Quain's Dictionary and other works.

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being a dearth of room elsewhere, it was considered safe to allow newly-arrived coolies to enter this depôt in which there had been no cholera. On the same day after the order for the opening of this depôt had been issued, but an hour or two before the entry of the men of the s.s. *Calypso*, a *Ban Hin Guan* man in this depôt was sent to the General Hospital among the ordinary sick and the disease proved to be cholera; it was followed by another case in the evening. The depôt was quarantined, and as the men of the *Calypso* had already mixed freely with the others it was considered unsafe to let them out, and they were therefore included in the quarantine. Three days later another man from the *Ban Hin Guan* and one from the *Calypso* had cholera, and on the 26th another man from the *Ban Hin Guan*. The man from the *Calypso* may have contracted the disease in Singapore, or on the ship, or in the depôt, but how about the first case from the *Ban Hin Guan* in this depôt? He had been more than fifteen days away from Singapore. The depôts are always closed and privately guarded to prevent the escape of the coolies with their advanced pay, so there could have been no inter-communication; they are entirely separate establishments. For convenience of employers of labour they are all in the same locality, but there are several business and dwelling houses, in none of which cholera occurred between this depôt and the "Kia Heng" and other depôts. From the readiness with which the people report small-pox, chicken-pox, &c., it may be assumed that they would not conceal cases of the much-dreaded "Muntah Cherit" (cholera). It might be suggested that this man contracted the disease on Quarantine Island, but even so it would make the incubation period more than ten days. Strict precautions were taken in the depôts and each patient was promptly removed to the hospital for infectious diseases with all his belongings, after which his room was disinfected and whitewashed. The pail system is in vogue for excreta; the pails are emptied daily. After each case the pails were taken away and new ones supplied, and the seats, walls, &c., cleaned and disinfected. The depôt was scrupulously clean, and the only water in the place was the regular municipal pipe-supply, such as is used by the 92,000 inhabitants who had no cholera. The basement is tiled and somewhat damp from over-much washing down, and here the men bathe daily by pouring water over themselves standing. The water off their bodies runs away at once into the open drain outside in the street. There is in the bathing-place a slight fæcal odour from the latrines. The upper rooms of the depôts are over-crowded and the inmates never get out night or day until they leave for the estates; the coolies make matters worse by crowding together in one or two rooms to play cards, and in the result the air is perceptibly impure and laden with the products of respiration. Acting on the supposition that there was something wrong with the depôt itself (inasmuch as isolation of sick and disinfection of rooms, which had appeared to be successful in other depôts built on the same pattern did not arrest the disease), it was decided to empty it, and on Sept. 28th the whole of the coolies (ninety in number), of whom it should be noted that only thirteen were passengers from the *Ban Hin Guan*, were removed to Quarantine Island. The depôt was then thoroughly disinfected from roof to basement and re-occupied by fresh coolies, after which there were no more cases of cholera in it. The disease, however, did not immediately cease among the men who had been removed to Quarantine Island. On the 30th there were two cases—one a man from the *Ban Hin Guan* and one a man from the *Calypso*. Seven days later two more men from the *Calypso*, and on Oct. 11th another man from the *Calypso*. All five cases were fatal. This ended the outbreak.

It would have been better to have removed these coolies to some other place instead of the Quarantine Island, as we cannot now say whether they brought the disease with them from the "Sin Seng Hong Chen" depôt or contracted it from germs left on the island by the s.s. *Hebe* passengers. Every sanitary precaution, however, was taken by the colonial surgeon, who is confident that the disease was not contracted on Quarantine Island. The men had abundance of fresh air and exercise there. The water-supply is the same as that used by the adjacent leper asylum, in which there are over 500 lepers, among whom there was no cholera.

The first case among all four sets of passengers may be safely assumed to have been contracted in Singapore, though it is possible, of course, that the men of the *Ban Hin Guan* were infected on the quarantine island. The later ones are not easy to account for unless we suppose the disease was handed over from one man to another, and this is probably the correct view. The occurrence of the last five seems to show that the attacks were not due to any sanitary defects inherent in the "Sin Seng Hong Chan" depôt, unless they are to be looked upon as instances of prolonged incubation. It may also be taken as fairly conclusive that the cases were not water-borne, even if the Chinese drank water instead of the universal tea. The case for quarantine seems to be made out in the history above given. Had these men mixed with the dense Asiatic population, ignorant as they are of sanitary matters and living under worse conditions than the coolies, Penang might have suffered like the sister settlement. As to incubation and media of infection, it is clear that either the incubation in some of these cases was very long or the infective matter was carried about by the men for some time before it was inhaled, swallowed, or otherwise absorbed into the system. In this regard the first case in the "Sin Seng Hong Chan" depôt seems most convincing; the period cannot be made less than ten days, and was most probably fifteen. The disease is not likely to have been conveyed by food, inasmuch as all the meals are served hot from a separate building to which the coolies have no access. Food is not kept in the coolies' rooms for flies from the latrines to settle on. The Chinese do not eat with their hands, like the Mahomedan Malays, but use spoons and chopsticks.

On the whole it would seem that if the disease was not in all the cases contracted in Singapore the infection must have been aerial; but whether by germs emanating from the bodies of the men or shaken off their clothes or hair, or given off by the fæces or vomit, is entirely a matter of speculation.

ON VARIOUS FORMS OF TALIPES AS DEPICTED BY X RAYS.[1]

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(Continued from p. 1812, vol. ii., 1896.)

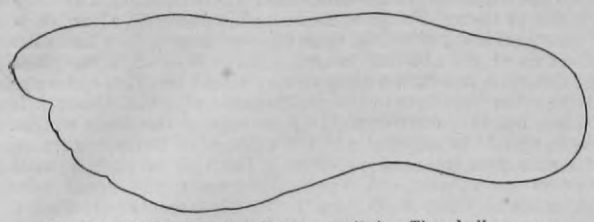
FLAT-FOOT is a deformity which, if further advanced, is termed valgus; it is characterised by loss, more or less complete, of the transverse and longitudinal arches of the foot, the sole being so flattened that the whole of it comes to the ground. If the sole of a well-formed foot be wetted with some coloured fluid and placed on a sheet of paper the impression left by such contact is as follows: the heel and the pad just behind the toes (thenar and hypothenar eminences) form the larger parts of the impression; they are connected by a narrower portion corresponding to the outer border of the waist of the foot. The outline of this narrower part is on the outer side convex and on the inner margin strongly concave; indeed, it is as though a semicircular piece were punched out of the diagram, the gap representing the place where, on account of its normal arched construction, the sole does not come to the ground. If in the same manner a print of a flat or valgous foot be made the impression presents no such gap, for the whole breadth of the sole, at the waist as elsewhere, comes in contact with, and makes its mark on, the paper. Moreover, the outline of both borders is changed: the outer one is no longer convex, but sharply concave; the inner one convex, presenting a considerable projection opposite the most hollow portion of the outer margin. Indeed, the words concave and convex hardly describe the form, for in front of, and behind, the medio-tarsus both halves of the foot are deflected outwards; therefore there is at either extremity of that joint what may be described as a rounded-off angle—at the outer margin an entering, at the inner a salient one. These are readily perceptible if the observer place his head in front of the erect patient's waist and look perpendicularly down on the naked foot. Or if he wish, as is desirable, to keep a record of the condition, he may, letting the patient stand on a sheet of paper, trace the outline with a sufficiently long cedar pencil. In this way was obtained the diagram here given (Fig. 12), the patient being directed to throw as much of the body weight as possible upon the distorted foot. The entering angle corresponds to the calcaneo-cuboid joint, the salient one to the head of the astragalus and to the

[1] The skiagrams were taken by Mr. Sydney Rowland, late Shuter Scholar, St. Bartholomew's Hospital.

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scaphoid. Combined with this double abduction is outward rotation of both halves of the foot, a combination which, as a little reflection will show, must destroy both longitudinal and transverse arches and bring the bones forming the inner extremity of the medio-tarsal joint to the ground; the mechanism of this mal-posture will be explained in the sequel. The abduction, outer rotation, and the thereby conditioned yielding of the arch cause such projection of the head of the astragalus and of the scaphoid that those two bones are plainly visible through

FIG. 12.



Tracing of flat-foot (medium severity). The hallux was valgous, but held in position during tracing.

the skin and other soft parts, as in the annexed photogram. It will be observed that the inner malleolus is less marked than in a normal foot, being somewhat obscured by the bulging of parts below. This bulging forms a rather broad line of rounded eminence, traceable downwards and forwards from near the tip of the malleolus in a direction of a right angle and a half (135°) to the axis of the leg. A little closer inspection or palpation will show that it really consists of two rounded projections separated by a space of lesser prominence; the posterior of these belongs to the astragalus and the anterior is the upper inner corner of the scaphoid (not the tuberosity). The inner lower border of the foot forms a line that is very nearly straight; it is in contact throughout its whole length with the surface on which it stands. The upper outline, that of the instep, is also nearly straight, or rather when viewed quite from the side—that is, by an eye on the same horizontal level—it forms a concave line, hollow according to the severity of the case. The whole foot is lengthened by straightening out of the arch, the heel projects abnormally backward, and the anterior segment forward. In a large proportion of cases the anterior tibial tendon is unduly prominent, or even if not visibly so it frequently, as also the posterior, may be felt as a tight cord beneath the skin. At all the metatarso-phalangeal joints the toes are somewhat flexed,[2] most markedly the hallux, which is also usually thrown outwards (valgous), causing the second to lie over, or, as in this case, mounting above, that toe. I have not seen any instances of adduction of the metatarsus on the tarsus as described and figured by Rediard,[3] but I have more than once found it abducted.

FIG. 13.



Photogram of flat-foot (medium severity). Hallux valgus.

FIG. 14.



Skiagram of foot shown in previous figure.

In taking a skiagram of a part in which several bones lying one behind the other intercept the x rays the shadows

[2] This flexion is produced by tightening of the plantar fascia due to straightening out of the arch.

[3] Mr. Walsham (Deformities of the Foot) reproduces Rediard's figure, but says he has not met with the condition.

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so produced are superimposed; they become thus somewhat intermingled, and a little diligence must be used in their interpretation. Such difficulties have already been encountered in my former illustrations and they recur in the annexed figure. (Fig. 14.) A little assistance, therefore, may aid the reader to differentiate the various bones. The three cuneiforms cannot be distinguished from each other; their shadows coalesce and overlap, but by taking the base of the fifth metatarsal bone as a guide the anterior end of the cuboid can easily be perceived, and the bulk of the bone is not difficult to make out, though the shadow of the scaphoid is so mingled therewith that it seems desirable to indicate how the two are to be differentiated. The highest and the lowest shadow is thrown by the scaphoid, the upper surface of which is marked, being seen quite in profile as a straight, rather short line just anterior to the head of the astragalus; running down from the ends of this line the back and front edges of the shadow diverge somewhat, then converge again, and coming together each in a crescentic curve, form the margins of the shade thrown by the tuberosity. The shadow of this part is of rather a light tone and is the lowest projection in the middle of the sole. The cuboid marks out a quadrilateral figure, the long axis being at right angles to that of the scaphoid; its hinder end abuts on the os calcis and partially overlaps the neck of the astragalus; the front one is to some extent concealed by the base of the fifth metatarsal bone. The upper and lower margins of the shadow are nearly horizontal, and cross, therefore, almost at right angles the back and front limiting lines of the scaphoid. The lower margin of the cuboid is pretty deeply notched, marking the outer end of the peroneal groove.

We may now go on to examine the bones. The whole astragalus, more especially the neck, is short. Probably a certain allowance must be made for the foreshortening due to abduction, yet this can only account for a small amount of the stunted shape. Moreover, the neck is bent upward. I would ask the reader to compare this plate with Fig. 2, a normal foot, and with Fig. 1, an equinous foot,[4] in order to get an idea of these changes. The os calcis is also somewhat abbreviated and its greater process is likewise deflected upward. The upper surface of the scaphoid is short from before backward. I find, by measuring a number of bones, that the proportion between the length from above down and the antero-posterior breadth of that surface is as 24 : 10. If the dimensions of this bone, as seen in the skiagram, were in the same ratio the upper edge of the shadow should be 5·8, whereas it is only 4. It has been shortened by pressure due to straightening out of the arch, or perhaps the sentence might be put thus. "As the crown of the bridge has slowly subsided the material of its keystone has been compressed." This view of the foot can only indicate, not distinctly show, the abduction of anterior and posterior halves above described; the rotation, however, is distinct, for on looking straight on the outside of a well-formed foot, the eye being on the same level, one should see, on account of its obliquity, a good deal of the dorsum, not merely the edge, as in the skiagram. In more severe cases this rotation is often sufficient to bring the external surface of the calcaneum in contact with the outer malleolus; indeed, this very nearly occurred with the extremity here shown when a certain amount of weight was thrown on the foot; but in that position the patient could not remain still sufficiently long; therefore, the skiagram had to be taken recumbent, otherwise the arch would have appeared much flatter and the tuberosity of the scaphoid would have projected still further into the sole.

It is thus abundantly clear that flat-foot and valgus are due to rotation outward of the extremity, followed by abduction on each other of anterior and posterior halves. It remains now to elucidate the mechanism of these changes. The feet of new-born infants are nearly flat, for though the outer lies lower than the inner border of the sole, yet there is under the waist of the foot hardly any hollow. The condition must not, however, be accepted as a deformity, for congenital varus or flat-foot is rare; indeed, its occurrence as a pure deformity unmixed with either calcaneus or equinus is doubtful. The infantile form of foot may, it is true, persist into after life; such child or adolescent waddles somewhat on out-turned, low-instepped feet; this "splay-footedness" though ungraceful, hardly amounts to a deformity. But by far the more usual course of events, that on which the activity and deftness as well as the beauty of the foot depends, is that soon after its proper use begins the hitherto flat sole should develop a well-marked arch and the low instep a high, prominent curve. The normal and correct form is, therefore, due to station and progression; it is, as it were, a bye-product of function. Hence, as such performance is due to muscular effort, it follows that these efforts mould the foot into shape. The usual and accepted assumption is that the tibial muscles are the chief, or rather that they are the only agents in lifting the tarsal bones into an arch and in sustaining them there. But neither of those muscles is advantageously placed for such action; the anterior is inserted into the distal end of the cuneiform, where the arch is already declining towards its front buttress; the posterior, after bending round the malleolus, runs forward almost in a line with the axis of the anterior tarsus; neither is at all in the place or direction in which a sling or stay would be. These muscles have other functions in the performance of which the arch is aided, but they cannot possibly so oppose the body weight as to uphold it, especially if the astragalus begin to turn on its axis and its head to droop. But this is exactly what occurs in valgus, and very often, as in the figure here submitted, one finds both tibials vainly struggling against that tendency, more especially if the condition be recent and somewhat rapid in its development. In older cases those muscles give up the useless effort

FIG. 15.



Nascent flat-foot from excessive labour. Ineffectual effort of anterior tibial to uphold arch. (From Barwell on Clubfoot.)

and one finds them flaccid. Although, then, these muscles are unable to prevent rotation of the os calcis, and with it of the astragalus, and though there is no muscle inserted into either bone that can perform this office, yet nature has provided another method. Projecting from the inner side of the calcaneum is a remarkable shelf or buttress of bone, upon which reposes the head of the astragalus, and which is called its sustainer. Viewed either from the front or back this is seen to project from the side at about a right angle to the plane of the inner surface of the calcaneum; it lies, therefore, very far beyond the centre of gravity and the line of support. The slightest weight on that shelf, therefore, must, unless it were upheld, overthrow the whole bone. The sustentaculum can of, and by, itself sustain nothing. The lower surface of the process, however, is scored by a wide groove (the photogram represents it in shadow), in which runs the tendon of the flexor longus pollicis, the muscle which does the chief work in most strong movements of the foot, and which from its oblique position behind the leg bones is most advantageously placed. In rapid walking the body is urged forward by the great toe; even in standing its aid is called for, in running, leaping, dancing it is in full use, and each time it thus exerts its power it draws up and sustains that process of the os calcis, and through it the head of the astragalus and the arch of the foot. The real sustentaculum tali is the flexor longus pollicis muscle. Hence, when the infant walks, using its toe for balance and progression, the os calcis is turned a little on its outer side, the head of the astragalus is lifted, and the arch of the sole and the prominent curve of the instep become duly formed. But certain conditions may interfere with the due performance of these functions—the child may from weakness of muscles either of back, of limbs, or of both, or from being put on his feet too

[4] THE LANCET, July 18th, 1896, pp. 160, 161. In both figures referred to in the text the neck of the bone is bent *down*.

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early, find difficulty in balance and, therefore, considerably everts the foot, thus throwing the great toe out of work. Rickets by causing bends of the leg bones may render them short in comparison to the muscles, which then can hardly perform their duty. A little later in life the body weight of a fat or of a feeble child may overload the muscles, or (and this may occur long after childhood) he may be put to carry burdens beyond his strength; in either of these cases the pressure downward on the sustentaculum being greater than the flexor of the hallux can uphold the os calcis and astragalus must roll over. Furthermore, any circumstance

FIG. 16.



Os calcis (normal); posterior view.

which prevents the great toe performing its function and task causing the work to be done, not as it should be, by the last phalanx of the great toe, but by the head of its metatarsal bone, not only throws that flexor out of work, but calls forth improper over-action of other muscles especially of the peroneus longus.

One of the most common modes of thus destroying the use and value of the toe is the wearing of foot-gear coming to a point in the middle line and therefore compelling the great toe to lie over, or under, the second, where it cannot possibly fulfil its office. Many people, more especially many girls and young women, are thus sedulously and painfully engaged on the artificial production of flat-feet and of avoidable lameness.

(To be concluded.)

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

POISONING BY ANTIPYRIN; RECOVERY.

BY EDWIN WEBSTER, L.R.C.P. LOND., M.R.C.S. ENG.

A GIRL, aged nineteen years, whom I was attending for anæmia and who was taking Blaud's pills, came to me one morning quite recently complaining of headache. I prescribed for her a draught containing five grains of antipyrin, seven grains of bromide of potassium, one drachm of compound spirit of ammonia, and water to one ounce. In about ten minutes after taking it a hurried message was sent for me to go to see the patient, as she was taken seriously ill. On arrival at her home within a few minutes the following conditions were present—viz., cold shivers, severe and gasping dyspnœa; the face was swollen, especially about the eyes, and so much so as to prevent any possibility of opening them or of seeing, except with great difficulty, the pupil; and the body was covered with a bright red rash like scarlet fever and resembling that of urticaria, so that it presented weals which were of different sizes, from that of a small papule to some as large as five-shilling pieces. The temperature in the axilla was 97° F., and the pulse, which was very intermittent, was only 50. She complained of no pain. The tongue was very dry. The lips and general aspect were decidedly cyanotic. I immediately had the patient put to bed and administered stimulants in the shape of whisky, &c., with warmth, and medicinally I gave strychnine with digitalis. Notwithstanding all that was done she remained in this state for about eight hours, with the exception of the shivering, which passed off at the end of three hours. When beginning to rally the breathing, which at one time was so bad that I thought I should have to resort to artificial respiration, first showed improvement, and in about four hours later—except that the rash, which had become fainter, was present, together with a slight puffiness around the eyes—she seemed to be very little the worse for her experience. Next evening she was up and felt well, though somewhat weak, and the subsequent day she went about her work as usual. The rash took about thirty hours to finally disappear. This case, I consider, is interesting on account of the rapid onset of the attack and the quick appearance of the rash, together with the severe symptoms after such a moderate dose of antipyrin.

Brighton.

NOTE ON THE FAMILY HISTORY OF A PATIENT WITH ICHTHYOSIS.

BY W. G. WILLOUGHBY, M.D. LOND.,
MEDICAL OFFICER OF THE EASTBOURNE INFECTIOUS DISEASES HOSPITAL

A BOY having been sent into hospital under my charge suffering from diphtheria I noticed that he had ichthyosis badly and made inquiries as to the other members of the family and found as follows. The boy was one of a family of eight, in order thus: a boy, aged fifteen years, has ichthyosis; a boy, aged fourteen years, not anything wrong with his skin; a boy, aged twelve years, has ichthyosis; two girls, aged respectively ten years and nine years, nil; a boy, aged seven years, has ichthyosis; a girl, aged five years, nil; and a boy, aged five weeks, has ichthyosis. The parents and grand-parents of this family are quite free from skin disease, but the mother had heard that her father's mother had the disease. The mother of the family above mentioned has two sisters both free from skin disease, and one of these has children all free from skin disease. The mother's brothers, however, like her sons, are affected, and again one escapes the disease while the remainder, two in number, have ichthyosis. One of these two is married, but his seven children (boys as well as girls) are all free. His wife, however, who was said to have had a good healthy skin at the time of her marriage, has since developed the disease, according to my informant, her sister-in-law. She is only connected with the affected family by marriage.

It is interesting that in these two families the girls are quite free while the boys have the disease (with one exception in each family) and that though the girls of the senior family are free, while the boys are affected, it is through one of the free females that the disease has been passed on to the next generation of boys and not through the affected males.

Eastbourne.

A CASE OF SUPPURATING APPENDICITIS.

BY W. MACBAIN, M.D., C.M. ABERD.

MY excuse for reporting this case is its departure from the rule that free or repeated suppuration implies the obliteration of the appendix and consequent immunity from subsequent attacks. In a paper recently published by Dr. A. Woods[1] it is shown that this result occasionally occurs in cases of suppurative appendicitis when the abscess is opened and drained, the appendix not being removed, a recurrence having been met with in about 5 per cent. of the cases treated in this manner.

The patient is a robust, otherwise healthy man, aged about forty years, following an employment which necessitates occasional heavy manual exertion. He first came to me in June, 1895, suffering from an apparently mild attack of appendicitis. The case lingered for a couple of months without any serious relapse, but there were occasional slight

[1] Medical Record of Philadelphia, Aug. 22nd, 1896.

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rises in temperature and a tumour formed about the size of an orange, which, however, gradually cleared up. On allowing him to leave his bed at the end of that time he at once relapsed and on my advice entered the Manchester Royal Infirmary. For three weeks after admission there was no rise of temperature or pain and he was permitted to get up, when his temperature at once increased to 104° F. Mr. Southam, under whose care the patient was, incised over the appendix, but such a copious flow of offensive pus welled out that it was not considered advisable to search for, and remove, the appendix, which was not seen; the abscess cavity was thoroughly washed out and a large drainage-tube was inserted. This was gradually shortened, and at the end of a month he was allowed to go home. Within a week of his return to work an abscess pointed at the old scar, and he was re-admitted to the infirmary, where the wound was freely opened, but the parts were so matted and densely adherent that the appendix could not be found, and Mr. Southam scraped out and drained the cavity, the wound healing fairly quickly. For nine months the patient continued to be in good health, but in October, 1896, an abscess again pointed, which I incised and drained, the man resuming work within a month. In the second week of this year he again appeared in my consulting-room, explaining that the old symptoms had returned but feeling disinclined to give up his employment the abscess had burst with copious discharge, and he himself cut five inches of drainage-tube, inserted it for four and a half inches, and dressed the wound with a pad of cotton-wool. He brought with him two small pieces of tissue which had come through the tube. These look reasonably like portions of the appendix, so there is a hope that this may prove the last of the series of relapses.

Cheetham-hill, Manchester.

A CASE OF ASPIRATION OF THE PERICARDIUM; LIFE PROLONGED EIGHT MONTHS.

BY JOSEPH JONES, M.B., CH.B. VICT.

THE patient, a girl fifteen years of age, suffered from mitral regurgitation left by acute rheumatism several years ago. On Jan. 6th, 1896, she was taken ill again with acute articular rheumatism and improved under the usual treatment until the 24th, when she became worse with great pain at the heart from pericarditis. She was blistered at the præcordium and put on salicylate of soda and morphia but got no better. On the 27th there was a loud see-saw murmur and the cardiac dulness extended to half an inch beyond the right sternal border, to the second intercostal space above, and to one and a half inches outside the left nipple line. The pain was somewhat easier. There was extreme dyspnœa, and the breath-sounds heard in the interscapular region were of a very loud and harsh bronchial character from pressure by the distended pericardium on the bronchi. This all grew worse until Feb. 2nd, the date of the operation, when the respiration was 80 to the minute, the pulse 160, and the temperature 99° F. The patient was quite dusky in the face and undoubtedly *in extremis*. After an exploratory puncture with a fine needle the medium-sized cannula of Dieulafoy's aspirator was used, having been previously sterilised by boiling in a 1 in 20 aqueous carbolic solution and subsequently kept in 1 in 10 carbolic acid in rectified spirit of wine. The skin was cleansed with the latter solution, and the trocar and cannula were inserted in the fourth intercostal space one and a half inches to the left of the sternum, in a direction downward and backward. Four and three-quarter fluid ounces of sherry-coloured serum (frothy, probably from air leaking in at the connexions of the aspirator) had been slowly withdrawn when a little blood came. Aspiration was then stopped and the cannula removed for fear of injuring the myocardium. The wound was covered with a piece of infirmary plaster. The dulness had diminished to practically its normal limits, and half an hour after the operation the patient was markedly better, the respiration being 60 and the pulse 140 per minute. The character of the breath-sounds could not be investigated just then as the patient was much too feeble to be troubled, but on the 9th they were much softer and quieter, the frequency being 36 per minute; the pulse was 108 and the temperature 98·5°. The patient continued to improve until the middle of June, when she was able to go to Southport for a few days. This appeared not to suit her for she commenced to be worse again, the heart dilated, and about the middle of August she developed anasarca. She died on Oct. 5th.

Leigh, Lancashire.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GREAT NORTHERN CENTRAL HOSPITAL.

RE-EXCISION OF ELBOW AFTER A LAPSE OF THIRTY-SIX YEARS.

(Under the care of Mr. PEYTON T. B. BEALE.)

IT is very unusual for surgeons to have an opportunity of re-excision of an elbow thirty-six years after it has been excised, nor is it usual for tuberculous disease to remain quiescent and to re-appear after so long a time in a patient who has performed hard manual labour all his life. Ollier has recorded a case in which he removed bone from the elbow on three occasions, at varying intervals, with a successful result, and there are several cases of a second resection with gratifying results known. In all probability the long interval which had elapsed between the two operations was most useful in adapting the parts to a second resection in this case. For the notes of the case we are indebted to Mr. H. R. Wadd.

A strongly built man, aged forty-seven years, was admitted to the Great Northern Central Hospital early in September, 1896. Thirty-six years ago—i.e., when the patient was eleven years of age—his left elbow-joint was excised at the Royal United Hospital, Bath, by Mr. Gore for tuberculous disease. A copy of the "operation register" shows the operation to have been performed on Dec. 15th, 1860. The result was entered as "cured." The patient said that the wound soon healed completely and he had an exceedingly good and useful limb—indeed, he has earned his living by hard manual work, lifting very heavy weights with the left arm, and he had not had the least pain or trouble in it until 1896. In June, 1896, the false joint at the left elbow became painful and swelled considerably; pus formed and it "burst," leaving two or three sinuses. On admission a very large abscess existed, which the house surgeon at once freely opened, and on inserting a probe found much bare bone. A few days after, on Sept. 15th, a long incision at the back of the elbow was made by Mr. Beale and about one and a half inches of the lower end of the humerus and at least an inch of the upper ends of the radius and ulna were removed. Mr. Beale, having dissected out as much of the diseased tissues as was possible, thoroughly scraped the intervening tissues. There was no doubt as to the disease of the bones being tuberculous. The wound was closed and tubes inserted and the limb put up on a straight splint so padded as to allow the limb to remain slightly flexed. It healed rapidly; the splint was discontinued on the sixth day and the patient was discharged on the twentieth day. On the twenty-eighth day the wound was completely healed, and the patient could lift a chair with ease with the left hand.

Remarks by Mr. BEALE.—The limb was put up very slightly flexed, because it was supposed that the patient would only have a little movement at the elbow, and seeing that the limb had been shortened about two inches at the first excision and again about three inches at the second excision I thought that this position of the limb would be the most useful for general work. The good result of the second excision is due to the excellent behaviour of the patient after the operation and to the fact that the house surgeon opened the abscess so promptly, thus putting the parts in a favourable state for excision. Had this not been done I feel sure amputation would have been the only

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available treatment. I am greatly indebted to Mr. J. Macready for allowing me to have charge of the patient and to Mr. Rigg, house surgeon to the Royal United Hospital, Bath, for a copy of the operation register relating to the case.

BRISTOL ROYAL INFIRMARY.

THREE CASES OF ACTINOMYCOSIS.

(Under the care of Mr. GREIG SMITH, Mr. HARSANT, and Mr. BUSH.)

THREE cases of actinomycosis having occurred within six months at the Bristol Royal Infirmary the following record will be of interest. In two cases the correct diagnosis was made before operation; in each of these the history was very clear and the signs typical. In the third case the diagnosis was made on the operation table as soon as the characteristic granules were perceived in the pus. Iodide of potassium was used in the treatment of all three and was probably of service in the third case. For the notes of these cases we are indebted to Mr. Thomas Carwardine, senior resident officer.

CASE 1. (Under the care of Mr. Greig Smith.)—A man, aged twenty-three years, was out in a strong wind on March 20th, 1896. He had some chaff loose in the pocket from which he took his handkerchief to wipe his nose, in doing which some dozen small pieces of chaff blew into his mouth. He managed to get rid of all but one piece, which appeared to be forced into the floor of his mouth by the tongue in the endeavour to remove it. About a fortnight afterwards he came to the Infirmary, but nothing definite could be found. Next day his right lower first molar began to ache and was removed. Two weeks later a swelling appeared beneath the lower jaw on the right side and soon spread across to the left side. He was admitted as an in-patient on June 12th. On admission he presented the signs of a sub-acute sub-maxillary cellulitis extending across the crop of the neck. The swelling was slightly red, but very tender and brawny. The floor of the mouth was hard and raised and pushed the tongue upwards and backwards. There was some obstruction to laryngeal respiration and preparations were made for a possible immediate laryngotomy or tracheotomy. With fomentations the condition of the mouth improved, but an abscess formed in the middle line of the neck. This was opened on the 14th, but on searching the pus no granules could be seen. On July 14th another abscess was opened on the right side containing about half a drachm of pus with some suspicious granules, which, on microscopical examination, proved to be masses of the ray fungus. The patient was put on ten grains of iodide of potassium thrice daily, and several small abscesses which have from time to time appeared have been similarly treated. The disease now seems to have spent itself and the patient is in perfect health.

CASE 2. (Under the care of Mr. Harsant.)—A healthy-looking countryman, aged sixty-five years, came into the infirmary on Nov. 9th, 1896. About two months previously he was preparing some thatch from the straw of Italian wheat when he experienced a pricking sensation in the throat due to the lodgement of one of the fine "spears" of the wheat. The sensation remained for about two days and then he felt nothing more for a fortnight. Then a lump appeared under the left side of the jaw and it continued to increase up to the time of his admission. When admitted a firm, smooth mass was present in the left sub-maxillary region, but slightly tender, fairly fixed, apparently infiltrating into the surrounding tissues, and rather adherent to the skin. On the left anterior pillar of the fauces was a small ulcer with scarcely any induration, but marked congestion around it. Iodide of potassium was given, but discontinued on account of iodism. On Nov. 18th the mass below the jaw was opened and scraped, some puriform material escaping. Microscopical examination confirmed the diagnosis of actinomycosis. The patient was discharged on Dec. 7th, the wound being practically healed as well as the ulcer on the fauces.

CASE 3. (Under the care of Mr. Paul Bush.)—The patient was a man, aged thirty-nine years, who had been for some time in the medical ward with a gradually increasing swelling of the chest the nature of which could not be determined. It was thought possible that it might be a residual empyema, a sarcoma, a gumma, or necrosis of rib. There was a large, rounded, semi-fluctuating, boggy, and tender swelling extending from the left clavicle to the upper border of the fourth rib and from the sternum to the left axilla. The patient was operated upon on May 21st. A little pus came away from the incision and granules were recognised at once and the diagnosis cleared up. Subsequent microscopical examination proved confirmatory. The surrounding tissues and pectoralis major were much involved and indurated. A considerable portion of the pectoralis major was cut away, a counter opening made in the axilla, and the area thoroughly scraped. No communication with the pleural cavity could be discovered. On June 9th the operation was repeated and iodide of potassium was now administered. On the 26th a fluctuating swelling appeared over the left supra-scapular fossa and the iodide of potassium was increased to twenty grains three times a day. From this time the dose was augmented until the patient took fifty grains thrice daily. Subsequently one or two collections appeared in the upper part of the back and were opened and scraped. From time to time a little blood-stained expectoration occurred, granules being absent, but apart from this there was no indication to show that the lung itself was involved.

Remarks by Mr. CARWARDINE.—Notwithstanding the large amount of iodide the patient in Case 3 had taken he has become much stouter than before and weighs more than he ever did in his life. The condition in front of the chest quieted down, excepting one or two very small unhealed places. At the back of the chest, however, there is a soft superficial fluctuating mass. There is no distinct evidence that the pleura or lung is involved, and there are reasonable hopes that the affection will in time be cured. Very careful inquiries have been made to find out the cause in this case, but without result. He worked for a large firm, and full inquiries were made of the firm, but to no purpose. He was, he said, fond of putting spills of shavings of wood into his mouth; but the most interesting fact is the following, which was elicited without leading questions and checked by cross-examination. He states that he has much more than most people a predilection for sucking hay and straw. The habit with him is so irresistible that if he saw a hay-cart on the other side of the road he could not resist the temptation to cross in order to get a piece to suck. He seems, indeed, to have the imperative idea that he must suck straw whenever possible. In view of the causation of actinomycosis this propensity seems worth mentioning as having some bearings on the case. Grouping the cases together a few points are worthy of special notice. For instance, the periods of incubation between the inoculation and the appearance of marked swellings seem to have been considerable. Although the appearances of each were quite characteristic there was some slight diversity in the microscopical characters, for it was noticed in Case 2 that the amount of mycelial threads was very great indeed as compared with the number of the true ray elements. Some parts of the specimen appeared to present a field full of such threads without any complete actinomycetes—threads quite distinct from isolated club-shaped processes. The effect of iodide of potassium can only be estimated in Case 3, and as this case has greatly improved, although it appeared almost hopeless from a surgical point of view, some considerable benefit may have been derived from it. The rapid disappearance of the granules from the discharge under iodide of potassium, as has been recorded in similar cases, was not, however, observed in this case. An opportunity of testing this may come later. The possibilities of diagnosis and the favourable termination in these cases will not be lost sight of. I have to thank the respective surgeons for their kind permission to record the above cases.

SWANSEA HOSPITAL.

A CASE OF DISLOCATION OF THE OUTER END OF THE CLAVICLE UNDER THE ACROMION PROCESS.

(Under the care of Mr. N. FOX EDWARDS, House Surgeon.)

THIS dislocation is perhaps more correctly described as a dislocation of the scapula upwards. It is a very rare displacement, the usual dislocation of the acromial end of the clavicle being upwards on the acromion. In order to produce it the force must be applied to the upper surface of

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the clavicle; and the conoid, trapezoid, and acromio-clavicular ligaments are all ruptured. The diagnosis of the condition is easily made.

The patient, a football player, was brought to the casualty department on Jan. 31st, 1896. He complained of having injured his right shoulder by falling heavily. He was an unusually well-developed man. On examining the right shoulder a projection in the region of the acromio-clavicular articulation was found. On tracing the clavicle outwards it gradually disappeared under the projection. On examining the prominence it was found to be directly continuous with the spine of the scapula. On pressing the shoulder back the deformity disappeared, this being accompanied by no crepitus, but by a certain amount of pain. The treatment adopted was to apply strapping in a manner similar to Sayre's method of treatment for fractured clavicle—more with the intention of forcing the shoulder back than of raising it. A gutta-percha splint was then moulded over the shoulder and the whole fixed with a broad bandage, the bandage passing over the top of the shoulder from behind forwards as near as possible to the neck.

Remarks by Mr. EDWARDS.—The question of cutting down on the two disarticulated bones and wiring them I considered, but as a few weeks' holiday would not leave the patient financially poorer, thanks to insurance, I determined to try the above method in preference to the additional, although slight, risk of a cutting operation. The patient then passed out of my hands, but I again had an opportunity of examining him some months afterwards, and found he had kept the appliance on for six weeks with a most successful result. There was no difference in the shoulders to be discovered.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Perforating Typhoid Ulcer treated by Operation and Suture; Recovery.—Jaundice and Perforation of the Gall-bladder in Typhoid Fever.

A MEETING of this society was held on Jan. 26th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

Dr. LAUDER BRUNTON and Mr. BOWLBY reported a case of Perforating Typhoid Ulcer treated by operation and suture and resulting in recovery. The patient, a man aged thirty-seven years, was admitted into St. Bartholomew's Hospital on Oct. 3rd, 1895, at about the end of the second week of typhoid fever. The case was a severe one and was complicated by hæmorrhage from the bowel soon after admission and by a relapse on Oct. 30th. The relapse lasted nearly a fortnight, and was followed by a slow convalescence till Dec. 14th, when there was a sudden attack of severe abdominal pain, followed after some hours by abdominal distension and symptoms of obstruction, but without nausea or vomiting. There was no evidence of free gas in the peritoneal cavity and the distension was chiefly in the lower half of the abdomen. Laparotomy was performed about eighteen hours from the commencement of the pain. The patient was placed under the influence of chloroform and the abdomen was opened in the middle line below the umbilicus. The upper part of the peritoneal cavity was free from gas or fæcal matter, but the great omentum was adherent in the pelvis, and as soon as it was separated it was found that the whole of the intestines beneath it were matted together. On freeing the uppermost coils about half a pint of fluid was let loose. It was dirty-yellow in colour and evidently consisted of some intestinal contents mingled with peritoneal exudation. On passing the hand into the cavity amongst the intestines from which this fluid had escaped a very indurated coil of bowel could be felt, which after a little trouble was separated from its adhesions and drawn out of the abdomen. It was then seen that the gut had been perforated by a small ulcer about as large as a pea, situated opposite to the attachment of the mesentery. This ulcer was evidently in the centre of an inflamed Peyer's patch, for an area of induration corresponding in size to such a patch could be felt in the wall of the bowel. The whole coil of intestines was covered with old and recent lymph, and was thickened and œdematous. This lymph was removed as thoroughly as possible and the whole bowel very carefully washed. Ten silk sutures were then passed after Lembert's method transversely to the long axis of the bowel, which was clamped by the fingers of the assistants. The sutures furthest from the ulcer were passed clear of the indurated Peyer's patch, so that the line of suture was about one and a half inches in length. Flatus and fluid matter were then allowed to enter the sutured coil of gut, and it was found that there was no leakage and that the lumen was free. The abdomen was finally irrigated with hot water until all foreign matter seemed to be quite removed, and, a drainage-tube having been passed into the pelvis, the wound was sutured. The operation lasted about forty minutes and the patient was not at all collapsed at its conclusion. Some difficulty in passing sutures was caused by the induration of the inflamed Peyer's patch and the friability of the intestinal wall. Recovery was uninterrupted, the temperature remaining normal throughout. The tube was removed in forty-eight hours and for four days no food was given by the mouth except water in teaspoonful doses. The bowels acted on the fifth day after the use of an enema, and for the next month the patient was very carefully dieted. He left the hospital on Feb. 21st in good health and returned to his work in April. When seen on April 15th he had regained his normal weight and the bowels acted regularly. For several weeks after operation he had a slight "dragging pain" in the abdomen and a feeling of tightness, but this gradually passed away. It was pointed out that the case was one unusually well adapted for operative treatment and could not be compared with those cases where perforation occurred during the height of the fever and in a patient greatly prostrated by the disease. It was probable that the perforation in the bowel had really existed for some time and had been temporarily but insecurely closed by adhesions. These had gradually yielded when a fuller diet was allowed, and had permitted an escape of the contents of the intestine. It would appear that the case described was the third recorded case of the kind submitted to operation in this country and the first to arrive at a satisfactory termination.

Dr. HERRINGHAM and Mr. BOWLBY reported a case of Typhoid Fever in which symptoms of Perforation occurred during Convalescence. Laparotomy was performed, but no lesion found. Recovery followed. Though perforation in typhoid fever was allowed to be almost invariably fatal, cases had from time to time been recorded in which symptoms usually held to indicate this event had yet been followed by recovery. Whether in these cases the bowel had actually been perforated must always remain doubtful, and it had been pointed out by Fitz that there were no trustworthy signs which were pathognomonic of perforation, and that the occurrence of even a local peritonitis alone would be quite sufficient to explain the condition. That the same symptoms might occur even when there was no peritonitis at all was shown by the following case. A girl, aged thirteen years, who was passing through an attack of typhoid fever had a subnormal temperature on and after the twenty-second day. On the twenty-eighth day symptoms appeared like those of perforation—namely, acute pain, frequent vomiting, and small pulse, together with rigidity and tenderness of the abdomen. These symptoms came on suddenly. The bowels had been open the day before. An oil enema was administered, but neither this nor the administration of morphia gave any relief. After three and a half hours it was considered advisable to perform laparotomy. No abnormal condition was found except that the colon contained scybala. Recovery was uneventful. The condition, although giving rise to alarming symptoms, was evidently due to constipation. The patient was in good condition, or the operation would not have been attempted.

Dr. LAUDER BRUNTON supplemented the report of this case by mentioning one which he had seen recently, in which a man who had been going about his work during the early stage of typhoid fever was admitted in a very weak condition at about the end of the third week. Hæmorrhage occurred and sloughs were passed. A week after admission symptoms of perforation occurred, but the patient was too weak and the pyrexia too great for an operation to be advised. Post mortem a pin-hole perforation was found and very extensive ulceration throughout the large intestine.

Dr. NORMAN MOORE congratulated Dr. Brunton and Mr. Bowlby on the encouraging result in their case. Physicians often met with cases in which they would be glad of surgical assistance. There were several circumstances which would aid the surgeon. The locality of the lesion was known within

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limits. Out of twenty-one consecutive cases at St. Bartholomew's Hospital the lesion was within two feet of the ileo-cæcal valve in half the cases and within three feet in three-quarters. He thought the usual date for perforation was put too early in many books. He had found localised peritonitis over the site of the ulcer of frequent occurrence in cases without perforation, and hence when perforation occurred the resulting peritonitis would be less general than in cases of gastric ulcer. Dr. Herringham's case had an important bearing on the cases which were supposed to have perforated and recovered spontaneously. He himself had never seen on the post-mortem table any cicatrix such as would result from the healing of a perforation.—Dr. GOODALL could not agree with Dr. Norman Moore that localised peritonitis was common in typhoid fever. He had only met with it in one out of many necropsies. He considered that the date of the disease was not an accurate index of the stage of the intestinal lesion. He thought the symptoms in some of the reported cases which recovered spontaneously might be due to a suppurating mesenteric gland.—Dr. SIDNEY PHILLIPS remarked that in the case where there was actual perforation the symptoms were indefinite, while in the simulated case they were apparently typical. He had frequently seen cases in which sudden symptoms of perforation had quickly subsided, but he doubted if any true cases of perforation had recovered spontaneously. He thought an operation should be performed as soon as it was clear that a perforation had really occurred. He had not seen lymph on the intestines as described by Dr. Norman Moore. He thought leakage was minimised in the cases where there was much distension. Where the intestines had lost their tone, and the abdomen had a doughy feel, and symptoms were masked, extravasation occurred more readily.—Mr. WALLIS thought that much harm was done by waiting too long and that there was too great reluctance on the part of physicians to recommend surgical interference in abdominal cases.—Mr. BOWLBY, in reply, said that in this case he was pressed urgently by Dr. Lauder Brunton to operate. He thought that Dr. Goodall's theory of inflammation of mesenteric glands was a very reasonable explanation of many cases. Although both his cases had recovered he thought a caution was necessary. Both of them were convalescent and in good condition; but if there were fever or much prostration the operation was by no means lightly to be undertaken.

Dr. FRANCIS HAWKINS read a paper on Jaundice and on Perforation of the Gall-bladder in Typhoid Fever. He remarked that cases of jaundice with typhoid fever were very rare. He had recently observed a case in a female, aged eighteen years, who while suffering from typhoid fever complained of pain in the abdomen and back, the abdomen being tumid and showing pink spots; the liver was slightly enlarged and the bowels were irritable; the pulse was 96 and regular; the respiration was 44 with râles, and the temperature was 104° F.; the urine was free from albumin and of specific gravity 1030. As regarded the progress of the case, for the first five days there was constant pain in the back and legs; food was rejected, the bowels being frequently opened; at night there was delirium. There was formation of fresh spots. The temperature varied from 102° to 104 4°, and the respiration was 36. On the next day pain (severe) occurred in the right half of the epigastric region and over the right lower axillary and hypochondriac regions; the respiration was 40 per minute, with evidence of dry pleurisy over the right base and the axillary and lower mammary regions. This vomiting was constant, the temperature being 105 8°. On the following day the conjunctivæ and the skin of the upper part of the body were jaundiced, bile was found in the urine, and the stools were frothy and white. The jaundice increased, the pain over the above-named regions became more severe and extended round the umbilicus, and the region of the gall-bladder was exquisitely tender. Bile appeared in the urine; both urine and fæces were passed unconsciously. The respiration was 50 per minute, the breathing being mainly abdominal, and dry pleurisy developed on the left side as well as on the right. After this the pain over the epigastric region lessened, ultimately disappearing. Bile was vomited and jaundice persisted till death, having lasted for three weeks. Once, and for one day, with the exception of the conjunctivæ being yellow, it quite disappeared. Ten days before death dyspnœa was extreme, the face was cyanosed, the soft parts were drawn in, and the respiration was 56 per minute (the breathing was abdominal), varying from 60 to 80. The patient died from the pulmonary complications. The stools at the first onset of the jaundice were white and frothy and later were more coloured (on three or four occasions containing bile), and were passed unconsciously. Hæmorrhage from the bowels was more or less constant for nine days, many of the stools being pure blood. There was delirium, this being constant at night and frequent by day. There were bullæ on the left leg, with dark-reddish margins; many pink petechiæ were present on both legs, which subsequently disappeared, as did the bullæ, leaving scars. A swelling (of the size of a Tangerine orange) on the left hip also disappeared. At the necropsy the body was found to be greatly emaciated. Both lungs were markedly pale and collapsed, with consolidation at the base of the right and at the apex of the lower lobe of the left. Ten ounces of turbid fluid was found in the right pleural cavity. The cardiac walls were flabby, the right ventricle was dilated, the valves being normal. The gall-bladder was adherent to the peritoneum, and around the adhesion there was a small area of peritonitis; the anterior wall of the gall-bladder showed a perforation. The contents of the gall-bladder were purulent; the walls were thin, especially on the posterior surface, where there was also almost perforation. There was a gall-stone lying free in the gall-bladder. The liver was uniformly enlarged, showing cloudy swelling, but exuding no bile. There was typical ulceration of the intestine.—Mr. MARMADUKE SHEILD said that he had operated successfully in a case in which perforation of the gall-bladder during typhoid fever gave rise to general peritonitis. It was published in full detail in THE LANCET of March 2nd, 1895.—Dr. JOHN HARLEY said that jaundice was rare in typhoid fever, except as an early and transient symptom. He had seen one case in which perforation of the gall-bladder occurred in a patient convalescent from typhoid fever. Adhesions prevented extravasation, but an epigastric swelling formed, and on incision many small calculi and some colourless bile were evacuated. From the absence of bile pigment in the calculi he thought the cholesterin had been deposited during the attack of fever.

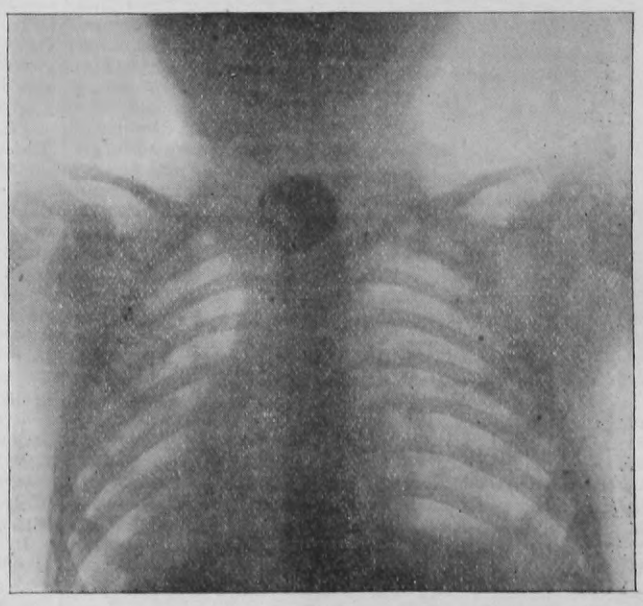
CLINICAL SOCIETY OF LONDON.

Clinical Evening.—Exhibition of Cases.

A MEETING of this society was held on Jan. 22nd, the President, Dr. BUZZARD, being in the chair.

Mr. A. A. BOWLBY, for Mr. HOWARD MARSH, showed

FIG 1.

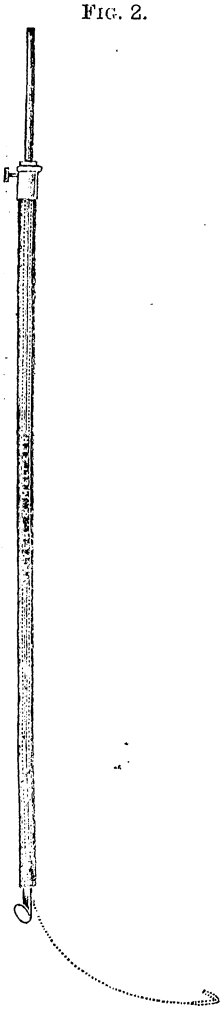


Skiagram showing coin in œsophagus.

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two cases of Coins Impacted in the Œsophagus. The first patient was a boy, aged three and a half years, who had swallowed a halfpenny. He was under observation for five weeks, but had exhibited no symptoms beyond occasional sickness. A skiagram[1] revealed (Fig. 1) the coin in the œsophagus at the level of the second dorsal vertebra. The coin could not be felt with the finger, and an attempt to remove it with a coin-catcher failed and no better success followed an attempt with forceps. Ultimately its removal was readily effected by the aid of a coin-catcher concealed within a gum-elastic catheter (as suggested by Mr. A. A. Bowlby) until the instrument had passed the coin (Fig. 2.) The second patient was a boy, aged three years, who was also said to have swallowed a similar coin. No pain or other urgent symptoms were manifested and the presence of the halfpenny could not be ascertained—it could not be reached by the finger—till a skiagraph was taken. Removal was easily effected with the instrument described above. — Mr. CLEMENT LUCAS recalled the case of a child, aged two and a half years, who had swallowed a halfpenny, and this was followed by some difficulty in swallowing. He was unable to remove the coin with the coin-catcher, and he pointed out that as coins usually lie transversely in the œsophagus forceps were useless unless they opened antero-posteriorly.

FIG. 2.



The coin-catcher in the catheter showing it extended and also pulled up against the catheter for the purpose of passing the obstruction.

Mr. H. G. CROLY (Dublin) showed a case of Ligature of the Second Part of the Sub-clavian Artery for Aneurysm in a man, aged thirty years, who was stabbed with a pair of tailor's scissors in 1893. Free hæmorrhage followed, which was checked without much difficulty, but when he began to use his arm again a tumour formed behind the clavicle. There was some loss of power in the arm and wasting owing to the pressure of the tumour on the brachial plexus. The usual methods of treatment were tried without success, and two years after the injury he ligatured the sub-clavian artery in its second part, tying the vessel with ligatures made of gold-beaters' skin, as suggested by Mr. Ballance, using the stay knot also suggested by him. The radial pulse returned in four weeks, and the paralysis had now almost completely passed off.—Mr. BALLANCE said he had seen the patient before he was operated upon and the tumour was certainly a very large one, extending both above and below the corresponding clavicle.

Mr. G. STOKER brought forward two patients, one of them suffering from Chronic Ulceration of the Leg and the other from the results of an injury, both treated by Oxygen. The first patient sustained a severe injury to his leg on April 10th, but healing was delayed, and on July 17th the ulcer was treated with 50 per cent. of oxygen, and the pain and fœtor speedily disappeared, and he was discharged cured on Sept. 4th. Bacteriological examination of the ulcer revealed the presence of the staphylococcus albus and aureus, together with streptococci. The other patient came under observation on Oct. 23rd. His leg had been painful for twenty years and had ulcerated ten years before. The leg presented a deeply excavated ulcer, with irregular, rough, thickened margins; there was considerable discharge, which was very offensive, and the ulcer was most painful. He was treated in the same way, and in less than four weeks the ulcer on the inner side of the leg had completely healed, and the other was in a fair way to recovery. Bacteriological examination showed the rod bacterium and the bacillus subtilis. Later he found only staphylococci and streptococci.—In reply to Mr. SPENCER WATSON Mr. STOKER stated that he had tried hydroxyl in place of oxygen, but found it more irritating and less convenient.

Dr. SIDNEY PHILLIPS showed a female, aged thirty-one years, with complete paralysis of the left fifth nerve. The following symptoms were present: anæsthesia and analgesia of the left side of the face and of the mucous membrane of the inner side of the cheek and that covering the soft and hard palate; the teeth on the left side were insensitive to pressure and several had become loose; loss of sensation over the left side of the tongue, and loss of sense of taste in the anterior part of the tongue and also over the posterior third, where strychnine, sugar, and salt were not recognised by the patient; anosmia, with a sanious, ichorous discharge from the left nostril and frequent epistaxis; conjunctival injection with a large area of cloudiness on the surface of the cornea; unless the eye was kept protected by a watch-glass small ulcerations of the corneal surface occurred, and even with this protection there was a tendency to growth of vessels over the cornea, which was checked by atropine locally; sight on the left side was defective, but there was no optic neuritis; the disc had latterly, however, become unduly white. The motor part of the fifth nerve had been entirely paralysed, but during the last few days some contraction of the masseter and temporal muscles could be felt; the jaw at one time deviated much more than at present towards the paralysed side when the mouth was opened. The illness commenced with sudden acute pain in the forehead and behind the eyes, with nausea and shivering, in August, 1896. At one time there had also been staggering gait and a little numbness of the left hand. These symptoms had all passed away under treatment by iodide of potassium, leaving the fifth nerve paralysed. The signs of improvement in this respect had only come on during the last few days under treatment by mercury. The eye had been injured about five years before by a fork, but not sufficiently to require medical advice, and the symptoms were probably the result of syphilis, seeing that the three first children of her marriage were born prematurely and dead and that specific treatment had influenced the symptoms. Dr. Phillips thought the lesion was in, or around, the Gasserian ganglion.—The PRESIDENT agreed that the affection was probably specific and that the improvement under treatment was against the probability of a nuclear origin. The Gasserian ganglion was probably the seat of the lesion.

Mr. C. W. MANSELL MOULLIN showed a case of Hæmo-pericardium. The patient, aged twenty years, received a severe blow over the sternum while playing at football on March 28th, 1896. He was able to go on playing for twenty minutes, but on arriving at his home he suddenly collapsed. At 9 P.M. on that day his pulse was about 60, but the heart was apparently beating about twice as quickly. There was no increase of cardiac dulness, but some difficulty in swallowing existed and there was great pain on the left side. The breath sounds were very loud all over that side and the temperature was 96° F. No urine was excreted for twenty-four hours after the injury. Thirty-six hours after the accident he was seized with a violent cough, accompanied by profuse expectoration, and he perspired profusely. The pulse was 140, the breathing 22 per minute, and his temperature 100·4°. The area of cardiac dulness gradually increased until it spread to the right of the sternum. On April 22nd, three weeks after the accident, he was seized with violent dyspnœa, and then the whole of the left side of the chest was found to be distended and motionless. The heart sounds could only be heard in the right second interspace. Mr. Mansell Moullin then made an incision through the fifth left space and exposed the pericardium, which was incised and a drainage-tube was inserted. Altogether some six pints of blood escaped through the tube within the first three hours and this clotted firmly in the basin. The dyspnœa at once disappeared, the tube was removed on the following day, and the patient was able to sit up in a week. The left lung remained collapsed for a long time, but now, ten months after the injury, he had returned to work and was again playing football. Mr. Mansell Moullin believed that a branch of the coronary artery must have been the source of the hæmorrhage.

Dr. H. G. TURNER showed a case of Multiple Nodules in a man who was suffering from renal disease and whom he had had under his observation for about twelve months, during which time he had developed more or less symmetrical nodules, at

[1] Taken by Messrs. Allen and Hanburys, Wigmore-street.

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first over the upper half of the body, but later elsewhere. Their distribution was not that of the rheumatic nodules, with which they were familiar. Some of them appeared to be connected with bone and were fixed, while others were freely moveable under the skin. For the present he preferred to describe the case as one of multiple fibromata of uncertain origin.

Dr. TURNEY also showed a man, aged sixty-five years, who had had Ptosis on the left side and complete Ophthalmoplegia for the last twenty years. During the last ten years there had been atrophy of the muscles round the shoulder. None of the muscles supplied by the fifth or lower cranial nerves were affected nor were the neck muscles. The lesion was evidently a nuclear one, and it was difficult to account for the escape of these intervening muscles.

Mr. R. CLEMENT LUCAS exhibited a patient suffering from Elephantiasis on whom he had performed the operation of ligaturing the femoral artery. A man, aged forty-five years, a native of Leicester, who had never been abroad, suffered twelve years previously from inflammation and thrombosis of the left internal saphenous vein, when his leg and foot swelled up, but gradually subsided again. Two years ago he cut a corn on the little toe of that limb, which he neglected. The toe sloughed away and he was in St. Thomas's Hospital for eight weeks, pieces of bone coming away at intervals since, but it was now healed. At this time the leg swelled again and had gradually increased in girth. The right leg and foot had also lately commenced to increase in size. The left leg and foot were œdematous and the cuticle about the heel greatly hypertrophied at the time of admission. Mr. Lucas ligatured the superficial femoral artery of the left leg on Dec. 18th, 1896, with a sterilised silk ligature, sterilised pads being used as dressing. Primary union without any rise of temperature followed, and three weeks afterwards the limb measured two inches smaller around the calf than before the operation. Good circulation followed in the foot.—Mr. F. C. WALLIS quoted a similar case in which no improvement followed ligature of the femoral artery. He asked if rest in bed accounted for the diminution in the size of the limb.

Dr. COLMAN showed a case of General Muscular Weakness following Infantile Paralysis. A boy, aged four and a half years, had an attack of infantile paralysis affecting the left latissimus dorsi, deltoid, triceps, and intrinsic muscles of the hand when aged eight months. During the last twelve months the opposite arm and both legs had become weak, some of the muscles being much wasted. All of them, except those originally paralysed, re-acted readily to a moderate faradaic or galvanic stimulus. The knee-jerks were exaggerated and there was marked pes cavus on each side. The condition was possibly due to slow extension of the poliomyelitis with some sclerosis of the white columns, although the electrical reactions hardly favoured this view.

MEDICAL SOCIETY OF LONDON.

Operation for Vesico-Vaginal Fistula.—Re-section of Sigmoid Flexure.—Laparotomy for Strangulation by a Band twice in the Same Patient.

A MEETING of this society was held on Jan. 25th, the President, Mr. REGINALD HARRISON, being in the chair.

Mr. STANMORE BISHOP described an operative method he had used with success for closing a Vesico-vaginal Fistula. He reviewed in detail the various methods that had been employed during the last two centuries with very indifferent success for the purpose of relieving this distressing condition. His own method of operating was as follows. The patient having been prepared, a circular incision was made through the vaginal mucous membrane, which was then reflected. Four stitches were then passed through the flap but not tied. Specially devised curved forceps were introduced per urethram and through the orifice to catch the sutures, the threads of which were withdrawn by the forceps and allowed to hang out of the urethra. By gentle traction on these a kind of frill was everted into the bladder. Before any firm traction was made a circular purse-string suture was passed from the vagina through the connective tissue only of the flap. This was secured to close the orifice and sometimes a second suture was desirable. The loose sutures originally introduced were easily withdrawn through the urethra. In cases where an extensive raw surface was left on the vaginal side it might be advisable to apply a Thiersch graft from some hairless part of the body. The vagina was stuffed for a few days after the operation. He claimed as advantages for the method that there was no tension of the uniting surfaces, the mucous floor of the bladder was re-formed, and the capacity of the bladder was not interfered with. The sutures were buried and did not project into the lumen. The thickened cicatricial edge of the fistula supported the wound like a splint.—The PRESIDENT considered he method very ingenious, but thought there might be some risk of a calculus forming at the site. In two cases he had been obliged to re-open a bladder some time after supra-pubic cystotomy, in consequence of phosphatic deposition occurring along the line of his original incision.

Mr. HERBERT ALLINGHAM showed a patient, sixty-four years of age, on whom he had performed resection of the Sigmoid Flexure six months before for a Malignant Stricture. There was a history of hæmorrhage, pain, and tenesmus for six months before operation, with alternating diarrhœa and constipation. Nothing could be felt under an anæsthetic, either per rectum or through the abdominal walls. The symptoms subsided for a time under medical treatment with rest in bed, but returned with some severity, and laparotomy was performed, and the sigmoid flexure was found to be partially occluded by a growth, which proved to be a columnar-celled carcinoma. The gut was ligatured by drainage-tubes above and below, and the growth and part of the mesentery rapidly removed in the way advised by Mr. Mayo Robson. The ends of the intestine were cleansed and approximated over one of Mr. Allingham's bobbins of decalcified bone. There was some discomfort a day or two after the operation, which was at once relieved by releasing flatus through a rectal tube. The bowels acted a week after operation. During the third week there was a little escape of pus with a fæcal odour through the wound, but this soon ceased. Although the motions were watched no signs of the bobbin were observed, and it was probably absorbed.—Mr. F. C. WALLIS asked for details as to the method of suture.—Mr. J. H. MORGAN referred to the difficulty often experienced in uniting the ends of the bowel in cases where there were hypertrophy and dilatation of the bowel above the stricture and contraction below, and asked how Mr. Allingham would deal with such cases.—Mr. ALLINGHAM, in reply, said that he would completely close each end of the intestine by careful suturing and obtain anastomosis by lateral approximation. He had fully described the details of suturing the intestine over his bobbin in Vol. XVI. of the Society's Transactions.

Mr. G. R. TURNER related a case in which Laparotomy had to be performed on two occasions in the same patient for Strangulation under a Band. The woman, in July, 1895, was seized with sudden pain six days before the first operation and symptoms of complete intestinal obstruction quickly followed. On opening the abdomen a volvulus of the small intestine (probably secondary), with extreme torsion of the mesentery, was found and easily relieved. A loop of about six inches of small intestine was found tightly strangulated under a band in the right iliac fossa. It was very deeply congested and there was some recent lymph on the surface. The band was divided. The woman rapidly recovered in spite of the long duration of symptoms. Six months later she was re-admitted to St. George's Hospital, having been seized with sudden pain and vomiting the day before. The incision was re-opened, but owing to the small intestine being adherent it was wounded. The opening was at once closed by Lembert's suture. The small intestine was found to be strangulated by a band situated this time in the right hypochondrium and evidently inflammatory in character, no doubt the result of some peritonitis during the previous attack.—Mr. WALLIS mentioned a case published by Mr. Harrison Cripps in which adherent intestine was wounded in re-opening an incision in the middle line.—Mr. SWINFORD EDWARDS thought it best to avoid the site of a former incision in re-opening the abdomen.

EPIDEMIOLOGICAL SOCIETY.

Age Incidence in Relation with Cycles of Disease Prevalence.

A MEETING of this society was held on Jan. 15th, Professor J. LANE NOTTER, President, being in the chair.

Dr. W. H. HAMER read a paper on Age Incidence in Relation with Cycles of Disease Prevalence, in opening which he

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referred to the several hypotheses that had already been advanced as explanations of the tendency of epidemic diseases, such as small-pox, scarlet fever, measles, and whooping-cough, to variations or waves of prevalence and of intensity, which, however, did not coincide. There was the theory of variations in the intensity of the poison, of the mere accumulation in the course of years of susceptible persons of the ages most liable, and Dr. A. Ransome's modification of the latter, that a certain density of susceptible population or proximity of the individuals was a necessary condition of widespread infection. Dr. Ransome had also pointed to the co-existence with the great epidemic waves, recurring at longer intervals, of shorter cycles of lesser range "like ripples on the billow." The late Mr. Netten Radcliffe had called attention to extraneous causes of varying severity of epidemics, and Dr. Whitelegge had insisted on a progressive intensification and attenuation of the virus as the cause of the greater wave cycles, movements of the population and accidents accounting for the smaller, the former being most marked in the less stable diseases, in which the quality rather than the quantity of the virus determined the prevalence of the disease. In each great epidemic there were, too, a progressive rise and fall of intensity or virulence not observed in the lesser seasonal or accidental outbreaks; but no such regular variation was to be observed in small-pox—a disease of constant type and character. Hirsch, indeed, denied that there were any factors besides the virus and a susceptible, because unvaccinated, population, though he recognised others in scarlet fever. It was Mr. Shirley Murphy who first demonstrated in the case of diphtheria and scarlet fever the influence of school attendance on their incidence on certain age periods. Dr. Hamer then exhibited a number of lantern views of diagrams showing graphically the incidence in successive quarter-years of measles, scarlet fever, and small-pox in each year of age up to five years, from five years to ten years, and ten and upwards calculated on a standard of 100 at all ages. These [which will, at the unanimous desire of the members, be reproduced in the Transactions] showed very clearly the greater and long period waves, the lesser intermediate fluctuations, the inverse ratio often subsisting between the death-rate and the case-mortality or the prevalence and the intensity of the disease, and between the general incidence and that on the age of greatest susceptibility. Some of the diagrams were calculated on different bases and some were inverted to convert inverse into direct ratios. These phenomena, which demanded leisurely investigation, were best seen in scarlet fever and, except as regards the minor curves, in small-pox, but were little marked in measles and whooping-cough. Dr. Ransome's view that the longer intervals between the great epidemic waves in Sweden, as shown by Dr. Berg's tables, were due to the sparseness of the population, was fully borne out by a comparison of those of London and the more densely peopled districts with those of the most purely rural character. In the case of small-pox the incidence of the disease in early and middle life respectively in the "fifties" and the "seventies" was distinctly influenced by the extension, and in the "nineties" again by the neglect, of infant vaccination. There had not, however, been notification of scarlet fever long enough to permit of positive conclusions, and there was little probability of that of measles and whooping-cough being generally adopted.

Dr. WILLOUGHBY felt that such a paper as Dr. Hamer's could not be adequately criticised except in one's study, but he would have preferred to see the age incidence stated on the number living at each age, as Dr. Hamer hoped to do at a future time. He also questioned the utility of such "actuarial" discussions of small-pox; the prevalence and age incidence of which were dominated by the extent of vaccination and re-vaccination, and the great epidemic wave of 1871-2 was brought about directly by French prisoners in Germany and refugees elsewhere.

Mr. SHIRLEY MURPHY held that the prevalence of small-pox when introduced into a locality depended on the aggregation of susceptible individuals. In autumn, when scarlet fever was most prevalent, its incidence was greatest on ages of from five to ten years and the case-mortality was lowest.

Dr. WHITELEGGE maintained that the greatest incidence of scarlet fever in early life and the highest case-mortality occurred in the intervals of lesser prevalence, indicating periodic variations in the intensity of the virus. The greater prevalence in autumn did not involve a high case-mortality because it took in ages of less fatality. As to Dr. Longstaff's suggestion of a relation between the rainfall and the prevalence of scarlet fever, he thought that drought might aggravate and wet might minimise a rise predetermined by other factors, and conversely of a fall, but could not be deemed a cause of such rise or fall.

Dr. HAMER briefly replied.

HARVEIAN SOCIETY OF LONDON.

The President's Address.—Election of Officers.—Conversazione.

THE annual meeting of this society was held on Jan. 21st at the Stafford Rooms, Titchborne-street, Edgware-road, Dr. WILLIAM HILL, one of the Vice-Presidents, being in the chair.

After reading the report of the council, which showed that the society was flourishing both in point of numbers and financially, Dr. CAGNEY, the senior secretary, read the President's address, the President, Mr. J. KNOWSLEY THORNTON, being absent owing to serious illness in his family. Mr. Knowsley Thornton dealt with certain lessons derived from his experience during twenty years of practice as a consulting surgeon. Speaking of his early enthusiasm for the microscope he admitted that it failed to satisfy all his expectations, and that its appearances were never to be depended upon alone when clinical observation was available. Speaking on the subject of abdominal surgery he dwelt upon the need that there was in view of the ease or immediate security attending operative procedure for care and forethought of ultimate results. Removal of the appendages he thought was too often needlessly practised. Removal of the vermiform appendix appeared to be becoming a routine procedure: he deprecated this, and dwelt briefly upon the dangers and disadvantages incident to it. In conclusion he paid a generous tribute to the life and labours of Lord Lister.

The following officers for the year 1897 were then reported by the scrutineers to be elected without opposition. President: Dr. R. H. Milson. Vice-Presidents: Mr. Argles, Dr. Boxall, Mr. Juler, and Dr. Lamb. Treasurer: Mr. Edmund Roughton. Honorary secretaries: Dr. F. W. Cock and Mr. Jackson Clarke. Council: Mr. R. S. Armstrong, Mr. E. Bartlett, Mr. Peyton Beale, Dr. Cagney, Dr. Gee, Dr. Gow, Mr. J. Griffith, Dr. L. Guthrie, Mr. Raymond Johnson, Dr. Maclure, Mr. L. Mark, and Mr. Knowsley Thornton.

After the meeting a conversazione was held, at which a large number of members and guests were present. Much interest was shown in a collection of skiagrams lent by Mr. William Anderson, Mr. W. H. Battle, Dr. Barry Blacker, Mr. H. T. Butlin, Mr. Percy Dean, Mr. Pearce Gould, Dr. W. S. Hedley, Mr. Victor Horsley, Mr. C. B. Keetley, Dr. Leon, Dr. Laurie, Dr. Macintyre (Glasgow), Dr. MacClure (Cromer), Mr. Howard Marsh, Mr. Henry Morris, Mr. Pitts, Mr. Noble Smith, Mr. Bland Sutton, Dr. John Shaw, Dr. G. A. Sutherland, and Dr. St. Clair Thomson. Dr. Hedley and Dr. H. Campbell Thomson gave a series of demonstrations with the fluorescent screen during the evening, and the meeting was also entertained by the artistic singing of Mr. Gilbert Denis and Mr. Mervyn Dene, and the violin solo of Dr. Haydon, Mr. Frank Barat being at the piano. A small orchestra filled in the intervals with selections by popular composers.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases, Specimens, and Skiagraph.—Foreign Body in the Œsophagus.

A MEETING of this society was held on Jan. 14th, the President, Mr. RECKLESS, being in the chair.

Dr. R. F. CASTLE showed a man, aged fifty years, suffering from Labio-glosso-pharyngeal Paralysis. The course of the disease was the reverse of the usual one, since the muscles of the larynx were the first to be affected instead of the last.

Mr. H. LOCKWOOD showed a Vesicular Mole weighing 2½lb. passed by a woman, aged forty-four years, the mother of nine children, who went the full normal period of pregnancy. There was considerable hæmorrhage four or five months after the last menstruation, but the large mass was passed

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without any complication and the woman made a good recovery.

Mr. LOCKWOOD also related a case of Foreign Body (False Teeth) in the Œsophagus. A hard substance was encountered at the junction of the œsophagus and pharynx, and after some difficulty and considerable hæmorrhage Mr. Lockwood extracted a palate with ten teeth attached. No complication ensued.

Mr. ARCHIBALD CUFF showed: 1 A Skiagraph of the Bones after an extensive Compound Fracture of the Leg. The fragments of the tibia were united with silver wires. The wound had perfectly healed in three weeks, and the after-result was good. 2. (For Mr. G. H. SHAW) an Enterolith which had caused acute intestinal obstruction in a woman aged fifty-nine years. The obstruction had lasted four days and the patient was much exhausted. The stone was removed by laparotomy, but the patient never rallied from the shock. The enterolith, which was of brownish-grey colour, measuring about one and a half inches by three-quarters of an inch, appeared to be a compound of salts of lime and magnesium, combined with fæcal matter. 3. A Calculus which had been impacted at the junction of the membranous and penile portions of the urethra of a boy aged ten years. The stone was cut down upon and removed and the skin brought together with silkworm gut. A catheter was retained for two days. The patient left the hospital recovered on the tenth day.

Dr. SINCLAIR WHITE showed four cases of successful Trephining. The first case, that of a man aged twenty-five years, was undertaken for the relief of traumatic epilepsy with mania. The patient, who had been an inmate of Wadsley Asylum, was operated on eight months ago. There had been immunity from the fits and mania since the operation. The second case was that of a child, aged four years, who began to have convulsions three hours after an injury to the left temple. The convulsions commenced on the left side of the face and rapidly spread to the left arm and leg. They were continuous, and the child was quite unconscious. The wound on the left temple was first explored, and a fracture being detected the trephine was applied, but without benefit. A large trephine disc was next removed over the region corresponding to the centre of the right Rolandic fissure, when the fits ceased immediately and permanently, and rapid recovery of consciousness followed. The third case was one of compound, comminuted, and depressed fracture of the right side of the frontal bone caused by a small rapidly revolving wheel starting from its bed. The inner table was much more extensively fractured than the outer. About thirty pieces of bone, several of which were lodged in the brain, were removed. The chief interest of the case lay in the fact that the patient, an adult male, went about for a fortnight after the injury, apparently without much discomfort, before the operation was done. The fourth case was one of cerebral abscess in a boy, aged twelve years, due to a wound in the forehead which had been inflicted three weeks previously. The skull was not fractured. The abscess contained about an ounce of pus and was situated on the surface of the right frontal lobe. The symptoms were headache, gradual onset of stupor, choked optic disc, rapid wasting, and subnormal pulse and temperature.

Dr. SINCLAIR WHITE also showed a case of Aneurysmal Varix between the Superior Thyroid Artery and the Anterior External Jugular Vein on the right side in a man aged thirty-eight years. The vein was much dilated and pulsated freely. The abnormal communication was marked by a small collapsable swelling. The thrill was very distinct and the bruit very loud. The condition caused little inconvenience and it was thought best to leave it alone.

The PRESIDENT, Dr. BURGESS, Mr. SNELL, Dr. KEELING, Mr. PYE-SMITH, Mr. CUFF, and Dr. ADDISON made remarks.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Treatment of Nævi by Electrolysis.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Jan. 20th, Dr. W. B. RANSOM, President, being in the chair.

Dr. L. W. MARSHALL read a paper on the Treatment of Nævi by Electrolysis and referred to an article by him which appeared in THE LANCET of Jan. 12th, 1889. He stated that the opinions then expressed were strengthened by the continued use up to date of this method. Before dealing with the treatment of nævi by electrolysis Dr. Marshall reviewed the several methods most commonly in use—viz., ligature, excision, injection, and the various applications such as ethylate of sodium, nitric acid, &c. These were all condemned with the exception of excision, the use of which he confined to nævi on unexposed parts which were not too large to admit of its adoption. It was claimed for electrolysis that it was (1) free from pain after operation; (2) it was free from danger; (3) no bleeding occurred; and (4) the scar which remained was whitish in colour and more nearly resembled true skin than any other. There was no tendency to contraction of this scar. The one argument against its use was its tediousness. Dr. Marshall insisted on the fact that it was only necessary to stay the growth and nature would complete the process. Too frequent operation was deprecated, and as an illustration of the time likely to be occupied before a good result was gained it was stated that two years would elapse before a raised nævus on the eyelid would yield a perfect cure. The great value of Lewis Jones' bi-polar needle was pointed out. Dr. Marshall believed that a cure was effected by plugging of the vessels and subsequent contraction by the formation of fibroid bands. He always aimed at attaining the former by attacking the base first. The use of a galvanometer was negatived, and it was pointed out that by change of colour alone could a safe guide be found as to the strength of current to be used and the period of its application. Dr. Marshall also stated that he could form no opinion as to the number of operations required for a given nævus until he had gauged the resistance by an operation. The history was given of an enormous raised nævus on the loin of a baby seven months old, which measured after the second operation six and a half inches by three and a half inches. This nævus was stopped completely in three operations. Eight cases were shown, all of which bore out the statements made in the paper, but the paper was based upon twenty years' experience of electrolysis for nævi. — Dr. PESKETT, Mr. O'MULLANE, the PRESIDENT, Dr. TRESIDDER, and Miss GREY spoke and asked questions, and Dr. MARSHALL replied.

Dr. MARSHALL also showed a boy, aged thirteen years, upon whom he had operated for Harelip and Cleft Palate; also Photographs from a very successful case of Osteotomy.

Dr. RINGROSE showed a man, aged thirty-four years, suffering from Keratosis Pilaris. He pointed out the distinctions between this disease and lichen pilaris.

Mr. LAWS showed a specimen of Glioma of the Retina occurring in a child, aged three years, with a six months' history. Strabismus was the first symptom noticed and afterwards a whitish appearance on the iris existed. He also showed a macroscopic specimen of the growth.

The PRESIDENT showed a microscopic specimen of Sarcoma of the Right Lobe of the Cerebellum from a patient who had middle-ear disease and who was trephined for cerebral abscess.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Election of Officers for 1897.—Exhibition of Specimens.—The Development of the Placenta.

THE annual meeting of this society was held at Owens College, Manchester, on Jan. 15th.

Dr. Walter of Manchester and Dr. T. B. Grimsdale of Liverpool, the retiring president and secretary, were thanked for their services, and Dr. H. Briggs of Liverpool, and Dr. J. E. Gemmell of Liverpool, were elected as president and secretary in their places. The following gentlemen were elected as office-bearers for 1897:—Vice-Presidents: Dr. T. A. Helme, Dr. Archibald Donald, Dr. T. B. Grimsdale, Dr. Glynn Whittle, Dr. T. Kilner Clarke, Mr. Edmund Robinson, Mr. Richard Favell, and Dr. A. H. Laver. Honorary Treasurer: Mr. J. Nelson Cregeen. Council: Dr. E. Annacker, Mr. F. A. E. Barnardo, Mr. Owen Bowen, Dr. S. Buckley, Sir R. M. Craven, Dr. E. T. Davies, Dr. Duncan Forbes, Dr. H. A. Lediard, Dr. John W. Martin, Dr. T. W. Napier, Dr. J. J. O'Hagan, Dr. Lloyd Roberts, Dr. G. J. Robertson, Mr. S. Rumboll, Dr. Benjamin Scott, Dr. W. J. Sinclair, Dr. A. Stookes, Mr. G. W. Thomson, Dr. Arthur Wallace, Dr. W. K. Walls, Dr. W. Walter, and Mr. C. J. Wright. Honorary Local Secretaries: Dr. John Scott, Manchester; Mr. W. Fingland, Liverpool; Mr. Edward

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O. Croft, Leeds; Dr. David Lowson, Hull; and Dr. Hugh Rhodes, Sheffield.

Dr. BRIGGS related two cases of Abdominal Hysterectomy for Uterine Fibroids, and showed the tumours.

Dr. J. E. GEMMELL related a case of Intra-uterine Disease and showed microscopic sections of Curetted Fragments.—A discussion took place as to whether the disease was adenoma uteri, benign or malignant.

Dr. W. E. FOTHERGILL read a note on the Development of the Placenta, and on its fate when retained *in utero* after the death of the fœtus; and showed several microscopic sections and drawings illustrative of the subject.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

The Death of Mr. Broadbent.—Congratulations to Lord Lister.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Jan. 14th, the President, Mr. WILLIAMSON, being in the chair.

A vote of sympathy with his relatives on the occasion of the death of Mr. Samuel W. Broadbent was carried.

It was proposed and unanimously carried that the congratulations of the society be sent to Lord Lister.

Dr. HUME showed a case of Sarcoma of the Kidney. The patient, aged fifty-three years, was well till August last and then felt an uneasy dragging in the right side, noticed an increased frequency in micturition, and discovered a lump in the abdomen. On admission to the infirmary the tumour was very moveable and could be passed across from the right lumbar and iliac regions, where it mostly lay, to the left of the spinal column. Because it seemed to be tied to a pedicle to the right side, high up, and because of the absence of colon note behind the tumour and its presence in front, it was considered to be probably renal. There was nothing abnormal in the urine. The abdomen was opened in the middle line and the diagnosis verified. The median incision was extended outwards through the right rectus abdominis muscle and the tumour and kidney were removed. The whole of the anterior abdominal wound was closed and a drainage-tube inserted through the loin. The specimen (exhibited) was a sarcoma about the size of a cocoa-nut, grown from, and involving, the lower end of the kidney. Its mobility was explained by the fact that it had dragged upon, and elongated, the kidney which formed its pedicle.

Dr. HUME also showed a patient after Excision of the lower end of the Humerus for Fracture and Dislocation (Heron Watson's operation). He was a young man whose elbow had been stiffened in consequence of a fracture-dislocation proved by skiagraph (exhibited). The arm was rendered practically useless by the accident, and attempts to remedy the condition by manipulations under chloroform had failed. The lower end of the humerus had been excised by Heron Watson's method with a satisfactory result.

Dr. HUME further showed a woman on whom four Abdominal Sections had been performed—viz., an operation for removal of two Fallopian tubes four years ago, a ventral hernia resulting. She was twice operated upon by the surgeon who performed the first operation without success. Six weeks previously Dr. Hume had opened her abdomen for the fourth time to cure the ventral hernia, and the result so far was perfectly good.

Mr. PAGE showed the following specimens:—1. A large Uric Acid Calculus the size of a Tangerine orange, successfully removed by Supra-pubic Lithotomy from a man aged fifty years, who had symptoms of stone for forty years. 2. Eight Calculi of Various Sizes removed successfully by the Supra-pubic Operation from an old man with Enlarged Prostate. It was evident from the examination of the specimens that some of the calculi had undergone spontaneous fracture. 3 An Oxalate of Lime Stone the size of a Walnut successfully removed from a boy aged four years by Supra-pubic Lithotomy. 4. A Gall-stone from the Cystic Duct the size of a filbert which had been removed by operation from a young woman who had a tumour in her abdomen about the size of an ostrich egg. The tumour was freely moveable and could be placed in any part of the abdomen, but when undisturbed remained in the right side. The diagnosis being uncertain her abdomen was opened in the right linea semilunaris and the enormously distended gall-bladder was opened and emptied of a clear, colourless fluid. The cystic duct was firmly plugged by the stone (exhibited) and had to be incised for its removal. The wounds in the gall-bladder and the duct were closed by sutures and returned to the abdomen, which was entirely closed without drainage. This was the fifth case in which he had closed one or other of the ducts by suture and returned them into the undrained abdomen, and all the cases had recovered well. 5. One lobe of a Thyroid Gland removed from a female for Sudden Hæmorrhage into its Substance. The patient had noticed a small swelling for many years, which, however, caused no inconvenience. A few days before her admission to hospital whilst working hard the swelling suddenly increased in size and became painful. At the same time she had such a serious attack of difficulty in breathing that it was thought she might not recover. Since then she had other attacks of dyspnœa and the tumour (exhibited) was removed. On section it was seen that the whole substance of the tumour was infiltrated with coagulated blood, and careful examination showed at one portion of it a small ruptured cyst. It seemed a probable explanation that hæmorrhage had first occurred into the cyst and that had burst.

Mr. RUTHERFORD MORISON showed a series of specimens of Uteri illustrating conditions which he thought could be best dealt with by vaginal hysterectomy. Cancer of the body and cancer of the cervix uteri were the most common indications for the operation. In one case he had excised the uterus and a fibroid of the anterior wall the size of a cocoa-nut which was causing gradually increasing bladder trouble, with attacks of urinary retention. In one case he had excised the uterus, both tubes and one ovary for acute gonorrhœal endometritis, salpingitis, and pelvic abscess. In one case he had removed the uterus in an apparently hopeless case to allow efficient drainage of a huge pelvic abscess which had been previously drained by the abdomen and which was complicated by fæcal fistula. He thought that no preliminary treatment of the vagina and the uterus was useful. All necessary preparations could be made immediately before the operation whilst the patient was anæsthetised. He did not use any ligatures, but secured the broad ligament in hæmostatic forceps before dividing each portion, using from twelve to twenty-four pairs of forceps for this purpose. No drainage-tubes or sutures were necessary, drainage being effected by a strand of gauze passed up the centre of the forceps. The vagina was then so full that neither intestines nor omentum could escape. The forceps were left in for forty-eight hours and the gauze removed in seventy-two hours. Unless the discharge became fœtid no further treatment than keeping the external parts clean and dressed was employed. He had performed this operation nineteen times for cancer and seven times for other conditions. All the twenty-six patients had recovered and only in one case had there been any accident. In this case sharp bleeding followed the removal of the forceps at the end of twenty-four hours.

Dr. COLEY exhibited examples of Congenital Disease of the Kidney which were removed (post mortem) from a man, aged forty-two years, who died in the infirmary. His illness began a year previously with diarrhœa and vomiting. On admission he was uræmic; his urine contained blood, and the two large tumours (exhibited) were found in his abdomen. They very closely resembled in appearance certain multilocular cystic ovarian tumours.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Jan. 22nd, the President, Dr. W. L. REID, being in the chair.

Dr. LINDSAY STEVEN showed the parts from a case of Abdominal Aneurysm which had arisen from the posterior aspect of the aorta and had ruptured into the tissue behind the peritoneum.

Dr. H. E. JONES showed a number of specimens of Urine from a case of Paroxysmal Hæmoglobinuria, illustrating the rapidity with which the blood-colouring matter may disappear from the urine. The fact that the patient was a young woman was another feature of interest.

Dr. LINDSAY STEVEN and Dr. T. K. MONRO demonstrated four cases of Muscular Atrophy. The first two followed the usual type of progressive spinal muscular atrophy, the one

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being an advanced and the other an early case; in the latter the atrophy was confined to the muscles of the right hand. The third patient was a girl in whom there was atrophy of the right trapezius and serratus magnus, and the condition was attributed by the patient to the act of carrying heavy weights. In the fourth case the patient, a young man, had been crushed by a coal truck, and there were atrophy and weakness of the muscles of the back, manifested by lordosis and inability to rise from the recumbent posture; in addition, the muscles of the right upper arm were much atrophied. All the patients had been treated with hypodermic injections of nitrate of strychnine and with evidences of improvement—at least, to the extent of apparent staying of the atrophic changes.

Dr. J. CARSLAW and Dr. R M. BUCHANAN submitted a report on a case of Double Facial Paralysis, and showed a number of microscopic sections of the nerves. The patient, a man aged thirty-two years, had suffered from syphilis (chancre) nine months before the paralysis appeared, but the onset of the paralysis was immediately preceded by exposure to severe cold. He improved to some extent under anti-syphilitic treatment. Shortly after treatment was commenced, however, he suddenly became paralysed (left hemiplegia), and died in the course of a few days. After death a limited softened area was found in the right corpus striatum, and the sections submitted showed considerable hæmorrhages under the sheaths of the facial and auditory nerves and some cellular proliferation. Similar changes were present in the perivascular spaces in the neighbourhood of the softened area in the brain. The case was regarded as of great importance in the possible interpretation it afforded of the exact nature of the changes to which the nervous system was liable in early syphilis.

Dr. W. G. DUN and Dr. LINDSAY STEVEN gave an account of a case of Congenital Cardiac Disease and showed the heart, which displayed extreme stenosis of the pulmonary artery, with patency of the foramen ovale, but without any imperfection of the inter-ventricular septum. The child at the time of death was four years of age and no symptoms exciting the suspicion of cardiac disease had been observed until within the last year of life. Attention was drawn to the late arrival of cyanosis and cardiac embarrassment, to the perfection of the inter-ventricular septum, and to the extreme contraction of the orifice of the pulmonary valve, and it was urged that such a conjunction of events justified the view that the disease must have commenced comparatively late in intra-uterine life and have continued to progress after birth. The abnormal communication between the right heart and the systemic circulation being limited to a moderate opening at the foramen ovale, whilst the degree of cyanosis had latterly been extreme, the case lent force to the suggestion that the cyanosis in such conditions was not due to mingling of venous with arterial blood, but rather to inefficient aeration of blood as a consequence of the pulmonic obstruction.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Pathological Conditions of the Heart.—Achorion Schönleinii.—Pyogenic Organisms.—Trichinosis.

A MEETING of this section was held on Jan. 15th, Professor BENNETT being in the chair.

Dr. J. B. COLEMAN exhibited ten specimens of Pathological Conditions of the Heart. One was the heart of a boy, aged eight years, who suffered from mild chorea and mitral regurgitation of old standing. Whilst in the hospital he developed acute endocarditis, from which he died. His heart was remarkably enlarged, particularly the left side. The mitral orifice was much dilated, admitting two fingers readily, whilst the apex was bifurcated, the apex of the left ventricle being nearly an inch below that of the right and separated from it by a groove. Another specimen was taken from a girl, aged nineteen years, who had been under Dr. Coleman's care from time to time for the past two years, presenting well-marked signs of mitral stenosis. The heart shewed extreme stenosis of the mitral orifice, which would not admit the edge of the finger-nail. The left auricle was much hypertrophied, the left ventricle was of normal size, the right ventricle was hypertrophied, and the right auricle dilated. The patient had suffered from paroxysms of dyspnœa and hæmoptysis, and hæmorrhagic infarcts were found in the lungs. Another specimen was from a man, aged sixty-six years, who was dead on admission to hospital. There was a rupture near the apex of the left ventricle. On the pericardial surface there was a rent about half an inch in length and on the corresponding endocardial surface there was ulcerative destruction of the endocardium and muscular tissue. The pericardium was distended with blood. The last specimen was taken from a labourer, aged twenty-eight years, who, whilst engaged in some severe work on the quays, suddenly dropped dead. The men who brought him to hospital stated that previously he had made no complaint. The pericardium was distended with blood, and the cause of death was a ruptured aneurysm of the left ventricle somewhat bigger than a walnut and situated near the apex of the ventricle. The external wall of the aneurysm was composed of the pouched-out pericardium; the cavity invaded the thickened myocardium, and a small opening from the inner side of the ventricle near the apex led into the sac of the aneurysm.—The CHAIRMAN remarked that these cases of spontaneous rupture of the heart accorded with the opinion, expressed by Dr. Stokes in former days, that when spontaneous rupture of the heart occurred it took place at the apex of the left ventricle.—Dr. MCWEENEY said he had examined a large number of hearts, but had never seen anything like the heart with the double apex which had been exhibited. Occasionally a slight depression between the right and the left sides of the apex was met with; but a left apex fully an inch below one on the right side, with a deep groove running between them, was a matter of considerable rarity.

Dr. MCWEENEY showed pure cultivations on glycerin agar and ordinary agar of Achorion Schönleinii grown from a favus scutulum given him by Dr. Coleman. A fragment of the scutulum was crushed in a drop of sterile broth between sterile glass slips, and a trace of the fluid rubbed into the nutrient surfaces. Abundant and pure development occurred at 37° C.

Dr. MCWEENEY also showed a series of Pyogenic Organisms which he had recently isolated from the human subject. The first was streptococcus pyogenes *var.* longus from a severe whitlow on his own finger (due to dissection). The second was staphylococcus aureus from a metastatic miliary abscess of the kidney in a case of septico-pyæmia and infective endocarditis that had terminated fatally within two days of admission to hospital. The patient was a powerfully-built man, aged twenty-five years, of alcoholic habits. The third organism was bacterium coli commune from the peritoneal exudation of a case of general purulent peritonitis from perforation of the vermiform appendix in a boy aged ten. A remarkable feature was the discharge of four ounces of turbid, yellow, foul-smelling fluid from the subject's left ear when on the post-mortem table. This fluid contained bacterium coli also in pure cultivation (specimen shown). Intra-cranially nothing was found to account for the aural discharge. Lastly, he showed bacillus pyocyaneus obtained from the urine of a case resembling tuberculous pyelitis, but shown to be due to infection of the kidney with the organism mentioned. This was a rare occurrence. The bacillus isolated was intensely chromogenic and pathogenic.

Dr. ALFRED R. PARSONS made a communication on Trichinosis, which was illustrated by specimens of encapsuled trichinæ removed from the body of a patient between sixty and seventy years of age, who was admitted to the City of Dublin Hospital last September. He was a labourer by occupation, and he stated that he had never had any serious illness. For a few years past he has had a cough, but was not obliged to give up his work till six or seven weeks before admission. Physical examination revealed the presence of extensive tuberculous disease of the right lung. The case terminated fatally in a little more than two months after his admission and the post-mortem examination disclosed a large cavity in the apex of the right lung. Scattered through the muscles, especially of the neck, extremities, and diaphragm, were numerous white spots, most abundant towards the tendinous insertion of the muscles. A small portion of one of the muscles was spread out in a thin layer on a slide, and in an area about half an inch square at least twenty-five capsules could be counted. None could be

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found in the heart muscle. On treating the capsules with dilute hydrochloric acid the embryonic trichinæ were easily seen. Experimental investigation proved that the trichinæ were dead, and probably the attack occurred so many years ago that it had passed out of the recollection of the patient. It would have been impossible for such an invasion of the muscles as this case disclosed to have occurred without producing symptoms. Within the last five years trichinæ in muscle have been recognised in two other cases—one in the anatomical department of Trinity College and the other in the anatomical department of the Royal College of Surgeons in Ireland.—The CHAIRMAN said the name of Dr. Robert Harrison of that city ought to come into the literature of this subject, for he reported the figure of trichina spiralis synchronously with, if not previously to, Professor Owen.—Dr. FRAZER said that the name of Dr. Robert McDonnell should also come into the history of the subject, for he had a case of trichina, and fed white rats with the infected tissue.—Dr. FINNY said that about the year 1867, when he was Demonstrator in Trinity College, he came on a portion of a diaphragm which was studded over with these white spots; and on examining them he failed to find anything but calcareous-covered trichinæ. The patient was an old woman, and it had not appeared that she suffered in any way from them. How long these organisms remained in the calcareous state after they accomplished their final journey into the muscular tissues was still unknown.—Dr. PARSONS, in reply, said that in neither the English nor the German literature of the subject did the names of Dr. Harrison or Dr. McDonnell occur. How long these organisms retained their vitality after they had become encapsuled had not been determined. It was certain, however, that they did retain vitality for a considerable time after they were encapsuled, and that dipping them in alcohol did not destroy them. In the early stages the symptoms produced by them might easily be mistaken for enteric fever, for there was pyrexia for five or six weeks, but later there was a change in the symptoms, and the severe pains in the muscles indicated the lodgement of the embryos in them and the consequent irritation.

Reviews and Notices of Books.

A System of Surgery. Edited by FREDERIC S. DENNIS, M.D., Professor of the Principles and Practice of Surgery, Bellevue Hospital Medical School, assisted by JOHN S. BILLINGS, M.D., LL.D. Edin. and Harvard, D.C.L. Oxon., Deputy Surgeon-General, U.S.A. Vol. III. Pp. 919. Philadelphia: Lee Brothers and Co. 1895. Price $6.

THE third volume of this excellent system of surgery maintains the high standard reached by its two predecessors. In it we find the same comprehensive treatment of the subjects with which it deals.

Most of the articles in this volume are rather short, but the paper on the Surgery of the Genito-Urinary System extends to over three hundred pages; this is by Professor J. W. White of Philadelphia, assisted by Dr. W. H. Furness. As might have been expected from the names of the authors we are presented with an admirable account of the subject. This article contains many references to authorities, and in this respect differs markedly from the other contributions in this volume, for most of them are singularly bare of references. There are a few points in Professor White's paper which call for notice. In the description of puncture above the pubes for retention of urine it is mentioned that a trocar and cannula are employed, so that when almost immediately afterwards Cock's perineal puncture is referred to the reader would be led to think that this operation also was done with the same instruments, whereas it is performed with a bistoury. In the account of cystoscopy the author points out that by observing the openings of the ureters it is possible to see if either kidney has ceased to secrete, or if the urine from either kidney is turbid with blood or pus—matters of great importance in deciding on the advisability of performing nephrectomy or any other operation on the kidney.

In dilating the bladder preparatory to the performance of suprapubic cystotomy we think it is difficult to estimate, as is suggested in this article, the amount of fluid which may be safely injected by the resistance felt in working the syringe; this is a very fallible, and therefore very dangerous, guide. The only safe method to employ is to dilate the bladder by hydrostatic pressure, using a funnel and tube; if the funnel be not raised more than four feet above the body of the patient the pressure on the bladder wall cannot exceed two pounds per square inch; this is a pressure which is quite sufficient to overcome vesical spasm, but any pressure much greater than this is unsafe with damaged walls of the bladder. Dr. White employs the term "canal of Nuck" for the processus vaginalis in the male; we are inclined to think that this term has hitherto been restricted to the corresponding structure in the female. We find the theory still put forward that the greater frequency of left-sided varicocele is connected with the angle at which the left spermatic vein joins the renal vein; we do not think that this ancient theory can really be maintained; the pressure of an overloaded sigmoid flexure is a much more probable cause.

The operation of castration for senile hypertrophy of the prostate was introduced by Professor White, and he gives a full account of this method of treatment of this troublesome condition.

Professor D. B. Delavan of New York has contributed a very satisfactory article on the Surgery of the Larynx and Trachea. The only other paper of any length is that on Syphilis, by Dr. R. W. Taylor of New York. The question of the mode of action of mercury in the treatment of syphilis is no doubt a difficult one, but we cannot agree with the author when he says that "we know by inductive reasoning and observation" that mercury "acts by destroying and rendering fit for absorption" the small-celled infiltration which is the first stage of all syphilitic lesions; and also when, acting on this view, he advises that mercury should not be given until this infiltration has occurred—that is to say, until the secondary stage has declared itself. It is generally, we believe, admitted that mercury acts directly on the disease, either on the organism itself, to the presence of which syphilis is due, or on the toxins which are formed; and the evidence is sufficient that if mercury be given early secondary manifestations do not appear at all or are very slight and transient. In the article on the Diseases of the Salivary Glands, by Professor C. B. Porter of Harvard University, it is stated that in mumps there is a tendency to metastasis to the ovaries. The statement is certainly to be found in most text-books, but we are not aware of any case ever having been reported in which this metastasis has occurred; it has probably crept into the book as analogous to the well-known metastasis to the testes.

Dr. Willard Parker of New York commences his account of the surgery of the neck by an excellent description of the development, which will make it very easy for the reader to understand the somewhat complex subject of the congenital abnormalities of that region.

In the account of the surgery of the chest, contributed by the editor, we are told that it is dangerous to wash out the pleural cavity after tapping an empyema, as hemiplegia may result. This is true, but a still graver result may follow, for in by no means a few cases fatal syncope has occurred, probably due to the injected liquid being too cold. In hernia of the lung it is surely hardly necessary for Professor Dennis to tell us that "this variety of hernia has no peritoneal sac." Numerous black and white illustrations accompany the articles, and there are also several in colours; of these latter the most noteworthy is one representing an interesting case of carcinoma lenticulare.

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Kurzgefasstes Lehrbuch der Mikroscopisch-Gynäkologischen Diagnostik. Von Dr. JOSEF ALBERT AMANN, Jr., Privatdocent der Gynäkologie an der Königlichen Universität, München. Mit 94 Abbildungen. (*Concise Text-book on the Use of the Microscope in Gynæcological Diagnosis.* By Dr. JOSEF ALBERT AMANN, jun., Tutor on Gynæcology at the Royal University, Munich. With 94 Illustrations.) Wiesbaden: J. F. Bergmann. 1897. Pp. 172.

IT is interesting to find that the value to the student of the examination of both macroscopic as well as of microscopic characters of all forms of disease, whether common or rare, is becoming so well recognised that special treatises on most of the organs of the body devote a chapter to the modes of preserving, cutting, staining, and mounting specimens. The present volume is intended to supply the student who is beginning gynæcological work with information in regard to the means at his disposal for the diagnosis of uterine disease, and accordingly commences with a short account of the methods in ordinary use in pathological laboratories and their application to the microscopic examination of abnormal conditions of the fluids and solids of the generative apparatus. Dr. Amann commences with a description of the staphylococci and streptococci, and of the micro-organism which is by far the most commonly found in the generative tract, the gonococcus; and the far less frequent but still common bacterium coli. The vaginal secretion, the author remarks, is acid and contains epithelial cells, yeast cells, cocci, and bacteria, and it is interesting to find that the vagina is a very unfavourable soil for pathogenic germs since the secretion from its glands possesses powerful germicide properties. Hence pathogenic germs are rarely found in it and when present have greatly reduced virulence. If the vaginal secretion be alkaline it is abnormal and then often contains pus cells, diplococci closely resembling gonococci, leptothrix filaments, and occasionally the trichomonas. As an illustration of the mode in which the author deals with his subject we venture to translate a portion of the section on the physiological changes of the uterine mucous membrane, that portion which deals with menstruation and which may prove interesting to our readers: "The changes that take place in the mucous membrane of the uterus during menstruation are of a passive nature and are simply caused by the increased afflux of blood. Shortly before menstruation a serous infiltration appears to be produced by the simple congestion of the vessels in the membrane. The vessels are indeed very greatly distended and the thin-walled capillary plexus surrounding the superficial part of the glands ruptures at various points, and the blood is effused into the wide-meshed and delicate stratum proprium just beneath the investing epithelium. The lacunæ of this lymphoid tissue are soon distended with the escaped blood, causing a partial breaking down of the tissue and patches of ecchymosis of various size are found in the stratum proprium. The cement substance of the investing epithelium still holds, but at length, after being much raised and stretched, it gives way and is in part thrown off. The gland tubes may frequently be seen isolated from their surroundings by masses of blood, and in their lumen red corpuscles may be found which have entered it from the mouth, and also, when the glands have been torn away, from the deep-torn surface. The diapedesis of leucocytes does not amount to a small-cell infiltration. The uterine contractions that result from the presence of blood in its cavity facilitate the discharge of that fluid with the detached external portion of the mucous membrane. The greater part of the membrane is preserved, though it appears to undergo a partial fatty degeneration. No renewal of the epithelium or of the elements of the stratum proprium occur whilst menstruation is progressing, and no indications of mitosis have been observed in these parts at this stage. The changes that take place, then, in the normal mucous membrane consist in mechanical compression, disintegration, and detachment of the superficial layers of the mucous membrane. As the congestion passes off a rapid regeneration of the mucous membrane occurs and mitosis may then be observed in the gland epithelium and in the cells of the stratum proprium and in the endothelial cells of the vascular walls. In the course of ten or twelve days the restoration of the mucous membrane is complete and the resorption of the ecchymosed blood has been accomplished."

The characters presented by the mucous membrane in dysmenorrhœa and in pregnancy are then given with a differential diagnosis of decidua menstrualis, decidua graviditatis intra-uterinæ, and decidua graviditatis extra-uterinæ.

A good account of the Fallopian tubes is given both in normal and diseased conditions, a subject that is scarcely more than mentioned even in Müller's "Handbuch." The text is here, as throughout the work, accompanied by original and well-executed illustrations that will prove useful to the student. The work is a reliable one and may be read with advantage by all who are devoting themselves to this branch of study.

The Causes and Treatment of Rheumatoid Arthritis. By SAMUEL HYDE, M.D. St. And. London: John Bale and Sons. 1896. 3*s.* 6*d.*

THE exceptional opportunities that many years' practice in Buxton have afforded Dr. Hyde of studying cases of rheumatoid arthritis and watching the results of its treatment make the expression of his view worthy of every consideration and study. This work contains much that is original and will well repay perusal. Rheumatoid arthritis is a disease the etiology and pathology of which has been much debated and which is extremely difficult to treat with any satisfaction. Dr. Hyde discusses the various views which have been advanced as regards the causes of the disease and defines it as "a trophoneurosis of joints unassociated with any systemic disorder and probably dependent upon some central nervous lesion." He is strongly inclined to believe that a central nervous lesion constitutes the starting-point in the majority of pronounced and characteristic cases of the disease. He states that in his experience no causes are more productive of this distressing malady than certain psychical conditions associated with anxiety and mental distress. The author's views on the morbid anatomy of rheumatoid arthritis are also plainly stated. He considers that the changes which occur in the structure of the joint are, on the whole, due to abnormal nutrition, and that the process may be in some cases associated with an inflammatory process, but not necessarily so.

In the chapter on "Pathology" the nervous element is again insisted on; the author says: "The more this factor in the causation of the disease has been recognised and allowed to influence my treatment the more I have been encouraged by the results." The treatment of this affection is considered very fully, occupying half the book—drugs, diet, clothing, massage, the use of stimulants, baths and mineral waters, climate, and the use of animal extracts. Great stress is laid on a full, generous diet, not too stimulating, and arranged with due regard to the digestive conditions of each particular case. Alcohol is not only admissible, but often a desirable factor of diet. The chapter on baths is also interesting and instructive.

We can cordially recommend this short work to our readers, believing that they will find much help in the comprehension and treatment of a disease the victims of which are so numerous and which so frequently results in permanent disablement.

LIBRARY TABLE.

Dod's Parliamentary Companion. London: Whittaker and Co. 1897. Price 4*s.* 6*d.*—The issue for the present year

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of this most useful little book comes opportunely at the time of the re-opening of Parliament. That it is literally brought "up to date" is shown by the fact that in the appendix is to be found an announcement of the peerage conferred as a New Year Honour on Sir Joseph Lister. The editor, though he states that the new title is not yet announced, sagely assumes in an accompanying slip that the family name of Lister will be adopted. As our readers are aware we were able to announce in our issue of Jan. 16th that the first medical peer would take the title of Lord Lister. By the death in 1895 of Dr. Daniel Ambrose, member for South Louth, and the resignation in March, 1896, of Mr. J. E. Kenny, member for the College Green division of Dublin, the number of medical men who obtained seats in the House of Commons at the General Election held in July, 1895, was reduced by two. On the other hand, the subsequent election of Sir William Overend Priestley, M.D., as member for Edinburgh and St. Andrews Universities introduced another representative of the medical profession into Parliament. So far as we are able to verify, the details given in the present issue of Dod's Parliamentary Companion are, as usual, reliable.

JOURNALS AND REVIEWS.

The Monist.—The January number opens with an abstruse metaphysical paper, fifty pages in length, on the Logic of Relatives. Under the head of Relatives of Second Intention the author, Mr. Charles S. Peirce of New York, explains that "logic in this stage of development may be called paradisaical logic, because it represents the state of Man's cognition before the Fall." Dr. P. Topinard of Paris gives the third of his series of articles on Science and Faith. On the present occasion he discusses the subject of Animal Societies, especially the assemblage of fishes in shoals and of birds and quadrupeds in flocks or herds.

The Psychological Review.—The January number contains two papers of considerable physiological interest. Professor W. L. Bryan and Mr. Noble Harter, both of Indiana University, give the results of their investigation of various problems connected with the acquisition of the telegraphic language, based on an analysis of the performances of numerous telegraphic operators, both learners and experts. MM. A. Binet and N. Vaschide of Paris describe experiments on the Influence of Intellectual Work on the Blood-pressure in Man. Their apparatus was a Mosso's sphygmomanometer, registering the pulsations of two fingers of each hand placed in indiarubber finger-tubes and exposed to the pressure of water. With this instrument it was found that when a young man mentally multiplied two figures by two figures "the first three or four pulsations which register themselves are usually of the same character as the preceding; sometimes they are slightly shortened. ..... Then the pulsation increases; it doubles in size or becomes twice and often three times as great."

Medicine (Detroit).—Dr. J. Frank of Chicago describes a new contrivance for intestinal end-to-end anastomosis. It consists of two decalcified bone collars, stitched one to each end of a piece of indiarubber tubing, which fits the aperture of the collars and is of such a length that the collars touch one another. The cut ends of the intestine, apposed and encircling the line of contact of the collars, are pressed in between them, slightly stretching the indiarubber tube; the elasticity of the indiarubber keeps the parts in position, and the tube is eventually passed with the fæces.

Birmingham Medical Review.—The opening paper is a practical and suggestive article on the importance of the Study of Anatomy by Mr. W. F. Haslam who introduces a good many useful hint on the work of the dissecting room and much profitable advice as to the cultivation of the faculties of observation and memory. Mr. E. Luke Freer as an illustrated paper on Operative Measures in Orthopædic Practice. Mr. J. Furneaux Jordan describes the successful reduction of a complete inversion of the uterus which had existed for more than seven months; the operation employed was that of Küstner, as modified by Dührssen.

The Senate for January contains a silhouette portrait of Sir Henry Acland, late Regius Professor of Medicine in the University of Oxford. It is a very good likeness, but we have much doubt whether the silhouette can be used with advantage to depict persons past the prime of life unless the introduction of a few white lines upon the face be allowed. In young people the profile may tell the story, but in those who have put a long record of work behind them the chief character is given to the face by lines which cannot be represented in the ordinary silhouette. The contents of the journal are interesting, and, as usual, show a familiarity with modern thought and literature, but Mr. Frankfort Moore should not be classed with Sir Walter Besant as a novelist, and to say that Mr. Gale has "become as thin and mechanical as Mr. Kipling in his least interesting moods" is rubbish.

The Journal of State Medicine. Vol. V., No. 1. January, 1897. London: Baillière, Tindall, and Cox. Price 2*s.*—With the commencement of 1897 it has been decided by the council of the British Institute of Public Health to publish this journal monthly, and the number here noticed is the first issued under the new arrangement. The Council is to be congratulated on this step, which should lead to a more continuous interest in the *Journal* than was heretofore possible. The present number contains an interesting paper from the pen of Mr. A. E. Fletcher, late H.M. Chief Inspector under the Alkali Acts, on the Pollution of the Atmosphere by Coal Smoke, which sets forth in condensed form matter which will be of use to many medical officers of health. Mr. Fletcher is not sanguine as to the reduction of smoke from private dwellings, and, as he adds, "he would be a bold man who would try to persuade a Briton to give up his open fire." Dr. Vivian Poore has a paper on Dry Methods of Treating Urine for Sanitary Purposes, in which he describes the satisfactory results obtained by the reception of urine into sawdust. He advises the adoption of this method under certain circumstances in rural districts. Both the above papers were read before the Glasgow Congress of the Institute in 1896. An article on Public Health Laboratory Work in London regrets that the Metropolitan Asylums Board have terminated their arrangement for bacteriological examinations at the laboratories of the Royal Colleges of Physicians of London and Surgeons of England and have substituted for it local examinations at the several hospitals of the Board. The step is regarded as a retrograde one.

Journal of Mental Science. January, 1897.—In the current issue of this quarterly Dr. Julius Mickle continues his observations on atypical and unusual brain forms, especially in relation to mental states. Dr. Gilmore Ellis, of Singapore, describes a peculiar nervous affection called "Latah," which is common amongst the Malays. The disease is almost invariably hereditary and is characterised by symptoms of a mimetic and paroxysmal nature. A valuable and original contribution to the pathology of insanity, by Dr. John Turner of the Essex County Asylum, deals with the question of phagocytosis in the brains of the insane. The function of absorbing and removing effete and degenerate material has been ascribed by Mr. Bevan Lewis to the Deiters' cells, but Dr. Turner goes further, and attributes similar power to other bodies, which he states are wandering leucocytes. He describes and illustrates, by means of small plates, numbers of cells lying free in the pericellular spaces. Practically, in all cases where they are seen, a portion of the cytoplasm of the nerve cell in their vicinity is deficient. This piece has a clean-cut, scooped-out appearance, and if two or more

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cells are present then two or more portions of the cytoplasm in their neighbourhood are scooped out. He concludes that either the invading cell exercises its solvent action on the cytoplasm of the nerve cell in its vicinity, whereby such portion is carried away by the lymph stream, or else they themselves absorb, and, as it were, feed on, the nerve cells. Doubtless this pathological condition will be further investigated, for it is by the record of such original work that a clearer understanding will be arrived at regarding much that is obscure in the pathology of mental diseases. A statistical paper by Mr. Pitcairn, of H.M.'s Prison, Holloway, shows that this institution receives in the course of a year many acute cases of insanity, which must entail much anxious work on the medical staff. In view of the rapid flow of cases the services of an additional assistant medical officer are urgently required. Dr. Walter Channing of Brookline, Massachusetts, U.S.A., writes on the Palatal Deformities of Idiots; his conclusions are not quite in conformity with the opinions expressed by various authorities in this country.

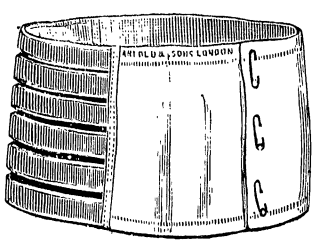
The monthly publications of the Religious Tract Society include the *Leisure Hour*, the *Girl's Own Paper*, the *Sunday at Home*, and *Sunday Hours*. The February part of the *Leisure Hour* has an interesting though short notice of the late Coventry Patmore, a poet who has treated the subject of domestic felicity with a spiritual purity and a tenderness which few if any of our singers of love have equalled. The same number also contains a sketch, illustrated with a portrait and autograph, of the author of "Wuthering Heights." The *Girl's Own Paper* is quite up to its usual standard of excellence, as is also the *Sunday at Home*. *Sunday Hours*, the new paper, contains Sunday reading for boys and girls; if the healthy tone of this latter publication is maintained it should find a place in every home where there are boys or girls or both.

Mercy and Truth.—This is the title of a new monthly periodical, issued at the modest price of one penny by the Church Missionary Society, Salisbury-square, E.C., and having as its sub-title, "A Record of C.M.S. Medical Mission Work." Dr. T. L. Pennell has an article on "The Afghans—How can we Reach them?" in which he gives some account of the work of a mission hospital. In another article the mission hospital at Hangchow is described.

New Inventions.

NEW OBSTETRIC BINDER.

AT my suggestion Messrs. Arnold and Sons of West Smithfield, London, have made for me a new form of obstetric binder which I hope will prove of use in midwifery. The novelty of its manufacture consists in a row of silk elastic bands inserted on one side of the bandage, which is itself

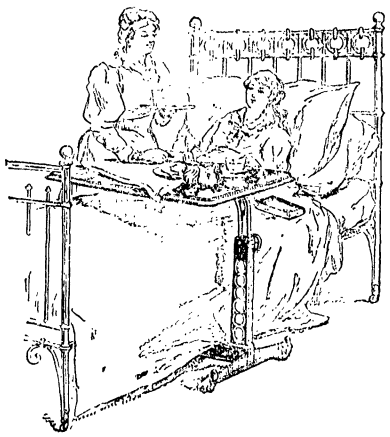


made of strong linen. By these means I hope to obtain the following advantages: (1) Even pressure over the abdomen, each band of elastic only expanding to the extent required at its situation; (2) power of self-adjustability by the patient; (3) the bands of elastic being at the side the patient will not be inconvenienced by having to lie on them; (4) the strong safety-pins supplied with each bandage will prove a boon to many, for often nothing is so difficult to find at these times as a pin worthy the name; (5) the binder is easily cleansed and can be used many times if carefully put away after each convalescence. I hope the time is at hand when every expectant mother will provide herself with a scientifically constructed obstetric binder and that the day of the roller-towel and any odd pins that can be found will pass away, to the improvement of the figures of the mothers and last, but not least, the temper of the practitioner.

Billesdon, Leicester. A. DUNLEY-OWEN.

THE "VICTOR GEM" INVALIDS' TABLE.

We illustrate below a new invalids' table for which are claimed some points of advantage over the old form. When not in use as a bed table the usual form of this convenience precludes its being used for any other purpose, and consequently is likely to be "in the way." The "Victor Gem," however, by its construction can be adapted for general use, and can be used as a card-, library-, sewing-table, &c. The top of the table is made in antique oak or walnut and is firmly secured by means of a small hand wheel to a right-angled framework of iron, one arm of which as



will be seen from the illustration slides within an upright iron frame surmounting the four rests on castors. When not required as a bed table the wooden slab can be reversed so as to bring the iron support to a more central position under the table, thus giving greater stability. The table certainly possesses advantages, but is not so easily adjusted as is desirable. Unless very great care is taken the iron arm which slides within the upright frame is liable to slip while the side hand screw is being turned, and descend to the lowest point with a clatter which would not be at all beneficial to an invalid suffering or recovering from a nervous complaint. The top of the table measures 1 ft. 6 in. by 3 ft., and can be adjusted between the maximum and minimum heights of 3 and 2 ft. It is sold by Messrs. Millard Bros., 123, Houndsditch, London—price, £1 10s.

THE WILLARD BELL TRUSS.

THIS truss consists of an oval pad, which fits over the external abdominal ring and the inguinal canal; this pad is firmly attached to a stout piece of nickeled steel wire, which passes upwards and outwards above the iliac crest, and, curving backwards, is attached to a broad pad shaped something like the letter W; this is intended to fit over the sacrum and the sacro-iliac articulation on each side. From the termination of the wire at this pad a band passes round the hip of the unaffected side and is attached to a button on the hernia pad. In use we have found that the sacral pad fits very comfortably and the whole truss is light and elegant and keeps back the hernia very satisfactorily. In the specimen submitted to us the force of the wire spring was a little greater than was necessary to retain the hernia, but probably the springs are made of different strengths. We consider the truss a useful and comfortable modification of the usual form. It is made by the Accrington Surgical Appliances Company, Limited, Dale-street Works, Accrington.

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THE LANCET.

LONDON: SATURDAY, JANUARY 30, 1897.

THE SANITARY STATE OF THE ARMY IN INDIA.

AS the readers of THE LANCET well know, we have always regarded the policy and action of the so-called "purists" and opponents of the Contagious Diseases Acts as highly mischievous and opposed to the interests alike of public health, public decency, and, we may add, morality. The condition of the British Army in India, as set forth in the *Times* of the 22nd instant, shows where that policy has landed us in that country. Briefly stated, the medical history of the army in respect of these diseases is as follows. From the time when the lock hospitals were closed, all restrictive measures have been gradually surrendered. The results obtained even before that date, however, showed that the system and machinery, as then applied, had proved inadequate to cope with the evil; but if these measures fell far short of accomplishing what they have effected on the Continent, and what had been anticipated from them, we see, now that all restrictive barriers have been taken away and been replaced by a system of free-trade in prostitution, that they nevertheless did impose some check on the flood of disease which has since taken place. The number of admissions—not the number of men, for the same individual may be admitted once or several times—for this class of disease has been steadily rising during the last few years from over 400 per 1000 until it has now reached considerably over 500 per 1000. Nor does the extent of the evil end here, for, according to a very able and vigorously-written article in the *Pioneer*, which the correspondent of the *Times* deemed of sufficient importance to telegraph home, not only has venereal disease been augmented in quantity, but it has acquired such a degree of virulence as to quality that numbers of soldiers have been invalided from India and landed at Netley in a truly terrible and pitiable condition. Would it not be well, by the way, if some of the leaders of the purist party obtained permission to visit these object lessons and see for themselves the practical results of their agitation?

The *Pioneer* may well institute a comparison between the plague at Bombay and the results of this scourge, one being a rare and temporary, the other a perennial and persistent evil, which yearly consigns hundreds of our young and inexperienced soldiers to the grave by loathsome paths of preceding suffering and illness. In the case of the plague we strive to do everything in our power to stamp out and limit the ravages of the contagion; in the other we do nothing of the kind, but all attempts in this direction are branded as the licensing of vice! We must look the facts in the face. Nature has implanted in every man, in common with the lower animals, an appetite so strong that it is hopeless to suppose we can successfully war against it. Deplore it as we may, it is nevertheless a fact conterminous with the history of the race itself that prostitution has existed from the earliest to the present times. No one would willingly allow people to wander about a powder magazine with a lighted torch or pipe. Not to prohibit them from doing so would be regarded as criminal folly; but we must take no steps to prohibit a diseased woman from pursuing her trade in the midst of the highly inflammable material of a short service army! To do so is to interfere with the liberty of the subject and to legalise vice forsooth! We take every precaution to safeguard people from all other infectious diseases, but none must be taken in regard to that kind of infection which does not simply end with the individual attacked, but may be, and often is, conveyed to other and innocent persons and even to the unborn. It is impossible that the whole army should be married at the ages at which men enlist and serve as soldiers. To do so would be tantamount to having no army at all. And we all know, moreover, what it means to allow every young man to marry regardless of his being able to maintain a wife and family; it means misery, suffering, and early death.

What, then, is to be done? It seems to us that we need somebody with the courage of his opinions to grapple with this question. Before we fold our hands and confess our inability to do anything let a full and impartial inquiry be instituted in the first place so as to ascertain the facts; and, in the second, let it be seen whether some method of dealing with the subject cannot be devised and put in force in real earnest. It may be found to be no good merely returning to the old Indian system as it was carried out; if so, let a new and better one be substituted for it. We have for our guidance, at any rate, the results that have been obtained in Continental armies, where restrictive systems are pursued, and the amount of these diseases has been thereby reduced to insignificant figures, which are in striking contrast with the ratios of our own army in this respect. No doubt the difficulties in a country like India are very great, but we cannot regard them as insuperable. It must not be forgotten that prostitution in India is a question of caste, and that if any help is to be given to the "unfortunates" of India it can be done by the aid of legislation and through the instrumentality of a cantonment magistrate in protecting them against incurring debts which bind them like slaves to continue their career. We have had experience of trying to fortify our young soldiers against temptation, and we have tried to provide for unfortunate women when diseased by a system of voluntary hospitals, of which they do not care to avail themselves, and the result has been that things have gone from bad to worse. Is it not time to deal with humanity as it exists, and no longer to proceed on the impracticable lines of a false sentimentality in dealing with one of the commonest and certainly gravest and most persistent forms of contagious disease with which we are acquainted? Having vainly tried to do all in our power to conduce to habits of continence, we may surely now, with a clear conscience, have recourse to other and repressive measures and endeavour to protect our young soldiers against the results of temptations which they seem to be practically powerless to resist. If we may judge by results, too, the application of restrictive legislation in regard to prostitution is attended with moral and social advantages: moral in that it checks many giddy, thoughtless girls at the very outset of their

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downward grade by the fear of discovery, and secures to the diseased prostitutes rest, food, and treatment in institutions where they will probably meet with more sympathetic kindness and chances of reclamation than they have ever had before. As regards the social effect of such legislation there can be no doubt that it effected, if it did nothing else, a great change for the better in the decorum and decency of those seaport towns to which it was applied. The whole question seems to us to stand in urgent need of further inquiry and of serious consideration.

THE question of quarantine detentions of shipping and of persons is certain to become an acute one in connexion with the proposed international conference as to plague. There are certain nations who, for the purposes of disease prevention, subordinate everything to the one idea of quarantine; and if, by the aid of vast expenditure and of a proper sanitary organisation, such detentions have been shown to be quite unnecessary in certain countries, the generality of nations urge that, with a view to what they term the advantages of an international agreement, the countries that have fitted themselves to cope with foreign diseases on modern scientific lines ought to sacrifice themselves in the interests of those nations whose sanitary administration has been one of more or less complete neglect.

This is briefly the present position of Great Britain in relation to many other States. Our Government has dispensed with all quarantine restrictions as regards cholera, and the knowledge of this has during the past generation acted as a stimulus to our sanitary authorities so to prepare their districts in advance that they shall be able, with a reasonable chance of success, to control foreign disease imported into their midst. This action has been of untold benefit in the prevention of disease and in the saving of life. At the Paris Conference England was asked to share in imposing quarantine, under the disguise of the new-fangled name "observation," in the Persian Gulf; she declined, and now we hear that we alone are responsible for all the evils that may happen in connexion with plague, with which disease, by-the-bye, the proposed quarantine detentions in the Persian Gulf had nothing whatever to do. Last year we took a further step in advance. We got rid even of the form of quarantine as regards plague and yellow fever in the British Isles, and the Local Government Board issued an order from which it is perfectly clear that they intend to deal with plague without resort to quarantine detentions. But directly we enter into any international conference we shall find that the majority of the European nations will demand quarantine, either openly or in disguise; and if we answer that we have decided that in this country we decline to detain healthy people in quarantine on a mere hypothesis that perhaps they may be incubating some disease or other, then we shall be told that we are breaking down all chance of an international agreement and that we, who are spending millions a year in the promotion of public health, have no other idea than the sordid one of securing our commerce. And, if we may judge by the past, the next step will be to accuse us of wanting to introduce disease into the basin of the Mediterranean and thus to infect Europe. Surely the time has come for us to answer that, if uniformity is wanted, there is such a thing as levelling up as well as levelling down, and the mark which is again set before our eyes, as one to be specially aimed at, is distinctly on a lower plane. Uniformity and international agreement are all very well, but the sacrifice that they involve may be a worse evil than a failure to agree. Accusations of the sort referred to are already being bandied about by experts who ought to know better, even if they do not; and it is under the ban of these accusations that we are asked to confer with other nations, some of whom have shown by their past attitude that they hardly care the proverbial "two straws" for the health of the communities for which they are responsible. It is, indeed, only when some panic prevails concerning a disease to which they are not accustomed that they suddenly try to make it appear that they are desirous, in the interests of all nations, to take a share in the control of disease. But that control is nearly always of the same sort—namely, one based on quarantine, which costs them but little, if, indeed, it does not put money into their pockets, and which only inconveniences others.

This, we believe, is in the main a correct and unvarnished story of the attitude likely to be adopted by the majority of the nations whose votes will count at an international conference; and it is a state of affairs that cannot fail to present difficulties to a country which has been endeavouring for nearly half a century to render antiquated and retrograde action unnecessary. So far as our own ports are concerned, medical inspectors of the Local Government Board are already at work and are doing what they can to prepare them better to meet any emergency which may arise; and, so far as India is concerned, we are glad to learn that the Government have felt themselves able to prohibit the departure of pilgrims for Mecca from either Bombay or Karachi. But, as regards plague, land routes are infinitely more dangerous than sea routes. Pilgrims going by sea are daily under such medical observation that detection of plague would be a comparatively simple matter; by land they may here and there have to run the gauntlet of a sanitary cordon, the passing of which in Eastern lands is, as a rule, a matter of money, but minor cases of the disease are very likely to pass unnoticed. We shall, however, doubtless find that, as hitherto, attention will be essentially concentrated on shipping, just as it was at the Venice Convention, even when cholera was slowly but surely advancing along the old land routes in the direction of Europe. In fact, a lock and key at Suez have charms for many who try to forget that long before the Suez Canal was in existence plague and cholera made far worse inroads into Europe than can ever be possible through the agency of traffic by sea, which is both limited in amount and is always carried out under conditions that make it the least dangerous method for the diffusion of infection.

A CASE of somewhat painful interest was tried last week at the Carnarvonshire assizes by Mr. Justice GRANTHAM which illustrates in more ways than one the difficulties of medical practice and the damage which may be inflicted on reputations by hasty and ill-considered statements. It was

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an action brought by Mr. DEW, a solicitor of Bangor, against Dr. GREY EDWARDS, for many years the trusted medical adviser to the plaintiff, to recover the expenses incurred by the latter by the illness of two of his children attributed to defendant's neglect in enforcing suitable precautions from contagion on the occasion of the fatal illness of another child which occurred just previously to their attacks. It was contended that Dr. EDWARDS had failed to recognise the first case as one of diphtheria, the disease from which the other children subsequently suffered. The hearing of the action occupied the Court for three days, and resulted in judgment being given for the defendant with costs. We can only give a brief outline of the salient features of the case, which, after all, amounted simply to the imputation of mistaken diagnosis and laxity in the adoption of precautionary measures on the part of the defendant.

As presented by the plaintiff, it was averred that Dr. EDWARDS, who was called in to the child STANLEY DEW, six years of age, on Oct. 5th, 1895, did not take a serious view of his condition, and more than once declared that there was no risk of contagion. The child had been sent home from a visit at a relative's house suffering from sore-throat. No membrane could be seen on the throat, but there was a small ulcer on the tonsil. On Dr. EDWARDS'S advice he was removed to a separate room, and not improving a trained nurse was called in. The condition of the throat grew worse, much sloughing took place, glandular swelling and nasal discharge ensued, and death occurred rather suddenly on Oct. 12th. The case was certified as one of "malignant sore-throat," but the bereaved parents in their distress seem to have been only too ready to attribute their loss to other causes, and their surmises were strengthened by what the judge rightly characterised as two unfortunate and hasty statements. When the child was in a critical state Mr. DEW wished for a second opinion, and sent for Dr. WILLIAMS of Holyhead. Before the latter arrived the child died, and after hearing Mr. DEW'S account Dr. WILLIAMS said that the case must have been one of diphtheria. The other incident arose out of a conversation which the plaintiff had some time subsequently with Mr. LLOYD of Bangor, when that gentleman said that he had been told by Dr. EDWARDS that the case was one of diphtheria and that antitoxin had been used. It was clearly shown that Mr. LLOYD had confused this case with the others which subsequently occurred, but Mr. DEW, believing this statement, came to the conclusion that antitoxin had been injected by Mr. FARLEY, who attended for Dr. EDWARDS on the night of Oct. 11th. He called on Mr. FARLEY to question him on the matter, but that gentleman declined to give him any information; nor was the plaintiff any more successful in his inquiry on the same subject addressed to the nurse. It was, indeed, a singular inference to have drawn, that Dr. EDWARDS, who had throughout seen nothing to justify a diagnosis of diphtheria, should have resorted to this line of treatment; but every allowance must be made for one who had been bereaved of his child and in whose mind suspicion had been aroused and allowed to grow. As a matter of fact, there was no foundation at all for this statement. Mr. FARLEY, who is the house surgeon at the Carnarvonshire and Anglesey Infirmary, attended at Dr. EDWARDS'S request to syringe the nostrils, which had become blocked by discharge. In his evidence Mr. FARLEY said he saw no membrane, and concurred with Dr. EDWARDS that the case was one of "malignant sore-throat."

Mr. DEW, unfortunately, having once had his confidence shaken, was all the more prepared to attribute the attacks of diphtheria from which his infant and two other children as well as a maid-servant suffered, to infection from the case of STANLEY. He appears to have read works on diphtheria, and his view as to the nature of the case was supported by Mr. LENNOX BROWNE, presumably one of the authorities consulted. As regards Mr. LENNOX BROWNE'S evidence, we need only say this, that it was unfortunately based upon his interpretation of the symptoms as detailed by Mr. DEW himself; and without in any way disputing the fact that cases of malignant diphtheria run a course not dissimilar from that here presented, it must be remembered that Mr. LENNOX BROWNE had no opportunity of personally observing the clinical features of the case. His evidence, therefore, is of no more and no less value than the rebutting expert evidence given by Dr. LLOYD ROBERTS and Dr. ASHBY on behalf of the defendant, both of whom acknowledged that gangrenous inflammation of the throat of a non-diphtheritic nature does occur—and occur, too, under similar insanitary conditions as those which often dispose to true diphtheria. The evidence given by Dr. EDWARDS himself was plain and straightforward and his account of the case perfectly coherent and comprehensible. He had no grounds for believing that the case was one of diphtheria, although, as may happen to any practitioner, even the most experienced, the possibility of such being the nature of the malady became more apparent when others of the household sickened with unmistakeable signs of the disease. Nevertheless, although he could not regard the case as of this specific nature, he certainly did take all reasonable precautions to prevent contagion. That he did not recognise the gravity of the case at first is not to be wondered at; but even when it assumed a more serious aspect he was only carrying out the wife's injunction not to say too much to depress her husband. It is impossible not to feel great sympathy with the parents in the trouble which befell them; but this sympathy is in great measure neutralised by the action taken by Mr. DEW, who has suffered his anxieties and distress to master him to such an extent as to destroy confidence in an old friend and medical adviser, to create suspicion of his actions, and impute to him serious negligence. Happily for all parties, the case has ended as it only could end, and we trust that Mr. Justice GRANTHAM'S sensible and judicious remarks may bear good fruit.

WIGAN MEDICAL SOCIETY.—A meeting of the above society was held on Jan. 21st, 1897, the President, Mr. C. R. Graham, in the chair. Mr. J. Collier read a paper on Astragalectomy, with Erasion for Pulpy Ankle-joint. The paper, an able and interesting one, with original suggestions, was listened to with much attention. A discussion followed in which the following members took part:—The President, Mr. Monks, Dr. Blair, Mr. Cooke, and Mr. Mitchell Roocroft.

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Annotations.

"Ne quid nimis."

THE QUESTION OF A CENTRAL HOSPITAL BOARD FOR LONDON.

THE meeting held on Monday at the United Service Institution for promoting the formation of a central hospital board was a very successful one—indeed, it would be difficult to exaggerate its importance. The fulness of the attendance and the remarkably representative character of the speakers and of the meeting itself were ample proof of the deep hold that this subject is taking of the mind of the public or of that section of the public which in the long run affects public opinion. The representation of the profession was unusually good, consisting, not only of well-recognised exponents of the grievances of medical practitioners but also of a fair number of the members of the medical staffs of the various hospitals. No doubt it was largely a Charity Organisation meeting, and in its very organisation showed the faculty of that society; but the fair field given to opponents and the moderation of the speeches combined to show how serious was the subject and how general is the conviction that the time has come for dealing seriously with it. To the chairman (Lord Stamford) is due much of the credit of the meeting. His own speech and his excellent temper and readiness in preserving order and discipline were most useful in contributing to good discussion and in eliciting a clear vote in favour of a central board by a majority of 121 to 12. But the speech of the occasion was that of Sir William Broadbent. The painful feeling that has possessed many medical men of late in connexion with this subject is one of anxiety lest the profession should be fatally divided upon it, and lest its members who constitute the staffs by which the work of hospital charity is done should prove indifferent to the wide abuse which has grown up like a canker in the monstrous development of the out-patient department. The speech of Sir William Broadbent will do much to allay this anxiety, and the presence of many other consultants at the meeting together with the letters read from Sir James Paget, Sir Edward Sieveking, Sir James Crichton Browne, Dr. Lauder Brunton, and others will have the same effect. Sir William Broadbent's position in the profession and in public favour might have supplied him with many arguments for adopting a Gallio-like attitude with respect to this movement. But he has well judged in speaking out clearly in sympathy with the bulk of the profession. In so doing he may save both the hospitals and the profession. He made his points well and in such temperate terms as to defy serious opposition. He showed that it was notorious that patients went to the hospitals for whom hospitals were never meant; that was a matter which concerned both the public and the profession—primarily the general practitioner, whose fair field of work was invaded, and next the physicians and surgeons of the hospitals, whose energy was wasted and whose time was misapplied. It was bad for the poor, for they were detained and received less attention than their cases required. Another great evil was the want of coördination of hospitals, each playing for its own hand and engaging in a vicious competition to show mere numbers. The quality of Sir William Broadbent's speech was well shown in the judgment with which he dealt with the question of special hospitals and the error of general hospitals in not soon enough recognising the need for some specialisation of work within their own walls. He disclaimed strongly all hostility to hospitals and any desire to abolish a proper and healthy rivalry in doing best for the patients and in seeing that the patients were worthy. He did great service to hospital authorities in supposing that they would come to recognise the necessity of some sort of central board and of coöperating harmoniously with it. A very important part of his speech was that in which he alluded with much hope to rumours of the Royal favour with which in this auspicious year schemes for relieving and benefiting the hospitals are regarded by Her Majesty the Queen and His Royal Highness the Prince of Wales. No more Royal thing could be done than the use in such a cause of the Royal favour. The fund so raised would have to be entrusted to a board which by its very functions would be entitled to a certain supervision of the institutions so favoured. We are heartily in accord with the wishes of Sir William Broadbent in this matter. We see nothing in the temperate and reasonable opposition of the speakers at the meeting to make us despair of the speedy success of this movement. Mr. Myers, the Rev. Dr. Wace, and Mr. Keetley were all well within reason in objecting to details in the specific motion proposed by Sir William Broadbent. But their objections and those of Dr. Lauder Brunton were well met by the assurance that nothing will be done without giving full consideration to the managers of hospitals and dispensaries, whose services in the cause of humanity must always be recognised. The one thing that may spoil this movement is division in the medical profession. It is the last profession that can take any exception to hospitals which keep within their functions, and if its various sections agree on reasonable lines the reform will be one of the achievements of this notable year. Let it be remembered that no cut-and-dried scheme is proposed and that on any Central Board that is likely to be formed the hospitals themselves will be—nay, must be—fully represented.

THE PLAGUE.

IT has been computed that the total number of victims to the plague at Bombay during the four months that it has prevailed in that city did not exceed the number that perished in London in about the same number of days in 1665. The official returns in either case did not probably accurately represent the actual number of deaths attributable to that disease. We know that in the great plague of London it was the opinion of Defoe that they did not do so and no doubt he was correct, as there were no reliable statistics in 1665. In connexion with this subject it may be interesting at the present time to refer to an occurrence which took place in 1876. In that year it was proposed to carry out some military works in one of our large garrisons abroad which would necessitate the disturbance of the remains of those who had fallen victims to the plague which had prevailed there in 1665. The local board of health took alarm and strongly recommended that certain stringent quarantine procedures should be adopted in regard to the workmen engaged, lest the plague of over two hundred years ago should be resurrected and possibly communicated to them from the ground and any remaining fragments of bone. As the steps proposed to be taken would occasion considerable expense and inconvenience and possible danger from the close proximity of a powder magazine the matter was referred to this country for an opinion as to whether the assumption rested upon any basis of fact. Of course, if it could be shown that there was any instance on record of plague having broken out from such a disturbance of the soil after the lapse of two centuries the precautionary quarantine measures might possibly be justifiable. This led to inquiry, with the result that might have been anticipated. We know historically that in the Great Plague of London upwards of 100,000 persons died from the disease and were not only buried in plague pits near the present site of Golden-square, at Goswell-street, Finsbury,

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Tothill Fields, Cripplegate, and elsewhere, but in every churchyard of the City and surrounding parishes. These continued to be afterwards used for all classes of interments, with the consequent continuous disturbance of the soil containing plague remains until the grounds were finally closed—more than a quarter of a century ago. Some of the churchyards were entirely emptied of remains in order to fit the ground for building purposes without incurring the slightest degree of risk against which the precautionary safeguards were proposed to be directed. Moreover, sewers, gas-pipes, water-pipes, and telegraph wires must have been laid and frequently repaired in situations where plague patients had been interred more than two centuries ago. The following facts were elicited in the inquiry, and they show how large were the plague interments in some of the metropolitan burial grounds:—Ninety-seven parishes within the walls, 9887; St. Andrew's, Holborn, 3103; St. Giles, Cripplegate, 4838; St. Botolph, Aldgate, 4051; St. Olave and St. Saviours, 6231; St. Giles-in-the-Fields, 3216; St. Martin-in-the-Fields, 2883; St. Mary's, Whitechapel, 3853; St. Margaret's, Westminster, 3472; and St. Dunstan's, Stepney, 6583. It is needless to add that in the face of this large experience, and in the absence of any evidence of plague having ever been reproduced by disturbances of ground 200 years after interment, the conclusion arrived at was that no other precautions were necessary beyond such as would be taken in the removal of the soil and remains of any cemetery at the station in question.

VISIT OF LORD LISTER TO BELFAST.

ONE of the most interesting events in connexion with the jubilee of Queen's College, Belfast, was the visit of Lord Lister, who was the guest of the President of the Ulster Medical Society, Professor J. Symington, who in former years was one of his house surgeons. On arriving at the College on the afternoon of Tuesday, Jan. 19th, Lord Lister received a tremendous ovation from the students, who unyoked the horses from the carriage and drew him in triumph to the new Union Buildings. In the evening the President of the Ulster Medical Society invited a large number of medical men, students, and leading citizens of Belfast to a symposium in honour of Lord Lister, which was held in the Medical Museum. An excellent programme of music was provided, and on rising to respond to the toast of his health proposed by Professor Symington, Lord Lister was received with the greatest enthusiasm. He said he had often heard of Irish hospitality and Irish enthusiasm, but never experienced them as he had done that evening. Having thanked all those present for the very cordial manner in which they had greeted him Lord Lister concluded by proposing the health of Professor Symington. On Wednesday forenoon (Jan. 20th) Lord Lister delivered a most interesting address in the library of Queen's College in connexion with the opening of the new laboratories. There was a very large attendence of medical men and students. President Hamilton having taken the chair, an address was presented to Lord Lister from the North of Ireland branch of the British Medical Association and the Ulster Medical Society, for which Lord Lister returned his warmest thanks, and then, on the invitation of the President, gave an extremely brilliant address on the great advantage the establishment of the new laboratories in physiology and pathology (opened the previous day by the Lord-Lieutenant) would be to the north of Ireland. He showed how both the general practitioners would be helped in their diagnosis of such diseases as diphtheria, &c., by such an institute, while it would be an immense help in the training of the students in their education for the medical profession. The bacteriological department would be of peculiar value in convincing the student of the reality of the microscopic foes with which he had to deal so largely—the microbes which were the cause of such a large number of human diseases. The making of a culture experiment, which needed so much care, was in itself a great source of education. He spoke of the absurdity of the objections of the antivivisectionists, and showed how peculiarly humane a man Pasteur was. He gave an interesting account of the investigations as to the microbe of the plague, which he had learned recently on a visit to the Institut Pasteur, and of M. Yersin's serum treatment of the plague. He showed how such a disease as the plague might be easily carried from Bombay, where it was already prevalent, in ships. Rats were liable to contract it, and a rat making its escape from a ship coming from Bombay—say, to the Thames or to Belfast Lough—might carry the plague ashore and entering any of their slums might affect human beings with this dreadful disease. Hence the necessity of having means at hand for combating such a malady. In conclusion, Lord Lister referred to the Royal Hospital, which he had visited that day, and which was altogether inadequate to the requirements of a great and growing city like Belfast; but he rejoiced that better things were in store for them and that within six weeks of the initiation of the movement for the new hospital more than half the necessary sum had been raised. He thought, therefore, whichever way he looked at this jubilee, that Queen's College, Belfast, more particularly with regard to its medical school, was entering upon a new era of prosperity, and he had felt it a great privilege to take part in their celebration. He hoped that the time was not far distant when the great northern metropolis would have its own University—a true teaching, graduating University—on the same lines as most of the German and the Scotch universities. At the conclusion of Lord Lister's lecture, which was most cordially received, Professor Mallet Purser (Dublin) and Professor Coats (Glasgow) addressed the meeting, and a most enthusiastic vote of thanks was accorded to Lord Lister. In the afternoon a large number of the citizens of Belfast and of the medical profession were invited to meet Lord and Lady Kelvin and Lord Lister at the Belfast Hospital for Sick Children. To the great regret of the graduates Lord Lister at the last moment was unable to be present at the banquet, having been commanded to appear at Marlborough House.

KITCHEN BOILER EXPLOSIONS: FOREWARNED, FOREARMED.

WE are experiencing just now a sharp "snap" of cold weather which calls to mind the severe frost of just two years ago. Nothing, of course, is more uncertain than English weather, but it is a curious, though perhaps not a very reassuring, fact that the present spell of cold weather was preceded by just the same remarkable series of phenomena which characterised the commencement of the severe frost in the early weeks of January, 1895. Thus, as on that occasion, we experienced on Monday a very wild and stormy day, with snow, hail, and rain, accompanied in some parts of the country by thunderstorms. Then a slight thaw set in, which, however, soon made way for continuous frost. This is precisely what occurred in January, 1895, previously to the continuance of a very exceptional period of severe frost, and it behoves us to be on our guard against the dangers which a prolonged frost may bring in its train. One of the most serious of these, as experience has shown, is in connexion with the possibility of kitchen boiler explosions, arising from the freezing of water in the supply-pipes. Already we learn that some inconvenience has been experienced from the freezing of water in the cisterns, but happily the frost has not lasted long enough as yet, or has not been sufficiently severe, to lead to more serious

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possibilities. But it may continue; and disaster may be prevented with a little watchful care and attention. As is now well known, kitchen boiler explosions may be prevented by means of a good safety valve. Those who have not this provision should bear in mind that the fire should never be allowed to go out. If the fire is allowed to go out it should be ascertained before lighting it again that water flows from the hot-water taps, and after the fire is lighted it should be kept low for a time until the pipes and the water flowing from the taps give evidence of gradual heating and of circulation being established. The knowledge of these simple facts, if acted upon, would prevent many a serious occurrence and stop the record of disasters which unfortunately characterised the severe frost of two winters ago.

THE CAUSATION OF SEX.

THE determining factor in sex has always been the subject of controversy, but up to the present time, although numerous theories have been propounded, none can be deemed satisfactory, and the causation of sex is still as much shrouded in mystery as is biogenesis. Perhaps one reason why so little progress has been made in the elucidation of this profound problem is the fact that there are so few opportunities of ascertaining reliable facts relating to the human subject in this connexion. Be this as it may, there can be no doubt that experiments on animals with a view to clearing away the mist with which this question is obscured would greatly add to our knowledge of the subject, and if the controversy which is taking place in the columns of our contemporary, the *Stock-keeper*, should have this effect not a little good may result. The theories which up to the present have been propounded are well known to readers of THE LANCET, in the columns of which several attempts have been made to thresh out the subject; but a letter from Mr. J. F. Chambers in the issue of the *Stock-keeper* of Jan. 8th, in which he ably propounds what may be called the katabolic and anabolic theory, will be read with interest. He says the fœtus passes through three cycles: (1) sexless; (2) hermaphrodite or bisexual; and (3) unisexual; and argues that at the second stage the "breeder may step in and enjoin nature to proceed after his wishes." The practical results of breeders' experiments, however, will be more valuable than any number of theories.

THE LAW WITH REGARD TO VERMIN.

BLOOMSBURY has an unenviable reputation based on an alliteration between the name of the district and the name of the insects which are said to abound in the houses. It would seem that the law can afford no help to those who would do away with this unpleasant characteristic. At the Bloomsbury county court a claim was made against Mr. Phillips of Ridgmount-gardens for £20 in payment of the first quarter's rent for a flat at York-gate-mansions, Regent's-park. The tenant on occupying these premises found that they were overrun with bugs. On going to town he discovered that six or seven of these *Cimices lectularii* had secreted themselves in the lining of his hat. He had barely reached his office when he received a telegram from his wife asking him to return at once. This he did, and then saw that the rooms were literally swarming with the vermin. A new carpet, which had not yet been used, was in such a condition that it had to be destroyed. Unable to cope with such an invasion Mr. Phillips left the flat and refused to pay the rent, on the ground that it was unfit for habitation. The plaintiff urged that the flat had been habited by the previous tenants for three years, that there had never been any complaint with regard to vermin, and that in renting the flat the new tenant had not asked if it was habitable. This latter is certainly a strange plea, for it should go without saying that a dwelling offered for hire is fit for habitation. The county court magistrate held, however, that there was no proof of implied warranty that the flat was free from vermin, and could not accept the theory that the presence of bugs proved a dwelling to be unhealthy. The verdict was therefore given for the plaintiff. The question arises from this case whether a dwelling swarming with bugs may be considered unhealthy. We cannot but think that when a house is overrun by such vermin it is a proof of filth and that dirt is unhealthy. Also, it is only natural to look upon a dwelling as a place of rest where the inhabitants will be able to sleep in comfort. But sleep under the conditions described must have been well-nigh impossible, and there is no denying that the want of sufficient rest is detrimental to health. According to the verdict given it will nevertheless be necessary to insert two special clauses in every lease: the first shall stipulate that the house must be habitable and the second that it must be free from vermin. Perhaps landlords will then require a third clause to the effect that a house let free from vermin shall be kept free from vermin by the tenants. Agreements on these lines would be of considerable benefit to all concerned. They would enforce cleanliness upon the tenants and this would be conducive to the preservation of public health. In the meanwhile it does not seem fair that Mr. Phillips should have had to suffer for the neglect of others.

A SIMPLE METHOD OF WATER ANALYSIS [1]

MEDICAL officers of health will welcome a method of water analysis which is simple in detail and sufficiently accurate to enable a definite opinion to be given as to the character of a water for drinking purposes. Of course, in these days of sanitary progress a medical officer of health cannot be said to be qualified for his duties unless he possesses a knowledge of water analysis. He should know how the analysis is conducted and how to place a fair interpretation upon the results. To do this he must be provided with a small laboratory equipped with the necessary apparatus and re-agents set apart for the special purpose. The chemical examination of water-supplies, useful as it frequently proves to be, is often neglected because of the somewhat complicated nature of the apparatus it requires and the time which a fairly complete analysis would entail; and it is within the experience of most medical officers that in general the advice to submit a sample to an analyst for examination is unheeded, so that unless the medical officer undertakes the investigation himself it is not done at all. In the interests of the public health it is very desirable that its guardians should be possessed of some easy means of arriving at the nature and quality of a given water-supply for themselves, and Dr. Thresh, the medical officer of health for the county of Essex, has devised a simple method to meet this serious deficiency. The re-agents employed are in the form of soloids, each soloid required to complete a given reaction representing a given quantity of the constituent sought. To give an example. When it is required to estimate the chlorides in a water; 70 c.c. are placed in a glass cylinder and a soloid of chromate of potash (indicator) added which is easily crushed by the end of a glass rod, so that the contents readily dissolve when the water is stirred. This done a soloid of nitrate of silver is added in the same way. If no red colouration is produced more soloids are added until the liquid remains red when well

[1] A Simple Method of Water Analysis. By John C. Thresh, M.D. Vict., D.Sc. Lond., D.P.H. Camb. London: J. and A. Churchill, 7, Great Malborough-street. 1897. Price 2s. 6d. (We may add that a special water analysis case, price 2 guineas, containing the soloids and apparatus required in this method, is supplied by Messrs. Burroughs, Wellcome, and Co., Snow-hill-buildings, E.C.)

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mixed. This indicates the end of the reaction, and each soloid used corresponds to two grains of chlorine per gallon. Further examinations—in regard, for instance, to the quantity of nitrites, nitrates, free ammonia, and even hardness—are conducted in the same way, while similarly the presence of objectionable metals can be detected and a measure of the organic impurity of the water made, judging by the amount of oxygen absorbed. This is done by adding to 70 c.c. of the water, until a faint and permanent pink appears, soloids of permanganate of potassium, each of which corresponds to 0·10 grain of oxygen absorbed by the organic matter in one gallon of water. A certain amount of care and discretion, of course, must be exercised in certain cases, but, as Dr. Thresh has satisfactorily shown, this method gives results which compare very favourably with the ordinary methods of analysis, which occupy much more time and involve the use of more complex apparatus. The introduction of this simple and approximately accurate series of processes should prove a valuable aid in the sanitary service.

LONDON CHILDREN AND DEATHS BY FIRE.

AT an inquest held upon the 25th inst. concerning the death of a child, aged seven years, from injuries received by her pinafore catching fire, Mr. Wynne E. Baxter mentioned that he considered it of great importance that children should be taught what to do under such circumstances—namely, to lie down on the floor and roll over and over. He had communicated with the London School Board and they had agreed that instruction should be given on the matter. It is not always that we have been able to praise the Board, but upon this occasion we do so most heartily. If they would only eliminate some of the unnecessary subjects they teach and substitute a few more of these practical lessons it would be better. It used to be—and may be still for all we know—the practice at a well-known school founded for deserving lads of poor condition and not supported out of the rates to set at the end of every "half" a "common sense paper." Why should not the Board do this? It would be an admirable exercise for the children. We congratulate Mr. Wynne Baxter on his successful procedure.

TABES DORSALIS AND MENTAL DISEASE.

IN the last number of the *Journal of Mental Science* Dr. Macdonald and Dr. Davidson of the Dorset County Asylum record a case of Tabes Dorsalis associated with mental change not characteristic of general paralysis. The patient was a man, aged thirty-nine years, who was found wandering, and on admission to the asylum it was noticed that there was inequality of pupils, loss of reaction to light, internal strabismus of the left eye, and loss of knee-jerk, but no fibrillary tremors. He spoke in a slow, drawling fashion, was confused as to dates, &c., depressed as to his disease, and irritable and emotional. His symptoms during the next few months did not vary much. He was subject to attacks of great irritability, followed by emotional instability and mental confusion. Three months after his admission he was seized with epileptiform convulsions affecting one side, and in these he died after about twelve hours. There were found to be localised areas of atrophy among the convolutions of both hemispheres, the pia mater was thickened, and there was excess of cerebro-spinal fluid, but no change in the vessels. In the spinal cord, sections of which were made and examined by the microscope, there was found to be extensive posterior sclerosis with thickening of the arterioles. The case had been certified as one of general paralysis with tabes dorsalis, but the writers point out that there is to their minds no justification for labeling such a case as general paralysis, as the characteristic clinical symptoms, especially the tremors, were absent and the post-mortem findings were not such as to make it certain that they were such as are met with in general paralysis. Their real object is to point out the fact admitted by many writers, but not generally recognised, that the mental disturbance associated with some cases of tabes dorsalis is not that of general paralysis. No doubt the psychical condition usually occurring with tabes is general paralysis, and in such cases we must suppose that a degenerative process is at work in the cord and also in the cortex cerebri. In this case also, apparently, there were changes in the cerebrum as well as in the cord; but the writers are of opinion that these, even taken with the clinical symptoms, especially the epileptiform convulsions, are not sufficient to justify a diagnosis of general paralysis.

EXTRAORDINARY VERDICT OF A JURY.

THE *Birmingham Post* records an account of an extraordinary verdict of a jury at Walsall. The case was one in which the Apothecaries' Society prosecuted a man for having illegally acted as an apothecary in contravention of the Act of 1815. It was proved that the defendant had supplied medicine to some people and no witnesses were called for the defence. His Honour Judge Griffiths then put it to the jury that the defendant had acted illegally and, that that being so, there must be a verdict for the plaintiffs. The jury, however, after a brief consideration found unanimously for the defendant, and after being told by the judge that such a decision was not in accordance with the evidence one of them said that they found the defendant had practised illegally, but there seemed much mystification and haziness about the Act, and therefore they unanimously found for the defendant. His honour thereupon ruled that this was in reality a verdict for the plaintiffs. In this case the jury appear to have thought that because they were not able to understand the Act they were entitled to give a verdict which they knew to be directly against the evidence and the law. Fortunately, however, they were overruled, and the fate of the defendant will serve as another wholesome example to those who practise medicine without the right to do so. Perhaps, if some of the members of the jury had chanced to have been treated by such practitioners they would not have been quite so ready to shield them.

THE LAW AND THE PUERPERAL POOR.

DURING the holding of an inquest at the Mortlake Mortuary on a child who died aged three days, Mr. A. Braxton Hicks elicited some instructive facts as to the state of midwifery among the poor in that district. The father of the child went for a medical man, Dr. R. D. Mackintosh, at two o'clock in the morning. It was admitted that Dr. Mackintosh had not been engaged to attend the case, and on learning that the patient could not pay he declined to attend. The relieving officer refused to give an order for a medical man on the ground that the husband was at work and he was prohibited by rule in such case from giving one. Dr. Mackintosh, on being examined, said that had he understood the case to be one of urgency he would have gone. He then made the remarkable statement that he *had had forty or fifty cases of this sort in a year and had never received a penny for any of them.* This shows a demoralised state of the district as respects this question and may well make medical men stand upon their rights. Another practitioner of the neighbourhood, Dr. Weir, who made a post-mortem examination on the child and found it to weigh 2 lb. 2 oz., was examined. He attributed this state of matters to the introduction of a midwife into the parish by a nurses' association, who found it more profitable to attend tradesmen's families for 10*s.* than the poor for 5*s.* Both practitioners agreed that this system was

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ruining the profession. The coroner disagreed with the relieving officer and thought that the officer had the power to have given an order in such a case. The husband's wage was 20*s*., and Dr. Weir described the wife as half starved. The coroner agreed with the complaints of the medical men, and the foreman of the jury said he hoped these would take it from the jury that they thought that others were taking away from medical men their professional work. He testified to Dr. Mackintosh's kindness in really urgent cases. The expression of opinion by the jury and the coroner, confirming that of the medical men, should lead the guardians of the neighbourhood to investigate the state of matters in the parish and to give explicit orders to their relieving officers to give medical orders in such cases.

MEDICAL CERTIFICATES AND THE LONDON SCHOOL BOARD.

THE London School Board has at last done something sensible. On Thursday, Jan. 21st, Mr. Whiteley moved, and Mr. Riley seconded, the following motion: "That in cases where the magistrate or justices of the peace is or are dissatisfied with the medical certificate furnished, and in cases where the medical certificate is *prima facie* unsatisfactory (and when the certificate is signed by a registered medical practitioner), the Board's medical officer shall in the first instance communicate with the practitioner giving the certificate, and in the event of such certificate being ultimately acted upon the fee of 2*s*. 6*d*. shall be paid by the board for the confirmation of such certificate, and that so much of the resolution of July 30th, 1896, as prescribes that 'in cases where the magistrate or justices of the peace is or are dissatisfied with the certificate furnished, the system now in operation be continued' be rescinded." This motion was agreed to after a hostile amendment had been negatived. The thanks of the medical profession are due to Mr. Whitely and Mr. Riley for this result. The latter has fought the question of medical certificates for some two years in the face of a bitter opposition and the former has spared himself no trouble to ascertain what the profession really thought upon the matter and was the drafter of the motion which is now passed.

REFUSE DESTRUCTOR AT OLD TRAFFORD.

THE inhabitants of Old Trafford are alarmed at the prospect of having a "destructor" set up in their midst. Though practically, by proximity and density of population, a part of Manchester, Old Trafford is under the government of the District Council of Stretford. From this village, which still retains some traces of rusticity, it is separated by a sparsely populated interval, and the two have but little in common. It is said by the objectors that the matter "has been pushed forward by the representatives from the Stretford end of the township, who have no special interest in Old Trafford," which strongly opposes its being placed "in the most densely populated part of the township and adjoining the already too unhealthy and crowded ward of St. George's, Hulme," which is part of Manchester. The writer of a signed letter in the *Manchester Guardian* suggests a site about half-way between the two on vacant land far from any dwellings, where "it would be neither a nuisance nor injury to anyone." Some time ago the people of Moss Side were threatened with a destructor; but by their action at the election of their district council they compelled the abandonment of the scheme for its erection. The question as to a destructor being or not being necessarily a nuisance always leads to violent controversy, but it is one of fact and should not be made one of sentiment. Some destructors have undoubtedly been defective in design or construction and could not be used without offence. But in some cases "cremation" is the most convenient mode of getting rid of refuse and, if it be so carried out that no gases escape before combustion is complete, there should be no nuisance and no opposition. It ought not to be difficult to ascertain the fact as to whether or not any of the destructors now in use come up to such a standard, but there is so much fear of annoyance from them that facts are too often put in the background and obscured by prejudice. The *Manchester Guardian* thus concludes a leading article on the subject: "But if Old Trafford is forced to accept this destructor its position will be unhappy indeed, what with the odours of the [ship] canal and the fumes from burning refuse."

THE LATE SIR ISAAC PITMAN.

THE system of shorthand known as phonography has proved to be of such utility to the medical profession that, as medical men, we cannot but record our sense of our indebtedness to its inventor, who passed away at his residence at Bath on the morning of Jan. 22nd. The enthusiasm and energy with which he pursued what Dean Alford called "that wretched attempt to destroy all the historic interest of our language which is known by the name of phonetic spelling," were remarkable; but it was in recognition of the usefulness of his other well-loved child, Phonography, that Mr. Pitman received knighthood on the recommendation of Lord Rosebery in 1894.

LONDON POST-GRADUATE COURSE.

THE eighth year (spring term) will commence on Monday, Feb. 15th, and entries may now be made. The facilities afforded to practitioners have proved of great service owing to the practical nature of the instruction. It is hoped that these facilities will soon still further be increased so as to make the teaching continuous and enable medical visitors to find at all times the help they need. Classes are being formed at Blackfriars (Skin), Bethlem (Mind), London Throat Hospital, King's College (Bacteriology), Cleveland-street (General Medicine and Surgery), Parke's Museum (Hygiene), and at the Institute of Preventive Medicine (Clinical Chemistry). Applications should be sent to Dr. Fletcher Little, Secretary, 32, Harley-street, W.

UNQUALIFIED PRACTITIONERS AND PRINCIPALS IN ABSENTIÂ.

ON the 22nd inst., according to the *Globe*, Mr. W. E. Baxter, coroner, held an inquest at the Poplar town-hall respecting the death of Ellen Shayes, widow, aged sixty-nine years, and living with her married daughter, Mrs. Ada Wright. In the course of the inquiry it transpired that Mrs. Wright went for Mr. C. W. Smith of North-street. His assistant attended and prescribed some medicine. The patient becoming worse Mrs. Wright sent "for the doctor again." The assistant would have nothing more to do with the case, and referred them to Mr. H. J. O'Brien. By the time Mr. O'Brien arrived the patient was dead. Mrs. Wright thought the assistant was a qualified man. The assistant, on being examined, said his name was William Pratt Maule; he was a chemist and assistant to Mr. C. W. Smith, who lived at Leyton and attended at Upper North-street "about three times a week." On the day in question Mr. Smith was expected but did not arrive. The assistant said he was asked to see the deceased, having told the messenger that "Dr. Smith" had not arrived. He did not tell them he was not qualified. Mr. Smith's name was on the plate. The coroner and the jury both expressed themselves strongly on such a system. The coroner said there was a great deal of practice in the East-end not according to the best views of the profession. He made another important remark which needs to be much pondered in this age of cheap medicine. "The people who

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came before him seemed to think more of getting a bottle of medicine than of being told what was the matter with them." The foreman thought this sort of thing should be stopped. The jury returned a verdict of death from natural causes, but added, "We desire the coroner to communicate the facts of the case to the Medical Council." They would have failed in their duty had they not done so. When will this evil cease and medical men recognise that they expose themselves to grave consequences by a system which misleads the poor?

ANTISEPSIS IN THE TREATMENT OF INFANTILE DIARRHŒA.

THE part played by bacteria in the production of the diarrhœa of infants was suspected and practically admitted by many long before the researches of Escherich and others had established this theory of its origin upon a scientific basis. According to the observer just mentioned, the two forms of germ life most active in the production of diarrhœa are the bacterium coli and the bacterium lactis. The influence of the latter will suffice to explain why it happens that a large number of cases of infantile diarrhœa—we might almost have said all such—become amenable to treatment when the usual milk dietary is reduced, or even for a short time discontinued, in favour of one consisting of fresh raw meat juice. The bacterial hypothesis explains also the success which has in a number of cases attended the temporary discontinuance of all nourishment and the substitution in its stead of boiled and subsequently cooled water given frequently in small quantities. This method, which has recently attracted some attention in France (*Journal de Clinique et de Thérapeutique Infantile*, Jan. 14th), is not altogether novel. Its *modus operandi* in cleansing and procuring rest for an overwrought bowel while maintaining blood-pressure by its ready absorption calls for little explanation. Something also remains to be said in favour of the procedure, often successfully employed in the case of dysentery, which obeys the same teaching, and by combining a sedative with an excitant of the liver aims at producing by means of the bile the moderate action of an antiseptic force which is resident in the body itself.

THE LONDON CHILDREN ASYLUM DISTRICT.

WE are to have a new Metropolitan Asylum Board. The enormous development of the Metropolitan Asylums Board for the treatment of infectious disease might well make the authorities hesitate before creating another set of asylums for the separate treatment of certain children under the Poor-law. The cost of the hospitals is great but, nothing daunted, the Local Government Board has drafted an Order for forming the several unions and parishes in the metropolis into a Children Asylum District under the Metropolitan Poor Amendment Act, 1867, and the Metropolitan Poor Amendment Act, 1869. This Order is the outcome of the recommendations of an influential departmental committee which investigated the whole subject of the treatment of children in pauper schools and which was pretty unanimous in its recommendations, but did not carry the concurrence of Sir John Gorst and Mrs. Barnett. The children for whose benefit this new departure is taken are thus specified: (*a*) Children suffering from ophthalmia and other contagious diseases of the eye; (*b*) children suffering from diseases of the skin and scalp; (*c*) children requiring either special treatment during convalescence or the benefit of sea air; (*d*) children who by reason of defect of intellect or physical infirmity cannot properly be trained in association with children in ordinary schools; and (*e*) children who are ordered by two justices or a magistrate to be taken, under the Industrial Schools Act, 1866, to a workhouse or an asylum of the district. The board of management is to be elected by the guardians of the metropolitan parishes. This looks very like the starting-point of five or six brand new separate asylums under special management, and likely to be very costly to the ratepayers. Undoubtedly some special consideration is necessary for children unfortunate enough to be handicapped in the race of life in the ways specified above. But we agree with those who think that it is questionable whether the course adopted by the Local Government Board is the best one. While creating huge asylums for the children it in no way liberates them from the care of the guardians or the Poor-law system, which seems almost in its very nature to breed unhealthinesses of its own. Such evils are not likely to be eradicated without the introduction of more special knowledge and care into the question than are likely to be provided by guardians who have proved themselves bad custodians of the public health. Besides, the policy of multiplying establishments for the concentration of the chronic infections of children is open to very much criticism apart from the financial objections to such a course.

THE DEPARTMENTAL COMMITTEE ON RABIES.

THE *Times* "understands that the Departmental Committee appointed by Mr. Walter Long last year to consider the best means of stamping out rabies has reported in favour of re-establishing the principle of centralised control. It is recommended that this power should be transferred back to the Board of Agriculture, whose duty it would then be, on receiving a notification of an outbreak of rabies, to ascertain the probable limits of infection and to make a muzzling order covering the whole area within those limits. Other suggestions are that every dog shall be required to wear a collar bearing its owner's name and address, together with a distinctive mark showing that it has been duly licensed; that questions of exempting certain dogs, such as sheep-dogs, from taxation shall be decided by the magistrates in petty sessions or some other local body instead of by the Inland Revenue authorities as at present; and that regulations shall be made for ensuring that none but healthy dogs be allowed to enter this country from abroad." The idea of centralising control seems to us to be an excellent one, but we are sincerely sorry for the Board of Agriculture, whose duty it will be to ascertain "the probable limits of infection." How the Board is to do this we cannot quite see. That the persons who are responsible for dogs should be known by means of the said dogs wearing collars with the names and addresses of their owners is also a suggestion we hope to see carried into effect. Hydrophobia is so terrible a disease that preventive measures, no matter how inconvenient to either dog or master, ought to be rigorously carried out; and if those well-meaning but wrong-headed individuals who write to the papers about the cruelty of muzzling orders were only to see a case they would not write the nonsense which they do.

"RETURN" CASES OF SCARLET FEVER.

AT a meeting of the board of the Islington guardians held on the 21st inst. a communication was read from Mr. Dewey, vestry clerk, enclosing a report from Mr. Harris, medical officer of health of Islington, with regard to a visit to the Kingsdown Orphanage to inspect a child, aged ten years, who, it was alleged, had been discharged from St. Ann's Hospital, Tottenham, while in an infected condition. Mr. Harris, in his letter, supported the allegation. He found desquamation still going on. The statements, as reported by Mr. Harris, seem almost incredible. The medical officer of the hospital wanting two wards the day before the patient's discharge fifteen beds were taken down. He said if the patients were not well enough they must be removed to Winchmore-hill. The nurse spent the afternoon in rubbing the hands and feet with pumice stone,

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and said she would "show the patient up." On the morning of discharge the patient was taken to the bath-room, but there was no hot water, in consequence of which the nurse only bathed her feet and hands. The matron of the orphanage infirmary informed Mr. Harris that when the child returned the hair was full of scurf and there was "life" in it, which was not the case when she left. A similar case was reported to the guardians by Dr. Marshall in a child who, after being in hospital for eight weeks and sent home, was found to be desquamating, and seemed to be the source of a second case seen by Dr. Marshall. The first was desquamating on both hands and one foot. Both of these returned children had moved about with perfect freedom among other children at home, at school, or at the Sunday-school. The dissemination of scarlet fever, still so ubiquitous in spite of isolation hospitals, gives importance to these facts.

THE GOVERNMENT AND FOOD ADULTERATION.

As we announced last week Mr. Kearley gave notice that he would move an amendment to the Address from the Throne regretting that no intention was expressed of promoting legislation in furtherance of the report of the Select Committee on Food Products. This amendment was duly moved and negatived in the House of Commons on Monday last, but not without considerable discussion. This result might safely have been predicted in view of the pressure of national affairs and of the very full programme before the House this session. The subject of food adulteration cannot be considered as one of minor importance, and in some respects it is a matter of regret that the provisions laid down by the committee in their report cannot soon be drafted in the form of a Bill which would make those recommendations (with due amendment of course) law. Although the action of the House in rejecting this amendment will delay an important piece of much needed reform the debate on Monday proved that a decided interest has at length been aroused as to the urgency of reform and, although no definite promise was given that the question would be dealt with this session, yet it was stated that it would be considered at the earliest opportunity. Indeed, according to Mr. T. W. Russell, a draft bill had been already prepared and was being carefully considered at the time by the Local Government Board, who were engaged in removing some of the difficulties which would be met with on a realisation by law of the proposals made by the committee. We have already pointed out that these proposals must receive the greatest possible consideration before they can become law. As Mr. Balfour said, the subject, as was evident from the facts touched upon by those who had taken part in the debate, was one of great difficulty and complexity. It had engaged the attention of a very competent committee for no less than three years of continuous and arduous labour, and its recommendations were of a complicated, and far from being of an uncontroversial, character. While we regret the delay because it is very desirable that the present Acts should be strengthened yet it is obvious that a drastic measure of this kind might lead to disastrous results if unduly hurried through the legislative machine.

AT St. Martin's Town Hall on Friday night last (Jan. 22nd) Mr. Bancroft delighted an enthusiastic audience with his appreciative rendering of Dickens's "Christmas Carol" in aid of the funds of Charing-cross Hospital. Mr. Bancroft will give the same reading on Tuesday afternoon, Feb. 16th, at 3.30 P.M., at Stafford House, St. James's, on behalf of the Chelsea Hospital for Women. The Duke of Sutherland has lent Stafford House for this the last of Mr. Bancroft's interesting series of readings.

MR. ALEXANDER PROFEIT, A.M. King's Coll., Aberd., L.R.C.S. Edin., J.P., who for the past twenty years was commissioner on Her Majesty's estates at Balmoral, Abergeldie, and Birkhall, died on Wednesday at his home, Craiggowan House, Balmoral. Mr. Profeit was at the beginning of his career a medical practitioner.

THE PRINCE OF WALES has graciously consented to lay the foundation-stone of the new buildings of the Royal London Ophthalmic Hospital, Moorfields, shortly after Easter, and it is understood that the Princess of Wales will probably accompany him. In the meantime an influential meeting in aid of the funds is to be held at the Mansion House on Monday, Feb. 1st.

THE Mercers' Company have granted £1000, the Skinners' Company £100 for three years, the Governors of the Bank of England £100, the Salters' Company 25 guineas, the Girdlers' Company 25 guineas, the Vintners' Company 20 guineas, and the Broderers' Company 10 guineas to the special appeal fund of £100,000 now being raised on behalf of Charing-cross Hospital.

PRINCESS CHRISTIAN has, at the request of the Queen, consented to open the new General Hospital which is being erected at Birmingham at a cost of nearly a quarter of a million sterling. The institution is expected to be ready for opening early in June, and the cost, less about £40,000, has been subscribed.

A MEETING of the medical profession will be held at St. Martin's Town Hall, Charing-cross-road, London, on Thursday next, Feb. 4th, at 4 P.M., to discuss the question of Hospital Abuse and the recommendations of the Hospital Reform Association.

THE festival dinner in aid of the funds of University College Hospital will be held at the Hôtel Cecil on Wednesday, Feb. 10th, when the Right Hon. the Lord Mayor of London will preside.

LORD SALISBURY has confirmed the intention of the Government to bring in, should time admit, a Bill for Amended Legislation for Habitual Drunkards during the current session.

MISS BEATTY, the plaintiff in the recent action against Dr. Cullingworth, has, we are informed, decided to carry her appeal to the House of Lords.

THE Semi-Centennial Celebration of the New York Academy of Medicine takes place to-day (Friday) at the Carnegie Music-hall.

THE DUCHESS OF TECK has consented to open the enlarged Leyton and Walthamstow Hospital on Thursday, Feb. 11th.

AT the meeting of the Linnean Society, held on Jan. 21st, Robert Barnes, M.D. Lond., was admitted a Fellow.

LITERARY INTELLIGENCE.—The first weekly part of a people's edition of Cassell's "Old and New London," including "Greater London," is now on the eve of publication. It contains a large coloured map of London, scale four inches to the mile, brought up to date as far as practicable, and clearly showing the railway stations, tramways, parks, public buildings, theatres, &c., of the metropolis.—Early in summer the Scientific Press will issue a book entitled "The Menopause and its Disorders," by Dr. Leith Napier.

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Pharmacology and Therapeutics.

THE ACTION OF PILOCARPINE IN EXCESSIVE SWEATING.

THE *Therapeutic Gazette* recommends the use of minute doses of pilocarpine for excessive sweating. It has been found that while the ordinary dose of pilocarpine will cause sweating a very small dose—such as $\frac{1}{10}$th to $\frac{1}{15}$th of a grain—often has the opposite effect. This action has been found useful in a certain number of cases of pulmonary tuberculosis to control the night sweats, and these small doses have not been accompanied by any unpleasant symptoms—such as increased salivary flow and general depression—which often follow when the drug is given in larger amounts. The writer of the article thinks that this might be a remedy worth trying in obstinate cases which have failed to yield to other methods of treatment. Proben, in the *New York Medical Journal*, warns the profession against the routine use of pilocarpine in uræmia, which, in his experience, has proved both untrustworthy and dangerous. The bad effects are ascribed to the cardiac failure which is apt to take place on account of the degeneration of the heart, which so often accompanies cases of chronic nephritis.

METHYLENE BLUE AS A THERAPEUTIC AGENT.

Berthier states that methylene blue may be used with advantage in cases of gastric hyperacidity. The dose recommended is from one to three grains each day for several days. It is then discontinued for a few days and afterwards used again. It is said that under this treatment the pain and vomiting disappear and normal digestion becomes re-established. The *Journal de Médecine de Paris* states that Netchaieff has used methylene blue in acute and chronic cases of Bright's disease, and a case is reported which improved greatly after taking one and a half grains of methylene blue daily for some time. Methylene blue is an aniline derivative in the form of bronze-green crystals forming an intense blue solution in water. The dose ranges from one to four grains. The urine of patients who are taking this drug is coloured blue and the fæces become blue on exposure.

THE TREATMENT OF EPILEPSY BY SULPHATE OF DUBOISINE.

Cividali and Gianelli report that sulphate of duboisine diminishes the number and intensity of epileptic attacks. The drug was administered in doses of 1-120th of a grain, increased to 1-60th, and the most favourable results were obtained in the cases of epilepsy associated with psychical disorders.

THYROID TREATMENT IN THE IDIOPATHIC TETANY OF CHILDREN.

Dr. Lacone Maestro is said to have applied the thyroid treatment to tetany with some success. The thyroid gland was given raw or slightly cooked, and the dose, small to begin with, was gradually increased to thirty grains a day. Although only three cases were tried, the result seemed definite enough to allow the following conclusions to be made. The thyroid treatment is well borne by children, and the digestive functions and diuresis are not notably influenced by it, and it is only in certain cases that it is necessary to suspend the treatment from time to time. In idiopathic tetany the administration of thyroid gland was found to diminish the intensity and frequency of the attacks and shorten the duration of the disease, while at the same time this treatment is not opposed to the symptomatic treatment, as it does not present any incompatibility with the methods ordinarily employed.

SUB-CONJUNCTIVAL INJECTIONS OF SODIUM CHLORIDE IN VARIOUS OCULAR DISEASES.

Dr. Veasey, writing in the *American Journal of Ophthalmology* on this subject, thinks that subconjunctival injections of sodium chloride produce quite as good results in the treatment of ocular affections as solutions of mercuric chloride, for he thinks that the benefit which may follow such injections results from the irrigation of the engorged lymph channels, and not from the specific action of the mercury on the inflamed parts. Sub-conjunctival injections of sodium chloride produce much less discomfort than mercury, and have been found of special value in relieving the pain of iritis and also in promoting the rapid absorption of sub-conjunctival hæmorrhages.

TURPENTINE IN ACNE ROSACEA.

A patient who was suffering from bronchitis as well as acne rosacea was given turpentine as an embrocation for his chest, and when it had produced the desired effect he took it into his head that what was good for his chest might prove useful for his face, which had been affected for a long time and appeared to be quite incurable, as a great many remedies had been tried unsuccessfully for it. The result was that the acne disappeared. His medical attendant, Dr. Betz, being greatly surprised at the result tried the same remedy on other cases of acne rosacea and found it very efficacious. The application causes, as might be expected, violent smarting and redness, which, however, disappear in a few hours. Dr. Betz suggests that the turpentine has a solvent action on the sebaceous secretion and that it produces a beneficial hyperæmia in the dermis, and, lastly, that it also exerts a disinfecting action which prevents the spread of the affection.

ARTIFICIAL SERUM IN SKIN DISEASES.

Subcutaneous injections of so-called artificial serum—that is to say, a solution of chloride and bicarbonate of sodium—have been employed by Dr. Tommasoli of Palermo with considerable effect on some cases of inveterate skin disease in his dermatological clinic. The effect which is generally attributed to "artificial serum" is that of stimulating the secretory and excretory processes of the body and of increasing its vital energy, and as these indications exist in many skin diseases it appeared probable to Dr. Tommasoli that he might in this way benefit his patients. No difficulty was experienced in administering the injections, which varied in quantity from one to seven ounces at a time, and in no case were any after ill-effects produced. Great improvement was effected in two cases of chronic eczema after less than thirty injections. A case of general folliculitis was completely cured by twelve injections, and one of senile genito-anal pruritus, which had lasted for thirty years, was cured in forty-four sittings; lastly, a case of lichen planus, with a great deal of itching, was cured in five weeks by thirty-three injections. On the other hand, however, no improvement was produced in fungoid mycosis, diathetic pruritus, pemphigus, lupus, syphilis, or in some cases of eczema.

STIVEN *v.* WELSFORD.

IN a recent issue of THE LANCET[1] we noticed briefly the circumstances relating to the trial of this action, which occupied the court for eight days, but inasmuch as leave was given to appeal against the verdict we abstained from commenting on the merits of the case. Litigation having, we believe, terminated we are no longer bound to silence. Seldom has it been our lot to chronicle such bitter strife between professional brethren and never to contemplate more contradictory evidence as to facts. The jury had a most unenviable duty, but since they have delivered themselves upon oath it would be invidious to challenge their verdict. Counsel for the plaintiff sought to explain the large discrepancies, not by alleging false swearing on the part of defendant's chief witnesses, but by assuming that the patient was from the natural effects of his illness incapable of accurate observation and reliable reasoning, and that his wife, on account of the physical and mental strain upon her, was under like disability. Mr. Justice Pollock, who presided at the trial, took a less liberal view and directed the jury to find on which side the truth lay.

The action was for slander alleged to have been uttered by Dr. Welsford against Dr. Stiven, who had professionally attended Dr. Welsford's brother. The main pleas for the defence were privilege and justification. On Dec. 11th, 1895, Mr. Welsford was seized with illness the chief symptoms, of which was abdominal pain. The attack eventually became an undoubted one of appendicitis, with consecutive perityphlitic abscess. Two equivocal symptoms, excess of lithates in the urine and derangement of the function of the bladder, led Dr. Stiven to diagnose "lithæmia." The intestinal disturbance he explained by errors in diet recent and remote, with their consequences, constipation and flatulence. It was not until the night of

[1] THE LANCET, Dec. 19th, 1896, p. 1772.

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the ninth day of the illness that Dr. Welsford saw his brother and then definite regional signs were manifest and notably swelling in the right iliac fossa. According to Dr. Stiven these were not present on the morning of that day. Guided by his diagnosis Dr. Stiven ordered on Dec. 12th half an ounce of castor oil and a seidlitz powder; on the following day the oil was repeated; from Dec. 16th to 19th a mixture containing half a drachm each of the sulphates of soda and magnesia was administered every six hours. On Dec. 19th tincture of rhubarb and potash was substituted. To relieve the patient's suffering five minim doses of tincture of opium was prescribed on Dec. 11th and 12th. This was replaced by hyoscyamus on the 13th and these again by bromide upon the 14th to the 18th; and on the 19th chloral, bromide, and morphine. A hypodermic of morphine was injected on Dec. 11th. Finding that opium disagreed with the patient the other above-named sedatives were resorted to. On Dec. 20th Dr. Soltau Fenwick was called in and the diagnosis of perityphlitis was confirmed and opium pill, gr. ¼, every six hours constituted the chief element of treatment. Even then surgical interference was not deemed necessary, but two or three days later Mr. Horsley let out 10 oz. of pus and found the appendix sloughed off and three necrotic patches in the cæcum, which eventually led to perforation.

The allegation was that Dr. Stiven had been guilty of gross carelessness and malpraxis; first, in that he failed to recognise the case as one of appendicitis; second, that what he mistook for lithæmia was merely an excess of lithates dependent on the febrile state; third, that he directed massage to be practised and himself "pummelled" the abdomen; fourth, that he improperly administered purgatives; and fifth, that he had countermanded the opium prescribed at the consultation and so had been guilty of a breach of etiquette. To these charges he replied in his defence that there was no evidence of appendicitis until the day of Dr. Welsford's appearance on the scene, although he had carefully examined the abdomen; that there was undoubted proof of the existence of lithæmia as shown by the condition of the urine, by the passage of a small calculus, and by the "stammering of the bladder"; that the alleged order of massage was merely a direction to the nurse to press over the left groin in order to facilitate the passage of an enema; that the administration of aperients was correct treatment; and, finally, that he temporarily stopped the opium on account of untoward symptoms which he attributed to its action, contending that he was not bound by the acquiescence he gave to its use decided upon at the consultation.

Graver indictments than the above could not well be levelled against a medical man, and at once we say Dr. Stiven's professional credit must for ever have been undermined unless he challenged proof of the sufficiency of the grounds on which they were made. Issue was joined in the action at law by the defendant pleading justification.

As regards the matter of ethics and law arising in the case we would first direct attention to the countermanding of the administration of opium. Any course of treatment agreed upon at a consultation is supposed to be carried out subject to the discretion of the medical man in charge of the patient. To limit his freedom of action might be to jeopardise the patient's health or life, and provided he acts in good faith, which must be assumed until the contrary is proved, no suspicion of disloyalty, and thus a breach of professional etiquette, ought to be entertained. Dr. Welsford seems to have concluded that Dr. Stiven had been disloyal, founding his judgment, no doubt, on the fact that Dr. Stiven had demurred to the opium treatment both at the consultation and on a previous occasion. But it is one thing for a person to give a tardy consent to a procedure he deems of questionable propriety and quite another to wilfully countermand such procedure from mere personal misgivings as to its desirability.

A consultation implies a divided responsibility, but this ceases when new factors intervene to change the aspect of affairs obtaining at the time of the conference. The medical man in direct charge of the patient is then unfettered to act as his conscience and judgment dictate. Rightly or wrongly, as regards the observation of facts, Dr. Stiven must be credited with having conscientiously dealt with a privilege, nay, discharged a duty. That on an earlier date he had substituted other sedatives for opium is presumptive evidence that he believed the latter drug did not agree with his patient; moreover, it was admitted that he demurred to its exhibition at the time of the consultation, and there was his sworn testimony at the trial.

The law holds that a medical man is bound only to act with reasonable care and skill. Even where the rules of procedure in a given case are laid down in definite terms it would be unjust to demand the highest attainable performance. It is much to the credit of the great body of general practitioners that charges of negligence and carelessness in the discharge of their vocation are most infrequent. Even where a medical man has apparently stepped beyond the frontier of professional duty charity bids us look with a lenient eye.

We freely admit that Dr. Welsford was sincere in his belief that his brother had not received proper attention and skill at the hands of Dr. Stiven. Distraught with anxiety as to the issue of the illness he might have given utterance to expressions of dissatisfaction which upon reflection might have seemed to him intemperate, but after the disturbing influences of thought and judgment had passed away he continued of the same mind and persisted in the same action. We cannot blame him for holding an honest opinion, or for the execution of what he conceived his duty, but we pity him in that he did not see his way to extenuate what he held to be the shortcomings of a brother practitioner. To carry his convictions, or allow them to be drawn, into the cold atmosphere of the law-courts was to expose himself to an ordeal from which he could not reckon on emerging faultless and unscathed. Of course, it was imperative to pursue the course he had opened or to retire with the acknowledgment that he had acted, if not wrongly, at least not wisely. We doubt not that the parties to the suit would have been better advised had they appealed to the arbitrament of a medical commission. A court composed of the highest professional learning and probity would have been more fitted to try the issue than a special jury of laymen. Thus much for the ethical and legal features of this melancholy exhibition. The medical aspects of the patient's illness, as judged by the testimony of the medical men—apart from that of the individuals immediately concerned—compel us to pause and compare the past and present schools of thought and practice with reference to a set of conditions described collectively as "typhlitis," "perityphlitis," and "appendicitis."

Five-and-twenty years ago much that is now held as permissible or imperative in the treatment of "appendicitis" would have been considered rank heresy. We do not hesitate to say that if many of the experts who gave evidence at the recent trial had been candidates for a diploma at the former period and had delivered themselves of their present opinions they would have stood in dire peril of being referred to their studies. What, then, has been the reason of the shifting voice of the profession with regard to the disease in question? At a cursory glance it might have been thought that a structure so definite in its anatomy and comparatively easy of access would be unlikely to present difficulty in the diagnosis of disease, or, the diagnosis being made, that there could be sharp contention as to the treatment. Much has been done of late years in the investigation of the causes, symptoms, diagnosis, and treatment of "appendicitis;" accumulated observations have more fully revealed the disorders that simulate it; and the advance of abdominal surgery has thrown much light on the history of its several phases and stages. The "rest and be thankful" line of treatment of former days has to a great extent given way to active interference, and doubtless many lives are now saved which formerly would have been sacrificed to abandonment. Great reforms very often, however, bring great abuses and rash temerity undoes the promised good. Whereas in earlier days opium was the sheet-anchor of appendicitis, the tendency now is to limit its exhibition, and there are those who discourage its use altogether. The cause of this revulsion is partly explained by the fact that appendicitis proper has been shown to cover a large number of the cases described as "typhlitis" and "perityphlitis" in which an overloaded state of the colon is a common antecedent and cause. In all cases opium is suggested—(1) by the pain and (2) by the inflamed and consequently paretic state of the muscular coat of the bowel. It is like a splint to a broken bone, and were there no contra-indications it would still enjoy universal confidence and adoption, but it checks the secretion of the mucous membrane, prevents unloading of engorged vessels, and by its narcotic influence often masks the symptoms, thus rendering it more difficult

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to estimate the degree of severity of the inflammatory process and the urgency for operative interference. To show how marked has been the counter-swing of the pendulum we need only mention an incident that occurred at the late trial. Dr. Mitchell Bruce, on cross-examination, was asked if he agreed with the teaching of a well-known text-book in which great prominence was given to the opium treatment. He replied by asking which edition of the work was referred to, and on being told hoist counsel with his own petard. "In a later edition," said Dr. Bruce, "you will find it the reverse."

The prevailing opinion amongst medical men it that opium should be sparingly administered and only when specially indicated, as by severe pain. Dr. Stiven could not reasonably be charged with having obstinately set his face against the opium treatment, since he prescribed it on more than one occasion and only discontinued its use when he believed it was doing harm. A far graver allegation was that he administered purgatives which seriously aggravated the disease; and the adoption of the "aperient" treatment was adduced as evidence that through carelessness he failed to recognise the nature of the malady. There was some conflict of testimony on the general question of the use of aperients in appendicitis. Four surgeons and three physicians from separate London medical schools were of opinion that aperients—not drastic purgatives—were generally advisable, and that the particular drugs and the quantity in which Dr. Stiven prescribed them were appropriate to the case, as put before them on behalf of the plaintiff.

From this narrative of the general principles of the medicinal treatment of appendicitis now current and of the particular method adopted by Dr. Stiven it must be conceded that two of the grounds of the charge of malpraxis were practically disposed of. The statements that Dr. Stiven pummelled the abdomen and ordered massage he directly denied, and the jury by their verdict believed him. The question as to whether the appendicitis dated from Dec. 11th or supervened several days later is perhaps somewhat doubtful. The condition of the appendix and the colon and the size of the abscess found at the operation would seem to suggest an earlier date than the 19th or 20th, but knowing how sudden the incidence and how rapid the development of appendicitis frequently are we are debarred from giving an authoritative opinion. The difficulty of absolutely diagnosing the state of affairs is shown by the fact that at the consultation two days prior to the operation, when ten ounces of pus were evacuated, no abscess was discovered, although it probably existed, but was obscured by flatulent distension of the colon and by the presence of gas outside it. If all the cases of mistaken identity in the investigation of supposed cases of appendicitis were collected the list would be a formidable one. We have known instances where an operation has revealed a tuberculous abscess; and again where the symptoms of early appendicular disease were prominent, and yet nothing wrong was found on dissection. Many of the symptoms in Mr. Welsford's case—pain in the abdomen, disturbance of the function of the bladder, and the passage of lithates in considerable quantity—were consistent with Dr. Stiven's diagnosis; equally they were covered by the conditions incidental to appendicitis. If, as alleged, a small calculus was actually passed—this was denied by the defendant—the event would naturally weigh heavily in Dr. Stiven's mind, considering the diagnosis he had made.

The term "lithæmia" is not a happy one, and, as Dr. Fenwick, sen., said, it has to a great extent fallen into disuse. It was originally intended to indicate the condition of the blood in the gouty diathesis, but it came to have a looser meaning and has, though erroneously, been applied by some to all cases in which there is excess of lithates in the urine. Dr. Stiven seems to have employed it in the more restricted sense, but it is only just to remark that the defendant contended that the "lithæmia" in his brother's case was only excess of lithates from the febrile state. The name matters little in itself, but a great deal depended on its use in this trial, for it raised the question, "Did Dr. Stiven mistake febrile urine passed by a patient suffering from appendicitis for evidence of a totally different condition and thus make a wrong diagnosis?"

After careful and anxious study of the evidence we feel compelled to subscribe to the verdict in Dr. Stiven's favour. We deeply deplore the litigation, which we hope and trust will be the means of fostering charitableness between medical brethren and act as a deterrent against unjustifiable slander.

THE PROPOSED CENTRAL HOSPITAL BOARD FOR LONDON.

THE Council of the Charity Organisation Society held a special meeting on Monday, Jan. 25th, at the Royal United Service Institution, "to consider the question of a Central Hospital Board for London and to appoint a general committee to promote its establishment." Members of the medical profession throughout London had been invited, and of these there was a very large and representative attendance. The proceedings, over which the Earl of Stamford presided as chairman, opened with the reading of a number of letters of apology for absence. Princess Christian expressed her great regret at being unable to attend. The Duke of Bedford wrote sympathising "with the idea of organisation." The Duke of Fife, offering to render what assistance he could to the scheme, said he "heartily sympathised with its objects and wished it every success." Lord Cranbrook wrote saying he felt "that some central authority is needed to prevent waste and overlapping." Sir James Paget said, "I think that very useful results may be attained if the plan proposed in the draft scheme which you sent to me be adopted and its rules be carefully observed." There were also letters from Mr. Gladstone, Lord Meath, Sir Edward Sieveking, Sir James Crichton Browne, Mr. G. D. Pollock, Dr. Lauder Brunton, and others. The letter of Dr. Lauder Brunton contained a short statement of his views on the subject of the meeting. His general view, he said, was that by means of coördinated action between the various hospitals of London a greater amount of good might be effected and less harm done in the way of allowing the hospital relief which was intended for the necessitous being shared to an undue extent by those who were able to pay for medical assistance. To insure the success of any such scheme it was obvious that it must meet with the hearty coöperation of the officials, both lay and medical, of the hospitals, more especially of the large ones. Dr. Lauder Brunton then went on to examine the draft scheme and to criticise it, and having done this he recommended that instead of pressing the adoption of the scheme now it would be best to be content with (1) re-affirming the decision of the previous meeting that a Central Hospitals Board for London was desirable; (2) that in it the medical and lay elements should both be represented; and (3) that the governing bodies of the various charities in London should be approached with the object of learning their views regarding the constitution of such a board and their willingness to coöperate in its formation.

The CHAIRMAN made a short introductory speech. For many years, he said, the incidental evils in connexion with the system of hospitals had been fully admitted. Special attention was called to them in the report of the House of Lords Committee in 1892, and the Charity Organisation Society had upon several occasions held special meetings of the Council upon the subject, the standpoint of this society, of course, being the interests of scientific charity—the desire that the suffering poor should be helped from available resources in the wisest possible way. It was, perhaps, as well to remember that the object for which hospitals were founded—the primary object—was the need of the suffering poor; but, of course, other interests were concerned in the matter, and the abuses which had arisen in connexion with medical relief deeply affected certain classes of the community, especially the abuses which were admitted to exist in connexion with the out-patient departments. The authorities of the hospitals themselves felt that there was a general public sentiment that a more satisfactory state of things ought to exist, and that the appeals which were put forward on behalf of hospitals in difficulties might be more fully responded to if there was some sort of central advising board which would instruct the public as to where funds were really most of all needed. It was nearly a year since he presided at a meeting at which the principle was affirmed that a central hospital board for London was desirable, and this meeting was called in the view that possibly the time might now be ripe to give further effect to that resolution and to appoint a committee to promote it. The object of the meeting was merely to appoint a committee which would pave the way for the establishment of a

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Central Board. It might be useful, however, to lay stress upon some of the principal points of the scheme which had been drafted. It was regarded as very essential that the voluntary system of medical relief should be preserved. The second object of the scheme was to give assistance to medical charities by means of a common fund for special purposes which would conduce to the improvement of medical relief in the metropolis as a whole. When he spoke of special purposes he meant such things as building extension, which could not be met by grants from the Hospital Sunday and Saturday Funds. The third object was to provide some machinery for regulating and improving the existing voluntary system. There was no intention of interfering with the self-government of individual medical charities or of intercepting donations to be given to them. The Board should be an influential body and should have at its disposal funds to enable it to make these special grants as well as the services of responsible visitors. It should have no compulsory powers, but should simply influence the public and the hospitals by the issue of an annual report. The duties of the Board would be, roughly, to obtain special reports and returns, require proper audit of accounts, visit and report upon each charity, and report upon the establishment, or removal, or enlargement of hospitals. The scheme was not submitted as a cut-and-dried proposal, but as a basis for consideration and discussion by the general committee which this meeting would be asked to appoint. It was hoped that the general committee, possibly through a small sub-committee, would approach the schools and hospitals and other bodies interested and in other ways promote the end desired.

Sir WILLIAM BROADBENT moved: "That this meeting affirms the resolution adopted on April 13th last approving of the establishment of a Central Hospital Board for London on a representative basis, and accepts the draft submitted to it as indicating a plan that, subject to further consideration and modification, is likely to prove satisfactory, and that the following be a General Committee to consider, promote, and from time to time report upon the draft scheme, with power to add to their number, and to appoint an Executive Committee." The names of the Committee were then read out. Sir William Broadbent, in continuing, insisted that nothing in the proceedings of this meeting could be taken as hostile to hospitals. It was no longer necessary to dwell upon the abuses that had arisen in connexion with these institutions, for they were known to every one present. It was impossible that the number of out-patients in particular seen every year, amounting to something like 1,300,000, could represent only those who were fit objects for medical and surgical relief, and it was matter of notoriety, and was well known to every hospital physician and surgeon, that, do what they might, patients came to hospitals who did not belong to the proper hospital class. This matter, of course, affected very closely the medical profession. It concerned primarily the general practitioners, who suffered seriously from the fact that patients who were able to pay for medical advice got it gratis at hospitals, and it concerned also hospital physicians and surgeons, who felt that they were sometimes made the instruments of inflicting a wrong upon their professional brethren. This might not concern the public very closely, but hospital subscribers would object, and did object when they knew of it, to paying for the medical advice of people who could quite as well afford to pay for it as they could themselves. It was acknowledged on every hand that there was a waste of energy on the part of physicians and surgeons of hospitals, that there was a waste of money on the part of supporters, and, worst of all, that there was a waste of time and infliction of great injury upon the poor patients. One of the main causes of the present unsatisfactory state of things was undoubtedly the isolation of the great hospitals from each other and the competition which had sprung up among them. There was no inter-communication, no comparison of work, or comparison of methods among them. Every hospital had endeavoured to solve its difficulties in its own way, and in consequence there had arisen differences and divergencies which had left gaps, and these gaps had sometimes been filled by small institutions, many of which had done great harm. One serious mistake hospitals made originally was in not recognising early the necessity for specialties. With every advance in surgery and medicine certain necessary specialties were developed, but the hospitals were not quick enough to recognise the necessity and provide for it, and in that way special hospitals arose. He had never been one to object to special hospitals. He had always recognised their merits and their necessities, but one must add that the special hospitals had been particularly liable to abuse and some of the worst evils of out-patient practice had arisen in connexion with them. The coördination proposed would not interfere with the individual life of the hospitals. Their autonomy must be respected. There was no idea of extinguishing the healthy rivalry between them but the rivalry must be in the direction of the good of the patients and not merely of increasing the numbers and being able to put forward specious claims to the support of the public founded on numbers and not founded on efficiency and the value of the work done. For his own part he should like to see local as well as general coördination. He should like to see each large hospital with its medical school a centre of usefulness, with which should be affiliated in the first place the provident dispensaries. It should not be forgotten that provident dispensaries represented men of the better and more highly principled among the working classes, who were willing to pay for their medical advice, and he should be prepared to give these men some preference in the matter of hospital consultation or hospital treatment. He would also do something for friendly societies, which, be it remembered, actually helped hospitals from their funds. There might also be organisation and inter-communication with the special hospitals in the locality. All this demanded some sort of central institution. What they wanted was "a hospital brain," which should receive information from every source and impart instruction derived from its experience. As to the draft scheme, no doubt modifications had occurred to all of them, but it had been formulated merely for the purposes of discussion, and it might emerge from the consideration of this committee something totally different. With regard to the funds necessary for the scheme it was hoped that other sources of supply might be tapped besides those at present open for the relief of hospitals. It had occurred to him that there was a possibility at any rate of a gigantic scheme of collecting money for the benefit of the London hospitals on the part of the Prince of Wales in celebration of the Queen's reign. His Royal Highness had, so to speak, put Guy's Hospital on its feet again, and he thought that this new scheme was worthy of the Queen, worthy of the Prince, and worthy of the occasion, and he only hoped that the rumours they heard might turn out well founded and that the scheme might have every success. If that money was collected there must be a committee of distribution. That committee would be in a way a central hospital board for the particular occasion. It must, in order to make the distribution effectual, obtain information from all the hospitals and must distribute the money, not merely in relation to the apparent necessities of the hospitals, but with some recognition of the merits of the different institutions which were to be supported. It seemed to him possible that this Central Board, which it must be for the occasion, might turn out to be the Central Board which they all desired to see, and if the principle of representation laid before them by the Charity Organisation Society could be carried out on the committee he thought it would be the best way to secure the proper distribution of the funds.

Mr. VICTOR HORSLEY seconded the resolution in a few sentences, his wish being, he said, to give those opposed to the principle it contained an opportunity of expressing their views to the meeting.

Mr. MYERS, seconded by Mr. GRIFFITH GRIFFITH, moved as an amendment: "That the Charity Organisation Society draw up recommendations to the boards of the London hospitals, &c., to enable these boards as much as possible to compare their relative expenditure and to profit when expedient thereby, and also to enable the Charity Organisation Society to draw up accurate annual reports and statements of accounts of these charities. That this society issue such advice as they may deem expedient for the better regulation of the out-patient departments of the various hospitals and dispensaries." Mr. Myers said he did not think the experience of central boards so satisfactory that they should attempt to create a new one, and with regard to finance he contended that in course of time the proposed board would divert contributions from the individual hospitals and increase their financial difficulties.

Mr. LOCH, secretary of the Charity Organisation Society, in reply to a question put to him, said that the desire was in the first instance to get the opinion of medical men upon the scheme, and then to submit it through the proposed committee to the governing bodies and officers of the hospitals.

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The Reverend Dr. WACE, chairman of King's College Hospital, expressed the view that further time should be given for the consideration of the scheme.

The amendment being put to the meeting was negatived by a large majority.

Another amendment affirming the resolution of April 13th, and suggesting that all further steps for the establishment of a central board should be taken by a committee of representatives elected by the individual hospitals, was moved and was also negatived by a large majority.

Sir WILLIAM BROADBENT'S motion was then put to the meeting and carried by 121 votes to 12.

BUBONIC PLAGUE IN BOMBAY.

WHAT with the disastrous outbreak of plague in Bombay, the terrible famine in India, the natural alarm of the European Powers and of our own Colonial Governments lest the plague should be introduced into their midst, and the enforcement everywhere of quarantine regulations against India, with the consequent paralysing effect on trade and commerce—not to mention other matters of more or less gravity—the Government of this country is at the present moment confronted with graver difficulties than any Government has encountered for some time past. We need now, if ever we did, a strong and wise Administration and an abstention on the part of the Opposition from exhibiting any captious party spirit. We may all, whatever may be our politics, rejoice that such an attitude as that last referred to has been adopted.

According to the latest returns it is computed that since the plague was officially recognised in Bombay, and despite the decrease in the population, close upon 10,000 deaths have occurred in excess of the average for the last five years. This excess may, it is believed, be fairly attributed to the presence of plague in that city. The great gravity of the situation has been fully recognised by the India Office at home and by the Viceroy's Government of our great dependency. Happily, it is not the habit of the people of this country to "lose their heads" in the presence of difficulties, but to rise to the occasion and make all the attempts in their power to meet and overcome them. Immense energy has been displayed and vigorous action has been taken, and large sums of money have been voted in view of preventing the epidemic from spreading on the one hand and of accommodating and succouring those afflicted with the disease on the other. It seems to us that, practically speaking, the measures which we sketched last week have been put in force. Medical and sanitary committees have been formed and have been energetically working; numerous isolation hospitals have been opened for the sick, and temporary accommodation for the infected or healthy; house-to-house visitation of all infected districts has been instituted, and all persons affected by the disease have been removed and segregated; infected houses have been demolished and open-air spaces and vastly increased ventilation provided; the railways are guarded against infection by medical inspection; measures for the all-round cleansing and disinfection of the city have been vigorously carried out under the advice of experts and of the best medical authorities, experienced organisers, and administrators that India could supply. In the case of pilgrims to the Moslem holy places the law has been put in force to prevent the disease being carried into the Red Sea. All pilgrimage from infected ports is to be stopped, and all persons, natives and others, proceeding by road, rail, or river are medically inspected on every available opportunity. It is only fair to the Government of India and the local authorities to ask what more could be done than has already been, or is being, done? The disease has, speaking relatively, affected but few Europeans, and the sickness and mortality amongst the dock labourers and Port Trust servants have been very small indeed. This fact supplies a standard in the way of sanitation and personal hygiene to the level of which the authorities must strive to attain for all classes alike. The reason why Bombay has been so sorely stricken is most probably attributable to previous chronic neglect of those sanitary and common-sense precautions which cannot be disregarded with impunity. Still, considering that Bombay is a big Eastern city, inhabited by a large and poor native population with numerous caste prejudices, into the midst of which the plague-cause was introduced, we cannot fail to notice that the modern methods of dealing with epidemic disease are all in the right line. Plague is probably about as fatal as ever it was in those whom it attacks, but the dimensions of an outbreak are much more under control than they were. The sickness and mortality at Bombay, bad as these may be, compare very favourably with what they were two centuries or less ago, when sanitation was unknown, and what to do, or to strive to do, in an epidemic, except to flee from the scene of it, was also either unknown or based upon purely empirical ideas.

Beyond the virulent but limited outbreak at Karachi and that at Poona, with a few cases at other places whither the panic-stricken native population of Bombay had fled, carrying the disease with them, we do not hear of any widely spread prevalence or manifestation of the disease. Contagious the plague undoubtedly is, but, like other epidemic infections, it fails to secure any firm foothold where the conditions are unfavourable to its growth and development. It is an exotic, which requires to have what we may term a muck-heap or hot-bed in the shape of a suitable environment prepared for its reception and growth.

All the Great Powers have assented to the project of an International Sanitary Conference at Venice to concert measures for preventing the introduction of the plague into Europe, which is to meet next month. Dr. Druetti, sent by the Italian Government to watch the progress of the plague in India, has arrived at Bombay. A special sanitary mission, accompanied by a French delegate, has been sent by the Medical Board in Egypt for the stations on the coast of the Sinai Peninsula to determine the measures that are deemed necessary to secure the immunity of Egypt from contagion, and there is generally a good deal of anxiety and activity displayed by the Continental Powers regarding the possible spread of the epidemic from Bombay.

ARMY MEDICAL DEPARTMENT REPORT FOR THE YEAR 1895.[1]

[FIRST NOTICE.]

THE Army Medical Report is now issued in two separate volumes—one as a blue-book for presentation to the Houses of Parliament consisting only of the official reports and statistical tables; the other of these and also of an appendix containing various professional reports and papers by officers of the Medical Service on subjects of a more technical and scientific character such as are of interest to the Department and medical profession, but which do not directly concern Members of Parliament and non-medical officials.

The report for 1895 leads off with the usual summary statement on the "Health of the Troops at Home and Abroad." This statement condenses the general information in such a way that it serves to focus the attention of the reader on the main points connected with the health of the army as a whole during the year under review, and we cannot, therefore, do better than adopt it as introductory to our notice.

The average annual strength of the troops serving at home and abroad in 1895, as computed from the returns received by the Army Medical Department, was 200,681 warrant officers, non-commissioned officers, and men (exclusive of colonial corps); the admissions into hospital in this force were 199,312 and the deaths 1669. The rates represented by these numbers are for admission into hospital 993·2 and for deaths 8·16 per 1000 of the average annual strength, the latter being calculated on the strength of 204,592, which includes detached men.

The statistics of the troops serving in the United Kingdom during the year show that the ratio of sickness and mortality were somewhat higher than in 1894, but still below the average. Only 3 cases of small-pox occurred, as compared with 11 in the year before, but scarlet fever and measles were more prevalent. Enteric fever gave practically the same ratio as in the previous year, Dublin being the station most affected. There was a considerable increase in the admissions for influenza, but a decline in those for venereal affections.

In the Colonies, as a whole, the general health was not so good as

[1] Army Medical Department Report for the Year 1895, with Appendix, Vol. xxxvii. London: Printed for Her Majesty's Stationery Office by Harrison and Sons, Printers to Her Majesty. 1896. Price 4s.

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in 1894, continued fevers being more prevalent at Malta, enteric fever at Bermuda, and malarial fevers at Mauritius, and a large increase occurred in the Straits Settlements in the sickness from venereal diseases. In the West Indies and China the admission ratios were lower than in the year before, while at Gibraltar there was but little change.

In India there was a decline in the sick rate as compared with that for the previous year, but a slight increase in comparison with the average ratio. Cholera and malarial fevers caused less sickness than in 1894, but there was an increase in the amount of venereal disease.

The health of the troops in Egypt was good and the improvement noted in last year's report continued, though in a lesser degree.

Among the papers in the appendices—sixteen in all in number—to which medical readers naturally turn with most interest thirteen are contributions by medical officers and by the professors at Netley. Among these we may refer to the Report on the Progress of Hygiene for 1896; the list of operations at Netley; a report on the Ashanti Expedition of 1895–6; various papers on medical, surgical, and pathological subjects; and one by the Professor of Pathology at the Army Medical School on the Pathology and Therapeutics of Scurvy. These we shall consider subsequently.

Glancing at the table of statistics of some of the most important of the results of sickness of every command in which the troops were stationed we find that the total mortality on an annual average strength of 200,681 was 8·16 per 1000, and of the army at home it was 4·32. Gibraltar is, as regards mortality, a healthy station compared with Malta, the death-rates being respectively 3·84 at the former and 6·87 per 1000 at the latter station. Mauritius, as regards admission-, death-, and invaliding-rates, heads the list in point of unhealthiness, India next, followed by China; whereas Canada is, except in point of mortality rate, the healthiest of the foreign stations. Of the home stations Scotland is the healthiest; and Ireland has the highest death-rate, but a lower admission and constantly ineffective rate than England and Wales. Speaking generally, the causes of inefficiency at the several stations at home and abroad are very much the same as they were in previous years. Typhoid fever remains the great and increasing cause of mortality in our European army in India, and, as everyone knows, venereal disease is the great and increasing cause of sickness and inefficiency in that command. We have already had occasion to call attention to the gravely increased prevalence of this disease among the population of the Straits Settlements and Malay peninsula.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6310 births and 4156 deaths were registered during the week ending Jan. 23rd. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 22·3 to 19·2 per 1000, rose again last week to 19·7. In London the rate was 18·1 per 1000, while it averaged 20·8 in the thirty-two provincial towns. The lowest rates in these towns were 12·0 in Croydon, 13·6 in Derby, 14·2 in Brighton and in Halifax, and 14·1 in West Ham; the highest rates were 23·5 in Sunderland, 23·6 in Burnley and Oldham, 26·0 in Manchester, and 29·2 in Liverpool. The 4156 deaths included 386 which were referred to the principal zymotic diseases, against 413 and 378 in the two preceding weeks; of these, 117 resulted from whooping-cough, 87 from diphtheria, 67 from measles, 43 from scarlet fever, 36 from "fever" (principally enteric), 35 from diarrhœa, and 1 from small-pox. No death from any of these diseases was recorded last week in Huddersfield; in the other towns they caused the lowest death-rates in Croydon, Hull, Halifax, and Oldham, and the highest rates in Blackburn, Burnley, Swansea, and Nottingham. The greatest mortality from measles occurred in Gateshead, Plymouth, Nottingham, and Bradford; from whooping-cough in Wolverhampton, Salford, Blackburn, Swansea, Nottingham, and Burnley; and from "fever" in Sunderland. The mortality from scarlet fever showed no marked excess in any of the large towns. The 87 deaths from diphtheria included 53 in London, 4 in Birmingham, and 3 in Liverpool. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns. There were 2 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 23rd inst., against 2 and 3 at the end of the two preceding weeks; no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 3354, against 3707, 3597, and 3414 on the three preceding Saturdays; 249 new cases were admitted during the week, against 271, 290, and 208 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 348 to 306 in the three preceding weeks, rose again to 325 last week, but were 407 below the corrected average. The causes of 56, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Cardiff, Nottingham, Newcastle-upon-Tyne, and in fourteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·8 and 21·9 per 1000 in the two preceding weeks, rose again to 24·6 during the week ending Jan. 23rd, and exceeded by 4·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·3 in Perth and 16·1 in Paisley, to 28·8 in Greenock and 28·9 in Glasgow. The 733 deaths in these towns included 36 which were referred to measles, 26 to whooping-cough, 8 to diphtheria, 7 to diarrhœa, 6 to "fever" (principally enteric), and 6 to scarlet fever. In all, 89 deaths resulted from these principal zymotic diseases, against 101 and 75 in the two preceding weeks. These 89 deaths were equal to an annual rate of 3·0 per 1000, which was 1·2 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 60, 45, and 28 in the three preceding weeks, rose again to 36 last week, of which 32 occurred in Glasgow and 2 in Paisley. The 26 deaths referred to whooping-cough corresponded with the number in the preceding week, and included 20 in Glasgow, 2 in Edinburgh, and 2 in Paisley. The fatal cases of diphtheria, which had been 3 in each of the two preceding weeks, rose again to 8 last week, of which 4 occurred in Glasgow and 2 in Edinburgh. The 6 deaths referred to different forms of "fever" exceeded by 2 the number in the preceding week, and included 4 in Glasgow. The fatal cases of scarlet fever, which had been 10 and 3 in the two preceding weeks, rose again to 6 last week, of which 3 occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 152 and 162 in the two preceding weeks, were again 162 last week, and were 26 above the number in the corresponding period of last year. The causes of 32, or more than 4 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 44·1 to 34·8 per 1000, rose again to 43·9 during the week ending Jan. 23rd. During the past three weeks of the current quarter the death-rate in the city has averaged 38·0 per 1000, the rate during the same period being 18·2 in London and 20·6 in Edinburgh. The 294 deaths registered in Dublin during the week under notice showed an increase of 61 upon the number in the preceding week, and included 57 which were referred to the principal zymotic diseases, against 40 and 47 in the two preceding weeks; of these, 23 resulted from whooping-cough, 15 from measles, 10 from diarrhœa, 4 from scarlet fever, 4 from "fever," 1 from diphtheria, and not one from small-pox. These 57 deaths were equal to an annual rate of 8·5 per 1000, the zymotic death-rate during the same period being 1·8 in London and 1·4 in Edinburgh. The fatal cases of whooping-cough, which had been 19 and 27 in the two preceding weeks, declined again to 23 last week. The deaths referred to measles, which had been 9 in each of the two preceding weeks, rose again to 15 last week. The 10 fatal cases of diarrhœa considerably exceeded the number recorded in any recent week, while the 4 deaths referred to different forms of "fever" corresponded with the number in the preceding week. The 294 deaths in Dublin last week included 51 of infants under one year of age and 57 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded the

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING THE YEAR 1896.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1896.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,421,955	225	25,647	13,808	6	3190	103	277	6436	13	49,705	11·1	9	3692	940	2663	2931	5	564	13	3192	14,009	3·1	81,721	18·2	160
West Districts.																										
Paddington	124,838	4	795	247	—	61	1	10	119	—	1237	9·7	1	103	22	65	49	—	13	1	66	320	2·5	1947	15·3	156
Kensington	170,660	13	1020	372	—	95	7	8	275	—	1790	10·3	—	173	40	70	99	—	16	1	60	459	2·6	2914	16·8	178
Hammersmith	104,551	3	532	218	1	51	4	9	121	—	939	8·8	—	62	21	52	62	1	13	2	85	298	2·8	1828	17·2	179
Fulham	115,008	2	628	356	—	54	5	9	99	2	1155	9·9	—	101	29	77	69	—	9	—	134	419	3·6	2057	17·6	175
Chelsea	96,657	2	571	488	—	66	2	6	120	—	1255	12·8	—	110	23	115	63	—	10	1	66	388	3·9	1850	18·8	168
St. George Hanover-square	80,041	1	342	124	—	64	1	2	56	—	580	7·1	—	32	11	24	15	—	9	—	20	111	1·4	1108	13·6	149
Westminster	53,477	2	224	109	—	35	2	1	79	—	452	8·3	—	18	10	20	26	—	9	—	35	118	2·2	978	18·0	170
St. James Westminster	22,955	3	75	37	—	6	—	2	20	—	143	6·1	—	31	3	2	3	—	3	—	10	52	2·2	397	17·0	149
North Districts.																										
Marylebone	141,114	4	811	292	—	107	—	3	248	—	1465	10·2	—	195	26	74	70	—	20	—	68	453	3·2	2855	19·9	141
Hampstead	75,812	—	289	199	—	58	2	6	54	—	608	7·9	—	58	7	30	22	—	7	—	17	141	1·8	916	11·9	123
St. Pancras	241,066	6	1079	482	—	200	1	21	355	—	2144	8·7	—	133	37	99	128	—	31	—	180	608	2·5	4442	18·1	168
Islington	337,639	51	2047	1117	—	236	6	31	391	—	3882	11·3	1	275	57	255	247	—	47	1	160	1033	3·0	5871	17·1	150
Stoke Newington	33,615	2	216	80	—	16	—	1	40	—	365	10·7	—	5	8	19	16	—	5	—	27	80	2·3	434	12·7	126
Hackney	213,774	8	1533	593	—	202	7	6	311	—	2660	12·2	—	95	36	103	147	1	37	1	192	612	2·8	3414	15·7	146
Central Districts.																										
St. Giles	38,158	—	120	60	—	21	—	1	80	—	342	8·8	—	41	7	7	14	—	4	—	16	89	2·3	737	19·0	147
St. Martin-in-the-Fields	13,003	1	73	16	—	18	2	1	12	—	123	9·3	—	11	3	3	5	—	3	—	5	30	2·3	214	16·2	164
Strand	23,820	—	132	37	—	8	—	1	11	—	189	7·8	—	28	6	3	8	—	1	—	13	59	2·4	550	22·7	193
Holborn	30,932	1	123	72	1	30	1	2	65	—	295	9·4	1	33	—	12	27	1	5	—	22	101	3·2	736	23·4	194
Clerkenwell	66,195	5	461	246	—	67	—	4	108	—	891	13·2	—	53	15	42	42	—	15	—	88	255	3·8	1393	20·7	184
St. Luke	41,478	2	264	133	—	38	2	2	133	—	574	13·6	—	35	21	26	23	—	4	—	52	161	3·8	1059	25·1	154
City of London	31,409	2	197	72	—	21	1	—	34	—	327	10·2	—	6	7	11	7	—	10	—	5	46	1·4	626	19·6	137
East Districts.																										
Shoreditch	122,265	1	708	371	—	117	9	3	297	—	1506	12·1	1	143	39	74	126	—	17	—	136	536	4·3	2656	21·4	180
Bethnal Green	129,151	2	1257	460	—	129	4	12	327	—	2191	16·7	—	153	35	75	160	—	20	1	113	557	4·2	2902	22·1	170
Whitechapel	78,286	4	638	351	—	62	—	2	138	—	1195	14·9	—	51	20	48	36	—	9	1	45	210	2·6	1655	20·6	141
St. George-in-the-East	47,583	2	378	214	—	33	1	2	69	—	719	14·9	—	28	18	30	17	—	5	—	60	158	3·3	1187	24·5	154
Limehouse	58,347	7	350	270	—	27	1	4	110	—	769	13·0	—	62	15	49	61	—	3	—	46	236	4·0	1357	22·9	176
Mile End Old Town	111,226	2	764	551	—	113	2	5	197	—	1634	14·5	—	84	34	97	83	—	16	—	95	409	3·6	2252	19·9	157
Poplar	169,379	9	964	701	—	184	8	7	315	1	2189	12·7	—	147	33	105	158	—	26	—	168	637	3·7	3550	20·6	176
South Districts.																										
St. Saviour Southwark	25,276	4	140	83	—	9	—	—	35	—	271	10·5	—	17	5	18	19	—	1	—	23	83	3·2	587	22·8	213
St. George Southwark	60,301	3	325	193	—	48	—	3	95	—	677	11·0	—	77	17	40	55	—	7	—	64	260	4·2	1472	24·0	181
Newington	121,191	3	677	407	—	88	1	9	194	—	1379	11·2	1	98	29	71	66	—	18	—	127	410	3·3	2527	20·5	184
St. Olave Southwark	11,673	—	62	44	—	9	—	—	21	—	136	11·5	—	11	5	9	13	—	2	—	17	57	4·8	261	22·0	153
Bermondsey	85,508	4	394	258	—	65	—	5	131	—	857	9·9	—	75	20	73	97	—	11	—	52	328	3·8	1873	21·6	160
Rotherhithe	40,432	5	198	123	—	45	1	6	113	1	492	12·0	—	43	10	26	36	—	11	—	31	157	3·8	834	20·3	159
Lambeth	296,036	18	1595	692	1	165	14	20	315	6	2866	9·5	2	182	65	139	140	1	24	1	175	729	2·4	5084	16·9	136
Battersea	165,864	8	1175	419	—	109	1	10	253	—	1975	11·7	—	179	32	82	138	—	16	1	116	614	3·6	2985	17·7	177
Wandsworth	188,908	2	1000	299	—	102	8	11	265	1	1688	8·8	—	151	29	40	158	—	21	—	121	520	2·7	2749	14·3	150
Camberwell	253,975	13	1222	1430	3	175	—	16	309	1	3179	12·3	—	206	52	260	196	1	37	—	176	928	3·6	4602	17·8	156
Greenwich	176,293	14	1163	836	—	113	3	17	242	—	2388	13·3	2	193	51	140	127	—	32	1	120	666	3·7	3323	18·5	157
Lewisham (excluding Penge)	83,795	1	343	365	—	58	—	9	79	—	855	10·0	—	39	7	75	28	—	9	—	60	218	2·6	1216	14·3	136
Woolwich	41,334	1	146	102	—	21	3	1	45	—	319	7·6	—	72	9	31	22	—	2	1	28	165	3·9	861	20·5	172
Lee	38,714	1	168	75	—	28	—	6	37	—	315	8·0	—	14	8	17	18	—	2	—	15	74	1·9	526	13·4	141
Plumstead	59,610	4	363	208	—	29	3	3	43	1	654	10·8	—	69	18	55	35	—	4	—	33	214	3·5	936	15.4	133
Port of London	—	5	5	6	—	17	—	—	2	—	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 446 cases of membranous croup.

† Including deaths from membranous croup.

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numbers recorded in the preceding week. Six inquest cases and 5 deaths from violence were registered; and 88, or nearly a third, of the deaths occurred in public institutions. The causes of 23, or nearly 8 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING 1896.

Complete statistics relating to sickness and mortality during the year 1896 in each of the forty-three sanitary areas of London are summarised in the accompanying table. The mortality statistics relate to the deaths of persons actually belonging to the various sanitary districts, and are the result of a complete system of distribution of deaths occurring in the institutions of London among the different sanitary districts in which the patients had previously resided. With regard to the notified cases of infectious diseases in London during 1896, it appears that the proportion of persons reported to be suffering from one or other of the nine diseases in the accompanying table was equal to 11·1 per 1000 of the population, estimated at 4,421,955 persons in the middle of the year. In the preceding three years the rates were 15·7, 9·4, and 9·5 per 1000 respectively. Among the various sanitary areas the lowest rates were 6·1 in St. James Westminster, 7·1 in St. George Hanover-square, 7·6 in Woolwich, 7·8 in Strand, 7.9 in Hampstead, and 8·3 in Westminster; the highest rates were 13·0 in Limehouse, 13·2 in Clerkenwell, 13·3 in Greenwich, 13·6 in St. Luke, 14 5 in Mile-End Old Town, 14·9 in Whitechapel and in St. George-in-the-East, and 16·7 in Bethnal Green. The prevalence of small-pox in London showed a further marked decline during 1896 the cases notified being only 225, against 2813, 1192, and 979 in the three preceding years; of these, 51 belonged to Islington, 18 to Lambeth, 14 to Greenwich, 13 to Camberwell, 13 to Kensington, 9 to Poplar, and 8 to Battersea. The number of small-pox patients admitted into the Metropolitan Asylum Hospitals during 1896 was 236, and only 3 cases remained under treatment at the end of the year. The prevalence of scarlet fever in London during 1896 showed a considerable further increase upon that recorded in recent years, the number of cases notified being 25,647, against 18,446 and 19,757 in the two preceding years; this disease was proportionally most prevalent in Hackney, Clerkenwell, St. George-in-the-East, Bethnal Green, Whitechapel, Mile End Old Town, Battersea, and Greenwich sanitary areas. During the year under notice 16,271 scarlet fever patients were admitted into the Metropolitan Asylums Hospitals; the number of cases under treatment, which had been 2708 at the beginning of the year, had increased to 3599 at the end of December last. Diphtheria also showed increased prevalence during 1896, the cases notified being 13,808, against 11,186 and 11,223 in the two preceding years; this disease showed the highest proportional prevalence in Chelsea, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town, Poplar, Bermondsey, Camberwell, Greenwich, and Lewisham sanitary areas. The Metropolitan Asylum Hospitals contained 687 diphtheria patients at the beginning of 1896; 5409 cases were admitted during the year, and 829 remained under treatment at the end of December last. The prevalence of enteric fever in London showed a decline during the year under notice; amongst the various sanitary areas this disease was proportionally most prevalent in Hackney, St. Martin-in-the-Fields, Shoreditch, Bethnal Green, Mile End Old Town, Poplar, and Rotherhithe. The number of enteric fever patients in the Metropolitan Asylum Hospitals at the end of 1896 was 116; 879 cases were admitted during the year, against 675 and 844 in the two preceding years. Erysipelas showed the highest proportional prevalence in St. Giles, Holborn, St. Luke, Shoreditch, Bethnal Green, and Rotherhithe sanitary areas. The 277 notified cases of puerperal fever exceeded by 41 the number recorded during 1895; 31 belonged to Islington, 21 to St. Pancras, 20 to Lambeth, 17 to Greenwich, 16 to Camberwell, and 12 to Bethnal Green sanitary areas.

During the year under notice the deaths of 81,721 persons belonging to London were registered, equal to a rate of 18 2 per 1000, against 20·9, 17·4, and 19·4 in the three preceding years 1893–4–5. This rate was, with two exceptions, lower than in any year on record, and was 1·6 per 1000 below the average rate in the ten preceding years. In the various sanitary areas the lowest death-rates were 11·9 in Hampstead, 12·7 in Stoke Newington, 13·4 in Lee, 13·6 in St. George Hanover-square, 14·3 in Wandsworth and in Lewisham (excluding Penge), and 15·3 in Paddington. The highest rates are 22·7 in Strand, 22·8 in St. Saviour Southwark, 22·9 in Limehouse, 23·4 in Holborn, 24·0 in St. George Southwark, 24·5 in St. George-in-the-East, and 25·1 in St. Luke. Taking the five groups of sanitary areas, the rate of mortality during 1896 was equal to 16·8 per 1000 in the west, 16·9 in the north, 17·8 in the south, and 21·4 in the east and in the central districts. To the principal zymotic diseases 14,009 deaths were referred during the year under notice; of these, 3692 resulted from measles, 3192 from diarrhœa, 2931 from whooping-cough, 2663 from diphtheria, 940 from scarlet fever, 582 from different forms of "fever" (including 5 from typhus, 564 from enteric fever, and 13 from simple and ill-defined forms of fever), and 9 from small-pox. These 14,009 deaths were equal to an annual rate of 3·1 per 1000, against 3·5, 2·6, and 2 6 in the three preceding years, 1893–4–5. Among the various sanitary areas the zymotic death-rates ranged from 1·4 in St. George Hanover-square and in City of London, 1·8 in Hampstead, 1·9 in Lee, 2 2 in Westminster and in St. James Westminster, and 2·3 in Stoke Newington, in St. Giles, and in St. Martin-in-the-Fields, to 3 9 in Chelsea, and in Woolwich, 4 0 in Limehouse, 4·2 in St. George Southwark and in Bethnal Green, 4·3 in Shoreditch, and 4·8 in St. Olave Southwark. The 9 fatal cases of small-pox registered in London during 1896 were 34 below the corrected average number in the ten preceding years; of these, 2 belonged to Lambeth and 2 to Greenwich sanitary areas. The 3692 deaths referred to measles were 900 above the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. James Westminster, Marylebone, Strand, Shoreditch, Bethnal Green, St. George Southwark, Woolwich, and Plumstead. The 940 fatal cases of scarlet fever were 149 below the corrected average; this disease was proportionally most fatal in St. Luke, Shoreditch, St. George-in-the-East, Mile End Old Town, St. George Southwark, St. Olave Southwark, Greenwich, and Plumstead sanitary areas. The 2663 deaths referred to diphtheria exceeded by as many as 786 the corrected average; among the various sanitary areas this disease showed the highest proportional fatality in Chelsea, Limehouse, Mile End Old Town, St. Olave Southwark, Bermondsey, Camberwell, Greenwich, Lewisham, and Plumstead. The 2931 fatal cases of whooping-cough were 232 below the corrected average; this disease was proportionally most fatal in Shoreditch, Bethnal Green, Limehouse, Poplar, St. George Southwark, St. Olave Southwark, Bermondsey, and Rotherhithe sanitary areas. The 582 deaths referred to different forms of "fever" were 82 below the corrected average; among the various sanitary areas the highest "fever" death-rates were recorded in St. Martin-in-the Fields, Clerkenwell, City of London, and Rotherhithe. The 3192 fatal cases of diarrhœa were 135 above the corrected average; this disease showed the highest proportional fatality in Fulham, Clerkenwell, St. Luke, Shoreditch, St. George-in-the-East, St. George Southwark, Newington, and St. Olave Southwark. In conclusion, it may be stated that the mortality from small-pox, scarlet fever, and "fever" was below the average, while that from each of the other zymotic diseases showed an excess.

Infant mortality in London last year, measured by the proportion of deaths under one year of age to registered births, was equal to 160 per 1000, against 164, 143, and 165 in the three preceding years. The rates of infant mortality in the various sanitary areas ranged from 123 in Hampstead, 126 in Stoke Newington, 133 in Plumstead, 136 in Lewisham, and 137 in City of London, to 180 in Shoreditch, 181 in St. George Southwark, 184 in Clerkenwell and in Newington, 193 in Strand, 194 in Holborn, and 213 in St. Saviour Southwark.

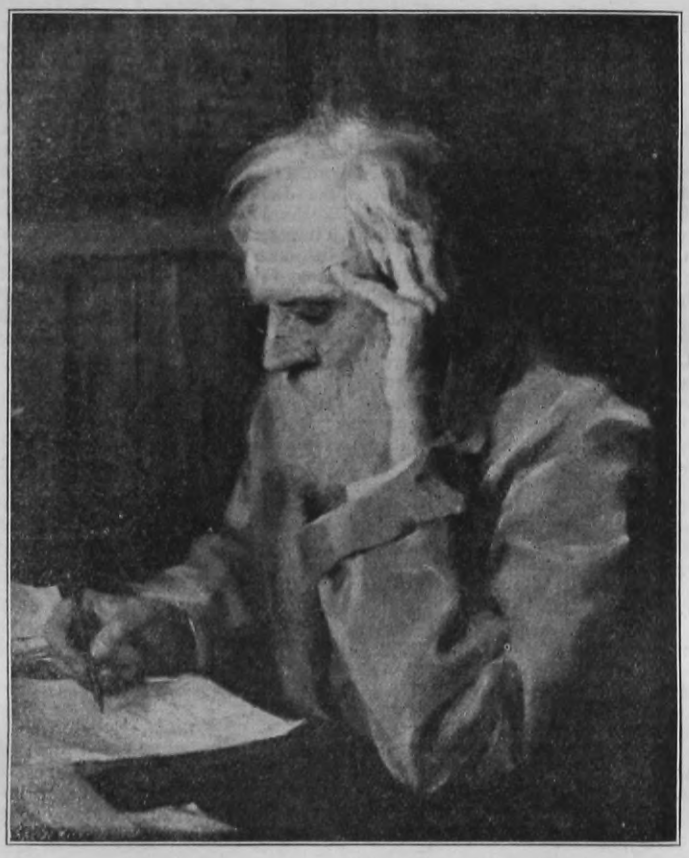
SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held at the Town-hall, Wandsworth, on Jan. 13th, Dr. B. Duke in the chair, when a paper was read by Mr. Howard Marsh, entitled "Studies in Diagnosis, illustrated by Difficult Cases." This appeared in full in THE LANCET of Jan. 16th. A discussion followed, in which Mr. T. A. I. Howell, Mr. John Gay, Dr. Wyman, Surgeon-Major Mark Robinson, and others took part, each speaker referring to difficult cases of various kinds which had come under his observation. On the motion of the President a vote of thanks to Mr. Howard Marsh for his valuable paper was carried by acclamation.

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Obituary.

EDWARD BALLARD, M.D., F.R.C.P., LOND. F.R.S.

As we announced in our issue of Jan. 23rd the death of Dr. Edward Ballard took place at his residence, Ravenscroft Park, High Barnet, on the morning of the 19th inst., at the age of seventy-six years. A few months ago he had an attack of bronchitis which tried him severely, but from this he appeared to have recovered almost completely. On the 17th inst., however, he experienced a much severer bronchitic attack, to which he rapidly succumbed. He passed peacefully away after an illness of two days' duration. Although he had suffered for some years from an ailment which kept him much at home, yet he has never given up work for a day, except when actually confined to his bed by illness. Only a week before his death a member of our staff spent an evening at his house, and on that occasion Dr. Ballard seemed bright and cheerful. He exhibited to the full his old love for statistical work and his well-known capacity of rapidly grasping the salient points of argument respecting any subject in which he took an interest. His memory seemed to be almost unimpaired, and his mental vigour was remarkable for a man of his age.



EDWARD BALLARD, M.D., F.R.C.P., F.R.S.
(From a painting by his daughter executed within a year of his death.)

Edward Ballard was born at Islington in 1820. The son of a gentleman of private means he received his early education at the Islington proprietary school, of which the head masters at that time were successively the Rev. Canon Parr and the Rev. John Jackson, afterwards Bishop of London. It was originally intended that he should take Holy Orders, but before he left school circumstances occurred which determined his selection of medicine as a profession. He was, however, to the end of his life a loyal and devout member of the Church of England, in the welfare of which he ever took the deepest interest. At the age of seventeen he was apprenticed, after the manner of the day, to Mr. Semple, who was at that time the only parochial surgeon in Islington and who was not only surgeon to the workhouse, but also a member of the staff of the National Vaccine Establishment. Mr. Semple was an enthusiastic botanist, and often accompanied his pupils into the country on botanical excursions. Under his instruction Mr. Ballard soon gained a fair knowledge of plants which was subsequently improved by attendance on the botanical classes at University College. In 1839 he entered the college as a medical student. His career at college and at the London University was a highly distinguished one. He graduated M.B. and subsequently M.D. as university medical scholar and Gold Medallist, and afterwards became a Fellow of the Royal College of Physicians. He was subsequently elected a Fellow and Tutor of University College and in 1889 a Fellow of the Royal Society.

After graduation Dr. Ballard engaged in practice, and filled the position of physician to the St. Pancras Royal Dispensary, where he had for colleagues Dr. (now Sir) Henry Pitman, the late Dr. A. P. Stewart, and the late Mr. Haynes Walton. Later he became lecturer on medicine at the Grosvenor-place School. Dr. Ballard's practical introduction to public health work was by means of his appointment as first medical officer of health to his native parish; he retained this appointment sixteen years—viz., from 1856 to the date of his promotion to office under Government. Throughout his tenure of the Islington appointment he devoted his energies to the organisation of local sanitary work and applied himself with assiduity to acquire a mastery over those branches of medical knowledge in which he subsequently achieved well-merited distinction as a teacher. It was while thus engaged that Dr. Ballard accumulated the rich fund of statistical facts concerning diarrhœa *sickness*, of which he was the first to realise the full importance and which has formed the starting point of much that he has since written on the history and behaviour of that fatal disease. Here, too, it was that he first attracted professional attention by his painstaking and skilful inquiry concerning a local prevalence of typhoid fever, which he was able to trace to a polluted milk-supply. This was the first investigation of the kind that up to that time had been made, and was perhaps as complete and successful a piece of work as any that he has since accomplished. His first important publication was a prize essay on Vaccination and its Alleged Dangers; this is a work of conspicuous merit, which has proved of great value to honest inquirers after truth in regard to this important subject. In 1871 Dr. Ballard accepted an appointment (twice previously offered him by Sir John Simon) as medical inspector under the Privy Council. On resigning his health officership in order to take up his new duties at Whitehall he was presented by the medical practitioners of Islington with a handsome microscope by Ross as a tribute of their esteem. From 1884 to 1886 he was engaged, in conjunction with Dr. Blaxall, in making a survey, for preventive purposes, of the most vulnerable points of the English coast in the not improbable contingency of cholera being imported into one or other of our ports from abroad. From that period onward to the close of his official career he was engaged during such intervals as could be spared from routine inspectorial duties in his well-known investigations into the exact nature of the disease known as summer diarrhœa. The first instalment of his report on diarrhœa was published by the Local Government Board in 1887, and ever since his retirement from office he has been engaged in further studies of the same

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kind, working with unabated zeal, and for five or six hours a day, whenever his health permitted, even to within a week of his death. The only words of regret that escaped him on his death-bed had reference to the fact that this concluding report on what may be held to have been the chief study of his later years must after all be left unfinished. Several parcels of manuscript with illustrative diagrams and tables still remain as he left them; but in the interest of preventive medicine it is to be hoped that means will yet be found to preserve and render serviceable a work upon which so much valuable labour has been expended.

After his transference from the Privy Council to the Local Government Board Dr. Ballard prosecuted a series of investigations on the subject of "effluvium nuisances" arising from manufacturing processes, with especial regard to their effect upon health. The result of this investigation he presented to the Local Government Board in three successive reports, of which the high character may be gathered from the following remarks by his official chief, Sir John Simon: "The results of Dr. Ballard's study constitute a complete body of scientific and practical information for the guidance, both of the traders who produce the nuisances in question and of the authorities who ought to control them—such a body of information as is, I believe, not only without equal in its own branch of subject matter, but certainly without superior, as to thoroughness of work, in any sanitary publication known to me."

Dr. Ballard married in 1846 Julia Hannah, daughter of Mr. Charles Huggons of London. She died in 1866, leaving two sons, Edward George, now one of Her Majesty's Inspectors under the Alkali Acts; and Charles, who is now in America; also one daughter, Mary Harriet, now Mrs. Allt. As his second wife, he married Emmeline, daughter of Mr. John Halse of London. By this marriage there are two children—Robert, who at the date of his father's death was on the way to Rangoon to engage in medical practice; and Alice Emmeline.

By the death of Edward Ballard the medical profession has lost one of its brightest ornaments. A man of sterling character, and of powerful and discriminating mind, he was devoted to his profession, and was possessed of intellectual qualifications which, aided by characteristic perseverance, were a guarantee of that success in his life-work which he unquestionably achieved. He shunned popularity, and spent his life in honest and fruitful, but unobtrusive, endeavours to benefit his fellow men. Amongst the few who were admitted to the privilege of his personal friendship, his memory will be long and affectionally cherished. His remains were laid to rest on Jan. 23rd in the family grave at Woking Cemetery. We present our readers with a reproduction of a photograph of Dr. Ballard, taken from a fine portrait in oils, which was painted by his daughter Alice only a few months before her father's death.

ROBERT BEEDIE ROBERTSON, F.R.C.S. EDIN.

ROBERT BEEDIE ROBERTSON, of Ardrossan, whose death occurred on the 16th inst., was a native of Aberdeen, where he was born in 1832. He was brought up mainly in Dundee, and from the grammar school there he went to the University of Aberdeen, where he passed through a very complete arts course with distinction, and proceeded to Edinburgh to study medicine. He obtained the diploma of the Royal College of Surgeons of Edinburgh in 1859 and the Fellowship of the same body in 1862. Very early in his career he saw a great deal of country practice as assistant to the late Dr. Alexander of Wooler, in Northumberland, one of the most active medical practitioners of his day and a man of fine literary instincts and culture. But on the death of the late Dr. Houston of Ardrossan young Robertson settled there as his successor.

"Dr. Robert Beedie Robertson, of Ardrossan, Ayrshire," writes Professor Gairdner, "was one of those thoroughly skilful and devoted men who, having a very high and justly-earned local reputation as the leading practitioner of a wide district, seem not to have had the time or opportunity, or perhaps the inclination, to add in a corresponding degree to the literature of medical science. This was not in Dr. Robertson's case owing to the want of literary culture or ability, for he was an excellent Latin and English scholar and had even a romarkable power of keeping himself under the influence of contemporary thought as expressed in literature. But his professional work occupied him very thoroughly, and not being of a very robust constitution he was never tempted to spend his energies in any way that did not tend directly to the benefit of his patients. For nearly forty years he has been the trusted adviser of a very large number of the wealthier and middle classes, and has also had a large *olientèle* among the poor, whom he attended without regard to pecuniary remuneration, bestowing on them the same care as on the others, and being in regard to all classes of society the friend as well as the physician. He was also repeatedly employed in medico-legal inquiries, and had a considerable amount of consulting practice. In short, there were few men better known or more favourably known in the northern division of Ayrshire than the late Dr. Robertson."

His death followed a long and distressing illness extending over nearly three years. Probably commencing in a sudden blindness in one eye from obliteration of the central artery of the retina this illness took on the form of a cerebral affection associated with a slight, but pretty constant aphasia amounting to forgetfulness of particular, and often very familiar, words. There never was anything approaching to complete aphasia or agraphia, and there was no paralysis at any time; but although his mind remained intact and his interest in his work continued he became gradually convinced that it was necessary first to circumscribe, and afterwards to discontinue, his professional services to the public. Some time ago he formally withdrew from practice altogether and since then has been in a large measure confined to the house and often to his bed, suffering greatly from pains in the head and from occasional sudden seizures of unconsciousness. He married, in 1874, the youngest daughter of the late James Boyd of Orchard, West Kilbride, who, with two sons, survives him.

THE SERVICES.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL H. H. STOKES, who has been stationed at Netley for the last three years, will proceed to Singapore at an early date, for duty in the Straits Settlements. Surgeon-Major Hewett has been nominated for service in the Bombay Command, and Surgeon-Major O'Connell has been appointed to the Medical Charge of the Headquarter Staff and Establishment, Punjab Command. Surgeon-Captain H. J. Parry has assumed Medical Charge of Women and Children, Wellington Lines and Aldershot town. Brigade-Surgeon-Lieutenant-Colonel R. Harman and Surgeon-Lieutenant L. P. Tomlinson have embarked for India, and Surgeon-Captain Cree proceeds to Gibraltar.

Surgeon-Colonel Michael Cogan retires on retired pay. Brigade-Surgeon-Lieutenant-Colonel James Macartney, M.D., is placed on retired pay. Surgeon-Captain A. De C. Scanlan, from half-pay, to be Surgeon-Captain, with precedence next below G. G. Adams, vice C. C. Fleming, seconded.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Governor-General has made the following appointments on his personal staff:—To be Honorary Surgeons: Surgeon-Major-General T. Walsh, A.M.S., and Surgeon-Colonel C. A. Atkins, A.M.S. Surgeon-Captain W. E. Jennings and Surgeon-Major F. F. MacCartie have respectively delivered over and received charge of the office of the Health Officer of the Port of Bombay. The services of Surgeon-Lieutenant C. D. Dawes (Bengal), are re-placed at the disposal of the Military Department.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Fleet Surgeons: William E. Breton to the *Prince George*, and Henry A. W. Richardson to the *Monarch*, afterwards to Cape of Good Hope Hospital. Staff Surgeons: Joseph H. Whelan to the *Monarch*, and to the *Penelope* when the *Monarch* becomes port guardship; Oswald Rees to the *Monarch* when commissioned; and H. S. Jackson to the *Pembroke*. Surgeons: Robert F. Bowrie to the *Tauranga* when commissioned; J. W. Craig to the *Caledonia;* William A. Whitelegge to the *Phœnix;* John H. Stenhouse to the *Algerine;* Alfred J. Pickthorn to the Portsmouth Division of Royal Marines; Ernest A. Penfold to the Plymouth Division of Royal Marines; Cyril J. Mansfield to the *Pembroke;* Hugh Clift to

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the *Vivid*, additional, for Devonport Dockyard; Edward B. Pickthorn to the *Vernon*; John A. L. Campbell to the *Stork*; and James G. Towler to the *Sharpshooter*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant David L. Anderson, 1st Banff Volunteer Artillery, to be Surgeon-Captain.

VOLUNTEER CORPS.

Royal Engineers: 1st Sussex: Surgeon-Lieutenant A. H. Croucher, M.D., to be Surgeon-Captain. *Rifle:* 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers: David Robertson Dobie, M.D., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the East Lancashire Regiment: Charles Edward Reading Bucknill, gent., to be Surgeon-Lieutenant.

CADET BATTALIONS.

1st Cadet Battalion the Buffs (East Kent Regiment): Acting-Surgeon C. W. Scott, M.B., resigns his appointment.

THE LATE SURGEON-MAJOR MANSER.

The esteem in which Dr. Manser, who fell a victim to the plague and a sacrifice to duty, was held in India is evidenced by the appreciative obituary notices in the Indian papers brought us this week by the mail. The *Bombay Gazette* says: "It is not too much to say that by Dr. Manser's death Western India loses a medical man of exceptional talent, and the Government a most competent and trusted medical officer."

DEATHS IN THE SERVICES.

Surgeon-Major T. W. Wilson (retired), Bengal Medical Service, on the 15th inst. at South Kensington. The deceased officer was eighty-four years of age.

Information has been received notifying the departure from the West Indies of the s.s. *Atrato*, with twelve invalids from Jamaica and Barbados for the Royal Victoria Hospital, Netley.

Brigade-Surgeon-Lieutenant-Colonel J. Arnott, M.D., has been granted a distinguished service reward of £100 per annum.

The distribution of prizes in connexion with the Volunteer Medical Staff Corps will be made at Calthorpe-street, W.C., by the Countess of Albemarle, on Saturday, Feb. 6th, at 7 A.M. The prize distribution will be followed by a dance.

BRITISH MEDICAL BENEVOLENT FUND.—The annual general meeting of subscribers to this fund was held on the 14th inst. at the residence of the treasurer, Sir W. H. Broadbent, Bart. The chair was taken by Sir James Paget, Bart., the President of the Fund. The financial statement and the report of the committee were submitted, and from them it appeared that subscriptions of £1185 9*s.* 8*d.* and donations of £365 19*s.* 6*d.*, making together £1551 9*s.* 2*d.*, had been received. The income from investments (all made according to the Trust Acts) amounted to £2086. The amount distributed in grants was £1464 15*s.*, and 107 annuitants had received £2114 6*s.* 8*d.* The distribution had been made by the honorary financial secretary through the London and County Bank, chiefly in monthly instalments, a mode which the committee find to be more and more desirable. Five new annuitants of £20 each had been elected to fill vacancies caused by death, and grants had been made to 159 applicants in sums varying from £5 to £20. Four legacies had been received during the year—viz.: from the executors of the late Mr. Tanton, £1953 6*s.* 2*d.*; from the executors of the late Dr. Fearnside, £300; from the executors of the late Mr. D. Rees Thomas, £50; and from the executors of the late Miss Hawes, £90. The last of these had, by desire of the testator, been devoted to the Grant Department. This year the accounts had been exhaustively audited by a chartered accountant and the working expenses had been satisfactorily small. The committee had received with regret the resignation of Dr. Robinson and Mr. S. G. Sloman, who had for many years acted as hon. local secretaries for Eastbourne and Farnham respectively, and who had during that time been invaluable friends to the charity. Mr. R. E. W. Brewer had undertaken the honorary local secretaryship for Newport, Monmouthshire. Votes of thanks were passed by acclamation to the treasurer and honorary secretaries, to the auditors, and to the honorary chartered accountant and to the medical press, and a very cordial vote of thanks to Sir James Paget, the chairman, for the great interest which he has always manifested in the welfare of the fund.

Correspondence.

"Audi alteram partem."

"A CENTRAL HOSPITAL BOARD FOR LONDON."

To the Editors of THE LANCET.

SIRS,—At the meeting summoned by the Charity Organisation Society on Monday it was noteworthy that, although the amendments were rejected, only a very small minority of the hundreds present voted for the original resolution. The latter was so framed that it was almost impossible to argue in favour of altering it without getting out of order. Surely every step, the earlier as well as the later ones, in forming a Central Hospital Board should be taken by a committee of representatives duly elected by the institutions concerned. At present we have a general committee of 168 individuals, who no doubt represent all kinds of excellent qualities, but who can only be said to represent the hospitals in the very limited sense in which a *sample* is representative. Organisation by pseudo-representation and semi-self-elected bodies has already done mischief enough to our hospitals. They bear the same relation to a duly elected body that an icicle does to a piece of sculpture. The former may assume a beautiful form and it may not, even when its material is absolutely clear and crystalline. At best it has no market value. Sculpture may be ugly enough, too, but if a man has modelled it himself it generally pleases him. It is of no use to tell us that "nothing is yet finally settled," that "there will be time," &c. Evil has to be checked in the inception. They can seldom be stopped afterwards. What confidence can reasonably be felt in a method of proceeding which has produced a scheme of representation with peculiarities of which the following are specimens? A general hospital of from 150 to 200 beds, if it is wise enough not to start a new medical school, is to have one representative—i. e., as many as a private house recently made into a small "hospital" for private ends. If it does start a school it will have four representatives, as many as the London Hospital with its 800 beds. A respectable hospital such as the Blackfriars Skin Hospital will have no representative. If it chose to call its large out-patient department a "dispensary" it would have one representative.

The representatives of the general practitioners are to be elected by the local branches of the British Medical Association, to which thousands of practitioners do not belong, and to which hundreds of consultants do. And so on; I only stop from fear of trespassing on your space. Why do not those who wish to see a Central Board established proceed as follows:—(*a*) Give ample notice (not five days) of a meeting at some central place—e.g., King's College; (*b*) invite the board of management and the medical staff of every hospital and public dispensary, small or great, to elect and send one representative; exclude all others from the meetings, except as reporters or spectators; (*c*) put to the meeting the simple primary question of "board" or "no board; and (*d*) if an affirmative be voted discuss schemes or a scheme of constitution for the new board—i.e., of distribution of representation. I annex what seems to me to be at least a logical one.

I think it would be time to discuss the matter with outsiders when we are agreed among ourselves. And we should then be in a position to show practically the gratitude we undoubtedly owe to Mr. Loch and his friends for taking the initiative.

I remain, Sirs, yours faithfully,

Jan. 26th, 1896. C. B. KEETLEY.

Scheme of Representation.

1. In distributing representation some simple principle should be adhered to. 2. The representation should increase with the number of beds in each hospital, the former in an arithmetical and the latter in a geometrical progression.

Hospitals with	50 beds	to have representatives	...	1
,,	,, 150 ,,	(= 50 + 50 × 2)	,,	...	...	2
,,	,, 250 ,,	(= 50 + 50 × 2^2)	,,	...	...	3
,,	,, 450 ,,	(= 50 + 50 × 2^3)	,,	...	...	4

Hospitals with less than fifty to be permitted to group themselves in their own way, one representative being given to each group with not less than fifty beds.

Dispensaries to be represented if with a certain income.

General practitioners to select their own machinery of election.

Paragraphs 2, i., ii., vi., vii., ix., and x. (pp. 6 and 7) of the Charity Organisation Society's scheme to be referred for consideration by the board as above constituted.

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THE PARKE MEMORIAL FUND.

To the Editors of THE LANCET.

SIRS,—On the 13th ult. I was at the Army Medical Department, London, and in the waiting-room I noticed an appeal card for subscriptions to the above fund. The Director-General also informed me that there was a great need of further support. After leaving this office I went to Messrs. Holt and Co. of Whitehall-place, and paid in the small sum of 10*s*. They told me that Surgeon-Captain F. A. B. Daly was hon. secretary to the fund. I have to-day heard from this gentleman that a statue has been erected to the late Surgeon-Major Parke in Leinster-lawn, Dublin; that the sum of £600 has been subscribed, but that nearly £100 more is required to clear off the cost of the memorial. In THE LANCET of May 23rd, 1891, a letter appeared from Captain N. E. Stairs, headed "A Tribute to Surgeon Parke." The following week I wrote, pointing out how truly deserving Surgeon-Major Parke was of the honour of the Albert Medal. I would now take the liberty of asking those who have not already subscribed to the Parke Memorial Fund, and who would be glad to help perpetuate the memory of one of the bravest and most unselfish of our profession, to send donations to Messrs. Holt and Co., 17, Whitehall-place, London, S.W., or to myself. In either case the sums subscribed will, by the kind permission of the Editors, be acknowledged in THE LANCET. I would suggest that the amount sent by any subscriber should not be more than ten and not less than five shillings, and I would not limit this fund to only gentlemen of the medical profession. The postscript is an extract from Captain Stairs' letter in 1891.

I am, Sirs, yours faithfully,

Canterbury, Jan. 19th, 1897. PUGIN THORNTON.

"I beg of you space to insert these few lines as a small tribute to a medical man who has done his work so well and nobly. I refer to my old comrade, Dr. T. H. Parke, of the late Emin Pasha Expedition. I feel certain people have not fully realised the services of Dr. Parke to humanity. It matters nothing where or under what circumstances these services were rendered; blacks are capable of just as keen suffering and anguish as we white men are, and I therefore ask you to record the following incident, which is by far the bravest and noblest it has ever been my lot to be a witness of:—'When a portion of the Expedition was stationed at Fort Bodo, in Central Africa, Dr. Parke, who was one of the number, was seized with a violent attack of bilious remittent fever; each day he grew worse, his temperature for the whole twenty days of illness never falling below 101° F. Quinine and arsenic and all other medicines failed, and Captain Nelson and I gave up all hope of his ever recovering. He was able only to crawl slowly about his hut, and could keep nothing of the poor foods we had to give him on his stomach. In spite of this, after about fifteen days' illness, when worn away to nothing, he crept out of his hut unawares to Nelson and myself, reached the hut of a black chief, Khamis Pari, and lanced for him a large and painful abscess, cleansed and dressed the wound, and was found by Nelson and myself in an absolutely helpless condition, and carried back by us to his hut. Next day reaction set in, and both Nelson and I expected he had only but a few hours more to live. He has never spoken to any of us, or to anyone that I know, a single word of this. I think it only fair to show to his brother medical officers what one of their number has done. Those who have suffered the agonies of a heavy fever will, I feel sure, appreciate and remember this brave action on the part of Dr. Parke."

"THE HALF-YEARLY MEETING OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—No one will be surprised that Mr. Heath has nothing more to say about Mr. Anderson's case. What could he say when he found from my letter that the propositions he advanced so confidently—viz., that the Council of the College had twice negatived a grant in aid of the appeal to the Privy Council, that such a grant would be illegal, and that the solicitor of the College had declared it to be illegal—were at variance with facts? Nothing whatever, unless he retracted his statements—a course which I regret to think that we cannot expect from him, even when he makes public charges against individuals which are absolutely unfounded. For example, at a public meeting Mr. Heath made an entirely irrelevant attack upon my election committee for issuing a statement, and at the same time on myself for having, as a member of the Council, permitted a statement to be issued, which he regarded as reflecting on the Council of the College for its action towards me during my tenure of office on the Council. When I show that Mr. Heath's imputation is unfounded because the statement did not relate to the period of my tenure of office as a Councillor, without retracting or expressing regret for an unfounded charge Mr. Heath shifts his ground to the different and wider imputation that the statement itself is untrue. He also makes it appear as if his fresh attack sprang from my letter dealing with a part of his speech which was not reported instead of from the fact that I had made his first position untenable, thereby implying that having been deprived by the abrupt close of the meeting of the opportunity of correcting his mis-statements I might have submitted to them in silence.

Mr. Heath's second attack and so-called proof are as unfounded as the first. He states that I made my first speech on behalf of the Members in November, 1886. I beg to refer him to THE LANCET of Dec. 26th, 1885, where he will find a report of my first speech on behalf of the Members, occupying about two columns of the paper, and delivered on Dec. 17th, 1885. The speech was briefly reported in the *British Medical Journal* and inserted *in extenso* in the *Medical Times* of Dec. 19th, 1885. This is an unhappy mistake in one who goes out of his way to remove the beam which he fancies that he sees in his brother's eye and destroys Mr. Heath's so-called proof. Both from my "literary efforts" and my speeches at the College in 1885 and 1886 my advanced opinions became well-known. That such opinions and their expression at the College in direct opposition to, and criticism of, the memoranda issued by the Council were injurious to my "collegiate interests" is not open to reasonable doubt. That I was well aware of this and deliberately disregarded it at the time is shown by a passage from the very letter of Nov. 8th, 1886, to which Mr. Heath refers and which runs as follows: "From long-standing conviction and from a sense of what is due to the Members of the College and to the profession at large I have come forward again (and as I am informed and believe in opposition to my private interests) to aid a righteous and most important cause." Views such as mine, opposed to the views of those in office at the College and of the majority of the Fellows, were certain to make any other candidate (from the point of view of Mr. Heath and his friend), as Mr. Heath says, "a more eligible candidate" for office in the College than myself. From any other point of view I trust that I may be permitted, without want of modesty, to challenge comparison of my claims to the examinership with those of any who were preferred to me. Mr. Heath's reasons, however, for confining the meaning of the words "collegiate interests" to an application for an examinership are best known to himself. Perhaps he will explain them. Mr. Heath calls the Association of Fellows—a body which includes such high-minded and public-spirited gentlemen as Mr. George Pollock, Mr. Holmes, Dr. Robert Barnes, Mr. Gant, and others whom I need not mention and which publishes its proceedings—"a clique." To the action of this clique, which has been guided by the principle that the College is not for the Council only, but for the Fellows and Members as well, the Fellows and Members are indebted for many reforms and improvements at the College—the annual general meeting of Fellows and Members, the annual Report of the Council, the simplification of the system of voting papers, the common room at the College, and the half-yearly meeting of Fellows. To such a "clique" I consider it an honour to belong, and I have very little doubt that such attacks as those of Mr. Heath will impart fresh vigour to its efforts for the promotion of the best interests of the greatest of all our professional institutions.

I am, Sirs, yours truly,

Wimpole-street, W., Jan. 26th, 1897. WALTER RIVINGTON.

THE USE OF TUBERCULIN IN A DAIRY HERD.

To the Editors of THE LANCET.

SIRS,—In the *Farmer and Stockbreeder* of Jan. 11th a notice appears under this heading giving an account of the result of using tuberculin as a means of distinguishing between tuberculous and non-tuberculous cows on a dairy farm of Mr. H. Purrott, of St. Albans. It appears that 50 per cent. of the cows tested reacted to the test, and that of the cows supplied by a dealer to replace those rejected 30 per cent. were found to react to the test. It further appears that the cows originally on the farm which reacted to the test were fed off, and when slaughtered were all found to have tubercle, "but few or none in more than one organ, and not at

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all in the tissue of the flesh." It is further stated that "such cows are therefore fit for human consumption, and in none of the cases, either on the farm or in those subsequently purchased, was a case of tubercle in the udder found, the essentially dangerous condition for contamination of the milk." Whilst congratulating Mr. Purrott on his pluck in seizing his cows by the tubercle, I venture to believe that the statements to which I refer merit the attention of those of us who are skilled bacteriologists. The facts that at least half of the cows on a particularly well managed dairy farm were found to be tuberculous, and that those cows were said to be apparently thriving and in good health, are worthy of consideration. The statements as to meat obtained from beasts infected with tubercle being fit for human consumption, and that it is only in cases of tubercle being found in the udder that the milk is infected, are statements about which I personally desire the opinion of the scientific pathologists. So far as my experience goes, very few dairy keepers would be willing to adopt the method which Mr. Purrott has adopted, and the practical question arises, Is it necessary or desirable that all dairy keepers should be compelled by law to take the same course?

I am, Sirs, yours faithfully,

Hatfield. LOVELL DRAGE.

LIQUID VACCINE VIRUS.

To the Editors of THE LANCET.

SIRS,—In the year 1870 Dr. Stephen Mackenzie, then resident medical officer at the London Hospital, used vaccine with glycerine in re-vaccinating the patients, nurses, and others, so that the process advocated by Dr. S. Monckton Copeman is not quite so new as supposed.

I am, Sirs, yours faithfully,

Flaxton, York, Jan. 26th, 1897. ALFRED KEBBELL.

THE LEICESTER BOARD OF GUARDIANS AND THE MIDWIVES QUESTION.

To the Editors of THE LANCET.

SIRS,—Dr. Rentoul cites the action of the Leicester board of guardians in their attempt to foist on the poor a midwife in the place of duly qualified practitioners; but this is not all the story. When the Local Government Board refused to sanction this appointment the Leicester board, after a great deal of quibbling, appointed their medical officers at half the pay promised to this L.O.S. diplomate. The uneducated woman was to receive 20*s.* where the qualified practitioner was to receive 10*s.* (it would probably have been 5*s.* if the law permitted it), so that it will be seen the board had not got the paltry excuse of economy. The Leicester board was loudly praised by the local press and the medical profession denounced in no measured terms. Why do the second-rate papers seek to magnify the virtues of quackery at the expense of education? Here we have leading articles almost daily on some new form of quackery.

I am, Sirs, yours truly,

R. BROADBENT, M.D. Edin.,

Jan. 26th, 1897. Member of the Leicester Board of Guardians.

"THE GLANDULAR FEVER OF CHILDHOOD."

To the Editors of THE LANCET.

SIRS,—I should like to express my appreciation of the admirable article by Dr. Dawson Williams in THE LANCET of Jan. 16th last. Until reading it I was totally unacquainted with Pfeiffer's writings on the subject, although for several years past I have been conversant with the complaint in question. On several occasions I have met with it in out-patient practice, and in at least two have known it epidemic amongst the members of the same household. With regard to fever, successive involvement of the glands beneath the sterno-mastoids, the freedom from definite pharyngitis or tonsillitis, and the subsequent retarded convalescence, all my cases tallied with the description given by Dr. Dawson Williams. In no one of my cases, however, was the abdominal pain sufficiently marked to call for any special examination of the abdomen, but after reading Dr. Williams's article I shall make a point of examining that region in every future case. With the name "glandular fever" I confess I am not particularly enamoured, although I am free from having any better one to suggest for the complaint. The "glandular fever of childhood," at least, I am sure is misleading, as in two cases I have known the complaint contracted by young adults when it was epidemic in their households. Dr. Donkin, too, I note by THE LANCET of Jan. 23rd, has known it occur in a young married woman. That the complaint is chiefly confined to children is indisputable; but that it is not exclusively so I feel certain. In this respect—its chief incidence in childhood—it agrees with measles, whooping-cough, and many other complaints, although no one doubts the occasional occurrence of these last in adult age. Dr. Dawson Williams's article will no doubt call forth further comments which may help to settle some of the doubtful points in the disorder.

I am, Sirs, yours faithfully,

Upper Berkeley-street, Jan. 24th, 1897. J. A. COUTTS.

"THE ASSOCIATION OF GALL-STONES WITH DERANGEMENTS OF THE PANCREAS."

To the Editors of THE LANCET.

SIRS,—The case recorded by Dr. Morton of Pancreatic Cyst associated with Gall-stones in THE LANCET of Jan. 23rd interests me very much. In the *British Medical Journal* of Nov. 14th I recorded a case which I judged to be one of acute pancreatitis in which the pancreatic disease was associated with gall-stone. One gall-stone was found post mortem projecting into the duodenum. I ventured to suggest that possibly the gall-stone may have furnished the necessary abrasion of surface for the entrance of micro-organisms to the adjacent pancreas. Since recording that case I noticed in the description of the Pathology of the Pancreas by Ziegler (translated by Dr. MacAlister) a case is referred to, recorded by Chiari, of suppurative pancreatitis associated with gall-stones. The relation between the acute and chronic diseases of the pancreas has yet to be determined.

I am, Sirs, yours faithfully,

R. H. KENNAN.

City Hospital, Park-hill, Dingle, Liverpool, Jan. 23rd, 1897.

THE MOSQUITO AS A VEHICLE OF INFECTION.

To the Editors of THE LANCET.

SIRS,—Professor Bignami's hypothesis of mosquitoes carrying malarial infection from one person to another is surely not intended to be taken seriously. If it were true every European in India would be attacked sooner or later, and yet how very few European women ever suffer from malaria. For more than the past year I have been taking very careful notes of all malarial cases admitted into the Royapettah Hospital, and in no instance has an intern patient developed malarial fever in the hospital. My hospital contains fifty beds, and all sorts of cases, medical and surgical (excepting obstetrical), are admitted. The hospital is only an old dwelling house, the sanitary surroundings are execrable, and it is for a hospital about as badly constructed as could be imagined. The neighbourhood abounds in mosquitoes, chiefly the grey or brown variety, and I have counted as many as 102 on the outside of a patient's mosquito net in the morning.

Next to a case of summer-autumn or winter-spring fever may be found a case of fractured femur: the latter will certainly remain in the hospital more or less helpless for a month, and if mosquitoes have the power of inoculating malarial fever, surely a case of protracted residence in the hospital would sooner or later contract the disease. I have had and kept mosquitoes, after a good feed, over nine days in captivity, and under less artificial restrictions they would probably live longer. As mosquitoes are not given to travel much, one which had sucked the blood of a malarial patient would have ample opportunity of inoculating other patients; but, as I have said before, I can recall no case. New-comers to India, whose blood is much sought after by mosquitoes, do not appear to suffer more from malaria than old residents. That malaria can be imported into a district seems proved by the history of the islands of Réunion and Mauritius. Recently the inhabitants of some villages to

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the north of Madras petitioned the Government on account of a very bad type of malarial fever which was decimating their dwellings. They said that fever was unknown until about two years ago, when a family suffering from malaria came from Cuddapah—a most malarious place—and since then fever had been rife. Several of the villagers have come to my hospital for treatment, and in all crescents were found in their blood.

Professor Bignami would contend that these people had been inoculated by mosquitoes, but I think that most medical officers in India would maintain that the drinking water had been contaminated in some way. Dr. Manson's theory is a very plausible one, and, judging from the analogy of filaria, it ought to be the correct explanation. I much prefer to believe in the mosquito infecting the water-supply than in its inoculating individuals.—I am, Sirs, yours faithfully,

A. J. STURMER, Surgeon-Lieutenant-Colonel.

Madras, Jan. 7th, 1897.

A CONFERENCE OF GENERAL PRACTITIONERS.

To the Editors of THE LANCET.

SIRS,—Surely the time has come when some united action should be taken by the whole body of general practitioners of the United Kingdom with a view of checking the present downward tendencies of our profession, and with this object in contemplation I would suggest that this year should mark a fresh epoch in the corporate life of the medical profession, not only in reference to ourselves, but to the public. In short, we might with advantage follow the example of other bodies of men (trades unions and others) in combining together in order to protect our own interests, and I take it that in order to accomplish this such a conference as I propose should be convened in London at some suitable time and place. And the same might be held under the presidency of our three newly-elected representatives on the General Medical Council. There should be no difficulty in obtaining delegates to attend such conference, and I think none of us will deny there is any lack of subjects now ripe for discussion, &c. Should this suggestion meet with approval, I shall be glad to hear from any brother practitioner willing to assist in this forward movement, stating at the same time in writing the particular subjects which in his opinion, and having regard to his own particular district, should form the basis of discussion by such conference.

I am, Sirs, your obedient servant,

T. HOWARD BROCKLEHURST, M.R.C.S. Eng., &c.

Weymouth, Jan. 25th, 1897.

*** We do not think that the profession would gain much from such a conference if instituted. As an expression of wide dissatisfaction it would be behind the times, for no one denies that the medical profession has many and various grievances; but as a method of relieving them a conference would lead to but little. Who is to decide which are local, petty, and personal grievances, and which are the questions that seriously affect the profession?—ED. L.

"ARMY EXAMINATIONS."

To the Editors of THE LANCET.

SIRS,—Your correspondent "Physician"[1] is apparently anxious to support the crammers, and yet his letter contains ample confirmation of everything that was stated in the annotation which he qualifies as "open to much criticism." To begin with, he says, "The fact is that in our large public schools the special education required interferes greatly with the general school studies." Precisely so; that is exactly what the correspondents whose letters you alluded to, complain of. But surely "Physician" would not have us believe that the system of education obtaining in our public schools is a bad one. That Waterloo was won in the playing fields of Eton and Harrow is a saying which may or may not have been uttered by Wellington, but in my humble opinion there is a great deal of truth in it. I firmly maintain, in common with most Englishmen, that our public schools are the best in the world and that in no other educational establishments can young fellows be turned out so well fitted in every respect for positions of responsibility in the army or any other walk of life. An examination that favours the withdrawal of boys from school before the usual time must be radically wrong, and therefore the sooner the present portal of entrance to Her Majesty's service is made less crooked the better it will be for all concerned. Your correspondent next tells us that "the duller, and lazier, and ill-prepared ones [schoolboys] ..... are taken in hand by special instructors, whom it is a gross injustice to stigmatise as 'crammers.'" Surely he must now see that this is in direct accordance with the spirit of your remarks. Thirdly, "Physician" asserts that crammers are men who "by force of character and experience, by careful study of each individual, and with the assistance of a staff of highly-trained assistants, succeed by genuine solid work in many instances where schoolmasters have failed." Does he mean to imply that the head masters of our great schools are deficient in all these respects? If so, I can only wonder at his adoption of such a singular line of argument. Incidentally "Physician" observes that Lord Wolseley and Lord Roberts would have been eliminated if physique had been a leading feature, but there also I am quite unable to agree with him. Both of these distinguished officers are men of exceptionally good physique, on a small scale it may be, but essentially sound and capable of enduring the trials and vicissitudes of a soldier's life. It would be easy to still further dissect your correspondent's letter, but the foregoing will suffice. Truly in this case the crammers have a right to pray for deliverance from their friends!

I am, Sirs, yours faithfully,

Jan. 16th, 1897. UNCRAMMED.

[1] THE LANCET, Jan. 16th, 1897, p. 209.

"POST-PARTUM HÆMORRHAGE AND ITS TREATMENT."

To the Editors of THE LANCET.

SIRS,—In reply to Mr. Stanmore Bishop's comments on my query as to the use of Davy's lever, may I be allowed to say I think it would be impossible to make effectual manual compression of the aorta in very stout women, even disregarding the obstacle presented by the state of the uterus? Absence of an instrument does not preclude the use of the hand.

I am, Sirs, yours faithfully,

Jan. 20th, 1897. RINALDO.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Northern Hospital.

THE annual meeting of the subscribers to this hospital was held on the 20th inst. at the town hall, under the presidency of the Lord Mayor. The committee in their report stated that during 1896 there had been 1573 in-patients and 5630 out-patients. The ordinary expenditure had been £6519, against £6643 in 1895. The adverse balance of £4019 at the end of 1895 had been wiped out by a transfer from the special fund of £4000 raised in response to the committee's appeal. Independently of contributions to that fund the receipts for 1896 had been £5715 15*s.* 7*d.* The adverse balance of last year incurred in working the ambulance had been generously paid off by Mr. Walter Holland. Thanks were expressed to Mr. L. S. Cohen, who had presented the new horse ambulance carriage, a description of which appeared in THE LANCET. The report added that the convalescent fund continued to be of great assistance in hastening the recovery of patients; that the nursing institution in Paisley-street had proved of increasing value to the hospital and to the general public; and that the committee gfatefully acknowledged the donation of £1430 from the Hospital Sunday and Saturday Funds. In concluding they thanked the public for their response to the appeal for funds for the furnishing and maintenance of the New David Lewis Hospital; £31,400 had been contributed for this purpose, and it was hoped that the remaining £8600 would be obtained as soon as possible. A pleasing feature of the report was the statement that the David Lewis trustees had increased their contribution towards re-building the hospital from £60,000 to £80,000.

Birkenhead Borough Hospital.

The committee's annual report stated that the improved

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financial position referred to in the report for 1895 had been more than maintained. This result was in no small degree due to the pecuniary aid afforded through the "Employés" Fund," from which they received a sum of £1095 1*s.* 11*d.* The subscription list had reached £1015 10*s.* 6*d.*, and the total income from all sources was £3720 7*s.* 10*d.* The expenditure included considerable items over the ordinary outlay for structural additions and alterations. The patients treated in the hospital during the year numbered 11,139, which was the largest number yet recorded. Of these 726 were in-patients, against 674 in 1895. These figures pointed to the need of extending the accommodation at an early date, and the committee desired to increase the reserve fund with that object. In October a horse ambulance carriage was provided for the town through the medium of the St. John Ambulance Association. It was manned and horsed from the municipal fire station and had proved a most valuable acquisition. The Mayor, on moving the adoption of the report, said it was a most gratifying circumstance to find such a substantial sum contributed by the working men of the town, but regretted that the general subscriptions had not increased in the ratio they might have expected.

Liverpool Medical Institution.

The report of the Council for the year 1896 shows that thirteeen new members and eight associates were elected during the year; two associates have become members. Tne list of members and associates numbered 283, compared with 286 at the same period of 1895. The average attendances at the ordinary meetings (which are held fortnightly from October to the end of April) were 77, and at the meetings of the Pathological and Microscopical section 46. At the ordinary meeting held on March 26th last, when Professor Lodge gave a demonstration of the Roentgen radiography, there were present 200 members, associates, and visitors. The number of books in the library were 10,461, an increase of 128. The expenditure during the year, which was above the average owing to the purchase of a number of microscopes and appliances, and to the erection of a handsome porch in the hall designed by Professor Simpson of University College, Liverpool, amounted to £612 11*s.* 10*d.*, leaving a balance of £132 15*s.* 10*d.* The oldest member is Dr. John Cameron, senior physician to the Royal Southern Hospital, who was elected in 1839. Dr. J. Birkbeck Nevins, the next senior on the list of members, was elected in 1844, and filled the office of President in 1886-87; the same post was held by Dr. Cameron in 1872-73. The society includes one lady member, Miss Lucy Cradock, the medical attendant to the female clerks in the Liverpool post-office.

The "Black Draught" Fatality in Liverpool.

An inquest recently held by the Liverpool coroner touching the death of a corporation pensioner, to whom a lad of sixteen years of age, an assistant in a druggist's shop, sold a quantity of laudanum in mistake for a "black draught," shows the absolute necessity of keeping all poisons apart from other drugs. It can hardly be credited that laudanum and black draught, which are so much alike in colour, would be kept in such close proximity as was proved to be the case in this instance. The boy Jennings stated in his evidence that the black draught bottle was kept on a shelf immediately below that on which the laudanum bottle was stored, the two bottles also being of the same size. The fact of the boy being in a hurry at the time he made the fatal mistake emphasises the danger of placing poisonous compounds so near each other. Another danger to the public consists in laudanum not coming under the class of "dangerous poisons" as sworn to by the manager of the shop referred to. The coroner, in summing up, said that the juxtaposition of the bottles was a remarkable circumstance in the case, and he was strongly of opinion that bottles containing poison, whether of an ordinary or extraordinary nature, should be kept in a separate part of the shop and should be of a distinctive make—a remark which was emphatically endorsed by the jury on returning their verdict of accidental death.

Further Demolition of Insanitary Property.

The fourteenth presentment of insanitary property was made to the grand jury at the City Quarter Sessions on Tuesday. The presentment included 890 insanitary houses in Toxteth-park and in the centre of the city. To carry out their scheme the Insanitary Property Committee of the city council obtained from the Local Government Board permission to borrow £50,000.

Port Sanitary and Hospitals Committee.

The estimates of the Port Sanitary and Hospitals Committee for 1897 amounted to £27,899 ordinary expenditure and to £2325 capital expenditure.

Jan. 26th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Proposed Sanatorium for Bristol.

UNDER the presidency of the Mayor a meeting was held on Jan. 20th to consider the best means of celebrating in Bristol the completion of the sixtieth year of the Queen's reign. A communication was read from the governing bodies of the Infirmary and General Hospital drawing attention to the importance of providing a convalescent home, and mentioning that one advantage would be that beds vacated by patients sent to it would be available in cases of emergency, whereas at present it was sometimes found necessary to refuse patients at these institutions. The sanatorium scheme was received very favourably, one gentleman offering a large house at the corner of Durdham Down for this purpose, and two offers of £2000 each were made subject to the proposal for a convalescent home being adopted. The meeting was adjourned, and at the next, Mr. J. S. Fry will move a resolution in favour of a sanatorium, and that at least a sum of £40,000 should be raised of which at least one half would be required for the endowment fund.

Health of Bristol.

At the meeting of the Bristol Sanitary Committee held on Jan. 14th the medical officer of health (Dr. D. S. Davies) reported that during 1896 the birth-rate in Bristol was 27 8, compared with the birth-rate of the thirty-three large towns of 31·3. The death-rate was 16·8, compared with 19·6 of the thirty-three large towns. Both the birth- and death-rate for 1896 gave the lowest figures he could find recorded for the city. The infant mortality was 138 per 1000 births, compared with 168·3 in the large towns. The year had been marked by no very unusual prevalence of epidemic disease, except that scarlet fever prevailed in a somewhat mild form; forty-four cases of small-pox appeared in the city and surrounding districts during the first half of the year. A somewhat large number of cases of diphtheria was notified, but the fatality was about the average of the last five years. Enteric fever had at no time prevailed in other than sporadic form, and the deaths were below those recorded during either of the three previous years.

Death of Albert George Cunningham, M.B., C.M. Aberd.

Dr. Albert George Cunningham, of Wellington House, Bristol, committed suicide by taking prussic acid on Jan. 17th. At the coroner's inquest a verdict of "suicide whilst temporary insane" was returned. Dr. Cunningham received his medical education at the Bristol Medical School and the University of Aberdeen; he graduated M.B. and C.M. of that University in 1882. The deceased had an extensive practice in Bristol, and took a great interest in municipal affairs, being a member of the town council for three years. He was honorary surgeon-accoucheur to the Bristol Lying-in Institution. The funeral took place at Greenbank Cemetery on Jan. 23rd.

Bristol Naturalists' Society.

The thirty-fourth annual meeting of this society was held on Jan. 14th at University College, Bristol. Professor Sidney Young, F.R.S., presided. The secretary stated that there was a slight increase of members. Mr. S. H. Swayne, M.R.C.S.Eng., was elected president. Professor Young gave an interesting address upon Crystals.

Libel Action by a Medical Man at Tenby.

At the Pembrokeshire Assizes, held on Jan. 18th, Mr. D. A. Reid, M.D.Edin., M.R.C.S.Eng., brought an action for libel against the proprietor and managing editor of the *Tenby Observer*, and claimed damages in respect of two paragraphs which appeared in the defendant's newspaper. It appeared that Dr. Reid, who had practised in Tenby for twenty years, was in attendance upon a patient suffering from small-pox at Penally. Shortly afterwards the

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Tenby Observer contained a paragraph which stated that "through the ignorance and stupidity of a local professional man Tenby has narrowly escaped a serious disaster," and a warning was given to the person referred to that a repetition of his negligence will mean ruin to himself as well as loss to the public generally. There was also another very similar paragraph in a later issue. The counsel for the defendants, after a consultation, stated that his clients were prepared to withdraw all imputations made and to consent to a judgment against them for £100 and costs; he added that the defendants extremely regretted what had been published and withdrew any reflection on the professional ability of the plaintiff, and they promised not to further attack him in his personal or professional character. Judgment was then entered on these terms.

Crime in Cardiff.

At the meeting of the Cardiff corporation watch committee held on Jan. 13th the head constable presented his annual report, which showed that during 1896 the number of persons proceeded against summarily was 6657 (being an increase of 442 since 1895), 3611 were convicted, 2935 discharged, and 206 were proceeded against on indictment. For drunkenness 1635 persons were prosecuted, as against 1464 in the preceding year; 594 were convicted and 1041 discharged. For the illegal sale of alcoholic liquor 106 persons were prosecuted (a decrease of 90 on 1895) and 85 were convicted.

Health of Cardiff.

Dr. Walford, the medical officer of health for Cardiff, reported to the Health Committee of the county borough on Jan. 12th that 5591 births (equal to a rate of 34·3 per 1000) and 2795 deaths (equal to 17·1 per 1000) had been registered during 1896. The death-rate was the lowest, with the exception of 1895 (when it was 16·2) since the statistics were first compiled in 1845. The zymotic rate of mortality was 2·2; 923 deaths occurred in children under one year and 464 deaths were in persons aged sixty and upwards. Small-pox caused 3 deaths.

Cardiff Infirmary.

At the monthly meeting of the Cardiff Infirmary Committee, held on Jan. 13th, under the presidency of Dr. W. T. Edwards, it was stated that a cheque for £3300 had been sent to the building fund of the infirmary as a result of the recent bazaar; the Marquis of Bute had forwarded £1000, Mr. Forrest 50 guineas, and Mr. Cory and Dr. Edwards had collected £1127 for the same object. It was suggested as a means of celebrating the "Queen's Diamond Jubilee" that a sum of £1000 should be raised with which to endow a cot in the children's ward, to be called the "Royal Victoria Cot." The idea was warmly taken up and a sub-committee was appointed to carry it into effect.

Pembroke Dock Water and Drainage.

At a meeting of the Pembroke Town Council, held on Jan. 11th, it was resolved to apply to the Local Government Board for sanction to borrow £27,000 for water-supply purposes and a sum of £15,000 for drainage.

The Gloucestershire County Council.

At the quarterly meeting of the Gloucestershire county council, held on Jan. 11th, the chairman (Sir J. E. Dorington) said that the council would have to fill the vacancy caused by the retirement of Dr. Ancrum from the aldermanic bench. Dr. Ancrum had rendered such long and excellent service to the county that he had asked him whether he had any wish in the matter of his successor and Dr. Ancrum had mentioned a name (that of Sir W. Guise, Bart.) which quite coincided with the policy of the council heretofore. Eventually this gentleman was elected.

Lunacy in Gloucestershire.

The report of the visitors of the lunatic asylums presented at the recent meeting of the county council stated that there had been a diminution in the number of insane poor admitted from the unions in the county, as shown by the admissions of the past four years: 1893, 279; 1894, 324; 1895, 315; 1896, 286. The cost to the county for maintenance was 7*s.* 10*d.* per head per week for the first quarter, and 7*s.* 7*d.* for the remaining three. This included the clothing of the patients, salaries of officials, and the uniform and wages of the attendants. This rate of maintenance is 1*s.* 3*d.* a week below the average of the other asylums of England and Wales. The visitors recommended a grant of £1500 for their farm and this was agreed to by the council.

The Wells Dispensary.

The annual meeting of this institution was held on Jan. 14th under the presidency of the Rev. Prebendary Beresford. The hon. secretary reported a balance in hand of only £7 6*s.* Some discussion took place upon the critical position of the institution, and it was resolved to make a special effort to increase the subscription list and to continue to carry on the dispensary on its present basis.

Jan. 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary.

A MEETING of contributors to the Edinburgh Royal Infirmary was held last week to receive the report of the committee of contributors upon the annual report of the managers. After dealing with the finances of the institution the report went on to consider various questions in which members of the profession took a very active interest. The first of these had reference to the new laundry being placed in Lauriston-lane. Dr. Batty Tuke had strongly opposed this at the preceding meeting of contributors. The committee, however, upheld the decision of the managers and considered that they had adopted the wisest course under the circumstances. The next matter dealt with was the new set of rules which had been approved of by the managers. The committee suggested that the rule which provided that if any member of the medical staff accepted the office of a manager he should *ipso facto* be held to have demitted his appointment should be deleted. The question is one which has given rise to a good deal of feeling in certain circles, some of the staff feeling strongly that they ought not to be debarred in this way from sitting on the board, while many of the lay managers held that the medical element was strongly enough represented on the board, seeing that the University, the Royal College of Physicians, and the Royal College of Surgeons each sent two members to the board, seven of whom were medical men. The question was again discussed at this meeting with the result that the recommendation of the committee was carried by 28 votes to 22. Another question referred to was the supervision of nurses. At present the lady superintendent has power to dismiss nurses with the sanction of the general superintendent, but it had been thought that there should be an appeal to the managers, and the committee had confirmed that. The report further expressed satisfaction with the general management of the institution, and stated that the floor-space was 149 feet per bed, which was unsurpassed except in the case of the city hospital of Antwerp.

Edinburgh University Court.

At the last meeting of this court the following additional examiners were appointed in Medicine:—Dr. R. Bruce Low, London, in Forensic Medicine and Public Health; Mr. Robert Turnbull, B.Sc., Edinburgh, Botany; Dr. De Burgh Birch, Yorkshire College, Leeds, Physiology; Dr. Gibson, Edinburgh, Medicine; Dr. Haig Ferguson, Edinburgh, Midwifery.

Longmore Hospital, Edinburgh.

The report of this useful institution, which is a hospital for incurables, has been issued. The result of the last additions to the building was that accommodation was now provided for 110 patients. In the course of last year the committee decided to still further enlarge the hospital by the addition of a new wing specially designed for cases of phthisis and cancer. Buildings had also been decided upon for new laundries and for an increase in the domestic offices. There had been an increase both in the annual subscriptions and in the donations and legacies received during the year.

The Jubilee of Anæsthetic Midwifery.

On Jan. 19th Professor Simpson of Edinburgh delivered a special lecture to his midwifery class on the career of his predecessor in the chair, Sir James Y. Simpson. The lecture was in recognition of the jubilee of anæsthesia in midwifery practice, for it was that day in the year 1847 that Sir James had first given an anæsthetic to a midwifery patient. The lecturer very fairly and fully discussed the part Simpson took in the introduction of chloroform.

Glasgow University.

The following appointments to examinerships are intimated:—In Medicine, Mr. Guthrie Rankin, M.D. Glasg.,

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London; in Surgery, Mr. J. A. Adams, M.D. Glasg., surgeon to the Glasgow Royal Infirmary; in Pathology, Mr. T. K. Monro, M.D. Glasg., assistant physician, Glasgow Royal Infirmary; and in Physiology, Mr. W. Stirling, M.D., D.Sc. Edin., Professor of Physiology in Owens College, Manchester. Mr. C. Workman, M.D. R.U.I., Lecturer on Pathology in Queen Margaret College, has also been appointed to be an examiner in Pathology. Professor Joseph Coats has presented to the University various instruments and apparatus for the equipment of the Pathological Laboratory, and the University Court has acknowledged the gift. The Court has appointed Dr. Robert Perry to be a director of the Glasgow Samaritan Hospital for Women. Plans for the new engineering and botanical laboratories have been finally adopted. The present arrangements for the teaching of Public Health in the University being regarded as unsatisfactory a joint meeting of the Court and Senate has been called to formulate a more complete scheme.

Anderson's College Medical School.

Dr. J. Pearson Munro has resigned his position as lecturer on Public Health in this school on account of ill-health. He has been presented on his retirement with a purse of sovereigns by his friends and former students. There is also a vacancy in the chair of Botany.

Western Infirmary, Glasgow.

Professor Murdoch Cameron and Dr. W. L. Reid have retired from their positions as physicians in the out-door department for diseases of women. They both remain in the service of the hospital in charge of the wards for the treatment of diseases of women and as clinical teachers. For the vacancies in the junior staff there are a number of candidates already in the field.

St. Andrews and Dundee.

A recent decision of the Privy Council would appear at last to have put in the way of settlement the long and complicated quarrel between the University of St. Andrews and Dundee College. The ordinances approved by the Privy Council practically settle the union of the two colleges on the lines originally drawn by the Scottish Universities Commission, but remove the Dundee representatives from the University Court of St. Andrews, and on the other hand leave the Dundee College to manage its own internal affairs. It is still permitted to conduct Arts classes at Dundee, and these are to qualify for graduation. There can, however, be little doubt that the main function for Dundee is to provide faculties in science and medicine, and it is to be hoped that the two institutions will now cease their squabbling and each devote itself to the prosecution of that particular portion of University work for which it is naturally best fitted.

Glasgow Philosophical Society.

At a recent meeting of this society a paper on "The Vaccination Commission's Report: a Plea for Re-vaccination," was read by Dr. J. C. McVail, medical officer of health for the counties of Stirling and Dumbartonshire.

Glasgow Microscopical Society.

The January meeting of this society was occupied by a lecture and demonstration on the Central Canal of the Brain and Spinal Cord by Dr. Alexander Macphail, Demonstrator of Anatomy in the University of Glasgow. Dr. Macphail showed a large number of diagrams and microscopical preparations and was awarded a vote of thanks on the proposal of Mr. J. Rankin, B.Sc.

Aberdeen Royal Infirmary.

The directors of the Royal Infirmary, Aberdeen, having requested that noiseless pavement should be laid in the streets adjoining the infirmary the town council has resolved to lay the roadway of Spa-street with tar macadam. The case of Woolman-hill, the street on the other side of the hospital, cannot yet be settled.

Jan. 27th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Longevity in Ireland.

THE vesy interesting leading article on longevity in THE LANCET of Jan. 9th has served to remind me that some remarkable cases of very old age have recently been chronicled in Ireland. Mrs. Margaret Hobbs, of Barnaboy House, King's County, recently deceased, was born on July 18th, 1794, and was, therefore, when she died in her 103rd year. According to the King's County correspondent of the *Freeman's Journal* she remembered, when she was a young woman, the celebration of the jubilee of George III. She was the wife of Thomas Hobbs, J.P., Captain in the 92nd Highlanders, who was severely wounded in action at Quatre Bras. Her Gracious Majesty took a kindly interest in Mrs. Hobbs and sent her many Royal messages of congratulation. On July 18th last Her Majesty's message said that she was "conscious of the touching fact that to-day you attain the great age of 102 years." Her Majesty further alluded to the brilliant military services rendered by Mrs. Hobbs's deceased husband and family, and expressed "the earnest hope that the military instinct that has been so marked in the past and present may be equally developed in the future history of the family." Mrs. Hobbs was the last or one of the last survivers of the widows of officers who fought at Waterloo, and was herself long ago a friend and correspondent of the great Duke of Wellington. Mr. Congreve Rogers of Tramore died last month. He was an old sportsman and follower of the famous Faithlegg Hounds in Waterford. He died at an age which has been variously estimated at from 104 to 107.

Sending Hydrophobia Cases for Treatment to Unqualified Persons.

At a meeting of the Newry board of guardians on the 23rd inst. the clerk announced that the board's solicitor had been served with a writ at the suit of the Local Government Board against the guardians, to have refunded to the rates the sum of £21 6*s*., paid by the guardians on foot of a decree obtained against them by Philip McGovern, Cowan, for the treatment of four persons bitten by a rabid dog. The guardians decided to defend the case and authorised their solicitor to employ counsel for that purpose. The result of this case will be awaited with interest, inasmuch as the decision arrived at will form a precedent, and will probably settle once for all the law in reference to the employment of unqualified persons by boards of guardians.

The Jubilee of Queen's College, Belfast.

The past week in college and medical circles in Belfast has been a most interesting and busy one, owing to the opening of the new Students' Union by the Lord-Lieutenant of Ireland, the celebration of the Jubilee of the Queen's College, the visits of Lord Kelvin (a Belfast man and former professor at the old Academical Institution) and of Lord Lister. The proceedings began on Jan. 19th, when, at three o'clock in the afternoon, the Lord-Lieutenant and the Countess Cadogan, accompanied by their host and hostess (the Marquis and Marchioness of Londonderry) and a large house party from Mountstewart, among whom were the Marquis of Dufferin and Ava, the Marchioness, Lady Hermione Blackwood, Lord Castlereagh, and Colonel Saunderson, M.P., arrived at the New Union Buildings. Here they were received by the President (Dr. Hamilton) and the professors of the College, and, having been presented with a gold key, the Lord-Lieutenant declared the Students' Union open. This beautiful building, with its reading-room, debating-hall, dining-room, refreshment and recreation room, has been opened free from debt, at a cost of £8000, subscribed for by friends of the College, professors, graduates, and the general public. The viceregal party were conducted through the new physiological and pathological laboratories, which Earl Cadogan declared open, and over which they were shown by Professor Thompson and Dr. Lorrain Smith, and they then proceeded to the library, which was crowded by students, professors, and those interested in the Union. The President then made a short and interesting statement, giving an account of the rise and progress of the College and of its former distinguished professors and graduates. A vote of thanks, on the motion of the Right Hon. Thomas Sinclair, M.A., D.L., seconded by Dr. Redfern, was most cordially passed to the Lord-Lieutenant, and the audience present adjourned to the great hall, where a very brilliant reception, attended by over 800 people of Belfast and Ulster, was given by the President and professors of the College. On Wednesday, Jan. 20th, the graduates' dinner took place in the great hall of the College, when nearly 300 gentlemen were present, including the President of the College (who occupied the chair), the professors and lecturers, and graduates, and a large number of

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guests, amongst whom were the Lord-Lieutenant of Ireland (Earl Cadogan), the Marquis of Dufferin and Ava, the Marquis of Londonderry, Lord Kelvin, Lord Roberts, Sir Thomas Moffett (President of Queen's College, Galway), the Moderator of the General Assembly, the Lord Bishop of Down, Connor and Dromore, Dr. Meredith and Dr. McGrath (secretaries of the Royal University of Ireland), the Lord Mayor of Belfast, Professor Fitzgerald, T.C.D., Mr. J. B. Dogherty, M A. (an old Belfast student), Under-Secretary to the Lord-Lieutenant, the Right Hon. Thomas Sinclair, M.A., Mr. Arnold Foster, M.P., Sir James Haslett, M.P., and Sir Samuel Black (Town Clerk). The following were the toasts:—"The Queen," proposed by the President; "The Prince and Princess of Wales and the other members of the Royal Family," proposed by the President; "The Lord-Lieutenant and Prosperity to Ireland," proposed by the President, to which Earl Cadogan responded; "The Army, Navy, and Reserve Forces," proposed by the Right Hon. Thomas Sinclair, M.A., D.L., to which Field-Marshal Lord Roberts replied; "Queen's College, Belfast," proposed by the Marquis of Dufferin and Ava, to which the President, Professor Purser, and Professor Cumming, M.D.R.U.I., replied; "Other Colleges and Learned Bodies," proposed by Professor Park, to which Lord Kelvin, Sir Thomas Moffett, and Professor Fitzgerald, T.C.D., replied; "The City and Trade of Belfast," proposed by Mr. J. B. Dogherty, to which the Lord Mayor (Mr. Pirrie) and the President of the Chamber of Commerce (the Marquis of Londonderry) replied. The banquet was in every respect a great success and a most pleasant *réunion* of old Belfast graduates. On Thursday, Jan. 21st, a reception was given by the Executive Committee of the Students' Union in the new buildings, which was specially attended by the students and graduates. Most of the professors and a large number of the public were also present. The President of the College gave a short account of the origin and progress of the Students' Union. He welcomed very warmly the students there that night, thanked them for their admirable behaviour during the jubilee celebrations, and hoped they would spend many happy hours in the new buildings. He announced that on Monday, Jan. 25th, everything would be ready in the various rooms for the members of the Students' Union. A well-selected and popular programme of music was then gone through, and a very pleasant evening was spent by all those present. On Friday, Jan. 22nd, the jubilee proceedings came to a conclusion, when the Lady Mayoress unveiled a portrait of Rev. G. Hill, to be placed in the great hall of the College. Mr. Hill had been for thirty years librarian of the College. In the evening the students of the union committee held a reception, which was largely attended.

Jan. 26th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Widal's Reaction for the Diagnosis of Enteric Fever.

PROFESSOR FRAENKEL of Halle, a former assistant to Professor Koch, has published an article in the *Deutsche Medicinische Wochenschrift* on the results obtained by Widal's reaction for the diagnosis of enteric fever. The details of the process have been already described by various writers in THE LANCET. In Germany the first confirmation of Widal's discovery was a paper in the *Berliner Klinische Wochenschrift* by Dr. Breuer, of Königsberg, who examined forty-three cases of enteric fever and found the reaction to be present in every instance, whilst it failed in the serum of twenty-seven patients suffering from other diseases. Only some cases, where bacteria coli were present in great masses, were found to influence the bouillon in a way similar to the agglutination typical of enteric fever; the fluid became cloudy for a few hours, but very soon regained its normal appearance. Dr. Breuer's patients were in various stages from the sixth day to the sixth week of the illness. He also examined the blood serum of nine convalescents; two of them, who had been free from fever for seventeen and twenty-four days respectively, yielded a negative result, but the reaction was obtained with the others. Owing to the rarity of enteric fever in Germany Professor Fränkel was in the month of August able to examine only one patient in the University Hospital of Halle; the reaction in this case was thoroughly typical, and in the middle of December, owing to the outbreak of an epidemic in the village of Almrich, he had ample opportunity for continuing his researches. He modified Widal's procedure by puncturing the finger tip with a sterilised lancet and collecting from 1 to 1½ c.c. of blood, which was then transferred to a sterilised glass tube. The coagulation of this blood yielded about half a cubic centimetre of serum, one or two drops of which were then mixed with a bouillon culture of enteric fever bacilli, and a hanging drop of this mixture was examined microscopically. It could then be decided at once whether the case was enteric fever or not, for if the reaction failed the enteric fever bacilli moved about as usual across the field of view, but if the reaction took effect they became as it were paralysed. At the margin of the preparation there was no material change in the distribution of the bacilli, but in the middle they became agglutinated in lumps. After some time they showed distinct symptoms of degeneration, their outlines losing their sharpness and their substance assuming a granular appearance. Professor Fränkel points out that the influence of the enteric fever serum on the cultures is more obvious on microscopical examination than when the result is inferred from the appearances presented in the glass-tube. With respect to this modification of the test he could only confirm the observations of Widal, Breuer, &c. The alteration of the culture was, according to his observations, most pronounced from twelve to fourteen hours after it had been mixed with the serum. Professor Fränkel examined the serum of twenty-eight patients, seven of whom were still confined to bed, and two of whom had been respectively two and three days without fever. With all these patients the serum showed a very distinct reaction. One of the patients had been ill for only two days; with the others the duration of the illness varied from fifteen days to six weeks, reckoning from the beginning of the symptoms. The remainder of Professor Fränkel's cases were 18 in number and were convalescent. With 16 of them, whose first symptoms dated back to a period varying from three to seven weeks, positive indications were obtained. Two patients, a boy whose fever had lasted eight days only and a girl whose symptoms were also of short duration, yielded negative results. One boy, who was received into the infirmary on Dec. 13th as being possibly a case of enteric fever, although the clinical symptoms were very doubtful, gave a negative result on Dec. 21st. Professor Fränkel also examined the serum of two men who had probably suffered from enteric fever a year before the outbreak of the present epidemic, but as they had not been under medical care the diagnosis was not certain. Both showed a marked reaction. Professor Fränkel says that if that be the rule, and if every person who has once suffered from enteric fever, even a long time before, continues to show the reaction, this fact may become the cause of errors. Patients suffering from other affections of the intestines, such as typhlitis, tuberculous ulcers, peritonitis, &c., were also examined, but the result was in every instance entirely negative. Professor Fränkel concludes that from a theoretical as well as from a practical point of view Widal's reaction is of the highest importance.

Precautionary Measures against the Plague.

A conference of hygienists will meet at the Imperial Health Office to discuss the measures to be taken in the event of the plague approaching or being introduced into this country, and in accordance with the instructions of the Imperial Chancellor the conference will be attended, not only by the ordinary official staff of the Health Office, but by the members of the extraordinary staff who reside out of Berlin. Vessels coming from Bombay and other ports in India and Persia are to be carefully examined and closely watched, and ships' medical officers will have to give particulars of any deaths that may have occurred during the voyage. The accommodation for travellers at the quarantine stations of Hamburg and Bremen is being increased. The *Vossische Zeitung* discusses Professor Haffkine's proposal to isolate Bombay by a military cordon, and comes to the conclusion that it offers little prospect of success. In 1879, when the plague had broken out in the Russian province of Astrachan, a Commission, composed of the celebrated epidemiologist, the late Professor Hirsch, Staff-Surgeon Dr. Sommerbrod, and Professor Küssner, was sent there to inquire into the practicability of isolating the infected district by means of soldiers, but the Commission, as well as Professor Virchow and Dr. Wernich, opposed any measure of this kind. Good results may possibly be obtained as long as the area of the

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epidemic is small, but never when the disease has attacked an entire province. For instance, in 1815 the Italian village of Noja was isolated by troops, the place being surrounded by a double deep ditch in which sentries were stationed, a third cordon being posted at a greater distance. The soldiers were strictly forbidden to hold any intercourse with the inhabitants and offenders were punished according to military laws. A soldier who had received playing-cards from the village was sentenced to death, and a villager who was delirious through an attack of the plague approached the cordon and was shot down by the sentries. It is obvious that measures of such severity will be impracticable in modern times. Great alarm was caused the other day in Hamburg by the announcement that a death from plague had occurred on board the British vessel *W. F. Pirrie*, which had arrived in the port from Bombay. It was also said that seven of the crew were still suffering from the disease, but both statements proved to be false, the death in question being caused by pulmonary tuberculosis, and the illness of the other men being due to the consumption of putrid meat. The vessel was, therefore, allowed to enter the port.

Professor Koch's Visit to London.

Dr. Thorne Thorne and Dr. Copeman, of the English Local Government Board, have recently been in Berlin to inquire into the vaccination arrangements of this town. They visited the vaccine institute connected with the central cattle market, where the practical working of the system, by which a sufficient stock of animal lymph is provided, was shown to them. According to the *Berliner Tageblatt* Dr. Thorne Thorne was asked whether it was true that the medical profession in London had deliberately and on purpose taken no notice of Professor Koch during his recent stay in the British metropolis. Dr. Thorne Thorne declared that the imputation of discourtesy was absolutely false, the facts being that on his journey to the Cape Professor Koch spent only one day in London and the name of the hotel where he intended to stay was not previously made known. It was owing to this combination of circumstances, and not through any fault of their own, that the London medical men had no opportunity of welcoming Professor Koch. His scientific eminence is acknowledged everywhere in England and the practical value of his discoveries is fully recognised. It was only natural that English newspapers should express regret that some British bacteriologist had not been selected for the mission to Cape Colony, but these sentiments were in no way inconsistent with a feeling of admiration for Professor Koch's eminent services to medical science. It was understood that he was averse to being the central figure of a public demonstration, but if he would stay longer in London on his return he would certainly meet with a cordial reception.

Jan. 25th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Plague.

ITALIANS, like the Southern races generally, are prone to panic in anticipation of advancing epidemics—a characteristic aggravated by their long experience of the paralysis of hygienic measures in presence of the invader and also by their well-founded misgivings as to their possessing the immunity which only a sound sanitary tradition—like that of Great Britain, for example—can create. Hence their superstitious reliance on quarantine and sanitary cordons—a reliance which their ablest physicians (Tommasi-Crudeli, among others) have shown to be quite illusory—nay, actively pernicious, as tending to induce a false security and to encourage that neglect of sanitation, public and personal, which forms the best safeguard against all imported disease. We have but to go back to the cholera visitations of 1884 and 1894 to appreciate the alarm at present prevailing in Sicily and Naples in view of a possible invasion of the pestis bubonica. Now, as then, there is no belief in remedial measures when the malady has effected a landing; now, as then, there is a well-grounded consciousness that public hygiene and private habits are such as to invite the enemy and hospitably to entertain him once he is within the gates. Dr. Baccelli, president of the Consiglio Superiore di Sanità, and a clinical teacher, as well as consultant, of great sagacity and experience, has just expressed his views on the situation and claims credit for the Italian Government in having initiated the International Conference which will sit at Venice to consider what action the European Powers should approve for their common protection. Great Britain, he hopes, will see her way to coöperating with the other Powers at the proposed conference; but if she should decline to take part in it he quite appreciates her grounds for so doing. Arguing from his previous practice in cholera epidemics he says her sanitary service afloat, whether in its resources or in its *personnel*, quite justifies her sense of security on such occasions; let alone the fact that the duration of the voyage from Babel Mandeb to her own seaports is long enough to constitute a quarantine superior to what any other State could demand for its own protection.

Jan. 24th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Russian Precautions against the Plague.

THE spread of the plague in India is being regarded with much interest, and perhaps with some apprehension, in Russia. From a document just published by the Medical Department it seems that the authorities responsible for the sanitary safety of the empire have been making arrangements for some time past to meet the threatened risk. Their first intimation of the existence of plague or a disease suspiciously like it was received in the end of September. On Oct. 10th (22nd) a telegram was received from the Indian Office in London confirming the outbreak and declaring the disease to be bubonic plague; but, so far as could then be judged, of a mild character. On Oct. 23rd (Nov. 4th) the Russian Ministry of the Interior declared Bombay as an "infected" town, this official declaration carrying with it, as a corollary, the necessity for all ships coming from Bombay to Russian ports to carry out certain measures of precaution fixed by the law of 1893. When, in 1894, the plague broke out in Hong-Kong, and the possibility of it spreading to Russia, not only by sea, but also by land, was discussed, it was decided that in the event of plague threatening to invade Russia by means of Persia o Afghanistan certain measures would have to be carried out on the Russian frontiers of those countries. About the 15th (27th) of last December news was received that the plague had appeared in Kurrachee, and as soon as this was confirmed conferences were held between representatives of the three Russian Ministries of War, Finance, and Internal Affairs. Meetings were held on Dec. 16th, 21st, and 28th (Old Style), at which the course followed by previous epidemics of plague was discussed and a plan of action drawn up. The following are the chief points in the plan of campaign:—1. Means must be taken to obtain accurate news of the first appearance of plague in certain specified ports and towns in Persia; for this purpose it is proposed to send Russian medical men to those places where there are not already (as in Teheran and Meshed) Russian consulates or missions. 2. The Persian shores of the Caspian Sea are to be specially watched. 3. "Observation-points" are to be established along the frontiers, dividing respectively Transcaspia and the Caucasus from Persia, Bokhara from Afghanistan, and Turkestan and Semirótchinsk from Kashgar. On the first receipt of news that plague has appeared either in Persia, Afghanistan, or Kashgar the whole series of frontiers will be closed to all passengers and goods, with the exception of certain points, where "inspection stations" will be established. 4. At Batoum, Poti, and Novorossiisk special sanitary control is to be kept over the Turkish feluccas visiting these parts. While the Government authorities are thus taking time by the forelock and wisely disposing their forces to prevent the infection from passing the frontiers, the daily press publishes the most highly-coloured and sensational statements regarding the extent of the plague. The charges against the English Government of inhumanity and indifference, and the complacent comparison of the methods followed by Russia when the small epidemic of plague broke out in the Volga in 1877 with those now practised in India, require no comment. When, however, the leading journals published the total returns of the epidemic from its beginning up to a certain date as the returns for one day only some protest is necessary. Such tactics, whether they have a political object or not, can only do harm by creating in the public mind a state of needless and unfounded alarm.

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Famine and its Attendant Diseases.

By a noteworthy coincidence Russia is not only the last European country in which an epidemic of plague has occurred, but she is also the last European country that has experienced a widespread famine. In 1890 and 1891, but more particularly in the latter year, the crops failed partly or wholly over very considerable districts of European Russia. Notwithstanding the energetic measures taken by the Government and the outside aid and generous gifts from other countries the suffering was great, and the deaths from inanition and accompanying disease were very numerous. Looking back to the records of the years 1891–92 (for the effects of the famine were still felt in the third year) it is of interest to note what diseases appeared to be rendered more prevalent by the famine. Nearly all diseases were more active and fatal in those years of want, but some showed a special virulence. All forms of "typh" were particularly prevalent. "Spotted typh," as typhus fever is called in Russia, "abdominal typh" or typhoid fever, and undetermined forms of "typh," were all high above the average. Curiously enough, "recurrent typh," or relapsing fever, showed no increase, but rather a diminution on the average of previous years for the whole country. There were, however, in certain parts of the country epidemics of relapsing fever in 1891, and notably in St. Petersburg, where 1005 cases were treated. Nearly a quarter of these were cases occurring in vagrants from the country. A low and virulent form of typhus fever was the most frequent zymotic met with in the famine districts. The number of cases of scurvy was enormously increased, apparently as a direct result of the famine. It was frequently associated with typhus fever, a combination which, according to Pirogof (who was chief surgeon to the Russian troops in the Crimean campaign), was very common both among the defenders and the besiegers during the siege of Sebastopol. As was to be anticipated, diseases of the alimentary tract prevailed to a most unusual extent during the famine years. The death-rate among children from these causes was particularly high. Among adults all forms of gastro-intestinal diseases were met with, from simple catarrh to the most severe and fatal forms of dysentery. These diseases were, of course, largely due to the unusual substances which the starving peasants ate to stay the pangs of hunger. Various forms of nuts, the leaves and bark of trees, and many varieties of inedible herbs and grasses were all pressed into the service and eaten either alone or mixed with the small quantity of available grain to make a larger loaf or a bigger mess of porridge. Even earth and straw are said to have been eaten in many instances. Among the other diseases or symptoms which were observed as accompaniments of starvation was hemeralopia or night-blindness.

Jan. 12th (24th).

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in January in the under-mentioned subjects:—

Surgery.—G. P. Ambrose, Westminster Hospital; C. C. Brymer, Montreal; C. H. Church, McGill University; J. McD. McCarthy, Cambridge; G. L. Meredith and A. E. Seller, London Hospital; and J. H. Wilson, Middlesex Hospital.

Medicine, Forensic Medicine, and Midwifery.—A. P. Ambrose, Westminster Hospital; E. S. Langworthy, St. George's Hospital; J. McD. McCarthy, Cambridge; H. R. Marsh, Guy's Hospital; J. H. H. Smyth, St. Mary's Hospital; and H. de P. B. Veale, Leeds.

Medicine and Forensic Medicine.—G. F. May, McGill University.

Forensic Medicine and Midwifery.—J. Gott, King's College; and W. F. Reckitt, Guy's Hospital.

Forensic Medicine.—A. W. H. Edgelow, Charing-cross Hospital; A. P. Square, Middlesex Hospital; and G. S. Thompson, St. George's Hospital.

Midwifery.—P. M. Brittain, St. Bartholomew's Hospital; and E. R. R. Cheesman, Charing-cross Hospital.

The diploma of the society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery: Messrs. Brymer, Gott, Langworthy, McCarthy, Marsh, Smyth, and Thompson.

INSTITUTE OF CHEMISTRY OF GREAT BRITAIN AND IRELAND.—At the Final Examination for the Associateship (new regulations) in January the following were successful in the subjects indicated:—

Branch A (Mineral Analysis).—Frank Collingridge, B.Sc. Lond., University College, London (passed Intermediate July, 1896); William Ranson Cooper, M.A., B.Sc. R.U.I., Royal University of Ireland and King's College, London; and John Allsopp Walker, B.A. Oxon., Oxford University.

Branch E (Analysis of Water, Food, and Drugs).—Raymond St. George Ross, Owens College, Manchester, and Dresden Polytechnic.

A NEW operating room has been erected at the Beckett Hospital and Dispensary at Barnsley at the sole cost of Mr. Charles Harvey. It contains all the latest improvements and is a most opportune benefaction.

MR. RICHARD DEANE SWEETING, M.A. Oxford, M.B. Trin. Coll. Dublin, D.P.H. Camb., &c., one of the Medical Inspectors of the Local Government Board, has been called to the Bar at Gray's Inn.

THE SANITARY INSTITUTE.—A sessional meeting of the Sanitary Institute will be held at the Parkes Museum on Wednesday, Feb. 10th, when a discussion will be opened by Dr. F. J. Waldo on Sanitary Supervision of Shelters for the Homeless. The chair will be taken at 8 P.M. by Dr. Robert Farquharson, M.P.

SUDDEN DEATH OF A MEDICAL MAN.—On Sunday evening, Jan. 17th, Mr. W. W. Boulton, of Beverley, died suddenly at his residence, Highgate House. He had been in delicate health for several years and had nearly relinquished practice. He was getting out of bed when he fell back and died almost immediately. He has been for many years a magistrate for the borough and was sixty-four years of age.

FOOTBALL CASUALTIES.—In a match between the "Moonlighters" and "Morfa Rangers" at Stradey Park, on the 16th inst. a member of the former team was injured and admitted to the hospital suffering from concussion of the brain.—During a match between Sheffield United and Wolverhampton Wanderers at Bramall-lane, Sheffield, on the 23rd inst, a Wolverhampton player fractured his leg.—In consequence of the severe weather a great many games and matches were on Saturday either abandoned or postponed.

PRESENTATIONS TO MEDICAL MEN.—The members of the St. John Ambulance Class at Shaldon, Devonshire, have recently presented Mr. W. Ker Bell, M.R.C.S. Eng., L.R.C.P. Lond., with a silver-mounted malacca cane as a mark of appreciation of his services as honorary lecturer.—At the Merthyr Tydfil Police-court, on Jan. 21st, the stipendiary magistrate (Mr. North), on behalf of the members of the police who had attended the St. John Ambulance Class, presented Mr. Cornelius Biddle, M.R.C.S. Eng., L.R.C.P. Lond., with a handsome drawing-room clock as a token of appreciation of his services as honorary instructor of the class.

BRIGHTON AND HOVE DISPENSARY.—The annual meeting of the Brighton and Hove Dispensary was held on the premises on Jan. 21st, Alderman Brigden presiding. The report showed that during the past year there had been 15,978 patients, this number being less by 700 than during the year before last. Mr. Thomas Martin had given two donations of £100 each, £100 were given by Mr. E. White, £154 were received from the Hospital Sunday Fund, and £115 from the Hospital Saturday Fund. Special attention was called to the hospital wards in the western branch, which were opened with four beds in the year 1889, but the number of inmates, which had increased from 33 in 1890 to 113 in 1895 and 125 in 1896, had necessitated the number of beds being raised to fifteen. Mr. J. W. Howlett, the former chairman of the Hove Commissioners, had given £750 for the endowment of a cot in the children's ward in memory of his daughter.

WORKHOUSE OVERCROWDING AT STOCKPORT.—At a recent meeting of the Stockport guardians the Workhouse Committee reported that the medical officer was instructed to confer with the master of the workhouse with a view to remedying the overcrowding on the female side of the hospital. The imbecile wards are also said to be overcrowded, and the clerk has written to each member of the Cheshire county council representing a division of the union and also to the local members of the Parkside Asylum Committee, Macclesfield, "pointing out the serious nature of the situation and asking them to do all in their power to bring about the provision of further asylum accommodation for the easterly end of the county with the least possible delay." The Local Government Board has approved of plans for a new workhouse proposed to be erected at Stepping Hill, near Hazel Grove, the cost of which will exceed £100,000. At the same meeting Mr. J. A. Watts was appointed medical officer and public vaccinator for the Hyde district, and Mr. F. Cant was appointed to the same offices for the Bredbury district.

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A SCHOOL FOR DAUGHTERS OF MEDICAL MEN.—Medical men requiring a school for their daughters may not be generally aware that there is a special establishment for the daughters of medical men, conducted by Mrs. Bennett, the widow of a medical man, and supported by some of the leading members of the profession in London. The address is Pelican House, Champion-hill, Denmark-hill, S.E. The secretary is Major Pead, 14, Victoria-road, Upper Norwood, S.E., who will send prospectus and give all information.

FINES UNDER THE DENTISTS ACT.—The Brighton stipendiary heard on Wednesday the last four cases of a batch of prosecutions for infringement of the Dentists Act, 1878, no fewer than seven gentlemen practising in the town—it was alleged in an illegitimate manner—being summoned by the registered practitioners of dentistry in the town. In two cases heavy penalties were inflicted. E. P. Day, of 15, Old Steine, who gave on his door-plate the name "Dr. Day, Philadelphia, U.S.A.," and A. Ferguson, or Cutler, of 12, East-street, were fined £10 and £3 13*s.* 6*d.* costs each, or twenty-one days' imprisonment. In each case it was alleged by the private inquiry agents employed by the prosecution that, in answer to a question if he was a qualified dentist, the reply was "Yes." Day, it was said, had taken a degree at Philadelphia and had practised since 1879. Ferguson was stated by a registered dentist practising in Brighton to have been his pupil for three years. He knew him as "Cutler," and never as "Ferguson of New York." Two other cases—E. Woods Oxborrow, of the Anglo-American Dental Company, 114, Queen's-road, and H J. Barker, 18, Trafalgar-street—were fined £2 each and £1 1*s.* costs, or fourteen days' imprisonment. In each case the offence was practically admitted. Two other cases fell through. One defendant was actually registered, but carried on a branch. In another case the stipendiary thought the evidence of holding out a qualification insufficient. The remaining case was adjourned pending a decision in the High Court, defendent being one of a number of dentists practising before the passing of the Act who were claiming to have their names placed on the register.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Ministry of Public Health.

A NOTICE of motion to this effect appears in the Order Book of the House of Commons against the name of Mr. Fortescue Flannery—namely: "That in the opinion of this House it is desirable that a Department of Public Health be constituted, and that the same be under the charge of a responsible Minister having a seat in Parliament." No date is named for the discussion of the motion.

Bills Introduced by Private Members.

As usual at the beginning of a session a great number of Bills have been introduced by private Members, but few of them on the present occasion have any special interest for medical men. Sir Walter Foster is responsible for a Bill to provide pensions for poor persons over the age of sixty-five years; Mr. Knowles has introduced again the measure for establishing upon a national basis the registration of plumbers; Sir John Lubbock has also made another attempt for his Shops (Early Closing) Bill; Mr. Cameron has introduced a Bill to amend the Burial Laws, while Mr. Thornton stands sponsor for a measure requiring all vehicles on highways to carry lights after dark. Whether these or other private Members' Bills come to anything depends very much on the amount of time claimed by the Government for their own legislative programme. Mr. Pym has introduced a Bill "to amend the Poor-law Officers' Superannuation Act, 1896, as respects female nurses appointed after commencement of the said Act."

The Adulteration of Food Products.

This question was raised by Mr. Kearley during the Debate on the Address, and the information was conveyed to the House by representatives of the Government that a draft Bill dealing with it has been prepared at the Local Government Board. Mr. Kearley was not able, however, to draw from the Government a pledge that the Bill will be introduced during the present session.

Rabies.

The Departmental Committee on the stamping out of rabies has presented its report, and in this it recommends that the power to issue muzzling orders should be taken from the local authorities who exercise it at present, and revert to the Board of Agriculture, who formerly exercised it. The Committee also makes suggestions as to dogs wearing a collar with the name and address of the owner and as to the importation of unhealthy dogs from abroad.

HOUSE OF COMMONS.

THURSDAY, JAN. 21ST.

The Plague at Bombay.

Lord George Hamilton, Secretary of State for India, said, in reply to a question by Mr. Caldwell, that the attention of the Government of India has been called to the necessity of providing suitable accommodation at Bombay for the isolation and treatment of cases of plague, but he did not propose to interfere with their discretion in regard to moving the troops from Colaba or using the barracks there as plague hospitals. He understood that temporary hospital accommodation of a suitable kind could easily be erected on the open ground in and around Bombay.

The Vaccination Question.

Mr. Logan asked the President of the Local Government Board if it was the intention of the Government to take any steps toward carrying out the recommendations of the Royal Commission on Vaccination during the present session, and whether they would advise boards of guardians to discontinue prosecutions for non-compliance with the Vaccination Acts until the Government were ready to deal with the subject.

Mr. T. W. Russell, in the absence of Mr. Chaplain, replied that the report of the Royal Commission was receiving the consideration of the Local Government Board. As to the second part of the question, it was the duty of boards of guardians to enforce the existing law, and the report of the Royal Commission did not in any way relieve them of their duty in this respect.

Mr. Logan asked the hon. Member if he was aware that many boards of guardians, in spite of the interim report of the Royal Commission, still prosecute people more than once, and whether he did not think it advisable to alter the law in conformity with the recommendations of the Commission.

Mr. Lough said the hon. Member might also tell the House what exactly is the state of the existing law.

No answer was given by Mr. Russell to these questions.

FRIDAY, JAN. 22ND.

Cholera on the "Nubia."

In reply to a question on this subject by Sir Walter Foster, Mr. T. W. Russell said that the *Nubia*, which arrived at Plymouth on Jan. 9th, was reported to have cholera on board. One of the Board's inspectors was immediately instructed to go to Plymouth and to place himself in relation with the port sanitary authority and the port medical officer of health. In all some thirteen cases and four deaths occurred. The action taken was that laid down in the Order of the Board as to cholera, and owing to the excellent arrangements prepared long in advance by the Plymouth port authority isolation of the sick was at once carried out, the healthy passengers were allowed on giving their addresses to proceed to their respective homes, and the ship after the requisite measures of disinfection was allowed to continue her voyage to the Port of London. The troops were transferred to shore under the direction of the military authorities. No extension of the disease occurred to any persons beyond those attacked on board, and the results fully justified the action which was taken in this country of dealing with diseases of foreign importation by means of isolation and without resort to any such measures of quarantine as were involved in the detention of healthy persons either in hospital or in an infected vessel.

Flogging a Prisoner.

Mr. J. A. Pease addressed a long question to the Home Secretary with reference to the flogging of a prisoner named Almond in Carlisle Prison.—Sir Mattthew White Ridley, in the course of his reply, explained that Almond made his escape from the prison by cutting through the bar of his cell window with a file. On his re-capture his case was referred to the Visiting Committee to be dealt with under the powers conferred upon them by the Prison Acts, and they, in the exercise of their discretion, and having regard especially to the fact that in addition to his escape he was also charged with repeated offences against prison discipline, and his character was bad, decided to order him eighteen lashes. The allegations as to his screams being heard all over the prison were unfounded; he uttered no sound and suffered no ill effects, but was able to dress himself and go about his work. The skin was not broken. The punishment was legal, and he had no power to interfere with the discretion of the justices which was vested in them by law, though as a rule a mere attempt at escape, if unaccompanied by aggravating circumstances, would not be punished by flogging.

Bubonic Plague in Bombay.

Lord George Hamilton made the following statement on this subject—viz.: The plague was identified at Bombay in September last. On Oct. 2nd wide powers were conferred on the chief executive officer of the city, who is a Government official, to take whatever measures were found necessary to prevent the epidemic from spreading. Large sums of money were voted for the purpose by the corporation. The Government appointed a special medical committee to investigate and advise; scientific experts came from other parts of India to report upon the disease and its prevention; while additional medical men and a large staff of workers were employed to carry out at once the special sanitary measures in Bombay advocated by the committee of experts. The epidemic appeared to be abating in November, but from Dec. 1st it grew more severe. The plague spread to Karachi in December and is now suspected to be epidemic in Poona. Over 2500 plague deaths have occurred in Bombay, over 300 in Karachi, and about 100 sporadic cases elsewhere. As the House is aware from newspaper telegrams, the plague has caused much terror among the people of Bombay and in the adjacent country, but the disease had not so far appeared in epidemic form at any place besides Poona outside the cities of Bombay and Karachi. The sporadic cases of which I spoke, excepting at Poona, occurred almost entirely among fugitives from the two plague-stricken cities. The efforts of the Government and of the corporation, between whom hearty coöperation exists, were devoted to relieving sufferers from the plague, to checking its extension in Bombay and Karachi, and to preventing its spread elsewhere. Hospital space was increased, special plague hospitals were provided for six different sections of the community, and are being prepared for two other sections. House-to-house visitation of infected quarters is being carried out under medical supervision. Every suspected case of plague that is not at once removed to the hospital is isolated as far as practicable. Every house where a plague case has occurred is disinfected and is, as far as possible, vacated, temporary accommodation being provided elsewhere. Insanitary houses are pulled down, in others partitions

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are removed or ventilation introduced. Special sanitary precautions and improvements have been carried out in the backward parts of Bombay city. A fuller staff of medical men and Indian medical men is being organised, and the Bombay Government will rely on England for a temporary staff of medical men and nurses if more aid is required. To prevent the spread of plague to other parts of India passengers leaving Bombay, Karachi or Poona by rail, road, or sea are inspected by medical officers, and persons travelling or alighting at the larger stations are stopped and removed for treatment if they are suspected of being plague-stricken. In case pilgrims to the Moslem holy places might carry plague into the Red Sea the Government of India have—empowered by law—declared that from Feb. 1st Bombay and Karachi shall cease for the present to be ports of departure for pilgrims. The Bombay Government report that the corporations are granting all necessary funds, while the executive and medical officers there and elsewhere are doing all that can be done though prompt suppression of the epidemic has not been attained. The Government of India report their belief that the arrangements at railway stations for checking the spread of disease are working well; but they are inquiring whether further measures are needed, which, if necessary, will be given. I believe that these remedial and precautionary measures are daily becoming more stringent and more effective; neither self-sacrificing work nor money is being stinted. If it has been difficult to secure the coöperation of some sections of the Indian population to promote the sanitary and preventive measures for the arrest and stamping-out of this pestilence, yet in other quarters loyal assistance and effective self-help have been displayed. I am hopeful that the continuous energy and vigilance shown by the Government and the local authorities and the rigorous measures they have adopted are beginning to make real impression upon that epidemic, and that we may for the future note its decline. I should add that the experts some time back expressed the view that during the winter months some increase in the epidemic might be expected. As I came into the House I received a telegram from the Governor of Bombay to the effect that he learns that alarmist and greatly exaggerated telegrams in reference to plague are being sent from Bombay, and he hopes that great caution will be shown before accepting the information as true. Only four pure Europeans have died from the plague, including a medical man and a nurse. Amongst the dock labourers and Port Trust servants the deaths and sickness are very small indeed.

MONDAY, JAN. 25TH.

Dangerous Trades.

Sir Matthew White Ridley, Secretary of State for Home Affairs, said, in reply to a question, that out of the seven processes named in the report of the Committee on Dangerous Trades he had already seen his way to certifying two as dangerous under the Act of 1891. Special rules embodying most of the recommendations of the Committee had been issued for one of these—the bottling of aerated waters—and would shortly be issued for the other—the vulcanising of indiarubber by means of bisulphide of carbon. With regard to the remaining five, a similar course would probably be necessary in the case of some, if not all; but there were legal and administrative considerations which made it difficult to give full and adequate effect in the form of special rules to the suggestions of the Committee. For the present, therefore, he must reserve his decision on this point, but in the meantime steps were being taken by the factory inspectors to watch these processes and to secure the improvement of the conditions under which work was carried on.

Venereal Disease among the Troops in India.

Lord George Hamilton made the following statement on this subject in reply to a series of questions—viz.: It is the case that the total aggregate admissions to hospital for venereal disease among the British troops in India amounted in the year 1895 to 522 per 1000, but this does not mean that 522 men per 1000 were separately and individually admitted, still less does it indicate that 522 soldiers per 1000 are incapacitated for duty from this cause. It is calculated on the latest returns that an average permanent deduction of 46 per 1000 is the loss entailed by these diseases. The facts as to the serious increase of this disease in India are now being inquired into by a departmental committee, on receipt of whose report Her Majesty's Government will carefully consider the whole subject.

Public Health Bill for Scotland.

The Bill of the Government to consolidate and amend the laws relating to public health in Scotland was introduced at this sitting without any explanatory statement and formally read a first time.

TUESDAY, JAN. 26TH.

Malta and the Indian Plague.

Mr. Chamberlain, replying to a question put by Sir Walter Foster, said it is the case that the Governor of Malta, after first imposing a twenty days' quarantine, has since issued a total prohibition on all vessels, however healthy they may be, arriving from India. His predecessors and he had continually urged the Government of Malta to adopt the more scientific and convenient methods of preventing the introduction and spread of foreign diseases instead of the stringent system of quarantine hitherto in use, but partly from the supposed necessity of conforming to the practice of Italy, and partly from the inveterate belief of the population of Malta in the necessity of the strictest quarantine which might lead to disturbance if the rules were relaxed, they had not as yet succeeded in effecting the change. He was now in correspondence with the Governor and had pointed out to the Colonial Government the serious injury which was being inflicted, not only on commerce, but on the interest of Malta by the action of the Government, and he should be glad if his remonstrances might induce them to adopt a more reasonable course.

Poor-law Officers in Ireland.

Mr. Clancy introduced at this sitting a Bill to provide for the Superannuation of Poor-law Officers in Ireland.

BOOKS, ETC., RECEIVED.

BERGMANN, J. F., Wiesbaden.
Jahresbericht über die Fortschritte auf dem Gebiete der Chirurgie. Von Prof. Dr. Hildebrand. I. Jahrgang: Bericht über das Jahr 1895. 1896.

CASSELL AND CO., Ludgate-hill, London.
The Year-book of Treatment for 1897. Price 7s. 6d.

CHURCHILL, J. AND A., Great Marlborough-street, London, W.
The Operations of Surgery. By W. H. A. Jacobson, M.Ch. Oxon., F.R.C.S. Third Edition. Illustrated. 1897. Price 34s.
The Natural and Artificial Methods of Feeding Infants and Young Children. By Edmund Cautley, M.D. Cantab. 1897. Price 7s. 6d

CROSBY LOCKWOOD AND SON, Stationers' Hall-court, Ludgate-hill, London.
Water and its Purification. By Samuel Rideal, D.Sc. Lond. Illustrated. 1897.

F. A. DAVIS COMPANY, Philadelphia.
Autoscopy of the Larynx and the Trachea. By A. Kirstein, M.D. Berlin. Authorised translation by Max Thorner, A.M., M.D. Illustrated. 1897.

KELLY AND CO., High Holborn, London, W.C.
Kelly's London Medical Directory for 1897.

KNIGHT AND CO., Fleet-street, London.
The Local Government Directory, Almanac, and Guide for the Year 1897. Price 8s. 6d.

LIPPINCOTT, J. B., COMPANY, London and Philadelphia.
System of Diseases of the Eye. Edited by W. F. Norris, A.M., M.D., and Chas. A. Oliver, A.M., M.D. Vol. I. Embryology, Anatomy, and Physiology of the Eye. Illustrated. 1897.
The Practice of Medicine. By H. C. Wood, A.M., M.D., LL.D., Yale, and R. H. Fitz., A.M., M.D. 1897.

LONGMANS AND CO., Paternoster-row, London.
A Book for Every Woman. Part II. Woman in Health and out of Health. By Jane H. Walker, M.D. Brux., L.R.C.P. Irel., L.R.C.S. 1897. Price 2s. 6d.
Exercises of Practical Physiology. Part I. Elementary Physiological Chemistry. By A. D. Waller and W. L. Symes. 1897. Price 1s. net.
Aristotle on Youth and Old Age, Life and Death, and Respiration. Translated by W. Ogle, M.D., F.R.C.P. 1897. Price 7s. 6d.
Essays by Geo. John Romanes, M.A., LL.D., F.R.S. Edited by C. Lloyd Morgan. 1897. Price 6s.

MACMILLAN AND CO., London.
Essays and Addresses by Sir J. Russell Reynolds, Bart., F.R.S., M.D. Lond., LL.D. Edin., LL.D. Aberd. 1896. Price 12s. net.

MITCHELL AND CO., Red Lion-court, Fleet-street, London.
Medical Etiquette Unveiled. By David Jones, M.D., Heidelberg. 1896.

REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.
Archives of Clinical Skiagraphy. Edited by Sydney Rowland, B.A. Camb. Vol. I. No. 3. December, 1896.

STANFORD, EDWARD, Cockspur-street, Charing-cross, London.
Journal of the Sanitary Institute. Vol. XVII., Part 4, January, 1897. Price 2s. 6d.

SMITH, ELDER, AND CO., Waterloo-place, London.
Under the Circumstances. By A. Armstrong. 1897. Price 6s

UNWIN, T. F., Paternoster-buildings, London.
Juvenile Offenders. By Wm. D. Morrison. 1896. Price 6s.

Dod's Parliamentary Companion for 1897 (Whittaker and Co., White Hart-street, London), 32mo; price 4s. 6d.—The Quarterly Journal of Microscopical Science, January, 1897; New Series, No. 156, Vol. XXXIX., Part 4 (J. & A. Churchill, London, 1897); price 10s.—Annales de la Société Royale des Sciences Médicales et Naturelles de Bruxelles; Tome 5 (Henri Lamartin, Bruxelles, 1896).—Die Medicinische und Operative Behandlung Kurzsichtiger Störungen: von Prof. Dr. A. Mooren (J. F. Bergmann, Wiesbaden, 1897).—Bericht über die 25. Versammlung der Ophthalmologischen Gesellschaft, Heidelberg, 1896: von E. von Hippel und A. Wagenmann; redigirt durch W. Hers und Th. Leber (J. F. Bergmann, Wiesbaden, 1897).—Das Sehen der Schielenden: von Dr. A. Graefe (J. F. Bergmann, Wiesbaden, 1897).—Magazines, &c., for February:—Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, and Pearson's Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALLEN, V. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Swaffham Sanitary District of the Swaffham Union.

ALLINGHAM, WALTER, M.R.C.S., L.R.C.P., L.S.A., has been appointed House Physician to the Victoria Hospital for Children, Chelsea.

ANGOVE, W. T., M.R.C.S. Eng., has been appointed a Captain in the South Australian Military Forces (Reserve).

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ARMSTRONG, G., M.B., Ch.B. Melb., has been appointed an Honorary Assistant Gynæcological Surgeon to the Sydney Hospital, South Australia.

BARLOW, JOHN, M.D., F.R.C.S., has been appointed Examiner in Surgery for the Faculty of Physicians and Surgeons of Glasgow, vice Hector C. Cameron, resigned.

BOASE, RICHARD DAVEY, M.R.C.S., L.R.C.P. Lond., has been re-appointed Medical Officer of Health by the Penzance Port Sanitary Authority.

BODEN, J. S., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Medical Officer for the Infirmary of St. Pancras Parish.

BROCK, JOHN, L.R.C.P. Edin., M.R.C.S. Eng., has been appointed House Surgeon to the Beckett Hospital and Dispensary, Barnsley, vice J. Currie, resigned.

CARTER, F. R., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the No. 6 Sanitary District of the Leeds Union.

CHEETHAM, F., L.R.C.P. Edin., has been appointed Officer of Health for S. Karkarooc Shire, Victoria, Australia.

FULLERTON, A. Y., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer at Dalby, Queensland.

GALE, F. W., L.R.C.P. Lond., M.R.C.S., has been appointed a Public Vaccinator for the District of Kaikowra, New Zealand.

HERBERT, J. WM. CHAMBERS, M.R.C.S. Eng., L.R.C.P. Edin., has been appointed Medical Officer and Public Vaccinator for the Pendlebury Division of the Salford Union.

HICKS, THOMAS W., M.B. Lond., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer of the Finchley Branch of the National Hospital for the Paralysed and Epileptic, Queen-square.

HOBHOUSE, EDMUND, M.D. Oxon, M.R.C.P., has been appointed Assistant Physician to the Sussex County Hospital.

HUGHES, W. K., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed a Surgeon to Out-patients and Orthopædist to the St. Vincent's Hospital, Melbourne, Australia.

JONES, O. STURGES, M.R.C.S. Eng., L.S.A., has been re-appointed Medical Officer of Health for Chichester.

KENNY, A. L., M.B., Ch.B. Melb., has been appointed an Ophthalmic and Aural Surgeon to the St. Vincent's Hospital, Melbourne, Australia.

KEOGH, A. G., M.B., Ch.M. Glasg., has been appointed Officer of Health for Lancefield Shire, Victoria, Australia.

KEOGH, E. J., M.B., Ch.M. Edin., has been appointed a Physician to Out-patients to the St. Vincent's Hospital, Melbourne, Australia.

KING, ARTHUR, M.B., C.M. Edin., D.P.H. Lond., has been appointed Medical Officer for the Workhouse of the Watford Union.

LAWRENCE, H. F., M.R.C.P., L.R.C.P., L.R.C.S. Edin., has been appointed a Medical Officer to the St. Vincent's Hospital, Melbourne, Australia.

LEEDHAM-GREEN, C. A., M.D. Heidelb., F.R.C.S. Eng., L.R.C.P., has been appointed an additional Casualty Surgeon for the Queen's Hospital, Birmingham.

MACDONNELL, E. R. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Litcham Sanitary District of the Mitford and Launditch Union.

MACGILLICUDDY, D. F., M.B., Ch.B. Melb., has been appointed a Physician to Out-patients and Chloroformist to the St. Vincent's Hospital, Melbourne, Australia.

MARTELL, H. P., M.B. Melb., has been appointed an Assistant Gynæcologist to the St. Vincent's Hospital, Melbourne, Australia.

MATURIN, F. H., M.R.C.S., L.R.C.P., has been appointed an Assistant House Surgeon to the Derbyshire Royal Infirmary.

MILLAR, WILLIAM, M.B., C.M. Edin., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer and Public Vaccinator for the Welton District of the Sculcoates Union.

MOLONEY, P., M.B. Melb., has been appointed a Physician to the St. Vincent's Hospital, Melbourne, Australia.

MORTON, D. M., M.B., Ch.B. Melb., has been appointed Chloroformist to the St. Vincent's Hospital, Melbourne, Australia.

MORTON, F. W. W., L.R.C.P., L.R.C.S. Edin., has been appointed a Physician to the St. Vincent's Hospital, Melbourne, Australia.

NELLY, J. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Surgeon to Out-patients to the St. Vincent's Hospital, Melbourne, Australia.

NICHOLSON, B. H., M.B., M.S. Edin., has been appointed Surgeon to the Essex and Colchester Hospital, vice H. Laver.

NORMAN, E. P., M.D., B.Ch. Dubl., has been appointed Medical Officer for the Workhouse and the Coddenham Sanitary District of the Bosmere and Claydon Union.

NUNN, P. W. GOWLETT, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for Bournemouth and Superintendent of the Sanitary Hospital.

O'SULLIVAN, M. U., L.R.C.P., L.R.C.S. Edin., has been appointed Gynæcologist to the St. Vincent's Hospital, Melbourne, Australia.

REID, R. G., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Public Vaccinator for the District of Murchison, Victoria, Australia.

RENTON, J. CRAWFORD, M.D., has been appointed Additional Examiner in Surgery in the University of Edinburgh, vice G. T. Bertson.

RIORDAN, T. F., M.D., Ch.M. Irel., has been appointed a Physician to the St. Vincent's Hospital, Melbourne, Australia.

SANDALL, T. EDWARD, B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator for the Alford District of the Spilsby Union, vice R. Lanphier, resigned.

SAYERS, M. H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant House Surgeon at the Worcester General Infirmary.

SMITH, G. H. W., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed a Surgeon-Lieutenant in the New South Wales Military Forces.

STANLEY, J. DOUGLAS, M.D. Edin., M.R.C.P. Lond., has been appointed a Physician to Out-patients for the Queen's Hospital, Birmingham.

STAWELL, R. R., M.B. Melb., has been appointed Pathologist to the St. Vincent's Hospital, Melbourne, Australia.

STIRLING, R. A., M.B., Ch.B. Melb., L.R.C.P., L.R.C.S. Edin., has been appointed a Surgeon to the St. Vincent's Hospital, Melbourne, Australia.

SYME, G. A., M.B., Ch.M. Melb., F.R.C.S. Eng., has been appointed a Surgeon to the St. Vincent's Hospital, Melbourne, Australia.

TAYLOR, G. HENRY, L.R.C.P., L.R.C.S. Edin., has been appointed a Second Government Medical Officer and Vaccinator in the Government Medical Service, New South Wales.

THOMAS, EVAN, M.B. Lond., L.R.C.P., M.R.C.S., has been appointed an Assistant Medical Officer for the Infirmary of St. Pancras Parish.

THORP, A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the New Mill Urban District Council.

THRING, E. T., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed an Honorary Surgeon at the Prince Alfred Hospital, Sydney, New South Wales.

WARD, DR., has been appointed Medical Officer and Public Vaccinator for the Codford District of the Warminster Union, vice Hugh Steven, resigned.

WATTS, JAS. A. W., M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer and Public Vaccinator to the Hyde District of the Stockport Union, vice G. W. Sidebotham, resigned.

WELD, J. C., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Officer of Health for N. Karkarooc Shire and Rosebery Township, Victoria, Australia.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon.

CHILDREN'S Hospital, Nottingham,—House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

DUNDEE ROYAL INFIRMARY.—Resident Clinical Assistant for three months. Board, lodging, and washing provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. Assistant Physician.

HULL BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £120 per annum, rising by annual increments of £10 to £150, with furnished apartments, board (except liquors), attendance, and washing.

INFIRMARY OF THE CITY OF LONDON UNION.—Assistant Medical Officer at the Infirmary of the Union, situate in the Bow-road, single, or widowers without children. Salary £150 per annum, with furnished apartments at the Infirmary, rations, and washing. Applications to the Clerk to the Guardians, 61, Bartholomew-close.

LONDON HOSPITAL, Whitechapel, E.—Surgical Registrar. Salary £100 per annum.

PARISH OF ST. GILES, Camberwell.—Assistant Medical Officer for the Infirmary, at Hart-street, Camberwell, and the Workhouse at Gordon-road, Peckham; also for Relief Duty at the Constance-road Workhouse of the parish for one year. Salary £50, with apartments, board, and washing. Applications to the Clerk to the Guardians, Peckham-road.

SHEFFIELD GENERAL INFIRMARY.—Junior Assistant House Surgeon for three years. Salary £50 a year, with board, lodging, and washing.

ST. MARY'S HOSPITAL, Paddington, London, W.—Surgeon in charge of Out-patients for five years.

ST. MARY'S HOSPITAL, Paddington, London, W.—Medical Registrar for one year. Salary £50 per annum. Also Medical Officer for the selection of Out-patients for one year. Salary £75 per annum.

TIVERTON INFIRMARY AND DISPENSARY, Tiverton, Devon.—House House Surgeon and Dispenser, unmarried. Salary £105 per annum, with lodgings, attendance, fire, and lights.

Births, Marriages, and Deaths.

BIRTHS.

CHALLENOR.—On Jan. 24th, at The Limes, Abingdon, the wife of H. S. Challenor, M.R.C.S., of a daughter.

HART.—At 29, Charlotte-square, Edinburgh, on Jan. 23rd, the wife of D. Berry Hart, M.D., of a son.

PARSONS.—On Jan. 19th, at Kaiapoi, Christchurch, New Zealand, the wife of Harry Compton Parsons, M.R.C.S. Lond., L.R.C.P. Eng., of a daughter (Susie). (By cable.)

SCARTH.—On Jan. 23rd, at Amwell-street, London, the wife of Isaac Scarth, B.S. and M.B. Lond., M.R.C.S., of a daughter.

STOWERS.—On Jan. 24th, at Silchester Lodge, Thornton Heath, Surrey, the wife of J. H. Stowers, M.D., of 128, Harley-street, Cavendish-square, W., of a son.

STYAN.—On Jan. 22nd, at Chapel-place, Ramsgate, the wife of T. G. Styan, M.A., M.D. Cantab., of a son.

WOOD.—On Jan. 15th, at Ellangowan, Selhurst-road, S. Norwood, S.E., the wife of Henry Wood, L.D.S., of a daughter.

MARRIAGES.

COWIE—MITCHELL.—On Jan. 20th, at Blairmore Glass, Aberdeenshire, Alexander Mitchell Cowie, M.B., of Dullan Brae, Mortlach, to Sylvia Margaret, daughter of Alexander Mitchell, of Montreal.

TAYLOR—LEACH.—On Jan. 27th, at St. John's, Cullingworth, Yorkshire, by the Rev. T. A. Mellody, Tom Taylor, L.R.C.P., L.R.C.S., &c., The Cottage, Cullingworth, to Ada, daughter of the late Joseph Leach, of Bradford.

DEATH.

ROBERTSON.—On Jan. 16th, at Arran-place, Ardrossan, Robert Beedie Robertson, F.R.C.S. Edin.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (3rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30P.M.).

THURSDAY (4th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (6th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (1st).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Communications:—Mr. H. W. Messenger: A Case of Double Harelip, with Cleft of the Hard and Soft Palates.—Mr. G. H. Bowden: A Case of Deafness following Bilateral Dislocation after Extraction of Molar Teeth.—Mr. H. Baldwin: Cement and Amalgam Fillings. Paper:—Mr. J. H. Badcock: Copper Amalgam, its Merits and Demerits.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. F. de Havilland Hall: Disease of the Nose and Throat in Relation to General Medicine. (Lettsomian Lecture.)

TUESDAY (2nd).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Papers: Mr. J. W. W. Stephens and Mr. C. D. Parfitt: Three Cases of Hæmorrhagic Diphtheria.—Dr. A. E. Garrod: Pneumococcous Endocarditis of a Two-cuspid Aortic Valve with Malformation of the Liver.—Dr. H. Mackenzie and Mr. W. Edmunds: Persistence of Thymus in Graves' Disease. Card Specimens:—Mr. D. Drew: Obturator Hernia.—Dr. Hebb: Tumour of Spinal Cord.

WEDNESDAY (3rd).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Mr. Doran, Dr. J. Phillips and others. Paper;—Dr. A. E. Giles: The Cyclical or Wave Theory of Menstruation, with Observations on the Variations in Pulse and Temperature in relation to Menstruation. Annual Meeting. The President (Dr. Champneys) will deliver the Annual Address.

THURSDAY (4th).—SOCIETY OF ARTS.—8 P.M. Prof. J. A. Ewing: The Mechanical Production of Cold. (Howard Lecture.)

HARVEIAN SOCIETY (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Clinical Evening.

FRIDAY (5th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.15 P.M. Mr. G. Herschell: On Chronic Fæcal Retention, its Consequences and Treatment.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—8 P.M. Discussion on the Menopause. Opened by Dr. A. Routh, Dr. W. Hunter, and Dr. C. Tuke.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (2nd).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Diagnosis and Treatment of Obstructive Deafness, apart from Pain or Discharge.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Tooth: Lecture.

WEDNESDAY (3rd).—WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.)—5 P.M. Dr. D. Hood: Appendicitis from a Medical Point of View.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Schorstein: Diagnosis of Early Tuberculosis.

FRIDAY (5th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Mr. W. Wingrave: The Clinical and Pathological Aspects of Atrophic Rhinitis.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Beevor: Cerebral Localisation.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

A MYSTERIOUS LETTER.

THERE was once a lady who incurred a bill. She left the neighbourhood, and her creditor, a medical man, gave instructions that her account should be sent in. The lady paid notwithstanding that she considered it "an overcharge for a bilious attack," seeing that her husband "lost considerably by the failure of the —— Bank," and her letter includes the following remarkable sentence: "I am beginning to see how it is the hospitals are getting so many female nurses They do the M.D.'s work much cheeper (*sic*) and just as well so it will eventually come to this, they will get a cradle and put the M.D.'s in and rock them to sleep and take the whole duty upon themselves, and then we will have woman's rights and clear consciences." That the good lady meant to be offensive is clear, but nothing else in her meaning is equally lucid. In what way efficient nursing at a hospital "cheepens" M.D.'s work no one can guess. How the rocking the M.D.'s in cradles would be an assertion of woman's rights is a second conundrum. We thought that the staunch upholder of women's rights would have nothing to do with cradles. And, again, how the rocking of M.D.'s in cradles will clear the consciences of ladies who do not pay their medical men beggars, conjecture.

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THE TREATMENT OF CARBUNCLE.

To the Editors of THE LANCET.

SIRS,—The germicidal treatment of carbuncle is not of recent date, but I venture to think also not of general adoption. The advantage, however, of simply dressing the carbuncle after free and early incision by iodoform and Listerian dressings has been so considerable in my hands that I beg leave to refer to it in THE LANCET. My last case of carbuncle (for instance), of about the size of a five-shilling piece, was treated by the usual cruciform incision and dressed as above indicated on the Friday of one week. The whole of the slough had "shelled out" by the Tuesday of the following week. There was none of the tedious and painful disintegration involved in the old process of poulticing and the healthy granulating action of the tissues literally pushed forwards the slough, chiefly in one mass, which was withdrawn by the forceps. By the end of the same week the edges of the wound, brought into close contact by adhesive plaster, had nearly united, so as to leave ultimately a most insignificant scar. This last event, too, is of course frequently a most desirable event. My patient was able to attend to his business during the time with trifling inconvenience. The situation of the carbuncle was at the back of the neck.

I am, Sirs, yours faithfully,

Jan. 24th, 1897. W. J. V. HARLE.

Service.—The case has not been put before us previously. The presents cannot be regarded legally as payment unless there is evidence that they were given and accepted as such. Again, a medical man is entitled to charge for his services even if the patient be in his own profession, and Dr. A—— is, of course, not in active practice. The whole matter is one for mutual arrangement. If an action is brought by Dr. D—— for reasonable fees he will certainly win it under the circumstances detailed by our correspondent unless it can be shown that without doubt the presents were made in lieu of other payment. Our correspondent will remember that we are expressing an opinion only upon the facts as laid before us.

LIFE ASSURANCE AND PENSION FOR NURSES.

THE Pearl Life Assurance Company have made a small departure that we can understand will prove very welcome to the class which it is designed to benefit. They have prepared a table combining life assurance with annuity in such a way that in the event of the death of the insured occurring before a certain date the sum of £25 is paid by the company, together with the surrender value of the premiums already paid. If the insured survives to the date in question she becomes entitled to a pension. An example will explain exactly what the company offer. Suppose the age of a nurse at her next birthday to be thirty-five years, and suppose she desires to derive a pension when she is fifty-five years, she would have to pay £2 5s. 1*d.* per quarter for twenty years. If she dies before attaining the age of fifty-five years she will be insured by the company in the sum of £25 together with the surrender value of the policy, in which direction the company are prepared to give what we consider highly liberal terms. If she lives until fifty-five years she will be placed in receipt of £5 per quarter for the rest of her life.

Astonished has not quoted to us the rules of the institution placing the treatment of all patients absolutely under himself. Certainly no change in such rules should have been made without giving him due notice. He is, perhaps, aware that to allow patients to be treated within the walls of the cottage hospital by their usual medical attendant is not without precedent, and that committees find the procedure to work well and to lead to more regular public support.

G. E. J.—The advertisement is unfortunate, but let us be fair. There is on the face of it no evidence that the medical man has countenanced the publicity, while all who are acquainted with him know that he is the last man to desire any notoriety obtained in an unworthy manner. The grateful journalist is evidently a stranger to the law of medical etiquette, and has said a good word for his medical man exactly as he would have extolled a convincing sermon from his clergyman, or the able conduct of a case by his lawyers. That the paragraph was written as part payment of the surgeon in lieu of cash fees is an absurd and unworthy assumption.

A CRUISE ON A WHALER.

To the Editors of THE LANCET.

SIRS,—May I trouble you, or any of your readers, on behalf of a young friend anxious to see something of whaling, to let me know through THE LANCET, at which depôt an application for an unqualified man may be made, from what port vessels sail, and any information as to necessaries useful throughout the cruise. Should answers to my queries be not in your keeping, would you kindly indicate where information may be had.—I am, Sirs, yours faithfully,

Jan. 26th, 1897. SCRUTATOR, M.D.

"THE UNQUALIFIED ASSISTANT."

To the Editors of THE LANCET.

SIRS,—Your correspondent "Student" may assure himself with perfect truth that the remarks of the President of the General Medical Council to Mr. Adamson on the subject of unqualified assistants commend themselves to the feeling of the main bulk of the general practitioners in England. It seems to me that if we would deny the right of the abortion-procuring midwife, the prescribing chemist, and the "ambulantic" policeman to hang upon the skirts of the medical profession we must first of all shake off the grasp of our own bastard half-brother—the unqualified assistant. To purify a river the ameliorating measures must be brought to bear upon the main stream and the improvement in the condition of the minor water-courses, creeks, and backwaters will follow as a matter of course; to reverse the process is at once ridiculous and futile. Your correspondent gives way to unnecessary alarm if he thinks that the publication of the person's name in penal cases will militate against that person's chance when he becomes qualified. He may calm his fears. In the case of the average unqualified assistant the probability is of the remotest that he will ever be other than what he is. No matter how vastly superior he deems the knowledge of his "business" learned from his "kindly" principal, who points out his mistakes (and signs the death certificates), to that gleaned from the conflicting theories of our learned "professors," the fact remains that the powers that be will refuse to accept the one for the other when he presents himself, if he ever does, for examination. Again, your correspondent disproves his own argument in attempting to draw a comparison between himself and a law student. It is essential for the latter to be articled for five years to a solicitor; this is analogous with the five years spent at a hospital in the case of the medical student. Should the law student for any reason be unable to put in the five years he would not be allowed to go up for examination, but he would not be allowed to practise as an unqualified solicitor. Finally, in these days of long curriculum and compulsory attendance at general and special hospitals the student who falls astern and becomes an unqualified assistant never regains his position, still less does he make headway. His knowledge of medicine is gained from the bottles in the surgery, their doses, and what they are "good for" from a pocket "aid." He finds himself at, fifty a disappointed Ishmaelite, going about from situation to situation with a growing feeling that his oft-advertised full curriculum, enthusiastic reception at midwifery cases, and Nimrod-like qualities with all manner of horseflesh, are hardly reckoned as a sufficient set-off to an insidiously developed, but firmly established predilection for every variety of strong drink.

I am, Sirs, yours truly,

Jan. 22nd, 1897. RIPARIAN.

Miss L. Waddington.—The letter is not suitable to our columns. It should be sent to some journal devoted to the interests of nursing.

Veritas.—The right course is certainly to lay the position fully before the registrar. The law says that the practitioner in attendance during the last illness should sign to certify. In the rare circumstances where the medical attendant has gone from the neighbourhood, but left behind him complete notes of the case so that the cause of death cannot be in doubt, the registrar should be informed by the successor in the practice or hospital appointment of the state of the matter. The difficulty cannot very often arise, as it cannot be a usual occurrence that between the last visit paid to a patient in his last illness and the occurrence of death the medical man in charge has reached a destination where he cannot readily be communicated with.

MIDWIVES AND THEIR WAYS.

THE following circular is, we are informed by a correspondent, circulated to the public in Grimsby:—

MRS. PHILLIPS,
CERTIFIED MIDWIFE,
(from Queen Charlotte's Hospital, London,)
449, WEELSBY TERRACE, CLEETHORPE ROAD, GRIMSBY.

449, Weelsby-terrace, Cleethorpe-road, Grimsby.

MADAM,—Having been in practice in Grimsby for three years, I take this opportunity of thanking my numerous patients for their kind confidence placed in me during that time.

Since obtaining my diplomas from London I have attended over a thousand midwifery cases, and am thankful to say I have not had one death or inquest.

I trust by prompt and conscientious attention to my duties to obtain a further share of public confidence and support.

Fee, 10*s.* 6*d.* I am, yours faithfully,

449, Cleethorpe-road, Weelsby-terrace, Grimsby. E. PHILLIPS.

This little circular contains also the picture of an earnest-looking female in nursing costume—some little gravity in the expression being doubtless produced by her responsible labours. The address of the midwife it will be noted is printed no less than three times with variation. Medical men in the neighbourhood must find this enterprising female an unpleasant neighbour.

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"THE SWALLOWING OF LEAD PELLETS."

To the Editors of THE LANCET.

SIRS,—With reference to the letter in THE LANCET of Jan. 23rd from Mr. Mason of Burton-on-Trent on the practice of swallowing shot, I may say that about twenty-five years ago a brother of mine, now dead, was a curate in that town, and at the time he informed me that in the course of his parochial visitations he had at various times been told (generally by elderly women) that they were in the habit of swallowing shot for the purpose of preventing the lights rising. He was also shown the shot used. As Mr. Mason's letter confirms my brother's statement it appears that this practice has been now followed in that locality for a long period. It would be interesting to know if it is confined to that part of the country, as I have not heard of it elsewhere.

I am, Sirs, yours faithfully,

J. R. WHITE, M.B., T.C. Dub.

Kelvedon Hatch, Brentwood, Jan. 24th, 1897.

Dr. Leonard Molloy.—It is impossible to answer in general terms. We presume our correspondent refers to some particular case. The medical superintendent might easily be compelled to examine a patient in the absence of the medical man under whose care the case was. The date of discharge of a patient might for reasons of convenience have to be left to the superintendent, but the fitness of a patient to be discharged would be settled by the medical man in charge. We presume that the duties of the superintendent have been defined.

ACCRINGTON DISPENSARY AND ITS MEDICAL OFFICER.

THE *Manchester Guardian* of Jan. 22nd contains the following account of an action brought by a dispensary against a late medical officer:—

"Yesterday at the Accrington County Court, before Judge Coventry, Mr. R. K. Whittaker, solicitor, applied for an interim injunction in the name of the trustees of the Accrington and District Medical Dispensary against Dr. John Neild Cooper, late medical officer to the dispensary, to prevent him from practising as a physician and surgeon in Accrington. The case is fixed for hearing at the next Haslingden Court, and application was made to prevent Dr. Cooper practising in the meantime. Mr. Whittaker read affidavits stating that Dr. Cooper was engaged as medical officer to the dispensary in June, 1896, and that he signed an agreement binding himself in case he left the Dispensary not to practise in Accrington for three years, or within a radius of three miles, and that if he did so he should be liable to a fine of £2 per day. The damages claimed were £50. It was alleged that the defendant was practising in Edgar-street, Accrington, and that he was canvassing members of the dispensary and promising them medical attendance on the same terms as members of the dispensary were treated. Dr. Cooper was discharged as medical officer to the dispensary on Dec. 22nd, and the affidavits alleged that by his canvassing and practice he was doing injury to the institution.—Mr. Speake, solicitor for the defendant, opposed the grant of an interim injunction, and denied that his client was canvassing the members of the dispensary. He also alleged that the agreement had been broken and that there was a good defence against the injunction being granted when the case came to be heard.—His Honour: Is your client willing to keep an account of the business he does until the hearing of the case?—Mr. Speake: Perfectly.—Mr. Whittaker: And promise not to canvass?—Mr. Speake: We deny it.—His Honour: I shall make no restraining order until I hear the case. The defendant must keep an account of the business done."

L.S.A.—We cannot say to whom the fee legally belongs, as this would be determined by agreement between principal and assistant. In the absence of mention of the matter in the agreement it would be determined by any legal decision in the matter already given; but we are not aware that the question has ever been decided in a court of law. As a matter of custom these fees belong to the principal, and we believe that a legal decision would endorse this custom. As a matter of mutual good feeling they are often divided between him and his locum-tenent or assistant.

DR. RENTOUL'S EXPENSES FUND.

To the Editors of THE LANCET.

SIRS,—The following is a first list of subscriptions to the fund.

I am, Sirs, yours faithfully,

Gateshead, Jan. 26th, 1896. ALFRED COX, M.B. Durh., Hon. Sec.

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"MADE IN GERMANY."

To the Editors of THE LANCET.

SIRS,—I shall be obliged if you will kindly insert this in your next issue. Some time ago I got a London surgical instrument firm to make me a small capsule for use in aural work. A few months ago an American friend of mine saw me using the capsule and liking it asked me where I had obtained it. I gave him the name of the firm. As he was leaving England altogether in a couple of weeks he was unable to give the order as the firm had not the article in stock. Before going home he went to Berlin for a few days and there saw the same thing in an instrument shop, where it was sold as a native idea. A little later it may appear again in London with a German name attached to it possibly, when, no doubt, it will be looked upon with awe by those who are so fond of German goods.

I am, Sirs, yours faithfully,

Devonshire-street, W., Jan. 22nd, 1897. GRIFFITH C. WILKIN.

PERSISTENT HYALOID ARTERY.

DR. CLARENCE A. VEASEY relates in the *Philadelphia Polyclinic* a case of persistent hyaloid artery extending, as in fœtal life, from the central artery of the retina to the posterior capsule of the lens. The left eye only was affected; it showed eighteen dioptres of myopia and vision amounted only to the counting of fingers at two feet.

Fair Play.—There is nothing illegal or "infamous in a professional respect" in B.'s conduct, so that A. cannot expect the General Medical Council to take cognizance of the matter. In the circumstances described to us B.'s application for the Poor Law appointment was decidedly not graceful, while his call upon A.'s patient with an offer of future services was contrary to all the accepted canons of medical etiquette.

UNFAIR COMPETITION.

WE have received a copy of the *Eastern Daily Gazette* which contains among other "Northern Notes" two paragraphs with reference to the appointment of medical superintendent to the Middlesborough Asylum. The first one says that the asylum is "now approaching completion," and gives the name of a gentleman who has applied for the post of medical superintendent, with an editorial endorsement of his fitness for the position. The second paragraph is a long testimonial from the superintendent of one of the best known asylums in the kingdom where Dr. X—— is at present a resident assistant. We are curious to know how this document could have reached the public press, for it would be manifest to every one that the printing of such strong recommendations of Dr. X—— gives him an unfair advantage over any other competitors who may apply for the post.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 28th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 22	29·36	N.E.	36	35	60	38	33	0·08	Cloudy
,, 23	29·65	N.E.	28	Fzn.	48	33	27	0·06	Cloudy
,, 24	29·95	N.	31	Fzn.	45	37	23	0·02	Cloudy
,, 25	29·59	W.	37	35	62	43	29	0·03	Cloudy
,, 26	29·73	W.	31	Fzn.	62	38	29	...	Fine
,, 27	29·87	WNW	30	Fzn.	55	41	29	...	Hazy
,, 28	30·11	N.W.	34	33	48	39	30	...	Cloudy

During the week marked copies of the following newspapers have been received:—*Rochdale Observer, Dover Telegraph, Portsmouth Times, Hampshire Telegraph, Newcastle Chronicle, South Wales Post, Scarborough Evening News, Bristol Times, Birmingham Post, Hereford Times, Windsor Chronicle, Manchester Guardian, Dundee Courier, Surrey and Hants News, Derbyshire Courier, Cheltenham Free Press, Essex County Standard, Washington Post, Herne Bay Argus, Sheffield Telegraph, Worcester Echo, Times of India, Lincolnshire Echo, Norfolk Weekly Standard, Pioneer Mail, Sussex Daily News, Builder, Liverpool Daily Post, Leicester Post, Western Morning News, Architect, Devon Gazette, Carlisle Express, Yorkshir Post, Brighton Gazette, City Press, Bristol Mercury, Herald (Barnes), Leeds Mercury, Sanitary Record, Reading Mercury, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Le Courrier de la Presse, North Wales Chronicle, Mining Journal, Local Government Journal, Surrey Advertiser, Belfast News Letter, Australasian Medical Gazette, Oswestry Advertiser, Woking Observer, Louth and North Lincolnshire News, Journal des Débats Paris, United Service Gazette, West Middlesex Herald, East Cumberland News, Blandford Express, &c., &c.*

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THYROID FEEDING IN CASES OF STUNTED GROWTH.

On the subject of thyroid feeding in cases of stunted growth Dr. Johann Julius Schmidt contributes an interesting article to the Vienna THERAPEUTISCHE WOCHENSCHRIFT the conclusions in which are supported by statistics and clinical reports. In the course of this communication Dr. Schmidt says:—

"I will add a few remarks regarding preparations of the Thyroid Gland, their doses, accessory symptoms and duration of feeding. Since reading Dr. Ewald's work on 'Disease of the Thyroid Gland,' in which their efficacy is highly praised, I have exclusively used the 'Tabloids' of Burroughs, Wellcome & Co. As experiments on animals point to the fact that moderate doses best accelerate growth I have only given my patients one 'Tabloid' daily.



"I tried Thyroiodin in two cases for several months. I have come to the conclusion, however, that during this time growth did not progress as rapidly as it did throughout the period that thyroid 'Tabloids' were successfully administered.

"I cannot say whether the daily dose of Thyroiodin was too small, or whether 'Tabloids' of Thyroid Gland contain a second important body as active albuminous principle which influences the growth of bone, a contention supported by several authors.

"In order to achieve a full measure of success, the 'Tabloid' feeding must be continued for a year or even longer period. The energy of growth however, which averages 1 cm. per month, seems to decrease in the second year.

"In those cases in which thyroid feeding has been carried out as above described and under the control of a physician, I have been unable to find either symptoms of the so-called thyroidism (nausea, headache, palpitation of the heart, and increase of pulse rate), or other troubles, such as albuminuria or glycosuria.

"I had only observed during the first three to four weeks of thyroid feeding an increase of diuresis, accompanied by the well known decrease of weight, though in a slight degree. However, later I was able to confirm the general improved state of health of all the patients, and an increase in weight corresponding to the general growth of the body.

"I have come to the conclusion that thyroid feeding influences stunted growth favourably. It has, moreover, been proved that even one and a half years' feeding with small doses is without danger to the patient. It seems, therefore, decidedly our duty to try this form of treatment in cases of stunted growth."

Thyroid Gland "Tabloids" (B., W. & Co.), 1½ gr. and 5 gr. are supplied in bottles of 100; the 1½ gr. "Tabloids at 10d., and the 5 gr. "Tabloids" at 2s. per bottle.

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Saxin has been aptly termed "the sweetest thing on earth," being about 600 times sweeter than sugar, and double the sweetness of saccharin. It is perfectly harmless as it undergoes no change in its passage through the digestive system, but simply imparts its delicate sweet flavour to the food or fluid with which it is used. For these reasons it is indicated in such conditions of disease as diabetes mellitus, gout, obesity, glycosuria, &c, in which the patient is debarred from taking sugar and yet retains an intense desire for the sweet flavour to which the palate has, by long use, become accustomed.

Saxin has important qualities which render it superior to other sweetening substances. It is unfermentable and permanent. It operates antiseptically and prevents decomposition. In flavour it is more delicate than any other sweetening agent, and in the shape of "Saxin Tabloids," ¼ gr. each, it provides the maximum amount of sweetening power in the smallest possible space. A small bottle, containing 100 or 200 "Tabloids," can be carried in the vest pocket without the slightest inconvenience, and thus the patient, who must avoid sugar, can have a delicately flavoured, harmless sweetening agent always handy, when at business, or when travelling at home or abroad.



Saxin "Tabloids," ¼ gr., are each equivalent to one lump of best loaf sugar and are supplied in bottles of 100 and 200 "Tabloids" at 7d. and 1s. 1d. per bottle.

CASCARA SAGRADA & BELLADONNA "TABLOIDS" (B., W. & CO.).

A valuable combination containing intestinal stimulant, tonic and laxative ingredients, the formula being:—

Cascara Sagrada Extract	...	...	2 gr.
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Belladonna Extract	...	...	⅓ gr.
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The MEDICAL PRESS, Dec. 16th, says: "The 'Tabloids being sugar-coated constitute a very agreeable form of exhibiting the combination."

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Antifebrin, 2 gr.
Antimony, Tartarated, 1/50 gr.
*Antipyrin, 2½ and 5 gr.
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Arsenious Acid, 1/100, 1/50, and 1/20 gr.
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Bismuth Sub-nitrate, 5 and 10 gr.
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Calomel and Jalap.
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Pepsin and Strychnine.
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Pepsin, Bismuth, and Strychnine.
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†'Zymine' (Fairchild).
†'Zymine' Compound (Fairchild).

* *May be had beautifully coated with pure white sugar.*

† *May be had sugar or keratin coated.*

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The Lettsomian Lectures

ON

DISEASES OF THE NOSE AND THROAT IN RELATION TO GENERAL MEDICINE.

Delivered before the Medical Society of London,

BY F. DE HAVILLAND HALL, M.D., F.R.C.P. LOND.,

PHYSICIAN TO THE WESTMINSTER HOSPITAL, AND JOINT LECTURER ON THE PRINCIPLES AND PRACTICE OF MEDICINE IN THE WESTMINSTER HOSPITAL MEDICAL SCHOOL.

LECTURE I.[1]

Delivered on Feb. 1st, 1897.

MR. PRESIDENT AND GENTLEMEN,—When your Council did me the honour of requesting me to deliver the Lettsomian Lectures my first thought was, Had I anything worthy of presentation before so distinguished an audience? It then occurred to me that between the position of the Medical Society of London and my own there was a certain resemblance. The society is always ready to receive papers on general medicine; at the same time it welcomes with equal pleasure the contributions of those of its Fellows who have devoted themselves to special branches of practice. My position is this: I am physician to a general hospital, and consequently all forms of disease come under my care; at the same time, in virtue of having held for nearly twenty years the post of physician in charge of the Nose and Throat Department at the Westminster Hospital, I may be considered to have more or less special knowledge of the diseases of the nose and throat. This being our respective positions I thought that I could not do better than submit for your acceptance some reflections on the relation existing between diseases of the nose and throat and general medicine, as in the dual capacity in which I stand I am perhaps better able to see the two sides of the question than either the pure specialist or the general practitioner

There are two chief methods of treating the subject I have chosen. You can either briefly run over the principal general diseases and point out the nose and throat complications which occur during their course, or you can start with the various diseases of the nose and throat and then mention the conditions under which they may be met. I have selected the former plan as being the more suitable for my purpose. I therefore propose to pass in review some of the principal general and local diseases of the body and describe the various affections of the nose and throat which occur during their course. If you will pardon a digression I should like to take this opportunity of emphasising the importance of the laryngoscope as a means of diagnosis and treatment. I often hear it compared with the ophthalmoscope, and I have heard students say that they have not time to perfect themselves in both, so they have chosen the ophthalmoscope. For the general practitioner, however, there can be no sort of doubt that the laryngoscope is immensely more useful than the ophthalmoscope. I am ready to admit that the ophthalmoscope is very often useful in settling a diagnosis, but as far as I can learn there are only two conditions in which the ophthalmoscope is essential to a diagnosis—viz., the presence of optic neuritis as indicative of some organic disease within the brain and the occurrence of retinitis as an early sign of renal disease. Its use from a therapeutic point of view is extremely limited. On the other hand, I might well occupy the whole of one of these lectures in describing the use of the laryngoscope in the diagnosis and treatment of disease, and I know of no speciality in which even a moderate amount of knowledge is so sure of a good harvest as that of laryngoscopy. The general practitioner who has made himself familiar with the laryngoscope has largely increased his sphere of usefulness. Far be it from me to run down the ophthalmoscope; on the contrary, I hope that the time will come ere long when no one will be licensed to practise unless he can show that he is capable of using the laryngoscope, ophthalmoscope, and other instrumental means of diagnosis. The use of the nasal speculum and rhinoscope is so closely connected with that of the laryngoscope that the student who learns how to use the latter will, as a matter of course, employ the former. This digression will, I hope, be pardoned, but I felt it a duty to speak plainly on the subject, as, owing to the deficiency in the system of examination as now carried on, students are not induced to perfect themselves in the use of the laryngoscope. Before entering upon a description of the nose and throat affections of the acute specific diseases I would like to accentuate the extreme importance of the nose and throat as the chief portals of entrance of the poisons, whatever they may be, which give rise to these diseases. Evidence is gradually being accumulated which points to the conclusion that people who suffer from nasal affections are more liable to contract infectious diseases, especially diphtheria, than healthy persons. In erysipelas of the face it is very frequently found that there is some chronic nasal affection and that the erysipelatous blush started from the nose. This I have often been able to demonstrate in hospital cases under my care. If we except water-borne diseases, such as cholera and dysentery, almost all the other infectious diseases are conveyed by the air, and hence the morbific agent usually enters by way of the nasal cavities and pharynx, and here it proliferates during the first stage of incubation. Two cases of artificially produced disease of the nose brought forcibly before me the risk of operative procedures on the nasal mucous membrane in persons exposed to infectious diseases. In both these cases I had used the galvano-cautery for the cure of hypertrophic rhinitis, and in both symptoms of scarlet fever manifested themselves two or three days after the application of the cautery. The first case might be merely a coincidence, but the second case was that of a medical man who, as house physician at a London hospital, had been constantly exposed to the infection of scarlet fever without effect until I unluckily made a way, as I believe, for the entrance of the germs through the abraded mucous membrane of the nose. The practical conclusions that I would draw from the above is the advisability of abstaining from operative procedures on the nasal mucous membrane during epidemics of influenza and other infectious diseases, as well as in the case of persons liable to be brought in contact with such diseases. I have also abstained from operating on medical students and others whose duties take them into the dissecting or post-mortem rooms. Lacunar tonsillitis occasionally follows intra-nasal cauterisation; I have seen it in one or two cases of my own, and numerous instances are to be found recorded in the various special journals. The *rôle* played by the tonsils as a point of entrance of germs into the system is now becoming more generally recognised. Gerhardt has termed the tonsil a physiological wound—an inlet guarded, however, by leucocytes which protect the system against the entrance of these germs. If from any reason the energy of the leucocytes is diminished or the tonsil is in an unhealthy condition then the germs of diseases—such as scarlet fever, diphtheria, and other infectious diseases—gain access to the system. Tubercle bacilli can probably pass through the tonsils, and, without giving rise to any disturbance in them, may produce tuberculosis of the glands of the neck. Staphylococci, streptococci, and other micro-organisms can also find their way into the system through the tonsils. Adenoid vegetations in the naso-pharynx have a similar action to the tonsils in this respect, and there can be little doubt that one of the beneficial results of Wilhelm Meyer's discovery will be a lessened amount of danger in cases of scarlet fever and diphtheria and especially a great diminution in diseases of the middle ear.

As I have already pointed out, in a large proportion of the infectious diseases the morbific element is conveyed by the air and consequently usually enters the system *viâ* the upper respiratory tract; hence it was to be expected that this region would show signs of irritation. The typical example of this is diphtheria, in which the disease in the first instance is a purely local one, consisting of a fibrinous exudation caused by the Klebs-Löffler bacillus, and it is not until the toxins produced by these bacilli in their growth have been absorbed that we have constitutional symptoms. Most of the infectious diseases give rise to a catarrhal condition of the air passages. This is especially the case in

[1] Lectures II. and III. will be delivered on Feb. 15th and March 1st respectively.

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measles. In some the engorgement of the nasal mucous membrane finds relief in epistaxis, so common a prodromal symptom in enteric fever. The naso-pharynx may be the starting-point of some diseases; notably, I believe, is this the case in influenza. I have already discussed the *rôle* of the faucial tonsils as the starting-point of scarlet fever, diphtheria, &c. The larynx deserves special attention in diphtheria, small-pox, and enteric fever. And, lastly, it should be remembered that all diseased conditions of the mucous membrane of the nose, naso-pharynx, pharynx, and larynx, whether merely local as an abraded surface, or as a part of a general disease such as scarlet fever, are liable to be accompanied by a secondary diphtheritic inflammation, and that this is a very grave complication, especially in the case of the acute specific fevers. I will now proceed to describe at greater length the changes seen in the nose and throat as a result of the acute infectious diseases.

SMALL-POX.

This disease is occasionally ushered in with catarrhal symptoms—e.g., sneezing, epistaxis, intolerance of light, lacrymation, sore-throat with redness and some swelling of the palate and tonsils, and hoarseness, symptoms which it is important to emphasise, as they may cause the disease to be mistaken for measles. In the malignant form of small-pox there may be profuse epistaxis. The pustules of small-pox have been seen in the nostrils, mouth, pharynx, and larynx, they have even been noticed as low down as the bronchia of the second or third order. The eruption may occur on any part of the mouth; salivation is present and is very severe in the confluent form of the disease.[2] If the soft palate is affected there is usually much inflammatory swelling and an abscess sometimes results. Owing to the moisture of the mouth the pocks seldom form well-marked pustules. At first they appear as whitish-grey slightly elevated spots, which soon soften and form superficial ulcerations surrounded by a red zone. The larynx in small-pox may be the seat of an inflammatory process causing congestion of the mucous membrane, or there may be a papular or pustular eruption giving rise to but little discomfort. In severe cases, however, about from the ninth to the twelfth day great swelling of the laryngeal mucous membrane may occur, and suffocative attacks due to œdema of the epiglottis and ary-epiglottic folds come on. Trousseau records three cases in which the progress of the disease was so rapid that death occurred before relief could be obtained. In a case of hæmorrhagic small-pox Morell Mackenzie[3] found "ecchymotic spots on the under surface of the epiglottis and on the mucous membrane over the arytenoid cartilages," and Gevaert[4] has described a case of sub-mucous hæmorrhage in the ary-epiglottic folds forming two thick sacs and considerably interfering with access to the larynx. In some cases ulceration extends down to the cartilages causing necrosis, and death may result from impaction of a piece of extruded cartilage in the glottis; or, owing to more or less destruction of the framework of the larynx and cicatricial contraction, stenosis may occur even after the lapse of many years. I knew one patient in whom tracheotomy had to be performed thirty-eight years after the attack of small-pox, and during the whole of this period she was the subject of a chronic laryngeal affection. If the crico-arytenoid joint becomes involved in the inflammatory mischief ankylosis may occur, and the patient will recover with a permanently fixed cord; this condition, rather than paralysis, is probably the explanation of two cases described by Morell Mackenzie[5] in which he says permanent paralysis of the adductor of a vocal cord followed small-pox. As in the other acute specific diseases, the excoriated condition of the mucous membrane of the upper air passages renders it vulnerable to the bacillus of diphtheria, hence a diphtheritic exudation may appear on the fauces, or the patient may have the signs of a membranous laryngitis. This form of laryngeal affection usually begins about the tenth day and runs a rapid and fatal course. Fortunately it is a rare complication. Dr. Ricketts, medical superintendent of the Small-pox Hospital Ships, Metropolitan Asylums Board, writes to me: "I remember only two cases which I regarded as diphtheria (in about 5000 cases). In a few more I have seen some membranous exudation on the fauces. But I have in no case made a bacteriological examination. In fact, the cases I speak of occurred some little time back, before I had the means of making such an examination."

VARICELLA.

According to M. Rondot[6] varicella is often accompanied by a mild sore throat, and he has been able to verify the existence of a varicellous eruption on the buccal mucous membrane even in the absence of a cutaneous manifestation. In this case the diagnosis is based on the objective character of the ulceration of the mouth, on the concomitant sore-throat, and the presence of an epidemic of varicella. Whatever may be thought of a varicellous eruption limited to the mouth there is no doubt that in typical cases of varicella vesicles with reddened bases may be seen on the palate; on the lips, tongue, and cheeks, small round, superficial ulcers occur, seemingly the result of the breaking down of a vesicle—in other words, the eruption of varicella may occur on mucous membranes as well as on the skin. I would lay stress on this point, as Osler and some other writers do not mention the possible occurrence of the buccal eruption. Varicella resembles small-pox inasmuch as the eruption may occur, though very rarely, in the larynx. Marfan and Hallé[7] report two cases. The first case, a child aged three years, was admitted into hospital on account of suffocative attacks. In spite of the absence of a membrane antitoxin was injected. Bacteriological examination, however, showed the absence of the bacilli of diphtheria. Tracheotomy was necessary and the eruption of varicella was then seen. The patient recovered. In the second case the child died from broncho-pneumonia and ulceration of the vocal cords was found.

MEASLES.

The sneezing and running from the nose which are the earliest premonitory symptoms of measles indicate the existence of an acute nasal catarrh. The discharge is at first clear and watery, but soon becomes muco-purulent and often excoriates the upper lip. As a rule the nasal catarrh disappears with the decline of the rash, but under unfavourable hygienic conditions in badly nourished children the discharge may continue and be the commencement of a chronic purulent rhinitis. Epistaxis may occur in the prodromal stage of measles, and in rare cases the loss of blood may be so great as to threaten life. According to Wolff[8] the accessory cavities of the nose are always affected in measles, sometimes with catarrhal inflammation, at others with purulent. This statement must, however, be received with a considerable amount of caution, especially with regard to purulent inflammation, in view of the rarity of acute affections of the nasal sinuses. On the second or third day of the disease hyperæmia of the roof of the mouth and soft palate is to be seen, followed by an eruption of small red points or patches giving a stippled redness to the parts. The term "endanthem" has been applied to this appearance. Inasmuch as this eruption is almost invariably present, and as it precedes the rash on the skin, it is of diagnostic importance where there is an unusually prolonged prodromal stage and in dark races of mankind in whom it is very difficult to recognise the cutaneous eruption. In delicate children severe stomatitis and even cancrum oris may develop; I remember Dr. Gee impressing on me when a student that measles was the most common cause of cancrum oris. The prognosis in these cases is very grave. The tonsils and mucous membrane of the pharynx generally are inflamed and swollen; the inflammatory mischief occasionally spreads up the Eustachian tube and gives rise to earache or even otitis media, but the latter is very rare in comparison to what happens in scarlet fever. Catarrh of the larynx is as much a part of the disease as nasal catarrh. The hoarseness and constant, irritable cough, which are so frequently met with in the first stage of the disease, point to the implication of the larynx. Von Ziemssen[9] speaks of having repeatedly seen a deep uniform redness of the laryngeal mucous membrane, with a yellow-reddish colour of the vocal cords. In rare cases measles comes on with the symptoms of laryngeal obstruction, and as the rash comes out these subside. Owing to the tendency to spasm in children the cough is not infrequently of a croupy nature. In the severe forms of laryngitis ulceration of the mucous membrane and even an abscess may occur, or death may in rare cases be due to œdema of the larynx. Dr. Major[10] of

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[2] Gibb: Diseases of the Throat, p. 285.
[3] Diseases of the Throat and Nose, vol. i., p. 191.
[4] Centralblatt für Laryngologie, vol. xii., p. 350.
[5] Loc. cit., vol. i., p. 192
[6] Revue de Laryngologie, &c., 1890, p. 31.
[7] Centrallblatt für Laryngologie, vol. xii., p. 499.
[8] Ibid., vol. xi., p. 961.
[9] Cyclopædia of Medicine, vol. iv., p. 201, English translation.
[10] New York Medical Journal, 1887, vol. ii., p. 347.

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Montreal has recorded a case of complete aphonia without the slightest embarrassment of respiration coming on during an attack of measles of more than usual severity. On laryngoscopic examination the left arytenoid was found fixed at full inspiration and completely immovable. There was redness about the joint and external tenderness. The larynx was otherwise normal.

Membranous laryngitis is an infrequent but very dangerous complication of measles. According to Morell Mackenzie [11] it is even more fatal than the corresponding scarlatinal affection, 80 per cent. of the cases proving fatal. This complication is, in the majority of cases, true diphtheria. "It usually supervenes during the eruptive stage, often just when the rash is fading; sometimes it arises later. The symptoms of laryngeal obstruction develop with great rapidity and are accompanied by a rise of temperature." [12] Dr. H. Smith [13] has recorded the occurrence of three cases of paralysis of the intrinsic muscles of the larynx. The paralysis set in within a few days after the subsidence of the fever. Loss of phonation was the only symptom. There was no congestion or inflammation of the larynx present. The first case lasted about ten days (without any treatment). The second and third cases lasted about six days treated with strychnine. I have seen aphonia due to paresis of the thyro-arytenoid muscles coming on after measles and cured by strychnine and faradaisation.

RÖTHELN: GERMAN MEASLES.

In this disease there is frequently slight nasal catarrh, but not to be compared to what is met with in measles. A sore-throat which resembles the early stage of the scarlatinal sore-throat is usually present; indeed, it was on this account that rötheln was originally regarded as a hybrid between scarlet fever and measles—i.e., it was said to have the sore-throat of scarlet fever and the rash of measles. As a rule there is only a moderate amount of injection of the throat, with some swelling of the tonsils; there is hardly ever any ulceration and never any sloughing. I would insist on the constancy of sore-throat as a symptom of German measles, as Osler in his otherwise admirable text-book on medicine makes no mention of its occurrence.

SCARLET FEVER.

One of the most important of the recent advances in the treatment of infectious diseases is the attention directed to the condition of the nose and naso-pharynx. In no disease is this more necessary than in scarlet fever. In severe forms of this disease the nostrils and naso-pharynx may become affected by extension from the pharynx. The Eustachian tubes opening into the naso-pharynx participate in the inflammatory mischief, which spreading up the tubes gives rise to otitis media and all the dangers to life and hearing therewith connected. At the commencement there may be noticed a catarrhal condition of the nasal mucous membrane, but the discharge rapidly becomes muco-purulent and very acrid, so that it excoriates the upper lip. In cases of a malignant type the mucous membrane may slough in places, and necrosis of bone and cartilage may result. In scarlet fever the streptococci of pus develop in great numbers in the mucous discharge; cervical adenitis and abscess, purulent otitis media, endocarditis, pleurisy, &c., are due to their absorption; hence the importance of local treatment.[14] In some cases epistaxis occurs at the commencement of the disease; when it occurs towards the end or during convalescence it is to be attributed rather to the kidney condition than to the fever. If a nasal discharge comes on during convalescence the secretion should be submitted to bacteriological examination, as post-scarlatinal diphtheria may attack the nasal passages primarily or exclusively. As in measles, the accessory sinuses, according to Wolff,[15] are always affected, the inflammation being sometimes of a catarrhal nature; in other cases suppuration may occur. I have already expressed my doubts as to the constant affection of the sinuses in measles, and I would repeat them again in respect to scarlet fever. It is quite unnecessary for me in this assembly to enter upon a description of the condition of the throat in scarlet fever. In passing, however, I should like to direct your attention to a very important practical point which, I think, is often overlooked, resulting in the occurrence of preventable disease and death. I cannot do better than quote Dr. Dukes, the able physician to Rugby School: "There is a class of sore-throats—to all appearance often only simple acute tonsillitis, while at others having a membranous or sloughy appearance and with a complete absence of eruption on the skin—occurring in those who have already had scarlatina. This kind of sore-throat, however, is capable of passing on scarlatina to an individual who has not already been affected by it. Scarlatina is often spread extensively by this means; for, if the patient has suffered previously from scarlatina, these sore-throats are looked upon as simple non-infectious sore-throats, and are consequently not carefully isolated for three or four days as they should be." [16] The occurrence of a membranous inflammation of the throat during the course of scarlet fever has attracted much attention of late years. It is now pretty generally agreed that a membrane may present itself at two periods of the disease [17]—(1) during the acute stage—i.e., during the period of eruption; (2) during convalescence or even later. 1. The membrane which occurs in the first period, though it may be whitish-grey, thick and adherent, and to the naked eye hardly at all to be distinguished from a true diphtheritic membrane, is proved by bacteriological examination to be due to streptococci and not to contain the Klebs-Löffler bacillus. It may also be distinguished clinically from diphtheria by not speading to the larynx and by not recurring locally. Dr. Sidney Martin [18] suggests that the throat already attacked by scarlet fever poison is rendered less capable of resisting the invasion of other organisms. 2. The membrane met with in the second period contains the Klebs-Löffler bacillus, and as this is accompanied by the presence of streptococci the disease represents a very grave combination. It is, of course, possible that diphtheria may occur as a complication of scarlet fever during the early stage, but this is, according to Dr. Washbourn,[19] a very rare mishap; the only way of arriving at a correct diagnosis is a bacteriological examination. As regards the method of infection, Dr. Goodall [20] is of opinion that the introduction of diphtheria into the Asylums Board's fever hospitals is generally due to infection from mild cases of that disease inadvertently admitted as scarlet fever. He thinks that the susceptibility of scarlet fever patients to the infection of diphtheria has been greatly exaggerated, for the great majority of those exposed to it in the observation ward, when the diagnosis was clinical only, did not contract it. It would appear that scarlet fever alone is not the predisposing cause to this mixed infection. According to Dr. Goodall "the prevalence of post-scarlatinal diphtheria has closely followed that of the primary form, and its incidence had not been materially higher among the scarlet fever patients in the hospitals than among the juvenile population of the metropolis of like ages." This would seem to suggest that an entrance for the diphtheritic bacillus is facilitated by the presence of some other organisms, possibly streptococci. Laryngeal mischief in connexion with scarlet fever apart from diphtheria is rare. Dr. Washbourn,[21] however, states that he has seen cases of ulceration of the larynx in scarlet fever unaccompanied by membranous exudation. Mr. Pepper [22] has recorded a case, of which the heading of the paper he read before the Clinical Society gives an epitome: "Scarlet fever; secondary sore-throat on fifty-fourth day; severe bleeding on fifty-eighth; ligature of left common carotid on fifty-ninth; hoarseness, followed by sudden aphonia, on same day as hæmorrhage; bursting of retro-pharyngeal abscess after application of ligature; recovery, with fixation of left vocal cord." In reference to the laryngeal condition, Mr. Pepper writes: "The sudden change in the voice from huskiness to complete aphonia came on prior to the operation and must have been due either to œdema of the mucous membrane of the larynx or to stretching of the vagus nerve from the extensive extravasation into the tissues of the neck." Dr. Mahomed examined the patient when he was convalescent and reported that the left cord was still almost completely fixed, and added, "Whether this fixation is due to paralysis or to inflammatory swelling I am by no means certain; I am inclined to think the latter." To me the history of the case clearly points to

[11] Diseases of the Throat and Nose, vol. i., p. 190.
[12] Goodall and Washbourn: A Manual of Infectious Diseases, p. 174.
[13] Brit. Med. Jour., 1892, vol. ii., p. 1108.
[14] Archives of Pediatrics, Jan. 2nd, 1894.
[15] Centralblatt für Laryngologie, vol. xi., p. 961.
[16] Health at School, p. 292.
[17] Transactions of the Clinical Society, vol. xxvii., p. 84.
[18] THE LANCET, Jan. 20th, 1894, p. 161.
[19] Brit. Med. Jour., 1894, vol. i., p. 130.
[20] THE LANCET, March 14th, 1896, p. 710.
[21] THE LANCET, Jan. 20th, 1894, p. 151.
[22] Transactions of the Clinical Society, vol. xvi., p. 21.

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inflammatory mischief in the neighbourhood of the left crico-arytenoid joint, causing arthritis and subsequent ankylosis of this joint. Gevaert[23] of Ghent mentions a case of scarlatinal angina in which, on account of stenosis of the larynx and threatened asphyxia, tracheotomy had to be performed.

WHOOPING-COUGH.

Whooping-cough almost invariably begins with a catarrhal stage, the nasal mucous membrane sharing in the catarrhal condition. During the paroxysmal stage epistaxis is a common symptom, and so far from being a grave one it often seems to relieve the patient. There is a difference of opinion as to whether there are any constant changes to be seen in the larynx during life. Von Herff,[24] while suffering from an attack, made a series of examinations upon his own larynx. He noted in the first stage a slight catarrh of the larynx, which became very intense during the spasmodic stage; the vocal cords, however, were not affected. The hyperæmia extended into the trachea. During every paroxysm a pellet of mucus could be seen on the posterior wall of the larynx on a level with the glottis; when this was expelled the attack ceased.

INFLUENZA.

Influenza is essentially a catarrhal disease—that is to say, the micro-organism, almost certainly that described by Pfeiffer, seems to attack the mucous membrane in the first instance; in some cases its effects are almost confined to them, and in nearly every case they experience the chief brunt of the disease. Very curiously Landgraf[25] states that he has seen rhinitis only once in 216 cases of influenza. He adds that this is the more surprising as in text-books it is reckoned as one of the most common symptoms of influenza. The only explanation that seems forthcoming is that Landgraf would not class a catarrhal state of the nose as rhinitis, but reserves the latter for severe inflammatory condition of the nose. The nose, as being the chief portal of the entrance of the specific bacillus, which is taken in with the inspired air, is early affected, and the excessive sneezing, marked interference with nasal respiration, and profuse running from the nose testify to the violence of the attack. In many cases the acuteness of the catarrh causes a certain amount of hæmorrhage from the nose. Occasionally this has been of an alarming nature, the bleeding occurring from the posterior third of the nasal cavity; in some cases, indeed, a special hæmorrhagic tendency seems to have developed during the course of the disease. A frequent sequel of the rhinitis of influenza is some alteration in the sense of smell. Usually it takes the form of simple loss of the sense of smell—anosmia. More rarely the anosmia is accompanied by perverted olfactory sensations—parosmia. I have met with all degrees of anosmia from slight impairment of the sense of smell to its complete loss. As a matter of course the loss of the sensation of smell was accompanied by loss of so much of the sense of taste as depends on flavour. I have no note as to the loss of gustatory sensations. One of my patients was a woman, twenty-eight years of age, who originally consulted me for debility, neuralgia, and violent fits of sneezing. She improved under the administration of iron and arsenic; I did not adopt any local treatment for the nose. In March, 1895, she had a mild attack of influenza which was followed by cessation of the attacks of sneezing, but she lost her sense of smell. The latter has persisted up to the present in spite of treatment. This case would seem to suggest that the inflammatory condition of the nasal mucosa led to changes both in the filaments of the fifth nerve in the nose and also to those of the olfactory, in the one case abolishing the hyperæsthesia and thus stopping the sneezing, and in the other case annihilating the normal sensibility of the nerve and causing anosmia. The accessory cavities of the nose are very liable to be affected in influenza, the intense frontal headache being due in many cases to extension of the catarrhal process from the nose to the frontal sinuses. In one patient under my care the pain and feeling of weight and fulness persisted so long after the influenzal attack that I thought it would have been necessary to adopt surgical measures to obtain relief; the patient, however, recovered without operation. Dr. Felix Semon[26] has narrated his personal experience of acute inflammation of the left antrum of Highmore after influenza, and many similar cases have been recorded. Cases of antral disease coming on in this acute manner respond much more quickly to treatment than those developing more gradually. In many cases the influenzal attack begins with symptoms referred to the naso-pharyngeal space, and it appears to be the starting-point of a large number of local affections coming on during influenza, notably otitis media and its result, and it may be the centre of the systemic infection. The patient complains of severe headache extending to the back, difficulty in breathing through the nose, and the sensation of a foreign body, variously referred to the nose or throat, so that the patient is constantly hawking or trying to clear the throat. On making a rhinoscopic examination the mucous membrane of the naso-pharynx will be found much swollen and covered in places with a viscid secretion; in exceptional cases I have seen follicular inflammation of the pharyngeal tonsil. Shelley[27] has called attention to the existence of a vesicular eruption on the palate as a sign of influenza. Acute pharyngeal catarrh is a very common condition in influenza; the mucous membrane is of a purplish colour and œdematous, and in consequence of the swelling and the muscular infiltration pain and difficulty in swallowing usually exist. The faucial tonsils, like the pharyngeal, may be the seat of follicular inflammation with or without peri-tonsillar mischief; they may be covered with a pultaceous exudation. On more than one occasion I have seen influenza start in a household with one inmate being attacked with what was apparently an ordinary lacunar tonsillitis, and it was only the fact of other members of the family speedily succumbing to one of the more ordinary varieties of influenza that cleared up the diagnosis in the first case. Occasionally the inflammatory mischief runs a very severe course. In one patient I saw in consultation with Dr. Penny the condition was that of a phlegmonous pharyngitis, as there was great swelling of the pharynx followed by suppuration, and the urine contained much albumin. This patient recovered. In two other cases a membranous exudation formed on the soft palate. It resembled in some respects a diphtheritic membrane, but unfortunately in neither case was a bacteriological examination made. In both patients the urine was albuminous. Both these patients died. One of the most common of the complications of influenza is laryngitis of all degrees of severity. In the mildest cases the larynx is seen to be the seat of a slight catarrh, the symptoms being a troublesome, irritable cough, difficult to cure, with hoarseness or even loss of voice. In more severe cases the vocal cords are intensely injected, the sputa may be tinged with blood, and occasionally the expectoration of blood has been so profuse as to warrant the term of hæmorrhagic laryngitis being applied. As I have already stated when speaking of influenzal epistaxis, a hæmorrhagic tendency is distinctly developed in some cases of influenza. The presence of dysphagia is said to differentiate the hæmorrhagic laryngitis of influenza from the ordinary forms of hæmorrhagic laryngitis. This statement requires confirmation.[28] Several authorities have noted infra-glottic swelling in cases of influenzal laryngitis. Fraenkel[29] regards as characteristic of this disease a fibrinous infiltration of the vocal cords, giving a whitish appearance in places to the cord. This is followed by a superficial loss of epithelium. Ulceration of the vocal cords, apart from any fibrinous exudation, has been described in influenza. The ulcers are quite superficial, occur in the anterior part of the cords, and usually heal rapidly. In severe cases swelling of the ary-epiglottic folds, occasionally amounting to œdema of the larynx, has been noted. Abscess of the larynx has been met with as a complication of influenza. Schaeffer[30] records a case in which abscesses developed in three different parts of the larynx; tracheotomy was required on account of dyspnœa, the cannula was able to be removed after eight days, and the patient made a good recovery.

The most common paralytic affection of the muscles of the larynx met with in influenza is paralysis of the adductors and tensors of the cords, giving rise to loss of voice. Lublinski[31] has recorded one case of paralysis of the posterior crico-arytenoid on the left side which recovered in the fourth week, and I have seen bilateral abductor paralysis

[23] Centralblatt für Laryngologie, vol. xii., p. 160.
[24] Medical Record, March 5th, 1887.
[25] Revue de Laryngologie, 1890, p. 499
[26] Brit. Med. Jour., 1894, vol. i., pp. 237, 408, 574, and 681.
[27] Ibid, 1893, vol. i., p. 79.
[28] Revue de Laryngologie, 1890, p. 613.
[29] Centralblatt für Laryngologie, vol. vii., p. 38.
[30] Deutsche Medicinische Wochenschrift, 1890, No. 10.
[31] Centralblatt für Laryngologie, vol. xii., p. 136.

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follow a severe attack of influenza. Kuttner[32] showed at the Berlin Laryngological Society a woman, fifty-four years of age, who had during an attack of influenza paresis of the soft palate and muscles of the posterior wall of the pharynx on the left side and paralysis of the corresponding cord. He regarded it as a case of recurrent paralysis of neuritic origin.

ENTERIC FEVER.

In enteric fever there is a tendency to a catarrhal state of the mucous membranes, and the pituitary membrane suffers with the others. Two symptoms met with in enteric fever are due to the catarrh of the nose—viz., the deafness which results from extension of the catarrhal process to the Eustachian tubes and their consequent occlusion, and epistaxis. Epistaxis is so common a symptom at the commencement of enteric fever that, given a young adult who is feverish and has had an attack of nose bleeding, the possibility of enteric fever should be borne in mind. Epistaxis is most frequent in the first week of typhoid fever, on the second or third day. As a rule it is of no prognostic significance, but occasionally the loss of blood has been so excessive as to destroy life. Devic[33] states that buccal ulceration is fairly common in enteric fever. The ulceration is always superficial, oval or round in shape, with regular and not undermined margins. It occurs most frequently on the anterior pillars of the fauces. The lateral aspect of the tongue, the anterior surface of the soft palate, and, lastly, the tip of the tongue come next in order of frequency. The ulcers may be red or yellowish-red, and are frequently covered with mucus, but a false membrane never occurs. As there are usually no symptoms the ulceration must be specially looked for in order to be recognised. According to Tripier these ulcers run an absolutely parallel course with the intestinal lesion; he therefore considers them of great value as a guide to the condition of the intestines. Devic has been able in three cases to predict a relapse owing to the fact that, though the patient had improved and the temperature was lower, there was no attempt at cicatrisation of the buccal ulceration. He has met with this condition in about one-sixth of the cases of enteric fever; they do not in themselves affect the prognosis. They are best treated by mild antiseptic lotions; caustics are unnecessary. At the commencement of enteric fever there may be some erythema of the pharynx and enlargement of the tonsils, but there is nothing characteristic. Dr. Gee[34] says: "Sore-throat attends the first few days of typhoid fever with a frequency which is remarkable. Hereby for a time perplexities in diagnosis may occur." He regards it as a necessary part of the febrile state rather than a symptom of the specific fever. Ulceration of the pharynx has been noted in exceptional cases. According to Morell Mackenzie[35] an herpetic eruption is occasionally seen on the mucous membrane of the pharynx and mouth, accompanied by pain in deglutition. As in the other acute specific diseases, a secondary diphtheritic deposit may occur on the fauces of patients suffering from typhoid fever. It usually occurs during the third week, and is a serious and fatal, but fortunately rare, complication. Out of six cases mentioned by Oulmont five terminated in death, and Peter states that it has been fatal in all the instances he has met with.[36] Clinically, the laryngeal changes in typhoid fever may be considered according as to whether they occur as a complication of the fever or whether the symptoms they present are so severe as to mask the underlying disease. Of the first variety laryngitis is the representative; a mild form, characterised by slight injection of the larynx and increased cell proliferation, is fairly common in the second and third weeks of the disease. Landgraf[37] has several times seen yellow patches in the larynx formed by colonies of staphylococcus pyogenes. A more severe form may occur acutely during the third week of the fever, or it may show itself in a chronic form during convalescence. During the first two weeks of typhoid fever there is often reason to suspect a catarrhal condition of the larynx from the patient's voice and the signs of catarrh of throat and chest, but it is usually not until the third week that the severe symptoms present themselves. These are hoarseness and feebleness of voice, dyspnœa (chiefly affecting inspiration, expiration being easy), and pain and difficulty in swallowing. Laryngoscopic examination is naturally difficult in patients in the third or fourth week of typhoid fever, but if practicable swelling of the arytenoids and of the ary-epiglottic folds and some ulceration are the conditions most likely to be recognised. Tracheotomy is generally necessary on account of the increasing dyspnœa. Death may be due to a laryngeal ulcer spreading down into the connective tissue and giving rise to subcutaneous emphysema. Fagge and Pye-Smith mention cases of this sort recorded by Wilks and Ziemssen. There is an interesting case reported by Dr. Parsons,[38] in which the emphysema occurred after tracheotomy had been performed, death following about fourteen hours later. At the post-mortem examination œdema of the larynx or purulent infiltration of the mucosa, together with more or less chondritis, are generally found. The chronic variety most frequently occurs during convalescence, or it may not be noticed until recovery is apparently complete. The patient presents the usual signs of laryngeal stenosis; sudden death may be caused by œdema of the larynx or impaction of a portion of necrosed cartilage in the glottis. If the urgency of the dyspnœa necessitates tracheotomy the cannula has generally to be worn permanently, as destruction of the cartilage leads to collapse of the larynx. Even if recovery takes place without tracheotomy, trouble in connexion with the voice and breathing may result from the cicatrisation of the ulcerated parts. I have recently had under my care a man who suffered from typhoid fever with laryngeal complication in 1856. In this case the ventricular bands were thickened, the left vocal cord was immobile in the cadaveric position, and there was thickening about the crico-arytenoid joint, and the outward movement of the right vocal cord was somewhat interfered with, but as the cord crossed the median line it came nearly in contact with its fellow, so that the voice, though feeble, was fairly clear. There was no dyspnœa except on great exertion. This was an example of how good a recovery may ensue even in a severe form of typhoid laryngeal mischief.

I now propose to describe another class of cases to which the name of laryngo-typhoid has been applied in which the poison of typhoid fever is at the onset focussed, as it were, upon the larynx, so that the symptoms of the local affection may, up to the end of the first week, so completely mask the underlying febrile state that it is not until the appearance of the eruption and other characteristic symptoms of typhoid fever that the diagnosis can be made with any degree of certainty. A typical case is one recorded by Gerhardt.[39] A man, aged eighteen years, "has been subject to hoarseness and cough with the slightest colds. On Dec. 24th, 1877, he was exposed to severe cold and wet. This was followed by severe chills, fever, pain in the throat, and cough with mucous expectoration. The voice was affected immediately; soon he became hoarser; when he entered the hospital he was completely aphonic. In swallowing there was severe, and on attempting to speak slight, pain in the throat. From the first he had headache, dizziness, and debility, soon after also hardness of hearing. On the 28th he took to his bed. The nights were restless and disturbed by dreams. On Jan. 1st, 1878, several copious bleedings from the nose occurred. On the 2nd he entered the hospital with fully developed symptoms of typhoid fever, particularly enlargement of the spleen, and the characteristic roseolar eruption." The laryngoscopic examination revealed swelling and injection of the epiglottis with an extravasation of blood the size of a pin's head. The laryngeal mucous membrane generally was in a similar condition, and there were dark extravasations of blood over the vocal processes. The neighbouring lymphatic glands were swollen and tender. Ulcers eventually formed on the epiglottis and arytenoid cartilages. The fever ran a normal though severe course. The patient left the hospital on Feb. 13th with a good voice; the ulcers were entirely cicatrised, and strength was completely restored. A series of five cases reported by Dr. Watson Williams[40] is important as pointing to the possibility of typhoid fever being communicated by the breath. This method of communication is, of course, most likely to occur in cases af laryngo-typhoid, hence special prophylactic precautions should be taken in these cases. Patients

[32] Ibid., vol. xii., p. 135.
[33] Brit. Med. Jour., 1896, vol. i., epitome 213. See also Vourviller, Centralblatt für Laryngologie, vol. vii., p. 13.
[34] St. Bartholomew's Hospital Reports, vol. x., p. 12.
[35] Diseases of the Throat and Nose, vol. i., p. 192.
[36] Morell Mackenzie, op. cit., p. 193.
[37] Berliner Klinische Wochenschrift, 1889, No. 14
[38] Brit. Med. Jour., Jan. 18th, 1896.
[39] Archives of Laryngology, vol. i., p. 121.
[40] Brit. Med. Jour., 1894, vol. ii., p. 1353.

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with any previous tendency to laryngeal affections seem to be more vulnerable to this form of typhoid fever than others; this was the case in Gerhardt's patient, and also in Dr. Watson Williams's first patient.

Shortly after writing the above a man, aged forty-five years, was admitted under my care into the Westminster Hospital from the throat department. On admission his temperature was 99 4° F. and rose the same evening to 103°. The nasal mucous membrane was dry and covered with crusts, the vocal cords were much congested, thickened, and irregular, and covered with inspissated mucus. The patient had a cough, was very hoarse, and appeared much more ill than the local condition would account for. In the course of a few days I came to the conclusion that I had to deal with a case of laryngo-typhoid, and the subsequent course of the disease verified my diagnosis.

Œdema of the larynx may occur as a result of any of the laryngeal complications of typhoid fever; it has been the cause of death in a case of ambulatory typhoid fever, without any previous symptoms of throat mischief.[41] Paralysis of the vocal cords is occasionally seen as the result of enteric fever. Lublinski,[42] for example, has seen five cases, four in men and one in a woman, all occurring between the ages of twenty-seven and thirty-nine years. In one case there was bilateral abductor paralysis, in three paralysis of one recurrent nerve, and in one paralysis of both recurrent nerves. The paralysis may be due to pressure on the recurrent nerve by enlarged glands or thickened pleura; or, inasmuch as it is sometimes accompanied by paraplegia or paralysis of peripheral nerves, we must assume the existence of an anterior poliomyelitis or a peripheral neuritis due to toxins. The symptoms usually show themselves during defervescence. Of the five cases recorded by Lublinski, one case, that of bilateral recurrent paralysis, died three days after the onset of the paralysis. In the case of bilateral posticus paralysis tracheotomy had to be performed. The diagnosis in these cases is only to be made by means of the laryngeal mirror, and care must be taken to exclude cases of fixation of the vocal cord due to ankylosis of the crico-arytenoid joint. The most recent account of the pathology of the laryngeal complications of typhoid fever is that contained in the paper written by Dr. Kanthack and Dr. Drysdale and the discussion thereon at the Laryngological Society of London on Feb. 12th, 1896. The paper was based on the post-mortem records of sixty-one cases. In fourteen there was loss of substance in the larynx and in eight it was stated in the post-mortem books that the larynx had not been examined, so that, assuming that the larynx had been examined in all the remaining 53 cases, which is doubtful, ulceration was found in 26 per cent. of the fatal cases. This represents a great advance in numbers affected compared with Hoffmann's figures, as quoted by Fagge and Pye-Smith;[43] he gives only 28 cases of ulceration in 250 necropsies—i.e., a percentage of 11 as against 26. One explanation is that the larynx of late years has been more carefully investigated than formerly, and another is that Dr. Kanthack and Dr. Drysdale included slight losses of substance in their list, whereas Hoffmann only reported cases of distinct ulceration. According to Dr. Kanthack and Dr. Drysdale the ulceration is most frequently seen over the tip and edges of the epiglottis and in the neighbourhood of the processus vocalis. Various explanations have been given as to the pathological nature of these lesions. Dittrich assumed that they were of decubital origin; the evidence on this point is conflicting. Rokitansky pronounced in favour of the typhogenetic nature of the ulceration, but clinical evidence and the results of recent bacteriological examination tell rather against this theory. I am myself inclined to agree with Dr. Kanthack and Dr. Drysdale in their summary of the question: "The evidence in their possession convinces them that these laryngeal ulcers occurring during the course of typhoid fever are caused by fresh infections with pyogenic organisms which always abound in the larynx and which gain a firm foothold on the debilitated tissues, although they cannot deny that in an individual case the typhoid bacillus may have escaped and caused the lesion." Dr. Jobson Horne made an important remark during the discussion to the effect that in some of the larynges of persons dying from typhoid fever the ulceration had been proved by microscopical examination to be of a tuberculous nature. From this he deduced two conclusions: (1) that typhoid fever may be a possible factor in the etiology of tuberculous ulceration of the larynx; and (2) that the tuberculous diathesis may be a factor in the etiology of typhoid ulceration of the larynx. One of the most characteristic features of the typhoid affection of the larynx is the tendency to suppuration about the cartilages leading to their necrosis and extrusion and the tendency to destructive changes in and about the crico-arytenoid joints, so that if the patient recovers he does so with an immobile joint and consequently fixed cord. Lacoarret,[44] in an excellent article on Arthritis of the Crico-arytenoid Joint, has collected many examples of this condition occurring as a result of enteric fever.

[41] Centralblatt für Laryngologie, vol. xi., p. 34.
[42] Ibid., vol. xii., p. 136.
[43] Principles and Practice of Medicine, third edition, vol. i., p. 153.

ERYSIPELAS.

In the production of facial erysipelas chronic nasal affections play an important *rôle*, hence the frequency with which erysipelas starts from the centre of the face, the orifice of the nostril being a favourite point of departure. A large amount of literature has accumulated on the subject of erysipelas of the pharynx and larynx, but our ideas on this subject have been clarified since we recognised the streptococcus erysipelatis as the cause of erysipelas. If, as seems likely to be the case, the streptococcus pyogenes, the cause of various septic affections such as phlegmonous erysipelas, is proved to be identical with the streptococcus erysipelatis, the whole subject of erysipelas of the throat will be much simplified. I am strongly in favour of the view propounded by Dr. Semon, that erysipelas, phlegmonous pharyngitis, angina Ludovici, and similar conditions are only modifications of the same process, differing in their virulence or place of development. I have discussed the subject of erysipelas of the pharynx and larynx in a paper presented at the meeting of the British Medical Association in 1891,[45] so that it is unnecessary for me to say more on the subject on the present occasion.

[44] Revue de Laryngologie, d'Otologie, et de Rhinologie, 1891, p. 399.
[45] Brit. Med. Jour., 1892, vol. i., p. 434.

ABSTRACT OF

An Address

Delivered to the Surgeons on Probation at the Termination of the Seventy-third Session of the Army Medical School, Netley,

BY SURGEON-MAJOR-GENERAL J. JAMESON, M.D. GLASG.,

DIRECTOR-GENERAL, ARMY MEDICAL DEPARTMENT.

[SURGEON-MAJOR-GENERAL JAMESON began his address by dwelling upon the advantages which accrue from the Services as a factor in education, and referred to the different conditions of life in the Services at a time when £1000 were paid for an exchange to India to obtain a shake of the Pagoda tree and in the present day. Dealing with the regimental system, he said it was still a question unsettled whether the abolition of that system was a benefit or a misfortune. Considered from an administrative point of view, there could be no doubt of the advantages of unification, although it had to be confessed that 99 per cent. of military officers did not acknowledge them. This, in his opinion, was the main reason why the success of the new system was not the better assured. Continuing, he said:—]

There is a habit of some, and a vile habit it is, of expressing grievances and other matters anonymously in the public press. A wrong diagnosis, faulty treatment, doubtful administration, or what appears to be such, are examples of subjects which have received public criticism. It is painful to relate, but true all the same, that of all branches of the service the officers of the Army Medical Staff, and particularly the retired ones, are the greatest offenders in this respect. The Naval Medical and the Indian Medical Services are comparatively innocent. We often ask that the Army Medical Service should be constituted on the lines of the Royal Engineers. Would that we followed the lines of

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the Royal Engineers in being loyal to each other. Does an officer of the Royal Engineers never make a mistake; but who ever heard of an inward scandal in his corps? If any man have a grievance let him seek redress through his own commanding officers; a favour to ask, let him ask it through the legitimate channels with a certainty as regards myself. The giving is always more agreeable than refusing. Giving may not always be possible, nor does a refusal necessarily mean an injustice, and when the refusal is followed by an appeal to a military, medical, or society journal the wisdom of refusal becomes apparent. Let us suppose that the Indian pay is increased, the period of the Indian tour shortened, perhaps the home tour lengthened, leave for study allowed, presidency or membership of mixed boards a right, messes in large stations established with a Government grant, badges of rank fully recognised, even army titles conceded, and a corps of royal surgeons formed. Is that enough? No; they are all as sounding brass and tinkling cymbals unless one thing more is possessed—professional merit. And here we are back to the good doctor again, for we cannot do without him. Your duty is to attend to the sick and wounded soldier and to prevent disease. To do that efficiently and at the same time to maintain self-respect in the performance, perfect equality with all branches of the service, save in the right of military command, is essential, and for that reason only is it claimed. I am glad to observe that the subject of the Army Medical Department is exciting attention outside military and medical journals. In *Blackwood's Magazine* of December last there is an article on the subject full of historical interest and instruction which will be read wherever English literature is appreciated. It is an education for the public, who will now be able to understand better the complicated nature of our duties in peace and war. The value of the article is enhanced by the fact that the writer is a general officer of distinction and experience, and it is an indication that the military portions of our duties are being recognised. Modern warfare has greatly changed the situation, and war risks are now pretty evenly divided amongst all ranks. Indeed, according to Mr. Archibald Forbes—no mean authority—the Medical Staff and Corps present are likely to be annihilated at the first general engagement. This possibly is an over-gloomy view of the situation, but probably when once in action and in range it is better to go on than to stop. The difficulty will be to get on when so many wounded are calling for assistance. The battle over, the warrior rests, eats, drinks, and sleeps. What of the medical officer? No rest for him that night, and he is fortunate who has had the forethought to provide himself with a sausage and a bit of bread. For him there is the long, weary night of anxious thought and downright hard work—dressing, operating, and giving chloroform in turn, his back aching, his fingers paralysed with fatigue as he compresses the severed artery, his face and clothes bespattered with blood. Complications are ever arising: now an exhausted patient to be succoured, there a case of secondary hæmorrhage to be attended to, necessitating the undoing of the dressings and fresh ligatures to the vessels, and so the night passes and morning still finds him alongside his patient, and he is lucky if the work is all done. Also on the march—in sun, rain, or snow—he shares with his military brother fatigue and privation, and here again the end of the march is the beginning of his hard medical duties. Risks of war, indeed! Who have the risks? The medical officer shares every one, *plus* those belonging to his profession. We hear little of caste prejudices on active service. As for rewards, that is another story; but I, with great satisfaction, may allude to the gazettes which followed the last Ashanti and Soudan expeditions in proof of a fairer and more liberal spirit now existing.

The Indian Medical Service provides employment of a very varied character for its members, thus giving scope for the exercise of a great variety of tastes, gifts, and attainments. The Government of India has always employed its medical officers for whatever duties—military and civil, professional and scientific—their capacity, education, and training have fitted them to perform. The medical charge of Government establishments and institutions is of course the primary object of the recruitment of the service, but the talents and acquirements of Indian medical officers have been utilised for a great many other purposes, such as the charge of prisons and asylums, professorships and lectureships in medical colleges and schools, political and scientific missions and commissions, botanical, chemical, medico-legal, and zoological appointments, special sanitary and vaccination employment, surveys and researches, opium and mint appointments, and so forth. At one time, indeed, the Honourable East India Company's medical officers were actually employed as postmasters and registrars, and when the electric telegraph was introduced into India the organisation of the department was entrusted to a distinguished surgeon, the late Sir Wm. Brook O'Shaughnessy. Under these circumstances it is not surprising that while the service generally has always maintained a high standard of ability, it has produced some very distinguished men who have done very valuable work. The writings of Twining, Annesley, Morshead, Vandyke Carter, Maclean, Fayrer, and Moore will always be treasured as classics in tropical medicine and surgery. Many other names connected with statistics, sanitation, botany, and natural history could be mentioned to swell the list of Indian worthies whose work endures. Through the agency of the Medical Service charitable hospitals and dispensaries have been established throughout the empire, so that medical and surgical relief has been brought within the reach of the people in town and country. The rate of development of these institutions in late years has been marvellous, and perhaps in no other form has the advantages of English influence in India been brought home to the Indian people in a form so admirable.

Since the year 1865 all officers destined for the Indian Medical Service have passed through this school. The fact that the present able and respected head of the Service, Surgeon-Major-General J. Cleghorn, sat on these benches shows that a whole generation of officers who have been *alumni* of the Army Medical School has during these last thirty-one years gradually occupied the places and assumed the duties of the men entertained prior to 1860, of whom very few, if any, remain in India. It is pleasant to be able to state that this new generation of Indian medical officers has fully maintained the honourable traditions of their Service and reflected credit upon the school which delights to watch their career and claim some share in their success. In India the field of labour tends to contraction as the methods of governing the empire become better organised and more stereotyped. Nevertheless, the Service still offers great opportunities of good work and of distinction, and in this connexion I may mention the name of Sir George Robertson, the hero of Chitral. It offers a competency to all and more than a competency to some. Owing to the multiplication of competent indigenous practitioners and the depreciated rupee it is more difficult, perhaps, to amass large fortunes than in the old days. Still, the career before you is full of promise and interest, and that you may enjoy it and prosper in it is the fervent wish, I am sure, of all who are assembled here to-day.

In conclusion, I must refer to the good work done in India and at Netley by Cayley (whose service with the Indian Government began forty years ago) Pringle, Guthrie, McGrigor, Muir, Munro, Crawford, and Mackinnon. You are never likely to forget Parkes and his work at Netley. The hall-mark of the sterling value of Netley was stamped by him, and his disciples and followers, De Chaumont and Notter, had been worthy successors in the great field of hygiene. One name, that of Longmore, who so long held a distinguished connexion with this school, recalls the value of his teaching and the nobility of his character.

[Surgeon-Major-General Jameson finished an interesting address by saying how justly proud they were of the number of occasions on which the decoration of the Victoria Cross had been bestowed upon the officers of the medical department.]

THE EASTERN DISPENSARY, BATH.—HONORARIUM FOR THE MEDICAL OFFICERS.—The Mayor of Bath presided at the annual meeting of this dispensary, held on Jan. 22nd. He mentioned that the institution deserved the very warmest support, as it was doing a most excellent work. The honorary secretary read the report, which showed a satisfactory state of things financially; it stated that during 1896 there were 4437 patients treated at the dispensary and 623 attended at their homes. The dental department reported a further increase of patients. It was agreed, on the proposition of the Rev. B. N. Thompson, to present an honorarium of five guineas to each of the honorary medical officers.

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DYSENTERY AND ITS TREATMENT.

WITH AN ACCOUNT OF SIX YEARS' EXPERIENCE IN THE TRANSVAAL AND MATABELELAND IN THE USE OF SOME VARIETIES OF MONSONIA AS THE CURATIVE AGENT.

BY JOHN MABERLY, M.R.C.S. ENG., L.R.C.P. LOND.

WITH the progress of sanitation dysentery has almost disappeared from the British Isles and is now looked upon as a disease peculiar to tropical and semi-tropical climates. It, however, is not necessarily restricted to such geographical limits, various outbreaks having occurred in England and on the continent up to a recent period which appear to have been closely associated with insanitary conditions and more or less malarial atmosphere. It is to the writers of the last thirty or forty years that we are indebted for a more accurate knowledge of the pathology and therapeutics of dysentery, and as far as our own nation is concerned almost entirely to those who have been engaged in medical work in India. Dysentery is described by Joseph Ewart as a specific febrile disease accompanied by considerable nervous prostration and characterised by inflammation of the solitary and tubular glands of the large intestine. It is no doubt due to specific poison, but at present there is great uncertainty as to its exact nature. Bertrand and Baucher in 1893 studied an epidemic among the troops stationed at Cherbourg and arrived at the conclusion that no one of the many micro-organisms found by them could be considered as specific for the disease. Arnaud in 1894 investigated sixty cases of tropical dysentery and arrived at the conclusion that the disease is due to a pathogenic variety of the colon bacillus.

Dysentery is generally most prevalent during the rainy season in tropical and semi-tropical climates, and is confined principally to malarial districts, being often associated with attacks of intermittent or remittent fever. Air contaminated by decayed organic matter may be a factor in causing an outbreak of dysentery, but experience goes to show that bad drinking-water is a more fertile cause of the disease. Two notable instances of the latter came under my notice in South Africa. The first was in 1891 whilst in medical charge of a thirty-mile section of railway in course of construction along the Klip River in the Transvaal. The line was being laid by a number of sub-contractors, whose camps, about fifteen in number, were situated at various points along it. The Kaffirs working at these posts suffered severely from fever and dysentery with the advent of the first heavy rains in September and October, the only exceptions being at one camp situated in low ground, at which about sixty Kaffirs were stationed, where not a single case occurred. The only assignable reason for this exemption appeared to be that the contractor insisted on his Kaffirs drinking water from a well close by instead of the river water, which was contaminated with all sorts of organic refuse washed into it from the surrounding country, which was being used by all the other Kaffirs. Another instance occurred during the Matabele rising in May, 1896. Whilst acting as medical officer to the Bulawayo Field Force I was struck with the number of cases of acute dysentery which occurred among the men in the Bechuanaland Border police camp. On making inquiries I found that they were drinking water from a well which on examination was found to contain a number of dead mice and other refuse. The well was cleaned and disinfected, with the result that the number of cases of dysentery at once diminished.

The symptoms of dysentery are so distinct that it is almost impossible to overlook them or mistake them for those of any other affection when once they are developed. The following description by John Ryan, in a commentary on dysentery, dated London, 1767, is perhaps as concise as any that can be given of the disease. He says: "A person afflicted with the more acute gripings in the belly, with a frequent inclination to stool, and who emits the evacuations with bloody or mucous matter is agreed to be troubled with a dysentery." We now use the word "tormina" to express the griping pain, which is sometimes excruciating, and "tenesmus" as "a comprehensive term for the morbid sensations referred to the anus and its vicinity, which consists in a feeling of fulness and weight with frequent constant inclination to go to stool and straining during the act of defecation, little or nothing being passed, and often of the nature of slimy mucus or blood, whilst no sense of relief is experienced afterwards."[1]

The disease as it comes under the notice of medical men for treatment is most naturally divided into two main classes of cases—namely, acute and chronic. "Acute" is used to express the first attack and before ulceration has been well established. "Chronic" is applied to any case the subject of which has at some previous period had one or more attacks and in which the ulcerative process is established. An attack may be associated with more or less fever. In many cases the fever is slight at the outset and disappears with the progress of the disease; in others it is high and persistent, belonging either to the intermittent or the remittent type. The term "malarial dysentery" has been applied to the latter form of case, but this, in my opinion, is a confusion, the symptoms being no doubt due to two distinct poisons, which must be treated independently of each other, so that the term "fever and dysentery" would be more correct. Vomiting is a symptom which in some epidemics is very prominent and is occasionally very intractable, more especially in women. In these cases it is probably due to reflex irritation to neighbouring nerve structures caused by the inflammatory process going on around the dysenteric ulcers. Another symptom which is very rarely seen is retention of urine due to spasmodic contraction of the urethra caused by reflex irritation of a dysenteric ulcer in the rectum. This is sometimes associated with paralysis of the sphincter ani, apparently due to the same cause.

Treatment.—There seems to be a universal consensus of opinion that the drug for the treatment of acute dysentery is ipecacuanha in large doses. Since its re-introduction into India by Dr. Docker about 1856 the death-rate from acute attacks has been reduced from 11 per cent. to less than 5 per cent., according to Sir Joseph Fayrer's statistics published in his work on "Tropical Dysentery and Chronic Diarrhœa," 1881. The following is his method of treating an acute case. "The patient should remain in bed. If there be abdominal pain or tenderness hot fomentations must be applied. A dose of from twenty to thirty grains of ipecacuanha powder, according to age, strength, &c., should be given to an adult in water, and the patient should endeavour to resist vomiting as long as possible. The dose of ipecacuanha is generally repeated in four or six hours, a second or third time according to effects, and especially if the first dose has been speedily rejected, as it often is." It is now usual to precede the dose of ipecacuanha with ten or fifteen minims of liquor opii, or some other form of opium, to prevent the tendency to vomit. For the same reason the ipecacuanha powder is often enclosed in a cachet or put in pill form. This treatment has one important drawback to general practice in that it entails personal supervision by a trained attendant in order to see that instructions are carried out, patients having a natural repugnance to taking a drug likely to cause vomiting. When we come to consider chronic dysentery there appears to be a similar general agreement among the most experienced men that no form of treatment is up to the present very successful. W. J. Moore in his "Manual of the Diseases of India," says in chronic cases that rest and quiet with a milk diet are the chief factors in treatment. Many chronic cases are little benefited by medicine and resist all treatment. Ipecacuanha affords very temporary relief. Dr. Chevers in "Diseases of India" gives no statistics of cases, but appears to consider the sub-acute, usually termed "chronic," form as very generally fatal in adults in the long run, opium and ipecacuanha being the drugs on which he places most reliance. Sir Joseph Fayrer says the prognosis in the advanced stages is uncertain; in the chronic more doubtful still—the ipecacuanha is no longer useful. He records five cases of chronic dysentery with three deaths, and recommends ten-minim doses of turpentine three times a day. Dr. (now Sir) Joseph Ewart in his article on Dysentery in "Quain's Dictionary of Medicine," after giving various directions for the treatment of chronic cases, says: "But it will often happen that in spite of the most careful dietetic, hygienic, and therapeutic management no substantial progress towards the repair of the ulcers is made, and the patient eventually dies worn out from suffering and the asthenia consequent literally on inanition."

The following statistics, kindly supplied by Dr. A. Crombie, Surgeon-General in Charge of the Calcutta Hospital, also bear out the same facts, and are further interesting as giving

[1] Quain's Dictionary of Medicine.

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a fairly correct estimate of the ordinary percentage of deaths from dysentery in the general run of practice, where both acute and chronic cases come under observation:—

TABLE I.—*Showing Number of Cases of Dysentery Treated in the Presidency General Hospital, Calcutta, for the past ten years, from 1885–94 inclusive.*

Years.	Treated.	Recovered.	Died.	Percentage of deaths.
1885...	162	147	15	9·2
1886...	111	103	88	7·2
1887...	116	110	6	5·1
1888...	84	72	12	14·3
1889...	104	97	7	6·7
1890...	73	67	6	8·2
1891...	94	92	2	2·1
1892...	45	41	4	8·8
1893...	54	51	3	5·5
1894...	94	87	7	7·4
Totals...	937	867	70	7·48

Remarks.—The treatment has been nowise invariably ipecacuanha. In a very large proportion of the cases no ipecacuanha except what is contained in Dover's powder was given. The average duration of the cases was within one week. The fatal cases were, with one or two exceptions, chronic cases. Acute dysentery in this part of India is not a fatal disease. They are mostly of the type known as catarrhal dysentery. There is in such cases probably little or no ulceration of the bowels.

Although dysentery is very prevalent in South Africa it has been very difficult to obtain any statistics which are of much value owing to the way in which they are published. I collected the records of twenty-three cases treated in the Bulawayo Hospital from July, 1894, to July, 1895. Of these five died, three being chronic cases and the other two acute. Large doses of ipecacuanha had been used in several of the cases. The average number of days the patients were under treatment was fifteen. The percentage of deaths was 21 8.

We may fairly gather from the foregoing statements that up to the present, although acute dysentery appears to be fairly tractable under favourable conditions, chronic dysentery, on the other hand, appears to resist all the resources of medicine. In what follows I am about to show, however, that there is a drug which is, I think, specific in its action on both the acute and chronic forms of the disease.

In March, 1889, having not long finished my career as a medical student at the Middlesex Hospital, London, I commenced practice near Johannesburg, and was struck by the unsatisfactory results obtained both by myself and others who had been longer in the country in the treatment of certain diseases, especially the various forms of dysentery. It became a question in my mind whether the contents of the Pharmacopœia represented anything like the whole of the remedies which lie hidden among the products of nature especially those of the organic kingdom. As far as medicinal plants are concerned South Africa is comparatively an unexplored country, and it seems but reasonable to suppose that it should contain not a few plants with unknown properties possibly of high value. Some of those who have practised medicine in South Africa must have come across cases, either personally or by hearsay, in which persons, not members of our profession, have successfully treated diseases which were apparently not amenable to Pharmacopœial remedies. Such an instance occurred to me in 1890. In that year I heard from a trustworthy witness of three cases of children suffering apparently from a form of very acute diarrhœa and vomiting—a form which generally means an acute attack of dysentery, which at that time was proving very fatal among the juvenile population of the Rand—who had been successfully treated with drugs obtained from the flora of the district. We must, of course, deduct a large percentage from the records of cures stated to have been effected by those outside the profession, but we cannot shut our eyes to the fact that there are drugs in South Africa known to the colonists the knowledge of which was probably originally derived from the Hottentots and Bushmen of the Cape Colony, which, in the hands of qualified men, would be of the greatest value. One of my chief objects in writing this paper is to show, by the results of over 100 consecutive cases, that such a drug does exist—a drug which I think I shall succeed in proving is a more powerful remedy than any which we at present possess in the treatment of the various forms of dysentery.

This drug first came under my notice in June, 1890, when a friend of mine, who had been suffering for two months from a severe attack of dysentery, and whose recovery was despaired of by his two medical attendants, was cured by the administration of a tincture prepared by a colonist from plants which he obtained from the Cape. The history of the case is briefly this. The patient, aged forty-eight years, had been treated by two members of the profession in Johannesburg for the greater part of two months, and though at times he improved the course of the disease was from bad to worse, till at length both medical men gave him up and felt it their duty to indicate the same to the patient's family. His wife, seeing the state of her husband, decided as a last resource that she would try the effect of the drug in question, which had been given to her in the form of a spirituous extract made with French brandy by a friend who had great faith in the remedy. The result was that after the second dose of about two ounces, given at an interval of four hours, the patient went quietly to sleep, and on awaking about eight hours afterwards found the dysenteric symptoms had disappeared and felt entirely a new man. He finished his medicine in two more doses, and from that time made a rapid and uninterrupted recovery, since which time he has never had any return of the old complaint, and up to 1895 to my knowledge he enjoyed perfect health.

After this case came under my notice I obtained a preparation of the drug made with brandy from a man who, however, would not divulge the secret as to what the plant was from which the tincture was made. I used his preparation in all suitable cases with invariably good results. From June to December, 1891, I had medical charge of the men employed in constructing the Vaal River section of the Netherlands Railway in the Transvaal, and during that period I had about seventy cases of dysentery in which I conclusively proved to my own mind the value of the drug in question. After finishing my medical contract with the railway authorities in the beginning of 1892 I made up my mind to get hold of the plant from which the drug was prepared. In this I had the greatest difficulty, as the owner of the secret resolutely refused to give me a fresh specimen of the plant except at a prohibitive price. However, I succeeded in obtaining from him a portion of a stalk and a few leaves which had been macerated in preparing his tincture. This specimen, such as it was, I showed to two friends well versed in the African flora, but they failed to identify the plant, not having sufficient data to go upon from the absence of flower or seed-pod. Having ascertained that the plant did grow in the surrounding country I determined to search for myself till I found a plant with similar stalk and leaves. After six weeks' patient endeavour I was fortunate enough to discover what I felt sure was a young specimen of the same plant in the Potchefstroom district. This plant had no flowers or seed-pod, but on showing it to my friend, Mr. C. D. Appelgren, he recognised it as a specimen of Monsonia ovata, and at once pointed out flowering specimens of the plant growing within a hundred yards of his residence on the Vaal River. He kindly collected a good quantity of the plants for me, and from these I made a tincture by maceration in spirit in the ordinary way for British Pharmacopœial tinctures — viz., 2½ oz. to the pint of rectified spirit, which proved identical in its action to the one I had been using as supplied to me previously for the cases I had been treating. Since then, as will be seen from the records of cases, I have been using this drug in the treatment of dysentery, and afterwards in the Zoutpansberg district of the Transvaal collected other specimens, and again in Matabeleland, where I found the plant was growing on the Bembize River, about twenty-five miles from Bulawayo. A friend, Mr. Fynne, who was farming there kindly had a large quantity collected for me, with which I had hoped to continue my work on the drug; but, unfortunately, the Matabele rising took place, and the stock that he had collected had to be left behind in his flight for Bulawayo in March, 1896.

The plant is an annual and must be gathered in January or February, and as I had to leave for England in July with my wife and family any further work has had to be put off to a more convenient season. I have, however, a quantity of seed which I hope to succeed in raising in England this summer, and shall then be able to continue work, as I am convinced the plant contains properties which will prove

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valuable for other forms of ulceration of the digestive tract besides dysenteric, but have not sufficient evidence at present at my disposal to justify me in making any statement.

I will now proceed to give the history of the cases treated, numbering 100, in which monsonia has been the remedy employed. Its action was sometimes supplemented with that of other drugs, as I found by experience that some specimens were distinctly more active than others, and situated as I was, with the necessity always of attending to my medical practice as a means of livelihood, it was sometimes very difficult to collect specimens which were really in proper order, and I was consequently obliged to use plants which were apparently too old and had certainly lost to some extent their medicinal properties.

CASE 1. *Chronic dysentery.*—The patient was a man aged thirty years. He was dark and well-nourished. He had had two attacks previously similar to the present one—the first in Aug., 1889, which lasted five days and for which he took a mixture, the composition of which he did not know, and was cured; and the second attack in May, 1890, which lasted ten days, and was cured by taking chlorodyne in doses of twenty minims every four hours. This, the third, attack began on Aug. 20th, 1890. He had been suffering from cold in the head for seven days previously. On the night of the 20th he felt very feverish, with occasional sensations of chill down the spine. There were pains all over the body, especially at the lower part of the spine. The bowels acted once during the day. On the 21st, at 7 A.M., he took two aperient pills, and at 10 A.M. the bowels were freely opened. He felt great pain in the left iliac region and lower part of

TABLE II.—RECORD OF 100 CONSECUTIVE CASES.

No.	Sex and age.	Nature of disease.	Date of commencement of treatment.	Date of convalescence.	No. of days under treatment.*	Remarks.†
			1890	1890		
1	M., 30	Third attack of dysentery	Aug. 23rd	Aug. 25th	3	No relapse for 6 months.
			1891	1891		
2	M., 30	Acute dysentery	March 8th	March 12th	5	—
3	M., 27	Chronic dysentery	March 30th	April 12th	14	No relapse for 12 months.
4	M., 26	Acute dysentery	July 31st	Aug. 3rd	4	—
5	M , 26	Acute dysentery	Aug. 4th	Aug. 6th	3	—
6	F., 60	Dysentery and fever	Nov. 26th	Nov. 28th	3	—
7	M., 32	Slight dysentery and fever	Nov. 15th	Nov. 16th	2	—
8	M., 42	Acute dysentery and drink	Dec. 16th	Dec. 17th	2	—
9 to 74	—	Acute cases in Kaffirs working on railway along Klip River, Transvaal	An average of 2 days off work in 64 cases		128	—
			An average of 7 days off work in 2 cases		14	—
			1892	1892		
75	F., 18	Acute dysentery	May 28th	May 29th	2	—
76	M., 34	Fever and dysentery	Sept. 11th	Sept. 12th	2	—
77	M., 36	Dysentery complicating a relapse of bilious fever	Nov. 22nd	Nov. 24th	3	—
78	M., 36	Acute dysentery and drink	Nov. 27th	Nov. 28th	2	—
			1893	1893		
79	M., 27	Fever and dysentery	May 12th	May 15th	3	—
				1894		
80	M., 41	Chronic dysentery	Dec. 21st	Jan. 2nd	12	No relapse for 2½ years.
			1894			
81	M., 25	Acute relapse with fever and afterwards hepatitis and local peritonitis	Jan. 17th	Feb. 4th	16	No relapse for 2 years.
82	M., 30	Dysentery and intermittent; a relapse from India	July 17th	July 20th	4	No relapse for nearly 2 years.
83	M., 40	Acute dysentery	July 19th	July 20th	2	—
84	F., 42	Acute dysentery	Sept. 20th	Sept. 21st	2	—
85	F., 4½	Chronic dysentery, whooping-cough, cancrum oris	Aug. 2nd	Aug. 10th	9	Death from cancrum oris.
86	F., 3	Acute dysentery and fever followed by cerebro-spinal symptoms	Sept. 25th	Oct. 1st	7	—
87	M., 33	Acute relapse in chronic case	Oct. 17th	Oct. 20th	6	No relapse for 18 months.
			1895	1895		
88	M., 23	Acute dysentery	Feb. 24th	Feb. 28th	5	—
89	M., 22	Acute dysentery following 2 days' fever	Feb. 27th	Feb. 28th	2	—
90	M., 33	Acute dysentery; drinking rather heavily	March 12th	March 13th	2	—
91	M., 20	Chronic dysentery	July 13th	July 16th	4	No relapse for nearly 1 year.
92	M., 27	Acute dysentery	Aug. 10th	Aug. 11th	2	—
93	M., 24	Acute relapse	Sept. 14th	Sept. 18th	5	Relapse 3 months after.
94	M., 37	Acute dysentery	Oct. 28th	Oct. 30th	3	—
95	F., 12	Acute dysentery	Nov. 5th	Nov. 7th	3	—
96	M., 30	Acute dysentery	Nov. 5th	Nov. 7th	3	—
97	F., 47	Chronic dysentery	Nov. 12th	Nov. 19th	8	No relapse for 7 months.
98	F., 16	Acute dysentery	Nov. 12th	Nov. 14th	3	—
99	M., 5	Acute dysentery	Nov. 12th	Nov. 14th	3	—
100	M., 37	Acute dysentery	Nov. 17th	Nov. 20th	4	—

* The average number of days under treatment was 2·95 taking acute and chronic together—an average of 8·1 days for chronic cases and for acute cases an average of 2·3.

† The periods stated during which no relapse occurred indicate in each case the time during which the patient was under observation. In a shifting population such as is found in new goldfields many patients are soon lost sight of.

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the back. At 1 P.M. he commenced passing slime mixed with blood, and from then till midnight he had six dysenteric motions. On the 22nd he had four dysenteric motions up to 2 P.M., when he took fifteen minims of chlorodyne, and repeated the dose at 5 P.M., with the result that he had no return of the symptoms. On the 23rd I saw the patient about midday for the first time. The temperature was 100° F. and the pulse 75. The tongue was coated with white fur in the centre, but was clean at the edges and moist. The pain in the lower part of the abdomen had recommenced, and the patient frequently passed viscid mucus streaked with blood. Two doses of four drachms each of tincture of monsonia were given at intervals of four hours. The symptoms disappeared and the patient enjoyed good health for six months, after which period I lost sight of him.

CASE 2. *Acute dysentery.*—On March 4th, 1891, this patient, a man aged thirty years, swam the Klip River when in a very heated condition from previous exertion. On the 6th he felt feverish, with aching pains all over the body. The bowels became very loose and were open fifteen times during the day. The motions were feculent and mixed with mucus. On the 7th he commenced to pass mucus mixed with blood, with great griping pains and tenesmus. The bowels were opened twenty-five times. He took some powders prescribed by one of the medical men without effect. On the 8th I was summoned to attend the patient at Johannesburg and ordered him one drachm of tincture of monsonia every three hours. After the third dose the pain and tenesmus disappeared and the motions became feculent. He continued taking the drug during the daytime till the 12th, when the bowels became normal and only open once a day.

CASE 3. *Chronic dysentery.*—In May, 1890, a man, aged twenty-seven years, was suddenly attacked, while marching with a detachment of police in Bechuanaland, with pain in the lower part of the abdomen, especially in the right iliac region. Ten minutes later he passed a motion mixed with a large quantity of blood. Two days afterwards he was taken to Macloutsie Hospital, where he had from twelve to twenty dysenteric motions a day. He was seventy days in hospital undergoing various forms of treatment and was eventually apparently cured by doses (20 grains) of pulvis ipecacuanhæ. He returned to Kimberley by waggon and had another attack of dysentery on the road. On Aug. 2nd he went into the Kimberley Hospital for treatment and remained there till Sept. 8th, when he left for Natal. In March, 1891, he returned to Johannesburg apparently well. On the 13th, however, dull pain recommenced in the lower part of the abdomen and the bowels became loose. On the 23rd he went into Johannesburg Hospital suffering from a sharp relapse of dysentery. He was treated with large doses of ipecacuanha and left convalescent on the 26th. He continued on a milk diet, but the bowels again became loose, blood and mucus again appearing. On March 30th, 1891, I first saw the patient and ordered him one-drachm doses of tincture of monsonia every six hours. He passed a little blood occasionally till April 2nd. From that date till the 12th the dysenteric symptoms disappeared and the bowels gradually resumed their normal condition. For twelve months subsequently the patient enjoyed good health, after which I lost sight of him.

CASE 4. *Acute dysentery.*—A man, aged twenty-six years, was on July 20th, 1891, seized with a sudden attack of diarrhœa, accompanied by a burning sensation down the spine, with griping pains in the lower part of the abdomen. The temperature was 99° F. and the pulse 92. A lead and opium pill (5 grains) was administered, followed by a solution of quinine (5 grains) in dilute hydrochloric acid (5 minims) given every six hours in about a wineglassful of water. The pains disappeared and the patient felt better. On the 22nd he went to Johannesburg and stayed there till the 27th. During this time he was troubled with diarrhœa. On the 28th he returned to his work on the Vaal River Railway and in the evening passed some mucus and blood. During the 29th and 30th he took several doses of chlorodyne on his own account, but the dysenteric symptoms grew gradually worse. On the 31st at 8 P.M. I was called in to see the patient, who was then very prostrate and had been passing mucus and blood almost every half-hour for the last twelve hours with great pain and tenesmus. The pulse was 125 and the temperature 98·8°. I administered an enema of about a quart of warm water lightly coloured with permanganate of potassium through an irrigation tube and prescribed two-drachm doses of tincture of monsonia every four hours. The patient felt much eased, and went to sleep at 10 P.M. On Aug. 1st the patient awoke at 8 A.M. He felt much stronger. The pulse was 80. The bowels were opened twice during the day—feculent, with a little blood. The pain and tenesmus were almost gone. He was put upon a milk diet and the medicine continued. On the 2nd the bowels were opened once—semi-solid with a little streak of blood. On the 3rd a normal motion was passed. The patient was feeling well and walking about. He commenced ordinary diet. He remained in good health for six months, when he was last under observation.

CASE 5. *Acute dysentery.*—The patient was a man aged twenty-six years. On Aug. 4th, 1891, he sent for medicine for an acute attack of dysentery. He took four two-drachm doses of tincture of monsonia at intervals of four hours. When seen a week afterwards he said he was completely cured.

CASE 6. *Fever and acute dysentery.*—The patient was a woman aged sixty years. She was a stout person acting as nurse, and had been suffering for about four days from an attack of malarial fever with diarrhœa. She had pain all over the body, anorexia, feverishness, especially at night, and vomiting occasionally. When I called in to see her, on March 26th, 1891, she was in bed complaining of frequent vomiting, with severe general headache and frequent passage of mucus mixed with blood, with tenesmus and griping pains in the abdomen. The temperature was 103·6° F. and the pulse 84. A mixture composed of two drachms of liquor bismuthi, one minim of acidum hydrocyanicum dilutum, and ten minims of liquor morphiæ hydrochloratis was administered, together with a little weak brandy and water. This eased the pain somewhat and the vomiting ceased. About a quarter of an hour afterwards a dose composed of five grains of quiniæ sulphas, six minims of acidum hydrochloricum dilutum, in two ounces of water, was administered and was repeated every six hours. Half an hour after the quinine mixture had been administered two-drachm doses of tincture of monsonia were administered every four hours if the patient were awake. I saw the patient again on the 28th, two days after my first visit, when the dysenteric symptoms had entirely disappeared, but she had still some slight remains of the malarial fever. The temperature was 100°. The quinine mixture was continued and the patient went to Johannesburg for two days' change and completely recovered.

CASE 7. *Acute dysentery.*—The patient was a man aged thirty-two years. The temperature was 101 4° F. and the pulse 97. The bowels were moved twelve times during the last twenty-four hours. The motions were feculent, mixed with blood and mucus. There was pain in the limbs and lower portion of the abdomen and back. Tenesmus was not strongly marked. A mixture containing five grains of quinine was given three times a day and two drachms of tincture of monsonia every four hours. The next day, Nov. 16th, 1891, the bowels were normal, the temperature was 98 6°, and the pulse 70.

CASE 8. *Acute dysentery and drink.*—The patient was a man aged forty-two years. He had been drinking heavily for some three weeks. When seen on Dec. 16th, 1891, he was in a weak condition, passing blood and mucus every half hour. There was great tenesmus and pain in the abdomen. The patient stated that on the 14th he slept in wet blankets and the next morning was seized with great pain in the stomach accompanied by violent diarrhœa, which quickly took a dysenteric form. I gave him at once four drachms of tincture of monsonia followed by two-drachm doses every four hours. On Dec. 17th I saw the patient, who said that the dysentery had quite stopped and he was celebrating his convalescence in a rather convivial manner.

CASES 9 to 74. *Acute dysentery.*—These were cases of dysentery occurring among the Kaffirs working on the Vaal River Section of the railway from June to December, 1891. Forty-four of the total sixty-six cases occurred in the months of October and November and were mostly of an acute form. The treatment consisted in administering half-ounce doses of tincture of monsonia every four hours. In all except two cases only four doses were required. The Kaffirs were generally fit to resume their work on the second day after the first dose of medicine. The only exceptions were the two cases before mentioned, and in both of these treatment was continued for nearly a week before they were completely cured. After the first four doses, which were given at intervals of four hours, the motions became feculent with now and then traces of blood and mucus, and the treatment

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was continued with two-drachm doses given three times a day.

CASE 75. *Acute dysentery.*—The patient was a young woman aged eighteen years. On May 28th, 1892, she complained of continual straining of stool, passing blood and slime. Two-drachm doses of tincture of monsonia were administered every four hours. I saw the patient again on May 30th, when she was convalescent and said that she began to improve after the first dose and had a refreshing sleep after the second.

CASE 76. *Acute dysentery.*—The patient was a man aged thirty-four years. When seen on Sept. 11th, 1892, his temperature was 101·2° F. The tongue was white with fur at the back; the pulse was 90. He complained of frequent tenesmus, passing very little slime and blood. An acid solution of quinine, containing four grains of the sulphate, was ordered three times a day and two drachms of tincture of monsonia every four hours. After the third dose the blood and mucus disappeared from the motion, which became feculent. On the 12th a powder consisting of eight grains of pulvus ipecacuanhæ compositus and ten grains of pulvis catechu compositus was administered with a drachm of tincture of monsonia, and all the unfavourable symptoms disappeared, and the patient has to my knowledge remained entirely free from dysentery up to the early part of 1896.

CASE 77. *Dysentery and fever.*—The patient was a man, aged thirty-six years, who was seen on Nov. 22nd, 1892. He had malarial fever in 1891 in Madagascar and had frequent relapses. On Nov. 22nd he had a sudden rise of temperature to 105° F.; the tongue was thickly furred and he had distinct symptoms of bilious fever. On treatment the temperature fell to normal, but acute dysentery intervened. Three doses of half an ounce of tincture of monsonia with ten drops of tincture of cardamom were administered at intervals of every four hours. On Nov. 23rd the patient had a fairly good night and felt much better. The motions were feculent, but a little tenesmus still remained. The patient was still very bilious looking. A powder containing four grains of calomel and ten grains of pulvis ipecacuanhæ compositus was given with a dose of tincture of monsonia. The symptoms disappeared, but during the night the patient felt an uncomfortable fulness. An emetic was given, and on the morning of the 24th the patient felt well enough to leave for the low country.

CASE 78. *Dysentery and drink.*—The patient was a man aged thirty-six years. When seen on Nov. 27th, 1892, he was suffering from general debility due to alcohol. At 1 P.M. symptoms of acute dysentery showed themselves, and during the afternoon he had several dysenteric motions. At 6 P.M. his temperature was 98·2° and the pulse 70. A powder containing fifteen grains of pulvis catechu compositus and six grains of pulvis ipecacuanhæ compositus, with half an ounce of tincture of monsonia, was administered, and on the 28th, when I next saw him, the dysenteric symptoms had disappeared. This patient died about a month afterwards from the effects of drink and possibly a return of the dysentery, but as he did not come under medical treatment I cannot say for certain.

CASE 79. *Acute dysentery.*—The patient was a man aged twenty-seven years. When seen on May 12th, 1893, he was suffering from bilious fever and acute dysentery. The dysentery was treated with two drachms of tincture of monsonia, ten minims of tincture of opium, and thirty minims of tincture of catechu every six hours. On May 15th the patient was convalescent.

(To be concluded.)

BEDFORD MEDICAL SOCIETY.—The annual meeting of this society was held at Bedford on Jan. 28th. The following officers were elected for the ensuing year:—President: Mr. R. H. Kinsey. Treasurer: Mr. A. Chillingworth. Secretary: Mr. W. Gifford Nash. After the meeting the members and their friends dined together. During the evening it was decided to send the congratulations of the society to Lord Lister on his elevation to the Peerage.

MEDICO-PSYCHOLOGICAL ASSOCIATION. — The spring meeting of the South-Western Division is to be held in the afternoon of April 27th at Barnwood House, Gloucester. After the transaction of business and the election of members Dr. Soutar will open a discussion on Recoveries in Asylums, and this will be followed by an important contribution from Dr. Goodall on the Systematic Collection of Patholog cal Data in Asylums.

MASTOID SUPPURATION FOLLOWED BY LATERAL SINUS PYÆMIA, TREATED BY PARTIAL EXCISION OF THE SINUS AND LIGATURE OF THE INTERNAL JUGULAR VEIN IN THE NECK.[1]

BY A. W. MAYO ROBSON, F.R.C.S. ENG.,
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WITH
HERBERT KEIGHLEY, M.R.C.S. ENG.,
SURGEON TO THE BATLEY HOSPITAL.

A MAN, aged thirty-seven years, was admitted to the Batley Hospital, under the care of Mr. H. Keighley, on Nov. 2nd, 1895, complaining of pain accompanied by a foul discharge from his right ear. The family history was good in all respects. The patient, a powerful and healthy man, never remembered having had any ailment apart from a periodic "discharge of matter" from his right ear. This had existed, he was told, from childhood, although he could not say whether it was subsequent to measles, scarlet fever, or other disease of infancy likely to give rise to such a condition. The discharge from the ear occurred two or three times a year and was always preceded by severe headache and pain in the ear. These attacks never lasted long nor did they compel him to give up work, and he used to make a boast to his wife that he always got well without the aid of a medical man, although she had frequently urged him to consult one. The present attack, which was more prolonged than any of the previous ones, and which led up to the operation, commenced in July, 1895. The patient had his usual premonitory symptoms of languor and headache, but the pain was not so severe as on former occasions and only occurred at night. At this time the discharge, which the patient described as "yellow matter," was mixed with blood. He did not leave off work. The ear discharged almost continuously till Oct. 27th, when it suddenly dried up. Three days later (Oct. 30th, 1895) the patient while at work was seized suddenly with a very severe pain extending all over the right side of his head and with a tendency to shivering. He, however, continued working the remainder of the day, but was compelled to remain in bed the following day. On Nov. 1st he was seen by Mr. H. Keighley, who found him suffering great pain in his right ear. There was no discharge from the ear, but the temperature was 102° F. and the pulse 96, the respirations being normal. He was removed to the Batley Hospital. Two days afterwards the patient's condition was much the same, but on the following day the tympanic membrane was seen to be inflamed and bulging, and on being punctured by Mr. Keighley great relief was afforded. The pus which escaped was very fœtid. Within twenty-four hours the patient had a most severe rigor in the early morning, followed by a temperature of 105°, pulse 130, and respiration 22; this was followed by a second rigor in six hours and by a third rigor in three hours. In the evening I was asked to see the patient in consultation with the staff of the Batley Hospital, who asked me to operate. I made an incision about two inches long behind the ear, over the right mastoid process. After trephining through hard and dense bone, which could only be perforated by the chisel and mallet, a quantity of very fœtid pus escaped; the cavity was well washed out, iodoform applied, and free drainage adopted. The lateral sinus was freely exposed and was bathed in pus, but as the blood was fluid in it the sinus was not interfered with. Directly after the operation and for the next ten days the temperature was quite normal and the patient seemed to be progressing satisfactorily. On the eleventh day he again had a severe rigor and a temperature of 105°, when I was again asked to see him. We decided on a further exploratory operation. By chipping away the bone with a chisel and mallet I freely enlarged the former cavity, when the lateral sinus was found to be black and filled with septic clot; this sinus I freely laid open, and as the walls were septic I removed as much of it as possible and

[1] A paper delivered before the Leeds and West Riding Medico-Chirurgical Society on Jan. 15th, 1897.

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thoroughly washed it up to the torcular herophili until blood flowed freely from the distal end of the sinus, which I then plugged with gauze. As I could not clear the lower end so satisfactorily, in order to prevent septic clot being carried into the system I cut down on the internal jugular vein in the neck and ligatured it in two places at an interval of half an inch. After this operation the patient was very comfortable, being quite free from headache and pain. There was no return of the rigors, although the temperature for the next ten days ranged from 96° to 105°, when a quantity of pus escaped from the wound. From this time the temperature remained normal and the patient made an uneventful and complete recovery. The patient is now in good health and well in every respect. For the notes of this case I am indebted to Mr. H. Keighley, who also undertook the entire after management.

The case illustrates the danger of allowing chronic ear-suppuration to go untreated, but it is chiefly of importance because of the radical treatment adopted, not only in clearing out septic clot, but in removing as much as possible of the septic wall of the sinus, and in ligaturing the internal jugular vein in order to prevent particles of septic clot being carried into the circulation and providing fresh foci for blood poisoning.

Leeds.

CATALEPTOID REFLEXES IN THE MONKEY.[1]

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A PHENOMENON came under my observation in the course of experiments upon monkeys at the commencement of the present year which seems sufficiently interesting to merit record here. Its occurrence, so long as certain conditions of experiment are maintained, appears regular and predictable. Although the character of the movements executed by the skeletal muscles when excited reflexly through the medium of the isolated spinal cord is variable, one feature common to them is their comparative brevity of duration. Many of them are, as pointed out by Fick and by Wundt years ago, hardly distinguishable in several particulars from the simple twitches elicitable from an excised muscle, so brief and local and incoördinate do they appear to be. Others are more prolonged and, as I have described in a paper recently communicated to the society, exhibit various forms of sequence or "march" (Hughlings Jackson). Without recapitulating the conclusions there drawn from the data given in that paper, I wish here to merely point out that of movements due to purely spinal reflex action, although some are fairly extensive, most are quite short-lasting, and not so prolonged as the longer of those that can be elicited under appropriate conditions from the cortex cerebri; also that if prolonged they, like the final phase of prolonged movements initiated from the cortex, often become clonic or exhibit that kind of action which in the paper referred to above I have designated "alternating."

The reflex movements, the subject proper of this note, are, on the contrary, of extremely prolonged duration, and absolutely devoid of clonic character and of alternating character. If the cerebral hemispheres be carefully removed—e.g., from a monkey—with avoidance of hæmorrhage and of fall of body temperature, and if sufficient time be allowed to elapse for subsidence in the animal of what may be called shock, movements can be evoked remarkably different from those I have ever seen elicitable as purely spinal or as cerebral reactions. If a finger of one of the monkey's hands be stimulated, for instance, by dipping it into a cup of hot water, there results an extensive reflex reaction involving movement of the whole upper limb. The wrist is extended, the elbow flexed, the shoulder protracted, the upper arm being drawn forward and somewhat across the chest. The movement occurs after a variable and usually prolonged period of latent excitation. The movement, although it may be fairly rapid, strikes the observer each time as perfectly deliberate; it is of curiously steady and "smooth" performance. Sometimes it is carried out quite slowly, and then, as a rule, the extent of it is less ample. The most striking feature of the reflex is, however, that when the actual movement has been accomplished the contraction of the muscles employed in it does not cease or become superseded by the action of another group, but is continued even for ten and twenty minutes at a time. The new attitude assumed by the limb is maintained, and that, too, without clonus or even tremor. In the instance cited—namely, that of the fore limb—the posture assumed suggests the taking of a forward step in quadrapedal progression, and in that posture the animal will remain for a quarter of an hour at a time. The degree of, for instance, flexion assumed in the new posture seems much dependent on the intensity and duration of the stimulus applied. If the degree is extreme the attitude of the limb may not be maintained to its full extent for the time mentioned; thus the elbow, at first fully flexed, will in the course of a minute or so be found to have opened somewhat. This opening can be often seen to occur *per saltum*, as it were, but the steps are quite small and recurrent at unequal intervals of between perhaps a quarter of a minute and a minute. After some relaxation from the extreme phase of the posture has taken place the less pronounced attitude—e.g., semiflexion at the elbow—may persist without alteration obvious to inspection for ten minutes or more. Apart from the occasional step-like relaxations the contraction of the muscles is so steady as to give an even line when registered by the myograph. A renewed stimulation of the finger excites further flexion, which is maintained as before in the way above described. The posture can be set aside without difficulty by taking hold of the limb and unbending it; the resistance felt in the process of so doing is slight; the posture thus broken down is not re-assumed when the limb is then released.

Analogous results are obtainable on the hind limb. Hot water applied to a toe evokes always, so far as I have seen, flexion of ankle and knee; usually of hip also. This movement is "deliberately" executed and always institutes a maintained posture. If the finger (or toe) of both right and left limb be placed together in the hot water there results symmetrical reflex movement of both the right and the left fore limbs (or hind limbs), leading to assumption of a fairly symmetrical posture by the right and left limbs respectively, the posture being similar to, but duplicate of, that evoked in the one limb only on excitation of that limb. This may appear a self-evident sequel to the observation given earlier, but is not so when an observation immediately to be mentioned is taken into consideration.

Not the least interesting part of the reflexes under consideration is a remarkable glimpse which they allow into the scope of reflex inhibition as regards the coördinate of movements of the limbs. Although the posture taken up by the right fore limb consequent upon excitation of a finger is symmetrically duplicated by the left limb when both hands are simultaneously stimulated, the effect of excitation of the two hands does not lead to symmetrical posture if the excitation be not synchronous but successive. If, when the right arm has already assumed its posture in response to an excitation of the right hand, the left hand be stimulated, there results, while the left arm in obedience to the excitation is lifted and placed in the flexed posture, an immediate and, if the stimulus be at all more than slight, complete relaxation of the right arm. The right arm drops flaccid while the left is raised and maintained in the raised attitude. Similarly, excitation of the right foot breaks down the posture assumed by the right arm, and conversely, and even more easily, stimulation of the right hand breaks down a posture assumed by the right leg. Again, a nip of the right pinna causes relinquishment of a posture assumed by the right arm or by the right leg. If the right pinna is pinched when both arms are in this cataleptoid posture, complete inhibition can be readily exerted on the right arm, but usually only partial relinquishment can be induced in the left arm. To exert complete inhibition upon the posture of the left arm the pinna pinched must be that of the left side. Similarly the posture reflexly evoked by appropriate stimulation of either hind limb can be inhibited by excitation of either pinna or of either fore limb, but predominantly by pinna and fore limb of the same side as the limb to be inhibited. The inhibition of the hind limb is much more easily elicited from the opposite hind limb than from the opposite fore limb or opposite ear. I have never yet seen it obtained diagonally upon the fore limb from the opposite hind limb.

The movements obtained in the limbs by exciting the limbs

[1] Communication to the Royal Society, Dec. 29th, 1896.

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themselves are only cited above as examples to illustrate the general characters of the condition. The details of the results will be given in a fuller paper dealing with the subject. I was prevented from inquiring thoroughly into the phenomenon when it was first met with; but in the course of the present summer and autumn the investigation has been systematically undertaken. I will conclude this preliminary note by adding that throughout the observations the animal's respiration remains apparently unaffected by the stimuli effective to produce the various reflexes and inhibitions such as above described. The respiration is tranquil, rather deep, regular, and often somewhat frequent. The animal in all my experiments has been completely blind, but a sharp conjunctival reflex exists. The knee jerks are elicitable but are not exaggerated. The tonus of the sphincters appears about normal. The pulse is full, regular, and fairly frequent. I have not at present succeeded in evoking the cataleptoid reflex by simply placing the limb in the desired posture.

In applying the term "cataleptoid" to these reflexes I do so because the reflexes recall, in some respects, strikingly certain phases of hypnotic condition—by some writers distinguished as cataleptic—and because the strict significance of the prefix implies a steady maintenance of possession subsequent to seizure and is, therefore, peculiarly applicable here, whether these reflexes be or be not allied to hypnotic catalepsy.

Liverpool.

ON MENTAL AND PHYSICAL FEEBLENESS WITH ANALYSIS OF CASES.

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DURING 1896 I had the opportunity of examining and reporting on many cases brought under notice of the Charity Organisation Society as "feeble-minded," but will here only deal with the first hundred as they were presented. After examination they were classed as follows:—

	Males.	Females.
Exceptional cases, requiring special care on account of mental or physical infirmity ...	37	31
Not exceptional cases	24	8
Number of cases examined and reported on	61	39

The "exceptional cases" are classed as:—

Imbeciles, including one girl, aged twelve years, paraplegic with double cataract. Her sister aged ten years, who is included below among the "feeble-minded," was also paraplegic with double cataract. A brother, aged eight years, had similar defects, but with better brain-power than his sisters	4	6
Feeble-minded, or feebly gifted mentally—i.e., distinctly deficient in mental power, but not to such a degree as to justify certification as imbecile	28	18
(Of these "feeble-midded cases" 4 males and 1 female were also epileptic; 6 males and 2 females were deaf, or had naso-pharyngeal obstruction; 2 males were affected with hemiplegia; and 1 male and 1 female suffered from disease of the spine.)		
Epileptic, not included above	—	4
(Of the nine cases of epilepsy—4 males and 5 females—one of the girls was mute and another was a moral imbecile.)		
Mentally exceptional or *moral imbeciles* not included above	2	1
Crippled or *physically defective* not included above:—	—	—
Infantile paralysis	—	1
Chorea	1	1
Leg amputated	1	—
Dumb with naso-pharyngeal obstruction ...	1	—
(The total number of cases crippled or physically defective was 8 males and 5 females.)		
Total number of cases reported as exceptional and needing care	37	31

In describing these cases previously to classifying them and giving a diagnosis it is necessary to record the facts seen, and for this purpose it is convenient to proceed according to four main classes of defect. 1. Developmental defects in size, form, and proportion of parts of the body, principally observing the cranium, palate, external ear, and the features individually. In the report[1] of the committee on the mental and physical conditions of childhood, forty-two such defects are defined besides others less commonly seen. 2. Abnormal nerve-signs observed in the balance, action or reaction in movement and coördination of parts moving. Twenty such signs are defined in the report. 3. The nutrition and physical health of the body. 4. Mental dulness or defect as elicited by questions asked of the patient and his appreciation of common objects and power to perform simple mental processes.

Among the more commonly observed nerve-signs the following may be mentioned: general balance, slouching or listlessness, the head may be dropped in place of being held erect, the shoulders asymmetrical, and the feet unequally planted with the knees bent. In the forehead there may be horizontal creases from over-action of the frontal muscles, or vertical creases produced by the corrugators. Fulness under the eyes resulting from relaxation of the orbicularis oculi is common in conditions of fatigue, and grinning or over-smiling is common in brain defect. The eyes may wander and not fix well on an object moved; on the other hand, the head only may be moved in looking at things in place of moving the eyes. The face as a whole may be wanting in tone and expression. The hands when held out in front in a well-trained, active child are on a level with the shoulders, pronate, the arms being straight at the elbow, parallel with one another the width of the chest apart, the hand straight with the forearm, all parts and the digits held in the same plane. In place of this straight posture the wrist may droop with the metacarpus folded or adducted, the fingers being bent as in fatigue or paresis. In the nervous child and the patient convalescent from chorea the wrist droops while the digits are over-extended at the knuckle-joints and there may be finger twitchings. Imitation of finger movements performed by the observer may be slow, with inexact coördination as produced by sight; this is a useful test of weak coördinating power in one side of the brain. Slow and inexact response in movement and in speech is a very important indication of deficiency of brain power. "Extra-movements" may be seen accompanying coördinated action, such as protrusion of the tongue before answering a question, or the head may be bent, or one hand placed behind the back; such uniformly repeated actions are not uncommon. Statistical inquiry shows[2] that both defect in development of the body and abnormal nerve-signs, either alone or in combination with other classes of defect, are much associated with brain conditions leading to mental dulness. Also, that nerve-signs alone or in combination with other defects are more frequent and potent causes of mental dulness than defect in development alone or in combination for boys, and also for girls when unassociated with low nutrition or physical delicacy. Some cases present one class of defect only; of the feeble-minded cases two boys and six girls presented all the four classes of defect; as a rule, the more classes of defect present the worse is the prognosis. It is, however, noteworthy that the "moral imbeciles," the worst group of mental cases, may present no defect in body, being well built, with a general good motor action, active and attractive and intelligent in reply, so that a judgment of the case is only made on the results of observing action under varied environment and on facts communicated by those in charge of the child.

Of the feeble-minded cases the report shows:—

	Males.	Females.
Cases with developmental defect without nerve-signs	1	—
Cases of nerve-signs without developmental defect	5	7
Cases with developmental defect and nerve-signs	21	11
An epileptic, feeble-minded, moral imbecile ...	1	—
Total	28	18

To enable us to give satisfactory advice concerning these cases, which occur abundantly in all sections of society, it is necessary to make a clinical examination, which should, I think, include what we see in development of the body and disproportioning of its parts and the features, and, also, in signs of brain action apart from mental tests proper which

[1] Report on the Scientific Study of the Mental and Physical Conditions of Childhood, with particular reference to children of defective constitution, and with recommendations as to education and training. Based on the examination of 100,000 children. Published by the committee at the Parkes Museum, London, W.

[2] See the writer's article in the Journal of the Royal Statistical Society, March, 1896.

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are mainly elicited by speech. A further reason for recording abnormal nerve-signs as distinct from the developmental signs is that the separate nerve-signs may to some extent be removed in detail by training, while the gradual removal of each defect in movement and balance indicates the improvement effected by training and shows the teacher certain points requiring daily attention. I have spoken of a clinical examination for the purpose of mental classification; beyond this, of course, a medical examination is needed on the ordinary points of health and freedom from disease. It may be well to draw attention to the frequency of deafness and naso-pharyngeal obstruction, defect of the eyes, skin, teeth, and glands, in cases of mental defect; conversely, I would draw attention to the frequency of mental defect in cases brought under treatment for the conditions just mentioned. It has been shown in the published report that all cases with any developmental defect are more delicate than others, their tissues fall into low nutrition under adverse environment (this fact is specially marked in the case of girls under all circumstances). I cannot but think that the boarding-out of such children under the Poor-law, as has been proposed, will lead to difficulties in the future. The diagnosis, classification, and management of children and adults with mental dulness and weakness is a subject that has recently attracted much public attention, while our State departments have recognised that provision for the care of such cases is necessary. The subject appears to call for due consideration from our profession, especially now that educational questions are so widely discussed and some educational bodies are seeking assistance from medical men.

After receiving evidence from the early part of the inquiry of the Committee on School Children, the Royal Commission on the Blind, &c., reported in 1889 "that with regard to 'feeble-minded' children they should be separated from ordinary scholars in public elementary schools in order that they may receive special instruction, and that the attention of school authorities be particularly directed towards this object." The London School Board has provided day classes of special instruction at twenty-four centres, where over 1000 children, dull, backward, or feebly gifted mentally, are taught; this is apart from the classes for the blind and dumb carried on under the Education Act of 1893. Clearly for such cases further industrial training is needed when they leave school at fourteen years of age.

The subject here dealt with is a large one and presents many aspects, especially in individual cases which must be dealt with according to circumstances. The census shows that 24 per cent. of the population are of school age, and the examination of 100,000 children seen in schools showed that about 1 per cent. are distinctly below the normal in mental or physical conditions, which may best be dealt with in early life and who are improvable under early and continuous training.

Prince of Wales-terrace, Kensington Palace, W.

THE TREATMENT OF EMPYEMA BY A VALVULAR TUBE.

BY W. MENZIES HUTTON, M.D., F.R.C.S. EDIN.

THE results obtainable by treating empyema by incision and drainage with an ordinary tube are often far from satisfactory. Many cases certainly heal up fairly well, but in a large number of cases healing, if obtained, is only after many weeks, and then we get considerable falling in of the chest wall and diminished expansion of the lung on that side. Cases are continually occurring in which Estlander's operation becomes necessary, and then even healing does not always follow. Nor are these unsatisfactory results to be wondered at seeing the usual methods of treatment are only to provide free exit of pus without attempting to aid in the expansion of the lung. In cases following pneumonia, influenza, and other acute affections good results are got by the ordinary methods of treatment. In these, however, even when healing has resulted in two or three weeks, I have found in a number of cases examined, even after months, that there remained an appreciable falling in of the chest wall with diminished expansion of the lung on the affected side. To understand how a valvular tube will enable the lung to expand we must have clearly before us the condition of affairs when there is an opening into the pleural sac. The lung is collapsed and the respiratory movements of the lung are reversed. With inspiration we have still further collapse of the lung by air rushing in at the opening into the pleural sac and by the expanding lung drawing air out of the collapsed one. With expiration, on the other hand, air is expelled from the healthy lung and distends the collapsed one. This is only slightly seen with ordinary expiration, but with forced expiratory acts, such as coughing, it is very evident. This can be proved by removing a portion of the chest wall in animals, and was demonstrated on the human subject in Germany, where it was necessary to remove a portion of the chest wall with a tumour. Here with each inspiration the collapsed lung was seen to diminish still further and with a cough the lung filled the pleural sac. In animals a hernia of the lung may even result from excessive expiratory acts. It is seen also just after opening an empyema: with inspiration the discharge lessens or even ceases, and with expiration it is violently expelled. Now if we introduce a tube with a valve attached we see that with expiratory acts air and discharge are expelled, but with inspiration the valve closes and no air gets back into the pleural sac, and the lung remains so far expanded and is ready to expand still more with each succeeding expiratory effort. In short, the lung keeps what it gains. I have tried several kinds of valves and apparatus and have now got one which works admirably. It consists of a large indiarubber tube with a rectangular rubber flange about 5 in. long and 4 in. broad. It is of sheet rubber about $\frac{1}{16}$ in. thick. The tube is just long enough to go through the chest wall. Into this tube is fitted a right-angled piece of glass tubing to which is attached a large-sized indiarubber drainage-tube about 6 in. long, and to this a duck-bill valve made of fine indiarubber is attached. This valve is encased by a glass tube which protects it from pressure. Between the flange of the indiarubber tube and the skin is inserted a piece of gutta-percha tissue somewhat larger than the flange. This sticks to the flange and to the skin and assists in preventing air getting in by the side of the flange. The opening in the chest wall should be made in the mid-axillary line at the level of the sixth rib, as this is the part to which the lung last expands. A dependent opening is not necessary and may be disadvantageous. When we are dealing with the pleural sac we have a piston arrangement by which the lung with expiratory efforts expels the discharge. I have tried the apparatus in cases where the opening had been made posteriorly or anteriorly, and what occurs is this—the lung comes out to the opening and blocks it, while a cavity remains at the lateral aspect of the chest. After the opening has been made the indiarubber tube is introduced, and the flange lies against the skin with the gutta-percha tissue between. Pads of wool are placed over the flange, which is fixed by a domette bandage to the chest. The large drainage-tube with the valve is slid over the bent glass tube and the valve end is carried round the chest to the front of the abdomen, where it is enveloped in wool to absorb the discharge, and this is retained in position by a binder. When the flange has been applied and the valve attached one can demonstrate the valve working. When the patient coughs air and discharge are expelled between the lips of the valve, and when inspiration occurs the lips of the valve are seen to close tightly. If now the lips are opened by inserting a probe between them air is heard to rush in, showing that more or less of a vacuum has been produced within the pleural sac. I would claim for this apparatus that it is simple and works admirably; that it hastens the expansion of the lung without causing any traction on the lung, as do syphon methods of drainage; and that it is safe and comfortable to the patient, who usually expresses himself easier after it is applied, as it enables him to breathe and cough much more easily. After even twenty-four hours the respirations are much reduced in frequency. The valvular tube has a further distinct advantage, in so far that it prevents air going into the pleural sac and so prevents sepsis, which frequently occurs in empyema. The discharge will be seen often after a day or two to become simply serous. There is also a great saving of dressing, as all the discharge escapes into the wool over the abdomen, and a nurse can easily change this. The flange does not require to be touched every day. Once every four days is usually sufficient for the wound itself to be looked to. For this purpose the tube is removed and, of course, air gets into the pleural

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sac, but as soon as the apparatus is re-applied a few coughs again expand the lung. As the lung expands the parietal and visceral pleuræ become adherent and obliterate the cavity. In acute cases the expansion may be complete in two or three days; in more chronic cases it may take ten days or more. I have seen a lung expand after it had been collapsed for eight months. The method is suitable for all cases except those in which a communication with a bronchus exists. It is rather difficult to know when complete expansion and adhesion have taken place. This can usually be determined by introducing a probe and feeling the lung. I append short notes of three cases which show the results attainable by this method.

CASE 1.—The patient was a woman aged thirty-eight years. She had an empyema which was treated in the ordinary way and apparently healed. Three months later it was found again discharging and there was a cavity which would contain about four ounces of pus. Great relief followed the application of the valve tube, especially by easing the breathing. Expansion occurred in five days; there was no recurrence.

CASE 2.—The patient was a man, aged twenty-two years, suffering from phthisis and empyema. This was opened and drained in the usual way for about twelve days. Then there was no sign of closure of the cavity and the valve tube was tried. The day after the tube was applied the patient was tested as regards his breathing by a spirometer. Three days later he was again tested and had now increased his breathing capacity by ten cubic inches. The discharge had also ceased and the lung was found expanded and adherent all over except for about one inch below the wound. This I expected to close and removed the tube. Just before the valve tube was used the pulse averaged 110 and the respiration 24 per minute. The temperature was 100° F. at night. On the second day after the pulse was 96, the respiration 18, and the temperature 99°. In this case I took out the tube a little prematurely, as some small re-accumulation occurred. The small cavity soon healed and three months after the patient had gained 21 lb. in weight.

CASE 3.—The notes of this case were kindly sent to me by Dr. Simpson of Golspie. The patient, a young man, aged twenty-three years, tall, phthisical, came in January, 1895, with a history of pleurisy two years previously, for which he was tapped in the Edinburgh Royal Infirmary, and also received injections of tuberculin. His left chest was filled with fluid, the apex beat being nearly under the right nipple. Aspiration was done several times and about ninety ounces of pus removed. As re-accumulation rapidly took place Dr. Simpson opened into the pleural sac through the sixth interspace and inserted the valve tube on April 1st. On April 5th the discharge had entirely ceased, the tube was removed, and the wound healed in a few days. The patient made an uninterrupted recovery, and in July was able to assist in haymaking and did most of the harvest work on his father's croft. By Oct. 14th he had gained nearly 2 st. in weight and could climb a steep hill without inconvenience to his breathing.

Space forbids further examples, but I think these will show what results may be gained by this method of treatment. I believe that by it we can gain a more rapid and more complete return to the normal in acute cases; in chronic we can get the lung to expand and be useful instead of the patient being worn out by long-continued suppuration, ending often in death or requiring the subsequent performance of Estlander's operation, which, if it stops the suppuration, deprives the patient of the use of the lung. This becomes a mass of tissue of low vitality, and, I believe, forms a fit nidus for the tubercle bacillus. The tube or valve may get blocked, but I have never had any trouble from this. If it should occur the apparatus is easily cleaned. The apparatus is to be had from Messrs. Walters and Co., 69, Lambeth Palace-road, London; or Messrs. Young and Son, Forrest-road, Edinburgh.

Edinburgh.

CLEVEDON CONVALESCENT HOME.—From the annual report of this institution, just issued, it appears that the past year has been a record one, 335 patients having been admitted. The total number of admissions since November, 1881, is stated to be 4168. The receipts for the past year were £801 and the expenditure £790. The reserve fund account shows a balance in hand of £65.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF RESECTION OF THE RADIUS FOR SARCOMA.

BY E. H. DOUTY, M.B., B.C. CAMB.,
ASSISTANT SURGEON TO ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

THERE is so little deformity in this case and the hand is so useful that I have thought it worth while to draw attention to it, as it may guide others to choose resection of the bone rather than amputation in cases of slow-growing endosteal sarcoma. The woman has fair grasping power and finds her hand useful to her in her household duties. The illustrations show (A) the state of the limb before the operation and (B) at the present time. The tumour pulsated in places and there was a history of eighteen months' growth. It proved to be a myeloid sarcoma. The patient was a widow, aged forty-eight years, and her personal and family history are without significance. I made a long incision over the outer aspect of the bone and extending to the middle of the metacarpus. I found the cartilages of the

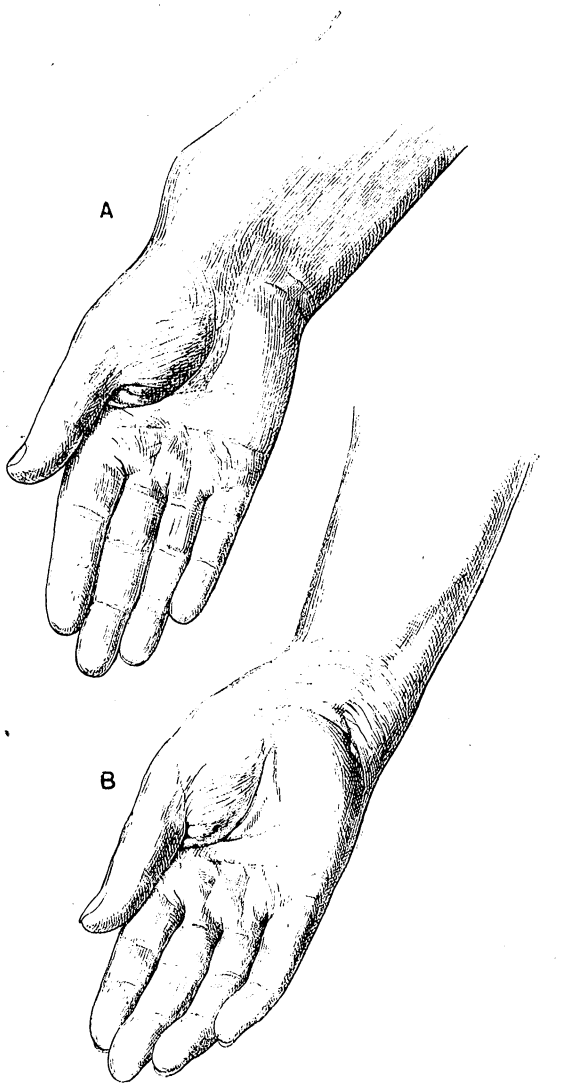


Fig. A. shows the appearance of the hand and wrist before, and Fig. B. after, the operation.

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radio-scaphoid joint discoloured, and I therefore removed the scaphoid bone as well. The growth was strictly confined to the radius and to its lower end, not extending more than two inches up the shaft. It is now four months since th operation.

Cambridge.

AN AFFECTION OF THE FIRST PHALANGEAL JOINT OF THE HAND.

BY E. DONALDSON, B.A. T.C.D., L.R.C.S. IREL.

IT sometimes happens when the hand is closed and an attempt is made to open it that one of the fingers remains in a state of fixed flexion with the tip almost touching the palm. The fault lies in the first phalangeal joint. The patient has to use the other hand to raise the finger into the straight position. A slight snap in the joint mentioned may be felt at the time of extension. The finger after reduction can be flexed and extended freely. The trouble is apt to return. The joint does not swell and, with the exception of this liability to get "stuck," presents no apparent abnormality. This little ailment is somewhat annoying to the patient, though it is not painful. It appears to be rare. I have seen only one case. Mr. Jonathan Hutchinson has described three others.[1] I do not know if any one else has written on the subject. So far, the affection has been found either in the ring or middle finger, and it may be found on one side or on both. It may be recovered from. Up to this it has not been found in anyone under fifty years of age. In the case observed by myself, which is published in Mr. Hutchinson's "Archives of Surgery" (vol. vii.), the flexed and fixed condition of the ring finger was most likely to occur when a firm grasp of anything was taken. The patient could close and open the hand without any difficulty if she did not attempt to grasp anything firmly. This, although a trivial ailment, is a very interesting one. The joint affected is the first phalangeal, which has most to do with flexion of the finger. I think a subluxation of this joint occurs when the finger becomes fixed and flexed. The histories of the patients suggest that senile or rheumatic changes act as predisposing causes.

Londonderry.

A CASE OF WOOL-SORTERS' DISEASE.

BY ALBERT E. TUNSTALL, L.R.C.P., L.R.C.S. EDIN.

THE following case of wool-sorters' disease occurred recently at Denholme. The patient was a man, aged forty-two years, who had been engaged for several weeks sorting mohair at a factory where two men had died from wool-sorters' disease about eight months previously. He left his work at noon on Saturday, Jan. 2nd, 1897, apparently in his usual health. Upon rising from bed about 9 A.M. on the Sunday morning, having slept well through the night, he complained of headache, localising it in the centre of the forehead. This pain became worse, so that about 11 A.M. he went back to bed and remained there until 4 P.M., when he again rose and had a cup of tea, but could not eat. He returned to bed about 7 P.M., the pain being not less severe. He had a restless night, being quite unable to sleep. During Monday the headache eased a little, but he commenced to feel a difficulty in breathing and had a slight cough. He then vomited what appeared to be a large clot of blood very dark in colour. That night he again had no sleep. During the early part of Tuesday he seemed to be easier. I saw the patient for the first and only time about 5 P.M. on this day (Jan. 5th). He then complained of headache, but said it was not severe. He had had no sleep since Saturday night, and also had taken no food since then. The patient's chief complaint, however, was that he had difficulty in getting his breath, saying, "There is something here," at the same time striking his hand upon the front of the chest over the upper part of the sternum. He had a slight cough, with expectoration of clear, rather frothy phlegm. His breathing was not laboured. His face had a dusky hue, and a somewhat careworn expression. The patient anxiously inquired what his illness was, and whether I thought it was owing to his work. The temperature was then 100·4° F. and his pulse was 86 per minute. The heart sounds were normal, and examination of the lungs only revealed signs of slight congestion. He could converse freely and his case did not appear to be near its end. However, the difficulty of breathing increased and he expired rather suddenly and very quietly five minutes before midnight. The patient had been quite conscious and able to talk to his friends up to within five minutes of his death. I saw the body thirteen hours after death; the face, neck, chest, and arms were then of a black-red colour, the legs retaining their natural white colour. The face was also swollen. The body still felt warm and post-mortem rigidity had not set in. By the next day the colour had slightly faded in the face.

I am sorry that no post-mortem examination was made, as the friends of the deceased could not be prevailed on to give their consent and the coroner did not order one. The insidious onset of the illness and the absence of grave symptoms all through were most noticeable. The friends did not feel alarmed until the patient vomited on the Monday night, and then, owing to my living at a distance of three miles, they decided to wait until the next morning before sending for me.

Thornton, Yorks.

[1] Archives of Surgery, vol. vi., p. 392, and vol. vii., pp. 54 and 380.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prœmium.

SEAMEN'S HOSPITAL, GREENWICH.

A CASE OF TETANUS TREATED WITH TIZZONI'S ANTITOXIN; RECOVERY.

(Under the care of Mr. G. R. TURNER.)

WE publish this week the notes of another case of tetanus treated with antitoxin, and our readers will recognise in it a type of the successful treatment of which more than one has recently been published—a young patient, a prolonged period of incubation, and slow development of symptoms. The case was by no means acute. The only example of the successful treatment of tetanus by the antitoxin serum which we were able to bring before our readers last year in the Mirror of Hospital Practice was a somewhat similar one.[1] It was the case of a boy, aged seventeen years, who had shot himself in the left hand. Stiffness of the jaw supervened on the twelfth day. Two days later antitoxin was given and the boy was convalescent in three weeks. The opinion of those watching this case as to the relative value of the serum and chloral hydrate is very striking. For the notes of this case we are indebted to Mr. E. Darbyshire, house surgeon.

On Aug. 31st, 1896, a boy, aged thirteen years, was admitted to the Seamen's Hospital, Greenwich, suffering from tetanus. The source of the infection was a wound inflicted by a rusty nail which the lad had trodden on about three weeks previously. At the time of admission there was a scar on the sole of the left foot with quite a healthy appearance, there being a scab over part of it, but no discharge. The patient first noticed his mouth feeling stiff and experienced some difficulty in opening it on the 26th, or about fourteen days after the injury. When the patient was brought to the hospital risus sardonicus was well marked and the teeth could not be separated more than a quarter of an inch. There was also slight stiffness of the neck. The parents had not noticed any "spasms." On the day after admission the back was stiff and the stiffness of the neck had increased. No convulsive movements of the limbs occurred. The boy was given ten grains of bromide of potassium and five grains of chloral hydrate every eight hours. On Sept. 2nd spasms of the arms were noticed, but these were not severe. At 9 P.M. on this date twenty grains of Tizzoni's serum were injected into the abdominal wall. No

[1] THE LANCET, Oct. 10th, 1896, p. 1012.

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reaction made itself manifest either in the pulse, respiration, or temperature. The spasms were rather more frequent and certainly more severe during the night; the back was stiff and the abdominal muscles were firmly contracted, but no true opisthotonos was present. During the day of the 3rd the patient seemed better, the convulsions being very slight and infrequent, but at night they increased again in frequency and severity. On the morning of the 4th ten grains of serum were injected into the thigh under chloroform, after which the spasms were less. There was no effect on the pulse, respiration, or temperature. A third injection of ten grains was given late in the afternoon of the same day, after which the patient was quiet and slept well all night. He was now given ten grains of chloral hydrate every four hours. On the 5th there were a few slight spasms; the patient was very drowsy all day. The bowels were most obstinately confined, castor-oil, calomel, and enemas being tried from time to time, and all proving equally ineffectual. On the 6th the patient slept almost continuously all day; there were no spasms. The chloral hydrate was still administered every four hours. On this day there was retention of urine, and at midnight ten ounces were drawn off by catheter. The passage of the instrument caused a spasm. As the patient was very drowsy the chloral was discontinued at night, but the following morning the spasms were more frequent and severe. Chloroform was given and ten ounces of urine were withdrawn by catheter. An injection of ten grains of serum was administered and an olive-oil enema, which was retained for several hours and then returned without any fæcal matter. The patient was again quieter and in the evening passed fourteen ounces of urine naturally. The ten-grain doses of chloral were recommenced during this day (Sept. 7th) and were continued through the 8th and 9th, during which time the patient certainly improved and passed his urine naturally, though the bowels were still confined in spite of two more enemas. On the 10th the chloral was only given every eight hours and at night the spasms were again worse; and on the morning of the 11th the patient's mouth was more drawn and his eyes more nearly closed than they had been for three days. At 12.30 P.M. on this day another injection of ten grains of serum was given without any effect on the boy's condition, and at 6 P.M. his temperature was 100° F., the highest it had yet reached. The patient passed a quiet night, and on the 12th the bowels were slightly opened. From this date the patient steadily improved, no more serum was given and the chloral was gradually dropped. The bowels gave no further trouble, being freely opened each day quite naturally. During convalescence the boy was given a tonic of iron and nux vomica, and he was discharged cured on Oct. 6th.

Remarks by Mr. DARBYSHIRE.—The points of interest in the case are the long incubation period, the very healthy appearance of the scar, and the prolonged and obstinate constipation. To those watching the case the chloral hydrate seemed to have much more effect in controlling the spasms than did the serum.

SHEFFIELD GENERAL INFIRMARY.

A CASE OF PATHOLOGICAL RUPTURE OF THE BLADDER; OPERATION; RECOVERY.

(Under the care of Mr. ARCHIBALD CUFF, resident medical officer.)

RUPTURE of the bladder is comparatively so rare an event, from whatever cause it may arise, that this fact, together with the gravity of the accident, will invest the record of the following case with much interest. Rupture of the bladder may be either traumatic or due to some cause acting from within; in either case the rupture may be intra-peritoneal or extra-peritoneal. Cases such as the following are very rare and usually result from a combination of causes such as that mentioned by Mr. Cuff as probably present in the case under his care. In the majority of cases of idiopathic, or, more properly speaking, pathological, rupture distension of the bladder is a very important predisposing cause; whilst local weakness, the result of some process such as ulceration or new growth, is usually present. Mr. Rivington[1] writes that "in cases of stricture and retention," when the rupture follows over-distension and straining the aperture is usually a small perforation, or a short rent of about half an inch, or a triquetrous opening, or a round hole lined by mucous membrane. In cases of hypertrophy of the prostate the opening may be smooth and rounded or a narrow rupture with thinned or sloughy edges.

A man, aged forty-seven years, was admitted into the infirmary under the care of Mr. Charles Atkin (to whose courtesy Mr. Cuff is indebted for permission to publish these notes) on March 28th, 1896, complaining of intense pain in the abdomen, which, commencing a fortnight before admission, had been increasing in severity ever since. The following history bearing upon his condition was obtained partly at the time and partly subsequently. Fifteen years ago he had suffered from a smart attack of gonorrhœa, attended with the passage of a blood-stained discharge during its most acute stage and followed by a gleet which lasted six months. Since that time he had always had trouble in passing urine, his symptoms being those which usually attend a stricture of the urethra—namely, frequent and painful micturition. He was perpetually wishing to pass urine, especially, he said, when on a railway journey. The quantity of urine passed at any one time was small, varying from a "teaspoonful to a small cupful." During the act he had to strain, sometimes so much that tears would come into his eyes from the pain. Now and then there was dribbling of urine from the meatus, indicating an over-stretched urethra and sphincter behind the obstruction. For the last three years, dating from symptoms of what was probably a sub-acute cystitis, his troubles had been worse. There had been after this frequent attacks of pain in the loins and in the lower part of the abdomen and his urine on several occasions had been noticed to be turbid and of a bad odour. At Christmas, 1895, he had had one of the worst of these attacks, but they had all in time passed off, leaving him with only the irritability of the bladder to trouble him. A fortnight before admission, when in fair health, and free from pain, while endeavouring to raise a long and heavy ladder from a wall and having to strain considerably to effect this, he distinctly felt something "give way" in the lower part of the abdomen. This was accompanied by only slight discomfort, which lasted through the day. He did not remember whether at this time his bladder was full or empty. Urination was not accompanied with more pain than he had been accustomed to. But that night the discomfort deepened into pain, and this became so severe that on the next day he called in his medical attendant. In spite of all treatment he became worse, vomited several times, had shivering fits, and his temperature rose progressively. At the same time a tumour made its appearance in the hypogastrium. He was finally sent to the Infirmary. On admission his temperature was found to be 106° F. and he appeared to be extremely ill. Ten grains of sulphate of quinine were given and the temperature fell to 101·5°. But it soon rose again and he had a severe rigor. About 11.30 P.M. he had another rigor and his temperature was then 103·5°. It was while in this rigor that Mr. Cuff first saw him. His countenance was flushed to a rosy red, the eyes were suffused, and the skin was dry and burning to the touch. The jaws were so tightly clenched that Mr. Cuff could get no reply to any questions from him. So powerful were the muscular spasms that the bed was clattering on the floor and all the inmates of the ward were kept awake by the noise. The patient's pulse was 140, small, and "running." On examining the abdomen a firm, ill-defined mass was felt in the hypogastrium, extending upwards nearly to the umbilicus, and laterally to the level of the mid point of Poupart's ligament. An indefinite sense of fluctuation was to be made out. The abdominal walls were tense and not moving very much with respiration, but there was not any especial tenderness on pressure. This and the absence of vomiting seemed to exclude a general peritonitis. Neither did the swelling extend into the right iliac fossa in such a fashion as to make it likely that appendicitis was at the bottom of the mischief. The bladder was next turned to, and a catheter passed into the urethra, where it soon was engaged in a tight stricture. This being overcome the instrument was passed into the bladder, whence a small quantity of alkaline turbid urine was withdrawn. The abdominal swelling lay between the point of the catheter and the abdominal walls and hence in front of, and above, the bladder, and the working diagnosis of a suppurative peri-cystitis was made. Owing to the unavoidable absence of Mr. Atkin, Mr. Cuff was requested to do whatever was necessary, and decided to explore

[1] Heath: Dictionary of Practical Surgery, vol. i., p. 152.

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the swelling there and then. Accordingly, at midnight, March 28th, chloroform was administered, and a sound passed with some difficulty into the bladder which felt as if it was embedded in plaster-of-Paris. Its cavity was small and contracted, and its walls hard and resisting. An incision two inches in length was made in the skin of the abdomen in the median line, immediately above the pubes and the interval between the recti was opened up. Continuing the incision Mr. Cuff next cut through what appeared to be a mass of thickened and inflamed connective tissue and finally opened up a cavity—or rather a series of cavities like the pores of a sponge—containing blood-stained urine on the surface of which a glistening scum was floating. This collection of connective tissue, which extended as far as could be made out over the front and sides of the bladder, was apparently the result of chronic inflammation and accounted for the feeling of thickening of the walls of the bladder, the distance between the point of the sound and the fingers being about three-quarters of an inch. One of the small cavities in this mass led down to the bladder wall and communicated by a small opening with its interior, the tip of the sound being felt through it by the fingers in the wound. So far, however, no collection of pus had been found to account for the condition of the patient, his temperature, &c.; and as the operator appeared to be cutting well below the superior limits of the swelling the incision was cautiously enlarged in an upward direction. Here a cavity was found containing about three ounces of a most foul-smelling pus. The wound was well syringed out and a flanged drainage-tube inserted into the cavities. The patient, who was somewhat collapsed, was put back to bed, and a catheter, connected with a piece of tubing dipping into a vessel of carbolic acid solution, was passed into the bladder and tied in to ensure proper drainage. The temperature fell almost immediately to 100°, and on recovering from the anæsthetic the patient expressed himself as feeling much better. Next morning the temperature had risen to 101·4°, but the general condition otherwise seemed to be good. The surface of the wound was discharging freely, and smelt of urine. The urine drawn off seemed to be clear. The temperature kept between 99° and 100° until April 3rd, when it fell to normal, but on the 8th (the twelfth day from admission) it rose again to 103°, and a sharp attack of facial erysipelas, starting from a small scratch on the nose, set in. Seven days later the temperature was again normal, and the patient has progressed favourably since. The abdominal wound has healed, but above the pubes there is still a small hard mass to be made out on palpation. A catheter has been passed regularly, and the patient says he is now passing urine with more comfort than he has known for years.

Remarks by Mr. CUFF.—It seems clear that here was a bladder the walls of which were probably pushed out into sacculi from the prolonged straining of micturition, consisting only of mucous membrane, and this softened and ulcerated from the effects of the recurring attacks of inflammation, from which the man suffered. Under the muscular strain put upon such a bladder by the abdominal muscles in lifting a heavy weight, one of these sacculi had given way and permitted of the escape of urine on to the anterior surface of the organ and, fortunately, outside the peritoneal cavity. That little was enabled to so escape—and the widespread areas of sloughing seen in traumatic cases were not present in this case—was due in all probability to the great inflammatory thickening serving to support and strengthen the walls of the bladder and opposing the spread of a fluid in its meshes. This thickening, the result of a long-continued chronic cystitis, finds an analogy in the thickening produced by a chronic urethritis extending through the mucous membrane of the urethra and involving the tissues of the corpus spongiosum. To the good influence of this thickening outside the bladder may be attributed also the absence of shock, it permitting only a very small breakage of the bladder-wall at first, this becoming larger subsequently by erosion from the escaping urine. It is interesting to note that the abscess present had not formed at the spot of rupture, but at a point nearer the peritoneal cavity, and hence nearer to the infecting intestines. The extravasated urine had set up an acute inflammation all around it, but only that portion of the exudation nearest the intestines had been invaded by pus-forming organisms. Pathological rupture of the bladder is one of the rarest forms of rupture to which that viscus is liable. It is due in some cases to the bursting of an ulcerated wall or sacculus; in other cases to the sloughing of the wall from pressure—e.g., by retroverted gravid uterus—or inflammation; the relative numerical proportion of cases of pathological rupture to cases due to traumatism is uncertain. Rivington, quoted by Henry Morris, collected seven cases of rupture associated with ulceration or sacculus, and nine due to pressure by a retroverted gravid uterus, out of a total of 322 cases of rupture from all causes. Of the 7 cases, 3 were intra-peritoneal, 3 extra-peritoneal, and 1 doubtful.

PAISLEY INFIRMARY.

A CASE OF SIMULTANEOUS DISLOCATION OF BOTH ENDS OF THE CLAVICLE WITH FRACTURE OF THE SCAPULA.

(Under the care of Dr. W. F. GIBB.)

THE small number of cases in which simultaneous dislocation of both ends of the clavicle has been met with makes the record of this one exceptionally interesting. It is evident that considerable violence was required to produce the displacement and it is very probable that it was applied in the only direction which renders this displacement possible. In spite of the shape of the joints at each end and the position of the bone, injuries to the shoulder far more frequently result in fracture of the clavicle or in dislocation of the humerus than in displacement of either end of the clavicle, for the ligaments which hold it in position are very strong.

A man, aged sixty-four years, was admitted to the Paisley Infirmary on May 19th, 1896. He had been coming down a plank gangway at a building in the course of construction, when he fell, alighting from a height of about four and a half feet on the point of his left shoulder. He was tall, bony, and about 11½ st. in weight. When seen by Mr. J. A. Graham, junior house surgeon, at 7.15 A.M. he was suffering pretty severely from shock, the accident having occurred at 6.30 A.M. The clavicle at its sternal end was dislocated downwards and forwards, forming a very prominent swelling at the top of the sternum. The rhomboid ligament was evidently torn through. The acromial end of the clavicle was displaced inwards about an inch and a half from its articulation with the acromion, so that the bone lay in an almost antero-posterior direction instead of its usual position; from the acromion inwards, forwards, and downwards. On taking hold of the two ends of the bone it could be lifted and moved backwards and forwards. There was a starred fracture of the infra-spinous fossa of the scapula and a suspicion of fracture of the ribs, though this last could not, on account of the swelling of the tissues around, be made out with certainty. There was considerable embarrassment of respiration from chronic bronchitis. Dr. Gibb confirmed the above diagnosis at his visit at 4 P.M. The patient was put to bed and supported by pillows in a semi-recumbent posture. The arm was placed in a dislocation sling and secured to the body by a bandage. The hand, however, slipped down and the bandage greatly impeded his respiration. The dislocation was not materially affected by the slipping of the hand, his posture appearing to benefit it more than anything. Accordingly, an ordinary sling was substituted and a binder lightly applied round the arm and chest. On May 27th he died from bronchitis. No post-mortem examination was obtainable.

Remarks by Dr. GIBB.—The above case is put on record on account of the rarity of simultaneous dislocation of both ends of the clavicle. In "Heath's Dictionary of Practical Surgery"[1] only four cases are mentioned as having been recorded. In "Ashurst's International Encyclopædia of Surgery"[2] it is stated that "a few cases of this rare form of luxation are said to have occurred." In "Treves's System of Surgery"[3] there occurs: "This accident is one of the curiosities of this part of surgical literature, and is generally produced by extreme violence. The sternal end is thrown forward, the acromial backwards."

[1] Vol. i., p. 313.
[2] Vol. iii., p. 661, 1883.
[3] Vol. i., p. 965, 1895.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.—The January meeting was held on the 30th ult. at the Infirmary, Plumstead, Mr. Walter Burney (Greenwich) presiding. Mr. W. E. Boulter showed cases of Recurrent Sarcoma, Amputation of Thigh, and Perforating Ulcer.

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Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Hæmorrhagic Diphtheria.—Ulcerative Endocarditis affecting a Malformed Aortic Valve.—Graves' Disease with Persistence of the Thymus Gland.—Exhibition of Card Specimens.

A MEETING of this society was held on Feb. 2nd, the President, Mr. H. T. BUTLIN, being in the chair.

Dr. J. W W. STEPHENS and Mr. C. D. PARFITT showed specimens from three cases of Hæmorrhagic Diphtheria. In all these cases purpura and hæmorrhages from the mucous membranes developed before death, which occurred from septicæmia and not from laryngeal obstruction. Cultivations were made after death from the heart's blood, lungs, spleen, kidneys, and other organs. In each case diphtheria bacilli were found in the cultivations from the lungs, confirming the previous observations of Kanthack and Stephens. In the heart's blood in one case diphtheria bacilli were found, in the second the pneumococcus only appeared in the culture, while in the third both diphtheria bacilli and streptococci were found in the blood. The diphtheria bacilli obtained on culture proved fatal to guinea-pigs, but the toxic effects could be with certainty avoided by mixing the culture with diphtheria antitoxin. By hæmorrhagic diphtheria they meant diphtheria accompanied by hæmorrhages under the skin and mucous membrane and not those where some hæmorrhage occurred at the seat of the disease.—Dr. A. A. KANTHACK said the cases illustrated the value of complete bacteriological investigation of every case as was actually carried out at the Johns Hopkins University. The ultimate cause of death in many non-bacterial diseases was due to the multiplication of pyogenic and other organisms in the blood. He did not believe that diphtheria was a purely local disease. The diphtheria bacillus could nearly always be obtained from the lungs.—In answer to Mr. KESTEVEN, Dr. STEPHENS stated the hæmorrhages were supposed to be due to the intensity of the septic infection and not to a pre-existing purpuric diathesis.

Dr. ARCHIBALD GARROD showed specimens from a case of Ulcerative Endocarditis secondary to Disease of the Middle Ear in a man aged thirty-nine years. The endocarditis affected the aortic valves, which exhibited a congenital malformation, there being only two large cusps of equal size. There were infarcts in the spleen and left kidney and in the lower lobe of the left lung which was the seat of pneumonic consolidation. Cultures from the pus from the left middle ear and from the heart's blood yielded abundant colonies of pneumococci and a few of streptococci, staphylococci, and the bacillus coli. Sections of the endocardial vegetations, stained by Weigert's method, showed numerous diplococci. The case was of interest, not only as an example of pneumococcal endocarditis, but also as illustrating the association of a congenital cardiac lesion with another congenital anomaly—viz., almost complete absence of the left lobe of the liver. The enlarged right lobe, which was cirrhotic, lay in a vertical direction. This case, taken in conjunction with another from which specimens were shown, suggested that congenital cardiac lesions, like acquired ones, may predispose to the attacks of bacteria upon the endocardium, for the malformed valves were in each instance alone attacked.—Dr. H. D. ROLLESTON referred to an exactly similar specimen of ulcerative endocarditis on a malformed aortic valve in the museum of St. George's Hospital. He suggested that two of the cusps might have become fused from endocarditis in very early fœtal life.—Mr. S. G. SHATTOCK did not think fœtal endocarditis had been the cause, as if so stenosis would have been present.—Mr. TARGETT had examined a liver showing a similar deficiency of the left lobe, and had searched without success for any arterial abnormality which might have caused it.—Dr. GARROD, in reply, said that in his specimen the two cusps were of equal size, and each had a single corpus Arantii. He thought one cusp had been suppressed.

Dr. HECTOR MACKENZIE and Mr. WALTER EDMUNDS read a paper illustrated by drawings and lantern slides on two cases of Graves's Disease with persistence of the Thymus Gland. This association was frequently met with by pathologists, but more experience was required before its constant presence could be affirmed, but it was too frequent to be accidental. It had been suggested that as the result of the disease the normal atrophy had been arrested or even that the remaining thymus tissue had hypertrophied. Administration of thymus gland had been recommended in this disease. Dr. Mackenzie had given it in twenty cases, but with negative results, except that there was some improvement in the general health. One of the cases brought forward in this communication had been so treated without benefit. The first case was that of a woman thirty-one years of age. Symptoms had been present for five years. At the end she emaciated rapidly and died from exhaustion. Each lobe of the thyroid gland was of the size of a hen's egg. The vessels on the surface were dilated. The thymus gland was persistent and spread out like an apron over the pericardium, being a quarter of an inch thick. The two lobes were nearly in contact in the middle line. The substance was pale. The second case was that of a woman who died at the age of thirty-five years, having suffered from the disease for one and a half years. The case was complicated with ascites and general œdema. The thyroid gland was much enlarged and uniformly so. The veins on the surface were greatly dilated, but the interior of the organ was not abnormally vascular. The two lobes of the thymus gland were present, but in an atrophic condition. The heart was much hypertrophied, although the valves were normal. There was chronic peri-hepatitis and there were signs of old pelvic inflammation. The thyroid glands and the thymus glands from the two cases were examined microscopically. The thyroid glands showed (1) the colloid so altered that it did not stain deeply with the usual re-agents; (2) the vesicles were enlarged and their shape altered—instead of being square, with rounded corners, they were oblong and branched; (3) the lining membrane was convoluted; and (4) the secreting cells were columnar instead of cubical. The thymus glands were not much altered, but degenerated and opaque concentric corpuscles were less common than in the normal organ, and in their place were enlarged corpuscles less degenerated and not opaque. One of the thymus glands contained eosinophilous cells, but this was not abnormal.—Dr. ROSE BRADFORD had examined four cases of Graves's disease post mortem; in all of them the thyroid gland was persistent and enlarged, in one case being thick and fleshy. He had seen the same condition present in some cases of leucocythæmia, Addison's disease, and lymphadenoma.—Dr. BERTRAM ABRAHAMS confirmed what had been said as to the inefficacy of thymus extract in Graves's disease, although it was of value in other forms of goitre.—Dr. MACKENZIE, in reply, said that he had found the thymus gland persistent in other cases, and showed one specimen from an elderly man who died from emphysema and a dilated heart. Its persistence in cases of Graves's disease appeared to be constant, but he should not like to hazard an opinion yet as to the significance of this fact.

The following card specimens were exhibited:—

Mr. D. DREW: Obturator Hernia.

Dr. CYRIL OGLE: (1) Ulcerative Colitis associated with Paraplegia; and (2) Hæmatoma of the Dura Mater.

Dr. B. HUNT: Myoma of Uterus weighing 34 lb.

Dr. F. LEWIS: Epithelioma of the Œsophagus and Scirrhus of the Pylorus in the same specimen.

Dr. HEBB: (1) Ulcerative Endocarditis in a Malformed Heart; and (2) Pendulous Tumour pressing on the Cervical Region of the Spinal Cord.

OPHTHALMOLOGICAL SOCIETY.

Spontaneous Recovery of a Retinal Detachment.—Retention Cyst of the Lacrymal Gland or "Dacryops."—Exhibition of Cases and Card Specimens.

AN ordinary meeting of this society was held on Jan. 28th, Mr. E. NETTLESHIP, President, being in the chair.

Dr. LAWFORD KNAGGS described a case of Spontaneous Recovery of a Retinal Detachment. A woman, aged twenty-one years, was shot in the right temple on May 21st, 1892. The bullet passed below the right orbit and lodged in the floor of the left antrum. The wound healed quickly. Attention was drawn to the right eye by the patient's complaints of inability to see things in certain portions of the field. Two choroidal ruptures near, and œdema around, the macula, and several large hæmorrhages were seen on the 22nd, and

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from that date till the early part of July an acute attack of central choroiditis, with much effusion, was observed in its various stages. At the latter date a large mass of white lymph occupied the vicinity of the macula, and was surrounded by a broad frame of pigment, over which several vessels curled, to be buried beneath the mass of lymph. On July 27th a detachment of the retina had formed, which, when seen end-on, was of the shape of a wedge of cheese with its apex uppermost. The top of the detachment formed a ridge, which ran horizontally backwards till it merged in a track which disappeared beneath the inflammatory mass overlying the macula. The front of the detachment probably reached to the ora serrata. The field showed scotomata corresponding exactly to the central mass and the detachment. The patient was not seen again till Nov. 28th, 1893, when the detachment was found to have disappeared completely, and the re-applied retina to be quite normal in appearance. The central mass had become more triangular in shape, but the track which had led to the detachment was still visible. The scotoma caused by the detachment had gone, and that dependent on the central disturbance had slightly contracted. Central vision was destroyed. The condition was unchanged some time later. There could be no doubt that the detachment was produced by exudation gravitating after expression from the central mass of inflammatory tissue, or possibly from a concealed detachment behind it. A detachment produced by inflammatory serum, whose natural tendency was towards absorption, differed essentially from a detachment where the subjacent fluid was a passive effusion filling a potential vacuum. Detachments of the retina were divisible into three groups: (1) those occurring in fairly healthy eyes as a result of concussion in some form, as in coughing, blows, &c.; (2) those where it is the direct result of inflammatory effusion dependent on severe traumatism or on some organic disease; and (3) those met with in eyes which are the subjects of some chronic disease, such as myopia, where degenerative as well as inflammatory changes may share in the production. In Groups 1 and 2 spontaneous recovery was more probable and surgical treatment more hopeful (in suitable cases) than in Group 3. These statements were illustrated by references to recorded cases.—Mr. CANT supplied an account of another case in which absorption and cure occurred in a similar condition, resulting from a blow from a cricket-ball in a man aged twenty-four years. The eye, though myopic to the extent of 5D., was previously healthy. The detachment was treated by pad and pressure to the globe, the retina becoming re-attached, while vessels could be seen growing on its surface.—The PRESIDENT mentioned the case of a woman, aged thirty years, in whom detachment occurred spontaneously in both eyes which were previously myopic. Under pilocarpine recovery took place till the vision equalled $\frac{6}{18}$, but the detachment recurred three years later.

Mr. ARNOLD LAWSON read a paper on Retention Cyst of the Lacrymal Gland. The patient was a young married woman, aged nineteen years. The tumour had been growing for about four months when first seen. It caused a swelling in the upper and outer part of the left upper eyelid, and was accompanied by considerable ptosis, slight proptosis of the globe downwards and forwards, and slight limitation of movement upwards. On raising the upper lid a soft elastic tumour immediately bulged forwards between the lid and the globe. The tumour was obviously cystic, and had a dark bluish appearance. The skin moved freely over it. There were no glandular enlargement and no pain, and the general health was excellent. The tumour, which grew rapidly whilst under observation, was removed by dividing the external canthus, and having by this means everted the lid an incision through the fornix conjunctivæ completely exposed the anterior surface of the tumour. It was then shelled out without much difficulty. It lay perfectly free and non-adherent, except along its anterior surface, where it was attached by tags to the subconjunctival tissue of the lid, and at its outer margin, where it seemed to be adherent to the lacrymal gland. The cyst measured 40mm. in length, and 22mm. in breadth at its thickest part, and bore a remarkable resemblance in size and shape to a pigeon's egg. Its walls were of extreme delicacy and very translucent. It proved to be an unilocular cyst with a very shaggy inner wall, and contained about two drachms of a pale, straw-coloured, limpid fluid with a small sediment. Microscopically, the cyst wall was found to consist of a very delicate, loose, wavy, and elastic areolar tissue, denser and more felted toward the external wall. There was a remarkable absence of the cellular element, and it was only after repeated examinations of many sections that any cells could be found lining the cyst wall. Ultimately a few clusters of very minute cells with large nuclei were found scattered here and there in a few of the sections. The cells were of irregular shape and grouping, but strongly suggested a glandular origin. The cyst fluid was neutral, of a light specific gravity, and contained a fair amount of albumin and a distinct trace of chlorides. The chief feature of the fluid was the presence of numbers of homogeneous bodies presenting great variety of size and shape. They were almost transparent, but stained readily. There were also present large numbers of leucocytes and red corpuscles, both floating free and also adherent to the bodies and embedded in them. The presence of fibrin in these bodies was demonstrated by staining after Weigert's method, and they were considered to be probably small detached masses of an albuminous nature which had been coagulated, the precipitation of the albumin being brought about by the presence of alcohol, in a weak solution of which the cyst was lying for some days before examination, and the coagulation resulting from the formation of fibrin from the blood elements in the cyst. This theory was supported by the constant presence of adherent and embedded leucocytes in these bodies. As a further explanation a possible analogy was suggested between the bodies and hyaline casts, probably derived from some proteid of the renal epithelium, the urine in which they were found being nearly always albuminous. The presence of the epithelial lining to the cyst, the glandular type of the cells, the situation of the cyst, the presence of sodium chloride in the fluid, and the limpid character of the fluid itself point very strongly to its being a retention cyst of the lacrymal gland, a disease of extreme rarity. A parasitic origin was suggested for the cyst on account of the curious bodies in the fluid, but the nature of the cyst wall placed such a diagnosis out of the question.—Mr. DEVEREUX MARSHALL described some curious bodies in the fluid apparently of a hyaloid nature, with flattened epithelial cells.

The following cases and card specimens were shown:—

Dr. MACNAUGHTON JONES: Case of Congenital Closure of the Lacrymal Punctum and Absence of the Canaliculus.

Dr. WORK DODD: Peculiar Changes in the Fundus Oculi.

Mr. JULER: Changes in the Macula.

Mr. J. GRIFFITH: Arrest of Development of Lens.

Mr. DOYNE: Retinal Hæmorrhages.

Mr. TREACHER COLLINS: Hæmorrhage into the Sheath of the Optic Nerve.

Mr. JESSOP: Detachment of the Retina.

Mr. HIGGINS: Two Eyes Lost by Spontaneous Hæmorrhage after Extraction of Cataract.

HUNTERIAN SOCIETY.

Sprains and their Treatment.—Pelvic Cellulitis.

AN ordinary meeting of this society was held at the London Institution, Finsbury-circus, on Jan. 27th, the President, Dr. HERMAN, being in the chair.

Mr. A. H. TUBBY read a paper on Sprains and their Treatment. He described the symptoms, differential diagnosis, and treatment. In the earlier stages—i.e., in the first three or four hours—he advocated cold and pressure and after that for three or four days the use of heat and pressure, and finally of well-directed friction and passive movements. If the joint remained stiff and painful liniments should be applied, but if it remained stiff only then massage and the application of the faradaic current were indicated.—Dr. F. J. SMITH thought that in some points the treatment of sprain was entirely different from fracture, although both were due to rupture, one of the soft parts and the other of the bones. He alluded to a point emphasised by Mr. Mansell Moullin—viz., if the patient was away from help the value of field or garden mould placed around the joint as a means of refrigeration and support.—Sir HUGH BEEVOR asked as to the treatment of sprains by massage within two days after the injury.—Dr. FORTESCUE FOX alluded to cases of chronic sprain complicated by teno synovitis. He was of opinion that in the case of the knee-joint the tender spot was just above, and to the inner side of

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the insertion of the ligamentum patellæ. Dr. Fox was averse to treating most cases of sprain by rest, especially after middle life.—Dr. ETTLES alluded to the use of opium liniment, and doubted if any absorption of opium could take place.—The PRESIDENT alluded to cases of chronic weakness of the muscles around a joint—e.g., atonic flat-foot, some cases of scoliosis, knock-knee, &c. He asked as to the effect of rest in producing atrophy of muscles.—Dr. J. F. WOODS observed that he had in many cases removed the pain after sprains by "suggestion" and manipulation.

Mr. T. H. OPENSHAW read a paper on Pelvic Cellulitis. He quoted a case in which an abscess had been opened just internally to the anterior superior spine of the ilium and the cavity was found to extend to the pubes and down into the thigh. After four months the patient was discharged with a sinus. Mr. Openshaw also spoke of a second case in which the patient was discharged with a sinus, and of a third case which had healed after some months. He deprecated early surgical interference unless it were absolutely necessary, the points of urgency being implication of the skin and suddenly wide tracking of pus. Further, some cases got well spontaneously and others burst by themselves. He quoted five cases in support of his contention.—The PRESIDENT was disposed to leave matters much to nature. About half the cases suppurated, and nine-tenths of these opened just above, and to the outer side of, Poupart's ligament.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Recurrent Appendicitis.

A MEETING of this society was held on Jan. 21st, the President, Mr. J. MACREADY, being in the chair.

Mr. W. R. H. STEWART showed a case of a man, aged twenty-three years, upon whom he had recently performed a plastic operation for a Deformity of the Nose. A cast showing the condition before operation was also exhibited. This showed a broad and deep groove in the middle line running from the lower end of the nasal bones downwards between the lateral nasal cartilages. The nose thus presented two well-marked tips. Along the floor of the groove there was a scar, and from this situation a tumour (a dermoid, it was thought) had been removed during infancy. At the operation it was found that the anterior margin of the septal cartilage was much broader than natural, and much of it, as well as of the lateral cartilages, had to be pared away before the sides of the cleft could be brought together so as to make the tip of the nose a single one. The result of the operation, six days after its performance, was very satisfactory and the patient's appearance was greatly improved.

Dr. ARTHUR WILSON read the notes of a case of Recurrent Appendicitis in a little girl aged five and a half years. There had been four attacks, two of them very severe, within five months, and about three weeks after the last subsidence of the inflammatory swelling the appendix had been removed by Mr. Mower White. The subsequent course of the case had been in every way satisfactory. The appendix showed considerable inflammatory thickening of its coats and three-eighths of an inch from the tip of it there was a marked constriction of its lumen. Distal to this the lumen was dilated into a small spherical cavity containing thick, purulent material and a semi-solid body, probably fæcal in nature. The mucous lining of the tube was nowhere ulcerated.—The PRESIDENT, Dr. STILES, Dr. GLOVER, Dr. TAIT, Dr. BAILEY, Dr. WATSON, and Mr. MOWER WHITE took part in the discussion which followed and Dr. WILSON replied.

Mr. PEYTON BEALE showed a male patient, aged twenty years, suffering from a Large Soft Swelling below the Calf of the Left Leg. The patient was the subject of congenital syphilis and had also a congenital malformation of the left tarsus and metatarsus. There was marked hypertrophy of the bones of the leg, the left leg being three inches longer than the right. The swelling was thought to be caused by lymphangiectasis, probably due to syphilitic fibrosis of the lymphatic vessels above. There was also considerable varicosity of the superficial veins of the leg and foot, no doubt due to partial blocking of some of the deep veins of the leg, also the result of syphilitic fibrosis.

Mr. BEALE also showed a man, aged forty-seven years, in whom he had excised the left elbow for tuberculous disease.[1] The point of interest in the case was the fact that excision of the same elbow had been performed thirty-six years ago at Bath so successfully that the patient had earned his living by hard manual work.

Mr. ALLAN HAIR, for Mr. TRAER HARRIS, exhibited a patient who, as the result of a blow, had sustained a double fracture of the body of the lower jaw. One fracture was just in front of the ramus of the jaw on the left side, and the other was between the two bicuspid teeth on the right. The fragments had been fixed by means of a Kingsley's splint, which the patient was still wearing eight weeks after the accident. There had been sequestra thrown off at the seat of both fractures and the septic condition of the mouth at the time of the accident had no doubt, in spite of the free use of 1 in 60 carbolic lotion since, tended to delay the union of the fragments.

ÆSCULAPIAN SOCIETY OF LONDON.

Rodent Ulcer.—Perforating Gastric Ulcer, Laparotomy, Recovery.—Gastric Ulcer with Probable Adhesions.—Senile Endometritis.

A MEETING of this society was held on Jan. 22nd, Mr. STEPHEN PAGET, President, being in the chair.

Mr. G. DENTON showed a patient, a woman aged fifty years, suffering from Rodent Ulcer of the Cheek. The sore, which was of three years' duration, was of the size of a florin and had penetrated nearly to the mucous membrane. No operation was allowed.

Mr. A. Q. SILCOCK read notes of a case of Perforating Gastric Ulcer in which Laparotomy had been performed with a successful result. A young unmarried woman was suddenly seized with symptoms suggesting gastric perforation. After twenty-four hours she was taken to St. Mary's Hospital. Mr. Silcock opened the abdomen in the left epigastric region and found on the anterior wall of the stomach towards the cardiac end a perforation from which the contents of the organ had escaped freely, setting up peritonitis. Stitches inserted would not hold, but tore their way through the dense tissue surrounding the opening. A considerable fold of the stomach wall on either side was therefore taken up and the reef or tuck thus made secured by stitches (a method also practised by Mr. William H. Bennett in the treatment of dilated stomach). The peritoneal toilet was performed of neeessity somewhat hastily and imperfectly, a gauze tampon was inserted, and the abdominal wound closed except at the point of its egress. The patient recovered without a bad symptom. (A fuller account of this interesting case will shortly be published in our columns.)

Dr. B. G. MORISON read notes of a case of Hæmatemesis occurring in a subject of chronic dyspepsia and attributed to gastric ulcer. The concurrence and continuance of fever (temperature 101° F. falling to 99·8°), previously absent and unexplained by any other defined cause, suggested the formation of local adhesions.

Dr. L. DURNO read notes of two cases of Senile or Post-climacteric Endometritis. The patients, aged respectively sixty-four and sixty-five years, had ceased to menstruate from twelve to fifteen years previously. In both cases slowly progressive emaciation was associated with a more or less thick and offensive discharge, a tender vagina ulcerated here and there, and enlarged uterus with smooth interior. Rest, tonics, and swabbing the endometrium, in one case with nitric acid and in the other with iodised phenol, followed by vaginal douches, effected a cure in from two to three months. Dr. Durno discussed at length the differential diagnosis between this class of cases and malignant disease of the uterus.

LIVERPOOL MEDICAL INSTITUTION.

Abdominal Hysterectomy.—Castration for Enlarged Prostate.—"Saddle Nose" remedied by Celluloid Bridge Permanently Buried.—Thoracic Aneurysm.—Suppuration in the Small Omental Sac.—Unsuccessful Attempt to Ligature the Left Subclavian Artery.

A MEETING of this society was held on Jan. 28th, Dr. RICHARD CATON, President, being in the chair.

Dr. BRIGGS exhibited specimens from four cases of

[1] This case was reported fully in THE LANCET of Jan. 30th, page 310.

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Complete Abdominal Hysterectomy, in each of which cases there were serious symptoms calling for operation.

Mr. ROBERT JONES related four cases of Enlarged Prostate with Urinary Complications upon which he had operated with success. In the first two cases both testes were removed, in the third the vas was divided and the lower end turned into the wound, and in the fourth one testis was removed. The first patient, aged sixty-five years, has led catheter life for five years. Before operation the prostate was the size of a hen's egg. Six weeks after the operation the catheter was discarded and the prostate was half its normal size. The second case was one in which the patient, aged sixty-seven years, had a very much enlarged prostate. He had had urinary difficulties for years and suffered retention for six weeks. Double castration was performed and he was in two months able to dispense with the catheter and was now practically well. In the third case the vas was divided and turned into the wound. Considerable amelioration of symptoms took place. In the fourth case the operation was only performed three weeks ago, and the prostate is now softer and less prominent. The symptoms have undergone amelioration.—Dr. ALEXANDER, Mr. RUSHTON PARKER, and Mr. LARKIN made remarks favourable to the operation.

Mr. THELWALL THOMAS brought forward a girl, aged fifteen years, in whom he had operated seven months previously for the deformity known as "Saddle Nose." The nasal bones had disappeared in childhood from congenital syphilis. A piece of celluloid modeled like the nasal bones and possessing a well-marked keel on its concave surface was inserted subcutaneously and pressed into position, the keel fitting between the nasal processes of the upper jaws, the lateral portions resting upon these processes. The incision was made on the left side and closed with horse-hair sutures. The embedded celluloid does not appear to cause any irritation, and has of course greatly improved her personal appearance. The above device was adopted in place of the osteo-periostic flap methods that have from time to time been described, but which all leave well-marked cicatrices elsewhere.

Dr. GLYNN showed a patient suffering from Thoracic Aneurysm in whose case the diagnosis was attended with more than ordinary difficulty. The patient came to the Royal Infirmary with blocking of the external jugular vein. On careful examination it was found that he had a thoracic aneurysm. There were, however, several peculiarities in the case. In the first place there was no pain, a symptom which Dr. Glynn considered very constant in thoracic aneurysm. However, on bending down the patient's face flushed, there was tracheal tugging, there was no fremitus over the left side of the chest, there was no pulsation in the left carotid, and the radial pulse on the left side was small. Dr. Glynn pointed out that the loss of fremitus was one of the earliest signs of aneurysmal pressure in the thorax.—Dr. WALLACE and Mr. RUSHTON PARKER commented upon the case.

Mr. BANKS related the case of a girl who had Suppuration in the Small Omental Sac. The girl was hit in the abdomen by a "swing boat." There was a central abdominal swelling reaching from the xiphoid to the umbilicus. There were pain, vomiting, high fever, and want of sleep. On examination there was a doubtful sense of fluctuation and from the history a blood tumour was diagnosed. An incision was made in the middle line of the abdomen above the umbilicus. The great omentum spread over the tumour; a trocar was introduced into the tumour and thin, greenish, fluid escaped. A large tube was substituted for this and after many weeks' drainage the patient recovered. The fluid withdrawn was old blood on the point of suppuration.

Mr. BANKS also brought forward the case of a man aged twenty-seven years in whom he had attempted to Ligature the first portion of the Left Subclavian Artery. The man had been severely crushed by an engine ten weeks before admission to hospital. The accident caused, among other injuries, a fracture of the outer third of the clavicle. The patient stated that immediately after the accident a swelling the size of a cocoa-nut appeared in the posterior triangle of the neck; this got smaller, but had re-commenced to grow. The diagnosis made was aneurysm of the second or third portion of the left subclavian artery. The operation to apply a ligature to the first portion of the artery was attempted; a long incision down the middle line of the neck was made; a transverse incision at either end of this enabled a flap to be dissected and turned outwards; the clavicle was cut through and the inner third removed; a piece of the first rib was also cut away to enlarge the field of operation; the interna jugular and innominate veins were tied; the left subclavian vein caused some trouble and was plugged with cyanide gauze; the aneurysm did not pulsate much, and this want of pulsation increased the difficulty of finding the artery. During the prolonged operation the left pleura was opened and was plugged with gauze. The difficulty of the operation was graphically described by Mr. Banks, and it was at last deemed necessary, on account of the condition of the patient, to desist from further attempts to secure the vessel. The patient died seventeen days later from pleurisy.—Mr. PAUL and Dr. ALEXANDER commented upon the enormous difficulties of the operation.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Exhibition of Specimens.

A MEETING of this society was held on Jan. 20th, Mr. WILLIAM THORBURN, Vice-President, being in the chair.

Mr. PETER THOMPSON showed a specimen of Polypoid Growth in the Duodenum. The tumour, which was about the size of a walnut, was attached to the region of the pylorus and possessed a well-marked pedicle, from which it hung freely in the interior of the gut. Continuous with the pedicle was a mass of hypertrophied mucous membrane, which microscopical examination showed to be partly gastric and partly duodenal in character. The gastric portion extended through the pylorus into the stomach, where it was continuous with the general lining mucosa, and this mass almost entirely occluded the passage. By experiment it was found that a very small stream of water could pass from the stomach onwards. There was in addition a small intussusception of the pyloric end of the stomach into the duodenum. The specimen was obtained from a dissecting-room subject aged seventy-five years, and the clinical history available shows that the tumour gave rise to no symptoms during life. It would appear that polypi in the region of the pylorus are rare, and it is still rarer that they should be determining factors in the production of intussusception so high up in the alimentary tract. Microscopically the polypus was found to be fibro-adenomatous in nature.

Dr. ERNEST S. REYNOLDS showed a specimen of an Aneurysm (arising from behind the aortic valves) which projected into the Right Auricle, where it had ruptured suddenly by a slit-like aperture. The aneurysm was the size of a hazel nut, and two of the aortic valves had been thrown into one, possibly from old endocarditis. The specimen was obtained from the body of a girl aged seventeen years who had had no known previous illness, but had died quite suddenly whilst walking in the street.

Dr. LEA showed the Brain from a girl aged twelve years into which an extensive Intra-ventricular Hæmorrhage had occurred, resulting in rapid death. The patient had enjoyed good health and had not suffered from any serious illness. The family history was good; there was no history of syphilis. A few hours before death she complained of headache, and vomited several times. She then went to bed, and was found dead two hours later. No convulsions were observed. The necropsy showed that the thoracic and abdominal viscera were healthy. The brain externally appeared to be normal. There were no signs of meningitis. On section the left ventricle was found to be distended with blood clot, the septum lucidum had ruptured, and some blood had passed into the right ventricle and also into the third ventricle. There was no laceration of the basal ganglia, and the bleeding appeared to have been primarily in the ventricle. There was no tumour. Sections were made of the small cerebral arteries; these, however, were quite healthy. It is possible that the hæmorrhage may have been due to a ruptured vein of the choroid plexus. In rare instances aneurysms have been known to rupture in young subjects. The precise seat of the hæmorrhage could not be discovered in this case.

PLYMOUTH MEDICAL SOCIETY.

The Present Position of Serum Therapeutics.

AT a meeting of this society held on Jan. 28th Dr. WEBBER read a paper on the Present Position of Serum Therapeutics. After a brief consideration of the history and

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principles of serum treatment and the methods of preparation of the antitoxic serums Dr. Webber discussed the results of the treatment in several of the diseases to which it has been applied. (*a*) In diphtheria its success was held to be firmly established. The statistics of Goodall, Von Ranke, Baginsky, Welch, and the committee of the American Pædiatric Society, showing an average death-rate under the treatment of 17·1 per cent., were compared with the average death-rate under former methods of treatment, estimated at 40 6 per cent. Having considered the beneficial influence of the injections on the clinical course and complications of diphtheria, the effect of the antitoxin on the kidneys was examined, and having regard to the small number of cases in which nephritis (as shown by the presence of blood and casts in the urine) had been recorded while under the treatment, and to the fact that it was frequently doubtful whether such nephritis was really caused by the serum or was due to the diphtheritic process itself, it was held that such occasional and uncertain evidence of harmful effect of the serum should not be allowed to militate against its general use. (*b*) In tetanus the results were not found to be so satisfactory. After allusion to the statistics published by Kanthack and by Hewlett, Dr. Webber examined the reports of twenty-four cases of antitoxic treatment of tetanus recently published. Of these he found that twelve recovered and twelve died, and confirmed the deductions of Kanthack, that the beneficial effects of serum injections were more frequently observed in the chronic cases with long incubation period than in those with short incubation and rapid onset of spasms. Dr. Webber referred to the strong immunising power of tetanus antitoxin when used as a prophylactic agent and its successful use in this manner in veterinary practice, and concluded that the serum treatment of tetanus, though not so successful as could be wished, still deserved an extension of trial. (*c*) The results of injections of anti-streptococcic serum in pyogenic affections were next considered, and a brief account of the cases reported up to the present was given. It was held that the successful results published in several of the cases, notably in puerperal septicæmia, urged the continuance of its use. (*d*) The treatment of inoperable malignant disease by injections of the mixed toxins of streptococcus erysipelatis and bacillus prodigiosus was reviewed, with special reference to Coley's work and to his publication of 160 cases treated by this method.[1] Though the constitutional effects on the patients were shown in many cases to be severe (rigors, pyrexia, and emaciation being often, and even a fatal result occasionally, observed), yet in view of the desperate nature of the diseases to which it was applied a further trial of the method was recommended. (*e*) The results of the injection of Maragliano's anti-tuberculous serum as published abroad were discussed, and, having regard to the encouraging statistics recorded by him, it was hoped that the method would receive a share of attention in this country. The paper concluded with a brief reference to Kitasato's work on anti-cholera serum and to that of Calmette and of Fraser on antivenene.

Microscopic slides of the bacilli of diphtheria, tetanus, and tubercle and of pure cultures of streptococci (kindly lent by Dr. Pethybridge) were shown.

[1] American Journal of the Medical Sciences, September, 1896.

THE ROYAL UNITED HOSPITAL, BATH.—The annual meeting of subscribers of this institution was held on Jan. 25th under the chairmanship of the Mayor. The seventy-first annual report showed that the patients treated during the past year had numbered on the medical side 685, on the surgical 663, making a total of 1348, as against 1387 in 1895. The out-patients numbered 9698 as against 9912. The expenditure had amounted to £6656 as against £6248 of the previous year, the increase being due to the opening of a new isolation ward and repairing the outside of the whole building. The income showed a falling off, as compared with 1895, in subscriptions of £35, while donations had been less by £414. Collections in churches and chapels were £112 lower. A substantial increase was shown in workmen's collections, but had it not been for a very much increased receipts from legacies the financial report would have shown a great deficit. As it was, the year's work showed that the income had failed to meet the expenditure by £229.

Reviews and Notices of Books.

Injuries and Diseases of the Genital and Urinary Organs. By HENRY MORRIS, M.A., M.B. Lond., F.R.C.S. Eng., Surgeon to the Middlesex Hospital, Member of the Council and of the Court of Examiners of the Royal College of Surgeons of England, Examiner in Surgery in the University of London. Pp. xvi. and 478. With 97 Illustrations. London: Cassell and Co. 1895. Price 21*s*.

THE title of this work is hardly an exact indication of the contents, as it deals with the injuries and diseases of the genital organs of the male only, and with the bladder in both sexes, while the injuries and diseases of the kidney are not included at all. Undoubtedly it was difficult to express this in a short title. The forty-seven chapters which the volume contains are divided into three sections; of these, the first treats of the male genital organs, the second of the organs which belong both to the genital and to the urinary systems, and the third section is concerned with the urinary bladder.

In speaking of diseases of the scrotum Mr. Morris distinguishes between lymph scrotum and elephantiasis scroti, but the two are surely nothing more than slightly different manifestations of one condition—namely, obstruction to the return of the lymph of the part. In the treatment of lymph scrotum excision is recommended, but it is not mentioned that those surgeons who have had most experience in the operative treatment of this disease consider that it is generally unadvisable to attempt to remove the enlarged inguinal lymphatic glands, as in most cases they contain anastomotic channels by which the lymph is able to return, though its ordinary course has become obstructed. Mr. Morris considers that "chimney-sweep's cancer" is much less often met with now than formerly. It is difficult certainly to come to a trustworthy decision on this point, but some careful investigators are of opinion that there is no definite evidence that the disease is any less frequent now than it was.

The congenital abnormalities of the testis are well treated, the author following the classification of Le Dentu. An interesting account is given of the somewhat rare condition called "Torsion, or Axial Rotation of the Spermatic Cord," first described by M. Nicoladoni in 1885. Torsion is much more likely to occur when the testis is retained, but it is by no means limited to undescended or misplaced testes. Various causes have been suggested for this accident, such as the absence or excessive length of the mesorchium, or violent twists, but in many cases no adequate cause seemed to be present. The symptoms closely resemble those of a strangulated hernia, and the true nature of the swelling has in several of the cases been discovered only after an exploratory incision. Puncture of the testis, Mr. Morris tells us very emphatically, should never be performed, except with the object of evacuating pus, and he considers that it is unjustifiable in an orchitis or epididymitis where suppuration has not occurred. In the orchitis of mumps the author points out that it is the body of the testis which is affected and that the epididymis is very rarely involved; he further remarks that the orchitis only occurs in boys and adults in whom the testis is capable of functional activity, and it is never seen in children or old people in whom the testis has either not yet assumed or has lost its secretory powers. Atrophy is not so commonly a result of this form of inflammation as it is usually thought to be. Orchitis is also described as occurring during tonsillitis, typhoid fever, scarlet fever, small-pox, influenza, ague, and gout. It is, of course, important to bear in mind that in some of the cases of orchitis occurring during the course of any of these diseases it may be the result of the employment of a catheter.

In the treatment of hernia testis Mr. Morris has obtained

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excellent results by excising the herniated structures and uniting the scrotal tissues over the opening. Hydrocele of a hernial sac is usually considered to be very rare, but the author states that it is by no means uncommon, and that he operated upon three cases within a few weeks of each other. Mr. Morris gives notes of a unique case of cavernous venous angiomata of the spermatic cord; the patient was twenty years of age and had several hard painful lumps along the left spermatic cord; these were removed by operation and were found to be cavernous in structure and to contain blood, while some had become cystic; the patient recovered. In the treatment of varicocele Mr. Morris prefers the subcutaneous ligature, two or three ligatures being applied, and he considers that this method is as effective as excision, and that it is preferable because it needs no open wound—a great advantage in a part not always easily kept aseptic. He has not seen recurrence occur if the ligatures are tied tightly and are applied sufficiently high up and low down, and if the patient is kept in bed for two or three weeks after the operation in order to allow the coagula to become organised. He thinks there is but little risk from puncture of a vein if care be taken that the ligatures are aseptic.

In strictures in the bulbo-membranous part of the urethra, which do not require external urethrotomy or perineal section, Mr. Morris considers that Holt's dilator is an excellent instrument when properly used; the dilatation must be done by a graduated series of tubes (about eight in number), and these must be pushed quickly through the stricture one after the other. When used in this way he has never seen any harm result and he thinks that no laceration of the stricture takes place. This method is a very different one from that in which Holt's dilator is usually employed, and which has led to many unfortunate results. Whatever method be used, it is, as Mr. Morris points out, of great importance that complete dilatation be effected at a single sitting so that a free outlet may be afforded to the septic contents of the bladder. For cases in which external urethrotomy is required, and in which Wheelhouse's operation would prove difficult, tedious, or impossible, Mr. Morris has found the following plan answer admirably. He employs a straight tapering staff, to the end of which is attached a filiform guide bougie. The guide is introduced into the bladder, and the staff, having been pushed as far as it will go, is cut down upon from the perineum and the front part of the stricture divided; the point of the staff is pushed onwards and the whole stricture is cut through, the knife running in the groove. This method saves the trouble of searching for the anterior end of the urethra in a bleeding wound. Mr. Morris also thinks highly of Cock's operation, but he always, either a few days after the operation, or more usually at the time of the operation, cuts through the cicatricial tissues and leaves a catheter in her bladder.

In cases of hypertrophy of the prostate requiring operation Mr. Morris is inclined to prefer a perineal incision, by which partial prostatectomy can be performed without opening either the urethra or the rectum. We are told on page 348 that "incontinence from atony or paralysis will be often rapidly cured by electrolysis applied to the hypogastrium or even within the cavity of the bladder," but no further information is afforded as to how the current, or even what current, should be employed. That such a good result should be often obtained is hardly the experience of the majority of surgeons.

Taken as a whole, the book may be considered a valuable addition to the literature of the subject of which it treats, but we cannot hide from ourselves the fact that flaws exist in it which should have no place. When a book is written by an acknowledged leader of surgery such as Mr. Morris is, the surgical public has a right to expect that in it, not merely shall the extensive knowledge and ripe experience of its author be conspicuous, but also that it shall have been written with due care and with a full sense of the importance of every word employed, for those who are unable to judge for themselves will rely on its statements, taking them on the credit of Mr. Morris's name. But what do we find? We put aside such misprints as "ilium" for "ileum" on page 131, where a diagram is said to illustrate a "hernial sac containing ilium," or the mis-spelling "phymosis" at least twice—these may be the fault of the proof-reader though we venture to think that they should not have escaped the author's attention; but we also find statements to which we must take exception. For instance, on page 164 we are told that numerous evil results may follow phimosis. Among others we find "simulated or actual hip disease and talipes." That simulated hip disease may occur with phimosis we do not question, but we should like very much to know how it is possible for "actual hip disease" and "talipes" to result from a narrowed foreskin. If Mr. Morris has met with cases demonstrating the occurrence of such an astonishing result, surely he should bring them forward, and not leave such a statement unsupported by any proofs. Mr. Morris is examiner to the University of London; how many marks would he give to a candidate who suggested "hip disease and talipes" as results of phimosis?

Although the author in his preface explains that in order to make his descriptions as brief as possible he has, in reference to operative treatment, generally confined himself to principles, yet we must confess that in numerous instances throughout the work the descriptions of operations are so brief as to be practically worthless. We hope that Mr. Morris will not think that we fail to appreciate the great value of his book; we appreciate it to the full, but we cannot be blind to the faults it contains.

Gout and Goutiness and their Treatment. By WILLIAM EWART, M.D. Cantab., F.R.C.P. Lond., &c., Physician to St. George's Hospital and to the Belgrave Hospital for Children. London: Baillière, Tindall and Cox. 1896. Pp. 589. Price 12*s.* 6*d.*

THIS is a work which will thoroughly repay perusal by those who have the necessary time to devote to it. The author apologises in the preface for the bulk of the book, which, he says, is not the least of its faults. It is, in our opinion, the only serious fault to be found with it, and it depends upon a certain diffuseness of style and arrangement perhaps especially difficult to avoid in the treatment of such a subject as gout. The book would not lose in value, and it might gain very considerably in some respects, by a judicious compression to some two-thirds of its present size. Having said this, it must be admitted that the work is a very able and thorough review of the subject and presents a happy blend of old-fashioned physic—in its best sense—with the most recent advances in pathology and therapeutics.

The book falls naturally into two parts. The first deals with the chemistry, morbid anatomy, and pathology of the disease, with the theories which have been advanced as to its nature and with its clinical phenomena. The second deals with treatment, and this part comprises the special task which the author has set himself to accomplish, though we find it difficult to say which portion is the better. The literature of gout is very voluminous, and Dr. Ewart presents us with an excellent account of the various theories and opinions which have been held on the subject from the earliest times. These, critically reviewed in the light of modern pathological research, form an admirable introduction to the therapeutical discussion which occupies the latter part of the work. Just emphasis is laid on the distinction between goutiness and declared gout, and throughout the book the line is clearly drawn between the two conditions; the original gouty defect is well defined as "a functional derangement fraught with

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organic consequences." Free and good use is made by the author of the writings of his predecessors, particularly of those of Sydenham, Garrod, Duckworth, and Roberts. The chemical researches of the last named on uric acid necessarily receive full consideration, and the views of Dr. Haig, in part accepted, are the subject of judicious and able criticism. Though it may be true that "without uric acid, no gout," yet Dr. Ewart is far from admitting that the essence of goutiness is merely uric acid. Of greater moment are the antecedents of the uric acid excess. From this point of view the recent researches of Horbaczewski on the derivation of uric acid from nuclein and its relation to leucocytosis receive very careful attention, and much weight is attached to them. As regards the renal theory of gout Dr. Ewart epigrammatically observes: "In the result the kidney is inadequate to the circumstances; nevertheless the change may be in the circumstances rather than in the kidney." The liver, in his opinion, though sharing in the general metabolic disturbances of gout and, indeed, taking a prominent part in them, has actually a doubtful part in its etiology. He is unable to accept the nervous theory of gout in its entirety. Though the nervous system may influence faulty metabolism, he considers that it does so in the degree only in which that system itself suffers from the effects of perverted nutrition. No theory of his own is put forward by the author; nevertheless, the summary and critical review of existing theories is a valuable contribution to the literature of gout.

In discussing the treatment of the disease the same broad distinctions are drawn between gout and goutiness. Gout is curable, though some of its worst results are not. Recent advances in pathology—and Dr. Ewart maintains that pathological facts must be the proper basis of treatment—render needful a re-consideration of some of the principles which have hitherto been recognised in its therapeutics. Space fails us to follow the author in detail into the critical review of the various modes of treatment which have been advocated. Colchicum and the alkalies naturally take the first place, and the remarks on the salicylate treatment of gout appear to us peculiarly valuable. Local treatment and diet receive full attention and several chapters are devoted to the medicinal springs which enjoy repute. The hygienic and prophylactic treatment of the disease are also ably reviewed. The whole question is, indeed, discussed in a masterly and scientific manner and the book cannot fail to impress the reader by the exhaustive manner in which Dr. Ewart has treated a difficult subject and the critical acumen which he has brought to bear upon it.

We cannot refrain from one trivial comment in concluding. In a footnote on page 14, dealing with the advantages of a knowledge of Greek in medical nomenclature, the author shows himself, as we had thought, somewhat of a purist. Yet he stoops later to the employment of that deplorable and barbarous word "uricacidæmia," against which no possible protest can be too strong.

LIBRARY TABLE.

De la Nature de l'Épilepsie. (*The Nature of Epilepsy.*) By FR. HALLAGER. Paris: Société des Éditions Scientifiques. 1897.—This work is devoted to an inquiry into the causation of epileptic attacks. A well-arranged account of the experimental evidence is given, followed by a chapter on epileptiform seizures. This is accompanied by a very useful table of seventy cases in which such seizures were due to local disease. A chapter is devoted to "reflex epilepsy," and forty-six supposed cases from medical literature, but their epileptic nature is in some cases hardly supported by the symptoms described. A description of post-epileptic states follows, and much stress is laid by the author on a single observation made by Dr. Hughlings Jackson on the changes in the retinal circulation seen through the ophthalmoscope during and after a fit. After briefly reviewing the points which favour his theory Dr. Hallager comes to the conclusion that "there are no phenomena of epileptic origin which do not find their explanation in the theory of anæmia," this anæmia being a local or general one in different circumstances. The evidence adduced, however, supports the view that the anæmia is not causative but concomitant quite as well as it does the author's theory. The book is well arranged and clearly written, and the tabulated abstract of nearly a hundred published cases will be found useful by those wishing to refer to the subject.

Recherches Cliniques et Thérapeutiques sur l'Épilepsie, l'Hystérie, et l'Idiotie. Par Dr. BOURNEVILLE. (*Clinical and Therapeutic Researches on Epilepsy, Hysteria, and Idiocy.* By Dr. BOURNEVILLE.) Vol. XVI. Thirty-one Figures in the text and Eight Plates. Paris: Felix Alcan. 1896. Price 7 francs.—This annual report of the Bicêtre Hospital for Idiots at Paris contains, as usual, much interesting material. It commences with an account of some of the educational methods employed and a general report of the working of the institution during the year. The second part is devoted to clinical descriptions of the more important cases. These are well illustrated by photographs. There is a full pathological report of the cerebral conditions in many patients that have died. Therapeutics are not forgotten. Further examples illustrative of the value of thyroid extract in some cases of obesity and in cretinism are given. There is a full consideration of the value of bromide of camphor as a nervous sedative, its use in cases of vertigo being strongly recommended by Dr. Bourneville.

JOURNALS AND REVIEWS FOR FEBRUARY.

Edinburgh Medical Journal.—The opening paper is by Mr. Jonathan Hutchinson and describes (1) a case of Hypertrophy of the Gums with General Dwarfdom; (2) the Malformations of the Teeth caused by giving Mercury to Infants; and (3) the Present Position of the Leprosy Problem. He states that mercury given to a pregnant woman will cause the milk teeth of her child to undergo caries soon after being cut, and that mercury given to an infant will produce a characteristic injury to the enamel of the permanent teeth. Dr. R. Milne Murray (Edinburgh), writing on the Deflection and Rotation of the Pregnant Uterus, suggests that rotation may offer a mechanical explanation of deviation. In his experience deviation is almost always to the left when the fœtus is in the occipito-posterior position, and there is an approximate numerical coincidence between the proportion of cases of these two conditions. Dr. Veitch and Dr. Fowler each describe a case in which Puerperal Septic Infection was successfully treated by Anti-streptococcic Serum. Altogether there are twelve original articles.

The Contemporary Review.—Mr. W. H. Dickinson treats the question of the water supply of London from a somewhat novel point of view. He finds that if a table showing the dividends declared last year by the respective companies be examined side by side with the number of microbes found per cubic centimetre of the respective waters provided by these companies the following rule may be established:—"The amount of dirt and number of microbes in London drinking-water may vary inversely as the profits derived by the companies supplying it." This argument should have been carried further by quoting similar statistics in regard to the water-rates and microbes of those supplies that are now under public control.

Chapman's Magazine.—The February number of this magazine has an admirable story by a new writer, Alan Oscar.

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It is called "Captain Kidd's Millions," and treats of that well-known character from a different point of view to that generally taken. The writer makes good use of the feeling that everyone has experienced at some time or other—namely, the consciousness of pre-existence or "the having been there before,"—a curious psychological state the study of which has always been a favourite subject both with poets and medical men. Henry Vaughan, who was both, and Rossetti, in the lines—

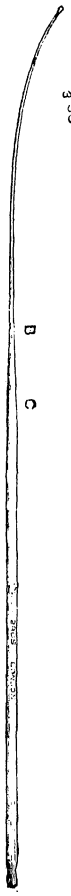
> "I have been here before,
> But when or how I cannot tell;
> I know the grass beyond the door,
> The sweet, keen smell,
> The sighing sound, the lights around the shore"—

have treated of this state. The whole matter was handled in a masterly way by Sir James Crichton-Browne in his Cavendish Lecture.[1] Another feature of the story is a most vivid picture of Execution Dock. The lower reaches of the Thames were not thickly populated in the eighteenth century, otherwise we might speculate on the dangers to health which would arise from the presence of so many putrefying bodies hanging in open air, even though, as in the "Fairchild Family," the sight of them served as correctives to the hasty tempers of youth.

New Inventions.

A DILATING URETHRAL BOUGIE.

THE favourable experience which I have had of the dilating bougie now described induces me to bring it under the notice of my medical brethren. It is made of whalebone and is about 35 cm. (14 in.) long. The slender extremity A B measures about 12 cm. (4¾ in.) in length, and is as thin as an ordinary bougie with a bulb-shaped point; this portion may be either bent (*coudée*) or twisted so as to more easily enter a stricture, and may be called the guide. The dilating part of the bougie, where it gradually increases in diameter until the full thickness is reached, is at B C, and is about 3 cm. (1¼ in.) long. The remainder of the instrument is of uniform diameter and measures about 20 cm. (8 in.) in length; this part is made in three different sizes corresponding to Nos. 2, 3, and 5 of the English scale, the guide being of almost the same diameter in all three sizes. Guides are adapted to various other instruments, such as catheters, stricture dilators, urethrotomes, &c., and when they are made of whalebone they are not different from those of my dilating bougie; but in those instruments the guide generally forms a continuation of a metallic tube or rod, an arrangement which is deficient in flexibility and has the further disadvantage that the instrument does not always follow the guide when the stricture is very difficult. If made in elastic gum the guide bends as soon as it comes in contact with an obstruction and is too flexible to pass through difficult strictures. As the dilating bougie is made entirely of whalebone the flexibility of the guide diminishes gradually, and there are no abrupt thickenings such as are found in some cases where the guide is attached to metal. Consequently when the guide has passed through a difficult stricture the dilating part B C must necessarily follow. An experience of more than eleven years has convinced me of the advantages of this bougie in the dilatation of difficult strictures.

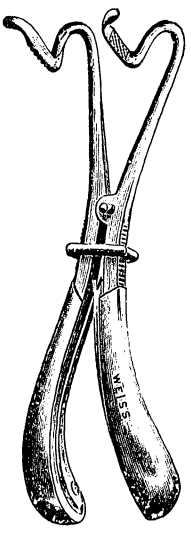


Rome. DR. NATALE AMICI.

[1] THE LANCET, July 6th and 13th, 1895.

THE "MAMMOTH-TUSK" GAG FOR SENILE AND EDENTULOUS JAWS.

ALL the gags I have hitherto met with are very prone to slip, thus embarrassing the operator and often seriously deteriorating his results. Messrs. Weiss and Son, of 287, Oxford-street, W., have kindly made for me the instrument here depicted, which I find most valuable for tongue and mouth operations generally; specially so, however, when the jaws are senile and edentulous. It is the familiar Ferguson's gag with a slight modification consisting in a prolongation of the prongs, which are also curved outwards at an obtuse angle and bevelled. When in position they lie—sheathed, of course, with vulcanite—on the inner aspect of the gum, and cannot well slide off until deftly removed. The instrument must be introduced with the handle in a line with the patient's neck, then rotated until the latter is at right angles to the trunk, and the jaws prised open, being extracted by a repetition of the same manœuvre. The head, if not over the table edge, should be turned on one side, the handle of the gag lying on the uppermost cheek. A remote suggestion of the recurvation in the mammoth's tusks explains the choice of title.



HERBERT SNOW.

Gloucester-place, Portman-square, W.

THE PROPOSED NEW PORTSMOUTH HOSPITAL.—A most promising beginning was made at Portsmouth on Friday with the scheme which has been discussed for some weeks for the erection of new hospital accommodation as a commemoration of the longest reign in English history. The meeting was called by the Mayor (Mr. G. E. Couzens) and was most representative in every sense; the mayor mentioned that the foundation stone of the present institution was laid by the late Prince Consort. Sir John Baker, M.P., the senior representative of the borough, moved a resolution favouring the erection of a new block of wards "in view of the general enlargement and improvement of the institution," and promised £500. Alderman Sir William King seconded and offered £100. Before the meeting ended nearly £2500 was subscribed, the mayor giving £250. As the present accommodation for males is but 32 beds—16 for regular and 16 for casual patients—it is probable the new wing will be for males.

THE SOUTHAMPTON SLUM SCHEME.—After some trouble the Southampton Corporation have acquired the property on the condemned area which by special Act of Parliament they intend to clear. The claims made for compensation totalled £42,088, which sum has been reduced by arbitration to £28,762, a difference of £13,326. The area first to be cleared—that between Simnel-street, Pepper-alley, Blue Anchor-lane, and the Old Walls—it will be necessary to replace with sufficient buildings to accommodate 250 persons of the working-classes before the remainder of the area is cleared. Mr. Harris, the medical officer of health, has put forward a scheme for this re-erection which includes a municipal common lodging-house upon the lines of the Rowton lodging-houses in London, modified to suit the purse of the Southampton Corporation. A rough estimate by the borough surveyor puts the cost of such a house to accommodate 240 single men in separate cubicles at £8500. As to artizans' dwellings, those recently erected by the Manchester, Sheffield, and Lincolnshire Railway Company in St. John's Wood are suggested as patterns. A building containing twenty sets of these flat tenements would, it is thought, cost £5000 and produce (at 5s. 6d. weekly each) an annual rental of £286. An Elizabethan house has unfortunately been condemned, but efforts are being made to preserve an ancient vault in Simnel-street.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 6, 1897.

RUMOURS and suggestions of a gigantic scheme for collecting money for the benefit of London hospitals still continue to fill the air. Sir WILLIAM BROADBENT'S allusion to these in his speech at the Charity Organisation Society could scarcely be merely casual. The idea is too natural and too agreeable to human nature in its moods of gratitude and joy to be lightly dismissed. HER MAJESTY has given it to be understood that while she will fall in with any methods of commemoration that commend themselves to her grateful and loyal people she would be especially pleased with measures that contemplate the benefit of the sick poor. The General Committee appointed in connexion with the draft scheme for a Central Hospital Board is to hold a first meeting to-day (Friday), and we understand that the members will take into consideration the possible event of the creation of a fund in aid of the hospitals of London, and will consider a proposal to address a communication on the subject to His Royal Highness the PRINCE OF WALES. There is no time to lose if such a fund is to be created, and there is no body that can more fitly undertake its promotion than the committee nominated at the recent meeting held under the auspices of the Charity Organisation Society. This committee will have no mere individual institution in view. It is the hospitals as a whole, as a system, the hospitals detached from their abuses that must be considered, and it would be difficult to name any other body with more knowledge and more intelligence to discharge such a function. The Charity Organisation Society itself will immensely enhance its own usefulness by doing all in its power to promote the organisation of a scheme for the aid of the hospitals. In the very nature of things this society has had to be somewhat critical in its action, so much so that many people have come to think its action is all criticism. It has a duty laid upon it in this sixtieth year of the reign of Her Majesty Queen VICTORIA, and that supreme duty is to devise and promote not only means for dispensing charity rightly, but ways for providing the very funds themselves. We have already expressed our approval—not in detail, but in general—of the scheme for the promotion of a Central Hospital Board for London. The one weak point in the claim of the society is that it has never been conspicuously associated with means for helping the hospitals out of their straits. To organise a fund in this memorable year for their special relief will be to develop a new function and a new claim to the gratitude and confidence of the public. Whatever measures may be necessary for the reform of hospital abuses must be accompanied with unmistakeable proofs of goodwill to hospitals themselves so far as they minister to the really necessitous sick. For the sake of the hospitals, as well as for that of the committee proposed by the Charity Organisation Society, we are glad to learn that it is in contemplation promptly to discuss this Commemoration scheme of a Fund for the Aid of London Hospitals. The very size of London puts it at a disadvantage as compared with smaller communities. A provincial town has its one or two institutions which everybody sees and knows. Here we have nearly two hundred, the great majority of which are mere names to those who are expected to support them To link the name of HER MAJESTY and her glorious and sympathetic reign with a fund for the relief of the hospitals of London will be to band the hospitals into one great cause which will appeal more powerfully than anything else to all ranks and classes of HER MAJESTY'S metropolitan subjects. We are glad that the committee appointed at the meeting of Jan. 25th is to consider this great subject mooted in the speech of Sir WILLIAM BROADBENT.

There is an obvious want of one great single purpose upon which to concentrate the sentiment of the metropolitan community. Here is such a purpose. And the acceptance of it by His Royal Highness the PRINCE OF WALES on behalf of HER MAJESTY would fill the hearts of hospital authorities with new hope. The response in our opinion would be all the more hearty and generous if the fund so created were to be entrusted to a committee which by its very constitution was known to be favourable to keeping hospitals to their proper and original function.

In any case the subject is one that requires most careful consideration, and one important point to be decided is whether the relief to be granted is to be organised for this year only or whether there is to be any idea of permanent endowment. We cannot feel sure, as we have previously said,[1] that the mere relief of the hospitals from debt would afford any security against the same condition recurring in a few years—and, therefore, we think that a permanent endowment in some form or other is the end to aim at. That there are difficulties in the way of carrying out this scheme, and those no small ones, we well know, but surely the overcoming of them is not impossible, and would be a note of special importance in a year which it is hoped will be so remarkable in many ways.

THE COMMENDATORE LUIGI PAGLIANI, who is described by our Rome correspondent as the highest hygienic authority in Italy, has recently delivered, in the Turin University, where he holds the chair of Public Health, an opportune discourse on the Pestis Bubonica considered from an etiological and prophylactic view-point. Having glanced at its history, particularly at its memorable visitation of Byzantium in the sixth century, as described by PROCOPIUS, Professor PAGLIANI said that it reached its height in Europe during the fourteenth century. In the sixteenth century it registered a decline, which it has steadily maintained, till in the first half of the century now closing it quite disappeared from Europe, from Turkey, and from Egypt herself. An attempted invasion on the Russian frontier at Weltyanka in 1878–79 was followed by a more successful "reconnaisance en force" in Mesopotamia, Syria, and Persia, where it remained endemic. Thence it diffused itself to Turkestan, to Upper India, to

[1] THE LANCET, Jan. 2nd, 1897.

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Southern China, from which it returned reinforced to Hindustan, especially Bombay. The intimate, uninterrupted relations of that port with the great European maritime cities inspired a note of alarm which was first responded to by the sanitary council of Alexandria, whose initiative was followed, particularly in the Mediterranean, by vigorous measures of precaution. Two conditions, said Professor PAGLIANI, render our times less panic-stricken in face of the enemy. First, our public health is more vigilantly supervised; and second, we know the micro-organism which is the efficient cause of the bubonic infection. Under the former there is infinitely less likelihood of that micro-organism acquiring a foothold; under the latter we have knowledge of the means of neutralising or disarming it. Recounting the well-known discovery of KITASATO and YERSIN, by which the bacillus bubonicus is recognisable, he further described the later studies of ZETTNOV and KOCH by which our familiarity with its nature and habits has been extended. For prophylaxis it is especially important to know that we have to deal with a "bacillus asporigenus" which dies after four days during which it is kept at a dry heat, or at the temperature of 80° C. for half an hour, or at that of 100° C. for a few minutes. Its resisting power to chemical disinfectants is feeble, succumbing shortly in a 1 per cent. solution of carbolic acid or of lime water. On the other hand, it develops easily in many culture media at the ordinary temperature (from 18° to 22° C.), having been found in the soil or in the dust of houses where those ill from it, or who have died from it, have been lodged. It affects not only man but even animals who share his dwelling-place. Rats, for instance, fall easy victims to it, and, as a rule, die in large numbers at the beginning, or in the course, of the epidemic. Not so well ascertained is the susceptibility to it of pigs and oxen. As to the latter, LOWSON'S direct and very accurate experiments would give a negative result. In the light of these the highly virulent bacillus found by KITASATO in dead cattle during an epidemic of "human" pestis would rather be the bacillus of the "bovine" order of the disease. The channels by which the infective agent finds entrance are very slight lesions of continuity in the skin and mucous membrane, from which it passes into the glands connected with the lymphatics nearest the point at which the agent had penetrated. Thus it is that AOYAMA explains the fact that the Chinese, who walk barefoot, are generally attacked by it at the inguinal glands, and the Japanese, who wear shoes, are almost exclusively affected at the armpits. For the same reason workers in oleaginous materials, and who live hygienically clean, are proof against it. The medical attendants and their assistants are not infected by their patients. AOYAMA was an exception, as was also his assistant; but they became infected while performing a necropsy. The incubation of the malady lasts from two to seven days. As a rule it develops most rapidly, presenting, together with tumefaction of the lymphatic glands, the symptoms usually met with in the graver infective fevers. The whole lymphatic system, especially at the groins, the internal viscera, and the blood are invaded by the typical bacillus and also by germs common to purulent infections. Death is the most frequent issue, supervening in from 70 to 90 per cent. of cases. Often it occurs in the very first days of the attack—rarely later than the eighth day of the malady. As for prophylaxis Professor PAGLIANI holds that the greatest circumspection must be practised in the admission into harbour, or into free intercourse, of craft which have had cases of plague on board. Such ships should in every case be subjected to the most stringent disinfection. Goods not of personal or domestic use are less to be feared from the prophylactic point of view. Skins arriving already treated with arsenic, or lime, or saltpetre, and in the dry state, may be held innocuous and, *pro tanto*, exempt from the disinfector's care.

WE have again and again raised a protest against the present system of teaching and examining as being responsible for the marked decline in the amount of time given by the medical student in late years to the practical work of the professional curriculum. The period of study has been lengthened, but we see no evidence of an increased attention to those practical subjects which form the bedrock on which his subsequent daily work must be founded. Scientific subjects are allowed to increase daily and to encroach more and more on the time which should be spent in the dissecting-room, the laboratories, and the wards and out-patient rooms of the hospital. The first year is now devoted to chemistry, physics and biology, the examinations in these subjects are specially arranged to favour cramming and text-book knowledge, and the judgment of the examiners as to the proficiency of the students in these sciences is often erroneous because the tests of the practical work are wholly inadequate. In many cases an up-to-date superficial knowledge enables one candidate to pass when another fails although he has tried seriously to obtain a practical and useful insight into these preliminary subjects. The examinations on the theoretical side are either too severe or are too superficial, whilst the practical examination is so scanty that the teacher inevitably recommends the getting up of a given text-book (the newer the better) instead of advising honest and thorough practical work in the laboratory. In biology the morphological aspect takes precedence, and the structural details of the animals which the student can observe for himself disappear into the background.

Passing on to the next period of the student's career, every anatomical teacher who is familiar with the daily work of our profession deplores the decadence in practical anatomy which is now so marked. We do not hesitate to say that the number of medical students who now thoroughly dissect the human body, so as to show and to see the structures clearly, is much less than it was fifteen or twenty years ago and is gradually dwindling to a minimum. Yet it is from these students that the future surgeon must come. The student is no longer to study anatomy in its application to the practice of medicine, surgery, and midwifery, but he is to be taught this eminently practical science "from a morphological standpoint, and as a member of the great animal series." His science is everything; his practical investigation for his after career is relegated to quite a subsidiary place. So in physiology the time that was formerly allotted to the

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elucidation of the functions of the human body, to the proper methods of preparing histological sections of the organs, and to the broad facts in the chemistry of the secretions, is now mainly occupied with minute details of physical and chemical experimental physiology, so that the student cannot see the forest because of the immense number of the trees. Such a course, again, may be advantageous to a pure physiologist, but it is entirely outside the training necessary for a medical practitioner. But as the examiners are specialists in their own branches of science or in some sub-division of them, so must the student be, and he is, crammed with innumerable details to the great deterioration of his reasoning faculties.

The later subject which will require all his time and attention are the clinical ones—medicine, surgery, and midwifery—and here, too, the text-book knowledge has been permitted to predominate over a real acquaintance with the practical recognition and treatment of disease. Then, again, the examination system at present adopted by most qualifying boards is at fault. Undue limitation of time and the exclusion of acute cases are fatal to a just examination, however conscientious the examiner may be. The methods of the examination room are often quite different from those employed in actual practice. We are glad to see that practical teachers like Mr. MITCHELL BANKS, Mr. PRIDGIN TEALE, Dr. STRUTHERS, and others are with us in this protest, and Mr. THOMAS COOKE has done good service in bringing the subject prominently before the profession in his pamphlet on "Specialism in Teaching and Examining." We do not agree with all his deductions, but the subject is one that requires very thoughtful consideration with a view to a reform of the present system both of teaching and of examining.

Annotations.

"Ne quid nimis."

BACTERIOLOGY IN THE CURRICULUM AND EXAMINATIONS.

IT may be remembered that last autumn Dr. Pavy moved the Royal College of Physicians of London to inquire into the question of the desirability of including the subject of bacteriology in the course of study and examinations required for the Licence of the College. Fears were freely expressed at the time whether it would be possible to introduce it without adding unduly to the burden of the student or imperilling the position of subjects of more immediately practical value. On the other hand, no one could fail to recognise that the study of bacteriology and its fruits was becoming essential to the proper understanding of many pathological and etiological problems, whilst it had also been gaining a position in clinical diagnosis and therapeutics. In point of fact, this young and vigorous department of science had already established its claim to a position in the curriculum of the medical student. The committee which was appointed to consider and report upon the question consisted of Dr. Pavy (chairman), Dr. Church, Sir Dyce Duckworth, Dr. Ord, Dr. Poore, and Dr. Washbourn (secretary). Their report was made to the last Comitia, and had been prepared after careful inquiry into the method and extent of instruction given in bacteriology in Continental as well as British schools. Their recommendations do not involve any very extensive departure from the rules at present in force. The subject being considered a branch of pathology they did not deem it necessary to make any special mention of it in the examination schedules; whilst with regard to the curriculum the specifying of other branches of instruction in the syllabus suggested the propriety of naming bacteriology as part of the course in pathology required of all students preparing for the college examinations. We think that these recommendations are wise and prudent. They admit the necessity of the medical practitioner being instructed in the leading facts and principles of bacteriology, and they show the student that the subject is one upon which he is liable to be questioned in the examination room. But the position assigned to the subject is one which is subordinate to the general subject of pathology rather than one of splendid isolation, requiring absorption of a large amount of time in its study and a distinct set of expert examiners. Nor from what is the prevalent custom of pathological teaching in schools and textbooks does this view of the position of bacteriology appear novel. The new revised regulations simply preclude the subject being ignored.

THE PLAGUE AT MARSEILLES IN 1720.

M. DELUNS-MONTAUD, formerly Minister and Member of the French National Assembly, has found among his family papers the draft of a report on the great plague which devastated Marseilles in the years 1720 and 1721. The manuscript is damaged and the name of its author effaced, but, judging from its contents, it seems to have been written by one of the three medical delegates of the Montpellier Faculty who were appointed to investigate the cause and development of the epidemic. As two of these delegates—Dr. Vernier and Dr. Chicoyneau—did not believe that the plague was contagious, the writer of the manuscript in question was probably the third delegate, Dr. Deidier, for he held the contrary opinion, a view confirmed in certain passages of the document. The Paris *Temps* publishes this interesting manuscript, from which we extract the more important passages. The author commences by relating that, at the time he was writing, some 30,000 persons had died from the plague in the town of Marseilles, including thirty monks and nuns and twenty surgeons, with a due proportion of their assistants, and "five or six doctors who died miserably without honour to themselves. I say miserably and without doing themselves honour because, seeing the disorder which prevails in the town, the want of food supplies, the general despair, the abandonment of the sick, it was not possible for them to fulfil their functions and efficaciously help the sufferers." The disease is described as "refined plague" (*peste raffinée*), characterised by charbon, bubos, and purple patches, and by its rapidly fatal results. The patients died in from one to three days, and sometimes suddenly without any premonitory symptoms. The first symptoms were pains in the head, troubled sight, a dazed condition, and a trembling voice. Then a cadaverous appearance, cold at the extremities, unequal pulse, nausea, collapse, delirium, and finally convulsions or hæmorrhage, followed promptly by death. In some cases the pulse was rapid and the beat evenly distributed. Among these several recovered in consequence, we are told, of repeated bleeding, emetics, laxatives, diuretics, and some cordials. If the malady lasted for more than five or six days there was some chance of escape, but such cases were rare exceptions; by far the greater number of patients died. The post-mortem examinations are described as having shown gangrenous inflammation of the stomach, chest, and brain. With regard to the cause of the plague, "every one is agreed that the evil only commenced after the arrival of a ship from India

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on which five or six sailors had died from the same sort of illness during the journey. Some merchandise from this ship was secretly, and without the exercise of any precaution, transported to one of the streets where four people lived and which was the first to be infected. The inhabitants of this street, having traffic with other quarters, spread the contagion. The porters who first removed the merchandise all died suddenly in the infirmary, and what proves that it is a veritable plague is the destruction of entire families when one member is attacked; father, mother, children, servants, all share the same fate, and, if one among them took refuge in another house he carried with him the same disease which there caused the same ravages. This has led to the abandonment of the sick, who, being deprived of all help, have perished, for they had no broth, or bread, or water to help them in their distress. Even the corpses remained several days in the houses and the streets without its being possible to find any one to bury them, since all those who buried the dead also died. The panic-stricken magistrates have neither the time nor the presence of mind to give suitable directions. They have lost all authority and are no longer obeyed. Indeed, the police commissioners and the public health functionaries of the districts have fled away. You will see by these facts what must be the melancholy condition of the town. We shall deem ourselves fortunate if we have escaped the contagion. At least the town of Aix is exempt and will protect itself. This exemption, I hope, will be the result of the good order prevailing at Aix, for I am persuaded that by these means only, and above all by sobriety, good food, confidence, moderate exercise, is it possible to shelter oneself against the contagion." These words seem to have been written after their author had left Marseilles and while he was undergoing quarantine in the neighbourhood of Aix, which is the political capital of Provence, while Marseilles is its commercial capital. Altogether some 60,000 persons died, and the mortality would have been much greater had it not been for the heroism of the Bishop Belzunce, who did his utmost to combat the general despair and who organised a system of relief and such nursing as was possible.

PSYCHICAL RESEARCH AND THE ROENTGEN AND OTHER X RAYS.

MR. WILLIAM CROOKES, F.R.S., whose tubes have been a necessary medium in the discovery of the Roentgen rays, delivered his presidential address to the Society for Psychical Research on Jan. 29th. Although the society has been in existence for fifteen years and "has done some excellent work" and the science with which it deals is "still in a purely nascent stage," yet he predicted that "psychical science as pursued by the society is the embryo of something which in time may dominate the whole world of thought." Over twenty years ago Mr. Crookes made some researches which attracted considerable attention among those investigating psychical problems, and he assured the society that he had still his old-standing interest in these just as when he had his first glimpse of some important laws of matter and energy which a large number of scientific men still do not recognise. Speaking of the newly-discovered Roentgen rays he said: "We are introduced to an order of vibrations of extremest minuteness as compared with the most minute waves with which we had hitherto been acquainted." "It has been demonstrated," he continued, "that these x rays as generated in the vacuum tube are not homogeneous, but consist of bundles of different wave-lengths analogous to what would be difference of colour could we see them as light, some passing easily through flesh but partially arrested by bone, while others pass with varying facility through bone but less easily through flesh." He considered it possible that other x rays exist in which vibrations are of a more extreme minuteness, as there is no reason to suppose that we have reached in the Roentgen rays the limit of frequency, and that some of those unknown rays may supply the key to much that is now obscure in psychical phenomena, as in telepathy—"the transmission of thought and images directly from one mind to another without the agency of the recognised organs of sense." By adopting such a hypothesis "no physical laws are violated, neither is it necessary to invoke what is commonly called the supernatural." Objections, he allowed, may be taken to this hypothesis, but in making objections to, or in answering these, it must be remembered that we cannot "express life in terms of heat or of motion" and other purely physical conditions. Doubtless "molecular movements strictly obey the law of the conservation of energy, but what is called *law* is simply an expression of the direction along which a form of energy acts, not the form of energy itself." He continued: "We may explain molecular and molar motions and discover all the physical laws of motion, but we shall be as far as ever from the solution of the vastly more important question as to what form of will and intellect is behind the motions of molecules, guiding and constraining them in definite directions along pre-determined paths."

THE EPIDEMIOLOGICAL SOCIETY AND THE ROYAL COMMISSION ON VACCINATION.

AT the last council meeting of the Epidemiological Society, held on Jan. 15th, 1897, it was resolved to submit the following resolution, in reference to the recent report of the Royal Commission on Vaccination, to the next ordinary meeting for adoption:—"That this society, while noting with satisfaction the pronouncement of the Royal Commission as to the value of primary vaccination, and the necessity for maintaining it, regret that, although the report also brings forward conclusive evidence as to the value of re-vaccination, the Commissioners have not seen their way to recommend legislation which would place it on the same basis as primary vaccination." The Epidemiological Society in former years took an active part in the question of vaccination, and its carefully prepared report on the subject was of material assistance to the Legislature in framing the Vaccination Acts. Doubtless the increasing proof of the need of re-vaccination as a protective which the experience of later times has brought may have weighed with its Council in submitting the above resolution to the society. If it does nothing more it will, at any rate, show that those who have the best opportunities of judging the question are persuaded of the importance to the community of securing a system of re-vaccination comparable to that to which Germany owes her immunity from small-pox.

THE NUMBERS OF THE PROFESSION.

BY the kindness of the Assistant Registrar of the General Medical Council we have been favoured with the statistics of the profession as they will appear in the forthcoming issue of the Medical Register for 1897. They scarcely mitigate the sense of undue increase in the numbers of our ranks which arose from a perusal of the data supplied in the Medical Directory. The number of practitioners holding British qualifications in the United Kingdom and out of it in the Medical Directory for 1897 is 34,284, an increase of 964 over that in the same work for 1896. According to the statistics of the forthcoming Register the number of registered practitioners with British qualifications is 34,478. The number in the Register of last year is 33,601, or an increase of 877. The particulars of this huge total are as follows:—New registrations: England, 780; Scotland, 477; Ireland, 128; restorations to the register, 52; total, 1437. From this must be deducted for removals; by death, 532;

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under Section 14, 25; under penal section, 3; total, 560. The actual number on the Register is affected by the removals chiefly under Section 14, which is a mere postal matter, and subject to variation according to circumstances or the action of the Council. Though the number on the Register grows from the excess of new registrations over the number of deaths it does not appear that the number of new registrations is increasing. For the last three years the numbers are, respectively, 1579, 1426, and 1385.

A FEW CHOICE "LOTS."

THE difficulties experienced by a country printer in setting up technical medical terms are amusingly illustrated in a document which has recently come into our possession. It is headed, "The Late Dr. L. Essay's [this is not, of course, the correct name, but it will serve our present purpose] Sale of Household Goods. Copy from Catalogue," and was doubtless sent round to the medical practitioners of the neighbourhood to attract them to the sale. We hope it did, for such an opportunity may not occur again! The following are some of the "lots":—741, a Haryngscope in case; 746, two silver cathetus in case; 747, Wet capping instrument in case; 748, Shphygniograyh (Mareys); 755, Syringe (Waginal); 759, Trocars and Camicula in case; 766, Midwifery Bags, Forceps, long and Rigot Case inside; 774 (by way of variation), Frocar and Camicula. 775 is delicious—viz., Minnim Measles in Box; as is also 781, Hosh (double) (can this be a truss?); 785, Hypodermis Case; 804, Box of Cathartics; 806, Porcelain Pressary; 822, Tensillotome; 827, Gynelological Instruments, &c., in paste-board box. Amongst books we find—839, Practical Orthop Acdiess, by Reeves; and 854, Human Orthology (what this science may be is a little difficult to guess). The last "lots" that we need stop to note in this "strange, eventful" catalogue are—859, "Enteric Fever," and 860, "Spinal Disease and Curvature." We wonder what their purchasers will do with them! If, indeed, they could happily contrive to keep securely under their own control such dire afflictions of mankind their names would deserve to go down to posterity coupled with those of Edward Jenner, Pasteur, and Lister. We will only add that we grieve to observe that "Dr. L. Essay" was the possessor of an "Ammoniaphorl (Harness)."

REMOVAL OF FOREIGN BODIES FROM THE STOMACH.

IN the *Deutsche Medicinische Wochenschrift*, No. 4, 1897, is an interesting paper by Dr. Fricker of Odessa describing an extraordinary case in which several foreign bodies were removed from the stomach of a woman and giving also a *résumé* of the literature of such cases and a table containing abstracts of 27 cases in which an operation had been performed for the removal of objects which had been swallowed. The case under Dr. Fricker's own care is certainly worth recording. The patient was a woman, aged thirty-two years. There was no history of insanity in the family. Between the ages of fourteen and fifteen years she was subject to "hysterical attacks." She married when seventeen years old and had eight children in quick succession (twins once) and two miscarriages. Eighteen months before coming under notice she had been much depressed by the loss of a child, and three months before a second child had died, and since that time she had been very melancholic, and several times attempted suicide by swallowing petroleum and carbolic acid, and then solid substances such as needles, nails, and small buttons. At first the patient made no complaint after performing these exploits, but subsequently experienced much abdominal pain. Various forms of treatment had been tried for the general condition, such as baths, electricity, &c., but without avail. A tender swelling appeared in the left side of the abdomen and an operation was decided upon. An abscess was found in the region of the swelling, and the stomach had evidently been perforated, but the site of perforation could not be discovered. With all due precautions the stomach was opened and the following bodies removed: a key (7·5 cm. long and weighing 21·38 grammes), a silver teaspoon (15·5 cm. long and weighing 25·15 grammes), a metal teaspoon (weighing 36·5 grammes), a fork (20·5 cm. long and weighing 84·75 grammes), two wire tacks, two hair-pins, two pieces of glass, one window hook, one steel pen, nine sewing needles, one piece of black-lead, one shoe-button, one grape-stone, two small lumps of tin, and one crochet-hook, the whole weighing 261·85 grammes. (A very good illustration of all these objects accompanies the paper.) The stomach was washed out with sterilised salt solution and the wound closed. The patient made a good recovery. Dr. Fricker gives a second table showing the statistics of such operations. I.—Before the days of antiseptics, 19 cases; 15 recovered and 4 died. An early operation was performed on 1 patient who died. Operation was delayed in 10 cases, and of these 9 recovered and 1 died; the time of operation was not recorded in 8 cases, and of these 7 recovered and 1 died. II.—Antiseptics were used in 35 cases; 29 recovered and 6 died. An operation was performed soon after the foreign bodies were swallowed in 10 cases; 8 recovered and 2 died. The operation was postponed in 17 cases; 15 recovered and 2 died. The time of operation was not known in 8 cases; 6 recovered and 2 died. To sum up these cases, then, an operation was performed in 54 cases, of which 44 (81·4 per cent.) recovered and 10 (18·6 per cent.) died. The result of such an operation can, therefore, only be regarded favourably.

FOOD ADULTERATION: PAST AND PRESENT.

IN a paper read before the Medical Society of Charing-cross Hospital on Jan. 13th on the Adulteration of Food Mr. P. A. E. Richards, F.I.C., public analyst of the parish of St. Martin-in-the-Fields, referring to the history of this subject, stated that although reference is made to it in writings dating back to the ancient Greeks it was not until the beginning of the present century that adulteration reached that degree of perfection, a regards precautions taken to avoid detection, that almost entitled it to be termed a fine art. Some of the methods of punishment in vogue in the old days might perhaps be revived at the present time with advantage and profit, such, for example, as that of the pillory and tumbril for sophisticating wines; in the reign of Edward I. a baker, on conviction for selling short weight, was ordered to be drawn upon a hurdle from the Guildhall to his own house "through the great streets where there be most people assembled and through the great streets *that are most dirty*." Satisfactory legislative control over the purity of the food supply of the country was, however, not seriously considered (with the exception of the Act, very limited in character, passed in 1836) until THE LANCET, in the year 1851, under the editorship of the late Mr. Thomas Wakley, started its famous "Analytical Sanitary Commission." One of the results of this inquiry was the appointment of a Parliamentary Committee, followed by the passing of the Sale of Food and Drugs Act, 1875, and its Amendment Act, 1879, which are the statutes at present in force. Although much time and trouble had been devoted to rendering these Acts as satisfactory as possible, still, as was pointed out, various improvements might be made. Mr. Richards mentioned, among other instances, the case of coffee mixed with chicory. Although the latter substance was frequently present to an infinitely greater extent than

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the former, the label usually showed coffee in prominent capitals, whilst the important statement "mixed with chicory" was hidden away in an unobtrusive position in the bulk of the lettering. These and similar defects in the Act it was hoped would be remedied by the recommendations recently made by the Select Committee on Food Adulteration. An interesting demonstration with the microscope, illustrating some methods of modern adulteration, added considerably to the interest of the paper.

NURSES AND THE COMMEMORATION FUND.

THE Duke of Westminster writes again to the *Times* on behalf of the Queen's Jubilee Nurses Commemoration Fund, and there is no doubt that Her Majesty is deeply interested in the problem of supplying nurses to the poor. At present, owing to the exaggerated notions of the training necessary for nurses, they are a luxury of the rich or the well-to-do classes, and the poor and, indeed, the lower section of the middle classes have to do without them as best they can. But this is only one part of the problem of meeting the care of the sick poor and must yield in importance to the hospital part of it. And there are indications that Her Majesty would be pleased with any form of commemoration which made the hospital provision for the really necessitous poor more adequate than it is. It remains to be seen whether the hospitals have friends as energetic and persuasive as the Duke of Westminster.

THE SERUM DIAGNOSIS OF TYPHOID FEVER.

THE December number of the *Canadian Practitioner* contains an interesting paper by Dr. J. J. Mackenzie, bacteriologist to the Provincial Board of Health, on the Recent Practical Application of the Serum Reaction of Pfeiffer in the Diagnosis of Typhoid Fever. The writer gives a short history of the reaction and then describes the method he has found most satisfactory. This method was introduced by Dr. Wyatt Johnston of Montreal. A drop of blood from a suspected case of typhoid fever is allowed to dry upon a slip of paper and then later, in the laboratory, the drop is moistened with sterile water and a portion of it mixed with a drop of fresh bouillon culture of typhoid bacilli. This is watched under the microscope, and if the case is one of typhoid fever in the course of from half an hour to an hour agglutination of the bacilli occurs. Dr. Mackenzie finds that after mixing the culture and the watery extract of the blood of a typhoid fever patient as a rule no change is observed for a few minutes, the bacilli moving rapidly backwards and forwards through the field with their characteristic motion. Then it is noticed that individuals stick together in pairs or in threes, moving clumsily, and in a short time others join the clumps, the movement becoming always slower, until finally all the bacilli are tangled together in large clumps containing ten or more individuals and all movements stop. The reaction takes longer in some cases than in others. In one case it was complete before the preparation could be placed under the microscope—i.e., in about two minutes. In the majority of cases it takes thirty minutes. Dr. Mackenzie states it as his experience that if there is no evidence of reaction within an hour there is not much chance of its appearing, but it is well to observe the slides for twenty-four hours. In order to be sure of accurate results a very motile culture must be used—i.e., a fresh one—and it is well to have it so dilute that not more than, say, from fifty to a hundred bacilli appear in the field. Dr. Mackenzie has tried the reaction in eighty-two cases, in some of them upon several samples of blood taken at different times. Sixty-one of these were cases of typhoid fever, or subsequently proved to be typhoid fever, and in fifty-seven of these he got a positive reaction; in four he obtained no reaction. In twenty-one which were not cases of typhoid fever, or subsequently proved not to be typhoid fever, a negative reaction resulted in all; there were, amongst other non-typhoid cases, tuberculosis, acute dilatation of the heart, articular rheumatism, septicæmia, and blood from healthy individuals. A number of cases of tuberculosis were tested, including two cases of meningeal tuberculosis, with negative results in each case.

THE LANCET RELIEF FUND.

UNDER the heading "THE LANCET as an Agency of Charity" the *New York Medical Journal* of Jan. 23rd, 1897, contains in the form of a leading article an appreciative notice of our Relief Fund. Curiously enough our contemporary seems to look upon the Fund as only just established, but, as our readers are aware, the Fund was started in 1889, and on Jan. 9th we published the eighth annual report in our columns. Our contemporary concludes by observing:—

"It is easy to see that by means of this fund numerous instances of real distress among deserving persons may be relieved, and the regulations are such, we should say, that it would be difficult for the almoners to be imposed upon. We look upon the undertaking as an outgrowth of pure philanthropy and as exceedingly creditable to the proprietors of THE LANCET, but we hope that not many of our British brethren will find themselves in such straits as to have to resort to the Fund."

From the final remark it would seem that the services of medical practitioners in America are more liberally requited than is the case here. The *New York Medical Journal* may be interested to know that during the eight years our Fund has been in existence 355 applications have been made by medical men or their widows, and in some of these cases we are glad to know that the assistance afforded has been the means of enabling the recipients to make a fresh and fair start in life.

IMPORTANT DECISION AGAINST A PROPERTY OWNER.

A CASE of great importance, especially as it bears upon the responsibilities of owners of house-property, has just been decided by Mr. Justice Mathews and a jury, the plaintiff being a widow living at Sutton, Surrey. This woman, the wife of a gardener, sued to recover £1000 as damages for his death. He lived in a cottage at a short distance from which, and on a higher level, were a row of similar tenements belonging to one of the defendants, a Croydon builder named James Manser. The cottages were drained by means of two cesspools, the overflow going into a soakaway, from which it percolated through the soil. The consequent nuisance became so bad that the deceased and his wife had to keep their doors and windows closed, and the man complained to the urban council first (it was alleged) in February last year and subsequently. In May the council's surveyor—the urban district council was made a co-defendant body—took steps to ensure an abatement of the nuisance. For various reasons, however, the evil was not remedied by Manser and the houses were unconnected with the sewers until July 4th. Meanwhile on June 25th the gardener was taken seriously ill, Mr. F. D. Atkins diagnosing septic pneumonia. A nurse who took charge of the case had to leave within a week, being herself taken ill, and the man died on July 19th. Mr. Atkins most properly declined to give a certificate on the ground that the case ought to be inquired into, and the jury at the coroner's inquest found that the death was due to blood-poisoning caused by bad smells from the overflowing cesspools. This was the case for the plaintiff. It being shown that no stoppage in the drain had occurred—the ground apparently of the action against the urban council—that part of the claim was withdrawn, the judge suggesting in the

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circumstances that the council should not press for costs. Manser declared that he had sent the plans for the connexions on May 20th, but a letter from him containing the words, "Herewith I enclose plan," and dated June 26th was put in, and he confessed he "had made a mistake and must abide by it." The jury found for the plaintiff, with damages of £140 for the widow and £40 for each of the children—£300 in all.

ACCIDENTS AND INSURANCE COMPANIES.

IF we may judge from a decision recently given in an American Court of Law[1] it behoves insurance companies to define very clearly to their own official intelligence and to the minds of their policy-holders the scope of the term accident. In the case in question death had followed blood-poisoning which originated in an abrasion due to wearing a tight shoe. A question of responsibility arising was decided by the local bench in favour of the representatives of the deceased, the cause of his death being treated as a pure accident for which he was not accountable. Such a result must surprise others besides our transatlantic contemporary. Whatever meaning the word accident may convey to the minds of insured persons or their friends it cannot surely in good English, or even in "American," be so stretched as to indicate more than a given injury and its natural consequences. A tight boot does not come within the number of arrangements necessary or usual in ordinary life. On the contrary, it is a fault in itself, and should therefore tend rather to disqualify claims founded on its use. This, however, is possibly in some instances accidental. The legal significance of an abrasion caused by it may be in like manner somewhat doubtful. But blood-poisoning has no natural connexion with such an abrasion, and there seems to be no reasonable doubt that the fatal disease which followed in the case above related was an evidence of neglect in the after-care of the wound.

A FAVUS-LIKE ERUPTION OF THE ORAL MUCOUS MEMBRANE CAUSED BY THE ASPERGILLUS NIGER.

THE aspergillus niger is well known to aural surgeons as the cause of a somewhat rare disease of the external meatus. A case, recorded by Winfield,[2] in which the fungus established itself in the mouth, is quite unique. The patient, a healthy woman, aged twenty-seven years, noticed a "small ulcer" on the roof of the mouth in the middle line, half-way between the incisors and soft palate. It produced no discomfort except when pressed on by hard food. It gradually increased in size and satellites also formed. When first seen there was an œdematous and lumpy patch extending from the incisors to within a quarter of an inch of the soft palate to the left of the middle line. There were also two round, cup-shaped elevations on the soft palate, symmetrically placed on either side of the middle line, and one of irregular outline behind the left incisor and canine teeth. The patches were more or less covered with a dirty yellow deposit, firmly attached to the swollen tissue underneath. Removal produced slight hæmorrhage. The colour of a recent deposit suggested the sulphur-coloured scutula of favus, but that of older date was more of a greyish-brown. The clinical picture was unlike anything seen before. Favus and tuberculosis suggested themselves. The microscope showed with a low power a fungus which differed from the achorion. The mycelium was composed of delicate fibres, which showed no tendency to fission, and which bore hyphæ. Scattered over the field were a number of fruit receptacles and a few loose spores. Agar tubes were inoculated. At the end of twelve hours they showed on the surface small white dots. These rapidly grew until the whole surface was covered with a yellowish-white mould, which in about thirty-six hours changed to greyish-brown. A mild caustic, composed of equal parts of resorcin, antipyrin, and creosote, was applied to the mouth. This checked the growth as long as the weather remained cold. But on the approach of spring it began to grow again and invaded the gums. A 25 per cent. peroxide of hydrogen solution was then tried. Improvement was at once noticed, and the patient recovered in seven weeks.

[1] Insurance Times of New York, December, 1893.
[2] Journal of Cutaneous and Genito-Urinary Diseases, January, 1897.

COLOUR PHOTOGRAPHY.

PHOTOGRAPHY in natural colours appears at last to have been achieved, and if this be so an advance equal in importance to that brought about by the x rays has been made. The process is at present a secret one, and will doubtless remain so until the necessary steps are taken to protect the rights of the inventor. From a purely scientific point of view it is regrettable that such a course has been decided upon, but in these utilitarian days there are few, we imagine, who would be justified in finding fault with the inventor on this account. The process, which has been demonstrated in the laboratory of King's College in the presence of such authorities as Professor Millar Thomson, Mr. Herbert Jackson, Captain Abney, and Sir Henry Trueman Wood, consists in taking a negative in the ordinary way on a gelatin plate which has been treated with a solution of certain salts the nature of which is a secret. The negative is developed in the ordinary way and differs in appearance but little from an ordinary negative. The positive produced from this looks like an ordinary transparency with no sign of colour. It is then immersed after the manner of intensifying an ordinary negative by mercury solution, in three coloured solutions, blue, green, and red, when the tones appear to possess a selective action, selecting just that colour and tint which characterise the parts of the original subject. The results, it is stated, are exceedingly beautiful and artistic and surpass the achievements of hand work. This announcement will, we are sure, be received with the greatest interest by our readers, since the new method should lend most valuable assistance to the faithful portrayal of the many conditions of the human subject which occur in medical and surgical practice.

THE RETIREMENT OF DR. CHEPMELL.

WE are sorry to learn that an old member of our foreign staff, Dr. Dobrée Chepmell, has been compelled by failing eyesight to retire from practice in London and to pass the winter in Bournemouth. Dr. Chepmell received his early medical education at King's College when that school flourished under the auspices of Todd, Budd, Fergusson, Partridge, Bowman, and Simon. In 1850 he obtained a travelling appointment, residing for eight or nine years with the late Lord Holland in France and Italy, and made himself familiar with the languages of both countries. Towards the end of the fifties he married and settled in Paris, becoming "Our Own Correspondent." This post he occupied until the duties of a large and increasing practice left no time for literary work. At the outbreak of the Franco-Prussian war Dr. Chepmell, with most of the English residents in Paris, migrated to London and commenced work as a consulting physician enjoying the confidence and friendship of many of the distinguished exiles and specially of the Empress Eugenie. During last autumn, whilst on his holiday in Guernsey, his native place, an attack of acute glaucoma in the right eye made its enucleation necessary in order to save the other. The operation was quite successful, and the result has been an improvement in the vision of the remaining eye. We sympathise most fully with Dr. Chepmell and deplore the cause of his enforced

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retirement, but at the same time are inclined to think that in such an "innings" as twenty years of a full-swing practice in Paris and twenty-five in London there are some grounds for congratulation.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

THE annual meeting of this society will be held on Tuesday, Feb. 16th, at 12, New-court, Carey-street, Lincoln's Inn-fields, at 4 P.M. It is with satisfaction we note in the annual report to be submitted on that occasion by the council that the past year has been a prosperous one for the society, which now enters on its fifth year with excellent prospects, and that the growth of the society in numbers has of late increased at a rapid pace. Upwards of eighty cases have been dealt with in the past year. The income of the society has amounted to £647 8*s.* 6*d.*, whilst the expenditure has been £392 6*s.* 11*d.*, thus leaving a surplus for the year of £255 1*s.* 7*d.* This last amount, together with the balance of £126 18*s.* 9*d.* carried over from 1895, gives the total amount of cash standing to the credit of the society's general account and reserve fund account on Dec. 31st, 1896. All debts incurred by the society during the year having been paid by Dec. 31st the new year was commenced without liabilities of any kind. A reserve fund has now been formed with Sir William Broadbent and Mr. Pickering Pick as trustees. Dr. Heron is the treasurer of the society and Dr. Hugh Woods and Mr. A. G. R. Foulerton the general and financial secretaries respectively.

INJURIOUS FUR COLLARETTES.

SEVERAL cases have occurred lately in which a rash upon the neck seems to have been produced by the wearing of sable collarettes, and quite recently we published two such cases in THE LANCET of Dec. 12th, 1896. We have met with another case which has afforded us the opportunity of submitting to examination a fur that had apparently caused an eruption and another which had been worn (without any objectionable results ensuing) by the same individual. It is worthy of note that the sables in question appeared to be of Canadian origin. The acute dermatitis following upon the wearing of a sable collarette has been very generally attributed to the presence of arsenic or some other irritant which it is suggested may have been used in the skin of the animal as a preservative. We, therefore, very carefully tested a sable skin which had produced an eruption, but we failed to find any trace of arsenic, mercury, or other chemical irritant. We are more inclined to think, therefore, that the irritation was due to a mechanical cause. It is well known that in many sensitive skins a rash is sometimes produced by mere contact with substances that have brittle and minute points. Glass-wool and asbestos, for example, cannot always be handled with impunity, a rash on the hand extending to the arm frequently following contact with these materials, although in themselves they may be quite soft and even suitable for the stuffing of seats and cushions. On examining the hairs of the fur of an old animal, the collarette made from which had apparently produced an eruption, they were found to consist of somewhat thick and rigid rods with sharp points at the tip, whereas the hairs of the fur of a younger animal, the collarette made from which proved to be free from objection, were found to be of a much finer character throughout and of a uniform thickness from the tip to the root. The hair of the older fur proved to be more rigid and less yielding than the hair of the younger fur, and therefore is more likely to prick the skin, especially as although the body of the hair is thicker the tip is a fine point. A simple experiment sufficed to afford distinct evidence of the validity of this view. It was found that when a fur that had been known to produce irritation was gently pressed upon a slab of soft grease the hairs penetrated into the fat, while the hairs of a younger fur did not penetrate it, but were bent round in a curve. It would therefore seem that in choosing a fur the one derived from a comparatively young animal should be preferred, and persons with sensitive skins or exhibiting an idiosyncrasy would do well to avoid the fur of an old animal and obtain some guarantee of the age of the skin purchased, although by making this selection the more handsome furs would probably have to be rejected.

THE PREVENTION OF OPHTHALMIA NEONATORUM.

THE *Maryland Medical Journal* states that last November Dr. John S. Fulton, secretary of the State Board of Health, prosecuted Mrs. Liersman, a registered midwife, for violation of the law enacted by the Maryland Legislature in 1894, "To Prevent Blindness in Infants." This was the first trial under the statute in question. The accused acknowledged having received from the Health Office of Baltimore a copy of the law and also a circular letter giving directions concerning the care of infants' eyes. A fine of 25 dollars and costs was imposed. The law is as follows: "An Act to prevent Blindness in Infants. Section 1.—Be it enacted by the General Assembly of Maryland: That if at any time within two weeks after the birth of any infant one or both of its eyes, or eyelids, are reddened, inflamed, swollen, or discharging pus, the midwife, nurse, or person other than a legally qualified physician in charge of such infant shall refrain from the application of any remedy for the same, and shall immediately report such condition to the health commissioner, or to some legally qualified physician in the city, county, or town wherein the infant is cared for. Section 2.—And be it enacted: That any person or persons violating the provisions of this Act shall, on conviction, be punished by a fine not to exceed one hundred dollars, or by imprisonment in gaol not to exceed six months, or by both fine and imprisonment. Section 3.—And be it enacted: That this Act shall take effect from the date of its passage. Approved April 6th, 1894."

MEDICINE AND THE LAW IN FRANCE.

THAT the decisions of our law-courts do not invariably give satisfaction will no doubt be freely admitted by our readers, and if we may take the following case as an example they do not manage these matters much better in France. An individual named G—— was charged before the correctional tribunal at Marseilles on two separate counts: firstly, the illegal exercise of the medical art with usurpation of title; and, secondly, fraud. It was proved that the man G——, who originally had been a petty tradesman, was not only a liberated convict (ticket-of-leave man), but also completely illiterate. He nevertheless established a Curative Institute at Marseilles and by dint of strenuous advertisement succeeded in attracting a large amount of custom. No diseases were too recondite or incurable to be out of reach of his remedies. His principal medicament was a pine extract which was warranted to do many wonderful things, but he also disseminated a variety of other nostrums in the attractive form of bon-bons, syrups, pearls, and liqueurs. Evidently G——, in spite of his antecedents, was an accomplished quack, for he "captured the confidence" of numerous wealthy patients, before whom he posed as a legally qualified practitioner. According to the immemorial practice of all charlatans he maintained an imposing array of gorgeously-attired servants, and he likewise dazzled the heedless with a display of spurious medals and diplomas, which he declared were the rewards that had been bestowed upon

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himself and his wares by societies and at exhibitions. In this way he contrived to extract considerable sums of money from ignorant and credulous people, whose eyes remained unopened, until at last they were compelled to acknowledge that the treatment they underwent did them more harm than good. The Marseilles tribunal found G—— guilty on the first count, acquitted him on the second, and condemned him to three months' imprisonment, with a fine of 500 francs. Against this decision he appealed, and the Minister of Justice seems also to have demanded a fresh investigation. The appeal was heard in the Supreme Court at Aix, and, to say the least of it, this, the final judgment, was peculiar. In addition to the irregular practice of medicine G—— was now pronounced guilty of fraud, the sentence of imprisonment accorded by the judges at Marseilles was confirmed, but the fine of 500 francs was remitted. As may be supposed, this ruling has excited a great deal of dissatisfaction in French medical circles. "With the greatest possible respect for the law as administered in France," says a Parisian critic, "we cannot help saying that reasonableness is not always one of its chief virtues. A correctional tribunal finds an impostor guilty on one of two counts only and inflicts a certain penalty. A court of appeal finds him guilty on both the counts and takes away half the penalty. This may be good law, but assuredly it is not good logic. Why, at this rate, if the fellow had poisoned a few of the boobies who swallowed his drugs and the primary tribunal had failed to convict him of it the court at Aix would have let him off scot-free, or perhaps even rewarded him!"

DERMATITIS CAUSED BY THE ROENTGEN RAYS.

DR. E. WAYMOUTH REID, Professor of Physiology in University College, Dundee, writing in the current number of the *Scottish Medical and Surgical Journal*, describes a remarkable personal experience of dermatitis caused by the Roentgen rays. Having to deliver a popular lecture on Roentgen's discovery he desired to obtain a photograph of his own chest or abdomen through the clothing to exhibit the contents of the pockets in addition to the skeletal structures. The exposures to which he was subjected were as follows:—Abdomen, Nov. 2nd, 1896, twenty minutes, followed by forty minutes. Chest, Nov. 3rd, fifty minutes, followed on Nov. 5th by ninety minutes. The coil was of ten-inch spark, fed by ten ampères, and the Crookes's tube ("focus" pattern) was some three inches from his waistcoat as he lay supine upon the table. On the evening of each exposure marked erythema of the skin of the abdomen and chest was noticed immediately beneath the position of the vacuum tube, and in addition slight redness of the skin of the back over an area corresponding to the exit of the rays from the body. In seventeen days the cuticle began to peel off, leaving a surface which was "raw" and "weeping," but not very painful. The discharge next became sero-purulent, and in the result some thirty square nches of cuticle were lost, but in thirty-three days healing was complete. Dr. Reid says that the apparent immunity of structures deeper than the skin is a matter of special interest. He had a sore on his chest and pimples on his back, but his lungs, so far as he knows, are unaffected.

MUNIFICENT GIFT TO THE UNIVERSITY OF ST. ANDREWS.

THE present Lord Rector of the University of St. Andrews —the Marquis of Bute,—who has for several years taken a keen interest in the development of the medical school at this ancient seat of learning, has undertaken to erect at his own cost under certain conditions four new laboratories, lecture-rooms, museums, work-rooms, &c. or the departments of anatomy, physiology, materia medica, and botany. These laboratories will be provided with all modern appliances for teaching and research purposes. The object in view is to enable students attending the medical classes at the University to spend two residential years at St. Andrews, these being required for medical graduation at all the Scottish universities. Owing to additions made last autumn to the medical teaching staff two complete *anni medici* can now be obtained at St. Andrews, qualifying courses being given in: (1) physics; (2) botany; (3) natural history; (4) chemistry; (5) anatomy; (6) physiology; and (7) materia medica. St. Andrews University aims at providing the seven fundamental subjects of the medical curriculum, and the four new laboratories, &c., will give greatly increased facilities and opportunities both to teachers and students. The new laboratories, &c., will form a most important addition to the existing natural philosophy, natural history, and chemical departments. They will inaugurate a new era in medicine at St. Andrews and, as they are to be built apart from the existing colleges on ground of their own, they will, of necessity, form the headquarters of the extended medical school there, which school will henceforth be known as the "Bute School of Medicine" in commemoration of the generous donor.

OPTIC NEURITIS AND ACUTE MYELITIS.

IN the *Archiv für Ophthalmologie* Dr. Katz relates the case of a woman aged fifty-six years who in 1894, after anxiety and a chill, began to have impairment of vision. The left disc was found to be red, the edges blurred, and the veins enlarged and tortuous. There was no swelling. The right showed similar changes, but in a milder degree. The sight, however, became worse, distinct papillitis became evident, and there were superadded symptoms of paralysis in the lower limbs and sensory impairment as high as the chest The sphincters were also affected, and in spite of treatment the paralysis persisted and the patient died a year later. At the necropsy disseminated myelitis was found to be present, there was atrophy of both optic nerves and of the chiasma, fatty heart, and interstitial nephritis. The writer refers to the coincidence of myelitis and optic neuritis—an inflammatory affection of two separate parts of the nervous system—and he adduces twenty cases of the same combination of morbid conditions. The most noteworthy point in these probably is the rapid loss of vision associated with swelling of both discs. In most cases both eyes are affected, the pupils are dilated and their reaction is lost or much impaired. Partial restoration or permanent loss of vision followed, and the myelitis was either in the dorsal or lumbar region. Dr. Katz suggests that the explanation of this curious combination is to be looked for in an affection of the sympathetic, leading to paralysis of the vaso-motor nerves with consequent hyperæmia and later atrophy of the optic nerves. The theory of an ascending meningitis he considers improbable—at least, in most cases. But probably a common cause for the two affections exists as a rule, and it is interesting to note that in fifteen out of twenty-one cases the neuritis preceded the myelitis. The identity of the histological changes in the two parts affected would also indicate a common cause, but it is impossible to give any definite opinion as to the nature of this.

LUXATION OF A SESAMOID BONE OF THE GREAT TOE.

THE value of the new photography is again exemplified by this case. The lesion appears not to have been described before, and the diagnosis was certainly impossible otherwise. The case is recorded by Thorburn.[1] A healthy labourer, aged sixty-one years, was injured on Sept. 3rd, 1895, by a weight

[1] Medical Chronicle, Nov., 1896.

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falling upon the dorsum of his left foot immediately behind the first metatarso-phalangeal joint. For three weeks he was able to continue work with continuous pain. Then he became totally incapacitated by increasing pain on standing or walking. In March, 1896, he applied at the Manchester Infirmary complaining of pain in the region of the head of the first metatarsal bone of the left foot with some tenderness on pressure over the inner aspect of the bone. No physical signs of injury could be detected. Rest, counter-irritation, and the internal administration of iodide of potassium produced no result. A skiagraph showed an osseous mass between the first and second metatarsal bones. Guided by the photograph, it was thought that some resistance could be felt on deep pressure. The mass was regarded as a traumatic periosteal node. On May 3rd an incision was made in the first metatarsal space on the dorsum of the foot and the bony mass readily exposed. It was found to be distinct from the metatarsal bone, slightly moveable laterally, and attached to the flexor tendons of the great toe, being, in fact, the external sesamoid bone displaced outwards from its articulation with the metatarsal bone. Reduction was impracticable. The wound healed by primary union and the pain ceased. In July the patient was perfectly well and he is now again at work. The writer assigns no reason for the relief. We would suggest as an explanation that the case belongs to that perfectly well-recognised, though not so well understood, group in which an operation *per se* is curative of pain.

THE PHYSIOLOGICAL INFLUENCE OF ALCOHOL.

IN a valuable communication to the American Physiological Society the results of some interesting practical experiments on the effects of a daily administration of alcohol upon certain animals are recorded. The investigation was directed chiefly to ascertaining the influence of alcohol upon growth, upon mental characteristics, and upon animal activity and ability. In the first experiment two pairs of kittens as much alike as possible, the males from one litter and the females from another, were chosen. At the end of ten days' administration of alcohol the alcoholic pair had contracted severe colds, which precluded the continuation of a fair experiment. Apparently there was a distinct stunting effect, but this was probably due to the disease rather than to the alcohol. It is interesting, however, to record that the alcoholic kittens became very quiet, while playfulness, purring, and fear of dogs no longer characterised their conduct. In another series of experiments two pairs of spaniel puppies were chosen, the males brothers and the females sisters. To these gradually increasing but non-intoxicant doses of alcohol were administered, until they amounted to one and a half fluid ounces. Growth was practically normal, the alcoholic pair growing at the commencement a little faster than the non-alcoholic pair, although those grown under normal conditions were about 5 per cent. heavier than the alcoholic brother or sister. There were marked differences of behaviour. Thus the alcoholic animals were much quieter, while by means of the pedometer the alcoholic male was found to develop 71 per cent. of the daily activity of his brother and the female only 57 per cent. of her sister. A more practical test of activity consisted in throwing a ball, the dogs competing on equal terms for its possession and for the privilege of bringing it back. In this way two series of tests were made, and on 1400 and 1000 balls being thrown the alcoholic male showed an efficiency of only 32 per cent. and 44 per cent., as compared with that of his brother. In spite of the fact that on account of differences in condition no satisfactory test was possible with the females, there is, as far as it went, an obvious moral to this very interesting investigation.

GREAT BRITAIN AND THE VENICE CONFERENCE.

THE representatives of Great Britain at the forthcoming Conference upon the Plague, which will commence its sittings at Venice on Feb. 10th, will be Dr. R. Thorne Thorne, F.R.S., C.B., as technical delegate, the Hon. Michael Herbert, C.B., of the British Embassy at Rome, and formerly at Constantinople, as diplomatic delegate, and Mr. H. Farnall, C.M.G., of the Foreign Office, as assistant delegate. British India will be represented by Surgeon-General Cleghorn and probably by another physician having practical acquaintance with bubonic plague. These delegates cannot arrive from India in time for the opening of the Conference and it is probable that Surgeon-Colonel Richardson, who is familiar with the etiology of the disease, will proceed to Venice in the first instance as a deputy.

THE annual oration of the Hunterian Society will be delivered in the large theatre of the London Institution, Finsbury-circus, at 8.30 P.M. on Wednesday, Feb. 10th, by Dr. Hingston Fox, on the subject, "William Hunter (1718–1783), Anatomist, Physician, Obstetrician; with Notices of some of his Contemporaries — especially Dr. Cullen, Dr. Fothergill, and Dr. Smellie." Members of the profession will be welcomed as visitors.

A MEETING was held at the Mansion House on Feb. 1st to consider the measures to be taken for increasing the building fund of the new Royal London Ophthalmic Hospital, Moorfields, now being erected in the City-road. A list of contributions was read, including £100 from the Queen and £1000 from the medical staff of the hospital.

THE next meeting of the Epidemiological Society of London will be held at 11, Chandos-street, Cavendish-square, on Friday, Feb. 19th, at 8 P.M., when a paper will be read by Dr. J. C. McVail on the Royal Commission on Vaccination, a review of the dissentients' statement forming the text of the paper.

THE death is announced of Dr. James Ellison, surgeon and apothecary to the Queen's household at Windsor. Dr. Ellison succeeded in 1851 to his appointment in Her Majesty's household and was seventy-nine years of age.

DR. J. A. LOWSON has been sent to Bombay by the India Office to place the experience which he acquired recently in Hong-Kong at the service of those occupied in controlling the epidemic of the Plague in Indian cities.

DR. F. J. WALDO will open a discussion on "Sanitary Supervision of Shelters for the Homeless" at a meeting of the Sanitary Institute on Wednesday next at 8 P.M. Dr. Robert Farquharson, M.P., will preside.

LORD LISTER, who has for many years been consulting surgeon to the General Lying-in Hospital, has accepted the Presidency of the institution in succession to the late Earl of Darnley.

DR. GARDNER of Melbourne, Dr. Novaro of Bologna, and Dr. Lardy of Constantinople have been elected corresponding members of the Paris Société de Chirurgie.

THE Lord Mayor will preside at the annual court of the Royal Hospital for Diseases of the Chest, City-road, E.C., on March 15th.

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Obituary.

SIR THOMAS SPENCER WELLS, BART., F.R.C.S., &c.,

PAST PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; SURGEON TO HER MAJESTY'S HOUSEHOLD; AND CONSULTING SURGEON TO THE SAMARITAN FREE HOSPITAL FOR WOMEN.

WE deeply regret to have to announce the somewhat sudden, but not altogether unexpected, death of Sir Spencer Wells, which occurred on Sunday last at Cap d'Antibes.

Sir Spencer Wells was born at St. Albans, Hertfordshire, on Feb. 3rd, 1818, being the eldest son of Mr. William Wells, who, as well as his father before him, had resided in that city. At an early age he turned his attention to the study of natural science, taking the greatest possible interest in the habits of all manner of living creatures, and when but a boy he expressed his determination of following the medical profession. In this choice he was confirmed by his parents, who saw clearly that not only did his tastes lie in that direction, but that he possessed the very characteristics which were calculated to lead him to success in the profession. He was quite a lad when he became a pupil of Mr. Michael Sadler, a general practitioner at Barnsley, in Yorkshire, then by no means the populous town into which it has developed, but even at that time an important centre of the textile and linen industry. The weaving machinery was in those days imperfect, and accidents of a more or less severe character were of a frequency which gave many opportunities for the observation of injuries which did not as a rule come under the notice of the young pupil of a general practitioner. After this initiation Thomas Spencer Wells, then a youth of seventeen, became a pupil of, and unqualified assistant to, a parish surgeon at Leeds. While residing under this gentleman's roof he had the opportunity of attending the lectures of William Hey, "the second," who did so much to promote the interests of medical education in the northern counties and who took so prominent a part in the establishment of the Leeds School of Medicine. He likewise attended the classes of the elder Teale, an equally eminent surgeon in Leeds. Besides the teachings of these two men, to whose influence he always referred with the warmest feelings of gratitude, he had the privilege of attending the surgical practice of the Leeds Infirmary, an institution at that time among the foremost centres of operative surgery in the provinces.



SIR THOMAS SPENCER WELLS, BART., F.R.C.S.,
PAST PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

He stopped little more than a year in Leeds and then proceeded to Trinity College, Dublin, and during his residence there made the best use of his time, attending the lectures of Sir Philip Crampton in Surgery and those of Arthur Jacob, the anatomist and ophthalmic surgeon. He left Dublin in 1839 and proceeded to St. Thomas's Hospital, London, where Joseph Henry Green, Benjamin Travers, and Frederick Tyrrell were the surgeons and Dr. Williams, Dr. Roots, and Dr. Burton the physicians. At the end of his first session at St. Thomas's Hospital Spencer Wells won the prize offered for the most complete and detailed reports of the post-mortem examinations made of the patients dying in the wards of the hospital during the session. After another year's attendance on the practice of St. Thomas's Hospital he obtained, in 1841, the Membership of the Royal College of Surgeons of England, and joined the navy as a surgeon. There was no war being carried on at the time, so that he had no prospect of immediate adventure or even of great activity. He was ordered to Malta, where he served in the Naval Hospital for six years, during which time he was permitted, besides his official or service duties, to frequently meet in consultation and to assist many of the resident medical men, both English and Maltese. Although he saw much practice and did much good work at Malta he afterwards stated that he saw only one case there which raised even a suspicion in his mind of the existence of ovarian disease.

Having served six years at Malta, he left the navy and in 1848 proceeded to Paris with the view of perfecting his studies in pathology. Magendie was then at the height of his fame and Claude Bernard had for some years been advancing towards the position to which he afterwards attained as a teacher. Many English practitioners and students were in Paris at this time, having been attracted thither by the fame of the great array of prominent thinkers and experimentalists, who, in their turn, attracted by the facilities and encouragements offered for the experimental discovery of the true nature of disease, had settled there. Among Spencer Wells's acquaintance in Paris was the late Dr. Waters, afterwards of Chester, who first directed his attention to the operation of ovariotomy. The two had many discussions on the subject, and ultimately concluded, as had previously been almost universally acknowledged in England, that it was an unjustifiable operation. It was not until ten years later that Wells returned to the subject in earnest; and up to the time of his residence in Paris (1850), as he afterwards stated, he had never, so far as he could remember, encountered a single case which he could safely assert to be ovarian disease either during his student days in Barnsley, Leeds, Dublin, or London, or during his stay in Malta and Paris.

On his return to London in 1853, Spencer Wells settled down in practice, and in a short time attained considerable success, turning his attention more especially to obstetric work, although he showed a remarkable aptitude for, and achieved some good work in, ophthalmic surgery, for which branch of his art his mechanical ingenuity and manipulative dexterity rendered him particularly suited. In 1854 he became connected with the Samaritan Free Hospital for

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Women and Children in the Marylebone-road, which had been established but seven years, and was little more than a dispensary for the diseases of women, not being provided with in-patient accommodation. With this institution he remained connected throughout his life. It was during this period of his career that, for a time, he edited the *Medical Times and Gazette*, and it was in his editorial capacity that he came into contact with many prominent members of the profession who were afterwards closely associated with his work. The man who probably exerted the greatest influence over his future was Mr. Baker Brown, the gynæcologist, who was at this time essaying the revival of the generally condemned operation of ovariotomy Although John and William Hunter had discussed the advantages and disadvantages of the operation and the methods of performing it, they had never put their theories into practice. Aston Key and Bransby Cooper had performed it a few times at Guy's Hospital, but their results had been by no means such as to encourage the advocates of the operation. It was not, however, until Charles Clay appeared as an advocate of the operation that it became in any way recognised as coming within the realm of practical and useful surgery, and even then the untoward results of a terribly large percentage of cases caused it to be looked upon with suspicion if not with absolute disapproval by the bulk of British practitioners.

In April, 1854, Spencer Wells, in company with his friend, Mr. T. W. Nunn of the Middlesex Hospital, assisted Mr. Baker Brown in his eighth case of ovariotomy. This was the first time that Spencer Wells had seen the operation performed, and its result, like that of six others of Baker Brown's first nine cases, was not encouraging. In discussing the operation afterwards Mr. Baker Brown remarked, "It's the peritonitis that beats us," for it was chiefly in the matter of after-treatment that the results of the operation formed such a discouraging picture. Temporarily disheartened by his ill-success in seven out of nine cases, Mr. Baker Brown for a time abandoned all hope of introducing the operation, although he was in his own mind convinced of its reasonableness and ultimate utility. It was not until 1857, however, that Spencer Wells himself attempted the operation, and this he did contrary to the express advice of his friend, Mr. Baker Brown, who nevertheless assisted him. The result of this his first venture was not encouraging, for he lost his case. He was not discouraged by this untoward beginning, but persevered, and in the following year his hopes were realised by the entire success of his second case. From that time forward the results obtained by him are a portion of the surgical history, not only of the century, but of all time.

It is not only on account of his mechanical dexterity in a particular operation that Sir Spencer Wells deserves to have his name kept in honoured remembrance. At the time when he turned his attention to ovariotomy the operation was so fatal as to be generally regarded as unjustifiable; and no common force of character was required to persevere with the operation. Feeling assured with the instinct of genius of the possibility of its ultimate success he says himself, "On taking up this subject as a matter of study and trial, just at the crisis when obloquy was the thickest and opposition the strongest, I felt that nothing but the most open frankness would carry conviction of success, or in case of failure justify the operation. ..... I therefore pledged myself to make known through the press all that I did and all that befell me" Sir Spencer Wells deserves the greatest credit both for having at that time the courage to make public his failures as well as his successes and also for recognising that only in such a way could it be hoped to establish ovariotomy as a justifiable operation. There can be no doubt that the large number of abdominal operations performed at the present day owe their inception to ovariotomy, and to Sir Spencer Wells belongs the credit, not of inventing ovariotomy, but of taking the principal share of the work involved in establishing that operation on a recognised basis.

In 1857 he became Lecturer on Surgery at the Grosvenor-place Medical School, which eight years afterwards became merged in the school of St. George's Hospital. Between the time when Spencer Wells first turned his attention to ovariotomy and the first occasion when he practically essayed it his energies were directed for the space of a year or more to a very different kind of work. Shortly after the war broke out in the Crimea he temporarily abandoned his work at the Samaritan Hospital and his private practice and proceeded to Smyrna, where he became surgeon to the British Civil Hospital there as well as at Renkioi, whither he afterwards proceeded. He saw a great class of injuries which were almost entirely new to him, and in the course of his work had the opportunity of attending to many abdominal wounds, experience which afterwards proved most useful in his surgical work. He frequently stated in after years that it was during the war that he realised that the peritoneum would stand much rougher handling than he had previously imagined, and it was this knowledge in great measure that reassured him in the operation and gave him the boldness which characterised his later work and which results amply justified. At Renkioi he was closely associated with Dr. Parkes, who was one of his oldest professional friends.

Sir Spencer Wells's literary works comprise a number of treatises and contributions which have been of great practical utility to the medical profession both in England and abroad. In 1851, after his term of service had expired for a year or two, he published a useful "Scale of Medicines for use in the Merchant Marine," and while in London previously to the outbreak of the Crimean War he contributed a valuable dissertation on "Gout and its Complications" (1854). It was while he was occupying the chair of Surgery at the Grosvenor-place School that he delivered his lecture on "Cancer and Cancer-curers," which was printed in the *Medical Times and Gazette* and afterwards published in pamphlet form in 1860. Among the archives of ovariotomy Sir Spencer Wells's works rank among the most valuable contributions; based as they were upon his personal experiences and being accounts in tabular form of the work of the foremost ovariotomist of the time, they form in reality little less than the history of the revival of this operation in England. In 1865 he published his first work on this subject under the title of "Diseases of the Ovaries," and in it he not only provided valuable statistics supplied by his earlier years as a successful ovariotomist, but conveyed many inestimable hints towards the diagnosis of ovarian tumours. Simultaneously with this work he published "A Note-book for Cases of Ovarian and other Abdominal Tumours," which was intended to assist practitioners in classifying their cases of these disorders and thus increasing the sum of statistical knowledge on this subject. This note-book has been through seven editions—a fact which testifies to its practical value and general utility. In 1882 an enlarged work founded on the two foregoing publications appeared, and was chiefly interesting in that it contained, in both a descriptive and tabular form, an accurate and detailed account of the personal work of the great ovariotomist. Its scope was to all intents and purposes limited to what its author had himself seen and done. A short history of the revival of ovariotomy was printed in 1884 and a second edition was called for in the following year. A considerable portion of his works on the subject of the operation with which his name is so intimately associated has been translated into the German language by Dr. R. von Volkmann and enjoys a wide popularity on the Continent. He was the author of a very large number of interesting and valuable communications to the Obstetrical and other societies as well as of numerous contributions to the medical press.

His opinions on the question of cremation were very decided, and in 1885, when the controversy begun by Sir Henry Thompson and others was at its height, he wrote an eloquent and outspoken letter to the *Times* advocating cremation, not only from a sanitary point of view, but pointing out what an impetus its adoption would give to the arts. Cinerary urns have in all countries where the practice is carried out been amongst the most beautiful features of the temples and other resting places of the departed. He likewise lectured at the Parkes Museum of Hygiene on the subject and brought similar arguments to bear.

It was during his residence in Malta—namely, in 1844—that the Royal College of Surgeons of England conferred on him the honorary degree of Fellow, the order of Fellows having been created by the new Charter. With the College of Surgeons his connexion was thenceforth of a most intimate character. In 1871 he was elected a member of the Council, in 1877 Hunterian Professor of Surgery and Pathology, and in 1879 a Vice-President. On the retirement of Sir Erasmus Wilson from the Presidency in 1883 Spencer Wells was elected to the chair, which he filled for a year. In 1883 he delivered the Hunterian Oration, and five years later held the post of Morton Lecturer on Cancer and Cancerous Diseases. In 1890 he was Bradshaw Lecturer.

Sir Spencer Wells was made an honorary Fellow of the King's and Queen's College of Physicians of

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Ireland, and when the Universities of Leyden and Bologna respectively celebrated the third and eighth centenaries of their existence, both of these bodies conferred on him the honorary degree of M.D. He was likewise honoured by the Doctorate of the University of Charkof and was a Knight Commander of the Norwegian Order of St. Olaf. He was a Fellow of the Royal Medical and Chirurgical Society, of the Pathological Society, of the Medical Societies of Paris, Moscow, and Stockholm, and a Member of the Obstetrical Societies of London, Berlin, and Leipzig. On May 11th, 1883, Her Majesty conferred on him the honour of a baronetcy of the United Kingdom in recognition of his services to medical science and to humanity. Sir Spencer Wells was a deputy-lieutenant for the county of London. He married in 1853 Miss Elizabeth Wright, daughter of Mr. James Wright, solicitor, of New Inn, by whom he leaves five daughters and one son, Arthur Spencer Wells, who succeeds to the title.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent medical men are announced:—Dr. L. Calori, Professor of Anatomy in the University of Bologna.—Dr. Pantaleo, Emeritus Professor of Midwifery in Palermo.—Dr. José Maria Vilches, Professor of Clinical Medicine in the Cadiz Medical School.—Dr. W. H. Pancoast, Professor of Anatomy and Clinical Surgery in the Philadelphia Medico-Chirurgical College.—Dr. Theodore Wormley, Professor of Chemistry and Toxicology in the University of Pennsylvania.—Dr. Karl Herrimann Sätherberg of Stockholm, well known not only for his works on orthopædics but as a poet.

STATISTICAL REPORT OF THE HEALTH OF THE NAVY FOR THE YEAR 1895.

OUR Royal Navy has of late years undergone, and is still undergoing, a considerable increase to its strength in the way of ships, and it is a matter of some consideration at the present time where we are to get the men to man them—for we need scarcely add that the seamen of our fleet have to be a strong, healthy, highly-trained body of men such as cannot be picked up promiscuously or every day.

The head of the Medical Service of the Navy tells us in the report under notice that the returns for the total force for 1895 may be regarded as satisfactory on the whole. There has been an increase in the number of cases of disease compared with the previous year, but this is attributed principally to the increased prevalence of influenza in the Home, China and Cape of Good Hope, and West Coast of Africa stations.

The total force in the Service afloat in 1895 was 67,960 officers and men, of whom 59·9 per cent. were between the ages of fifteen and twenty-five, 29·04 per cent. between twenty-five and thirty-five, 9·47 per cent. between thirty-five and forty-five, and only 1·57 per cent. were above forty-five years of age, so that our Navy is, as it should be, mainly a young one.

The ratio of invaliding in 1895 was 25·26 per 1000, which is lower, with the exception of 1889, than that recorded for any year since 1856, when, we are told, the present system of statistical reports was started. The ratio of deaths in 1895 (6·6 per 1000) was a slight increase on that of 1894, but somewhat less than the average of the last eight years. This increase is explained by being chiefly attributable to the foundering of the pinnace of the *Edgar* at Chemulpo, with the loss of forty-eight officers and men. The total number of cases of disease and injury entered on the sick-list gives a ratio of 959·32 per 1000, being an increase of 40·12 on that of 1894, but a decrease of 14·54 per 1000 as compared with the average ratio of the last eight years. The average number of daily sick in 1895 was 2789·32, which is in the ratio of 41·04 per 1000; and it is calculated that the average loss of service from disease and injury amounted to 14·98 for each person.

Taking the distribution of sickness throughout the different stations it is stated that the lowest sick-rate was on the South-East Coast of America station and the highest on the East Indies station. The ratio per 1000 of men sick daily on the Home station was 40·43; Mediterranean, 37·19; North American and West Indian, 36·52; South-East coast of America, 33·38; Pacific, 41·12; Cape of Good Hope and West Coast of Africa, 48·85; East Indies, 49·9; China, 45·12; Australian, 44·87; and in the irregular force, 43·06.

The naval operations connected with expeditions on the East and West Coasts of Africa gave rise to a great increase of sickness from malarial fevers, more especially those conducted up the Brass River.

Turning to some of the special kinds of disease and inefficiency, we find there were 10,292 cases of venereal disease returned during the year under report. Of these, 3296 were of primary and 1651 of secondary syphilis. The number invalided for these diseases was 173 and there were 5 deaths. Upwards of 5000 cases are recorded at the home stations.

The number of cases comprised under the heading of diseases of the respiratory system in the total force is 8109, the invalidings number 223, and the deaths 81.

There was a severe outbreak of measles on board the *Britannia* in 1895, fifty-two cases having occurred, three of which ended fatally.

Sixty-five cases of enteric fever occurred, distributed throughout twenty-four ships at the home station, fifteen of which died.

In the Mediterranean Squadron, composed of thirty-three vessels in all, with a mean force of 10,270, the admissions for disease and injury during the year were 9990. Among the fevers there were 505 cases of simple continued fever and 82 of enteric fever, 557 of influenza, 9 of dysentery, and 11 of mumps. Sixteen cases of enteric fever ended fatally and 17 were invalided.

The health of the squadron on the East Indies station in 1895, judging from the invaliding rate (42·47 per 1000), the death-rate (10·21), which was 3·26 higher than 1894, and the daily average number of men ineffective, was not so favourable as in the preceding year.

Scattered here and there through these reports are some interesting medical notes and cases which give occasion for regret that they are not more frequently encountered. Surgeon F. H. A. Clayton, M.B., of the *Thrush*, has some excellent remarks on West African fevers in connexion with the organism discovered by Laveran and studied so successfully by Golgi, and of the value of that discovery in settling the diagnosis of certain obscure cases of malarial disease. Surgeon John Lowney, of the *Redpole*, on the China station, describes a case in which a hydatid cyst was expelled from the stomach—rarely the seat of that parasite. Surgeon V. G. Thorpe, of the *Penguin*, and Surgeon James M. France, of the *Ringdove*, have also some good observations on malarial fevers, and Surgeon E. A. Penfold, M.B. Edin., alludes to a curious case of poisoning from the consumption of a fish caught off Malo Island, New Hebrides.

The information in these naval medical reports is mainly statistical, and that which is added of an explanatory character, or as illustrative of the type and nature of the diseases at the different stations, is generally of the most condensed kind. The interest of these reports would, in our opinion, be very much increased by more extended extracts from reports made by medical officers whose observations, derived from so many different climates and parts of the world, must often be of value.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE ordinary quarterly Comitia of the Fellows of the Royal College of Physicians was held on the 28th ult., the President, Dr. S. WILKS, F.R.S., occupying the chair.

The PRESIDENT stated that since the last meeting he had taken part in the award of the Gilbert Blane medal, which had been bestowed on Surgeon E. G. Thorne. He had nominated Dr. Markham Skerritt as the Bradshaw Lecturer for 1897 and Dr. S. M. Copeman as Milroy Lecturer for 1898. The President also drew attention to the dies of the Weber-Parkes medal, prepared by Mr. Boucher from designs by Dr. H. Weber. Replicas of the medal were on the table and were much admired by the Fellows.

The following gentlemen were admitted to the Membership of the College:—Jas. Barr, M.D. Glasg., A. P. Beddard, M.R.C.S., L.R.C.P. Lond., G. H. A. C. Berkeley, B.A., M.B. Camb., C. R. Box, M.D. Lond., R. J. McL. Buchanan, M.D. Vict., M. Craig, M.A., M.B. Camb., J. J. Perkins, M.A., M.B. Camb., and R. A. Young, M.D. Lond.

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Licences and certificates were granted to the successful candidates for the recent examinations for the Licence and for the Diploma of Public Health.

Communications were read:—(*a*) From the secretary of the Royal College of Surgeons of England reporting the proceedings of its Council. (*b*) From Mason College, Birmingham, inviting the College to send a representative to serve on its newly-constituted Council. The President nominated Dr. W. H. Dickinson for that office. (*c*) Requests for loans of pictures for public exhibition, which had been declined in accordance with the invariable rule of the College.

A report from the Council embodying the following resolution was unanimously adopted:—

"That when the College decides to return the diploma of Membership to any gentlemen who has been permitted to withdraw, in his own interest, from the status of a Member, the name of such reinstated Member shall be placed at the bottom of the list of Members of the College."

"That in future, when application is made for the restoration of a diploma of Membership which has been surrendered, notice of such application shall be placed on the agenda paper for the next quarterly Comitia, with a request that any objections to such restoration should be sent by Fellows to the Censors' Board for their consideration before the application is submitted to the vote of the College at the following quarterly Comitia."

On the nomination of the Council Dr. Sansom, Dr. Mitchell Bruce, Dr. Allchin, and Dr. F. Taylor were elected to the Council to fill seats caused by the retirement by rotation of Dr. R. Liveing, Dr. Duffin, Dr. Thorne Thorne, and Dr. F. T. Roberts.

The report of the Special Committee appointed on Oct. 29th to consider the desirability of including the subject of bacteriology in the course of study and examination for the Licence was read. The Committee, after full inquiry into the extent of teaching in bacteriology both in foreign countries and in the schools of the United Kingdom, were of opinion that the subject should be included. It was pointed out that the inclusion of pathology in the subjects of examination covered that of bacteriology, and as regarded the course of study they recommended that after the words, "including practical instruction in pathological histology," the words, "and in bacteriology," should be added to the regulation bearing on instruction in pathology.—The adoption of the report was moved by Dr. PAVY, seconded by Dr. CHURCH, and carried unanimously.

The PRESIDENT offered for the acceptance of the College, on behalf of Lady Reynolds, a portrait of the late President, Sir J. Russell Reynolds, Bart., M.D., LL.D., F.R.S., by Mr. Sydney Hodges, painted about 1883. The thanks of the College were voted to Lady Reynolds by acclamation.

A report from the Bisset-Hawkins Memorial Committee was read submitting a design by Dr. H. Weber for the medal it was proposed to institute. The report was adopted.

Sir DYCE DUCKWORTH, treasurer of the College, read a report of the proceedings which took place on the occasion of the removal of the remains of Louis Pasteur to the Institut Pasteur on Dec. 26th, 1896, he having attended the ceremony as representative of the College.—The PRESIDENT, in expressing the thanks of the Fellows to Sir Dyce Duckworth, remarked that it was no credit to this country that it had given no tribute to "that great man," Louis Pasteur.

Reports were also received from the representative of the College in the General Medical Council (Sir Dyce Duckworth) from the Conjoint Finance Committee, from the College Finance Committee, the Committee of Management, the Laboratories Committee; the annual report of the Examiners for the Licence was also presented.

THE BATTLE OF THE CLUBS.

THE *Montreal Medical Journal* for December, 1896, publishes some resolutions passed (1) by the Provincial Board of Medicine of Quebec and (2) by the medical men of Santa Clara, county California. The following are the Quebec resolutions:—

[TRANSLATION.]

PROVINCIAL BOARD OF MEDICINE.

Extract of the minutes of the Provincial Board of Medicine, held at Quebec, 12th September, 1895, in the new rooms of the School of Medicine of Laval University.

Proposed by Dr. S. Gauthier, seconded by Dr. Beausoleil, and resolved, "That a committee composed of the members of the Legislature, together with the proposer and seconder, be authorised to study the rules and constitution of the several friendly societies doing business in the province of Quebec, and that it be resolved that this committee take means to do away with the despotic rules that these associations calling themselves philanthropical impose upon the medical profession." "That the College of Physicians and Surgeons of the province of Quebec express their disapproval of the conduct of members of this College who make engagements with these societies to attend the members of the lodges for a salary agreed upon in advance." "That it is derogatory to professional honour and ethics to be bound in all cases to make known the name, the cause, and the nature of the sickness of the members of these associations." "That this committee confer with the several managements of these associations of mutual help, so as to cause the withdrawal from their constitutions of the clauses requiring the doctors to certify, even under oath, the causes of the demands for benefits from their members." These obligations being a cause of crying abuse in a great number of cases, at the same time that they expose the medical profession to popular discredit.

True copy. (Signed) A. G. BELLEAU,
Secretary C.M. & C.P.Q.

The resolutions of the Californian medical men are much more drastic, and run as follows. The resolutions are prefaced by a letter from the secretary:—

Resolutions Adopted by the Physicians of Santa Clara County.

Whereas rendering professional service at a stipulated fee per capita per annum is derogatory to the medical profession, we, the undersigned physicians and surgeons of Santa Clara County, California, enter into the following agreement:

1st. We mutually, jointly, and individually, pledge our word of honour not to enter into any contract, or agreement, or renew any existing contract or agreement, either written, verbal, or implied, to render medical or surgical services to any lodge, society, association, or organisation. 2nd. We will not render medical or surgical services to the members of the above-mentioned bodies for less compensation than we charge the general public for similar services. 3rd. This agreement shall not be construed to affect existing contracts between physicians and surgeons and the above-mentioned bodies. 4th. These pledges shall take effect and be in force for a term of three (3) years from and after May 22nd, 1896.

"This agreement shall not apply to hospitals and purely public charitable institutions. The duty of the standing committee shall be to interview new coming physicians, &c., and, in general, to carry out the purposes of the agreement. Communications may be addressed to the chairman or secretary.

The Californian practitioners' resolutions are very admirable, and will, no doubt, bring the "clubs" to see reason, if, and "there is much virtue in an 'if,'" the whole 124 members stick to one another. Perhaps we are somewhat behind the age in this country; but here it generally happens that if a "club doctor" gives up his appointment in obedience to the wishes of his fellow practitioners some other medical man from a distance steps into the post thus vacated. On the whole we think the Canadian plan the better, at first at any rate, but we wish our colleagues, both there and in California, every success in their struggle for, to quote the *Daily Chronicle*, "the right of combination."

ARMY MEDICAL SCHOOL, NETLEY.

TERMINATION OF THE SEVENTY-THIRD SESSION.

THE seventy-third session of the Army Medical School, Netley, was brought to a close on Jan. 30th, when the prizes were distributed by Surgeon-Major-General J. Jameson, Director-General of the Army Medical Department, in the presence of the military and nursing staff of the Royal Victoria Hospital and a considerable company, which included Surgeon-Major-General Cuffe, C.B., Principal Medical Officer, Portsmouth.

Surgeon-Colonel J. Lane Notter, M.D. Dub,, secretary to the Senate of the School and Professor of Military Hygiene. read a report of the work of the session and the result of the examinations, of which the following is an abstract:—

"A *précis* of the reports which the professors of the Army Medical School have addressed to the Secretaries of State for War and India respectively is contained in the printed slips which have been distributed to all those who are present here to-day. It indicates the position of the surgeons on probation of the British and Indian Medical Services as determined by the results of the London and Netley examinations. I am able to report that the work of the session has been satisfactory; twenty-four out of the twenty-five surgeons on probation who have undergone the final examination have proved themselves fitted to receive Her Majesty's commission. In general ability they are as a whole of fair

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average. Their conduct while passing through the school has been excellent, and there has been a good tone throughout the school. The Herbert Prize, consisting of £20, given in memory of the late Lord Herbert of Lea, who, when the Right Honourable Sidney Herbert, was president of the Royal Commission which resulted in the foundation of the Army Medical School, and which is awarded at the end of each course of instruction to the surgeon on probation who has evinced the highest proficiency in the special subjects taught at the Army Medical School, is on this occasion awarded to Surgeon-on-Probation Stammers, of the Army Medical Staff. The Martin Memorial Gold Medal, which is given to the surgeon on probation who takes the highest place in Military Medicine, and is intended to commemorate the late Sir Ranald Martin, is awarded to Surgeon-on-Probation Woolley, of the Indian Medical Service. The Professor of Medicine desires to call attention to the names of Surgeons-on-Probation McArdle and Stammers as having particularly distinguished themselves throughout the examination in military and tropical medicine. The Parkes' Memorial Bronze Medal, which is given to the surgeon on probation who takes the highest place in Hygiene, and which forms part of a memorial to commemorate the great services of the late Professor E. A. Parkes, has been won by Surgeon-on-Probation Stammers of the Army Medical Staff. The second prize in hygiene, a book presented by Mrs. de Chaumont in memory of her husband, the late Professor F. de Chaumont, F.R.S., is awarded to Surgeon-on-Probation McArdle of the Indian Medical Service, who has gained the second place in this department of study. I desire also to make mention of Surgeons-on-Probation Marriott and Woolley, who have also particularly distinguished themselves in military hygiene. The Montefiore Prizes, two in number, which were founded by Mr. Nathaniel Montefiore, were awarded to Surgeons-on-Probation Stammers and Hugo. The first prize consists of a medal with a cheque for £21; the second of a revolver. The Professor of Military Surgery desires that the names of the following gentlemen shall be honourably mentioned in this department of study: Mr. J. M. Woolley, Mr. E. W. Bliss, and Mr. A. A. F. McArdle. The Prize in Pathology, a prize of books, presented on this occasion by the Director-General, has been won by Surgeon-on-Probation G. E. F. Stammers of the Army Medical Staff, while the names of the following gentlemen are worthy of special mention as pathologists: Mr. C. A. Lane, I.M.S.; Mr. C. F. Wanhill, A.M.S.; and Mr. T. B. Kelly, I.M.S. The Maclean Prize of books, presented by Surgeon-General Maclean, so long Professor of Military Medicine in the school, is awarded to Surgeon-on-Probation A. A. F. McArdle, of the Indian Medical Service, who has gained the highest marks in clinical and ward work."

The Director-General then presented the prizes and delivered an address, an abstract of which will be found at p. 366 of our present issue. The proceedings were brought to a close by a few words from Surgeon-Major-General W. Nash, M.D. Edin., Principal Medical Officer, Netley, who thanked the Director-General for presiding and presenting the prizes and for his admirable address. The Director-General, the guests, and staff were subsequently entertained at luncheon by the officers of the Army Medical Staff.

The following are the names of the surgeons on probation of the Medical Staff of the British Army and Indian Medical Service who were successful at both the London and Netley examinations. The final positions of these gentlemen are determined by the marks gained in London added to those gained at Netley, and the combined numbers are accordingly shown in the lists which follow:—

ARMY MEDICAL STAFF.

	Combined marks.		Combined marks.
1. G. E. F. Stammers ...	5889	7. E. W. Bliss	4004
2. C. F. Wanhill	5006	8. M. M. Rattray	3999
3. W. E. Hudleston	4697	9. J. H. Power	3922
4. M. P. Corkery	4278	10. R. E. G. Phillips	3824
5. F. J. Gaine	4178	11. T. H. M. Clarke	3772
6. L. Addams-Williams ...	4094	12. W. E. P. V. Marriott ...	3697

INDIAN MEDICAL SERVICE.

	Combined marks.		Combined marks.
1. A. A. F. McArdle... ...	5626	7. C. H. Watson...	4649
2. J. M. Woolley	5625	8. C. H. S. Lincoln	4530
3. C. A. Lane	5300	9. R. H. Price	4502
4. T. B. Kelly	5030	10. E. F. E. Baines	4408
5. J. H. Hugo	4921	11. G. F. Sealy	4340
6. W. H. Kenrick	4900	12. R. Bryson	4269

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Staffordshire County Sanitary District.—The administrative county of Staffordshire contains so many sanitary districts that to make a separate report upon each would, Dr. Reid tells us, be a difficult matter, and hence he continues his former plan of dealing with the district report under different headings. In his summary of the work of the sanitary committee for the year ended July, 1896, Dr. Reid, in referring to certain Local Government Board inquiries as to sewage disposal, suggests that further efforts should be made to induce the Local Government Board to give notice of all such meetings to the Council; at present, he states, he hears of them only by chance. Conferences have been held during the year under review in reference to hospital accommodation and Dr. Reid hopes that more than one joint hospital board will be formed under the Isolation Hospitals Act. The reports of the district medical offices of health contain, we are told, evidence of much work done in the direction of substituting the water-carriage system for the privy method of excrement disposal, and activity has also prevailed in the matter of closing private wells where public supplies are available. As a means toward the reduction of infantile mortality Dr. Reid suggests that the Council, through the Technical Instruction Committee, might institute lectures in domestic hygiene at suitable centres throughout the county. It is to be hoped that if this excellent suggestion is acted upon by the Council efforts will be made to attract mothers to the lectures by the distribution of printed leaflets in the neighbourhood; perhaps a well-qualified lady lecturer would be able to instil some useful knowledge into the minds of the mothers. In connexion with this subject it may be remarked that in seven districts in the county of Staffordshire the infantile mortality exceeded 200 per 1000 births. Reference is made by Dr. Reid to the prejudice which exists in certain districts against taking advantage of isolation accommodation, and he very properly insists upon the necessity of making such accommodation as attractive as possible. Certainly we should be sorry to be "isolated" in some hospitals for infectious disease with which we are familiar. The adoption of compulsory notification is gradually extending in the county, but there are still some 89,000 persons unprotected by the Act. The cost of notification is, Dr. Reid shows, not ruinous, it having amounted to but £1 2*s.* 8*d.* per 1000 inhabitants during 1895. It is gratifying to learn that the inspection of meat, dairies, and cowsheds is receiving more attention than heretofore, as also is the sanitary control of factories and workshops.

Wandsworth Sanitary District.—The medical officers of health for this district in their current conjoint report express the opinion that the usual estimate of the amount of isolation hospital accommodation which would be necessary to cope with measles in London is a much exaggerated one. They point out that an average stay in hospital of three weeks would probably suffice, as contrasted with the very much longer period required for scarlet fever. At the present time they remark that no case of measles, however bad and however poorly provided for at home, can be received into any hospital or infirmary.

Bedfordshire County Sanitary District.—In his annual report for 1895 Dr. Leonard Wilde, in commenting upon the death-rate of the county, points out that there is an undue tendency among medical officers of health in Bedfordshire to reduce the death-rates of their districts through the too liberal exclusion of deaths. He observes that although the deaths occurring within a district among persons not belonging thereto are studiously excluded, no such care appears to be exercised in adding the deaths which rightly belong to the district, but which have actually occurred outside it. As a means of illustrating his point Dr. Wilde observes that, although 2683 deaths were registered in the county, only 2526 were dealt with by medical officers of health. Notification of infectious diseases is not yet complete in Bedfordshire, and hence it is impossible to ascertain the exact amount of infectious disease present in the county. In one of the recalcitrant districts it was

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seriously urged that notification was unnecessary inasmuch as when infectious disease prevailed notification could be adopted in a few hours. These arguments show a very poor appreciation of the fundamental principles of preventive medicine. Dr. Wilde reminds the County Council that although he endeavours to carefully summarise the district reports it is obvious that sanitary defects may exist of which he can only become cognisant after a personal survey of the county. Certainly the survey which was undertaken by Dr. Williams, the county medical officer of health of Glamorganshire, has had not only the effect of making him familiar with the subject upon which he annually writes, but has also stimulated public action in the local districts. In some senses the Bedfordshire County Council are an advanced body, and we read with pleasure that with the view of reducing infantile mortality they have instituted lectures to women through their Technical Instruction Committee. Isolation accommodation in Bedfordshire is still practically at a standstill, but Dr. Wilde seems rather to favour the suggestion that the County Council should provide hospitals for small-pox throughout the county, and allow the local authorities to provide hospitals for ordinary infectious disease. There is very much to be said for this suggestion, as the provision of separate small-pox hospitals by each authority is hardly to be expected.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6563 births and 4338 deaths were registered during the week ending Jan. 30th. The annual rate of mortality in these towns, which had been 19·2 and 19·7 per 1000 in the two preceding weeks further rose last week to 20·6. In London the rate was 19·9 per 1000, while it averaged 21·1 in the thirty-two provincial towns. The lowest rates in these towns were 10·8 in Croydon, 14·7 in Halifax, 15·9 in Preston, and 16 0 in Gateshead; the highest rates were 25·3 in Birmingham, 25·7 in Liverpool and in Salford. 27·5 in Wolverhampton, and 33 6 in Plymouth. The 4338 deaths included 366 which were referred to the principal zymotic diseases, against 378 and 386 in the two preceding weeks; of these, 120 resulted from whooping-cough, 83 from diphtheria, 58 from measles, 38 from scarlet fever, 38 from diarrhœa, 29 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Brighton, Norwich, and Birkenhead; and the highest rates in Burnley, Salford, Blackburn, Nottingham, and Wolverhampton. The greatest mortality from measles occurred in Bradford, Gateshead, Plymouth, and Nottingham; from scarlet fever in Salford and Croydon; and from whooping-cough in Salford, Bristol, Burnley, Blackburn, and Wolverhampton. The mortality from "fever" showed no marked excess in any of the large towns. The 83 deaths from diphtheria included 53 in London, 6 in Birmingham, 4 in West Ham, 3 in Wolverhampton, 3 in Oldham, and 3 in Liverpool. No fatal case of small-pox was registered during the week under notice, either in London or in any other of the thirty-three towns. There were 9 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, Jan. 30th, against 3 and 2 at the end of the two preceding weeks; 7 new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3311, against 3597, 3414, and 3354 on the three preceding Saturdays; 254 new cases were admitted during the week, against 290, 208, and 249 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 306 and 325 in the two preceding weeks, further rose to 355 last week, but were 240 below the corrected average. The causes of 78, or 1·8 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Salford, Bradford, Leeds, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Blackburn, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 21·9 and 24·6 per 1000 in the two preceding weeks, declined again to 24·3 during the week ending Jan. 30th, but was 3·7 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18·0 in Leith and 19·8 in Dundee to 29·0 in Perth and 30·5 in Greenock. The 723 deaths in these towns included 28 which resulted from measles, 28 from whooping-cough, 11 from diarrhœa, 7 from "fever," 5 from scarlet fever, and 2 from diphtheria. In all, 81 deaths resulted from these principal zymotic diseases, against 75 and 89 in the two preceding weeks. These 81 deaths were equal to an annual rate of 2·7 per 1000, which exceeded by 1·0 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 45, 28, and 36 in the three preceding weeks, declined again to 28 last week, of which 24 occurred in Glasgow and 2 in Paisley. The deaths from whooping-cough, which had been 26 in each of the two preceding weeks, rose to 28 last week, of which 19 were recorded in Glasgow and 7 in Edinburgh. The 7 deaths referred to different forms of "fever" showed a slight further increase upon recent weekly numbers, and included 3 in Glasgow. The fatal cases of scarlet fever, which had been 10, 3, and 6 in the three preceding weeks, were 5 last week, of which 4 occurred in Edinburgh, where the 2 fatal cases of diphtheria were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 162 in each of the two preceding weeks, rose to 190 last week, and exceeded by 48 the number in the corresponding period of last year. The causes of 44, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 34·8 and 43·9 in the two preceding weeks, declined again to 42·4 during the week ending Jan. 30th. During the past four weeks of the current quarter the death-rate in the city has averaged 39·1 per 1000, the rate during the same period being 18·6 in London and 21·3 in Edinburgh. The 284 deaths registered in Dublin during the week under notice showed a decline of 10 from the high number in the preceding week, and included 46 which were referred to the principal zymotic diseases, against 47 and 57 in the two preceding weeks; of these, 27 resulted from whooping-cough, 7 from measles, 6 from scarlet fever, 4 from diarrhœa, 2 from "fever," and not one either from diphtheria or small-pox. These 46 deaths were equal to an annual rate of 6·9 per 1000, the zymotic death-rate during the same period being 1·7 in London and 2·7 in Edinburgh. The fatal cases of whooping-cough, which had been 19, 27, and 23 in the three preceding weeks, rose again to 27 last week. The deaths referred to measles, which had been 9 and 15 in the two preceding weeks, declined to 7 last week. The 4 fatal cases of scarlet fever exceeded by 2 the number recorded in the preceding week, while the 2 deaths referred to "fever" were below the number in any recent week. The 284 deaths in Dublin last week included 55 of infants under one year of age and 72 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further increase upon those recorded in recent weeks. Five inquest cases and 11 deaths from violence were registered; and 78, or more than a fourth, of the deaths occurred in public institutions. The causes of 29, or more than 10 per cent., of the deaths in the city last week were not certified.

URBAN MORTALITY IN SCOTLAND IN 1896.

The aggregate mortality from all causes in the eight principal towns of Scotland in 1896 was 28 877, being at the rate of 19·25 per 1000 of the estimated collective population (1,500,435). 11,081, or 38 4 per cent. of the total deaths, were those of children under five years of age. Of the 28,877 deaths, 14,388 occurred in Glasgow, 4680 in Edinburgh, 3105 in Dundee, 2479 in Aberdeen, 1184 in Leith, 1351 in Paisley, 1101 in Greenock, and 589 in Perth. The death-rate per 1000 of estimated population in the respective towns for 1896 was as follows: Glasgow, 20·41; Edinburgh, 16 93; Dundee, 19 21; Aberdeen, 18·24; Leith, 15·98; Paisley, 18·28; Greenock, 17·82; and Perth, 19 36. This is the lowest annual death-rate for the past twenty-one years in Edinburgh, Leith, and Greenock. In Glasgow

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and Paisley it is the lowest for the past twenty-one years with the exception of 1894. In Aberdeen it is lowest with the exception of 1885. In Dundee, with the exception of three years, it is also the lowest for the past twenty-one years, and in Perth with the exception of four years. Comparing the mean death-rate in the decade 1876–1885 and 1886-1895, we find it was lowered in the latter period in all the eight towns except Leith, where it rose fractionally; but last year, again, Leith had an exceptionally low death-rate. Following the classification of the Registrar-General we find the causes of the 28,877 deaths in 1896 to be as follows:—Specific febrile or zymotic diseases, 4116; parasitic diseases, 8; dietetic diseases, 115; constitutional diseases, 5631; developmental diseases, 1947; local diseases (including those of the nervous, circulatory, respiratory, digestive, and urinary systems), 14,748; violence, 1150; ill-defined and not specified causes, 1162. Generally speaking, the mortality from all causes was under the average for the first six months of the year and over it for the second six months. The highest monthly mortality was in November and December, when the deaths from inflammatory affections of the respiratory organs (not including phthisis or whooping-cough) constituted 26·5 and 24·0 per cent. respectively of the total deaths. As might have been expected from the low general death-rate, the mortality from miasmatic diseases was relatively light last year. From January to May whooping-cough was the most fatal of the epidemics. All the towns except Perth were affected, Glasgow, Aberdeen, and Paisley most markedly so. From that date to the end of the year measles was the most fatal epidemic, Glasgow and Paisley being the chief sufferers. Scarlet fever was also noticeable in August and September in Leith and Paisley. There were no deaths last year from small-pox in any of the eight towns. Roughly speaking, the temperature was higher and the rainfall lower than the average in the first half of last year, and the reverse was the case in the second half.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR H. E. R. JAMES, lately returned from Hong-Kong has joined the Army Medical Staff in the Home District, and Surgeon-Major W. G. Clements has joined for duty at Chatham. Surgeon-Major E. A. Roche has taken over Medical Charge of Officers, Women and Children, and the Female Hospital at the Curragh. Surgeon-Major B. T. McCreery has been posted to Dublin for duty. Surgeon-Major J. L. Hall has joined at Woolwich for duty. Surgeon-Major W. Heffernan embarks at Southampton for Bombay. Surgeon-Lieutenant-Colonel William M. James retires on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant-Colonel Charlesworth, A.M.S., has been transferred from the Mhow District to the Bombay District. Surgeon-Captain Halt, A.M.S., on arrival from England, has been posted to general duty, Bombay District. Surgeon-Lieutenant Morgan, A.M.S., has been posted to general duty, Poona District. Surgeon-Lieutenant Smith has been transferred from the Poona District to the Quetta District. Surgeon-Captain D. G. Marshall (Bengal), is appointed to officiate as Professor of Materia Medica and Pathology in the Lahore Medical College during the absence on furlough of Surgeon-Captain J. Murray, or until further orders. Surgeon-Captain J. Davidson, Bengal Establishment, is appointed to be on special duty in connexion with the famine operations in the Allahabad Division. Surgeon-Captain A. W. T. Buist, officiating Civil Surgeon, is transferred from Ferozepore to Jhelum, relieving Surgeon-Captain J. N. Macleod.

NAVAL MEDICAL SERVICE.

The following appointments are announced: — Staff-Surgeons: D. T. Hoskyn to the *Centurion*, additional, for Yokohama Sick Quarters. J. H. Thomas to the *Orlando*; A. H. Miller to the *Royal Arthur* for voyage home; and F. J. Lilly to the *Mildura*. Surgeons: E. H. McSherry to the *Wallaroo*; F. A. Capps to the *Royal Arthur* on *Waterwitch* paying off; E. C. Cridland to the *Waterwitch*; and H. N. Stephens to the *Centurion*, additional, for the *Esk*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain James Drummond, M.D., 3rd Durham Volunteer Artillery (Western Division, Royal Artillery), to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment: Surgeon-Captain F. P. F. Ransom, M.D., resigns his commission. 4th Volunteer Battalion the Cheshire Regiment: Ralph Bennett Sidebottom, gent., to be Surgeon-Lieutenant. 1st (Cumberland) Volunteer Battalion the Border Regiment: Surgeon-Lieutenant C. W. Graham is appointed Second Lieutenant. 2nd Volunteer Battalion the Durham Light Infantry: Surgeon-Major J. Mitchell to be Surgeon-Lieutenant-Colonel.

THE VICTORIA CROSS.

The following are the names referred to by Dr. Jameson, Director-General of the Army Medical Staff, at the conclusion of his address, reported at p. 366 of our current issue:—Surgeon-Major Thomas Egerton Hale, M.D., V.C.; Assistant Surgeon William Henry Thomas Sylvester, V.C.; Surgeon-General Sir James Mouat, K.C.B., V.C.; Surgeon-General Sir Anthony Dickson Home, K.C.B., V.C.; Surgeon-Lieutenant-Colonel E. B. Hartley; Deputy-Inspector-General of Hospitals Joseph Jee, C.B., V.C.; Surgeon-General Herbert Taylor Reade, C.B., V.C.; Deputy Surgeon-General W. G. N. Manley, C.B., V.C.; Brigade-Surgeon William Temple, M.B., V.C.; Brigade-Surgeon Campbell Millis Douglas, M.D., V.C.; Brigade-Surgeon-Lieutenant-Colonel James Henry Reynolds, V.C.; Surgeon-Major John Crimmin, V.C.; Surgeon-Captain F. S. Le Quesne, V.C.; Surgeon-Major O. E. P. Lloyd, V.C., and Surgeon-Captain H. F. Whitechurch.

Correspondence.

"Audi alteram partem."

"A CENTRAL HOSPITAL BOARD FOR LONDON."

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to give my reasons for moving the amendment (reported in your issue of Jan. 30th) to Sir William Broadbent's resolution regarding the above-named scheme at the meeting of the Council of the Charity Organisation Society on Jan. 25th.

In the first place, I should state that from my experience of the previous meeting of the Council I feared that unless some such amendments were moved there would be little or no attempt made to oppose this scheme. The Charity Organisation Society in its endeavour to obtain a better system of management of the London hospitals is undoubtedly proposing a good work and one which the society is specially fitted to undertake, and from the evidence so far obtainable the scheme of a Central Hospital Board meets with the approval of the general public and of a portion of the medical profession. Is not this, however, probably in great part due to the able advocacy of Mr. Loch and to the invaluable support of Sir William Broadbent? In the draft scheme it is acknowledged that a Central Board of 169 delegates, as proposed, would be a large and unwieldy representative body. Consequently the Executive Committee would do the work, and in time this would pass to an inner ring of men and women who, by giving up their time to it, would hold the reins of power; and what then would become of fair representation?

The Board should have, it is stated, an income of, say, £20,000 per annum, and it is proposed that the Board should make grants to hospitals and dispensaries to facilitate their removal, if requisite, to other districts and to meet other special needs, but no reference is made to the working expenses of this Board. Perhaps it is intended, as suggested by the Select Committee of the House of Lords, that these should be defrayed by levying a small percentage on the income of the hospitals sending delegates. If this Board only obtained an income of £20,000 per annum of what use would that be towards giving grants, as proposed, to institutions whose combined incomes, exclusive of legacies, was in 1892 £600,000 per annum. If, on the other hand, the Central Board scheme were accepted by the public and legacies were

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left (as suggested) to this board, instead of to individual hospitals, a vast sum of money might in course of years pass into its hands and with this a dangerously controling power which would ruin the individuality of the hospitals, destroy all healthy rivalry, bring them to one dead level, and if wielded by a small clique might sap the foundations of our old and well-deserving charities.

Perhaps I have painted this in too strong colours but surely it is a point worthy of the deepest consideration, and though it is distinctly stated that the Board does not intend to interfere with the hospitals, what will become of intentions when it holds these institutions in a golden grip?

Then, with regard to inspectors, it is stated in the draft scheme that "there is no general system of supervision that insures that defects or abuses are brought to light by inspection and remedied by the common sense of the administration stimulated by the fear of publicity." Such must be the duty of the Board's inspectors "that it may act and report with a competent knowledge of the facts." Surely our great hospitals which have stood some of them the test of centuries do not require the supervision of a Central Board with its inspectors, whose knowledge of their interior economy cannot be so great as that of their own boards. If, however, such inspections were to be made, where are the qualified men and women to be found who would devote their time to this work as volunteers? Paid inspectors would have to be appointed of high probity and special capability, and a serious expenditure incurred thereby.

Lastly, should this Board become all-powerful and dictatorial, personal interest in individual hospitals would be much shaken thereby. Believing, however, that much might be done for the more systematic management of our hospitals, it occurred to me that the Charity Organisation Society could well draw up recommendations to such effect which, after consultation, would meet with the cordial approval of well-constituted hospital committees and render the formation of a Central Hospital Board, with all its attendant expenses, quite unnecessary.

I am, Sirs, yours faithfully,

ARTHUR B. R. MYERS,
Brigade-Surgeon-Lieutenant-Colonel.

Gloucester-street, S.W., Feb. 1st, 1897.

To the Editors of THE LANCET.

SIRS,—I wonder if it has occurred to Mr. Loch and his friends that our hospitals were not built or managed by them, that those who have given largely to the existing hospitals do not often complain of their extravagance or bad management and do not inquire, for instance, how many chickens our sick consume in a year or tell us we have no business to order chickens and such-like dainties to people who are classed as "proper objects" of charity. Perhaps I am wrong, but I never like to ask a person, sick or well, whether he or she is an object. I don't think, however, I have been more often deceived during the last forty years than the best of "organisers," and certainly have seen a few organising friends mistaken in their judgment. But I daresay I am prejudiced against this organising business as regards sick people. Considering that a dose or two of what costs but a small fraction of a halfpenny may give relief in cases of severe pain, I should order the medicine or send the patient to bed without considering in what class of objects he ought to be placed. Few among us, I should think, would like to ask a patient before examining and prescribing whether he had his fee ready, and few of us quite like to put up in large print near the door or in the dining-room—Mr. X's fee is so much, though I have been told by students that, when about to pay for the luxury of going in for a certain examination, before the door was opened wide enough to see anything inside a voice was heard "Hev yer got yer fee?" All this, however, is a matter of opinion, and we don't need to be set right (or wrong) by a Central Board.

Several hundreds of the profession have given their support to the proposal, but probably few have thought how the Board would work. They would give great power to the Board, but has it occurred to them that Central Boards are prone to gain in importance as they get older, and the more power they acquire the more they demand. After a few Board generations, those who worked for the earlier ones as free men become poorly paid servants, and unless they are humble and submissive may soon receive hints that they are not as strong and as capable of work as they were, and stronger persons take their places perhaps at lower wages. In the course of years philanthropy may possibly be changed into a sort of tyranny. I think, too, I have had a hint that some of the smallest hospitals had better be transported elsewhere, while the painful lives led by others are out of kindness to be cut short for the good of the rest. But, when I think of the weakness and powerlessness of many hospital beginnings I have known, extending over years and years when they lived almost upon hope alone, but have nevertheless gained in strength so as to be of the greatest service to large districts, I tremble for the fate of some which are now in that unfortunate condition; but I cannot see why in this country, or on what principle, they should be destroyed. We are all familiar with weak and wretched babes in early infancy and during childhood who grow into strong, useful, and long-lived members of society. I doubt whether several of the youngest and best of our hospitals would in their early years have passed the ordeal of the proposed Central Board in their infancy. I well remember the slow progress of one of the last and best of our hospitals—now admirably placed, arranged, and managed — the Great Northern. I say nothing concerning the early life of my own hospital, but I trust that help will flow direct to University College and that the £15,000 required may be sent to it *direct* before the fifty beds have to be closed and long before the £20,000 a year is paid over to the Central Board to be divided amongst us according to our merits as appraised by that authority that is to be.

I am, Sirs, your obedient servant,

Feb. 4th, 1897. LIONEL S. BEALE.

THE TREATMENT OF MYOMA.

To the Editors of THE LANCET.

SIRS,—The statement made in the columns of THE LANCET of Jan. 23rd that the Gynæcological Society had for three or four years insisted that total extirpation of the uterus was the best treatment for these tumours seems to me somewhat premature, as I do not think that many, if any, cases of this operation had occurred so far back as four years ago in British practice. Those who gave utterance to this sentiment as that of the society form, no doubt, an extremely important section of it; but it is equally certain that an important minority will not give their sanction to any such opinion. I think it probable, for example, that Dr. Bantock and myself could make up a larger list of cases of myoma treated in various ways than all the other members of the Gynæcological Society put together, but neither he nor I have made up our minds as yet definitely on the subject—at least, I can speak for myself. I have tried a number of cases of the so-called "pan-hysterectomy," and have a list much longer than any yet published in England, and I do not find that it commends itself to me in preference to Koeberle's method save in the one particular of being somewhat easier. Indeed, in those cases for which it is adapted I cannot understand how an hour and a half or even an hour can be spent over it unless the proceeding is much interrupted by unnecessary conversation. Its primary mortality, so far as my own work is concerned, is much the same as the clamp operation, but it is too early to speak positively upon this important point. As adverse arguments to the operation there are several points to consider, the first being that there is a distinct group of cases for which it is absolutely inapplicable, and these, unfortunately, are the cases which demand hysterectomy most of all—I mean the soft œdematous myomata. In the tumours having uterine tissue at their base, firm, not given much to shrinking, and with vessels well-defined and separate, the operation can be easily applied.

On Thursday last I operated for one of the former class of tumours and started with the intention of trying the pan-hysterectomy, but found it absolutely impossible. It is, however, upon secondary results that the fate of this operation will depend, and I have seen already enough of them to make me suspect that it will be speedily discarded. The reason is the unfortunate effects of the ligature, a paper on which I published some time ago. In this operation the ligature is not dropped into a peritoneum, which speedily digests and absorbs it, but is pressed among tissue peculiarly apt to resent interference.

Concerning the lower ligatures it must be borne in mind that they are placed with nothing between them and the

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cavity of the bladder but part of its denuded muscular, and the whole of its mucous coats. These form but a slight protection against a dead ligature finding its way into the bladder. In addition to such an accident as this, three other forms of accident have already passed under my notice—namely, the formation of leakage from a ureter, leakage from the bladder, and leakage from intestine, all incidents occurring long after the primary success had been obtained.

Personally I have been now for twelve years patiently waiting for material upon which I could emphatically express my opinions as to the complete methods and the best of treating myoma, but one thing after another has arisen to alter opinions which I thought had been steadfastly established, and even yet I am obliged to refrain from writing fully on the subject. I think with the knowledge of this that the younger members of the Gynæcological Society will refrain from the positive expressions of opinions which must be premature, and at least they will not pledge the whole society to opinions against which many of their seniors certainly must enter an energetic protest.

I am, Sirs, yours truly,

Newhall-street, Birmingham, Jan. 23rd, 1897. LAWSON TAIT.

P.S.—Should the operation maintain its position in surgery its name ought to be "hysterectomy," as the three derivatives of that word accurately describe it, and I cannot find any classic authority for such a combination as "panhysterectomy"—all classical usages of such a combination are quite different in purpose.

"LIQUID VACCINE VIRUS."

To the Editors of THE LANCET.

SIRS,—With reference to Mr. Kebbell's statement in your issue of Jan. 30th that glycerine was used as a vehicle for vaccine lymph in 1870 I would observe that this is hardly the point in question. That glycerine has been utilised as an addition to vaccine lymph for many years past is surely a matter of common knowledge, but I think that I may lay claim to have been the first to demonstrate the bactericidal properties as regards the "extraneous" micro-organisms commonly present in lymph, upon which the employment of glycerine, after the fashion to which I have called attention, depends for its value. I am not aware that in 1870, or, indeed, prior to the date of my communication to the International Congress of Hygiene in 1891. anyone had called attention to the bacteriological purification of vaccine lymph, which can be brought about by exposing it to the action of glycerine for some considerable length of time before using it for the purpose of vaccination.

I am, Sirs, yours faithfully,

S. MONCKTON COPEMAN.

Cromwell-gardens, W., Feb. 1st, 1897.

To the Editors of THE LANCET.

SIRS,—On referring to an essay I wrote in 1870, when competing for a prize offered by the Medical Council in St. Petersburg, I find therein stated that the most permanent form of preserved vaccine lymph is the crust of vesicles that have run a normal course, and that in using it for vaccinating it should be well moistened with pure water or with *glycerine* and rubbed down on a glass plate, &c. Further, "the vaccine germs and the lymph plasma are *both* necessary for the production of vaccinia."

Since that date I have used and distributed many scores of times a mixture of vaccine and glycerine and noted that glycerine intensifies somewhat the local action of vaccine. Hence, vaccinating with a mixture of vaccine and glycerine is by no means a *new* procedure and can probably be traced to about the commencement of this century. Truly there is nothing new under the sun.—I remain, Sirs, yours truly,

P. MURRAY BRAIDWOOD, M.D. Edin.

Coleshill, Amersham, Bucks, Jan. 30th, 1897.

"THE HALF-YEARLY MEETING OF THE FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—Mr. Rivington is unnecessarily wrathful with me for having overlooked the fact that in 1885 there was, in addition to the ordinary meeting of Fellows and Members (at which he did not speak), a special meeting on Dec. 17th, at which he made a lengthy oration, which he communicated in advance to a now defunct journal. I apologise for my errors, and with regard to Mr. Rivington's references to the examinership would say that I have been especially careful to make no use of information coming to me officially as a member of the Council; but since Mr. Rivington, "without want of modesty," challenges comparison of his claims to an examinership with those of any who were preferred to him I would point out that he had the opportunity of showing his mettle as an examiner in anatomy and physiology from 1878 to 1883.

I am, Sirs, yours faithfully,

Cavendish-square, Jan. 30th, 1897. CHRISTOPHER HEATH.

*** This correspondence must now cease.—ED. L.

IN MEMORIAM: DR. BALLARD.

To the Editors of THE LANCET.

SIRS,—The friends of Dr. Ballard—and they are "a numerous host"—will be grateful to you for your notice of his character and his work, and, not least, for giving publicity to the photograph of the exquisite portrait of him, painted so happily shortly before his death by his gifted daughter Miss Alice Emmeline Ballard. There is one omission in the obituary which I am sure you will allow me to supply—viz, mention of Dr. Ballard's "report upon the epidemic malady prevalent in Middlesbrough and its neighbourhood, the most obvious character of the disease being pleuro-pneumonia (pleuro-pneumonic fever)." This outbreak was in 1888; and Dr. Ballard's report, occupying some 165 pages of the report of the medical officer of the Local Government Board, constitutes not only one of the most complete accounts of this remarkable disease, but one of the best specimens of Dr. Ballard's work in its painstaking, thorough investigation into every branch and bearing of any subject which he took in hand, full of actual facts and of suggestions for future workers. I am not sorry to have this opportunity of expressing my estimate of a neighbour of whom all Islington practitioners were proud, with whom in his post of health officer he coöperated with perfect harmony and courtesy. It was my good fortune for many years—to him years of trying physical disability—to enjoy his somewhat intimate friendship and to have much intercourse with him. The general impression which will for ever remain with me is that in Dr. Ballard the profession has lost one of its best type of members. Years of sickness are those that try of what sort a man is. No sooner was pain abated than he was at his work again with fresh zest. He never complained, save just a slight regret that he had not "yet completed his diarrhœa report." His interest in the latest literature and the latest science was acute. His honesty of expression was delightful and permitted any criticism. His science, though of the latest, in no way interfered with his devoutness and his faith, as these in no way abated his sympathy with those whose forms of faith might differ from his own. The State has never been better served than by Edward Ballard, and he was a striking instance of the man to whom the duties of preventive medicine are more congenial than those of private practice.

I am, Sirs, your obedient servant,

Highbury-place, N., Feb. 2nd, 1897. JAMES GREY GLOVER.

"THE CASE OF DEW *v.* EDWARDS."

To the Editors of THE LANCET.

SIRS,—In your leading article in THE LANCET of Jan. 30th on this recent case in which I was the plaintiff you say of me, "He appears to have read works on diphtheria, and his view as to the nature of the case was supported by Mr. Lennox Browne, presumably one of the authorities consulted." With all respect I must say that there is no word in my evidence nor anything which occurred at the trial to justify such an inference, nor was any question asked of me on this point either by counsel or his lordship. As a matter of fact, the description of my son's symptoms was given by me within a couple of hours after his death on the evening of Oct. 12th, 1895, to Dr. Williams of Holyhead, who swore, in the course of his examination in Court, that the description which I had then given him of my son's symptoms was precisely the same as the one he had heard me give on oath in the course of my evidence. I

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had also months before the trial informed my counsel and several medical men of the nature of the symptoms exhibited by my boy during his last illness. I was not aware that Mr. Lennox Browne had ever written any book upon diphtheria until he arrived at Carnarvon to give evidence at the trial, and I never read his book nor any other medical work on diphtheria. The only reference to any volume was to a Homœopathic Handbook of Domestic Medicine a day or two after my son's death to read the treatment and diet there recommended in cases of diphtheria so as to compare it with the treatment, &c., which my son had undergone. The question of calling upon Mr. Lennox Browne as an expert witness was not mooted or decided upon until the night before the date first fixed for trial, nor until I had learnt that similar testimony from distant parts was to be brought forward on behalf of the defendant. Mr. Lennox Browne's book was not even used by my counsel, though it was used by the other side for purposes of cross-examination. Despite the result of the case, it is some satisfaction to me to know that you do not in any way dispute the fact "that cases of malignant diphtheria run a course not dissimilar from that here presented," which certainly appears to justify the evidence of all my medical witnesses, and more especially since you fail to point out any difference between "a malignant sore throat" which is not diphtherial and the one which is.

I am, Sirs, yours obediently,

Bangor, Feb. 2nd, 1897. SAM. R. DEW.

*** In the article referring to the above case in our issue of last week an error was made with reference to the remarks of the judge upon the conversation which helped to mislead the plaintiff as to the nature of his child's illness and the treatment pursued. It was *not* Mr. Lloyd who held this conversation, but as the report states:—"His Lordship said he had not the slightest doubt that the whole thing originated in that statement, an unfortunate one on the part of Mr. David Owen" (referring to the statement that antitoxin had been used in the case). Our error is the more unfortunate as Mr. Lloyd throughout acted with perfect professional propriety under very difficult circumstances.—ED. L.

"THE GLANDULAR FEVER OF CHILDHOOD."

To the Editors of THE LANCET.

SIRS,—In a letter published in THE LANCET of Jan. 23rd commenting upon the paper by Dr. Dawson Williams on Glandular Fever in Childhood I implied that it seemed possible that there might be an epidemic at present in Bristol. Within the two weeks that have elapsed since then I have seen several well-marked cases in the out-patient department of the Children's Hospital showing that there can be little doubt that such an epidemic exists. My object in writing is not, however, mainly to draw attention to this point, but to remark upon the question raised by Dr. Coutts in his letter last week as to the propriety of considering glandular fever a disease of childhood merely. In my former letter I mentioned that I had seen two adults who had suffered, and I have since met with another. A friend told me that the children of a coachman had been seen with their necks tied up. I called and found that all the members of a family of eight children had been attacked a week or two previously with fever and tender swellings in the neck, and in the two children I was able to see the enlarged glands were still present. The main point of interest was, however, that the father, aged forty years, had also suffered, and described the curious difficulty of swallowing that accompanies the disease. Pointing to the cricoid cartilage, he indicated that there was a sense of obstruction in that region which necessitated "a struggle to swallow." Such instances occurring to adults show that although they are evidently less susceptible than children, they may be attacked.

I am, Sirs, yours faithfully,

Clifton, Bristol, Feb. 2nd, 1897. THEODORE FISHER.

SYPHILIS AND HEART DISEASE.

To the Editors of THE LANCET.

SIRS,—Will you allow me to state that the connexion between fibroid disease of the heart and syphilis was first brought before the profession in this country by Dr. Wilks in a communication published in the Transactions of the Pathological Society for 1856? The case was not included in the table of fatal cases in my paper on the subject in THE LANCET of Jan. 23rd, as the cases there tabulated were limited to those in which there were other evidences of syphilis than the heart changes. But I am unwilling that on this account there should be no acknowledgement of the fact that it was Dr. Wilks who first recognised and brought before the profession the effects of syphilis upon the heart wall.

I am, Sirs, yours faithfully,

London, W., Jan. 28th, 1897. SIDNEY PHILLIPS.

"THE VENTILATION OF HOUSE DRAINS."

To the Editors of THE LANCET.

SIRS,—Referring to my letter on the above subject which you kindly printed in THE LANCET of Jan. 16th, p. 208, and which you stated you could not fully answer without further information I beg to give you the following points supplied to me by the surveyor. The depth of the sewers is from 2 ft. 6 in. to 5 ft.; the size of ditto in road from 9 in. to 15 in., the probable distance of same to highest point of house drains, about 30 ft. more or less. The house drains have more than a fall of 1 in 60. The district is a flat one consisting of 244 acres with a population of 5440 and 1088 inhabited houses. Is it possible and *proper* under these conditions to construct ventilating intercepting traps to prevent sewer air entering the house drains and if not what do you suggest with the same object? An answer to this will greatly oblige.—I am, Sirs, your obedient servant,

Feb. 3rd, 1896. BAYNHAM.

*** In view of the details supplied there does not appear to be any insuperable difficulty as to the application of disconnecting traps in the district referred to by our correspondent. The length of house drain mentioned (30 ft.) is short and would indicate narrow streets and small tenements. A house situated under the least favourable conditions given, say 30 ft. from highest point of house drain to highest point of sewer, might be dealt with thus:—

	Ft.	in.
Depth of highest point of house drain below surface of ground measured from bottom of 6 in. drain	1	4
Length of house drain to disconnecting trap, say, 20 ft. with a fall of 1 in 48...	0	5
Drop of drain into trap or fall in disconnecting chamber	0	6
Length of drain from disconnecting trap into sewer 10 ft., with a fall of 1 in 30	0	4
Total	2	7

This, taking the sewer as 9 in. and 2 ft. 6 in. as the depth to the top of the same below the surface of the ground gives a fall to the bottom of the sewer of 3 ft. 3 in., or 7 in. to spare to allow for the difference in the levels of the roads and adjoining properties. Of course this fall of 1 in 30 from trap to sewer will only apply to houses at the extreme end, where the sewers are comparatively empty; lower down, where they run more or less full, the final descent of the house drain must be at an acute angle to prevent backflow, but as the sewer will here be deeper this presents no difficulty. The drains will, of course, be laid upon concrete. 1 in 48 has been given as the fall; 1 in 60 is a fall that requires great care in laying, and if the first can be had it is perhaps better. In London sometimes even a less fall than 1 in 60 is used, but anything between 1 in 30 and 1 in 60 will do; more or less is not desirable. The traps used should have a contracted throat, otherwise they are liable to choke, and the usual inlet and outlet ventilating pipes should be used. All traps should be approved by the surveyor. The second question—as to the desirability of adopting these traps—is perhaps less easily answered. Judging from the population, the acreage, and the size of sewers, the latter,

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excepting in the matter of ventilation, should, if properly laid, be in fair condition. The daily passage, however, of some 100,000 or 150,000 gallons of sewage, whilst tending to flush a small sewer, must of necessity in its passage through so long a length give off in considerable volume the products of fermentation, though the rainfall on so large an acreage, if passing into the sewer, must be greatly in its favour from a sanitary point. Whilst fixing the disconnecting traps as near to the sewer as possible a certain length of dead drain between the sewer and the trap cannot be avoided, and these dead ends are most objectionable, accumulating the foulest air in the sewer in such close proximity to the houses. Undoubtedly these ends should be fitted with at least a four-inch ventilating pipe on the sewer side of the house trap carried up to a suitable point above the roof of each house, but in this matter discretionary powers should rest with the surveyor who administers the by-law, as in some instances such a pipe might prove a source of danger. To be definite, the disconnecting traps can be used and are certainly desirable as retarding the entrance of sewer air to the inside of the houses, but if used the public drain must be ventilated. Without these traps this is still more a necessity.—ED. L.

"'RETURN' CASES OF SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—In your annotation in THE LANCET of Jan. 30th under this heading beside the question of neglect at a special hospital comes the more general one of how far persistent desquamation is a sign of infectiousness in convalescents. There is good reason to doubt that the child, aged ten years, was discharged from the hospital while in an infected condition; ragged edges are often found on the hands and feet for some time after infection is over, and cases are not rare where harmless desquamation is continued into the twelfth week or longer. In this case no clue is given as to the time that had elapsed since the commencement of the disease. A similar case is mentioned in this note as discharged after eight weeks in hospital and also a second case, but only a supposition is expressed as to whether one other case may have been due to the first of these, though—"both of these returned children had moved about with perfect freedom among other children at home, at school, or at the Sunday-school." No evidence is forthcoming as to any child having suffered in consequence. Some details of the one case supposed to be originated by the nine-week convalescent would be of interest.—I am, Sirs, yours truly,

WILLIAM SQUIRE, M.D.St.And., F.R.C.P.Lond.

Dunscombe, Ealing, W., Jan. 30th, 1897.

"THE FRINGES OF DISEASE."

To the Editors of THE LANCET.

SIRS,—I have read with great interest Dr. Goodhart's address, published in THE LANCET for Nov. 21st, 1896, on the Fringes of Disease. It brings before us clearly our ignorance of the nature of very common ailments, and should serve as a warning against hiding this ignorance under high-sounding titles, which only tend to confusion. I was struck especially by Dr. Goodhart's remarks on the subject of follicular stomatitis in the adult, for I have very lately had a case of it and must plead guilty to having taken refuge in the stomach theory of causation, although feeling that there was nothing particularly wrong with that much-abused organ.

The facts of the case are these. A woman, aged twenty-six years, confined normally on Aug. 18th, 1896, experienced on the fourth night a species of nightmare which lasted for an hour or so. On the night of the 30th she had similar symptoms, but not so marked, followed in the morning by an attack of vomiting. On examining the heart a loud, musical, systolic murmur of very strange distribution and conduction was heard in the pulmonary region. This murmur, after lasting for a few weeks, gradually disappeared, and at the present date the heart sounds are apparently normal.

The patient did not convalesce properly, a condition ascribed to the heart trouble, which I looked upon as thrombotic, and on Oct. 14th she developed follicular stomatitis (small ulcers with yellowish pellicle). I may remark that at this time the baby was affected with thrush in the mouth. Recurrent attacks in the mother continued until Oct. 23rd, when she left for a change, her mouth being very sore and painful on the day she went away. On the 24th she felt very tired after a night's railway journey. On the 27th she had a pain in one of her knees which almost prevented walking. On the 28th she felt very ill. She experienced a feeling of internal coldness, but no shivering, and her temperature rose to 104° F. On the 29th the temperature was 105°, dropping to normal next day, when dysenteric symptoms began, after which the fever was only slight. The dysentery gradually improved and she was able to get up on Nov. 6th, and though the convalescence was a little slow it was otherwise satisfactory. The stomatitis cleared up during her sharp illness and has not since returned. In connexion with these obscure signs of disease I should like an opinion upon a condition of tongue, of which I have met with one or two cases in young children. I mean a map-like appearance of the dorsum, due to loss of epithelium in patches. What is the immediate cause of this condition?

I am, Sirs, yours faithfully,

WALTER H. HAW, B.A., M.R.C.S. Eng.,
District Surgeon.

Barberton, South African Republic, Dec. 16th, 1896.

THE ELECTION EXPENSES OF DR. J. G. GLOVER, DR. LOVELL DRAGE, AND DR. S. WOODCOCK.

To the Editors of THE LANCET.

SIRS,—It is proposed that subscriptions be raised to defray the expenses incurred in the late election by the candidates, Dr. James Grey Glover, Dr. S. Woodcock, J.P., and Dr. Lovell Drage. Although the two latter were not successful they, considering they appeared for the first time as candidates, made a good fight and will certainly contest the seats again at the next election. The expenses were necessarily heavy, the "constituency" being 24,000 electors. Any sums sent to me will be acknowledged on behalf of the committee and the accounts duly audited.—I am, Sirs, yours faithfully,

A. GEORGE BATEMAN, M.B. Aberd.,
Hon. Sec. to the Election Committee.

49, Devonshire-street, Portland-place, W.

"DR. R. R. RENTOUL AND THE MIDWIVES BILLS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan. 23rd Mr. R. Humphreys gives the lie direct to some of the statements in my address upon the above subject and which appeared in THE LANCET of Jan. 16th. I shall notice only two of his assertions.

First, he takes objection to my having said that the Midwives Bill was a "proposal to hand over confinements, natural and abnormal, to the sole control of the midwife." He says, "No one ever proposed to do such a thing." Although I took care to quote Clause 5 of the first Midwives Bill in my address as published on Jan. 16th, so that supporters of "midwives" registration might be taught the very A, B, C of their proposal, I shall quote it again for their exclusive benefit. Here it is—Clause 5 of the Bill of February, 1890: "A person registered under this Act shall be entitled *to practise midwifery* in any part of England and Wales for gain; and from and after the first day of January, one thousand eight hundred and ninety-one, a person shall not be entitled to recover any fee or charge in any court for the *performance of any midwifery operation*, or for any midwifery *attendance*, or *advice*, unless she be registered under this Act; neither shall she be eligible for any public appointment as a midwife without such registration." (A copy of this Bill can be had from Eyre and Spottiswoode, East Harding-street, E.C.). Now if this clause did not propose to hand over *all* midwifery cases, natural and abnormal, then I fail to understand the meaning of words.

Secondly, I quoted Dr. Matthews Duncan as having stated that 1 woman in every 15 died in her first confinement.

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Mr. Humphreys asserts that Dr. Duncan "never said anything of the kind." Here again Mr. Humphreys shows his ignorance. If he will refer to Dr. Duncan's work[1] he will find a table showing that 1 in 15 dies in her first confinement, 1 in 8 in the fourteenth confinement, and 1 in 6 in the fifteenth confinement. I am really surprised that even Mr. Humphreys gives himself the congenial part of trying to throw mud at Dr. Duncan. Dr. Duncan was appointed by the Government to report upon this subject, and it is not likely he either wilfully or otherwise told untruths. Had Mr. Humphreys taken the trouble—as the merest tyro would—of having read the statement made by Mr. Stephens, M.P., before the Select Committee upon Midwives Registration (question 586) he would have seen Mr. Stephens stated that the death-rate among women in their *first* confinement at the City of London Lying-in Hospital was 1 in 20; this among 1923 births. Dr. Duncan's figures also are, if anything, too low, because he deliberately excluded all deaths among *unmarried* women—a class who give a very high puerperal death-rate.

If the above are fair samples of my "mis-statements," I think I can leave your readers to judge of their accuracy. If my case is based upon untruths, let it deservedly perish. Will you allow me here to state that the "Editorial Reference Committee" of the *British Medical Journal* has, on Jan. 21st, ordered that my address, which you published on Jan. 16th, is to be suppressed from the journal? This "Reference Committee" consists of Dr. H. Barnes (Carlisle), Dr. Roddick (Montreal), Dr. C. Parsons (Dover), Dr. T. Bridgwater (Harrow), Dr. J. W. Cousins (Southsea), and Dr. C. Holman (London). Why have they thought it worthy of being suppressed? May I ask as a favour, through THE LANCET, that each practitioner interested in this vital question order at once 100 reprints of my address, so that he may send it to M.P.'s, county councillors, boards of guardians, and members of medical societies?

I am, Sirs, yours truly,

ROBERT R. RENTOUL,

Liverpool. Direct Representative, General Medical Council.

"POISONING BY ANTIPYRIN; RECOVERY."

To the Editors of THE LANCET.

SIRS,—The case of poisoning by antipyrin recorded by Mr. Webster in THE LANCET of Jan. 30th reminds me of a case I saw a few years ago in Calcutta. The patient was a middle-aged woman, convalescent from typho-malarial fever. She was suffering from severe headache, for which I gave her ten grains of antipyrin, with twenty minims of spiritus ammoniæ aromaticus and an ounce of water. In about half an hour's time the patient's condition much resembled that described by Mr. Webster, but with these differences: she was very pale, not cyanotic; there was no swelling of the eyelids, but almost complete loss of sight, and the rash disappeared in about eighteen hours. It much resembled that of urticaria, but there were no small papules, as in Mr. Webster's case. It is interesting to note that the rash in cases of chronic antipyrin poisoning is small scattered papules only, which are seen chiefly on the flexor surfaces. My patient rallied well on the administration of hot coffee and whisky. I am, Sirs, yours faithfully,

FRANK G. WALLACE, M.A., M.B., B.C. Cantab.

Earl's-court, Feb. 1st, 1897.

CHRONIC ULCERATION TREATED BY OXYGEN.

To the Editors of THE LANCET.

SIRS,—Will you permit me to make a correction in your kind report in THE LANCET of Jan. 30th of my oxygen cases shown at the Clinical Society? *All* the final bacteriological examinations showed only *staphylococci*, all the other micro-organisms having disappeared. I have obtained identical results in hundreds of examinations. I mentioned these facts to show the selective power that oxygen undoubtedly has.

I remain, yours faithfully,

Hertford-street, Mayfair, W., Feb. 1st, 1897. GEORGE STOKER.

[1] Mortality of Childbed and Maternity Hospitals, p. 41, table vi.

MALE NURSES.

To the Editors of THE LANCET.

SIRS,—It is possible that some of your readers may be inconvenienced by an erroneous statement of Lady Priestley in the *Nineteenth Century*. Having mentioned the necessity and propriety of employing male nurses in certain cases Lady Priestley regrets that there should be no institution for supplying them. This is an amazing misstatement considering that the Hamilton Association for providing male nurses was founded in May, 1885, and has been steadily at work up to the present time. Many medical men have employed the nurses under the association, and have testified to their ability and attention. During all this time the association has been regularly advertised in the THE LANCET, and on more than one occasion you have expressed your editorial approval of its work; even as early as 1886 you pronounced it "deserving of support." Let us again remind your readers that the Hamilton Association is not a commercial, but a philanthropic institution. Its object is not to make a pecuniary profit, but to be a benefit to both patients and nurses, and therefore to medical men. Thus it differs altogether from proprietary concerns which since its establishment have added this branch to their business. It is managed by a committee on which the profession is fully represented and which is therefore able to exercise needful discipline. Admission to the roll of the association is only obtainable after full inquiry into the character and antecedents of candidates and is the best guarantee the public have of the qualificatiions of a nurse. You will, no doubt, remember that the association was founded by the late Miss Jane Hamilton, a lady whose relatives were hospital physicians and surgeons. Miss Hamilton had seen the necessity of men being trained as nurses to attend to various cases, had witnessed distress at the difficulty of obtaining them, and founded the association at very great expense, leaving a legacy at her death to carry it on. Surely Lady Priestley should have known this before writing on the subject. We hope, however, the publication of these facts in your columns may go far to neutralise the injurious effects of her misstatement.

We are, Sirs, yours faithfully,

THE TREASURERS OF THE HAMILTON ASSOCIATION.

Park-street, Grosvenor-square, W.

*** "The Hamilton Association for providing trained male nurses is one deserving of support. It is most desirable, we think, that male nurses should be employed for attendance on the sick of their own sex whenever practicable." These were our words concerning the Hamilton Association in THE LANCET of Aug. 7th, 1886, and they convey our opinion at the present time.—ED.L.

"ARMY EXAMINATIONS."

To the Editors of THE LANCET.

SIRS,—May I say, in answer to "Uncrammed," that I did not uphold the current scheme of "Army Examinations," neither did I decry our public school life, and I certainly do not call in question the capacities of the school teachers? My point is that the inevitable competition, whatever the subjects of examination may be, is the great cause of the parental complainings, with which everyone must sympathise. This competition means that only a proportion of candidates can be successful, notwithstanding that all may come up to a satisfactory standard of physique, mental equipment, &c., and have enjoyed the advantages of a public school training. But the misfortune is that this is not enough. These candidates have to compete with one another, and the competition necessitates a special preparation which is carried out under disadvantages at school, but, for reasons I gave, with more success outside by special army instructors. The need of this special preparation may be deplorable, but how is "Uncrammed" going to obviate it? To eliminate competition is impossible, and the only other way to suppress these outside army instructors is for the schoolmasters to be more successful. Even then, does "Uncrammed" suppose there would be no distressed parents left to write to the papers and bemoan their hard lot? Are the lads who cannot compete successfully from school to give up the struggle? But what harm do these army instructors do? THE LANCET, having

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branded them as "crammers," denounced the short sojourn with them as pernicious to a candidate's mind, body, and estate, and pointed out their costliness as a bar to the competition of a poor man. Candidates for the army, be it noted, with few exceptions have enjoyed a costly public school training. I disputed THE LANCET'S conclusions with regard to the "crammers," and there is no need to repeat my remarks.

I am, Sirs, yours faithfully,

Feb. 1st, 1897. PHYSICIAN.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

VI.—LEEDS.[1]

Extensive Abuse at the Leeds Infirmary.—The General Practitioner's Grievance.—Result of a Small Plébiscite on Hospital Abuse.

IT is very generally acknowledged that considerable abuse prevails at the Leeds Infirmary. Considering the importance of this institution this fact has a very marked effect upon the profession generally. The Leeds Infirmary was first established 129 years ago and now ranks among the largest and finest hospitals in the kingdom. In 1894 there were 48,715 old and new patients treated at the Leeds Infirmary, of whom 6115 were in-patients. The accidents alone amounted to 8138 and among these 966 had been admitted as in-patients. The cases were so severe that 111 died within forty-eight hours. The total number of new patients amounted to 41,093 in 1894 and to 42.976 in 1895, and the population of Leeds is estimated at 367,505. These figures suffice to show what a very large proportion of the sick resort to the infirmary, and out of so great a number there must be many cases of abuse. This was not denied. Indeed, one of the principal surgeons on the infirmary staff acknowledged that according to the general impression there is abuse. He remembered that some years ago a member of the Charity Organisation Society was engaged, and he made a list of patients who lived in good locaiities or appeared to be in good circumstances. These persons were visited at their own homes, and the result of the investigation proved that there were many cases of abuse. But the question was now gravely complicated by the large contributions given by the workpeople, who were every year assuming more and more authority in the control of the hospital. Another leading member of the hospital staff thought the infirmary should only be open to patients sent by a medical man for consultation, except in cases of accidents or emergencies. It was little use complaining about "sixpenny doctors" while the infirmary continued to compete with the medical profession. Fortunately, Leeds was in the happy position of not possessing too many charities, and therefore the charities, if they competed with the profession, at least did not compete with each other. This happy condition of affairs could not, however, last. The infirmary had reached the maximum limit of possible extension. As the town continued to grow rival hospitals would certainly be started, and then the difficulty of dealing with the question of abuse would be greatly aggravated.

A third member of the infirmary honorary staff related to me that a country medical man had sent to him a patient suffering from a wound of the head. After attending to this patient once or twice at his surgery he found him among the out-patients of the infirmary, where he had been admitted though he possessed ample means. Another out-patient, who came to be treated for stricture, was known to be in receipt of a weekly income of £4 and to have boasted that he spent £2 a week in drink. Why should men who can spend £2 a week in drink avail themselves of a charity intended only for the poor? Another patient, a woman who had a slight operation performed, made a donation of £4 4*s.* to the infirmary on leaving. This person could very well have afforded to pay the usual fee. That she gave a donation to the infirmary is satisfactory in itself, but this does not help to relieve the economic pressure on the medical profession caused by the competition of hospitals. The casualty department of the infirmary was also much abused because people rushed to the infirmary instead of going to their local practitioners. This was notably the case with regard to accidents that occurred at football matches. If a youth or man had money enough to devote himself to football and regularly engaged in matches he should have money enough to pay for ordinary surgical attendance and should only be admitted into the hospital when the injury was so serious as to necessitate a treatment so lengthy and expensive as to be altogether beyond his means. The greatest abuse related to the trivial cases. It is true that they occasioned such a slight expense that it would probably cost more to organise a system of prevention than to allow the evil to continue. But this swamps the out-patient department, and it is bad for the education of the medical students, as so large a number of cases have to be hurried through. If these trivial cases could be excluded the medical men would have many more private patients. Among the male out-patients the trivial cases were not so numerous as in the case of the female. Men often could not afford the time to wait an hour or two before getting the advice and medicine they needed, but with most women and children time was no object. The visiting surgeon or physician would find himself quite exhausted by the time he had sifted and disposed of these trivial cases, and when he came to the interesting cases where useful demonstrations could be given to the students he was already fatigued and scarcely fit for the task. This grievance became so urgent that measures had to be taken, and now the residential staff go the round of the waiting-rooms and sift the patients, thus relieving the visiting staff of many of the trivial cases. There was no denying that there was abuse—great abuse—my informant concluding by saying that he constantly saw at the hospital patients who not only could pay a half-crown, but even a guinea fee.

Speaking to a general practitioner who had been for some years residential surgeon at the infirmary, he expressed opinions very similar to those uttered in my presence by various members of the Manchester Medical Guild. He explained that he was particularly interested in surgery, but that, to his great disappointment, he found there was no surgery left for the general practitioner. He had been in general practice for several years and he had had only three surgical cases. Even for the smallest accident people now all went to the infirmary. The surgical education now enforced was quite useless, and it sufficed to be in general practice for a few years to forget to a great extent what had been learnt. It was absolute waste of money to buy surgical instruments; they would rust for want of use, and the fees were so few that they would never cover the cost. The general practitioner could not compete in surgery with the hospital—he must content himself with medical cases, and these for the most part trivial cases. When the illness was more serious then the class of patients who could only afford small fees had a fair excuse for going to the hospital. Thus among his patients he found that a man who might be considered a well-to-do tradesman, went to the infirmary because he had a sore finger. Another tradesman, who owns the house in which he lives, also tried to get advice at the infirmary, but this case was detected and refused. Close at hand, however, a shopkeeper goes every week to the infirmary for atropine drops, although he is able to pay the ordinary fees for medical attendance on his wife and children. He knew of persons in receipt of £4 a week who went into the infirmary for every little ailment, even to have a tooth drawn. Further, they reproached their neighbours, and called them extravagant and "stuck up" if they did not also go to the infirmary. He thought that the staff at the infirmary were not keenly alive to the necessity of reducing the number of patients.

Mr. W. H. Brown, one of the surgeons of the infirmary staff, some time ago sent a circular to a hundred general practitioners established at Leeds. In this circular he asked four questions. First, whether they thought that there was abuse at the infirmary, and, if so, whether it was among the in-patients or the out-patients? Secondly, whether the infirmary injured their private practice? Thirdly, whether there was any advantage to counterbalance the injury done, such as the convenience of being able to get rid of troublesome patients or of cases where expensive appliances

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *continued*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *continued*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; and (5 *concluded*) Jan. 23rd, 1897, Manchester.

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were required? Fourthly, whether they could make any suggestions to lessen the abuse? Over ninety replies were received. Without exception all agreed that there were abuses and that these were more frequent in the special departments. The majority said that the competition of the infirmary did injure them financially, but that this injury was compensated in a great measure, if not entirely, by the convenience afforded in being able to transfer costly or troublesome cases to the infirmary. Many general practitioners in their replies made a point of the fact that they experienced no difficulty in getting their private patients admitted to the infirmary. There were not many suggestions as to likely remedies. Most of these suggestions embraced proposals for the establishment of a wage limit, and one medical man went so far as to urge the total abolition of the infirmary. On the strength of these replies Mr. Brown propounded a plan according to which a printed form was to be given to every out-patient who appeared to be in a superior position. He would then receive medical advice and medicine sufficient for two days, but would not receive further advice or medicine unless he brought back the form signed by a magistrate, a minister of religion, or a medical man. This form consists of a certificate setting forth that the applicant "is a proper person to be under the infirmary treatment." This scheme was not adopted, nor does it seem to offer a satisfactory solution of the problem, for it leaves to the signatories of the certificate the responsibility of deciding who are suitable recipients of such charity. Some would be very lenient and others very severe; there would be no uniformity. Mr. Brown explained that he performed many operations on patients at the infirmary who could afford to pay moderate fees for ordinary illnesses. For instance, he had for that day an operation of ovariotomy on a woman whose husband was earning twenty-eight shillings a week. Though she lived in a very nice little cottage, still it was not a proper place for such an operation; the medical man, therefore, who attended this patient himself asked to have the case removed to the infirmary. Such cases surely ought not to be refused.

(To be continued.)

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The New General Hospital.

THE arrangements towards the completion and opening of a new general hospital are rapidly approaching settlement. The Queen has deputed Princess Christian to represent her at the opening ceremony, which is expected to take place in June. It is anticipated that the occasion will be made the opportunity for an appeal for further funds, of which some £40,000 are yet wanted. Mr. J. C. Holder, the chairman of the committee, has promised an additional £5000, a noble example of generosity. A fitting and useful mode of obtaining subscriptions is by the endowment of individual beds. For this purpose the sum of £1250 set apart for each bed so endowed. Already advantage has been taken of this in a number of instances, where the name of a particular donor or the memory of some deceased is perpetuated by a name affixed to the bed so set apart. On all sides there is nothing but admiration for the structure and a justifiable pride in the addition to the city of this monument of philanthropy and benevolence.

Medical Defence.

An elaborate report drawn up by a committee of the Birmingham and Midland Counties Branch of the British Medical Association and presented at the last ordinary meeting was rejected by 21 votes to 18. The tendency of opinion was that the Association should keep free from this particular question, which it was considered would be best carried out by a separate and independent organisation.

The Arrest of Tuberculosis.

An address upon this subject was given before the Warwickshire Chamber of Agriculture on Jan. 30th by Sir James Sawyer. Stress was laid upon the fact of prevention being better than cure; and after a lucid description of the tubercle bacillus and the principal modes of prevention of its spread measures were considered for combating the disease and spreading the necessary knowledge for understanding the subject by the light of modern investigations. The following resolution was passed: "That this Chamber recommends that the facts of tuberculous disease should be diffused among agriculturists, together with the plain common-sense measures for its prevention that may suggest themselves; meanwhile, that agriculturists should await further enlightenment from scientists who are investigating the subject."

The City Council and the Drainage Board.

A recent resolution of the City Council instructed the General Purposes Committee in the following terms: "To consider and report whether any, and if so what, means can be adopted by the council to obtain a greater control over the acts and expenditure of the drainage board than exists under the present system." The committee has issued a report in which it is stated that the City Council have legally no controlling power over the drainage board other than such as may be exerciseable by the fourteen representatives appointed by the City Council who are a majority of the board. Any attempt they consider to exercise this would be impolitic and unwise in the face of the existing authorities who constitute the board.

Feb. 3rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Royal Eye Hospital.

AT the annual meeting of the Manchester Royal Eye Hospital, last week, it was stated in the report that the number of out-patients last year had been 22,364, an increase of 1,656, as compared with the previous year; 10,276 attending at Oxford-street, and 12,088 at St. John-street. The number of in-patients admitted was 1,370, an increase of seven. 3,825 accidents were treated at the two hospitals. The arrangement adopted in 1894 of appointing two house-surgeons so that greater attention might be given to the out-patients, has been continued, and found advantageous in every way, and the "board of management have much pleasure in acknowledging the valuable services which both gentlemen—Dr. J. G. Clegg and Dr. J. A. Menzies, have rendered to the hospital." The re-arrangement and furnishing of rooms at Oxford-street, where it was thought advisable for them to be quartered, as well as the installation of the electric light in some parts of the hospital, with other necessary work, have involved a considerable addition to the expenses. Notwithstanding this "the finances of the hospital continue in a very satisfactory condition," a statement not often made in a hospital report. A remark in the speech of Mr. David Bannerman, the chairman of the board, may be noted as illustrating a very common feeling among the supporters of hospitals. In paying a well deserved tribute to the memory of the late hon. secretary to the hospital, who for twenty-three years had acted in that capacity, he said: "Joining the board when the number of its patients was less than 3000 and its income less than £1000, Mr. Parlane watched and contributed to its growth and development until its numbers had risen to over 22,000 and its income to more than £4300." There is the usual feeling of exultation at the great increase in the number of patients, no doubt naturally enough, for everyone likes success, but there is no indication that the question of hospital abuse had suggested itself. There are plenty of poor deserving cases and no doubt far too many pitiful ones to whom the hospital is rightly an invaluable boon, but how many of the 23,364 out-patients had trivial ailments that could have been dealt with by the general practitioner, and how many of them could easily have paid his modest fees?

Fatal Boiler Explosion.

Your warning as to the danger of kitchen-boiler explosions, given in THE LANCET of Jan. 30th, has been unhappily illustrated at Ramsbottom. At an inquest held last Thursday respecting the deaths of two little girls of seven and five years of age, it appears that they were killed through the bursting of a self-feeding kitchen boiler on the previous Tuesday. The evidence was to the effect that, "owing to the severe frost, the water in the outlet pipe of the hot-water apparatus had become frozen, with the result that the kitchen boiler burst, and, in addition to partly wrecking the house, severely injured a man named Tycroft, his wife, and four children, two of

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whom died in the Ramsbottom Cottage Hospital." The boiler was said to be thicker than those usually fitted in cottage houses, which only shows how useless the increase of thickness is when no safety-valve is provided. A death was recorded about ten days ago, due indirectly to the cold weather, showing the danger of hot-water bottles. A little girl, aged eight years, named Ashworth, of Middleton, was scalded on the Monday and died on the Wednesday. At the inquest it was stated that the mother put three children in the same bed and afterwards put in a hot-water bottle. She had no sooner done so than the bottle, which had been warmed in the kitchen oven, burst, the cork being forced out by the steam. The three children were badly scalded, and one, who was very much injured about the lower part of the body and legs, died as above stated. "The jury were of opinion that death was due to accidental causes," and not, it is to be supposed, to the natural consequences of ignorance or thoughtlessness. This is tragedy, but it is not far removed as to cause from "an accident," which—fortunately, as it happened—may be looked upon as comedy. The stopper of a decanter having stuck the lady of the house directed it to be taken to the wash-house and put into the boiler, which was done. Shortly after a loud explosion was heard, and on some one going to see what had happened the remains of the decanter were found in innumerable fragments, so that this mode of extracting stoppers was given up. Happily no one was present when the explosion occurred.

Salford and the Queen's Commemoration.

Salford has decided to commemorate the sixtieth year of the Queen's reign by establishing a central nurses' home in connexion with the Manchester and Salford Sick Poor and Private Nursing Institute, which is already affiliated with the Queen Victoria Sick Poor Nurses' Home. An appeal will be made to all classes in Salford for contributions towards raising a fund of not less than £10,000 to cover the cost of the requisite land, the buildings, and their necessary equipment. At the public meeting yesterday about £1450 were promised by some of the gentlemen present.

Intoxicants in Stockport Workhouse.

A discussion took place at the meeting of the Stockport board of guardians yesterday respecting the taking of beer and spirits into the workhouse by the officers. Dr. Rayner said that this abuse of stimulants had led to the abuse of decency and to several officers being dismissed. One officer gave drink to a pauper with the result that the latter was sent to gaol for drunkenness. The board ordered that in future no spirituous liquors are to be taken into the workhouse without the written consent of the master.

Royal Infirmary.

The plans of the ten architects who were selected to compete for the design of the new infirmary on the present site have been (by the kind permission of the Lord Mayor) publicly exhibited in the Lord Mayor's parlour at the Town Hall during the past week between the hours of 9 A.M. and 5 P.M.

Feb. 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Medical Missionary Society.

THE annual meeting of this society was held last week, the President, Sir T. Grainger Stewart, presiding. Dr. Fry, the superintendent, intimated in his report that during the year 10,243 new cases had been treated at Cowgate Dispensary. As regards the finances of the society they showed an excess of expenditure over income of £352. A number of missionaries spoke and testified to the value of medical knowledge by missionaries and the great advantages of medical missions.

The Association for the Better Endowment of the University of Edinburgh.

The report for the past year shows that this association continues to do a useful if quiet and unobtrusive work in connexion with the University. The most outstanding feature is a bequest of £1500, in memory of the late Dr. John Allan, H.E.I.C.S., left by his widow for a medical scholarship on conditions that the sum be increased to £2500 within two years. The association necessarily see difficulties in finding this extra £1000, although they are anxious to be able to utilise the bequest.

Various Medical Institutions in Edinburgh.

The Royal Public Dispensary, the Eye, Ear, and Throat Infirmary, and the Dental Hospital and School have all held their annual meetings and submitted their annual reports, from which it is seen that they respectively continue to perform their parts in the medical teaching and amongst the medical charities of Edinburgh.

Scottish Poor-law Medical Officers' Association.

The second annual dinner of this association was held in Glasgow on the 27th ult. The chair was taken by Mr. Alex. Cross, M.P., who, in proposing the toast of the association, remarked upon the large number of medical men in Scotland—some 800—who were officers concerned with the operation of the Poor-laws, and said he had no doubt that all of these, when the objects of the association were better understood, would become members of it. He recognised a substantial grievance in the position of the medical officers in relation to the parish councils which had the power to dismiss the medical officers without right of appeal. This should undoubtedly be remedied by granting to every medical officer a power of appeal to the central authorities. At present the question of a superannuation allowance was probably premature, but recent legislation with regard to the English officials would give to a Scottish demand considerable force. Mr. W. L Muir, president of the association, replied, and in doing so disclaimed any antagonism on the part of the medical officers to the parish councils, but contended that it could not be held that the service was free from grievances, and it was their object to secure the removal of these grievances.

Royal Hospital for Sick Children, Glasgow.

The annual meeting of subscribers was held on Jan. 26th, the chair being taken by Lord Provost Richmond. The report showed a considerable increase in the number of cases treated in the hospital, more especially in the surgical wards, but the financial statement indicated a deficit of no less a sum than £1553 11*s.* 1*d.* in the year's working. Dr. Hector C. Cameron, in supporting the motion for the adoption of the report, referred to the form in which hospital reports were issued as appealing to the public apparently on the grounds of minimum cost per patient and per bed and minimum period of residence. He questioned whether this condition was an ideal to be desired, and would almost rather see a board of directors boasting of the large expenditure of money on each patient and a prolonged average period of residence. In this direction rather than in the opposite one he looked for the measure of the usefulness of a medical or surgical institution. Dr. Cameron had no doubt that a hospital for sick children was an admirable and even a necessary charity, though he was by no means inclined to view without concern the indefinite multiplication of medical charities. Many of the so-called special hospitals were not only unnecessary, but had, in addition, the unfortunate effect of diverting subscriptions from institutions the necessity for the existence of which was beyond dispute.

Medical Appointments and Vacancies.

Mr. Francis J. Barber, M.B., C.M. Glasg., and Mr. Frank Hill, M.B., C.M. Glasg., have been appointed to be House Surgeons to the Glasgow Eye Infirmary. Mr. Robert Cormack, B.Sc., has been elected Professor of Botany in Anderson's College Medical School. Mr. Alfred Young, M.A., M.B. Glasg., has resigned his position as Surgeon to the Glasgow Central Dispensary. The appointments as in-door and out-door House Surgeons to the Glasgow Maternity Hospital are intimated to be vacant.

Faculty of Physicians and Surgeons of Glasgow.

Mr. John H. Chaldecott, L.R.C.P. Lond., having passed the necessary examinations and been elected, has been enrolled a Fellow of the Faculty.

Feb. 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Isolation Hospital Question at Dublin.

AT a meeting of the Dublin Corporation held on Feb. 1st the Lord Mayor called the attention of the Council to the

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fact that the War Office authorities had now declined to give over possession of the Pigeon House Fort, and had only agreed to give over a portion of it on payment of £20,000. He further observed that, inasmuch as the Corporation were not likely to get the buildings into their hands for two or three years, the Council must now face the situation and deal with the important matter of an Isolation Hospital with as little delay as possible. He believed that there were thousands of people in Ireland who would subscribe towards the establishment of such a hospital outside the city, and be ready to signalise the sixtieth year of the reign of Her Majesty by a generous response for such a purpose.

Poisoning by Coal Gas at Drogheda.

A lodging-house in Drogheda was, on account of information received, forcibly entered by the police on Sunday morning. The three bedrooms, which were filled with gas, were found to contain eight men, all in a state of insensibility. After the use of various remedies the medical men in attendance succeeded in restoring five of the inmates to consciousness, two of the eight being already dead. The remaining man is now conscious, but lies at the Union Hospital in a precarious condition. It is alleged that a heavy traction engine which passed through the narrow street in which the house is situated on Friday night may have caused a break in the gas main. The inquest has been adjourned in order to allow a thorough investigation into the matter.

Annual Meeting of the Dublin Branch of the British Medical Association.

The annual meeting of the Dublin Branch of the British Medical Association took place at the Royal College of Physicans of Ireland on the 30th ult., when an address was delivered by Dr. Wallace Beatty advocating the Systematic Teaching of Dermatology in the Medical Schools.

The Samaritan Hospital for Women, Belfast.

At the annual meeting, held on Jan. 28th, the medical report stated that during the year there had been 721 new extern and 203 new intern cases, and 158 operations were performed. In both departments there was an increase in the number of patients. Twenty-four abdominal operations were performed. A generous gift of £500 from Mr. Forster Green has enabled the committee to proceed with the erection of a new wing for cases of cancer, and this is nearly completed. The household expenditure, including medicines, amounted to £388 13*s.*, while the contributions from intern patients were £340 12*s.* 6*d.* A hearty vote of thanks was accorded Mr. Green for his generous contribution.

The Belfast Hospital for Sick Children.

At the annual meeting, held on Jan. 29th, it was reported that during the year 1896, 293 children were admitted into the wards, and of these 129 were surgical, 154 medical, and the others eye and ear cases; 127 operations were performed with four deaths. In the extern department there were 9494 cases. A large class of students are attending the hospital. Financially the receipts were £500 more than the previous year, still the expenditure exceeded the income by £194, the total expenditure being £1868, but the average cost has only been 12*s.* 4*d.* per head weekly.

The New Infectious Diseases Hospital for Belfast.

A deputation from the North of Ireland Branch of the British Medical Association waited on the Public Health Committee of the Belfast Corporation on Jan. 28th, urging that, in accordance with a resolution passed at the last meeting of the branch, the infectious diseases hospital should not be built at Purdysburn on the grounds that the conveyance of patients such a distance would militate against their recovery, and that for the convenience of students, for whom a knowledge of such diseases was essential, such a hospital should be nearer the city. The deputation were most cordially received, and the matter is still under consideration, but there is no doubt the site at the asylum in Grosvenor-street would be in every respect the most suitable.

Prevalence of Influenza in the North of Ireland.

At the present time there is a widespread epidemic of influenza throughout the north of Ireland, and in some districts—Coleraine, Garvagh, and Cookstown—the type of the disease has been severe with considerable mortality. In Belfast during the past month many cases have occurred, and in that city, while the epidemic of scarlet fever is subsiding, there are many cases of measles.

The Cork District Lunatic Asylum.

Dr. Oscar Woods, resident medical superintendent, submitted his annual report at the last meeting of the governors of the Cork Asylum. The figures showed a great increase in the number remaining under treatment and the admissions were considerably above the average. With regard to heredity, Dr. Woods points out that in 32 per cent. of those admitted during the year there was a distinct hereditary predisposition. This he considers a very high percentage, as the average in England for the past five years has been only 23 per cent., and in American asylums it is as low as 10 per cent.

Mr. P. A. McDermott, F.R.C.S. Irel., has just been appointed to the Visiting Staff of St. Michael's Hospital, Kingstown.

Feb. 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

France and the Bubonic Plague.

IN the medical world the subject of bubonic plague occupies all our attention. Professor Proust, Inspecteur en Chef des Services Sanitaires, has made a long report to the Academy of Medicine, in which he records statistics in illustration of the unchecked progress of the epidemic from Hong-Kong to Bombay, and from Bombay to the Red Sea. He drew from his report the conclusion that if the resolutions passed at the International Sanitary Conference of Paris in 1894 had been accepted with unanimity by the European Powers Europe would be to-day completely protected against the plague. He pointed out the danger of the invasion of the Continent from the Persian Gulf, where no proper surveillance had been organised, and declared that it was absolutely necessary that the Mecca pilgrimage for next spring should be interdicted or, failing that, that the strictest sanitary precautions should be taken with regard to it. France had arranged for these precautions in connexion with her Mussulman subjects in Algeria, Tunis, and Senegal, and Professor Proust hoped that England would do the same. "Si chacun fait son devoir," he concluded, "l'Europe sera à l'abri du fléau." Government has now taken every means to enforce the decree of Jan. 4th, 1896, by proscribing under the severest penalties the introduction into France of any merchandise directly or indirectly coming from Bombay or from a known infected source, save by the ports provided with a *lazaret* such as Marseilles, Pauillac, St. Nazaire, Havre, Dunkirk, and Algiers. The decision of the English Government interdicting the departure of pilgrims from Bombay and Karachi and supporting the scheme for an international congress at Venice was received with great pleasure in France. MM. Brouardel, Proust, and Barrère have been chosen to represent France at the Congress, the sittings of which will commence on Wednesday next, Feb. 10th.

The Bacillus of the Plague.

Professor Roux, Director of the Institut Pasteur, has made a communication to the Academy of Medicine upon the bacillus and serum pathology of the bubonic plague. He described the work of Dr. Yersin and the characteristics of the bacillus, and dwelt upon its probable dissemination by rats and mice, or from the expectorations, stools, and even the blood of the patients. He also alluded to Dr. Yersin's experiments in "vaccination" against the plague and the successful cases reported from Canton and Amoy. He considered it established that the protective serum could be kept unaltered in spite of weather and travel, and that it was efficacious when employed at the commencement of the malady. There was nothing new in Professor Roux's dissertation, which was obviously made not so much to inform the scientific world as to re-assure laymen.

Anti-typhoid Serum.

In the learned societies two important contributions have lately been made to the study of typhoid fever. M. Chantemesse has communicated to the Société de Biologie the discovery of a simple toxin extracted from cultures of the typhoid bacillus. It is obtained most readily by cultivating

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the bacillus in bone marrow or the pulp of spleen macerated at a low temperature. It is more resistant to warmth than to cold and can only be preserved by exclusion of air and light. Curiously enough, according to M. Chantemesse, its toxic power is more marked among large than small animals. He is now making inoculation experiments upon horses at the Institut Pasteur, and we may expect the records of his results. At the Société Médicale des Hôpitaux M. Ferrand and his assistant gave an account of a singular case of apparent typhoid fever in which the serum reactions of M. Widal had been obtained when the patient was in reality not suffering from typhoid fever, but from septicæmia the result of an injury to his finger. M. Widal, who was present at the meeting of the society, criticised the method employed by the experimenters in the case.

Le Service Médical de Nuit.

This service continues to occupy the attention both of medical men and the Municipal Council. During ten years it has rendered the greatest service to the community, for anyone taken ill during the night was able to obtain from the police station the help of one of the medical men enrolled for the service. A medical man summoned in this way was paid ten francs by the municipal administration, who recovered the same from the invalid, save in the case of paupers. The Municipal Council has, as your readers well know,[1] found the strain upon their finances too great. Repayments were infrequent, and from economical motives the Council decided that each medical officer of the service should be paid a salary of five hundred francs a year, irrespectively of the number of visits that he might be called upon to pay. Most of the medical men refused to accept the terms and Paris is now without its *service médical de nuit*. The trouble has arisen from the fact that the conditions of the service varied much according to the social status of the residents in the different districts. In rich districts the medical man would expect to be disturbed say twice a month, but in poor districts he might have to rise six times in the night, so that to award the same payment all round was to inflict an obvious injustice. Negotiations are still proceeding between the medical men and the Municipal Council, and the general idea in Paris is that the latter has made its economical departure in a maladroit manner and that the failure of the service has been due to irregularity in the way in which the Municipal Council has managed its part of the work. For political reasons and fear of unpopularity the Council is said to have taken no pains to see that they were repaid the fees they had advanced.

A public dinner has been given to Dr. Huchard, a well-known worker in diseases of the heart, by no less than 233 of his fellows, in celebration of his election to the Academy of Medicine.

Dr. Duroziez, also best known for his researches in cardiac pathology, has recently died in Paris. His work hardly met with the official or public recognition that it deserved, for his treatise upon diseases of the heart was widely consulted by the medical profession.

Feb. 1st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Professor Salvatore Trinchese.

ONE of Italy's most honoured academic figures has departed in Dr. Salvatore Trinchese, sometime Rector of the Neapolitan University and Professor of Comparative Anatomy and Comparative Embryology in that seat of learning. A distinguished *alumnus* of the same school, he succeeded Panceri in 1880 in the anatomical chair, from which he was transferred to the other professorships above mentioned. During his *régime* as Rector (an honour he held twice) he took the initiative, since energetically carried out, for the enlargement and re-adjustment of the University's *curricula*, himself laying the foundation-stone of the new buildings. He was a valued as well as voluminous contributor to scientific periodicals, especially to those bearing on nature-study in its anatomical and embryological relations, and he leaves behind him many works of remarkable merit in general biology. His funeral was largely attended by the academic and scientific world; but as he was in religion what Italians call a "Calvinista" (non-conformist), the function was purely civil.

L'Istituto Kinesiterapico.

Italy has this week brought herself abreast of a movement which, begun in Sweden under the auspices of Major Ling and Dr. Gustav Zander, has been vigorously taken up in Germany and Austria—the movement for the mechanical exercise of the muscles, the joints, and, indeed, of all parts of the system which are apt to get out of gear by sedentary or self-indulgent habits. The Commendatore Beccaro and Dr. Colombo have the credit of this salutary initiative, and in the "Istituto Kinesiterapico" (establishment for the therapeutics of motion), just opened in the Piazza di Termini, they have given Rome a lead which, it is to be hoped, will be followed by other great Italian centres, particularly those which, as seats of learning, offer more inducements to cultivate the mind than the body. In the British Isles athletic sports for the young, and such games as lawn tennis and golf for the middle-aged and elderly, have no counterpart in the continental, particularly the Latin, countries. True, these latter have the fencing saloon and the pistol gallery, but such exercises as these imply, generally in a confined atmosphere and calling into play a very limited proportion of the physical powers, are not for a moment to be compared to the games—football, cricket, golf, or boating—which, pursued *al fresco*, make British youths and men the most finely-developed in the world. Cycling, no doubt, is beginning to be widely practised abroad; but it has its disadvantages—the "kyphosis bicyclistarum," for instance, of continental classification—and needs to be supplemented by other modes of exercise to compensate for the over-pressure of one set of muscles and the comparative inertia of others. Besides, something more systematic than a discipline which can be carried out only "when weather permits" is required, especially in great cities, to counteract the degeneration or worse induced by sedentary life. In spring, in autumn, say the Roman organisers of the "Istituto," the delicious air of the surrounding hills is itself an attraction to out-door exercise; while in summer the resort to mountain or seaboard, or this or that Transalpine, or even Cisalpine "Kur-ort," enables those who can afford it to give the body its due proportion of movement. But in winter this salutary exertion is suspended, the relapse into sedentary life is inevitable, and with it the no less inevitable return of the "degenerations" and "organised incapacities" and "disabilities" which make the professional man or the brain-worker a premature invalid or valetudinarian. In winter, therefore, as, indeed, all the year round, the needs of the sedentary classes are met by the "Istituto," which is conducted on the only sound principle of bodily exercise, that of a gradual evolution of the powers of each organ, the enfeebled or dormant ones first receiving attention till they are brought level with the more normally developed, and the whole system finally endowed with that harmonious balance in which excess in one direction is reduced to atone for restriction in another. To this end accurate measurements are taken of the degree in which a muscle or limb is defective, and the particular exercise or mechanical apparatus which its condition indicates are prescribed and brought into play. No movement is allowed to last more than two minutes, sometimes not even so long. Fatigue, or anything approaching to it, is carefully avoided. Again, when muscular force is so impaired or undeveloped as to be incapable of exertion, electricity is brought in to restore or evolve the missing power till this in turn becomes capable of undergoing the voluntary movements above referred to. Every operation of the professional masseur is indicated by mechanical devices—"tapotement," for instance, being effected by a series of little hammers with elastic covering which keep up a beating movement along the course of a muscle or nerve till a healthy reaction is induced. To enumerate all the appliances in use at the "Istituto" would be to compile a formidable catalogue—a catalogue, moreover, susceptible of almost limitless extension as experience suggests new contrivances. The composition of the assembled public at the opening day supplies a measure of the inspiration under which the "Istituto" has been started and of the social class it is meant to serve. Medicine was represented by its acknowledged heads—academic, clinical, and consultant; while the number of lawyers, merchants, bankers, artists, men of letters, and journalists was a significant indication of the *clientèle* in whose interests

[1] THE LANCET, Jan. 16th, 1897.

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it has been organised. "Care of the body" is an old tradition of the Eternal City. It is an instructive sign of the limes that that tradition is now so effectively resuscitated, with all the scientific improvement and clinical experience that divides the Rome of the nineteenth century from the Rome of the first.

King Humbert's Body Physician.

Dr. Quirico, sometime physician to the Royal Household, has just been nominated "medico particolare" (special physician) to his Majesty King Humbert.

Jan. 30th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Despatch of a Bubonic Plague Commission to Bombay.

THE Imperial Royal Academy of Sciences has employed a portion of the Treitl Fund in sending a commission, composed of Dr. Hermann Müller, Dr. Ghon, Dr. Albrecht, and Dr. Pöch, to investigate the nature of the bubonic disease now prevailing in India. Dr. Müller is assistant to Professor Nothnagel and is one of the most distinguished of our young medical men. He was born in Gratz in 1860, took the M.D. degree in Vienna at the age of twenty-four years, and was for three years assistant to Professor Ziemssen of Munich. He is at the head of the expedition and is specially charged with the observation of the clinical features of the disease; the post-mortem examinations will be performed by Dr. Albrecht, who is at the present moment assistant to Professor Weichselbaum. The bacteriological examinations are to be made by Dr. Ghon, who is also assistant to Professor Weichselbaum and is well known to the medical world by some publications on bacteriology. Dr. Pöch, attached to the clinic of Professor Neusser, is the junior member of the commission; he is a very able photographer and will assist his colleagues generally. The four medical men will leave Trieste on Feb. 3rd and will remain at Bombay for three or four months. On Jan. 29th they were received by his Excellency Baron Gautsch, Minister of Public Instruction, who complimented them upon their courage and wished them much success in their inquiries. The Treitl Fund is so called after the late Herr Treitl, a Vienna citizen, who bequeathed to the Academy all his fortune, amounting to about £100,000.

The Midwives Question.

The medical profession in Vienna is at last beginning to give some attention to the present condition of its material interests, and the professional journals, which have until now for the most part confined themselves to subjects of purely scientific import, are at present filled with articles on the causes of the decline of medical practice. The medical associations have also taken the matter up, and Dr. Stransky has made a contribution to the discussion which has caused something of the nature of a sensation among the medical profession in Austria. According to him the conditions of medical practice are pitiable; not only have the younger members of the profession at the commencement of their career to encounter great difficulties, but he is aware of a case in which a well-known and very able man, who had been over thirty years in practice, found the pecuniary recompense so inadequate that he abandoned the profession and went into business. If this be so at present it seems probable that practitioners will have to face a still more sombre prospect in the future, for the Government contemplates a further development of the principle of insurance against sickness; such insurance is at present obligatory on the working class, and it will in course of time be extended to employers and tradesmen, so that when this comes to pass medical fees will be at the rate of a penny each visit. Nevertheless, the number of young men entering the profession every year shows no diminution, and the inevitable competition is intensified by the increase of unqualified practitioners, by the gratuitous treatment of well-to-do patients in the hospitals, and by the encroachments of midwives. Not less than a fifth part of the practice in the outlying portions of Vienna is in the hands of the midwives. It is the midwife who is first sent for when illness makes its appearance, and it is she who decides whether it is necessary to call in a medical man. Midwives undertake the treatment of cases of abortion and premature birth, they make examinations, remove retained portions of the ovum or placenta, and perform irrigations with antiseptic solutions prepared by themselves. When adherent placenta or atony of the uterus causes hæmorrhage they give ergotine, and obtain medical aid only when there is fever. It is not surprising, therefore, that in shoulder presentations turning is not performed in proper time, and that extensive lacerations of the perineum occur. Midwives also treat children's diseases, especially scarlet fever, measles, and small-pox, by herbal infusions and poultices, and they dissuade the parents from sending for a medical man, saying that if the doctor comes he will notify the case to the authorities and the house or apartment will have to be disinfected. They treat disease of the eyes of new-born children with applications of milk or urine; if eclampsia occurs the sick woman's wedding veil is put on, and if no improvement follows from the use of this traditional remedy a medical man is called in with a view to avoiding unpleasantness and preventing a post-mortem examination. How is this state of affairs to be remedied? asks Dr. Stransky. The obvious answer would be: By the enforcement of the laws against unqualified practice. But law is uncertain, and if a midwife were punished her practice would increase, for the public would look on her as a martyr persecuted by the medical men. Moreover, the midwives are so efficiently organised that a medical man making a complaint against one of them would seriously endanger his position, and Dr. Stransky mentioned an instance of a man who lost his obstetric practice in consequence of taking action against a midwife in connexion with a case of abortion. Dr. Stransky suggested that the Health Office should take energetic steps in the matter, and he strongly condemned the conduct of some medical men who send out circulars to midwives soliciting recommendations to patients.

Jan. 31st.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

The Government Lunatic Asylum.

THE total number of lunatics under treatment during the year 1896 was 910, of whom 182 were discharged recovered, 154 relieved, 66 unrelieved, 13 not insane, and 81 died. The average daily number of resident inmates was 477, having varied from 411 to 514. The admissions were 422 and included the following: mania, 147; puerperal insanity, 2; mania from hasheesh, 49; intoxication from hasheesh, 17; dementia from hasheesh, 19; mania of persecution from hasheesh, 3; dementia, 54; idiots, 3; epileptics, 17; general paralysis, 29; chronic mania, 11; pellagrous melancholia, 8; &c. The 81 deaths during the year were due to—tubercle, 23; general paralysis, 13; pellagra, 3; ankylostomiasis, 2; cholera, 10; diseases of the nervous system, 11; all other diseases, 19. The causes of insanity could not be discovered in 127 patients, though many of them were consumers of hasheesh; but the following causes, among others, were registered: hasheesh, 88; alcohol, 9; syphilis, 27; pellagra, 11; epilepsy, 17; sunstroke, 2; grief, 30; and religious excess, 16.

Hasheesh Lunatics.

At least a quarter, and probably one-half, of the male cases are due to an abuse of hasheesh, as has often been pointed out before. The average residence in the asylum of discharged cases was forty days. A few of the patients confessed to opium-eating besides the hasheesh habit, and the seven women admitted during the year were all prostitutes or servants in hasheesh dens.

General Paralysis.

From Dr. Warnock's investigation during the last two years it seems evident thas this disease is commoner in Egypt than has been supposed. It will be noted from the figures quoted above that nearly 7 per cent. of the year's admissions, besides 16 per cent. of the deaths, were due to general paralysis. The following table is worth quoting as showing that the Egyptians themselves, as in 1895, furnished the bulk of the cases:—

Nationality.	Male.	Female.	Total.
Egyptian	17	6	23
Greek	3	1	4
Jewish	1	—	1
Syrian...	1	—	1

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The Egyptians came from the poorest and least educated classes, such as pedlars, servants, and artisans, and there was one peasant among them. Syphilis was found to have existed in nearly every one of them, and when it is remembered that in this country syphilis is practically untreated we probably have the most marked causal element of general paralysis among the Egyptian poor. Several patients upon admission bore upon their heads broad scars due to the application of the actual cautery in their villages, for the native firmly believes that fire will burn away any disease or frighten away the demon possessing the patient. He also believes that a dangerous lunatic should make the round of certain extra-religious mosques in the hope of a cure. These enforced pilgrimages sometimes result in the commission of crimes on innocent people.

Improvements in the Asylum.

A recent letter described some of this year's reforms under Dr. Warnock's superintendence, and though £4000 has been voted for past necessities, it is obvious that at least a similar sum must be forthcoming from the finance authorities if all the crying evils are to be remedied. In the meantime overcrowding has been greatly lessened, and the superficial area in the bedrooms has been raised from an average of fifty-two square feet per patient to seventy-six square feet. The actual figures now vary from a minimum of sixty-three to a maximum of ninty-five square feet. Water is now laid on to all floors, together with sinks and Pasteur-Chamberland and Berkefeld filters. Each section has been provided with a dining-room and a great deal has been done to humanise the unfortunate patients. It is only twelve years ago that the native director of the sanitary department refused to sanction extra expenditure at this asylum on the grounds that the insane were wild animals, and should be treated as such!

Decorations for Cholera Work.

Of late years the Khedive has decreed that honours shall be bestowed upon Government employés chiefly upon two occasions in the year. The gazette to celebrate His Highness's accession to the throne has just been published. No less than 226 officials were honoured by appearing in it, and it was prophesied on all sides that a well-deserved compliment would be paid to the English and native doctors who had worked for twelve months, not without success, against cholera. But the Khedive and his English advisers thought differently and determined to issue as few rewards as possible and to let those few take the form of inferior decorations. It is not dignified to do more than protest against this ungenerous policy, which stands out in marked contrast to the lavish decorations and promotions showered upon the Egyptian army after six months spent in re-capturing Dongola. Four European sanitary officers were selected from a list of twelve recommended. They were Dr. Rogers Pasha, who received the Second Class Osmanieh, a decoration which would have appeared more valuable if it had not been given at the same time to his native subordinate. Dr. Schiess, the Swiss Director of the Government hospital at Alexandria, was given the Third Class Order of the Medjidieh after thirty years' painstaking work for Egypt; and a similar decoration was awarded to Mr. Pinching, on whom the burden lay of inspecting half of the country during the long cholera campaign. The names of Dr. Graham and of Dr. Garner are entirely omitted from the list, though it is well known that they distinguished themselves in no common way for a whole year. The remaining decoration, the Fourth Class of the Osmanieh, was given to Dr. Bitter (a German) for much hard work in Alexandria. Curiously enough, none of the European workers in Cairo have received anything. Sixty natives were recommended for reward, but only twenty were approved of.

Absence of Cholera.

Some interest was created in Egypt last week by a Reuter's telegram stating that some persons on board the Peninsular and Oriental Company's steamship *Nubia* had contracted cholera at Port Said on her way from India to London in December. As a matter of fact Port Said enjoyed a singular immunity from cholera during the late epidemic, and there has not been a single case of cholera in all Egypt since the middle of October.

Commission to Study Plague.

The accounts of plague from the Bombay presidency are so unsatisfactory that Dr. Rogers Pasha has obtained leave from the Egyptian Government to proceed there to study the disease on the spot and the regulations necessary to ensure the prevention of its entry into Egypt. He is accompanied by Dr. Bitter, now head of the new Institute of Hygiene, and by Dr. Ibrahim Pasha Hassan, chief of the Medical School.

Cairo, Jan. 20th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Prevention of the Spread of Tuberculosis.

IT appears that nearly 9000 cases of phthisis were reported to the New York Board of Health in 1896, and nearly 6000 deaths resulted from the disease. It is conservatively estimated that at least 20,000 cases of well-developed and recognised phthisis now exist in this city, and an additional large number of obscure and incipient forms of the disease. A very large proportion of these 20,000 cases constitute more or less dangerous centres for infection, the degree of danger depending upon the intelligence and care exercised. It may be safely assumed that from the failure to exercise proper care from 30 to 50 inhabitants of this city daily become infected by phthisis, and of these about one-half die later from the disease. The directors of the Department of Bacteriology of the Board of Health state that they fully believe that with proper regulations tuberculosis may be restricted within the narrowest bounds and eventually, perhaps, almost exterminated. This is not the idle dream of sanitary enthusiasts or theorists, but is a conviction founded upon the most thorough and conclusive experimental investigations, which have been amply confirmed by practical experience. They recommend that a hospital for phthisical patients be established under the charge of the Board, where the poor, who are active sources of danger to the community, may be cared for; that the Sanitary Code is to be so amended that phthisis will be officially considered a communicable disease and regulations for its surveillance be formulated; that all institutions which treat phthisical patients are to be regularly and systematically inspected by officials of the Board and that better measures be taken to educate the people as to phthisis and the methods of preventing it; and that a closer sanitary inspection be exercised over phthisical patients in densely populated districts, in crowded workshops, and in public buildings.

Statue of Dr. Samuel D. Gros.

The statue of the late Dr. Samuel D. Gross by A. Sterling Calder, recently cast in Paris, will soon be erected on the grounds of the Smithsonian Institute at Washington. The movement for the erection of a statue to Dr. Gross was begun by the American Medical and Surgical Association, of which he was founder and first president. With the coöperation of the *alumni* of Jefferson Medical College and other warm personal and professional friends the necessary funds were collected. Congress appropriated a sum sufficient for the erection of a suitable pedestal, and the monument is to be unveiled by a granddaughter of Dr. Gross during the next Congress of Physicians and Surgeons in Washington. This statue is the second of its kind erected in this country to a physician, the other, in New York, being to Dr. J. Marion Sims, a personal friend and contemporary of Dr. Gross.

An Enormous Lying-in Hospital.

A citizen of New York has given $1,000,000 to the Society of the Lying-in Hospital of the City of New York for the erection of a hospital. There are over 26,000 children born in this city every year whose mothers are without medical aid. The hospital will care for 6000 patients yearly. It will have a width of 83 ft. in Seventeenth-street and of 116 ft. in Eighteenth-street, with a frontage of 184 ft. in Second-avenue. It will be ten storeys high and will have a fire-proof construction of steel, brick, and stone. The lower part will be built of granite and the superstructure will be of yellow brick with granite facings. The main entrance to the hospital will be on the Avenue, and side entrances will open in Seventeenth-street and Eighteenth-street. A dormitory and sitting-room for students will have a place on the basement floor, which will also contain a large clinic hall and instruction room, a kitchen, a sewing-room, and an attendants' dining-room in the rear. On the cellar floor, besides the furnaces, dynamo-rooms, and store-rooms, there will be a laundry, several rooms for servants and attendants, and a disinfecting apartment. The executive

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department of the hospital, with the necessary offices, will be on the first or main floor. Here, too, will be a museum, a lecture-room, the dining-room for students, and rooms for nurses and attendants. The second, third, fourth, fifth, and sixth storeys will be constructed on a uniform plan. They are to be used for the wards and will eventually contain 250 beds for patients. On the seventh storey the operating-room will be placed, together with a room designed for the storing of instruments and apparatus. This floor will also contain the private room for nurses. Nurses' rooms and rooms for graduate students, of whom there were more than 300 at the hospital between Oct. 1st, 1895, and Sept. 30th, 1896, will be found on the eighth floor. There will be an aseptic laundry here and a diet kitchen, besides a large amphitheatre, which will extend up through the ninth floor. The pathological laboratory and a laboratory for the special study of microbes will have a place on the tenth floor.

Organisation of the Trained Nurses of America.

The Trained Nurses' United Aid Society of America is the name of a large organisation recently incorporated in this country. The movement is in the interest of at least 6000 trained nurses now being employed in the United States. Its object is the relief of members whose professional activity is suspended on account of illness or accident, and in case of death the payment of funeral expenses. Homes of rest, loans of money in case of temporary distress, an invalid fund, endowed beds, and pensions are other advantages which will be added.

Emergency Rations for the Army.

A board of army officers has concluded its investigations as to the quality and quantity of an emergency ration for soldiers. As a result the Secretary of War has issued the following: "The President hereby establishes an emergency ration for troops operating for short periods under circumstances which require them to depend upon supplies carried upon their persons. Its component parts are as follows: bacon, 10 oz.; hard bread, 16 oz.; pea-meal, 4 oz., or an equivalent in approved material for making soup; coffee, roasted or ground, 2 oz., or tea, 1½ oz.; saccharin, 4 grains; salt, 0·64 oz.; pepper, 0·04 oz.; tobacco, ½ oz." The Secretary of War also adds that this emergency ration must be resorted to only on occasions arising in active operations when the use of the regularly established rations may be impracticable.

Jan. 19th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Adelaide Hospital Inquiry.

OWING to the termination of the Parliamentary session the Select Committee of the Legislative Council appointed to inquire into the disputes at the Adelaide Hospital has ceased before it had nearly completed its investigations. In its report it recommended that the inquiry be continued by a Royal Commission. The Government declined to appoint a Royal Commission, as in its opinion "no good result would follow." Dr. Leith Napier and Dr. Ramsay Smith have, however, at the request of the Government compiled a report in answer to the evidence taken by the Committee from Dr. Corbin and Dr. Moule. The main charges contained in this evidence were summarised in a previous communication.[1] Subsequently under cross-examination Dr. Corbin made a statement which created some sensation and has been made capital of by Dr. Napier in his reply. When asked why he did not interfere sooner and prevent Dr. Napier making the alleged surgical blunders Dr. Corbin said (as reported in the press—the evidence has not yet been published by authority): "I thought the greatest good to the greatest number was far more to be considered, and I did not interfere because I hoped he would kill the man on the table and so damn himself for ever. I thought if one case could raise the indignation of this sluggish public that perhaps many lives would be saved." He subsequently explained that he did not mean what he said: "It never occurred to me at the time to allow the patient to die on the table; the very fact of my interference shows that. It occurred to me since that possibly the greatest good to the greatest number would have been achieved by Dr. Napier actually killing a patient on the table, and that was in my mind, perhaps, when I made the answer at the end of a tiring and harassing cross-examination." Dr. Napier's report in reply is in the main a denial of the facts, which he says, have been falsely and maliciously misrepresented by Dr. Corbin, Dr. Moule, and Professor Watson, who, he alleges, had entered into a conspiracy against him. In the case of supra-pubic lithotomy in which the peritoneum was opened and not closed, he says the opening was unavoidable; that having been opened it was better to leave it open and drain; and that the patient did not die from peritonitis, as Professor Watson's report of the necropsy stated, but from the effects of ether badly administered. In the case in which he explored the kidneys by abdominal section he maintains that the method he adopted was correct and expresses astonishment that an anatomist like Professor Watson should be so ignorant as to assert that the left renal vein is longer than the right. In the case of laparotomy for hydatid he also maintains that his method of operation was correct and observes that the Adelaide surgeons have originated nothing in regard to the modern treatment of hydatids, which he claims to have been evolved by Mr. Lawson Tait. The case of carcinoma of the mouth which, according to Dr. Corbin, was diagnosed as "rhinolith," Dr. Napier says he called a "ranulith," a name coined by himself for some forms of ranula. Concussion of the spinal cord by *contre-coup* is, he says, a condition well known to neurologists. Dr. Smith's report is chiefly a condemnation of the hospital arrangements at the time he took office, and he asserts that "neither house surgeons nor nurses could be trusted where the lives of patients were at stake."

Annual Meeting of the Victorian Branch of the British Medical Association.

At the annual meeting of the Victorian branch of the British Medical Association the following were elected office-bearers for the ensuing year:—President: Mr. Stirling. Vice-President: Dr. McAdam. Hon. Treasurer: Dr. J. R. M. Thomson. Hon. Sec.: Mr. W. Kent-Hughes. Hon. Librarian: Dr. Felix Meyer. Council: Dr. A. V. Anderson, Dr. Gresswell, Mr. Kenney, Dr. O'Sullivan, and Dr. Springthorpe. Dr. O'Sullivan, the retiring President, delivered an address, in which, after referring in eloquent terms to the services to science of the late Baron von Mueller (one of the original members of the branch), he noticed the developments in connexion with the Roentgen rays, and expressed his belief that their long-continued action might be found to exert a salutary effect in several pathological states. He regarded the results obtained by Coley, Emmerich, and Scholl as conclusive as to the curative effect of erysipelas serum on malignant tumours. The apathy of the public in establishing infectious fever hospitals was denounced in forcible language. In the domain of gynæcology, his own speciality, the retiring President alluded to the advances in the technique of hysterectomy, avowing himself a warm advocate of panhysterectomy. He traced a number of the ills of women to the use of measures adopted to prevent conception, and urged the profession to denounce these procedures with no uncertain voice. He was convinced too that cycling was injurious to women. He asserted that nerve strain was at its highest in cycling—the brain, the eyes, the ears, the hands, and the feet must be ever on the alert and act in harmony, and remembering the close relationship between the brain and the generative organs the almost inevitable result must be harmful.

The Macleay Lectureship in Bacteriology.

The late Sir William Macleay left a sum of £12,000 to establish a lectureship in bacteriology in Sydney in the first instance in connexion with the University, but, as explained in a previous communication, the Senate decided that the University could not fulfil the conditions.[2] In accordance with the terms of the will the bequest was then handed to the Linnean Society of New South Wales. The council of that society, however, was not in a position to equip a laboratory at the time, but decided to allow the capital to accumulate. The council now has a sufficient sum for a proper equipment, and is advertising for a lecturer, who will be required to devote his whole time to his duties at a salary of £350 a year and two-thirds of the fees received from students. He will be required to devote his time

[1] THE LANCET, Jan. 9th, 1897, p. 141.

[2] THE LANCET, Aug. 10th, 1895, p. 352.

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primarily to original research, under the orders and control of the council, and at the discretion of the council may also give instruction to a limited number of pupils, the number and fee to be fixed by the council.

The Chair of Physiology at the Melbourne University.

Dr. G. B. Halford, who has occupied the chair of Physiology ever since the Melbourne Medical School was founded, has for some time, from the effects of age and failing health, been unable to fulfil the duties of his office in a thoroughly satisfactory manner. Some time ago he resigned, but on finding that the council did not propose to give him any retiring allowance he promptly withdrew his resignation. He has now been granted twelve months' leave of absence on half-pay and Dr. C. J. Martin, Demonstrator of Physiology in Sydney University, has been appointed to do the work of the chair at a salary of £500 a year and the status of lecturer, and it is generally understood that when Professor Halford finally retires Dr. Martin will be appointed professor. The chair originally included anatomy and pathology as well as physiology, but in 1881 was divided, and Dr. H. B. Allen made first lecturer on, and then professor, of anatomy and pathology. Some time ago there was talk of dividing this chair into two, leaving Professor Allen to pathology, which is quite sufficient for one man, but owing to want of funds nothing has been done.

BUBONIC PLAGUE IN BOMBAY.

THERE were 97 deaths from plague reported from Bombay on Tuesday, the 2nd inst., out of a total mortality of 282. At Karachi 51 cases out of 59 died, making a total of 853 deaths in that town out of 930 cases. The disease also exists in Poona, Gao, and Daman, and in Baluchistan. In Poona up to date there had been 58 indigenous cases—48 in one quarter and no cases in the cantonment. So far as is known Calcutta is not as yet affected.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board under the five years' regulations in the subjects indicated at the quarterly meeting of the Examiners:—

Part I., Chemistry and Physics:

Baggs, James Charles, St. Thomas's Hospital.
Bailey, Lionel Danyers, St. Paul's School, West Kensington.
Barrett, Henry Edward, St. Mary's Hospital.
Beet, William Ashley, London Hospital.
Bennett, Charles Harold, St. Mary's Hospital.
Bennett, Kenneth Hugh, University College, London.
Bennette, Horace Willie Paul, University College, Liverpool.
Bettinson, George, St. Mary's Hospital.
Brice, Henry Doyle, Westminster Hospital and the Pharmaceutical Society's School.
Camacho, Angelo, St. Paul's School, West Kensington.
Chell, George Russell Haines, Mason College, Birmingham.
Clayton, John Cecil, University College and Clifton Laboratory, Bristol.
Crass, Gerald, Coneybeare, Middlesex Hospital.
Cumberbatch, Elkin Percy, St. Paul's School, West Kensington.
Dalzell, Arthur Montgomerie, St. Bartholomew's Hospital.
De Carteret, Sylvester, St. Bartholomew's Hospital.
Dodd, Archibald Stewart, St. Mary's Hospital.
Douse, John Freeman, Guy's Hospital.
Edwards, Arthur Baynes, St. Bartholomew's Hospital.
Fawssett, Wilfred, King's College, London, and St. Thomas's Hospital.
Fisher, Charles, St. Bartholomew's Hospital.
Fort, Percy Reginald, St. Mary's Hospital.
Foster, Edward Cecil, University College, London.
Goodair, Percy Hamilton, St. Thomas's Hospital.
Gray, William Harrington, London Hospital.
Green, Arthur Llewellyn Baldwin, St. Bartholomew's Hospital.
Hackney, Gordon Herbert, University College, London.
Hanbury, Langton Fuller, St. Thomas's Hospital.
Hanbury, Reginald Janson, St. Bartholomew's Hospital.
Harris, William Trengweath, St. Thomas's Hospital.
Harrison, Edward Montague, St. Paul's School, West Kensington.
Haydon, Maurice Willoughby, St. Thomas's Hospital.
Howkins, Cyril Henry, Mason College, Birmingham.
Huddart, Cuthbert Edmund Arnold, London Hospital.
Jeremy, Harold Rowe, London Hospital.
Jones, John Pugh, University College of South Wales, Cardiff.
Jones, Sydney Herbert, King's College, London.
Kidd, Basil Symonds, St. Mary's Hospital.
Lindsey, Eric Craigie, St. Mary's Hospital.
Mathews, William L'Estrange, Mason College, Birmingham.
Miller, Frederic William, King's College, London.
Mitchell, Talbot Carter, Yorkshire College, Leeds.
Pank, Harold William, St. Bartholomew's Hospital.
Prins, Henry Mallock, University College, London.
Raven, Hugh Milville, St. Mary's Hospital.
Richard, George Herbert, St. Paul's School, West Kensington.
Sale, John Caruthers, St. Bartholomew's Hospital.
Small, Robert, St. Thomas's Hospital.
Soper, George Bertram, Guy's Hospital.
Stephenson, Robert West, University College, Liverpool.
Tatchell, William Arthur, London Hospital.
Thompson, Reginald, St. Bartholomew's Hospital.
Tovey, Arthur Hamilton, St. George's Hospital.
Turtle, Godfrey de Bee, King's College, London.
Vincent, George Bernard, St. Paul's School, West Kensington.
West, John Arthur, St. Bartholomew's Hospital.
Whitwell, Hugh, St. Bartholomew's Hospital.

Part II., Practical Pharmacy:

Adams, Henry Cyril, St. Bartholomew's Hospital.
Baker, William Langworthy, Guy's Hospital.
Bell, Kenneth de Risley, King's College, London.
Bigg, Reginald, St. Bartholomew's Hospital.
Blizzard, Walter Harry Stanley, Mason College, Birmingham.
Brice, Henry Doyle, Westminster Hospital.
Brown, Evelyn Kempson, London Hospital.
Bullmore, Edward Augustus, University College, London.
Clitherow, Herbert George, London Hospital.
Couzens, Alfred John, London Hospital.
Forster, Frederick Cecil, St. Mary's Hospital.
Fuller, Laurence Otway, University College, London.
Gaitskell, Charles Edward, Guy's Hospital.
Gleig, Percy North, Charing-cross Hospital.
Heath, Francis Harold Rodier, Guy's Hospital.
Hewer, Edward Septimus Earnshaw, St. Bartholomew's Hospital.
Hollick, Hubert Harry, Mason College, Birmingham.
Irvine, Guy Harle, University College, Bristol.
Jones, John Pugh, University College of South Wales, Cardiff.
Joy, Norman Humbert, St. Bartholomew's Hospital.
Kilpatrick, James Armstrong, University College of South Wales, Cardiff.
Kirkman, Albert Henry Beaumont, Guy's Hospital.
McGavin, Laurie Hugh, Guy's Hospital.
Maher, Michael Robert, University College, Liverpool.
Maugham, William Somerset, St. Thomas's Hospital.
Mondy, Samuel Lee Craigie, University College, London.
Morris, Isaac Llywellyn, St. Bartholomew's Hospital.
O'Meara, Eugene John, Guy's Hospital.
Palgrave, Edward Francis, St. Bartholomew's Hospital.
Parsons, Arthur Ruscombe Crane, King's College, London.
Phillips, Nathaniel Richard, University College of South Wales, Cardiff.
Pugh, Arthur Bailey, St. Bartholomew's Hospital.
Ramsay, Palmer Devoy, St. Mary's Hospital.
Rees, Henry Melville, Owens College, Manchester.
Richards, Ramsey Martyn, St. Mary's Hospital.
Ryley, Charles, St. Mary's Hospital.
Shattock, Charles Robert, King's College, London.
Sheldon, Walter Sirr, University College, London.
Stanley, Arthur John, Mason College, Birmingham.
Tarbet, Peter Rowley, University College, London.
Thomas, Arthur Richard, Guy's Hospital.
Timothy, John Haydon, University College of South Wales, Cardiff.
Wadmore, James Christopher, University College, Bristol.
Walter, John Basil, Guy's Hospital.
Watson, John Harry, University College, Liverpool.

Part III., Elementary Biology:

Ackery, Edward Faulkner, Charing-cross Hospital.
Allan, Charles Henry, London Hospital.
Bannerman, Charles Harold, University College, Liverpool.
Bennette, Horace Willie Paul, University College, Liverpool.
Boclett, Jaustin Marcel, Charing-cross Hospital.
Brice, Henry Doyle, Westminster Hospital.
Carling, Ernest Rock, Westminster Hospital.
Clitherow, Herbert George, London Hospital.
Couper, James, Charing-cross Hospital.
Davies, Charles Woolmer, St. Thomas's Hospital.
Davies-Ooranofski Vladimir, Anderson's College, Glasgow, and University College, Liverpool.
Dix, Charles, St. Bartholomew's Hospital.
Douse, John Freeman, Guy's Hospital.
Downes, Thomas William Hardwick, St. Thomas's Hospital.
Drabble, Charles Clement, Firth College, Sheffield.
Drinkwater, Frederick Andrew, University College, Liverpool.
Fawssett, Wilfrid, St. Thomas's Hospital and King's College, London.
Fowler, Trevor Hayman, St. Bartholomew's Hospital.
Graves, Robert Kennedy Grogan, St. George's Hospital.
Grote, Robert George Ernest, Charing-cross Hospital.
Hamill, John Molyneux, St. Paul's School, West Kensington.
Hemans, Thomas Daniel, St. Thomas's Hospital.
Hendley, Phillip Arthur, King's College, London.
Hughes, Thomas Hugh James Ellis, St. Mary's Hospital and King's College, London.
Jackson, Frederick Douglas Selmes, Guy's Hospital.
Jeremy, Harold Rowe, London Hospital.
Jobson, Frederick Cuthbert, Westminster Hospital.
Lindsey, Eric Craigie, St. Mary's Hospital and King's College, London.
Margetts, Horace Palmer, St. Bartholomew's Hospital.
Marsh, James Kenneth Nevil, St. Bartholomew's Hospital.

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Martyn, Frank Derecourt, Westminster Hospital.
Michel, Arthur George, Charing-cross Hospital.
Morgan, Frank, Westminster Hospital.
Morrow, David, Queen's College, Belfast.
Nesfield, Vincent Blumhardt, St. Paul's School, West Kensington.
Richards, Thomas, University College of South Wales, Cardiff.
Roberts, John Hamilton, Charing-cross Hospital.
Sale, John Curuthers, St. Bartholomew's Hospital.
Sampson, Bernard Moore, St. Thomas's Hospital.
Scott, Edward Spencer, London Hospital.
Soden, Arnold Edward, McGill College, Montreal, Canada.
Stephenson, Robert West, University College, Liverpool.
Van Dyk, Adriaan François, School of Medicine, Surgeon's Hall, Edinburgh.
Williams, Sidney James, Mason College, Birmingham.

The following gentlemen passed the First Examination of the Board under the four years' regulations:—

Part I., Chemistry, including Chemical Physics:

Dudley, Samuel Robert, St. Bartholomew's Hospital.
Houchin, Edwin Augustus, Middlesex Hospital.
Magee, Charles Crozier Tandy, Melbourne University and London Hospital.

Part II., Materia Medica:

Bell, Victor Samuel Alexander, Cambridge University and St. Bartholomew's Hospital.
Clough, Harry, Yorkshire College, Leeds.
Cooper, Frank, Mason College, Birmingham.
Elvins, Ralph Sedgeley, Mason College, Birmingham.
Gould, Horace John, Middlesex Hospital.
Grantham-Hill, Wilfred St. George, St. Mary's Hospital.
Magee, Charles Croezier Tandy, Melbourne University and London Hospital.
Phillips, Philip, Charing-cross Hospital.
Pierce, George Oliver, King's College, London.
St. John, Winstan St. Andrew, St. Mary's Hospital.
Sandison, James, London Hospital.
Sowden, George, London Hospital.
Towers, Henry, Yorkshire College, Leeds.
Voller, Frank, St. Thomas's Hospital.
Waldmeier, Frederick John, Syrian Protestant College, Beyreut, Syria, and London Hospital.
Whyte, Frederick William, Queen's College, Belfast.

Part III., Elementary Physiology:

Elliott, William Robert, Cambridge University.

UNIVERSITY OF CAMBRIDGE.—On Jan. 28th the following graduates of the University were admitted to degrees in Medicine and Surgery:—

M.B. and B.C.—F. A. C. Tyrrell, B.A., Clare; and J. Hobday, B.A., Christ's.
M.B. only.—R. A. Kirby, B.A., Trinity; and G. C. Taylor, M.A., Christ's.
B.C. only.—L. P. Black, B.A., Trinity Hall.

Mr. Walter Gardiner, F.R.S., has resigned his University lectureship in Botany on his appointment to the Bursarship of Clare College. Eighteen additional freshmen were matriculated on Jan. 28th, making the entry for the year 923.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. René du Bois-Reymond and Dr. Ruge have qualified as *privat-docenten* of Physiology and Internal Medicine respectively.—*Bologna:* Dr. Angelo Pugliese has qualified as *privat-docent* of Physiology.—*Florence:* Dr. Ernesto Pestalozza has been appointed Professor of Midwifery and Gynæcology.—*Geneva:* Dr. Johannes Martin has been appointed Professor of Psychiatry in succession to Dr. Olivet, who is retiring.—*Groningen:* Dr. Wiersma has qualified as *privat-docent* of Psychiatry.—*Iurieff (Dorpat):* Dr. Kessler has been appointed Extraordinary Professor of Gynæcology. Professor E. R. Kobert is resigning the chair of Pharmacology and is about to take the post of Director of the Brehmer Sanatorium in Vienna.—*Leipzig:* Dr. A. Heffter has been appointed Extraordinary Professor of Pharmacology.—*Modena:* Dr. Arnaldo Maggiora has been appointed Professor of Experimental Hygiene.—*Munich:* Dr. Johann Rückert has been appointed Professor of Anatomy.—*Padua:* Dr. Alessandro Serafini has been appointed Professor of Experimental Hygiene. Dr. Gregorio Manca has qualified as *privat-docent* of Physiology.—*Palermo:* Dr. Vincenzo Acquisto has qualified as *privat-docent* of Histology.—*Rome:* Dr. V. Ascoli has qualified as *privat-docent* of General Pathology.—*Strassburg:* Dr. P. Manasse has qualified as *privat-docent* of Otology.

THE following telegram to the Secretary of State for the Colonies has been received from the Governor of Gibraltar: "Jan. 27th, 1897.—Vessels from India will not get pratique at Gibraltar and will not be allowed to land passengers or goods. Mails and specie will be landed in quarantine and coals and provisions supplied in quarantine."

PROFESSOR SHERRINGTON, F.R.S., of University College, Liverpool, will deliver an address at the College of Medicine, Newcastle, on Thursday, Feb. 18th, upon Researches on the Spinal Segment.

PRESENTATIONS TO MEDICAL MEN.—Dr. E. W. Joscelyne, of Southwick, has been the recipient of a silver fish knife and fork and a silver mounted pipe by the members of the Southwick ambulance class, and as a present on his approaching marriage, in recognition of his instructive lectures on First Aid.—Mr. Sinclair Finlay, L.K.Q.C.P., F.R.C.S.Irel., of Stroud, New South Wales, was presented, at a public entertainment on Nov. 14th last, on the occasion of his departure from that locality, with a valuable gift of plate from the residents of Port Stephens district.—Mr. George A. Phillips, M.R.C.S.Eng., of Walsall, has been the recipient of a beautiful illuminated address in a neat frame from the members of the London and North-Western Railway Permanent Way Department ambulance class at the Walsall station, as a thank-offering for his services as instructor in First Aid.—Dr. Richard C. Shettle of Reading was presented, at a meeting of the medical and surgical staff of the Royal Berkshire Hospital, on the 21st ult., at which all the members were present, with a pair of silver candlesticks. The occasion was to wish him good-bye on his resigning the office of physician, which he had held for a period of twenty years.—Mr. Robert Kennedy, M.A., M.D. Glasg., has been presented with a handsome barometer in recognition of his services as lecturer to the Queen-street station ambulance class.—Mr. R. Wilson Bruce, L.F.P.S. Glasg., has been presented with a testimonial by the members of the Glasgow police force on the occasion of his resignation of the position of casualty surgeon to the northern police district.

CHANGES AT THE LIVERPOOL ROYAL INFIRMARY.—The annual meeting of the trustees of the Liverpool Royal Infirmary, held on Saturday last, presented features of more than ordinary interest. Its proceedings included the announcements of the retirement of Mr. Hamilton B. Gilmour from the chairmanship, after an occupancy of nineteen years; and of the resignation of Dr. Alexander Davidson of the honorary physiciancy which he held for twenty years. Universal regret is felt at the Royal Infirmary that Dr. Davidson should have thought fit to resign active duties there. Happily, his resignation has not been due to age or infirmity, as he is in robust health. Mr. H. B. Gilmour's retirement from the chairmanship of the General Committee is also much regretted by his colleagues and others; he was chiefly instrumental, in conjunction with a portion of the medical staff, in the reconstruction of the magnificent building which is looked upon as one of the best constructed and equipped hospitals in Europe. A more zealous and efficient chairman it would be difficult to find. His courtesy, forethought, and attention to minute details, and his constant consideration for the comfort of the officials, nurses, &c., are warmly acknowledged by all connected with the institution. Mr. Mitchell Banks, on behalf of the medical staff, alluded in feeling terms to the kindly relations which had always existed between the chairman and the staff, and described Mr. Gilmour's conduct in the chair as distinguished by urbanity, justice, and forbearance—qualities which had enabled him to smooth over many difficulties. His "quiet tact and happy behaviour had prevented molehills from growing into mountains of dissatisfaction." Some three or four years ago Mr. Gilmour's colleagues on the committee presented him with his portrait painted in oils, which now adorns the board room. The present "committee of management" was first formed concurrently with the completion of the second hospital building in 1823, previously to which the management was vested in a "weekly board." The first chairman of the newly-constituted committee was the late Mr. Edward Gibbon, who held the office (with the exception of one year) until the year 1850. His son, the present Mr. Edward Gibbon, succeeded him in the chair, which he resigned in 1878. Mr. H. B. Gilmour was then unanimously elected to preside over the committee. The trustees have now further honoured him by conferring on him the presidency, a post which is usually held for one year and which numbers amongst its late occupants the Marquis of Salisbury, K.G., Earl Derby, Earl Harrowby, and Earl Lathom. Dr. Davidson was elected an honorary consulting physician at the same meeting.

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A BALL in aid of King's College Hospital will be held at the Queen's Hall, Langham-place, on Wednesday, Feb. 24th. Information may be obtained of Mrs. Wace, King's College, London.

THE reading of Dickens's Christmas Carol, given by Mr. Bancroft at the London Hospital on the evening of Feb. 1st, resulted in a cash profit of £150 to the charity.

BUDLEIGH SALTERTON COTTAGE HOSPITAL.—The eighth annual meeting of the Budleigh Salterton Cottage Hospital was held on Jan. 14th, Dr. T. N. Brushfield presiding. The honorary secretary stated that the committee considered the finances to be in a satisfactory condition as there is a balance in hand of £98 as against £96 last year. The committee reminded the inhabitants of Salterton and district that this hospital is a "Jubilee" memorial, and think that as a commemoration of the Queen's sixty years' reign it would be appropriate to make it a model cottage hospital by the erection of a porter's cottage with laundry attached and a suitable mortuary chamber. The following gentlemen were elected on the staff: Honorary Consulting Physicians, Mr. T. N. Brushfield, M.D. St. And., M.R.C.S.Eng.; Mr. R. Walker, M.D.St. And., M.R.C.S.Eng. Medical officers — Mr. T. G. C. Evans, M.R.C.S. Eng., L.R.C.P. Edin.; Mr. H. F. Semple, M.R.C.S. Eng., L.R.C.P. Lond.

THE SUSSEX COUNTY HOSPITAL.—Exactly eleven months on Friday, Jan. 29th, the Prince of Wales laid at Brighton the foundation-stone of the new out-patients' department of the Sussex County Hospital, and on Friday Her Royal Highness the Duchess of Fife, accompanied by her husband, opened the department. The building stands on the opposite side of the road facing the hospital, and is only one storey high, though of good elevation. The main entrance leads to the waiting-room, which is 92 ft. by 26 ft.; at the rear are a double set of examination rooms for the surgical and medical staff, with dressing and bathrooms attached, and a dark room for ophthalmic cases and the dispensary. The heating is by hot water and electric light is used. The mayor (Alderman Blaker), the chairman of the committee of management (Mr. G. D. Turnbull), the staff, and officials of the institution and other ladies and gentlemen assisted in the ceremony, which was witnessed by a large number of visitors. The whole of the money laid out on the building has been subscribed.

PRESENTATION TO MR. F. D. MOCATTA.—An interesting ceremony took place on Jan. 27th at the Jews' Free School, Spitalfields, on the occasion of the presentation of an album of addresses and signatures to Mr. Mocatta, who has just entered upon his seventieth year. Lord Rothschild occupied the chair, and among those present were Sir Philip Magnus, Professor Meldola, Sir William Vincent, Mr. Isidore Spielman, Mr. Cecil Sebag-Montefiore, Dr. Gaster, Professor Marks, and Sir Samuel Montagu, M.P. The address contained in the album was a fitting expression of the appreciation of the benevolence of Mr. Mocatta by representative recipients of his charity. The address contains the signatures of 8000 persons, and upwards of twenty-five London hospitals were associated with the movement as well as seventy other non-Jewish institutions. Evidence of the esteem and regard in which Mr. Mocatta is held as a munificent supporter of various charities comes from all parts of the world. Thus signatures have been received from warm supporters of the movement from Paris, Berlin, Vienna, St. Petersburg, and most of the other important cities in Europe, while names have also been subscribed from Canada, America, Bombay, Cape Town, the United States, Jerusalem, and even from Australia. The album, which measures twenty-two inches by fifteen inches, and about four inches in thickness, is bound in pale blue levant morocco. Embedded in a framework of rich leather is a silver plaque designed by Mr. Solomon, a beautiful and artistic group representing Charity. The printing of the address itself has been worked on a rich dark red morocco leather with the letters impressed in gold. To Messrs. Zaehnsdorf, of Shaftesbury-avenue, is due the credit of producing so admirable and artistic a volume, which is a worthy symbol of tribute to the respect and affection in which Mr. Mocatta is universally held for the philanthropic services he has rendered to the world at large.

MEDICAL MAGISTRATE. — Mr. Robert George Reid, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., of Nagambie, Victoria, Australia, has been appointed a Justice of the Peace for the Central Bailiwick, Victoria.

THE GREAT WESTERN RAILWAY MEDICAL FUND SOCIETY.—The fiftieth annual meeting of this society was held at New Swindon on Jan. 19th. The report showed that there were 10,925 members. Eighty-three cases had been treated in the hospital during the year, the average daily cost of each hospital patient being 1*s.* 8*d.* The total income was £9064, including members' contributions of £7657. The chief items of expenditure were—medical officers, £5552; donations to hospitals, £187; management expenses, £381; the balance left being £820.

THE AFTER-CARE ASSOCIATION.—The annual meeting of this association will be held on Monday next, Feb. 8th, at 3 P.M., at 5, Hyde-park-square, W., by permission of Mr. and Mrs. Bonham Carter. This is the only charity in the United Kingdom having for its object the care of poor persons discharged upon recovery from asylums for the insane, and as such is worthy of all support from the profession. Persons subscribing not less than 5*s.* per annum or giving a donation of not less than £2 10*s.* become members of the association, but much larger subscriptions are needed. All communications should be made to Mr. H. Thornhill Roxby, at the Church House, Dean's Yard, Westminster, S.W.

WEST CORNWALL INFIRMARY. — The annual meeting of subscribers was held at the West Cornwall Dispensary and Infirmary, Penzance, on Jan. 20th, Prebendary Hedgeland, the President, being in the chair. The report showed that there had been 148 in-patients during last year, against 140 during the year before last. Simultaneously with the increase in the patients there was a diminution in the income, the subscriptions having fallen off by more than £18, the consequence being that the committee did not feel themselves in a position to purchase many things which were really wanted. The Edward Bolitho Convalescent Home had accommodated 68 patients, 42 of whom were sent from the infirmary. The contributions included gifts of £30 from the late Mr. W. Bolitho of Polwithen, of £500 from Mrs. W. K. Foster, and of £200 from Miss N. Bolitho, "In Memoriam, William Bolitho." The total expenditure for the year was £843, and the total receipts were £770.

ANOTHER UNREGISTERED DENTIST.—At the Hove Bench on Monday the magistrates heard a charge under the Dentists Act against James Galloway of 6, Goldstone-villas, who denied having used the descriptions of "dentist" and "surgeon dentist" as implying that he was specially qualified to practise dentistry. The chief evidence, as in the cases heard at Brighton recently, was supplied by private detectives, one of whom said that he asked Galloway if he was a qualified dentist, to which he replied that he was, and arranged to do certain work for £2. Another witness said defendant gave him a circular on which were the words "Dentistry at moderate charge. D.D.S., U.S.A., surgeon dentist." The defence was that Galloway had received the diploma of the Dental College at Kansas and that under one section of the Act he could practise if he could show that he was not an ordinary resident of the United Kingdom and that he held a qualification to practise in a British possession or foreign country and did not represent himself as being on the Register. As soon as he could make arrangements, he said, he was going back to the States. Defendant was, however, fined £2 and costs, including advocate's fee.

DIPHTHERIA IN LONDON.—The registered deaths from diphtheria in London in the week ended Jan. 23rd were 63 in number and were no fewer than 30 above the corrected decennial average for the third week of the period 1887 96. The numbers registered in the preceding three weeks had been 49, 71, and 52 respectively. Islington was credited with 8 of the 63 deaths, Camberwell with 6, Lambeth with 5, Hackney, Bethnal Green, and Battersea each with 4, and Hampstead, Poplar, and Bermondsey each with 3 deaths. Of the 63 deaths, 3 were of infants under one year of age, 37 in the succeeding four years, 19 in the next fifteen years, and 4 in persons aged over twenty years. The admissions to hospital during the week were 93, against 115, 104, and

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108 in the preceding three weeks, and 881 patients remained under treatment in hospital on Saturday, Jan. 23rd. In the outer ring there were 10 deaths registered, of which 3 were in the Edmonton, 3 in the West Ham, 2 in the Brentford, and 1 each in the Carshalton and the Hayes districts. Last week the registered deaths from the disease in London fell to 53, but even so they were 17 in excess of the corrected decennial average for the fourth week. Hammersmith, St. Pancras, Islington, and Camberwell were each of them credited with 4 deaths, and Mile End Old Town, Lambeth, and Battersea sanitary areas each with 3 deaths. All the deaths were in young persons aged under twenty years, and 33 of them in the first five years of life. The deaths registered in the outer ring, however, showed an increase, being 21 in number, and were scattered widely round London—namely, in Kingston, Bromley (2), Isleworth (3), Brentford, Harrow, Willesden, Hornsey, Tottenham (2), Edmonton, and in the West Ham registration district (8).

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Destitution in London.

A RETURN is being prepared of the number of deaths in the administrative county of London in the year 1896 upon which a coroner's jury has returned a verdict of death from starvation or death accelerated by privation, together with any observations furnished to the Local Government Board by boards of guardians with reference to these cases.

Half Holidays for Shop Assistants.

A Bill, backed by several private Members, has been introduced into the House of Commons which provides that every shop assistant shall have a half holiday in each week.

HOUSE OF COMMONS.

THURSDAY, JAN. 28TH.

Payments by Guardians to an Unqualified Person in Ireland.

In reply to Mr. J. P. Farrell the Chief Secretary to the Lord Lieutenant of Ireland replied that the Local Government Board had issued a writ against the Newry board of guardians, specially naming four members for the recovery of a sum of money paid by the guardians to Philip McGovern in direct contravention of the law. In October, 1895, the guardians passed regulations that these men and any other persons bitten by a mad dog who might thereafter apply were to be sent for treatment to McGovern, who claimed to be able to cure hydrophobia. The Board pointed out to the guardians that McGovern's farmhouse not being a recognised hospital within the meaning of the Act the guardians were acting *ultra vires* in sending patients to him for treatment. Upon the presentation of McGovern's bill the guardians applied to the Board to sanction the expenditure, which the Board explained they had no power to do, and as the account was not paid McGovern served the guardians with a civil bill for the amount. The guardians decided not to defend the process and judgment went against them accordingly by default. The Attorney-General had granted his fiat for the proceedings, which were now being taken in the superior court.

FRIDAY, JAN. 29TH.

Venereal Disease amongst the Army at Home.

Mr. Brodrick, Under Secretary of State for War, stated, in reply to a question on this subject put by Major Rasch, that on Jan. 1st the men under treatment for venereal disease at the several stations were 155 at Aldershot, 77 at Portsmouth, 84 at Woolwich, and 169 in Ireland. These figures gave the following rates respectively per 1000 of the strength:—12·13, 18·06, 16·79, and 8·93, with an average of 11·84.—Major Rasch asked whether the Government intended doing anything to remedy this state of things.—Mr. Brodrick replied to this that the whole question as related to India was under inquiry by a departmental committee of the India Office and no decision with regard to any steps could be taken until the results of that inquiry were obtained.

Petroleum Lamp Accidents.

Replying to a question by Captain Donelan relating to cheap oil and lamp accidents the Home Secretary said that it was among the questions which the Select Committee on Petroleum was considering. That Committee, he hoped, would be re-appointed shortly and would conclude their labours at an early date.

Army Medical Staff Examinations.

Sir Walter Foster asked the Under-Secretary of State for War whether the rule which prevents candidates for the Army Medical Staff who have twice failed in the competitive examinations again presenting themselves for examination has been or is to be set aside, and, if so, how many trials a candidate is to be allowed.—Mr. Brodrick: In future, on the recommendations of the medical authorities, three trials will be allowed.

MONDAY, FEB. 1ST.

The Payment of Vaccination Officers.

Mr. Holland asked the President of the Local Government Board whether, in view of the fact that vaccination officers were paid only by fees upon successful cases of vaccination and that therefore their incomes had been largely reduced in a great number of districts by the non-enforcement of the Vaccination Acts by boards of guardians while their actual work was in no degree diminished thereby, the Local Government Board would sanction boards of guardians paying the vaccination officers by fees based upon birth returns as well as upon successful cases of vaccination.—Mr. Chaplin replied that experience had amply shown the importance of payment of vaccination officers by results as a principle of general application, but he would consider whether any modification in the existing rule could be made under which the payment of the vaccination officer should not wholly depend on fees in respect of the certificates of successful vaccination registered.

Rabies.

Mr. Walter Long, President of the Board of Agriculture, replying to a question on this subject addressed to him by Dr. Farquharson, said that twelve cases of rabies had been reported in the county of London and twenty-two in the five home counties during the last six months. He was informed that the Public Control Committee of the London County Council proposed that present muzzling regulations should now be so far relaxed as to give exemptions to dogs under proper control and wearing a collar with the name and address of the owner. In this connexion he might perhaps be allowed to point out, however, that it would be necessary for the whole subject to be further considered in the light of the report of the committee which had been sitting for some time past to inquire into the working of the laws relating to dogs. He understood that the committee proposed that a determined effort should now be made to rid the country of rabies once and for all. If this could be accomplished, the necessity for the issue of intermittent muzzling regulations by particular local authorities would disappear. He was under the impression that the owners of dogs and the public generally would support a well-considered scheme which promised to secure the complete extirpation of rabies in these islands—a result which was never likely to be secured under the existing system.

TUESDAY, FEB. 2ND.

The Poor-law Officers Superannuation Act.

Mr. Chaplin, replying to a question put by Sir Walter Foster, said that the Local Government Board were of opinion that neither under the Superannuation Act of 1864 nor under the Act of last session, was a public vaccinator who was paid by fees under a contract, an officer to whom a superannuation could be granted. He was not contemplating any alteration of the law in this respect.

Scurvy among Indian Troops.

Lord George Hamilton said, in reply to a question, that the Indian troops at Suakin were attacked for a short time by a sudden outbreak of scurvy, during which 2 British officers, 103 men, and 85 followers were admitted to hospital suffering from this complaint. In about a month—viz., by the beginning of November—it was completely eradicated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANNINGSON, B., M.D. Cantab., M.R.C.S., has been re-appointed Medical Officer of Health by the Cambridge Town Council.

BARLING, A. S., L.R.C.P., M.R.C.S., has been appointed Surgeon to the Lancaster Police.

BARR, JAMES, M.D. Glasg., L.R.C.S. Edin., has been re-appointed a Physician to the Northern Hospital, Liverpool.

BEATTY, SAMUEL, M.B. C.M. Edin., has been appointed Medical Officer of Health by the Moulin Parish Council.

BRODRICK, CHARLES CUMBERLAND, L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer for the Whitchurch and South Lydford District of the Tavistock Union.

BRYANT, H. A., L.R.C.P. Lond., M.R.C.S., has been re-appointed Honorary Surgeon to the Westminster Cottage Hospital, Shaftesbury.

CAMPBELL, DONALD, M.D. Glasg., has been re-appointed Medical Officer of Health for the Calne Rural Sanitary District.

CAMPBELL, WM. F., M.D., C.M. Edin., M.R.C.S., has been re-appointed a Consulting Surgeon to the Northern Hospital, Liverpool.

CARTER, F. R., M.R.C.S., has been appointed Medical Officer for the Sanitary District of Chapeltown.

DAVISON, R. T., M.D. Aberd., M.R.C.S., has been appointed Medical Officer of Health by the Malden and Coombe Urban District Council.

DICKINSON, E. H., M.D., C.M. Edin., L.R.C.P., L.R.C.S. Edin., F.R.C.P. Lond., has been re-appointed a Physician to the Northern Hospital, Liverpool.

FERGUSON, JAMES HAIG, M.D., F.R.C.P. Edin., has been appointed Additional Examiner in Midwifery in the University of Edinburgh, vice A. H. F. Barbour.

GRATTE, CHARLES BROOKE, L.R.C.P. Lond, M.R.C.S., has been appointed Public Vaccinator for the Newport and St. Woolos District of the Newport (Mon) Union, vice H. R. Hudson, deceased.

HALL, W. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Frank Sanitary District of the Ticehurst Union.

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HAMILL, J. WILSON, M.D., M.Ch.R.U.I., has been appointed Examiner and Certifier in Lunacy at Hope Hospital by the Salford Board of Guardians.

HAMILTON, W. C., M.B., C.M.Edin. has been re-appointed Senior House Surgeon to the South Devon and East Cornwall Hospital, Plymouth.

HARRISSON, DAMER, F.R.C.S.Edin., M.R.C.P.Irel., M.R.C.S., has been re-appointed an Honorary Surgeon to the Northern Hospital, Liverpool.

HONNYWILL, ALFRED ORAM, L.R.C.S.,' L.R.C.P., L.M.Edin., has been appointed Medical Officer and Public Vaccinator for the Sutton and Cheam District of the Epsom Union.

HUGHES, T. H., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., has been appointed Medical Officer of health by the Connah's Quay Urban Council.

KIRWAN, JAS., ST. L., M.B., B.Ch.Irel., has been appointed a Second Assistant Medical Officer to the Ballinasloe District Asylum.

MACDERMOTT, P. A., F.R.C.S.Irel., L.R.C.P.Irel., has been appointed a Medical Officer of the St. Michael's Hospital, Kingstown.

MANIFOLD, W. H., M.R.C.S., has been re-appointed a Consulting Surgeon to the Northern Hospital, Liverpool.

MATTHEWS, WM., L.D.S.R.C.S.Eng., has been re-appointed a Dental Surgeon to the Northern Hospital, Liverpool.

MORGAN, JOHN, F.R.C.S.Eng., L.R.C.P.Lond., has been re-appointed Medical Officer of Health by the Landport Rural District Council.

NEWTON, H. W., L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer for the First Sanitary District of the Chelmsford Union.

PRESTON, GEORGE, L.R.C.P.Edin., M.R.C.S., D.P.H., has been appointed Medical Officer of Health for the Saltash Urban Sanitary District, vice R. T. Meadows, resigned.

PUZEY, C., F.R.C.S.Eng., L.R.C.P.Lond., has been re-appointed an Honorary Surgeon to the Northern Hospital, Liverpool.

ROSSITER, CHAS. B., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., has been appointed Medical Officer to the Flintshire Dispensary, Holywell.

ROWLANDS, WM., L.R.C.P.Irel., M.R.C.S., has been re-appointed Medical Officer of Health by the Little Crosby District Council.

RUTHERFORD, C., L.R.C.P., L.R.C.S.Edin., L.F.P.S.Glasg., has been re-appointed Parochial Medical Officer, Eskdalemuir, Langholm.

SAUNDERS, A. M., M.B., C.M.Aberd., D.P.H., has been appointed Medical Officer for the Duffus Parish Council.

WALKER, G. E., F.R.C.S.Eng., has been re-appointed a Consulting Ophthalmic Surgeon to the Northern Hospital, Liverpool.

WILSON, A. H., L.R.C.P.Lond., M.R.C.S., has been re-appointed an Honorary Surgeon to the Northern Hospital, Liverpool.

WILSON, FRANCIS KENNETH, M.B., B.S.Lond., M.R.C.S.Eng., L.R.C.P.Lond., has been appointed Assistant House Surgeon at Westminster Hospital.

WOOD, T. OUTTERSON, M.D., F.R.C.P.Ed., M.R.C.P.Lond., has been appointed Consulting Physician to the St. George's and St. James's Dispensary, King-street, Regent-street, London, W.

YOUNGER, EDWARD GEORGE, M.D.Brux., M.R.C.P.Lond., Dipl. State Medicine, R.C.P. & S.Irel., has been appointed Medical Officer of Health to Gray's Inn, London.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BLACKBURN AND EAST LANCASHIRE INFIRMARY, Blackburn.—Senior House Surgeon. Salary £100 per annum, with board, washing, lodging, &c.

BOROUGH OF BURTON-UPON-TRENT.—Medical Officer of Health for the District of the Borough. Salary at the rate of £350 per annum, exclusive of authorised disbursements.—Applications to the Town Clerk, Town Hall, Burton-upon-Trent.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W. — Clinical Assistant.

CHILDREN'S HOSPITAL, Nottingham,—House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton. Assistant Physician.

DERBY COUNTY ASYLUM, Derby.—Junior Assistant Medical Officer. Salary £100, rising to £130 per annum, with furnished apartments, board, &c.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL, Hastings.—House Surgeon, unmarried. Salary £75 per annum, with board, lodging, and laundry expenses.

HULL BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary £120 per annum, rising by annual increments of £10 to £150, with furnished apartments, board (except liquors), attendance, and washing.

JOINT COUNTIES ASYLUM, Carmarthen.—Clinical Assistant for six months. Board, lodging, &c., and honorarium offered.

LINCOLN COUNTY HOSPITAL, Lincoln.—Assistant House Surgeon for six months. An honorarium of £10 and board, residence, and washing.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Board and lodging provided.

LONDON COUNTY ASYLUM, Claybury, Woodford, Essex.—Qualified Lady Assistant Medical Officer, single. Salary £120 per annum, rising by £5 a year to £150, with board, lodging, and washing.—Applications to the Clerk, Asylums Committee Office, 21, Whitehall-place, London, S.W.

LONDON HOSPITAL, Whitechapel, E.—Surgical Registrar. Salary £100 per annum.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician House Surgeon, Assistant House Physician, and Assistant House Surgeon for six months. The former two will each receive a salary at the rate of £40 a year, and the latter two each at the rate of £20 a year.

PARISH OF ST. GILES, Camberwell.—Assistant Medical Officer for one year for the Infirmary, at Havil-street, Camberwell, and the Workhouse at Gordon-road, Peckham; also for Relief Duty at the Constance-road Workhouse of the parish. Salary £50, with apartments, board, and washing. Applications to the Clerk to the Guardians, Offices, 29, Peckham-road, S.E.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Resident Medical Officer for one year. Salary £80 per annum, with board and washing.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Honorarium at the rate of £24 per annum, with residence, board, and washing.

STRETTON HOUSE ASYLUM, Church Stretton, Salop.—Resident Medical Officer, single. Salary £100, and all found.—Applications, C. H., care of Dr. T. Hyslop, Bethlem Royal Hospital, S.E.

TIVERTON INFIRMARY AND DISPENSARY, Tiverton, Devon. — House Surgeon and Dispenser, unmarried. Salary £105 per annum, with lodgings, attendance, fire, and lights.

TOWNSHIP OF TOXTETH PARK.—Senior Assistant Medical Officer for the Workhouse and Infirmary. Salary £100 per annum, with board, washing, and apartments. No extra fees, but drugs and appliances will be found by the Guardians.—Applications to the Clerk to the Guardians, 15, High Park-street, Liverpool.

VICTORIA UNIVERSITY—YORKSHIRE COLLEGE, Leeds.—Demonstrator of Physiology. Salary £150.

Births, Marriages, and Deaths.

BIRTHS.

ALLEN.—On Jan. 27th, at Derby, the wife of W. H. Allen, B.A., M.B., B.C.Cantab., of a son.

BATES.—On Jan. 28th, at Church-road, Upper Norwood, the wife of J. Curling Bates, L.R.C.P.Lond., M.R.C.S.Eng., of a son.

COLLINS.—On Jan. 31st, at Ulverston, the wife of Arthur Ward Collins, M.B., of a daughter.

GROSS.—On Jan. 28th, at Hamstreet, near Ashford, Kent, the wife of Chas. F. Gross, M.R.C.S., L.R.C.P., of a daughter.

LISTER.—On Jan. 28th, at Rose-hill, Totteridge, Herts, the wife of W. T. Lister, F.R.C.S., of a son.

MELLERSH.—On Jan. 26th, at Faireholme, Esher, her father's residence, the wife of W. Francis Mellersh, L.D.S.R.C.S.Eng., of Surbiton, of a daughter.

POPERT.—On Feb. 1st, at Albert-road, Southport, the wife of A. J. Popert, Surgeon, of a daughter.

POWERS.—On Jan. 28th, at Gosforth, Cumberland, the wife of C. H. Powers, M.R.C.S., L.R.C.P. Lond., of a daughter.

STARK.—On Jan. 15th, the wife of M. Dugald Stark, M.D., of Oxford, of a son.

TAIT.—On Jan. 27th, at Highbury-park, the wife of Edward Sabine Tait, M.D., of a daughter.

DEATHS.

BLUNDELL.—On Jan. 23rd, at Carlton-vale, London, William Blundell, M.R.C.S., L.S.A., late of Weston-super-Mare, aged 61.

BOLTON.—On Jan. 14th, at Constanta, Roumania, Doricella Eustachia, Laura Rita, aged 12 years, after a long illness, patiently borne, the dearly-loved child of A. Irwin Bolton, M.B., A.B.

ELLISON.—On Jan. 31st, at Windsor, in his 80th year, James Ellison, M.D. Lond., for forty-five years Surgeon to Her Majesty's Household at Windsor Castle.

HASTINGS.—On Jan. 27th, at Brighton, Thomas Hastings, F.R.C.S., Surgeon-General, Retired List, Indian Medical Service, aged 78.

KELLY.—On Jan. 16th, at his mother's residence, Ballynease, Co. Derry, John A. Kelly, M.B., eldest son of the late James Kelly, J.P., Ballynease, Co. Derry.

WELLS.—On Jan. 31st, at Cap d'Antibes, suddenly, Sir Spencer Wells, Bart., F.R.C.S., &c., aged 73.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (10th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (11th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (13th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (8th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Cases:—Mr. Noble Smith: (1) Spastic Contraction of a Mutilated Hand, Trophic Ulcer on the Posterior Surface with extreme Pain of the whole Hand, relieved by Tenotomy and Neurectomy; (2) Diffuse Lipoma and Congenital Deformity of the Phalanges of the Index Finger.—Mr. J. H. Morgan: Compound Fracture of the Anterior Fossa of Skull with resulting Lesions to Retina.—Mr. G. R. Turner: Excision of Head of the Radius for old unreduced Dislocation.—Mr. F. C. Wallis: Case of unusual Fracture of the Humerus in a boy of sixteen years.—Mr. G. Stoker: Two Cases of Ulcers treated by Oxygen Gas.—Mr. S. Edwards: Skiagram of Knee-joint after Suture of Patella.

TUESDAY (9th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. P. Horton-Smith: On the Presence of Typhoid Bacilli in the Urine of Patients suffering from Typhoid Fever.—Dr. J. Abercrombie: On some Affections of the Nervous System met with in Association with an Attack of Enteric Fever.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN (17, Bloomsbury-square, W.C.).—8 P.M. Mr. A. C. Seward: Fossil Plants.

WEDNESDAY (10th).—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens:—Mr. W. R. H. Stewart: Case of a man with Deformity of the Nose, shown at the December meeting; after operation.—Dr. Bond: Girl with Mucocele of the Frontal Sinus; after operation.—Dr. E. Law: Case of Cleft Palate; hypertrophy of the posterior extremities of the inferior turbinals, and adenoid vegetations.—Dr. H. L. Lack: Demonstration of a Method for Examining the Larynx in Infants.—Dr. W. Williams: Coloured drawing of a Tuberculous Larynx treated by Curettement, &c.—Dr. St Clair Thomson: A man with Lupus of the Larynx and Tuberculosis of the Lungs.—Mr. Charters Symonds: (1) Ulceration of the Right Ventricular Band, with impaired mobility of the cord; (2) Perichondritis with Fixation of the Left Cord, from secondary syphilis; (3) Tubercular Ulceration of the Septum, a case shown in October, 1895.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8 P.M. Annual Meeting. 8.30 P.M. Dr. Hingston Fox: Hunterian Oration.

THURSDAY (11th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Mr. Bowreman Jessett will show: (1) Carcinoma Uteri, with Dermoid Cyst of Ovary, removed by Vaginal Hysterectomy; (2) Myomata Uteri, removed by Pan-hysterectomy; (3) Hæmato-Salpinx with large Hæmatocele; (4) Tubal Gestation. The President's Inaugural Address. Dr. Macnaughton Jones: Demonstration of Specimens and Instruments from Berlin.

FRIDAY (12th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Mr. J. E. Lane: Two Cases of Gastro-enterostomy.—Mr. W. Edmunds: Sequel to previously recorded cases of Excision of Malignant Growth from the large Intestine.—Mr. S. Paget: Cases of Voracious Hunger and Thirst after Injury or Disease of the Brain.—Dr. E. W. Goodall: Two Cases of Enteric Fever fatal during the third and fifth week respectively in which there was no Intestinal Ulceration.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (8th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. D'Arcy Power: Intussusception.

TUESDAY (9th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Diagnosis and Treatment of Nerve Deafness.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Beevor: Lecture.

ROYAL INSTITUTION.—3 P.M. Prof. A. D. Waller: Animal Electricity.

WEDNESDAY (10th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. D'Arcy Power: Intussusception.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Bidwell: Operations on the Stomach.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. S. Martin: Cases Illustrating Points of Interest in Mitral Stenosis.

THURSDAY (11th).—SOCIETY OF ARTS.—8 P.M. Prof. J. A. Ewing: The Mechanical Production of Cold. (Howard Lecture.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—Dr. Seymour-Taylor: Urine-Testing.

ROYAL INSTITUTION.—3 P.M. Mr. J. W. Gregory: The Problems of Arctic Geology.

LONDON SKIN HOSPITAL (40, Fitzroy-square, W.).—4 P.M. Mr. J. Startin: Gouty Affections of the Skin.

FRIDAY (12th).—CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Mr. W. Wingrave: The Anatomy and Physiology of the Ear.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. J. Taylor: Epilepsy.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. D'Arcy Power: Intussusception.

ROYAL INSTITUTION.—9 P.M. Prof. J. Milne: Recent Advances in Seismology.

SATURDAY (13th).—ROYAL INSTITUTION.—3 P.M. Mr. W. F. Lord: The Growth of the Mediterranean Route to the East.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

LOCAL APPLICATION OF COLD IN PNEUMONIA.

DR. THOMAS J. MAYS of Philadelphia, writing in the *Medical and Surgical Reporter*, describes the treatment of acute pneumonia by ice-bags applied to the chest. He has used this method for 295 patients, only ten of whom died.

Dr. Edith Huntley.—The advertisements are, of course, very sad. Nothing can be done to check them, as the offenders are not upon the Medical Register and therefore owe no allegiance to the General Medical Council; responsibility of publication lies with the editor of the paper. We are glad to know that many journals refuse to insert these disgusting and untruthful advertisements, but at home, as well as in India, there are proprietors not so scrupulous.

Scotus.—The directions as to the manner of the Scotch form of oath are as under. The officer requests the witness to hold up his right hand and to repeat after him the words of the Oath. No book of any kind is used. The witness, holding his right hand above his head, says, "*I swear by Almighty God (as I shall answer to God at the Great Day of Judgment) I will speak the truth, the whole truth, and nothing but the truth.*"

Mr. Champion B. Russell.—There is no doubt a difference between the temperament of dwellers on high ground and that of dwellers in valleys; but the difference is believed to be the result of an influence extending over a long range of time. To make the individuals change environment would not make them mutually exchange mental capacity and moral stability.

Mr. Charles Blake is thanked for his communication, which will receive immediate attention.

Mr. E. J. Lloyd (Bangor).—We much regret the error, which we have noted and explained elsewhere.

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MEDICAL PRACTICE IN SOUTH AFRICA.

To the Editors of THE LANCET.

SIRS,—A correspondent in THE LANCET of Jan. 16th (p. 194) gives a very disheartening account of South Africa as a field for medical men, and a perusal of his letter would discourage practitioners from trying their fortunes in that portion of Her Majesty's dominions. From my own knowledge of the country and from what I have learned from friends who have resided in various places in the Cape Colony and the neighbouring provinces and states I think your correspondent's description of the country is entirely unjustified. Take, for example, the district around George Town in Cape Colony. There is at present only one medical man in the place and he has a very large tract of country to attend to. Farmers and colonists have often to come sixty or seventy miles to obtain medical attendance when ill. From Mossel Bay to Kuysna, a distance of about 100 miles, there is but one young practitioner, and this district comprises the rich farming country known as Long Kloof. So also at Mafeking in Bechuanaland there is but one practitioner, yet it is the centre of a large and important district with a growing population. As to the necessity for knowing Dutch, very few medical men in South Africa seem to have acquired it. The cost of living is not nearly so great as represented. Very good accommodation can be had at the boarding houses, which exist in every town and village and which afford excellent board and lodging at the rate of £5 a month. I am, Sirs, yours faithfully,

University Club, Dublin, Jan. 23rd, 1897. W. F. BAILEY.

X. Y. Z.—There is no necessity whatever that the dispenser should be a qualified medical man. We presume that he does not originate the treatment but simply carries out the instructions of the medical officer. The dispensing departments of all the great charities are under the supervision of dispensing chemists, not of medical men.

THE MUSSULMAN DEPUTY.

THE medical members of the French Legislature have so long been the mark of the newspaper wits that of late the jests at their expense have began to pall, but luckily for the Parisian penny-a-liners the appearance upon the Parliamentary scene of Dr. Grenier, the Mussulman deputy, has imparted fresh pungency to their satires. Amongst the elected practitioners several ere this have been remarkable for their peculiarities, but the eccentricity of the latest edition to their number exceeds all that has so far been seen. "What with Catholics and Protestants, Free-thinkers and Jews, the Assembly," says one of the facetious scribes, "was formerly quarrelsome enough and to spare, but now that a fresh apple of discord has been thrown among our legislators in the shape of a pious Mussulman crying, '*La ullah illa ullahi*,' the confusion will be worse confounded than ever." According to another writer the new Deputy for Pontarlier is an ordinary medical practitioner, who has neither given his name to an operation nor invented a new instrument. For his fame he depends entirely upon his religion and his *burnous*. If we may believe the majority of his multitudinous interviewers he is charitable, popular, and beloved of his patients, to say nothing of his celebrity as a member of the Municipality. He declares to all and sundry that it is his mission to preach the Koran and convert the whole French nation to Islam. The comments of the medical journalist who signs himself Dr. Minime are somewhat peculiar. "It is known," says this well-known feuilletonist in the *Journal de Médecine de Paris*, Jan. 3rd, 1897, "that Islamism differs from all other religions in two essential particulars. It sanctions polygamy and constrains its adherents to perform daily ablutions of the face, the hands, and especially of the feet. We need not insist upon the importance of the first of these dogmas. Were polygamy to be made legal the population would increase, many people would be rendered happy, and the number of damsels condemned to single blessedness would diminish to the vanishing point. As for the obligatory performance of ablutions, all medical men and hygienists are aware how advantageous that would be. Can you imagine Frenchmen being obliged to wash their feet night and morning? It would be a transformation—a regeneration of the race. If M. Grenier can bring this to pass he will have done more for hygiene than MM. Monod and A. J. Martin. ... It must be admitted that the religion of Mahomet possesses one marked advantage over ours. The habitual attendance at mosque is compulsory, but no worshipper is allowed to enter with unwashed feet. The day when bathing fountains, similar to those that invariably exist in the ante-chambers of all Mohammedan mosques, are to be found at the doors of our churches a glorious progress will have been realised." The punning journalists say there are rats and spiders in the new deputy's garret (*grenier*); but if Dr. Minime's estimate of the national cleanliness is correct, and Dr. Grenier can succeed in converting his fellow-countrymen to the virtue that stands next to godliness, it should go far towards proving that in his madness there is a good deal of method.

"A WARNING TO MEDICAL MEN."

To the Editors of THE LANCET.

SIRS,—The following facts may be of some use to your readers. A week ago a respectably-dressed man called upon me with the business card of a cork manufacturer and a small parcel which he stated contained samples. I declined to give an order, but at his urgent request lent him 1*s.* to take him home, as he had inadvertently left half a sovereign behind when he came out in the morning, he said. He stated that the name on the business card was that of his deceased father and that the business was the property of himself and his brother. Feeling suspicious I wrote to the manufacturer whose name appeared on the card, and he replied that a person had called upon him ten days previously who represented that he was in a position to do business for him, as he called upon medical men, chemists, &c., and who offered to work on a commission. On these representations he took away some business cards and nothing had been seen of him since. I may mention that the enterprising traveller was very anxious that I should lend him 2*s.* I grieve to say that I have not heard from him since. I leave it to your discretion as to whether it would be wise to warn practitioners in London. I am, Sirs, yours truly,

Jan. 25th, 1897. E. F. O'FERRALL.

*** Mr. O'Ferrall will find that in our issue of Jan. 9th we printed a warning to our readers against this or a similar impostor.—ED L.

TEA AS A REMEDY IN COMA.

DR. J. A. SEWELL of Mentone writes to us calling attention to the value of strong infusions of green tea in the treatment of coma, and reminding us that THE LANCET of July 16th, 1864, contained an article on the subject by his late father, Dr. James A. Sewell, Professor of Practice of Physic at Laval University, Quebec. This article gives details of four successful cases, the most remarkable of which concerned a female patient, thirty years of age, subject for some years to what she called "spasms of the heart," for which she had been treated by various medical men without any effect. "Latterly she had been using Battley's sedative solution with more benefit, but as she had no attack for some months she had discontinued the use of this remedy for about three months. A short time since she was threatened with one of her usual paroxysms, and, dreading it very much, she had recourse at once to Battley's sedative solution in two-drachm doses; these doses she continued at intervals till she had taken two ounces and a half in about eight hours. Shortly after the last dose she was seized with a slight convulsion and almost immediately became comatose. I saw her at 2 A.M., two hours after the convulsion, and found her in a state of profound coma; pupils contracted; respirations two in the minute, and performed with a great effort; pulse very rapid, small, and extremely irregular; face deathly pale, ghastly, cold, and covered with a clammy sweat; extremities also cold. It was evident that she was under the narcotic influence of the enormous dose of opium which she had swallowed and that death was imminent. As three hours had elapsed since she had taken the last dose I conceived it useless to use the stomach-pump; moreover, in the then state of her respiration I believe the use of that instrument would have been at the risk of her life. As she could not swallow an emetic was equally out of the question. I therefore applied extensive sinapisms to the legs and chest, used the cold douche, and applied ice to the head. Having by this time been joined by my friend Dr. Jackson I suggested the propriety (while waiting for a galvanic battery) of administering an injection of a pint of the strongest possible infusion of green tea per anum, which was done at 3.15 A.M. In half an hour there was a visible improvement in the breathing, which was now six in the minute, accompanied by a slight return of colour to the face and a corresponding improvement in the temperature of the cheeks. The coma continued much the same, but, encouraged by the improvement in the other symptoms, the injection of tea, to which some brandy was added, was repeated at four o'clock. During the next hour we had the satisfaction of observing a gradual return of the respiration to its normal condition, with an improved state of the pupils and a corresponding change in the general temperature of the body. She continued to progress favourably, and between five and six o'clock (or about two and a half hours after the first injection), though she could see nothing, she recognised those about her by their voices, and soon after we were enabled to pronounce her out of danger." Dr. Sewell's other three cases included one of alcoholic poisoning in an infant and two of coma in adults from causes not specified. One of the adults, a man aged forty years, was given a tablespoonful of a strong infusion of tea every twenty minutes; after six doses he showed some improvement, and after four additional doses he became maniacal, but "next day he was himself again." Dr. Sewell believed that the introduction of tea as a nervous stimulant was due to the late Dr. Graves, who recommended its use in the coma of fever.

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"TREATMENT OF CHILBLAINS."

To the Editors of THE LANCET.

SIRS,—During such weather as we have lately experienced many of your readers will have had numerous applications for the treatment of chilblains. The following procedure has been practised by me for some winters past with invariable success and prompt and speedy relief in every instance. Having ascertained and localised the focus of each chilblain, whether on hand or foot or elsewhere, resort to the application of the secondary current of a Faradaic battery, increasing the current gradually to high strength. The application must be made direct to the affected part—that is, both poles must be in contact with the affected area, separated only by the area occupied by the chilblain itself. Having first previously dipped the electrodes in saturated sodium chloride solution, maintain the application of the current to each chilblain for from five to fifteen minutes. If the chilblain be watched during the application of the current the tissues will be seen to gradually blanch and the anæmic area due to the pressure of the electrodes will be seen to creep outwards, even though care be taken not to increase the pressure. This blanching begins after about five minutes of the passage of the current. The result of this procedure is as follows: the itching as completely and promptly stopped by the first application, and a second, one or two days afterwards, usually suffices to effect a cure; seldom, if ever, does a third or fourth application become necessary. I have never in a single instance in an extensive trial of this method known it to fail to effect a cure in three or four days, to the great delight and gratitude of the victim. The treatment is handy and rapid, and I feel sure will be of use to many or I would not ask your valuable space for its advocation.

I am, Sirs, yours faithfully,
F. W. FORBES ROSS, M.D. Edin.

Chepstow-place, Bayswater, W., Jan. 28th, 1897.

Enquiry.—It is a matter for mutual agreement entirely. We are of opinion that the best arrangement would be that A and B should each continue to receive the profits of his own practice. If it is a convenience to A to receive all the purchase money three months before the purchase is complete, it is equally a convenience to B to have three months' introduction as a partner. The matters should have been taken into consideration before the price was fixed.

OLD ENGRAVED COPPERPLATES.

WE have received from Mr. Andrew Tuer, Managing Director of The Leadenhall Press, Ltd., 50, Leadenhall-street, E.C., a communication which may be of interest to some of our readers. Mr. Tuer desires to purchase old engraved copperplates of any size, with figures, views, portraits, miscellaneous and fanciful and scrap subjects, and any old engravings of all kinds, plain and coloured, and old scrap-books.

Beta.—The Apothecaries' Hall of Ireland was the corporation to whose examinations our correspondent refers. The Royal College of Physicians of Ireland was not mentioned. The Royal College of Surgeons in Ireland was only alluded to incidentally, because this body and the Apothecaries' Hall of Ireland formerly had a conjoint scheme. This scheme was closed for new entries on June 30th, 1895, students who entered before that date being allowed to complete their examinations.

D. S.—We are not able to make an absolute promise with regard to the insertion of any paper.

TREATMENT OF HAY FEVER AT NEUENAHR.

To the Editors of THE LANCET.

SIRS,—I should be greatly obliged if any of your correspondents would give me information as to the efficacy of the treatment for hay fever as carried out at the above place.

I am, Sirs, yours faithfully,
Jan. 30th, 1897. M.D. CANTAB.

A. B. C.—The cases have been brought to our knowledge. The name of the medical man in the second case, published first, is not given, and probably in both instances the fancied improvement never took place. The rays have been tried also for the resolution of tuberculous deposit, but with no success. We have seen no reliable account of any improvement following the use of the rays upon malignant growths, and it is difficult to see how improvement could logically be expected.

ANTISEPTIC MIDWIFERY.

DR. J. DYSART MCCAW has written referring us to certain papers published in 1884 and 1889. In the first paper he states that he "communicated the then new-fangled Continental methods of using corrosive sublimate in midwifery work" to the medical profession in England through the columns of the *Provincial Medical Journal*. In the second he gave the results of his own practice.

R. D.—The case requires no special treatment whatever. We never recommend individual practitioners. From our correspondent's own showing he is in good and careful hands. Why should he change?

HYPODERMIC MEDICATION.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me (1) which form of hypodermic syringe now in use they find most convenient? (2) whether tabloids for the various solutions make the more reliable form for administering hypodermic injections? and (3) whose tabloids are the best.

I am, Sirs, yours truly,
Feb. 3rd, 1897. REGULAR READER.

Rocket.—1. The information under this head is too scanty. It is essential to know how B came to be absent. When a medical man is engaged to attend a woman, he is entitled to his fee *unless he fails in his portion of the contract.* 2. The prevailing idea of the profession is to the above effect. Our correspondent will perceive that an engagement to attend such cases is of itself a hindering and inconvenient thing, apart from the actual attendance.

THE STANDARD ACCESS "EYE."

WE have received some diagrams from Messrs Mooney and Co. of Manchester illustrating inspection eyes for drains. They are made applicable to straight pipes, bends, junctions, or disconnecting traps; the idea is to supersede the more expensive inspection chamber. The importance of some ready means of access to various points of house drains is universally recognised, and where the expense prohibits the use of the chamber these Standard Access "Eyes" are preferable to the ordinary junction. They allow a rod to be passed either up or down the drain. They are very suitable for use in short branches or for such drains as are at no great depth below the surface of the ground.

A Medical Officer.—Our correspondent's letter will receive attention. He will find his question concerning vaccination answered in our columns already.

M.R.C.P.—No one can consider A. to have acted nicely, but his conduct could not be brought under the notice of the General Medical Council.

F.R.S. Edin. (and others).—The reference should have been to the *North Eastern Daily Gazette.*

Mr. W. G. Thistle is thanked for his letter, which will be inserted.

Justitia has omitted to give his name and address.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 4th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 29	29·96	N.W.	35	33	58	40	32	0·06	Overcast
" 30	29·31	SSW	39	38	43	39	35	0·05	Raining
" 31	29·23	N.E.	37	36	41	38	35	0·17	Overcast
Feb. 1	29·32	S.E.	36	36	41	40	35	0·46	Raining
" 2	29·16	E.	39	39	41	40	36	0·51	Raining
" 3	29·72	S.E.	37	37	46	45	36	0·06	Foggy
" 4	29·81	S.W.	45	44	55	49	37	...	Cloudy

During the week marked copies of the following newspapers have been received:—*East Anglian Weekly Times, Harrogate Advertiser, Batley Reporter, Times of India, Pioneer Mail, Dewsbury Reporter, South Africa, Wolverhampton Chronicle, Devon Gazette, Scotsman, Keighley News, Halifax Courier, Glasgow Evening News, Liverpool Courier, Norfolk Daily Standard, Manchester Guardian, Architect, Pullen's Kent Argus, Northampton Mercury, Somerset County Herald, Tonbridge Telegraph, Builder, Sussex Daily News, Hinckley Times, Kent Messenger, Beverley Guardian, Hereford Times, Yorkshire Post, Hornsea Gazette, Western Express, Bristol Mercury, Doncaster Gazette, Brighouse Echo, Rochester Journal, Leeds Mercury, Leicester Post, Buckingham Express, Daily Chronicle, Newcastle Leader, Worcester Herald, Hampshire Telegraph, Bradford Observer, Birmingham Post, Hull Mail, Windsor Chronicle, Craven Herald, Portsmouth Times, Essex Telegraph, Leyton Independent, Brighton Gazette, Birmingham Daily Gazette, Local Government Chronicle, Sanitary Record, Mining Journal, Educational Times, Hertfordshire Mercury, Reading Mercury, City Press, Weekly Free Press and Aberdeen Herald, Bombay Gazette, Advertiser (Adelaide) Surrey Advertiser, Local Government Journal, Le Courrier de la Presse (Paris), Clifton Chronicle, Eastern Counties Times, Original Llandudno Directory, Poole Herald, Newark Advertiser, Oswestry Advertiser, Walsall Advertiser, Lincoln Gazette, Liverpool Daily Post, Public Health, Derbyshire Times, Richmond and Twickenham Times, Lincolnshire Echo, Isle of Man Times, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. J. E. Allen, Harrogate; Mr. W. T. Atwool, Torquay; Messrs. Arnold and Sons, Lond.; A. R., Lond.; Mons. J. Astier, Paris; Mr. D. E. Anklesana, Maheekantha, India; After-Care Assoc. (The), Lond., Sec. of.

B.—Mr. C. H. W. Bennett, Sandbach; Messrs. Barber and Co., Derby; Bristol Electric Safety Lamp Works, Lond.; Mr. C. F. Bryan, Leicester; Burton-on-Trent Borough, Clerk of; Mr. G. P. Butcher, Plymouth; Dr. J. B. Brierley, Old Trafford; Mr. C. Birchall, Liverpool; Dr. A. G. Bateman, Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Miss A. W. Buckland, Lond.; Mr. W. G. Burcombe, Lincoln; Mrs. S. A. Bennett, Lond.

C.—Dr. J. St. T. Clarke, Leicester; Mr. P. W. Crane, Loughborough; Mr. P. A. Colmer, Yeovil; Dr. A. J. Chalmers, Lond.; Mr. M. Charteris, Glasgow; Mr. A. H. Cheatle, Lond.; Chelsea Hosp. for Women; C. H., Lond.; Messrs. G. Curling, Wyman, and Co., Lond.; Messrs. W. Cooper, Ltd., Lond.; Messrs. Cassell and Co., Lond.; Messrs. Callard and Co., Lond.; Mr. E. Chilcott, Lond.; Mr. D. D. Cottrell, North Cohocton, N.Y., U.S.A.; Cancer Hosp., Lond.; Mr. E. B. Chamberlain, Minehead.

D.—Mr. H. Dunderdale, Blackpool; Dr. H. J. Davis, Lond.; Mr. H. R. Davies, Lond.; Messrs. Dulan and Co., Lond.; Mr. S. R. Dew, Bangor; *Die Allgemeine Medicinische Central-Zeitung*, Berlin, Editor of.

E.—Mr. E. Edwards, Lond.; Messrs. Elliott, Son, and Boyton, Lond.

F.—Mr. W. Falla, Jersey; Mr. R. Fletcher, Streatham-park; Mr. A. Frost, Lond.; Dr. T. Fisher, Bristol.

G.—Professor Gairdner, Glasg.; Dr. J. Gilroy, Waterbeck, Ecclefechan, N.B.; Mr. A. H. Gilford, Reading; Dr. J. F. R. Gairdner, Glasg.; Mr. E. T. Goode, Doncaster, Yorks; Capt. A. M. Gallet, Lond.; Mr. J. Gillingham, Chard; Messrs. Gordon and Gotch, Lond.; Mr. A. Gros, Lond.; Messrs. W. Garland-Smith and Drake, Lond.

H.—Dr. W. Hatton, Edin.; Dr. Hawkes, Naples; Hospital Reform Assn., Cardiff, Hon. Sec. of; Mr. H. E. Hicks, Bradford; Messrs. C. J. Hewlett and Son, Lond.; Mr. J. Halliwell, Winchcombe; Surg.-Capt. H. Herbert, Bombay; Miss E. A. Huntley, M.D., Simla, India; Dr. G. Heath, Birmingham; Mr. G. E. Henderson, Lond.; Mr. J. Heywood, Manchester.

I.—Institute of Chemistry of Gt. Britain and Ireland, Lond., Registrar of; Messrs. A. C. Irwin and Co., Lond.; Iowa State Medical Society, Des Moines, Iowa, U.S.A., Sec. of.

J.—Dr. A. H. Jeremy, Jamaica; Dr. W. E. Jameson, Rochdale; Dr. Prosser James, Lond.; Messrs. J. F. Jones and Co., Paris; Jenner Inst. for Calf Lymph, Battersea.

K.—Mr. R. L. Knaggs, Leeds; Messrs. B. Keith and Co., New York, U.S.A.; K. L., Lond.

L.—Mr. H. K. Lewis, Lond.; Dr. J. A. Lowson, Forfar; Locum Tenens, Leicester; Messrs. Lee and Nightingale, Liverpool; Mr. E. G. Lumsden, Wolverhampton; Mr. T. Laffan, Cashel, Ireland; Mr. J. H. Lynn, Lond.

M.—Mr. J. McCreery, Ivybridge; Messrs. Macduff and Co., Lond.; Mr. E. Mogg, Bridgwater; Dr. MacDonald, Dorchester; Medical, Halifax; Messrs. J. Moore and Son, Lond.; Dr. J. D. McCaw, Lond.; *Die Münchener Medicinische Wochenschrift*, Editor of; Mr. W. F. MacDonogh, Twickenham; Dr. R. Moir, St. Andrews, N.B.; *Middlesex County Times*, Lond.; Medicus, Lond.; Dr. J. C. McLeod, Conception Bay, Newfoundland; Dr. A. Mills, Brussels.

N.—Mr. W. G. Nash, Bedford; Newcastle-on-Tyne Clinical Society, Hon. Sec. of.

O.—Dr. J. Oliver, Lond.; Mr. A. J. Oldman, Llandudno; Messrs. Oliver and Boyd, Edin.; Occiput, Lond.

P.—Dr. S. Phillips, Lond.; Mr. J. Pilkington, Blackburn; Mr. L. W. Powell, Kingswood; Dr. J. B. Pettigrew, St. Andrews, N.B.; Plymouth Medical Society, Hon. Sec. of; Parish of St. Giles, Camberwell, Clerk of.

R.—Dr. R. R. Rentoul, Liverpool; Mr. S. H. Rowley, Swadlincote; Royal Hants County Hosp., Winchester, Sec. of; Royal Institution, Lond., Sec. of; Dr. F. W. F. Ross, Lond; Royal Academy of Medicine in Ireland, Dublin, General Sec. of; Messrs. Read and Co., Bristol; Mr. A. W. M. Robson, Leeds.

S.—Mr. Y. Saneoshi, Tokyo, Japan; Prof. C. S. Sherrington, Lond.; Scot, Lond.; Messrs. Smith, Elder, and Co., Lond.; Salop, Lond.; Messrs. Sharland and Co., Lond.; St. Mary's Day Nursery and Hosp. for Sick Children, Plaistow, Sec. of; Scotus Nottingham; Messrs. Schenker and Co., Budapest; Sir James Sawyer, Birmingham; Dr. R. Hill Shaw, Brighton; South Devon and East Cornwall Hosp., Plymouth, House Steward of; Sanitary Wood Wool Co., Lond.; Sister, Lond.; Mr. T. S. Sutton, Bishop's Castle; Sirmoor State, Nahan, India, Med. Officer of; Messrs. J. P. Segg and Co., Lond.; Dr. J. E. Squire, Lond.; Dr. T. E. Sandall, Alford; Dr. J. F. Smith, Lond.; Dr. D. Stanley, Birmingham; Mr. H. A. Scriven, Lond.; Dr. G. M. Sydenham, Gibraltar; Mr. H. Sell, Lond.; Stockport Infirmary, Sec. of; Dr. J. G. Shea, Chesterfield.

T.—Dr. F. S. Toogood, Lewisham; Mons. J. Tétu, Lond.; Mr. W. T. Thistle, Lond.; Mr. W. P. Thornton, Canterbury.

V.—Mr. J. Vickers, Lond.; Victory Cycle Manufacturing Syndicate, Lond., Managing Director of.

W.—Mr. J. Walker, Stenhousemuir; Mr. W. Roger Williams, Preston; Mr. W. A. Welman, Bridlington Quay; Herr T. Weiss, Vienna; Mr. H. B. Wilkinson, Southampton; Mr. J. C. Wells, Lond.; Wigmore Nurses' Inst., Lond., Supt. of; Dr. G. B. M. White, Lond.; Dr. J. R. Williams, Penmaenmawr; Mr. J. P. Waddy, Rosseau, Ontario, Canada; Dr. F. G. Wallace, Lond.; Westminster Hosp., Lond., Sec. of; Messrs. G. Waterston and Sons, Edin.; Messrs. Wilcox and Co., Lond.

Y.—Yorkshire College, Leeds, Registrar of.

Z.—Messrs. A. and J. Zimmerman, Birmingham.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. J. Adam, West Malling; Anthrax, Lond.; Mr. T. H. Agnew, Manchester; Ashwood House, Kingswinford, Proprietor of; Aorta, Lond.; Dr. W. H. Allen, Derby; Messrs. Allen and Hanburys, Lond.; Ajax, Lond.; Apollinaris Co, Lond.; A., Lond.

B.—Mr. A. Bird, Dudley; Dr. Bombardieri, Canlonia, Italy; Dr. B. Bramwell, Edin.; Mr. L. A. Bidwell, Lond.; Mr. E. Baker, Birmingham; Miss Ballard, Barnet; Mr. P. A. Bradshaw-Isherwood, Ramsgate; Blackburn and East Lancs. Infirmary, Sec. of; Mr. C. Beavis, Twickenham; Dr. G. P. Bate, Lond.; Mrs. Bloxam, Eltham; Dr. T. Buzzard, Lond.; Mons. O. Berthier, Paris; Mr. H. S. Ballachey, Chelford; Mr. H. K. Birley, Chorley.

C.—Mr. F. W. Clarke, Manchester; Messrs. A. Cohen and Co., Lond.; Charles, Lond.; Mr. D. J. Carroll, Clonmel; Mr. W. Corkey, Glenanne; Mr. G. W. Corser-Price, Stafford; Mr. C. Cade, Lond.

D.—Mr. E. Du Cane, Lamberhurst; Devonshire Hosp., Buxton, Sec. of; Messrs. Dixon and Linnell, Manchester; Durham, Newcastle-on-Tyne; Mr. A. Doran, Lond.

E.—Exeter City Asylum, Digbys, Clerk of; E. M., Lond.; Elderly, Lond.

F.—Mr. A. G. Fleming, Partridge Green; Forster Green Hosp. for Consumption, Belfast, Hon. Sec. of; Messrs. Fells and Son, Ramsgate; Dr. J. Findlay, Penpont.

G.—Prof. A. di Giacomo, Napoli, Italy; General Apothecaries' Co., Lond.; Grosvenor, Lond.; Mr. W. F. Gardiner, Sydenham; Dr. A. S. Gubb, Lond.; Mr. J. George, Lond.; Dr. A. S. Grünbaum, Liverpool.

H.—Mr. T. F. Hale, Barrow Hill; Mr. C. W. Hemming, Abergwynfi; Hastings Hosp., Sec. of; H. S. W., Ashton; House-Surg, Lond; Dr. G. Herschell, Lond.; High Shot House, Twickenham, Proprietor of; Dr. V. Harley, Lond.; Mr. W. C. Henley, Dartmouth; Dr. E. Hutchinson, Bridlington; Hill, Lond; H. R., Lond.; Messrs. Hill and Hoggan, Glasg.; Mr. R. Harrison, Lond.

J.—Mr. H. S. Jackson, Lond.; Mr. D. J. Jones, Blaenavon; J. K., Lond.; J. L. N., Lond.; Joint Counties' Asylum, Carmarthen, Med. Supt. of.

K.—Dr. Kingdon, Birmingham; Dr. E. Kingscote, Lond.

L.—Dr. G. Lane, Douglas, I.O.M.; Mr. J. H. Lamb, Crediton; Mr. A. B. Long, East Grinstead; Sir H. D. Littlejohn, M.D.Edin.; Lux, Lond.; Mr. W. Latham, Ashton-in-Makerfield.

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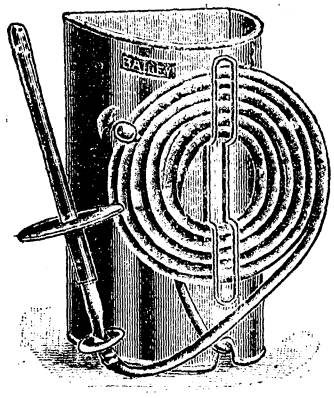
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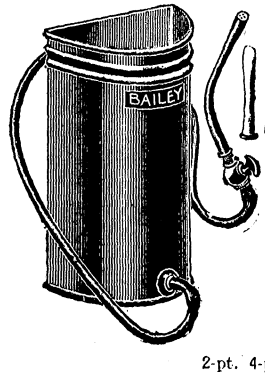
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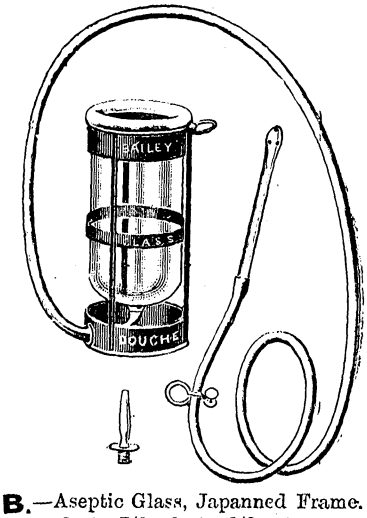


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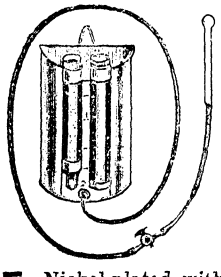


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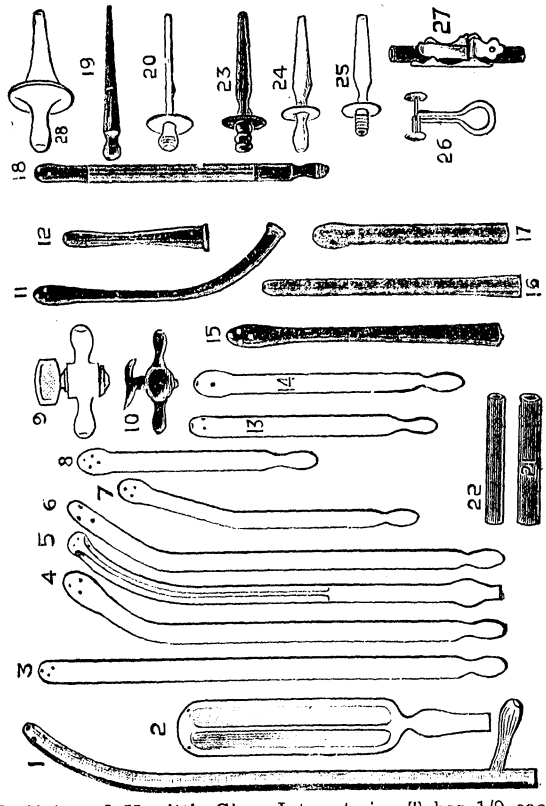
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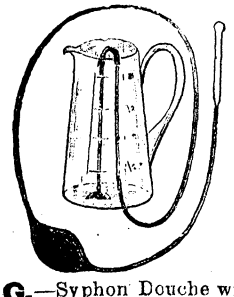
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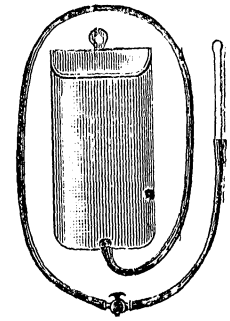
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ABSTRACT OF

The Hunterian Lectures

ON

THE PATHOLOGY AND SURGERY OF INTUSSUSCEPTION.

Delivered at the Royal College of Surgeons of England,

BY D'ARCY POWER, M.A., M.B. OXON., F.R.C.S. ENG.,

HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY; SURGEON TO THE VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.

LECTURE I.

Delivered on Feb. 8th.

[The full text of this lecture will be published in the forthcoming number of the Journal of Pathology and Bacteriology. We print a brief summary of it to form an introduction to the second and third lectures.]

SOME POINTS IN THE MINUTE ANATOMY OF INTUSSUSCEPTION.

MR. D'ARCY POWER began his course of lectures with an apology for selecting so time-worn a subject as intussusception, but he justified his choice by saying that it was one which had occupied the thoughts of John Hunter, the great master in pathology, after whom the chair he occupied was named. Very little seemed to be known about the minute anatomical changes occurring in intussusception, though the various museums attached to the medical schools and hospitals throughout the country contained an abundance of material for its study. The earliest changes were shown in sections from the intestine of a child, aged eight months, upon whom he had performed an operation successfully thirteen and a half hours after the appearance of the first symptoms of intussusception. The child died a few days later with symptoms of paralysis of the bowel, but without peritonitis. The mucous membrane of the invaginated colon was healthy except for an increased number of goblet cells in its crypts of Lieberkühn. Much blood had been extravasated into the sub-mucous tissue, though no clotting had occurred. The circular layer of muscle was healthy, but the longitudinal layer was œdematous and was separated from the serous coat by many large venous and lymphatic channels. The next section was taken from an experimental invagination made in a cat a week previously. The histological changes were again more marked in the mucous and sub-mucous layers than in the muscular coat, but the extravasation of blood was chiefly in the mucous membrane, whilst the swelling of the sub-mucous tissue was due to œdema. The sections from the experimental invagination in a cat were compared with a spontaneous intussusception which had killed a dog. The extravasation of blood in the dog's intestine had done serious injury to the mucous membrane and to the sub-mucous tissue, but the chief alteration in its structure had taken place in the muscular coat, where the circular fibres were separated by the œdema and had degenerated. Some of the later changes in intussusception were illustrated by sections taken from John Hunter's own specimen, which was particularly well preserved, because at the time the patient died spirit was so cheap and strong that its retailers used to advertise that their customers might be "drunk for a penny, dead drunk for twopence, and straw to lie upon for nothing." Hunter's specimen, which led him to write his celebrated paper upon "Introsusception," was taken from the body of a child who died sixty hours after the first symptoms of illness had been recognised. Microscopical examination showed that the mucous membrane of the intestine was healthy, but that parts of its surface were covered with blood clot. The whole of the sub-mucous tissue was engorged and œdematous. The circular layer of muscle was more injured than the longitudinal layer, whilst the mesocæcum was thickened by bands of fibrin. A lymphatic gland which had been involved in the invagination was congested.

The latest changes occurring in intussusception were shown in sections taken through the ilea of children in whom the sub-mucous and serous coats of the intestine were suppurating whilst the mucous and muscular layers were comparatively healthy. The changes which take place in the intestines of adults as a result of intussusception were next shown to be identical in some points with those occurring in the more delicate tissues of children, though in other points they differed widely. The frequent association of adult intussusception with polypi and other growths in the intestinal canal led to the changes being of a more chronic nature. The villi of the mucous membrane, therefore, became converted into mere tags of connective tissue, but the extravasation of blood into the sub-mucous tissue remained a marked feature in the invaginated bowel. In a case of chronic intussusception taken from the body of a man, aged twenty-seven years, the sub-mucous and muscular layers had become converted into dense fibrous tissue, whilst the villi were congested, but had not undergone any mummifying change into connective tissue. Sections from portions of bowel which had been exfoliated with and without the recovery of the patient were then exhibited. It appeared that the intestine occasionally underwent a sclerosing process before it was cast off, but that more frequently it had undergone so much tryptic digestion as to leave only a skeleton of connective tissue (reticulin) which was still sufficiently coherent to be passed as a complete cylinder. An examination of the scarred intestine at the point of separation showed that the mucous membrane repaired itself, and that the sub-mucous tissue became continuous with the serous coat by layers of scar tissue which ran through the interrupted muscular coat. The exact method of repair in these cases required more careful examination, for the specimens which had been examined were not sufficiently well preserved to allow a satisfactory microscopical examination to be made.

The rarer forms of intussusception were then considered, and sections were shown from a case of descending and retrograde intussusception occurring in the same patient. It was clear that in this instance the descending or ordinary form of invagination was the primary one, whilst the retrograde invagination had been produced much later, though it was not of the "agonic" type. Sections were then shown from a polypoid tumour associated with an intussusception occurring in a woman. The tumour proved to be a sarcoma, but the intestinal villi contained numerous oval bodies which seemed to be thrombosed vessels. The thrombosis was limited to the villi, for the bloodvessels in the deeper part of the mucous membrane and in the sub-mucous tissue contained ordinary post-mortem clots. Mr. D'Arcy Power concluded his lecture, which was illustrated throughout with microphotographs, by an allusion to Dr. Vierthuff's and Dr. Sutherland's cases of intussusception occurring in the course of attacks of purpura. He also pointed out the various ways in which a Meckel's diverticulum, whether it was open or closed, might cause the rarest forms of intussusception; and he showed a specimen in which an obscure case of intussusception in an old person was proved by microscopic examination to be associated with carcinoma, that most usual cause of invagination in late adult life.

LECTURE II.

Delivered on Feb. 10th.

THE PATHOLOGY OF INTUSSUSCEPTION.

IN the former lecture we ascertained some of the minute structural changes which take place in invaginated portions of the intestine, and we were then on the firm ground of fact. In the present lecture I propose to consider some points in the pathology of intussusception, and we shall find that we are almost at once driven to theorise. Every advance in pathology must be made by combining the results obtained from a consideration of anatomical, physiological, and clinical facts, for the science is the mistress of all these its handmaidens. It will, therefore, be necessary to follow intussusception along these lines, and afterwards to draw certain conclusions from the premises thus obtained.

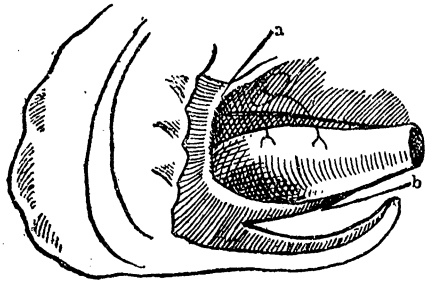
Anatomical.—It behoves us to make a careful anatomical examination of the ileo-cæcal portion of the alimentary canal, because from 40 to 60 per cent. of all the recorded cases of intussusception are said to occur at this part of the intestine. My work, therefore, has been limited to the ileo-colic angle, and I have been very greatly assisted by Dr. Pickard and Dr. Hayne, successively the senior resident medical officers at the Victoria Hospital for Children. These gentlemen have given me many opportunities to examine the ileo-cæcal region

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in the bodies of children from a few days old up to the age of fifteen years.

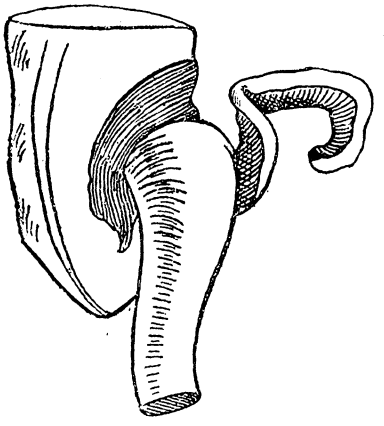
[The result of these observations were set out in a table, which showed that, of the forty-four cases examined, two were fœtuses near full term, and forty-two cases were children whose ages ranged from five days to fifteen and a half years. In each case the length of the mesentery was recorded and also the diameters of the ileum and colon, and the breadth of the ileo-cæcal valve; the arrangement of the peritoneal folds and mesenteric glands was also described.]

FIG. 1.



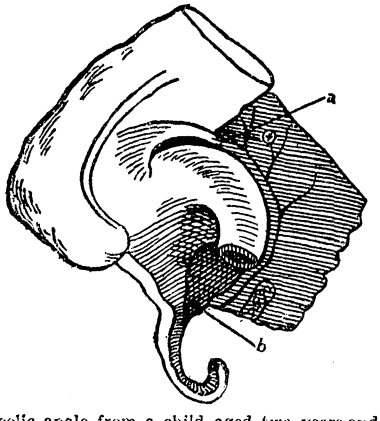
A simple but complete form of ileo-colic angle from a girl, aged eleven years. The ileo-colic fossa is well formed and the axis of the ileum is almost horizontal. *a*, The ileo-colic fold. *b*, The ileo-cæcal fold.

FIG. 2.



The ileo-colic angle of a child, aged twenty-three months. The ileo-colic fossa is absent and the axis of the ileum is directed upwards to end in the large intestine.

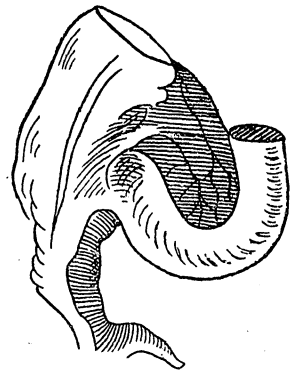
FIG. 3.



The ileo-colic angle from a child, aged two years and eight months. The ileo-colic fossa, *a*, is incomplete, but there is a very large and deep ileo-cæcal fossa. *b*, The axis of the ileum is concave downwards.

(*a*) *The mesentery.*—The length of the mesentery is a matter of interest in considering the pathology of intussusception, because the size of the invagination depends materially upon the length of the mesentery or upon its extensibility. The length of the mesentery is singularly constant in all the specimens measured; and as the age of the individuals varied considerably this means that its proportion to the length of the body was much greater in infants than in older children. The intestines should, therefore, be

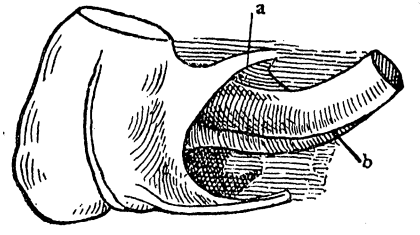
FIG. 4.



The ileo-colic angle of a child, aged fifteen weeks. The ileo-colic fossa is incomplete and the axis of the ileum is convex downwards.

capable of a greater range of movement in children than in adults. This result is confirmed by the practical experience of all surgeons who have had to open the abdomen for the relief of intussusception in children, for the intestines are nearly always so freely moveable that it is easy to bring the tumour into the wound. The mesenteric lymphatic glands

FIG. 5.

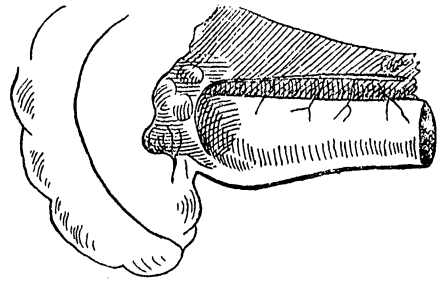


The ileo-colic angle of a girl, aged fourteen years. The ileo-colic fold, *a*, and the ileo-cæcal fold, *b*, are unusually well developed. The axis of the ileum is nearly horizontal.

vary greatly in their size and distribution. They are discrete and seed-like in many specimens, and in others they are aggregated to form a mass of lymphoid tissue.

b. The ileo-colic angle.—The point of union of the small intestine with the large intestine next engaged my attention. The axis of the ileum at this point was horizontal (Fig. 1) in

FIG. 6.



The ileo-colic angle of a child, aged eight weeks. The ileo-colic fossa is incomplete, but its roof is studded and thickened with lymphatic glands. The axis of the ileum is horizontal.

20 cases; in 14 it sloped upwards to open into the large intestine (Fig. 2); in 3 it was concave downwards (Fig. 3), and in one it was convex downwards (Fig. 4). The actual line of union of the ileum with the colon is hidden both in front and behind by folds of the peritoneum, the arrangement of which

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has been made familiar to us by the works of Mr. Treves,[1] and of my friends Dr. Rolleston and Mr. Lockwood[2] in England, and of Dr. Perignon[3] in France. The folds give rise to pouches the extent and complexity of which vary in each specimen, but as a rule those in front of the ileo-colic junction are simpler than those behind and below it. The ileo-colic fossa resolves itself into two great types, the complete (Fig. 1) and the incomplete (Fig. 6), whilst in some cases (Fig. 2) it is entirely absent. The complete fossa (Figs. 1 and 5), which is usually coexistent with the simpler types of cæcum, is that in which the ileo-colic fold stretches in a wide sweep from the ileo-colic mesentery across the ileum to form the mesentery of the appendix. This fold is attached to the cæcum externally, and terminates internally in a crescentic margin which forms the mouth of the ileo-colic fossa. This border is sometimes thick and rounded (Figs. 1 and 6), at other times thin and membranous (Fig. 5), and the ileo-colic fold may often contain one or more lymphatic glands (Fig. 6). The lower wall of the pouch is formed by the ileo-cæcal fold in the most simple instances. This fold is attached for a varying distance along the lower border of the ileum, but, like all the other structures in this region, it varies greatly in its development and is often wholly absent. Numerous modifications of this type are seen (Figs. 1 and 5), but they agree in having a pouch of greater or less depth which involves the whole width of the ileum. The incomplete form of pouch (Figs. 3, 4, and 6) occurs when the ileo-colic fold terminates on the anterior surface of the ileum. When there is no pouch (Fig. 2) the ileo-colic fold is attached to the ileum in its whole extent. The peritoneal folds lying behind the ileo-cæcal junction are much larger and more complex than that situated in front of it, and the fossæ formed by them vary so greatly in width, depth, and structure that I have no time at present to describe them adequately. It must suffice to say that they are divisible broadly into the ileo-cæcal (Fig. 3, *b*), which runs upwards behind the ileo-colic junction and the sub-cæcal fossæ, which are situated behind the cæcum, and are less constant than either the ileo-colic or the ileo-cæcal pouches. The course run by an ileo-cæcal intussusception will depend materially upon the arrangement of these peritoneal folds and their fossæ. When the folds are simple the fossæ are small, and if lymphatic glands are absent the case is probably only a simple invagination which can easily be reduced by irrigation of the bowel in its earlier stages, or, if it be left unreduced, will run a chronic course. When the peritoneal folds are complex the fossæ are large, and if the lymphatic glands are numerous so much tissue is necessarily invaginated in addition to the intestine that if early strangulation does not occur extensive adhesions of the puckered mesentery must necessarily be formed which will soon cause the intussusception to become irreducible. Such cases will, therefore, run an acute course.

c. Relative diameters of ileum and colon.—The width of the large intestine at birth is only a few millimetres greater than that of the small intestine, and before birth its diameter is usually the same or even a little less; at the age of fifteen years it is from two and a half to three times as large. The colon begins to grow in girth directly after birth, as might be expected when we remember that its function is to store up and consolidate the refuse food materials until they can be cast out of the body at convenient times and places. A general review of the figures shows that whilst the ileum only rarely doubles its diameter, if eleven or twelve millimetres be assumed to be a fair average width at birth, the large intestine not only often doubles its size, but may even treble or quadruple it. During the early months of life, therefore, there is a rapidly increasing disproportion between the transverse diameters of the large and small intestines.

d. The ileo-cæcal valve.—The last point of anatomical interest to which I directed my attention was the ileo-cæcal valve. The description found in the ordinary text-books of anatomy is substantially correct in a large number of cases, but in many the arrangement differs. The orifice is often oval or circular in the hardened specimens instead of being horizontal, and a part of the valve is frequently so defective that the opening appears to be horseshoe-shaped when it is seen from the cæcum. The ileum nearly always projected for from four to seven millimetres into the lumen of the intestine, and in a few cases the mucous membrane of the ileum was distinctly prolapsed into the large intestine.

Physiological.—Let us turn now from the anatomical to the purely physiological side of the question as to the cause of intussusception. Observation tells us that the peristaltic wave passing along the small intestine ceases at the ileo-cæcal valve and that a new wave is developed there by the contraction of the coats of the large intestine. It is quite possible, therefore, for the end of the ileum to be contracted or even to be absolutely quiescent at the instant when the colon is contracting energetically. The experimental work of Dr. Leubuscher,[4] elaborated and carried to a more successful issue by Professor Nothnagel,[5] has taught us that intussusception is due to one piece of gut swallowing, so to speak, a neighbouring piece, which has become constricted in consequence of local or other causes producing a vigorous contraction of its circular layer of muscle. The important part which is played by the muscular coat of the intestine in producing an intussusception is well seen in two specimens[6] which came from the museum of Mr. George Langstaff. They were taken from dogs which had been dosed with turpith mineral for the cure of the distemper. The signs of intussusception began almost directly after they had taken the drug. The first dog lived two days and the second dog three days. These specimens led me to experiment with turpith mineral to discover whether the intussusceptions were produced by it or were merely of accidental occurrence, and they formed the beginning of a series of experiments upon the effects of increasing the peristalsis of the intestines.

[The lecturer described some experiments made by administering turpith mineral and other drugs to cats, rabbits, and guinea-pigs. In many cases a series of localised contractions of the bowel occurred, separated by relaxed portions, an arrangement very favourable to the formation of intussusceptions. An important point brought out by one of the experiments was that the force exercised by peristalsis is extremely slight. He continued:—]

The feeble force of peristalsis has also been noticed by Professor Cash[7] of Aberdeen, who says that in dogs a weight of from eight to ten grams is sufficient to prevent a well-developed peristaltic wave from executing its object, whilst the traction exercised by a weight of five grams produced much hindrance and caused spasmodic contraction of a propulsive character, which created most distinct discomfort or colic.

Pathological.—A considerable number of the cases of intussusception are merely invaginations of one piece of bowel into another, which is usually of larger calibre, and if there is a great disproportion in width spontaneous reduction may take place, as in a case recorded by Mr. Thomas,[8] occurring in a boy aged sixteen months, in whom he had distinctly felt the invaginated intestine per rectum. When the disproportion between the diameters of the enshcathed and ensheathing intestine is less marked or when much additional tissue is invaginated adhesions are formed, the intussusception becomes irreducible, and in process of time secondary changes take place in the intestine, which lead to strangulation, to gangrene, or to ulceration of the neck of the bowel.

1. *Strangulation.*—Strangulation in intussusception is more often chronic than acute. It is of the true or elastic variety when it occurs in intussusception—that is to say, the invaginated bowel is enclosed in a lumen which is either no bigger than itself, as in the enteric form, or only slightly larger, as in the ileo-cæcal variety; whilst in the ileo-colic type, where the ileum passes through the ileo-cæcal valve, the valve may form an additional constricting agent. During the actual invagination the lumen of the ensheathing intestine must be dilated to its utmost extent. The wall of this portion of the intestine then recoils and exercises sufficient pressure upon the vessels of the mesentery to cause a marked congestion in the tissues of the intussusceptum. The congestion leads to a stagnation in the blood flow, and so to a cellular infiltration, which is best marked at the two points where the vessels are doubled upon themselves—that is to say, at the end of the intussusceptum and at the point where the pressure is exercised, which is the neck.

2. *Gangrene.*—The inflammatory changes which result

[1] The Anatomy of the Intestinal Canal and Peritoneum in Man, 1885.
[2] Journal of Anatomy and Physiology, vol. xxvi., 1892, p. 130.
[3] Thèse de Paris, 1892, No. 4.
[4] Virchow's Archiv, vol. lxxxv, 1881, p. 83.
[5] Beiträge zur Physiologie und Pathologie des Darmes, Berlin, 1884, p. 42; Specielle Pathologie und Therapie, Band xvii., Theil ii., 1896, p. 297.
[6] Museum of the Royal College of Surgeons of England, Nos. 2725 and 2726.
[7] Proceedings of the Royal Society, No. 247, 1886, p. 230.
[8] THE LANCET, Dec. 25th, 1886, p. 1219.

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from a continuance of these conditions lead to gangrene, which may spread slowly from the apex towards the neck of the invaginated piece of gut, though in many cases it appears early and may involve considerable portions of the invaginated bowel. Gangrene, however, is less common in intussusception than it is in hernia, and there are several reasons for this difference between the two conditions which have otherwise many pathological affinities. Intussusception is essentially an affection of children, and in children gangrene of any part is rare, even after the most serious injuries, partly because their vascular system is so healthy that it adapts itself readily to the most unfavourable conditions, partly because the blood-supply to all growing parts is very abundant, and partly because all young tissues are soft and yielding. In an intussusception, therefore, the bowel passes through an elastic ring which, even when it is inflamed, never offers a resistance in any way comparable with that exercised by the rigid fibrous structures which compress a hernia or an internal strangulation. It is less likely than hernia to set up general peritonitis, because the gangrenous portion is enclosed in a sheath of healthy intestine, for the gangrene in chronic cases nearly always begins in the intussusceptum, though it may afterwards involve the intussuscipiens.

3. *Ulceration.*—The occurrence of ulceration or of necrosis of the intussuscipiens is a much greater danger than gangrene of the intussusceptum, but it is fortunately somewhat less common. It is, however, met with at either end of the intussusception, as well as in the bowel above and below that portion which has been invaginated. We do not yet know the exact course taken by the micro-organisms as they pass through the wall of the bowel, and though I have been engaged in an endeavour to trace their passage, my results are not yet sufficiently advanced to warrant any definite statement, but there seems to be no doubt that micro-organisms begin to traverse the intestinal wall when a loop of bowel has been constricted for a period of from four to forty-eight hours, and that the more completely the blood supply is arrested the more rapidly do they pass. Suppurative peritonitis is not usually set up in anything like so short a space of time, and when it does occur it is more often associated with rupture of the gut from the progress of ulceration due to accidental or additional causes than to the simple extension of suppurative processes through the wall of the intestine. The experiments of Grawitz[9] and of Halstead[10] have shown that even pure cultivations of pyogenic organisms as well as suppurating tissues and particles of fæces do not necessarily cause suppuration when they are introduced directly into a healthy peritoneal cavity. Accessory conditions must be present to enable pus-producing substances to set up a purulent peritonitis, and these accessory conditions seem to have in common the power of preventing absorption or removal of the pyogenic substances from the peritoneal cavity.

Clinical factors.—There are good reasons to believe that intussusception is associated with peculiarities of structure and function in the alimentary canal. In a certain proportion of cases intussusception has occurred in more than one member of a family[11] and in children of parents who have themselves suffered from conditions associated with organic or functional disturbances of the bowels. A remarkable instance of this came under the notice of Mr. Pick[12] in the case of a child, aged fifteen months, who was admitted under his care into St. George's Hospital for the relief of an intussusception. The grandfather and the father of the child had been operated upon for strangulated hernia, and one brother had died from strangulated hernia. Many cases of intussusception have been cured by injection or inflation of the bowel through the rectum, even when the apex of the intussuscepted gut has protruded beyond the anus, and in a few cases such advanced intussusceptions have receded spontaneously, whilst in others when the abdomen has been opened the surgeon[13] has rejoiced to find that the invaginated bowel unfolded itself spontaneously as soon as the merest touch had released the constriction at its neck.

[9] Charité Annalen, xi.
[10] American Journal of Medical Sciences, No. 94, 1887, pp. 437 and 451.
[11] Hutchinson: Transactions of the Medico-Chirurgical Society, vol. lix., 1876, p. 99. Bryant: Harveian Lectures, p. 12, case 17.
[12] THE LANCET, June 13th, 1891, p. 1312.
[13] Marsh, Transactions of the Medico-Chirurgical Society, vol. lix., 1876, p. 81; Fagge and Howse, ibid., vol. lix., 1876, p. 85; and Shepherd, THE LANCET, Nov. 19th, 1892, p. 1155.

CONCLUSIONS.

The evidence derived from anatomical, physiological, pathological, and clinical data renders it legitimate to assert that ileo-cæcal intussusceptions occur when the colon is considerably larger than the ileum, and is so unduly moveable that it readily allows itself to become invaginated when once the process has begun. This variety of intussusception is essentially an affection of childhood, and such an undue increase in the width of the colon implies either a congenital abnormality or an unduly rapid growth, for at birth the diameter of the large intestine is practically the same as that of the ileum. Such a rapid increase in the width of the large intestine may, perhaps, in some instances, render the ileo cæcal valve less competent to guard the end of the ileum, because the valve is not capable of very rapid growth if it is to be firm. Unduly rapid growth of the large intestine may thus allow the end of the ileum to become prolapsed into the colon, and under suitable conditions such a prolapse may serve as the starting point of an intussusception. Though anatomical peculiarities are important factors in the production of an intussusception, the physiological factors are no less important, for they apply in all probability to every form of invagination, whether it is of the enteric variety, the ileo-cæcal, or the colic. The physiological factor is much less easy to specify, for it is almost certainly an individual peculiarity. It may be stated broadly, however, that as regards the ileo-cæcal portion of the intestine the increased mobility, coupled with the unduly rapid growth in the width of the large intestine, is probably associated with increased and irregular peristaltic movements of the large intestine. The cause of intussusception is obscure, but clinical evidence shows that it may be produced mechanically if suitable anatomical and physiological conditions be present. Amongst such mechanical causes are direct injury to the abdomen,[14] sudden and violent muscular efforts,[15] gymnastic movements,[16] jolting or dandling,[17] paroxysmal coughing as in whooping-cough,[18] or it may even be the reward of greediness, as in the cases recorded by Max Bauer[19] and Leichtenstern,[20] in which men were suddenly seized with symptoms of intussusception shortly after eating a quantity of cherries—stones and all. It is, indeed, no matter of surprise that such causes should produce an intussusception, for any of them would lead to a sudden and limited constriction of the intestine associated with an active peristaltic movement of a neighbouring portion sufficient to draw the receiving layer of the gut over the contracted portion, which then becomes the apex of the intussusceptum. As soon as the intussusception has been started the anatomical peculiarities again become of paramount importance, for they determine the character of the intussusception. In the ileo-cæcal forms a wide colon with few and simple ileo-colic folds, devoid of glands, will allow the intussusception to run a chronic course even though the amount of bowel invaginated is very great; whilst complex fossæ, with numerous glands at the ileo-colic angle and prolongations of mesentery along the end of the ileum, will no doubt so far steady the ileum as to render its intussusception less likely, though should it occur the additional amount of tissue invaginated will render the impaction peculiarly tight, so that if gangrene is not produced at once early adhesions will be formed and the intussusception will soon become irreducible.

[14] Guy's Hospital Reports, 1868, vol. ix., p. 290; Transactions of the Clinical Society, vol. xvi., p. 64; THE LANCET, Aug. 18th, 1888, p. 315; and Aug. 27th, 1892, p. 482.
[15] THE LANCET, Aug. 18th, 1888, p. 315.
[16] THE LANCET, March 25th, 1893, p. 651.
[17] New York Medical Record, vol. xlix., 1896, p. 73, case xiv.
[18] Transactions of the Clinical Society, vol. xxii., 1889, p. 282.
[19] Berliner Klinische Wochenschrift, No. 33, 1892, p. 817.
[20] Deutsche Archiv für Klinische Medicin, xii, 1874, p. 381.

FREEMASONRY: THE RAHERE LODGE, No. 2546.—A meeting of this lodge was held at Frascati's Restaurant on Feb. 9th, Bro. Alfred Cooper, F.R.C.S. Eng., W.M., in the chair. Bros. Horton-Smith, Owen Lankester, Gow, Laming Evans, and Sloane were admitted to the Third Degree in Freemasonry, Bro. Worthington was admitted to the Second Degree, and Mr. Howard Marshall was initiated into Masonry. The brethren afterwards dined together. A sum of ten guineas was voted from the lodge funds to the Royal Medical Benevolent College and one guinea to the Guy's Hospital Re-endowment Fund.

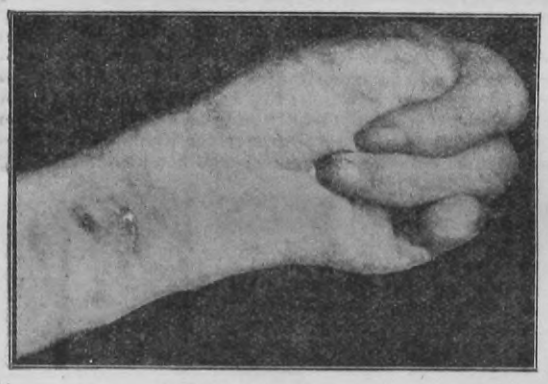
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TWO CASES OF DEFORMITY OF THE HAND RELIEVED BY OPERATION.[1]

BY NOBLE SMITH, F.R.C.S. EDIN.,
SURGEON TO THE CITY ORTHOPÆDIC HOSPITAL, AND SURGEON TO THE ALL SAINTS CHILDREN'S HOSPITAL.

CASE 1.—A woman, aged forty-five years, was admitted to the City Orthopædic Hospital on July 13th, 1896. The patient gave the following history of her case:—Ten years previously, while alighting from a tram-car, she was thrown off under a passing vehicle and her left hand was crushed by one of the wheels. She was taken to the Royal Free Hospital, where the hand was dressed, and where a few weeks later it was found necessary to amputate the end of the second finger. Two years later, finding that her hand was becoming contracted and was very painful, she went to the Mildmay Hospital, where the end of the little finger was amputated. During the next few years she underwent many operations, apparently for the removal of diseased bone, but the hand gradually contracted more and more, the pain became very severe and the hand absolutely useless, so that amputation was proposed, at one of the London hospitals, as the only effective remedy. The patient then came to the City Orthopædic Hospital. When admitted she was in an emaciated condition, and was suffering extreme pain in the affected part. There was a trophic ulcer on the back of the hand discharging freely. The hand was so tightly clenched, that it was impossible to separate the mutilated thumb from the fingers or the fingers from the palm of the hand, and the skin had a "glossy" appearance (Fig. 1). On July 16th I

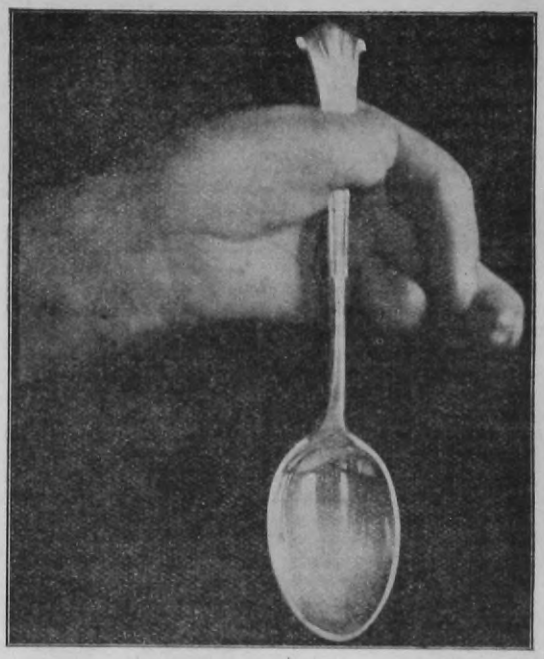
FIG. 1.



The hand before operation.

performed the following operation. A transverse incision was made across the front of the wrist and the tendons of the palmaris longus and flexor sublimis muscles and the ulnar and median nerves were divided. The median nerve was much enlarged. After the tendons were divided it was possible to extend the fingers into a fairly good position, but bearing in mind the extreme sensibility of the nerves supplying the hand, as evinced by the great pain and the "glossy" condition of the skin, I feared that tenotomy alone would not remove the suffering, and realising that, unless this were relieved, the only other resource was amputation, I felt emboldened to divide the nerves in spite of the possibility of serious interruption to the nutrition of the hand by cutting off so large an extent of nerve-supply. The result was very satisfactory. The patient was immediately relieved from much of her pain and in a few days was quite free from suffering, the wound healing up rapidly. A few weeks later I noted that the patient was free from pain; the trophic ulcer was healing; she could move the fingers slightly and could grasp a spoon or other article between her stump of the thumb and her fingers (Fig. 2). Since that period the ulcer has healed up entirely, and although there is considerable stiffness in the fingers, the fact of the patient being able to grasp renders the hand a very useful one. On Jan. 11th I divided a tense band of fascia which passed from the base of the thumb towards the base of the middle finger, because this part was contracting.

FIG. 2.



The same three months after operation.

I also broke down some of the stiff finger-joints. As regards numbness caused by the neurotomy, the patient made no

FIG. 3.



Skiagraph of hand before operation.

complaint except upon inquiry about a fortnight after the operation. The loss of the pain was such a relief to her that the numbness was doubtless felt as a benefit. The progress

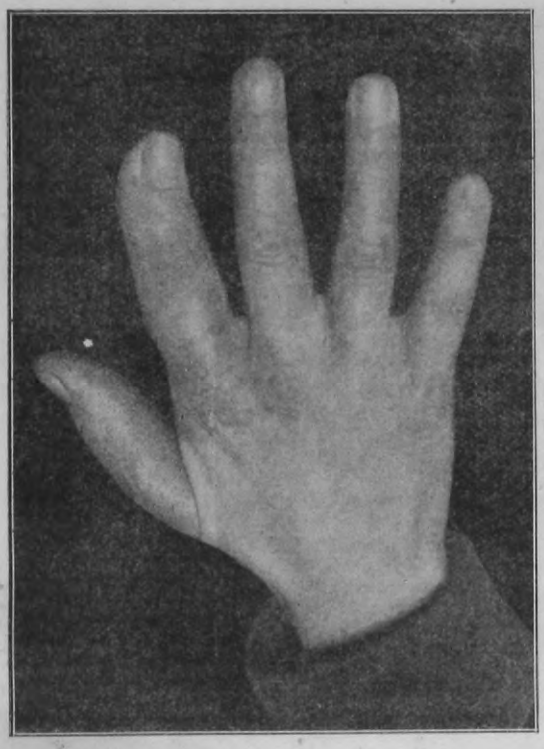
[1] These cases were shown and described at the meeting of the Medical Society of London on Feb. 8th, 1897.

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was so satisfactory that it was not until November—that is, four months after operation—that I tested the sensation of the skin, when I found it very good. There was a small area of numbness in the palm at the base of the middle and ring fingers, but not elsewhere, and the two points of a pair of scissors could be separately detected in the other parts.

CASE 2.—A woman, aged twenty-three years, gave the following history of her case: At the age of fifteen months she fell down some steps and when picked up it was found that the thumb and index finger of her right hand had "doubled up." Ten years later, finding that the finger was becoming crooked and abnormally large, the patient was taken to a hospital, where it was said that amputation was the only remedy. The patient did not obtain any other advice until she came to the City Orthopædic Hospital a year ago as an out-patient. The thumb and index finger were then found to be much enlarged and the distal end of the index finger was turned in the ulnar

FIG. 4.



From a photograph of hand taken January, 1897.

direction. The patient was a waitress and she became unable to do her work properly, especially as she could not cut up bread and butter, which was one of her duties. The exact nature of the enlargement was not clear, but it so closely simulated the appearance of congenital hypertrophy that I thought the bones were probably enlarged and that there was an excess of fatty tissue. Mr. Sydney Rowland took a skiagraph of the hand (Fig. 3) which showed that the bones were normal as to size and that the enlargement was entirely due to soft tissue. The Roentgen rays also showed the exact shape of the last phalangeal joint of the index finger, the deformity being produced by irregularity in the shape of both of the bones forming that joint. I operated at first for the lipoma, which I found diffused between the tendons in all directions. I was able to pull out long threads of the fatty nodules which probably come under the denomination of lipoma arborescens of T. Muller. Billroth refers to the analogy between this form of lipoma and the proliferation of fat in the processes of the peritoneum, of the large intestine (the appendices epiploicæ), and other serous membranes. This variety, says Billroth, is extraordinarily rare. Bland Sutton states that diffuse lipomata do not admit of removal, and certainly in this case to have removed all the redundant fat would have been a tedious procedure, but the result of removing a great portion of it was very satisfactory. The immediate diminution in size enabled the patient to use her hand with much less inconvenience, and in the course of some weeks the affected part became still smaller. It was now found that the bend at the end of the index finger was a source of great inconvenience, as it would catch the middle finger. I therefore cut down upon the radial side of the finger and cut the second phalanx transversely with bone forceps nearly to the ulnar border. I then forcibly broke the remaining piece of bone bringing the finger into a straight line. There remains a very slight inclination of the terminal phalanx towards the middle finger, but this gives the patient no inconvenience. The skiagraph shows the hand before the operation, and the photograph (Fig. 4) depicts its appearance at the present time. The hand is now perfectly useful, but if necessary more of the fatty tissue will be removed by further operation.

Queen Anne-street, W.

AN UNUSUAL CASE OF TUBAL ABORTION.

BY J. BLAND SUTTON, F.R.C.S. ENG.,
SURGEON TO THE CHELSEA HOSPITAL FOR WOMEN AND ASSISTANT SURGEON TO THE MIDDLESEX HOSPITAL.

THE following is a record of the most curious case of tubal abortion which has come under my notice. In addition to its novelty there are several points of clinical interest well worth consideration, as they demonstrate the fact that under some conditions tubal abortion can be differentiated from tubal rupture by the clinical signs.

A married woman, aged forty-one years, the mother of four children, was last pregnant in May, 1886. From that date she continued regularly to menstruate till June, 1896. In that month and in July, August, and September the usual menstrual period was represented on each occasion merely by a "slight loss." On July 28th the patient had severe pain in the lower part of the abdomen lasting three hours. On Aug. 14th a similar attack occurred. On Sept. 15th she was again in great pain, which lasted five days. The pain diminished in severity but did not wholly subside, and she sought relief at the Chelsea Hospital for Women, where she was examined by Dr. Arthur Giles, who detected a swelling

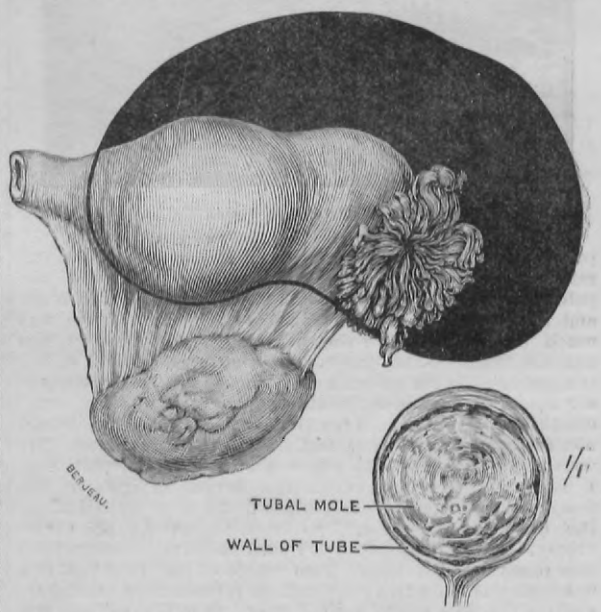


Figure of a gravid tube. The dark outline represents the shape and size of the smallest clot. It also shows the shape of the ampulla of the tube when distended.

in the left half of the pelvis. From the physical signs and the history he regarded the case as "tubal pregnancy and very probably tubal abortion," and sent her into the ward. On examining the patient I found the left half of the pelvis occupied by a semi-solid swelling which extended into the

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false pelvis and could be felt above the brim. The cervix was soft and patulous. The uterine cavity measured three and a half inches. There was slight bleeding from the uterus. The history and the physical signs were those of repeated hæmorrhage from a gravid tube. On Oct. 19th cœliotomy was performed. On entering the cœlom (peritoneal cavity) I found a clot, the size and shape of the dark outline in the figure, lying in a fold of omentum. It was removed. Beneath it lay a second clot of precisely the same shape, but much larger. On removing this a third clot was found in the recto-vaginal fossa of twice the dimensions but of exactly the same shape as the other clots. A rounded, hard body was felt in the left tube. I then removed the ovary, tube, and adjacent parts of the meso-salpinx in the usual way. The right ovary and tube being normal were not interfered with. The patient recovered quickly and completely.

The clots were in shape reniform; the exterior of each was laminated like the blood in the wall of a sacculated aneurysm or in the sac of an old hæmatocele of the tunica vaginalis testis, but the central parts consisted of ordinary clot. The hard body in the tube was a "mole," and on microscopic examination yielded many chorionic villi in cross section. The ostium abdominale was widely patent and the ampullary wall thick, succulent, and entire. The case was one of "incomplete tubal abortion," but peculiar in this respect: as the blood collected and distended the tubal ampulla it firmly clotted and was then discharged with pain through the tubal ostium into the recto-vaginal pouch. The "delivery," so to speak, of each clot coincided with the three definite attacks of "pains" in July, in August, and in September.

The only record I know which is in any way parallel is by Noble. In a case of tubal abortion the blood clots in the pelvis "were coiled up as though they had been ground through a sausage machine." This was due to the blood clotting in the tube, and the clot was then forced out as a sausage-shaped mass by the continuance of the bleeding. The shape of the clot represented in the illustration is exactly that assumed by the ampullary section of the Fallopian tube when in the condition of hydrosalpinx.

Queen Anne-street, W.

THE GLANDULAR FEVER OF CHILDHOOD: A CASE IN AN INFANT AGED SIX MONTHS.

BY T. EDWARD SANDALL, M.B., B.C. CANTAB.,
MEDICAL OFFICER OF HEALTH OF ALFORD; LATE HOUSE PHYSICIAN AND HOUSE SURGEON TO THE CHARING-CROSS HOSPITAL.

I HAD drawn up a report of the following case before I saw the valuable paper of Dr. Dawson Williams in THE LANCET of Jan. 16th, 1897, and I think that the notes of this case will be of sufficient interest in connexion with the subject of glandular fever in childhood to be published.

The patient, a healthy infant six months old, was apparently well on Nov. 10th, 1896, but was restless and fretful during the night, though nothing definitely wrong was noticed on the morning of the 11th. At midday, however, the mother noticed a slight swelling beneath the angle of the jaw on the right side, and upon examination I found the glands at the anterior border of the sterno-mastoid enlarged, causing a swelling about the size of a pigeon's egg, which did not, however, seem tender to the touch. The throat was apparently quite normal, the tonsils were not enlarged, and there was no congestion or abnormal redness. The temperature was 102·4° F. and the pulse 160. There was no cough or dyspnœa and the child did not seem to be in pain. On the evening of the same day the temperature rose to 103° and the pulse to 200 per minute, while the swelling was considerably larger; hot fomentations were ordered and twenty minims of brandy every four hours. On the 12th the temperature was 102° and the pulse 160. The swelling was now of the size of a hen's egg in the anterior triangle of the neck. Nothing abnormal could be detected in the throat; the bowels were open and the child took food well. Mr. A. E. Odling, who kindly saw the case with me, agreed that it was a case of primary glandular swelling; the hot fomentations were continued and twenty minims of brandy given each time the child was fed, with a grain of carbonate of ammonia every four hours. On the 13th and 14th the child remained in the same condition, the temperature varying from 102° in the morning to 102·6° in the evening and the pulse-rate from 160 to 170. The swelling appeared stationary, with the skin slightly reddened over it, and there was little or no tenderness on palpation. The bowels acted regularly and the child continued to take nourishment well. On the 16th the temperature fell to 101°, the pulse keeping at 160, and the child seemed better. The improvement continued for the next three days, and on the morning of the 20th the temperature was 99·4°, the swelling being slightly reduced. Gradual improvement continued for the next few days, and on the 26th the temperature fell to normal for the first time, the pulse being 144 per minute. The skin was reddened at one point over the swelling and suppuration appeared imminent, but there was no tenderness on pressure. No other glands at any time during the illness were enlarged, and after the first day or two the child seemed fairly well, in spite of the temperature, and there were no other symptoms beyond those described. The swelling gradually subsided, but the skin was reddened and the glands could be felt distinctly enlarged more than three weeks afterwards. It is interesting to note that the child cut his first tooth on Dec. 5th, twenty-four days after the appearance of the glandular swelling.

At the time I was somewhat puzzled as to the exact diagnosis, and I therefore took careful notes of the case, as I had not previously observed one of a similar character. As far as I could gather there was no source of infection; the patient was an only child, and no other children in the district were similarly affected to my knowledge. A few cases of tonsillitis in adults were, however, under my care at the time. Dr. Dawson Williams does not refer in his paper in THE LANCET of Jan. 16th to "glandular fever" in so young an infant as the case I have described. In my case the tender age (six months) and the limitation of the glandular swelling, as far as I could ascertain, to one side of the neck are worthy of note. The child is now (February, 1897) in excellent health.

Alford.

DYSENTERY AND ITS TREATMENT.

WITH AN ACCOUNT OF SIX YEARS' EXPERIENCE IN THE TRANSVAAL AND MATABELELAND IN THE USE OF SOME VARIETIES OF MONSONIA AS THE CURATIVE AGENT.

BY JOHN MABERLY, M.R.C.S. ENG., L.R.C.P. LOND.

(*Concluded from p. 372.*)

CASE 80. *Chronic dysentery.*—This case, which lasted from Dec. 21st, 1893, to Jan. 2nd, 1894, was treated similarly to Case 79. An enema of warm water was given every other day. The patient made a complete recovery. There was no relapse to June, 1896.

CASE 81. *Chronic dysentery followed by hepatitis.*—The patient, a man aged twenty-five years, commenced treatment on Jan. 17th, 1894. He had been healthy up to September, 1893, when he had an attack of dysentery, which lasted four weeks in spite of medical treatment, and was eventually stopped by an infusion of cemirubra. The dysentery recurred at intervals, and from the end of December, 1893, until Jan. 14th, 1894, the patient was continually passing motions mixed with mucus and blood from four to eight times a day. On the 14th the patient came to me for treatment, and was then passing mucus and blood with a great deal of tenesmus about every two hours. An enema containing a very weak solution of Condy's fluid of about one quart was used, and a mixture composed of three drachms of tincture of monsonia, ten minims of tincture of opium, and ten minims of tincture of catechu was administered every four hours. No dysentery or pain occurred till nine hours afterwards, when the symptoms recurred and gradually assumed a severe form, partly, I think, owing to the patient having gone out and got wet. On the 17th the patient again called me in and was then in bed, passing mucus and blood and portions of diseased mucous membrane frequently. He was in great pain and vomited all nourishment taken, both solid and liquid. The pulse was 130, very weak, and the temperature 99·5° F. The tongue was dry and furred. An enema was at once given of about a pint of warm water slightly coloured with Condy's fluid. A powder containing half a grain of morphia and three grains of

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cocainæ hydrochloras was administered, followed in ten minutes by twelve grains of bismuthi subnitras. This quieted the vomiting, and a quarter of an hour after thirty grains of pulvis ipecacuanhæ were administered in syrupus aurantii. The dose was retained for an hour and then a large quantity of dirty-coloured acid fluid was vomited. The patient then complained of pain all over the abdomen, especially the lower portion A hypodermic injection of four minims of morphia was given and the patient kept absolutely quiet. The bowels were opened twice during the next five hours with very little tenesmus. A small quantity of loose fæcal matter mixed with a little blood and mucus was passed. The dysenteric symptoms gradually returned, and six hours after the first dose a second dose of twenty grains of ipecacuanha was administered with the same precautions. This was retained about half an hour. The patient seemed comparatively comfortable but extremely prostrate. The diet consisted of a little brandy and milk given at intervals. During the night severe vomiting and frequent inclination to empty the bowels returned. On Feb. 18th the patient was exhausted. The pulse was 125 and the temperature 98°. There were great pain and a tendency to vomit frequently. The enema of the 17th was repeated and a hypodermic injection of three minims of morphia was administered. The tongue was still coated with dirty white fur. During the day a gradual improvement was made in the patient's general condition. The vomiting ceased, but very little food was taken, a very small quantity of liquid even producing a tendency to vomit. A dose of twenty grains of ipecacuanha was given in the afternoon with the same precautions as previously. Vomiting occurred in about three-quarters of an hour. On the 19th he had dysenteric motions with frequent tenesmus. A hypodermic injection of three minims of morphia was administered, and half an ounce of tincture of monsonia, twenty minims of tincture of catechu, and ten minims of tincture of opium were prescribed and retained without vomiting. The patient improved during the next four hours and was removed carefully to a cooler room. The bowels were opened once. On the 20th the pulse was 90 and the temperature 98·2°. The last mixture was administered every six hours. During the day the bowels were opened once, the motions being feculent and mixed with a little blood and mucus. At night, as there seemed a good deal of hardness and tension about the abdomen, two drachms of castor oil were given. Two hours afterwards the patient's bowels were opened twice, the motions being loose, dark, and mixed with some stringy mucus. About 10 P.M. one grain of morphia was given by the mouth. The patient had a quiet night. On the 21st the patient was improving. The bowels were opened once, the motion being similar to that on the preceding day. The mixture of monsonia, catechu, and opium was repeated twice during the day. On the 22nd the patient was doing well. The medicine given was the same as on the 21st. The pulse was 80 and the temperature 98·4°. The tongue was cleaning well. On the 23rd the patient was taking his milk diet well. The bowels were opened twice; the motions were loose but otherwise normal. The patient sat up in his room. The medicine was discontinued. On the 24th and 25th the patient rapidly regained strength. The pulse was 86 and the temperature 98·6°. The bowels were opened once normally. On the evening of the 25th the patient complained of pain across the loin and scarcity of urine. Three ounces of hot, fresh infusion of buchu were made and administered, which relieved the symptoms. The patient had a good night. On the 26th, about 3 P.M., the patient was seized with two or three severe rigors, followed by a sudden rise of temperature to 103° and the pulse to 114. There was great pain over the region of the right lobe of the liver. There was tenderness on pressure over the gall-bladder, but no enlargement was perceptible to the eye or on palpation. On auscultation a grating sound could be heard with inspiration over the region of the liver dulness. Eight grains of calomel were given by the mouth and a subcutaneous injection of morphia (three minims) administered. On the 27th the patient was easier. The temperature was 99 4° and the pulse 108; there was tenderness on pressure over the right lobe of the liver, especially over the gall-bladder, where firm digital pressure caused inclination to vomit. The patient complained of catching pain there on deep inspiration. There was no cough. The tongue was coated white in the centre, but was cleaning at the edges. Hot fomentations were applied over the liver, and linimentum aconiti et iodi (equal parts) painted over the painful area. The bowels not being open half an ounce of castor oil was administered at midday; a small, hard motion was passed at 4 P.M. The temperature was 103°. An enema of hot soap-and-water was given and a large quantity of fæcal matter passed, after which the temperature fell to 99·5°. On the 28th the temperature rose again during the early hours of the morning. Half an ounce of sulphate of soda dissolved in a glassful of water was given. The patient soon after vomited about half a pint of bile. The temperature then fell to 99 4°, but remained variable during the morning. The pulse was very weak (from 120 to 130). The bowels were moved four times (feculent). There was a tendency to reflex vomiting. The patient became very restless towards night. Thirty grains of sulphonal were given. On the 29th the patient slept irregularly till 2 A.M. The temperature was variable (from 101° to 103°). The tendency to vomit continued. The pulse was very weak and the patient extremely exhausted. The pain in the right side continued and there appeared to be a localised peritonitis between the under surface of the liver and intestine. The patient could retain little nourishment except champagne. Two drachms of tincture of monsonia were administered. Hot stupes were continuously applied over the right side. The patient slightly improved during the night. One drachm of tincture of monsonia was given at intervals of four hours twice, and at night five grains of calomel were administered, the bowels not having been opened. The tendency to vomit continued, but a little fluid nourishment was retained. At 7 P.M. the patient was immersed in a hot sitz-bath for about ten minutes and felt much relieved. The temperature was 99·6° and the pulse 115. On the 30th the patient slept irregularly. He had improved slightly in his condition. At midday the temperature was 100° and the pulse 105. About 2 P.M. half an ounce of castor oil was administered, and towards the evening the bowels were opened once. The motion was loose and light brown in colour. The pain and tenderness became less over the liver. Hot stupes were continued and at 8 P.M. twenty grains of sulphonal were administered. On the 31st the patient had a quiet night, and during the day took a fair amount of fluid nourishment. A mixture containing ten minims of tinctura nucis vomicæ, ten minims of acidum hydrochloricum dilutum, and half an ounce of infusum gentianæ was given every six hours, and half a grain of morphia was given at midday. The bowels were not opened. At 3 P.M. half an ounce of sodii sulphas was administered. About four hours afterwards the bowels were opened once. The motion was similar to that on the 30th. The tongue was thinly coated with white fur. The temperature varied between 101·5° and 102·5°, and the pulse was 108. On Feb. 1st four motions were passed—feculent, brown, with a light-coloured sediment. The temperature ranged between 100 8° and 102 5°. The pulse was 100. There was a dull pain in the right side. A pill of mercury (five grains) with hydrochlorate of morphia (a quarter of a grain) was administered and the patient put into a hot sitz-bath containing some mustard. The patient passed a good night, the bowels not being open. On the 2nd the pulse was 100 and the temperature 98 6°. The pain in the right side was almost gone, but the patient complained of a dull, heavy pain in the right arm and shoulder. Two doses of thirty grains of salicin were given at 10 A.M. and 2 P.M. respectively. During the morning the patient had two slight rigors, with a rise of temperature to 100°, which remained till 9 P.M. and then fell to normal. At 8 P.M. a pill of colocynth and hyoscyamus (five grains) was administered. One solid motion was passed. On the 3rd the temperature was 98 2° and the pulse 90. At noon the temperature rose to 102 5°. A mixture containing six grains of quinine, three minims of liquor arsenicalis, and twenty minims of acidum hydrobromicum was ordered every six hours. The evening temperature was 101 8°. On the 4th the midday temperature was 98 4°. There was still some pain in the right arm and shoulder. At night an injection of three minims of morphia was administered. From this date the patient made a comparatively quick recovery with one or two slight rises of temperature which were treated with the same mixture as given on Feb. 3rd, and the patient till 1896 enjoyed excellent health.

CASE 82. *Chronic dysentery.*—The patient, a man aged thirty years, had suffered from dysentery in India. On July 17th, 1894, his temperature was 104° and the pulse 98. The tongue was dry and furred. The skin was dry. The patient suffered from acute dysenteric pains and passed mucus and blood every half-hour. A powder containing ten

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grains of quinine and ten grains of antifebrine was administered and an enema of hot soap-and-water was given. The patient commenced to perspire profusely in about a quarter of an hour. The pain became much relieved. Four hours afterwards three drachms of tincture of monsonia were administered and repeated every four hours. The dysentery was much relieved, but continued slightly till the 19th. A lead and opium pill was given with each dose of the medicine. The dysenteric symptoms had disappeared by the evening of the 19th. A return of the fever occurred about 8 P.M. I administered two grains of the bark of a tree whose value in intermittent fever I had learned from Kaffirs living in the fever districts of the Murchison Range, Transvaal, but which I was not able to identify, although it belonged, I believe, to the Croton family. The bowels were thoroughly well opened once, after which the patient went to sleep for eight hours. The symptoms all disappeared and the patient made a complete recovery. Up to the time I left the country—a period of nearly two years—he had had no relapse.

CASE 83. *Acute dysentery.*—This was a man, aged forty years, who came under my care on July 19th, 1894. He had been suffering for three days from an acute attack of dysentery, and had been taking powders composed of ten grains of pulvis ipecacuanhæ compositus and pulvis ipecacuanhæ respectively without effect. I at once ordered an enema of about three pints of hot water with a little Condy's fluid. The patient passed a large quantity of fæces. I then administered three drachms of tincture of monsonia, with a lead and opium pill every four hours. Three doses were given. The dysentery entirely stopped after the first dose. On the 20th, at bedtime, four grains of calomel were given. In the morning the patient passed a loose motion with slight tendency to tenesmus. Two more doses of the medicine of the 19th were given during the day, with the result that the dysenteric symptoms disappeared. Up to July, 1896, no recurrence had taken place.

CASE 84. *Acute dysentery.*—The patient, a woman, aged forty-two years, came under treatment on Sept. 20th, 1894. She had been suffering from acute dysentery for two days. The treatment was similar to that in Case 83. She passed dysenteric stools three times after the first dose of medicine, but all bad symptoms disappeared after twenty-four hours.

CASE 85. *Chronic dysentery with sloughing mucous membrane; death from cancrum oris.*—I saw this patient, a girl, aged four and a half years, on Aug. 2nd, 1894. She had been suffering for three weeks previously from whooping-cough and had been treated by a chemist with a mixture containing bromide and belladonna. When called in the child was extremely weak, and besides the whooping-cough was suffering from a severe attack of dysentery, which had commenced six days previously. The patient was frequently passing portions of sloughy mucous membrane mixed with blood. A mixture containing half a drachm each of tincture of monsonia, tincture of callilipis,[1] and syrup of tolu, with ten minims of spirit of chloroform, was given every four hours. At night a powder of six grains each of pulvis ipecacuanhæ compositus and bismuthi subnitras with half a grain of calomel was ordered. The child improved steadily, and on the 4th the dysenteric stools had almost ceased, although the bowels were still too loose. A mixture containing chalk with two minims of tincture of opium and five minims of tincture of catechu was given alternately with the previous mixture every four hours. The whooping-cough was considerably relieved and the bowels became normal. The child took her nourishment well, but did not appear to gain strength as quickly as could be wished. On the 9th the left cheek was noticed to be very much swollen, and on examining the mouth a large sloughing ulcer, evidently cancrum oris, was seen. The child rapidly sank and succumbed early on the morning of the 10th.

CASE 86. *Fever and dysentery.*—A girl, aged three years, came under my care on Sept. 25th, 1894. The patient had been suffering for three days from dysentery. The parents had been giving her chlorodyne without effect. When seen the child was slightly feverish, with bilious symptoms, and was also suffering from dysentery. A powder containing five grains of pulvis ipecacuanhæ compositus, four grains of bismuthi subnitras, and one grain of calomel, was administered at night. The patient passed some mucus mixed with blood and bile. On the 26th one drachm of tincture of monsonia and three minims of spirit of chloroform were ordered every four hours and at night five grains of pulvis ipecacuanhæ compositus with six grains of bismuthi subnitras. The patient was passing some greenish stools without blood, but with slight tenesmus and a little mucus mixed with the motion. On the 27th this treatment was continued. The powder given on the 25th but without the calomel was repeated morning and night. The bowels became normal during the day, but symptoms showed themselves of a slight attack of cerebro-spinal fever with pain in the head and irregular temperature. A mixture of ten grains of bromide of potassium, one grain of chloral hydrate, and fifteen minims of compound tincture of camphor was ordered every six hours, the head to be kept bathed with cold water. The symptoms continued for four days and then gradually disappeared. The bowels were regulated with small doses of calomel when necessary and a Dover's powder was given at night.

CASE 87. *Chronic dysentery.*—On Oct. 17th, 1894, I saw a man, aged thirty-three years, who had had several previous attacks of dysentery, one of which had lasted seventy days, two years before. He had been treated in a military hospital in India. Since then he had been subject to chronic attacks. The present attack had commenced insidiously two weeks before. When seen the patient was passing mucus and blood, frequently with great pain in the abdomen and tenesmus. The temperature was 102° F. The skin was hot and dry. The patient had a jaundiced appearance. Two grains of the powder mentioned in Case 82 were given and the patient vomited about a pint of bilious fluid two hours afterwards. A large enema of warm water was administered and a quantity of fæcal matter was passed. The patient felt much relieved, and a mixture of three drachms of tincture of monsonia with a lead and opium pill (4 grains) were ordered every four hours. On the 18th the bowels were moved three times; the patient was easy and his temperature was normal. The motions contained a little blood and mucus mixed with feculent matter. There was slight tenesmus. On the 19th there were two movements of the bowels. The mucus and blood had disappeared from the motions, but the patient complained of a feeling of distension about the stomach. Half an ounce of castor-oil was given and four hours afterwards a large loose motion was passed. Two doses of tincture of monsonia with a lead and opium pill (5 grains) were given at intervals of six hours. All dysenteric symptoms ceased. The patient was ordered a tonic of two minims of liquor arsenicalis with half an ounce of infusum gentianæ three times a day and made a complete recovery. No relapse occurred to the end of June, 1896—a period of over eighteen months.

CASE 88. *Acute dysentery.*—A man, aged twenty-three years, was seen on Feb. 24th, 1895. The patient was tall and rather poorly nourished, with a history of phthisis on his mother's side. Three days previously the patient was attacked with severe diarrhœa, for which he took large doses of laudanum and afterwards a lead and opium pill on his own account. When seen he was suffering from an acute attack of dysentery, and was passing mucus and blood with a good deal of tenesmus. The temperature was 98° F. and the pulse 90 and feeble. An enema of warm soap-and-water was given and a large quantity of fæces was passed. Four drachms of tincture of monsonia with a lead and opium pill (4 grains) were administered every six hours. The pain and tenesmus ceased, and during the next twelve hours one dysenteric motion was passed with very little straining. Early in the morning of the 25th the tendency to griping pains and tenesmus returned. Another enema was given and the medicine was continued. On the 26th the patient was improving slowly and the motions gradually became feculent with slight tenesmus. On the 27th the enema was repeated and the mixture continued. The patient felt much better, but still had a little pain in the lower part of the abdomen and slight straining. In the afternoon he took a drive into the country, and from that time no recurrence occurred. In June, 1896, he was still in good health.

CASE 89. *Acute dysentery.*—A man, aged twenty-two years, came under my care on Feb. 27th, 1895. He had had an attack of malarial fever two days previously. During the night symptoms of acute dysentery had commenced. When seen at 9 A.M. he was passing mucus and blood frequently with a good deal of tenesmus and pain in the lower regions

[1] Tincture of callilipis is made from the root of a plant of that name, which is peculiar to South Africa. It is used by some of the natives as a cough drug. As such it is not of great value, but in the few cases in which I have used it it has proved of marked value in the treatment of whooping-cough, especially in its late stages.

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of the abdomen. The temperature was 98·6° F. and the pulse 70. An enema of warm soap-and-water was given and the patient passed a fair amount of fæcal matter. Half an ounce of tincture of monsonia with a lead and opium pill were ordered every four hours. Three doses only were taken and the patient resumed work on the 28th. No relapse occurred.

CASE 90. *Acute dysentery.*—A man, aged thirty-three years, came under treatment on March 12th, 1895. He suffered for two days previously from acute dysentery. He stated that he had been drinking rather heavily of spirit, and three days before he had been for a long walk in the heat of the day and had drunk a large quantity of water from a spruit. The symptoms came on within twelve hours. He had taken chlorodyne in full doses without effect. The same treatment was followed as in Case 89. On the 13th the patient complained of the bowels feeling full and uncomfortable. A large enema of hot soap-and-water was given and a large quantity of fæces was passed. Half an ounce of tincture of monsonia was administered and the patient resumed work in the afternoon.

CASE 91. *Chronic dysentery.*—A man, aged twenty years, had been for two months suffering from chronic dysentery. His first attack occurred in December, 1894, and lasted fourteen days. He came to me on July 13th, 1895. During the previous week the dysentery had been most troublesome during the early morning and daytime, the patient passing mucus and blood seven or eight times a day with a good deal of tenesmus. When seen the temperature was 98·4° F. and the pulse was 60. The tongue was white and flabby. The patient, although naturally strong, appeared very much exhausted. The exertion of walking to the surgery caused him to faint. An enema of weak Condy's fluid and water was administered. He passed a quantity of fæcal matter mixed with a little stringy mucus and blood. The same treatment as in the two previous cases was carried out, with the result that the patient was completely cured in about four days. I did not see him again, but met him some time afterwards, when he told me that no recurrence had taken place. He remained well to June, 1896—eleven months afterwards.

CASE 92. *Acute dysentery.*—A man, aged twenty-seven years, came under my care on Aug. 10th, 1895. He was suffering from an acute attack of dysentery, which had commenced on the previous day. An enema was given and medicine similar to that in the last three cases. He had no recurrence after the second dose of the medicine.

CASE 93. *Chronic dysentery.*—A man, aged twenty-four years, came under treatment on Sept. 14th, 1895. His temperature was 102·4° F. and the pulse was 98. The tongue was thickly coated with a brownish fur. The bowels, according to the patient's statement, had been continuously straining during the last twenty-four hours, accompanied by very severe pain in the lower part of the abdomen. A powder containing eight grains each of phenacetin and quinine was administered in a cachet, and a mixture of three drachms of tincture of monsonia and ten minims of spirit of chloroform was ordered every four hours. An enema of about a pint of warm solution of hydrargyri perchloridum (1 in 3000) was given. This produced violent pain and a feeling of faintness. A hypodermic injection of morphia (four minims) was administered, and the patient remained fairly easy for some hours till about 10 P.M. He then had three or four dysenteric motions slightly streaked with blood. An enema of warm water with a few drops of Condy's fluid was given and the patient felt much eased. On the 15th the straining disappeared and the temperature was 99·5°. The tongue was dirty. There were four motions, which were feculent, with very little mucus. The mixture was continued. On the 16th the temperature was 100·2°. The tongue was coated with dirty brown fur. The patient still strained occasionally, but passed nothing. The cachet of the 14th was repeated and an enema of soap-and-water was given, but without effect. One ounce of castor oil with fifteen minims of tincture of opium was administered. Two hours afterwards the patient passed a large quantity of hard fæcal matter. Tincture of monsonia was continued every six hours. On the 17th the temperature was normal; no motions were passed and the tongue was clean. On the 18th the bowels were normal and the medicine was discontinued, the patient being convalescent. The patient had had two previous attacks of dysentery with violent tormina, and since this attack he has had another which he cured with a fresh infusion of monsonia which a friend made from plants growing on his farm. No relapse has occurred since.

CASES 94, 95, 96, AND 100.—These were all acute cases treated at my own surgery. An enema was given in each case and a mixture of two and a half drachms of tincture of monsonia, fifteen minims of liquor opii sedativus, and six minims of spiritus chloroformi every four or six hours was ordered.

CASES 97, 98, AND 99.—These were all in one family—a mother and two children. The mother had been suffering for two months from chronic dysentery, which had been treated in various ways by another practitioner. The mixture given in the four preceding cases was given. As she had been taking castor oil no enema was necessary. The children (Cases 98 and 99) were both acute cases. Enemata were given and the same mixture ordered, Case 99, a child, taking one-fourth of the doses mentioned.

In discussing the foregoing cases it will be better to divide them into two classes, acute and chronic. First, acute. Out of 100 cases recorded ninety come under the heading of acute. In none of these was ipecacuanha used, the treatment consisting of monsonia in from two to four drachm doses every four or six hours. In a few of the later cases the action of the monsonia was supplemented by pilula plumbi cum opio, as, for instance, Case 88; but it is interesting to note in this case that the patient had previously to coming under treatment been taking both tincture of opium in full doses and pilula plumbi cum opio, and that in spite of the exhibition of these drugs the symptoms had become steadily worse, showing that the pilula plumbi cum opio alone was ineffectual as a cure. My reasons for adding pilula plumbi cum opio to the treatment in some of the later cases was that the specimens of monsonia from which the tincture I was using was made had been gathered nearly three years previously and appeared to be losing to some extent its activity. It is a recognised fact among pharmacists that some drugs, especially when kept in the dry state in hot climates, steadily deteriorate in quality, and in my experiments I have found that this was apparently the case with monsonia. The average number of days that a patient was under treatment was 2·3, which is certainly far below the average of any statistics which I have been able to consult under any other form of treatment.

Although, according to some of the Indian authorities, the records of the treatment of acute dysentery with ipecacuanha show almost equally good results, monsonia has one great advantage in that it requires no special precautions and can be taken by the patient just as any other drug without the necessity even of remaining in bed. Secondly, chronic dysentery, on the other hand, has not up to the present time proved amenable to any form of treatment, and has been hitherto looked upon as incurable and very frequently fatal, but the preceding records go far to prove that monsonia is as efficacious in the treatment of chronic as in that of acute dysentery. Out of the 100 cases I have reported ten were chronic, and of these nine made complete recoveries, and were under treatment for 8·1 days on the average. The one exception was Case 85; even in this case the dysentery was cured, but the constitution was so exhausted by the long illness previous to treatment that the child succumbed to cancrum oris. Seven of the chronic cases recorded as being cured were under observation for periods varying from one to four years, no relapses occurring. One case was lost sight of after six months, during which time the patient had no recurrence. The remaining case (No. 93) was the only one to my knowledge in which a relapse occurred; this was due, in my opinion, to the tincture of monsonia having lost some of its qualities, the plants from which it was made having been kept too long. This case was soon cured, however, by a fresh infusion of the drug made from plants collected on the patient's farm. The monsoniæ belong to the order Geraniaceæ, of which they form a genus. A great number of varieties are found in Southern Africa. The plants I have used come under the varieties Monsonia ovata and Monsonia Burkei. Several species are known to have astringent properties due to the tannic acid which they contain, chiefly in the roots. Their action as astringents is, however, weak, and I do not think that the results obtained by the preparations I have used in dysentery were at all due to their astringent properties. This conclusion is borne out by the fact that the drug appears to have very little effect on ordinary diarrhœa and also that the preparations made from the dried flowering plant without the root were in dysentery quite as effective as, if not more so than, those in which the root was used, and in which certainly a large proportion of tannic acid was present.

Judging from the number of cases which I have now

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treated I feel convinced that the plant has a specific action on the poison of dysentery apart from any mere astringent properties. Whatever the active principle of the drug may be it appears to have a soothing influence on other forms of intra-abdominal irritation to the lower nerve centres. This was shown by the distinct and rapid relief it gave in about six cases in which I tried it in pelvic pain due to old inflammatory peri-uterine lesions. In each of these cases the relief was much greater than that obtained by opium or its alkaloids. These facts lead me to conclude that the effect of the drug on dysenteric symptoms is partly due to its soothing action on some of the lower nerve centres and partly to the peculiar healing influence which it exerts on ulcers of the intestinal tract. In the beginning of 1896 through not being able to obtain specimens of the plant I was obliged to return to the use of pharmacopœial drugs. This was unfortunate, as during the Matabele rising from March to July, 1896, an epidemic of dysentery occurred at Bulawayo, which would have afforded me very valuable materials for further researches with regard to the action and the peculiar properties of the drug. Though so far nonplussed I was still able to cope successfully with acute cases of dysentery, and it may be of general interest to give some account of the treatment pursued. One of the first cases which came under treatment was that of a child, four years of age, suffering from acute dysentery. I ordered four grains of pulvis ipecacuanhæ compositus with four grains of pulvis kino compositus every six hours and an enema of warm water twice a day. The child appeared to be all right the next day, but two days after the mother sent for me again, when the dysentery was as bad as ever and prolapse of the rectum was commencing. The powders seemed to have no effect. I ordered the enema to be continued and three grains of phenacetin to be added to the powders. The result was excellent, the child rapidly recovered and no relapse occurred. Most of the subsequent cases occurring in this outbreak were of a very acute form, often associated with a good deal of vomiting and sometimes high temperature. The treatment, briefly stated, was as follows. A mixture containing one and a half drachms of liquor bismuthi, one minim of acidum hydrocyanicum dilutum, ten minims of liquor morphiæ hydrochloratis and water to one ounce was given every four hours in cases where there was much vomiting. Ten minutes after each dose of the mixture a powder containing ten grains of pulvis ipecacuanhæ compositus, ten grains of pulvis kino compositus, and five grains of phenacetin was administered. In other cases ten grains of bismuthi sub-nitras was given before or with the powders. Where much fever was present a powder containing eight grains of quinine with eight grains of phenacetin was given night and morning. In cases in which the attack was of more than forty-eight hours' standing an enema of about two quarts of warm water with a little Condy's fluid was given. The patients were not kept in bed except in severe cases. Meat diet was strictly forbidden. Most authorities incline to the opinion that astringents and full doses of opium are not only useless but do much harm in the acute phase of the disease, and I think the foregoing powder would certainly come under that condemnation. The results, however, were extremely satisfactory in all the acute cases, which numbered somewhere about forty. I attribute their success to the addition of the phenacetin and also to the administration of the enemas. With regard to phenacetin, the *rationale* of its action in dysentery is somewhat similar to that of ipecacuanha. Dr. Ewart attempted to explain the action of the latter in the following terms:—"In large doses it stops inflammatory action, augments the alvine secretions from œsophagus to rectum, increases the flow of bile and pancreatic juice, purges without irritating, lessens peristaltic action, produces rest, restrains tormina and tenesmus, promotes diaphoresis, restores the balance of the portal circulation, is a direct sedative to cardiac action, and acts on the stomach and duodenum, pancreas, liver, and small intestines, and on the glands of the large intestine."

Although this statement is somewhat vague it is in the main, perhaps, as correct a representation of the action of ipecacuanha, and still more so of such powerful diaphoretics as phenacetin, as in the present state of our knowledge can be given. Consequently it acts as a corrective to the astringent qualities of kino and to the tendency which opium has to check the natural secretions in the intestines, which latter it is most important to encourage. Both the astringent action of the kino and the sedative action of the opium are very necessary in relieving the dysenteric symptoms, provided any deleterious action is guarded against. In order to explain the beneficial effects of large enemata in the treatment of dysentery it will be essential to draw attention to a very important point in the pathology of the disease and one which appears to have been almost entirely overlooked. After the first day or two in an acute attack of dysentery, and commonly in chronic cases, the small intestines are loaded with fæces. The way in which this condition is brought about appears to be as follows. An acute attack commences with diarrhœa which is at first feculent in quality; the stools gradually change from feculence to mucus and blood. This change takes place any time within the first forty-eight hours. From this stage onward, perhaps for days, no fæcal matter is passed. What apparently happens is that the dysenteric ulcers in the large intestine cause spasmodic contraction about the ileo-cæcal valve, which entirely shuts off the small intestine from communication with the large, thus preventing any chance of irritation to the dysenteric ulcers from fæcal matter. An exactly similar condition is seen in inflammation of the cornea, where the eyelids are spasmodically contracted as a natural protection against the irritation of light. This condition having been once induced it is self-evident that to give heavy doses of opium and astringents, without at the same time endeavouring to clear the small intestines of fæcal matter, would only tend to aggravate the disease. The fæcal matter continues to accumulate in the small intestine, increases the tendency to tormina and tenesmus, and adds fæcal poisoning to the other symptoms. This latter accounts, I think, to a large extent for the very rapid exhaustion which occurs in cases which are left untreated. It is for these reasons that large doses of opium and astringents have been so universally condemned; but I contend that if given with proper precautions opium and astringents are of decided benefit in the acute stages. I now make it a rule to inquire on first seeing a patient whether any fæces have been passed during the last twenty-four hours, and unless the attack is quite recent I invariably find that such has not been the case. I then order an enema of two or three pints of warm water with a little Condy's fluid in it. The patient as a rule passes a large quantity of fæcal matter and experiences a great feeling of relief, the tenesmus disappearing for the time being. Very weak solutions of any disinfectant are applicable, with the one exception of bichloride of mercury; this drug in the weakest solutions causes acute pain. In some cases, where the ulcer is low down in the rectum, the sphincter ani will be found to be paralysed temporarily. It is then impossible to evacuate the small intestine by means of enemata. In these cases it is necessary to give castor oil. In the subsequent treatment of dysentery, provided the tendency of the small intestine to become blocked is counteracted, no harm can result from the use of opium and astringents, combined with such diaphoretics as ipecacuanha and phenacetin; and judging from my experience in a large number of cases I feel convinced that they materially assist in the cure of the disease.

Birmingham.

ACUTE PEMPHIGUS.

BY MAURICE EDEN PAUL, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND.

IN THE LANCET of Oct. 31st, 1896, Dr. James Priestley described an interesting case of acute bullous eruption on an erythematous base, attended by severe febrile symptoms and ending fatally. He regarded the case as almost, if not quite, unique, but asked for opinions from those who have had experience of like cases. In the latter half of 1890, when I was in residence at the London Hospital as house physician to the late Dr. H. G. Sutton, I saw a very similar case. Notes are not now accessible to me and I can describe the case from memory only, but fuller particulars could readily be obtained from the records of the hospital. The patient was a middle-aged woman of a full habit of body. She was suddenly attacked with febrile symptoms attendant on the outbreak of a violent dermatitis. The skin over large areas of the trunk and extremities was bright red and raised, presenting, like erysipelas, a firm edge at the

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junction of the inflamed and the healthy parts. On the surface of the inflamed areas of skin bullæ, from half an inch to one and a half inches in diameter, were freely sprinkled. In places these bullæ were confluent. It will be observed that this case differs from Dr. Priestley's in the presence of infiltration of the skin in addition to the erythema. That, however, the disease was not erysipelas was shown by the simultaneous appearance of the dermatitis in such wide areas. Moreover, diffused acute erysipelas would almost certainly have killed the patient in a day or two. I cannot recall whether there was or not faucial inflammation. Dr. Sutton was not attending the hospital when the patient was admitted, so at my request Dr. Stephen Mackenzie kindly saw the case. He said that it was anomalous, but that if he were compelled to give it a name he should call it "acute pemphigus." The patient was severely, even dangerously, ill for a time, but, as far as I can remember, made a good recovery in about ten days. The cause of the illness remained obscure.

Surely cases of this kind, though rare, are well recognised. Whitehouse, in the article on Bullous Affections in "Twentieth Century Practice," describes it as "pemphigus acutus," an eruption of bullæ on an erythematous base, with febrile symptoms and pharyngitis. He says, however, that the bullæ never exceed half an inch in size. In Dr. Priestley's case "the smallest bullæ were as large as a hen's egg"; and in the case I have described the bullæ were also, unless my memory plays me false, far larger than those mentioned by Whitehouse. But when the line that separates a "vesicle" from a "bulla" has once been passed, variation in size depends probably on individual peculiarities of skin and on the intensity of the inflammatory process, and cannot be regarded as specific. Again, the only difference between pemphigus acutus neonatorum and the pemphigus acutus of older children and of adults, appears to lie in the absence in the former case of pharyngitis. There is the same acute outbreak of large bullæ on an erythematous base, with fever and prostration. The absence of pharyngitis in pemphigus acutus neonatorum may be due to the fact that infants appear to be exempt from catarrhal inflammation of the pharyngo tonsillar region. Even in the case of the powerful poisons of syphilis and diphtheria, the stress of the inflammation falls in infants on the nasal and laryngeal mucous membranes, while the fauces are slightly if at all affected. Catarrhal pharyngitis I have never seen in a child under two years of age. The cause of these acute bullous eruptions remains undiscovered, and I have no light to shed on the subject. My excuse for writing this paper consists in my desire to bring before the profession the case already described and also one much more singular that came under my notice three years ago.

Case of acute pemphigus and acute eczema of the face in an infant, the two diseases being intercurrent, but independent in course.—The patient was a female child aged two months. Acute eczema of the face and hairy scalp of ordinary type began on Jan. 28th, 1894. On Feb. 4th bullæ appeared in the groins, then on the neck, and then on the upper part of chest and back, the crop in these regions occupying three days in its development. The blebs were about half an inch in diameter and in many places confluent. Three fingers of the right hand were entirely denuded of epidermis on the morning of the 7th. Up to this time the general condition had been good, but further blebs appeared, so that on the 9th the eruption was almost universal except on the legs, head, and face; collapse set in, and the infant was kept alive only by the free exhibition of brandy. The blebs being closely set and rupturing early, the appearance was that of an acutely inflamed skin with the epidermis hanging in shreds and patches, as in an extensive burn of the second degree. On the evening of the 9th the child began to recover strength, but moderate fever continued till the 12th. By the 14th the skin was soundly healed. Meantime, on the face, on which no bullæ had appeared, the eczema had run its ordinary course. By the 14th the period of active secretion and crust formation was over; but sub-acute discrete papules and vesicles continued to appear for more than a month longer, the child's general health remaining good all the time. The child is now, at three years of age, in excellent health. Such an example of two specifically distinct skin diseases running an independent, but a simultaneous, course in the same patient is, I think, sufficiently rare to deserve being placed on record. The sanitary surroundings and the feeding (artificial) of the child at the time of the illness were all that could be desired, and no cause could be discovered. The case was an isolated one in my practice. The child's father had suffered from acute eczema in infancy; again and severely at the age of eighteen years; and is now never free from chronic eczema in winter. This fact may interest those who believe in the existence of a "dartrous diathesis."

Nagasaki, Japan.

TREATMENT OF MALIGNANT TUMOURS BY MIXED TOXINS.

BY HUGHES REID DAVIES, M.R.C.S. ENG., L.R.C.P. LOND.

IN an annotation in THE LANCET of Dec. 5th, 1896, there is a record of a meeting of the Johns Hopkins Medical Society, at which Dr. Coley read the results of his treatment of 160 cases of malignant tumour by subcutaneous injections of the toxins of erysipelas and bacillus prodigiosus. Dr. Coley's perseverance and patient research should merit respectful attention, even though his resulting success be so limited. I should like to draw attention to an extract from my case-book on "Coley's fluid."

A stout Jewess, married, aged fifty-three years, with a strong carcinomatous family history, consulted me in 1893. At the axillary border of the right mamma, distinct from the gland tissue, I found a hard, clearly defined, freely moveable mass the size of a walnut, over which the skin was unbroken. I offered to excise the growth, but consent was refused. In October, 1895, I was again consulted and noted that the tumour was distinctly nodular, the size of a hen's egg, attached to the skin, and moveable with difficulty. The right mamma was much swollen. The cutaneous coverings of the axillary half of the mamma were hard and œdematous. The skin over the tumour was unbroken. The axillary and clavicular gland were implicated. On Oct. 3rd Mr. F. S. Eve kindly saw the case with me. We decided not to operate for many reasons, among which were: the duration of the disease from my first diagnosis in 1893; the presence of an adherent, ill-defined, infiltrating mass in the axilla extending under the pectoral muscles; the condition of the skin; and the strong objection of the patient's friends to any operation. The patient herself also had a horror of any attempt at surgical interference, yet craved that something might be done. As a last resource, and to satisfy the patient, subcutanous injections of Coley's fluid were commenced. On Nov. 22nd a hypodermic injection of one minim of Coley's fluid was administered about one inch from the tumour on the sternal side. There was no appreciable reaction beyond a slight blush round the tumour. On the 25th two minims of a weaker solution (equal to one minim of the previous stronger solution) were injected with no appreciable result. On the 27th two minims were injected and resulted in rigors, followed by about one inch of slight circumferential blushing lasting twenty-four hours. The patient was mentally but not physically upset. The temperature was 101° F. and the pulse was 90. The œdema of the skin was certainly less On Dec. 3rd three minims were administered and followed by slight rigors. On the 6th five minims were given, which produced strong rigors, vomiting, and diarrhœa (lasting two hours) within half-an-hour of the injection, which was well into the base of the tumour and not into the neighbouring skin. Four hours after the injection the temperature was 102 5° and the pulse was 140; there was no body rash, but a broad circumferential blush and axillary gland tenderness. There was great bodily and mental distress. Following this there were debility, loss of appetite, a daily temperature of from 100° to 101°, with a pulse of from 90 to 100, until the 14th, when another injection of four minims into the base of the tumour was given, from which there was no reaction. By this time there was not much increase in the size of the base, but the fungations were more expansive. The tumour was freely moveable. The œdema of the mamma and of the axillary folds was less. There was no inflammation or suppuration at the seat of the injections. There was no body rash and no wasting, but there were slight occasional hæmorrhages and free serous discharge from the fungating surface. On the 20th the fungating mass was sloughing

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centrally, leaving a large cup-like cavity surrounded by large unequal fungations. The mamma was larger and harder. Owing to objections from the patient no hypodermic injection had been given since Dec. 14th. On the 23rd three minims were injected but no reaction followed. On Jan. 11th, 1896, the tumour centrally had sloughed almost flush with the thorax. There was marginal increase. Four minims of fresh Coley's fluid were injected into the marginal fungations, which produced a vigorous reaction in half an hour, with rigors and vomiting, followed by stupor and difficult locomotion, and succeeded by a deep sleep lasting all night. From this date to March 19th the injections were fairly regular at intervals of a few days. There was free serous discharge from the tumour, especially from the central cavity. The marginal growths were thinning perceptibly. Rigors, and often retching or vomiting, nearly always followed the injections. The patient was daily losing weight and strength, and the growth was slowly but steadily increasing in size, it then measuring four inches by three inches. An eczematous, patchy condition of the skin appeared on the forehead, eyelids, and extensor surfaces of the knees and elbows, with exfoliation. The skin of the fingers and palms cracked and peeled. At this stage, as no appreciable benefit had been derived, the injections were stayed.

On Dec. 7th, 1896, the tumour was found to extend from the angle of the right scapula to the axillary half of the right mamma, and above from the apex of the axilla to a line drawn from the lower border of the mamma to the inferior angle of the scapula. The pectorales muscles were pushed forward by the growth; the right arm was twice its normal size from œdema, and the clavicular glands were markedly increased in size and hardness. The mamma itself was badly infiltrated and partly sloughing. Mitigation of the agonising pain and sleeplessness experienced by the patient was derived from morphia pills, of which she daily took up to two grains. The local treatment throughout was an endeavour to keep the fungating masses dry, sweet, and clean by various powders and antiseptic washes.

On Dec. 23rd the patient became semi-comatose and, without regaining consciousness, died on Dec. 27th, 1896. The usual Jewish objections to post-mortem examination prevented me following the case further; but external abdominal examination showed that there was immense hepatic enlargement, the lower margin almost reaching the iliac crest.

Remarks.—The value of Coley's fluid, as gathered from the foregoing notes, has been, in this case of carcinoma, I fear, practically *nil*. True, in the early stage of the disease I fancied the rate of growth was checked and the fœtor of the discharge lessened, but the terribly alarming reactions after injection, and the final skin effects, as noted, induced me to desist from a further course of treatment.

Bow, E.

SOME REMARKS ON PLAGUE.

BY J. A. LOWSON, M.B., C.M. EDIN.

A FEW remarks on some plague questions may not be out of place at a time when Europe is threatened with invasion by an old enemy, and especially as a late paper on the subject—viz., that by Dr. Cantlie before the Epidemiological Society on Dec. 18th, 1896—contains inaccuracies regarding the Hong-Kong epidemic as well as opinions which are not shared by several of those whose experience of the disease has been very much greater than his. Full treatment of these subjects can scarcely be gone into, as considerations of time and space do not permit at present.

1. *Nomenclature.*

Any change in the nomenclature of the disease is greatly to be deprecated; there is really no necessity for it. In Hong-Kong those of us who were constantly describing the disease to medical visitors had occasion to call it a malignant polyadenitis some time before Dr. Cantlie ever saw a case. It will be time to change the name when we find that plague includes two or more diseases, as typhus fever did in days gone by. At present, however, there seems to be little danger of the name "malignant polyadenitis" taking root; one might as well apply it to syphilis as to plague.

2. *Distribution.*

The present known limits of plague have not been correctly laid down by Dr. Cantlie. I have very little doubt myself that plague has made its way over Europe, Asia, and Africa in past days. In the course of desultory reading I came to the conclusion that the East Coast of Africa at least had suffered from the disease further south than a limit of nineteen degrees north, but without medical authority at hand refrained from mentioning this at the Epidemiological Society's meeting when plague was discussed. Since that time I find that plague is well known in Equatorial Africa, and through the courtesy of Mr. Peter Rattray of Dundee, lately in Uganda, some interesting details can be given. The disease in the Uganda district is known as "kaumpuli" and is well known there. In a dictionary edited by Pilkington and printed by the Church Missionary Society in 1892 the definition of this word is given thus:—"The plague—a disease attended generally by a swelling of the glands, pain in the chest, very prevalent after the rains. Treatment: Blisters on the swollen parts and an emetic is the most successful." I understand Captain Ashburnham of the Rifle Brigade nursed a European through the disease out there. I hope to get further information on the African distribution of the disease. When a native is attacked the whole tribe remove to another district at once—sound policy easily carried out because of its inexpensive character. Uganda is practically on the Equator, and although almost 4000 feet above the level of the sea the mean temperature should be nearer 90° than 80° F. The usual afternoon temperature in the shade is about 98° in the dry season, slightly less in the rainy season. This surely does away with Dr. Cantlie's limits and the ingenious suggestion of Dr. Payne that the isothermal line of 78° may stop the march of the disease. If the disease is well known in the centre of Africa it must have found its way there; and I will not be surprised, now that attention has been directed to the subject, to hear that it is met with in other tracts of Africa. It seems peculiar that Stanley and other explorers have nothing to say on the subject, the information I had previous to Mr. Rattray's being founded on missionary lay reports on the disease.

In Singapore in the latter end of 1895 or early in 1896 the death-rate was abnormally high (from sixty to seventy-five per mille per annum) for several weeks, and some malignant disease was presumably "hanging around." The authorities there, however, reported that no plague existed. In 1896 three cases of plague were landed in Hong-Kong from ships arriving from Singapore, and although two cases could be explained away by long periods of incubation or other loop-hole, one case—that of an Indian servant on a Calcutta liner—leads me to conclude that he must have been infected in Singapore. He was perfectly well when he left Calcutta and no swellings of any kind whatever were present prior to his arrival at Singapore, yet after being on shore in Singapore he became severely ill in three days, typical plague glands formed, and he was landed at Hong-Kong to die. Even the medical officer of health who saw the gland and had had previous plague experience did not think it was plague at first, but it was an undoubted and typical case. From the inquiries made of the man I could not trace any other source of infection, such as by fomites, &c., on the ship. Calcutta at that time was not infected, so, if my conclusion be right, Singapore is another equatorial spot to be added to the geography of plague colonies. I trust further explanation will be forthcoming. So far, if it has been in Singapore it has not done much damage.

The evidence regarding Uganda, however, must convince us that plague will march and flourish wherever it is carried and finds a suitable pabulum—irrespectively of the ordinary temperatures we find on this earth.

3. *Pestis Minor and Pestis Ambulans.*

It is to be hoped these two terms will be kept distinct when further discussion occurs. Pestis minor is that bubonic disease which occurs (?) before an outbreak of plague, whilst pestis ambulans is the designation applied to glandular enlargements occurring during or after an epidemic which may probably be due to a less potent infecting power.

Pestis minor.—The Hong-Kong experience in this respect

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requires notice. Dr. Cantlie said in his paper that all his ideas on the subject had been changed in a few days owing to the reputed discovery in the blood of patients suffering from buboes in Calcutta of a bacillus similar to the plague bacillus. Since 1889 Dr. Atkinson has placed the venereal wards especially of the Government Civil Hospital in my hands, and the records of excision and scraping of glands in that institution given by Dr. Cantlie cannot enter a plague report at all. Before the Hong-Kong and China Branch of the British Medical Association I read a paper in 1893 entitled, "On Venereal Disease in the Far East and the Repeal of the Contagious Diseases Act," and stated that all these cases of inguinal bubo which I had operated on were venereal in origin, in most cases due to a preceding chancre, in some cases due to gonorrhœa; in every case an antecedent venereal history was obtained. I think it must have been at this same meeting that Dr. Cantlie gave the definition of the bubo published in THE LANCET of Jan. 2nd, 1897. The majority of the members at that time gave a similar experience to that obtained at the Government Civil Hospital, and if further inquiries had been carried out perhaps Dr. Cantlie might have modified his statements on these cases, many of which probably were of that kind of patient who did not want to have venereal disease as a cause of absence from work. It was surely remarkable that they all occurred in the inguinal glands, more remarkable still that they all occured in men. No comparison could be drawn between the years I have mentioned and those previous, as radical treatment such as excision at least was seldom, if ever, attempted. I have been informed by some of the older practitioners of the East that the same type of bubo has been in evidence for as long as they can remember in China. I have seen very few of the non-venereal buboes mentioned by Dr. Manson, and in all there was some cause for the enlargement such as continued irritation from morphia injection, old injury, elephantiasis, or other similar mischief. In one case excessive copulation seemed to be the cause of an inguinal bubo, but after a few days on Easton's Syrup a slight discharge from the penis took place, which proved to be the remains of an old gonorrhœa. A peculiar form of lymphangitis appeared in the garrison of Port Hamilton in 1886-87 and was reported by Surgeon A. J. Wildey, R.N., in the Transactions of the Hong-Kong Medical Society published in 1889. Here there was a lymphatic disease of a somewhat epidemic character, but it cannot be said it was the forerunner of plague or in any way associated with it.

The children's epidemic glandular disease related by Dr. Cantlie in 1891 was certainly peculiar, but he forgets to mention that at the time he was fully convinced it was mumps. I saw several cases of true mumps about that time, but knew nothing of Dr. Cantlie's cases until he read his paper before the British Medical Association, Hong-Kong branch. It was singular that no adults were affected, and although a close watch was kept in the Government Civil Hospital afterwards no cases were ever seen by the medical officers there. Godding's cases coming after the plague, if related to that disease at all, should be treated under the heading of pestis ambulans. They were very like those narrated by Surgeon A. J. Wildey, R.N., and the danger of plague on board men-of-war may be the next scare for the Admiralty.

I contend that the Hong-Kong cases mentioned above have no relation to plague and cannot be classed as pestis minor—that bubonic plague in its severe type was introduced straight into Hong-Kong without any mongrel form intervening. In 1893, when these buboes were discussed, I mentioned that, not to be behind Dr. Cantlie, I hoped to discover the bacillus bubonicus Lowsonii, but have to confess to having failed up to the present moment. I have asked several medical men in America to keep watch on their bubo cases, many of which show the same characteristics which have been noted in the East—their results may be expected presently. The Calcutta cases should be "thrashed out" by the medical men there. The reports already received give good grounds for scepticism.

The reports of the Russian outbreak in 1877-79 leave no doubt that Dr. Döppner saw some cases which at present have the best claim to be classed as pestis minor; but what a different description to those of the Far East. "They had abscesses of the lymphatic glands either of the groin or the armpit which were suppurating freely." Again: "It was marked by a period of feverishness occasionally extending to a fortnight, but usually of a shorter duration, followed by the development of buboes in the submaxillary, axillary, and crural regions, *but most frequently in the submaxillary region.*" If my memory is correct none of Dr. Cantlie's children's cases suppurated; they resolved, as the usual parotiditis caused by mumps in this country does. In most hospitals in Britain a certain number of lymphatic abscesses occur every year, and it has been the same in Hong-Kong. Mr. Rattray informs me that in Uganda many natives came to him with swollen glands and said they had "kaumpuli," but that in every case he found some ordinary cause for the condition.

I trust these remarks will remove any false impression Dr. Cantlie's remarks may have given regarding the subject of pestis minor in Hong-Kong in 1894.

Pestis ambulans.—After the 1894 outbreak it was only natural that some glandular cases should occur where there was doubt in diagnosis, and in several such I examined microscopically the blood and gland "juice" without finding a trace of the plague bacillus. I made no culture experiments. In most acute infectious diseases a minor infecting power has been proved—cholera, influenza, and diphtheria being common examples; but in plague so far I have not met it, unless a slightly greater percentage of recoveries towards the end of an epidemic is attributable to this cause. A very careful history has to be got before ambulatory plague can sometimes be excluded, and so far I do not know if the plague bacillus has ever been found in pestis ambulans. It seems possible that a small amount of the toxin may be somehow absorbed by the body to cause slight glandular enlargement without the necessary entrance of bacilli, as the products of the bacilli may hang about a neighbourhood long after all bacilli are dead. One case sent in by Dr. Cantlie will illustrate the difficulty of diagnosis sometimes met with. A Parsee was admitted with slight elevation of temperature and enlargement of glands in the left femoral region. Preliminary examination of blood was negative and no cause could be found for the enlargement until a nocturnal specimen of blood showed we were dealing with a case of filaria sanguinis hominis. This was a purely accidental occurrence—the examination of a 9 P.M. specimen of blood; but for this we might have had this case puzzling us still for a diagnosis. The only case during the epidemic—or rather immediately afterwards—which was really doubtful was that of one of our nurses whom I was requested to see after she had been ailing for some time with lymphatic inflammation of the right leg and femoral lymphadenitis. Four or five weeks previously she had had some pain in the groin simultaneously with pain extending down the lymphatics of the leg to the knee, and it was only when the lymphangitis was well marked down almost to the toes that she complained and took to bed. For several reasons it was deemed unwise to make a puncture in the gland, so no microscopical examination was made. Recurrent attacks of lymphangitis followed, with occasional enlargement of the gland, such as is seen sometimes in any large hospital, and the conclusion was come to that it was not due to plague infection. This is the only case seen which has been left in doubt. During 1895 cases of ambulatory plague were still looked for carefully, but none turned up which could be classed under that heading—in fact, the so-called sporadic cases showed no lessening of virulence, with the result that every case died if my memory serves me right. In Swatow several cases occurred, so I am informed, but of these more evidence is required yet. While on this subject it is right to mention that many mistakes have been made by competent men when examining blood or bubonic tissue for the plague bacilli, and it requires some time for even a man who has done some laboratory work to be sure of the correctness of his examination.

(4) *Infection. (a) Method of Leaving the Body; (b) Mode of Infection; and (c) Carriage and Spread of Infection.*

(a) Method of leaving the body.—One certain but infrequent channel is by the discharge from buboes. The bacilli are numerous in such discharge, and even after it becomes purulent some days elapse as a rule before the bacilli disappear and the infecting power is lost. This loss of infecting power will explain why the experiments which have heretofore been made by inoculating man and animals have failed, and the statement has consequently been made that the discharge from buboes was not infective. After some days' suppuration the pus has no more infecting power than that from a simple ulcer. The reason why this channel of exit is infrequent is that death generally supervenes before any vent to the discharge is made or required. Out of about

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2300 cases seen in the Hong-Kong Chinese hospitals certainly not fifty buboes suppurated and burst, whilst in Macao and Canton I only noticed other two such cases amongst large numbers of plague-affected patients. The fæces are infective. The most complete experiments on this subject were made by Staff-Surgeon Wilm, who was working with us in Hong-Kong.[1] In every case he experimented on culture from a plague patient's fæces gave positive results as to the presence of the plague germ. In cases where albuminuria and casts were found bacilli were also present in the urine. The sputum almost always contains them, as also the fur on the tongue. At present there is no evidence to show that the milk is infective. I doubt it, as many children who were suckled by their plague-stricken mothers were left on our hands in hospital. Still, it is possible that such children were able to resist infection by the alimentary tract or mouth inoculation. No bacteriological experiments were made. The bacilli have so far not been found in the sweat secretion and I do not think in pure sweat they will be obtained. All culture experiments so far have failed. I believe there is little or no danger of infection by the breath of a plague patient. In Hong-Kong, had this danger been great, certainly more deaths would have occurred amongst those occupied in plague work. In the house-to-house visitation party who went round twice daily and entered the most infective houses in the city no one took the disease. Their duties only necessitated examination of the inmates of a house and their removal when suffering from plague, with a minimum of interference as far as movement of furniture or dirt was concerned. At the height of the epidemic these men spent the best part of two hours twice daily in the worst infected houses in the city. I certainly do not agree with the view that prolonged exposure to, and respiration of, "plague atmosphere" is necessary to get plague. A lengthened exposure only adds to the possibilities of a man getting it; he might get it from merely looking in at the door and getting a whiff of dust from the floor blown into his face; it is plague dust and dirt which are the infecting agents in houses. The cleansing squad of soldiers suffered, however—those who had to remove the dirt after stirring it up—and these only suffered when a preliminary disinfection was not carried out. After primary disinfection had been thoroughly set going none of these soldiers took plague. Several of the sanitary board's men who drove the dirt and refuse and shovelled it on to the fires on the Praga died, but, in contrast to this, notice how the attendants in hospitals fared. During the first ten days of the epidemic the hospital ship *Hygeia* was overcrowded (considering the hot, still atmosphere in the harbour), and the lower deck especially threatened to be dangerous, the smell of patients lying in dirty clothing being sickening and causing frequent emesis amongst those looking after their welfare, reduced in numbers and unable to get through all their bathing duties on account of many of the "boys" having fled. In this "hole" not one of these remaining attendants took the disease, although they were frequently fourteen hours on duty there. A Chinese hospital (the old glass works) was opened shortly after, and in forty-eight hours the building was crowded with dead and dying, and the condition of affairs under Chinese management grew most alarming. Here were wards full of patients looked after by Chinese attendants, who religiously kept all windows and doors closed whenever a European's back was turned, and who often slept in the same rooms as their patients, only separated from them by a partition extending half way up to the ceiling. Not one of these got plague, although they were breathing as thick a "plague atmosphere" as one could desire. Even some days after, when free disinfection of the floors took place every morning when being swept, the atmosphere during the night was indescribably bad. The deaths of hospital attendants in 1894 were only two in number in Hong-Kong. The first to contract the disease was a Eurasian Roman Catholic sister at work in the Alice Memorial Matshed Hospital, the cleanliness of which was undoubted; but the sister having had no previous experience of nursing it is probable that some indiscretion was the cause of infection. Incidentally I would remark that the most stringent instructions to be careful should be given to all attendants and any carelessness punished at once—even by dismissal if other attendants can be had. The other case was that of an Amah in the Chinese hospital (the new abattoirs), where hygiene was perfect so far as the building was concerned. Here, again, there was ignorance of nursing, not to mention the fact that the woman had to do the washing of patients' bedclothes, &c., in addition. At a Chinese hospital outside Hong-Kong one attendant took the plague and died. This hospital was meagrely supplied with lime as a disinfectant. At a large hospital I visited in Canton after the plague had been raging there for three months none of the attendants so far had taken the disease although they lived practically with the patients—some of the attendants' friends actually sleeping in the same small room. In this case, however, actual contact with the patient was rare, as the latter were allowed to die in their old clothes and were only occasionally supplied with tea or medicine (?) out of a pot or Chinese bowl. This hospital used no disinfectants. The walls of the small rooms had been whitewashed before the epidemic began and the floors were simply swept up after each patient died and a new mat was placed upon the bed board, the old one being generally destroyed. I contend that in the case of the lower deck of the *Hygeia* (for some days, at least), in the Glassworks Hospital and the Canton Hospital the condition of the atmosphere as far as being laden with the expired air of plague patients could not have been worse; the attendants had every opportunity, from length of time employed, of inhaling it for hours on end, yet none took it, and one is forced to believe that the mere expired air of a plague patient cannot have much, if any, potency. The infection of plague in this respect I liken to phthisis, the sputum here again conveying the infecting matter. Further, the majority of houses in Hong-Kong consist of a ground-floor and first-floor, in many cases a second-floor, and occasionally a basement. These floors are connected by a wooden stair inside the house shut off from the dwelling parts by a badly put together wooden partition, in some cases not reaching up to the ceiling. Now the atmosphere of this house is practically the same all through, yet often the inhabitants of single floors would be swept away and the others escape scot free. These floors were attacked indiscriminately—the first-floor or second-floor seeming to be attacked with greater regularity than the ground-floor, probably because the last was more exposed to the fresh air and sunlight and had a larger exit for refuse. This impartiality in attack of floors is also a strong point against those who pin so much faith to the theory that the soil originates or harbours the disease and that the order of attack depends on the distance an animal's or man's mouth is above the ground. This was especially the case in 1894, and I do not think the 1896 experience has been much different. In the latter year many isolated cases occurred in houses, but the disease got no further owing to excellent organisation, early detection of cases, and immediate disinfection. The term "house epidemic" has frequently been made use of in previous plague history, but this ought now to make way for "floor" or "flat epidemic." Of course, it may happen that all floors in some houses may be infected at the same time, but from what I have already said it is probably unusual.

(*b*) *Mode of infection.*—"Infection may take place by inoculation, inspiration, or introduction into the stomach."[2] The preponderating method will vary in different epidemics and will depend on the opportunities presented. Rabbits, when inoculated by an incision in the abdomen, generally present appearances of reaction—inflammation and œdema—round the wound. When inoculated in the leg such reaction is sometimes absent. Lymphangitis in man may or may not occur early in the disease, and even if present may give no external evidence of its presence. Some cases may be instructive.

CASE 1.—Professor Aoyama of Tokyo: "On June 28th, at a dinner given by the Japanese doctors to several of the Hong-Kong medical gentlemen connected with the plague, Professor Aoyama's temperature was 101·6° F. He slept well during that night. On the morning of the 29th Dr. Cantlie saw him and found him suffering from what he supposed to be the results of a dissection wound. At 5.30 P.M. he was seen by Dr. Molyneux and myself, and the case being immediately diagnosed as plague he was removed to the *Hygeia*. From the evidence which we procured it seems that on June 22nd or 23rd, whilst making a post-mortem examination he scratched the left third finger on the posterior and ulnar aspect of the first phalangeal joint.

[1] See Report to the Hong-Kong Government on the subject, 1896.

[2] Medical Report on Bubonic Plague to the Hong-Kong Government by James A. Lowson.

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On June 27th he again scratched himself on the end of the right thumb. When removed to the *Hygeia* he had a temperatare of 105°; had a bubo in the left axilla without lymphangitis; had a well-marked lymphangitis of the right arm extending up to the level of the middle of the humerus." Here there was no lymphangitis at first in what I took to be the plague-infected arm, but it was only non-apparent, as it appeared later, and its intensity can be gauged by the fact that over twenty incisions had to be made in it. Professor Aoyama's own statement is as follows (translated from the German): "On June 28th, after having finished a dissection, I took my meal about half past two and did not enjoy it. After the meal I went upstairs, when at certain movements of the arm I felt a slight pain in the left armpit, and on feeling with my finger I found some slightly enlarged glands present. In the evening I felt very ill, depressed, and languid, burning hot along the whole of the back, whilst the thermometer showed normal temperature. As Mr. Kitasato and I had invited guests that evening I was present at supper. I had no appetite and felt so weak and languid that I often wished to withdraw. At half-past eleven I hurried to my room, when I found my temperature was 39·5° C. I took 1 gramme of quinine and slept well. Next morning I awoke and noticed on the ulnar side of the left ring-finger a small, whitish-yellow blister, and thence along the back of the hand a red line. From this time I remembered nothing for more than two weeks." Now on the evening of his removal to the *Hygeia* and next morning three medical men with as good eyesight as it is possible to have examined him and could not see a trace of lymphangitis in the arm, even when local phalangeal trouble was already evident. The lymphangitis of the right arm was caused by the wound of June 27th. The question as to whether there will be "wound reaction" at the site of infection depends on the purity or impurity of the infecting material and the susceptibility and resisting power of the animal or person inoculated; and in the case of Chinese, who are notoriously susceptible to the disease and have little resisting power, it is little wonder that lymphangitis should be frequently absent seeing that they die usually from the first to the fourth day, before lymphangitis, when it is to occur, has had time to make itself apparent. Lymphangitis may occur late in the disease as a sequela, and when it does it often appears in what was probably the infected limb, of which Case 2 is an example.

CASE 2.—Dr. Ishigami, assistant to Mr. Kitasato. "Examination (June 29th) showed the absence of any open wound on the left hand (he had a left axillary bubo); but there was the mark of a small scar on one of the fingers where he said he had scratched himself some days before. ..... On July 26th lymphangitis of left arm, treated with lead and opium." I take this as an example of what probably often occurred in the epidemic—inoculation by a small wound, no wound reaction, no lymphangitis within the first few days, but developing later if the patient survived—even this last condition is not at all necessary. No mention of lymphangitis is made by Cerutti, who inoculated six Europeans to preserve them from the plague, five of them dying. Professor Aoyama and his assistants were always particularly careful of their hands whilst examining patients in the wards, using carbolic spray, &c.; but it struck me that in the post-mortem room, where there was far greater danger, they were careless in not using some antiseptic oil on their hands. Although they washed their hands afterwards in water and alcohol, yet there would be about two hours during the sectio cadaveris in which they could easily get infected.

CASE 3.—A policeman's wife was "admitted with sore between first and second toes, right foot; right femoral bubo and lymphangitis already suppurating." Here there was evidently a mixed infection of plague and streptococcus at once and suppuration was rapid.

These views on inoculation I have given somewhat fully, as this mode of infection has been ridiculed by some medical men in the Far East without having given much attention to the subject. The mere fact that many plague buboes in the groin and armpit suppurate whilst the internal enlarged glands in the same patient do not seems to bear out the fact that the streptococcus infection is practically stopped at the primary bubo, whilst a secondary plague infection of other glands goes on. The cervical glands rarely suppurated; perhaps in inoculation by the mouth the streptococci had not the same chance of entering the system. In one or two cases multiple abscesses were found, as one occasionally gets a pyæmia after septicæmia; but had these cases been infected by plague alone I do not think suppuration would have been found in disseminated foci. The better class Chinese do not suffer nearly so much from plague. Their houses are slightly cleaner than those of the lower classes, and they wear shoes with the trousers tied tightly round the stockings, thus cutting off a large amount of infecting ground.

Actual proof of infection from food will not be easily proved amongst Eastern races, and may arise from infection of the animals eaten or from infection of food or vegetables which have been exposed in plague houses. Infection by drinking water can only be possible where the most insanitary wells are allowed to exist. It will probably be found that, although the infection be carried to these by flies, mosquitoes, &c., it will not long survive in any well or pool where a free access of air is possible.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF EXOMPHALOS WITH OTHER MALFORMATIONS.

BY WALTER M. WOODHOUSE, M.R.C.S. ENG., L.R.C.P. LOND.,
SENIOR ASSISTANT MEDICAL OFFICER, KENSINGTON INFIRMARY.

A GIRL, aged twenty years, was admitted into Kensington Infirmary on Nov. 5th, 1896, suffering from syphilis. On examination it was found that she had mucous tubercle round the vaginal orifice and anus, besides a squamous eruption on her skin, which she stated had been there since her ninth year. The patient was thought to be in about the sixth month of pregnancy. Under anti-syphilitic treatment the mucous tubercles cleared up considerably and her general condition greatly improved. On Dec. 18th the patient had a sudden and somewhat copius hæmorrhage from the vagina. An examination was immediately made and the right foot of a fœtus was found to be presenting. After the other foot had been brought down some difficulty was experienced owing to two soft masses which were felt, one lying posteriorly to the abdomen and the other anteriorly to the head. The former of these was found to be the placenta, and a large swelling seemingly attached to the umbilical region; the latter, a tumour which ruptured prior to delivery, will be presently described. The mother made an uninterrupted recovery and is now to all appearances quite well. The fœtus showed no sign of life; at the same time, there was no evidence of maceration.

Necropsy.—The child, a female, was twelve inches in length, and, as far as the characteristics would permit one to judge, of about from six and a half to seven months' development. Both feet presented well-marked talipes varus. There was a general stunted appearance, the neck being absent, and the head, which was flat at the top with a curiously sloping posterior part, appeared to spring direct from the shoulders. The eyes were prominent and the upper lids seemed much swollen. Dissection proved the absence of the vault of the skull, except some part of the frontal bone, which was pressed back and closely approximated to the anterior part of the base. The roof of the orbit was absent, leaving the eyeball uncovered on its superior aspect, thus explaining the swollen appearance of the eyes. Various foramina for vessels and nerves could plainly be discerned after the skin flaps had been dissected back. What brain matter there was was contained in a tumour before mentioned over the cervical vertebræ and posterior part of the base of the skull. There was no bony matter behind the usual situation of the foramen magnum, which was absent. The neural arches were deficient over the entire spinal column, leaving the spinal canal unenclosed. Still more remarkable was the arrangement of the abdominal and thoracic viscera. The thorax appeared to be abnormally short. From the region of the umbilicus sprang a pedunculated mass the size of a large orange, the pedicle being an inch in diameter. From the opposite end arose the umbilical

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cord, the length of which was one and a half inches. It may be inferred that the outer coat of the mass was amnion, since it was continuous with the amnion on the cord. On internal examination the mass was divided into two unequal parts by a flat structure composed of muscular tissue, no doubt diaphragm. The smaller, situated in the pedicle, contained the heart with its pericardium, the lower end of the œsophagus, and the lungs. This necessarily caused elongation of the trachea and bronchi. The large cavity—containing the stomach, the large and small intestines, liver, and spleen—was lined by a continuation of the peritoneum. The large intestine re-entered the true abdominal cavity and was continued as the rectum to the anus. The thoracic cavity was almost obliterated, containing only the thymus gland. The kidneys and pelvic organs were normal.

Kensington.

A CASE OF MALIGNANT DISEASE OF THE RECTUM; PERFORATION; DEATH; NECROPSY.

BY ALONZO G. RIDER, M.B. LOND.,
ASSISTANT SURGEON TO THE ROYAL ALBERT HOSPITAL, DEVONPORT.

ON Sunday morning, May 24th, 1896, I was asked to see a widow woman, aged sixty years, as she was in pain in her abdomen. Before I reached the house, however, another medical man had been called in, as the pain had become much worse. I did not see the patient, but learned from the patient's daughter that she was much easier after a hypodermic injection of morphia. Next day I was asked to see the patient, and the history obtained was as follows. The patient was seemingly in perfect health till Sunday morning about eight o'clock, when she was taken with pain in her abdomen, which increased rapidly in severity. (There was no error in diet to account for this attack.) The pain seemed to radiate from the umbilicus, where it was most severe, all over the abdomen. Vomiting set in soon after the attack; it was persistent, at first bile-stained and afterwards brownish and offensive. It was not feculent. The history obtained gave two or three months alternating constipation and diarrhœa. Bright blood was often passed with the motions, which were frequently flattened. There had been no bladder or uterine troubles. Occasionally the patient felt some dull, aching pain over the sacrum, but with this exception she said "she had never felt better in her life till this attack commenced." There had been very little loss of flesh. The bowels were easily moved by mild aperients. There was nothing definite with regard to the family history. When seen the patient was lying on her back with both legs drawn up. The features were pinched; the extremities cold and clammy. The pulse was 90, weak, and of low tension. The respirations were 24, not markedly costal. The temperature was 97 4° F. The tongue was dry and covered with thick whitish fur. The abdomen was distended. There was no evidence of fluid in the peritoneal cavity. There was tenderness all over the abdomen especially around the umbilicus. In the right iliac region a swelling the size of one's fist could be felt; it pitted on deep pressure. There was no œdema of the legs. Nothing could be detected per vaginam or per rectum. Malignant disease of the large intestine, probably the rectum, was diagnosed with acute intestinal obstruction supervening on the chronic condition, and the patient was as soon as possible removed to the Royal Albert Hospital with a view to having colotomy performed. She, however, rapidly became worse and died before any operation could be performed about six hours after admission.

Necropsy.—There was no free gas in the peritoneal cavity; in Douglas's pouch there was about half an ounce of brown-coloured fluid with a fæcal odour. Some of the lower coils of the small intestine were covered in places with recent lymph. In the upper third of the rectum there was a growth surrounding the bowel for a distance of one and a half inches. It almost entirely occluded the lumen of the gut. On the left side of the bowel there was a recent ulceration, passing through all its coats large enough to admit a No. 3 catheter. No secondary deposits were found. The appearance of the growth was carcinomatous, but no microscopic examination was made.

Devonport.

CASE OF PAPILLOMATA OF THE LARYNX IN A CHILD; RECOVERY AFTER TRACHEOTOMY.

BY G. HUNTER MACKENZIE, M.D. EDIN.,
SURGEON FOR DISEASES OF THE THROAT AND NOSE TO THE EYE, EAR, AND THROAT INFIRMARY, EDINBURGH.

A BOY, aged two and a half years, was sent to me at the Eye, Ear, and Throat Infirmary on Sept. 4th, 1895, by Dr. McCreadie of Leith. His voice had been husky from birth, and for a year previous to admission the vocal symptoms had grown appreciably worse. Latterly the respiration had become noisy and somewhat impeded, especially when he had "cold," to attacks of which he was now very subject. He had been singularly free from the usual troubles of infancy and childhood. On admission the boy was in poor general condition, the respiratory act was noisily performed, and inspiratory dyspnœa was distinctly, but not markedly, present. He spoke in a whisper. An attempt to use the laryngoscope alarmed him and induced an aggravation of the respiratory difficulty with spasm. He was accordingly chloroformed and again examined, without, however, very definite results. On Oct. 7th he had become so much worse that tracheotomy had to be performed for the relief of the breathing. Great improvement followed and he was dismissed in about a week.

The subsequent history of the patient may be briefly summarised. The tracheotomy tube was worn for seven months. During this period pieces of warty-looking growths were detached from time to time and were coughed up, usually at such times as the tube was removed for cleansing purposes. Ten such pieces, the largest being of about one-half the size of a grain of rice, were detached and recovered from the expectoration and secretion of the trachea and tracheal wound. These were found to be papillomatous in structure. In June, 1896, being seven months from the date of operation and two months from the time of expectoration of the last piece of growth, it was determined to remove the tube and close the tracheal opening, and although for a few weeks the breathing was at times greatly impeded, especially during sleep, it gradually improved, and re-insertion of the tube was not necessary. The boy (in January, 1897) breathed quite freely, and about a month previously his normal voice had been heard for the first time.

Remarks.—This case is recorded as an example of the success which attends the treatment of papillomata of the larynx in children by simple tracheotomy. There is abundant evidence to show that forcible removal of these growths by intra-laryngeal or extra-laryngeal operations is very apt to be followed by rapid and frequent recurrence. Not only so, but in the case of the last mentioned (thyrotomy) being adopted an additional and serious drawback is probable in the form of permanent injury to the voice. The disease, it will be noted, seems to have been congenital, which is occasionally the case, although more frequently it appears as a sequel of one of the exanthemata, usually measles.

Edinburgh.

AN UNUSUAL RESULT OF ABORTION.

BY C. E. PURSLOW, M.D., M.R.C.P. LOND.,
HONORARY OBSTETRIC OFFICER, QUEEN'S HOSPITAL, BIRMINGHAM.

THE patient from whom the specimen which I am about to describe was obtained was the mother of three children. During her last pregnancy she suffered in the early months from retroflexion of the gravid uterus. This was rectified and a pessary worn for two months, and the condition gave rise to no further trouble. On this occasion she had not menstruated for eighteen weeks and had all the signs of normal pregnancy. She was then seized with somewhat severe labour pains, and when I saw her the fœtus contained in its amniotic sac had been expelled and was lying in the bed. The placenta could be felt presenting at the os, and as pains were going on regularly it was not interfered with and the placenta and membranes were expelled in about two hours' time. A douche was then given and the patient made a normal recovery. No discharge of any kind had preceded the expulsion of the amniotic sac. On examining the specimen it was seen that the fœtus, about six inches long, was enclosed in the intact amniotic sac with

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the liquor amnii. There was no trace of chorionic or placental tissue on the outer surface of the amnion, and the fœtus could be plainly seen through the walls of the sac. The umbilical cord had given way at its placental attachment and its torn end was very distinctly seen as a depression on the surface of the sac, the whole length of the cord lying in the sac with the fœtus. The specimen is now in the museum of Mason College. The expulsion of the entire sac of the ovum is fairly often met with at all stages of pregnancy, but such a result as the one I have described appears to me to be extremely unlikely to occur, and it is with the object of discovering whether any of the readers of THE LANCET have ever met with such a specimen that I have written this note, as I can find no reference to any similar specimen having been described.

Birmingham.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

VICTORIA HOSPITAL FOR CHILDREN.

A CASE OF PURULENT CEREBRO-SPINAL MENINGITIS; DIAGNOSIS BY MEANS OF LUMBAR PUNCTURE; NECROPSY.

(Under the care of Dr. DAWTREY DREWITT.)

PUNCTURE of the spinal canal and evacuation of the cerebro-spinal membranes in cases of tuberculous meningitis have been practised with varying success. This case illustrates its advantages as an aid to diagnosis in other diseases of the spinal cord. The puncture itself is unlikely to cause any injury if performed with ordinary care, and the position of the cauda equina in young children—lying in two bundles on either side of the canal—makes the nerve elements at the point usually selected practically safe from injury. Mr. Power gives a description of the operation in his book on Surgical Diseases of Children. For the notes of the case we are indebted to Dr. Louis B. Hayne, house physician.

A girl, aged ten years, was admitted into the wards of the hospital on the night of Dec. 15th, 1896, under the care of Dr. Dawtrey Drewitt, with the history that from infancy she had suffered from intermittent attacks of otorrhœa, mainly on the right side; she had never been really well since she had diphtheria three years previously. Recently she had been studying hard at school. On Dec. 5th she had right-sided earache with a little discharge, and on the 8th the present illness commenced, with headache and vomiting. She was kept in bed for a week, the main symptoms being drowsiness and headache. There was no action of the bowels after the 9th. On the 16th, the morning after her admission into the hospital, symptoms of cerebral irritation were present. The head was markedly retracted and the child constantly cried out in a semi-delirious manner, complaining of headache mostly over the right frontal and temporal regions. The temperature was 102·8° F., and the pulse was rapid but regular. The tongue was dry and brown. There was vertical nystagmus on fixation and also optic neuritis; and there were a few flakes of pus on the right membrana tympani. A rigor, the temperature rising to 104·8°, occurred during examination. The knee-jerks were absent; there were no localising symptoms. By the advice of Mr. D'Arcy Power the sub-arachnoidean space was punctured at the level of the third lumbar spine by a fine trocar and cannula, a test tube full of foul-smelling pus being withdrawn. The child was considerably relieved and slept quietly for three or four hours; symptoms of irritation, however, returned, which terminated with death twelve hours later.

Necropsy.—At the post-mortem examination purulent lymph and pus, somewhat offensive in character, were found covering the base of the brain and of the left lobe of the cerebellum, with considerable matting together of the parts. The base of the right lobe of the cerebellum was normal; the brain substance was also normal. The spinal membranes and cord were covered with pus of a similar nature. No evidence of middle-ear disease was discovered.

Remarks by Dr. L. B. HAYNE.—Lumbar puncture, carried out with the ordinary aseptic precautions, serves as a useful addition to our diagnostic aids in cases where there are no signs to enable us to distinguish between cerebral irritation as the result of a general and that the result of a local condition. In this case the history of previous attacks of right otorrhœa might reasonably have led one to suspect the presence of an acute cerebral abscess, and undertake the operation of trephining accordingly. The futility with which such an operation in this case would have been undertaken was happily avoided by the formation of the diagnosis afforded by the preliminary lumbar puncture.

STANLEY HOSPITAL, LIVERPOOL.

A CASE OF TRAUMATIC EPILEPSY; TREPHINING; IMPROVEMENT.

(Under the care of Mr. G. P. NEWBOLT.)

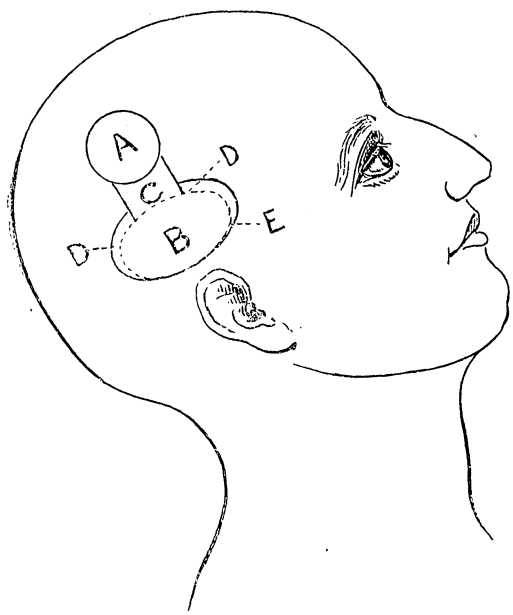
OPERATION for the relief of traumatic epilepsy is placed on a firm footing and many cases of its successful accomplishment are on record, yet the account of a case such as the following, in which the lesion was an extensive one, will always be of interest to those engaged in surgical practice. Although the patient does not appear to have received the full benefit hoped for from the operation, still there is no doubt of the improvement which has ensued. More than one case is known in which the removal of a spicule of bone which projected from the under surface of the skull was sufficient to relieve the patient of his fits, and a case is on record in which such a spicule was found near the trephine opening after death. The operator had failed to discover a cause for the attacks at the time of the operation. In a collection of 82 cases 72 had a distinct history of some lesion to the head. In 46 out of these 72 there was a fracture, which was compound and depressed in 26 cases. The exact seat of the lesion is not given accurately in a large majority of the cases. In 45 it was over one or the other parietal, in 14 over the frontal, and in 3 over the occipital area.[1]

A sailor, aged forty-five years, was admitted to the Stanley Hospital on April 3rd, 1894, suffering from epileptic fits apparently due to an old injury of the head. The following notes, giving the early history of the case, were obtained from the surgeon under whose care the patient came directly after sustaining the injury at Boston, U.S. On Dec. 13th, 1888, whilst weighing anchor a chain parted and the end of it struck the patient on the right side of the head, inflicting a compound comminuted fracture of the skull, from which brain substance and blood exuded. On admission to the Boston Hospital there was a wound the size of a silver dollar half an inch above and posterior to the external ear. Under ether one large detached fragment and several other depressed fragments of various sizes were removed, a small amount of brain substance was washed out, and the wound was closed as far as possible, but there was not sufficient scalp to cover it completely. The patient was delirious and had to be restrained for four days, but at the end of that time he was fairly rational. On Jan. 27th, 1889, he was up and dressed for the first time, and said that on the previous day all at once his memory and senses came to him, and he knew who he was and where he was. On the 30th he was quite rational, and remembered everything except what had occurred during his stay at the hospital, but he recollected nothing about the accident. The granulating surface of the wound lay about three-quarters of an inch below the surface of the scalp and pulsated visibly. On Feb. 10th his eyes were examined, with the following report: "V.O.U. $\frac{20}{20}$; the fundus is normal; there is complete hemianopsia; the left side of the field is gone in both eyes, the division line being practically vertical and running across the fixation point. The eyes were not absolutely steady during examination, but enough so to make the general result unquestionable." On the 16th he was examined by a neurologist with the following result: "Smell, sensation, and motion are normal. He reads fluently. The grasp is strong, the dynamometer recording—right hand 100, and left hand over 95. The triceps, radial, ulnar, and epigastric reflexes are absent, the abdominal

[1] Jacobson: The Operations of Surgery, second edition, p. 186.

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cremasteric and plantar reflexes being present. The knee-jerk is slightly greater on the left side; he stands with the eyes shut. There is hemianopsia." On March 30th he was discharged well. For two years after the accident the patient was perfectly well, and then whilst working he had a fit and dropped as if shot. Since that date (March, 1891) he had had fits at intervals varying from two weeks up to two and a half months. Before the fit came on he had a sensation of numbness and then pain starting about three inches above the left wrist on the inside. The pain shot down the inside of the wrist and around the back of the hand and also passed up to the shoulder. He then became unconscious for about five minutes and was a quarter of an hour in coming to himself. Lately he had had pain in the left wrist and ankle, also at the seat of fracture, and at the corresponding point on the other side of the skull. On account of these fits he could get no employment whatever and consequently was most anxious that some operation should be done. On admission to the Stanley Hospital the patient was a strong, healthy looking man. There was an oval depression in the bony wall of the skull on the right side above, and posterior to, the external ear. It was three-quarters of an inch deep and at the bottom of it the brain pulsated. When he lay down this depression filled up whichever way he turned his head. There was a distinct impulse on coughing. The bony margins of this depression were rounded, but there were fissures in it anteriorly, posteriorly, and below. The antero-posterior diameter was one and a half inches. From above downwards it was two inches, and the lower edge was one and a half inches above the centre of the external auditory meatus. There was no paralysis, but he was slightly deaf on the left side and hemianopsia was present. On April 6th, 1894, the head having been completely shaved and rendered aseptic, chloroform was given and a big semicircular flap was turned down from the right side of the skull, its base being level with the top of the depression. A circle one and a half



A, Trephine centre. B, Old wound. C, Bone removed between trephine centre and old depression. D, Margins pared. E, Spot where spicule was found.

inches in diameter was then raised from over the wrist centre, but the parts beneath were apparently healthy; and so, having reflected the flap lower down, Mr. Newbolt removed the portion of bone (C) between the trephine circle and the edge of the depression. The adhesions betweeen the cicatricial tissues covering the old wound and the edges of the bone (DD) were next separated and the bone pared all round except at the base. Whilst doing this a spicule of bone was discovered in the anterior corner of the wound (E) and underneath it a small cyst. The spicule was removed and the cyst opened. All hæmorrhage having been stopped, the pieces of bone removed were cut up and re-implanted, the wound was completely closed, and the patient returned to bed. On the 16th he was allowed to be up. By the 18th the wound had healed by first intention and the replaced bone had formed a dense cicatrix over the part on which it was placed. On May 4th he left the hospital. His last fit before the operation occurred on March 18th, 1894. He kept perfectly well until Nov. 2nd, when he had a slight fit, not so severe as the others, and he was able to walk home soon after it. This was seven months after the operation. At the end of May, 1895, whilst at Santos, he had a second fit, another interval of seven months having elapsed, and at the end of September, 1895, a third took place, the interval being four months. When last seen, on March 12th, 1896, the patient had remained well and had not suffered from another fit. He still had hemianopsia and slight deafness. The replaced bone had become quite firm and the old depression still existed.

Remarks by Mr. NEWBOLT.—I report this case as I think it is interesting both in itself and from the early history of the accident. I am inclined to think that adhesions probably have had a good deal to do with the onset of the fits, though the spicule may have acted as an irritant. It will be interesting to follow the history of this patient and to see whether the fits increase in frequency or not. He was shown at the Liverpool Medical Institution.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Urine in Typhoid Fever.—Nervous Symptoms in Typhoid Fever.

A MEETING of this society was held on Feb. 8th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

Dr. P. HORTON-SMITH read a paper on the Occurrence of Typhoid Bacilli in the Urine of Patients suffering from Typhoid Fever. He referred to the observations of previous writers who had found the bacilli present in a varying number of the cases examined, and in some as early as the first week. He thought, however, that these results ought to be accepted with some caution, as sufficiently stringent precautions did not appear to have been taken to distinguish the organism from the bacterium coli commune. In all his cases he had made careful negative tests and excluded this fallacy. The urine was passed with careful precautions into a sterilised flask. Plate cultures were made (*a*) by smearing drops of urine on the gelatin surface; and (*b*) by filtering the urine through a sterilised Chamberland's bougie and making cultures from the deposit. Their identity as typhoid bacilli was confirmed by their appearance, and especially that of their cilia under the microscope; by their not evolving gas when cultivated in gelatin; by their not coagulating milk, even after a month; and by their reaction with typhoid serum. He had observed eight cases, involving sixty-one examinations, in which he had established the presence of typhoid bacilli in the urine. He had never been able to find it in the early stages of the disease, and therefore the diagnostic value of a positive observation was small. The investigation showed that it was important to disinfect the urine as well as the fæces of patients suffering from typhoid fever.—The PRESIDENT drew attention to the important practical conclusion to which this scientific investigation had led.—Mr. H. E. DURHAM asked whether in any of these cases of undoubted typhoid fever Widal's serum reaction had been tried during life. He did not find the test so reliable as he had been led to expect, and it was specially important to have information as to its presence or absence in cases which were shown bacteriologically to be true cases of typhoid fever.

Dr. JOHN ABERCROMBIE read a paper on Some Affections of the Nervous System met with in Association with an Attack of Typhoid Fever. He thought that the imbecility occasionally met with was mainly due to insufficient feeding. He described the case of a boy who was very delirious during the first two weeks and then passed to a condition of mental dulness, but resented any attempt to feed him, nasal feeding being necessary, except for a short interval, for two months, during which time he remained in the same imbecile condition. He quite recovered his mental equilibrium a

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month later. Some peripheral paralysis came on during his convalescence, but ultimately recovery was complete. Although rigors usually suggested peritonitis or perforation they might have no grave significance, and in several cases quoted appeared to be simply dependent on constipation. He (the speaker) described one case and quoted others observed by Osler in which rigors were associated with the occurrence of venous thrombosis. He had met with two cases of convulsions in the course of typhoid fever. In the first case the fever came on a few weeks after a perfectly normal labour; the initial diarrhœa had given way to treatment and the bowels were acting daily. During the third week the patient had four convulsions, for which there was no evident cause. It was believed that the convulsions were reflex, and although the bowels were acting daily it was decided to give a glycerine enema. A large, pultaceous, very offensive stool was evacuated; the patient's temperature came down to 101° F. that night, and she had no more convulsions. The second case occurred in a man, thirty-five years of age, who had a convulsion on the forty-first day which was apparently due to the occurrence of venous thrombosis.—Dr. HERRINGHAM said he had seen cases of imbecility occurring in patients who were in hospital and taking a full amount of nourishment. Insufficient food could only be regarded as one of the factors. Rigors might be due to quite trivial causes, and some people seemed specially liable to them. He thought there was an analogy between the temperature curve and the epileptic paroxysm, the early sustained pyrexia corresponding to the tonic stage, the fluctuating temperature during defervescence to the clonic stage, and the rigors to the sudden irregular jerks which are so often seen at the close of a convulsion.—Dr. DE HAVILLAND HALL had seen a case in which rigors occurred with symptoms of heart failure; no explanation was found for their occurrence, and they did not delay the recovery.—Dr. JOHN HARLEY insisted on the close relation between typhoid and intermittent fevers. He thought there was an inherent tendency to rigors, especially in severe cases. Typhoid fever had a way of bringing out any weak spot in the nervous system, and he quoted cases in which transient paralytic symptoms showed themselves during the course of the fever.—Dr. NORMAN MOORE mentioned two cases in which rigors were followed by the passage of pus in the urine. It was difficult in such cases to tell if the formation of pus were due to the attack of fever or were antecedent to it. He thought that the mental weakness was in great part attributable to the long duration of the fever.—Dr. RUSSELL WELLS referred to cases of typhoid fever in which symptoms of cerebro-spinal meningitis occurred. No lesion was found in those cases which were examined after death, and the symptoms appeared to be due to the circulation of some chemical poison.—Sir DYCE DUCKWORTH thought that the long duration of the disease was one of the most important factors in producing mental weakness. Mania and melancholia were frequently met with after typhoid fever, and both they and the more severe forms of delirium are usually associated with a neurotic family proclivity. He hardly agreed as to the existence of any close relation between typhoid and intermittent fevers.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Feb. 8th, the President, Mr. REGINALD HARRISON, being in the chair.

Dr. MORGAN DOCKRELL showed a case of Withering Sarcoma of the Scalp of fifteen years' duration. The case was shown by the late Mr. Morrant Baker nine years ago and fully reported in the St. Bartholomew's Hospital Reports; it had remained quiescent until a few months ago, when it became more active and acquired a condition of mycosis fungoides. The question arose whether such a case was suitable for the injection of Coley's fluid.—Mr. G. R. TURNER asked if the discharge had been examined for the ray fungus. He thought that such a growth as this patient exhibited appeared too extensive for the use of Coley's fluid.—Dr. DOCKRELL, in reply, said that he had found that when a condition of mycosis fungoides was present these cases did best with Coley's fluid. He thought that as the growth was increasing it was worth while to try the injection of the fluid.

Mr. NOBLE SMITH showed a woman who ten years previously had sustained an Injury to the Second Finger of the Right Hand. The finger was amputated. He also showed a case of Diffuse Lipoma and Congenital Deformity of the Phalanges of the Index Finger in a woman who, at the age of fifteen months, fell down some steps and injured the thumb and index finger of the right hand. A full report of these two cases is published at p. 431 of our present issue.

Mr. J. H. MORGAN showed a man, aged twenty-six years, with Bi-temporal Hemianopsia after Compound Fracture of the Anterior Fossa of the Skull. He had fallen from a height and fractured the patella; he vomited a considerable quantity of blood, had ecchymosis of both eyelids, blood in the nostrils, and conjunctival hæmorrhage on the right side. He developed a condition of cerebral irritation. More than a month later a swelling was noticed in the upper part of the right orbit with a bony margin, and emphysema was present in this region, which lasted several days. It was found that he had loss of vision in both temporal fields. The discs were pale and probably in a condition of early atrophy. Mr. Morgan thought the fracture involved the anterior fossa and the orbital plate on the right side.

Mr. F. C. WALLIS showed a boy, aged sixteen years, who fell on his shoulder through a distance of thirty feet and caused a longitudinal fracture of the great tuberosity of the humerus just below the insertion of the muscles. This portion of bone sprang away from the shaft, but was not separated from it, and tore through the fibres of the deltoid. An incision was made and it was found that in the abducted position of the arm the splintered bone came nearly into position; subsequently, however, it was necessary to remove the projecting portion of bone. The boy made a good recovery and has good movement in the arm.

Mr. G. R. TURNER showed a case of Excision of the Head of the Radius for Old Unreduced Dislocation in a Soldier who was thrown whilst driving a cart. He sustained a fracture of the ulna about the middle and dislocation forward of the radius. A skiagram showed that the head of the radius was dislocated forwards. The head of the radius was excised, care being taken not to interfere with the tuberosity of the biceps. The man made a good recovery and was able to pronate and supinate well, power of flexion being limited.—Mr. F. C. WALLIS asked if any treatment short of operation had been tried.—Mr. WATERHOUSE said that he had, in a child eight years of age, been able, after making an incision, to force the head of the bone back into position with a periosteal elevator.—Mr. TURNER, in reply, said that he had tried manipulation under chloroform. He did not think that it was likely in such a case as this that reduction could be performed, and that these cases often seemed to do better when the head of the bone was excised than they did even if one succeeded in reducing the dislocation.

Dr. R. MAGUIRE showed a case of Malignant Disease of the Lung in a man, aged fifty-two years, who complained of shortness of breath and cough, the first complaint being, however, difficulty in swallowing. He had dulness over the upper part of the left lung with loud bronchial breathing. He thought that infiltration of the lung by new growth had taken place along the bronchi. The œsophagus allowed a bougie to pass easily.

Dr. R. MAGUIRE showed a second case of a man with Congenital Heart Disease, aged twenty-two years. He had had rheumatic fever three times, but when only seven months old he had been seen at Brompton Hospital by Dr. Pollock, and was then said to have had heart disease.

Mr. SWINFORD EDWARDS showed a Skiagram of a Knee-joint after Suture of the Patella from a man, aged thirty years, in whom he had wired the patella on the ninth day after the accident.

Dr. G. STOKER showed two cases of Ulcers treated with Oxygen Gas, the one ulcers on the leg, the other lupus of the nose. In the latter case scraping the surface had been combined with treatment by oxygen; both conditions had considerably improved since being under treatment.

OBSTETRICAL SOCIETY OF LONDON.

Exhibition of Specimens.—Annual General Meeting.—President's Address.—Election of Officers.

A MEETING of this society was held on Feb. 3rd, the President, Dr. F. H. CHAMPNEYS, being in the chair.

Mr. DORAN showed the following specimens:—1. Fibroma

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of Ovary; Impaction; Ascites; Removal. A year before removal this tumour was impacted in the pelvis; the uterine cavity measured three and a half inches. It was reduced with ease. In the autumn ascites set in and the uterus measured four inches; the tumour, eight inches broad, lay in the abdomen across the pelvic brim and quite moveable. Mr. Doran removed it on Jan. 12th. The pedicle was five inches broad and very short, otherwise no difficulty was encountered and the patient did well. She was forty-nine years of age. 2. Lipoma of the Lumbar Region, four pounds in weight and of twenty years' growth. The patient was aged fifty-five years and had borne ten children. She was very corpulent. In 1876 it measured three inches and remained about that size till 1891, when it began to grow very rapidly. It was removed in 1894 without any difficulty; it then measured nineteen inches in its long diameter, bulging conspicuously from the loin forward and outwards. 3. Fibroma of the Abdominal Wall increased during Pregnancy. The patient was aged thirty-two years and had borne five children. The tumour was first seen in December, 1895, and the patient became pregnant shortly afterwards. It increased over two inches in its long diameter during pregnancy and was removed five weeks after delivery. It lay in the substance of the left internal oblique muscle and probably originated in the conjoined tendon. Neither the external oblique muscle nor the peritoneum was involved or adherent to the tumour. Mr. Doran called the attention of the society to the great predominance of parietal tumours of this kind in women.

Dr. JOHN PHILLIPS showed a Fœtal Monstrosity (Hemicrania). The mother, a young primipara, was delivered at the eighth month of pregnancy; the labour was complicated by marginal placenta prævia. The fœtus presented by its face and labour terminated with the chin to the anus as in first vertex delivery. The placenta was of enormous size and irregular shape. The fœtus was stillborn. The external appearance of the monstrosity is exactly depicted by Ahlfeld, the characteristic frog-like attitude being well seen. The tumour over the site of the occipital and upper spinal regions had been removed in the specimen and was found to consist of a broken-down brain substance with various nerves passing from it. The whole of the posterior portion of the cranial vault and the posterior vertical laminæ were entirely absent. The lower jaw articulated in a fossa in normal relation to the zygoma. The generative, digestive, cardiac, and pulmonary systems were normal. The fœtus was a female. The left foot had an equino-varus and the right a calcaneo-valgus.

Mr. TARGETT showed a specimen of Ruptured Gestation in an ill-developed right uterine cornu. The gestation sac was connected with the cervix of the well-formed left cornu by a small, rounded cord which seemed to be traversed by a minute canal. This cord was three inches long and represented the lower end of the Valerian duct. The evidence that the gestation sac was uterine and not tubal rested upon the facts that the right round ligament took origin from it and that the sac possessed a normal right broad ligament with a Fallopian tube and ovarian ligament of the usual length. The left cornu was lined with decidua and its cervix plugged with mucus. A rupture of the sac was caused by vomiting in consequence of the administration of an aperient draught and was speedily fatal. The patient was in the fifth month of pregnancy.—After remarks from Dr. MACNAUGHTON-JONES, Dr. GRIFFITH said he had carefully examined two similar specimens with the object of endeavouring to identify and trace the Mullerian duct or any channel of communication between the developed and the undeveloped horn containing the gestation sac. The method he adopted was by microscopical section through the whole thickness of the septum uniting them. He had failed to find any trace of such a canal in either specimens, and he placed no reliance on a bristle for this purpose, which would naturally find some passage along the bundles of muscle fibres or some vessel or nerve.—Remarks were also made by Dr. MACLEAN.

Dr. CULLINGWORTH exhibited a specimen removed by operation a few hours previously consisting of the Fallopian Tubes and Ovaries. The right Fallopian tube was enlarged, tortuous, and completely occluded by adhesion of its fimbriated extremity to the surface of the ovary. Its diameter was one inch and its length four and a half inches. Its lumen was dilated and contained about half a fluid ounce of greenish-yellow pus without odour. The mucous lining was covered with granulation tissue without any trace of ulceration. The right ovary was enlarged, and on section was seen to contain a large number of small abscesses with walls of thick, opaque, whitish tissue, giving them the appearance of degenerate corpora lutea. Dr. Cullingworth said that he exhibited the specimen chiefly on account of the interest attaching to the condition of the ovary. It was unusual to find a large number of small abscesses in the ovary except in tuberculous disease. In this case he believed the inflammation to be of gonorrhœal origin, the purulent vaginal discharge during the first inflammatory attack having probably been due, not to the bursting of an abscess, as was then supposed, but to acute gonorrhœa. The result of the operation showed that nothing short of complete removal of the diseased parts would have sufficed to give the patient relief.—Remarks were made by Dr. STEVENS, Dr. MCCANN, and Mr. GANDY.

The annual general meeting of the society was then held. The reports of the honorary treasurer (Dr. Potter), the honorary librarian (Dr. Griffith), and the Chairman of the Board for the Examination of Midwives (Dr. Cullingworth), respectively, were read and adopted, and a vote of thanks passed to each gentleman.

The laws as revised by the Council were confirmed.

The PRESIDENT then delivered his Valedictory Address; and it was moved by Dr. Potter and seconded by Dr. Hurry, "That a vote of thanks be accorded to the President for his address, and that he be requested to allow it to be printed in the next volume of the Transactions." This was carried unanimously.

A vote of thanks to the retiring Vice-President and Members of Council, proposed by Dr. Playfair and seconded by Dr. Sinclair, was passed.

The names of the officers recommended by the Council and elected were as follows:—President: Dr. Charles James Cullingworth. Vice-Presidents: Dr. William Duncan, Dr. John H. Galton, Dr. Thomas Cargill Nesham (Newcastle-on-Tyne), and Dr. Jamieson Boyd Hurry (Reading). Treasurer: Dr. John Baptiste Potter. Chairman of the Board for the Examination of Midwives: Dr. Percy Boulton. Honorary Secretaries: Dr. William Radford Dakin and Dr. John Phillips. Honorary Librarian: Dr. Walter S. A. Griffith. Other Members of Council: Dr. Thomas Rutherford Adams (Croydon), Dr. John Walters (Reigate), Mr. Joseph Thompson (Nottingham), Mr. Albert Kisch, Dr. Arthur Nicholson (Brighton), Mr. Richard Pinhorn (Dover), Dr. Thomas Watts Eden, Dr. Amand Routh, Dr. Frederick John McCann, Mr. William Gandy, Mr. George Henry Pedler, Dr. Montagu Handfield-Jones, Dr. William Rivers Pollock, Dr. Alfredo Antunes Kanthack, Dr. Angus Fraser (Aberdeen), Dr. Harold A. Des Vœux, Dr. Charles Hubert Roberts, and Dr. Walter W. H. Tate.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

Double Harelip and Cleft Palate.—Deafness following Bilateral Dislocation of the Jaw occurring during Extraction.—Cement and Amalgam as a Filling.

AN ordinary meeting of this society was held on Feb. 1st, Mr. R. H. WOODHOUSE, President, being in the chair.

Mr. MESSENGER exhibited models and related the history of a case of Double Harelip and Cleft Palate. The operations for remedying the harelip and cleft palate had proved successful, but the maxilla, owing to the operations, was V-shaped and the mandible very prominent, the lower lip having a strong tendency to drop.

Mr. BOWDEN recounted an interesting case of Deafness following Bilateral Dislocation of the Jaw occurring during Extraction. The patient, a female, aged thirty-seven years, had the three left mandibular molars removed, nitrous oxide being administered as an anæsthetic. On the patient's regaining consciousness it was discovered that there was a bilateral dislocation of the jaw, which was easily reduced under the influence of a further dose of the anæsthetic. Two weeks subsequently the patient was found to be absolutely deaf in the left ear. The patient was then seen by Mr. Cumberbatch, who stated that his first impression was that the deafness was nervous in character from the shock of knowing that the jaw had been dislocated, but the presence of pain did not support this view, as primary affections of the labyrinth were not painful. The suggestion he made was that the violent wrench on the jaw by pulling on the

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cartilaginous meatus, and through that the membrane, had set up inflammation of the tympanum which spread to the labyrinth. About three weeks after the operation the condition of deafness began to improve.

Mr. H. BALDWIN read a communication on Cement and Amalgam as a Filling. After detailing the method he usually employed he remarked that as a filling the combination of cement and amalgam had distinct advantages over amalgam, as in addition to being entirely free from the many objections to which the latter was open it possessed the following points of merit as compared with either amalgam or gold: (1) it required a much smaller sacrifice of healthy tooth substance and (2) therefore left a stronger tooth; (3) it necessitated less pain in excavating; (4) it interposed a non-conducting layer between the sensitive denture and the metal; and (5) it was thoroughly water-tight. In addition, the rapidity with which the combination could be employed, and the absence of a tendency to stain the tooth, must also be regarded as distinct advantages. Mr. Baldwin stated that he had used the method with increasing frequency for over thirteen years, and stated that the results he had obtained had been most gratifying.—Mr. ROBBINS referred to the fact that amalgam as a filling was receiving proper scientific attention from such investigators as Mr. Tomes in this country and Dr. Black in America. He spoke in favour of the continuation of cement with amalgam.—Mr. A. E. BAKER, Mr. CUNNINGHAM, Mr. RUSHTON, Mr. HUMBY, Mr. HERN, Mr. MATHESON, and Mr. LLOYD-WILLIAMS also took part in the discussion.

HARVEIAN SOCIETY OF LONDON.

Smoking at Non-clinical Meetings.—Polyneuritis in Children.—Primary Sore on Lip.—Rodent Ulcer.—The Oxygen Treatment of Ulcers.

A MEETING of this society was held on Feb. 4th, Dr. R. H. MILSOM, President, being in the chair.

The PRESIDENT, in opening the discussion upon the subject of smoking being allowed at ordinary meetings, said that whilst considering the views of the smokers it was also necessary to look at the question from a much broader point of view. The society was one of the oldest medical societies in London, and the members ought to be very careful not to introduce any innovation which would be detrimental to it or lower the prestige with which it had been handed down to them by their predecessors.—Dr. NORMAN KERR was opposed to the introduction of smoking at ordinary meetings. Though unable now to smoke he had been a smoker for a long series of years and had derived much enjoyment therefrom; but he had always looked upon it as a matter of fairness and honour never to enjoy the "divine weed" in the presence of those who neither approved of nor relished the use of tobacco.—Dr. THOMAS MORTON, Mr. JULER, and others spoke against the proposition, which was negatived by a unanimous vote.

Dr. LEONARD GUTHRIE showed two boys, each aged five and a half years, who had suffered from Polyneuritis. Case 1 was admitted to the Children's Hospital, Paddington Green, on Oct. 5th, 1896. Twelve days previously he had suddenly lost power in his hands and arms; in a few hours his legs became similarly affected. Two days later he was unable to walk. He complained of headache and pains in the limbs when handled. He had been slightly delirious at night and the bowels had been relaxed. His previous health had always been good. There was no history of diphtheria or any form of sore-throat. On admission he was healthy-looking and well nourished. The eyes were normal except for slight nystagmus in looking to the left. The palate was unaffected and the voice was natural. He was unable to sit up or stand without support and could not walk at all. The movements of the upper extremities were all weak, and the hand-grasp so much so that he let objects slip through his fingers and could not feed himself. The legs below the knees were bluish, cold, and tender on pressure. He cried with pain behind the knees when made to stand. There was foot-drop on both sides and power of dorsiflexion of the feet was much impaired. The extensors of the legs and feet did not react to galvanism or faradism. The knee-jerks and plantar reflexes were absent. Otherwise he seemed well. The treatment was massage and galvanism, together with daily injections of liquor strychniæ, beginning with one minim, and increased by half a minim every other day until the dose reached ten minims. By Nov. 4th he was able to sit up in bed and feed himself, but could not stand alone. The extensor muscles of the legs had wasted and also the thenar and hypothenar eminences in both hands to a slight extent. Henceforth he gradually improved, becoming able first to stand and then to walk alone. At the present time the only symptoms which remained were slight dropping of the feet in walking and loss of knee-jerks. Case 2 was admitted to hospital on July 16th, 1896, with symptoms resembling those of cerebellar disease. Nine weeks previously he had begun to tremble and shake, his gait became unsteady, and he often fell down. Five weeks later his face was drawn to the right side and he complained of pain in the left side of the face and head. He was restless and noisy at night, fretful and irritable by day, and had lost his appetite. There was no history of diphtheria, sore-throat, or other illness. On admission he was healthy-looking and well nourished, but seemed drowsy and listless and complained constantly of left-sided headache, but did not vomit. He had complete left-sided facial paralysis. The palate was unaffected and the voice unchanged. There were neither signs nor history of middle-ear disease. The optic discs were normal. There were marked tremors and ataxy of the hands on voluntary movements and also tremors of the legs on standing. When in the erect position there was considerable lumbar lordosis. He walked with his legs apart and staggered as in cerebellar disease. He could not rise from the sitting position without resting his hands on his knees as in pseudo-hypertrophic paralysis. The knee-jerks were absent. There was no wasting of any part, but only general muscular weakness. The treatment was by small doses of biniodide of mercury. After two weeks he began to improve; the tremors and ataxy and the facial paralysis gradually disappeared He became able to sit up and rise from the ground without difficulty, but the knee-jerks were still absent. By Sept. 7th the knee-jerks had returned and now he was in every respect well. In commenting on these cases Dr. Guthrie remarked that, although the symptoms seemed dissimilar, the disease—polyneuritis—was the same. The etiology of the disease was uncertain. One naturally thought of diphtheritic paralysis, although a history of primary diphtheria was absent, for many cases of diphtheritic paralysis occurred without any such history. A stronger objection to this diagnosis was the absence of palatal paralysis. The soft palate was, he believed, invariably affected in paralysis following faucial diphtheria. It might escape or be attacked later in cases of vulvar or cutaneous diphtheria. But the patients were both males and there was no history of cutaneous diphtheria, which could not have escaped notice had it occurred. It was suggested that a modified attack of influenza in unprotected subjects might account for the symptoms. For influenza in its primary form was essentially a disease which attacked the nervous system and left behind it effects which simulated those of almost every nervous affection known. Syphilis, alcohol, and other toxic agents could be excluded.—Dr. JAMES TAYLOR expressed agreement with Dr. Guthrie's diagnosis.—Dr. NORMAN KERR would like to know the atmospheric conditions when the attack began.—In reply Dr. GUTHRIE said that as to climatic influences the illness of one child commenced in May and lasted till August. The illness of the other began in September. The hot months were well known to be associated with diseases such as infantile paralysis and cerebro-spinal meningitis in children.

Mr. ROUGHTON showed a woman, aged thirty years, suffering from a Primary Chancre of the Lower Lip. When first seen (two months after the first appearance of the sore) there was a yellow, circular, raised, indurated ulcer the size of a shilling, but there was no enlargement of the sub mental glands. Glandular enlargement appeared soon afterwards, but was very much less in amount than that usually seen in such cases. Mr. Roughton commented on the importance of early diagnosis in cases of erratic chancre, and pointed out that there was a risk of their true nature being overlooked.—Mr. EASTES had seen similar cases. In one the swelling of the face measured three inches across from the lip to the chin, the primary sore near the angle of the mouth being little more than a crack.

Dr. ALFRED EDDOWES presented a man, aged thirty-one years, suffering from Rodent Ulcer of the face and ear of four years' duration. The age of the patient, the fact that the ulcer, now an inch wide, had never been treated surgically, and the clean cut appearance of its edges, were the chief points of interest. The patient, whom Dr. Eddowes had only seen a few days ago for the first time, was at present opposed to operative treatment; but Dr. Eddowes had lived

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long enough to see sad relapses in cases which had been treated years ago by very skilful surgeons. He did not scrape in such cases, but always adopted the plan of burning the tissues with a cautery of low temperature to the extent of a quarter of an inch in all directions. He expected in this case that the large hole would become filled in a few days with granulation, and that there would be an excellent flat scar with minimum disfigurement.

Mr. GEORGE STOKER showed Cases Treated by Oxygen Gas. Case 1. A woman, aged fifty-one years, has had ulcers on her legs for seven years. They began by an abrasion of the skin. The patient had suffered great pain. She was treated at Chelsea Dispensary and at St. George's Hospital. The ulcers never healed. When she came into the Oxygen Home on Dec. 28th, 1896, she had three large and two small ulcers. She was treated with equal parts of oxygen and purified air. In eleven days the two large ulcers healed, the other three being reduced in size, but still open. On Jan. 25th, 27th, and 29th these latter were inoculated with staphylococci. On Feb. 4th two were healed and the third one nearly so. Case 2. A woman, aged thirty-eight years, was admitted to the Oxygen Home on Oct. 21st, 1896. Just before Christmas, 1894, the leg first became bad, she was then treated as an out-patient at St. George's Hospital. In April, 1896, she went again to St. George's Hospital. Since that time till October 1896, she had been laid up at home. She had suffered constant pain. She was treated with equal parts of oxygen and purified air. On Nov. 23rd the two smaller ulcers were quite healed. On Dec. 21st the large ulcer had almost healed, only two small places remaining unhealed as large as threepenny and sixpenny pieces respectively. On Jan. 22nd, 1897, the small places still remaining unhealed they were inoculated with staphylococci. On the 25th, 26th, and 27th the inoculations were repeated. On the 29th the patient was discharged cured.—Mr. GEORGE STOKER and Mr. GEORGE DONEEN gave a bacteriological report on the above cases. Case 1. Before the oxygen treatment was begun a cultivation was taken from the ulcer on agar agar. After incubation it was found to contain a pure growth of staphylococcus pyogenes citreus. N.B.—Out of upwards of sixty cases examined this was the first and only one in which a pure growth of staphylococci was found previous to the oxygen treatment being begun. Case 2. The cultivation taken before the oxygen treatment was begun was found to contain bacillus fluorescens and staphylococcus pyogenes albus. The former disappeared after a few weeks. The above examinations are especially important as showing the relation between oxygen and staphylococci in promoting healing. In Case 1 we found staphylococci in an ulcer that showed no disposition to heal till oxygen was applied, and in both cases a stage was reached in which oxygen ceased to cause healing till fresh staphylococci were introduced by inoculation. It would seem from this that there is some collaboration necessary between these two factors, oxygen and staphylococci, in order to promote healing by this system of treatment.—Dr. SOLOMON SMITH said that, however open to criticism the oxygen treatment might appear, it at the least was worthy of careful investigation. The bacteriological observations which were recorded by Mr. Stoker were of very great interest. It was certain that wounds often healed well when bathed in pus which must be crowded with micro-organisms, in illustration of which he instanced the "laudable pus" of pre-antiseptic days. They were all aware of the septic evils so often associated with certain forms of streptococci, but what Mr. Stoker had stated in regard to the "healing" effect of pure cultures of staphylococci seemed to him to far outweigh in importance all that had been said about oxygen. In every out-patient room there were cases healing well under various forms of treatment—under Unna's paste, for example—which were certainly not aseptic, and he urged that careful examinations of the discharges in such cases should be made, with the object of ascertaining whether in them also a similar preponderance of staphylococci presented itself.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

The Menopause viewed from a Gynæcological Standpoint.

A MEETING of this society was held on Feb. 5th, the President, Mr. W. BRUCE CLARKE, being in the chair.

A discussion on Disorders associated with the Menopause opened with the reading of a paper by Dr. AMAND ROUTH, in which he first dealt with organic lesions common at the menopause, leaving psychical conditions to subsequent speakers, though they could not be ignored in actual practice if success in treatment was to be attained. He showed that the vulva was apt to become affected with local hyperæsthesias, such as pruritus pudendi, which was a symptom of many diverse conditions. Thus it might be due to a pure neurosis, to reflex causes, such as early cancer of the cervix, to mucous polypus, to prolapsed ovary, or to kraurosis, local rashes, dirt, parasites, vaginal or uterine discharges, irritating urine, as in cases of cystitis, acidity, gout, or diabetes. Kraurosis vulvæ and diabetic pruritus were described, with their appropriate treatment. Intra pelvic climacteric affections were next considered and the influence of the ovarian "internal secretion" was discussed, with the probability that the diminution of this influence accounted for some of the climacteric phenomena. The hæmorrhages of the menopause were then dealt with. If vaginal and cervical disease could be eliminated the uterus should be digitally explored after rapid dilatation, and a means of diagnosis and immediate treatment thus afforded. If this were done as a matter of routine early cases of fundal cancer could be very easily dealt with by vaginal hysterectomy, which was now an operation almost without mortality, though, owing to the cases being seen somewhat late, the final results were still unsatisfactory. Functional pelvic and constitutional troubles were then considered, and it was pointed out how advisable it was to avoid local treatment at this age unless it were imperative. The subjects of tachycardia and "flushings" were discussed. The treatment was most successful by combined nerve sedatives, anti-spasmodics, and purgatives. All such patients needed much encouragement, and in the absence of serious organic disease should be assured that they would soon emerge from their present trials and become active and possibly even robust and vigorous.

Mr. CHARLES TUKE discussed the subject from the psychological aspect. He pointed out that the neuroses seen show many gradations from nervous irritability with effects on the character and temper to fully developed insanity, which has a tendency in a large proportion of cases to melancholia or a delusional insanity, less frequently to mental weakness, and rarely to general paralysis. The treatment advocated was change of air and scene, removal from friends, together with attention to the bodily health. By these means many patients were restored to mental and physical vigour.

Dr. HARRY CAMPBELL observed that the nervousness of the climacteric is not strictly synchronous with the menstrual irregularities of this epoch, that a wave of nervous irritability comes over the woman before the commencement of the irregular menstruation and lasts for some time after its disappearance. The same is true of puberty. He contended that practically every woman suffered from depression of spirits at the climacteric. He referred to the frequency of post-climacteric monthly manifestations. He had observed them in over 100 cases, and in one case had traced them to beyond seventy years of age. He was inclined to believe that the menstrual rhythm continued in all women to the end of life.

Dr. J. A. MANSELL MOULLIN said that Dr. Routh had dealt exhaustively with the local troubles of the vulva commonly met with at this period. One symptom to which Dr. Moullin drew attention was dyspareunia. Cases occurred where the introitus was small, the mucous membrane of the vulva had already acquired that smooth and glazed appearance characteristic of senility, and around the ostium vaginæ were certain well-defined, circumscribed spots extending forwards and involving the meatus urinarius and the urethral canal. These were exquisitely tender and bathed in a muco-purulent discharge. This condition had been termed lupus minimus, which Dr. Moullin regarded as a misnomer.

Dr. HENRY SUTHERLAND remarked that he did not believe that the change of life *per se* had much influence in causing insanity at this period. His data were based on an investigation of 100 cases of insanity at this period. The form of insanity was melancholia in 67 per cent, mania 24 per cent., dementia 4 per cent., epileptic insanity 3 per cent., general paralysis 2 per cent. The prognosis was usually favourable, 40 per cent. recovering. The duration of the attack varied from three months to three years, after which period the

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outlook was hopeless. Dr. Sutherland added suggestions as to treatment.

Mr. MCADAM ECCLES alluded to two points of interest to the surgeon in connexion with the menopause: (1) as to operations at this period, and (2) as to whether the involution of the sexual organs had any effect on mammary cancer.

Dr. FORBES-ROSS referred to the insanity occurring in the male sex at a period corresponding to the climacteric, and that some derangement of the abdominal organs was associated with the mental disorder.

Dr. MCCANN said he quite agreed with Dr. Harry Campbell as to the continuance of the menstrual phenomena after the blood loss had ceased, as the discharge of blood might be looked upon as an accidental concomitant of menstruation, examples of so-called white menstruation being not uncommon. He pointed out that cases of early menopause might be confounded with a condition which he believed to be more frequent than was generally accepted—viz., transitory superinvolution of the uterus associated with amenorrhœa and climacteric signs and symptoms. He described a case where a patient, aged thirty-two years, having nursed her child for eight months, had a period of complete amenorrhœa for fourteen months after the cessation of lactation. She complained of marked flushings and other disturbances associated with the menopause. On vaginal examination the uterus was found to be small, the cavity measuring two inches, and there was contraction of the upper portion of the vagina (a well-known sign after the menopause). Six months later menstruation returned with increased size of the uterus, and the patient had continued to menstruate regularly. She was not anæmic. He had seen in addition two other cases closely resembling the one described.

Dr. CHAPMAN advocated belladonna in the treatment of tachycardia at the menopause.

Mr. CHARLES TUKE disagreed with Dr. Sutherland's opinion and thought that the climacteric was frequently associated with a mental "breakdown." He had seen acute mania develop after the removal of a mammary cancer at the climacteric. He thought that mental and nervous symptoms were more frequent in the upper classes. He agreed with Dr. Forbes-Ross in thinking that there were analogous mental disorders in the male corresponding to the climacteric in the female.

Remarks were also made by Dr. CAMPBELL POPE.

Dr. ROUTH, in reply, expressed his sense of the value of the discussion. He was familiar with the painful granular areas of the vulva. In reply to Mr. Eccles, he believed that acute mania was more common after ovariotomy at the menopause than at other ages. Ovarian "internal secretion" was a very interesting subject. The cure of osteomalacia by oöphorectomy was explicable by the chemical changes produced in the blood, but the very recent recovery of recurrent mammary carcinoma after oöphorectomy was so far inexplicable. He had not seen any cases of temporary superinvolution described by Dr. McCann and was much interested in the cases.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The Royal Commission on Vaccination.

A MEETING of this society was held on Jan. 15th, Dr. G. P. BATE, President, being in the chair.

Dr. F. T. BOND, of Gloucester, read a paper entitled, How shall we Legalise the Recommendations of the Royal Commission on Vaccination? While paying a high tribute to the ability and character of the members of the Commission he expressed his regret at the absence from their report of summary, index, insets, or headlines, as well as of any clear indication of the practical policy they would propose. There were but three "recommendations"—viz., the discontinuance of criminal procedure and of repeated penalties, the more effective inspection of common lodging houses, and the supervision of tramps who might be vehicles of infection—and perhaps a fourth as to the more general supply of calf lymph. They "thought" that the age for primary vaccination might be extended from the third to the twelfth month, as in Scotland—except in the presence of an outbreak, though they did not indicate how such exceptional procedure should be enforced; that vaccination might be oftener postponed on account of ill-health or insanitary surroundings; that greater care should be taken to avoid wound poisoning, and the inspection delayed until the tenth or twelfth day, when the effects of such accidents were manifested (which should be treated by the public vaccinator); and that the Local Government Board should have power to compel the establishment of small-pox hospitals. They were "of opinion" that vaccination should not be optional and that the State should "promote" it, though by what form of pressure or suasion they did not say; and persons suffering loss by isolation or exposure to infection should be compensated by the local authority; while they "believed" that risks and opposition would be lessened if vaccination and inspection were, "as a rule," carried out in the home. They admitted the value of isolation, but only as an auxiliary measure, and made a passing reference to "sanitation," and, "believing" in the protection afforded by vaccination and re-vaccination, "considered" the danger incident to vaccination "insignificant" in comparison. But while piously wishing for the extension of vaccination, which the State should not only "promote" but "require," they would so far sympathise with "honest or conscientious" objections as to enable any parent to evade it by a simple statement before a magistrate or vaccination officer, at the same time dropping procedure against the merely negligent by the repeal of existing Acts. Dr. Bond maintained that it would be better to suspend, for a limited period of, say, five years only, the harsher and more obnoxious clauses, substituting "orders" of a tentative and temporary character. He considered that in order to distinguish "honest" objection from indifference the summons should be taken out as hitherto and the costs paid by the objector, who by a public declaration in court might obtain an exemption, to be entered in the register of the vaccination officer, but to hold good only until the child reached school age or small-pox broke out in the district. It would be far easier to enforce vaccination of school children than of infants, and inspection of their arms would discover the "sham" vaccinations which worked such evil, and he thought that re-vaccination might be required on leaving. The difficulty in tracing defaulters, through change of residence, if not wilful mis-statement of place of birth, would cease, since children were now compelled to attend some school, and their arms would be evidence of vaccination or of its omission. He considered that certificates should testify not merely to alleged "success" but to the number and area of the vesicles, which should be entered in the register for future reference. He approved of home vaccination by the public vaccinator, but could not agree to every practitioner being constituted one. He strongly urged the transference of vaccination from the guardians to the sanitary authorities on whom all measures for the prevention of disease and control of epidemics already devolved, pointing out that the difficulties apprehended by the commissioners in respect of overlapping authorities were imaginary and owing to a confusion between unions and sanitary districts. This would necessitate and hasten the much-needed re-organisation of sanitary administration and the better adjustment, consolidation, &c., of areas, with the appointment of whole time and independent medical officers of health, who should be brought into closer touch with the Poor-law medical officers, vaccination, registration, and other officers. The post of chief vaccination officer would be attached to that of superintendent-registrar over revised and coincident areas. He thought that if a short statement of the benefits of vaccination with evidence were affixed to the notice given at the registration of birth, and the public vaccinator were between six and twelve months later to visit the parents at their home by tact and suasion both the objections and the apathy might mostly be overcome. After summarising the conclusions embodied in the report, Dr. Bond asked the support of the society for the following recommendations—(1) to allow public vaccinators to offer calf lymph as a substitute for human lymph in all cases in which it might be preferred; (2) to extend the period within which a child was at present required to be vaccinated; (3) to provide for the medical treatment of children after vaccination, so far as might be necessary to ensure good results; (4) to provide for the more effectual supervision of tramps and common lodging houses; and (5) to ensure better means than now existed for enforcing the proper accommodation in every sanitary district for the isolation of small-pox and other infectious diseases.

The discussion of the paper was adjourned until the next meeting.

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LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Specimens.—Serum Diagnosis of Typhoid Fever.

A MEETING of the pathological section was held on Feb. 4th, Mr. F. T. PAUL being in the chair.

The following specimens were exhibited:—

Dr. GEMMELL: (1) Calcareous Deposit in the Broad Ligament; (2) Tubo-ovarian Abscess; and (3) Adenoma Uteri.

Mr. ROBERT JONES: (1) Omental Adhesions after operation for Ascites; and (2) Osteo-Sarcoma of the Femur.

Dr. BARENDT: Lichen Ruber Planus-efflorescence.

Mr. R. A. BICKERSTETH: (1) Villous Tumour of the Bladder; and (2) Hypertrophy of the Prostate.

Mr. LARKIN: (1) Carcinoma of the Submaxillary Salivary Gland; and (2) Fibroma of the Skin.

Dr. LESLIE ROBERTS: (1) Angioma Serpiginosum; and (2) Lymphangioma Capillaræ Varicosum.

Dr. GIVEN: Acne Keloid.

Mr. R. PARKER: Sarcoma of the Popliteal Space.

Dr. JOHN ROBERTSON (St. Helens) read a paper on Serum Diagnosis of Typhoid Fever in which he gave a brief review of the observations of earlier workers, and especially those of Pfeiffer and Kolle, Gruber, Durham, Widal, and Delépine. He showed the method of demonstrating the special action of typhoid blood serum on the bacillus of typhoid fever (*a*) in test tubes, and (*b*) as hanging-drop preparations under the microscope and spoke of the advantages of the latter method for clinical purposes. He explained the method of collecting blood in sterile, large-sized vaccine tubes and described the special apparatus used for collecting. The preparation of the typhoid culture was next reviewed and the necessary dilution of the serum. The results obtained by various observers and those obtained in St. Helens during the past six months were compared. The value of the early diagnosis of typhoid fever to the patient and for public health purposes was emphasised and the use of known typhoid serum in identifying the typhoid organism was commented on.

After a few remarks from the CHAIRMAN Professor DELÉPINE emphasised the importance of using fresh cultures of the bacillus typhosus. He had noticed that old cultivations had of themselves a tendency to clumping. To obtain such cultures the bacillus was grown on solid medium and fluid cultures were made from day to day as required. It was important to avoid the slightest contamination, and he considered a magnifying power of 300 diameters sufficient to observe the reaction.

Mr. H. E. DURHAM (London) drew attention to a few historical facts contrasting the old observations of Metschnikoff and others on growth in immune serums with the sudden and immediate direct action of serums on appropriate microbes. Bordet had not attached sufficient importance to the "clumping action" of serums to lead him to the study of the inter-actions of various microbes and serums; the positive result in Bordet's phenomenon is arrived at when all microbes are degenerated into coccus-like bodies. He showed that a positive reaction is present between organisms which are otherwise regarded as specifically different, so that a positive result in testing microbes is not absolutely conclusive as to species; the positive reaction of Gärtner's bacillus enteritidis (with typhoid serum discovered in Professor Gruber's laboratory) was cited as a case in point, as well as the reactions of certain races of vibrios. At the Wiesbaden Congress in April, 1895, Professor Gruber and he had demonstrated that animals which had received a single immunising dose of cholera more than a year previously still showed a specialised action upon cholera vibrios, but not on other kinds. The use of serum reactions might be summed up under three headings:—(1) recognition of kinds of bacteria and, to a certain extent, of the virulence of bacteria; (2) recognition of kinds of serum and their potency; and (3) recognition of disease in man clinically by the reaction of the serum on known bacilli. It was pointed out that positive reaction was not strictly specific. The two kinds of immunity—viz., antitoxic and anti-bacterial—must always be distinguished. Anti-bacterial serums had great clumping power on appropriate microbes, yet might be entirely without antitoxic power. Antitoxic serums always had some anti-bacterial power, but in no relation to the antitoxic power. Highly acute infective diseases (mainly toxic) as diphtheria or cholera required therapeutically an antitoxic serum. In more chronic diseases such as typhoid fever an anti-bacterial serum might be sufficient; present results with anti-typhoid serum (which is mainly anti-bacterial) were not unpromising. The present anti-streptococcic serum as tested by its clumping power was not highly potent anti-bacterially; it was suggested that probably more uniformly good results would be obtained when a higher potency of anti-bacterial power had been obtained. For anti-bacterial purposes it would be possible to gauge the dose of serum required by estimating the dilution which occurred in the patient's body. As regarded the clinical value of typhoid sero-diagnosis, observation showed that a positive result was not always obtainable in typical cases of typhoid fever. This was not curious when it is remembered that the degree of immunisation or production of "antibodies" is relatively slight in man when contrasted with an animal which has received a large number of injections. A warning was raised against a positive reaction from the fact of the inter-action of typhoid and Gärtner's bacillus, an instance being cited of positive reaction occurring after a nondescript attack resembling typhoid fever somewhat, but which yet might have been due to a bacillus similar to that of Gärtner. Mr. Durham then gave a demonstration of photographic lantern slides (many of which were of historical interest as having been prepared in the summer of 1895) to show the macroscopic and microscopic effects of various serums, illustrating the want of absolute specificity in the reaction and the abnormal growth in serums (coccus chains). A series of tubes were shown to draw attention to the action of typhoid fever serum and the serum of typhoid fever patients on the bacillus enteritidis of Gärtner. Blachstein's "Chrysoidin" cholera reaction was also exhibited.

Dr. GRÜNBAUM emphasised the importance of dilution of the serum and recommended that it should be accurate. On account of the action of normal serums and those of other diseases a time limit is also necessary. He had observed similar effects to those of the Canadian observers from the variability of virulence, but proper dilution obviated any confusion. The action of typhoid serum on other micro-organisms was interesting, but did not affect its diagnostic value. That the reaction should be present from about the third day of the disease was in accordance with experiments on animals whose blood first showed an agglutinative action generally about the third day after the first inoculation. He had not come across any case of enteric fever in which the reaction was not present at some time. In one so-called abortive case it was also found. The method does not depend on the motility of the pathogenic organism, as was shown by the agglutination of a diplococcus from a scarlet fever case by serum from another scarlet fever patient. He hoped that the results of investigations now proceeding would enable him to isolate the micro-organisms of other diseases as well as facilitate their diagnosis, although in some cases there were difficulties arising from mixed infection.

Dr. N. E. ROBERTS showed a hanging-drop specimen of typhoid bacillus culture, to which the serum of a typhus fever patient had been added four hours previously (dilution 1 in 20). The bacilli were motile and showed no clumping. In contrast with this, two specimens of enteric serum treated in the same manner and at the same time gave the following results. The active darting and gliding movements were lost in a few minutes and clumping was marked in one case in half an hour and in the other case in a little over that time. He was of opinion, from what he had observed, that there seemed to be a decidedly specific quality in the blood of an enteric patient tending to inhibit the movements of the typhoid bacillus in broth culture and also to the formation of clumps. What had struck him as most remarkable—in some cases it was startling—was the almost immediate cessation of the movements of translation on the field, and he was disappointed to find that Mr. Durham did not seem to attach much importance to this. In his first observations on typhus blood he obtained the reaction, but on diluting the serum as above it failed to give it. He asked what was the intimate meaning of this reaction. Was it associated with immunity? If so, was it proportional to immunity? As physician to the Liverpool City Hospitals he had about 300 cases of typhoid fever under his care every year. During the five years he had charge of the South Hospital the typhoid fever cases were not far short of 1300. He found that about 4 per cent. of these cases relapse, by which is meant that a patient undergoes a fresh attack of typhoid fever. This is excluding all doubtful cases and those of mere recrudescence. He would take an ordinary case of relapse as an example. A patient had a severe attack of typhoid fever lasting four weeks. The temperature became settled

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and the patient was in a fair way towards convalescence when in a week or ten days he started a fresh attack—a new enteric process. That patient was not immune against typhoid fever surely. At all events he was not immune in the sense that a typhus fever or small-pox patient was after an attack of either of these diseases. He was not protected against the disease. The relapses at the City Hospital resulted in a two weeks' fever as a rule. Sometimes after the first relapse the patient underwent another attack after an interval perhaps, and rarely a third relapse had been described. This would appear to show that protective immunity, if attained at all, must come on very late indeed in the history of a patient. But it was said that the serum reaction came on very early, some observers saying that they found it in the seventh or eighth day of the disease. If the phenomena of relapses therefore were of any value on this point the serum reaction did not appear to be proportional to immunity attained. On the other hand, that immunisation was going on during the enteric process appeared to be probable, as evidenced by the fact that it was comparatively a rare occurrence for a typhoid fever relapse patient to succumb to the attack. It was a curious fact that a patient who had just emerged from a severe attack of typhoid fever, perhaps lasting for four weeks, and who, weak and prostrate from the effects of it, was very badly equipped to weather another storm, should in the large majority of cases go through his second attack without "turning a hair," to use a vulgarism. He had a moist tongue, looked well, slept well, had a fair pulse, and was comfortable. That was the usual story of a typhoid fever relapse. Further, the temperature might be high, even higher than in the primary attack. This latter fact seemed to throw a sidelight on the question of the importance of mere temperature in typhoid fever. It would, therefore, appear that for some reason or other the toxæmia in relapses was very much modified and the recoveries were much more numerous than in primary typhoid fever. The explanation of this appeared to the speaker to be that a slow immunisation was going on from an early date in the history of the case, which, although not sufficient to protect the patient absolutely, was sufficient to modify the severity of the attack. To sum up, Dr. Roberts was of opinion that immunity of a protective quality came on very late in typhoid fever, if at all, but that an immunisation was going on all along.

Professor BOYCE said how indebted they felt to the great authorities who had come that evening to render this debate on the diagnosis of typhoid fever one of the most important which had occurred up to the present time. They had had the privilege of hearing from Dr. Robertson, Mr. Durham, Dr. Roberts, Dr. Grünbaum, and Professor Delépine the results of their most recent investigations. No one would question the value of the serum diagnosis of typhoid fever, and the simplicity of the test made it incumbent upon all to apply it. They had now only to send a small capillary tube of blood to the pathological laboratory to receive an opinion. The discussion had brought out the share that the several speakers had taken in this most important investigation, and he gladly seized this opportunity of claiming for Dr. Grünbaum priority as regards Widal's observations. Professor Boyce agreed with the observations of Dr. Roberts, who was working in the pathological department upon the reaction of typhus serum.—Mr. DURHAM stated that he obtained a reaction with the bacillus enteritidis. Dr. Campbell and himself had tried the reaction with a closely allied bacillus, which was invariably associated with a very severe form of dysentery met with at the Rainhill Asylum, but they had not obtained clumping with typhoid serum.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases.—A Plea for more Accurate and Systematic Feeding of Infants.

THE fifth ordinary meeting of this society was held on Feb. 3rd, the President, Dr. A. H. CARTER, and afterwards Dr. FOXWELL, being in the chair.

Mr. MORRISON read notes on a case of Fracture of the Clavicle by Muscular Contraction.

Dr. FOXWELL showed a case of Early Disseminated Sclerosis in a young man. No similar disease or neurotic predisposition could be traced in the sufferer's family. The disease was attributed by the patient to hard work in a stooping position, and the first symptom was vertigo of increasing intensity and becoming so severe as to cause the patient to fall. The present symptoms and signs were extremely spastic gait and spastic tremor of the legs while standing, with marked preservation of volitional power and disappearance of the tremor in the recumbent posture, spastic expulsion of the urine, and only a very little tremor of the hands near the completion of delicate coördinate movements. Affection of the speech was doubtful and not recognised by the patient and his friends, but there was a slight nystagmus on strong lateral conjugate deviation, chiefly to the right side.

Dr. SAUNDBY showed the Kidneys from three cases of Diabetes Insipidus in which death had ensued from uræmic coma. The first pair, which showed well-marked hydronephrotic sacculation, came from a case published at length in the *Practitioner* of January, 1895. The patient was a young man who had suffered from polydipsia and polyuria all his life, but during his final stay in hospital the amount of urine was less—between five and six pints—and the urea only 200 grains daily. He died comatose on the eighteenth day after admission. The kidneys shown next were from the body of a young man who had had polydipsia and polyuria for four years. When seen last September his urine was only from five to six pints daily and contained 300 grains of urea. He died from coma on Jan. 11th. The kidneys were sacculated and wasted, the microscope showing sub-capsular interstitial nephritis. The last pair of kidneys were from the body of a woman who had died in the General Hospital from uræmic coma. For a month before admission the patient had suffered from thirst and polyuria. The urine contained a little albumin, and varied in amount from five to seven pints. The urea was estimated soon after her admission only, and was then stated to be 700 grains. These kidneys showed no trace of sacculation, but the cortical substance was atrophied, and the microscope showed similar sub-capsular interstitial nephritis, as in the former case. Dr. Saundby referred to the cases published in "Beale's Archives" in 1861 and 1862 by Dr. Strange of Worcester and Dr. Eadie, but he remarked that the lesson contained therein had been unheeded by that generation and had had no definite significance for himself, although well known to him, until his first fatal case two years ago. The point he wished to bring home was that cases of diabetes insipidus are liable to suffer from secondary wasting of the kidneys, causing fatal uræmia, and that this is common enough to require modification in the current prognosis, which regards this disease as but little dangerous to life, although generally incurable.

The PRESIDENT read a paper entitled "A Plea for more Accurate and Systematic Feeding of Infants," in which he insisted that greater attention should be given to the composition of infants' food from whatever source it was derived. He discussed the composition of human milk, the variations usually met with in practice, and the best means of overcoming them. Reasons were adduced for the preference of cow's milk as a substitute for human milk, and tables were submitted for more accurate adjustment of milk to infant's requirements. It was pointed out that by more careful feeding, accompanied by periodical weighing of infants at short intervals, much might be done to prevent serious gastro-intestinal disorders.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Jan. 28th, the President, Mr. RECKLESS, being in the chair.

A resolution of congratulation to Lord Lister on his elevation to the Peerage was passed with acclamation.

Mr. SIMEON SNELL introduced the following clinical cases: (1) An infant with Anophthalmus and Cyst of the Right Lower Eyelid; (2) two instances of Rupture of the Choroid; (3) Sub-conjunctival Dislocation of Lens, with Rupture of the Globe above; (4) Retinitis Pigmentosa with an unusual amount of Pigment (the patient's grandfather on the mother's side was affected); and (5) Herpes Ophthalmicus. Mr. Snell then related the particulars of a case of Distended Frontal Sinus. The patient had undergone a similar operation fifteen years previously and had remained well for

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twelve years. About three years since a tumour at the upper orbital region re-appeared and increased until the patient again came under observation in November last. There were then considerable prominence and outward displacement of the eye. The sinus was opened from the orbit and a drainage-tube passed into the nose. Stereoscopic photographs of the patient before and after operation were shown.

Dr. ARTHUR HALL demonstrated the presence of Borax in the Urine from Cutaneous Absorption.

Mr. ARCHIBALD YOUNG showed a case of Molluscum Fibrosum.

Mr. CUFF showed cases illustrating some of the Various Lesions of the Joints and Bones occurring in the later stages of Congenital Syphilis and made remarks upon them. They included forms of sclerosing osteitis and necrosis of the tibiæ, humeri, ulna, and radius; enlargements of the epiphyses of the long bones and in one case lengthening of the affected bone (tibia). Necrosis of the frontal bone was also present in one case. The joint lesions included the usual ones found in syphilis and were in the main symmetrical. The bone lesions, on the other hand, were asymmetrical, contrary to what is usually taught.

Dr. SINCLAIR WHITE showed—(1) a lad, aged eleven years, with Atrophy of the Thenar Eminence and Bulbous Enlargement of the Tips of the Thumb and Index Finger due to implication of the median nerves in the callus of a fracture of the humerus; and (2) a large Calculus removed from the Prostatic Urethra of a Boy. The calculus had a uric acid nucleus which, becoming impacted in the prostate, had increased in size and produced retention of urine.

The PRESIDENT, Dr. KEELING, Mr. ATKIN, Mr. PYE-SMITH, Dr. SINCLAIR WHITE, Mr. SNELL, Mr. CUFF, and Dr. EASTES made remarks.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Spontaneous Rupture of the Female Bladder. — Ileo-colic Intussusception: Enterostomy; Recovery.—Lateral Sinus Pyæmia. — Empyema of the Maxillary Sinus. — Some Instruments of Local and Historical Interest. — Diphtheria.—Exhibition of Specimens.

A MEETING of this society was held on Jan. 15th, Dr. BRAITHWAITE being in the chair.

Mr. E. O. CROFT read notes of a case of Spontaneous Rupture of the Female Bladder. A widow, aged thirty-eight years, was admitted into the Hospital for Women and Children at Leeds suffering from hæmorrhoids. The rectal symptoms had existed for four or five years, but there was no history of other illness and the family history was good. On Dec. 5th, 1896, the hæmorrhoids were removed by operation under ether. There was no subsequent retention of urine and progress was normal until Dec. 14th—i.e., eight days after the operation, when the patient complained of abdominal pain and stated that she had felt a twitch in her body while reaching to move her pillow. Abdominal pain and distension continued and the urine diminished in quantity, though a few ounces were drawn at intervals by the catheter. There was no rise of temperature. The patient gradually sank and died on Dec. 17th. At the necropsy a large quantity of urine was found in the peritoneal cavity. There was no peritonitis, adhesion, or evidence of tuberculous disease or abscess in the pelvis or abdomen. The bladder was empty. On the upper and posterior surface of its peritonial aspect, in the middle line, was found a long, somewhat oval ulcer measuring about one inch by half an inch at its widest part. From its thickened edges it appeared to be of old standing. The base was formed of the mucous membrane of the bladder, and in its centre was found a small circular aperture about one-sixth of an inch in diameter. The specimen has been preserved for further examination and a fuller report will be subsequently published. Mr. Croft drew attention to the diagnosis being rendered obscure by the fact that the bladder continued to hold some urine after the perforation took place, and also to the peculiarity of the ulceration taking place on the outer surface of the bladder.

Mr. LAWFORD KNAGGS described a case of Ileo-colic Intussusception in which Enterostomy was performed for Obstruction. After an interval the intussusception, which had been diagnosed subsequently to the enterostomy, was reduced through a lateral incision, and later the artificial anus was treated by enterectomy. A second case, in which the intussusception was of colic variety, had been reduced through a median incision after the failure of inflation. Both cases had done well. Some circumstances observed in connexion with the first formed the basis of some remarks on the mechanism of spontaneous reduction.

Mr. MAYO ROBSON read a paper on a case of Lateral Sinus Pyæmia in which he had removed part of the lateral sinus and ligatured the internal jugular vein in the neck. The patient, who was extremely ill at the time of the operation, and was suffering from a high temperature with frequent rigors, made a slow but good recovery and was now quite well. The wound in the neck healed by first intention and the trephine opening, which had to be packed, healed by granulation.—A discussion followed in which Mr. WALKER, Dr. BRONNER, Dr. WHITEHEAD, and Mr. HOLLINGS joined.

Dr. ADOLPH BRONNER read notes on a Case of Empyema of the Maxillary Sinus, in which the only symptom complained of was parosmia. He drew attention to the frequency of diseases of the accessory cavities of the nose after influenza. In most cases the symptoms of disease of the maxillary sinus were discharge from the nares, parosmia, and slight pain. In the case recorded parosmia was the only symptom. The sinus was opened through the alveolar process and the opening kept patent by a gold pin attached to the false teeth. This was the most successful method of treating these cases.

Mr. C. J. WRIGHT read a paper upon Some Instruments of Local and Historical Interest and exhibited a number of specimens from the Medical School Museum. He referred to the very ancient examples found in Pompeii and other parts of Italy as illustrating more or less perfect forms of those in use at the present day—viz., catheters, probes, dissectors, scalpels, trephining instruments, uterine sounds and hooks, and anal and vaginal specula. These were seen recently in this country amongst the valuable collection exhibited by Messrs. Oppenheimer and Co. at the annual meetings of the British Medical Association in 1894-95. The Donaria—or votive offerings to the medical deities—chiefly of terracotta, in this collection evinced much anatomical and pathological accuracy. Coming to later times, plates in Scultetus' "Armamentarium Chirurgicum" (seventeenth century) of Hey's saws and Weiss's dilator were found, of which the forms at present in use are mere developments, and a drawing from the same work showed that suction for cataract was practised before that time. The following were then exhibited: Stethoscope (the original form as depicted in Laennec's book—about 1816, and another later form, with stopper); Hey's Saws (various forms—1803-1810); Aston Key's Lithotomy Case (1824); straight grooved Staff and Beaked Knife, Blunt and Cutting Gorgets, &c., according to Cheselden; Knives and Blunt Gorgets used by the late Samuel Smith of Leeds; and a Pair of Bone Forceps which belonged to Liston, marked with his initials, "R. L." The jubilee of anæsthesia rendered important the earlier modes of administration of ether. A glass receiver enclosing sponges was shown, corresponding probably with that described by Dr. Wm. Squire[1] in 1896 as the one used at the first administration of ether, at which he was present, in December, 1846; also a Sponge covered with mackintosh, used upon the re-introduction of ether to England in 1872, and Allis's Cage Inhaler for open administration, brought from Philadelphia in 1875 and still used in America. The obstetric examples were Smellie's Forceps (covered with leather, 1754); Denman's short straight Forceps (1794); Davis's short curved Forceps (about 1841); Pair of Crotchets with English lock (Smellie's); and another Pair of Crotchets, with sheath for guarding one point (Davis's). Some "Moxas"—an old form of escharotic and counter-irritant for burning into the subcutaneous tissues and consisting of pith and cotton soaked in potassæ nitras—completed the list. Mr. Wright concluded by appealing to members for contributions to his collection.

Dr. GORDON SHARP read a paper upon Diphtheria and dealt with Hansemann's views, and showed that the percentage of cases in which the Klebs-Löffler bacillus is not found is few in number. Further, that the presence of the bacillus on normal mucous membrane is accidental, and the same may be said of the tubercle bacillus or other micro-organism. The presence of other micro-organisms in diphtheria was next spoken of, and Dr. Sharp gave it as his opinion that

[1] Brit. Med. Jour., Oct. 17th, 1896, p. 1143.

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staphylococci and streptococci hindered the production of the organic acid and so increased the malignancy of the malady. His opinion was that these last-named microbes did not produce a membrane like that seen in a well-marked case of diphtheria evident to the clinician. Regarding the mild cases of diphtheria with almost no membrane and little or no symptoms, Dr. Sharp said he believed the best plan was to make no more fuss of them than was consistent with ordinary common sense.

Mr. ROBSON showed the following card specimens: 1. A case of Gastrostomy with a small oblique opening. The patient had been fed for eighteen months by means of a catheter through the artificial opening with no tendency to leakage. 2. A case of Pyloroplasty for simple stricture of the pylorus performed five weeks previously. 3. A Calculus weighing 5¾ oz. removed by Supra-pubic Lithotomy.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

The Insanity of Childhood.—Perforating Gastric Ulcer.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Feb. 3rd, Dr. W. B. RANSOM, President, being in the chair.

Mr. EVAN POWELL, in a paper on the Insanity of Childhood, said that the disease was rarely met with unassociated with idiocy or imbecility. The variety and range of the mental disorder varied with the degree of mental development. The insanity of the child was for the most part that of the senses, and the chief characteristics were restlessness, viciousness, and destructiveness. He described a case of mania in a boy aged seven years, who was said to have been frightened by a dog when two years of age, and soon after to have had a sort of "fit"; he showed now and again certain peculiarities of conduct up to the date of the attack of mania; his symptoms were acute excitement, with violence and destructiveness, and there was lack of coördination in the muscles of his limbs and much tremor of the face. A week after admission he had an epileptoid seizure and became unconscious and rigid, but was not convulsed; after this he steadily improved and was discharged after two and a half months' residence. As age advanced the insanity began to simulate that of the adult and delusions and hallucinations appeared, but these were transitory and less liable to become fixed. He (Mr. Powell) related two other interesting cases of acute mania in boys aged fourteen years, the result of injury to the head and epilepsy. The latter, he said, was one of the most common causes of insanity in children. A peculiar feature in some cases he had noticed was the habit of climbing. Occasionally an attack of mania might arise in a congenital imbecile. He related a case in a boy, aged fifteen years, who recovered after an attack of eczema of the scalp. Melancholia in children was rare. Dr. Emminghaus found that out of 199 cases of insanity in children 24 were melancholic. The disease was mostly of the simple variety, but occasionally it assumed the active form, the child becoming acutely distressed, incessantly crying or moaning, and seeming to be in constant terror; delusions of persecution and hallucinations of hearing sometimes were present; but the most striking form in which the melancholia of children manifested itself was by suicide. The suicidal act may be committed under sudden impulse, from the dread of punishment or from disappointment, in some rare instances also from jealousy. He gave some statistics of suicide in children and related a recent case. Moral insanity, another variety of the derangement of the affective faculty, was sometimes met with in children; there was more or less complete perversion of the moral sense, and the child exhibited inordinate vicious propensities, either to steal, to destroy things, to torture animals, or to commit sexual vice. He recommended that such cases should be treated away from home, either under the care of private individuals or in suitable "homes." In conclusion, Mr. Powell related three cases of general paralysis in children aged respectively twelve and a half, thirteen, and fourteen years.

Mr. A. R. ANDERSON read clinical notes of two cases in which he had operated for Perforating Gastric Ulcer. The first patient lived six weeks and succumbed to the results of subphrenic abscess, the site of the ulcer being found firmly healed. The second made an uninterrupted recovery and was shown at the meeting.

The following cases were also exhibited:—

Dr. C. BELL TAYLOR: (1) Bilateral Glioma; (2) Simple Cataract Extraction in a patient aged ninety-six years; and (3) Skin Transplantation for Ectropion.

Mr. STEVENS showed a pathological specimen of a Gastric Ulcer communicating with an hepatic abscess.

KIDDERMINSTER MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on Jan. 29th, the President, Mr. W. MOORE, being in the chair.

Mr. J. L. STRETTON showed:—1. A boy, aged thirteen years, upon whom he had operated for the Radical Cure of Hernia last October; the result was perfect. 2. A man, aged thirty years, who strained himself seven months previously while lifting a heavy weight and ever since had suffered from pain in the left chest and shortness of breath. When first seen about six weeks before there was a systolic murmur heard to the right of the sternum and conducted upwards, but this has disappeared. There was also a marked difference in the volume of the pulses felt at the wrists and they were not synchronous; the difference is still very marked, the left pulse being very thin. There was no specific history, but he was decidedly neurotic. The case was of interest because the question had been raised as to whether his condition was really due to the strain. Mr. Stretton thought that as the result of the accident there was some dilatation of the aorta.—An interesting discussion ensued, some members considering that the symptoms were due to nervous conditions.

Mr. W. HODGSON MOORE showed:—1. A young woman with Specific Disease affecting the bones of the lower extremities. She had derived benefit from large doses of iodide of potassium, but when pushed it did not remove the whole of the disease. He raised the question of whether there was not some other disease in association with the syphilis, but the general opinion of the meeting was against this. 2. A Plaster-of-Paris Jacket which he had removed from a boy who complained of considerable pain in the dorsal region. When removed it was found that a halfpenny had become fixed in the mid-dorsal region and by pressure caused a considerable amount of ulceration. It was then remembered that he had dropped the coin down his back some time before it gave rise to any symptoms.

Mr. E. P. HASLUCK showed a Heart with very extensive Calcareous Degeneration of the Aortic Valves from a man aged seventy-four years. He was only ill for a few hours and died from exhaustion. The degeneration was so extensive that the cusps were rigidly adherent and gave a distinct metallic ring when struck; they felt like rough stones. In spite of this mischief he did not exhibit any serious symptoms, although he had been short of breath for the previous five years. He was walking about, apparently in good health, within a few hours of his death.

Mr. S. STRETTON read a paper entitled Some Notes on the Present and Future General Practitioner.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

The Perigraph.—Dual Brain Action and its Relation to certain Epileptic States.—Operations for Gall-stone.

A MEETING of this society was held on Feb. 3rd, Dr. W. CRAIG, Vice-President, being in the chair.

Dr. GRAHAM BROWN showed an ingenious instrument, invented by himself, which he called a Perigraph, for delineating the shape of the thorax and for clinical mensuration generally. It was based upon the pertagraph, but instead of having a straight arm for following the outline the arm was sickle-shaped and had a joint which enabled it to be turned over so that the point of the sickle could follow a circle.

Dr. LEWIS C. BRUCE (Morningside Asylum) read a paper on Dual Brain Action and its Relation to Certain Epileptic States. He defined the condition as one in which an individual appeared to have two separate states of consciousness and in whom the right and left brains alternately influenced

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the motor functions. Many cases published as instances of dual brain action were merely examples of delusional states. His attention had been drawn to the condition by a patient in the Derby Borough Asylum who presented two distinct states, which he called the English stage and the Welsh stage. In the English stage he was right-handed, spoke English, but understood Welsh. His memory was a blank for everything that had occurred in the Welsh stage. He wrote with his right hand, but if he used his left hand he wrote mirror-fashion. In the Welsh stage he did not understand English and spoke only in Welsh. He wrote with his left hand and from left to right. Dr. Bruce thought the condition was due to the unequal effects of disease in the two hemispheres and examined the patients in the asylum with a view to elucidating this point, but no case presented the motor peculiarities present in the Welshman. He was led, however, to the study of unilateral epileptic seizures, which suggested that the condition known as epileptic automatism might be due to the seizure paralysing one side of the brain while the other carried on its function. He gave an example of this condition in an epileptic who, after a unilateral fit, was able to walk and feed herself with the left hand. Her mental condition was altered so that when shown money she manifested no desire to obtain it, although in her normal condition she did. The conclusion drawn from this case was that the left hemisphere controlled the right and was more highly educated. After a right-sided seizure the left hemisphere was disorganised and left the other uneducated hemisphere alone acting. He thought it was owing to this that the mental phenomena after a fit were of such a low type. He suggested that in some epileptics the disease was due to a want of equal education in the two hemispheres rendering the patient liable to brain exhaustion under certain conditions.

Dr. RUTHERFORD MORISON (Newcastle-on-Tyne) read notes on cases of Gall-stone. In the first case the gall-bladder was found to be small, but two stones were removed from the common duct. In the second case a tumour could be felt in the right hypochondrium, which descended with respiration and was apparently not a moveable kidney. It proved to be adis tended gall-bladder filled with clear fluid, a single stone blocking the cystic duct. In the third case a tumour, which could be felt in the right hypochondrium in the position of the gall-bladder, was found to be a thin-walled sac continuous with the gall-bladder. The gall-bladder itself was contracted and thickened. Several stones were removed from the sacculus and two from the common duct.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Excision of the Tongue.

A MEETING of this section was held on Jan. 22nd, Professor BENNETT being in the chair.

Mr. WHEELER read a paper on Excision of the Tongue, and referred to sixty-one cases that he had operated upon, stating that each particular case of cancer of the tongue generally required a special operation and that no individual recognised operation would be suitable for every case. He never ligatured the lingual arteries prior to the operation on account of any dread of hæmorrhage during the operation. His practice was to extirpate the tongue before removing the sub-maxillary glands and the enlarged lymphatic glands, as the diseased mass in the mouth was a constant source of irritation and the longer it remained the greater chance there was to the patient of septic poison. He had operated on the tongue with the ordinary scissors, the thermo-cautery scissors, and the electric cautery, and for precision and celerity he thought that, in suitable cases, the thermo-cautery scissors were the best. There was no charring of the part, no sloughing, and no secondary hæmorrhage. He never found it necessary to perform preliminary tracheotomy before excising the tongue, as he considered that there was no compensation to the patient for this additional operation and no advantage to the operator. He emphasised the necessity of absolutely cleansing the mouth and tongue prior to and after the operation. Some of his cases had occurred from three to fifteen years ago and had had no return of the disease. The parts removed were examined by competent pathologists and microscopists and found to be epithelioma.

Mr. SWAN said that Mr. Wheeler was to be congratulated on the fact that he had patients alive fifteen years after operation for this disease, but most surgeons would admit that cases were occasionally seen which presented all the clinical aspects of malignant disease of the tongue—viz., the ragged sore with a hard base, the emaciated appearance of the patient and the enlargement of the neighbouring glands, the age of the patient also being that at which cancer commonly occurred—and which were, however, not cancer but only simulated it and got well under a course of mercury. He agreed with Mr. Wheeler that it was unnecessary to tie the lingual artery as a precaution against hæmorrhage in the removal of the tongue.

Sir THORNLEY STOKER said he did not think that the minute anatomy of the tongue had any essential bearing on the rude facts that they had to deal with in connexion with the surgery of this portion of the body. Syphilis was unquestionably a predisposing cause of cancer, and he also agreed with the remarks of Mr. Swan as to the difficulty of diagnosing many cases of cancer of the tongue from syphilitic affections. Most of them had seen instances of what had commenced as syphilis degenerating into carcinoma. Mr. Wheeler spoke of dividing the gustatory nerve as a means of relieving pain and salivation in cancer of the tongue. He had performed the operation on a good many occasions, and he had not found any marked benefit to result from that proceeding. The gustatory nerve was seldom divided at a time when the nerve was easy of exposure and when the operation was an insignificant one; but when the cancer had infiltrated the floor of the mouth and produced aggravated pains in the ear the division of the gustatory nerve became rather a serious operation. He entirely disapproved of the practice of transfixing the base of the tongue. There was a reason for transfixing the base of the tongue in the days when the écraseur was used in the operation and a needle was put in to prevent it from sliding, but no one would use an écraseur in this operation now. As to the thermo-cautery scissors, he thought it a totally unnecessary instrument. In cases which were proper ones for the performance of the operation, perfect command over the vessels was obtained by performing Whitehead's operation and using a clipped forceps if an artery began to bleed. He had never found it necessary to divide the cheek, and dividing the lower jaw and opening the floor of the mouth were, in his opinion, unnecessary practices. Complete access could be got to the base of the tongue—in spite even of the small mouths that Mr. Wheeler seemed to have found so common—through the oral aperture by Whitehead's operation, and as far back as it was safe for the surgeon to carry that operation. He had of late years done no operation except Whitehead's, and he believed it to be the best for removing the tongue in a case of cancer. In the last case he operated on he found it necessary to go so far back that he had to remove the anterior artery of the palate and a portion of the tonsil on one side, and he found no difficulty in doing it by Whitehead's operation. The tongue could—by a pair of forceps, and not by the old practice of a ligature—be drawn so far out of the mouth that the operation was practically an extra-buccal one; and every artery that sprang—there were only four or five—could be secured by a clipped forceps and tied. He believed that the practice of operating in hopeless cases of cancer of the tongue was a bad one. In ordinary cases deligation of the lingual arteries was unnecessary.

Mr. TOBIN said that in cancer of the tongue he should like to see an operation of such magnitude undertaken that not only would the diseased tongue be removed—not through the mouth, but through an incision underneath the jaw so that the floor of the mouth and all the structures in their continuity could be reached as far as possible—but also the glands connected with it.

Mr. M'ARDLE said that where the disease had not returned for fifteen years it would be very desirable to have a microscopic section which would indicate the character of the disease at the outset. His experience in cases in which the diagnosis had been thoroughly established was that the return took place very much earlier. The phrase "removal of the tongue" was hardly sufficient for nineteenth-century surgery. It was not sufficiently definite. Removals of the whole tongue, of a patch at the side of it, and of the front of it should be distinguished. If statistics were to be of any use they should be founded on something definite. A cancer engaging the base, or one side of the tongue, bore little or no resemblance to a cancer

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on the tip of it, and these degrees of affection should not be all classified in a heap. He was adverse to the practice of charring the mouth by cautery. The operator saw nothing of what he was doing; he never knew whether he had got beyond the limits of the disease or not, and though the practice in question was the readiest way it was not the most perfect. If the disease had engaged the base of the tongue the lingual artery should be secured and a submaxillary incision should be made outside the mouth, for once the base of the tongue had been infiltrated with cancer the sub-lingual glands must be infected, and it would be impossible to remove them without an external incision.

Mr. LENTAIGNE said that up to two or three years ago they firmly believed in Whitehead's operation; but they did not get to the root of the disease by it, and if there were an extension of the disease to the glands Whitehead's operation was not sufficient. If he were tempted by a very small cancer at the end of the tongue to perform Whitehead's operation, he would go on to a second operation and search for the glands, especially under the upper portion of the sterno-mastoid, where, in his experience, recurrence most often took place. He agreed with Mr. Wheeler as to the importance of having the mouth clean before the operation. Cautery of any kind was objectionable. He had frequently used adhesive gauze after operations on the tongue, and had found it to be of great use. It protected the cut surface from food, &c., and the healing proceeded in a most satisfactory way under it.

Mr. DOYLE said that the thorough removal of cancer of the tongue and all the glands and the diagnosis of this disease were by no means easy. A late associate of that society, who had a small white spot near the margin of the tongue, was seen when it first appeared by specialists in London and other cities, who said there was nothing in it. Three years afterwards it was removed by an operation under cocaine. The removed portion was submitted for microscopic observation to another specialist, who could not tell anything about it. Three months afterwards the disease recurred in the submaxillary glands and terminated fatally.

Mr. MYLES said that quite recently, with the assistance of Sir Thornley Stoker, he operated on a supposed cancerous tumour of the breast, and as the question of diagnosis was very doubtful he called in a younger colleague, Mr. Greer, who was an experienced microscopist, and made a microscopic examination of part of the tumour, but the result was nil. Microscopic examinations of scrapings or of fresh sections of the tongue were absolutely unreliable. Professor Hamilton of Aberdeen brought under the notice of the profession the changes that occurred in the tongues of old people, and produced microscopic sections of the tongues of persons over fifty-five years of age, and every one of these presented the identical appearances that were usually associated with epithelioma. He placed side by side with them sections of clinical epithelioma and the most expert pathologists were unable to distinguish between the two. When he (Mr. Myles) was house surgeon of Steevens' Hospital a case came there to be operated on for cancer of the tongue, and everybody, except Mr. Edward Hamilton, diagnosed it to be epithelioma. The patient was a woman of sixty-five or sixty-six years of age, who was the mother of eighteen children and the grandmother of twenty-four. Mr. Hamilton suggested a mild course of mercury, which was adopted, and she went home perfectly well. In a large percentage of cases it was impossible to distinguish a syphilitic gumma from true epithelioma.

Mr. WHEELER, in reply, said that he had recorded the history of his cases as fully as he could. There were only ten that he could account for. In twenty-nine he knew that the disease returned. As to twenty-two, he had no direct knowledge of the disease not having returned, but he heard indirectly that five of them were alive.

THE SOUTHAMPTON WATER SUPPLY.—The Directors of the South Hants Waterworks Company, whose undertaking the Southampton Corporation is endeavouring to compulsorily acquire, announce in their half-yearly report that they are taking steps to oppose the Bill by every means in their power, feeling assured that by so doing they are protecting the best interests of the proprietors. It is of interest to note that they report last year an addition of 994 houses to the rent-roll, giving an increased annual rental of £1,222. They declare dividends for the half year of 10 and 7 per cent.

Reviews and Notices of Books.

Handbuch der Gynäkologie. In drei Bänden. Herausgegeben von J. VEIT (Leyden). Mit zahlreichen Abbildungen. Erster Band. Wiesbaden: Verlag von J. F. Bergmann. (*Handbook of Gynæcology.* In Three Volumes. Edited by J. VEIT (Leyden). With numerous Illustrations. First Volume. Wiesbaden: J. F. Bergmann.) 1897. Pp. 628.

THE volume before us is the first of three about to be edited by Dr. J. Veit, the complete work promising to be an important contribution to gynæcological literature. It contains five monographs by well-known and able men, who present to the reader the results of the latest observations. The subjects taken in order that are here discussed are: Asepsis and Antisepsis in Gynæcology, by Dr. H. Löhlein of Giessen; the Anomalies of Position and of Movement of the Uterus and Neighbouring Organs, by Dr. Otto Küstner of Breslau; the Diseases of the Vagina, by the editor, Dr. J. Veit of Leyden; Gonorrhœa, as it affects the Female Genito-Urinary Organs, by Dr. E. Bumm of Basel; and the Development and Defects of Development of the Female Generative Organs, by Dr. W. Nagel of Berlin.

Dr. Löhlein, in his article on Asepsis, shows himself to be a staunch adherent of the doctrines advocated by Lord Lister. Cleanliness in the gynæcologist should be a reflex act. He discusses the merits of various antiseptics that have been found serviceable, amongst which may be mentioned lysol, kresol, creolin, solveol, aqua chlorata, lime chloride, and others. For purification of the hands, sand and soft soap may be used with advantage. Woodcuts are given showing the construction of various sterilisers. For the purification of catgut he recommends cumol, the high boiling point of which, from 160° to 170° C., destroys some form of germs that remain capable of proliferation in boiling xylol the boiling temperature of which does not exceed 136° to 140° C. Silk is more easily purified. Full instructions are given in regard to the arrangements of the operating theatre and of the perfect cleansing and sterilisation of instruments and for the preparation of the patient when vaginal and other operations, such as laparotomy, have to be performed. A table is given showing the excellent results obtained in the Giessen Hospital for Women since the introduction of asepsis, only 4 per cent. dying under the most serious operations. The article which will, perhaps, be perused with most interest by those who can read German is that of Professor Otto Küstner of Breslau, the contents of which we may briefly indicate. After a short section devoted to the normal position and movements of the uterus he passes on to the consideration of pathological fixation the result of parametritis, and then discusses abnormal mobility, with anteflexion, retroflexion, lateral flexion, torsion, prolapse, inversion, eversion, and hernia, with the special methods of relief devised or practised by the author, and a very large number of excellently drawn illustrations. Moreover, each of these sections is preceded by an excellent bibliography.

Dr. Veit, in his article on the Diseases of the Vagina, gives an excellent account of modern bacteriological investigation in regard to the micro-organisms present in the vagina. Various observers, he points out, have shown that organisms are present normally which might easily, under appropriate conditions, induce puerperal fever and death, and that such auto infection does actually occur in even well-appointed institutions. The reason why this does not occur more frequently is, according to Döderlein, that the vaginal mucus has a strongly acid reaction, and is therefore an unfavourable medium for the growth of micro-organisms, whilst in disease the secretion may become neutral or even alkaline. The bacilli in health are few in number and of definite

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nature, whilst in disease they present great variety, and, amongst them doubtless there are some saprophytes and pathogenic germs. Much doubt, however, seems to exist in regard to the whole of this inquiry, and much more investigation is evidently required before any positive statements can be made, the researches of Krönig, for example, being by no means in accordance with those of Döderlein. Dr. Veit describes with much interesting detail inflammation, wounds, and foreign bodies in the vagina, neoplastic formations, (such as cysts, myoma and sarcoma, malposition, and, finally, fistulæ) communicating with the large and also with the small intestines. The treatment of such cases will, we presume, be given in detail in some future article, as it is here only glanced at.

Dr. Bumm, to whom with Neisser and Haab science is indebted for the demonstration of the micro-organism constantly associated with gonorrhœa, treats the subject which he has made his own in a very satisfactory manner. He remarks that, considering Dr. Bernutz and Dr. Goupil as long ago as 1857 drew special attention to the extension of gonorrhœal inflammation to the Fallopian tubes and the frequency of pelvic peritonitis in connexion with it, he has been greatly surprised that it was very generally overlooked n works published twenty or thirty years later. It required the monograph of Noeggerath to compel the attention of practitioners to the serious effects of gonorrhœa in the female, and it needed experimental and microscopic evidence to establish the facts that are now generally admitted. A similar uncertainty existed in regard to purulent ophthalmia, and it was reserved for Zweifel in 1884 to supply evidence by inoculation that ordinary lochial secretion is incapable of producing blennorrhœa. Dr. Bumm gives an exact description of the gonococcus, the size of which he estimates at 1·2 μ from pole to pole. It is, he says, the micro-organism of all those at present known—at least, of those that are pathogenic in man—which has attained the highest grade of parasitic adaptation. Whilst other pathogenic germs, such as the bacteria of tuberculosis, of splenic fever, and of typhus fever, can thrive well in the bodies of animals, the gonococcus attaches itself exclusively to the human mucous membrane. All attempts to infect the lower animals with it, even the highest apes, have signally failed. That the gonococcus is the active agent he considers to be demonstrated by the fact that severe gonorrhœa can be caused by inoculation with the pure culture twenty removes from the original matter, and a slighter attack even after thirty pure cultures in succession. Dr. Bumm has examined fragments of the cervical mucous membrane in cases of recent infection and finds that the gonococci penetrate as far as the connective tissue of the mucosa between the epithelial cells, these last, being detached, either leaving the surface denuded or being replaced by flattened or roundish cells. He has carefully examined the membrane of the uterus in five cases in which the uterus was removed on account of chronic salpingitis. The infection was found invariably to be limited to the mucous membrane, the muscular tissue being quite free from infection. The glands of the cervical region were invariably intact. The cells covering the papillæ are often very healthy. The gonococci have to be searched for sometimes over areas of considerable extent. Hence he arrives at the conclusion that in chronic cervical gonorrhœa the invasion of gonococci is limited to a few isolated and very small patches of the membrane. He gives drawings which bear out his statement.

From the present standpoint of our knowledge Dr. Bumm is inclined to think that recovery from an attack of gonorrhœa must be due to functional changes in the protoplasm of the regenerated epithelial cells rendering the cells capable of resisting the inroads of the gonococci. This immunity, however, only exists for the particular attack, and so long as the gonococcus is present in the secretion, since a new germ or germs can easily induce another inflammatory outburst. Gonorrhœal inflammation of the urethra occurs with great frequency in females, as all those who have to deal with lock hospitals for females know, but is in general easily cured. The microscopical characters are similar to those in men. The extension of the inflammation to the bladder, ureters, and pelvis of the kidney is rare. Gonorrhœa extending to the interior of the uterus and even to the tubes is not uncommon, and of the inflammatory appearances and of the invasion of the micrococcus in both of these parts and of the ovaries, peritoneum, and rectum Dr. Bumm gives minute and carefully written accounts. From his own and recorded observations he shows that gonorrhœa though a frequent, is not by any means a constant cause of sterility. He gives some statistics of the frequency of gonorrhœa in New York on the authority of Noeggerath—statistics that must, we think, exaggerate the prevalence of the disease, although, no doubt, it is common in all large towns. Whilst many pages are devoted to the diagnosis and symptomatology of gonorrhœa there is but a small space occupied with the treatment, and the changes must still be rung on perchloride of mercury, nitrate of silver, and carbolic acid injections, and other well-known measures. If the successive volumes of this work are maintained at the same high level as this, the work will prove of the greatest value to the practitioner.

Essays and Addresses. By Sir JOHN RUSSELL REYNOLDS, Bart., F.R.S., M.D. Lond., LL.D. Aberd., LL.D. Edin., late President of the Royal College of Physicians of London and of the British Medical Association; Physician to Her Majesty's Household; and Consulting Physician to University College Hospital. With Portrait and brief Biographical Sketch. London: Macmillan and Co., Limited. 1896. 12*s.* net.

WE have rarely, if ever, read a volume with greater pleasure than this, and in publishing it Lady Reynolds should earn the gratitude not only of the medical profession, but of all, whatever their rank or calling, who love noble thoughts nobly expressed. The papers of which it is composed were personally selected with others for publication by the late President of the Royal College of Physicians of London, and it was his intention to write appendices to them where it appeared to him that such additions were required to bring the matter up to date. The experience of half a century's assiduous practice in hospital ward and consulting-room was at his disposal to be drawn upon, and leisure alone was wanting for the completion of the task in accordance with his wishes. But this leisure never came. "My husband died," says Lady Reynolds, in her graceful and pathetic little prefatory note, "when the work was merely planned in his mind. I have, therefore, chosen from among the selected papers some of general interest, the majority of which would have been published by Sir Russell Reynolds without alteration Here, we think, Lady Reynolds adopted a wise course. There were many papers left behind him by Sir Russell Reynolds that might well have been re-published—the Lumleian Lectures, for example, upon the Relation of Medical to Legal Practice; but it was their author's opinion that they required alteration or explanatory notes to give them their complete modern value. Either, then, the work would have to be published in a form with which Sir Russell Reynolds had expressed himself as not quite satisfied or it would have to be entrusted to another hand to write the additional notes. Neither course would have been absolutely satisfactory, and we consider that it was a wise decision to give to the public only such work as had, firstly, passed the test of the author's hardly-earned approval and, secondly, such as called for no elucidation or editorial addition from

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the pen of another. For in this way we have obtained not only a volume of fine and finished essays, each complete in itself and carrying its distinct and unmistakeable message, but we have also obtained a very faithful portrait of the author's mind.

In the first essay in this book, entitled "The Relation of Practical Medicine to Philosophical Method and Public Opinion" we have very clearly displayed the fact that Sir Russell Reynolds estimated other qualities in the physician as much as technical skill, and this fact forms a sort of key-note of all the other essays. Proper scientific equipment the student of medicine must have, but psychological knowledge he must also possess, and he cannot obtain this by intuition. Powers of observation must be trained as groups of muscles are worked up to perfected movement by the athlete; and the habit of logical thought must be as much fostered and instructed as the habit of daily exercise if the result is to be the alert mind comparable to the alert body. But Sir Russell Reynolds's Aristotelian teaching does not stop here. The true student of medicine—we do not use the term student as meaning a school-boy or an examinee, but as implying all who are wishful to learn—should not hold that he has complied with all possible requirements when, in addition to practical and text-book knowledge of his particular science, he has mastered the forms for the analysis of reasoning, and assumed the habit of putting these forms to practical employment in his work. In every science or branch of knowledge facts must be studied; in every science or branch of knowledge these facts must be arranged and must be weighed and their conclusions must be looked to as much as the premisses upon which they rest. But in the science of medicine, at any rate, this is not all. In the science of medicine sympathy, charity, and imagination play a part that they do not play in more exact sciences. While Sir Russell Reynolds in some essays—as for example in the address at the opening of the Westminster Hospital Medical School in 1859, entitled "The Facts and Laws of Life," and in the introduction to the System of Medicine—lays particular stress upon the value of logic, he is careful in others to point out that nature cannot be expounded by syllogisms and that the medical man wants hope, love, and belief in an ordained scheme for good, as well as his technical knowledge and his orderly mind, if his services are to be, what he should strive to make them, for the good of his generation. To the teacher of such doctrines, it need hardly be said, the transcendental side of medicine would naturally appeal, and some of Sir Russell Reynolds's finest writing—an address on the Present Position of Medical Knowledge, delivered at Norwich in 1874, and certain passages in the Harveian Oration of ten years later, for example—are devoted to showing how all embracing is the science which deals with life as approached from the avenues of disease, and how necessary it is that the votaries of such a science should be single-minded in their intent to search out the truth, yet humble-hearted in their conviction that the test-tube does not contain the whole story of the creation. The true physician, according to Sir Russell Reynolds, must be the true philosopher or lover of wisdom. Where a defined range of accurate performance is possible he cannot be too accurate, but before the unknowable he must be neither impertinent nor despairing. To see in a glass darkly is not a performance to be ashamed of. It is better than entire inability to see. The wise man will understand his limitations and work on strenuously and humbly that he may set back those limitations if not for himself at least for generations that are to come. To accept what cannot be explained is not a sign of confessed credulity, and the most learned man is the man that has learned to look upon his knowledge as so infinitely small compared with the magnitude of the things that remain to be known, that it is borne in upon him that even he is ignorant. This is but a bald exposition of Sir Russell Reynolds's attitude towards the greatest problems of our cosmogony, and we recommend our readers to study "The Relation of Practical Medicine to Philosophical Method and Popular Opinion," written in 1858; "The Present Position of our Knowledge," which was the address in medicine delivered before the British Medical Association in 1874; and, lastly, the "Organised Progress of Medicine," the Presidential address to the same body twenty-one years later. They will in those papers see Sir Russell Reynolds's faith revealed.

From this high philosophical level of thought several of the essays make a gentle descent and reveal the author in the more familiar mood of practical adviser, discoursing humourously of things as they are and things as they ought to be in the medical career. To this category belong the well known introductory lecture entitled "Types of Students," delivered to the Medical School of University College in 1863 and reprinted in THE LANCET as recently as 1894; the essay entitled "Specialism in Medicine," a speech before the Medical Society of University College, London, in 1881, and the paper on the Value of Competition, an address delivered on prize-day, 1885, at University College, Bristol. The first of these essays is the most broadly humorous, the second is the most caustic, and the third the most directly practical. But all three serve to show their author in a totally different aspect from that in which he presents himself to us in the more stately compositions to which we have already alluded. There he is an instructor whose ideals are hard to follow and whose optimism may appear not altogether justified by the affairs of everyday life, because based upon a range of knowledge with which the everyday working man is not dowered. Here he is the shrewd and genial adviser, familiar with the troubles, pitfalls, and temptations that assail the men of his own calling from their entry as students until the end of their professional careers, and as prompt to put a finger upon the sore spots as to recommend remedies of a thorough and drastic sort.

We have resisted many temptations in the course of this review to quote copiously from the pages. The essays abound with phrases which form remarkable illustrations of the bent of the author's mind and of his high and sensitive moral standard, but they are composed with such regard for symmetry and proportion that detached passages, however pregnant of meaning, brilliant, or humorous, do not give a fair idea of the whole. It is as a whole that we recommend their perusal to our readers. Their teaching is noble; their wisdom is deep and shrewd; frequently they move to laughter, and now and again they may provoke tears. No one can rise from reading them without feeling that they have held intimate communion with a man whose sympathy was as broad as his penetration was acute and whose wide range of learning and career of unbroken worldly success only served to make him the kinder critic of less gifted men and the readier friend of less fortunate.

Hygiene for Beginners. By ERNEST SEPTIMUS REYNOLDS M.D., F.R.C.P. Lond. London: Macmillan and Co. 1896 Pp. 226. Price 2*s.* 6*d.*

THIS is a small but, so far as it goes, a very excellent little book. It is an expansion, as the author tells us in his preface, of a Primer of Hygiene written by him in 1894 for the use of higher-grade school children and the like. As an introduction to the chapter upon Hygiene a short but succinct account of anatomy and physiology has been added. These two subjects, though necessarily treated in a very cursory manner, are set out with lucidity. Part II., which is concerned with hygiene, commences with a short history of hygiene, and mentions various pioneers in the field of

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sanitary science and preventive medicine, such as Cook, Howard, and Jenner. The author is wrong, however, in saying that "Cook first showed how to prevent scurvy on board ship" (p. 106). That honour belongs to James Lind, physician to Haslar Hospital, who published his treatise on Scurvy in 1753, while Cook published, or rather read, his paper before the Royal Society in 1775.

There is an excellent chapter on Parasites and their Action on the Body, which includes a short account of bacteria.

Other chapters deal with Impurities in Air and in Water and the diseases they cause; and with Food, Cooking, and Beverages. We cannot agree with Dr. Reynolds in thinking that three-year-old mutton is the best. Five-year-old is far superior. On page 139 salt is included among the condiments as "not in any sense a true food." This is obviously a slip which should be corrected in the next edition, for on pp. 91 and 134 salts are given as necessary parts of the perfect diet.

The chapters on Ventilation, Warming, Lighting, and the Dwelling-house in general are well and clearly written, but in that upon Personal Health, although ordinary baths are spoken of, there is no mention of the Turkish bath, that invaluable adjunct to health, especially for the town-dweller. The chapter upon infectious diseases is admirable, except, we fancy, that Dr. Reynolds makes too light of German measles. The book ends with a clearly-written chapter upon what to do in various medical and surgical emergencies. Altogether this is an excellent little book, despite the one or two slips which we have pointed out, and one we can recommend to parents, guardians, schoolmasters, and others.

A Manual of Infectious Diseases. By E. W. GOODALL, M.D Lond., Medical Superintendent of the Eastern Hospital of the Metropolitan Asylums Board, formerly Medical Registrar to Guy's Hospital; and J. W. WASHBOURN, M.D., F.R.C.P. Lond., Physician to the London Fever Hospital, Assistant Physician to Guy's Hospital and Lecturer in the Medical School. London: H. K. Lewis. 1896. Pp. 368. Price 15*s*.

THE authors have produced an excellent and well-balanced handbook. Facts are clearly stated, and no recent results of any value omitted. The five opening chapters on Fever, Contagion and Infection, Disinfection, Rashes simulating those of the Specific Fevers, and Sore-throat give precisely what a student needs. Controversy is, as far as possible, kept in the background, and the heated discussions on cow scarlet fever of a few years ago are here summed up as follows: "In others [milk-supplies] no such infection could be traced, even after the most careful investigation, but the cows supplying the milk were found to be suffering from a disease of the udder, skin, and viscera; and it has been supposed that this was really scarlet fever in a modified form." The account of the complications of scarlet fever and their treatment is very good and full. In a future edition, in describing the distribution of diphtheria, it might be well to enter into a little more detail. The curious facts brought out in Dr. Longstaff's paper and map are worthy of much attention, and every medical man would be capable of adding to our knowledge of them if the lines of inquiry were pointed out. The bacteriological examination of diphtheritic membrane and the differences between various forms of bacilli found are clearly explained. There is also a very lucid account of the standardising of antitoxic serum. In the chapter on Small-pox and Vaccination there is nothing new, but all necessary points are well brought out. The chapter on Enteric Fever is detailed and practical. The book is a thoroughly sound one.

LIBRARY TABLE.

Transactions of the American Gynæcological Society. Vol. XX. Philadelphia: Wm. J. Dornan, Printer.—There are several papers of interest in this volume. We may especially mention one by Dr. S. C. Gordon, entitled "Further Experience and Observations in Hysterectomy for Fibroids." He believes that hysterectomy for fibroids of the uterus should be as much the general rule as ovariotomy for tumours of the ovary. His last twenty hysterectomies for fibroids have been without any mortality. Another paper of interest is by Dr. Howard Kelly on the Renal Catheter and its Uses in the Diagnosis and Treatment of Renal Diseases. He passes the catheter into the ureter through a speculum, and this method, which appears to be especially dependent on a good light being available, seems far better than any attempt to pass a catheter into the ureter by the sense of touch alone. There is also an exhaustive paper on Deciduoma Malignum, with numerous references, that will prove of great use to anyone desirous of looking up this subject. The volume is quite equal to any of its predecessors, and it contains a general index of Volumes I.—XX.

JOURNALS AND REVIEWS.

Scottish Medical and Surgical Journal.—Professor McCall Anderson (Glasgow) describes a case in which hæmatoporphyrin occurred in the urine in connexion with attacks of hydroa æstivale. The patient was a man, twenty-six years of age, who had from infancy suffered annually from an eruption of the face, ears, and hands. It usually began in early summer and disappeared on the approach of winter. The first symptom was a sensation of itching and burning, which after ten or twelve hours was followed by the formation of blisters filled with a greenish serum. The urine was acid, and contained no albumin, sugar, bile pigment, or blood, but was of a light burgundy-red colour, which spectroscopically seemed to be identical with alkaline hæmatoporphyrin. Professor Annandale (Edinburgh) contributes two cases of strangulated obturator hernia, one case of suppurating dermoid cyst of the ovary simulating suppurative appendicitis, and three cases of intestinal obstruction from fæcal accumulation. Dr. P. Blaikie Smith (Aberdeen) gives an account of two cases of tumour of the brain. Dr. Elder (Leith) publishes the first portion of a paper on Agraphia and the Existence of a Special Graphic Centre.

St. Bartholomew's Hospital Journal.—In the January number Dr. Edmund Cautley discusses the therapeutic value of food in infantile diarrhœa. He concludes with the following remarks:—"Let me advise you to treat every case on its merits, and not to stick to any hard and fast rules, and apply such rules to rich and poor, to the well-nourished and the marasmic, to the intelligent and the stupid, in the heat of a tropical climate and the cold of more northern regions. Bear in mind that almost all cases are due to errors in diet, and that on a suitable food the patient will rapidly recover. With care and patience investigate every case, and think no detail too trivial for even the greatest among us, if it leads to the recovery of a single life or the relief of a single symptom." Dr. Kanthack continues his Pathology Jottings and Mr. Alban Doran contributes a paper on the Details of Ovariotomy and Disputed Points in After Treatment.

The Middlesex Hospital Journal.—The Middlesex Hospital has determined not to be behind some of the other large metropolitan schools in possessing a journal of its own, and accordingly the first number, which is published by Messrs. Mitchell and Hughes, 140, Wardour-street, W., price 1*s*., has just been issued. The editor hopes that as "'Middlesex' men are to be found in every direction, ... our journal will .....

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form a connecting link between them all." The journal is intended for students as well as for past pupils of the hospital, and the objects of the new venture comprise the record of events of interest in connexion with the hospital and school, together with lectures, addresses, and clinical notes. The first number contains an excellent reproduction of a photograph of the late Mr. J. Whitaker Hulke, F.R.S., and among the literary matter we find a clinical lecture on Two Cases of Stone in the Bladder by Mr. Henry Morris, F.R.C.S. Eng., and a note on the Condition of the Knee-jerks in Fracture-Dislocation of the Spine by Dr. Campbell Thomson. We congratulate the editor on the "get up" of the first number and wish the new venture every success.

St. Mary's Hospital Gazette. The first number of Vol. III. is embellished with a portrait of Surgeon-Lieutenant-Colonel A. T. Norton, V.D., whose career is also briefly sketched. Surgeon-Lieutenant-Colonel Norton, who is the popular commander of the Volunteer Medical Staff Corps (London companies), is also an old pupil and late member of the staff of St. Mary's Hospital, and has just been elected consulting surgeon to that institution. Among the Editor's Notes we observe an announcement that a new post of medical officer for the selection of out-patients has been constituted. "The holder of this office, who must be a Member of the Royal College of Physicians, will attend the out-patient department daily and see all the new medical out-patients, and select each day not more than twenty-five cases of the greatest severity and transfer them to the physician to the out-patients, himself dealing with the remainder according to prescribed directions." By this arrangement it is hoped that benefit will accrue both to patients and students. Would it not be possible for the new medical officer while making his selection of suitable cases from a medical point of view to give an eye to each case with regard to the worthiness on the part of the patients to receive free treatment?

Knowledge.—This month the contribution to the series of articles on the Science of the Queen's Reign is from the pen of Miss Agnes M. Clerke, and deals briefly and in a popular way with the progress of astronomical research during the past sixty years. Under the heading A Pantheon of Science Mr. John Mills gives a summary of the history of the Royal Institution. It is some 100 years ago since that temple of science was first conceived by Benjamin Thomson, and the recent opening of the Davy-Faraday Laboratory, besides marking an epoch in the history of applied science in this country, forms a fitting memorial of the centenary of the Royal Institution of Great Britain.

The Cornhill Magazine.—There is a certain class of patients who are never satisfied unless their medical adviser "gives them something." To physicians who deal with such we recommend a perusal of an article by E. H. Parker upon Diet and Medicine in China. Imagine the effect upon a nervous patient of seeing "toads' eyebrows" in a prescription. E. T. Murray Smith has an interesting article upon Two Centuries of National Monuments in Westminster Abbey. The eighteenth century, although it produced furniture, jewellery, miniatures, fabrics, porcelain, plate, bindings, and music all of the highest quality, was sunk in the lowest depths as regards anything ecclesiastical. Hence the paganism and hideousness of the monuments of the time. And the epitaphs! Here is a portion of one upon Admiral Vernon:

> "Dying he bid Britannia's thunder roar,
> And Spain still felt him when he breathed no more."

This is as good as—

> "Fancy six hundred gentlemen at least,
> And each man mounted on a capering beast."

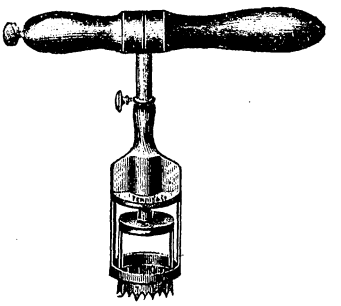
Some nineteenth century memorials are not in the highest art, witness the Stephenson window with the mud-dredger, but they are not so pretentious as their predecessors.

New Inventions.

NEW TREPHINE.

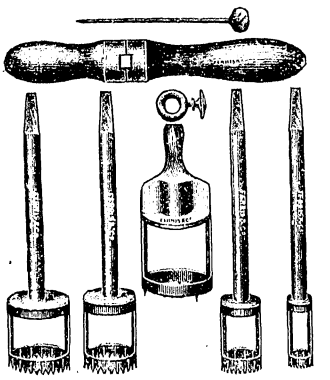
ON several occasions on which I have had to trephine for compound depressed fracture of the skull it has occurred to me that it would be an advantage to have an instrument without the central pivot pin and one which could, therefore, completely encircle the depressed bone. With the old instrument, the pin having to be placed upon the edge of the underpressed part of the skull, obviously necessitates having to remove an unnecessarily large portion of sound bone and

FIG. 1.



often the trephine cannot completely cover the fracture. Messrs. Ferris and Co. of Bristol at my suggestion have made an instrument which consists of a circular guard with three projecting points surrounding the saw edge, so as to get a purchase on the sound bone until a sufficiently deep groove has been cut. The guard can be held with the left hand while the right hand rotates the saw, and the guard can be made adjustable so as to regulate the depth of the saw cut. Trephines of various sizes can be adjusted to the same

FIG. 2



handle and only one guard is required. This instrument not only meets the particular object I had in view, but has also other advantages over the old-pattern trephine. The blade being open, it is light and the operator can see what he is doing. The stop collar on the stem regulates the depth of the saw cut. The whole instrument can be taken apart for cleansing and sterilising without any trouble.

WALTER FALLA, M.R.C.S. Eng., L.R.C.P. Lond.,
Surgeon to the Jersey General Hospital.

A THROAT IRRIGATOR.

I WISH to call attention to a simple and effective throat irrigator which has been manufactured by Messrs. Maw, Son, and Thompson from a design of Miss S. Copeman, a district nurse. The fluid to be used is contained in a pear-shaped india-rubber ball of three or four ounces capacity, to which is screwed a metallic tube about five inches long, curved at right angles in the middle. This tube is about the size of a

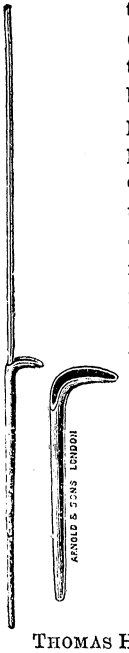
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No. 12 catheter, and at its further extremity it carries the nozzle, of which there are two forms, one flat-ended and the other spherical, both of them being pierced with very numerous minute perforations. The irrigator has been used in a large number of cases of diphtheria and scarlet fever in the Croydon Borough Hospital, and has proved easy to manipulate, leaves one hand free for the use of a tongue depressor, and does not give rise to the apprehension occasioned to nervous children by the hissing sound of some forms of apparatus.

LEONARD WILDE, M.D. Durh., M.R.C.P. Lond.
Palace-chambers, Westminster.

A MODIFIED NASAL STYLE AND PROBE FOR RADICAL CURE OF NASAL DUCT OBSTRUCTION.

THE advantages of this probe are:—1. The introduction of the style is facilitated by use of the probe. (*a*) The probe may be passed first and the style then threaded over it, the horizontal limb being convenient to lay hold of. (*b*) The probe may be placed in the style—its end just projecting through—thus converting an open end with sharp margins likely to hitch against the mucous membrane of the tube or any obstruction into a solid point which will more readily pass any stricture of the duct. 2. When *in situ* the style can be worn indefinitely, for (*a*) being hollow it allows the tears to pass down and the obstruction is at once relieved; and (*b*) the horizontal limb of the style lies in the slit inferior canaliculus, where it is not visible. 3. The open elbow of the style is less liable to blockage by mucus and is more easily cleansed while *in situ*, as when blocked it is only necessary to pass the probe down in order to ensure patency. These styles have been made for me by Messrs. Arnold and Sons, London.



THOMAS H. BICKERTON, M.R.C.S Eng., L.R.C.P.Edin.
Liverpool.

THE DILATING URETHRAL BOUGIE referred to in our issue of Feb. 6th, under the heading of "New Inventions," may be obtained from Messrs. Down Bros., St. Thomas-street, Borough, S.E.

LONDON LOCAL DEATH-RATES.

IT has been asserted on good grounds that London is the healthiest large city in the world. The Registrar-General's annual summary for 1895 gave mortality statistics for three European and three American cities having populations exceeding 1,000,000, in addition to those for London. These cities were Paris, Berlin, Vienna, New York, Brooklyn, and Philadelphia. The death-rates in these six foreign cities and London ranged from 19·4 and 19·8 in Berlin and London to 23·1 and 23·3 in Vienna and New York. It would thus appear that in 1895 the Berlin rate was slightly lower than the London rate, whereas the rate in each of the other five cities exceeded the London rate. As regards the Berlin mortality it should be pointed out that the low birth-rate suggests an over-estimate of the population, in which case the death-rate would be understated.

During last year the London death-rate further fell to 18·2 per 1000, which in an urban aggregation of nearly 4,500,000 persons, a large proportion of whom are living, as Mr. Charles Booth tells us, under absolutely poverty-stricken conditions, is a result of which the metropolitan sanitary authorities may well be proud. A careful analysis, however, of strictly local statistics abundantly proves how much still remains to be done before the possible minimum town death-rate is obtained, even in London. Dr. T. Orme Dudfield has recently issued an Annual Summary of Vital Statistics for Kensington, for which sanitary area he has long held the office of medical officer of health. His statistics are based upon the results of the London Quinquennial Census in March last, and thus acquire additional value. On this basis Dr. Dudfield estimates the population of Kensington in the middle of last year at 170,000 persons, among whom the birth-rate is stated to have been only 30·2 in 1896, to which it has steadily declined from 33·1 in 1868. Dr. Dudfield, with a view to ascertain the health-condition of various parts of his district, which vary widely in many respects and especially in the social status of the inhabitants, has divided Kensington into six sanitary districts, in which the birth-rate last year ranged from 11·4 in the south-east to 32·1 in the north. In three of these sanitary districts the birth-rate was below 16 per 1000, showing the abnormal constitution of their population, which probably includes a very high proportion of domestic servants, who practically contribute locally neither to the birth-rate nor to the death-rate. The variations in the death-rates in Dr. Dudfield's sanitary subdivisions of Kensington are fully as wide as those in the birth-rates. The death-rate in the whole of Kensington was equal to 16·7 per 1000, and was almost identical with the mean-rate in the ten preceding years. In the south-east and south-west sanitary districts the death-rate in 1896 was so low as 9·1 and 13·4 per 1000, while it ranged upwards in the others to 20·0 in the north and 30·9 in the north-west. Thus Kensington includes an area with a population of 21,040 persons, among whom the death-rate last year was practically double the rate that prevailed in the remainder of the district. Dr. Dudfield further points out that in the "Notting Dale" special area, with a population of 3740, which forms part of this insanitary north-west sanitary district, the death-rate last year reached the startling figure of 50·0 per 1000. Whether tested by the crude death-rate at all ages, or by the zymotic death-rate, or by the rate of infant mortality, this north-west sanitary district affords conclusive evidence of unsatisfactory health-condition. The death-rate from the principal zymotic diseases in Kensington was last year 2·7 per 1000 against 3·2 in the whole of London. In the six sanitary districts it ranged from 1·2 in the south-east and south-west, to 5·9 in the north-west, while in the "Notting Dale" area it was no less than 8·0 per 1000. Kensington, notwithstanding its very low death-rate at all ages, showed last year a rate of infant mortality of 178 per 1000, exceeding the mean rate in London by no less than 18 per 1000. In the sanitary districts this rate of infant mortality ranged from 109 in the south-east, to 281 in the north-west and in the "Notting Dale" special area the appalling rate of infant mortality was 432 per 1000, signifying that very nearly half the children born died before completing their first year of life. These important figures, showing strictly local death-rates within the district of Kensington, have been prepared by Dr. Dudfield in response to a request from the Kensington Vestry for detailed information relating to any "abnormally high death-rate" within the parish. It will be interesting to see what action the vestry will now take in consequence of the "Notting Dale" disclosures.

It is impossible to over-rate the value of Dr. Dudfield's statistics relating to the local sanitary districts in Kensington, and it may be hoped that the medical officers of health of other metropolitan sanitary areas will follow his example. These statistics show that while the Kensington crude death-rate is deceptively low there are parts of the parish in which the death-rate is probably as high as in the worst parts of Holborn, St. Giles, or of East London. With regard to the low recorded death-rate in the whole of Kensington there can be no doubt that it is very considerably understated in consequence of the very high proportion of domestic servants included among the population of a large part of the district. This disturbing factor naturally affects the death-rate of females more than that of males. Mr. Thomas A. Welton recently read before the Royal Statistical Society an interesting paper on "Local Death-rates," which specially dealt with the disturbing influence of the immigration of young adults from rural districts to towns, a large proportion of whom in the case of illness return to their rural homes. This paper deserves the careful attention of the medical officers of health of both urban and rural districts.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 13, 1897.

THE voluntary hospitals of the metropolis should receive an enormous accession of strength from the action of his Royal Highness the PRINCE OF WALES in linking them with the event of the completion of the sixtieth year of HER MAJESTY'S unprecedented and glorious reign. It is gratifying to gather from the PRINCE'S letter that in bringing this project to the notice of the inhabitants of the metropolis he is able to commend it as one near to his own heart, and that he does so with the concurrence of Her Most Gracious Majesty the QUEEN. We have long advocated this cause—and did so again as recently as last week—as peculiarly fitted to command universal support and to be associated with a reign which has been so beneficent and sympathetic in its personal influence and which will stand out in history for ever-memorable advances in the art of healing.

The PRINCE in his letter, which has been before all our readers during the week, remarks on the fact that the finances of the hospitals of London have long been a source of anxiety and solicitude—a statement that is perfectly true, although we regret to see that the PRINCE has been misinformed as to the *amount* of the annual deficiency and has been induced to repeat the apocryphal statement about an annual shortcoming of from £70,000 to £100,000. He points out the small proportion of inhabitants that really contribute to the support of hospitals—less than 1 in 100. Excluding the half of the population that cannot give and having exclusive reference to the 500,000 households which have the means to contribute, he finds that 450,000 do not contribute anything to hospitals. This large number of persons, having the means to give to hospitals and not giving, is a subject for much study, and the PRINCE'S remarks are made with that mixture of kindliness and good sense which are always so apparent in his speeches. He does not attribute the not giving to mere indifference but to three other causes—partly to a difficulty of choosing the right institution, partly to the lack of an annual opportunity of giving annual subscriptions, and partly to the feeling that small sums are hardly worth contributing. There is force in these reasons. But they do not exhaust the explanation. There is at least a fourth which has grown in force rapidly of late and which must be met if the scheme of the PRINCE is to be worthy of his patronage and of the reign for which it is to be the chief metropolitan thank-offering. We refer to the laxness of hospital administration and the failure of hospital authorities to eliminate from their splendid and beneficent work all pauperising influences and all superfluous charity. The recognition of the need of provision for such elimination in the Royal scheme as it comes to be developed will add immensely to its strength and to the assurance of its success.

We assume, in our gratification with the main feature of the scheme, that it is open to modification in details and that the General Council may be slightly enlarged by the addition of those who would represent the strong desire to see a magnificent relief of the impecuniosity of London hospitals accompanied with a guarantee that necessary reforms of administration shall be a condition of receiving a share in the PRINCE OF WALES'S Hospital Fund for London. This brings us to the duty of criticising the more questionable parts of the scheme. There is one feature of it which we think the PRINCE on reflection will re-consider—that which extends it over a number of years; that which, in fact, makes it a continuous scheme in competition with the ordinary and regular channels of charity. Obviously the year 1897 has a charm and an emotion of its own which cannot be sustained. And the success of the PRINCE'S appeal will depend on taking this tide of feeling at the flood. A date should be set for the closing of the PRINCE'S Fund, and in our opinion not a remote one. The iron cools quickly and must be struck while it is hot. When the London citizen can in a given year at once show his loyalty to an incomparable Sovereign and his sympathy with a less fortunate brother or sister in hospital, there is no reason why every respectable hospital in London should not be relieved of all that is intolerable in its burden. But the appeal must stand out clear and well-defined from all others in point of time and of form. To prolong it will be, in our opinion, to endanger, if not to spoil, it. Apart from the objection that such prolongation would bring it into competition with common forms of appeal, there is another objection to extending the scheme over future years in the expense it would entail for the collection of an infinity of small sums. There are already indications that a large sum will be raised quickly in response to the PRINCE'S suggestion; but the sooner it is decided to mark the exceptional nature of the appeal the better, in our opinion, will be the result.

The PRINCE did well to frame his terms so as to include and invite those who can only give in shillings as well as those who can give in pounds. The widow's mite and the workman's shilling can be cast into this treasury, and none will be more gratified with such donations from slender purses than the illustrious Sovereign, for whose commemoration they are contributed, and her son, whose lasting honour it will be to have instigated so fitting a monument to her. This is a year when those whose modest wants of every day are met by the toil of every day can join with their richer brethren in testifying to the beneficence of QUEEN VICTORIA'S rule. Is it too much to hope of the accumulated and ever-increasing wealth of this metropolis that in this record year some big contributions to the Fund will soon be announced such as may show that liberality grows with wealth? Guy's Hospital was the work of one man. There are scores of men in London who could with little trouble wipe out the debt of every worthy hospital and fill the vacant wards with grateful and fit patients who are now being treated in ill-adapted homes. We have no wish to exaggerate the place of hospitals. We believe it will hinder this great commemorative movement if means are not taken to assure the public that the Fund shall not be used to perpetuate lax administration in hospitals. But no errors of administration can excuse those who have the means for not helping to make this Fund a splendid success in response to the gracious and charitable proposal of the PRINCE OF WALES and in commemoration of the reign of a

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Sovereign who will be for ever distinguished for her many public and private virtues and, not least, for her sympathy with enlightened progress.

WHAT with plague, famine, and pestilence India is at the present time undergoing a terrible trial, but the sad condition of that country furnishes no ground for the state of more or less unreasoning panic with which some Governments and people seem to have been seized. We have no desire to minimise the gravity of the situation; indeed, no one who knows anything of the disease, even historically, and of the epidemic proportions it may assume, is likely to do so. But the accounts that have been handed down to us of the plague in past ages have left such an impression on the imagination that the events looming on us from India are very apt to arouse our fears to such a degree as to cause us to forget the very different conditions existing in 1665, for example, and those existing at the close of the present century. Then everything that could go to make up a hot-bed for epidemic disease was present; diseases were not differentiated from one another; the most elementary principles of sanitary science were unknown and their practice undreamt of; dirt, foul air, and overcrowding, which still so largely prevail in Eastern countries and cities, were then the rule everywhere; and the human race was, it may be said, dominated and terrorised in the presence of disease by one idea—the fear of contagion—from which the only possible safety was flight, such as we have recently seen amid the native populations of certain parts of India. The modern method of dealing with epidemics is very different and far wiser. We strive by all the means in our power to get at the facts and not view them in mis-shapen and exaggerated proportions through a fog of fears and prejudices of our own, the product very often of simple panic and a morbid imagination. That plague-infected persons can and do carry the disease with them is undoubted, but this is not all. Place and environing conditions probably play even a more important part than persons. It is, however, so much easier and cheaper to impose measures against the freedom of the person than to take steps against the insanitary conditions of a place that recourse is apt to be had to the former exclusively.

We really know very little about the plague beyond the fact that it is a virulent form of disease characterised by some very definite features, that it is very largely fatal in those attacked, that it is apt to spread and assume huge proportions in a population under given conditions, and that it is almost certainly contagious. But we know scientifically little or nothing at present of its true natural history, its exact cause and mode of origin, of the vehicles and agencies by which the disease-cause is carried and spread, of the period of its incubation, and so forth. The first thing, obviously, to be done under such circumstances—and there is no lack of courage and scientific enterprise on the part of the medical profession of this and other countries in this respect—is to boldly strive to study and investigate its nature and properties, making use in the meantime of all those weapons with which our knowledge of other epidemic infectious diseases has made us acquainted. At the present time we must adopt those precautions which common sense would indicate and such as have been found effective in the case of any other epidemic disease of an analogous kind. That is what has to be done, and, like other difficult things that have to be undertaken, we may as well set about doing it as calmly and thoroughly as we can. It is when we come to apply these principles to practice that difficulties arise; hence the adoption of international sanitary conferences. We quite recognise our international responsibilities and the duty we owe to other countries, but we cannot altogether close our eyes to the fact that the Governments of Europe envy British prosperity and are nothing loth to seize upon any occasion for imputing blame to this country. We agree with a remark in the *Spectator* that some Governments are capable, if anything could be gained by it, of declaring that famine is infectious. The proper course—that of an International Sanitary Conference at Venice—has been adopted with the view of fully considering the subject and of agreeing as to what should internationally be done. The present conference will not be the least important of the series and the complement of the others, its predecessors in 1891, 1893, and 1894 held at Venice, Dresden, and Paris respectively.

The Indian Government has already inaugurated a very vigorous policy. It has interdicted the departure of pilgrims from Bombay and Karachi. In addition to the close inspection of all passengers by rail from these ports, the supervision of all large towns and villages, the isolation of all cases of plague as soon as discovered, together with the segregration of those infected, and the destruction or disinfection of their houses have been undertaken. A measure has, moreover, been passed, with the approval of the Mussulman and Hindoo members of the Legislature, empowering all local governments to take any necessary steps for the suppression of plague without the necessity of reference to the Government of India. The possible invasion of the continent of Europe through the Persian Gulf, the unfitness and danger of Kamaran as a quarantine station, which, instead of being a safeguard, is far more likely, if all we hear of it be true, to act as a depôt for the concentration and diffusion of epidemic disease, are points which will require the attention of the Venice Conference. As regards Europe and the Suez Canal, we may remark that the bulk of the shipping passing through it is British, and if the risk of importing plague bears any relation to the amount and frequency of the communication with India, England should incur a greater risk than any other European country. It will, we presume, be possible to treat the Canal as a branch of the sea and to allow vessels from India to pass through it in quarantine without having any communication with the shore, and in this way to fulfil any international precautionary sanitary requirements. It is quite natural that the British delegates should not regard the question of quarantine and epidemic disease in exactly the same light as their Continental *confrères;* but it is very important that the subject should be regarded from every point of view and that some definite and reasonable line of international action should be agreed upon. Taught by experience, we in England have come to rely upon a combination of measures: precautionary, in the first place, against the introduction and dispersion of

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disease-causes, and the protection of a population or locality, if and when invaded, by being sanitarily prepared for it. The British nation has been slowly but surely learning to lean more confidently upon the latter support, but it is quite a mistake to suppose that it altogether ignores and shuts its eyes to the former. Still, sanitation in its broadest and best sense is of slow growth: it means time and money, and Continental nations, with the enemy at their door, very naturally seek by quarantine and severely restrictive measures to close the door and shut him out. We trust that all the delegates will approach the discussion of the questions to be considered by them in a dispassionate and eminently conciliatory and reasonable spirit. A large number of men well qualified by their eminent position and reputation and by their administrative capacity and judgment will take part in the Venice Conference, and we confidently hope that some practical line of action may be the result of their deliberations.

WITHIN the last quarter of a century the laws relating to public health in Scotland have been, directly or indirectly, subjected to an amount of tinkering almost approaching that of the Factory Acts in England. Not only have there been directly some half-dozen Acts in amendment of the principal Act of 1867, but indirectly there have been at least two Local Government Acts, and a Burgh Police Act which itself took a good many years to gain admission to the Statute-book. In addition, of course, there have been such measures as the Notification Act, the Rivers Pollution Act, and the Housing of the Working Classes Act. It was the sincere desire of many who were interested in public health in Scotland that, when once the insufficiency and inconvenience of all this chaos of enactments had become impressed on successive Governments and when another Bill was in consequence to be brought before Parliament, that Bill should incorporate in itself everything that was useful in the existing measures and should add such new provisions as might be required. This desire has not been satisfied. Yet a great deal has been obtained, and the policy of asking for a silk gown in the hope of getting a sleeve has been justified. The policy, however, will have to be continued during the progress of the measure through Parliament, as there is still much required to make the Bill even fairly satisfactory. Last year, it may be recollected, the Secretary for Scotland began by introducing in the House of Lords an elaborate amending Bill, proposing at the same time to leave the principal Act unrepealed. The confusion threatened by this procedure was so self-evident that, under representations from various quarters and in spite of the eager support of a body of sanitary inspectors who ought to have known better, the amending Bill was quickly withdrawn. It was at once replaced by a Bill to abolish the existing Public Health Acts and to provide a substitute for them. This was described as a Consolidating Bill, and although it did not carry the principle of consolidation so far as it might have done, yet it was a vast improvement on the previous proposals. It passed the House of Lords, but time did not permit of its consideration by the House of Commons. Comparing that Bill as it entered the House of Lords with the Bill as now read for the first time in the House of Commons it is obvious that the two measures are essentially the same. Yet owing to amendments made in the Upper House and other amendments which have been made by the Government before presenting the Bill to the House of Commons there is evident a very considerable improvement in various parts of it.

In particular, the clauses relating to infectious disease have been much simplified. But it is just here that further amendment will be most urgently needed. It is proposed that all powers relating to infectious diseases shall apply only to such diseases as are brought under the Notification Act. The adoption of the Notification Act is to be made compulsory, which, of course, is entirely as it should be. But the Act does not include all infectious diseases, and the great majority of local authorities do not adopt for inclusion measles and whooping-cough. The effect of the clauses if passed in their present form will be that, unless measles is made notifiable in a district, the provisions for inspection of premises, and cleansing and disinfection, and the penalties with regard to exposure of infected persons, letting of infected houses, sending to school of infected children or children living in infected houses, and so forth, will not be applicable. The same remarks apply to all other infectious diseases exclusive of the minimum list contained in the Notification Act. However desirable it may be that Sanitary Boards should add to the diseases to be notified in their districts, this is not the way in which the matter should be dealt with. Two remedies suggest themselves. Clause 42 might be omitted altogether, leaving circumstances to decide which diseases should from time to time be considered infectious, or else a list of infectious diseases might be included in the clause, apart altogether from the Notification Act. At present the term infectious disease is not defined in the Scottish Public Health Acts, and absence of definition would be better than a definition which would so greatly limit the powers of sanitary authorities.

In the nuisance section there is a new provision of some interest. Among nuisances it is proposed that there be included "any refuse or manure contained in uncovered trucks or waggons standing or being at any station or siding or elsewhere on a railway so as to be a nuisance or injurious or dangerous to health." The object here is most praiseworthy, but the word "uncovered" is altogether objectionable. The throwing of a tarpaulin over a waggon-load of stinking offal would be apt to be looked on as equivalent to a special licence to allow the filth to continue for any length of time polluting the atmosphere in the vicinity of the station or siding, and, whereas at present complaints by residents or by local authorities may receive some attention from railway companies, under the Act as proposed the reply of the company might likely be that the Public Health Act was being carefully complied with. No attempt is made in the Bill to deal with dirty railway carriages. It is the duty of Parliament to take some steps to make railway travelling cleanly and reasonably safe against infection, but seeing that railway lines belonging to one company extend through the districts of hundreds of sanitary authorities and that the use of carriages is not limited to any one locality, the question is perhaps too broad to be dealt with by local bodies. Possibly the Local

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Government Board or the Board of Trade might be the proper authority, but there is no doubt that good grounds exist for taking action in the matter.

Throughout the Bill various omissions are noticeable which can easily be rectified, as with regard to nuisances for which two or more persons are jointly responsible, the paving of common courts and passages, the levelling and macadamising of private streets in villages, the provision by local authorities of slaughter-houses in populous rural districts, the smoke-testing of drains, and the formation of port sanitary authorities. The Bill as it stands is a good Bill, but it requires many additions before it can be looked on as complete, and if Parliament desires to be rid for a reasonable period of public health legislation for Scotland it should see that no provision of obvious utility, the value of which has been proved by English or other experience, is left out of the new measure. We fully expect that before it reaches the report stage much will have been done to improve it in Committee.

Annotations.

"Ne quid nimis."

"SOME REMARKS ON PLAGUE."

WHENEVER an occasion arises for the discharge of professional duty or for affording a chance of enlarging our scientific knowledge of disease there is never any lack of courage and enterprise on the part of members of the medical profession—the men are always forthcoming. The epidemic outbreak of bubonic plague in India has not only caused, as might naturally have been expected, members of the medical services in that country to work with zeal and energy in the practical relief and attendance on the sick, but it has given a great impetus to bacteriological and scientific researches into the nature and treatment of that disease. Nor has this zeal been confined to India or England, for the medical profession on the Continent are keenly competing with us for the honour of adding something fresh and helpful to the common store of knowledge, and we are not surprised to learn that several scientific inquirers are proceeding to study plague on the spot. We would call attention to the paper by Dr. J. A. Lowson which appears in this number of THE LANCET on the subject of plague. Dr. Lowson has had the opportunity of seeing and treating that disease during its recent outbreak in China and is now on his way to Bombay, where in addition to the services he will render in the practical work of his profession he will have, we fear, ample opportunities of renewing his acquaintance with the disease and of adding, we trust, to our readers' knowledge of it by supplementing from Indian sources of observation the interesting remarks contained in his present paper in connexion with the Hong-Kong epidemic. Passing over Dr. Lowson's observations in regard to the nomenclature, distribution, and varieties of the disease known as pestis minor and pestis ambulans, we may briefly advert to those points in his paper in which he alludes to the methods by which infection leaves the body and the mode of carriage and spread of it. One certain but infrequent channel is by the discharge from buboes in which the bacilli are, he states, numerous and continue to be present with infecting powers for even some days during its purulent stage. Another vehicle of infection is the fæces, the culture-experiments made by Staff Surgeon Wilm in Hong-Kong having demonstrated the presence of the plague germ in these intestinal discharges; bacilli have also been found in the urine under certain conditions, in the sputum, and in the fur on the tongue. Dr Lowson is doubtful whether the secretion of milk is infective; many children suckled by their plague-stricken mothers were not infected. A similar observation was, it will be remembered, made in regard to cholera. He considers that there is little or no danger of infection from the breath of a patient suffering from plague, and cites a good deal of evidence in support of that view and in illustration of the freedom of attendants on plague-stricken patients from contracting the disease though breathing an atmosphere tainted with the expired air of these patients. Alluding to the curious localising effects and restricted sphere of influence of the infection noticed in the course of his experience at Hong-Kong, he thinks that the term "house infection" might in many cases be still more accurately termed "floor or flat epidemic." Dr. Lowson sums up the mode of infection in plague by saying that it may take place by inoculation, inspiration, or introduction into the stomach; the preponderating method will vary in different epidemics and will depend upon the opportunities presented.

THE MIDWIVES REGISTRATION BILL.

THE Bill for the registration of midwives was introduced in the House of Commons on Tuesday, Feb. 9th, by Mr. Egerton, and on that occasion was formally read a first time. The names appearing on the back of the Bill are those of Mr. de Tatton Egerton, Mr. Schwann, Sir Frederick FitzWygram, Mr. Skewes-Cox, Mr. Bonsor, Mr. Fenwick, Sir James Woodhouse, Mr. Harrison, Mr. John Wilson, Mr. Graham, Mr. Bill, and Mr. Heywood Johnstone. The Bill consists of sixteen clauses. The definition clause says that the term "midwife" shall mean "a woman who undertakes to attend cases of labour in accordance with the regulations to be laid down under this Act." The third clause, after laying down that no woman shall take or use the name of midwife unless she is registered, states that "the certificate of registration under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts in respect of such certificate or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine or surgery, or that she is qualified to grant any medical certificate or any certificate of the cause of death." Further on the Bill proposes to set up a Midwives Board, to make rules for regulating the conditions of admission to the Register and the mode of conducting the qualifying examinations, to appoint examiners, to prepare and publish annually a register of midwives, to frame for approval by the General Medical Council rules for regulating, supervising, and restricting within due limits the practice of midwives, to decide upon the conditions under which a midwife may be suspended from practice, and to perform a number of other functions. In the ninth clause it is proposed that every local sanitary authority throughout England and Wales (the Bill does not extend to Scotland or Ireland) shall appoint its medical officer of health or other registered medical practitioner or practitioners as the local supervising authority over midwives in the sanitary district. Such is the outline of the Bill from which its tenour can be gathered. We shall proceed in ensuing numbers to deal with its provisions in detail.

DR. NANSEN ON THE PREVENTION OF SCURVY.

DR. NANSEN, in his lecture at the Albert Hall on "Some Results of the Norwegian Arctic Expedition," among other highly interesting matters touched upon one of great medical interest. We all know the difficulty that has been experienced, and has always to be encountered, on such expeditions, and frequently in those of a military nature, in

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regard to scurvy, a malady which has hitherto been usually found to occur in Arctic explorations. Dr. Nansen ventured to [declare that it was very easy to avoid that disease by taking proper precautions, and he proceeded to relate his experience:—

"Dr. Torup, Professor of Physiology at the University of Christiania, had come to the conclusion, after examining the subject, that scurvy must arise from poisoning, caused, in particular, by badly preserved meat and fish. He thought that in the decomposition which takes place in the meat from bad preserving—in salt meat, for instance—there was poisonous matter allied to the so-called ptomaines, which, when constantly partaken of, engendered the malady we call scurvy. Particular attention was paid to this at the time of their equipment, and from their experience and the investigations he had the opportunity of making during the journey, he could entirely subscribe to Torup's opinion in this matter. It was to be hoped that in a near future there would be scientific elucidation of this important point; and it was equally to be hoped that certain means for avoiding this hitherto so fateful sickness might be shown."

Whether this supplies a key to the explanation of all the out breaks of scurvy that have occurred it would be premature to declare; but it marks a new departure and is well worthy of further investigation. Meanwhile, we think it may possibly account for some of the outbreaks about which a difference of opinion existed as to whether they were to be entirely explained by the absence of fresh vegetables.

THE NEW POOR-LAW SUPERANNUATION ACT AND MEDICAL FEES.

"YES," remarked an eminent politician to us the other day, "you doctors never look after your interests as a class; your work is so exacting that you have not the time, and thus when it happens that the interests of your class are in question you go to the wall." Medical officers in the Poor-law service are much exercised just now as to whether the extra fees which they receive for midwifery, amputations, vaccinations, &c., can be allowed to count as a basis for their future superannuation allowances as well as their fixed salary. The Act provides that the superannuation allowance to which an officer is entitled shall be based upon the average of his "annual salary and emoluments" during the five years prior to the date when he ceases to hold office, and the question raised is whether these fees form part of the "emoluments" of a medical man's office. We have already referred to this subject,[1] and on grounds already stated we have maintained that where a medical officer is also a vaccination officer the vaccination fees form part of the emoluments of his office, and should therefore be included as a basis for calculation. The Local Government Board, however, has expressed the opinion that as a vaccination officer only holds that office under a contract terminable on either side at a month's notice these fees cannot be included. As the matter now stands, therefore, the only way to get a final decision on the question of the vaccination fees would be to take the matter before one of the High Courts of Justice and get an authoritative interpretation of the Act on this point. Clerks to guardians, who are generally superintendent-registrars of births and deaths, stand in precisely the same position as regards their registration fees, but these gentlemen took good care in the framing of the Act that a special clause (Clause 19) should be inserted to the effect that "for the purposes of this Act superintendent-registrars and registrars of births and deaths are deemed to be in the service of the guardians of the union in which their districts are situated," and therefore the registration fees can be counted for superannuation. This precedent, it seems to us, is a very important one in considering the case of vaccination fees; but it also forms a very apt illustration of the advantage of looking after one's own interests. As regards the other medical fees, such as those for midwifery and major operations, we think there can be but little doubt—less doubt than in the case of vaccination fees—that these must be held to be included among the "emoluments" for purposes of superannuation, for they are "fees applicable to the office" of medical officer, and as yet no doubt has been thrown upon the fact that a district medical officer is an officer of the guardians. We understand, as a matter of fact, that percentages have already been deducted from these fees in the various unions, in view of their forming a basis for superannuation. In reference to the lunacy fees which some district and resident medical officers receive when called upon by the lunacy justices to examine and certify lunatics, these fees cannot well be included within the scope of the Act, because they are paid to the practitioner, not by virtue of his office as a medical officer, but by order of the justices in his capacity as an ordinary medical man. No special clause has been inserted to cover this difficulty as in the case of superintendent-registrars, and nothing short of fresh legislation can alter matters as regards lunacy fees. But in the case of vaccination fees we are of opinion that the grounds in favour of their being included are sufficiently strong to state a case for the interpretation of the Act upon this point in one of the High Courts.

[1] THE LANCET, Nov. 7th and 28th, 1896.

"MEDICAL ORIGINALS."

UNDER this heading a writer in a Russian periodical supplies some interesting details regarding the mode of life of an eccentric member of the medical profession, whose appearance was well known in the streets of St. Petersburg some half a century since. Having in the course of a somewhat lengthened career succeeded in amassing a considerable fortune, the physician in question, whose name is not given, decided on retiring from practice in order to pass the remainder of his days with dignity in the enjoyment of leisure. It happened, however, that his brain, so long accustomed to active exercise, proved unable to withstand the enervating effects of idleness. While the stimulus afforded by his daily ministrations to his sick and suffering townspeople continued in operation his faculties remained unclouded, but no sooner was this withdrawn than at once symptoms of mental deterioration began to show themselves. Being destitute of family ties he lived entirely alone, save for an antiquated crone, who was nominally his cook, although apparently she had but little whereupon to exercise her culinary talents. In addition to avarice the chief form of derangement with which the old gentleman was afflicted was dread of robbery. Formerly conspicuous for his gaiety he now became morose and suspicious to the last degree, fearing to leave his treasure for a moment, and unable either to sleep or to eat. According to the ancient dame he would assuredly have put an end to his misery by hanging if he could only have prevailed on himself to go to the expense of a rope. The means this aged monomaniac adopted to protect his beloved gold from thieves was truly remarkable. Having been medical attendant to the principal gaol he contrived to procure the skeletons of a number of malefactors who had been executed, and these he disposed around his premises in a way that unquestionably was calculated to strike terror into the heart of the boldest of burglars. In the first place, with his own hand he blackened the walls of the various rooms and passages, and having thus prepared the background he next arranged the lugubrious relics in a variety of attitudes all more or less startling. In the vestibule, for instance, he placed by way of a cloak-rack the skeleton of a woman who had cut the throats of her children. In the middle of the adjoining room stood the gigantic and minatory osseous remains of a Grenadier, who

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had suffered the extreme penalty for murder. In lieu of a sideboard the dining-room contained a grim-looking erection fashioned out of human bones, plates and dishes resting on the pelves, and knives, forks, and spoons between the ribs, while the dome of a skull served as a sugar-basin and a child's ossicles as sugar-tongs. The appliances thus forbiddingly stored were, however, more for show than use, since their owner never by any chance entertained a guest and towards the end abstained almost altogether from eating. His death is ascribed to fear and hunger combined. A few moments before he expired he is said to have raised himself up in bed with great difficulty in order to blow out a candle; but whether he was actuated by a desire for economy or dreaded to afford illumination for the long-expected robber it is impossible to determine.

OYSTERS AND TYPHOID FEVER.

ACTING on the instructions of the Sanitary Committee, the medical officer of health of Brighton, Dr. Newsholme, has written to the medical officers of the thirty-three great towns of England and Wales, drawing attention to the danger of the spread of cholera and typhoid fever from sewage-contaminated oysters and other molluscs, and asking whether they would support a petition to the Local Government Board for legislation giving powers to local authorities to prevent the consumption of molluscs so polluted similar to the powers already in force for dealing with milk, or to take proceedings before the magistrate of the district in which the oyster-layings are situated, for the purpose of obtaining an order prohibiting their use until rendered fit for the purpose. Twenty-two answers had been received, nearly all in hearty support of the proposals. A petition on behalf of local authorities generally is to be prepared.

TUBERCULOSIS OF THE LUNGS IN ADVANCED LIFE.

PULMONARY tuberculosis when developed at a fairly advanced age, fifty years and upwards, often runs a very chronic course, and the acute form is but seldom met with at this time of life. In the *Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, Jan. 20th, 1897, is a paper on this subject by Dr. A. M. Luzzatto. The presence of other micro-organisms, in addition to those pathognomonic of tubercle, is known to have a marked influence on the febrile phenomena and destruction of lung tissue, and Dr. Luzzatto's investigations were directed to the isolation of such bacteria. Fifteen cases were chosen, the patients being all over fifty years of age. In four cases scrapings were obtained from pulmonary cavities and the tissue of the lungs, and in eleven cases the sputum was examined, having been washed by Kitasato's method. In each case cover-glass preparations were made, cultivations were made on agar plates, and rabbits or guinea-pigs were inoculated. The following results were obtained. In eight cases colonies of streptococci were obtained on agar plates which always exhibited the same characteristics; the cocci were fairly large, not motile, stained well by Gram's method, and formed long chains, especially in broth cultures. The colonies were small, but often raised considerably above the surface; in only three instances could a broth culture be obtained, and sub-cultures were made with difficulty. The virulence of the fresh broth cultures was tried on two rabbits; in the first animal there was a slight local reaction; in the second no result followed. The streptococci were in two of the cases found to correspond with the staphylococcus pyogenes (aureus, citreus, and albus), and in all the cases with three forms of saprophytes; one was recognised as the micrococcus candicans (Flügge), the second as the bacillus fungoides (Tschistowitsch), and the third as a motile bacillus which could not be recognised as any known form. In the remaining seven cases the above-described forms of saprophytes were found in six and in the other case only the pathogenic bacilli were found. No definite relationship could be discovered either between the presence of the streptococci and the height of the fever or between the former and the existence of cavities and the course of the disease. In those patients over sixty years of age streptococci were never found. With the exception of two cases in which the animals died, in two cases of blood-poisoning (streptococcic infection), the sputum and contents of the cavities when inoculated were not virulent. The tubercle bacilli, however, caused death in from four to six weeks. Dr. Luzzatto concludes, therefore, that although, of course, pulmonary tuberculosis in old people has the same specific origin—namely, the tubercle bacillus—yet mixed infection is not nearly so common as in younger life, it being present in only about half the cases. Further, the micro-organisms which are found show only a slight degree of virulence and are not very tenacious of life; in short, we have to deal with an attenuated infection, and this explains to some extent the long and mild course which pulmonary tuberculosis usually exhibits in advanced life.

A DANGEROUS DELAY.

AT a meeting of the Uckfield (Sussex) rural council last week one of the sanitary inspectors made a statement which, if it be true, reveals an extraordinary condition of affairs. At one of the railway stations in his district, this officer declared, small-pox had broken out in the house of the station-master. Six children suffered from it, and at the time of the inspector's visit the station-master, not having been relieved by the company, could not leave his post. At the time one of the children, in the desquamating stage, was actually running about the platform, and it was only upon the inspector telegraphing to the authorities that the man was relieved. This state of affairs, with passengers through the place daily, was bad enough, but to make matters worse the man was also sub-postmaster! So that by rail and by letter this centre was capable of spreading the disease. It was proposed that the man should be prosecuted, but eventually an amendment to caution him was carried. It seems a case in which, surely, something should be said to the railway management—provided, of course, that the facts are as stated.

SCARBOROUGH'S SHAME.

A SERIES of admirable articles upon sanitary reform have recently been appearing in the *Scarboro' Post* which reveal a state of matters by no means creditable to the surely ironically styled "health committee" of that well-known watering place. From these articles it appears that the death-rate for the three years 1893-95 was as follows: England and Wales, 18·2; Birmingham, 19·9; Hastings, 14·2; Bournemouth, 13·2; Eastbourne, 12·6; Southport, 16·5; and Scarborough, 18·2. Of course part of this mortality is due to deaths of visitors registered in the borough, but the same remark holds good with regard to Eastbourne, Hastings, and especially Bournemouth. One great cause is not far to seek, but is contained in the following simple statement: Scarborough, 8900 houses—6500 privies. Some of these privies are actually *inside* the houses, and although the soil is removed weekly it still has to be carried through the houses. Several cases of this kind are alleged to exist within a few yards of the Town Hall; this being so it might urge the members of the health committee who talk about "sanitary fads" to action if the night soil were carried through the Town Hall when the said committee were sitting. Another crying want is an isolation hospital, the need for

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which is forcibly set forth by the journal we quote from. This is, perhaps, a greater necessity than the abolition of the privy system; but, in our opinion, the two reforms should go hand in hand. "Obsta principiis" is the motto for those who have charge of the health of a community to bear in mind, and in no way can money be better spent than in sanitation. We earnestly hope that the medical officer of health will continue to press these reforms upon the health committee, and that the ratepayers also will do their share in demanding them. It is argued that the high death-rate, the privy system, and other abominations only affect the residents' and not the visitors' quarters; this may be true, but it is a very foolish argument. Firstly, the prosperity of a town depends mainly upon the permanent residents and not upon visitors; secondly, if these same visitors become acquainted with the state of matters revealed by the *Scarboro' Post* it is quite likely that their numbers will diminish to a vanishing point until sanitary improvements have been carried out. Everyone interested in Scarborough—and many are so—owes a debt of gratitude to the editor of the *Scarboro' Post*, and we hope soon to learn that the health committee has awakened to a due sense of its responsibilities.

A VILE TRADE.

MONSIEUR HENRI ROBERT of Paris is a man of filth. He is a disseminator of pornography and his circulars have recently been sent to certain members of the medical profession. We are able and willing to supply his full address so that the police of the gay capital may raid his premises and burn his beastly stock-in-trade, if there is any Act under which the French authorities are empowered to defend public morals to such an extent. We also desire to address a very serious word of warning to our readers. We know that members of the medical profession are not likely to be attracted by the lubricity of any circular. It is ignorance—not knowledge—that is fascinated by the wares of the pornographer. But certain of the advertisements have a semi-scientific appearance, and the medical writer might be tempted to purchase the books for other than lewd reasons. Let him not give way to the temptation. Traffic in these books may not be penal in Paris, but it is penal in England. The man Robert's circulars are posted in England. What is to prevent Robert from communicating to his agents in England the names and addresses of his English clients? On such an event blackmail would follow. The recipient of these circulars should send the letter and contents to the Postmaster-General and ask his Grace the Duke of Norfolk to earn everyone's gratitude by devising some scheme to prevent his Department being made the medium of incentive to vile immorality and even unmentionable crime.

GALVANIC DILATION OF EUSTACHIAN STRICTURES.

AN interesting application of electro-therapeutics in the treatment of aural disease is described by Dr. Arthur Duel in the *New York Medical Journal* of Jan. 16th. It consists in the employment of the negative pole of a galvanic battery for dilating constrictions of the Eustachian tube too tight to allow of ordinary inflation, after the method sometimes adopted in treating urethral stricture. Dr. Duel uses for this purpose fine copper bougies "securely mounted on No. 5 piano wire. These are passed through small insulated pure silver catheters and drawn back until the bulging portion of the bougie fits tightly in the mouth of the catheter." The other end of the wire is attached to a handle which connects it with the negative pole of a battery, the positive pole of which is in contact with the hand of the patient. The bougie is passed as usual along the Eustachian tube till it meets the constriction (as in the urethra there may be more than one of these). A weak current is slowly turned on and after from two to five minutes the bougie passes through the stricture with a slight pressure. It is then slowly withdrawn and the current gradually turned off before the catheter is removed. It is important that the current should be both opened and closed slowly. So far the results of this treatment are said to have been most satisfactory and Dr. Duel expects that the absorptive action thus illustrated will prove effectual not only in clearing the Eustachian passage in obstinate cases of constriction but also in causing resolution of hypertrophic deposits within the tympanum.

MIDWIVES' CORDIALS.

IN the course of an inquest touching the death of an illegitimate new-born infant at Broughton it transpired that the midwife, Mrs. Malcolm, finding the child cross and without sleep, ordered Mrs. Lord, one of the witnesses, to send to her house for a pennyworth of cordial. It was supplied by the servant and was compounded in this wise: a teaspoonful of Turkey rhubarb, a teaspoonful of magnesia, half a pound of loaf sugar, and a pennyworth of essence of linseed. The midwife from whom she had the prescription used to add laudanum, but she did not. The child died the next day after getting the cordial. Dr. Percy Hall, who made the post-mortem examination, said the child seemed to have died from bronchitis. He did not think the cordial contained laudanum. Both the coroner and the jury thought it wrong for midwives to prescribe. So do we. And such practices will have to be stopped.

AN EIGHTEENTH CENTURY PHYSICIAN.

IN the current number of the *Quarterly Review* is an article entitled "Eighteenth Century Reminiscences," founded upon a memoir of the Rev. Joshua Parry published in London in 1872 and also upon an unpublished MS. of his son, Caleb Hillier Parry, M.D. The latter was in many ways a very notable character. Born near Cirencester in 1755, the eldest son of a well-to-do and literary Nonconformist minister, both he and his father were intimate with the Mæcenas of the day—Allen, Lord Bathurst, to whom Pope dedicated his magnificent Epistle No. III. of the Moral Essays on "The Use of Riches." Caleb Parry's father died in 1776, and soon after the son migrated to Bath and became a fashionable physician. The western city was not then, as it became at a later date, given up to proprietary chapels and Christian charity, as exemplified by the refusal of sundry inhabitants to sit in the same room with a Roman Catholic, but was the resort of the leading literary and scientific men of the day—Herschel, Banks, and Jenner, and—distinguished in other fields—Lord Rodney and Lord Howe. Concerning the latter Parry has the following note. He was attending Lord Howe for a sharp attack of gouty pleurisy, with apparently some pneumonia. "I proposed a remedy," he says, "which, although new at that time to others in the treatment of highly inflammatory gout, had long been employed in that malady with the greatest success by myself. This was blood-letting." This was accordingly done and the patient much relieved. Howe thereupon asked if any good would come from repeating the operation, to which Parry replied in the negative, when Howe said, "I had yesterday no doubt that your proposal was right, and the event has shown that it was so. Now, let me give you one piece of advice. Deliberate well before you decide on any conduct; and, when you have decided, go straight on and never turn to the right hand or to the left." Admirable advice for anyone, but specially for a medical man. Parry furnished a number of sound contributions to medical literature; among others he was the first to describe.

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exophthalmic goitre, of which disease he left an account of six cases, but for the outside world he is chiefly memorable as the father of Admiral Parry the Arctic explorer. Judging by the fragments of the MS. given in the article under consideration the possessor of it would confer no small benefit upon the reading public if he were to consent to publish the whole.

SERIOUS POLLUTION OF CHESHIRE STREAMS.

ON the 27th ult., at the Northwich county court, an application was made on behalf of the Northwich rural council for the removal of the suspension of an order requiring the Cheshire Alkali and Salt Co. of Middlewich to abstain from polluting the Rivers Dane and Croco and calling on them to show cause why a penalty of £20 a day allowed under the order should not be enforced. An affidavit stated that on Jan. 6th the two streams were white, apparently from lime refuse, and dead and dying fish were floating on the surface. The company's advocate denied the statements in the affidavit and pressed for time to complete preventive works. The judge said: "You have not filed a counter-affidavit. I saw this thing myself, and it is an intolerable nuisance which ought to be stopped." The advocate then stated that the company had bought ten acres of land and had plans for a reservoir which would cost several thousands of pounds. The judge: "I fail to see that I can do anything but remove the suspension and allow the penalty of £20 a day for every day the offence is committed to be enforced." There may, then, still be some hope that our streams and rivers will in time cease to be mere sewers.

SUBSTITUTES.

IT seems to us that the principal offence which is committed in trade nowadays is that of tendering substitutes, or the real article mixed with a proportion of substitutes, instead of the unsophisticated substance. That being so, the scope of the present Food and Drugs Act might well be simplified in accordance with modern requirements. In fact, we are almost inclined to think that the whole Act and its somewhat intricate clauses could be consolidated down to a very simple enactment. We would suggest, for example, that the seller should be required to supply exactly the article demanded and nothing else. If there should be any difficulty as to what a given term means let the State provide a definition. Thus the seller should be given to understand that when the buyer asks for "pure coffee" it should contain no chicory or other substance that is not coffee, that "butter" must be free from foreign fats, that "milk" must be the normal product of the cow, and Demerara sugar cane sugar not beet crystals, and so on. And we would extend this enactment to articles of clothing and other commodities. If a buyer asks for linen the seller has no right to tender him "linenette" or for flannel "flannelette." Nor should the seller tender anything in the nature of a substitute without informing the buyer to that effect. The fact that two things are of the same chemical composition, but in other respects different, is no justification for substitution, otherwise a vendor would be justified in offering oil of turpentine for oil of lemon, or oil of peppermint for oil of lavender. Yet the chemical composition of these substances is the same. So is that of beet sugar and cane sugar, but this does not justify a grocer calling his beet sugar Demerara or supplying his customer with beet sugar when he asks for cane sugar or Demerara crystals. We have not one word to say, be it food or article of clothing, against substitutes, but to supply a substitute against the knowledge of the purchaser is undoubtedly to commit a fraud, and sellers should be brought to understand this. That was the principle which at any rate, we rejoice to say, was upheld last week when the Islington vestry instituted a prosecution against a grocer for selling beet crystals as Demerara sugar. In giving his decision Mr. Bros said that it had been very strongly urged in this case that prejudice to the purchaser could not be proved, because the article supplied was alleged to be superior to the article asked for. The question for him to consider, as he very rightly pointed out, was not whether the article was superior to the article asked for, but whether it was of the same nature, substance, and quality. Though the article might be of the same nature and quality it clearly was not of the same substance. We welcome this sensible decision and congratulate the Islington vestry on having established a sound principle. We should like to see this principle extended to all other articles of purchase, so that the buyer may get what he asks for and not a substitute. A short Act based on this definition would comprehend all articles of trade, and not be restricted simply to articles of food or clothing. In short, it would be an Act to deal decisively and effectively with one branch at least of commercial immorality.

INFECTIVE MYELITIS.

IN the last number of the *Neurologisches Centralblatt* there is an abstract of a paper on this subject by Babes and Varnali. The writers restrict the term "myelitis" to true inflammatory processes, involving the vessels and connective tissue, excluding sclerotic or degenerative changes, and this, of course, postulates a virus for infective myelitis. From a consideration of other cases and of five which they themselves observed they consider that in such cases inflammation of bloodvessels is a necessary part of the process. Changes in the parenchyma of the spinal cord follow these changes in vessel. Especially do the toxin of the tubercle bacillus and the virus of syphilis cause such vascular changes. Micro-organisms, however, may without any affection of vessels penetrate the nerve cells, or surround them and gives rise to a peri-cellular inflammation in which the bloodvessels participate, as in hydrophobia, or in other cases, such as those of tetanus, the toxin may cause only alterations in the nerve cells. The paper is interesting and suggestive, especially in reference to the examination by cultures, &c., of the cords from cases of especially acute myelitis.

UNDERGROUND CELLARS AS BAKEHOUSES.

THE Factory and Workshops Act of 1895, like all other Acts of Parliament, is drawn so that a coach-and-four can be run through it. The Act provides that no bakehouse underground shall be permitted after January 1st, 1896. Mr. Berry, the medical officer of health for the County Borough of Wigan, finding that a bakehouse which was not in use on Jan. 1st, 1896, and had not been so from May, 1895, was re-opened as a bakehouse on Dec. 2nd, 1896, laid informations against the owner and also the occupier. The case being an important one was defended by Mr Horridge, barrister, of Liverpool, Mr. J. J. Charnock, Town Clerk of Wigan, appearing for the medical officer of health. The case turned upon the question as to whether this was a bakehouse in use on Jan. 1st, 1896, when the Act having reference to underground bakehouses came into force. Mr. Horridge submitted that they were entitled to use this underground bakehouse and said the question which arose was one of law. The Act which came into operation in 1896 did not interfere with existing rights, and although from that date the Legislature would not allow an underground bakehouse, yet the bakehouse in question had been in use from time to time, and on Jan. 1st, 1896, was merely waiting for a tenant. The magistrates who heard the case in Wigan Borough Police-court said that after considering the case they had decided that the cellar in question was used as a bakehouse and that the

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cases would be dismissed. They, however, did not grant costs, as they thought it a proper case to bring forward. It appears, consequently, that once a bakehouse always a bakehouse, if the oven and other baking apparatus be left in and the place has not been used for any other purpose, no matter how long it may have been untenanted. Medical officers of health, therefore, will have difficulty in getting rid of these undesirable bakehouses, unless successful under the Public Health Acts. Evidently the new Factory and Workshops Act will not help them.

HONOURS TO MEDICAL MEN.

AMONG the recipients of honours just conferred by his Highness the Khedive appear the following medical men, whose names were brought prominently to notice during the late cholera epidemic in Egypt—viz, Mr. Harry Crookshank Pasha, Inspector-General of Prisons, and Dr. Rogers Pasha, C.M.G., Director-General of the Sanitary Service, who are both promoted to Grand Officers (Second Class) of the Imperial Order of the Osmanieh, and Dr. Pinching Bey, Sanitary Inspector of Lower Egypt, who becomes a Commander (Third Class) of the Order of the Medjidieh.

CHANGES IN THE BLOOD AFTER THYROIDECTOMY.

DR. POSTOEFF of Kharkoff has made a number of observations on the blood of dogs before and after the removal of the thyroid gland with the object of elucidating the changes which the extirpation of the gland produces in the blood. He divides the theories which have been propounded on this subject into two groups—the one supposing that the thyroid gland in its normal condition secretes some substance which is necessary to the proper working of the nervous system, and the other ascribing to the gland the secretion of some substance which directly destroys certain metabolic products, the accumulation of which in the blood would be fatal. His observations show that the extirpation of the thyroid gland is followed by a diminution in the red corpuscles, the hæmoglobin, and the specific gravity of the blood; an increase in the white corpuscles; a great increase in the fibrin obtained by whipping the blood; a diminution of nitrogen both in the blood and in the serum; and a marked diminution of nitrogen in the fibrin, not only relative, but absolute.

THE WATER-SUPPLY OF RICHMOND.

WE have received from Mr. John Cockram of Richmond (Surrey) a lengthy and detailed statement making serious complaints against one of the sources from which the water-supply of the town is derived. The importance of the issues involved, not only to the permanent residents, but also to the thousands of annual visitors from London, obviously requires that the responsible authorities should make known their reasons for feeling confidence in a source of domestic water-supply which at first sight appears to be not altogether above suspicion. The water distributed to this important town seems to be taken from four distinct quarters. The best is that which is pumped from a well 1446 feet deep, giving access to chalk strata and to Thanet sand; our correspondent assumes 224,000 gallons as a daily average yield therefrom. A further amount of 100,000 gallons is supplied daily by the Southwark and Vauxhall Water Company. The water complained of by our correspondent is estimated at a daily quantity of 200,000 gallons and comes from a shallow well at Petersham. This well "lies 56 ft. from the border of the Thames, in very low ground which is subject to inundation by the Thames. The bottom of the Petersham well is 11 ft. 6 in. from the surface. Richmond main sewer runs under the Thames towing path between the river and Petersham well. Although the land immediately surrounding the well is in its natural state, yet a large area of surface in the neighbourhood of Petersham and Ham—an area from which the well may fairly be supposed to derive some of its supplies—is made up of Richmond town refuse, which during seven years, and to the extent of about 45,000 tons, was deposited there in holes and hollows made in excavating gravel, and then the refuse was neatly covered over with turf. When the Thames overflows then this refuse must pollute the water at Petersham well, and when there is a drought Petersham supplies diminish seriously. On Nov. 17th, 1894, the flood rose 4 ft. above the top of Petersham well." The chief ground of complaint is that the water obtained from this questionable source is, previously to distribution, mixed with the better quality of water obtained from the deep well and from the London water company. If the facts are as alleged further investigation is urgently needed. Water drawn directly from the Thames is said to be used for flushing the sewers and sprinkling the roads.

UNIVERSITY COLLEGE HOSPITAL.

The festival dinner in aid of the funds of this charity was held at the Hôtel Cecil on Feb. 10th, when the Right Hon. the Lord Mayor presided. Among those present were the Lady Mayoress, His Excellency Baron Whettnall (the Belgian Minister), Lord Monkswell, Sir Douglas Galton, Sir John and Lady Hutton, Mr. B. L. Cohen, M.P., and Mrs. Cohen, Mr. H. F. Pollock, M.P., the Mayor and Mayoress of Richmond, Alderman and Mrs. Truscott, Mr. H. Lucas (chairman of the hospital committee), Mr. A. E. Barker, Dr. H. C. Bastian, Dr. Dudley Buxton, Dr. J. Rose Bradford, Dr. Radcliffe Crocker, Mr. R. J. Godlee, Dr. W. R. Gowers, Mr. Christopher Heath, Mr. Victor Horsley, Dr. G. B. Hunt, Mr. Raymond Johnson, Dr. Sydney Martin, Dr. G. Vivian Poore, Dr. Sydney Ringer, Dr. F. T. Roberts, Dr. H. R. Spencer, Sir Henry Thompson, Mr. Tweedy, and Miss Davenport Hill. In asking for funds the Lord Mayor said that some 47,000 persons were treated at University College Hospital in the course of a year, and that unless the hospital was more strongly supported by the benevolent public some of the beds would have to be closed. It is to be hoped that, as the Lord Mayor said, "the English purse is inexhaustible," and that not only University College Hospital, but all our great London medical charities will in this, the sixtieth year of Her Majesty's wonderful reign, experience practical proof of his lordship's dictum. Subscriptions to the amount of £5000 were announced by Mr. N. H. Nixon, the secretary, in the course of the evening.

THE NATURE OF YAWS.

MR. JONATHAN HUTCHINSON[1] states his present position on this much-debated question. It has been abundantly proved that there is disease prevalent in the West Indies, the Fiji Islands, at the Cape, in Ceylon, the East Indies, and many other localities which is specific and much the same in all places. It is propagated by contagion only. Inoculation experiments and observations have proved that a primary sore develops after an incubation period of about four weeks, followed by a general eruption at the end of from two to three months. This eruption is framboesial or raspberry-like in character. It tends to disappear and does not usually leave scars. Next follow sequelæ or tertiary symptoms. There may be bone disease, destruction of the nose, and intractable

[1] Edinburgh Medical Journal, January, 1897.

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forms of skin ulceration resembling lupus. With the primary sore there are enlarged glands as in chancre. Most authorities assert that mercury and iodide of potassium are curative in the several stages, as in syphilis. On these facts there is no room for dispute. The debate centres on the relation to syphilis. Three opinions are possible: (1) that yaws is syphilis modified by race and climate; (2) that it is the parent stock from which European syphilis is derived, but that by long transmission the two have undergone some modification; and (3) that it has no real connexion, but depends on a specific poison of the same class which produces phenomena of a very similar kind. The latter is the opinion of almost all who have observed the disease in its native haunts. Experiment has proved that a patient who has recently had yaws may be inoculated with syphilis, and the same has occurred accidentally. On the other hand, in support of the belief that yaws cannot be anything but syphilis is the fact that it never comes to Europe as such. It seems impossible that a very contagious malady of prolonged duration, to which white persons as well as black are liable, which prevails over such extensive areas with which there is so much commerce, should remain for centuries restricted to its own districts.

THE FLUSHING OF CISTERNS.

WE have received from Mr. H. Carter, C.E., of Victoria-street, Westminster, a circular signed by himself and others calling attention to this subject.

"As a matter of public interest," the letter runs, "we have thought it our duty to call attention to the present action of some of the London water companies in serving notices on owners of houses to take out their three-gallons flushing cisterns and to substitute two-gallons cisterns. Although the water companies' regulations only permit a two gallons flush, the regulation has not been hitherto strictly enforced, at any rate, not in the better class of houses. As experienced sanitarians, we have been in the habit of recommending three-gallons flushing cisterns, being satisfied that a two-gallons flush is not sufficient to clear the closet trap and drain, however perfect their construction, and it is also well-known to us that most of the so-called two-gallons flushing cisterns do not discharge more than a gallon and a half."

We agree with Mr. Carter and his friends that a three-gallon flush is preferable to one of two gallons, but we think that in bringing so serious a charge against those responsible for the supply of fraudulent cisterns he should have given the names of the accused. Altogether, we should like more details, for if ever there was a time when the London water companies would be unlikely to wantonly annoy their customers that time is now.

THE SANITARY STATE OF THE ARMY IN INDIA.

WE have received a communication with reference to our leading article on "The sanitary state of the Army in India" (*vide* THE LANCET of Jan. 30th) in which the writer states that examination of the returns and the avoidance of theories demonstrate—as a mere question of figures—that the operation of the Contagious Diseases Acts had, if any effect, a reverse one to that alleged by us. "Prior to the Cantonments Acts there was," our correspondent writes, "an annual average decrease of 26 per 1000; under them an annual average increase of 14 per 1000; since repeal this increase has been reduced to 2 per 1000, to last published return." With regard to the first part of this statement we would simply say that all comparisons with the European Army in India as it existed before the short service system are, as our correspondent must know, quite valueless and misleading, as the circumstances were altogether different. Our remarks on the subject of venereal disease among the British troops serving in India were based upon figures given in published official reports as to the increased admission-rates for venereal disease. The subject was also referred to in the article from the *Pioneer Mail* extracted in the *Times* of Jan. 22nd last; and, as regards 1895, Lord George Hamilton, in reply to questions in Parliament, stated that the total aggregate admissions to hospital for venereal disease among the British troops in India amounted in that year to 522 per 1000—not 522 separate individual soldiers he went on to explain. Lord George Hamilton added that the facts as to the serious increase of this disease in India are now being inquired into. The Indian press has for some time past been calling attention to the large and increasing amount of this class of disease among the European troops in that country. It raises "the eyebrows of astonishment" to be told that these authorities are all wrong, but our correspondent must settle the matter with the officials of India, on whom we prefer to rely in the meantime for our statistical data. We cannot open our columns to a correspondence on the subject, for which we fail to see any need, as we presume from what has already taken place that the facts will soon be elicited in Parliament. We may, however, in the meanwhile, refer him to the *Pioneer Mail* of Jan. 14th, just to hand, for his edification.

AN AMERICAN SANATORIUM.

DR. T. J. MCGILLICUDDY directs attention in the *New York Medical Journal* of Jan. 16th, to the climatic advantages possessed by the west coast of Florida, and especially by the region of Tampa Bay. The traveller in search of health if he hails, as is usually the case, from a more northern latitude is advised to leave for the south about the middle or end of January and to stay at Tampa Bay till the end of April or the early part of May. During this period he should find the climate of the west coast of Florida mild, genial, dry, and equable, but possessed also of a bracing quality. The cases most likely to derive benefit from the change, we are told, are those of pulmonary and bronchial disease, with the necessary exception of advanced pulmonary tuberculosis. The conditions of domestic life are described as favourable, hotels and boarding-houses affording every comfort and convenience at reasonable rates. Good steamship and railway services exist. A warning is added against the dietary customs prevalent among the ordinary inhabitants of this district, which a brief glance at certain descriptive particulars is enough to justify.

MORE THAN THE MIGHT OF ARMED MEN.

AMID the number and variety of political and other events of a more or less sensational character which rapidly succeed one another we are apt to lose sight of some possessing a significance and interest of their own. They serve, however, to indicate the existence of a spirit which will survive and continue to grow when seemingly greater and more important occurrences are forgotten. Under the heading of "A Noble Knight" there recently appeared in the *Times* an extract from a letter received from India from Captain Leslie Younghusband, Inspecting Officer Imperial Troops, in which a little incident is recorded of the part played by Sir Portab Singh, K.C.S.I., the Regent of the Iodhpur State, Rajputana, and his brother. It appears that a young British officer in Iodhpur had fallen a victim to that disease which claims so many young European lives in India—viz., enteric fever. Sir Portab Singh and his brother personally aided in the last offices rendered to this young officer in helping to put his body into the coffin and carrying it downstairs to the carriage, and subsequently to the grave, as a mark of sympathetic respect to a brother soldier. What may seem, and would have been to one of ourselves, a small thing was, in reality, a large and remarkable one for a high-caste Hindu to perform. Sir Portab Singh is the Maharajah of an important native State, "a man of the highest caste and bluest blood of India, the genealogy of the family going back to before the Christian era." Lieutenant Cadell, the deceased officer, was not an official

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employed at Iodhpur; he was not a personal friend of the Maharajah; he was simply a brother soldier for whom this Maharajah resolved to break his caste. This nation may well be proud of possessing officers who can manage whilst serving in India to engender feelings of this sort in the hearts of the highest native rulers, and grateful to Sir Portab Singh for such an exhibition of loyal feeling to them and to us.

REMOVAL OF SCARLET FEVER CASES IN CABS.

MRS. ELIZABETH WILLIAMS, Brynafon-terrace, Menai Bridge, and her mother, Mrs. Jane Davies, were fined lately by the magistrates of Bangor Police-court for removing their servant who was suffering from scarlet fever to Cyttir. Mr. Langford Jones, Bangor, testified to the facts, and said it was highly dangerous to the public to remove a patient in such a conveyance. Not only so, when the patient arrived at her mother's house no one was at home and she had to be kept waiting on the steps. An attempt to prove that the disease had not declared itself before the patient left her mistress's house failed. No steps up to the time of trial had been taken to disinfect the cab. The sanitary authority, the Ogwen District Council, would have failed in its duty had it not brought such facts to light.

THE ASYLUM WORKERS' ASSOCIATION.

THE Asylum Workers' Association, of which the late Sir Benjamin Ward Richardson was the first president, has among its objects the improvement of the status of asylum nurses and attendants and the provision of a "home of rest and nursing" for those engaged in asylum work. If carried out under proper medical supervision the education of asylum attendants in the special form of nursing required in asylums is an object worthy of support, and we welcome the first number of the *Asylum News* (the official organ of the association), which has been published with the intention of furthering the objects of the association. At the annual meeting of the association, which was held on Monday last, it was stated that the association now numbered upwards of 2000 members. The receipts for the year amounted to £107 2*s*. 6*d*. and the expenditure to £12 5*s*. 6*d*., leaving a balance in hand of £94 17*s*.

AT a recent meeting of the Committee of Graduates of the University of London, Mr. H. H. Cozens-Hardy, Q.C., M.P., the President, in the chair, the following resolution was unanimously adopted:—"That the Committee of Graduates of the University of London in favour of the scheme of Lord Cowper's Commission express the earnest hope that Her Majesty's Government will again introduce a Bill for the creation of a statutory commission for the re-constitution of the University of London and assure the Government that such a measure will have their active support."

THE official announcement of the conferment of a Peerage upon Sir Joseph Lister appears in the *London Gazette* of Feb. 9th as follows:—"Whitehall, February 8, 1897.—The Queen has been pleased to direct letters patent to be passed under the Great Seal of the United Kingdom of Great Britain and Ireland, granting the dignity of a Baron of the said United Kingdom unto Sir Joseph Lister, Bart., President of the Royal Society, and the heirs male of his body lawfully begotten, by the name, style, and title of Baron Lister, of Lyme Regis, in the county of Dorset."

MR. WYNTER BLYTH will lecture at the Sanitary Institute on Monday next, Feb. 15th, at 8 P.M., upon Factory Legislation.

WE are glad to note in the *Times* that at a Convocation of the University of Durham, held on Feb. 9th, it was agreed that the seal of the university should be affixed to a petition to the Queen for a supplementary charter to enlarge the penal power of the university in respect of the annulling of degrees and other matters.

THE Venice Conference having been postponed from Feb. 10th to the 16th, it is expected that Surgeon-General Cleghorn will arrive at Venice in time for the opening of the proceedings.

THE presentation of a testimonial to Sir William Broadbent will take place in the library of the medical school of St. Mary's Hospital on Wednesday, Feb. 17th, at 3 P.M.

HOSPITAL REFORM.

A PUBLIC meeting in connexion with this subject took place on Thursday, the 4th inst., at St. Martin's Town-hall, under the auspices of the Hospital Reform Association, Dr. J. WARD COUSINS in the chair.

In opening the proceedings the Chairman said they had met to consider a very important matter and one which he thought they could fairly say, as a Hospital Reform Association, they had determined to prosecute with wisdom and discretion. It was a subject of congratulation that since the formation of the association other societies and associations had become more active in the direction of hospital reform, particularly the Charity Organisation Society and the British Medical Association. There were, however, one or two distinguished features in the Hospital Reform Association, contrasting it with other kindred associations. In the first place, it was not confined to the metropolis, in addition to which it was open to all comers and not to members of the medical profession only. Another characteristic was that they were going to initiate suggestions and alterations in connexion with the management of the casualty and out-patient departments of hospitals. Those present would agree with him that it was only the really urgent cases of disease that required special skill, care, and observation, and were worthy of being treated in hospitals; whereas people labouring under small ailments and indifferent disorders often received subscribers' tickets, the consequence of which was that the out-patient rooms of hospitals were overcrowded. Referring again to the objects of the Hospital Reform Association, he said they were going to advocate no wage limit as regarded hospital relief. Personally he felt very strongly on this question, and one reason why he thought there should be no wage limit was the fact that the coöperative system was developing marvellously throughout England and respectable working men were enabled by their combinations in such societies to secure skilled attendance and the best medical advice. He thought there ought to be more affiliation, too, between these societies and the hospitals throughout England and Wales, so that in that way a large number of the common ailments of life might be dealt with at the homes of the respectable working classes. Again, more ought to be done to promote affiliation between all classes of medical practitioners.

Letters regretting inability to attend the meeting and wishing success in the pursuit of the objects of the association were then read, which had been received from Dr. J. G. Glover, Sir William Broadbent, Mr. Walter Rivington, and others.

Dr. ISAMBARD OWEN then proposed the following resolution, which, with slight modification, was declared carried:—"That the wholesale, indiscriminate, and hasty relief at present administered by many hospitals in out-patient and casualty departments is demoralising to the community, detrimental to the interest of true charity, unjust to the medical profession, and injurious to medical education, and that in the opinion of this meeting the time has arrived when the attention of governors of hospitals should be seriously given to the matter." He was glad to be in a position to respond to the

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call to propose the resolution, being in some sort a representative of a London hospital in which the evils of indiscriminate medical charity had long been recognised. Touching on the statistics of the question, Dr. Owen then said that in the year 1895 more than 350,000 out-patients had been treated in the great London hospitals, while 455,000 patients had been returned as having been treated as casualties. Allowing for re-duplications in the reckoning of the patients, the conclusion could hardly be resisted that 500,000 persons during that year received out-door relief at the hands of the great London hospitals, and if to that number there were added 500,000 more who received relief at the smaller hospitals and at the special hospitals, a total would be reached which was truly appalling when one considered the proportion of these figures to the total population of London. But it was not only on the ground that indiscriminate relief was demoralising to those classes of the people to whom it was afforded that he recommended to them the resolution proposed; he appealed to them on the ground of the grave injustice to members of the medical profession who practised among the poor or among the comparatively poor. The system of indiscriminate relief to which he referred must be held responsible for a great deal of that lowering of medical remuneration which had become such an unfortunate feature of the condition of the medical profession of the present day.

Dr. FREDERICK SMITH, Dr. JESSOP, and Mr. NELSON HARDY then addressed the meeting in support of the resolution.

The Hon. SIDNEY HOLLAND, chairman of the London Hospital, said he thought it was a little bit unfortunate that the invasion, if he might call it so, should have come from Wales to London just at a time when all were trying to celebrate this great year by having a larger collection for hospitals than usual, and he thought it a still greater pity that a gentleman from Wales should write to the *Times* about the abuse of hospitals and give figures which it did not require an expert to show the fallacy of. He referred to the letter of Mr. T. Garrett Horder in the *Times* of the 2nd inst., in which he (Mr. Horder) had pointed out that the 2600 patients who attended a certain hospital were all cases which should not be treated, whereas he (the speaker) was perfectly certain Mr. Horder had had no means of investigating the position of those people, and he was quite sure that at that same London hospital the abuse which people so blindly talked about hardly existed. He knew he was speaking in the presence of people who were all in favour of their own notions, but all he could say was that he had spent day after day in the out-patient department and had stopped every person almost whom he thought was at all in a position to pay, with the result that he had been pained and surprised and grieved at the absolute misery and destitution of the people who were treated. To write to a paper like the *Times* and give a list of butlers and ladies' maids who had been treated as a sample of the class treated was an abuse of the power of writing to the press. He was the grandson of a medical man, and was the last in the world to wish harm to the profession, and he was also now one of the managers of three hospitals and the chairman of three, and he distinctly said it was not with them that the abuse existed. The difficulty was to get the staff to do anything. One of the previous speakers (Dr. Frederick Smith) had talked about the out-patient department, but he (the speaker) had had the pleasure of meeting with him and had talked with him on various matters connected with it and he had never heard Dr. Smith say a word till then about it at all. If he (the speaker) were asked to increase the staff of the hospital they would all be up in arms against him at once; but if the hospitals were a benefit to the poor let them have bigger staffs and so get more time. If it was a question of pay and the staffs were not paid, put that down to those responsible for it—that was one important part of the association's objects. He did not know that the staff wanted pay—he thought the hospitals had been useful to the staff. He had always believed that hospitals did a great deal of good for patients, but he had yet to learn they had done any harm to medical men. Of course, he knew that East-end practitioners did not get West-end fees, but still the fees often were a very great deal more than the patient could afford to pay. He was quite ready to believe that the out-patients should be charged something. It was said that to do so would take it out of the outside practitioners' pocket, but he (the speaker) thought much more harm was done to the outside practitioner by not charging than by charging. Some of the poor in the East-end had not much faith in the outside practitioner, and some of them were justified in their opinion. As to whether they thought more of the outside practitioner than of the hospital, the proof of the pudding was in the eating, and they preferred to come and wait many hours to have themselves attended to on the cheap. This showed that Dr. Smith was wrong when he said they could pay. In conclusion he would say that it was not right to make the general statements on the subject which had been made and let it go out to the public that there was great abuse of hospitals when they knew how willing people were to stop their subscriptions and to take every possible excuse to stop them. Responsible people like those present should take steps like these with some care and thought and should approach the staffs of hospitals and get those to help who were members of their own profession, and not appeal to the public at meetings held by gentlemen unconnected with London hospitals.

Mr. TIMOTHY HOLMES in the course of his remarks said that speaking from his own experience at St. George's Hospital there were very few people indeed who could afford to pay anything like a reasonable fee. He did not believe that the abuse of the out-patient department would be found to lie chiefly in the direction indicated—viz., that persons came there who were able to pay; but at the same time there might be a certain amount of abuse in that way. What seemed to him the most striking abuse in the out-patient department was that the greater part of the treatment was ill-directed; the affections treated there, and a good deal of the surgical practice, too, was directed to the treatment of diseases which ought not to be treated—as they must be in a hospital—by a short consultation and a bottle of physic. A great deal of work was thus done which produced very little result. There ought to be more time given to the cases and they ought to be different cases.

Other speakers having addressed the meeting the proceedings were brought to a close by a hearty vote of thanks to the chairman.

ARMY MEDICAL DEPARTMENT REPORT FOR THE YEAR 1895.[1]

[SECOND NOTICE.[2]]

THE average strength of warrant officers, non-commissioned officers, and men who served in the United Kingdom in 1895 was 99,795, and in addition the number of men detached from their corps averaged 3911.

1895.	Ratios per 1000 of strength.				Average sick time to each soldier.	Average duration of each case of sickness.
	Admissions.	Deaths.	Invaliding.	Constantly sick.		
					Days.	Days.
England and Wales	718·9	3·95	17·12	43·68	15·94	22·18
Scotland	591·1	3·66	14·21	26·51	9·68	16·37
Ireland	669·9	5·59	15·30	38·13	13·92	20·77
United Kingdom	702·8	4·32	16·57	41·76	15·24	21·69

In comparison with the corresponding ratios of the preceding ten years a decrease is shown in the admission rate of 68·3, in the mortality rate of 0·88, and in the constantly sick rate of 2·19 per 1000. The total loss by death and final discharge from the service on account of medical unfitness was 2167 men, equal to a ratio of 20·89 per 1000 of strength, only fractionally above the rate in the previous year.

[1] Army Medical Department Report for the Year 1895, with Appendix. Vol. xxxvii. London: Printed for Her Majesty's Stationery Office by Harrison and Sons, Printers to Her Majesty. 1896. Price 4s.

[2] The first notice appeared in THE LANCET of Jan. 30th, 1897.

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There were three cases of small-pox recorded during the year; two of the patients bore good marks of vaccination, the disease was of modified type, and ran a favourable course; in the third, who was a recruit and had not been vaccinated in the service, the disease ran a severe and confluent course.

Enteric fever gave rise to 137 admissions and 35 deaths. In Scotland there were 3 admissions and no deaths, in England and Wales 73 admissions and 22 deaths, and in Ireland 61 cases and 13 deaths. Island Bridge Barracks (Dublin) were vacated during the year on account of the number of cases occurring there and the drainage system was disinfected and remodelled, but it is believed that the insanitary surroundings have far more to do with the prevalence of the disease than any defects within barracks.

Taking all forms of venereal diseases together the ratios for the United Kingdom were 173 8 for admissions and for constant inefficiency 15·28 per 1000, being a decrease on preceding years. The Channel Islands gave the highest ratio—230·1 per 1000. The district showing the lowest admission rate was that of Cork.

The influence of age and length of service on the sickness, mortality, and invaliding of soldiers serving in the United Kingdom is set forth in tables. The sequence of the ratios in these respects is very much the same as in previous years.

As regards different arms of the service it appears that the highest admission-rate was 840·1 in the infantry, the next being 739 5 in the Household Cavalry, the lowest in the garrison staff and departments; the highest mortality-rate was in the regimental depôts (5 83), followed by the Royal Engineers (5·53); the lowest was in the infantry (3·81). Invaliding was highest in the Household Cavalry and in the Foot Guards—34 62 and 22·83 per 1000 respectively.

Turning to the recruiting of the army we find that the total number of recruits inspected in 1895 was 55,698, of which number 32,782, or 588·57 per 1000, were found fit for service. England and Wales supply by far the larger number of recruits, followed by Ireland and Scotland. Defective vision, diseases of the heart, loss or decay of many teeth, and defects of the lower extremities are prominent causes of rejection; but the main causes come under deficient chest measurement, height, weight, &c. As regards the state of education of the recruits finally approved, it appears that 63 per 1000 are well educated and 902 per 1000 are able to read and write.

Passing to the health of the troops serving in the Mediterranean there is not much to be said about Gibraltar. The ratios are much the same as they were in 1894; the admission and constantly sick rates are somewhat higher than the average of the preceding ten years, but the death-rate has declined by 1 06 per 1000. It is remarked in connexion with enteric fever that no case was admitted from the South Barracks, where certain sanitary improvements had been effected, which in 1895 (1894?) gave the largest number of admissions. One soldier died from hydrophobia at this station; he was bitten by a dog in October, 1894, and the wound healed after cauterisation; on Jan. 28th, 1895, he felt unwell, and died on the 31st with well-marked symptoms of the disease.

Malta, with an average strength of 8292 (excluding the Royal Malta Artillery), was not so healthy in 1895, although there was less prevalence of enteric fever, as in the previous year or in comparison with the average rates for the previous decennium. The following table shows the sickness and mortality in the command during 1895:—

1875. Average strength.	Ratio per 1000 of strength.				
	Admissions.	Deaths.	Invalids sent home.	Invalids finally discharged	Constantly sick.
8292	771·5	6·87	14·71	8·32	55·17

Fevers of a more or less continued type, together with enteric fever, prevailed, and there was a good deal of venereal disease, 192 cases of which were imported into the station—mostly from India—during the year. There seems, also, to have been a good deal of sickness among the officers, women, and children during the year at this station.

THE PLAGUE IN INDIA.

As regards the plague in India the latest intelligence does not show any abatement or decrease in the extent of prevalence of the epidemic. At Karachi and Poona, on the contrary, the disease is said to be increasing. Still, the total mortality from the plague in India from its commencement to the present time, deplorable as it is, bears no sort of comparison with that recorded of the great epidemics of a few centuries ago. We infer from the official report of the Governor of Bombay that the state of public feeling in that city is somewhat more hopeful. The hospitals are more freely resorted to; and for the week ending Jan. 29th there had been a diminution of deaths from plague and in the number of total deaths from all causes, but it must be added that there has been a very large decrease in the population owing to the exodus which has taken place. There were 245 deaths recorded in Bombay on the 1st of the present month, and an alarming outbreak of plague had taken place in the gaols and the removal of the prisoners was contemplated. In those districts and quarters of the city where the disease had been worst it had either been suppressed or had decreased, while it had been extending to other quarters. Very great activity had been, and is still being, displayed in providing for the segregation of the sick and the removal and accommodation of healthy people who had been exposed to infection and for the disinfection or destruction of infected houses, and the cleansing, disinfection, and sanitary improvement of the city generally. We gather that the drainage of Bombay has long been defective in that there was more water coming into the city than was removed from it, and that there was a great deal of water running to waste and productive of a water-logged state of the soil owing to imperfect house connexions and the ignorance of the natives. The disease prevails mainly among the native and poorer classes of the population occupying the more crowded districts of the city. The attacks among Europeans have been relatively very few. According to the official returns there had been up to Feb. 4th 5098 cases of plague in Bombay and 3841 deaths. The week's mortality from all causes amounted to 1645. The disease still prevails at Poona and Karachi and sporadic cases of plague are stated to have appeared elsewhere. In Poona, where fifty-eight indigenous cases had been reported, forty-eight occurred in one quarter. No cases had occurred in the cantonment. The latest intelligence from Poona and Karachi is, as we have said, to the effect that the disease is increasing, the number of seizures and deaths at the latter place greatly so. Calcutta, so far as is known at present, remains free from plague.

It is reported that many cases, some of which have terminated fatally, have occurred at Goa and Daman, and that the Portuguese authorities have adopted very severe and stringent measures for its suppression. A report is stated to have been received from the Governor of the Transcaspian territory announcing that plague has broken out at Kandahar; and a Russian force, under General Youoff, composed of Cossacks, the troops of the frontier guard, and Bokharan troops, has been instructed to keep a watch along the Amu Daria and establish a military cordon.

We think that in the case of what are termed *bustees* and certain foul and overcrowded native quarters in cities the simplest and best course would be to destroy them, where safe and practicable, by fire instead of pulling down and demolishing them. It also seems desirable, where it can be done, to utilise tents and huts on freely exposed sites outside a city as a means of accommodating any excess of population and lessening any overcrowding. When a case of plague occurs in a house it is better to vacate the house and remove the unattacked occupants, segregating them for a time in places specially set apart for their accommodation. They are not likely to act as fresh foci of contagion to other people provided their surroundings be healthy and the sites clean, open, and exposed. The soil is the great vitaliser of the plague bacillus. There is no more powerful factor for inviting the incidence or increasing the prevalence and virulence of any epidemic disease than overcrowding. All ocean-going vessels leaving Bombay are medically inspected before starting. Pilgrim ships have been prohibited from leaving Bombay since the 1st inst.

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THE BATTLE OF THE CLUBS.

WE are glad to see that South London—or at all events Battersea and Clapham—is organising against the pressure of the Clubs. The "Battersea and Clapham Medical Service" is managed by an executive committee consisting of the medical attendants only, and this committee is to have sole control over the affairs of the Service. There are some very admirable rules, of which the third is perhaps the most important.

3. Persons wishing to become members must make a declaration to the collector that they are unable to pay for medical attendance in the ordinary way and that they are not suffering from any kind of illness, whether acute or chronic. If this declaration is afterwards found by the committee to have been untrue, those whom it concerns will be immediately expelled and all contributions paid will be forfeited.

The payments are 1*s* a quarter for membership and 1*d*. a quarter for management, in addition to 1*d*. for every new card of membership. The highest amount payable for any number of children under twelve belonging to one family is 4*d*., and the highest management fee payable by one family is 4*d*.

Rule 9 may be an excellent one in theory, but we do not see how it is to be carried out in practice.

9. Any member who may have contracted an illness by his or her own fault shall not be entitled to medical attendance for the same on the terms of the service.

The medical attendants, eight in number, are given at the end of the book of rules. We notice that whatever their qualifications they are all styled "Doctor," though some of them have no degree, but doubtless the gentlemen to whom these remarks refer will see the propriety of altering this mistake in the next edition. Meanwhile we wish the new "Service" every success.

A correspondent writes to us enclosing a circular setting forth the benefits, scales of payment, and other matters which obtain under the "Cripplegate Benefit Society for Women." Our correspondent says:—

"I enclose a circular sent to me with an invitation to become a medical officer to the Cripplegate Society for Women at the remuneration of 4*s*. per member per year. I have declined the honour on the grounds that the medical officer agrees to attend those who can only afford to join under Scale I. and those better off who can afford to pay under Scale VI. at the same rate; also that the medical officer has no option but to attend any member, no matter what her social position; and lastly, that our local women's society pays its medical officer 6*s*. per member per year, and with the medical aid clubs in this district meets all the requirements of the working-classes for medical attendance."

We think he is quite right. Under Scale 1 the weekly payments to obtain benefits are, if the applicant is aged eighteen, 4*d*. per week; if thirty-five, 5*d*. Under Scale 6 the weekly payment at eighteen is 1*s*. 5*d*.; at thirty-five, 2*s*. 8*d*. It is manifestly absurd that persons who can afford to pay such vastly larger sums in the one case should only pay the same sum for medical assurance as their poorer sisters; also, there is no doubt that the medical officer should have the option of refusing to attend any member if he thinks her an unfit subject for charity. Friendly societies are excellent institutions in many ways, but when they are constructed so as to grind the faces of struggling medical men, who are in some ways the worst paid class in the community, it is time for the said class to make a stand.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

THE WEBER-PARKES MEDAL.

OUR readers may be interested to see the accompanying illustration of the medal which has been designed to accompany the award of the Triennial Prize founded by Dr. Hermann Weber in memory of his friend, the late Dr. E. A. Parkes. The award is, it may be recalled, to be made for the best essay on subjects connected with the Prevention and Cure of Tuberculosis, and the competition is open to the whole world. The subject for the first competition was announced about twelve months ago.

The obverse bears the portrait of the founder in profile to the left with his name and the date of the foundation, 1894. On the reverse Demeter, Heracles, and Apollo are represented standing before a seated figure of Asklepios. Below is the inscription: "Prevention and Cure of Tuberculosis," and above we read, "Weber-Parkes Prize Medal." The idea of the reverse, which is Dr. Weber's own, is that

FIG. 1.



Obverse.

FIG. 2.



Reverse.

the physician represented by Asklepios, the Greek god of medicine, makes use of light and climate (Apollo, the Greek sun-god), food (Demeter, the earth-goddess), exercise and drainage (Herakles, the god of strength and cleanser of the Augean stables) in the prevention and treatment of tuberculosis. The medal (two inches in diameter) is the work of Mr. Frank Bowcher.

THE ARMY ESTIMATES FOR 1897-98.

MEDICAL officers and others will be turning to the Army Estimates to see if they can discover in its pages any indications of coming changes in the Army Medical Service. The estimates for medical establishments, pay, &c., required for the year ending March 31st, 1898, show little difference, however, from those of last year. The sum estimated in Vote 2 is calculated at £295,800, being an increase of £1000 on that of last year. The total establishment of medical staff of all ranks is 948—one less than in 1896-97. Of this number 335 are on the Indian establishment. The total numbers and pay of the medical staff, British establishment, amount to 613, at the estimated cost for 1897-98 of £233,200, divided between £178,750 for home and £54,450 for colonial service respectively.

The pay of militia medical officers and civilian practitioners for the ensuing official year is estimated at £10,600. The cost of the Medical Staff Corps, nurses, clerks, and other subordinates is taken at £38,000, as against £37,000 in

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1896–97. The cost of medicines, surgical instruments, &c., is calculated at £14,000, the same as last year. The Army Medical School at Netley comes under establishments for military education, and its estimated cost amounts to £7900 for the year 1897–98. The headquarter office establishment consists of a director-general, one surgeon-major-general, one brigade-surgeon-lieutenant-colonel, and two surgeon-majors and surgeon-lieutenant-colonels. In the Secretary of State's covering memorandum on the Army Estimates for 1897–98 it is stated that although the number of recruits raised in 1896 is about 1000 less than in the previous year the difference does not arise from any difficulty in obtaining men, for the authorised establishment has been fully maintained without any alteration of the standard of height. The percentage of special enlistments of men not conforming in every way to the standards now numbers only 18 per cent., as against 19·9 per cent. in 1895 and 25 4 per cent. in 1894, which is satisfactory so far as it goes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6536 births and 4375 deaths were registered during the week ending Feb. 6th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 19·2 to 20·6 per 1000, further rose last week to 20·8. In London the rate was 20·6 per 1000, while it averaged 20·9 in the thirty-two provincial towns. The lowest rates in these towns were 11·3 in Huddersfield, 14·2 in Croydon, 14·6 in Newcastle-upon-Tyne, and 16·3 in Halifax; the highest rates were 24·7 in Oldham, 25·2 in Liverpool, 25·3 in Bolton, and 27·2 in Manchester. The 4375 deaths included 361 which were referred to the principal zymotic diseases, against 386 and 366 in the two preceding weeks; of these, 132 resulted from whooping-cough, 69 from diphtheria, 51 from "fever" (principally enteric), 45 from diarrhœa, 34 from measles, 30 from scarlet fever, and not one from small-pox. No fatal case of any of these diseases was recorded in Norwich or in Huddersfield; in the other towns they caused the lowest death-rates in Newcastle-upon-Tyne, Croydon, and Cardiff, and the highest rates in Hull, Bradford, Blackburn, and Burnley. The greatest mortality from measles occurred in Plymouth and Bradford; from whooping-cough in Bristol, Swansea, Nottingham, Blackburn, Burnley, and Sunderland; and from "fever" in Gateshead, Halifax, Wolverhampton, and Hull. The mortality from scarlet fever showed no marked excess in any of the large towns. The 69 deaths from diphtheria included 46 in London, 5 in West Ham, 5 in Birmingham, and 4 in Leeds. No fatal case of small-pox was registered in any of the thirty-three large towns. There were 21 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 6th inst., against 3, 2, and 9 at the end of the three preceding weeks; 12 new cases were admitted during the week, against 1, 0, and 7 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3153, against 3414, 3354, and 3311 on the three preceding Saturdays; 245 new cases were admitted during the week, against 208, 249, and 254 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had increased from 306 to 355 in the three preceding weeks, further rose to 404 last week, but were 81 below the corrected average. The causes of 65, or 1·5 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Oldham, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·6 and 24·3 per 1000 in the two preceding weeks, rose again to 26·6 during the week ending Feb. 6th, and exceeded by 5·8 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 22 3 in Dundee and 22 6 in Aberdeen, to 37·5 in Perth and 44·0 in Greenock. The 792 deaths in these towns included 96 which were referred to the principal zymotic diseases, against 89 and 81 in the two preceding weeks. Of these 32 resulted from whooping-cough, 28 from measles, 20 from diarrhœa, 7 from scarlet fever, 5 from diphtheria, and 4 from "fever." These 96 deaths were equal to an annual rate of 3·2 per 1000, which was 1·5 above the mean zymotic death-rate during the same period in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 26 and 28 in the two preceding weeks, further rose to 32 last week, of which 23 occurred in Glasgow and 5 in Edinburgh. The deaths referred to measles, which had been 28, 36, and 28 in the three preceding weeks, were again 28 last week, of which 24 were recorded in Glasgow, 2 in Aberdeen, and 2 in Perth. The 7 fatal cases of scarlet fever exceeded by 2 the number in the preceding week, and included 3 in Glasgow. The deaths from diphtheria, which had been 8 and 2 in the two preceding weeks, rose again to 5 last week, of which 4 occurred in Glasgow. The 4 deaths referred to different forms of "fever" were below the number in any recent week. The deaths from diseases of the respiratory organs in these towns, which had been 162 and 190 in the two preceding weeks, further rose to 229 last week, and exceeded by 113 the number in the corresponding week of last year. The causes of 61, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 43·9 and 42·4 per 1000 in the two preceding weeks, rose again to 44·2 during the week ending Feb. 6th. During the past five weeks of the current quarter the death-rate in the city has averaged 40·1 per 1000, the rate during the same period being 19·0 in London and 22·0 in Edinburgh. The 296 deaths registered in Dublin showed an increase of 12 upon the number in the preceding week, and included 52 which were referred to the principal zymotic diseases, against 57 and 46 in the two preceding weeks; of these, 24 resulted from whooping-cough, 18 from measles, 4 from scarlet fever, 3 from diarrhœa, 2 from "fever," and 1 from diphtheria. These 52 deaths were equal to an annual rate of 7·8 per 1000, the zymotic death-rate during the same period being 1·7 in London and 1·6 in Edinburgh. The fatal cases of whooping-cough, which had been 27, 23, and 27 in the three preceding weeks, declined again to 24 last week. The deaths referred to measles, which had been 15 and 7 in the two preceding weeks, rose again to 18 last week. The 4 fatal cases of scarlet fever were within 2 of the number in the preceding week, while the 2 deaths referred to "fever" corresponded with the number recorded in the preceding week. The 296 deaths in Dublin last week included 65 of infants under one year of age and 57 of persons aged upwards of sixty years; the deaths of infants showed a further increase upon recent weekly numbers, while those of elderly persons showed a decline. Five inquest cases and 6 deaths from violence were registered; and 84, or more than a fourth, of the deaths occurred in public institutions. The causes of 19, or more than 6 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING JANUARY, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during January in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 9·0 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 14·6, 12·6, and 10·7 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in St. George Hanover-square, St. James Westminster, Hampstead, Strand, City of London, Lee, and Plumstead; while they showed the largest excess in St. Giles, Clerkenwell, St. Luke, Shoreditch, Bethnal Green, Mile End Old Town, Poplar, and St. Saviour Southwark. Eight cases of small-pox were notified in London during January, against 2, 0, and 3 in the three preceding months. There were 8 cases of small-pox under treatment in the Metropolitan Asylum Hospitals at the

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—JANUARY, 1897.

(*Specially compiled for* THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1897.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.													
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON...	4,463,169	8	1439	971	—	203	6	18	449	1	3095	9·0	1	55	63	239	152	—	36	1	57	604	1·8	6224	18·2	126
West Districts.																										
Paddington	126,161	—	35	27	—	5	—	—	13	—	80	8·3	—	—	5	6	2	—	2	—	—	15	1·6	165	17·1	136
Kensington	171,427	—	44	23	—	8	1	1	15	—	92	7·0	—	—	1	4	2	—	2	1	2	12	0·9	207	15·7	140
Hammersmith	105,959	—	28	26	—	4	1	1	7	—	67	8·2	—	—	3	8	1	—	—	—	2	14	1·7	144	17·7	116
Fulham	120,040	—	50	19	—	6	—	1	9	—	85	9·2	—	—	—	2	3	—	2	—	2	9	1·0	155	16·8	139
Chelsea	96,692	—	24	18	—	4	—	—	10	—	56	7·6	—	1	4	5	5	—	2	—	2	19	2·6	157	21·2	164
St. George Hanover-square	80,330	—	15	10	—	3	—	—	9	—	37	6·0	—	1	1	3	—	—	—	—	1	6	1·0	84	13·6	100
Westminster	53,027	—	16	9	—	—	—	—	4	—	29	7·1	—	4	2	3	—	—	—	—	—	9	2·2	78	19·2	52
St. James Westminster	22,576	—	1	3	—	—	—	—	1	—	5	2·9	—	—	1	—	—	—	—	—	—	1	0·6	23	13·3	103
North Districts.																										
Marylebone	140,808	1	22	15	—	8	—	—	28	—	74	6·8	—	—	—	3	1	—	5	—	—	9	0·8	206	19·1	101
Hampstead	77,275	—	20	8	—	4	—	—	3	—	35	5·9	—	—	—	4	1	—	1	—	—	6	1·0	62	10·5	124
St. Pancras	242,255	—	63	29	—	16	—	2	25	—	135	7·3	—	—	3	13	10	—	2	—	4	32	1·7	352	18·9	136
Islington	341,134	—	120	88	—	8	—	3	22	—	241	9·2	—	8	6	22	11	—	—	—	2	49	1·9	464	17·7	122
Stoke Newington	34,136	—	12	5	—	1	1	—	—	—	19	7·3	—	—	—	3	—	—	—	—	—	3	1·1	27	10·3	71
Hackney	216,698	—	101	50	—	6	—	—	20	—	177	10·6	—	—	4	10	1	—	—	—	5	20	1·2	253	15·2	78
Central Districts.																										
St. Giles	37,240	2	21	1	—	2	—	—	9	—	35	12·1	—	—	—	—	4	—	1	—	—	5	1·7	55	18·9	159
St. Martin-in-the-Fields	12,711	1	4	2	—	—	—	—	3	—	10	10·3	—	—	—	—	1	—	1	—	—	1	1·0	27	27·7	44
Strand	23,552	—	5	3	—	—	—	—	—	—	8	4·4	—	—	—	1	1	—	1	—	—	3	1·7	39	21·6	74
Holborn	30,493	—	11	5	—	1	—	—	4	—	21	9·0	—	1	2	2	1	—	—	—	1	7	3·0	53	22·7	123
Clerkenwell	66,162	—	29	13	—	6	—	—	13	—	61	12·0	—	—	1	4	10	—	—	—	1	16	3·2	126	24·8	179
St. Luke	41,279	—	16	12	—	5	—	—	8	—	41	12·9	—	3	—	1	2	—	—	—	—	6	1·9	78	24·6	114
City of London	30,228	—	2	4	—	3	—	—	1	—	10	4·3	—	—	1	—	—	—	—	—	—	1	0·4	49	21·1	104
East Districts.																										
Shoreditch	121,883	—	49	36	—	7	—	—	24	—	116	12·4	—	—	4	12	5	—	1	—	2	24	2·6	182	19·5	147
Bethnal Green	129,098	—	43	39	—	8	—	—	26	—	116	11·7	—	3	—	8	—	—	1	—	3	15	1·5	217	21·9	147
Whitechapel	79,724	—	24	23	—	2	—	—	9	—	58	9·5	—	1	1	3	—	—	2	—	—	7	1·1	123	20·1	104
St. George-in-the-East	47,917	—	9	15	—	4	—	—	10	—	38	10·3	—	5	1	4	4	—	1	—	3	18	4·9	105	28·6	174
Limehouse	58,508	—	28	15	—	3	—	—	5	—	51	11·4	—	9	—	2	3	—	—	—	—	14	3·1	112	24·9	166
Mile End Old Town	111,883	—	50	37	—	10	—	1	4	—	102	11·9	—	4	—	9	5	—	3	—	1	22	2·6	157	18·3	124
Poplar	169,811	1	65	63	—	4	—	—	19	—	152	11·7	—	7	2	16	6	—	2	—	1	34	2·6	264	20·3	100
South Districts.																										
St. Saviour Southwark	24,919	—	12	6	—	3	—	—	3	—	24	12·6	—	—	—	1	2	—	—	—	1	4	2·1	41	21·4	119
St. George Southwark	60,388	—	16	9	—	3	—	—	3	—	31	6·7	—	1	2	2	4	—	—	—	—	9	1·9	100	21·6	135
Newington	122,191	—	30	23	—	11	—	—	10	—	74	7·9	—	1	2	8	13	—	—	—	—	24	2·6	215	22·9	159
St. Olave Southwark	11,480	—	5	2	—	2	—	—	—	—	9	10·2	—	—	—	—	2	—	—	—	—	2	2·3	20	22·7	171
Bermondsey	85,629	—	32	23	—	5	—	—	4	—	64	9·7	—	1	1	13	4	—	—	—	3	22	3·3	140	21·5	119
Rotherhithe	40,643	—	11	7	—	2	—	—	4	—	24	7·7	—	4	1	6	3	—	—	—	—	14	4·5	71	22·8	149
Lambeth	300,048	—	85	47	—	11	2	6	28	—	179	7·8	—	—	4	14	14	—	3	—	8	43	1·9	414	18·0	132
Battersea	168,877	—	65	42	—	7	—	—	18	—	132	10·2	—	—	2	7	6	—	1	—	1	17	1·3	219	16·9	148
Wandsworth	195,612	—	91	25	—	7	1	1	16	—	141	9·4	—	—	4	7	3	—	—	—	2	16	1·1	200	13·3	111
Camberwell	257,575	1	77	105	—	5	—	1	18	—	207	10·5	—	1	1	16	2	—	3	—	6	29	1·5	322	16·3	130
Greenwich	178,367	1	71	30	—	8	—	1	25	—	136	9·9	1	—	2	5	8	—	—	—	2	18	1·3	248	18·1	111
Lewisham (excluding Penge)	86,152	—	16	23	—	5	—	—	6	—	50	7·6	—	—	2	4	2	—	1	—	—	9	1·4	96	14·5	91
Woolwich...	41,409	—	6	20	—	—	—	—	2	—	28	8·8	—	—	—	6	1	—	—	—	1	8	2·5	62	19·5	174
Lee	39,215	—	8	6	—	1	—	—	5	—	20	6·6	—	—	—	2	1	—	—	—	—	3	1·0	44	14·0	101
Plumstead	61,057	—	7	5	—	2	—	—	6	1	21	4·5	—	—	—	—	8	—	—	—	1	9	1·9	68	14·5	80
Port of London	—	1	—	—	—	3	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 57 cases of membranous croup.

† Including deaths from membranous croup.

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end of January, against 2, 1, and 3 at the end of the three preceding months; 7 new cases were admitted during the month. The prevalence of scarlet fever in London showed a further decline from that recorded in recent months; this disease was proportionally most prevalent in Fulham, Hackney, St. Giles, Clerkenwell, Limehouse, St. Saviour Southwark, and Wandsworth sanitary areas. The Metropolitan Asylum Hospitals contained 3246 scarlet fever patients at the end of January, against 4054, 3932, and 3601 at the end of the three preceding months; the weekly admissions averaged 245, against 398, 356, and 355 in the three preceding months. The prevalence of diphtheria in London showed a further decline from that recorded in the three preceding months; among the various sanitary areas this disease showed the highest proportional prevalence in Islington, St. Luke, Bethnal Green, St. George-in-the-East, Mile End Old Town, Poplar, Woolwich, and Camberwell. There were 897 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of January, against 780, 777, and 829 at the end of the three preceding months; the weekly admissions averaged 105, against 105, 110, and 119 in the three preceding months. The prevalence of enteric fever in London also showed a further decline from that recorded in recent months; this disease was proportionally most prevalent in Clerkenwell, St. Luke, City of London, Mile End Old Town, St. Saviour Southwark, and Newington sanitary areas. Erysipelas showed the highest proportional prevalence in Marylebone, St. Giles, St. Martin-in-the-Fields, Shoreditch, Bethnal Green, and St. George-in-the-East sanitary areas. The eighteen cases of puerperal fever notified during January included 6 in Lambeth, 3 in Islington, and 2 in St. Pancras sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, Jan. 30th, the deaths of 6224 persons belonging to London were registered, equal to an annual rate of 18·2 per 1000, against 16·5, 19·2, and 17·6 in the three preceding months. The lowest death-rates during January in the various sanitary areas were 10·3 in Stoke Newington, 10·5 in Hampstead, 13·3 in St. James Westminster and in Wandsworth, 13·6 in St. George Hanover-square, and 14·0 in Lee; the highest rates were 22·8 in Rotherhithe, 22·9 in Newington, 24·6 in St. Luke, 24·8 in Clerkenwell, 24·9 in Limehouse, 27·7 in St. Martin-in-the-Fields, and 28·6 in St. George-in-the-East. During the four weeks of January 604 deaths were referred to the principal zymotic diseases in London; of these, 239 resulted from diphtheria, 152 from whooping-cough, 63 from scarlet fever, 57 from diarrhœa, 55 from measles, 36 from enteric fever, 1 from an ill-defined form of continued fever, and 1 from small-pox. These 604 deaths were equal to an annual rate of 1·8 per 1000; among the various sanitary areas the lowest death-rates from these diseases were recorded in Kensington, Fulham, St. James Westminster, Marylebone, City of London, and Lee; and the highest rates in Holborn, Clerkenwell, St. George-in-the-East, Limehouse, Bermondsey, and Rotherhithe. One fatal case of small-pox was registered in London during January, the first that has been recorded in the metropolis for more than six months; this case belonged to Greenwich sanitary area. The 55 deaths referred to measles were little more than a fifth of the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Westminster, St. George-in-the-East, Limehouse, and Rotherhithe sanitary areas. The 63 fatal cases of scarlet fever were 21 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Chelsea and Shoreditch. The 239 deaths from diphtheria exceeded by 65 the corrected average number; this disease was proportionally most fatal in Shoreditch, St. George-in-the-East, Mile End Old Town, Poplar, Bermondsey, Rotherhithe, Camberwell, and Woolwich sanitary areas. The 152 fatal cases of whooping-cough were just half the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Chelsea, St. Giles, Clerkenwell, St. George-in-the-East, Newington, and Rotherhithe. The 36 deaths referred to enteric fever were 17 below the corrected average number; there was no marked excess of "fever" mortality last month in any of the sanitary areas. The 57 deaths from diarrhœa corresponded with the corrected average number. In conclusion, it may be stated that the mortality in London during January from these principal zymotic diseases was more than 34 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths under one year of age to births registered, was equal to 126 per 1000 during January, and was below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Westminster, Stoke Newington, Hackney, St. Martin-in-the-Fields, Strand, Lewisham, and Plumstead; and the highest rates in Chelsea, St. Giles, Clerkenwell, St. George-in-the-East, Limehouse, Newington, St. Olave Southwark, and Woolwich.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR F. J. JENCKEN has received orders to embark on the transport *Dunera* on the 24th inst. He has been posted to the Bombay Presidency. Brigade-Surgeon-Lieutenant-Colonel H. Stokes has received orders to embark on the P. and O. s.s. *Aden* on the 20th inst. He proceeds to the Straits Settlements, when he will take over the appointment of Senior Medical Officer. Surgeon-Lieutenant-Colonel Dorman and Surgeon-Captain G. F. Alexander have been appointed to the Cork District for duty. Surgeon-Captain Fayrer embarks for India this month. Surgeon-Major G. F. Gubbin has been posted to the Medical Charge of the Station Hospital, Gravesend. Surgeon-Captain J. Paterson having reported his arrival at Netley on the 5th inst. is posted to the Surgical Division of the Royal Victoria Hospital. Surgeon-Captain Forrest has embarked for Bombay in the transport *Dilwara*. Surgeon-Major D. O'Sullivan has been placed under orders for service in India.

Surgeon-Lieutenant-Colonel R. G. Thomsett to be Brigade-Surgeon-Lieutenant-Colonel, vice J. Macartney, M.D., retired. The under-mentioned Surgeon-Captains to be Surgeon-Majors:—Michael W. Russell, Benjamin F. Zimmermann, Alexander Stables, M.B., Grenville E. Moffet, M.B., Henry A. Haines, M.D., John D. Moir, M.B., Richard Crofts, George E. Hale, D.S.O., Cecil W. Johnson, M.B., Alfred T. I. Lilly, Charles C. Reilly, Allan Perry, Samuel N. Cardozo, Arthur De C. Scanlan, Henry D. James, and William Turner. The under-mentioned Surgeon-Lieutenants to be Surgeon-Captains:—Harold V. Prynne, Alfred E. Master, M.B., George Dansey-Browning, Ernest S. Clark, M.B., Kennet B. Barnett, M.B., Michael Boyle, M.B., Kenneth M. Cameron, M.B., Charles M. Fleury, Arthur C. Fox, Sebert F. St D. Green, and Walter Tibbits, M.B.—*London Gazette*.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Colonel R. H. Carew, A.M.S., is brought on the Administrative Medical Staff of the Army, vice Surgeon-Colonel Ferguson. Brigade-Surgeon-Lieutenant-Colonel Woodforde Finden, Indian Medical Service, Bengal Establishment, retires from the service. Surgeon-Captain Townsend Wharton Shaw, M.B., Indian Medical Service, Bombay Establishment, resigns the service, subject to Her Majesty's approval. Surgeon-Captain G. B. French is appointed to the Civil Medical Charge of the Naini Tal District, in addition to his military duties, during the absence on leave of Surgeon-Major Tate, A.M.S. Brigade-Surgeon-Lieutenant-Colonel G. F. Bevan, 17th Madras Infantry, is appointed to the Medical Charge of the Regiment, and Surgeon-Captain J. O. Pinto, 21st Madras Pioneers, is also appointed to the Medical Charge of the Regiment. The latest news from Bombay, says the *Pioneer Mail*, reports that Surgeon-Major Dimmock is attacked with the plague. The Queen has approved of the promotion of the following officer of the Indian Medical Service:—To be Brigade-Surgeon-Lieutenant-Colonel: Surgeon-Lieutenant-Colonel George Watters, Bombay Establishment.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Staff-Surgeons: Arthur S. Nance to the *Collingwood*, and Charles E. Geoghegan to the *Royal Oak*. Surgeons: Robley H. J. Brown to the Royal Marine Depôt at Walmer; William E. Marshall to the *Duke of Wellington*; Sydney H. Youel to the *Penguin*; and Edward Sutton to the *Theseus*. Surgeon and Agent: Patrick J. Flanagan at Mullaghmore.

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VOLUNTEER CORPS.

Artillery: 1st Dorsetshire (Southern Division) Royal Artillery: David James Lawson, M D., to be Surgeon-Lieutenant. The Highland: Surgeon-Lieutenant J. M. Moir, M.D., to be Surgeon-Captain. *Rifle:* 3rd Volunteer Battalion the Northumberland Fusiliers; William Henry Vickery, gent., to be Surgeon-Lieutenant. 1st Volunteer Battalion the South Staffordshire Regiment: Surgeon-Major H. H. Smith resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement.

HEALTH AND LONG INDIAN SERVICE

In the debate connected with the Army Estimates Mr. Brodrick made a great point of the health of the soldier in relation to long service in India. Lord Roberts and the late General Chesney suggested a system by which the British soldier was to have three years' service for home with a prolongation of nine years for service in India. But Mr. Brodrick appealed to the statistics of the health of the army in India during the closing years of long service. Before the end of the long service 65 per cent. of the army in India were dying. The cost as regards expenditure of life represented the difference between 65 per 1000 and 17 per 1000, the present rate. There were other questions as to efficiency, but Mr. Brodrick mainly relied, in his reply to Sir C. Dilke, upon the results of health statistics as the main factor in his argument against the proposal.

MILITARY WORKS BILL.

The expenditure for barracks and hospitals which has already taken place under the Barrack Loan is very considerable, and that proposed under the Military Works Bill will come to some millions more. That an immense deal has been done towards increasing the accommodation, health, and comfort of the soldier of late years is indisputable. The outlay was sadly wanted, and a good deal still remains to be done in this country and the colonies before our troops are as well housed and provided for as they should be.

ROYAL NAVAL HOSPITAL, STONEHOUSE.

Deputy-Surgeon-General Thomas H. Knott, M.R.C.S., L.S.A., joined the Royal Naval Hospital, Stonehouse, on Jan. 29th for temporary service until the return of Deputy Inspector-General Thomas Browne, M.D., from Bermuda. Deputy Inspector-General Robert May, M.D., M.R.C.S., has ceased duty in the establishment and will proceed on leave prior to his leaving for Bermuda. He has the best wishes of those with whom he has been brought into contact, owing to his uniform kindness to the sick and others.

The s.s. *Spartan* arrived at Southampton on Feb. 4th. She brought twenty-seven invalids for the Royal Victoria Hospital, Netley.

The revised regulations for entry into the Naval Medical Service have just been issued.

ROYAL COMMISSION ON TUBERCULOSIS.—Sittings were held, under the chairmanship of Sir Herbert Maxwell, M P., last week, at 7, Whitehall-place, when the following gentleman were called and gave evidence:—Dr. J. Niven, medical officer of health of Manchester; Mr. W. H. Green, cattle dealer of Higher Broughton, Manchester; Mr. Vacher, medical officer of health for the county of Cheshire; Dr. Newsholme, medical officer of health of Brighton; Dr. Tatham, superintendent of statistics, Registrar-General's Office; Mr. Wiley, of the Butchers' Association, West Hartlepool; and Dr. Gourley, medical officer of health of West Hartlepool. Further sittings of the Commission have been suspended for the present in order to consider the evidence already obtained. It is intended to re-assemble towards the end of March in order to hear the evidence of witnesses appointed by the Royal Agricultural Society, the Scottish Chamber of Agriculture, the British Dairy Farmers' Association, and from the farming interest in Ireland. Further evidence will also be taken from butchers who have complained of the risks to their business arising from want of uniformity of inspection. During the spring certain members of the Commission, including the chairman and secretary, will visit some of the cities on the Continent to inquire into the system adopted for the inspection of meat in public abattoirs, and also into the regulations affecting the sources of the milk and dairy produce exported to this country.

Correspondence.

"Audi alteram partem."

PHIMOSIS: A CAUSE OF HIP DISEASE AND TALIPES.

To the Editors of THE LANCET.

SIRS,—In the long review of my book, "Injuries and Diseases of the Genital and Urinary Organs," with which THE LANCET has been good enough to honour me your reviewer states: "On page 164 we are told that numerous evil results may follow phimosis. Among others we find 'simulated or actual hip disease and talipes.' That simulated hip disease may occur we do not question; but we should like very much to know how it is possible for 'actual hip disease' and 'talipes' to result from a narrowed foreskin. If Mr. Morris has met with cases demonstrating the occurrence of such an astonishing result, surely he should bring them forward, and not leave such a statement unsupported by any proofs."

As this criticism seems to require some reply, will you kindly allow me the opportunity of saying that had I been writing a treatise on "hip disease" or "paralytic and spastic deformities," instead of briefly enumerating the immediate and remote effects of congenital phimosis, I should have amplified, by quoting cases and authorities, the statement which has called forth the rebuke of your reviewer. Since Dr. Lewis A. Sayre, during one of his visits to this country nearly twenty years ago, instructed me that congenital phimosis and adherent prepuce was a cause of reflex contractions and paralysis, resulting in talipes and other deformities, I have been in the habit of looking to the prepuce of children complaining of pain in the joints, or affected with lameness, and feebleness of the spine and lower limbs. I have long been convinced myself, and for years have taught, that the disturbance of the nervous centres, the nervous irritation, from genital excitement due to phimosis, produces sometimes spastic contractions, sometimes weakness and partial paralysis, which result in talipes, bent knees, and flexed and adducted hips, and that recovery from these deformities quickly follows circumcision. I am also persuaded that the clumsy walking, the frequent falls, and the frequent adoption of a position of extreme abduction in squatting and straining at micturition, induce actual synovial disease of the hip-joint.

In spite of the teaching of Dr. Sayre, of the details of cases and the figures of some of his patients published in 1876 in his book on "Orthopædic Surgery and Diseases of the Joints," and notwithstanding Dr. Campbell Black's references made in his book on "Functional Diseases of the Renal, Urinary, and Reproductive Organs" and by some other writers, the *rôle* played by phimosis in the causation of disease would seem to be to-day, as Dr. Sayre twenty years ago said it was then, "almost entirely overlooked by the profession in general." Otherwise it would be hardly likely that my statement would have caused astonishment in one so well informed as a reviewer of works on surgery should be. Twenty years ago phimosis was scarcely recognised, except by the few, as a cause of rupture; and even to-day many seem incredulous that an adherent contracted prepuce can lead to changes in the bladder, ureters, and kidneys as extreme as the most persistent narrow stricture of the urethra or an enlarged prostate.

Will you allow me to add to these few remarks that I trust I am duly humbled by the little lecture your reviewer gives me anent his discovery of my mis-spelling of two words; "ileum" for "ilium," and *vice versâ*, is, however, a slip which occasionally occurs in the writings of many excellent authors. The readiness with which the "e" is mistaken by the type-setter for an "i," and the ease with which the proof-reader's eye misses the error in type when his mind is intent on the construction and meaning, explain this error. In my case it is none the less inexcusable because it does not occur in the text, but in the description of a diagram (and to my sorrow, I must add, in the index of illustrations also). But "phymosis" is etymologically unpardonable, especially as it is said to be so spelt "at least twice." I have looked through the chapter on Congenital Defects and Malformations of the Penis and find that the word phimosis (or phimotic) occurs therein fourteen times, but in each instance it is spelt correctly. I

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have not yet found where the mis-spelling of this word occurs, but I am satisfied it exists, and I thank the reviewer for drawing my attention to such a fault, "which should have had no place" in the book.

I am, Sirs, yours faithfully,

Feb. 9th, 1897. HENRY MORRIS.

"DR. R. R. RENTOUL AND THE MIDWIVES BILL."

To the Editors of THE LANCET.

SIRS,—Dr. Rentoul has been good enough to notice two of the "assertions" contained in my letter published in THE LANCET of Jan. 23rd, a letter which, as he remarks, "gives the lie direct to some of the statements" in his address.

I will take the second first. It is that which deals with Dr. Rentoul's misquotation from Dr. Matthews Duncan's works. He has had the audacity to repeat the misquotation and even to give a reference to the work itself. He says that Dr. Matthews Duncan's tables show that one in fifteen mothers died in their first confinements. The numbers actually given are one in seventy-four.[1] The table Dr. Rentoul appears to have quoted from, it is expressly stated, "will not give results or percentages representing actual values, but only figures for mutual comparison." I pointed this out in my evidence before the Select Committee of the House of Commons, and have done so several times since then. Dr. Rentoul further quotes a single clause from one of the 1890 Bills in order to prove that registration of midwives was no less than an attempt to oblige "the wives of the poorer and wage-paid classes" to "have no one to help them during their confinements but midwives," and although this misconception was pointed out at the time, though the object of the proposed legislation has been repeatedly pointed out since then, and though the whole subject was fully ventilated before the Select Committee, yet Dr. Rentoul still continues to make this preposterous assertion. He neglects to observe that the clause is one which *limits* the practice of a midwife, and he attributes to it an intention to give her for the first time rights which she already possesses. Because of two clumsy expressions in a Bill of 1890 all subsequent measures of the same description are assumed to be directed towards effecting a change in the present condition of affairs, not only exactly the opposite to that which is their expressed intention, but also to give a free hand to midwives in a direction in which they have absolutely no limitation at the present time. In his letter Dr. Rentoul dramatically remarks, "If my case is based on untruths, let it deservedly perish." He has pronounced his own sentence. He leaves me nothing to add to it.—I am, Sirs, yours faithfully,

ROWLAND HUMPHREYS, L.R.C.P. Lond.,
Honorary Secretary, Midwives Bill Committee.

Buckingham-street, Strand, W.C., Feb. 9th, 1897.

THE ARMY MEDICAL DEPARTMENT.

To the Editors of THE LANCET.

SIRS,—Will you allow me to make one or two short observations on the text of Surgeon-Major-General Jameson's admirable address at Netley? The Director-General complains of want of loyalty in the department; but what attempt is there ever made to create and foster that indispensable quality—to promote the content which is essential to solidarity? The Army Medical Staff is made up of isolated units. It is a wheel, so to speak, without a hub, so no wonder it wobbles! The members have no central meeting place (for Netley is so remote), no museum or Valhalla, and, worst of all, no journal, archives, or organ of any description. Surgeon-Major-General Jameson lays stress on the need for professional merit. We cannot do without the "good doctor" to attend the sick and wounded and to prevent disease. Quite so; although it is to be feared that when he invented that catchword Sir Redvers Buller was not thinking of the latter duty, which is far and away the most important. Professional merit is no doubt the chief desideratum; but what is there done to ensure it? Nothing—absolutely nothing. If a medical officer wishes to become professionally meritorious he has to seek for knowledge as best he may from books and records. He is not afforded the smallest assistance or encouragement by the authorities. The medical officers of our army have unrivalled opportunities for acquiring information regarding disease and its prevention in all quarters of the world, but for lack of a little judicious fostering all this valuable material is ultimately wasted. The fruits of experience are allowed to perish ungarnered. Are there not papers published with the annual report, someone may inquire? Yes, the appendix for 1895 contains sixteen papers, of which thirteen emanate from Netley—a mere drop in the ocean, and, I venture to think, by no means the best drop.

In this connexion I may perhaps be allowed to refer to a personal incident. A manual of hygiene for soldiers in India having been called for and a prize of £50 offered for the best no fewer than thirty-four MSS. were sent in. All, without exception, were pronounced unsuitable because they contained theories. One MS., at least, was returned to its author with facetious comments pencilled on the margin. As the Director-General very happily puts it, medical officers share every risk *plus* those belonging to his profession. Man is a combative animal and it is useless to deny that he takes pleasure in fighting; if he does not he is no man. In savage warfare the surgeon is debarred from this pleasure. His eyes are glued to his wounded; he cannot even tell how the day is faring, and ere this has been speared through the back in consequence. To refuse military privileges in full to medical officers is the outcome of sheer intolerance, but unhappily the intolerants are all-powerful at present. It is for the medical men to unite and insist on justice.

Surgeon-Major-General Jameson thinks that officers of the Army Medical Staff, "and particularly the retired ones," are great offenders in the matter of anonymous complaints, but here I trust he is misinformed. One or two individuals with an undue sense of their own merits and importance can perpetrate a great deal of anonymous complaining. Dealing with general matters I should have preferred myself to remain anonymous, but under the circumstances feel bound to sign my name.—I am, Sirs, yours faithfully,

H. R. GREENE,
Brigade-Surgeon-Lieutenant-Colonel (Retired).

St. John's, Woking, Feb. 6th, 1897.

P.S.—I hate appending that ridiculous title, but it is the only one I have a right to. Perhaps Director-General Jameson can see his way to have it changed? If so he will earn my undying gratitude.

HOSPITAL REFORM ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—I venture to think that the following resolution, which was passed at an influential meeting of the medical profession held in London on April 27th, 1871, with the late Sir William Fergusson as chairman, is worth reproducing at the present time:—

"In order to improve the clinical teaching of the out-patient department of the general and special hospitals it is very desirable that the present unrestricted system of gratuitous relief at these institutions be curtailed partly by the selection of cases possessing special clinical interest and partly by the exclusion of those who on social grounds are not entitled to gratuitous medical advice."

This resolution was proposed by Mr. Timothy Holmes, seconded by the late Dr. Anstie, and carried unanimously.

I am, Sirs, yours faithfully,

Cardiff, Feb. 8th, 1897. T. GARRETT HORDER.

*** We have also received from Mr. Garrett Horder the draft of a memorial to be presented to the Royal College of Physicians of London by the Association.—ED. L.

SHOULD EPILEPTICS MARRY?

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Jan 23rd, p. 260, you quote Dr. Gowers' statement on the subject of the advisability of the marriage of an epileptic: "In cases which are the result of accidental lesion of the brain, which are characterised by ..... the absence of hereditary taint, fears of inheritance are groundless." Has Dr. Gowers any special reason for supposing that accidental lesions of the brain are less liable to be transmitted than similar lesions of the eye or the finger, instances of which are so frequently brought under our notice? It is manifest that a hereditary taint must have a beginning, and it is obvious that the taint is stronger at the

[1] Fecundity, Fertility, Sterility, &c., p. 319.

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start than when it has passed through several generations; and the son, grandson, great-grandson, &c., claim one-half, one-quarter, one-eighth, &c., share of the original trouble. In a family with a hereditary taint of syphilis or phthisis the danger to the offspring decreases in proportion to the distance from the accidental lesion or "origo mali." Until we have some very cogent reason for believing that epilepsy obeys a totally different law, or that it is never the result of accidental lesions of the brain, in spite of Dr. Gowers' assertion that it is so, a physician should, in my opinion, hesitate to offer any hope of immunity to the progeny of an "accidental" epileptic. I am, Sirs, yours truly,

Jan. 26th, 1897. WILLIAM G. THISTLE.

THE BARIUM WATER OF LLANGAMMARCH WELLS.

To the Editors of THE LANCET.

SIRS,—The use of barium as a therapeutic agent has been lately brought before the profession and attention has been drawn in the columns of THE LANCET[1] to a mineral spring (containing that metal in solution) at Llangammarch Wells, Breconshire. I need only remind your readers that the above spring contains about six and a half grains of barium chloride per gallon, besides chlorides of sodium, calcium, and magnesium. It is claimed that its action is similar to that of digitalis, acting as a tonic to the cardiac muscle, steadying the pulse and increasing its volume. While staying at Llangammarch during the season of 1896 I had a number of cases of cardiac disease under my care; from these I select the following as a type amongst others recommended by Dr. Lauder Brunton for the course of treatment there.

A young man, aged twenty-four years, was first seen by me on July 31st. His previous history was good; he had never suffered from acute rheumatism, but had had scarlet fever when a child. He was always fond of athletics, had rowed a good deal at school, but not much since. In 1895 he was in Switzerland, and thinks he over-exerted himself in climbing. His present trouble was first noticed in February, 1896, when he complained of attacks of palpitation, which were especially marked after ascending stairs and after smoking cigarettes, of which he consumed a considerable number. He used alcohol in moderation. His digestion had not been good. On examination he was found to be a well-built, muscular man. The chest was of a good shape, the apex beat of the heart was not distinctly felt, but percussion of the area of cardiac dulness showed that it was enlarged slightly to the left. Upon auscultation no murmur was audible, but after exertion (as running round the room) a systolic murmur was heard which was conducted outwards. The pulse was sixty per minute, of good volume, but irregular, there being from four to six intermissions per minute. The urine was normal.

The treatment adopted was as follows. He was directed to keep in the fresh air as much as possible, not to climb hills or exert himself in any way. He was strictly dieted and not allowed tobacco or alcohol. He was ordered a glass of barium water thrice daily and barium baths were administered three or four times a week. The latter varied in duration from five to twenty minutes and in temperature from 95° to 85° F. He was also advised to take walks daily up a sloping path about 300 yards in length, having an incline of 1 in 6, stopping every few yards for a rest. With the exception of an attack of indigestion his progress was very steady. I found that while immersed in the bath the pulse fell from four to six beats per minute, while the volume increased. This effect was maintained for some hours afterwards. The gentle exercise on the sloping path did not increase the frequency of the pulse. He soon entirely ceased to have any palpitation, and on Aug. 24th I found that although there was no change in the area of cardiac dulness, yet the pulse was much more regular, that the intermissions had diminished considerably, and that the murmur was not audible even after running up two flights of stairs. On my return to London in October I found my patient still free from palpitation, and he informed me that he had had considerable bicycle riding without experiencing any ill effect.

The above results appear to me to be due chiefly to the rest enjoined and the administration of the barium water. Llangammarch seems to me to be especially well fitted for the treatment of such cases, for, in addition to possessing the barium springs, it is situated in a pleasant valley, has a most invigorating air, and is quiet and free from excursionists.

I am, Sirs, yours faithfully,

W. BLACK JONES, M.D., B.S. Lond., D.P.H.

Jan. 30th, 1897.

[1] THE LANCET, Nov. 24th, Dec. 1st, 1894, and June 4th, 1896.

PROPOSED TESTIMONIAL TO PROFESSOR CAMPBELL BLACK.

To the Editors of THE LANCET.

SIRS,—As a mark of the esteem in which Professor Campbell Black is held by practitioners who sympathise with his views on professional matters, and who are specially indebted to him for his recent candidature for the Direct Representation for Scotland upon the General Medical Council, the following committee of subscribers has been formed with a view to presenting him with a testimonial, which it is proposed should consist of his portrait in oils:—

	£	s.	d.
J. McKim, M.D. Glasg.	5	0	0
Sir Henry Littlejohn, M.D. Edin.	1	1	0
R. Grieve, F.F.P.S. Glasg.	1	0	0
Joseph Bell, M.D. Edin.	1	1	0
J. Maxwell, M.D. Glasg., Tobermory	0	10	0
Jas. Dunlop, M.D. Edin.	1	1	0
J. Erskine, M.B., Glasg...	2	2	0
R. MacNab, M.D. Glasg., Brighton	1	1	0
D. Moffat, M.B. Glasg. ...	0	10	6
G. R. Fortune, L.R.C.P. Edin.	1	1	0
H. Murray, F.F.P.S. Glasg.	1	1	0
J. F. Sutherland, M.D. Edin....	0	10	0
A. MacDonald, L.R.C.P. Edin....	1	1	0
J. F. Stevenson, L.R.C.P. Edin....	1	1	0
D. Cowie, M.B. Glasg. ...	1	1	0
J. C. Woodburn, M.D. Glasg.	1	1	0
Angus Macphee, M.D. Glasg.	1	1	0
W. MacDonald, L.R.C.P. Edin....	0	10	0
G. Yeaman, M.D. Glasg.	1	1	0
J. Provan, M.D. Glasg. ...	1	1	0
D. R. Cameron, L.D.S. F.P.S. Glasg.	1	1	0

Subscriptions have also been received from a number of lay friends. We beg to bring the proposal under the notice of practitioners who may be inclined to support it and shall be glad to receive and acknowledge subscriptions.

We are, Sirs, yours faithfully,

JAMES ERSKINE, M.B. Glasg., 351, Bath-street; D. MACLACHLAN, Solicitor, 33, Renfield-street, } Honorary Secretaries.

D. FORTUNE, J.P., 84, Wilson-street, } Honorary Treasurer.

Glasgow, Feb. 8th, 1897.

LORD LISTER AND HIS FORMER PUPILS.

To the Editors of THE LANCET.

SIRS,—In common with many others I think the elevation of our old and revered teacher, Sir Joseph Lister, Bart., to the Peerage should not be allowed to pass without his former pupils in London, Edinburgh, and Glasgow having an opportunity of showing their appreciation of the honour by giving him a complimentary banquet. No doubt the committee of the Graduates' Testimonial would act also in this matter, and in the meantime I shall be glad to receive the names of those who favour the idea.

I am, Sirs, yours faithfully,

GEORGE ELDER.

17, Regent-street, Nottingham, Feb. 8th, 1897.

HEALTH OF TROOPS IN INDIA.

To the Editors of THE LANCET.

SIRS,—Would you kindly allow me to state in THE LANCET that a lecture will be given, followed by a discussion, at the United Service Institution, on Friday, Feb. 19th, at 3 P.M., on the Result of Abolishing the Contagious Diseases Acts in India and other foreign stations? We shall be glad if gentlemen will attend, especially those of the medical profession, who may have had experience of India.

I am, Sirs, yours faithfully,

Piccadilly, W., Feb. 10th, 1897. R. L. DASHWOOD.

"THE SANITARY STATE OF THE ARMY IN INDIA."

To the Editors of THE LANCET.

SIRS,—It is to be hoped that your leading article in THE LANCET of Jan. 30th on the spread of syphilis in the Indian

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army may be followed by others couched in even stronger terms. If the facts were fully known there would soon be a loud demand for some measures by which the evil might be diminished. It seems to me that no one has sufficiently considered the effects upon the native population of the spread of syphilitic disease. For many miles, even for several days' journey, round some of the military stations, especially in the hills, syphilis is very prevalent, and its effects upon the population are too evident. The infection is conveyed partly by soldiers, both European and native, visiting the native villages, and partly by men and women who come from the country round with supplies for the bazaars, who contract the disease and carry it to their homes. Medical aid for these unfortunates there is none or next to none. Those who have no regard for the health of soldiers may perhaps feel some pity for the unhappy women and children of far-off villages. Many of the people in England who have helped to bring about this state of things know little of the course of syphilitic disease or how the innocent suffer for the sins of others. I may say that there was no objection amongst the native population to the measures taken to check the disease and to cure those suffering from it: This might easily be verified if an inquiry were made through the district magistrates.

I am, Sirs, your obedient servant,

Feb. 8th, 1897. BRIGADE-SURGEON.

ELECTIONS OF MEDICAL OFFICERS OF HEALTH: A PROTEST.

To the Editors of THE LANCET.

SIRS,—A short time ago I applied for an appointment as medical officer of health for a rural sanitary district. The medical officer who resigned the appointment is county medical officer of health, and holds the office of medical officer of health for nearly all the sanitary districts in the county, his salary amounting to about £1000. The advertisement announcing the vacancy stated that canvassing, directly or indirectly, would be deemed a disqualification. I went over and inquired of the assistant clerk (in the absence of the clerk, with whom I made an appointment) if the appointment would be an open one and if any local man was likely to apply. I was assured that the appointment would be a perfectly open one and that the medical officer of health had ceased to have any connexion with the district. He, in fact, lives as far off the district as I do. On the strength of this information I got my testimonials and application specially printed. After the lapse of a few days I was informed that I was one of two selected candidates and was asked to attend the meeting at which the election would be made. I duly attended and found there were only four members present (not a quorum, I understand) and my opponent. You may imagine my surprise and disgust when I found in my opponent a young man with the D.P.H. Cambridge and B.Sc. of Edinburgh, who had been acting for fifteen months as assistant without salary to the medical officer of health who had just resigned. I expressed my surprise that he should go in for such a small appointment (the salary is £75). He said that he would not have done so but that he could continue to act as he had done hitherto as unpaid assistant to the medical officer of health who had given up this district. No D.P.H. was necessary, and as I had attended during the past year courses of instruction in hygiene, bacteriology, and public health chemistry I imagined I should stand a good chance for such an appointment when I could practise generally at the same time.

Now, I ask you if it is likely that no influence was used in favour of the successful candidate, and if it is a desirable state of things that a medical officer of health should in this way pay his assistant? General practitioners, when they require assistance, pay for it out of their own pockets, and why should medical officers of health with larger incomes than the average general practitioner not do likewise? In this case the county medical officer of health will hold this appointment through his assistant, who will receive the salary in return for his services, as but for the influence of the county medical officer of health the assistant would not have obtained it. Then the assistant will hold it only long enough to enable him to get a larger plum in the public health service when the ratepayers will be required to go to the expense of another advertisement and second-class railway fare for the successful and unsuccessful but selected candidates. This is evidently against the interests of the ratepayer. The vacancy created would, of course, be again filled by another assistant, and so the appointment would become really vested in the appointment of assistant to the county officer.

Then, again, I consider it nothing but an insult to have asked me to attend the meeting at all, and my presence was required only to throw dust in the eyes of the public and give the affair an appearance of impartiality which I am perfectly confident it did not possess. I protested against the appointment by letter and sent an account of the affair, with a copy of my protest, to the Local Government Board, calling their attention to the relationship existing between the ex-medical officer of health and the successful candidate. It is unjust to me because I incurred expense, which I should not have done had I had the least idea that the assistant of the county medical officer of health would be a candidate. It will, if allowed to go on, be a trap for others, as without a doubt it will be advertised sooner or later as vacant, and aspirants for the office will be misled by the terms of the advertisement, which stated that "no canvassing directly or indirectly" would be allowed and that "second-class railway fare will be given to selected candidates." I beg to enclose my card. Trusting you will find space for this letter in your valuable journal, I am, Sirs, yours truly,

Feb. 8th, 1897. JUSTITIA.

"A CONFERENCE OF GENERAL PRACTITIONERS."

To the Editors of THE LANCET.

SIRS,—In reference to Mr. Brocklehurst's letter in THE LANCET of Jan. 30th, wherein he suggests a conference to consider the best means whereby the grievances affecting the profession can be remedied, permit me to say that, contrary to the editorial note appended to his letter, I believe his views would meet with no half-hearted response. We shall very soon have to decisively face this friendly society or club question. Our grievances are now becoming alarmingly widespread. At Beckenham, Penge, and Anerley (S.E.) the request of the medical men for a living wage and a voice on the medical matters affecting the clubs and benefit societies and that vexed question of wage limit have been characterised as dictatorial, inquisitorial, &c.; and we are plainly told that any further requests of the medical men will result in the withdrawal of all the clubs in the district and the establishment of a United Friendly Society's Institution officered by a couple of medical men of ability imported from a distance. We are further informed of a registry in the North of England where M.D.'s Lond. and F.R.C.S.'s are eager for these appointments, to say nothing of scores of Scotch, Irish, and London Licentiates. Now, Sirs, London has been fortunately free from these institutions up to now, but should they start and multiply it will be a matter calling for the serious consideration of the profession, in the metropolis especially, in view of the fact that our profession is so congested. The fact is we are up to now hopelessly beaten on this club question; in spite of the magnificent work accomplished by your Commissioner, and in spite of the prognostications of many of your contemporaries, institutions like Derby, Lincoln, Yarmouth, &c., are flourishing, to the chagrin and mortification of the medical men of those towns. A general conference may suggest the means for combating these difficulties. It is strange, yet true, that whenever professional men for their own interests combine to secure a living wage, thereby propounding some of the trades' union theories, their actions are at once regarded as malignantly aggressive by the very men who are everlastingly howling about these doctrines. The one main cause is that the supply is so much in excess of the demand, and if the deans of our schools would be honest with intending students in telling them that the outlook for a qualified man without means is about on a par with that of a night-soil man or bricklayers' labourer it would tend to minimise the evil. For the truth of this statement *vide* THE LANCET of Jan. 30th, where qualified men are sought for £1 a week.

I am, Sirs, yours obediently,

Feb. 5th, 1897. SCOTUS.

"ARMY EXAMINATIONS."

To the Editors of THE LANCET.

SIRS,—"Physician" concedes every point raised in your annotation, but he is in error in ascribing to THE LANCET

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conclusions which were contained in quoted matter. His admission that "the competition necessitates a special preparation which is carried out under disadvantages at school, but with more success outside by special army instructors" goes to the root of the matter. A system of competition that necessitates the premature withdrawal of boys from school and has consequently led to the evolution of the crammer cannot be defended without decrying public school life. If crammers are good schools must be bad, and *vice versâ*.

I am, Sirs, yours faithfully,

Feb. 6th, 1897. UNCRAMMED.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

VI.—LEEDS *(concluded)*.[1]

The Work-people's Hospital Fund and its Tendency to Convert the Infirmary into a Provident Club.—The Claims and Grievances of the Workmen Subscribers.—The Jews at the Infirmary.—The Leeds Public Dispensary.

FROM the statements recorded in our last issue it will have been seen that the existence of hospital abuse at the Leeds Infirmary cannot be denied. Indeed, it has formed the subject of many discussions among the members of the staff and the managing board. At a special meeting held at the Leeds Infirmary on this particular subject very diverse opinions were expressed; but the great bone of contention, however, was the amount of authority, if any, which the working men subscribers ought to exercise. In this respect the position at Leeds is very remarkable and may bring about a complete revolution in the purpose and organisation of the infirmary. It has already been seen at Liverpool and elsewhere that the mere fact of throwing a few pence into the collection box on Hospital Saturday or Sunday has led many of the poorer classes to infer that they thus acquired a right to go to the hospital. In different towns several general practitioners have expressed their conviction that the Hospital Sunday Fund had done them a great deal of harm. They had lost patients who now went to the hospital because they subscribed to that fund. But at Leeds the position is much more serious because the subscription does not consist of a chance dole given once a year, and perhaps not every year, but of a systematic weekly levy duly deducted from workmen's wages. When the "Leeds Workpeople's Hospital Fund" was first started its originators certainly did not foresee the very serious consequences that might accrue. This fund was established in 1887. At that time £1800 were collected from the working classes by voluntary subscriptions and without any sort of organisation. Now Leeds is divided up into twenty wards or districts. Every year a public meeting is held in each district, and a chairman, an honorary secretary, and a committee are elected to represent the district and to organise the collection of money from the working classes of that district. Each district committee selects two of their own members to form an executive in conjunction with a similar representation from all the other districts. The General Committee, composed of all officials from all districts, meets once a quarter, and consists of some 600 members. Thus a regular parliament of a thoroughly representative character has been established by the working people of Leeds outside the infirmary and yet destined to deal with and, in a measure, to control the infirmary. Nor is it easy to resist such interference, for the workmen will soon be contributing about a third of the total expenditure of the infirmary. It is true that the income for 1895 amounted to £33,798, but this includes exceptional legacies to the amount of £11,279. The total income in 1893, including legacies, was only £22,263. The total expenditure in that year was £24,897, so there was a deficit. In 1895 the expenditure was £24,122. I was not able to ascertain what the total expenditure for 1896 would be, but I was assured that the workpeople's fund would in round numbers reach the figure of £7000. The average annual expenditure for the five years, from 1891 to 1895 inclusive, was £23,179. Thus it will be seen that the workmen's fund exceeds a quarter of that amount, and as it is likely to increase it will probably be soon equal to a third of the total expenditure. But the workmen not only contribute money, they also devote an immense amount of time and labour. To collect £7000 for the most part in penny contributions implies a great deal of organising work, of book-keeping, &c. Even when larger sums are obtained the work is equally onerous. These larger sums are secured by the holding of bazaars, the giving of concerts, or the organisation of working-men's gala festivals. To make such festivals a success generally requires four months' hard preparatory work.

A great number of workmen belong to these organisation committees. They subscribe out of their wages to the hospital fund and, what is more valuable, devote a great portion of their leisure time to the business of organisation. At the same time, many belong to benefit clubs to which they also subscribe. It sometimes happens, however, that they are not satisfied with the treatment they receive from their club medical officer, and they consider that, as they have rendered so much service to the infirmary, they are justified in asking for a consultation for a second opinion from some member of the hospital staff; but, just because they have worked so constantly for the infirmary, these committee men are known, and, therefore, are told that they must go back to their club medical officer and that they are in too good a position to claim advice at the hospital. At the same time, there are thousands of patients admitted who are as well off and better off than themselves, but who are not so well known. This is more particularly the case with regard to the very large number of patients who do not live in Leeds, but who are attracted to Leeds by the very high reputation the infirmary enjoys. The Yorkshire workman is animated by a rugged sense of independence. He does not want charity, but why should he pay, and this in a regular and systematic manner, for an infirmary that refuses to give him help while it freely assists other workmen who pay nothing at all, but who happen to live outside Leeds? The workmen of Leeds pay nearly a third of the cost of the infirmary, and this gives them no right to claim admission when ill, but the workmen outside Leeds, who do not raise a finger to help the institution, are freely admitted. There is no denying the injustice of such a state of affairs. The more a workman does to raise funds to help the infirmary the smaller are his prospects of ever receiving any benefit from the infirmary.

Apart from this grievance, which applies to the well-known members of the committees of the workpeople's fund, there is the question of the general crowd of subscribers who are not personally known, and are therefore not often detected when they apply for medical advice at the infirmary. Many, however, do not conceal the fact. On the contrary, they often boast that they are subscribers, being under the impression that this entitles them to a good reception and to every care. Formerly the infirmary was maintained exclusively by subscriptions given by the rich alone for the benefit of the poor. Now the poor—or, in any case, the comparatively poor—subscribe a very large proportion of the funds needed, and they naturally think that they have a claim on the institution. This must necessarily tend to transform the infirmary into a sort of medical benefit club; yet the proposal to convert the infirmary into a huge provident club would at the present moment be met by the immediate resignation of the entire medical staff. But then the whole of the visiting staff works gratuitously so as to assist the poor. The infirmary might, however, be divided into two. Certain hours of consultation and a portion of the wards might be devoted exclusively to charitable purposes. The remaining time and space could be given to subscribers and for this portion of the work the entire medical staff would be paid. The full payment of the medical staff would very materially change the aspect of the question. A large section of the working class are thoroughly convinced that nowhere can better medical advice be obtained. It is a common saying that "You will be all right if you can get into the infirmary," therefore the working classes are willing to pay liberally and regularly so as to acquire the right of

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *continued*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *continued*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; and (6) Feb. 6th, 1897, Leeds.

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going to the infirmary when they are ill. It is not much use saying that it was never intended to give them any such right. The working men are well organised. They have been taught and educated from their childhood that it was their duty to subscribe regularly to certain institutions. They subscribe to their trade union, to a benefit club, perhaps to a Christmas or goose club, perhaps also to a building society or a football club. In exchange for these subscriptions they receive solid benefits. Now and for some years an ever-increasing number of workmen have been induced to subscribe with equal regularity to the Leeds Infirmary. Certainly it has been stated here and there that in exchange for this last sacrifice they are to receive no advantage whatsoever, but such an assertion is so utterly at variance with the whole trend of their life and experience that naturally it is neither understood nor accepted. Then, again, the working classes have acquired the art and principles of self-government. The man who pays votes and the man who votes governs. Every subscriber to the Workpeople's Hospital Fund votes, and therefore this democracy not only decides how this fund shall be employed, but will not allow any interference on the part of outsiders. When the management of the infirmary has attempted to interfere with the action of the workmen's committees they have been very promptly and sharply told to mind their own business. Here, then, we have a new force consisting of money and of men, which in course of time may entirely revolutionise the hospitals of more than one town. Indeed, this revolution has already commenced—at least, at Leeds. The workmen are not satisfied with the management of the convalescent home attached to the Leeds Infirmary. Consequently the executive of the Leeds Workpeople's Hospital Fund adopted at a recent meeting the following resolutions:—

"That some building suitable for a convalescent home be rented on a lease of three or five years (with option of purchase) capable of accommodating from twenty-five to thirty patients. That preference be given to a building in a salubrious district some miles distant from Leeds and possessing adjoining land. That the rent and cost of furnishing and maintaining the home be provided out of the Workpeople's Fund. That such cost be deducted from the fund before any division is made for the medical charities. That applications for admission to the home be confined to workpeople who subscribe to the fund. That all applications for admission to the home be made to the ward president or secretary, who shall bring the same (with full information) before the committee appointed to deal with such applications. That the period of residence for each patient be limited to two weeks—unless the patient is in such a state of health that removal would be injurious. That the cost of conveyance of patients from and to Leeds be defrayed by the committee, when satisfactory evidence is produced as to inability to pay on the part of the patients. That a salaried medical officer be appointed to the home."

In the face of such a resolution who shall say but that what has actually happened with regard to the convalescent home may not also occur with regard to some wards or sections of the infirmary? It may be said that this would never be sanctioned at the infirmary; but can the managers of the infirmary prevent the construction of some other hospital? Leeds is an exceptionally favoured position, because the infirmary is free from the competition of rival hospitals. But this cannot continue for long. The infirmary, it has already been stated, has grown and grown till now it has reached the furthermost limits of possible extension. On the other hand, the population of the town is for ever increasing. The necessity of more accommodation, which will soon arise, may be met by the workmen withdrawing their subscriptions from the infirmary and utilising them to maintain a hospital of their own. According to the last printed report the total average cost of in-patients at the infirmary was £1 1*s* 8¼*d*. per week, and the cost of out-patients 1*s* 3¾*d*. In the face of these figures the workmen subscribers justly maintain that they do not receive from the infirmary anything like an equivalent for what they give to the infirmary. Nor can they agree to the theory that what they subscribe is a charitable gift for which they must expect no return. Such a theory might be accepted even by the working men subscribers if there existed no abuse at the infirmary. But it is notorious, obvious, and undeniable that workmen who do not subscribe at all, yet who are as well off as, and sometimes better off than, those who do subscribe, are readily admitted into the infirmary. This, as already explained, is more particularly the case with regard to workmen who live outside Leeds. Workmen might be willing to subscribe to help those poorer than themselves, but why should they give their money for the medical treatment of those who are as well off as, and better off than, themselves? While such abuses continue the workmen cannot look upon the infirmary as a pure charity. If the hospital authorities choose to spend the money they receive from the middle and upper classes on workpeople who could, but do not, subscribe, surely they should spend the money they receive from workmen on such workmen who are inspired by a higher sense of duty and therefore contribute, and contribute largely, towards the expenses of the infirmary. Thus the authorities are face to face with this dilemma. Abuse must be absolutely prevented and no one received at the infirmary except the extreme poor, or else workmen subscribing to the Hospital Fund must be acknowledged as having purchased by their subscription a right of entry to the infirmary.

Of course, the difficulty is met for the moment by a sort of compromise. It is denied that the workmen subscribers to the workpeople's hospital fund have acquired the right to be treated at the infirmary; but, in practice, they are very largely admitted to such treatment. It is not, however, to be expected that such a makeshift arrangement will last indefinitely. The workmen will ultimately rebel against such a loose proceeding. They will stand on their dignity and demand admittance to the hospital as a right, or else that the workmen who do not subscribe to the hospital fund must likewise be excluded. It is impossible to expect that subscribers will long consent to have no better standing than men of their own class who do not subscribe.

At present when a patient arrives at the infirmary he has first of all to see a clerk, who takes his name and address. If the clerk finds that the applicant is living in a house where the rent is likely to be 5*s*. or 6*s*. or more per week he asks for further information, inquires where he is working and what wages he earns. Then, if he is not satisfied, the applicant is referred to the head clerk. In the majority of cases it will be found that these comparatively well-to-do applicants have already run up a big "doctor's bill," which they are endeavouring to pay off by weekly instalments, and in such cases they are admitted to the infirmary. Others belong to a benefit club; but as there are clubs where the payment is as low as 2*s*. and 2*s*. 6*d*. a year the medical attendance obtained for this sum is of a very inferior character. Others may be in receipt of good wages but have very large families. In all such cases they may even obtain gratuitously from the infirmary certificates that enable them to claim sick allowance from their clubs. It is difficult to send an applicant back to his club medical officer when it is found that he is also a regular subscriber to the infirmary. Others frankly admit that they could pay for a private medical man, but have greater faith in the infirmary medical officers, and therefore work hard for the workpeople's hospital fund and themselves subscribe regularly, and trust that this will entitle them when ill to receive advice from the infirmary. The head clerk admitted to me that it was very difficult indeed to send away such persons. Even the poor Jews from the sweating dens that abound in Leeds are liberally subscribing to the infirmary. Much has been done to respect their religious principles. Thus no necropsies are allowed on the bodies of Jews unless there is an absolute necessity, and then all the parts are very carefully collected for burial. The Jews are also allowed to bring their Kosher food. The Jewish community offered to provide at their own expense a Jewish cook for the infirmary, but to prevent this complication they are now allowed to provide their own food from the outside. They have proved themselves to be very grateful people and express their satisfaction in a most feeling manner.

About three years ago the Charity Organisation Society was asked to depute one of its members to investigate cases of abuse. A certain number of applicants were then visited in their own homes. Very few cases of abuse were found, and those who seemed fairly well situated were members of the artisan class who subscribed to the workpeople's hospital fund. This system of inquiry was only maintained for three months and many persons who abuse the charity kept away during that time. Even when cases are investigated there is generally a divergence of opinion on the board of management as to what constitutes an abuse. One section maintains that some of the cases do constitute an abuse; the other section that there is no abuse, or that the abuse is not sufficiently flagrant to warrant any interference. But how can the board agree as to what is an abuse or not when one section believes that workmen subscribers have no rights, another section that they have every right, and a third that they do not get their money's worth? The only really strict surveillance exercised is with regard to admissions to the

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convalescent home. For the last fifteen or sixteen years all such cases have been referred to the Charity Organisation Society and a strict investigation has been made. As a result we have seen that the workmen are going to establish a convalescent home of their own.

There is one important medical charity at Leeds against which I heard no complaints. This is the Public Dispensary in New Briggate. During the twelve months commencing on July 1st, 1895, and ending June 30th, 1896, a total of 31,368 patients were attended there. The secretary, Mr. Teale, explained that when first appointed he understood his principal duty was to prevent abuse. The patients are not required to bring any recommendation. The secretary carefully questions each applicant, taking down his or her name, age, address, occupation, and wages. The address more especially is a good indication as to the patient's means. There is a rule according to which the secretary must visit their own homes at least five out of every 100 applicants. Nevertheless, he now rarely finds cases of abuse, nor has it as yet been necessary to call upon employers to check the statements made as to the wages received. It is so well known that these inquiries are made that none but the poor venture to attend. It is very rare to find an applicant paying more than 5*s*. a week for rent. Mr. Teale did, however, last November ascertain that a patient paid £19 a year rent, but then he had three lodgers. Another case was that of a man with one child who earned £1 per week, but lived with his mother, who kept a public-house. Some applicants at once declare that they can afford to pay and only attended because they did not know what medical man they should consult. Others attend who are members of clubs and say that the club medical man has done them no good. Another case of abuse recently detected and stopped was that of a boy whose father employed eight workmen. When Mr. Teale entered upon his duties some three years ago he had to stop many more applicants. Thus during the first six months he discovered sixty-seven cases of abuse, but during the last six months he has only detected eighteen cases of abuse.

The great question at Leeds, then, is whether the infirmary could and should be managed on somewhat similar lines to the public dispensary. The opinion is growing fast that the infirmary is becoming less and less a charity. The Board accept the money they receive as charitable gifts and do not admit that it confers any right on the donor. The sole claim to the infirmary should be poverty. That is the creed; but in practice this theory is not observed. The management and the medical staff have tolerated so many abuses that people are beginning to laugh at this theory, and the workmen dominate more and more public opinion. The position is certainly most embarrassing, peculiar, and pregnant with the potentialities of great changes. It is a striking example of the difficulties that arise from the toleration of hospital abuse.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Royal Infirmary.

THE annual meeting of the trustees of the Liverpool Royal Infirmary was held on Jan. 30th, under the presidency of Mr. William Rathbone. The treasurer's report, which was an encouraging one, showed that the financial position had improved. Some considerable legacies and donations came in during 1896, but were almost all for endowment. At the present low rate of interest for trust securities they add comparatively little to the current income of the charity. The maintenance fund, however, has not been drawn upon during the year, which is thereby so much strengthened for the future. Altogether the infirmary had dealt with £29,250; the ordinary income, including the Hospital Sunday and Saturday contributions, being £10,629, and the expenditure £13,659. The sum of £6500 had been invested, of which £5000 had been received from Mr. Tate, whilst £3632 had been received from land sold to University College. Much to the regret of all connected with the Infirmary, Dr. Alexander Davidson has resigned the office of honorary physician which he has held for twenty years; and likewise Mr. Hamilton B. Gilmour has resigned the chairmanship, after nineteen years' occupancy of the post, which he filled with much dignity. Both gentlemen will retain their connexion with the Infirmary, inasmuch as Dr. Davidson was elected an honorary consulting physician, and Mr. H. B. Gilmour is to be the President for the ensuing year. For the vacancy caused by the retirement of Dr. Alexander Davidson the candidates, as far as is at present known, are Dr. T. R. Bradshaw, the senior assistant physician; Dr. J. Hill Abram, the junior assistant physician; and Dr. James Barr, physician to the Northern Hospital. The appointment is in the hands of an electoral committee consisting of about ninety-five members.

Liverpool Infirmary for Children.

The forty-fifth annual report just issued gives the number of in-patients treated during the year 1896 as 1076 and the number of out-patients as 13,832, these figures showing decreases of 89 and 324 respectively as compared with those of the previous year. The out-patient department had again been very busy and had heavily taxed the energies of the staff. Special attention had been given by the honorary medical officers to eliminate trivial and other improper cases, and, but for this precaution, the figures would undoubtedly have been larger. The funds of the institution, which had reached a low ebb, were fortunately greatly assisted by donations of £200 in memory of the late Mr. George Holt from Mrs. and Miss Holt, of £108 from Lord Derby, and £50 from the R. P. Houston Fund, raising the total income to within £30 of the expenditure, so that the balance due to the treasurer was now reduced by the sum of £26 12*s*. All the legacies—£570—had been spent. Mr. James Lister sent a donation of £50 in view of the out-patients' requirements, and within a few days of the close of the year Mr. J. Marke Wood generously contributed the sum of £1000 without conditions. The amount apportioned by the Hospital Sunday and Saturday Fund was £660. Mr. John Grant Morris re-furnished one ward with eighteen cots. This is one of the charities which was severely criticised by THE LANCET Special Commissioner in his recent investigations in Liverpool on "Hospital Abuse." It is quite true that young general practitioners bitterly assert that patients are constantly taken by their parents to this hospital for "special advice" and that the said parents used to and could still afford to pay moderate fees. It is only just to say that the fault does not rest with the medical staff, who are all anxious to prevent abuse at the hospital; yet the fact remains that the Children's Infirmary is not a popular institution with the young practitioners of Liverpool.

Bequests to Liverpool Charities.

Under the will of the late Mrs. Elizabeth Buckton of Walton the Liverpool Stanley Hospital, the Ladies' Charity and Lying-in Hospital, the Liverpool Infirmary for Children, and the training ship *Indefatigable* will each benefit to the extent of £50, and the Liverpool Society for the Prevention of Cruelty to Children to the extent of £20.

The Lunacy Fee Dispute in the Prescot Union.

Dr. Hall of Prescot, in declining to accept the reduced fee for certifying pauper lunatics for removal to asylums, carried by a small majority by the board of guardians, deserved the sympathy and support of his brother practitioners, which, it is gratifying to find, has been accorded to him. The clerk reported to the board that since the last meeting a lunatic had been removed to the county asylum at Rainhill, and Mr. James Mercer, the magistrate who signed the order, had appended a note stating that he authorised the payment of the usual fee of one guinea, his intention being to avoid any possible delay that might arise in consequence of the demand by the medical men as shown in the letters that were laid before the meeting. Mr. Mercer also stated that he had done this under protest, and trusted that the guardians would take the whole question to the Local Government Board. It is not easily seen how the Local Government Board or the Commissioners in Lunacy can assist the board of guardians in this matter; it is not in the power of those two bodies to compel Dr. Hall or any other medical man to accept half a guinea for this work. They have agreed among themselves not to accept the minor fee, so there is nothing left to the guardians but to pay the guinea fee. The chairman was only making use of superfluous language in saying that "a grave responsibility would rest on Dr. Hall if anything serious happened in the house through his refusal to sign the certificate for a lunatic to be placed under proper control unless he were paid the guinea fee." Dr. Hall is the

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best judge of the value of his own services and was quite within his rights in declining to sign the certificate, irrespectively of the urgency of the case, unless he received the fee which he and his medical brethren considered to be the recognised one; and any responsibility attaching to delay in dealing with the patient lay with those who had thought fit to reduce the fee without consideration of the possibility of its rejection by the local medical men. Dr. Hall is entitled to the respect and the thanks of the profession for his attitude under embarrassing circumstances, thanks which are equally due to his brethren for their kindly help.

Insanitary Dwellings.

The fourteenth "presentment" of the Public Health Department was issued last month and included 890 houses. According to the report furnished by Dr. Hope, the medical officer of health, they consist usually of three rooms placed one above another and connected by stairs without any intermediate landing, so that practically the same atmosphere pervades each of the three rooms. The houses, moreover, are back-to-back and side-by-side with others of similar structure, consequently there cannot be either back windows or side windows or through ventilation, neither is there a water-closet provided for each house nor a direct water-supply. The houses are arranged in courts, the entrances to which are narrowed or even converted into tunnels, by the contiguous street houses. The water-supply is by standpipes in the courts and the receptacles for ashes or other refuse are also placed in the courts for the common use of the inhabitants. The water-closets, being outside the dwellings at exposed places in the courts, are difficult of access by night or in bad weather and in times of sickness, from which it results that the people either retain excrement in vessels in the rooms or deposit it anywhere in the court. In some instances the brickwork of the premises is still good, but, on the whole, the property is in a general state of dilapidation and ruin. Some of the courts lead off streets forty feet wide, such as Bispham-street, but this does not lessen the insanitary condition of the court. During the year 1895 no less than 779 notices were issued from the sanitary department to the owners of the property in question to cause the abatement of nuisances such as choked and defective drains, dangerous roofs, and such like. In addition to these notices ninety-eight others were sent during the past twelve months under the Public Health Act to remedy nuisances arising from filth alone. The average death-rate for the whole of the "presented" property during the three years ending 1895 was 42 per 1000, varying in different groups from 30·3 in the Gore-street group up to 79·6 in the Paul-street group. The death-rate for the whole city during the same period was 25·3, and the average for the dwellings in Victoria-square was 22 per 1000. The total population displaced by the demolition of the houses reported upon will be 3272; there is no reason to fear that over-crowding will be caused in other parts of the district, as there are at present 1495 empty houses within a radius of a quarter of a mile to be let at rentals varying from 2*s.* 3*d.* to 6*s.* per week.

WESTERN COUNTIES NOTES

(FROM OUR OWN CORRESPONDENT.)

Precautions against the Bubonic Plague.

AT the meeting of the Bristol sanitary authority, held on Jan. 28th, Dr. D. S. Davies, the medical officer of health, stated that Dr. Reece, one of the medical inspectors of the Local Government Board, had had an interview with him in regard to the port arrangements for the medical inspection of vessels, and particularly with respect to the possible introduction of plague by vessels from the infected districts in India. It was resolved to recommend to the town council that the Notification Act already in force in the urban district should be formally extended to include the port district.

Vaccination in Bristol.

At the last meeting of the Bristol board of guardians the clerk read the summary from the vaccination officer from Jan. 1st to June 30th, 1896, which showed the total numbers of births to be 726; of this number 493 were successfully vaccinated, 92 died unvaccinated, 10 cases were medically postponed, 2 were removed to places known by the officer, 65 removed to places unknown, leaving on Jan. 31st, 1897, 67 neither entered on the officer's register book nor temporarily accounted for in the report book.

Health of Bristol During the Past Quarter.

During the fourteen weeks ended Jan. 2nd there were 1671 births and 1048 deaths in the city of Bristol. The births corresponded to an annual rate of 27 per 1000. The death-rate was 16·9 per 1000, which was 1·8 below the average. Among the 1048 deaths are included 215 infants under one year and 349 of persons aged upwards of sixty years. The infant deaths were in the proportion of 129 per 1000 births registered during the same period, this rate being 21 per 1000 births lower than the average in the thirty-three large towns, which was 150. The zymotic death-rate was 0·9 per 1000, which was 0·8 below the average. Fifty-seven deaths were due to the principal zymotic diseases—viz., whooping-cough, 25; scarlet fever, 10; diphtheria, 9; diarrhœa, 8; and "fever," 5. Different forms of violence caused 30 deaths.

The Proposed Sanatorium for Bristol.

A meeting was held on Jan. 27th to consider the best way of commemorating in Bristol the length of the Queen's reign, and a committee was formed to prepare a scheme dealing with the erection of a sanatorium in connexion with such local medical charities as may be decided on. It is satisfactory to see that there is every prospect of a sanatorium being erected in Bristol or the immediate neighbourhood. It is hoped that £40,000 will be raised, half of which will be required for the endowment fund.

The Devonport Board of Guardians and Fees for the Certifying of Lunatics.

At the meeting of the Devonport board of guardians, held on Feb. 5th, the clerk, who was instructed at the last meeting to write to the magistrates' clerk, complaining of Mr. G. A. Rae's charge of two guineas for certifying in the case of a lunatic, read the following reply: "In the case to which you refer there were two separate examinations at different times. Under such circumstances it has been customary to pay two fees of £1 1*s.* each, although the justices may have called in the same doctor on each occasion. This being so we cannot well ask Mr. Rae to reduce his charge." Although several members of the board characterised the charge as "outrageous" the clerk explained that there was no alternative except to pay the fee of two guineas. It seems a pity that the Devonport guardians should complain about being charged the ordinary fees for the examination of lunatics, but it is only another instance showing how many people are always only too ready to reduce medical fees.

A Useful Appointment at Cardiff.

At the meeting of the Cardiff health committee, held on Feb. 1st, Dr. Walford, the medical officer of health, pointed out how important it was for the public health that animals, after being slaughtered, should be subjected to inspection by a person fully qualified to detect any disease, and he suggested that a qualified veterinary surgeon should be appointed for the purpose. After considerable discussion it was decided to carry out the medical officer of health's suggestion. The salary of the new official was fixed at £200 per annum, and he will be required to devote the whole of his time to the purpose of inspecting slaughtered cattle and also the cows in the sheds from which milk is supplied.

The Bath Sanitary Committee and their Medical Officer of Health.

At the last meeting of the Bath sanitary committee the committee agreed, on the recommendation of the sub-committee, to defer giving a trial to bacteriological tests in cases of suspected diphtheria, as recommended by Dr. Symons, medical officer of health. A report was also considered from a special committee with reference to Dr. Symons' proposals for a new system of disinfection, this including the provision of a steam disinfector. The special committee stated that they could not recommend the outlay proposed, and considered that the matter should remain in abeyance. One member thought that certain of the medical officer of health's recommendations might with advantage be adopted and a long and somewhat heated discussion ensued on the subject. The adoption of the report was moved, but an amendment was proposed that a copy of Dr. Symons' report on the subject be sent to each

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member of the committee. Six members voted for the amendment and six against. The chairman gave his casting vote against it, and the report was consequently adopted. It certainly seems strange that the wise recommendations of their medical officer of health were not adopted by the sanitary committee.

Lunacy in West Wales.

The thirty-second annual report of the medical superintendent of the Carmarthen Asylum, which serves the three counties of Carmarthen, Cardigan, and Pembroke, was issued last week. Dr. Goodall, who again publishes his report in Welsh, states that on Jan. 1st, 1896, there were 559 patients (276 males and 283 females). There were admitted during the year 137 patients (80 males and 57 females). The number admitted was in excess of the average. The average age on admission was thirty-nine for males and forty-one for females. Forty patients were discharged: 29 of these were cured, 6 relieved, 3 unimproved, and 2 were transferred to other asylums. Two female patients were discharged as not insane. There were 50 deaths (25 males and 25 females). On Dec. 31st, 1896, there remained 606 patients (315 males and 291 females). The proportion per cent. of recoveries to admission was 28·15 (20·85 for males and 34·54 for females). The average age at death was for males fifty-two and females forty-eight. During the year additional accommodation for 50 patients was prepared by the completion of the wards.

The Bath Eye Infirmary.

The annual meeting of the Bath Eye Infirmary was held on Feb. 1st, Mr. H. D. Skrine presiding. The report showed that during the past year the work performed had been very satisfactory and beneficent. The honorary treasurer stated that while the year started with £6 due to the treasurer it finished with a favourable balance. It was unanimously decided to present Mr. W. Mardon Beaumont, M.R.C.S. Eng., the honorary surgeon, with an honorarium of fifty guineas for the valuable services rendered by him during 1896.

Visit of Dr. Nansen to Bristol.

Dr. Fridtjof Nansen will give a popular account of his recent expedition, entitled, "Across the Polar Region," at the Victoria Rooms, Clifton, on March 1st. The chair will be taken by Professor Lloyd Morgan, F.R.G.S., Principal of University College, Bristol.

Feb. 9th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Rebuilding of the Royal Infirmary, Newcastle-upon-Tyne.

THE annual court of governors was held in the library of the Royal Infirmary, Newcastle-upon-Tyne, under the presidency of the Right Worshipful the Mayor, last week. The adoption of the annual report was moved by the Mayor, seconded by the Right Honourable the Earl of Ravensworth, and carried unanimously by the large number of governors present. The report showed a large increase in the amount of work and a small decrease in the income of the institution. The expenditure exceeded the income by upwards of £3000. It was stated in the report that the house committee had asked the eminent architect, Mr. Waterhouse, to express an opinion as to the eligibility of the present site for a hospital of 400 beds and as to whether a new hospital could be erected upon the present site and the work of the institution be carried on at the same time. Upon both these points Mr. Waterhouse expressed himself favourably, pointing out the advantages of the present site. Mr. Riley Lord, the ex-Mayor, then moved: "That the House Committee be instructed to prepare and submit to the Queen's Commemoration New Infirmary Fund Committee a scheme for the erection of the new infirmary on the present site." This was carried unanimously, so that the question of site may now be considered to be practically settled. Mr. Riley Lord, to whom is due the credit of raising in a few months £80,000 of the £100,000 required, hopes that it may be possible to lay the foundation-stone of the new building in June of this year, but few people believe this sanguine hope can be realised. Mr. Riley Lord has, however, already accomplished so much more than was considered possible that he may see his wish accomplished.

The Children's Hospital, Newcastle-upon-Tyne.

The annual meeting of this charity has just been held. It shows an increasing amount of work, a decreased income and debt, and, speaking generally, this may be looked upon as the condition of the medical charities in the neighbourhood. The general practitioners complain that the medical charities are abused, and Dr. Jeaffreson in a pamphlet recently issued has voiced this view. There must be some explanation for the position the profession is being driven to occupy, not only here, but in the other large towns of the country. There are men who send round canvassers asking the families of the working classes to allow them to attend them for a few pence a week, and when remonstrated with they reply they are compelled to do this to compete with the medical charities, where advice and costly drugs can be obtained gratis. This, they say, together with unchecked practice by unqualified men, is depriving them of the opportunity of earning a living by legitimate means. Since the working classes commenced to contribute largely to the medical charities and to take a very active part in their administration it is said by the general practitioners there is less reluctance on the part of those who formerly paid for their medical attendance to apply to the charities—institutions which the workpeople are beginning to look upon more and more as medical clubs, maintained by them for their own advantage rather than for that of the class for whom they were originally intended.

Newcastle-upon-Tyne, Feb. 8th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Medico-Chirurgical Society.

THE usual monthly meeting of this society was held on Feb. 5th, the President (Dr. W. L. Reid) being in the chair.—Dr. Ernest Thomson showed a woman suffering from Ectropion affecting both eyelids on the right side and the lower eyelid on the left. The case was of many years' duration, and one of its most interesting features was the behaviour of the corneal epithelium over the right eye. This had been accustomed to regularly proliferate and dry into a horny scale, which after a time was shed, the patient thus regaining a fair degree of sight after a period of blindness. — Dr. Middleton showed a boy, the subject of a large Fæcal Tumour. The tumour occupied the greater part of the lower abdomen. Below it was very hard and appeared as if moulded to the upper aspect of the pelvic basin, but the upper part could be distinctly "indented" by pressure with the fingers. There was no history of peritonitis and the boy's general health appeared to be quite undisturbed.—Dr. Hinshelwood showed a woman who had recovered from Albuminuric Retinitis. The patient at the end of 1893 had an attack of nephritis with general dropsy and uræmic phenomena. Early in 1894 her vision failed, and this was so marked that when brought to the infirmary she had to be led by a friend. At this time there was double optic neuritis and the characteristic brilliant white spots in the region of the macula. In the course of three months vision had so much improved that the patient could read the smallest test types. The ophthalmoscopic changes very gradually lessened, the neuritis subsided, and the white spots slowly faded away, so that at the end of twelve months nothing remained except a somewhat "filled-up" appearance of the disc, some stippling of the macular region, and the remains of former hæmorrhages in the periphery of the fundus. The albuminuria also had gradually disappeared. Dr. Hinshelwood pointed out the importance of the case as bearing on the general doctrine that the prognosis in renal disease was, when albuminuric retinitis appeared, extremely bad. Whilst this was undoubtedly true, when the disease was interstitial nephritis, the present and other instances showed that a more favourable view was possible when the renal changes were mainly parenchymatous in character. — Dr. Ernest Thomson read notes of a case of Sensory Aphasia with Homonymous Sector-shaped Defect in the Visual Fields. The case was discussed mainly with a view to determine the anatomical diagnosis, and a number of diagrams illustrating the course of the optic pathways in the brain were used to elucidate the argument.

Glasgow University.

A free public lecture was delivered in the Pathological

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Institute on the 8th inst. by Professor Joseph Coats. The subject of the lecture was Inflammation. This was dealt with in a highly interesting and lucid fashion and was illustrated by numerous microscopic slides and lantern views. There was a large audience. The annual medical ball took place on the 4th inst. Its increasing popularity was manifested by the large attendance of practitioners and students, the ball-room in St. Andrews Hall being, if anything, rather too small for those wishing to dance. The tickets for the dance were all disposed of some weeks before the event. At the February meeting of the Queen Margaret College Medical Club on the 8th inst. a paper was read by Dr. Marion Gilchrist on Milk as a Cause of Disease.

Medical Appointments.

Mr. Thomas Kay, M.B., C.M. Glasg., has been appointed one of the surgeons to the Glasgow Central Dispensary. The position of pathologist to the Glasgow Samaritan Hospital is advertised as vacant.

Poor-law Medical Officers' Association.

The officers of this Association are determined to utilise every opportunity to secure redress of the grievances of which medical officers appointed under the Poor-law complain. The election contest at present proceeding in the Bridgeton division of Glasgow has been regarded as such an opportunity and a deputation from the Association has waited on the two candidates for the purpose. of explaining the views of the medical officers and pressing these views upon the candidates. In reply, Sir Charles Cameron said he was entirely in favour of granting to medical officers dismissed by parish councils a right of appeal to the Local Government Board. In the smaller parishes more especially, personal, political, and religious considerations were apt to influence the relationships of the councils to their medical officers. Protection from such influences was due to the medical men, who had public duties to perform. Mr. Scott Dickson, the unionist candidate, also received the deputation, and promised to use all his influence to secure the satisfaction of their wishes.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Isolation Hospital for Dublin.

THE Dublin death-rate continues very high, scarlet fever and measles being widely prevalent, while the difficulty which was recently experienced in isolating an important case of small-pox has opened people's eyes to the danger of another epidemic of that disease. It will be remembered that no hospital accommodation could be found for that patient, who was, therefore, left in the house in which he was attacked, two officers from the Public Health Department of the corporation being appointed to guard the house and secure its isolation. It has been said that nothing short of a contagious disease seizing a member of the Public Health Committtte would rouse them into making proper isolation arrangements. Something very like that has now occurred, for one of the sub-sanitary officers to whom the isolation duty was entrusted has just died from a virulent form of small-pox. It is stated that he was so rash as to enter the room in which the patient was convalescing and that he then acquired the disease. Every effort was made to secure his isolation and to save his life: a disused house belonging to the corporation was at once supplied with the necessary furniture, bedding, &c., two qualified nurses were placed in charge, but nothing availed to save the poor man, who died on the 4th inst.

Unqualified Assistants.

At the last meeting of the Council of the Royal College of Surgeons in Ireland the following resolution was passed:—"That in the opinion of this Council the employment of unqualified assistants by qualified medical men is most injurious to the interests of the public and the profession, and should be prohibited by the General Medical Council."

Mr. Stoker of the Bengal Civil Service.

Mr. Stoker, who has just been appointed to the important position of Famine Secretary to the Government of the North-west Provinces in India, is a graduate of Dublin University, where he chanced to be on leave when the telegram conveying his appointment reached him. He is now on his way to the worst portion of the famine district.

Belfast Maternity Hospital.

At the last annual meeting held on Feb. 3rd it was reported that during the previous year there had been 270 cases in the house and 170 in the extern nursing department, and there had been no deaths in the house during the year. At the dispensary there were 707 patients. There is a deficit of £60 upon the year's work. The Lady Mayoress, who presided, said as soon as the Queen Victoria Hospital was an accomplished fact she would be glad to lend her assistance to the erection of another maternity hospital in Belfast.

Ulster Medical Society.

At the meeting on Tuesday Dr. M'Donnell read a paper on Birth Palsy; Dr. Lindsay read a short paper on Helps to Diagnosis in Obscure Cases of Scarlet Fever; and Dr. Mitchell read notes of a case of Immediate Enterectomy by Murphy's Button for Gangrenous Inguinal Hernia, and showed the specimens.

Belfast Asylum.

At a meeting of the governors, held on Feb. 8th, an extract from a report made by Dr. Orr, medical officer of health for the Purdysburn district, was read, in which he said that "the sewage works are situated about half a mile up the stream from Milltown, the inhabitants of which complain of water-pollution, and in my opinion the natural purifying influences brought to bear on the water on that course are not sufficient to render it fit for domestic use at Milltown, especially at times of excessive sewage flood." Milltown is a village situated below the Purdysburn Asylum, and the river spoken of flows from the one place to the other. The plan originally adopted was to have the sewage deodorised and afterwards spread over the ground, but instead of that the sewage was run down a trench in the direction of the river, and it was just allowed to find its own way. A number of little trenches were then cut out of the ground, which, however, were found not fit to admit the sewage. The ground was then made as porous as possible, and it was stated by a member of the Board that at the present time this was acting perfectly. It was agreed to refer the matter to a committee with power to engage professional assistance. The chairman of the Public Health Committee of Belfast (Alderman Graham, M.D. R.U.I.) spoke strongly against the adoption of artificial means for dealing with the sewage, and stated that wherever chemicals had been tried they had proved a failure and had to be removed. Alderman Graham's name was added to the Special Committee.

Forster-green Hospital for Consumption and Chest Diseases.

On Feb. 8th a largely-attended adjourned extraordinary general meeting of the subscribers to this hospital was held to confirm the special resolution passed at a general meeting held on the 15th ult., altering the articles of association and raising the status whereby life governors must be donors of £1000 instead of £300 as formerly. This change has been brought about by the fact that the income from £300 would be insufficient to meet the expense of an in-patient. Under the new rules which were passed donors of £300, instead of being life governors, have only certain privileges for a limited number of years.

Election of Dispensary Medical Officer for the Whitechurch District, Cork.

A meeting of the Whitechurch Dispensary Committee was held last Friday for the purpose of electing a medical officer. There were two candidates—Mr. Donovan and Mr. Lynch. The former was elected by a majority of one, but as objections have been lodged with regard to the qualifications of some members of the committee the final decision of the Local Government Board is looked forward to with some interest.

An Octogenarian Athlete.

Athletic sports were held at Freemount, County Cork, last week, and a man named James Loder, aged eighty-two years, covered 33 ft. in three standing jumps. Several young men failed to come within 3 ft. of the veteran athlete's distance. Old Loder weighs only 8 st. and is remarkably vigorous. It is asserted his father lived to the remarkable age of 110 years.

Feb. 9th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Precautions against the Plague.

THE question of taking measures against the invasion of the plague has entered the domain of practical politics. A.

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decree published on Sunday, the 7th inst., absolutely prohibits the landing in any French ports of merchandise shipped from infected Indian localities. Under an Act brought in by M. Barthou false declarations can be punished by imprisonment, the term varying from one to five years, and by a penalty of from 1000 fr. to 3000 fr. It is interesting to recall that the old law punished such false declarations with death. The new law recognises the possibility of extenuating circumstances and allows the jury only to condemn the accused to hard labour. The Chamber has voted a sum of 40,000 fr. for expenses of the delegates to the Venice Conference and for the exceptional expenditure which the prescribed measures will bring about in the various ports. The Sanitary Council has been specially called together to lay down regulations for passengers and to determine the conditions under which quarantine should be imposed. Landing is prohibited in all the French ports in the Mediterranean. Quarantine is to last eight days for passengers disembarking at any ocean port and four days for those arriving at channel ports. Three vessels from India have already been precluded from disembarking their passengers at Marseilles on account of the hostility of the inhabitants, who threaten to break into riot. An English ship entering Havre has not been able to land her cargo, and even the mail coming by the *Yarrow* has not been able to unload. Letters have only been received after having been disinfected in a stove.

The Serum Diagnosis of Typhoid Fever.

At a meeting of the Society of Biology MM. Widal and Sigard communicated an improvement in their method of diagnosis. Till now the reaction by agglutination has been obtained by mixing fresh cultures of the typhoid bacillus with the serum of the patient under investigation. These bacilli when killed by heat lose their agglutinating power, and investigators have remarked that when the bacilli are destroyed with due care, whether by a temperature of between 57° and 60° C., or preferably by adding a drop of formal to the culture, they preserve, even though dead, their property of agglutinating the serum of typhoid fever patients for as long as three months. Tubes can, therefore, be prepared with formol and preserved in the laboratories of hospitals, preventing the necessity of using fresh and virulent cultures—an innovation of considerable importance to general practitioners.

Le Service Médical de Nuit.

A new decision has been taken by the Municipal Council more favourable to the medical man. The sum of 29,000 fr. has been added to the original grant, and each *quartier* is to receive a certain sum calculated upon the mean annual number of night visits made during the last two years. The fee for these visits, which was originally proposed—i.e., 8 fr.—has finally been set down at 10 fr., and to all intents the old organisation has been re-established. The present service is indeed more effective. In certain districts the population has recently increased and the number of visits paid has also increased in proportion. Under the old *régime* if an epidemic had broken out, despite the increased number and seriousness of the cases, the annual sum received would have remained the same. Now the remuneration of the medical officers will be proportionate to their work, and the fees will be recovered from the patients by the inspector of taxes for the district. The officers of the service must have French qualifications.

Dissatisfaction in the French Army Medical Service.

Resignations have become more and more numerous in the Service. Half the medical officers leave the army as soon as they have completed thirty years' service—that is to say, when they have just established a right to a retiring pension. The general complaint is that promotion is unjustly managed. Formerly promotion went by seniority, now it is dictated by merit. As a consequence, it is said that some arrive at the highest places at an age too young to do their work properly, the complaint being made that favour plays a great part in the selections for promotion. The Government is beginning to fear that the Service will be short-handed.

A Supporter of Quackery.

Dr. Guermonprez, surgeon to the hospital at Lille and Professor at the Catholic University at that town and a well-known gynæcologist, has been boycotted by the profession for having accepted the medical certificates of a priest who practises medicine illegally at Sens and who has been many times convicted for his misdemeanour. Dr. Guermonprez, whose religious convictions are responsible for his attitude, attempted to lighten the rigors of the law for the priest, and the Society of Surgery, of which he was a member, has decreed that he was to blame and has removed him from its roll. In addition to the important position I have mentioned Dr. Guermonprez was medical officer to the Chemin-de-fer du Nord, a very important post, so that we have the position that the chief medical officer of the service, the absolute master over his subordinates, has been publicly reproved by the medical profession unanimously. The case illustrates the absolute necessity for a tribunal of professional honour in France.

Feb. 8th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Koch's Work in South Africa.

PROFESSOR KOCH'S investigation of the cattle plague in South Africa forms the subject of a recent article in the *Norddeutsche Allgemeine Zeitung*. One of the first places which he visited after arriving in the colony was the leper asylum on Robben Island in Table Bay, and he is said to have expressed his satisfaction with the general arrangements of the establishment as well as with the bacteriological work accomplished in the laboratory. The party included representatives of the Colonial Government, the German Consul-General, and several medical men. On Dec. 3rd he left for Kimberley, where the principal part of the work of investigating the cattle plague will be undertaken. He was accompanied by his assistant, Dr. Kohlstock, and also by Dr. Turner, a medical officer of the Colonial Government. It was arranged that a laboratory should be fitted up at a farmhouse about two miles from the town, and whilst the requisite alterations were being made Professor Koch went to Taungs, a town in the Kaffir country about 200 miles from Kimberley, where more than 20,000 head of cattle have died from the epidemic, so that there was abundant opportunity of observing the disease, of performing necropsies, and of collecting morbid specimens. On Dec. 8th the party returned to Kimberley, where the laboratory was then in working order, and eight animals were inoculated with infective material brought from Taungs. The inoculations were made in the mouth and nose, every precaution being taken to ensure isolation and to guard against any accidental extension of the disease in the Kimberley district. One of the inoculated animals very soon died with symptoms of cattle plague, and the pathogenic material obtained from it was used for the inoculation of a fresh series. Professor Koch is very pleased with the arrangements which have been made by the colonial authorities for facilitating his researches, and finds that everything has been done to render his visit agreeable. The foregoing particulars have only appeared in an ordinary newspaper; a far more detailed and satisfactory account of the cattle plague inquiry will no doubt be communicated to the medical press on the return of Professor Koch and his assistants. The German Government is said to have requested him to visit Bombay for the purpose of investigating the bubonic plague.

The Prescribing and Dispensing of Medicines.

In the year 1725 a law was passed forbidding medical men to direct their patients to have their prescriptions dispensed by specified pharmaceutical chemists, an exception being made only in the case of some special medicines which are not contained in the German Pharmacopœia, and therefore require a previous agreement between the prescriber and the dispenser. Patients are entitled to have medicines made up at any pharmaceutical establishment entirely at their own discretion, and a case under the old statute has just been brought before the law-courts. A medical man in Berlin, whose professional standing was not very high, had displayed in his waiting-room a request that his patients would have their prescriptions dispensed at a pharmacy in the neighbourhood, and he also announced that a so-called "unguentum antiluposum," by means of which he pretended that lupus could be cured, was only to be obtained there. Legal proceedings were thereupon taken, and in the course of the trial the defendant's counsel argued that the statute which was said to be infringed had been abrogated or rendered obsolete by recent legislation. Much amusement was caused by the reading of a paragraph from the law prohibiting chemists from giving Christmas presents to medical

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men. The defendant was convicted and fined 300 marks (£15), but has appealed against the decision.

The late Sir Thomas Spencer Wells.

The announcement of the death of Sir Spencer Wells was received in Berlin with feelings of sympathy and regret. The current numbers of our leading medical journals, the *Deutsche Medicinische Woohenschrift* and the *Berliner Klinische Wochenschrift*, appeared before the news arrived, but the principal newspapers publish detailed obituary notices eulogistic of the deceased, pointing out that German surgery owes much to his example, as was fully recognised by competent representatives of this branch of medical science on the occasion when his portrait was placed in the collection of portraits of eminent surgeons preserved in Langenbeck House. Sir Spencer Wells was one of the few honorary members of the German Surgical Association; he was present at the celebration of its twenty-fifth anniversary in 1896 and was very cordially received.

Feb. 8th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The University Riots.

FROM Turin to Palermo the whole academic world has for the past week been in a ferment. At some universities the undergraduate "demonstranto" have been so violent as to necessitate military intervention; in others the session has had to be suspended with half at least of the "annus academicus" sacrificed for professors and students equally. As I write, even the secondary schools have caught the revolutionary contagion and are joining in the demonstrations against the Minister of Public Instruction (Signor Gianturco). Meanwhile that able and efficient functionary has the sympathy of all the judicious and right-feeling part of the community—sympathy which will sustain him in asserting the authority of Government and in strengthening the hands of the professoriate. The *Opinione* (the Prime Minister's organ) concludes a grave and trenchant article on the situation by deploring the premature spirit of party which prevails in the Italian seats of learning and denounces those journals which, for political purposes, encourage that spirit and foster a state of things which must be disastrous to the next generation while well-nigh paralysing the present. "From every side," it says, "there is an appeal to energy, to firmness in the interests of the students themselves, for the decorum of the universities, and for the dignity of science. The severer and the more effective the rigour the more grateful will be the families whose sons are compromised; the more true liberty is respected the more thankful will be the youths when, the momentary excitement having died down, they realise the deplorable results of rebellion and the evil inspiration of its promoters." Italy has much leeway to make up in education, particularly on its professional side. It will be long, indeed, before she resumes the place she has ceased to hold in the scientific arena. The more promptly and peremptorily, therefore, she "puts down her foot" and restores discipline in her academic halls the better will she consult her own interests at home and strengthen her reputation abroad.

Professor Bizzozero on Small-pox.

Small-pox, like the poor, "is always with us"—a condition of things the less likely to cease now that the anti-vaccinationist is letting his voice be heard. To this type of agitator an opportune answer, which is also a grave rebuke, has just been given by the Professor of General Pathology in the Subalpine School, Dr. Bizzozero, whose zeal and skill in the domain of public health is only second to the laboratory work which has made him renowned. "Italy," say the agitators in question, "is a well-vaccinated country, and yet she is perennially scourged with small-pox." Now of these two affirmations, rejoins Professor Bizzozero, the second is true, because the first is not. Small-pox reaps, he says, a yearly harvest of victims; from 1887 to 1889 it cost the country well-nigh 48,000 lives. But just before that epidemic there was no law making vaccination compulsory. The only statutory precaution in force was one, indirect in its incidence, requiring an inoculation certificate for admission to schools. Statistics for 1885–86 show that for every thousand births there was an average of 757 vaccinations, comprising all the "inoculations" practised at all ages. For every 1000, therefore, there were 243 persons not vaccinated. The contingent of those remaining unvaccinated throughout life cannot be determined with accuracy. The nearest approximate estimate, says Professor Bizzozero, is drawn from army medical statistics. In the quinqennium 1884–88 which preceded the epidemic, out of 683,836 soldiers 12,165 had not been vaccinated—that is, 1·77 per cent. of non-vaccinated, or, transferring the calculation to the 30,000,000 Italians, there were 527,000 persons absolutely defenceless against the malady. So much, continues Professor Bizzozero, for the non-vaccinated. As for the vaccinated, nearly all of them had had but one "inoculation," and that in infancy. This is deduced from the fact that in the two years above mentioned the re-vaccinated numbered as few as 6·5 per 1000, so that to the non-vaccinated group we must add another much larger group—that of those in whom by the remote date of the "inoculation," the immunity was imperfect, if not entirely extinct. What wonder, then, asks Professor Bizzozero, if small pox finds in Italy so favourable a nidus for its spread? But are we to infer, he continues, that vaccination is useless? No. The one possible inference is this—against small-pox a single vaccination is not enough. Nor does greater value attach to the objection that vaccination is useless because small-pox attacks particularly children under five years of age, when the immunity it is supposed to confer should be at its maximum. Let us see, says Professor Bizzozero, what, according to age, has been the mortality from small-pox in the two years when the epidemic was at its height:—

DEATHS FROM SMALL POX IN EVERY 10,000 INHABITANTS.

	1887.	1888.
Up to 1 year of age	59·5	67 5
From 1 year to 5	18 4	25 2
From 5 years to 10	4 2	5 1
,, 10 ,, 15	1 9	2 0
,, 15 ,, 20	2·4	2 2
,, 20 ,, 40	2 9	2·3
,, 40 ,, 60	2 5	1·9
,, 60 ,, 80	1 6	1·3
,, 80 ,, upwards	0·9	0·8

These statistics prove that the infantile mortality is enormous, but it proves nothing against vaccination. In fact, it demonstrates that less than a third of those born are vaccinated within the year of birth; of the other two-thirds, some are vaccinated sometimes in the third or fourth year from birth, some are not vaccinated at all. Proceeding to examine the figures of those years which prepared the soil for the epidemic, Professor Bizzozero finds that of 1000 children below one year there were 685 unvaccinated, and as the births in that period averaged in one year 1,135,000, so every year there were about 777,000 children unvaccinated among whom small-pox could make free havoc. In the years of life immediately following on the first the number of the vaccinated augments and the mortality sinks to a small figure. "It is not true, therefore," concludes Professor Bizzozero, "that small-pox reaps more victims among children *in spite of* the fact that the immunity ought to be stronger in them. It reaps more victims *because of* the immunity conferred by vaccination being neglected in the greater part of them."

Feb. 8th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

Faith-healing in the Colonies.

NEW ZEALAND seems to be a happy home for every kind of unfeathered quack, the Dierks case, referred to later, being an excellent example. There must be something in the climate which is especially favourable to cranks and impostors of all kinds. It seems quite clear that whenever such a one makes his appearance among us, whether he is a "boomer" of a patent medicine for resuscitating men's bodies or of a new patent creed under the heading of a Christian scientist or humbug of whatever kind, he is not only certain of a patient hearing, but of a more or less enthusiastic support. New Zealand is constantly overrun with quacks of various descriptions, almost all of whom reap a rich harvest from the credulity and infirmities of the colonial people. A man

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calls himself a "Professor" (of this, that, or the other art), and if he be only impudent enough in his assertion and advertises enough people rush to him with fees as eagerly as the Children of Israel in the wilderness flocked to the feet of the prophet who held aloft the life-saving image of the brazen serpent. There is no doubt that faith-healing in one form or another has been practised ever since man made his appearance upon earth—i.e., the curing of diseases without medical or hygienic treatment—by simply inducing a healthy interaction between body and mind. For instance, Charles II. is said to have cured a number of cases of scrofula by a touch of his hand; and it is well known that the medicine man of the Maori or the ordinary negro tribes is a faith-healer. On the same principle did Prince Hohenlohe, Father Gassner, and countless others cure by faith. The doctors of the Salpêtrière in Paris work—so they say—miracles quite as unique as any on record by faith plus hypnotism. This is all true up to a certain point; but the patients, when the excitement is over, usually find themselves not only poorer in pocket, but worse in health for their experience. In this colony (as elsewhere) it is certain that the "workers of cures" rarely remain long enough in one place to await the results of their treatment. In this policy they show their wisdom. Thousands of pounds must certainly go into the pockets of globe-trotting quacks out of New Zealand dupes every year; worse than this, unskilful treatment as a rule intensifies the ailment it professes to cure; but occasionally a "miracle is effected"—apparently attributable to the means used—and then numbers are deluded by the testimony given by the patient, who is, as a rule, sincere in his desire to assist humanity! New Zealand imports about £40,000 worth of patent medicines annually. The Custom duties on this amount to 35 per cent. Trade profits have now to be added before the patent or proprietory medicine can be obtained by the public, so that the public expenditure on this luxury can be easily calculated. When one considers that the basis of most of these patent medicines is a remarkably effective but cheap drug (aloes), and that a little soap—being largely used in pill-making—and a bit of ginger are added to warm the compound up, it is by no means difficult to comprehend how fortunes are made by the original vendors. The salves and ointments are compounded of materials of a most homely and inexpensive character. The attractive appearance of the package or the euphonious name is probably as responsible for the favour in which they are held as any real good which can be derived from the consumption or use of the medicine itself. There is, I should imagine, no community under the sun which, in proportion to its numbers, consumes annually more patent medicines from all quarters of the globe than do the residents of the Australian colonies.

New Zealana Medical Defence Union.

Dr. Irving of Christchurch and his colleagues are to be congratulated on having at last found themselves in a position to register the above company. Legal difficulties prevented the scheme being carried through last year at the meeting of the association held at Christchurch; but since that time it has been ascertained how the home societies met those obstacles and the difficulties have been surmounted. Briefly put, the above union is a limited liability company in £1 shares, which form the capital, and this will not be called upon except to meet such heavy expenses as cannot be met out of the annual subscriptions, which amount to only 5*s.* per member. Calls up to the full amount of the guarantee may at any time be requested if such are required for urgent and special objects. Provisions are also made whereby the annual subscription can be increased; this is for the object of preventing calls on the capital of the company for the expenses incurred in the ordinary carrying on of its functions. That the union will have a long career of usefulness to the profession seems certain, and Dr. Irving is to be commended for his perseverance in carrying out the details.

The "New Zealand Medical Journal" Amalgamates with the "Australasian Medical Gazette."

It appears from the last two annual general meetings of the New Zealand Medical Association that the members have been anxious to bring about the above negotiation. The New South Wales Branch of the British Medical Association, who are the proprietors of the *Australasian Medical Gazette*, have arranged that eight pages of their monthly journal shall be devoted entirely to New Zealand matter. They also undertake to supply the magazine to all our members, post paid, for the charge of fifteen shillings per annum, the payment to be made through the New Zealand branch. The issue of Oct. 1st, 1896, then of the *New Zealand Medical Journal*, was its last production under the old conditions. The little journal has been very ably edited formerly by Dr. Colquhoun and latterly by Dr. Barnett (both gentlemen hailing from Dunedin, where the journal was published quarterly). That the *New Zealand Medical Journal* did not die a natural death from pecuniary embarrassment is made clear by the balance-sheet which the present management have published in its last isssue, for it shows a cash balance of £10 16*s.* 8*d.*, in addition to sound assets which are estimated to be worth £80 at least. The late journal has played its part well, for it has been the means of doing more than interchanging ideas among the busy general practitioners scattered about the colony and who are oftentimes quite unable to attend even the meetings of their own special branch, much less the annual general meetings of New Zealand medicos. Many very valuable papers have from time to time appeared in its pages, most of which, stamped with originality and dealing with general practice in the colony, are well worth preserving for reference. It will be seen by-and-by how the new arrangement works, but I should not be surprised to discover that before many years are over our heads New Zealand will find it imperative to have a medical journal of its very own.

Interesting Case of an Action for Malpractice: Damages for Plaintiff £50 and Costs.

The case of Tuku Wunu, an infant, suing by his next friend Wiu Hamiona, his father, *v.* Dierks has recently been tried before his Honour Judge Kettle, and has excited great interest. It is as a general rule very difficult to run quacks to earth, but when they practise under the cloak of religion the task becomes doubly difficult. This person Dierks is a Lutheran missionary, who for years past has treated patients and received payment for rendering medical services, not only to the Maoris, but also to the settlers along the west coast of the north island. He undertakes the cure of cancer by pricking over the area of the tumour with various kinds of needles, followed up with friction of the general surface, and has caused in numerous instances, as it is needless to say, intense suffering as a result of his method of treatment. Judge Kettle's judgment covers all the ground, and is well worth recording. As an instance of the amount of "confidence" some of the settlers of Maxwelltown have in the ability of this charlatan they met together and subscribed the full amount of the damages and costs in which Dierks had been mulcted. It is a matter of satisfaction, however, to note that most of the enlightened members of the community declined to show any substantial sympathy with such a clerical humbug. The judgment is in substance as follows: "The plaintiff, a native lad about fourteen years of age, states that an injury to his leg was unskilfully treated by the defendant, and he claims £500 as damages. On March 9th he was struck on the shin with a board and on March 13th or 14th he took to his bed. On March 15th the defendant visited him, professed himself competent to treat the injury, prescribed, and continued in attendance till Dr. Saunders, who arrived on March 18th, pronounced the case to be acute periostitis and necrosis. All the medical experts who gave evidence and the medical authorities to whom I was referred agree that early and energetic treatment is of the greatest importance in such a case. There can, I think, be no doubt that the defendant's treatment was improper and unskilful, and he is, under the circumstances of the present case, liable to the plaintiff. [Bevan on Negligence, second edition, 1895, pp. 1397,1399 and 1400, and other authorities were here quoted.] If a person not professing to have any special skill undertakes on an emergency and gratuitously to set a broken arm or leg he would only be liable, if at all, in the event of gross negligence; but in the present case the defendant professed to be competent and received money for his services. In all probability necrosis had set in before the defendant took the case in hand, but I think he is liable for the increased injury to the plaintiff owing to his improper and unskilful treatment from March 15th to March 18th, and I assess the damages at £50, for which judgment will be entered with costs, court fees, counsels' fee, and witnesses' expenses."

Dec. 24th, 1896.

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Obituary.

JAMES ELLISON, M.D. LOND., M.R.C.S. ENG., L.S.A.,

SURGEON TO HER MAJESTY'S HOUSEHOLD, WINDSOR.

DR. ELLISON, of Windsor, whose death, at the age of seventy-nine years, took place on the 31st ult., was born in India, his father being in the service of the East India Company. He was sent to England for his education and in 1834 was articled to Dr. Thomas Walker of Peterborough, with whom he remained as pupil until 1839, when he became a student at St. Bartholomew's Hospital. Having qualified, he returned to Peterborough, where he had obtained the appointment of house surgeon to the dispensary and infirmary; this post he relinquished that he might pursue his studies at the University of Heidelberg, and finally, in 1846, having graduated in the University of London, Dr. Ellison settled in London at the corner of Wimpole-street and Great Marylebone-street. After practising there successfully for six years he entered into partnership with the late Mr. Henry Brown, who held the post of surgeon apothecary to the Queen's Household, and in 1851 Dr. Ellison settled in Windsor. He was soon after appointed surgeon to the Windsor Royal Infirmary (an office which he resigned some years since) and subsequently he was appointed surgeon apothecary to Her Majesty's Household. This post he held to the day of his death, being associated in the appointment with his partners, Dr. W. Fairbank, and his son, Dr. W. A. Ellison. In 1847 Dr. Ellison married the daughter of his first professional teacher, Dr. Walker. This brief enumeration of the steps in Dr. Ellison's professional life gives no insight into the man. Naturally endowed with high ability, earnest and painstaking in all he did, Dr. Ellison left school an unusually well educated lad, and throughout his long life he never ceased to devote the time he could spare from his professional work to the improvement of his mental culture. He was an excellent linguist, and was deeply interested and widely and accurately informed in all branches of natural science. He worked with the telescope and the microscope in an exhaustive manner; he read deeply, his reading covering a wide range of subjects; he was an excellent water-colour artist; and had a thorough knowledge of music. With all this store of knowledge he was absolutely free from ostentation, and those only who knew him intimately were aware of his extensive culture. Thoroughly up in all branches of his profession, possessing tact and judgment, with well-trained senses, he was of necessity a successful practitioner, and his thoughtful face, and grave, forcible manner doubtless contributed to win for him the confidence of his patients, while his kindness, his high standard of honour, his rectitude, and his modesty brought him the affection and respect of his patients, friends, and neighbours. From a letter addressed by Sir James Reid, K.C.B., M.D., to a member of the family we quote the following gratifying and high testimony to his worth: "I received your telegram announcing Dr. Ellison's death, and lost no time in informing the Queen, who commands me to express to yourself and to the other members of the family Her Majesty's sincere regret at the loss of one who has served her so long and so faithfully, and for whom she entertained the greatest regard," the writer of the letter in which this message was conveyed adding, "Dr. Ellison was one of the most unaffected, upright, and honourable men I ever knew, and whose high-mindedness was never more in evidence than during the protracted and distressing illness which he had borne with such exemplary fortitude and patience."

Dr. Ellison was no less active in body than in mind and in early life was proficient in the various athletic pastimes of the period. He joined the volunteers at the commencement of the movement, and notwithstanding the calls of a very large general practice in Eton, Windsor, and the neighbourhood, with frequent calls for consultation, he served first as captain and subsequently as surgeon to the regiment for a period of twenty-eight years. Dr. Ellison retained his upright figure and quick, active step until the occurrence of his illness in 1895. At that time symptoms of malignant stricture of the œsophagus showed themselves; he had the professional help of Mr. Lennox Browne, Dr. Semon, and Mr. Charters Symonds. The latter surgeon—when, in December, 1895, thirteen months before Dr. Ellison's death, the power of swallowing had gone—succeeded in getting a tube through the stricture, by which tube food was administered up to Jan. 30th, 1897. The death of Dr. Ellison takes from the ranks of the profession a skilful, accomplished, honourable, and loveable gentleman.

DR. NIKOLAI ZDEKAUER.

THE death occurred on Jan. 15th (27th) of ex-Professor Nikolai Feodorovitch Zdekauer, one of the most distinguished of Russian physicians and sanitarians. The deceased was a Finn by birth; he was born in Sveaborg in 1815, and was therefore in his eighty-second year at the time of his death. He was educated in the St. Petersburg Army Medical Academy, where he obtained the diploma of *lékar* as long ago as 1838. From 1848 to 1863 he filled the chair of Pathological Anatomy in the Academy. He took his M.D. degree in 1842. He was the author of several works on clinical subjects, among which may be mentioned a volume of clinical lectures, works on heart disease, small-pox, influenza, and cholera. But of even greater importance than his clinical labours were his successful endeavours in the fields of hygiene and public health. It was the successive cholera epidemics in the middle decades of the century which first drew the attention of Zdekauer to the importance of these subjects. He was fortunate in gaining the ear of those in power and was able very soon to give practical effect to his teaching. He studied deeply the questions of lighting, heating, ventilation, and drainage, and there were few public buildings in St. Petersburg in which great improvements were not introduced in all these points as the result of his initiative. Among those who actively coöperated with him in these matters was General Todleben, of Crimean fame. As early as 1850 Zdekauer endeavoured to form a society in St. Petersburg on the lines of the Analytical Society of London, which should have as its object the supervision of the food-supplies of the capital. This endeavour was not immediately successful, though it led to the formation in 1852 of the first Russian National Health Society. This society existed only for ten years, but it is said to have done much in that time to improve the sanitary condition of the Russian capital. In 1877 Zdekauer represented Russia at the International Congress of Hygiene at Brussels, and on his return from this he was successful in forming a new society, the present Russian National Health Society. He was elected the first President and remained in this post until within a few years of his death. Dr. Zdekauer was also a member of the Medical Council, of which he was President for five years, from 1884 to 1889. He took an active part in the scientific committee of the Army Medical Department, was a member of the Red Cross Society and of many other Russian and foreign societies, and was President of the Sanitary Commission of the Government of St. Petersburg. In 1860 he was appointed *leib-medik-consultant* to the Imperial family; he was the recipient of many decorations, and when in 1888 he completed his jubilee of public service the late Emperor Alexander III. presented him with a handsome snuff-box, set with diamonds and bearing the Tsar's portrait. The cause of death was heart failure, apparently the result of old age. The funeral took place on Jan. 20th (Feb. 1st.) and was a most imposing ceremony. Among those present were the Grand Dukes Vladimir, Paul and Constantin, representatives of a large number of public institutions, and many leading members of the medical profession and of society.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. C. Corradi, Lecturer on the Ear and Throat in the University of Turin.—Dr. Bates, late Professor of Medicine in the California University, San Francisco.—Dr. Sudakevich, Professor of Pathological Anatomy in the University of Tomsk.—Dr. G. Münch, Professor of Pathological Anatomy in the University of Kieff.

A VACCINATION RECORD.—In the Steyning Union (Sussex) it has been reported that last quarter 1,493 children were born in Hove, of whom only seventeen were unaccounted for. Out of 141 born in the rural district, only the odd one remains to be accounted for.

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Medical News.

UNIVERSITY OF CAMBRIDGE.—The Senate have conferred on Dr. Alfredo Antunes Kanthack, F.R.C.S., of St. John's College, the complete degree of Master of Arts *honoris causâ*. Dr. Kanthack's valued services as John Lucas Walker student and as Deputy-Professor of Pathology have thus received a merited recognition by the university. The stipend of £250 a year has been assigned to Dr. Joseph Griffiths, F.R.C.S., for fulfilling the duties of the Professorship of Surgery during the period of suspension.

FOREIGN UNIVERSITY INTELLIGENCE.—*Christiania:* Dr. Blom Leegard has been appointed Professor of Neurology, Dr. C. P. M. Baeck Professor of Dermatology, Dr. H. Ström Professor of Surgery, Dr. Axel Th. Johanessen Professor of Pediatry, and Dr. V. C. Uchermann Professor of Otology with Laryngology.—*Naples:* Dr. Calabrese, Dr. Polignani, Dr. Oro, and Dr. Leocato have qualified as *privat-docenten* of Medical Pathology, Ophthalmology, Dermatology, and Midwifery respectively.—*Prague* (*German University*): Dr. Julius Pohl has been appointed Professor of Pharmacology and Pharmacognosis.—*Strassburg:* Dr. P. Manasse has qualified as *privat-docent* of Otology.—*Turin:* Dr. Martinotti has qualified as *privat-docent* of Psychiatry.—*Vienna:* Dr. Rille and Dr. Spiegler have qualified as *privat-docenten* of Dermatology and Syphilis.—*Zürich:* Dr. Wilhelm Felix has been appointed Extraordinary Professor of Anatomy.

THE proceeds of Mellin's Food Art Competition, amounting to £247 10*s.*, have been distributed amongst the undermentioned hospitals:—Alexandra Hospital for Children with Hip Disease, £22 10*s.*; Belgrave Hospital for Children, £22 10*s.*; Cheyne Hospital for Sick and Incurable Children, £22 10*s.*; East London Hospital for Children and Dispensary for Women, £22 10*s.*; Evelina Hospital for Sick Children, £22 10*s.*; Hospital for Sick Children (Great Ormond-street), £22 10*s.*; North-Eastern Hospital for Children, £22 10*s.*; St. Mary's Day Nursery and Hospital for Sick Children, £22 10*s.*; Victoria Hospital for Sick Children, £22 10*s.*; Edinburgh Royal Hospital for Sick Children, £22 10*s.*; and Brighton Royal Alexandra Hospital for Sick Children, £22 10*s.*

THE MANCHESTER MEDICAL GUILD.—The third annual report of this guild was held in the Victoria Hotel, Manchester, on Jan. 27th, Alderman F. H. Walmsley, J.P., being in the chair. The annual report and statement of accounts were received and adopted. Forty-five new members had joined during the year and two had resigned, leaving the number of members 156. The council had held twenty meetings and dealt with many matters of importance to the local profession, whose interests it had endeavoured to safeguard and maintain. A special inquiry had been made into the subject of "Club and Allied Practices," and an interim report was presented thereon. Medical guilds had been formed at Stockport, Wigan, and other places, showing that the need for local organisation was becoming more and more recognised. The following honorary officers were elected:—President: Mr. F. H. Walmsley, J.P. Vice-Presidents: Mr. Henry Aldred, J.P.; Dr. Henry Ashby; Dr. C. H. Braddon, J.P.; Mr. Samuel Buckley; Mr. William Crosby; Dr. J. Dreschfeld; Dr. A. M. Edge; Dr. C. E. Glascott; Dr. Alfred Godson, J.P.; Mr. James Hardie; Mr. Francis Hepworth, J.P.; Mr. Thomas Jones; Dr. David Little; Dr. T. N. Orchard; Dr. D. Lloyd Roberts, F.R.S. Edin.; Dr. Henry Simpson; Mr. F. A. Southam; Dr. Graham Steele; Mr. G. A. Wright; Mr. Walter Whitehead, F.R.S. Edin.; Dr. Sam Woodcock, J.P.; and Mr. A. H. Young. The officers and council were elected as follows:—Chairman: Dr. J. Dixon Mann. Vice-Chairman: Dr. C. E. Glascott. Treasurer: Dr. Chas. G. L. Skinner. Hon. Secretary: Dr. Alexander Stewart. Council: Mr. S. Bagley; Dr. W. B. Bell; Dr. I. Blore; Mr. W. G. Booth; Dr. W. F. Boycott; Mr. G. H. Broadbent; Dr. E. Vipont Brown; Mr. R. J. Dearden; Dr. R. Forsyth; Mr. C. R. O. Garrard; Dr. J. H. Godson; Mr. W. E. Husband; Mr. E. L. Luckman; Mr. J. A. Palanque; Mr. G. H. Pinder; Mr. J. Ratcliff-Gaylard; Mr. F. Leyland Roe; Dr. A. B. Ritchie; Dr. J. Prince Stallard; and Mr. R. H. Wolstenholme. Auditors: Mr. R. G. Heathcote and Dr. H. Monteagle.

THE MANCHESTER MEDICAL SOCIETY.—A meeting was held on Feb. 3rd, Dr. Graham Steell, President, being in the chair.—The President delivered the annual address before the members of the society, his subject being Heart Disease, a Retrospect of over Five-and-Twenty Years.—Dr. J. E. Platt read a communication upon Some Points in the Diagnosis and Treatment of Fractures of the Lower End of the Humerus. The observations were based upon a series of sixty cases which he had treated at the Manchester Royal Infirmary. The cases included eleven of separated epiphysis, one of partial separation of the epiphysis, seven of transverse fracture at or near the condyles, three T-shaped fractures, twenty fractures of the external condyle, eleven of the internal condyle, and seven of the internal epicondyle. The manner of growth of the lower epiphysis of the humerus and the fact that separation of this epiphysis as a whole probably never occurs after the age of thirteen years were referred to. The occurrence of cubitus valgus and varus after oblique fractures of the condyles was mentioned, and a means of preventing these deformities when the fractures are treated with the elbow flexed was described. The importance of immediate reduction of the displacement of the fractured portions of bone was insisted upon. The relative advantages of anterior and internal angular splints in the treatment of these cases were discussed and the former was recommended, since it had been found to keep the fragments in good position much more readily than the latter. For the reduction of the swelling around the elbow-joint a slight amount of pressure with cotton-wool had been found more effective than evaporating lotions. The use of passive movements of the elbow-joint in the treatment of these fractures was condemned. Some of the cases had been treated with passive movements, others without passive movements, and it was pointed out that the latter cases had, on the whole, recovered in a shorter period of time than the former. Seldom had it been found, except in cases where the displacement of the fragments was not properly remedied, that those fractures which were treated without passive movement left any very prolonged stiffness of the elbow-joint.

LITERARY INTELLIGENCE.—We are asked to state that a series of popular text-books on nursing will shortly be issued under the title of the "Burdett Series," by the Scientific Press. The first of the series, which is entitled "Hints on District Nursing," by Miss Amy Hughes, Superintendent of Nurses, Bolton Union Workhouse, will be published immediately. The books, we are informed, will be produced in a handy pocket size, and are exceedingly well written, nicely printed, and bound in cloth. On these points we will advise our readers when we have the volumes before us.—Messrs. J. & A. Churchill will shortly publish "A Short Practice of Midwifery," giving the treatment adopted in the Rotunda Hospital, Dublin, by Henry Jellett, M.D., assistant master. The author states that he has written this little work, first, because he was "requested to do so by several of the students attending the hospital; secondly, because the extremely successful results following the treatment adopted seem to warrant its publication." There is a preface by Dr. Smyly, late master of the hospital, and an appendix containing the statistics of the Rotunda Hospital for the last seven years.

THE ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AT VENTNOR.—The report of the twenty-eighth year of the operations of this well-known hospital for chest diseases was read by the secretary, Mr. Ernest Morgan, and adopted at the annual meeting of governors held on Feb. 11th, at the London offices, 34, Craven-street, Charing-cross. The report showed that the work had gone forward steadily and satisfactorily. The board of management have accommodation for 134 men and women patients in ten blocks of houses situated in the Undercliff of the Isle of Wight, each patient being provided with a separate bedroom facing south and overlooking the sea; and while every bed continues to be occupied, there were at the end of the year 135 approved applicants for whom, unfortunately, there was not room in the hospital. An effort is being made to increase the accommodation by the erection of another block of houses, which it is hoped may be erected, as many of the other houses have been in the past, in memory of a deceased relative or friend, by some wealthy, benevolent donor, the cost being £2000; and H.R.H. Princess Henry of Battenberg has promised to lay the foundation stone of the new block in July next. The

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total receipts in 1896 amounted to £11,831 (including £2543 from a festival dinner, but nothing whatever from legacies), and the expenditure was £12 031. The number of patients treated was 810, some of whom were resident as long as thirty weeks, though the average stay was eight weeks; 32 died, and 79 per cent. were improved in health by treatment. As the annual subscriptions are only £2394, an effort will be made this year to obtain the necessary funds for maintenance by a special appeal. Mr. P. B. Burgoyne was unanimously elected treasurer of the hospital. The re-election of the retiring members of the board and auditors, and the customary votes of thanks brought the proceedings to a close.

THE CHILDREN'S HOSPITAL, BIRMINGHAM.—The annual meeting of this institution was held on the 25th ult., under the presidency of the Earl of Warwick. The report stated that the number of patients treated during the year was 14,016. The number of in-patients was 922, out-patients 12,987, and casualties 107, being an increase of 402 as compared with the previous year. The amount of air-space in the hospital had been increased by reducing the number of patients, with the result that there was now accommodation for 62 patients with an average of 1040 cubic feet of air per bed, instead of 75 beds with an average of only 875 cubic feet of air. This reduction had not affected the numbers, but only the length of their stay, benefit being received in a shorter time. The accounts were considered, and it was shown that there was an adverse balance of £397 14*s.* 10*d.*, but it was pointed out that a large sum—namely, £1100, had been spent in sanitation of the hospital. Earl Beauchamp was elected President for the ensuing year, and various votes of thanks were passed.

ELECTRICITY FOR THE PRICE OF GAS.—Brighton recently achieved a smart stroke of business in the prompt measures which resulted in the acquisition of the Shoreham waterworks, a stroke which meant practical independence on that score for the town itself and the means to supply more outside customers—of course to the profit of the ratepayers. In the matter of electricity the corporation as suppliers have met with great prosperity. Last year they made a profit much ahead of previous years, and it was said at a meeting of the council last week that in the matter of general use Brighton was ahead of any other town in the kingdom. The balance goes to relieve the general district rate, and the price is lowered. The council decided that the initial charge of 7*d.* per unit for an average of one hour per lamp per day shall be continued and that the charge for electricity over the average should be reduced from 3*d.* to 1½*d.* per unit. This, it is thought, will ensure an adequate net profit, and will make electricity as cheap as gas for heating or motive power. The actual cost of production in the first hour per day is found to be over 7*d.*; after the first hour it is about §*d.* only.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Famine in India.

PAPERS with regard to the famine in India are to be laid before Parliament at intervals of six weeks so long as the famine lasts. These papers will include information as to abnormal mortality occurring within the famine area.

Plumbers' Registration Bill.

There is every prospect of the House of Commons having an opportunity this session of discussing and expressing its opinion by vote upon the Plumbers' Registration Bill. Its promoters were fortunate in the ballot for places, with the result that the Bill stands as the first order on Wednesday, March 3rd.

The Midwives Registration Bill.

The Bill for the Registration of Midwives was introduced in the House of Commons on Tuesday, Feb. 9th, by Mr. de Tatton Egerton, and on that occasion was formally read.

HOUSE OF COMMONS.

THURSDAY, FEB. 4TH.

The Midwives Question.

Mr. Schwann asked the Home Secretary whether the Government proposed to take any action to carry out the report of the Select Committee on Midwives' Registration (of 1893), which was of opinion that a large amount of suffering and death was needlessly inflicted on both women and children of the so-called working classes through the want of medical training amongst those practising as midwives.—Sir Matthew White Ridley, in reply, said he had referred the matter to the Lord President of the Council, who informed him that the Association for promoting the Compulsory Registration of Midwives intend to promote a Bill with this object during the present session, and that he had under consideration the question of receiving a deputation from the Association with regard to it.

Water-Supply in Rural Districts.

Sir Cameron Gull asked the President of the Local Government Board whether his attention had been called to the fact that, although statutory obligations were imposed upon rural district councils in respect of the supply of water to places within their districts, it had been often found practically impossible for those councils to carry out their obligations in the absence of powers of compulsory purchase; and whether, having regard to the serious amount of sickness in country districts which was directly traceable to insufficient or impure water-supply, he could introduce at an early date a short measure enabling rural district councils to compulsorily acquire water rights. Mr. Chaplin said he was advised that there had been cases where district councils had been placed at a disadvantage, and he had already caused the point to be noted as one of the matters which should be considered in connexion with any Bill for the amendment of the Public Health Acts, but for reasons already given on other matters he could not undertake to bring in a Bill this session.

Lunacy Statistics.

Mr. Patrick O'Brien, on behalf of Mr. Corbet, asked the Home Secretary if attention had been recently called to the fact that the number of insane persons under official cognisance in the United Kingdom, Ireland included, have increased from 55,525 in 1862 to 128,896 in 1895, and that the ratio of insane per 1000 of the population had gone up during the same period from 1·81 to 3·28; and whether, in view of the importance of the subject, he would take steps to convene an International Conference to ascertain what measures could be taken to arrest the spread of the disease?—Sir Matthew White Ridley said, in reply: I am aware of the great increase in the number of insane persons in institutions and I would remind the hon. Member that on Feb. 23th of last year I stated in this House that I should consult with the Lord Chancellor with a view to the attention of the Lunacy Commissioners being specially directed to the question. The Lunacy Commissioners have, I am informed, completed a special report on the subject, which is now in the printer's hands; and until I have had the opportunity of considering that report I should prefer not to reply to the second part of the hon. Member's question.

Experiments on Living Animals.

Mr. MacNeill asked the Home Secretary for an assurance that the report for 1896 of experiments on living animals would be published in time for discussion on the Estimates.—Sir Matthew White Ridley said he had already explained why the report of 1895 was issued so exceptionally late, and assured the hon. Member that every effort would be made in future to get the report out on an early date.—Mr. MacNeill then asked what measures were taken in respect to two men licensed to perform experiments on living animals during the year 1895, under the provisions of the 39 and 40 Vic., c. 76, who were stated in the report of the inspector, Dr. G. V. Poore, to have been guilty of irregularities as licensed vivisectors; what were the irregularities brought by the inspector in these cases under the notice of the Secretary of State; were any proceedings under the provisions of the Cruelty to Animals Act, 1876, taken against these persons or either of them; and were the certificates granted to them by the Home Secretary for the purposes of vivisection revoked.—Sir Matthew White Ridley said the irregularities consisted in the one case in the licensee performing an operation on a cat without having the necessary certificate; in the other case in the licensee performing two experiments necessitating a certificate which he had omitted to obtain. In the first case the licence was revoked and was re-granted only after an interval of three and a half months, and steps were taken to prevent a recurrence of the irregularity. In the second case the consideration of the application for a renewal of the licence was deferred for a month. In neither case was it considered desirable to take further proceedings.

The Small-pox Epidemic at Gloucester.

Mr. Chaplin, in reply to a question by Mr. Bayley, said that as the Royal Commission on Vaccination sent a special commissioner to report on the epidemic of small-pox at Gloucester, the Local Government Board did not deem it expedient to instruct their inspector to make a report on the same subject.

Metropolitan Pauper Children.

Mr. Talbot asked the President of the Local Government Board how it was proposed to distinguish between the weak-minded children who were to be entrusted to the care of the new board which was intended to be established in London and the imbecile children at present under the charge of the Metropolitan Asylums Board in their school at Darenth. Mr. Chaplin replied that the children who were sent to Darenth were children in respect of whom the medical officer of the district or workhouse from which they were sent had certified that they were in his opinion chronic and harmless lunatics, idiots, or imbeciles. The distinction in this case would be that children who were of weak or feeble intellect, but were not certified to be imbeciles or idiots, would be subject to the new order

FRIDAY, FEB. 5TH.

Hemp Drugs in the East.

Mr. Chamberlain said, in reply to a question by Mr. Henry J. Wilson, that the Ceylon Government have recently decided, with his approval, to prohibit the importation of hemp drugs into Ceylon and to raise the import duty on opium from one rupee to two rupees per lb.

Experiments on Living Animals.

Mr. MacNeill asked the Home Secretary whether the two men stated in the report of the inspector to have been guilty of irregularities as licensed vivisectors were now in the possession of licences enabling them to perform experiments on the bodies of living animals without anæsthetics, and without being obliged to put the animals to death after the operation; what was the nature of the operation performed by one of these vivisectors before he had obtained a licence; to what penalties did he expose himself by his conduct, and why were not

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proceedings instituted against him; why were the names of the two vivisectors not published in the report; and would the Home Secretary now declare the names of these persons.—Sir Matthew White Ridley replied: Both the gentlemen referred to now hold licences, one of them with the addition of certificates which enable him to perform experiments without anæsthetics; the other one with the addition of certificates which dispense with the obligation of killing the animal after the effect of the anæsthetic has passed off. As regards the second paragraph of the question, both gentlemen held licences at the time of performing the experiments in question, but had omitted to obtain the certificates which were also necessary under the Act. The experiments in both cases were such as would be allowed, and; in fact, have been allowed, to be performed by properly qualified persons, and both gentlemen had previously the certificates which in the cases in question they had omitted to obtain. The penalties are those provided by the Act of 1876—namely, fine for a first offence and fine or imprisonment for subsequent offences. The irregularities were committed before I came to the Home Office, but I see no reason for dissenting from the opinion of my predecessor, that in the particular circumstances the withholding of the licence for a time and the warning given were sufficient punishment. It was decided on the same grounds not to publish the names, and I am not prepared to do so now.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX., King William-street, Strand, London.

Practical Manual of Diseases of Women and Uterine Therapeutics. By H. Macnaughton-Jones, M.D., M.Ch. Seventh Edition. Illustrated. 1897. Price 15s.

A Text-Book of Diseases of the Nose and Throat. By Francke H. Bosworth, A.M., M.D. Third Edition. Illustrated. 1897.

Aids to the Study of Bacteriology. By T. H. Pearmain and C. G. Moor, M.A. Price 3s. 6d.

BROWN PRINTING CO., Montgomery, Ala, U.S.A.

Transactions of the Medical Association of the State of Alabama. The State Board of Health. Organised 1847. Session 1896. Montgomery, April, 1896.

CARRÉ, G., ET NAUD, C, Paris.

Pathologie et Traitement de la Luxation Congenitale de la Hauche. Par Dr. Ad. Lorenz. 1897.

CHURCHILL, J. AND A., Great Marlborough-street, London, W.

Transactions of the Ophthalmological Society of the United Kingdom. Vol. xvi. Session, 1895-96, with List of Officers, Members, &c. 1896. Price 12s. 6d.

CLAY, C. J., AND SONS, Ave Maria-lane, London, E.C.

A Manual and Dictionary of the Flowering Plants and Ferns. By J. C. Willis, M.A. Vols. i. and ii. 1897. Price 10s. 6d.

FISCHER, GUSTAV, Jena.

Vorlesungen über Allgemeine Pathologie. Von Dr. M. Löwit. Erstes Heft. 1897.

Bibliographischer Semesterbericht. Von Dr. G. Buschan. Zweiter Jahrgang, 1896. Erste Hälfte. 1896.

HIRSCHWALD, AUGUST, Berlin.

Allgemeine Brunnendiätetik, von Trink- und Badekuren. Von Dr. J. Beissel. 1897.

KIMPTON, H., High Holborn, London.

The Diseases of Infancy and Childhood. By L. E. Holt, A.M., M.D. Illustrated. 1897. Price 25s. net.

LEWIS, H. K., Gower-street, London, W.C.

Dental Surgery. By A. W. Barrett, M.B. Lond., M.R.C.S., L.D.S. Eng. Third Edition. Illustrated 1897. Price 3s. 6d.

Refraction of the Eye: its Diagnosis and the Correction of its Errors. By A. Stanford Morton, M.B., F.R.C.S. Eng. Sixth Edition. 1897. Price 3s. 6d.

On Deafness, Giddiness, and Noises in the Head. By E. Woakes, M.D. Lond.; assisted by C. Woakes, L.R.C.P., M.R.C.S. Fourth Edition. 1896. Price 10s. 6d.

Ambulance Lectures on Home Nursing and Hygiene. By Samuel Osborn, F.R.C.S. Third Edition. Illustrated. 1896. Price 2s.

MACMILLAN AND CO., London.

The Cell in Development and Inheritance. By Edmund B. Wilson, Ph.D., Columbia University. 1896. Price 14s. net.

MASSON ET CIE, Paris.

Traité des Maladies de l'Enfance. Tome i. 1897.

METHUEN AND CO., Essex-street, Strand, London, W.C.

The Fall of the Congo Arabs. By Sidney L. Hinde. 1897. Price 12s. 6d.

THE REBMAN PUBLISHING COMPANY, Adam-street, Strand, London, W.C.

Septic Conditions of the Infantile Alimentary Canal, and their Treatment. By W. Forbes-Ross, M.D. 1897. Price 7s. 6d.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections, from Models in the Museum of the Saint Louis Hospital, Paris, with Explanatory Woodcuts and Text Edited by J. J. Pringle, M.B., L.R.C.P. Part 7. 1897. Price 10s. 6d.

THE SAVOY PRESS, 115, Strand, London, W.C.

Musa-Medica; a Sheaf of Song and Verse. By J. Johnston, M.D. Edin. 1897. Price 2s. 6d.

WILSON EFFINGHAM, Royal Exchange, London, E.C.

The Law of Wills. By C. E. Stewart, M.A., Barrister-at-Law. Fourth Edition. 1897. Price 1s. 6d.

Appendix X. to the Second Edition of the Descriptive Catalogue of the Pathological Specimens contained in the Museum of the Royal College of Surgeons of England: by Jas. H. Targett (Taylor and Francis, Red Lion-court, Fleet-street, London); 1896.—Transactions of the American Climatological Association for the Year 1896; vol. xii. (printed for the Association, Philadelphia, 1896).—Transactions of the American Gynæcological Society, vol. xxi., for the year 1896 (W. J. Dornan, Philadelphia, 1896).—Transactions of the Iowa State Medical Society, vol. xiv., forty-fifth annual session, 1896 (The Kenyon Printing Company, Des Moines, Iowa, 1896).—Sell's Directory of Registered Telegraphic Addresses; by Henry Sells; 1897 (H. Sell, 167, Fleet-street, London, E.C.); price, including supplements—subscribers 18s., non-subscribers 21s.—Everybody's Guide to Photography; by "Operator" (Saxon and Co., Bouverie-street, London, E.C., 1897); prices—cloth 6d., leather 1s.—Everybody's English Song-book, with Melodies; First Series: by Basso (Saxon and Co, London).—The Artists' Almanac for 1897 (George Rowney and Co., 64, Oxford-street, London).—Catechism Series: Anatomy, Part 3, "Head and Neck," Second Edition; also Toxicology" (E. & S. Livingstone, Edinburgh); price 1s. each net.—La Nature et la Vie: par Gabriel Viand (Charles Mendel, Paris, 1897).—Guy's Hospital Reports, vol. liii., being vol. xxxvii. of the Third Series (J. & A. Churchill, London, 1896).—Alb. Cammermeyer, Kristiania: De Dovstumme i Norge; af V. Uchermann; 2den Del (Bilag), 1892. Karter til de Dovstumme i Norge; af V. Uchermann; 1893. De Dovstumme i Norge; af V. Uchermann; iste Del (Tekst); 1897.—Transactions of the American Ophthalmological Society; thirty-second annual meeting; New London, Conn., 1896 (published by the Society, Hartford, 1897).—Guides of the Swedish Tourists' Club, No. 14; Stockholm (The Swedish Tourists' Club, Stockholm).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALDRIDGE, NORMAN ELLIOTT, M.B., C.M. Edin., D.P.H., R.C.P. & S. Lond., has been appointed Physician to the Royal South Hants Infirmary, Southampton, vice T. W. Trend, resigned.

BRODIE, W. H., M.D. Edin., F.R.C.S. Eng., D.P.H., has been re-appointed Medical Officer or Health for the First and Second Sanitary Districts of the Battle Union.

CLEMMEY, W. N., M.R.C.S. Eng., has been appointed Honorary Surgeon to the Bootle Borough Hospital.

COGHILL, MARY S. SINCLAIR, L.R.C.P. and L.R.C.S Edin., has been appointed Registrar and Anæsthetist to the Royal Hospital for Children and Women, Waterloo Bridge-road.

COOKE, M. A., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon-Lieutenant in the 2nd V.R. Gloucester Regiment.

CROUCH, H. C., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon and Anæsthetist to the Royal Orthopædic Hospital, London, vice M. H. Sayers, resigned.

CULROSS, JAS., M.B., C.M. Glasg., has been re-appointed a Medical Officer to the Newton Abbot Cottage Hospital.

DAVIDSON, A., M.D. Edin., F.R.C.P. Lond., has been appointed an Honorary Consulting Physician to the Liverpool Royal Infirmary.

DIMMOCK, A. F., M.D. Durh., M.R.C.S., has been re-appointed an Honorary Medical Officer to the Harrogate Infirmary and Dispensary.

DODGSON, R. W., L.R.C.P. Lond., M.R.C.S., has been appointed an Additional Demonstrator on Physiology, St. Mary's Hospital Medical School, London.

ENGLAND, GEO. F., M.D. Camb., M.R.C.S., has been appointed an Honorary Physician to the Royal Hants County Hospital.

EVANS, E. P., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer to the District Council of Mountain Ash.

FERNIE, FRANCIS E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Swynnerton Sanitary District of the Stone Union.

FOX, EDWARD J., B.Sc. Lond., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Manchester Royal Infirmary.

GRIMBLY, R. H., M.R.C.S., has been re-appointed a Surgeon to the Newton Abbot Cottage Hospital.

HANDFORD, H., M.D., C.M. Edin., M.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to the Nottingham County Council.

HAYDON, E., M.B., C.M. Glasg., has been re-appointed a Surgeon to the Newton Abbot Cottage Hospital.

HEDGES, JOHN A., M.R.C.S., has been appointed Medical Officer of Health for the Rural Sanitary District of Eaton Bray.

HUNT, E., L.R.C.P. Lond., M.R.C.S., has been re-appointed a Medical Officer to the Newton Abbot Cottage Hospital.

JONES, H., L.R.C.S. Irel., D.P.H. Camb., has been appointed Medical Officer of Health by the Rhondda Urban District Council.

LEES, C. A., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer and Public Vaccinator for the Somersham Sanitary District of the St. Ives (Hunts) Union.

MAGUIRE, ROBERT, M.D. Lond., F.R.C.P., has been appointed a Physician to the Hospital for Consumption, Brompton.

MARGRISON, R., F.R.C.S. Eng., has been appointed an Honorary Surgeon to the Royal Hants County Hospital.

MITCHELL, A. M., M.B., B.C. Camb., has been appointed Resident Medical Officer to Queen Charlotte's Lying-in Hospital, London.

MORRIS, C. D., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Sunbury Urban Council.

NEWTON, LANCELOT, M.R.C.S., has been re-appointed Medical Officer for the Sawtry Sanitary District of the Huntingdon Union.

NISBET, A. T., M.D., C.M. Glasg., has been re-appointed a Medical Officer to the Newton Abbot Cottage Hospital.

OZANNE F. N., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Medical Officer to the Harrogate Infirmary and Dispensary.

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PADWICK, J. C., L.R.C.P. Lond., M.R.C.S., has been appointed a Junior House Surgeon to the Salop Infirmary, Shrewsbury.

PEPPER, A. S., M.S. Lond., M.B., B.S., F.R.C.S., has been appointed a Surgeon to St. Mary's Hospital, London.

POWELL, H. A., M.D., M.Ch. Oxon., L.R.C.P. Lond., M.R.C.S., F.R.C.S. Edin., has been appointed an Honorary Surgeon to the Royal Hants County Hospital.

PULLIN, B. GIBBES, L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed a Surgeon to the Sidmouth Cottage Hospital.

SCOTT, WM. G., M.B. Edin., L.R.C.S., has been re-appointed a Surgeon to the Newton Abbot Cottage Hospital.

SKINNER, STEPHEN, M.B., C.M. Aberd., M.R.C.S., has been appointed Medical Officer of Health for Clevedon, Somerset.

SMITH, L. C., L.D.S.R.C.S. Eng., has been appointed an Honorary Surgeon Dentist to the Durham County Hospital.

SWETE, E. H. W., M.D. St. And., M.R.C.S., D.P.H. Camb., has been re-appointed Medical Officer of Health by the Bromyard Urban District Council.

THORNE, ATWOOD, L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Registrar, Central London Throat, Nose, and Ear Hospital.

TURNER, J. A., M.B., C.M., D.P.H. Camb., has been appointed Medical Officer of Health by the East Herts Urban and Rural District Councils.

VINTER, SYDNEY G., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Union House and Medical Officer and Public Vaccinator to the No. 2 District, St. Germans Union, vice Charles W. Chubb, resigned.

WATKIN-WILLIAMS, PENROSE L., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed a Medical Officer for the Dunster and Minehead Village Hospital and Deputy Medical Officer and Public Vaccinator for the Dunster District of the Williton Union, Somerset.

WHITAKER, E. T., M.B., C.M. Edin., B.Sc., D.P.H. Camb., has been appointed Medical Officer of Health for the combined Sanitary Districts of Tenbury, Burford, Cleobury Mortimer, and Rock.

WILLIAMS, N., M.B. Cantab., M.R.C.S., has been re-appointed an Honorary Medical Officer to the Harrogate Infirmary and Dispensary.

WOOD, R. E., L.D.S.R.C.S. Eng., has been re-appointed an Honorary Dental Surgeon to the Harrogate Infirmary and Dispensary.

WOOD, W. C., L.R.C.P. Lond., M.R.C.S., has been appointed a House Physician to St. Mary's Hospital, London.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHNAL GREEN BOARD OF GUARDIANS.—Second Assistant Medical Officer at the Workhouse and Infirmary, Waterloo-road, Victoria Park, N.E., for six months. Salary at the rate of £80 per annum, with rations, furnished apartments, washing, and an allowance at the rate of £3 per annum in lieu of beer. Applications to the Clerk to the Board, Bishop's-road, Victoria-park, N.E.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salaries £70 and £50 respectively, with board, washing, and attendance at the Institution. Also Extra Acting Physician for three afternoons a week. Salary £40 per annum.

BLACKBURN AND EAST LANCASHIRE INFIRMARY, Blackburn.—Senior House Surgeon. Salary £100 per annum, with board, washing, lodging, &c.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon, for twelve months. Salary £80 per annum, with furnished apartments, board, and attendance.

BOROUGH OF BURTON-UPON-TRENT.—Medical Officer of Health for the District of the Borough. Salary at the rate of £350 per annum, exclusive of authorised disbursements.—Applications to the Town Clerk, Town Hall, Burton-upon-Trent.

BRISTOL ROYAL INFIRMARY.—Resident Officer, to perform obstetric and other duties, for one year. Salary £40 per annum, with board, lodging, and washing.

CHILDREN'S HOSPITAL, Nottingham.—House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

DENTAL HOSPITAL OF LONDON, Leicester-square.—Dental Surgeon.

DERBY COUNTY ASYLUM, Derby.—Junior Assistant Medical Officer. Salary £100, rising to £130 per annum, with furnished apartments, board, &c.

EAST END BRANCH OF THE CHILDREN'S HOSPITAL, Sheffield.—Lady House Surgeon (Out-patient Department only). Salary £70 per annum, with board, lodging, and washing.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thorofare, Ipswich.—A Second House Surgeon, single, for one year. Salary £70 per annum, with board, lodging, and washing.

GENERAL HOSPITAL, Birmingham.—Pathologist, for one year. Salary £100 per annum, with board and residence, £20 per annum being allowed till residence is provided in the new hospital.

GENERAL HOSPITAL, Birmingham.—House Physician, for one year. Salary £70 per annum, with residence, board, and washing.

GREAT YARMOUTH HOSPITAL.—House Surgeon. Salary £90 per annum, with board and lodging, but no wines, spirits, beer, &c., are found.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

JOINT COUNTIES ASYLUM, Carmarthen.—Clinical Assistant for six months. Board, lodging, &c., and honorarium offered.

LINCOLN COUNTY HOSPITAL, Lincoln.—Assistant House Surgeon for six months. An honorarium of £10 and board, residence, and washing.

LONDON COUNTY LUNATIC ASYLUM, Colney Hatch, Middlesex, N.—Junior Assistant Medical Officer, single. Salary £120 per annum, rising £5 a year to £150, with board, lodging, and washing.—Applications to the Clerk, London Asylums Committee Office, 21, Whitehall-place, London, S.W.

LONDON HOSPITAL, Whitechapel, E.—Surgical Registrar. Salary £100 per annum.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Resident Medical Officer, for one year or more. Salary 100 guineas per annum; board, lodging, and washing provided.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer, for six months, unmarried. Salary at the rate of £80 a year, with board and lodging. Also Medical Officer for the Dispensary, unmarried. Salary £180 a year, without board or residence.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon for six months. The former two will each receive a salary at the rate of £40 a year, and the latter two each at the rate of £20 a year.

PARISH OF ST. GILES, Camberwell.—Assistant Medical Officer for the Infirmary, Havil-street, Camberwell, and the Workhouse at Gordon-road, Peckham; also for Relief Duty at the Constance-road Workhouse of the parish, for one year only. Salary £50, with apartments, board, and washing. Applications to Mr. C. S. Stevens, Guardians Offices, 29, Peckham-road, S.E.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—House Surgeon, for one year. Salary £110, with board and residence.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Examiners.

ST. GEORGE'S AND ST. JAMES'S DISPENSARY, 60, King-street, London.—Physician, and also Physician for the Diseases of Women and Children.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Resident Medical Officer for one year. Salary £80 per annum, with board and washing.

STAMFORD HILL AND STOKE NEWINGTON DISPENSARY, 189, High-street, Stoke Newington, N.—Junior Resident Medical Officer. Salary for the first three months at the rate of £50 per annum, and afterwards at the rate of £75 per annum, with board and residence in each case.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Professor of Anatomy. Applications to the Secretary and Registrar, University College, Cardiff.

VICTORIA UNIVERSITY—YORKSHIRE COLLEGE, Leeds.—Demonstrator of Physiology. Salary £150.

WEST HERTS INFIRMARY, Hemel Hempstead.—House Surgeon and Dispenser, who shall also be Assistant Secretary, for two years, unmarried. Salary £100 per annum, with furnished rooms, board, fire, lights, attendance, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BARRITT.—On Feb. 2nd, at Welland-terrace, Spalding, Lincolnshire, the wife of G. Lacy Barritt, M.R.C.S., L.R.C.P. Lond., of a son.

BENSON.—On Feb. 2nd, at Fulwood-road, Sheffield, the wife (née Simmonds) of Henry Mitchell Benson, M.B., C.M. Edin., of a daughter.

BUCHAN.—On Feb. 5th, at Athenæum-terrace, Plymouth, the wife of W. A. Buchan, M.B., of a son.

COCKRAN.—On Feb. 3rd, at the Priory, Caversham, the wife of C. H. Cockran, Physician and Surgeon, of a daughter.

GODDARD.—On Feb. 6th, at Wembly, the wife of Charles E. Goddard, L.R.C.P. Lond., M.R.C.S. Eng., of a son.

HUDSON.—On Feb. 6th, the wife of C. E. Leopold B. Hudson, F.R.C.S., of 16, Harley-street, W., of a son.

PETTER.—On Feb. 7th, at Stanhope-road, Darlington, the wife of Walter Petter, M.D., C.M., of a son.

RYLE.—On Feb. 3rd, at Hadley, Barnet, the wife of Reginald John Ryle, M.D., of a daughter.

TOWNSEND.—On Feb. 3rd, at Ivy House, Normanby, the wife of F. E. Townsend, M.D., of a son.

VOELCKER.—On Feb. 6th, at Harley-street, the wife of Arthur F. Voelcker, M.D., of a daughter.

MARRIAGES.

MACLAURIN—CROAL.—On Feb. 4th, at Sydney, Charles MacLaurin, M.B., C.M. Edin., eldest son of the Hon. Henry Norman MacLaurin, M.D., LL.D., Chancellor of Sydney University, to Anne Bithiah (Nannie), fourth daughter of Thomas Allan Croal, 16, London-street, and General Post Office, Edinburgh.

MARSH—BAQUERA.—On Feb. 3rd, at the Garrison Church (King's Chapel), Gibraltar, Surgeon-Major T. A. Perry Marsh, Army Medical Staff, youngest son of the late H. G. Marsh, J.P., of Winterbourne, Glos., to Cecilia de Baquera, second daughter of Don Nicente Baquera, of Malaga, Spain.

TINLEY—LEA.—On Feb. 3rd, at Christ Church, Bridlington Quay, William Edwyn Falkingbridge Tinley, M.B., M.R.C.S., elder son of Thomas Tinley, M.D., J.P., of Hildegard House, Whitby, to Ada, younger daughter of Thomas Lea, of Abbey-terrace, Whitby.

DEATHS.

BOURNE.—On Feb. 7th, at 5, Pittville-crescent, Cheltenham, Walter Bourne, M.D., aged 68.

BROWN.—On Feb 7th, at Shaldon, Devon, Osmond Percy Brown, M.R.C.S., L.S.A., aged 35.

FRENCH.—On Feb. 9th, at his residence, Darmstadt, Sutton, Surrey, suddenly, Henry French, M.R.C.S., aged 83.

SHARPLES.—On Feb 8th, at his residence, Maisonnette, Leam-terrace, Leamington, William Sharples, M.R.C.S., in his 84th year.

SHEPHERD.—On Jan. 24th, at Bloemfontein, Orange Free State, Ernest Shepherd, M.R.C.S., L.R.C.P., aged 26.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (17th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30P.M.).

THURSDAY (18th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (20th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (15th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. F. de Havilland Hall: Disease of the Nose and Throat in Relation to General Medicine. (Lettsomian Lecture.)

TUESDAY (16th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Papers:—Dr. T. C. Fox and Dr. F. R. Bloxall: The Plurality of Ringworm Fungi (with lantern demonstration).—Mr. S. G. Shattock: Undescended Testicle Removed in Radical Cure of Hernia.—Dr. H. M. Fletcher: A Congenital Cyst of the Mediastinum.—Dr. F. J. Wethered: Case of Hypertrophy of the Lung. Card Specimens:—Mr. J. Poland: Cylindrical-celled Carcinoma of Testis.—Dr. F. J. Smith: Aneurysm of the Thoracic Aorta in a Boy.

ROYAL STATISTICAL SOCIETY (Royal United Service Institution, Whitehall, S.W.).—5.30 P.M. Mr. N. A. Humphreys: English Vaccination and Small-pox Statistics, with Special Reference to the Report of the Royal Commission and to recent Small-pox Epidemics.

WEDNESDAY (17th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Mr. G. M. Giles: On a Simple Method of Micro-photography.

THURSDAY (18th).—SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Casual Communication by Mrs. Dickinson Berry, M.D. Lond. Paper:—Dr. L. Hill: The Causation of Chloro form Syncope, an Experimental Enquiry.

HARVEIAN SOCIETY.—8.30 P.M. Prof. H. R. Spencer: On the Diagnosis and Dangers of Breech Presentation, and its Treatment by External Version during Pregnancy.

FRIDAY (19th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-st., Cavendish-sq.).—8 P.M. Meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (15th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. W. R. H. Stewart: Examination of the Ear.

ROYAL COLLEGE OF SURGEONS.—4 P.M. Mr. C. Heath: Hunterian Oration.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. A. Wynter Blyth: Introductory Lecture, on Factory Legislation.

TUESDAY (16th).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Mania, Acute, Hysterical, Acute Delirious.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Eczema, its Varieties.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Diagnosis and Treatment of Diseases producing Pain in or about the Ear.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ferrier: Lecture.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4 P.M. Dr. T. D. Savill: Cases of Hysteria.

WEDNESDAY (17th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Refuse Removal and Disposal.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Wethered: Hæmoptysis.

THURSDAY (18th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: On the more important Constituents of Normal Urine.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Hopkins: Clinical Lecture.

SOCIETY OF ARTS.—8 P.M. Prof. J. A. Ewing: The Mechanical Production of Cold. (Howard Lecture)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. H. Mauley: Sanitary Law, English, Scotch, and Irish; General Enactments Public Health Act, 1875; Model Bye laws, &c.

FRIDAY (19th).—LONDON POST-GRADUATE COURSE.—Kings's College, 3 to 5 P.M., Prof. Crookshank: The Microscope and Methods of Cultivation.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Mr. W. Van Praagh: Defects of Speech.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Taylor: Jacksonian Epilepsy.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. H. Snow: The Value of "Anticipatory" Gland Excision in Cancer-Surgery.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

LANTERN LECTURES.

To the Editors of THE LANCET.

SIRS,—Would any of your readers who have given popular lectures on hygiene and have illustrated them on screens with lamps, kindly let me know the cost of the hire of the whole apparatus and where obtainable.

I am, Sirs, yours truly,

Feb. 8th, 1897. HYGIENIST.

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"A CRUISE ON A WHALER."

To the Editors of THE LANCET.

SIRS,—Noticing an inquiry in THE LANCET of Jan. 30th as to obtaining a berth as surgeon to a whaler I am induced to offer you a few remarks. I possess, I believe, the distinction (?) of being surgeon to the last sperm whaler out of England. The *Cowlitz*, to which I refer, left in 1856 returning to England in the autumn of 1859. The surgeon has a fairly rough time of it, having to go aloft daily regularly on the lookout, and is held responsible for the safety of the boats when away from the ship after whales, not a nice job in squally weather or when the boats are away after sundown and the lights of glimmering lanterns have to be kept sight of, with only four boys to work the ship, which is necessarily under easy canvas. He has also to take an occasional spell at boiling oil. Of course, among the South Sea islands the weather is intensely hot. I know nothing as to the black or Greenland whalers, but I saw what I believe was the last of them come into Dundee some four years since when taking a summer holiday. The Americans still do a little from San Francisco, and there are small vessels from Sydney which are only away a few months on a trip. Oil, both sperm and black, is of comparatively little value, and the trade, I fancy, as far as England is concerned, is extinct.

I am, Sirs, yours truly,

Feb. 7th, 1897. F. E. BARNES, M.R.C.S.E., L.S.A.

C. T.—We have replied to the question previously in these columns. We think that the notifications should be stamped.

WINTER RESORTS.

DR. P. C. HICKEY, of Kilkee, co. Clare, writes to us calling attention to the salubrity of the climate and its beneficial effect in cases of irritable throat or mild stages of phthisis. The town "is also a fine sanatorium for convalescents from the effects of surgical operations and debilitating diseases such as whooping-cough, Bright's disease, and the various forms of exanthemata. ..... Frost is seldom seen, snow is a rare event, and fogs are unknown. Of the great snow-storm which swept England and Ireland on Jan. 21st and 22nd we have had no evidence except the reports in the daily papers. Kilkee is built round a very small sheltered bay facing the Atlantic, upon a narrow tongue of land averaging a mile or a mile and a half in width, and stretching to the southwest between the ocean and the great estuary of the river Shannon for about sixteen miles. It is, as it were, a ship at sea, therefore the climate is equable. The soil is light and sandy, rain dries almost as it falls, and the Gulf Stream flows close to its shores." Kilkee has direct railway communication with Dublin. It has good hotel accommodation at very moderate prices, and there are two trout rivers within six miles; there is also first-rate sea fishing and the principal hotel has rights of shooting over preserved ground.

Mr. T. WHITEHEAD writes:—"It may interest your readers to learn that while the majority of our watering places have experienced some severe weather this winter yet Bude has been fortunate in having had but little frost and no snow or fog. There are still some stocks and violets in bloom in my garden, and though we have had some cold easterly winds, yet is has always been possible to get out for walks on the sands or cliffs. Rain falls on fewer days in the year at Bude than at any other seaside place, Bournemouth excepted, where the number of rainy days in the year averages 149, Bude making a good second with 150 only. I may add that the temperature is only two-tenths of a degree below Torquay, and that the railway between Holsworthy and Bude is in course of construction and will be completed in about twelve months, so that the ten miles coach drive, always a dreary part of the journey in winter, will soon be a thing of the past. We have a grand sea, fine cliffs, and bracing climate, and your readers might do worse than to give Bude a trial for winter or spring."

Disgusted.—The paragraph is certainly quite wrong and a gross offence against accepted canons of etiquette. But has our correspondent any proof that the gentleman whose name is so prominently brought forward knew anything about the insertion of it previously to its appearance in print?

L. H. C.—It would not be right to insert the change of address in the lay papers of the district into which the move is being made. In unprincipled hands such an act would become at once an invitation to the public to rally round the new practitioner.

"HYPODERMIC MEDICATION."

To the Editors of THE LANCET.

SIRS,—In answer to "Regular Reader" in THE LANCET of Feb. 6th, I can say that the most convenient hypodermic syringes I know of are made of celluloid by Mousnier, 26, rue Houdan Sceaux, Seine, France. They are perfectly aseptic on account of the material they are made of; they never require to be asepticised—passed through a flame, &c.—as glass or metal ones. I have had them in continuous use for over four years. I wish to say, further, that the fluid medicines are kept in celluloid tubes; they keep perfectly aseptic.

I am, Sirs, yours faithfully,

Geneva, Feb. 7th, 1897. A. CORDES, M.R.C.P. Lond.

TREPHINING THE FRONTAL SINUSES.

To the Editors of THE LANCET.

SIRS,—Trephining the frontal sinuses is by no means a new surgical operation nor is it infrequently performed, but too often we do not see the patient until a nasty external sinus has been formed. The following interesting case came under my care at the London Throat Hospital towards the end of 1895. The patient, a woman, came complaining of inability to breathe through the right nostril accompanied by a distressing discharge. The difficulty in breathing had come on, gradually increasing, during the last eighteen months; the discharge had lasted for quite five years. On examination the nostril was found full of large polypi and when these were removed the discharge was found to be as bad as before and pus was clearly seen flowing from the infundibulum. It was determined to open the frontal sinus, and this was done with a small trephine a few days later. The sinus was found full of web-like granulation tissue, in which three small mucous polypi were embedded. The whole of this tissue was carefully scraped out. A small drainage-tube was put in with the object of keeping the wound open for the necessary time. The sinus was well syringed out through the wound with the biniodide of mercury solution (1—1000) each day until the lotion came freely and quite clear into the nose. On the 8th day the drainage-tube was removed and the wound quickly healed up. With the operation the discharge ceased and has not returned since. I saw this patient last November, a year after her first coming to the hospital and nine months after the operation, when she still remained quite free from trouble.

I am, Sirs, yours faithfully,

Devonshire-street, W., Jan. 25th, 1897. GRIFFITH C. WILKIN.

Cerium.—"Golf arm" is somewhat of the same nature as "lawn-tennis arm." Probably the injury consists in a strain or rupture of some of the ligamentous and muscular fibres (particularly of the supinator brevis) around the elbow joint. Very likely, too, the posterior interosseous nerve is involved.

Nurse Stewart will obtain all information from the Secretary of the National Society for the Employment of Epileptics, Hanover-chambers, 12, Buckingham-street, Strand.

R. W. S.—The last Students' Number of THE LANCET was issued on Sept. 5th, 1896, and contains a full account of all that our correspondent wishes to know.

J. R.—We cannot recommend individual practitioners.

THE GENEROSITY OF A NAVAL CAPTAIN.

WE have received a letter from Captain Gallet of East Dulwich in which he desires to make through our columns the following handsome offer:—

> "I offer to any university, doctor, or private person," he writes, concerning consumption, "to demonstrate by irrefutable proofs after experiences will have been made upon people suffering from that disease, that by a treatment which I shall subject them to, I can radically cure them, on the condition that the patient is not in the last stage of the illness. ..... I have also a remedy for the cure of external cancer or gangrene, which illness I have cured myself, and for dysentery (from which I saved eighteen of my sailors at Santiago de Cuba). All these remedies can be easily obtained, and I hold them at the disposal of the Government if they wish it for their expedition to Benin, and I guarantee that with them they will not lose one man by disease of the above-named natures. *Cholera.*—I have been fighting against that illness during the Crimean war, and I possess a certificate that will prove what I did and how my remedies acted."

Shall we be considered narrow and prejudiced if we warn the gallant captain to mind his own business and to abstain from deluding the sick with idle promises? We are willing to believe that he can step a horn-pipe, box a compass, or lead a cutting-out expedition with any nautical hero afloat. But, avast there! If the history of the Crimean War formed one long pæan in Captain Gallet's praise, we should none the less hold him a mischievous person when he took to quackery.

C. P., F.R.C.S.—We have already had our attention called to this matter. There is no evidence that the medical man in question knew anything about the insertion of his name, and everyone who knows him must be aware that he is the last man to countenance such a method of obtaining publicity.

Leges.—The possibility of the occurrence is so well known that authorities cannot be necessary to prove it. If the persons are physically perfect their consanguinity would be no bar.

THE CAUSATION OF SEX.

A CORRESPONDENT, who writes on the above subject, probably refers to a letter in THE LANCET of May 7th, 1881, page 769. If he will consult "Neale's Digest" he will find that numerous references to the subject have appeared in our columns, extending from the year 1870 to 1894.

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"ANTISEPTIC MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—I was much interested in the address of Dr. Clement Godson on the above subject in THE LANCET of Jan. 23rd, 1897, owing to the fact that in the early part of 1887 I copied from the 1886 edition of Playfair's "Midwifery" the following note and pasted it on the inside of my instrument case, from which I now transcribe:—

"Antiseptic Midwifery" { Acid. Carbol. 1 in 50. / Tinct. Iodi diluted to pale sherry colour. / Condy 1 in 80. / Hydrarg. perchlor. 1 in 2000—best."

Finding the sublimate described as the best I choose it first and have used it in every case since then—as a vaginal injection in normal labours, and intra-uterine where the hand, forceps, &c., has entered the uterus—with the result that, with one exception, in no case where I have been present at the confinements has puerperal septicæmia followed. The exception was in the case of a primipara, aged eighteen years, the wife of a cavalry soldier, who, without my knowledge, had used a waterproof sheet which he had taken from the stable. I had it instantly removed and the bed changed and recovery was uneventful. At no time have I had any symptoms of mercurialism; this I attribute to careful expression of the contents of both uterus and vagina after injecting. In one part of his address Dr. Godson says, "Why the sublimate treatment should not be adopted in private practice as well as in hospitals I am at a loss to understand." Is this assumption correct? As far as I am aware it is a very general treatment in private practice.

I am, Sirs, yours truly,

Ballincollig, Jan. 26th, 1897. JAMES J. HARDING.

W. B. W.—We are unable to say at present whether there is any definite expectation of the drug mentioned being able to keep the particular disease in check. Reports on the matter are very conflicting.

THE SILENT COAL BOX.

AMONG the many trifles which go to make up perfection in the sickroom none is more important than absence of noise, and nothing is more irritating to a sick person than the noise which attends the operation of putting coals on the fire from an ordinary coal box, which in the quietness of the sick room seems to have been specially constructed as a sounding box from which to obtain the maximum of noise from the minimum of space. More than one inventor has attempted to construct a really silent coal box but perfection is far from having been attained, and the articles put before the public, though more expensive, are little better in practice than the common expedient of placing pieces of coal wrapped in thick soft paper in a paper- or india-



rubber-lined wooden box lid or papier maché tray with a pair of small muffled tongs for a lifter. The article of which we give an illustration is manufactured by Messrs. Reynolds and Branson of Leeds, and is made of cowhide. A pair of tongs covered with india-rubber tubing are supplied for lifting the coals from the box. We have practically tried the invention, and although it is perhaps more convenient and gives less trouble than the expedients mentioned above, the amount of noise is not perceptibly lessened. For a really efficient sickroom coal box it is not only necessary that the material of which the box is composed should be non-resonant, but the coals contained in the receptacle must also be prevented from falling together to take the place of pieces removed. The price of the apparatus is £1 5*s.*

Justitia.—Yes, the duty is at ninepence in the pound. The house in question is not a place where goods are exposed for sale.

Canthos.—The recognised custom in the civil profession is for the newcomer to call, but our correspondent need not do so unless he desires.

A QUERY.

To the Editors of THE LANCET.

SIRS,—Is it possible for pieces of placenta, membrane, or blood clot retained in the uterus after delivery to set up symptoms of puerperal fever? And, if so, do the symptoms differ from those cases in institutions which had a mortality of 1 in 19?

I am, Sirs, yours truly,

Feb. 10th, 1897. ANTISEPTIC MIDWIFERY.

*** Certainly, it is quite possible to have symptoms of "puerperal fever" set up by portions of placenta or clot retained in utero. The mortality of such cases depends on the treatment adopted.—ED. L.

STRAIGHT FROM THE COW.

To the Editors of THE LANCET.

SIR,—During an attack of dysentery I was advised to take milk-and soda-water. I found that milk warm from the cow was more beneficial. Is there any sucker arrangement to attach to a cow's udder by which milk can be drawn off and sucked through a tube without being exposed to the air at all? If delicate, growing children, and invalids would take milk in this way, it would do them far more good than milk (especially boiled milk) which has been exposed to the air. Have wet nurses ever given their services to invalids? If not, why not?

I am, Sir, yours truly,

Rangoon, Burma, Jan. 1st, 1897. WEAK STOMACH.

Liber will find in our Students' Number, which was published on Sept. 5th, 1896, at pages 652, *et seq.*, a very complete list of the best text-books. The two treatises of medicine he mentions are not comparable. We recommend him to reinforce his study of Hilton Fagge's work by reference to special articles in Dr. Clifford Allbutt's System of Medicine.

Alpha.—Inhalation is practised with different drugs for different diseases in their different stages, but we know of no treatise dealing with its therapeutics exclusively.

A PROPOSED CRIPPLES' AID UNION.

MR. GILLINGHAM, of Chard, Somerset, whose ingenious appliances for artificial limbs, &c., we have previously noticed favourably in our columns, has sent us a proposal for the celebration of Her Majesty's record reign. It is that a national provincial cripples' aid union should be formed for the relief of those crippled by accident or disease. Centres of this union should be formed, he thinks, in every large centre of industry, and committees formed for the rural districts. We would make an addition to our correspondent's suggestion, and say that if this proposal is ever carried out the present Surgical Aid Society should be invited to act as the trustees of the parent fund of this union. Mr. Gillingham's suggestion is, we think, a good one and might be usefully acted upon.

Mr. P. S. Oram.—We do not know of any special authority on the subject, but are confident that our correspondent could obtain a sound opinion on the question from any leading consultant in his city.

Mr. Henry Pilkington is thanked for his communication.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 11th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 5	29·51	S.E.	44	43	48	48	43	0·45	Raining
,, 6	29·51	N.W.	40	38	47	43	38	...	Overcast
,, 7	29·79	N.W.	40	38	62	43	38	...	Fine
,, 8	30·30	S.W.	37	35	51	49	34	0·07	Overcast
,, 9	29·97	S.W.	49	48	63	54	37	0·02	Cloudy
,, 10	30·16	N.	48	45	54	51	47	0·19	Cloudy
,, 11	30·04	E.	44	43	45	43	43	...	Raining

During the week marked copies of the following newspapers have been received:—*Harrogate Advertiser, Wolverhampton Chronicle, Levant Herald, Dundee Courier, Newcastle Leader, Times of India, Manchester Guardian, Halifax Courier, Pioneer Mail, Oldham Standard, Carlisle Express, Liverpool Daily Post, East Anglian Daily Times, Kettering Guardian, Southampton Times, Builder, Yorkshire Post, Sheffield Telegraph, Norfolk Daily Standard, Architect, Scotsman, Hull Mail, Glasgow Herald, North British Daily Mail, Essex County Standard, Southport Visitor, Heckmondwicke Reporter, Pullen's Kent Argus, Leeds Mercury, Carnarvon Herald, North Wales Chronicle, Bolton Chronicle, Bradford Observer, Birmingham Post, Hampshire Independent, Bristol Mercury, Doncaster Gazette, Leicester Post, Sussex Daily News, Somerset Journal, Midland Free Press, Halifax Guardian, Hereford Times, Grantham Journal, Chester Chronicle, Peterborough Advertiser, Walsall Observer, Brighton Gazette, Sanitary Record, Ripley Advertiser, Evesham Standard, Le Courrier de la Presse (Paris), City Press, Reading Mercury, Mining Journal, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Local Government Chronicle, Local Government Journal, Herald (Barnes), Kent and Sussex Post, Derbyshire Times, Surrey Advertiser, Montevideo Times, Londonderry Sentinel, Belfast News Letter, Worcester Herald, Chiswick Times, Bath Herald, Pudsey District Advertiser, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Mr. R. Ackrill, Harrogate; Association of Asylum Workers, Richmond Hill, Hon. Sec. of; A. C., Lond.; Messrs. Armour and Co., Lond.; Mr. T. Armstrong, Lond.; Mr. T. B. Archer, Lond.

B.—Dr. P. M. Braidwood, Amersham; Mr. E. Stanmore Bishop, Manchester; Miss F. N. Boyd, Lond.; Dr. E. C. Baber, Brighton; Mr. S. W. Beck, Tiverton; Dr. Byrom Bramwell, Edinburgh; Bristol Royal Infirmary, Sec. of; Mr. M. Brown, Lond.; Messrs. Baillière, Tindall, and Co., Lond.; Messrs. F. B. Benger and Co., Manchester; Messrs. W. H. Bailey and Son, Lond.; Messrs. Baird and Tatlock, Lond.; Dr. T. McL. Brown, Portmoak Manse, N.B.; Messrs. Burroughs, Wellcome, and Co., Lond.; Birmingham Hosp. for Sick Children, Sec. of; British Museum, Copyright Office.

C.—Mr. H. Carter, Lond.; County Borough of Huddersfield, Med. Off. of Health of; Messrs. G. Curling, Wyman, and Co., Lond.; Dr. E. Chaumier, Tours; Cerium, Devizes; Carriage Insurance Co., Dr. E. M. Courtenay, Kingston; Mr. F. W. Clarke, Manchester; Mr. W. F. Collings, Sark; Mr. F. W. Chapman, Chester; City of Chicago, Depart. of Health, Asst. Commssioner of; Mr. Carl Ricker, St. Petersburg, Russia; Courier Office, Leamington, Manager of; Dr. H. Campbell, Lond.; Cumberland and Westmoreland Counties Asylum, Carlisle, Med. Supt. of.

D.—Mr. H. L. Dave, Gondal, India; Dr. D. Drew, Lond.; Mr. T. Dixon, Lond.; Messrs. S. Deacon and Co., Lond.; Dr. A. Duke, Worthing; Messrs. Dakin Bros., Lond.; Messrs. Dulau and Co., Lond.; Mr. J. de la Mothe, Eastbourne; Mr. J. H. Dewar, Lond.

E.—Dr. G. Elder, Nottingham; Enquirer, Bedford; Messrs. L. W. England and Co., Lond.; East Suffolk Hosp., Ipswich, Sec. of.

F.—Mr. P. Falcke, Lond.; Messrs. S. Fisher and Sons, Lond.; *Farmer and Stockbreeder*, Lond., Editor of.

G.—Dr. S. Grose, Torquay; Gordon Technical College, Geelong, Victoria, Hon. Curator of; G. P. O., Lond., Sec. of; Gt. Yarmouth Hosp., Hon. Sec. of; Messrs. J. F. Goss, Ltd., Lond.

H.—Mr. A. Haviland, Douglas, I.O.M.; Dr. T. W. Hime, Bradford; Howard Association (The), Lond., Sec. of; Hospital Reform Assn., Cardiff, Hon. Sec. of; Dr. L. Humphrey, Cambridge; Hosp. for Women, Soho-square, Dean of; Hornsey Urban District Council, Clerk of; Messrs. W. Hatchman and Co., Lond.; Mr. J. Heywood, Manchester.

I.—Iowa State Medical Society, Iowa, Sec. of.

K.—Dr. O. J. Kauffmann, Birmingham.

L.—Dr. L. Lunsen, Newcastle-on-Tyne; London Institution, Sec. of; Messrs. Lever Bros., Lond.; Mr. C. M. Leakey, Caistor; Dr. R. C. Lucas, Lond.; Life Saving Society (The), Lond., Hon. Sec. of; Lawrence Patent Water Softener and Sterilizer Co., Lond.; Messrs. Lee and Nightingale, Liverpool; Mr. H. K. Lewis, Lond.; Dr. Lane, Douglas, I.O.M.; *La Presse Médicale*, Paris, Manager of.

M.—Dr. R. S. Miller, Windsor; Medical Guild (The), Manchester, Hon. Sec. of; Mr. H. Morris, Lond.; Medical Society of London, Hon. Secs. of; Messrs. Mather and Crowther, Lond.; Mr. R. D. MacGregor, Glasg.; Mr. J. R. Milnes, Lond.; Dr. J. P. MacLaren, Claygate; Mr. M. Morris, Lond.; Manchester Children's Hosp., Sec. of.

N.—Nightingale Home for Trained Nurses, Southsea; Messrs. Newton and Co., Lond.

O.—Mr. P. S. Oram, Manchester; Messrs. Offord and Sons, Lond.; Messrs. Oliver and Co., Tunbridge Wells.

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The Hunterian Oration.

Delivered at the Royal College of Surgeons of England on Feb. 15th, 1897,

BY CHRISTOPHER HEATH, F.R.C.S.ENG.,
PAST PRESIDENT OF THE COLLEGE; HOLME PROFESSOR OF CLINICAL SURGERY IN UNIVERSITY COLLEGE, LONDON; AND SENIOR SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

[AFTER some introductory remarks Mr. Heath said that previous Hunterian Orators had laid stress on the fact that John Hunter was a learned physiologist and a profound pathologist but had in some measure ignored the fact that he was also a great surgeon, and it would be his effort that day to set out this side of Hunter's character. He mentioned Hunter's apprenticeship to his brother-in-law Buchanan, when he acquired manual dexterity by working as a carpenter, his work as assistant to his brother William, when he trained his hand as a dissector, his work under Cheselden and Pott, his house surgeoncy at St. George's, and his short though important career as an army surgeon. Passing on to Hunter's return to London in 1763, the orator referred to the election to St. George's as surgeon in 1768 and to his course of lectures on the "Principles of Surgery," which commenced in 1774. Mr. Heath continued:—]

In his lecture on "Injuries of the Head," Hunter shows himself to be far in advance of his contemporaries, with whom trephining the skull was a matter of routine. He says: "In cases of fissure of the skull only it may admit of dispute whether we are always to trepan. If there is no symptom of an injured brain, certainly it will not be necessary. It may not be necessary even when attended with symptoms of an injured brain, for the injury may only be from the concussion, and we never trepan for concussion." Again he lays great stress upon the danger of opening the dura mater because of the occurrence of fungus cerebri, which was almost constant before the introduction of antiseptic dressings, and even now is not entirely unknown. He says, "whenever I have seen the dura mater opened the brain has worked through the opening, and the patients have died. This was the case with a Mr. Cooper, whose dura mater I opened with a crucial incision on account of the state of the parts beneath; he died, and I think it is probable I killed him by opening the dura mater." Mark the honesty of the man—"it is probable I killed him." Fashion reigned in Hunter's time as at present. Thus under the head of simple fracture we find him saying, "the position for the patient to lie in was formerly on the back, but the side is now generally adopted. However, I think its whole advantage is that it has the appearance of novelty, and is not a real improvement; but time will establish the truth." Again, in speaking of fractured patella, he says, "Before the year 1750 it was the practice to endeavour to bring the broken ends of the bones as near together as possible, with little or no motion allowed; but after that a fashion arose (for we have fashions in surgery as in everything else, arising perhaps from a person happening to do well who had not been treated in the old way) of letting the parts separate, and of not forbidding motion so strictly; but now caprice has, I believe, had its day, and we are taught by reason and experience that the parts should be, when cured, as nearly as possible in their natural situation."

Here, thanks to Mr. D'Arcy Power, I am able to avail myself of a little bit of contemporary criticism in the form of an "Essay on the Fracture of the Patella or Knee-pan, by John Sheldon, F.R.S., Professor of Anatomy in the Royal Academy of Arts, London, 1789." Mr. Sheldon combats the view that the extension of the leg relaxes the muscles attached to the patella, though, as he says, "those anatomists whose opinions I am acquainted with, as the late Dr. Hunter, Mr. J. Hunter, the late and present Professor Monro, and every other teacher or writer I have seen or heard of, have entertained the same opinion, though the contrary is evidently the case." He proceeds to argue that the thigh must also be flexed upon the pelvis, a practice which has been generally adopted for many years, so as to relax the rectus; but he also recommends slight flexion of the knee so as to relax the hamstrings—a useless and harmful proceeding.

In his lecture Hunter tells the story of a lady with an old fractured patella and great separation of the fragments, with consequent loss of power; and Sheldon speaks with approval of his plan of exercising the muscles of the thigh, by swinging the leg with weights attached to the foot. How both these surgeons would have appreciated my colleague Mr. Barker's simple plan of wiring the fragments together by the sub-cutaneous method!

John Hunter's name is so inseparably connected with the treatment of aneurysm that it is almost unnecessary for me to maintain his claims to originality in his operation of applying a ligature at a distance from the sac, particularly after the exhaustive lectures on the subject of aneurysm which were given in this theatre in 1871–3 by Mr. Holmes. The claims put forward by French surgeons, and particularly by Broca in his classical work on aneurysms, for Anel as the proposer of the Hunterian operation will not bear investigation; for it is clear that Anel really placed a ligature above the aneurysm, and in close proximity to it, and only differed from his predecessors in not laying open the sac. It is well known that this method and its varieties proved so fatal from secondary hæmorrhage that Pott, the leading authority of the day, recommended amputation as the only safe proceeding; and on this Hunter remarks in his lectures, "When the disease is in an advanced stage I agree with Mr. Pott in thinking amputation necessary and preferable. The earlier, therefore, the operation for the aneurysm is performed the better, not waiting with the expectation that an increased size of the aneurysm will produce an increased size of the collateral branches. If the artery, however, cannot be tied above the aneurysm in the operation, where can it be tied if the limb be amputated? Why not tie up higher in the sound parts where it is tied in amputation and preserve the limb?"

The first operation performed by Hunter for popliteal aneurysm, by ligature of the femoral artery in Hunter's canal, was in December, 1785, the patient being a coachman aged forty-five years. Sir Everard Home gives full details of the case in the *London Medical Journal*, vol. vii., 1786, and vol. viii., 1787, and also in the first volume of the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, which was published in 1793, during Hunter's lifetime. It is quite clear that the vein was included in the ligatures, which were four in number, two being tied and two kept in reserve. The patient recovered. Home gives four other cases operated on by Hunter, one of which was fatal; and on the fourth case it is remarked that "in performing the operation the vein was not included in the ligature," implying that previously the vein had been so included. In the museum of this College is preserved the preparation of this historical case (3258)—obtained by Hunter "with some trouble and considerable expense" on the patient's death, fifteen months after the operation—a drawing of which accompanies Home's second paper in the *London Medical Journal*, 1787. "The femoral artery was impervious from its giving off the arteria profunda as low as the part included in the ligature. Below this part the femoral artery was pervious down to the aneurysmal sac and contained blood, but did not communicate with the sac itself, having become impervious just at the entrance. What remained of the aneurysmal sac was somewhat larger than a hen's egg, but more oblong and a little flattened. It contained a solid coagulum of blood, which adhered to its internal surface. A section made of this coagulum appeared to be composed of concentric laminæ, uniform in colour and consistence. The trunk of the femoral vein where it passed along the side of the tumour must have been obliterated." Appended to the account of the dissection is the following remark:—"The conclusion to be drawn from the above account appears a very important one, viz., that simply taking off the force of the circulation from the aneurysmal artery is sufficient to effect a cure of the disease, or at least to put a stop to its progress, and leave the parts in a situation from which the actions of the animal economy are capable of restoring them to a natural state." We are not informed whether this statement of Home had the support of Hunter or not, but it is a little remarkable that no reference should have been made to the collateral circulation, which has such an important bearing upon the formation of laminated clot within an aneurysm.

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Our museum contains also, thanks to the late Mr. Thomas Wormald, the specimen from Hunter's fourth case, in which the vein was not included in the ligature. The patient was thirty-six years old and survived the operation for fifty years. "The portion of artery obliterated by the ligature extends from the origin of the profunda downwards to the division of the popliteal. A small oblong mass of earthy matter occupies the situation of the aneurysm."

Of course, Hunter's new operation had a certain amount of opposition, notably from his colleague Bromfield and from Percival Pott; but we find in Home's paper that Mr. Lynn, of the Westminster Hospital, had a successful case, the date of which is not given. Hunter was cursed with a candid friend, one Jesse Foot, surgeon, who published the year after his death "The Life of John Hunter," in which he criticised severely the whole of Hunter's professional career; but it is remarkable that he makes no allusion to the operation for aneurysm.

Of the separate volumes which Hunter published the first was that on "The Natural History of the Human Teeth" and a "Practical Treatise on the Diseases of the Teeth," price £1 1s., 1778. The late Mr. Thomas Bell, F.R.S., himself a distinguished dental practitioner, as well as for many years Lecturer on Comparative Anatomy at Guy's Hospital, in the preface to Hunter's essay in Palmer's edition, speaks of the work thus: "If it may be stated that the work in question is perhaps the least felicitous effort of this extraordinary genius, and that of which the errors are the most obvious and striking, some apology may be found even for these in the confined nature of the subject and especially in the obscure and anomalous structure of the organs of which it treats; whilst the basis which his experiments and observations have laid for subsequent improvements in our knowledge, both of the physiology and pathology of the teeth as well as in the treatment of their diseases, constitutes a never-ceasing claim to the gratitude and admiration of every scientific practitioner of dental surgery."

Mr. Jesse Foot, surgeon, in "The Life of John Hunter," already mentioned, does not spare the author, but devotes no fewer than thirty pages to a detailed criticism of this work on the teeth, interspersed with remarks of a more or less scurrilous nature. Mr. Foot says, no doubt with truth, "John Hunter, at the time he published this book, had but very little practice, the whole circle being then filled up by names to which I have before alluded; and Hawkins, Bromfield, Sharpe, and Pott were proud and unaccommodating professional men. They were above submitting to consultations with dentists. Their patients, who wanted advice for relative complaints of the teeth, sent for or went to them, and from them took the instructions which the dentists were to obey. Hunter laudably condescended to accommodate himself to the necessity of the case, and to fill up this chasm in practice he placidly attended on fixed days and hours at the house of a dentist to aid him by consultation for the benefit of his patients." In Chapter IX., which treats of Drawing the Teeth, Hunter has to his caution against rapid extraction of the teeth appended the following note: "I must do Mr. Spence the justice to say that this method appears to be peculiar to him and that he is the only operator I ever knew who would submit to be instructed or even allow an equal in knowledge, and I must do the same justice to both his sons." Mr. Foot thereupon says: "John Hunter was not found to bestow his smiles upon every dentist; his sincerity in friendship confined him alone to the family of the Spences"; and then proceeds to give a personal recollection of the elder Spence dating from 1762, when he kindly extracted without fee a tooth from Mr. Foot, who was then an apprentice.

No doubt, as Bell has pointed out, Hunter made mistakes in his work on the teeth, particularly as regards the development of the second set and their relation to the temporary teeth. But the sections on gumboils, on excrescences from the gum, on deeply-seated abscesses in the jaws, and on abscess of the antrum maxillare show that he had considerable experience in the ailments connected with the teeth and their surgical treatment. His chapter on "Transplanting Teeth" shows how careful he was in dealing with all the details of such a delicate operation, which we know to have been highly successful in his hands, although eventually abandoned on account of the fear of transmitting syphilis.

In 1786 John Hunter published "A Treatise on the Venereal Disease," which excited a good deal of controversy at the time and has been freely criticised during the last fifty years. Hunter had no doubt seen a great deal of venereal disease whilst serving with the army both at home and abroad, though he seems to have ignored to a very great extent the labours of others in the same field of inquiry. His reputation as an anatomist and surgeon was so great that the work was received both at home and abroad with acclamation. In 1787, the year after publication, French and German translations appeared. In 1788 there was a second English edition, and in 1791 the first American edition was published. There were not wanting, however, contemporary critics, and foremost amongst them must be mentioned Benjamin Bell of Edinburgh and Mr. Jesse Foot, surgeon, to whom I have already referred. This last gentleman brought out a volume of 450 pages, in which he goes *seriatim* through Hunter's work, criticising as far as possible all his statements and speaking of him invariably as the "Professor," which he seems to regard as a term of reproach. Unfortunately, Hunter started with the idea that the poisons of gonorrhœa and syphilis were identical, and so early as 1767 made experimental inoculations upon himself with gonorrhœal matter, as he believed, but which, no doubt, was mixed with the discharge from a chancre within the urethra. A chancre and secondary symptoms resulted, for which mercury was taken, and, in his own words, "the time the experiments took up from the first insertion to the complete cure was about three years." After such a personal experience it is not surprising to find Hunter laying down explicitly: "The experiment proves that matter from a gonorrhœa will produce chancres." His critic, Foot, takes the same view, and says sarcastically: "I shall be glad to be informed by the Professor who ever doubted but that it [the poison] was the same!" It is the more curious that such an acute observer as Hunter should have fallen into such an error, for we find him laying down that "till about 1753 it was generally supposed that the matter from the urethra in gonorrhœa arose from an ulcer or ulcers in that passage, but from observation it was then proved that this was not the case." He proceeds also to show, by the examination of the bodies of criminals known to be the subjects of gonorrhœa at the time of execution, that the prevailing belief in the existence of warts or growths in the urethra in all cases of gonorrhœa was incorrect. Hunter seems to have had undoubting faith in the contradictory statements of his patients, and particularly of his female patients, the subjects of gonorrhœa. It is difficult otherwise to understand the conclusions he comes to, for they often appear to be entirely opposed to modern experience. His views also on swelled testicle do not commend themselves to the modern surgeon, for he held that the inflammation was due to "sympathy," and that the testicle "is never affected with the venereal disease, local or constitutional." However much in the present day we may disagree with Hunter in recommending a mercurial course for the treatment of gonorrhœa we must allow that he thoroughly appreciated the various affections of the urinary organs which commonly result from and follow that disorder. Still more valuable are the chapters on "Supposed Consequences of Gonorrhœa," disorders which have proved a happy hunting ground for the quack for many generations. Hunter's description "of the discharge of the natural mucus of the glands of the urethra" is brief but forcible: "The small glands of the urethra and Cowper's glands secrete a slimy mucus similar to the white of an egg, not coagulated. This seldom appears externally or flows from the urethra but during the indulgence of lascivious thoughts, and is seldom or never attended to except by those who are either under apprehensions of a gonorrhœa coming on, or imagine the last infection is not gone off entirely, and are therefore kept in constant terror by this natural discharge." He then passes on to speak of "the discharge of the secretions of the prostate gland and vesiculæ seminales," and expresses a strong opinion, in which modern physiologists agree, that the vesiculæ are not seminal receptacles. "It is a discharge of mucus," he says, "by the urethra which generally comes away with the last drops of urine, especially if the bladder is irritable, and still more at the time of being at stool, particularly if the patient be costive, for under such circumstances the straining or action of the muscles of these parts is more violent. It has generally been supposed that this discharge is semen, and the disease is called a seminal weakness; but it appears from many experiments and observations that the discharge is undoubtedly not semen." So highly do I appreciate John Hunter's good common-sense teaching on this important

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subject that I have for many years kept this page in his works doubled down in order that I may read out an authoritative statement to those miserable persons who consult the surgeon from time to time for so-called "spermatorrhœa"—a word which one could wish eliminated from our language.

It is remarkable that the term "Hunterian chancre" should have been the universally accepted description of the primary syphilitic sore, for Hunter himself says: "Venereal ulcers have one character, which, however, is not entirely peculiar to them, for many sores that have no disposition to heal (which is the case with a chancre) have so far the same character. A chancre has commonly a *thickened base;* and although in some the common inflammation spreads much further, yet the specific is confined to this base." But what is most remarkable is that Hunter denied the existence of chancres on the mucous membrane of the vagina or cervix uteri, and *a fortiori* did not recognise such unusual occurrences as chancre of the lip, &c. Although the anatomy and pathology of the lymphatic system, including glandular enlargements, had made great progress during the previous century, yet the primary indolent bubo was not recognised as typical of syphilitic infection. Thus we find Hunter describing all kinds of buboes as occurring during the primary stage of syphilis, and even advocating the mercurial treatment of suppurating chancres and inflamed buboes.

From what has been already said it cannot surprise us to find Hunter's views of the lues venerea or constitutional syphilis little in accordance with the opinions of the present day. It will be sufficient to quote the following as regards the transmission of syphilis from parent to child. "It is supposed," says Hunter, "that a fœtus in the womb of a pocky mother may be infected by her. This I doubt very much. However one can conceive the bare possibility of a child being affected in the womb of a pocky mother—not, indeed, from the disease of the mother, but from a part of the same matter which contaminated the mother." Again, he says: "It has been supposed that such a contaminated child could contaminate the breasts of a clean woman by sucking her," and yet a little later he describes vividly enough the infection of a nurse by a syphilitic child. Yet with all these mistakes, which it has taken nearly a century to correct, we owe John Hunter a great debt of gratitude for his unfailing faith in mercury as the specific remedy for syphilis. So long as varieties of venereal sores were undistinguished mercury was, of course, often given unnecessarily and with disastrous effects; but if it had not been for Hunter it seems likely that the heresy which the Bells and other Scotch surgeons promulgated, that syphilis did not require mercury for its cure, would have made much greater way than it did. Thanks to the labours of Ricord, Hutchinson, and Hill, the diagnosis and treatment of syphilis are now placed on a firm basis; and if it had not been for the "shrieking sisterhood" and the action of a few effeminate Members of Parliament we might now be rejoicing in the reduction of venereal disease in our army and navy by those most beneficent laws known as the "Contagious Diseases Acts," which were unhappily wiped out by a weak-kneed Government just when they were conferring the greatest benefit upon suffering humanity.

The papers which John Hunter himself contributed to the Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge were only two in number. The first was read on Feb. 6th, 1784, and was "On the Inflammation of Internal Coats of Veins." The frequency of phlebotomy gave rise, as he says, "to a very frequent complaint—that is, an inflamed arm after bleeding"; and he proceeds to show that this arose from the wound not healing by first intention. Numerous post-mortem examinations enabled him to state correctly enough that, as the result of inflammation of the lining membrane of the vein, in some cases adhesion of the coats and obliteration of the canal took place, whilst in others suppuration ensued and abscesses had to be opened, or led to the death of the patient by what we now term pyæmia. It is remarkable that Hunter does not mention thrombosis and does not appear to have recognised the formation of clot in the vein as an early stage of phlebitis.

In the treatment of phlebitis Hunter urges the application of a compress to produce adhesion of the surfaces of the vein; and though this can be but of little service it is noteworthy that he should have anticipated the proposal of Mr. Henry Lee to pass a pin beneath the vein, so as to prevent pus getting into the circulation, by upwards of seventy years. Nothing is more remarkable in the present day than the almost absolute safety which attends the removal of portions of varicose veins, as recommended by the late John Marshall, provided strict attention be paid to asepsis.

Hunter's second paper was read on Aug. 18th, 1789, and was "On Introsusception"—as it was spelt in those days. He says: "When the introsusception is downwards it may be called progressive, and when it happens upwards, retrograde"; and attributes the slipping of one piece of intestine within another solely to some additional weight in the gut above. Again, Hunter says: "The outer fold is the only one which is active, the inverted portion being perfectly passive and squeezed down by the outer, which inverts more of itself." Although these views are not received in the present day, the figures of two cases of intussusception which Hunter gives most accurately represent the disorder and could not be improved upon. His treatment is curiously dominated by his views as to the action of the outer fold of the intussusception, for he says: "Medicine can never come in contact with the outer fold," and he advises, therefore, giving vomits, "with a view to invert the peristaltic motion of the containing gut, which will have a tendency to bring the intestines into their natural situation." It is remarkable that neither inflation of the bowel from below, which dates from Hippocrates, nor the proposal of Praxagoras to open the abdomen and thus reach the seat of trouble, which in modern times has proved so successful, receives any mention in this essay.

John Hunter seems to have been the originator of the practice of feeding artificially through a stomach-tube. He read before the Society for the Improvement of Medical and Chirurgical Knowledge on Sept. 21st, 1790, "A Case of Paralysis of the Muscles of Deglutition, cured by an artificial mode of conveying food and medicines into the stomach." The patient was a man, aged fifty years, a hypochondriac who lost the power of swallowing, and was brought to Hunter for relief. Hunter proposed that a hollow flexible tube should be passed down into the stomach, and mentioned his having an instrument of the kind made of spiral wire covered with gut for the purpose of injecting liquids into the stomachs of animals. The plan was adopted and the patient recovered. The instrument used was a fresh eel skin of rather small size, drawn over a probang, and at the end of the paper it is observed: "An eel skin seems very well adapted for this purpose, being smooth, pliable, and readily passed into the stomach; but as cases of this kind may occur when eels cannot be procured a portion of the gut of any small animal, as a cat or lamb, will make a good substitute."

This same volume of the society's "Transactions" contains a paper by Sir Everard Home "from materials furnished by Mr. Hunter." It is entitled, "Some Observations on the Loose Cartilages found in Joints," in which the view is maintained that the cartilages originate in blood-clots rather than in the loose fringes of the joint. Hunter advises the removal of such bodies by an incision above and to the inner side of the patella, and describes graphically the extreme difficulty of the proceeding, owing to the tendency of the cartilages to escape into the cavity of the joint.

I have thus endeavoured to show by his own writings that John Hunter was an able and experienced surgeon as well as an unrivalled anatomist. That he had been for some years before his death the leading surgeon in London cannot be doubted, for even Mr. Jesse Foot allows this. He says: "I think I may affirm that his consultations were more in fashion than any other surgeon's, and that his range of practice was more extensive—that we heard more of the name of John Hunter than of any other surgeon." Evidence of this kind is better than that which nowadays is too often looked upon as the test of professional success—the amount of legacy duty. Hunter died a poor man, not because he did not make a large professional income, but because he spent all he made upon his museum. When he died in 1793 we find his influential friends exerting themselves to procure a grant for his widow from the Government of the day; and eventually in 1793 Parliament voted £15,000 for Hunter's Museum and placed it under the care of the Corporation of Surgeons. The Royal College of Surgeons of England, the successor of that corporation, cannot be said to have failed in its duty towards Hunter's collection, and the splendid series of museums which the College has erected during the present century show the interest taken

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by the Council of this College in the promotion and advancement of the art and science of surgery.

[Mr. Heath concluded, according to custom, with an eloquent reference to those Fellows of the College who had died since the last oration—namely, John Whitaker Hulke, William Savory, Arthur Durham, John Eric Erichsen, George Murray Humphry, and Spencer Wells. His peroration was as follows:—]

And now, Sir, having completed the roll of the illustrious departed, let me conclude by saying a few words on my own behalf. In July my period of office as a Councillor of this College expires, and this is, therefore, the last occasion on which I shall have the right to address my colleagues and the College at large from this place. Gentlemen, I cannot but view the future of this College with some anxiety. This great corporation is, I fear, on the high road to become something very unlike the Royal College of Surgeons of England which has existed now for nearly 100 years. Hitherto it has been regarded as the home of surgical science and its funds have been devoted to the advance of the art of surgery by providing unrivalled opportunities for study in its museum and library. This College will, in my opinion, lose professional prestige and fall in public estimation if its funds should ever be diverted from these legitimate purposes in order to support the interests of individual members of the profession, however worthy in themselves. It will be a melancholy day for British surgery if ever this Royal College should become a gigantic Protection Society to fight the puny battles of its Members who may happen to come into collision with each other or with the public. It is to the Council, and to the Fellows who elect the Council, that we must look for the maintenance of that high professional position which this College has hitherto occupied and for the furtherance of the art and science of surgery—*quæ prosunt omnibus artes.*

ABSTRACT OF

An Oration

ON

WILLIAM HUNTER (1718-1783),

ANATOMIST, PHYSICIAN, AND OBSTETRICIAN.

WITH NOTICES OF HIS FRIENDS,

CULLEN, FOTHERGILL, SMELLIE, BAILLIE, ETC.

Delivered on Feb. 10th, 1897, before the Hunterian Society

BY R. HINGSTON FOX, M.D., M.R.C.P. LOND.,

PHYSICIAN TO ST. LUKE'S MISSION DISPENSARY.

[AFTER the customary words of address to the President and Fellows Dr. Hingston Fox referred to the practice in vogue in the eighteenth century of leading medical men advertising their lectures in the ordinary newspapers of the day, and quoted an example of one inserted by William Hunter. The date of this, his first, was 1746. He then briefly referred to Hunter's family, his youthful days, and his friendship with Cullen. He spoke of Hunter's entry into London, where he made the acquaintance of Smellie, Dr. James Douglas, and Nicholls of St. George's Hospital. Dr. Fox continued: "It is as anatomist, physician, and obstetrician that I desire to bring Hunter before you this evening." The orator then gave a short account of the leaders in medical science at the time he spoke of—such as Richard Mead, Sir Hans Sloane, Cheselden, Pott; and, abroad, Boerhaave, Haller, Morgagni, and Linnæus. He continued:—]

William Hunter in 1747 became a member of the Corporation of Surgeons. In the next year he travelled on the Continent with young Douglas, going through Holland to Paris, and visiting some of the medical schools. In particular he went to see Albinus, one of the greatest of Boerhaave's pupils, who held the chair of anatomy at Leyden for the long term of fifty years. Here he saw some of the injected preparations for which that anatomist was famous, and was led to use this method of investigation in his own future work with signal success.

In 1748 his youngest brother John, ten years his junior, came up to London, fired, it would seem, by the same desire of a larger field for his energies. He wrote to offer his services to William as an assistant in his dissecting room. William replied with a kind invitation to visit London. John Hunter became at once his brother's pupil and assistant and was inducted by him into the anatomical studies in which he was to spend most of his life. He soon showed great skill in dissecting and injecting specimens and assisted his brother in many of his researches in anatomy and physiology, making discoveries more or less in conjunction with him. These, as we shall see, were afterwards a fruitful source of dispute between them. For several years after John came to London his elder brother sought to direct and help him in his studies, placing him under Cheselden and under Pott. He even tried to give him what he had himself enjoyed—a university training—but John's stay at Oxford was very brief and to little purpose, and he referred very ungraciously in after life to the efforts that had been made on his behalf. Indeed, it must be acknowledged that the younger brother gave during these early years little comfort or satisfaction to his friends. His manners were rough and coarse and his associates low. Indications of this occur in the letters which have been preserved. The dispositions and training of the two brothers were so different that it is hardly to be wondered at that they diverged as time went on. William, with his culture and polite instincts, had a trait of strictness and severity in his character, although he was kind at heart. Yet he refers often to his brother John in his lectures and in his medical commentaries in appreciative terms. And it was principally through William's powerful interest that John was elected to his most important appointment in the year 1768—that of surgeon to St. George's Hospital. John once sent him a patient with the following laconic note: "Dear Brother,—The bearer is very desirous of having your opinion. I do not know his case. He has no money and you don't want any, so that you are well met.—Ever yours, JOHN HUNTER."[1] John left his brother's laboratory in or before 1761, going abroad on account of his health as a surgeon in the army, and was succeeded by Hewson, a very able young anatomist with whom after some years William disagreed, and Cruikshank was engaged in his place in 1770. Hewson made important researches into the lymphatic system, discovering the existence of these vessels in birds and fishes, and demonstrating the human lymphatics with a fulness hitherto unattained. He died at the age of thirty-four years; his works have been published by the Sydenham Society. A curious letter is extant from Benjamin Franklin, who, during his stay in England, lodged at one time with William Hunter and Hewson, and "as a common friend had been obliged to listen to their mutual complaints." He writes to William Hunter in 1772 to give evidence as to the terms of agreement between them.[2]

In 1750 William Hunter received his degree of Doctor of Medicine from Glasgow University, gave up surgical practice, and left the hospitable roof of Mrs. Douglas to take a house in Jermyn-street, where he practised as a physician. By this time he had made various communications to the Royal Society; the first was as early as 1743, when he was but twenty-five years old, on "The Structure and Diseases of Articular Cartilages." At that time, and, indeed, throughout the eighteenth century, papers on medical subjects were laid before the Royal Society in large numbers. He was elected a Fellow 1767, in the same year as his brother. It may be added here that in 1768, on the foundation of the Royal Academy by Joshua Reynolds, Gainsborough, and others, Dr. Hunter was appointed its first Professor of Anatomy. A painting in the Royal College of Physicians of London, of which he became a Licentiate in 1756, represents Hunter lecturing to the members of the Academy. In his practice Hunter had come to turn his attention especially to midwifery, and he had been appointed man-midwife to the Middlesex Hospital in 1748 and surgeon-accoucheur to the British Lying-in Hospital next year. In this branch of medicine his reputation constantly grew, until in the year 1762, when he was forty-four years of age, he was called in to see the young Queen of George the Third. The story is told that the King asked him when he came out of the

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[1] Life of Mr. Baillie, prefixed to Wardrop's edition of his works.

[2] Hunter-Baillie MSS., i., 126.

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chamber what ailed Her Majesty, and that he replied, "The Queen is *with bairn*." I have not found any written authority for this story. In any case, his attendance gave much satisfaction, and he was two years later named as Physician Extraordinary to the Queen, and from this date his practice amongst the upper classes rapidly increased. Hunter's polished manners and refinement, coupled with much shrewdness and a careful attention to his patients, made him a *persona grata* with persons of rank, whether by title or talent. The letters existing prove that he was on terms of easy acquaintanceship with many of the nobility, such as the Earls of Chatham and Rockingham, Lord North and Lord Bute. Horace Walpole writes to him in 1773 to promise him Lord Orford's "original"—an American Moose deer.[3]

Hunter's character is placed in a favourable and interesting light by some letters which passed between him and the Earl of Suffolk, whose lady he had attended at her death in childbed in 1767. Lord Suffolk had addressed to Dr. Hunter a letter full of the most affectionate gratitude for his attention and help: "My busyness is to beg of you, if *Reward* is an irksome word, to let me substitute *Regard* in its room." Dr. Hunter, after warmly thanking Lord Suffolk for his letter, continues: "I am now by your Lordship's kind sympathy as happy as I can be after taking such a share in so great a calamity. I feel an inclination to say a thousand things which I must suppress. I wish to talk upon a subject which you must forget. We will take it up in Heaven. At this moment I fancy that I have a Friend there who listens to my thoughts and bids me say to you in a little time we shall all be happy again; who bids me tell you to take care, for her sake, of yourself and of your child. Allow me to love your child all the days of my life; she will be exactly what you describe and what you wish. Allow me sometimes to see her, that I may indulge a pleasing melancholy and fancy that I am doing something very agreeable to Heaven. It may be preparatory to some exalted enjoyment there. Allow me likewise to offer your Lordship the best advice I can. As soon as possible do a force to nature and go into the bussy world again. Nothing but that, I think, can restore your peace of mind and make you what I am sure you wish to be, a Blessing to Mankind. May you yourself be blest, both for your own sake and for loving so tenderly one so worthy of all your affection."[4]

[Dr. Fox then gave an account of Hunter's museum and proceeded:—]

He sought, but sought in vain, to construct on the basis of this museum and his lecture classes a national school of anatomy. He was ready to erect the building and to endow it with the sum of £7000. But his application in 1765 to the Government of the day to grant a site was unheeded, and the golden opportunity which might have done much for British medicine was suffered to pass by. It was a bitter disappointment to Hunter, and although Lord Shelburne sought as an individual to undo the ill act of the Cabinet, and offered to head a subscription list with a promise of a thousand guineas, Hunter's pride would not stoop to accept it. He turned to rely upon his own unaided efforts. A plot of ground was purchased in Great Windmill-street, near the present Piccadilly-circus, and here in 1770 he built a spacious house, containing a large room for his museum, a lecture theatre, and dissecting-rooms, besides rooms for his own residence. Here he lived and taught for the remaining thirteen years of his life. The house was afterwards occupied by his nephew, Dr. Matthew Baillie, and it was there Joanna Baillie began to write her dramas; it still stands, a plain red brick structure, somewhat altered, the portico gone, and the building now incorporated in the Lyric Theatre.[5] Hunter was a keen and jealous controversialist, laid exaggerated stress upon his discoveries, and was too sensitive of his own fame as an original worker. He was conscious of this weakness—an inordinate love of controversy, and condoned it on the plea that the passive submission of dead bodies rendered anatomists impatient of contradiction.

[3] Ibid., 128.

[4] Ibid., pp. 102-104. Henry, twelfth Earl of Suffolk, was K.G. and Secretary of State for the Northern Department. The story of his deep attachment to his wife and sorrow for her early death, of his devotion to the child named after her, and of her death at eight years is a pathetic one. He married again later, but it was not like the first love. He died before the age of forty years. I have to thank the Countess of Suffolk for her courtesy in supplying information.

[5] The house of John Hunter on the east side of Leicester-square, containing his lecture theatre, dissecting-rooms, &c., is at the present time about to be absorbed by the Alhambra Music-hall, which adjoins it.

[Dr. Fox then mentioned the two great controversies of Hunter's life, that with the Monroes with regard to priority in the discovery of the tubuli testis, and the bitter dispute with his brother as to the double circulation in the placenta.]

An estrangement resulted between William and John and they scarcely met again. After Haller died Hunter was chosen, in 1782, to occupy his place as one of the eight Foreign Associates of the French Academy—perhaps the highest foreign honour a man of science can obtain. Haller's seat had been occupied before him by Morgagni, and before him by Ruysch. On this occasion the chymists, one of the eight classes into which the Academy was divided, wished to have Bergman, the Swedish chemist, elected, but the class of anatomists insisted that it was their right to appoint a foreign associate, and Hunter was chosen.[6] We do not find that Dr. Hunter took much part in the political events of his time, nor did John Hunter on his part. A letter to a friend, written in 1778, five years before his death, concludes: "I told you that I have taken my leave of Politics: and am sorry to say that as far as I am a judge this country deserves humiliation, or rather a scourge. God bless you.—WILLIAM HUNTER."[7] The times, indeed, looked dark and threatening. Great Britain was at war with the United States and with France, and Spain was just declaring war against us. The long contest in Hindostan was in its early and more doubtful stages. At home there was trouble and discontent. And who that could have foreseen the prolonged struggles that were to come during nearly forty years would not have lost heart for the future of our country? Yet through all the staying power of the Anglo-Saxon race proved equal to the strain. William Pitt became Prime Minister in the year that Hunter died.

Ten years before his death, despite his frugal manner of living, Dr. Hunter began to suffer from "wandering gout," affecting, we are told, sometimes the limbs and sometimes the stomach. His bodily powers, strained by incessant exertions which he would not relax, gradually waned, but the spirit was active and undaunted to the end. On March 20th, 1783, he rose from his sick-bed, against the remonstrances of his friends, to deliver the introductory lecture of his course—an occasion when there was a large and more general audience. Towards the end of the lecture he fainted and had to be carried from the theatre. He never rose again, but died quietly, a few days later, on March 30th. John Hunter came to see him again and again in his illness and gave him needed surgical attention (catheterism). The brothers were reconciled at last, for dividing lines belong to life. As it has been finely said: "It is death alone which integrates." He died in peace. "If I had strength enough left to hold a pen," he said to Dr. Charles Combe, his executor, "I would write how pleasant and easy a thing it is to die." William Hunter was only sixty-five years of age, the same age attained by his brother John ten years later. Both died in the fulness of their work, closing a life of strenuous labour. So died their nephew, Matthew Baillie; so died many other masters in our art, from the days of Sydenham and of Radcliffe down to those of our own Wilson Fox and Andrew Clark. He was buried in the rector's vault of St. James's, Piccadilly, where his monument stands between those of Sydenham and Richard Bright.

[Dr. Fox then went on to speak of Hunter in the triple *rôle* of anatomist, physician, and obstetrician. With regard to the first of these "persons" he quoted from letters showing that Hunter was a close student of nature. He mentioned the discovery of the tubuli testis, the lacrymal ducts, the origin and use of the lacteals and lymphatics, the mode of formation of congenital herniæ, the anatomy of aneurysms, the placental circulation, the nature of the fœtal coverings, especially the decidua, and, above all, the anatomy of the gravid uterus. The Great Windmill-street School was referred to and stress laid upon the fact that William Hunter shone, not only by his own glory, but by the light reflected from his celebrated brother and pupil, John. Dr. Fox continued:—]

In speaking of William Hunter as a physician I use the latter word in no restricted sense. Perhaps the departments of medicine were not then so strongly marked out from one another; at any rate, Hunter took no narrow view of his profession. He began his medical life as an anatomist, practising surgery the while; then he took a physician's

[6] MS. letter to W. Hunter, announcing this honour, in possession of Miss Hunter-Baillie.

[7] Letter in possession of Miss Hunter-Baillie.

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degree and finally devoted himself chiefly to the practise of midwifery. Nothing, indeed, that came within the scope of medicine in its widest sense was foreign to his mind. He made many contributions to the six volumes of "Medical Observations and Inquiries," published between 1757 and 1812 by that "Society of Physicians" which was the precursor of the Medical Society of London and is often confounded with it. Hunter succeeded his friend Fothergill as president of this society. Several of the papers relate to aneurysm and to his discovery of varicose aneurysm, others to the advisability of operating in empyema when there is no more than a reasonable probability of finding pus, to necrosis of the tibia and the nature of callus, and to rupture of the capsular ligament in dislocations at the shoulder. There is one very careful and elaborate record of a case of traumatic emphysema, in which the cellular tissue of the whole of the body was inflated with air.[8] The patient was *in extremis*, but Hunter, by suitable incisions, pressing the air out, and stopping the injured thorax, succeeded in effecting a cure. He goes on to expound the nature and functions of the cellular tissue and the use of punctures in anasarca; these should be very small, rather than large, as he had learned by trial of both these methods, one on each leg of the same patient. He had dissected black cattle, dead from an epidemic disorder attended with emphysema. Other papers deal with the structure of the symphysis pubis and the insensibility of tendon.

[After referring to two papers of Hunter upon congenital heart disease, wherein Hunter certainly foreshadowed the doctrine of evolution, the case quoted by Watson of the boy with anorexia, and a medico-legal paper upon child murder, Dr. Fox passed to consider Hunter's friends, Cullen and Fothergill, and also his nephew Baillie. Of Hunter as an obstetrician he said:—]

I pass on to speak of William Hunter as an obstetrician. The art of midwifery was passing in the middle of the eighteenth century through a severe struggle. When Smellie settled in London in 1739 the bulk of the practice was in the hands of midwives. Mrs. Nihell of the Haymarket, who afterwards published a treatise on the subject, had a large practice, and was a doughty and uncompromising champion of the exclusive right of her own sex to practise the art. Between her and Smellie, who lived hard by in Pall Mall, there was unceasing war. There were, indeed, men physicians devoted to this art, but when they were called in it was often only to advise the midwife, the patient not permitting herself to be touched. When William Hunter attended the young Queen of George III. he merely waited in an ante-room in case the midwife needed his assistance. The principal men-midwives when Smellie and Hunter began to work were Dr. Maubray and Sir R. Manningham. Of the former it need only be mentioned that he stated a decided preference for a seven months' term over a nine months' gestation on account of the influence of the moon and the mystical value of the number seven. Manningham was of a higher order and long enjoyed the chief reputation in London, where he founded the first maternity institution. He detected the imposture of Mary Tofts, the "rabbit-breeder." Yet so far was the art in its infancy that in his Compendium, published in the year that Smellie commenced practice, no mention is made of any sort of instruments. Instruments, however, were in use, but mainly of a destructive kind, and it was Smellie's earnest desire to find better methods, so that in difficult cases the child's life should not be sacrificed, that brought him to London.

[Here Dr. Fox gave a short account of Smellie and continued:—]

William Hunter was for many years the acknowledged leader in obstetric practice in London. In dealing with his claims to distinction in this department I am glad to be able to quote one who wrote with authority, the late Dr. Matthews Duncan. In his "Researches in Obstetrics" Dr. Duncan quotes Dr. Hunter many times; for example, on the inclination of the axis of the uterus, the plasticity of the uterus adapting itself to the shape of the fœtus, the condition of the cervix during pregnancy, the cause of the fœtal head being commonly downward, the especial development of the cephalic end of the fœtus, the posture of the child during the last months of gestation, the early implantation of the placenta over the cervix, the separation of the fœtal from the maternal portion of the placenta in a four months' conception, and the operation of symphysiotomy.

Smellie acknowledges the help derived from Hunter's "reforming the wrong practice of delivering the placenta"—i.e., leaving it more to natural efforts. And Hunter's lectures, preserved to us in the notes of students, bear witness to his thorough grasp of the practical issues of his art. He describes, for instance, clearly and simply, the occurrence of fever, convulsions, white leg, hemiplegia, &c., in the puerperal state, and his treatment, if rather conservative and inactive, is at any rate free alike from active hurtfulness and from a pretence of specifics.[9] Hunter described the retroversion of the gravid uterus apparently for the first time, and proposed the name by which the displacement is now known. His papers on this subject are very clear and interesting.[10]

A few words remain to be said on William Hunter's personal character. His many-sided tastes have been referred to. It is wonderful, perhaps, that they did not hinder him from attaining high distinction in his own profession. But he had no wife or child, and his museum was the recreation of his leisure hours. A man of untiring industry, an early riser, exact and orderly in his habits, thoughts, and speech, he combined the learning of a scholar with the refined manners of a gentleman. He was kind and he was just; and if he was so conscious of his own abilities and so sensitive to praise or blame that he sometimes appeared jealous, sometimes even bitterly combative in his attitude to others, such feelings did not long disturb his peace of mind. "I am, I believe, one of the happiest of all men," he writes to Cullen in 1768, "though my hurry is somewhat greater than I could wish."[11]

I have thus sought to set William Hunter before you as a great anatomist and a sound and successful practitioner of medicine and of midwifery.

"Verax: capax, perspicax: sagax, efficax: tenax."

A teacher of renown and wide influence, he contributed greatly, with his brother, John Hunter, to establish medical science and art upon the only sure foundation, that of anatomy. May we not rightly speak of "the era of the Hunters" and associate the two brothers together in the great work they did for natural science?

[Dr. Fox concluded by a *résumé* of the scientific work of the time, and ended his address by thanking those who had given him assistance by placing at his disposal the various manuscripts, books, &c., which he had used in preparing it.]

[8] Medical Observer and Inquirer, ii., p. 17, and iii., p. 372.

[9] MS. Lectures 42, b. 34, Royal College of Surgeons of England.
[10] Medical Observer and Inquirer, iv., p. 400, and v., p. 388.
[11] Life of Cullen, i., Append.

BIRKENHEAD MEDICAL SOCIETY.—A meeting was held on Feb. 12th, the President (Dr. R. Sydney Marsden) in the chair. — Mr. S. Wilkinson opened a discussion on Hypnotism in an able paper, giving some interesting details of his own experience, and in the subsequent discussion the following members took part — Dr. Pinkerton, Dr. Brien, Mr. Harrington, Dr. McSwiney, and the President. — Mr. Wilkinson replied.

ROYAL LUNATIC ASYLUM, ABERDEEN. — The report by Dr. William Reid, physician and superintendent of this asylum for 1896, states that on Jan. 1st last year there were 741 patients on the register: admitted during the year, 207; discharged, 157 (recovered, 95; relieved, 33; not improved, 29); died, 55—leaving at Dec. 31st, 736, including 5 absent on probation. A great many of the cases admitted were in indifferent physical condition, and several of them exhibited symptoms of incipient phthisis. The percentage (45·9) of recoveries to admissions is higher than for many years. Dr. Reid calls attention to the large number for this asylum of deaths from general paralysis and from phthisis. The new hospital (opened on Aug. 3rd) promises fully to realise expectations. The ventilating and heating system have proved satisfactory, and the electric lighting is for asylum requirements a decided advance. The income amounted to £23,342 and the expenditure to £23,435. In all 948 cases were under treatment last year, and the directors are to hold in the spring of this year a conference with Her Majesty's Commissioner in Lunacy as to the re-construction of the main asylum.

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ABSTRACT OF

The Hunterian Lectures

ON

THE PATHOLOGY AND SURGERY OF INTUSSUSCEPTION.

Delivered at the Royal College of Surgeons of England,

BY D'ARCY POWER, M.A., M.B. OXON., F.R.C.S. ENG.,

HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY; SURGEON TO THE VICTORIA HOSPITAL FOR CHILDREN, CHELSEA.

LECTURE III.[1]

Delivered on Feb. 12th.

THE TREATMENT OF INTUSSUSCEPTION.

TURNING from the theoretical to the more severely practical aspects of intussusception, there can be no doubt that all cases of the affection have to be treated upon the assumption that they are either reducible or irreducible. I do not propose to occupy your time with a history of the treatment of intussusception. Those who are interested in such matters will find that Professor Ashurst,[2] Dr. Leichtenstern,[3] and Mr. Jonathan Hutchinson,[4] have published admirable summaries of it from different points of view. It is still necessary, however, to teach the majority of mothers that early advice and abstention from domestic remedies are required in all cases of painful constipation occurring suddenly in young children, just as it is only lately that men, as well as women, have come to understand that the immediate treatment of strangulated hernia means recovery, whilst to delay is death. It is evident, indeed, that we are tracing in this century the exact course which our predecessors in the last century had to follow in regard to the treatment of hernia. Obstinate and ignorant people exist now as they did then, who would treat an intussusception with the same masterly inactivity as their ancestors treated hernia, and upon the identical plea that such a line of treatment yields a few spontaneous recoveries.

a. Reducible intussusception.—Clinical and pathological evidence show that an invaginated portion of the intestine has a constant tendency to reduce itself until its muscular coat becomes paralysed or adhesions are formed at its neck. This tendency to reduction is probably counteracted during the earlier stages of an intussusception by the tonic contraction of the ensheathing bowel, for if this be reduced or abolished by mechanical or other means the intussusception can be easily reduced until hardly any invagination remains. Inflation or injection of the large intestine is, upon the whole, the safest and the most satisfactory treatment for all cases of uncomplicated intussusception, provided that the patient has been seen early enough, that the distending force be applied gradually, and that it be not too great.

b. Treatment by irrigation.—Injection is preferable to inflation because the force employed can be graduated with much greater accuracy, whilst the apparatus is always at hand. But irrigation is not of the least service in the enteric form of intussusception, where one part of the small intestine is invaginated into another; for many observers[5] have shown by experiments on living and on dead bodies that fluid can only be made to pass through the ileo-cæcal valve when over-distension of the colon has caused a mechanical separation of its two segments. Such an over-distension, however, is in the highest degree dangerous, because it is usually accompanied by a cracking of the serous coat of the large intestine, which is soon followed by rupture of the muscular and mucous layers if the force be continued. The method of irrigation under hydrostatic pressure is the most satisfactory way of distending the colon in cases of colo-colic and ileo-cæcal intussusception. The fluid is allowed to pass into the large intestine by its own weight, so that the force can be accurately estimated by observing the height to which the reservoir is raised above the recumbent body of the patient. The valuable experiments of Mr. Mortimer[6] in London and of Mr. Mole[7] in Bristol have greatly increased our scientific knowledge of the effects of irrigation in the treatment of intussusception. They have shown that the results depend partly upon the obstruction to be overcome within the intestine and partly upon the external support. The greater the pressure within the abdomen the more is the distending force neutralised, for the intestinal wall is then compressed between two opposing forces. There is apt to be cracking of the serous coat of the large intestine when the resultant pressure of the fluid distending the colon is about two and a half pounds per square inch—that is to say, when the irrigator is raised five feet above the body of the patient, and this accident usually happens when the irrigator is raised to eight feet, though the bowel may be completely ruptured when the reservoir is only raised to a height of six feet. Rupture of the large intestine is most likely to occur in the transverse colon at or near the splenic flexure, whilst in the small intestine it takes place in the unprotected portion of the bowel which is situated between the two layers of the mesentery. It is impossible for the surgeon to estimate the capacity of the colon in any individual case of intussusception, nor can he judge the amount of pressure that may be applied with safety to the inflamed and softened intestinal wall at the neck of the tumour. A pint of fluid was sufficient to rupture the bowel in a child,[8] aged three months, though the injection was made by one of the most careful and experienced surgeons in the profession. Dr. Muir, at my instigation, has measured the capacity of the colon in the bodies of several children, and the measurements show how widely different is the capacity of the colon in different children of almost the same age. Thus in a male child aged five months ten ounces of water were sufficient to distend the colon, whilst in a girl aged seven months thirty ounces could easily be passed into the large intestine. Forty-eight hours is the limit of time within which irrigation is likely to be successful in an ordinary case of ileo-cæcal intussusception with tolerably acute symptoms, and such pressure is alone justifiable in a child aged two years as can be obtained by raising a reservoir of water containing a quart of salt solution at 100° F. two and a half feet above the anæsthetised patient. I do not think that inversion of the patient renders irrigation more successful, but I am satisfied that long-continued distension under a low pressure is of more avail than rapid dilatation under a high pressure. The surgeon should keep one hand flat upon the abdomen whilst irrigation is being performed, and he must carefully avoid great variations of pressure. A sudden and uniform enlargement of the whole abdomen during the irrigation raises a strong suspicion that the bowel has been ruptured. A laparotomy must be done at once when this accident happens, and the seat of rupture should be looked for either on the left side of the abdomen or at the neck of the intussusception. The length of the intussusception is no bar to its reduction by irrigation, for many cases are recorded in which an intussusception has been reduced even when the ileo-cæcal valve has protruded beyond the anus.[9] A chronic case with a great deal of glairy discharge, the onset of which has been heralded by similar attacks of less intensity, may be treated by irrigation a very much longer time than is allowable in ordinary cases; indeed, some cases[10] of this nature have been cured when the symptoms have lasted from four to six months. The duration of the symptoms is perhaps always of less importance in an intussusception than their intensity. The longer the time the symptoms have lasted, however, the more likely it is that adhesions will have been formed. Slight adhesions are not an insurmountable barrier to reduction by irrigation, though they militate greatly against its success as Professor Senn's[11] investigations showed.

A great disadvantage attends the use of irrigation for the cure of intussusception apart from the danger of rupture. This disadvantage is the liability to recurrence after

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[1] Abstracts of Lectures I. and II. appeared in THE LANCET of Feb. 13th.
[2] American Journal of Medical Science, July, 1874, pp. 48 and 285.
[3] Ziemssen's Cycl. Pract. Med., vol. vii., p. 643.
[4] Transactions of the Royal Medical and Chirurgical Society, vol. lvii., 1874, p. 37.
[5] Bull: Virchow's Jahresbericht, xi., 1878, p. 205. Heschl: Wiener Medicinische Wochenschrift, 1881, No. 1. Debierre: Lyon Médical, 1885, No. 45. Senn: Intestinal Surgery, Chicago, 1889, p. 221. Mole: Bristol Medico-Chirurgical Journal, vol. xii., 1894, p. 65.
[6] THE LANCET, May 23rd, 1891, p. 1144.
[7] Bristol Medico-Chirurgical Journal, xii., 1894, p. 65.
[8] Transactions of the Clinical Society, vol. xxi., 1888, p. 246.
[9] Brit. Med. Jour., vol. ii., 1896, p. 629.
[10] Max Bauer, Berliner Klinische Wochenschrift, No. 33, 1892, p. 817.
[11] Intestinal Surgery, p. 154, Experiments 15 and 19.

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reduction. Dr. F. H. Elliott[12] has published the details of a case of recovery from intussusception in a child, aged eight weeks, in whom recurrence took place twenty-four hours after the first reduction, five days after the second reduction, and thirteen days after the third reduction. Dr. Chaffey[13] had a less satisfactory experience, for an intussusception recurred on five separate occasions until the patient—a boy aged three years—died from exhaustion. When recurrence is a very marked feature in a case it is better to open the abdomen at once rather than to trust to repeated irrigation of the bowel, for it appears[14] that re-invagination can positively be prevented by shortening the mesentery at the point of invagination by folding it upon itself in a direction parallel to the bowel and maintaining it in this position by a few catgut sutures. No absolute rule can be laid down, however, for a child is now under my care who has apparently been cured of an intussusception, though irrigation had to be done on five separate occasions before the tendency to recurrence was overcome. A second objection to this method of treatment lies in the fact that the operator cannot see what he is doing. The reduction is, therefore, incomplete in some cases, for the last part of an intussusception is the most difficult to unfold. Cases are well known in which such an incomplete reduction has been found at the necropsy.[15] The ileo-cæcal valve, too, is sometimes a cause of trouble after the reduction of an intussusception, theoretically because a hæmorrhage into its substance may make its segments gape, or may so stiffen them as to predispose to a fresh invagination of the ileum, practically because it may be mistaken in its inflamed state for the tumour of an intussusception.[16] The after-treatment of an intussusception which has been cured by irrigation must consist in keeping the patient absolutely at rest, in the administration of opiates, and in feeling the abdomen gently from time to time to ascertain that the tumour has not recurred.

c. Treatment by Abdominal Section.—When irrigation has failed to relieve an intussusception the method must not be continued for too long a time, because the patient may become collapsed, even though no injury be done to the bowel. Abdominal section must then be performed at once, and this forms the second great method of treating intussusception. The failure of irrigation, because it leads to the necessity for laparotomy, increases the surgical interest of the case tenfold, but unfortunately it adds greatly to its gravity; for whilst the mortality of intussusception in infants treated without operation is calculated in the latest series of tables at 59 per cent., the mortality amongst the cases in which the abdomen had been opened is 67 2 per cent. Dr. Wiggin,[17] who appears to have compiled these statistics with great care, explains that this high rate of mortality is due to the inclusion in his tables of all cases in which laparotomy has been performed. The risk of abdominal section is reduced to 22 2 per cent., if only those cases be reckoned which have been operated upon within forty-eight hours of the onset of the symptoms and if we only take into account the cases which have been submitted to operation since the year 1889, when the more perfect technique of abdominal surgery has become generally known. Such an estimate, however, is based necessarily upon published cases, and is probably inaccurate, for no record has been kept of many unsuccessful operations.

Shock is the great and immediate cause of danger in every case of abdominal section performed upon a young child for the relief of an intussusception. Chilling of the body, bleeding, and powerful nerve stimuli ascending to the spinal cord from the splanchnic region, are the causes of shock, and they should be reduced to a minimum. Chilling of the body is easily prevented by placing the patient upon a hot-water bed and by swathing the arms and legs in cotton-wool, whilst the chest is covered with a roughly-made jacket of Gamgee tissue. The subcutaneous injection of one-fiftieth of a grain of strychnine, with enemata of brandy and hot water, will cause a temporary rally lasting long enough for a simple abdominal section to replace a piece of invaginated intestine in a child, though in a long operation these measures must be repeated more than once. The anæsthetic should be given sparingly. The incision should be made in the middle line, and at first it should only be long enough to admit two fingers and a thumb into the peritoneal cavity, for in the simplest cases it is unnecessary to drag the intestine to the wound. Indeed, it is better not to do so, because such a proceeding stretches the mesentery, and so stimulates the nerves that the splanchnic vessels are first contracted and afterwards dilated, leading to as great a lowering of blood pressure as would be caused by a very serious hæmorrhage. The less the intestine is handled, therefore, the better it will be for the patient, but it is much better to enlarge the incision and to bring the tumour into view if there is any difficulty in reducing the intussusception rather than to run any risk of tearing the serous coat by manipulating the intestine in too cramped a space. Rapidity combined with caution is the golden rule in all cases of abdominal surgery, and if it be followed in these cases the operation of laparotomy, even in a young child, is no more dangerous than is the ordinary operation for the relief of a strangulated hernia in an adult. The mortality rate of 22·2 per cent. applies more especially to this class of cases, and though it is still far too high we may hope that, as time proceeds and the cases are seen earlier, it will be still further and very greatly lowered. Washing out the peritoneal cavity is wholly unnecessary in the simpler cases; it lengthens the operation and increases the shock without yielding any adequate result.

An intussusception sometimes recurs after it has been reduced, but recurrence is less usual after an abdominal section has been done than when reduction has been brought about by irrigation. In a few cases[18] the intestine has remained so œdematous that the tumour has been felt even after the wound has been closed, leading the operator to suppose that invagination had recurred. Such a condition may be distinguished from true recurrence by the fact that the swelling rapidly disappeared and with it the symptoms of obstruction. There is another condition equally uncommon in which after an abdominal section has been done and the intussusception has been reduced the patient passes one or two healthy motions and seems to be on the highway to recovery, but within a few hours or days he again becomes constipated, his abdomen becomes distended with flatus, and he dies. A case of this kind recently came[19] under my care in the person of a boy aged eight months who had suffered for thirteen and a half hours from symptoms of intussusception. Irrigation failed to reduce the intussusception, so I opened the abdomen and easily replaced the bowel without doing it any injury. The child afterwards passed two motions—one blood-stained, the other natural—and took his food well, digesting it. Forty-five hours after the operation he began to vomit, the intestines became distended, and he died with all the symptoms of intestinal obstruction. The examination of the body in the post-mortem room showed that the intestines were distended with flatus to within a foot of the ileo-cæcal valve. The distension stopped suddenly, although there was no visible cause for its arrest either outside or within the intestine or abdomen. The colon, like the lower part of the ileum, was collapsed. There was no intussusception and no peritonitis. Similar cases are recorded by Mr. Pick[20] and by Müller.[21] The bowel in these cases is paralysed at the seat of invagination, for it is sufficiently injured to destroy its functional activity, but not badly enough to destroy its vitality. If a similar case should unfortunately happen again in my practice, I shall inject hypodermically a grain or two of barium chloride in solution. The drug is a powerful stimulant of peristalsis, but its action is less severe than eserin. When an intussusception has been successfully reduced by laparotomy, the surgeon should satisfy himself before he closes the abdomen that he has overcome the only cause of obstruction and that the case he is treating is really as simple as it appears to be, for an intussusception may be complicated by a variety of troublesome and dangerous conditions. Dr. Handfield-Jones and Mr. Page[22] published the details of such a complicated case in which there were two intussusceptions of the colon and one of the ordinary ileo-colic

[12] THE LANCET, Jan. 9th, 1897, p. 67.
[13] THE LANCET, July 7th, 1888, p. 17.
[14] Senn: Abdominal Surgery, p. 95.
[15] Dr. Goodhart, Transactions of the Clinical Society, xvi., 1883, p. 62 and plate 5.
[16] THE LANCET, vol. ii., 1892, p. 380.
[17] New York Medical Record, vol. xlix, 1896, p. 85.
[18] Watson Cheyne, THE LANCET, Nov. 29th, 1890, p. 1158; Farrer, THE LANCET, vol. i. 1893, p. 829.
[19] Brit. Med. Jour., vol. ii. 1895, p. 1356.
[20] THE LANCET, June 13th, 1891, p. 1313.
[21] Beiträge zur Klinische Chirurgie zu Tübingen, 1886, ii., 499.
[22] Transactions of the Royal Medical and Chirurgical Society, vol. lxi., p. 301.

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type in a boy aged five years, and I have already mentioned the less uncommon cases of double intussusceptions.

d. Irreducible intussusception.—Intussusceptions become irreducible under many different conditions. In the first place the intestine may be healthy, but it is kept invaginated by more or less extensive adhesions; by peculiarities of structure, such as twists in its axis or the forcing of one piece of intestine upon another; by great swelling of the intussusception, or by the presence of large tumours in the intussuscepted bowel. Secondly, an intussusception may become irreducible because the bowel is so gangrenous or ulcerated that the surgeon does not dare to exercise traction upon the tumour, nor does he dare to leave the injured intestine within the peritoneal cavity. It has already been pointed out that slight and newly-formed adhesions do not necessarily render an intussusception irreducible, even by such a simple method of treatment as irrigation, though their presence is of unfavourable augury, because increased force is necessary to effect reduction. The adhesions formed in an ordinary case of intussusception which has been allowed to run its course unchecked may be very extensive and very dense. Clinical observations show how widely different is the tendency to the formation of adhesions in different persons. Mr. Marsh[23] performed abdominal section on a child about fifteen hours after the onset of symptoms, only to find that the intussusceptum had become so universally adherent to its sheath that it was impossible to effect a reduction. A similar experience befell Mr. Makins[24] in the case of a child aged four years, who had suffered from symptoms of intussusception for forty-eight hours. On the other hand, the formation of adhesions is sometimes delayed for an indefinite length of time, as in the cases seen by Dr. Lettsom,[25] in which the symptoms of intussusception were of three months' duration, and by Dr. Leichtenstern,[26] where they had lasted eleven months, and yet the post-mortem examination showed that hardly any adhesions were present.

Gangrenous and ulcerating intussusceptions form the second great group of irreducible intussusceptions of the bowel. I have already occupied some part of your time with a consideration of gangrenous intussusception, so that I shall not deal further with its pathology or causation, except to say that it is only produced with the greatest difficulty in experimental invaginations upon animals. The treatment of an irreducible intussusception is fraught with danger, whether it be irreducible from mechanical obstacles on account of extensive adhesions or because of gangrene. The prognosis in these cases was formerly considered desperate, but the advance of abdominal surgery has led to a recognition of the extraordinary readiness with which wounds of the intestine repair when their edges are kept in proper apposition, and we now have good hope that our efforts will be crowned with success even in the most unsatisfactory conditions.

e. Doubtful cases.—When the surgeon has opened the abdomen and finds that the intussusception is greatly congested and has lost its gloss he must not too hastily assume that it is dead. A piece of intestine which is only congested will bleed if it be pricked, even though it has lost its lustre, and if it be gently stroked until its vessels are emptied the the blood will be seen to pass along the vessels again as soon as the pressure is taken off them. A piece of intestine in such a condition must be handled very tenderly. It is unnecessary to remove it, and the patient is often so collapsed as to render any prolonged operation impossible, even if enterectomy were advisable. The wisest thing to do in such cases is to wrap a layer or two of gauze round the injured intestine as soon as the invagination has been released. One end of the gauze is left hanging out of the abdominal wound, the intestine is laid inside the peritoneal cavity and the incision is lightly closed with temporary silk sutures. If the bowel ruptures the intestinal contents may then find their way out of the abdominal cavity, whilst if it recovers the gauze can be removed and the wound will close by granulations.

f. Simple irreducible cases.—In chronic cases, when the end of the intussusceptum is gangrenous; when the intussusception is short and when it is irreducible from adhesions, from the presence of a polypoid tumour, or from a bulbous enlargement of the end of the intussusceptum, the method recommended by Barker,[27] Jessett,[28] and Greig Smith[29] may give excellent results. The broad principle underlying each modification of the operation is to ensure the union of the intussuscipiens with the intussusceptum by inserting a continuous suture at the neck of the tumour, then to slit open the intussuscipiens, remove so much of the intussusceptum as lies dead or free, stop the bleeding, and sew up the wound in the sheath. It is sometimes impossible to remove the intussusceptum after it has been divided, and in such a case Leszczynski[30] left the piece of bowel in the large intestine to be dealt with by nature, and the patient recovered. These methods are useless when the intussusceptum is attached to the intussuscipiens by firm adhesions for any great distance, as in these cases the two cylinders of intestine may form a continuous tube. Mr. Sydney Jones,[31] recorded such a case occurring in a child, aged nine months, in whom an intussusception proved fatal after the symptoms had lasted nine weeks. The apposed serous surfaces were adherent along their whole length by firm fibrous tissue. An artificial anus would alone be serviceable in the treatment of such a case, or if the adhesions did not extend very low in the rectum Halsted's operation of lateral anastomosis[32] might be employed.

g. Enterectomy.—Partial operations are useless when the neck of the sac is ulcerated, when the sheath of the intussusception is gangrenous, or when the invagination is associated with malignant disease of the intestine, and it is exactly in these cases that the greatest and most satisfactory advance has recently been made in the surgical treatment of intussusception. The old operation of making an artificial anus for the relief of the worst cases of irreducible intussusception had long been condemned by the more thoughtful surgeons, and Mr. Howse[33] performed a formal enterectomy for the relief of a ruptured intussusception in a child aged five months in September, 1876. But it was not until 1885 that Professor Braun[34] in Germany and in 1887 that Mr. Lawford Knaggs[35] in England called attention to the feasibility of section and subsequent suture of the intestine in these cases, pointing out the great advantage to be gained by the operation over the older methods. Resection was at first associated with simple end-to-end suture of the divided intestine, which is theoretically the most perfect but practically the most difficult method of obtaining union. The results of simple end-to-end suture proved most unsatisfactory, and this method has now been abandoned for more complex operations, which have resolved themselves into the union with, and union without, the aid of mechanical appliances, the methods of Senn and of Maunsell respectively. Personally, I have no hesitation whatever in giving in my adherence to the non-mechanical party, for it seems to me that its methods are more simple, whilst its results are at least as good as those obtained by the mechanical school. Maunsell's method is particularly suited for the ileo-cæcal form of intussusception which is the more common, for the two pieces of intestine vary greatly in their calibre, so that the invagination is easy. For the present, however, Murphy's button seems to have the advantage, though I think that it is but a temporary one, for in all the cases where it has been used successfully the intussusception has been of the enteric form, where the serous surfaces are smooth and can be brought into sufficiently close approximation to ensure union by first intention. It must necessarily prove less useful in intussusceptions involving the large intestine because the appendices epiploicæ render it impossible to bring the two surfaces into regular and uniform apposition.

My own experiments carried on without a knowledge of the very valuable and more extensive work done along the same lines by Mr. Ballance and Mr. Edmunds,[36] have satisfied me that in animals Maunsell's method yields the most satisfactory results. It can be performed at a moment's notice and the entire operation, from the

[23] THE LANCET, Feb. 14th, 1891, p. 367.
[24] Transactions of the Clinical Society, vol. xxii., p. 282.
[25] Philosophical Transactions, vol. lxxvi., p. 305.
[26] Deutsches Archiv für Klinische Medicin, xii., 1874, p. 381.
[27] THE LANCET, Jan. 9th, 1892, p. 79.
[28] Surgical Disease of the Stomach. 1872, p. 133.
[29] Abdominal Surgery, fifth edition, 1896, vol. ii., p. 675.
[30] Pamietnik ii Zjardu chirurgor. polskich, 1890, quoted by Rydygier in the Verhandlungen der Deutschen Gesellschaft für Chirurge, 24, 1895, p. 439.
[31] Transactions of the Pathological Society, vol. viii., p. 179.
[32] American Journal of the Medical Sciences, vol. xliv., 1887, p. 437 and Bulletins of the Johns Hopkins Hospital, vol. ii., 1891, p. 1.
[33] Transactions of the Medico-Chirurgical Society, vol. lix., p. 94.
[34] Verhandlungen der Deutschen Gesellschaft für Chirurgie, xiv., 1885.
[35] THE LANCET, April 16th, June 4th and 11th, 1887.
[36] Transactions of the Royal Medical and Chirurgical Society, vol. lxxix., 1896, p. 255.

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first incision to the last suture in the abdominal wall, can be completed easily in thirty minutes. The outlook for cases of irreducible intussusception treated by enterectomy is distinctly favourable, whatever method be adopted. When Braun[37] published his statistics in 1885 he could only find a single case where recovery had followed enterectomy for the relief of intussusception. Rydygier, in his addendum to Braun's list, published ten years later, has been able to collect the records[38] of 25 cases published between the years 1885 and 1895 in which recovery has taken place after the intestine has been resected or an anastomosis has been made between two pieces of bowel for the cure of intussusception. I find that four more recoveries are to be added to this list. Two of these occurred in America,[39] where the operation was done for the relief of chronic intussusception in women and two were done in England for acute gangrenous intussusception in children. One of these cases is recorded by Mr. Mitchell Banks,[40] who tells me that the boy is still alive and well. The other case came under the care of my colleague, Mr. Pickering Pick, and, though it is still unpublished,[41] he has very kindly given me leave to say that it was that of a girl aged eight and three-quarter years, who had complained of pain after she had jumped off a form at school. The abdomen was opened on the seventh day after the onset of symptoms and a stinking intussusception was found two inches above the ileo-cæcal valve. It was cut away, and the two ends of the ileum were brought together with a Murphy's button, which was passed on the ninth day after the operation.

For the sake of completeness I will sum up the conclusions at which I have arrived in this lecture. Intussusception is a condition which brooks no delay in its treatment, for something must always be done at once except, perhaps, in those slight cases which are indistinguishable from severe colic. In all doubtful cases purgatives should be completely withheld. I found in my experiments that cats and rabbits bore a simple invagination with remarkable freedom from symptoms, and that after a varying period of time the invaginated bowel could be excised and the animal would recover. All the animals, however, to whom purgatives were administered after the intestines had been invaginated died when enterectomy was performed. Clinical evidence teaches the same lesson, for all the records of cases show that the symptoms have been seriously increased when the patient has been purged. The routine treatment of intussusception is to chloroform the patient and steadily to fill his large intestine with hot salt solution under a hydrostatic pressure of not more than 3 ft. in a child, the fluid being allowed to remain in the intestine at least ten minutes. The earlier this method is adopted after the appearance of the symptoms the better are the results obtained, but it should not be adopted in enteric intussusception, in cases where the symptoms are very acute, or in those where the absence of signs or symptoms, with a subnormal temperature, leads the surgeon to suspect that the intestine is becoming gangrenous. In these cases, and when the intussusception is not reduced after irrigation has twice been tried, and when after reduction the intussusception has twice recurred, the abdomen must be opened. The surgeon must then be prepared to deal effectually with the conditions he may find by such operative means as he can carry out with the least amount of shock and in the shortest space of time that is compatible with the safety of the patient. This will be ensured if he uses the method with which he is most familiar. But he should bear in mind that hardly a case can arise in which he is justified in closing the abdominal wound without at least an attempt to complete the operation by reducing or removing the intussusception. Such half measures as the formation of an artificial anus are hardly ever justifiable, and the results obtained by them are usually most disastrous.

[37] Verhandlungen der Deutschen Gesellschaft für Chirurgie, xiv., Berlin, 1885, p. 491.
[38] Ibid., xxiv., Berlin, 1895, pp. 446-459.
[39] Annals of Surgery, vol. xxiii., p. 440; and vol. xxiv., p. 733.
[40] THE LANCET, Feb. 23rd, 1895, p. 487; and Brit. Med. Jour., vol. ii., 1896, p. 1197.
[41] Published since the above was written in the Quarterly Medical Journal, vol. v., 1897, p. 121.

GUILDHALL BANQUET TO POOR CHILDREN.—After paying all expenses, including the cost of 1000 hampers sent to poor crippled children, Mr. Alderman Treloar has given £34 6*s.* 1*d.*, the surplus of his fund, to Mr. J. Kirk, the secretary of the Ragged School Union.

SOME SMALL-POX STATISTICS.

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[WITH A COLOURED CHART.]

THE following figures[1] are derived from personal inquiry into the incidence of small-pox on households in three recent outbreaks—namely, (1) in the Dewsbury Union, 1891-92; (2) at Leicester, 1893-94; and (3) at Gloucester, 1895-96. They comprise information of:—Dewsbury: 544 households, numbering 3000 persons. Leicester: 193 households, numbering 1234 persons. Gloucester: 899 households, numbering 4861 persons. The small-pox attack-rates were:—Dewsbury: 3000 exposed, 887 attacked; rate 29·5 per cent. Leicester: 1234 exposed, 320 attacked; rate 25·9 per cent. Gloucester: 4861 exposed, 1717 attacked; rate 35·8 per cent. The small-pox mortality was:—Dewsbury (3000 persons): 83 deaths; mortality, 2·7 per cent. Leicester (1234 persons): 17 deaths; mortality, 1·3 per cent. Gloucester (4861 persons): 370 deaths; mortality, 7·6 per cent. The small-pox case-fatality was:—Dewsbury: 887 attacked; 83 deaths; fatality, 9·3 per cent. Leicester: 320 attacked; 17 deaths; fatality, 5·3 per cent. Gloucester: 1717 attacked; 370 deaths; fatality, 21·6 per cent.

At different age-periods these returns show (Table I.):—

TABLE I

—	Exposed.	Attacked.	Died.	Attack-rate.	Mortality.	Case-fatality.
Under 1 year.				Per cent.	Per cent.	Per cent.
Dewsbury	75	25	16	33·3	21·3	64·0
Leicester...	33	7	2	21·2	6·0	28·5
Gloucester	167	80	56	47·9	33·5	70·0
1 to 10 years.						
Dewsbury	654	178	32	27·2	4·8	18·0
Leicester...	328	95	10	28·9	3·0	10·5
Gloucester	1436	661	193	39·0	13·4	34·4
10 to 30 years.						
Dewsbury	1349	482	24	35·2	1·7	5·0
Leicester...	531	151	3	22·6	0·5	2·0
Gloucester	1751	594	48	33·9	2·7	8·0
30 years and over.						
Dewsbury	901	202	11	22·4	1·2	5·4
Leicester...	330	67	2	20·3	0·6	3·0
Gloucester	1507	482	73	31·9	4·8	15·1

Note.—In Dewsbury the age was not ascertained in 21 of the exposed, none of whom were attacked. In Leicester the age was not ascertained in 9 of the exposed, none of whom were attacked.

Proportion of vaccinated and unvaccinated.—For the sake of simplicity the whole series has been divided into two categories only, the "vaccinated" and the "unvaccinated"; but in detailed analysis it is necessary for greater accuracy to further sub-divide these categories. Thus the "vaccinated" group here includes those instances (few comparatively) where no certain evidence could be obtained as to the fact of vaccination and those in which vaccination had been alleged, but of which no ocular evidence could be obtained; again, amongst the "unvaccinated" are here included all those who at the time of the invasion of the house by small-pox underwent primary vaccination—a not inconsiderable number in Dewsbury and Gloucester. If these were separated the effect on the statistics would be a lowering of the proportion of the unvaccinated, with a raising of the attack- and mortality-rates among the latter. For the attack-rate and mortality of those who were "undergoing" vaccination were, the former especially, much below the figure obtained by their inclusion with the strictly unvaccinated. (See reports on these outbreaks in the appendices to the final report of the Royal Commission). The term "vaccinated" refers to primary vaccination only.

At Dewsbury, of 3000 exposed, 2395 were vaccinated, a

[1] Most of these data have been published in the Final Report of the Royal Commission on Vaccination.

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proportion of 79·8 per cent. At Leicester, of 1234 exposed, 846 were vaccinated, a proportion of 68·5 per cent. At Gloucester, of 4861 exposed, 3386 were vaccinated, a proportion of 69·6 per cent. These proportions are somewhat altered when those who were attacked are alone considered, for amongst these there were at Dewsbury, 887 attacked, of whom 574 were vaccinated, or 64·7 per cent.; at Leicester, 320 were attacked, of whom 170 were vaccinated, or 53·1 per cent.; and at Gloucester, 1717 were attacked, the vaccinated numbering 1028, or nearly 60 per cent. Or, dealing with the *fatal* cases only, the proportions were: at Dewsbury, 83 deaths, vaccinated 13, or 16·6 per cent.; at Leicester, 17 deaths, vaccinated 1, or 5·9 per cent.; and at Gloucester, 370 deaths, vaccinated 95, or 25·7 per cent.

Distributed amongst age-periods the figures are (Tables II. and III.):—

TABLE II.

—	Exposed.		Attacked.		Died.	
	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.
Under 1 year.						
Dewsbury	16	59	1	24	0	16
Leicester...	1	32	0	7	0	2
Gloucester	14	153	0	80	0	56
1 to 10 years						
Dewsbury	400	254	43	133	1	31
Leicester...	77	251	2	93	0	10
Gloucester	258	1178	24	537	1	192
10 to 30 years.						
Dewsbury	1125	224	341	141	5	19
Leicester...	438	96	104	47	0	3
Gloucester	1649	102	539	55	30	18
30 years and over.						
Dewsbury	833	68	187	15	7	4
Leicester...	321	9	64	3	1	1
Gloucester	1465	42	465	17	64	9
Age uncertain.						
Dewsbury	21	—	—	—	—	—
Leicester...	9	—	—	—	—	—
Gloucester	—	—	—	—	—	—

TABLE III.—*Showing Proportionate Distribution.*

—	Exposed.		Attacked.		Died.	
	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.
Under 1 year.	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Dewsbury	21·3	78·7	4·0	96·0	—	100
Leicester...	3·0	97·0	—	100·0	—	100
Gloucester	8·3	91·7	—	100·0	—	100
1 to 10 years.						
Dewsbury	61·1	38 9	24·4	75·6	3·1	96 9
Leicester...	23·4	76·6	2·1	97·9	—	100 0
Gloucester	17·9	82·1	4·2	95·8	0·5	99 5
10 to 30 years.						
Dewsbury	83·4	16·6	70·7	29 3	20·8	79·2
Leicester...	82·0	18·0	68·8	31·2	—	100·0
Gloucester	94·1	5·9	90·7	9·3	62·5	37·5
30 years and over.						
Dewsbury	91·3	8·7	92·6	7·6	63·6	36·4
Leicester...	97·2	2·8	95 5	4·5	50·0	50·0
Gloucester	97·2	2·8	96·4	3·6	87·6	12·4

Attack-rates and mortality.—The foregoing figures supply the means of contrasting the vaccinated and unvaccinated series in respect to their rates of attack—i.e., the proportion of those exposed to infection who contracted small-pox. They also supply data for determining the mortality (as well as the case-fatality) in each series. At Dewsbury, where the attack-rate on the whole number exposed was 29·5 per cent., the rate for the vaccinated was 24 per cent., and for the unvaccinated 51 7 per cent. At Leicester, where the attack-rate on the whole number exposed was 25·9 per cent., it was for the vaccinated 20·1 per cent., and for the unvaccinated 38·4 per cent. At Gloucester, where the attack-rate for the whole number exposed was 35 8 per cent., it was for the vaccinated 30·3 per cent., and for the unvaccinated 46·7 per cent.

Then as regards the rate of mortality, at Dewsbury for all classes, this was 2·7 per cent., for the vaccinated 0·5 per cent. and for the unvaccinated 11·5 per cent. At Leicester, where the mortality-rate for the whole was 1·3 per cent., for the vaccinated it was 0·1 per cent., and for the unvaccinated 4·1 per cent. At Gloucester, where the mortality-rate for the whole was 7·6 per cent., it was for the vaccinated 2·8 per cent., and for the unvaccinated 18·6 per cent. The case-fatality dealing with larger percentages exhibits this contrast more strikingly. Thus at Dewsbury the general fatality was 9·3 per cent., for the vaccinated 2·2 per cent., and for the unvaccinated 22·3 per cent. At Leicester, where the general fatality was 5·3 per cent., it was for the vaccinated 0·6 per cent., and for the unvaccinated 10·7 per cent. At Gloucester, where the general fatality was 21·5 per cent., it was for the vaccinated 9·2 per cent., and for the unvaccinated 40·0 per cent.

These returns may again be distributed amongst age-periods as follows (Table IV.):—

TABLE IV.

—	Attack-rate.		Mortality-rate.		Case fatality-rate.	
	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.	Vaccinated.	Unvaccinated.
Under 1 year.	Per cent	Per cent	Per cent	Per cent	Per cent	Per cent
Dewsbury	6·2	40·7	—	27·1	—	66·6
Leicester	—	21·8	—	6·2	—	28·5
Gloucester	—	52·2	—	36·6	—	70·0
1 to 10 years.						
Dewsbury	11·2	52·3	0·2	12·2	2·3	23·3
Leicester	2·6	37·0	—	4·0	—	10·7
Gloucester	9·3	45·5	0·4	16·3	4·1	35·7
10 to 30 years.						
Dewsbury	30·3	62·9	0·4	8·4	1·4	13·4
Leicester...	23·7	48·9	—	3·1	—	6·8
Gloucester	32·6	53·9	1·8	17·6	8·0	32·7
30 years and over.						
Dewsbury	22·4	22·0	0·8	5·8	3·7	26·6
Leicester...	20·0	33·3	0·3	11·1	1·5	33·3
Gloucester	30·3	40·5	4·3	21·4	13·7	53·0

The Class of "Under" Vaccination.—It has already been stated that the inclusion with the "unvaccinated" of those who were primarily vaccinated at the time of infection of the household materially influences the attack-rates and mortality amongst the former. This is most apparent in places where, as at Gloucester, such vaccination during an epidemic is widely resorted to. In order to give an opportunity to anyone to revise the foregoing returns by the subtraction of those who were "under" vaccination, as well as to give some idea of the influence which this recent vaccination appears to exert, these cases are now dealt with apart. They require, however, much closer scrutiny than can be here given, especially as to the time of the vaccination and its objective result. This has been done elsewhere, and I here must content myself with the remark that however closely they are analysed the only result of any change in the figures would be the re-transference of some to the list of the "unvaccinated," which could not fail, I think, to still further

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diminish the mortality of those admitted unquestionably to be "under" vaccination. At Dewsbury, out of the 605 in the "unvaccinated class," there were 78 who may be considered as "under" vaccination when exposed to infection; of these, 21 were attacked and 3 died.[2] The attack-rate was, therefore, 28·9 per cent., the mortality 3·8 per cent., and the case-fatality 14·2 per cent. At Leicester there were exposed 17, attacked 4, and no deaths. The attack-rate was, therefore, 23·5 per cent. At Gloucester there were exposed 653, attacked 85, deaths 25, or an attack-rate of 13·1 per cent., mortality 3·8 per cent., and case-fatality 29·4 per cent.

Distributed in age-periods these figures are (Table V.):—

TABLE V.

—	Exposed.	Attacked.	Died.	Attack rate.	Mortality.	Case fatality.
Under 1 year.				Per cent.	Per cent.	Per cent.
Dewsbury	16	7	3	43·7	18·7	43·0
Leicester...	2	1	—	50·0	—	—
Gloucester	57	10	3	17 5	5·2	30·0
1 to 10 years.						
Dewsbury	41	10	—	24·4	—	—
Leicester...	8	2	—	25·0	—	—
Gloucester	550	66	21	12 0	3·8	31 8
10 to 30 years.						
Dewsbury	19	4	—	21·0	—	—
Leicester	7	1	—	14 3	—	—
Gloucester	39	8	1	20 5	2 5	12·5
30 years and over.						
Dewsbury	2	—	—	—	—	—
Leicester	—	—	—	—	—	—
Gloucester	7	1	—	14·3	—	—

Thus it will be seen that with the exception of the Dewsbury return at age "under one year" the attack rates are markedly lower than those given for the whole "unvaccinated class" at the different ages. This is strikingly the case with the Gloucester figures, where, too, the total number is very high. Similarly the mortality and fatality rates are in every instance lower than those pertaining to the whole "unvaccinated class," although mostly much higher than the rates for the "vaccinated."

Previous small-pox.—Of the 9095 persons exposed to infection in the series here dealt with, 222 were stated to have been attacked by small-pox in early life, a proportion of 2 4 per cent. Of these, 10 were again attacked, forming out of the total attacks 2922, a proportion of 3·4 per cent.; none died. The attack-rate amongst those who had small-pox a second time was, therefore, 4·5 per cent., or about one-seventh of the general attack-rate.

As regards age-distribution, a previous attack of small-pox was reported in only 2 out of the 2693 who were under 10 years of age when exposed to infection a second time, and neither of these again contracted the disease. Of the 3634 exposed to infection between the ages of ten to thirty years, 33 were stated to have had small-pox previously, and 3 of these again were infected. Of those aged thirty years and over, 187 out of the 2738 exposed to infection had previously suffered from small-pox, of whom 7 were again attacked. Thus the attack-rate for these persons who were again exposed to infection was — from ten to thirty years, 9·1 per cent.; thirty years and over, 3·7 per cent. Distributing these 222 persons between the two series of "vaccinated" and "unvaccinated" there were 146 in the former and 76 in the latter. So that the attack-rate, or liability to a second attack, was for the vaccinated 4·1 per cent., and for the unvaccinated 5·2 per cent. Of the vaccinated 17 were between ten and thirty years, of whom 2 were again attacked, or 11·3 per cent., and 129 over thirty years, of whom 1 was attacked, or 0·8 per cent. (nearly). Of the unvaccinated 2 were under ten years of age (none attacked); 16 were between ten and thirty years, of whom 1 was attacked a second time, or 6·2 per cent.; and 58 were over thirty years, of whom 3 were again attacked, or 5·2 per cent. (nearly). The subtraction of these persons, who enjoyed a much greater immunity from attack than those who had never been infected before, is essential to the endeavour to arrive at a just conclusion upon the question of the protective power of vaccination. Were this done we should have amongst the whole of those exposed 9095 minus 222, or 8873, and attacked 2922 minus 10, or 2912, giving an attack-rate of 32·8 instead of 32·1.

Similarly, the vaccinated figure would be 6627 minus 146, or 6481, of whom were attacked 1770 minus 6, or 1764, an attack-rate of 27·0 per cent., instead of 26·7. And the unvaccinated figure would be reduced 2468 minus 76, or 2392, of whom were attacked 1152 minus 4, or 1148, or an attack-rate of 48 per cent., instead of 46·6. The change wrought by this subtraction is, however, better seen in the later periods of life, where most of these figures occur. Thus, to take the age-period thirty and over only, the figures would be thus altered:—

	Exposed.	Attacked.	Attack-rate.
Vaccinated....	2619 - 129 = 2490	716 - 4 = 712	28·6
Unvaccinated	119 - 58 = 61	35 - 3 = 32	52·4

Whereas the rates at this age-period, when these persons are included, are vaccinated, 27·3 per cent.; and unvaccinated 29·4 per cent. The change is, therefore, most marked with respect to the "unvaccinated," who have been protected by having experienced an attack of small-pox in early life.

The annexed table (Table VI.) will enable those interested in this subject to make similar calculations for each of the several districts. It will be found that the attack-rate amongst the unvaccinated is everywhere much raised by the deduction.

TABLE VI.—*Showing Numbers previously Attacked by Small-pox.*

—	Dewsbury.	Leicester.	Gloucester.	Total.
Exposed	126	19	77	222
Attacked	6	—	4	10
Vaccinated.				
Exposed	76	14	56	146
Attacked	3	—	3	6
Unvaccinated.				
Exposed	50	5	21	76
Attacked	3	—	1	4
EXPOSED TO INFECTION.				
Vaccinated.				
10 to 30 years	11	—	6	17
30 years and over	65	14	50	129
Unvaccinated.				
1 to 10 years	—	—	2	2
10 to 30 ,, ...	13	—	3	16
30 years and over	37	5	16	58
ATTACKED BY SMALL-POX.				
Vaccinated.				
10 to 30 years	2	—	—	2
30 years and over	1	—	3	4
Unvaccinated.				
10 to 30 years	1	—	—	1
30 years and over	2	—	1	3

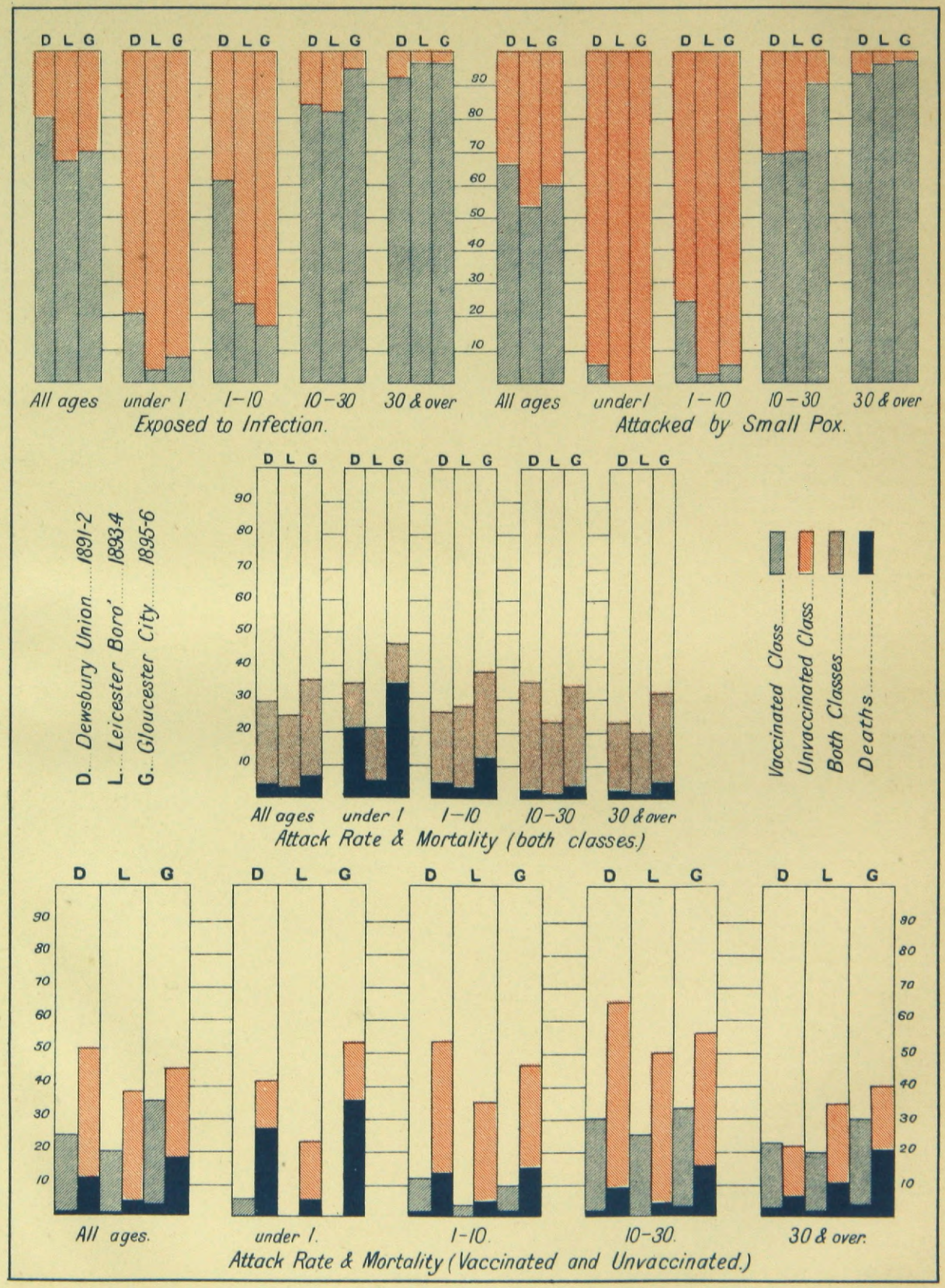
CONCLUSIONS.

Amongst the conclusions which may legitimately be drawn from the foregoing statistics are the following:—

1. That when an outbreak of small-pox occurs within a community of which the child-population is largely unvaccinated the attack-rate and mortality are highest in the early

[2] In my Report on the Dewsbury Outbreak (Appendix to the Final Report of the Royal Commission), on p. 128 et seq. these cases have been throughout separated from the unvaccinated series.

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TO ILLUSTRATE AN ARTICLE ON SOME SMALL-POX STATISTICS,

BY Dr. SIDNEY COUPLAND.

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years of life (under ten years). Combining the results of the three inquiries there were in all 9095 exposed to infection, of whom 2922 were attacked and 470 died—an attack-rate of 32·1, a mortality-rate of 2·1, and a (case) fatality-rate of 16·0 per cent. At ages under one year of 275 exposed 112 were attacked and 74 died—an attack-rate of 40·7, a mortality-rate of 26·9, and a fatality-rate of 66·0. At ages one to ten years of 2418 exposed, 852 were attacked and 235 died—an attack-rate of 35·2, a mortality-rate of 9·7, and a fatality-rate of 27·5.

2. That the attack- and death-rates at the age-period ten to thirty years most nearly approximate to the mean, but that the fatality-rate is lower. Of 3634 exposed, 1227 were attacked and 75 died—an attack-rate of 33·7, a mortality-rate of 2·0, and a fatality-rate of 6·1.

3. That the attack-rate at ages thirty years and over is lowest of all, but the fatality is higher than at the previous period. Of 2738 exposed, 751 were attacked and 86 died—an attack-rate of 27·4, a mortality-rate of 3·1, and a fatality-rate of 11·4.

4. That vaccination has a marked influence in diminishing liability to attack and to a fatal issue, an influence most apparent in early life, but obtaining in lessening degree at later periods, the rates amongst the vaccinated being always below those of all classes at the same period:—

TABLE VII.—*Rates among the Vaccinated.*

Vaccinated.	Attack-rate.	Mortality.	Fatality.
Under 1 year	3·2	—	—
1 to 10 years	9·3	0·2	2·9
10 to 30 years	30·6	1·1	3·5
30 years and over	27·3	2·7	10·0

5. That on the other hand, the lack of vaccination enhances the liability to attack and increases the mortality from small-pox in an infected community, both absolutely and relatively, but that the absence of this influence is less marked, at any rate, so far as regards the liability to infection, as age advances.

TABLE VIII.—*Rates among the Unvaccinated.*

Unvaccinated.	Attack-rate.	Mortality.	Fatality.
Under 1 year	45·5	30·3	66·6
1 to 10 years	46 5	13·8	29·9
10 to 30 years	57·5	9·4	16·4
30 years and over	29·4	11·8	40·0

6. That although great variations may exist between different outbreaks as regards the general attack-rate and mortality, irrespective of the proportion of the vaccinated and unvaccinated in the community, yet in every instance a similar disproportion exists in the attack-rate and mortality of the vaccinated and unvaccinated respectively. The comparison of the outbreaks at Leicester and Gloucester bears this out. In these two places the proportion of the vaccinated in the community invaded by small-pox was nearly the same, and a like parallelism obtained at each age-period. These proportions were also maintained amongst those attacked with small-pox, except that in every instance the relative proportion was higher of the unvaccinated amongst those attacked than it was amongst those exposed. The general attack-rates and the mortality at all and any age were notably higher at Gloucester than at Leicester. Nevertheless in the two places the attack-rates of vaccinated and of unvaccinated were similarly disproportionate throughout.

7. That upon this it appears that (*a*) whether a small-pox outbreak be severe or slight, intense in its virulence and fatal in its effects, or comparatively mild and yielding a low death-rate, (*b*) whatever may be the local conditions or circumstances, the amount of isolation and other less obvious factors whereby the extent of an outbreak is influenced,—there still remains one feature common to all. This is that invariably the unvaccinated members are more liable to be attacked, besides yielding a rate of fatality considerably in excess of that which results amongst the vaccinated section.

8. That the disparity between the vaccinated and unvaccinated rates is considerably increased if those who were "undergoing vaccination" when exposed or attacked be deducted from the total of the "unvaccinated," and even more markedly (for the later periods of life especially) by a similar deduction of those who had in previous years suffered from small-pox.

EXPLANATION OF THE COLOURED CHART.

These diagrams have been constructed from the statistical data given above. They are intended to furnish a ready means of comparison between the three outbreaks in respect to: (1) the general attack-rate and mortality at all ages and in each of four age-periods; (2) the proportionate numbers (per cent.) of the vaccinated and unvaccinated at all ages and at each age-period amongst those exposed to infection; (3) the proportionate numbers (per cent.) of the vaccinated and unvaccinated at all ages and at each age-period of those attacked by small-pox; and (4) the attack-rate and mortality (per cent.) of the "vaccinated" and "unvaccinated" groups at all ages and at each age-period.

(*To be continued.*)

TWO CASES OF INTRACRANIAL TUMOUR.

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INTRACRANIAL tumours form but a small percentage of the cases occurring in asylum practice. Their comparative rarity has frequently been commented upon, the more so as such an institution is the haven in which only sufferers from intracranial diseases or their results find refuge. The effects and manifestations of tumour-growth have usually been divided into those of a local and of a general nature. The former are very rarely such as to render the patient's removal to an asylum advisable, while the mental disturbances included among the latter are usually of a simple nature, such as dementia of varying degree, with or without stupor, or slight melancholia readily controllable at home or in hospital. Occasionally, however, a different tale can be told; and it is my present purpose to illustrate some of these more unusual features with the help of a couple of cases which have, among others, come under my notice as pathologist during the past year.

CASE 1. *Epilepsy (?); tumour of the frontal lobe.*—The first case, for the clinical notes of which I am indebted to my colleague, Mr. C. Bayley, is that of a man aged fifty-five years, admitted into Whittingham Asylum on March 28th, 1895, and who died therein on Sept. 19th of the same year. The certificate on which he was admitted states that "he has delusions of identity, time, and place; that he cannot give any connected account of himself, wanders about on imaginary journeyings, and has no idea where he is or when he came here." Historical particulars are very scanty. He is said to have suffered from two previous attacks, but the age at which they occurred, their duration, and other details are returned as unknown. Notes as to family tendencies and previous bodily health were not forthcoming, while the man's mental condition precluded the possibility of his giving a reliable account of himself. He volunteered the statement that he suffered from fits, and the facts mentioned in the certificate could certainly be interpreted to that effect, but he could not tell how long he had been so afflicted, when they seized him, or whether he had an "aura" or not. He was distinctly demented, his apperception being slow and his memory, for recent events in particular, impaired, but there was no sign of stupor. He presented delusions of identity, time, and place, as mentioned above, and was obstinate, bad-tempered, and passionate, displaying the common "epileptic character." He would at times make rushes, attempting to strike those about him or to smash surrounding objects. He was careless as to his person and took no active interest in what was going on around him. When I saw him he was reading with some intelligence a weekly periodical of light literature; in conversation his sentences were well-formed and his utterance distinct, but he was sullen and showed a disinclination to talk. Particularly was there no sign of aphasia in any of its forms. Physically he was well-nourished, somewhat sallow complexioned, with dilated capillaries on the cheeks and nose, and glistening sclerotics. The pupils were contracted, reacting well to light and

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accommodation. There was no optic neuritis. The reflexes were all normal; there was no motor or sensory impairment. The pulse was 70 and the respiration 19. He ate and slept well and seemed in fair general health, with the exception of a troublesome cough. His condition remained the same till the beginning of August, when the cough grew worse, a slight rise in the temperature was registered in the evenings, and he took to his bed. Physical examination only revealed the signs of chronic bronchitis. At the end of August he had an attack of hæmoptysis; he became feeble and emaciated, and his respirations became shallow and very rapid (60 per minute). Cheyne-Stokes respiration was noted towards the close and he died on Sept. 19th, 1895. At the necropsy there were found, besides chronic bronchitis, scattered patches of broncho-pneumonia, and an abscess cavity (non-tuberculous) in the left upper lobe, the following conditions:—The calvarium presented nothing of note; the dura mater was somewhat thickened and tense; on opening it the subdural space was dry and the subjacent convolutions slightly flattened. On attempting to remove the brain it was found to be attached to the floor of the anterior fossa by a tumour. Involving the dura mater and the pia mater, over the anterior and inferior aspects of the left frontal lobe, but leaving the bone untouched, the tumour had invaded the left frontal lobe penetrating as far as the head of the caudate nucleus. The falx was adherent to the mesial aspect of both frontal lobes and was likewise involved by the tumour which, passing through it, had attacked the adjacent cortex of the right lobe. The corpus callosum had also become infiltrated for about an inch. The tumour was not encapsulated and could not be shelled out; it was reddish-white, with a peculiar soft, granular aspect on section and of fairly firm consistence. The white matter of the hemispheres in its immediate neighbourhood had softened, which softening extended to the anterior edge of both optic thalami, the ependyma, which was granular, alone separating it from the cavity of the lateral ventricles. The basal arteries were slightly atheromatous; with this exception the rest of the brain presented nothing of any interest. There were no secondary deposits in any part of the body.

CASE 2. *General paralysis simulated; apparent convalescence; relapse; multiple psammomata of the dura mater.*—The second case (clinical notes of which have been kindly supplied by my colleagues, Dr. A. Simpson and Mr. R. J. Stephens) is of peculiar interest and in some respects perhaps unique. It is that of a woman, aged thirty-eight years, who was admitted into the asylum on Nov. 23rd, 1894, and died on July 10th, 1895. The reception order states that "she is sullen, morose, and stupid; she curls herself up under the bed-clothes and refuses to answer questions and to take food. She is excited at times and with difficulty restrained. Her husband is afraid that she will do away with herself." The somewhat meagre history said that she was married and had three children, the youngest one year old. Her parents died from phthisis and one brother committed suicide. She had been of temperate habits and, with the exception of an attack of typhoid fever some years ago, had always enjoyed good health. The present attack was stated to be of nearly three years' duration, consisting of progressive dementia. On admission she presented the appearance of a full, flabby-faced woman, almost suggesting œdema, expressionless, and with a generally bloated look. The pupils were contracted and did not react to either light or accommodation. There was neither optic neuritis nor atrophy. The reflexes appeared to be normal. Speech was so thick, indistinct, and slurred that even the pronunciation of her name was almost unintelligible. Muscular power was much impaired without any definite paralysis and she was sent to bed immediately after admission. Any sensory defects that might have existed could not be ascertained on account of her mental condition, though she appeared to be sensitive to pain. She was extremely fatuous and demented, lying in bed dull, listless, and uncomplaining, not seeming to appreciate where she was or to have any idea of her surroundings. She lay grinding her teeth, passing urine and fæces into the bed, and required every attention. At times she was restless. She was considered to be a general paralytic in the third stage, and the progress of the case for some time justified this opinion. From Dec. 1st to Dec. 4th she had an irregular febrile temperature, was lethargic, and could scarcely swallow. On Jan. 3rd, 1895, she had a slight epileptiform seizure affecting mainly the left side, and was more helpless and feeble. But now a remarkable change took place; the patient began to improve. On Jan. 20th she was reported as being slightly better, but very helpless still. On Feb. 4th the note says that she smiled fatuously when spoken to and appeared to understand more of what was going on around her. On Feb. 27th she was just able to sit up and was much brighter mentally. The favourable change progressed till at the end of April she was able to get about, though her face was still expressionless, her speech still somewhat slurred, and her manner childish and demented. In June she was reported as bright and cheerful, working well in the ward, and greatly improved as regards her general health. In fact, she was considered sufficiently convalescent to be discharged to the care of her friends. General paralytics, we know, may improve unexpectedly and to such an extent that their detention in an asylum is no longer warranted; but such an improvement as this woman, presumably in the third stage of general paralysis, showed has never yet, to my knowledge, been recorded. The diagnosis was therefore re-considered, but a better one was not arrived at, for convalescence was quite as unaccountable in any of the diseases which might possibly have simulated general paralysis. She was, then, to be discharged and the diagnosis suspended *sine die*, as it were; but on June 27th, a day or two before she was to have left us, a sudden change occurred. She was noticed to be looking dazed and ill and complained of severe occipital headache. This was the first occasion, be it noted, on which headache was complained of. She was sent to bed. The temperature was sub-normal, the pulse 84, and the respirations 19. There was no vomiting. The pupils were equal and contracted and showed a peculiar phenomenon. When the lids were raised by the examiner the pupils dilated to their utmost capacity, but after a few seconds contracted, or rather collapsed, with rapidity, only to dilate again after an interval of perhaps a minute previously to again contracting. This would be repeated periodically and apparently quite independently of the action of light or accommodation. The knee-jerk was absent, but the other reflexes were normal. During the following days the headache increased in severity. It was then I saw her for the first time and observed the conditions already noted. In addition, I found her crouched up in bed moaning, with injected conjunctivæ. Sensory aphasia (?) also appeared to develop as far as could be ascertained in her condition; she was easily roused and could well express her wants, but did not seem to understand what was said to her. She became more and more stuporose; there was slight rigidity of the muscles at the back of the neck; and a few days before death loss of power was detected in the right arm and some paresis of the right side of the face, while the leg remained apparently unaffected. No convulsive seizures were noted. She rapidly became comatose; Cheyne-Stokes respiration developed, and she died on July 10th, thirteen days after the onset of acuté symptoms. The post-mortem examination revealed a startling condition of affairs. The dura mater was thickened and firmly adherent to the calvarium over the left hemisphere from the Rolandic fissure backwards. On carefully opening it a large number of almost spherical tumours were found growing from its inner surface on the left side. They attained their maximum development over the ascending parietal convolution, the whole parietal lobe, the upper half of the temporo-sphenoidal lobe, and over the mesial aspect of the hemisphere from the Rolandic to the calcarine fissure, in which region they were so densely clustered as to give rise to mutual compression. They were about thirty in number, ranging in size from the dimensions of a walnut to those of a green pea, the larger variety predominating. They merely compressed the hemisphere, in no wise implicating the cortex, being only here and there loosely attached to the pia-arachnoid. The corpus callosum and the mesial aspect of the right hemisphere were necessarily somewhat compressed. Not all the tumours were so clustered together; one or two were noted at more distant sites. A few of small size were found growing from the dura mater of the base in the left middle cerebral fossa, a large solitary growth on the dura mater covering the anterior surface of the left frontal lobe, and another of the same size springing from the posterior margin of the large wing of the right sphenoid bone. The tumours, covered by a thin, tense capsule, were pinkish-yellow on section, of a soft, fibrous structure, and slightly gritty to the touch. Their attachment to the dura mater was not particularly firm, a soft, felt-like base being left behind.

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The bones of the skull were not affected. The direct effects of compression of the cerebral cortex were very marked, the grey matter being often reduced to a thin, dark greyish-purple line. Elsewhere the cerebral cortex, though a little congested, appeared healthy, particularly without even a suggestion of general paralysis. The membranes stripped readily; the lateral ventricles showed no granularity or dilatation; in fact, the rest of the brain presented no obvious morbid appearances.

Widely as these two cases differ from each other they have yet two points in common. One is the predominance of mental over bodily symptoms already referred to in the introductory remarks—dementia, with more or less excitement, being the form assumed. The other is the absence of headache, of optic neuritis or optic atrophy, and of vomiting. It is, however, such a well-recognised fact that these three cardinal symptoms may occasionally be wanting that it will suffice if I record it and pass to other points in the diagnosis. The facts of the first case are scanty. The patient was a quarrelsome, impulsive dement, possibly an epileptic, though no fits were recorded during his detention at Whittingham Asylum. All signs of intracranial pressure or of a distinct focal brain lesion were absent. The existence of the Cheyne-Stokes phenomenon was practically valueless and the only suspicious circumstance was the alleged epilepsy, as true "idiopathic" epilepsy rarely develops in the sixth decade. But cortical or subcortical thrombotic softenings are a frequent cause of epileptiform seizures at that time of life, and this consideration, together with the general aspect of the man—the glistening sclerotics, the dilated facial capillaries, and the chronic bronchitis—gave some colour to the supposed existence of such localised areas of softening. Apart from the question of diagnosis, some interest attaches itself to the site of the growth in this instance and to the symptoms manifested by it. Epilepsy—not Jacksonian—is of not infrequent occurrence in tumour of the frontal lobe and is apparently the effect of indirect irritation and pressure; the case is another instance of this, and in this respect presents nothing unusual. Far more interesting is the relation of the tumour to the frontal lobes as the seat of the higher organs of mind. Attempts have been made to assign distinctive clinical phenomena to morbid growths in this region. Marked enfeeblement of the mental powers has been credited with some diagnostic importance, but cases have been published in which great deterioration of the intellect has accompanied tumour growth elsewhere, whilst mine shows that a neoplasm may extensively invade one frontal lobe, may involve the other together with the corpus callosum, and yet give rise to only a moderate degree of mental failure. Bruns, who, in opposition to Ferrier, Allen Starr, and others, is not inclined to attribute to the frontal lobes a greater share in the higher intellectual faculties, might cite this case in support of his views; but another interpretation seems also possible. The tumour, as microscopic examination (see later) showed, was evidently of slow growth—allowing, maybe, the more intact right lobe to compensate to some extent the lesion in the left—and might have gone on growing for a further considerable period as far as the effects produced by it were concerned, had not an intercurrent disease cut short the patient's life. Now the rapidity with which an intracranial tumour runs its course in the absence of complications will depend upon its site and nature, while the multiplicity and severity of the symptoms manifested will, *inter alia*, depend upon the rapidity of its growth. A cerebellar hemisphere may, for example, be almost totally destroyed by an abscess of gradual formation, with no symptoms to point to such a lesion. Similarly, we have to deal in the present instance with a tumour which, by slowly destroying, rather than by compressing, the nervous structures had failed to increase the intracranial pressure to any great extent. We may, therefore, consider that the tumour had reached but a comparatively early stage of its life-history at the time of the patient's death. If this be granted, then the case is of value as corroborating the opinion lately put forward by Oppenheim and others, that tumour growth in the frontal lobes anterior to the præcentral gyrus is often characterised, not by the extent of mental impairment, but by the early onset of the same, frequently even before sensory or motor symptoms become manifest. The epileptic seizures alleged to have occurred in Case 1 must not be placed in the latter category—at least, not in the sense here employed; general epileptic convulsions are in such cases not a local manifestation, but as much a general symptom of organic brain disease as headache, vomiting, or a slow pulse. Whereas no suspicions as to the presence of a cerebral tumour were entertained in the first case matters were somewhat different in the second. For the sake of convenience we may consider the diagnosis in connexion with three distinct periods in the course of the disease—viz., on admission, at convalescence, and at the occurrence of the relapse which ended in death.

The difficulty on the first occasion lay in the intensity of the symptoms presented, while headache, vomiting, and optic neuritis were absent. True focal symptoms were also wanting, profound dementia, general paresis of the extremities and helplessness, with difficulty in swallowing and unintelligible articulation, being the most marked objective phenomena. Some fine distinctions have been drawn between the dementia of general paralysis and that of cerebral tumour; between the affections of speech in the two diseases; and between the modes of onset and the relation to each other of mental and motor symptoms. In cases of cerebral tumour the dementia is said often to assume the form of childishness; speech is said to be slow, thick, and laboured, and not so ataxic as in general paralysis, while motor symptoms are said to manifest themselves sooner than mental. Other and finer points of difference are said to exist; but, like the foregoing, they can only be of use in the diagnosis of cases not too far advanced. Progressive destruction of the cerebral cortex, whether due to a diffuse new growth or to the process underlying general paralysis, must gradually merge initial differences into the final and more or less uniform picture of loss of cerebral function. In no class of diseases is the knowledge of the mode of onset and development of symptoms so valuable as in affections of the nervous system. The paucity of historical particulars in the present instance was most unfortunate, depriving us, as it probably did, of important criteria. Two facts only in this period of the disease may be noted as exceptional if the case was one of dementia paralytica—namely, the absence of pupil reaction to both light and accommodation and the apparently normal condition of the knee-jerk. Both are uncommon in general paralysis; still, their comparative rarity was insufficient in itself to imperil the diagnosis. Then came that remarkable period of convalescence, during which the diagnosis "general paralysis" had to be re-considered. We have already stated that convalescence in the third stage of general paralysis is unknown, and that the diseases which could simulate general paralysis—namely, cerebral tumours, cerebral syphilis, "colloid disease" of the hemispheres, multiple sclerosis, lead paralysis, and other toxic conditions—all present the same difficulty. It is true that in multiple sclerosis some symptoms—e.g., oculo-motor paralysis—may disappear, and that others, such as dementia, may show some temporary improvement; but the absence of all other symptoms, such as tremors, nystagmus, &c., practically excluded it. None of the remedies deemed serviceable in some of the above had been employed, especially had mercurials and potassium iodide at no time been exhibited, treatment having been mainly expectant. Syphilis and lead-poisoning could, therefore, probably be excluded; of the latter there was, moreover, not the slightest indication elsewhere. Alcoholism was most unlikely, as she was stated always to have been temperate, as well as for other reasons. She was too young for that very rare affection "colloid degeneration" of the hemispheres, and pachymeningitis interna hæmorrhagica was most unlikely to occur at her age save as a complication of general paralysis. So only two diseases remained—general paralysis (with or without pachymeningitis) and intra-cranial tumour. Convalescence was in each case equally inexplicable, though we know that some tumours—sarcomata and psammomata among them—may undergo temporary involution under certain conditions, notably during the puerperium. There was nothing, however, to make us believe in such a remote possibility, and so the diagnosis was suspended for the time being. But on the occurrence of the relapse and the sudden onset of acute symptoms the question of diagnosis again came to the front, and the problem was to decide between an exacerbation of a hæmorrhagic pachymeningitic process, a "paralytic" seizure, meningitis of the vertex, or sudden increased tension in a cerebral tumour. The course of the disease, the steady progress from bad to worse without the occurrence of convulsions, practically excluded a "paralytic" congestive attack. No possible cause could be assigned for an acute meningitis (except a

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tumour), quite apart from the fact that the temperature never rose above normal. There were thus left, as alternatives, a pachymeningitis hæmorrhagica or an intra-cranial growth. Both give rise to pressure-effects, both are of local origin, capable of causing focal symptoms, and both are liable to sudden increase in tension. If the case was one of pachymeningitis, then the possibility would gain ground that general paralysis was present after all—the third stage of that disease being simulated by the complicating meningitic process, while convalescence might have been brought about by the brain becoming accustomed to a pressure which had ceased to increase and which had possibly even diminished from some organisation and absorption of the effused blood. Whatever the nature of the brain-compressing tumour its position was clearly at or near the psychomotor areas of the left hemisphere. One fact, however, appeared difficult of interpretation: we refer to the left-sided epileptiform convulsion which had occurred some six months previously. A few isolated cases in which convulsions and paralysis have occurred on the same side as the cortical affection have, it is true, been reported by reliable authorities, but the more natural explanation in this case was to assume the bilateral nature of the lesion, differing probably in severity on the two sides, but yet in symmetrical positions. The lesion that most commonly fulfils these conditions is hæmorrhagic pachymeningitis. We therefore formulated our diagnosis to this effect: that the patient was suffering from cerebral compression, due in all probability to bilateral hæmatoma of the dura mata, complicating general paralysis. Further remarks on the case are, I think, superfluous. The only remaining point of interest would be the explanation of convalescence. The cortex of the left hemisphere—at least, a great part of it—was compressed and atrophic to such a degree as to indicate a process of some standing. The right hemisphere in all probability stepped in and gradually undertook some of the functions of the left, aided by a temporary cessation of growth in the tumour, and possibly by diminished tension; then sudden, increased vascular pressure may have rapidly brought about the fatal termination.

I have so far only considered the clinical aspect of these cases; a word or two concerning the microscopic appearances of the tumours may not be amiss. The first tumour was composed of masses of ovoid cells which were here and there arranged in strands separated by bloodvessels. It was microscopically sharply defined from the brain substance, into which it sent delicate, bud-like processes, rich in vessels, and gave us the impression of having sprung from the endothelial cells of the dura mater. The principal feature of interest was the presence of certain spherical bodies irregularly distributed throughout the tumour. They were, curiously enough, more plentiful in the younger parts of the growth, where they were frequently clustered together with just a few tumour cells intervening. Round their outer margin, which was clearly and sharply defined, one or two delicate spindle cells could almost invariably be seen and sometimes just a trace of fibrous tissue. These bodies took up various stains in various ways—some were dyed red, others yellow with picro-carmine, some light blue, others almost black by hæmatoxyline; alum carmine stained them in every shade of purple, while eosine gave them a fine pink tint. With iodine they assumed a golden yellow colour and no "amyloid" reaction could be obtained by any of the usual methods. Though the majority of these "corpora" were devoid of concentric striation, yet a goodly proportion showed it in various degrees. Calcification was not apparent. Here and there—instead of a spherical body—an elongated, curved, rod-shaped structure could be noted, fractured transversely in places and responding to staining re-agents in all respects like the former. A double process appeared to underlie the formation of these bodies; the greater number of them appeared to have resulted from a sort of obliterative endarteritis leading to occlusion of the vessel and ending in a degeneration of the inflammatory products—perhaps a form of coagulative necrosis. The other process, which, however, plays a very subordinate *rôle*, is a hyaline degeneration of the vessel-wall; it is limited to the periphery of a few of the bodies and forms a thin ring there. I have stated that in the older portions of the growth the tumour-cells were separated into strands by intervening vessels. This formation is much accentuated by the fact that nearly all these vessels present an advanced stage of hyaline degeneration; their walls are often ten or more times as thick as in the normal, have here and there almost occluded the lumen, and have pushed the tumour-cells aside. In one or two places only scattered remnants of the latter have survived, and all that can be seen is a mass of hyaline material, the vascular origin of which is recognisable only on closer examination and best by means of eosine-staining of formol-hardened specimens, in which the well-preserved red blood-corpuscles are conspicuous by their brilliant scarlet. If the areas illustrating the first process were to be alone submitted for examination one would probably be inclined to name the tumour a "psammoma"; if the areas demonstrating only the last, a "cylindroma." But we have here a mixture of the two; and it would appear that vessels which have become subject to the hyaline change to any extent are exempt from the endarteritic process and *vice versâ*. Why this should be we do not know and do not wish to speculate. Curiously enough, the tumours in Case 2, which were composed of long, almost fibrous spindle-cells, presented to some extent a parallel. The older growths contained a multitude of spherical bodies similar to those in the last case, but mostly calcified, and presenting besides an almost constant concentric lamination, also a delicate radial striation in some few instances. Treatment with hydrochloric acid of such bodies as were not too old revealed what appeared to be the remains of nuclei; and in the tumours of younger formation a process of obliterative endarteritis could again be noted, evidently the precursor of the "sandy" bodies. Neither in this case nor in that of Case 1 was there any evidence that the spheres resulted from the conglomeration of tumour cells. I have ventured to enter into these details as the classification and nomenclature of such tumours are still in a lamentable state of confusion. I do not pretend to say that all so-called "corpora amylacea," "corpora arenacea," &c., are the results of an endarteritis; two cases would be obviously insufficient for such a statement. But I am strongly of opinion that the terms "psammoma," "cylindroma," &c., are misleading. The structures from which these names are taken may occur in tumours of diverse characters—e.g., in mammary carcinoma, in ovarian, parotid, and omental tumours, as well as in tumours of the brain, and may even, as the first specimen showed, appear side by side in one and the same neoplasm. Those that result from endarteritis are perhaps the expression of a "senile" change in tumours of slow growth. Their greater frequency in some tumours than in others would appear to depend upon the differences in the rate of growth, which is, again, dependent, not only on the variety of tumour, but on the site of development; hence the difference of opinion whether a "psammoma" should be ranked among the sarcomata or whether it should constitute a class of its own. I am of opinion that these tumours do not constitute a special class, and that if the terms are to be used at all they should be employed in the adjectival form, such as "psammomatous sarcoma," "psammomatous glioma," "cylindromatous endothelioma," &c. "Angiolithic sarcoma," a name suggested by Cornil and Ranvier for certain forms of growths, would similarly have its advantages.

Whittingham.

TWO CASES OF ECTOPIC GESTATION IN WHICH RUPTURE OF THE SAC TOOK PLACE IN THE THIRD WEEK; ABDOMINAL SECTION IN ONE CASE; RECOVERY.

BY HASTINGS GILFORD, F.R.C.S. ENG.

RUPTURE of the sac of an ectopic gestation under the age of one month is statistically very uncommon. Thus of 300 instances of this accident collected by Hecke and Cauenbirge[1] only two were at this period, one being of three weeks' duration and the other of fifteen days. Parry[2] out of 174 cases of rupture gives one which occurred at three weeks, and states that "the earliest period mentioned is three weeks," but afterwards goes on to say that "Rokitansky has known rupture to occur within a fortnight after conception." In the experience of Mr. Lawson

[1] American System of Gynæcology, vol. ii., p. 184.
[2] Extra-uterine Pregnancy, p. 174.

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Tait[3] "the period of rupture is limited between the fourth and twelfth weeks of pregnancy." Very few instances are reported in medical literature. In some of them it is difficult to ascertain the duration of pregnancy even when an examination of the sac has been made, owing to the loose standard of measurement made use of. Thus Dr. Montgomery[4] has published a case in which a cyst "of the size of a cherry" was found in the left tube at an operation for a rupture which occurred five weeks after menstruation. One which was estimated to have been of three weeks' duration is also reported by another observer, who writes that the sac was of the size of a hazel nut. Dr. Richards of Mass.[5] in publishing a case, which he also computed from the date of the last menstruation to have been of three weeks' duration, found the right Fallopian tube dilated to the size of an olive. Dr. Martin[6] describes a case in which the sac was of the size of a pigeon's egg and in which the period of pregnancy was estimated to have been about four weeks.

Now comparisons of this sort are almost necessarily inaccurate owing to the fact that people vary widely in their estimates. Thus I have known the size of one and the same growth to be compared by one observer with a walnut, by another with a cobnut, and by another with a pigeon's egg. And when such estimates are brought to the test of actual measurement it is surprising how wide of the mark they are sometimes found to be. Moreover, many of these common domestic articles vary greatly in size. Some varieties of cherries or of nuts are almost double the size of other varieties, and olives probably vary as widely. The average length of some hazel nuts that I measured was 17 mm., and of some cherries nearly the same. Waldeyer,[7] who measured an ovum and membranes of the age of "exactly four weeks," found the length to be 19 mm. It is therefore probable that the age of three weeks assigned to the first and second of the above cases was approximately correct; but in the case of the third, if the enlargement were due solely to the ovum and its membranes, the estimate of three weeks must be wrong, for an olive measures 30 mm. in length. If ample allowance be made for the thickness of the sac wall the ovum could not have been under the age of a month; nor is it likely that a sac the size of a pigeon's egg could have been of only four weeks' growth, for the egg of the common blue rock has a length of 36 mm. This is midway between the 42 mm. of the wood pigeon's and the 30 mm. of the turtle dove's. The mistakes which may arise from this vague method of measurement are well shown in some estimates attributed to Smolsky and which I have seen quoted in more than one publication with approval. He is said to have observed that the sac of a tubal pregnancy reaches the size of a pigeon's egg during the first month, while at the end of the second month it approximates to that of an English walnut; in other words, the length of the pigeon's egg being 36 mm. and that of the common English walnut 32 mm. (it varies from 26 mm. to 38 mm.), the sac is no larger at two months than it is at one month!

But the opinion now held by gynæcologists is, I believe, that rupture under the age of one month is by no means so unusual as the older statistics lead one to suppose. Recent statistics of German writers show a much larger proportion of ruptures at this early period, and there are reasons for believing that many cases are undiagnosed. 1. In the first place, the fact that the diagnosis of ectopic gestation is commonly based on the presence of one or more of the symptoms of pregnancy may become positively misleading when we have to do with a case in which they have not had time to develop. 2. Then certain other symptoms, which are common to all cases after the lapse of a month, may before then be absent, particularly alteration in the character of menstruation and pain.[8] 3. Mistakes may also arise from the absence of a tumour. The sac in these early cases is so small as to be unrecognisable by external examination. In my second case I was unable to find the sac even before rupture, though I examined the Fallopian tubes carefully. 4. There is another sign which is so often present that its absence may be a special source of error. This is hæmatocele. It is so customary now to associate pelvic hæmatocele or hæmatoma with the rupture or abortion of the products of an abnormally situated pregnancy that there is a tendency to regard the one as the necessary concomitant of the other. Indeed, while in most text-books a bulging of Douglas's pouch is given as a consequence of rupture, no mention is made of the fact that this important symptom may be absent. One probable result of this serious omission is that some of these cases remain undiagnosed owing to the fact that there is no local sign of pelvic hæmorrhage. In neither of the following cases was there any evidence of a collection of blood in Douglas's pouch, though in one there was a small swelling in the broad ligament. This symptom was also absent in another case I once saw, in which rupture took place at the end of the ninth week, and in which the patient made a marvellous recovery after being seemingly in articulo mortis. Absence of one of the above factors may render diagnosis difficult; but when, as in one of the following cases, there is no indication of pregnancy, no sign of a tumour, and no obvious collection of blood in the pelvis, and in which all the symptoms are abdominal and not pelvic in character, an exact diagnosis is hardly possible. These two cases afford a good illustration of the rule that the indications of rupture are almost as severely fulminating in character in those of early as in those of later date. Mr. Bland Sutton,[9] who has thrown so much light on this subject, writes of an instance in which intense collapse ensued on the rupture of a sac containing a tubal mole of 8 mm. long. But it is asserted by others[10] that the symptoms may be quite insignificant. I have, however, been unable to find the report of any such case except one which has also been published by Mr. Bland Sutton in which the sac was ruptured at about the third week and the symptoms were slight.

CASE 1.—A woman, aged twenty-eight years, who had had a natural labour two years previously, sent for me to attend her for a supposed miscarriage. I found that the last menstruation had commenced seventeen days before and had run its usual course in four days. The next day, however, the flow returned and continued without cessation up to the time I saw her. It was small, but variable, in quantity, and was neither shreddy nor attended with pain except the usual sacral aching that she always felt when "unwell." She herself was convinced from her feelings that she was pregnant, but there were no other indications of pregnancy. On bimanual examination I thought the uterus was somewhat large, but a careful examination of the ovaries and tubes failed to reveal anything amiss. Connexion had last taken place two days before the period and not for about a fortnight before. I attached much importance to her own indescribable feelings of having conceived, and looking upon the case as one of very early abortion thought of dilating the os and curetting. The next day, however, under the influence of rest in bed, both backache and bleeding ceased, and on the seventh day she went downstairs. On the evening of this same day she had risen from a sofa, and was on her way to the kitchen when she shrieked out with a dreadful pain in the left iliac region and dropped down in a faint. At the same time the uterine bleeding returned, but finally ceased in a few hours. When I saw her about an hour afterwards she had been sick and was of a deathly pallor, while her skin was covered with a cold clammy sweat. The pulse was small and too frequent to be counted. She, however, speedily improved under the influence of a small dose of opium, and I left her fairly comfortable in bed, with directions that I should be sent for if the symptoms returned. No examination was made for fear of inducing fresh local bleeding. Early the next morning I received a message from the husband, saying that she had "passed a terrible night, vomiting and fainting the whole time. Is extremely weak; she seems utterly to have collapsed." I now made a vaginal examination, but the universal tenderness and rigidity of the abdomen were such as to render a satisfactory investigation impossible. I could detect no swelling and the uterus was freely moveable. It was decided that if she did not speedily improve an operation would be advisable. She had, however, no fresh symptoms, and three days after the accident was so much better than she looked and felt almost as well as before it occurred. I now very carefully made a vaginal examination and detected a hard, round, and moveable swelling in the left

[3] Diseases of Women, p. 440.
[4] Transactions of the American Association of Obstetricians and Gynæcologists (Sajous, 1891).
[5] Annals of Surgery, December, 1894, p. 718.
[6] Berliner Klinische Wochenschrift, No. 22, 1893.
[7] Spiegelberg's Midwifery, vol. i., p. 115.
[8] Dr. Tuttle: Transactions of the American Association of Obstetricians and Gynæcologists, 1891, p. 402.
[9] Brit. Med. Jour., March 30th, 1895.
[10] Dr. Condamine: Lyon Médicale, 1894, p. 317.

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broad ligament. It seemed to be about 20 mm. long and was tender on pressure. Its inner end was close to the uterus, but the two could be differentiated by the finger. During the reaction from shock the temperature rose to 100·5° F., but it soon dropped to 99·5°, and did not again rise higher, though it was more than six weeks before it became permanently normal. The swelling gradually diminished in size, but did not disappear until after the lapse of nearly three months.

CASE 2.—This woman was aged thirty-three years and had been married thirteen months. Nine months before she had miscarried of a three months' child and had been very ill with fever and offensive discharge until the products of conception came away. Menstruation then became regular but painful. She menstruated fourteen days before the accident in the usual manner, but was a week over her time. On the evening of Aug. 22nd she ate a quantity of unripe plums. At 9 P.M. she was straining at stool when she felt as if something gave way in the "small of her back." This was instantly followed by such shock and agonising pain in the abdomen that she had great difficulty in getting to her bedroom. Dr. Abram was now sent for, and when he arrived she was retching and vomiting almost incessantly, and was complaining of intense pain, mainly referred to the regions of the sternum and shoulders. It came on in paroxysms and was accompanied with faintness and increasing feebleness of pulse. Her extremities were cold and lips blanched, and she tossed about in perpetual restlessness. The temperature was subnormal. The abdomen was full, but not distended, and was uniformly tender except in the epigastric region, where it appeared to be more sensitive than elsewhere. The following day the abdomen was fuller and a shifting dulness was noticed in the left flank. A bimanual examination revealed nothing to account for her symptoms. Dr. Abram considered her condition to be the result of hæmorrhage and asked me to see her with the view of performing abdominal section. We found it impossible to arrive at a satisfactory diagnosis. Dr. Abram inclined to the view that there might be a perforated gastric ulcer attended with hæmorrhage. This opinion was supported not only by the mode of onset, situation, and character of the symptoms but by the fact that they had set in apparently as the result of a highly injudicious meal. I, on my part, supposed from the quantity of fluid that was evidently present in the abdomen that the symptoms were, perhaps, due to the twisting and rupture of a latent ovarian cyst. We both agreed that in the event of the continuance of the symptoms the patient's chances of recovery would be improved by an exploratory incision. Late in the afternoon, as there was no improvement, we decided to operate. On opening the abdomen between the navel and the pubes a rush of dark blood took place through the wound. On inserting the hand the fingers came down upon a pedunculated fibroid situated in the fundus of the uterus. It was round, of about 40 mm. in diameter, and was broken off without bleeding. The middle of the left tube was then found to be expanded into an oval swelling 12 mm. in length and split along its upper surface for nearly its entire length. Its inner surface was shaggy and its walls averaged about 2 mm. in thickness thinning off to a paper-like tenuity at the edges of the rent. No bloodvessels could be seen, nor could a probe be introduced into the expansion from either end. The rest of the tube appeared to be healthy and was neither constricted nor dilated and the fimbriated extremity was open and unaltered. The ovary was slightly enlarged and was afterwards found to contain a recent corpus luteum. The right tube and ovary were found to be healthy. The left were both removed after the application of a silk ligature. The abdomen was flushed out with boiled water. The blood and imperfectly formed clots probably amounted to more than two litres. The washings were unfortunately thrown away by mistake before they had been inspected for the ovum. The stomach was examined but no ulcer was found. No drainage-tube was used. The patient did well until the fifth day, when the temperature began to rise. It became progressively higher until the tenth day, when there was a discharge of pus into the rectum, and from that time the patient made an uninterrupted recovery.

Remarks.—Case 1 was seen on the third day by a very able gynæcologist, who pronounced it to be one of simple para- and peri-metritis, basing his opinion chiefly on the absence of the indication of pregnancy. But I consider this a good instance of the way in which these early tubal ruptures may be overlooked. I myself now know that I once made a similar mistake. A woman came to me three months after a "miscarriage" subsequent to amenorrhœa of six weeks' duration. It was attended with very severe symptoms, which, she said, were attributed by the medical attendant to the fact that "nothing ever came away," though it appears that there was bleeding from the uterus of three or four days' duration. I found the uterus to be embedded in a plaster-like mass, which I thought consisted of distended tubes and ovaries matted together with inflammatory material. She subsequently went into a hospital but came to me again on her discharge. That which I took to be inflammatory material had then disappeared, and the uterine appendages were distinctly swollen and painful. At the operation which I afterwards performed both tubes were found to contain blood, one being distended like a sausage, while in the other it was circumscribed into a rounded cyst of about 30 mm. in diameter. I greatly regret that this specimen was subsequently thrown away, for I now think it may have been an instance of double tubal pregnancy, though the way in which one tube was distended for nearly its whole length with clot is suggestive of some other cause for the hæmorrhage in one side. That which I regarded as the effusion of pelvic cellulitis I now suppose was really coagulated blood. The case was a lesson to me on the pathology of some cases of so-called parametritis.

In Case 1 detailed above it may well be asked if it were not an instance of incomplete tubal abortion, but the fact that the swelling was apparently at the uterine end of the tube was against this assumption. Moreover, all such cases should surely be classed under the head of rupture unless there is ocular proof that blood has found its way into the peritoneal cavity through the mouth of an unruptured tube. It is well known that Mr. Lawson Tait is sceptical of the possibility of a true abortion from the Fallopian tube comparable with that from the uterus. Certainly in some of the cases which have been brought forward by the Germans as instances of tubal abortion it is distinctly stated that the tube was torn. I prefer to look upon this case as one in which there were either successive gushes of blood through a rent in the sac or into a small adventitious sac in the broad ligament. In the former case the nodule felt by the finger would be a tubal mole or hæmato-salpinx; in the latter a hæmatoma. Although there was no direct evidence of the effusion of blood into the peritoneal cavity, yet the symptoms were so much more consistent with this hypothesis that I have no doubt it was what actually took place.

With regard to Case 2, in some books it is stated that the bulging of a hæmatocele may not be felt at an early period owing to the blood being in a liquid condition; but in the course of a few hours, when coagulation has set in, it will be evident. But that this is not the explanation in all instances is well shown in the case under notice, for it was found at the operation that nearly all the blood, both clotted and fluid, came from the left flank and that not so much as an ounce was found in the retro-uterine pouch, though there were no adhesions to prevent its reaching this situation. Probably when rupture took place the blood immediately dropped into the most dependent part, which then happened to be Douglas's pouch; but afterwards, when the patient was on her side, it shifted into the left flank, being helped on its way by her restlessness. Subsequently it was kept from again getting into Douglas's pouch by the distension of the intestines. This is similar to what is observed in perforated gastric ulcer and other accidents in which fluids are poured into the peritoneum. And every surgeon who has irrigated the abdominal cavity knows how difficult it sometimes is to get fluid to pass the barrier of neighbouring coils of intestine when they are distended with flatus. The accident occurred in this case apparently as the result of straining at stool, but it is quite possible that a slight rupture had really taken place before and was the cause of the desire to defecate, for the patient did not actually get relief and nothing was felt in the rectum on vaginal examination afterwards. In this case there may have been a gradual oozing of blood, either into the sac or through a small rent, followed by sudden completion of the split during the act of straining. That this is probably the true explanation is suggested by the report of another case of rupture in which the first symptom was the sensation of the pressure of a hard substance obstructing the rectum and causing a desire to defecate.

Reading.

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A QUESTION FOR ANÆSTHETISTS.

BY R. CLEMENT LUCAS, B.S. LOND., F.R.C.S. ENG.,
SURGEON TO GUY'S HOSPITAL.

IT must have occurred in the experience of almost every hospital surgeon that a day or two after an operation of very trivial character, where an anæsthetic has been administered, the patient's temperature has been observed to rise very high, the wound has been examined and found perfectly quiescent, devoid of every indication of inflammation, and completely healed, yet the skin is burning and the patient obviously ill; next a little cough is noticed and soon rusty sputum is coughed up, indicating pneumonia. These cases have occurred too frequently in my experience to be explained either upon the hypothesis of infection prior to admission into the hospital or upon the conjectured basis of chill taken at the operation, where every precaution has been taken to obviate unnecessary exposure. I have noticed it happen on several occasions after operations for hernia, when it might be suggested the patient's resistance might have been lowered by previous vomiting; but I think I may say that I have observed it as frequently after many other operations of more trivial character. The most recent case, at present under my care in Guy's Hospital, is that of a healthy young man admitted for what is now one of the commonest and simplest operations, the aseptic excision of a varicocele. Gas and ether were administered on Feb. 4th and the varicocele was excised, and the wound closed and dressed with aseptic pads. His temperature rose and on the 6th it reached 103° F. His wound was examined and found to be perfectly quiet. On the 7th he began to expectorate rusty, blood-stained sputum, and the expectoration on being examined was found to contain the pneumococcus.

It may, of course, be said that this young man was in the incubation period of pneumonia when admitted, and that he simply developed it in the ordinary course after the operation, but I think these cases, though occurring apparently sporadically, do occur too frequently in hospital practice not to have some other explanation. Gas and ether, it may be urged, are powerful stimulants to the lungs, and sufficient to account for subsequent inflammation. Undoubtedly bronchial conditions frequently follow their administration of sufficient severity in old people to prove fatal. But here is a young, healthy man clearly infected with the infective germ of pneumonia. He was operated on in a well-warmed theatre and placed in a bed on the most protected side of the ward. But apart from this, exposure to cold can no longer be regarded as a sufficient cause of pneumonia. It can only predispose thereto. One might as well argue that cold would cause phthisis without any exposure to the tubercle bacillus.

The question I wish to ask of anæsthetists is whether the apparatus used by them may not sometimes be responsible for germ infection of the lung? I speak of hospital practice, now, where some dozen apparatuses are being constantly employed, carried from patient to patient without any attempt at sterilisation. Considering the enormous advance made of late years in every department of surgery for the better disinfection of everything brought into contact with a wound, it has struck me as somewhat marvellous that so little improvement in this direction has been made by those responsible for the inhalers used for giving anæsthetics. I have often thought it not altogether pleasant to see an anæsthetist blow out and distend the large bag used for ether administration by the breath of his own body, however sweet that may be, and then apply it directly over the patient's mouth. But as matters stand now there is no apparatus used in hospital practice, so far as I am aware, for the administration of either the A.C.E. mixture, or gas, or ether, which is capable of being boiled, or which is otherwise disinfected before being applied over the mouth. If, as I am suggesting (and it may be capable of bacteriological proof), that the apparatus used for giving the anæsthetic, and not the anæsthetic itself, may be responsible for lung infecting inflammations, then some radical change will soon have to be made in the apparatus, which, going from mouth to mouth as at present, seems capable of carrying infection of a kind such as I have indicated.

Wimpole-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

RARE CONGENITAL MALFORMATIONS.

BY C. KESSICK BOWES, M.B. OXON.

ON Dec. 30th, 1896, a woman was delivered of a female child at full term after a natural labour, this being her second confinement. Directly the child was born I noticed that the hands presented a very unusual appearance, the fingers pointing upwards towards the elbow, and on examination I found that there was entire absence of both radii and both thumbs. When at rest the outer side of each hand—i.e., the index finger and its metacarpal bone—rested against the forearm, but by manipulation the hands could be brought down at right angles to the forearm, but no further, and there was great resistance to supination. The ulna in each arm was a little curved and seemed shorter than normal, but in all other respects the child seemed to be perfectly developed. On the third day, as soon as the mother's breasts became full of milk, she noticed that as the baby sucked the nipple, after drawing two or three times, the milk returned through the nose, and she had to take her from the breast. I examined the child's mouth and found nothing to account for it, and as this regurgitation continued, and the child began to waste, I suspected some obstruction in the œsophagus. I did not pass a bougie, as the nurse told me that the child had frequent attacks of cyanosis with much choking, and she seemed so fragile and weak that I did not think it would be wise to attempt it. In this way she continued to live, but gradually wasted, and eventually died from exhaustion when thirteen days old.

I obtained permission to make a post-mortem examination and found that the upper part of the œsophagus was simply a cul-de-sac extending about three-quarters of an inch below the larynx, and that the lower part, as it came up from the stomach, opened into the trachea near the point of its bifurcation. The stomach and intestines were quite empty and very thin, just as one would expect to see them in a case of starvation. On opening the heart I found that the interventricular septum was not complete, being deficient in its upper part.

The case is an extremely interesting one, not only on account of the rare malformations, but also on account of the length of time the child lived without any nourishment whatever.

Herne Bay.

POISONING FROM EATING ROOT OF SCARLET RUNNER BEAN.

BY J. S. MACPHERSON, L.R.C.S., L.R.C.P. EDIN.,
L.F.P.S. GLASG.
MEDICAL OFFICER, UGANDA PROTECTORATE.

THE following account of poisoning from eating the root of scarlet runner bean may be of interest to the profession, as I am not aware of any similar previously recorded case.

On the night of Nov. 18th, 1896, a large number of our garrison, comprising Soudanese soldiers and their wives and Swaheli porters, partook of a small quantity of the root of the scarlet runner bean, which had been collected by our native gardener. Several of the men had the root roasted, while others, probably the majority, simply ate it in the raw state. In a short time—i.e., within a couple of hours—they were all seized with symptoms of poisoning, twisting pain in the stomach and violent vomiting, accompanied by vertigo and prostration. As there was nothing to indicate the precise nature of the poison I had at once recourse to an emetic of thirty grains of zinc sulphate largely diluted with hot water, resulting in prompt emesis with immediate beneficial results. The following morning most of them simply complained of vertigo with an uneasy, twisting stomachic pain, though several suffered more than others from prostration and weak

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cardiac action. The administration of a purgative dose of sulphate of magnesium with the addition of a few drops of diluted sulphuric acid removed all remaining symptoms, though the vertigo lasted in several cases for from twelve to eighteen hours from the time of eating.

There could be no mistake as to the root in question being that of the scarlet runner bean, as it was planted by ourselves from London seeds and grown in the garden amongst peas, cabbages, and cauliflower, and I cannot conceive unless the root is *per se* poisonous, how it could have absorbed poisonous material from any neighbouring plant. I may mention that the bean itself was largely partaken of by ourselves and we never observed any noxious effect. I forward you a specimen of the root in question, also the plant and bean for analysis. Possibly the deleterious substance may be analogous to that contained in the poisonous variety of cassava or deadly manioc root which is referred to in Mr. Stanley's book "In Darkest Africa."

Ravine Station, Uganda Protectorate.

CHILD IN UTERO CRYING DURING LABOUR.

By E. FITZGERALD FRAZER, L.R.C.S., L.R.C.P. IREL.

I WAS in attendance on a case of twin labour here recently where I applied the forceps to the head of the first coming child. Whilst using gentle traction, and the vertex being still upon the perineum, I was surprised, as was also the nurse, to hear the child cry. At first we thought we were deceived, but in a very short time after the sound was repeated, and before any part of the head was born the same phenomenon occurred several times. Nothing unusual happened during the birth of the second child, which came away naturally. I cannot say whether the pressure of the forceps had anything to do or not with causing the crying. There were no marks of it on the head and the boy is doing well. This instance illustrates the possibility of uterine breathing, as otherwise I cannot see how the vocal cords could have been called into play. I attribute the entry of air into the lungs as having taken place during the time I was putting the forceps into place in doing which no difficulty presented itself. Thinking the particulars may be of interest to the readers of THE LANCET I have pleasure in submitting them.

Brighton.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prœmium.

ROYAL UNITED HOSPITAL, BATH.

A CASE OF ULCERATIVE ENDOCARDITIS TREATED BY ANTI-STREPTOCOCCIC SERUM.

(Under the care of Dr. A. E. W. FOX.)

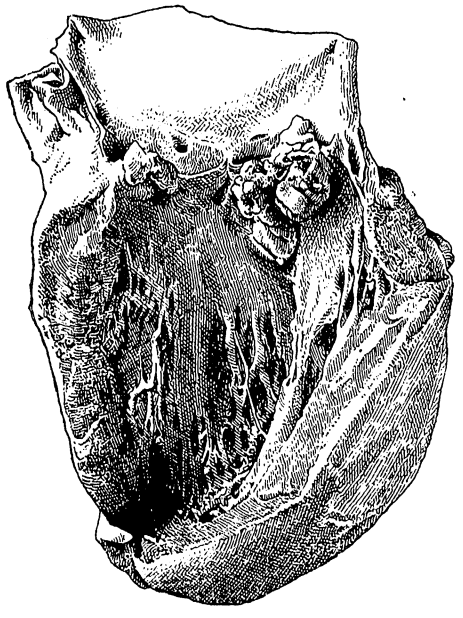
THIS case illustrates one of the more severe types of malignant endocarditis. It is published to show the results of the injection of anti-streptococcic serum, the use of which was decided upon from a perusal of the notes of a successful case which we brought forward in the Mirror of Hospital Practice. The duration of illness before treatment by the serum was about the same in both cases, but the symptoms had been more severe in this patient. The value of the treatment will most probably be found to depend largely on the time the disease has existed before the treatment is commenced. The difficulty consists in making an early diagnosis; but when the diagnosis has been successfully made the method of treatment by the serum has proved of great value in other forms of septicæmia. The publication of cases in which it has been tried, if they illustrate important points, is of much value, although the ultimate result may not be satisfactory. For the notes of this case we are indebted to Dr. W. H. Cooke, resident medical officer.

A man, aged thirty-six years, was admitted to the Royal United Hospital, Bath, on Nov. 17th. He stated that he had not had rheumatism or syphilis; he had been an abstemious man and always lived in England. His illness had commenced seventeen days previously with cold shivers and pains, which commenced in the back. These pains disappeared from the back with the aid of strong turpentine embrocations, but reappeared in the limbs and head. He had had cold shivers daily and became very feverish. There had been no vomiting or diarrhœa. His urine was examined three days before his admission; it smelt strongly of violets. Cold nitric acid produced a cloud, which appeared at the top of the urine first and cleared up on boiling. This was considered as due to turpentine absorption. There was no albumin. On admission to hospital on Nov. 17th he was found to be well-nourished. His complexion was pallid and muddy. The conjunctivæ were slightly jaundiced. The tongue was slightly coated, white, and moist. The temperature was 101·8° F.; the left pulse 100, of good strength; and the respiration 20. There was no distress of any kind, but he complained of some pain in the right arm and right occipital region. There was no rheumatic odour, no œdema of the legs, and no effusion into any joint. The right radial artery was not pulsating and a clot could be felt in the middle third of the brachial artery. It was not tender. The anterior and posterior tibial arteries of both legs were pulsating. The chest was well formed, resonance was good, and the breath-sound normal. As to the heart, relative cardiac dulness commenced at the third left rib and was absolute at the fourth. The apex was in the normal position. At the apex the first sound was reduplicated and the second part of it ended in a slight whiff; the second sound was pure and distinct. At the base, over both the pulmonary and aortic valves, a faint soft systolic murmur was audible. With regard to the spleen, dulness commenced at the upper border of the eighth rib and continued to the lowest border of the ribs; it could not be felt. The liver dulness was increased downwards. The urine was of normal colour, 1020, acid, with no albumin. On the 18th the temperature at 8 P.M. rose to 104·6°. He did not shiver, but sweated profusely. There was no rheumatic odour. On the 19th there was no change in the cardiac signs. On the 20th he had had much pain in the calves during the preceding night. There was no blocking of the anterior or posterior tibial arteries. He was sweating profusely. The bowels were rather constipated. He had been given an injection of 10 c.c. of anti-streptococcic serum on the previous day at 1 P.M. There was no rash or any other discomfort from the injection. On the 21st the pain in the legs had gone. He was sweating profusely. He took nourishment well. The urine was 1020, acid, with a trace of albumin. The systolic murmur at the apex of the heart was becoming more distinct. On the 22nd he had had a better night, but felt rather faint in the morning. He had had some return of the pain in the calves. On the 23rd he had two injections of 10 c.c. each, and similar injections were now made every day. The systolic murmur at the aortic orifice was soft, whereas at the pulmonary orifice it was rough and loud (? two separate murmurs). The pulmonary was louder than the aortic second sound. A loud, rough systolic murmur was heard in the mid-sternal region, probably exocardial. On the 24th he was not so bright in the morning; he had had a bad night. The murmur at the apex of the heart was becoming louder and rougher each day. On the 25th he sweated profusely. There was no pulsation in either of the tibial arteries or the popliteal of the left leg. The leg was only slightly cooler than the right. On the 26th there was no change. On the 27th he felt a little better. The systolic murmur at the base of the heart was now loudest over the aortic orifice, the second sound being short and sharp. The British Institute of Preventive Medicine reported of blood taken from the left arm three days previously: "Streptococci not found either microscopically or by cultivation. No micro-organism has been isolated." On the 28th he felt and looked a trifle better. He had not had a good night. About the lumbar and lower scapular regions much boggy œdema had appeared from the numerous injections in the scapular regions. The left leg and right arm were of the same temperature as the corresponding limbs. On the 29th the injections were left off. On the 30th the temperature, which fell to 100·4°, had risen again

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to 103·6°. The heart's action was not quite regular. At the aortic orifice the systolic murmur was now very loud and rough, as also at the apex. He now had to be propped up in bed. On Dec. 1st he was worse. He had been delirious during the night. He was drowsy throughout Nov. 30th and was rather deaf in the morning of Dec. 1st. He now had diarrhœa. The injections were continued. On the 2nd he said he felt better, but was evidently worse. At 2 P.M. he was much worse and was cyanosed. The heart's action was irregular and the pulse very small. He had dyspnœa. At 5 P.M. he died. The temperature varied from 98° on the morning of the 19th to 104·6° on the evening of the 18th, but was generally over 103° at night and above 100° in the morning. The influence of the serum was apparently *nil* as regards the temperature record.

Necropsy.—The body was well nourished and muscular. Rigor mortis was present. There was no œdema. The pleuræ contained about a pint of ordinary serous fluid each side. There were a few recent adhesions both sides. The right lung was normal. There was much recent lymph on the surface. With regard to the left lung the whole of the lower lobe was airless and in a state of hypostatic congestion. The pericardium contained from 3 to 4 oz. of clear fluid. There were a few patches of recent lymph. The heart weighed 14 oz.; it was enlarged; there were three patches of recent lymph, the largest being on the right



Left ventricle cut open to show the large mass of vegetations in the aortic valves. (From a photograph.)

ventricle. Both the right auricle and the right ventricle were dilated. The tricuspid orifice admitted four fingers; there was no deposit or ulceration. The left ventricle was hypertrophied and dilated; the mitral orifice admitted three fingers; there was no deposit or ulceration. Almost entirely blocking up the aortic orifice was a vegetation which appeared to arise from the base of the left posterior aortic valve. This vegetation was of the size of a walnut and measured about 1 in. in depth and ¾ in. in breadth; it was covered by recent blood clot. The base of the valve was replaced by vegetation. There were two softened spots in the endocardium immediately beneath the vegetation. This growth extended on to the surface of the anterior valve between which and the right posterior valve there was an irregular calcareous deposit. There was slight atheroma of the aorta. The coronary arteries were not blocked. The spleen was very large, pulpy, and grumous; it was taken out in pieces and weighed about 20 oz. It was so much broken down and disorganised that no infarct could be discovered. The liver was enlarged and weighed 71 oz. It was congested and fatty. The right kidney was moveable and weighed 9½ oz.; the capsule peeled easily; there was a white infarct. The kidney was much congested. The left weighed 6 oz. and he capsule peeled easily; there were several white infarcts; it was much congested. Examination of the head was not allowed. The right brachial artery was dissected out, but unfortunately was lost. The staff of the British Institute of Preventive Medicine very kindly examined a section of the vegetation and found numerous streptococci.

Remarks by Dr. FOX.—The general aspect of grave illness presented by this patient, his rigors, sweats, type of pyrexia, enlarged spleen, cardiac murmurs, and embolic blocking of his right brachial artery pointed conclusively to the diagnosis of ulcerative endocarditis. We therefore determined, encouraged by Dr. Sainsbury's successful case, to try the effects of the anti-streptococcic serum. This treatment was begun as soon as we obtained the serum—on Nov. 20th—when 10 c.c. were injected. In all he had twenty injections, the result being that he certainly looked brighter and said that he felt better. Though the sweats continued the temperature no longer showed such marked fluctuations. The report from the British Institute of Preventive Medicine upon the blood taken from his left arm on Nov. 24th stated: "Streptococci not found microscopically or by cultivation. No micro-organism has been isolated." This was after twelve injections of the serum. Though no streptococci were found in the blood, nevertheless after death streptococci were discovered under the microscope in the vegetations. These streptococci were so embedded in the vegetation that it is difficult to understand how they could have been acted upon by the serum. The fatal termination of the case was no doubt attributable to the almost complete blocking of the aortic orifice by the huge vegetation with its surrounding blood clot. In my own limited experience of ulcerative endocarditis, which began in 1878, when I published my first case in THE LANCET,[1] all treatment has been absolutely futile. I think, therefore, that more help is to be expected from the bacteriologist than from any other direction and I shall certainly give a further trial to the serum treatment.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Ringworm Fungi.—Exhibition of Specimens.

A MEETING of this society was held on Feb. 16th, the President, Mr. BUTLIN, being in the chair.

On the motion of the PRESIDENT a resolution was passed expressing sympathy with the family of the late Mr. G. D. Pollock, a former president of the society.

Dr. COLCOTT FOX and Dr. BLAXALL gave a demonstration of the Plurality of Fungi associated with Ringworm. Microscopical specimens and over forty lantern slides were exhibited. They had examined over 400 cases, clinically and culturally, macro- and microscopically. Their results in the main confirmed the brilliant work of Sabouraud in Paris, but they differed from him in many details and on a few important points. They discussed four groups of fungi—viz., microsporon Audouini, endothrix, ectothrix, and lastly, some rare forms of fungi giving rise to ringworm-like lesions, but yielding faviform cultures. The microsporon caused about 90 per cent. of scalp ringworm in London and was sometimes associated with some macules on the face, neck, &c., but only exceptionally formed circinations. It was almost entirely confined to the human being. The well-known uniform clinical macroscopical appearances were then described. Microscopically they were characterised by a closely adherent external sheath of *small* spores extending some distance beyond the mouth of the follicle and by an infiltration of the hair shaft with mycelium mostly with scanty septa, and ending above the bulb in a striking fringe. The macroscopical appearances of the cultures were demonstrated and shown to be distinctive. The true fructification was then described as obtained by Dr. Fox and Dr. Blaxall from Klatsch specimens of the aerial portion of the cultures. They found the fructification to be on the same plan in microsporon as in endothrix and ectothrix. Chlamydospores were commonly seen in microsporon cultures. The endothrix fungi were so called from the fact that they were confined exclusively to the inside of the fully infected hair. The

[1] THE LANCET, March 2nd, 1878.

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fungus was strikingly larger than microsporon and occurred almost entirely in chains of mycelial spores. Macroscopically they gave rise to two sets of appearances in the scalp. In one division an appearance superficially resembling a form of alopecia areata was produced (*la tondante peladoide*); in another circinations left patches or little collections of a few stumps. In both divisions the hair tended to break off very short or in the follicle and the stumps were dark and swollen. Circinations on the glabrous skin were somewhat more common than in microsporon. It did not cause beard or nail lesions. It was believed to be exclusively human. The striking cultures aptly termed crateriform by Sabouraud were then demonstrated, and the fructification shown to be practically similar to that of microsporon. The ectothrix fungi were a still less homogeneous group, for they included pyogenic fungi, producing markedly inflammatory and pustular lesions both on the scalp, beard, and glabrous skin. All, at any rate those affecting adults, were believed by Sabouraud to be of animal origin—a view Dr. Fox and Dr. Blaxall were in great measure able to confirm. Microscopically the hairs were enveloped in the intra-follicular portion in a sheath of mycelial spores. Mycelia tended to grow out into the follicular epithelial contents. The hair always, they believed, was liable to be invaded by mycelial threads and was sometimes packed. The fructification was shown to be practically on the same plan as in the preceding groups. Fungi giving rise to faviform cultures, but clinically to ringworm-like lesions, were then considered.

Mr. S. G. SHATTOCK showed the Undescended Testes removed from the inguinal canal of a so-called hermaphrodite who had passed for a female. Histologically there was extreme thickening of the basement membrane of the tubules, together with absence of spermatozoa and spermatoblasts. The groups of granular polyhedral "interstitial cells" normally found in the adult testis, and which bear some resemblance to the cortical cells of the supra-renal, were unusually distinct. Mr. Shattock raised the question whether it was not possible that these cells had some connexion with the "internal secretion" of the organ and might not be responsible for virile characteristics. It had been suggested by Schäfer that the interstitial cells of the pancreas had to do with the internal secretion of that gland. The testicular interstitial cells could not be remnants of the Wolffian body for they were absent in the fœtus and the child. Information was particularly wanted from surgeons as to any differences in the effects of castration in children and adults. In operating for the relief of hypertrophy of the prostate surgeons sometimes removed the entire testis and sometimes the vas deferens only; it was important to know whether there was any different result in the two classes of cases as regards the general effect on the patient, as in the latter class the interstitial cells were left. There was possibly a parallelism between the obesity following castration and that of myxœdema, which was certainly due to loss of an internal secretion.—Mr. STANLEY BOYD said that the results of castration appeared to be very inconstant. He mentioned the case of one man with strong sexual powers on whom double castration was performed for extensive tuberculous disease of the testes. Afterwards he was hardly able to speak without bursting into tears. This passed off after some months, and he married, and said that he was competent sexually. In another older man on whom double castration was performed for tuberculous disease hardly any change was noticed except that he became fatter. Similar interstitial cells were also present in the ovary. It had been shown by Beatson and others that retrogression of mammary cancer often occurred after double oöphorectomy, and he suggested that some morbid secretion of these interstitial cells might have favoured the development of the mammary tumour.

Dr. H. MORLEY FLETCHER showed a Congenital Cyst of the Mediastinum removed from a girl, aged six years, who died from bronchitis and whooping-cough. The cyst lay behind the right bronchus and in fibrous connexion with the œsophagus. The wall was composed of unstriped muscular tissue and lined by ciliated epithelium; it was filled with glairy fluid. It was probably a fœtal outgrowth from the œsophagus and not from the bronchus.—Mr. W. G. SPENCER agreed that it was an œsophageal cyst. In the frog the œsophagus remained ciliated after fœtal life.

Dr. WETHERED showed a specimen of Hypertrophy of the lung from a woman, aged fifty-one years, who had been in the Middlesex Hospital under the care of Sir Richard Douglas Powell. There was no history of any illness until five years before coming under observation, when she had an attack of bronchitis followed by pneumonia. About the middle of November, 1896, a cough developed, accompanied by much dyspnœa. On admission the physical signs were those of bronchitis. At the post-mortem examination the base of the right lung was found firmly adherent to the diaphragm and side of the chest wall and was injured in the process. The upper lobe of the right lung was found to be greatly hypertrophied, being equal in size to about three-quarters of the whole of a normal lung. The edges were rounded and thick; the lung substance was firmer and more resilient than normal, and it was evidently a case of true hypertrophy of lung compensatory to the condition of the lower and middle lobes. In the fresh specimen the lower lobe was bright red in colour, slightly aerated, and a small piece cut off floated in water. The middle and lower lobes together only measured about four inches by three inches. These two lobes were entirely devoid of pigment, thus indicating that the collapse had been of long standing, and if not congenital that it had occurred in very early life. No obstruction in the bronchi could anywhere be found. There was no fluid in the pleural sac and no evidence of external pressure on the bronchus. The left lung was emphysematous and altogether larger than natural, there being an increase of true lung tissue. Dr. Wethered was inclined to think that it was the result of a pneumonia in early childhood, basing the supposition on the size of the lobes, the strong adhesions to the diaphragm and wall of the chest, the absence of any indications of obstruction to the bronchi, and the entire absence of pigment.—Mr. J. H. TARGETT agreed that the condition was due to pneumonia in early life.

Dr. LEE DICKINSON showed a specimen of Extensive Thrombosis of the Pulmonary Artery associated with Congenital Pulmonary Stenosis from a boy four years of age. The stenosis began a little below the valve and there was also a deficiency in the septum ventriculorum. There were firm polypoid vegetations almost occluding the pulmonary orifice and the lumen of the artery was nearly occluded by firm, laminated clot extending into the lungs, which contained many infarcts and broncho-pneumonic patches. Usually in these cases the blood clotted badly and possibly the broncho-pneumonia or sub-acute endocarditis was responsible for the undue coagulability in this case.

CLINICAL SOCIETY OF LONDON.

Gastro-enterostomy.—Sequel to Cases of Excision of Intestinal Growths.—Voracious Hunger and Thirst after Injury or Disease of Brain.—Fatal Cases of Enteric Fever without Intestinal Ulceration.

A MEETING of this society was held on Feb. 12th, Dr. BUZZARD, the President, being in the chair.

Mr. J. ERNEST LANE read the notes of Two Cases of Gastro enterostomy for Carcinoma of the Pylorus. The first case was in a woman, fifty-five years of age, admitted into hospital in November, 1894, with all the symptoms of pyloric obstruction. The stomach was united to the commencement of the jejunum by means of Murphy's button and perfect recovery ensued, the patient being alive and perfectly well at the present date and showing no signs of further progress of the disease. A peculiar feature of the case was that the button was still retained in the intestine. The second case was in a man, forty-two years of age, in a state of extreme emaciation from pyloric cancer. Gastro-enterostomy was performed with Murphy's button and the patient's condition was temporarily greatly improved thereby. At nineteen days from the date of operation he developed symptoms of intestinal obstruction, to which he succumbed. The cause of death was found to be volvulus of the sigmoid flexure, but the stomach and jejunum were firmly united, and there was no leakage at the seat of the anastomosis; the button was still in position. In his remarks Mr. Lane advocated the operation of gastro-enterostomy as a palliative measure in cases where the condition of the patient rendered pylorectomy impracticable, and pointed out that in his first case the malignant disease had remained quiescent for a period of more than two years since the operation.—Mr. L. A. BIDWELL said that he had operated in several

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cases by Halsted's method, using stitches alone; he preferred simple suture to the use of the button, as it was almost as speedy and less apt to be followed by extravasation.

Mr. WALTER EDMUNDS related the sequel of two previously recorded cases of Excision of Malignant Growth from Large Intestine. The cases were read before the Clinical Society in October, 1893. In the first case a malignant growth in the cæcum was removed by excising the cæcum and establishing an artificial anus. The patient remained in good health for several years, dying from another cause five years and ten months after the operation. There was no recurrence. The large intestine was greatly atrophied and contracted from disease, its diameter being about 1 cm. In the second case, one of excision of a malignant growth in the sigmoid flexure, with re-establishment of the continuity of the bowel, the patient survived the operation three years and three months; the cause of death was probably a recurrence in the lungs.

Mr. STEPHEN PAGET read a paper on cases of Voracious Hunger and Thirst after Injury or Disease of the Brain. He had collected notes of fourteen cases of this kind pointing to the existence of special centres of hunger and thirst close to the centres of speech, probably in the anterior extremity of the temporo-sphenoidal lobe, near the uncinate gyrus. A short account was given of each case, including one in his own practice. The primary injury or disease in each case was as follows: Four of the patients had received a severe blow on the forehead, two had been struck on the side of the head, two had fallen heavily on the back of the head, two had presented signs of a fracture of the base, and one had fallen from a height, coming down in a sitting posture. In addition to these eleven cases of injury there were three cases of disease: one had abscess of the left temporo-sphenoidal lobe, one had a suppurating cyst in the right temporo-sphenoidal lobe, and one had embolism of the left side of the brain. Eight of the fourteen patients suffered from voracious appetite for solid food without much thirst; three suffered both from thirst and hunger; and three had intense thirst without hunger. In none of them was the primary injury or disease fatal; it was, therefore, certain that the centres of hunger and thirst were not situated in the immediate neighbourhood of the vital centres. Three of them had well-marked aphasia; it was, therefore, probable that these centres lay close to the centres of speech, and not improbable that they were connected with the olfactory centre. This hunger and thirst was not the natural appetite of convalescent patients or the result of any general mental derangement, and it was not secondary to traumatic diabetes. With regard to treatment, no harm had come in any case from letting the patient freely indulge his craving for food and drink. The voracious desire lasted, as a rule, for many weeks or months and then came to an end of itself.—Mr. T. SMITH thought that a good case was made out for the existence of a special centre. It could not be a case of exhaustion, as had been suggested, for there was increased activity of function.

Dr. E. W. GOODALL read notes of two cases of Enteric Fever, in which a necropsy showed Absence of the usual Intestinal Lesions. The first case was that of a boy thirteen years of age, admitted into the Eastern Fever Hospital in July, 1894. He died twenty-one days after admission, on the thirty-fourth day of the disease. The chief symptoms were continued pyrexia, a soft and frequent pulse, moderate diarrhœa and abdominal distension, bronchitis, restlessness and delirium, and towards the end muscular tremor, prostration, and coma. Spots were not observed till late in the disease. Post mortem there was slight erosion of the Peyer's patches, which were slate-coloured, but no definite ulceration. The spleen was not enlarged; one parotid gland was suppurating. The second case occurred in 1888, and the account is taken from the hospital records. The patient, a man thirty years of age, died four days after admission on the fifteenth day of his illness. During life there had been numerous rose spots, continuous pyrexia, delirium, and finally coma. At the necropsy the Peyer's patches were much swollen, but not ulcerated. The spleen was enlarged and pulpy. Fagge, Goodhart, Moore, Chantemesse, and Sidney Phillips have related instances of a similar nature.—Dr. SIDNEY PHILLIPS said that on a former occasion he had brought two cases of this description before the society, and had since seen several fatal cases of typhoid fever without intestinal lesions or with only a single very small ulcer.

BRITISH GYNÆCOLOGICAL SOCIETY.

Vote of Condolence on the Death of Sir Spencer Wells.—Exhibition of Specimens and Appliances.—President's Address.

A MEETING of this society was held on Feb. 11th, Mr. MAYO ROBSON, President, being in the chair.

On the motion of Dr. ROBERT BARNES, seconded by Dr. ELDER, a vote of condolence with the family of the late Sir Spencer Wells in their sad bereavement was passed.

Dr. T. BOWREMAN JESSETT showed the following specimens:—(1) A case of Hæmatocele, independent of Gestation; (2) Carcinoma of the body of the Uterus; and (3) Dermoid of the Ovary, with Carcinoma of the Uterus.—Dr. HEYWOOD SMITH thought that the first specimen ought to be further examined with a view to determining whether or not it were due to ectopic gestation. He would ask whether at the necropsy a decidua was found in the uterus.—Dr. PURCELL noted that in the second case no ligature was used, and he could readily understand that there was not much room for such manipulations in a small vagina unless the perineum were split. He saw the operation in the third case; the cyst came down at the same time as the uterus was drawn down; and in this case also clamps were used. He thought that Mr. Jessett could in no way be held responsible for the intestinal obstruction in the first case; certainly there was nothing in the operation at which he was present to determine the fatal result.—Dr. MACNAUGHTON-JONES remarked on the highly ambiguous meaning of the term "pelvic hæmatocele." As commonly used, it was extremely vague and was applied to conditions widely differing in their surgical and anatomical relations. This led to confusion both in diagnosis and treatment. As to the specimen shown by Mr. Jessett he might remark that though ectopic gestation was a frequent cause of pelvic hæmorrhage, the fact that so-called "hæmatocele," due to various causes and in different situations, might occur independently of pregnancy was generally recognised by authorities. Regarding intestinal obstruction after laparotomy he should say there was no more anxious complication nor one more frequently difficult to detect the cause of. The diagnosis between obstruction from septic peritonitis, adhesive peritonitis, appendicitis, ileus, or kink in the bowel, as in Mr. Jessett's case, or strangulation, was difficult, and could only be determined by such symptoms as the mode of onset and time of occurrence, the situation and character of the pain, the shape of the abdomen, and its sensitiveness.—Dr. CLEMENT GODSON said that the second case was a patient from whom he had removed a polypus fourteen or fifteen years ago. She remained well till eighteen months ago and then came complaining of hæmorrhage, but no pain. She thought it was a return of the periods, but the regularity was doubtful, and her age made him suspicious; and when a little later she had an offensive discharge he had little doubt that she had malignant disease. The uterus was slightly enlarged, but mobile. She made a good recovery.—Mr. BOWREMAN JESSETT, in reply, said that no microscopic examination was made in the first case, but there was no decidua in the uterus. He felt sure that the connexion of hæmatocele with ectopic gestation was not nearly so frequent as they had lately been led to suppose. Referring to Dr. Purcell's remarks he thought that the splitting of the perineum should always be avoided if possible.

Dr. MACNAUGHTON-JONES showed a section from an Endotheliomatous Ovary, prepared by Dr. Ludwig Pick, and also a section of a Fallopian Tube which he had seen removed from a patient for Salpingitis, and stained and mounted within twelve minutes after its removal by this pathologist's method.

The PRESIDENT delivered his Inaugural Address.

Dr. C. H. F. ROUTH moved that a hearty vote of thanks be given to the President for his interesting address, and that he allow it to be printed in the journal of the society. He said he had heard many learned discourses, but had not heard one marked by more sterling common sense. He could remember the time when Professors knew less of Gynæcology than the tyro of to-day; but the advances in this branch must not lead them to neglect medicine and surgery; those who had the best knowledge of these branches became the best gynæcologists, whilst their neglect led to extremes in gynæcology, such as not operating at all, or operating too

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much.—Dr. CLEMENT GODSON seconded the motion, which was carried by acclamation.—The PRESIDENT briefly replied.

Dr. MACNAUGHTON-JONES, by special request, showed some Gynæcological Instruments and Appliances which he had recently seen used in the Frauenkliniks in Berlin, more particularly those necessary for Martin's colpotomy and Landau's vaginal pan-hysterectomy. Having briefly described the steps of these operations he showed the instruments and appliances used in each, including Orthmann's instrument, a combination of uterine sound with claw forceps, which in the former operation was used to steady and draw down the uterus. It was also of great value in other operative procedures on the uterus and adnexa. Landau's operation, in which clamps alone were used, had now been performed some 400 times, with a mortality of little over 2 per cent. He claimed for it that it could be performed in cases in which any other form of hysterectomy would be impossible. Dr. Macnaughton-Jones also showed Landau's combination of branched dilator with trocar and cannula, most convenient for opening pelvic abscesses, and the special needles of Olshausen for ligaturing the uterine and ovarian vessels. Besides other appliances, Dr. Macnaughton-Jones also exhibited an electric lamp with a reflector which could be attached to any electrical connexion, and was specially useful in the Trendelenburg position, being capable of throwing a light of 200-candle power into the basin of the pelvis.

PATHOLOGICAL SOCIETY OF MANCHESTER.

The Bacteriological Diagnosis of Typhoid Fever.—Exhibition of Specimens.

A MEETING of this society was held on Feb. 10th, Dr. T. HARRIS, President, being in the chair.

Professor DELÉPINE demonstrated and explained the chief methods which have been used for the Bacteriological Diagnosis of Typhoid Fever from 1894 (when Gaffky established the relations existing between the bacillus and the fever) till 1895. He showed that, up to that latter date, no single test was sufficient to differentiate clearly the bacillus typhosus from the bacillus coli communis of Escherick and allied bacilli. He then gave it as his opinion, based on a number of personal observations, that though the bacillus of typhoid fever was easily obtained from the organs, and especially the spleen, of typhoid patients after death it was difficult to obtain it during the life of a patient unless one had recourse to puncture of the spleen, which he did not consider a justifiable procedure. Pfeiffer's method (1894) of testing the specificity of a bacillus by observing the changes that took place when the bacillus to be tested was introduced into the peritoneal cavity of a guinea-pig protected by preventive inoculation against the action of the specific bacillus in question (or by injecting into a non-protected animal a mixture of the bacillus and of immunised serum) was a great advance. It gave the means of finding out in a comparatively short time, and by a very delicate test, whether a bacillus was the specific one or not. The modification introduced by Metchnikoff, and specially by Bordet (1895), simplified matters still further, since it did away with inoculation of the living animal and showed that the serum of a highly immunised animal was capable of causing immobilisation, agglomeration, and even degeneration of the corresponding bacillus *in vitro*. Gruber and Durham (1896) showed later that this reaction *in vitro* was nearly specific when used with proper care, and gave very good results. Notwithstanding all these improvements the initial difficulty of isolating the bacillus during the life of the patient remained, and the bacteriological diagnosis of typhoid fever could not be effected in less than two or three days (when it was possible to isolate the bacillus). It was also necessary to have the serum of an animal immunised against typhoid fever ready for use when wanted. Widal, who, from his previous work with Chantemesse (1892) had been led to believe that even at an early stage of the fever the blood of typhoid patients acquired immunising properties, thought that instead of using the serum of an immunised animal for the purpose of testing unknown bacilli it would be much simpler to test the blood of patients with a typical typhoid bacillus to see whether that blood was capable of producing in the bacilli the changes described as occurring *in vivo* by Pfeiffer (1894) or *in vitro* by Charrin and Roger (1889), Metchnikoff (1891), Essaeff (1893), Bordet (1895), Gruber and Durham (1896), when bacilli were exposed to the action of the blood serum of immunised animals. He found that the blood of typhoid patients soon after the beginning of the fever (four or five days) was able to produce on pure culture of the typhoid bacilli immobilisation and agglomeration of these microbes. He found also that the blood of patients not affected with typhoid fever and of healthy persons did not give the reaction. He found also that the reaction took place very rapidly. He felt, therefore, justified in announcing on June 26th last year that the method of serum diagnosis of typhoid fever was a very reliable one. Dr. Grünbaum, who was working in Vienna with Professor Gruber, had, it now appears, been working at the same subject at the same time as Widal; he did not, however, obtain results quite as satisfactory and his theses were not published till September—i.e, about two months after Widal had given very clear and circumstantial accounts of his method. Though for these reasons Dr. Grünbaum cannot claim for himself the credit which is attached to Widal's discovery, it is interesting to know that he had been working on nearly the same lines as Widal and had obtained analogous results. In fact, it is remarkable that so few observers should have thought of this application of previous discoveries. Professor Delépine then gave a brief account of the method which he had followed to avoid a number of accidental fallacies in the application of the test, and he alluded to the work which Dr. Sidebotham and himself had done since the beginning of July, 1896. They had now tested about ninety cases, with results which confirm entirely Widal's original announcement. (A first account of these cases has already been published in THE LANCET of Dec. 5th and 12th, 1896.)

The following card specimens were shown:—

Dr. ASHTON: Gynæcological Specimens.

Mr. BATTLE: Foreign Bodies from the Intestine.

Dr. FOTHERGILL: Microscopical Sections and Drawings of Placental Polypus.

Mr. HENDRIDGE: Composite Odontome.

Dr. LEA: (1) Malignant Adenoma of Uterus; and (2) Parovarian Cyst with Twisted Pedicle.

Dr. M'NAUGHT: Entire Ovum retained in Utero after death of Fœtus.

Mr. J. E. PLATT: Epulis.

Dr. WAHLTUCH: Skiagraphs.

Dr. R. T. WILLIAMSON: Specimens of Blood from cases of Leucocythæmia.

Dr. YONGE: Nasal Polypus.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Prevalence of Cancer.

A MEETING of the above society was held on Feb. 3rd, the President, Mr. GODFREY CARTER, being in the chair.

Dr. ARNOLD EVANS read a paper on the Prevalence of Cancer from a statistical point of view. After remarking that by "cancer" was meant malignant disease in the widest sense, Dr. Evans pointed out that the Registrar-General's report showed that the total number of deaths from cancer in England and Wales during the year 1894 amounted to 21,422, as compared with 11,300 in 1875; that the death-rate per million of the population had risen from 384 in the decennium 1861–70 to 589 in the ten-yearly period 1881–90, and that the increase had been steadily progressive from year to year. He also pointed out that as the local variation in the death-rate from all causes required correction for age and sex constitution of the population, so the same correction should be made in respect of cancer when comparing the mortality-rate in one district with that in another. Dr. Evans mentioned that when this correction had been applied by the Registrar-General to the recorded cancer mortality-rate in the registration counties, some which had a high crude mortality-rate from cancer found places in the list of those with medium or low corrected cancer death-rates. This point was clearly illustrated by means of coloured charts illustrating the area of high, medium, and low cancer mortality-rates in the registration counties of England and Wales. One point which Dr. Evans thought required further investigation was the curious fact that even after correction of age and sex constitution all the most

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populous parts of the kingdom exhibited a low death-rate from cancer. It was noted that the corrected cancer death-rate for males was subject to greater local variation than that for females. The opinion expressed by the reader of the paper was that the prevalence of cancer was on the increase, but that the increase was not so great as is shown in the Registrar-General's reports, the reasons assigned for this opinion being: (1) that the age constitution of the population is not the same as it was twenty years ago, a relatively larger proportion of people now attaining the age at which cancer is most likely to occur; (2) that greater precision in medical diagnosis has taken many diseases from ill-defined groups and placed them under the heading of malignant disease, this opinion being supported by the fact that the increase in the mortality rate is greater in males than in females; and (3) that inquiries by the General Register Office in reference to vaguely specified diseases add something to the list of deaths from cancer which would otherwise have been differently classified.—Dr. RABAGLIATI took a gloomy view of the advantages of surgical interference in cases of cancer and doubted if life were lengthened thereby. He pointed out that there had been great progress of late years in the treatment of fever and phthisis, but that with regard to cancer the death-rate was on the increase. In discussing the etiology of cancer he laid great stress on the kind of food taken.—Dr. HIME criticised Dr. Rabagliati's views as to the causation of cancer, disagreeing *in toto* with regard to the effects of starchy food.—Dr. J. H. BELL discussed cancer as affecting the eye.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

A Case of Diabetes Insipidus.

A MEETING of this section was held on Jan. 29th, Dr. DUFFEY, President, and subsequently Dr. LITTLE, being in the chair.

Mr. BURGESS related a case of Diabetes Insipidus occurring in a girl fifteen years of age, whose previous history was good up to two years ago, when the symptoms developed after a febrile attack. As well as could be determined thirst preceded the polyuria. The amount of urine passed was sixteen pints per diem; inosite was absent; and the specific gravity was 1·003. The patient had been under observation for eighteen months, during which time the urine was frequently examined. At no time was albumin or sugar present. During the above period there were no characteristic symptoms of either interstitial nephritis or amyloid kidney. The treatment comprised valerian, antipyrin, belladonna, ergot, and nitric acid. Beyond giving temporary relief drugs were found to be worthless. The reason for bringing forward the subject was to elicit the opinions of the Academy whether drug-treatment was of any avail more than causing temporary improvement, and whether the disease had any tendency to shorten life.

The PRESIDENT said that he believed Mr. Burgess's diagnosis of the case he had brought forward to be quite correct. He (the President) had seen only one or two cases of the disease, which seemed generally to follow some debilitating illness. In Mr. Burgess's case he (the President) thought that what was called gastric fever was the more immediate antecedent of the disease. He would ask in what doses did Mr. Burgess give the valerian. Trousseau, who introduced the use of the drug, used to give very large doses of it—as much as fifteen grains of the powdered root per day. A great number of drugs had been recommended for this disease; and, according to some authorities, antipyrin had been given with good effect.

Dr. FALKINER was aware of a case of diabetes insipidus which had lasted for twenty-six years. As far as he understood the pathology of the disease the rational treatment was by ergot.

Dr. PARSONS said he had only seen two cases of this disease. He saw both cases in Vienna; in each an accident preceded the symptoms.

Dr. DOYLE mentioned the case of a man, thirty years of age, who had been in the habit of taking large quantities of drink of all kinds. He suffered from alcoholic paralysis, had hemiplegia, and developed acute mania. He passed immense quantities of urine of a very low specific gravity. Dr. Doyle gave him small doses of phosphorus, with the result that he got quite well and was now in perfect health.

Mr. S. M. THOMPSON mentioned a case of this disease, occurring in a young woman, which he treated with phosphorus. There had been no lesion as a cause of the occurrence of the disease.

Dr. SHAW mentioned a case, which he had attended, of a child, five or six years of age, who was attacked with the disease in question, the symptoms being intense thirst and excessive passing of urine. This went on for two or three years. He treated the disease with opium. The patient eventually developed meningeal irritation and effusion on the brain.

Dr. J. BARTON stated the case of a policeman—a man of large size—who came to him suffering from polyuria. He had been during all his previous life perfectly healthy and had received no injury whatever, but suddenly he began to be very thirsty and to pass immense quantities of urine. His urine, on examination in Trinity College laboratory, was found to be perfectly free from albumin or sugar. The symptoms had been present for two or three months before he saw the man. He first gave him extract of belladonna, which did him no good. He tried a good many other things and finally gave him pulverised opium, and after having taken it for a fortnight the patient got perfectly well and had had no return of the disease.

Dr. PEACOCKE asked if Mr. Burgess had found anything to be effectual in alleviating the thirst. Phosphoric acid and other things had been recommended, but his (Dr. Peacocke's) experience of them was that they were failures.

Dr. JAMES LITTLE related a case which came under his notice a great many years ago of excessive thirst and excessive secretion of urine. Post mortem the bladder was found to be not much distended, but its walls were immensely thickened. There was no sign whatever of cystitis, but the ureters were nearly as large as the small intestine of a child. There was no "surgical kidney." The disease appeared to have been mechanical, having its origin in an enlarged prostate. Not long ago he (Dr. Little) saw what he considered to be a similar case.

Mr. BURGESS, in replying, said that he hoped to have the girl under observation for a considerable time and to be able to give them further information as to the case.

Reviews and Notices of Books.

L'Hygiène Publique de Hongrie. (Public Hygiene in Hungary.) Budapest: E. Boruth. 1896. (A Közegészség ügye Magyarországban.)

WE have before us an interesting monograph covering sixty-five pages, compiled by order of the Minister of the Interior of Hungary, and published in several languages for the occasion of the millennial celebrations at Budapest of last year. The statistics are based upon a Government Report for 1895, showing the condition of public health in Hungary at the close of the first millennium of Hungary's existence as a State.

The kingdom of St. Stephen has an area of 322,310 kilometres or 124,448 square miles, including Croatia; it is therefore somewhat larger than the United Kingdom. Politically, Hungary proper, exclusive of Croatia, is divided into sixty-three countries, varying in size between 1150 and 126,000 kilometres, containing from 50,000 to 717,000 inhabitants, these again are sub-divided into circuits. There are twenty-six cities endowed with self-government; Budapest, the metropolis, contains about 600,000 inhabitants. The superficial area of Hungary proper is 279,759 kilometres. Public sanitation is regulated by a special law enacted in 1876, constituting a central sanitary board or council in the department of the Ministry of the Interior, its executive being the magistrates, assisted by the police. All branches of sanitation are brought before these tribunals, from which there is no

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appeal, unless the fine exceeds 100 florins or twenty days' imprisonment. Analysts are appointed at convenient distances all over the country; the police have the power to confiscate and to destroy all food and drink declared by the experts to be unwholesome, and to demolish buildings, old or new, if declared by proper authority to be unfit for occupation. The supervision of country medical practitioners, pharmacists, and midwives belongs to this department. Adulteration of food and drinks is severely punished. The following are some of the headings of the law cited above, under which the duties of the authorities are enumerated: (1) security of infant life, supervision of infant asylums, school hygiene, contagious and infectious diseases; (2) prisons and houses of detention; (3) ambulances, help to the wounded; (4) medical practice in general—homœopathy has a chair at the university, but otherwise charlatanism is prohibited; (5) general hospitals and asylums for the insane, both public and private; and (6) railway and ship hygiene. From an international point of view the most important section of that law is doubtless that which treats of epidemics and contagious diseases and the measures to be taken concerning them.

Hungary is the sentinel on the high road of the epidemics proceeding from the East, from Turkey, and from Russia. The supervision of this department is entrusted to special sanitary inspectors of experience. Printed instructions on sanitation are disseminated in thousands of copies among the people, showing what preventive measures are necessary in case of an approaching epidemic. Popular instructions are likewise given as to diphtheria, croup, influenza, cerebro-spinal meningitis, tuberculosis, hydrophobia, syphilis, ophthalmia, typhus fever, &c. Antitoxin (diphtheric) is distributed gratis. In the first year of its application 3737 doses were issued. The decisions of the Dresden Conference have been accepted by the Hungarian Parliament in 1894.

In the Pasteur Institute at Budapest 466 cases were treated in the two years, 1890 and 1891. Many of them came from abroad, where at that time no such establishments were known. In 1892, 144; in 1893, 147; in 1894, 288; and in 1895, 1204 cases were inoculated. The percentage of mortality of the treated was 2·10; but if we exclude cases in which hydrophobia developed during treatment or within twenty-four hours after completing the course of inoculations it amounted only to 1·10.

Purulent ophthalmia was and is still very prevalent in some parts of the country. Special enactments were set on foot, and special measures were taken to prevent its spread in the army, public and private schools, and institutions. A report is submitted by Government and the Parliament on cases of trachoma every year.

Vaccination is compulsory and so is re-vaccination in accordance with the law of 1887. There are public vaccinators appointed and pure lymph is distributed at certain stations. All pharmacies are licensed by Government and must be presided over by graduates of the university. They are considered as parts of public hygiene and not as trade establishments. The Supreme Sanitary Board at Budapest is merely a consultative body and consists of a president appointed by the Crown, a vice-president, and a secretary, besides twelve ordinary members. It gives advice in all matters of public health, recommends candidates for medical appointments, &c.

The percentage of persons suffering from zymotic diseases on the whole population of about 15,000,000 was: in 1893, 7·70; in 1894, 10·2; in 1895, 9·9. The most fatal diseases were: diphtheria, croup, measles, typhoid fever, and scarlet fever. The mortality from small-pox shows the following numbers: there died, of the vaccinated, 37 3; of the non-vaccinated, 62·7. The death-rate was, among the protected, 11·5; among the unprotected, 47·7. This high rate of mortality prevailed before the more stringent sanitary law of 1887 came into operation. Between the years 1879 and 1887 the mortality from small-pox was appalling; there occurred—particularly in the year 1887—15,470 deaths; but since vaccination has been more carefully practised there were, in 1892, 3424; in 1893, 1224; in 1894, 837 fatal cases of variola—a great improvement. But whilst deaths from small-pox are diminishing there is an alarming increase of mortality from tuberculosis; its percentage between the years 1892 and 1895 was progressive, and rose respectively from 9·29, to 10·29, 10·60, and 12·01 of the whole annual mortality.

Puerperal fever is carrying off many more victims than would have been expected in the country of Semmelweis. There is on an average a midwife for every 2043 inhabitants in the country places and one for every 788 in the towns; but there is an unequal distribution of educated midwives, since in 9384 villages, having nearly 6,000,000 inhabitants, there was not a single recognised midwife to be found. The number of beds in hospitals and asylums, both public and private, amounts to over 15,000. There are, besides, permanent emergency hospitals in 2326 towns and communes capable of supplying 13,224 beds in case of an epidemic outbreak and for isolation purposes. Prostitution is under police supervision.

The following was the general mortality per 1000 of the population: in 1890, 32·5; in 1891, 33·4; in 1892, 32·7; in 1893, 30·1; in 1894, 30·2; and in 1895, 29·4—a slow but gradual improvement.

The first real organiser of matters concerning sanitation was the late Dr. Markusovsky, under Minister Trefort. The actual president of the central sanitary board or council is Dr. Chyzer, who has for co-adjutors men of great zeal and superior attainments. Among the juniors we notice the name of Dr. Jenö Farkas, well known in medical circles in London.

Ectopic Pregnancy; its Etiology, Classification, Embryology, Diagnosis, and Treatment. By J. CLARENCE WEBSTER, B.A., M.D., F.R.C.P. Edin., Assistant to the Professor of Midwifery and Diseases of Women and Children in the University of Edinburgh. With eighty illustrations of naked eye and microscopic appearances. Edinburgh and London: Young J. Pentland. 1895.

ALTHOUGH, as the author says in the introduction, the importance of the subject might be considered a sufficient justification for publishing a work embodying the recent advances made in the knowledge of the nature and treatment of this condition, a still more weighty argument is afforded by the plea that he brings forward for consideration a large body of original matter based on several years of clinical and laboratory work. There is an interesting account of the early history of the subject sub-divided as follows: (1) the history of ectopic pregnancy in the period before Dezeimeris; (2) that of the period between Dezeimeris and Lawson Tait; and (3) that of the present time. The first case of ectopic pregnancy of which there is any clear account, is one described by Albucasis, an Arabian physician, living in Spain in the eleventh century. It is not stated here whether the case ended fatally or not, but as in this case parts of the fœtus were discharged through the abdominal wall by suppuration, recovery was not unlikely.

In discussing the changes that take place in the Fallopian tube when pregnancy occurs there Dr. Webster considers it to be fully established that a decidua vera is always formed in the tube. As regards the value of anæsthesia in facilitating the examination necessary for a diagnosis of ectopic gestation the author says: "The danger of post-anæsthetic rupture of the sac from vomiting has been exaggerated by some authors in a most unwarranted

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manner." It appears to us that the danger in such cases is not due to the occurrence of vomiting. Rupture is much more likely to be caused by the bi-manual examination, unless very cautiously employed.

The anatomical and historical parts of the book strike us as being the most satisfactory; the clinical portion deals with matter that has already received considerable attention at the hands of other authors. There are no less than twenty-two excellent plates at the end of the volume from drawings made by the author. The book must undoubtedly be regarded as a valuable work of reference on ectopic pregnancy.

JOURNALS AND REVIEWS.

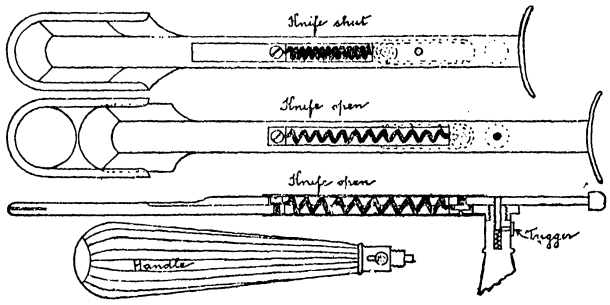
St. Thomas's Hospital Gazette.—St. Thomas's men will notice with regret the announcement in the first number of Vol. VII. of the retirement of Mr. F. G. Parsons, who has so ably edited the *Gazette* from its earliest infancy. Among the articles is a succinctly-written little paper entitled "Notes on the Application of x rays" and the first instalment of a paper by Mr. W. G. Sutcliffe, "Recollections of the Second Matabele War."

Guy's Hospital Gazette.—The recent death of Surgeon-Major Manser, who lost his life at the post of duty, is fresh in the minds of all, and the two letters from Surgeon-Lieutenant-Colonel J. S. Wilkins and Dr. L. F. Childe respectively, announcing the death and appreciating the worth of the late officer will be read with interest. R. O. M. continues his "Notes from a Holiday in Persia." From them we learn that the only hospital in Teheran is under the charge of an American and that in the matter of surgical machinery it is quite up to date—"all the latest from New York."

New Inventions.

AN AUTOMATIC SPRING TONSIL GUILLOTINE.

I WISH to draw the attention of the profession to a form of tonsil guillotine which I have devised to work by "spring action." Owing to the fact that there are numerous forms of guillotine already in use, one naturally hesitates before describing any modification of such an instrument. However, I venture to show the working of one which, with the advice and kind assistance of Mr. C. Vyle, I have had made by Messrs. Arnold and Sons, West Smithfield, and it appears to me to be of some advantage. The accompanying illustrations show at a glance the method I have adopted of applying a "spring" to a Mackenzie instrument. One end of

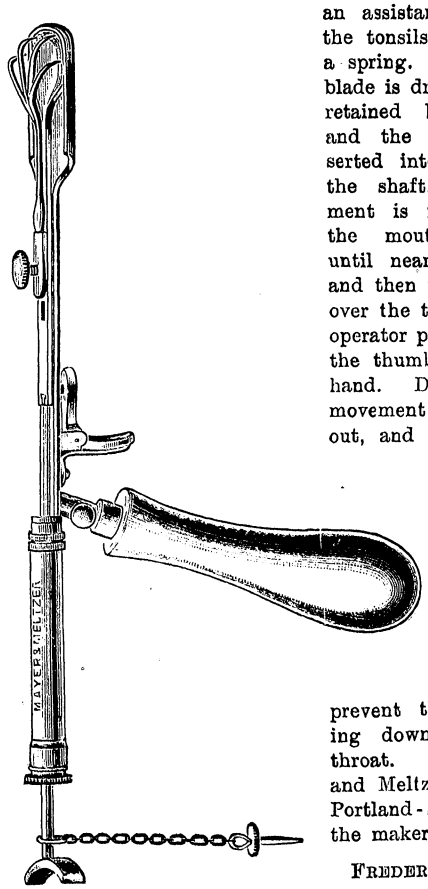


the spring is fitted to the distal part of the lower segment, and is the fixed point, and the other to the knife slide. On setting the instrument in the usual way, by drawing back the proximal end, the spring is thus made tense, and is fixed and kept ready to be instantly released, by a catch within the handle meeting a small hole in the top slide as it is drawn back, and worked by a smaller spring in the handle. When ready to excise the tonsils, the guillotine is released simply by touching a knob or trigger, as seen in the diagram. The spring is covered in and so arranged that it can easily be removed for cleansing purposes, and the strength is sufficiently great to enable the knife, on being released, to instantaneously cut through the tissue. The advantages are: rapidity of action; can be worked with one hand, leaving the other free for the thumb to press externally upon the tonsil, the left for the left and *vice versâ*; the easy and simple mode of working; the instrument cannot get out of order; is simple in its mechanism and seems to answer the purpose for which it is intended — namely, immediate excision when once the guillotine is favourably *in situ*, and being thus steady and not requiring any force from the operator, so preventing any movement or displacement from the tonsil otherwise necessarily induced.

London. R. BROOKS POPHAM.

AN IMPROVED TONSILLOTOME.

THIS instrument does away with the necessity of an assistant to push up the tonsils. It works by a spring. Before use the blade is drawn back until retained by the catch, and the small pin inserted into the hole in the shaft. The instrument is introduced into the mouth horizontally until nearly in position, and then turned sideways over the tonsil, while the operator pushes it up with the thumb of the other hand. During the last movement the pin falls out, and on pulling the trigger the tonsil is removed instantaneously, painlessly, and with great precision. A specially devised guard is added to prevent the tonsil falling down the patient's throat. Messrs. Mayer and Meltzer of 71, Great Portland-street, W., are the makers.



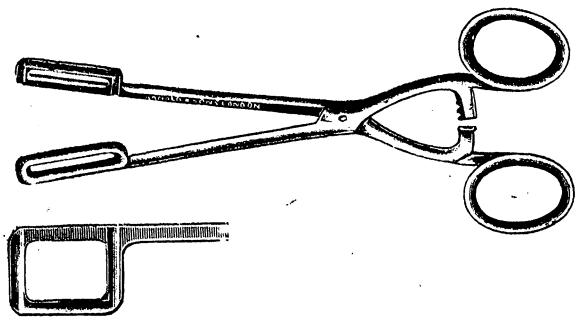
FREDERICK SPICER, M.D. Durh.
Devonshire-street, Portland-place, W.

A NEW TONSIL FORCEPS.

SOME time ago, having to excise a number of enlarged tonsils, I found great inconvenience in working with the instruments commonly used for that purpose. Accordingly, I designed the instrument illustrated below, which has been most satisfactorily made by Messrs. Arnold and Sons, London. The mode of using the instrument is as follows. The forceps having been introduced into the mouth and counter-pressure made beneath the angle of the jaw, the enlarged tonsil is thereby placed between the blades of the forceps. The handles then being approximated, the instrument is locked by means of the neck and catch with which it is furnished. The tonsil is then drawn well towards the middle line by means of the instrument. A tonsil bistoury is then passed from below upwards behind the tonsil about to be removed. The bistoury is made to cut from behind forwards, being kept closely applied and parallel to the sides

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of the grasping portion of the forceps. For those who would wish to make "assurance doubly sure" the bistoury can be inserted within the fenestræ and made to remove that portion of the tonsil contained within the blades, which, inasmuch as the fenestræ are fairly large, practically means the entire gland. The latter mode of operating will be



facilitated by studying the portion of the tonsil enclosed between the blades by inserting a small tumour-hook in it. This method of removal cannot be effected without some detriment to the edge of the bistoury. The advantages claimed for this instrument are as follows: (1) impossibility of wounding the internal carotid artery, as the blades of the forceps clasp the gland in a plane at right angles to the line of the artery; (2) extreme ease of application, as both blades are in full view of the operator; (3) when applied is retained in position by catch, thus enabling the operator to dispense with assistance; (4) can be applied to either side with equal facility; and (5) the grooves on the blades of the forceps obviate any tendency on the part of the tonsil to slip from the grasp of the instrument.

Littleborough. G. KIRKMAN FINLAY, M.B., B.Ch., B.A.O.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Feb. 11th, the President, Sir WILLIAM MAC CORMAC, being in the chair.

The secretary reported the death, on Jan. 31st, 1897, of Sir Thomas Spencer Wells, Bart., past President and past member of the Council of the College.

The Council passed a resolution of condolence.

The report from the committee on the circular to the Fellows was received and adopted. It showed that 1150 circulars were sent out and 686 valid answers were received. Of these answers 485 negatived the proposal to give direct representation upon the Council to Members of the College. Of the minority of 201, who thought that the Members should be admitted to the privilege, 42 thought the representation should be by Members only, 40 by Fellows only, and 119 were indifferent. Only 67 thought that Members should be qualified to vote irrespectively of their standing in the profession, 125 voting for some age restriction and 9 not replying to the question; 129 considered that new seats should be added to the Council, 49 that seats should be taken from the Fellows and given to the Members' representatives, and 23 ignored the point.

A report was presented from the delegates of the two Royal Colleges on the question of a Teaching University for London and the following resolution recommended by them was adopted:—

"That the Royal College of Physicians of London and the Royal College of Surgeons of England, in full accord with their previous action, express the earnest desire that Her Majesty's Government will at the earliest opportunity re-introduce a Bill for the reconstitution of the London University by Statutory Commission on the general lines of the report of the Cowper Commission, and do assure the Government that such a course will have their approval and support."

Mr. W. Rivington resigned his position as one of the delegates.

A letter was read from Dr. Michael Beverley stating that at a largely-attended meeting of the profession resident in Norwich and at a very numerously attended meeting of the Norfolk and Norwich Medico-Chirurgical Society, Sir Frederic Bateman and he were appointed a deputation to present a Memorial to the College asking for advice with regard to professional relations with medical aid associations.

A committee was appointed to receive the deputation and to report on the whole matter to the Council.

A letter was read from Lord Lister thanking the Council and the Fellows for their congratulations.

The Council approved, as proposed by the Royal College of Physicians of London, the inclusion of bacteriology as a subject of study and examination under the regulations of the combined Examining Board, and the addition for this purpose of the words "and in bacteriology" to Section 1, Sub-section 5, par *d* of the regulations.

It was moved by Mr. Macnamara and carried *nem. con.*—

That the Council do hereby withdraw their representatives from the Civil Rights Defence Committee acting on behalf of Mr. R. B. Anderson, F.R.C.S. Eng.

It was moved by Mr. Heath and carried—

That the resolution of the Council of Dec. 21st, 1893, relating to the appointment of Representatives of this College on the Conjoint Finance Committee be rescinded and that the treasurers of the College be *ex-officio* Members of such Committee.

CONGRATULATIONS TO LORD LISTER.

WE have received the following letters for publication from the President of the Royal College of Surgeons of Edinburgh:—

Royal College of Surgeons of Edinburgh,
3rd February, 1897.

DEAR LORD LISTER,—I have the pleasure of transmitting to you the congratulations of the Fellows of the College on the occasion of the further honour conferred on you by the Crown in your elevation to the Peerage, passed with acclamation at the meeting of the College to-day.

I am, Dear Lord Lister, yours very sincerely,
JOHN STRUTHERS.

TO LORD LISTER,—We, the Fellows of the Royal College of Surgeons of Edinburgh, met to-day for the first time since Her Majesty conferred on you the honour of elevation to the Peerage, embrace the opportunity of offering you our congratulations on an honour so well deserved and which is enhanced by the fact that it is the first occasion on which that honour has been conferred on a member of the medical profession.

It is with pleasure that we, some of us your former colleagues, many of us your former students, recall that you became a Fellow of the College in 1855, that your career as a Teacher, and those Researches that were to bear so much fruit, began in Edinburgh; and, after being continued for some time in Glasgow University, were resumed in Edinburgh, where, in the position of Professor of Clinical Surgery, you inculcated the principles of Antiseptic Surgery to large classes of students and illustrated these principles by your practice in the Royal Infirmary.

While the results of your labours are appreciated by all of us, it is only those of us who recollect what Surgery was before you enforced these principles who can fully realise the improvements that have been effected by their application. What were dangerous operations are now done with comparative safety, operations that could not be attempted are now undertaken with success, and wounds of all kinds now heal rapidly and cleanly. Further, we recognise that the benefits of the application of antiseptic principles extend beyond surgery; that the mortality in Maternity Hospitals has thus been very greatly reduced, and that antiseptics are employed with advantage in many departments of the Practice of Medicine, including that of the regulations for Public Health. We need hardly add that these principles are fully applied in our Royal Infirmary and other Hospitals here, and everywhere in Edinburgh.

It is a source of pleasure to us to think that the new era in surgery which you have established will render your name imperishable as one of the benefactors of the human race. All of us, former colleagues and pupils alike, join in further expressing our esteem for you personally, and in wishing you yet many years during which you may enjoy the satisfaction of knowing that your great work is appreciated throughout the world and during which you may still more exert your influence.

In name and by authority of the College,
JOHN STRUTHERS, President.

[REPLY]

12, Park-crescent, Portland-place,
6th Feb., 1897.

MY DEAR PRESIDENT,—I beg you to express to the Fellows my warmest thanks for their generous words of congratulation transmitted by you. They carry me back to the days when I began to teach Surgery with the sanction of the College, entailing, as it did, that of the University; a most liberal arrangement, then, I believe, unique in the British Island, one which has certainly contributed largely to the greatness of the Edinburgh school, and to which I am personally incalculably indebted.

I need hardly say that this expression of kind feeling on the part of my former colleagues and students has given me the greatest pleasure.

Believe me, very sincerely yours,
JOSEPH LISTER.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 20, 1897.

THE House of Commons last week, when it went into Committee of Supply to resume the debate on the army estimates, was the scene of an interesting and lively discussion which was followed by an unexpected result. It was generally believed that the Government proposals were unsatisfactory to many of their own followers and would meet with strong opposition, especially on the part of the military members and the advocates of radical reforms in the Army and War Office. The debate was one of the few occasions, however, in which a speech told with considerable effect on the House, and, to adopt a frequently-applied phrase, took the wind out of the sails of the Opposition. Mr. BRODRICK defended the Government measures in a speech of singular clearness and ability. It does not, of course, fall within our province to pronounce any opinion upon the wisdom, efficiency, or otherwise of measures of military policy and army organisation in so far as they do not affect the health of the soldier or the medical service, but we may, nevertheless, say that he showed that the Government had, at any rate, considered the situation in all its bearings and had adopted what, under the circumstances, seemed to be the most prudent and practicable course. But what was more to the point, Mr. BRODRICK showed that they had, in what they were doing, the approval of the late, and of the present, Commander-in-Chief. This had the effect of disarming the military members of the House and of depriving the criticism of Sir HENRY CAMPBELL-BANNERMAN of any effective sting.

The part of Mr. BRODRICK'S speech which more directly concerns us, however, was that in which he had to deal, as he said, with the "thorny subject" of the condition of the Army Medical Department. He admitted that for some time past there had been difficulty in procuring sufficient candidates. Many reasons had been adduced for this, among the principal of which, he said, were the questions of rank and social position, of the examinations having been conducted under less favourable circumstances for candidates from Irish and Scotch medical schools, of the rate of pay in India, and of the prolonged foreign service. Lord LANSDOWNE had given, Mr. BRODRICK declared, the most careful personal attention to all these questions, had received various deputations, and had spared no pains to get to the root of the difficulty. Lord LANSDOWNE was, moreover, very anxious that every consideration should be shown to the officers of a most valuable and distinguished department. As regards the constitution of the examining board for the army, we have Mr. BRODRICK'S assurance that, while every consideration would be given to eminent members of the Scotch and Irish schools for filling vacancies on the examining board, the board would be constituted solely with reference to the professional eminence of its members, without regard to the mere fact of their coming from one part or another of the United Kingdom. We confess that we have never considered this was a matter that had much, if anything, to do with the popularity or otherwise of the medical service, or that candidates were deterred from presenting themselves for examination on this ground; and the fact that the falling off of Irish candidates is no greater than the falling off of other candidates deprives it, as Mr. BRODRICK rightly alleged, of any special significance or importance. Mr. BRODRICK then briefly passed in review the history of the department in connexion with the question of the titles of medical officers and that lack of social consideration with which it was closely bound up. He traced the origin of this to the abolition of the regimental system and the consequent loss of that special and close personal contact and intimate relationship that existed between medical officers and their regimental brother officers. There is, no doubt, a good deal of force and truth in this view; but we would remark that the regimental system was abandoned in the interest of the State, and it should be remembered that there was even then a good deal of discontent expressed by many regimental medical officers at their position at mess, considering their relative rank and the amount of their contributions to the mess and band fund. What is now apt to be forgotten, however, must be admitted by everybody, and it is this: that since the introduction of the present system the gain in regard to medical and field hospital organisation, field hygiene, and medical arrangements generally has been enormous. The splendid results, as far as the sick and wounded are concerned, that have been obtained in many of our late campaigns under the present consolidated system could not have been accomplished under the older regimental one. But all this is now ancient history; we have to address ourselves to the state of things as they exist at the present time. We are glad to recognise that Lord LANSDOWNE has done his best to remove several real and substantial grievances of which, as we have always contended, medical officers had to complain. He has, we are told, after communication with the India Office, secured to them an increase of pay in India and the Indian tour has been moved back to five years instead of six. By the increase of pay we trust we are right in assuming that the medical officer will get the pay of his army rank whilst serving in that country. Assistance is also promised towards forming medical messes at large stations and in providing the necessary accommodation for them where possible; and opportunities to study on return from foreign service will likewise be afforded. We are not told, however, whether the period of home service will be increased and that of foreign service consequently decreased—a very important consideration; nor are we told whether medical officers will be moved about when at home less than they are at present.

But it is when we come towards the end of Mr. BRODRICK'S remarks on the Medical Department that the real difficulty has to be encountered. It is many years since we first suggested that the medical service should be made into a Royal Corps and placed on a footing analogous to that of the other scientific corps of the army. The medical service is a departmental one, and

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its officers have at present composite medical and military titles carrying substantive rank in all that appertains to their own service and duties. These concessions, Mr. BRODRICK says, made in deference to the recommendations of the late Sir ANDREW CLARK, though welcomed at the time by the profession, have not altogether acted as was desired. Some of the composite titles, we would parenthetically remark, were very unhappily chosen. What medical officers ask for is that they should be formed into a corps and welded with the Army Hospital Corps under some such title as the Royal Medical Staff Corps or the Royal Corps of Surgeons, of which they should be the officers with corresponding military, and not composite, titles. They will consequently be disappointed to learn that none of the proposals which have been submitted to the Secretary of State for giving new forms of army rank to the medical staff appear to him desirable for adoption. He does not believe that by such titles the Medical Department will obtain the status to which their talents and professional acquirements entitle them, and says that anxious though the War Office is to meet the medical profession on all points this is not one of those on which further action appears to be desirable.

THE adverse conditions under which the poll of the Fellows of the Royal College of Surgeons of England on the question of the direct representation of the Members of the College on the Council was taken have produced their natural result. By 485 votes to 201, a majority of 284—considerably more than two to one—the Fellows of the College have reversed the decision arrived at by the half-yearly meeting of the Fellows in January, 1896, and have decided that "it is not desirable to give the Members of the College direct representation upon the Council." In the face of this vote the analysis of the 201 affirmative answers which forms part of the report of "the Committee on the Circular to the Fellows," and shows how those favourable to the representation of the Members would carry their views into effect, loses much of its intrinsic interest. Nevertheless, there are some noteworthy points in this analysis. The first point is that out of the 201 affirmative voters no less than 161 would admit Members of the College to seats on the Council, and 42 of these are in favour of the representation of Members being by Members only. Only 40, therefore, of the 201 affirmative voters were in favour of the representation of Members being by Fellows only, and 119 were for the representation being by Fellows and Members indifferently. This shows a remarkable growth of liberality of opinion among the liberal-minded Fellows. On the other hand, among the 201 affirmative voters there is a stong preponderence of opinion in favour of limiting the concession of the franchise to Members of a certain standing, 67 voting that Members of the College should be qualified to vote without restriction as to standing and 125 imposing a limit of years. As to the seats to be assigned for the representation of the Members, the committee states that the numbers mentioned were too varied for convenient classification, ranging from two to half the Council, 129 being in favour of obtaining the seats by addition and 49 by subtraction. The chief reason for the preference given by the 49 voters to obtaining the seats by subtraction was no doubt the belief that a Council of 24 is quite large enough.

We are neither surprised nor discouraged by the result of the poll. We are not surprised because we carefully pointed out at the time that the circular of the Council was issued that the conditions under which it had gone out would injuriously affect the prospects of a successful issue for the Members of the College. We may remind our readers that the adverse conditions were these: In the first place the subject of the representation of the Members of the College on the Council had been discussed by the Council, and the Council, by 11 votes to 8, passed a resolution to the effect that as the Council represented the Members of the College as well as the Fellows no further representation of the Members was desirable. When this vote was taken the minority was weakened by the absence of two or three members of the Council favourable to the concession. In the second place, the circular itself was so drawn as to show a decided leaning to the negative side. This was chiefly due to the action of the Society of Members of the College in urging upon the Council to incorporate in the circular the reasons of the society for asking for representation, such reasons being by no means the strongest or least assailable reasons that could have been formulated. The request destroyed the prospect of securing the issue of a circular of a neutral tint, as the committee on the circular to the Fellows doubtless considered themselves bound to answer and to correct the statements of the Society of Members. The third and, we think, the most potent adverse influence was the issue, at the precise moment when the circular of the Council was being sent to the Fellows, of another circular from the Society of Fellows of Manchester, accompanied by a reprint of an article or letter which a member of the Council of the College had published in the medical journals some weeks previously, expressing views strongly antagonistic to the claims of the Members of the College.

Nothing is more encouraging to us than the fact that in spite of the adverse influences on which we have commented the opponents of the concession fall short by nearly 100 votes of a majority of the Fellows. This circumstance is of the greatest importance to the cause of progress, for the material is already at hand by which a minority on the present poll can be converted into a majority at the next. For the time the result stops progress both for the Fellows and the Members of the College and prevents the Fellows securing a new Charter to make statutory the half-yearly meetings of the Fellows of the College. But it cannot stop the progress of opinion among Councillors, the Fellows and the Members of the College, and the profession generally. It cannot prevent the gradual disappearance of the majority of 284 until the requisite affirmatory majority is obtained. The growth of liberal opinion in the profession may be slow, but it is sure, and will not be hindered by the fact that exclusive privilege dies hard.

IN the dental profession at the present time there seems to be quite an epidemic of prosecutions, the majority of which are in connexion with Clause 3 of the Dentists Act—namely, the one dealing with unregistered persons. At

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Brighton no less than seven such summonses have been heard within the last few weeks, while at Swansea there have been five similar cases. The Dentists Act, as amended by the Medical Act of 1886, allows private individuals to carry out prosecutions, but those who undertake such work should make certain of their facts beforehand and not leave any stone unturned to ensure success, as a single failure is a heavy discount on many successes. That this care is not always taken is well shown by two prosecutions during 1896, in one the action being lost by the technical error of not putting in the Dentists' Register as evidence, while in the other the person prosecuted was actually on the Dentists' Register.

With regard to the actions at Brighton we find that in the three heard on Jan. 19th one was adjourned and two were unsuccessful. In the first of these it was admitted that the name of the defendant did not appear upon the Dentists' Register, and the defence was that although such was the case the defendant had practised dentistry for twenty-two years and was therefore in practice before the passing of the Act. After hearing the evidence the stipendiary adjourned the case for eight weeks on the ground that an action is to come before the High Court in which a number of dentists, including the defendant, are proceeding against the General Medical Council for refusing to place their names on the Dentists' Register under Clause 37 of the Dentists Act. This case is one of the greatest importance, and its result must have an important bearing upon the judicial position of the General Medical Council in the administration of the Medical and Dental Acts. In the second case the person who appeared to answer the summons was not the same seen by the witnesses for the prosecution, and as the solicitor for the plaintiff did not press the case the summons was dismissed with costs. The third case was against a Dr. DINJIAN, manager of the American Dental Institute, who was admittedly not registered. The stipendiary dismissed the case on the ground that sufficient evidence had not been produced to prove that defendant held himself out as a qualified dentist. This idea is somewhat difficult to fall in with when the defendant admits to being the manager of the Brighton branch of the American Dental Institute. The four cases heard on Jan. 26th, in addition to one heard at Hove, were all successful. Of the cases at Swansea the summonses have been dismissed in two, while in the remaining three no judgment has so far been given.

In another case which has recently been before the courts the interest centred on the question of damages for malpraxis. The plaintiff, to state the case briefly, sued the American Dental Institute on the ground of alleged negligence on the part of one of their operators in attending to him. The plaintiff had, as far as can be gathered from the newspaper report, a bridge made; for this he paid sixty guineas. He subsequently suffered much pain and discomfort, due to the roots to which the bridge was fastened being left untreated and in a septic condition. The plaintiff was eventually seen by a Dr. BOSWELL, who seems to have given him relief. Evidence in favour of the plaintiff was given by some prominent dental surgeons, and he was at the conclusion of the hearing awarded £150 damages. As far as the question of malpraxis goes the case was of undoubted interest, and although we are unable to discuss now the whole question in detail it is well to point out that the name of M'CORMICK does not appear in the Dentists' Register for 1896. This fact should not, we think, be lost sight of by the proper authorities. The action is a glaring example of the insufficient way in which the public are protected from the hands of unqualified persons.

THE question of the registration of midwives bids fair to become as hardy an annual as that affecting the deceased wife's sister. A new Bill has been introduced and backed by twelve Members of the House of Commons, which Bill was down for second reading upon Feb. 12th, although it never arrived at that stage of progress. Of this Bill, which is shorter and less complex than that introduced by Lord BALFOUR of Burleigh in the House of Lords in 1895, we print the full text in another column, so that our readers can study its provisions at leisure for themselves. In some ways it is an improvement upon its predecessor; for instance, Lord BALFOUR'S Bill defined "midwife" as a woman who undertakes to attend cases of natural labour without the direct supervision of a medical practitioner. The Bill now before the House wisely avoids this pitfall by defining "midwife" as a woman who undertakes to attend cases of labour in accordance with the regulations to be laid down under this Act. Thus it avoids defining the impossible by omitting the words "natural labour" and shifts the responsibility to the shoulders of the hereinafter to be constituted Midwives Board (*vide* Clause 5). The local supervising authority is by both Bills practically the same—namely, the local sanitary authority; but Lord BALFOUR'S Bill provided for payment for this supervisory duty, whereas the present Bill makes no such arrangement, unless Clause 6 may be taken to include a provision of this kind.

We think it most unlikely in the present state of public business that this Bill will ever reach its second reading, and we understand that Sir WALTER FOSTER intends to move its rejection; but nevertheless it is of importance that the profession should grasp the main facts of the Bill, so as to have rational grounds either for opposing or furthering the measure. It is, we believe, universally allowed that the present system, whereby any woman, however ignorant, may attend women in childbed without let or hindrance, without there being any check on her spreading puerperal fever, and without being under any kind of authority, is intolerable and should be altered; but when it comes to laying down the details of a measure whereby the present state of matters may be improved the difficulties in the way begin to appear. We must remember that midwives always have existed and always will exist; that women, especially among the poorer classes of the community, will continue to prefer to be attended by a midwife in preference to a medical man, possibly on account of cheapness, but in many cases, we expect, because the midwife does not lay down so many (to their minds) unnecessary and harassing rules for their guidance during convalescence; that this partiality, though it may appear to well-regulated minds very foolish, is a factor which must

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be reckoned with in dealing with this question; and that unless the Legislature is prepared to absolutely prohibit all and every kind of unqualified practice midwives will continue to be an integral part of the social community. At present the midwife is a sort of free-lance, but as a result of all the registration Bills hitherto brought in she would come to be recognised, despite all said to the contrary, as a duly licensed medical practitioner.

Although we yield to no one in our desire that puerperal women should be protected from the dangers of sepsis brought about by the ignorance or carelessness of their attendants, yet we cannot agree to any scheme which does not lay down a hard-and-fast line between a midwife and a medical practitioner. The present Bill in Clause 5 lays all the responsibility of defining the duties of midwives upon the Midwives Board. Paragraph *f* of Section 2 of this clause is as follows: "To frame for approval by the General Medical Council rules for regulating, supervising, and restricting within due limits the practice of midwives." We must confess ourselves unable to see how the General Medical Council or any other body is to frame rules which shall lay down for the guidance of a midwife when her own attendance shall cease and it becomes necessary for her to call in a medical man, for we take it that this is meant by the paragraph under consideration. If the Bill ever reaches the committee stage we consider it absolutely necessary that some clause should be added making it clear as to what in the opinion of the framers of the Bill a midwive may or may not do; for as it stands the measure is very incomplete, and too much seems to be left to those who are to arrange the details. All the same it is an honest and carefully-drawn plan to attempt to meet a humanitarian want, and if the points which we have endeavoured to indicate are dealt with we think that, as a part of the law of the land, it would in some ways diminish pain and suffering. At any rate, to quote the great master HIPPOCRATES, if it do no good it will at least do no harm, always provided that it is made perfectly clear not only to those who can read the Bill, but also to that class from which the midwife's patients come, that even when registered the midwife will be in no way a "doctor," but only a nurse. We should like to add that we see no reason why this question should not be discussed in the profession calmly and with politeness. The points are all perfectly clear, and the procedure requires formulating, but there is no necessity for ill-tempered recrimination.

PORTSMOUTH AND GOSPORT.—The total funds contributed towards the restoration of the Royal Portsmouth Hospital as the memorial of Her Majesty's long reign had reached on Feb. 13th £5139. At a meeting at Gosport last week it was decided to establish a Victoria Nursing Institute. An amendment was moved by a working man that 100 workmen's dwellings should be provided instead. Perhaps it is a pity that this was negatived, for workmen's dwellings are greatly needed. Parts of the town much need attention, and long ago the urban council were asked to provide better dwellings for the poorer classes. They, however, decided on Feb. 18th to take no action under the operative section of the Housing of the Working Classes Act, relying on private enterprise and the plea of costliness.

Annotations.

"Ne quid nimis."

THE WATER-SUPPLY OF THE METROPOLIS.

WE begin to-day the report of a Commission which we have instituted to inquire into the water-supply of the metropolis—a subject which bids fair to assume a political importance proportional, if possible, to its importance when viewed from the aspect of public health.

THE FIGURES OF VACCINATION.

AT a meeting of the Royal Statistical Society held on the 16th inst. at the Royal United Service Institution a paper on "English Vaccination and Small-pox Statistics, with special reference to the Report of the Royal Commission and to recent Small-pox Epidemics," by Mr. Noel A. Humphreys, was read. He arrived at the following conclusions (among others) based upon the figures discussed: 1. That the mean annual death-rate from small-pox at all ages in England and Wales, which was 408 per 1,000,000 in the twelve years for which records exist prior to compulsory vaccination, fell to 126 per 1,000,000 in the forty-two years since vaccination was made compulsory, which period included the world-wide epidemic of 1871-72. 2. That the main part of this decline of mortality occurred among children under the age of ten years, who may be presumed to have been principally affected by the increase of infant vaccination. 3. That the age-incidence of fatal small-pox had entirely changed under the influence of increased infant vaccination; and that small-pox, from being mainly a disease of childhood, was now proportionately more fatal to adults. 4. That, judged by the statistics of the last six principal local small-pox epidemics, the proportion of deaths of children bore a constant ratio to the proportion of children officially returned "unaccounted for" as regards successful vaccination. 5. That efficient infant vaccination conferred a practically complete immunity from fatal small-pox during the first ten years of life. 6. That the increase in the proportion of adult deaths from small-pox must be attributed to the waning of the protective effect of infant mortality, this hypothesis being corroborated by the steady increase in the proportional case-mortality of vaccinated persons in recent epidemics at successive age-periods above ten years. 7. That both the small-pox attack-rate and the case-mortality was far lower at all ages among those who had been vaccinated in infancy than among the unvaccinated. 8. That the type of disease suffered by small-pox patients was far more severe among the unvaccinated than among the vaccinated; and that the severity of the type appeared to vary with the number and quality of the vaccination marks. 9. That, judged by the statistics of small-pox hospital nurses and attendants, successful re-vaccination afforded practically complete protection to adults, even to those brought into actual personal contact with the worst forms of disease. We recommend these conclusions to the careful consideration of those who have been unable to read aright the lessons taught by figures.

THE "LOCAL PRACTITIONER": A PRESS PARODY.

IT is a most satisfactory sign of the spirit of our times that the interests of hospitals, which have done and are doing so much for the public good and for the reputation of medicine, are well befriended by the daily press. We

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regret to temper this admission with any qualification, but the unfortunate proneness of zeal to consort with ignorance and to proclaim this failing in the press as elsewhere leaves us no alternative. A writer in one of the local newspapers of the metropolis has recently interested himself in the problem of hospital finance, especially with that part of it which concerns the Great Northern Central Hospital. Naturally and rightly, he commends the practice of that hospital. He can hardly say too much in praise of the practitioners who have there worthily done their duty (though not alone in that glory). Here his own financial operations break down, for having thus well paid the Æsculapian Peter he proceeds to rob the unmitred Paul who administers physic *in partibus extra muris*. He would cast no slur, he tells us, upon "local" practitioners as a body—a somewhat confusing description, which we may freely translate as equivalent to what we call general practitioners—but the professional services of many such are, he says, worse than useless. He then draws an imaginative picture of medical men who were qualified twenty years ago, then went to sleep, and learnt their craft no more. Some of them, he says, should not be allowed to attend a sick dog. He solemnly warns the public that they cannot learn these truths too soon. We would, on our part, rather caution them not to accept them too readily from this authority. As everyone knows, there are degrees of excellence or the reverse in every calling—medicine and even journalism not excepted. Nevertheless, a criticism so ill-informed and so sweeping as that to which we have referred, though ostensibly favourable to one section of the medical profession, can only be regarded as gratuitously insolent towards another not less deserving, and we trust it will be so received by the public to whom it was addressed in what was, perhaps, a moment of aberration.

"WALLACE-ISM!"

WE have received a publication called the *Herald of Health*, edited by C. Leigh Hunt Wallace, and "having for its object the physical regeneration of man." Other objects are, we gather from a study of its pages, vegetarianism, anti-vaccination, the puffing and vending of a non-poisonous preparation of aconite, and generally to further the interests and tenets of a sect called "Wallace-ites." We never heard of them before; they are not among the 293 sects mentioned as having places of worship in the list given by Whitaker. However, it is well known that the best work is generally done in silence. Although the *Herald* scoffs at medical men and medical science—*vide* page 26 of the February number—yet it advertises a professional preliminary school for girls. To quote from the prospectus: "The object of this school is to provide girls with a sound all-round education, and at the same time prepare them for these professional preliminary examinations so that they can, while with us, or later on, register themselves as medical students without further preparation." This school is at 5, Osnaburgh-terrace, and the same address is given as being a boarding-house for Wallace-ites. Now we should very much like to know how the professional preliminary girls and the Wallace-ite boarders are all to be accommodated in the same house consistently with the laws of healthy housing, unless, indeed, the number of both classes is extremely small. Is the house run upon a kind of Box and Cox arrangement, or do the professional preliminary girls only come for instruction during the day? or how are things managed? There are a number of other interesting advertisements, e.g.:—"Monthly nurse. Vegetarian, hygienist, teetotaler? Diploma. No doctor necessary. Mrs. ——, ——, N.W." If no doctor is necessary the professional preliminary girls will not get much work out of the followers of the *Herald of Health*. Fads such as this paper advertises do not as a rule do much harm, but we most strongly object to people being allowed to sell so-called non-poisonous preparations of aconite. Already one unfortunate man has died after taking a dose of Wallace's specific, No. 1, or, to quote the verdict of the coroner's jury, "from cardiac failure produced by a poisonous dose of aconite contained in a bottle labeled Wallace's specific, No. 1." The sale of this nostrum, even when labeled "Poison," ought to be sternly put down altogether or else its composition should be inscribed on the containing bottle or packet.

THE MIDWIVES QUESTION IN VIENNA.

THE interesting communication in THE LANCET of Feb. 6th from our own correspondent in Vienna on the lamentable state of medical practice in that city is worth much consideration. It shows that even in a State which regulates medical and midwives' practice more than is done here medical practitioners are badly protected from gross evils. The article is, indeed, full of instruction. The legislation in Austria, which requires insurance against sickness by working men is about to be extended to employers and tradesmen, and doubtless, implies the further degradation of the remuneration of medical men. Unqualified practitioners continue to increase. The competition of the hospitals giving gratuitous treatment is on a huge scale. And midwives do a great deal not only of midwifery practice but of general practice, especially among children. They dissuade parents from sending for medical men by saying that the practitioner will notify their cases and lead to the expense of disinfection. The impression conveyed of the intelligence of these midwives is very poor. They deal in charms. They treat eye diseases of new-born children with milk or with urine, and if convulsions occur put on the mother's wedding veil. Those persons who are concerned for the plight of women attended by midwives in this country and also wish to protect them by legislation and registration should study these revelations and introduce securities that midwives, if they are to be registered, shall also be restricted to very plain and palpable duties.

"CHILD STUDY."

A PUBLIC meeting was recently held in Manchester at Owens College in connexion with a local society for "child study," which is now to be made a branch of the national association for the same purpose. Dr. Ashby, on the proposal of Principal Ward, presided, and said that a small association was formed in Manchester last year and that now affiliation was sought with the British Association for Child Study. To those who had read the delightful essays of Professor Sully it was not necessary to explain the object of the society. During the last few months some of their candid friends had asked if they were going to experiment on newly-born babies—if they were going to put pepper or salt on their tongues to try to find out at what exact period they appreciated these useful condiments. They were asked if they were going to repeat the experiments on the prehensile faculty of infants in order to demonstrate their affinities with our lower relations, and if it was intended to make the nursery a temple and the baby an idol. They had no intention of doing any of these things, but would work under the direction and with the help of some distinguished psychologists and biologists, and they would also seek the assistance of mothers, nurses, and teachers—"all those, in fact, who were the associates of the infant in its early days and had the shaping of its destinies. There was still a good deal of rule-of-thumb work in the British nursery." Professor Lloyd Morgan of University College, Bristol, gave an address on the aims and

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methods of such a society. He based the primary claim of child study on the bearing it had on education and was convinced that systematically undertaken it would tend to give right ideas and to eradicate wrong ones, and thus be "influential on the practice of education." In the past psychologists had been too introspective, and had given the results of self-analysis, and had thus evolved a psychology of sages; but it was most desirable that they should make their science more thoroughly comparative by the investigation of psychological processes in minds at a lower stage of development. By working hand-in-hand "the trained psychologist and the teacher by profession would attain to results which in the largest and fullest sense would tend to give right ideas and eradicate false and erroneous notions." Professor Morgan said the subject of perception and conception as exercised in tolerably close touch with sensory data would, he was sure, amply suffice for the session's work. He indicated what could be done in testing the sensory endowments. The range and accuracy of vision, the perception of colour, the recognition of visual objects, experiments on hearing, observations on pressure perception, space perception, memory, and the subject of association and suggestion were among the points discussed. Dr. Mumford, who has taken the initiative in the formation of the local society, in which he was ably backed by Professor Alexander, proposed, and Professor Wilkins seconded, a vote of thanks to Professor Morgan for his address. The study of child life and the patient watching for the gradual development of the physical and mental faculties—for the first smile of recognition—afford as fascinating a study as any young mother wishes for or can imagine; but the "scientific" observation of "their powers of estimating angular value or relative weight" will perhaps only be thoroughly appreciated by the "new woman." And the nursemaids, whose aid Dr. Ashby invokes, must surely be required to undergo training and "registration" before being called on to give the results of their observations. Professor Morgan says, truly enough, that the child's coöperation must be obtained, and that if while making experiments on his perceptive powers the "trained psychologists" sat solemnly by, taking mysterious notes, he did not think the results would be satisfactory. "We must place ourselves as nearly as might be on the same plane as the children. What we desired them to do we too ourselves must do. The observers' notes should be written up afterwards." These are most judicious remarks, showing already some knowledge of child life. It would be charming to see the professors become "as little children," and most interesting to know the verdict of the experimented on the perceptive faculties of the experimenters. There is much we should like to learn as to the "dawn of intelligence," and we wish the society every success.

THE NOTIFICATION OF MEASLES.

IT has for a long time now been a disputed point as to whether or not measles should be included among the notifiable diseases. At first sight it would appear inconsistent not to include within the Act a disease which is at the same time one of the most infectious and fatal of those which prevail in this country. Further consideration, however, will quickly show that there are many difficulties in the way of making the fact of notification a useful means of checking epidemics, and it has actually been shown that in many places where such a system has been adopted the epidemics have been quite as widespread and uncontrollable as before. In times when no epidemic is in existence it is probable that the notification of odd cases might occasionally lead to prevention of further spread, but when an epidemic has once set in the difficulties become enormous. The disease spreads so rapidly that to ensure any chance at all of stamping it out at its commencement a large staff would always have to be kept in readiness, which would lead to a very great expenditure and a very doubtful gain. The onset of measles makes it a very difficult disease to identify in the early stage, for, unlike the more definite onset of scarlet fever with the early appearance of a rash, its first symptoms are often treated with the family remedies for a cold, and it is usually not until the seeds of infection have been widely scattered that its nature is definitely recognised and measures are undertaken to prevent it spreading. On the other hand, if this disease came within the Act it might, perhaps, teach the public to look upon it with rather more awe, which it is rightly entitled to by reason of its great fatality. We have before us a report on this subject which Dr. Corfield has made to the vestry of the parish of St. George Hanover-square, in which, after due consideration, he advises that body not to adopt the system of notification. His inquiries into the subject show that the plan has failed to produce any effect in many places where it has been adopted and he does not think that the doubtful advantages received would in any way justify the enormous expenditure which the adoption of such a scheme would necessitate. Among the methods for checking an epidemic Dr. Corfield has great faith in the early closing of infant schools, which, if adopted soon enough, should be very beneficial, and he further dispels the illusion that children catch the disease just as easily after the school is closed by playing with each other in the courtyards and streets, for fresh air is always an antagonist to disease, though we are afraid that the germs may live comfortably, even if they do not thrive, in the stagnant and darkened atmosphere which occupies the limited spaces between so many London dwellings.

CENSURE BY A CORONER.

FROM a report in the *East Anglian Daily Times* it appears that on Feb. 4th an inquest was held by Mr. J. Harrison, coroner for Essex, at Wivenhoe, touching the death of Henry Robert Childs, aged fifty-six years, a painter. The body of deceased was found in the Colne in about three feet of water and four or five yards from the edge. After the tide had gone down footmarks could be traced for sixty yards down the sand from the sea wall. During the inquiry the jury expressed a desire to know when Dr. Hewlett of Wivenhoe last attended deceased and for what malady. In furtherance of this wish the coroner despatched his officer to ask Dr. Hewlett for information or to request his attendance. Dr. Hewlett replied: "I decline to give any information here, as I consider it unprofessional to give evidence and testimony to a police officer which should be given only by the medical man in person at the coroner's court. I was prepared and, moreover, perfectly willing to attend the inquiry as a witness if desired." On the message being reported to the coroner he said to the officer: "You tell Dr. Hewlett from me that if he sends me messages like that I shall commit him for contempt of court, and he will find himself in a funny position." Subsequently he informed the jury that Dr. Hewlett had sent back "a most insulting message" and that unless he had an apology he should certainly have him before him next time he had an inquest in Wivenhoe. If the facts are correctly reported, we have no hesitation in saying that, in our opinion, Dr. Hewlett's action was consonant with both the spirit and the letter of the law. A medical man is not bound to state to a coroner's officer the evidence he would be able to give. Nor do we consider a verbal request to attend an inquest is sufficient. By the statute 6 and 7 Will. IV., c. 89, the first section enacts "that whenever it shall appear that the deceased person was attended ..... during his last illness

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by any legally qualified medical practitioner it shall be lawful for the coroner to issue his *order in the form in the schedule* thereunto annexed for the attendance of such practitioner as a witness." We find no mention of any alternative method of demanding the attendance. In Jervis's "Coroners" it is laid down that "in all cases of sudden or violent death ..... it is desirable that a surgeon should be called as a witness, and if the deceased has been attended by a medical practitioner his attendance should be secured, care being taken that he is able to identify the body." We have repeatedly endorsed this opinion, and although the coroner in this case undoubtedly acted within his powers we think that he would have shown greater discretion if he had issued an order for Dr. Hewlett's attendance in the first instance. Failing that, however, there can be no doubt that on the presentation of the jury he should have adjourned the court for Dr. Hewlett's evidence on oath under subpœna. To say nothing of the serious inconvenience that may be caused to a medical man by being unexpectedly and peremptorily required to attend an inquest at once, we consider that both by courtesy and law he has a right to expect a formal summons at due notice. A coroner's court is one of first instance and hearsay evidence is admissible, but nevertheless this should be taken only as a substitute when direct testimony on the point at issue is not procurable. Again we quote Jervis: "If during the inquiry it appears that there are persons whose testimony is material and who are not in attendance, the coroner may *issue his summons* to compel their attendance," and "the coroner, being guided by the information he has received, usually sends a message to those whom he thinks material. Should they neglect or refuse to attend the coroner, as incident to his office of judge of a court of record, has authority to issue a *summons* to compel their appearance ..... and he may, if necessary, issue a *warrant*. If a witness resists the warrant the coroner may commit him for contempt." If this is a correct statement of the law it is clear that in the case under discussion Dr. Hewlett was not guilty of contempt and therefore not subject to committal. We trust that there is some fault in the report of the proceedings at the inquest, for, failing that, we should be inclined to think that the coroner could with more justice be called to account for exceeding his jurisdiction than that Dr. Hewlett should be committed by the coroner for contempt. It may be in the recollection of our readers that some years ago, when the late coroner for Middlesex insisted upon fully exercising his legal powers with regard to the holding of an inquest and the manner of conducting it, the subject was made the matter of an interpolation in Parliament, and that the Home Secretary, whilst admitting that the coroner's procedure was within the four corners of the law, hinted at the clipping of coroners' wings unless they acted with more discretion.

MODERN LAW AS TO VACCINATION PROSECUTIONS.

ON several occasions recently prosecutions of defaulters under the Vaccination Acts have failed owing to the omission on the part of the prosecutors of what was held to be a necessary detail—i.e., the vaccination officer had not been furnished with special written instructions to take proceedings in each case. It is difficult to ascertain upon what grounds it has been held that such instructions were essential, but it is certainly a fact that the ardour of boards of guardians has in some instances been somewhat damped owing to cases in which this detail was omitted having been dismissed. It appears, however, that the legal profession has recently been looking up the law on the subject, and has now arrived at the same position as has, we believe, been held all along by the Local Government Board. A decision having been given at Ipswich that it was not necessary for the guardians to issue separate instructions for prosecuting in each case, or, indeed, any instructions at all, reference was made to the Court of Appeal and the decision was upheld. Mr. Justice Wright, in giving judgment, is stated to have said that the law had been altered, but we fail, having regard to the fact that there has been no recent legislation on vaccination, to understand how this can have been the case. However, his judgment was that the vaccination officer could proceed without any express instructions, and Mr. Justice Bruce, in concurring in the decision, pointed out that the vaccination officer was, by the fact of his appointment, entitled to take proceedings. This decision will do much to clear the air, and it is to be hoped that clerks to all boards of guardians will pay due attention to it. We note that the judgment bore fruit on Feb. 11th at West Ham, when some twenty defaulters were brought before Mr. Baggallay and orders in all cases were made. One of the defaulters asked to see the authority of the vaccination officer, and it turned out that he had received only general instructions. It would seem, however, that not even these are now considered necessary, and the defendant having failed to carry this point endeavoured to obtain relief under the recent report of the Royal Commission. Mr. Baggallay, however, replied that a magistrate's duty was to obey the law, and that the law had as yet no concern with "conscientious objections."

MOVEMENTS OF VOCAL CORDS.

THE last volume of the *Philosophical Transactions* contains the record of an important piece of work in reference to cerebral localisation by Dr. Risien Russell. The title of the paper is "The Influence of the Cerebral Cortex on the Larynx," and it describes in considerable detail the experimental work which the author of the paper had undertaken and carried through with the object of showing to what extent, and in what degree, the various laryngeal movements are represented in the cerebral cortex. It is only natural that Dr. Russell's recent experiments, in which he was able to demonstrate the presence in the cortex of centres for various ocular movements other than those merely of conjugate deviation, should have suggested a similar line of research in reference to those of the vocal cords. It will be remembered that these experiments on ocular movements were undertaken at the suggestion of Dr. Hughlings Jackson, who thought that by dividing the muscles which subserve the lateral ocular movements it might be possible, by stimulation of the area of the cortex subserving them, or of some neighbouring part of the cortex, to evoke other ocular movements. Such, indeed, proved to be the case, and in the present investigation, as has been said, a similar procedure was adopted to try whether it was not possible to obtain abduction as well as adduction of the vocal cords. The experiments were carried out, of course, with the animals anæsthetised, and in one series of experiments the movements of the cords were directly observed, while in another the results were graphically recorded by means of a tambour and kymograph. In many of the experiments also the abductor bundle of fibres in the recurrent laryngeal nerve was separated from the adductor bundle—a procedure which Dr. Russell had previously shown to be not only feasible, but comparatively easy. The cerebral cortex was stimulated under different circumstances. 1. When both recurrent laryngeal nerves were intact. Under these conditions adduction of the cord was usually obtained, but in the dog occasionally abduction was obtained, and in the cat an additional abductor centre was found corresponding closely in position to that of the centre from which abduction was obtained in the dog. The most

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careful observation failed to reveal unilateral movement of the vocal cords or the slightest difference in the time or manner of their movement. 2. It was also found that if one laryngeal nerve were cut, the vocal cord of which the nerve was still intact could be equally well stimulated from either side of the cortex cerebri. 3. It was when the adductor fibres alone of one nerve were divided that there was first found evidence of the representation of abduction of the vocal cords in the cortex of the dog. It was found possible to evoke both abduction and adduction under such circumstances, but whereas both cords participated in abduction, only that cord of which the adductor fibres were intact in the recurrent laryngeal nerve was adducted. 4. If one recurrent laryngeal nerve were completely divided, and the adductor fibres only in the other, abduction of the cord of which the recurrent laryngeal nerve contained intact abductor fibres could be elicited on stimulation of the proper centre in either cerebral hemisphere, and if the adductor fibres in both nerves were divided—leading to a widely open condition of the glottis—excitation of the abductor centre led to still greater abduction of the vocal cords. The focus which has thus been marked out in the cortex cerebri of the dog is in the anterior composite and prorean gyri, and that it is probably the true abductor cortical centre for the vocal cords is made more likely by the fact that it is precisely in the same region in the cat's brain that the effect is to be obtained. But in the cat there is this great difference, that abduction can always be evoked on cortical excitation, whether the adductor fibres in the recurrent laryngeal nerves be intact or not, whereas in the dog it is sometimes necessary to divide the adductor fibres in one recurrent laryngeal nerve before it is possible to elicit abduction on cortical excitation. The result of the research, therefore, broadly stated, has been to differentiate centres stimulation of which causes abduction of the vocal cords. There are many other minor points of considerable interest referred to in the paper, in regard to which the original should be consulted by those interested, and Dr. Russell is to be congratulated not only on the results of his work, which are interesting and important in an unusual degree, but also on the care and ingenuity which he has shown in the various stages of the research and the lucid manner in which he has detailed his procedures.

ANTI-VIVISECTIONIST TACTICS.

IN a letter which appears in our columns attention is called to the fact that the Anti-Vivisectionists' Society is at present using most unscrupulous methods to lead the public astray on the question of vivisection. From personal experience we know that this is the case and that a large number of well-meaning but thoughtless individuals are at present carrying about petitions which they can certainly not understand and which are calculated to do an immense amount of harm amongst those who have no opportunity of knowing that much of what is stated in these petitions is absolutely false and much intentionally misleading. These petitions are carried to every drawing-room meeting, and to church meetings of all kinds, and a number of signatures have been obtained, especially from people who do not take the trouble to inquire into these matters for themselves. As our correspondent points out, Sir Spencer Wells, a man who is said to have relieved an enormous amount of suffering amongst women, could not have obtained the results he did had he been so foolishly sentimental as to put the lives of a few animals against the number of lives he has been able to save and the amount of suffering he has succeeded in alleviating. Even those who have followed him, although they have done no animal experiments themselves, must recognise their indebtedness indirectly to the earlier experiments on animals. Unfortunately there are always a large number of people who are easily influenced by specious statements and plausible arguments, especially when they come from people who apparently speak with authority, but we should like all who are asked to sign this petition to insist on a definite answer to the following question: Could the antitoxic treatment of diphtheria have been evolved and could it be carried on without experiments being made on animals? Having got an answer to this question we should like them to ask the following: Is it true or is it not that there has been a great diminution in the percentage-mortality of diphtheria—representing last year in the Metropolitan Asylums Board Hospitals alone a saving of 250 lives and an enormous amount of suffering to the children of those to whom this unscrupulous circular is addressed; whilst in a certain class of case—that following scarlet fever—the death-rate has been reduced from over 60 in a 100 to less than one-tenth of the original mortality? When these questions are satisfactorily answered people may begin to consider whether they will sign these petitions or not, but until then all who have children of their own will be wise to withhold their support from a movement which is kept alive by faddists, many of whom do not object to taking animal life or the infliction of animal suffering where their own selfish interests and pleasures are concerned. We are perfectly willing to discuss this matter with those who are consistent throughout, but for most of those engaged in this so-called crusade we hope that honest people can have little but contempt; indeed, if their methods were not so persistent and so unfair most people would wish to forget them as soon as possible.

MENTAL DEFECT IN CHILDHOOD AND INCREASE OF INSANITY.

IN the House of Commons questions were asked a few nights ago concerning the alleged increase of insanity, and also as to the discrimination of children who are weak-minded only from those who should be sent to an asylum as imbecile. The number of insane patients in institutions has increased largely of late years; but the question as to actual number of persons becoming insane is one upon which authorities differ. A special report has been prepared by the Lunacy Commissioners, which is now in the printer's hands. Whatever may be shown by that report as to increase of the numbers of lunatics or otherwise, it is very desirable to consider whether any public means can be taken to lessen lunacy in adults by better care of the mental conditions of children. It is frequently found that a brain unstable from early years becomes insane under the pressure of life, and one means of prevention worthy of consideration is the discrimination of such children and their care. There are children of imperfect intelligence and low mental power in judgment, memory, and social sense whose bodies and brains are not so far abnormal as to justify their certification as imbeciles; again, there are children distinctly mentally exceptional, not necessarily dull in intellectual power, but destitute of moral sense and the knowledge of right from wrong, or of the decencies of social life and conduct, who are never truly sane, children of unsound mind though not imbecile. There are no sharp lines of discrimination between these groups and normal children that can be defined by single defects indicating mental weakness. We would suggest that for practical purposes an individual child should be classed and dealt with on a medical report showing defects in health and in points of bodily development, especially of the head, palate, and features; also describing abnormalities in gait, in expression, movements, or response in action as well as speech, while the mental power is tested by questions as to knowledge, judgment, and memory. It is important that some facts should be

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stated as well as an opinion expressed by the medical certificate in any case of mental deficiency. This question of discriminating children of feeble mental power from imbeciles is a part of the reference made by the President of Council to the Departmental Committee appointed to report on the education of children of defective intellect.

THE APPRECIATION OF THE GENERAL PRACTITIONER.

THERE are some indications that the rage for specialism has reached its height, and that the public are coming to see that they must rely for medical aid in nine out of ten of the medical emergencies of life on the general practitioner. Not only so, but for the general direction of life, for making the best of a person's physical and mental constitution, more will depend on the ordinary adviser, provided he be a man worthy of his vocation, than upon a consultant, however expert, who sees the patient once or twice in a lifetime. The *New York Medical Record* has a leading article on this subject, based on some remarks by no less a personage than President Cleveland, who, at a recent meeting of the semi-centenary of the Academy of Medicine, sounded the praises of the old-school practitioner who met all the emergencies of treatment in the last generation. He was supported in this view by Dr. Jacobi, who, speaking of the actual needs of medical practice of to-day and giving specialism its due meed of praise, expressed himself strongly in favour of re-instating the all-round man. It cannot be doubted that with the ever-improving qualification of the general practitioner the force of these considerations will gradually prevail.

THE PROPOSED SUPERANNUATION OF LOCAL AUTHORITIES' OFFICERS.

WE are glad to see among the Bills introduced to the House of Commons by private Members one which has for its object the superannuation of the officers and servants of local authorities. This latter term has a wide significance, as it includes practically all local bodies having sanitary and parochial functions, outside boards of guardians and other authorities, to which the Poor Law Officers Superannuation Act of last session relates. Thus we see the councils of all boroughs and urban and rural districts, school, highway, burial, and joint boards under Public Health Acts, and public libraries and baths commissioners and vestries named as coming within the definition. The Bill proposes to secure for all officers and servants as defined superannuation allowances on the basis of the Act just referred to, which Act, in so far as it can be made to apply, is printed in a schedule to the Bill, the main measure being made to refer to the schedule as extending to local authorities in the same way as to Poor-law authorities, with such differences only as are essential to the proper reading of the Act as thus extended. Thus, clauses of the Act relating to the title of officers and servants to superannuation allowances, the scale of such allowances, the method of reckoning services, the power to add years to actual service for the purposes of the Act, cases of subsequent appointment, forfeiture of claim on account of fraud, the return of contributions in certain cases, scale of contributions, and decisions of questions, together with some other provisions of the Act, are incorporated in the schedule as now set out in clauses 2 to 14 of the Act. Existing officers and servants may write themselves out of the scope of the proposed measure, as in the main Act, and any person doing so will remain subject to the provisions of the Metropolitan Officers Superannuation Act of 1866 if he be in the service of any authority to which that Act applies. Otherwise that Act is to be repealed. "Officer" means every officer in the service of a local authority and every assistant overseer and vestry clerk, except officers on the teaching staff of a board school. We learn that already public vaccinators are busying themselves in the direction of taking steps to make this proposed measure a means of securing to them the benefits denied under the Act of last year. We hope that they will be successful. The whole Bill has our sympathy, no reason appearing for the withholding from the officers coming within its scope the benefits which are now allowed to those in the Poor-law service. We cannot imagine that the House of Commons is likely to stand in the way of the superannuation of men who have devoted themselves to the service of the community in matters of public health, education, and cognate matters. This is an age of pension schemes, and where, as in the present case, authorities propose to reimburse themselves by a system of deferred pay for the granting of an old-age allowance to their officers and servants there seems no objection to the scheme. The servants of the Crown already possess the privilege, and now the Poor-law has a similar privilege for its officers; the present session will, we trust, witness the enactment of the Bill before Parliament, either as it stands or, at any rate, substantially as now drawn.

A NATIONAL PHYSICAL LABORATORY.

UPON Feb. 16th a deputation of scientific men headed by Lord Lister waited upon Lord Salisbury to induce the Government to supply funds for the foundation and maintenance of a National Physical Laboratory. The initial expense it was said would be £30,000 and the annual cost of maintenance, £5000. Lord Salisbury, in reply, acknowledged the extreme importance of the matter, but could not undertake to give any pledge in the absence of the Chancellor of the Exchequer. With regard to expense he said two important words which appeared in the printed statement had been omitted by the speaker. The amounts mentioned were in that statement put down as being necessary "at first." He had known modest movements which started with thousands to end in millions. He threw out as a suggestion that instead of asking the Chancellor of the Exchequer to pledge himself to outlay to which no bounds were set, some limited scheme of standardising for stopping adulteration should be pressed upon the State, and the question of general research reserved or allowed to depend on private munificence. We should be glad to see Lord Salisbury's scheme adopted, for the prevention of adulteration is a most important matter. He is quite right as to the probable increase in the expenses; and no one who remembers the increase of Mr. Forster's education rate of threepence in the pound to close upon a shilling can think otherwise.

THE WATER-SUPPLY OF CHICAGO.

THE city of Chicago, in spite of the great engineering work that was carried out in 1893, has not yet secured a satisfactory water-supply, and we understand that the Department of Health has considered it necessary to shut off the town water from as many as 250 public schools with an aggregate of 208,000 scholars. The task of making special arrangements for the supply of water upon so large a scale must be a very formidable addition to the duties of the School Board. The first impression of the visitor to the city on looking out upon the broad expanse of Lake Michigan, and learning that it is an inland sea of singularly pure and potable water, is that here at least the question of water-supply is solved by nature, whatever the dimensions or demands of the city may be which stands upon the shore. But, in point of fact, the very abundance of the water is its bane. If a river of moderate dimensions flowed through the city there would be no fear of contamination. The simple expedient of placing the water intake above the sewage

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outflow would make the city absolutely secure against this peril. But in Lake Michigan the volume of water is so vast that the flow is imperceptibly slow, and so long as any part of the city's sewage is permitted to flow into the lake there will be a danger of its drifting into the water intakes. Our own experiments made in 1892 (*vide* The Report of THE LANCET Special Sanitary Commission of Inquiry concerning the Water-supply of Chicago, U.S.A.—THE LANCET, April 8th, 1893) showed that this danger was notably reduced by putting the intake at a distance of three or four miles from the shore; but they also showed that this was no complete protection, and now the experience of the School Board confirms our experimental results and enforces the conclusion that complete isolation of the water-supply is the only safe and trustworthy course. Unfortunately for a community residing on the shores of a great lake, it is a course presenting many and special difficulties. In these circumstances it is no smal matter that it has a great reputation for enterprise and public spirit to maintain.

THE MEDICAL PROFESSION AND MASSAGE ESTABLISHMENTS.

WE think it quite time that forcible protest should be made in the name of the medical profession against the custom of advertising establishments, which, to put it mildly, are quack institutions, as places for the giving of electric baths and massage. The objects for which most of these establishments exist are perfectly well known and it is not our purpose now to deal with that aspect of the question. That is a matter for the police. What we do most strongly object to is their masquerading under the cloak of providing medical treatment. Electric baths, if properly given, are a very valuable method of treatment; but to try to give them in a metal bath is worse than useless, even if the metal be painted. The baths in two widely-advertised houses which were visited were ordinary metal baths; no questions were asked about the complaint from which the visitors might be suffering, and the whole style of the rooms, the "nurses," and the establishment generally left no doubt as to the purposes for which the places were used. These baths are advertised in the most respectable newspapers, and the advertisements are couched in such terms as to give the idea that the houses are places where definite medical treatment is carried on. This must be altered. Let the proprietors either use the expression in vogue in the eighteenth century for a like place—e.g., "bagnio"—or the old English word "stew." We are not now concerned with the morality or otherwise of the question, but we must insist upon the advertisements being so worded that the medical profession should not appear to have anything to do with such places. The police can surely do the rest.

THE POSITION OF THE AURICULO-VENTRICULAR CUSPS DURING SYSTOLE.

IT is usually taught in this country that during systole the thin edges of the auriculo-ventricular cusps "outside the attachments of the chordæ" (Foster) are kept flatly in apposition by the contraction of the papillary muscles simultaneously with the ventricle, and that the same muscular action keeps the cusps as a whole convex to the ventricular cavity. The pictorial representation of this state in transverse sections conveys the impression of the valves being locked up and bulging towards the auricle, an impression which is certainly erroneous. Dr. Cockburn Smith, in a letter in another column, calls our attention to a view held by many on the Continent and said by some to have originated with Parchappe. According to this the effect of the muscular actions we have referred to is to "pull down the auriculo-ventricular curtains," applying the valves one against another, and in the case of the left ventricle to the outer wall of that cavity, while in the right ventricle the approximated valves lie against the septum ventriculorum. Parchappe's book is valuable and interesting and his views, which, however, were not solely his, were in the main correct, as may be easily demonstrated. In a paper on the Action of the Valves of the Mammalian Heart, published by Dr. Noël Paton in the Laboratory Reports of the Royal College of Physicians of Edinburgh (vol. iv., p. 36) the same view in its essential points is maintained, and references are given to the works of Meckel, Mayo, Reid, Hope, and Burdach, who preceded Parchappe in entertaining it. Dr. Paton's experimental methods may be learned by consulting his paper, but anyone may convince himself of the truth of this view by purchasing the heart of a sheep killed by bleeding which has died with the heart in systole and dividing that organ so as to expose the interior of the ventricle with its taut cusps and contracted ventricle and papillary muscles. It may be readily conceived how such a disposition of these valves is calculated to strengthen their power of resisting intra-ventricular pressure when it is at its maximum at the commencement of systole and how so powerful a barrier against regurgitation quickly gains the upper hand in its struggle against distension, as the latter quickly subsides with the diminished size of the contracting ventricular cavity and the forward movement of its fluid contents.

PAR NOBILE FRATRUM.

THIS week we are able to lay before our readers two addresses of exceptional interest, full of references to events which have become historical, and commemorative of some of the greatest names in British medical science. Although the Hunterian Orations have for so many years been the congenial theme of practised speakers and writers, the subject is in no danger of becoming tedious or threadbare, for the story of John Hunter's life and work is incapable of compression within the limits of a single discourse, and the author of the oration each year has therefore considerable opportunities of selecting the topics for which he has a special preference. Mr. Christopher Heath has succeeded in everywhere manifesting a pleasant freshness and vitality, a sure sign of a speaker being both in sympathy with his subject and thoroughly familiar with the various developments which it has undergone in the hands of successive investigators. On account of its essentially practical nature John Hunter's anatomical and surgical work readily admits of being quoted from even under the very altered circumstances which have come to pass in the course of upwards of a hundred years, and in this respect he is perhaps placed at an advantage over his elder brother William, whose similarly distinguished career is outlined in the oration delivered by Dr. Hingston Fox before the Hunterian Society. Originality of mind and unwearied assiduity were the special attributes of these two brothers. They each had the satisfaction of knowing that their work was appreciated by their contemporaries; and more appropriate monuments to the memory of such men there could hardly be than their own museums, the one preserved by the Royal College of Surgeons of England and the other by the University of Glasgow.

THE RECENT LUNACY COMMISSION AT BOLTON.

AT the Bolton County-court, during the last week in January, Mr. Fischer, Q.C., one of the Masters in Lunacy, was engaged, with the assistance of a jury, in holding an inquiry respecting the state of mind of Mr. Arthur Knowles, a Bolton cotton spinner. The proceedings were instituted on the petition of the wife, and the case, which was of a

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somewhat unusual and painful nature, created much local interest. In such cases the rule is laid down that evidence relating to the presence of insanity in the alleged lunatic must be restricted to a period of two years preceding the inquisition. The testimony of the witnesses, both lay and medical, was of a contradictory character. Three medical men, including the family attendant, testified to the defendant's mental incapacity; on the other hand, several experts gave it as their opinion that he was capable of managing his affairs. Between the latter and the petitioner's counsel there was a pretty display of dialectical fencing. The most remarkable feature in the case was that it was admitted by the defence that in May, 1895, the defendant was of unsound mind. Previously to this he had several attacks of influenza, the last of which was followed by a slight attack of melancholia. Always of a religious turn of mind, he became more intensely so, declared he was Jesus Christ, and at Ilkley Moor on one occasion denuded himself of his clothing in a public place. Subsequently he associated himself with a peculiar sect who believed in faith-healing, and roamed about the country attending holiness conventions, returning to his home accompanied by other believers, his inferiors in social status, to whose presence in the house his wife naturally objected. Space forbids entering into all the salient features of the case, but there can be no doubt that the verdict arrived at by the jury was the correct one—viz, that he was of unsound mind and incapable of managing his affairs, for it is safe to say that if left to his own devices his religious mania would have become more intense, and hopeless insanity would probably have supervened.

BY the result of the election on Monday last for the Bridgeton division of Glasgow another member of the medical profession obtains a seat in the House of Commons. Sir Charles Cameron, Bart., M.D., LL.D. Dub., had a majority of 125 votes over the unsuccessful candidate, Mr. Scott Dickson, the Solicitor-General for Scotland. Sir Charles Cameron represented Glasgow in Parliament from 1874 to 1885 and Glasgow (College division) from 1885 to 1895, when he lost the seat. With the political aspect of the election we have nothing to do, but we may rejoice at the fact that the ranks of the medical profession in Parliament (thanks to the recent elevation of Sir Joseph Lister to the Peerage we are able to use the more comprehensive term) are strengthened by the accession of a distinguished representative.

A MEETING of the Executive Committee of the Society of Members of the Royal College of Surgeons of England was held on the 16th inst., when the following resolution was unanimously agreed to: "That a requisition be forthwith prepared and forwarded to the College, in accordance with the regulations, asking the Council to call a special meeting of Members at an early date, to consider the results and validity of the recent poll of the Fellows, and other matters of importance to the Members."

AT the next meeting of the Neurological Society, which will be held in the rooms of the Medical Society, 11, Chandos-street, on Thursday evening, March 4th, at 8.30 P.M., communications will be made upon Muscle Spindles, by Professor Sherrington, F.R.S., Mr. Victor Horsley, F.R.S., and Dr. F. E. Batten.

DR. DE HAVILLAND HALL'S second Lettsomian Lecture on Disease of the Nose and Throat in relation to General Medicine was delivered before the Medical Society of London on Monday last, and will be reported at full length next week. We regret that the pressure upon our space has made the delay in publication necessary.

THE Mercers' Company have granted 1000 guineas to the special appeal for £100,000 now being raised for Charing-cross Hospital. The Leathersellers' Company have also granted £100, the Brewers' Company 20 guineas, the Cutlers' Company 10 guineas, and the Scriveners' Company 10 guineas to the same fund.

ON Wednesday next, Feb. 24th, at 8 30 P.M., in the reference library room of the London Institution, Finsbury-circus, Mr. Victor Horsley F.R.S., will deliver the second of the Hunterian Society's lectures. The subject will be Torticollis and its Treatment. Members of the profession will be welcomed as visitors.

THE annual general meeting of the Medical Defence Union will be held at the rooms of the Medical Society, 11, Chandos-street, Cavendish-square, W., on Thursday, Feb. 25th, at 5 P.M. Mr. Victor Horsley, F.R.S., will take the chair and move the adoption of the annual report.

MR. BANCROFT, as the result of his readings from Dickens's works, which we understand he intends to resume next winter with the same object, has made gifts to various hospitals in London and the provinces of sums exceeding £3000.

THE council of the Sanitary Institute have accepted an invitation from the City Council of Leeds to hold a sanitary congress and health exhibition in that city in the month of September next.

SIR WILLIAM BROADBENT was presented on Wednesday last, in the library of St. Mary's Hospital medical school, with a service of silver plate in recognition of his valuable work as senior physician.

ON Thursday evening last Dr. J. C. McVail read a paper before the Epidemiological Society entitled—"The Royal Commission on Vaccination: a Review of the Dissentients' Position."

THE International Sanitary Conference at Venice has held two meetings on the 16th and 17th inst., when the measures adopted by various nations for checking the spread of epidemics were discussed. We hope to be able to publish some account of the proceedings of the Conference in future issues.

AT the recent election for the post of assistant surgeon to St. Mary's Hospital Mr. H. S. Collier, F.R.C.S. Eng., obtained the appointment.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fifth meeting of the session was held on Feb. 10th in the Medical Library of University College, Dr. Aust Lawrence, President, being in the chair. — Dr. F. H. Edgeworth showed a patient with Intra-thoracic Tumour. Dr. Symes and Dr. Broom remarked on the case.—Dr. T. Fisher showed numerous Pathological Specimens recently added to the Bristol Royal Infirmary Museum.—Mr. C. W. J. Brasher showed a modification of Hale White's Tongue Depressor with glass shield for infectious cases.—Dr. Michell Clarke and Mr. Morton read a paper on a case of Abscess of the Lung, with operation. Dr. Elliott, Mr. Ewens, Dr. Parker, Dr. Fisher, Dr. Harrison, and Dr. Skerritt discussed the subject.—Dr. B. J. Baron read a paper on the Symptoms and Treatment of Empyema of the Maxillary Antrum, with results of operation in eight cases. Mr. Harsant and Professor Fawcett spoke on the paper.—Dr. Parker read a paper on the Diagnosis of Certain Diseases Allied to Rheumatism. Dr. Harrison made some remarks.

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The Lancet Special Commission ON THE METROPOLITAN WATER-SUPPLY.

I.

LONDON is supplied with water partly by deep wells, but chiefly by various water companies. A comparatively small amount of water only is derived from the wells, which, with one exception, are all in the hands of private individuals or of companies. The quantity of water which can be obtained from wells has lessened year by year, for the level of the underground water has sunk. No statistics are available to show the daily amount which is derived from the deep wells, but compared with that supplied by the water companies it is inconsiderable. Of surface wells it is possible that a few remain. Some moveable pumps are still used by builders in the Chelsea district, but it is unlikely that much of the water is used for drinking. Of public pumps in London few, if any, remain. One of the last to go was the historic one of Aldgate, but for years before its removal it had been supplied, not, as the people in the neighbourhood supposed, from a local source, but by water laid on from the mains of the New River Company in accordance with the directions of the tactful and sagacious medical officer of health for the City of London, who, finding that the local water was extremely impure, and knowing that the inhabitants would not tamely submit (if they knew it) to any alteration in their cherished water-supply, by a pious fraud allowed them for years to pump water from the New River supply. And it was not until the pump was replaced by a tap that complaints were rife in the district.

The well of St. Govor in Kensington-gardens was formerly derived from a spring, but the saint has deserted the shrine, and the water, it is to be feared, has lost its healing efficacy. Practically, surface wells and springs in London have ceased to exist, dry wells affect only the few proprietors of them, and the great bulk of the water supplied to the district is brought by the water companies.

In the present article we propose to give a brief and necessarily incomplete sketch of the history of the London water-supply of the past; secondly, to define the metropolitan areas which are affected by the various water authorities which supply them; and thirdly, to give a brief description of the area of distribution of each metropolitan company.

EARLY HISTORY OF THE LONDON WATERWORKS.

The site of London was by nature bountifully supplied with water. The Thames was a large pure river and there were many springs in the town itself and in the immediate neighbourhood. Little is known about the water-supply of Roman London and few traces have been found of it; but this does not, of course, prove that during the Roman period there was not a really well-arranged water-supply. We know from recent excavations at Silchester that the arrangements there were extremely thorough and efficient. There were public baths and a large sewer which discharged beyond the walls of the city. It is probable that London and other cities in Roman times were equally well supplied, but naturally in the case of a city like London, where changes have constantly been going on and each generation of citizens has more or less destroyed the work of former ones, traces of the earlier civilisation are not frequently found. On the other hand, in the case of Silchester, which till recently remained undisturbed from the time it fell into ruins, it has been possible there to see clearly how perfect the arrangements were.

In the time of the Saxon dynasty London was a walled city with seven gates: Doe Gate and Blynes Gate or Belins Gate next to the river, Lud Gate and New Gate on the wes Creple Gate and Bischops Gate on the north, and Oeld Gate on the east. The streams of Share Bourne and Lang Bourne ran into Wall Brooke, which rising in Fensbury ran through the marshes of Moorfelde, then passed under the city wall, and flowing in a south-easterly direction ran into the Thames at Doe Gate. The river of Wells was beyond the city wall and to the west. Tod's Well, Bad's Well, and Fag's Well sent water into its left bank; the Old Bourne and the overflow from St. Bridget's Well ran into the right bank. Of these streams the names survive. The Walbrook and Langbourne are no more seen, but they have given their names to City wards.

In the time of Henry II. an account of London was given by Fitz-Stephen, Thomas à Becket's secretary. He appears to have been annoyed by the number of the drunkards and by the chastity of the city dames,[1] but he spoke well of the water. "There are about London," he says, "on the north of the suburbs choice fountains of water, sweet, wholesome, and clear, streaming forth among the glistening pebble stones." The amount of water, however, soon became insufficient for the wants of the inhabitants. The courses of the streams in the city became reduced in size and in places covered by the building of houses, and the citizens were obliged to bring water from a distance. In the year 1236 a supply granted on the demand of Henry III. by Gilbert Sanford was brought from Tyburn by leaden pipes, and some years later conduits were built in various parts of the city,[2] from which water derived from this source could be obtained.

The Corporation of London provided for the cleansing and repairing of the springs at Tyburn for the Great Conduit in Chepe, and the records of 1329 give an account of the money paid for that purpose and for the beer provided for the labourers who carried out the work. The records of the City of London contain a good many entries showing the difficulties the authorities had with regard to the conduits and the water-supply generally. It was found necessary to appoint keepers of the conduit, and their chief duty appears to have been to see that the water was not stolen wholesale for the purposes of trade. In 1312 it was provided that brewers, cooks, and fishmongers should pay, at the discretion of the keeper of the conduit, for the water they used for business purposes. In 1337 there was a complaint that the brewers sent "day after day and night after night" and took tubs full of water to make their ale. After a discussion in full court by the mayor, sheriffs, and alderman it was decided that if any large tubs were in future sent to the conduit by brewers they should be forfeited and retained for the benefit of the conduit. The pipes which conveyed the water to the great conduit in Chepe passed from Tyburn to Constitution Hill, thence to the Mews near Charing-cross, through the Strand to Fleet-street. The pipes were partly above ground and therefore exposed to weather and to accident, and in 1388 complaint was made by some of the inhabitants of Fleet-street that through the breaking of the pipes their houses had become damaged by the overflow of the water. In 1390 permission was given to certain citizens residing in West Cheap to put up a conduit near the church of St. Michael le Quern, and that it should be supplied from the great pipe of the conduit opposite St. Thomas Acon. An old drawing shows that there were two lines of pipes one above the other, and it seems that the water in the lower pipe could be had gratuitously by anyone who wanted it for drinking or for household use, and that certain money was paid for water supplied by the upper pipe. The money thus obtained was applied to keeping the conduit in repair and paying the attendant in charge of the place. An entry in the City Records, 1415, tells how the mayor and corporation had ordained that the brewers who rented the fountain were not to draw any water from the small pipe below on pain of fine. As the water-supply became more and more inadequate for the supply of an increasing population riots occurred at the public conduit between the water

[1] Urbis matronæ ipsæ Sabinæ sunt.

[2] The first public cistern was the great conduit in West Cheap. It was lined with lead and the structure itself was of stone. The other conduits built in the city before the great fire were:—The Tun upon Cornhill, furnished with cistern, 1401; the Standard in West Chepe, supplied with water, 1431; the conduit in Aldermanbury and the Standard in Fleet-street, made and finished, 1471; the Standard in Fleet-street, Fleet-bridge, 1478; the conduit in Glass-street, 1491; the conduit in Glass-street, re-built by William Lamb, 1577; the Little Conduit in Stocks Market, re-built about 1500; the conduit in Bishopsgate, 1513; the conduit in London-wall against Coleman-street, 1528; the conduit in Aldgate, supplied with water from Hackney, 1535; the conduit in Lothbury and Coleman-street, near the church, 1546; and the conduit of Thames water at Dowgate, 1568.

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carriers, so that the Lord Mayor by proclamation forbade people who resorted thither to come armed with clubs and staves. People who lived near the Thames obtained their water from carriers, whose business it was to deliver it from the river. It seems, however, that the people who lived in the lanes near the Thames objected to others passing without paying toll, and the water carriers or "cobs," as they were called, were a very truculent set of people. In 1438 the Abbot of Westminster granted to the Lord Mayor and citizens of London the privilege of taking water from the Manor at Paddington. The consideration to be paid by the city to the Abbot and his successors was two peppercorns on the Feast of St. Peter. It was provided, however, that if this work should interfere with the ancient wells used for the supply of the Abbey the grant should cease. In 1568 water was raised by machinery to the conduit on Dowgate-hill.

In 1582 a man named Peter Moris or Morice, an ingenious engineer, undertook to supply the city with water pumped from the Thames. The exact nationality of Peter Moris is open to doubt, but he was a Freeman of London. He put up an engine at the first arch of London Bridge, and by means of water wheels, which were driven by the river, he was able to force water through leaden pipes at such pressure that it was thrown over St. Magnus's steeple, to the great admiration of the mayor and corporation and the people who met to see the sight. He afterwards obtained the lease of the second arch of London Bridge and was thus enabled to increase the amount of water supplied. The Moris family built up an excellent water business, which was carried on by the family until the beginning of the eighteenth century, but the amount supplied was not sufficient for the whole of London. Thames water was conducted in leaden pipes to supply houses in Thames-street, New Fish-street, and Grass-street, and as far as the north-west corner of Leadenhall. The work was completed in the year 1582 on Christmas-eve. The City authorities paid the costs of the main pipe which conveyed the water to a standard made for that purpose. This standard, called the "Carrefour," had four spouts which pointed in different directions, and not only supplied the inhabitants of the houses near, who sent to fetch the water, but it served to cleanse the streets and discharged water northwards towards Bishopsgate, eastwards towards Aldgate, southwards towards the Bridge, and westwards towards the Stocks Market. It seems that the amount of water first supplied was not maintained, and Fleming, who continued Holingshed's Chronicles, says: "If the said water were maintained to run continually, or at least every tide, some reasonable quantity, as at first it did, it would have been well; but from 1566 it was much aslaked, through whose default I know not, sith the engine is sufficient to convey water plentifully." The standard at Cornhill existed until the Fire of London. It was sometimes dry, sometimes overflowing, and was frequently indicted as a nuisance for the latter reason by the inquest of Cornhill ward. The water business started by Moris was continued at London Bridge for one century and a half, and a tower was built on the bank as early as the reign of Elizabeth. The Great Fire destroyed some of the property, and in consequence of this litigation occurred at the petition of Mary Moris, widow of John Moris, against her brother-in-law Thomas and the trustees of the estate. In consequence of the fire the defendant, Thomas, tried to get out of paying her jointure, which was to have come out of the profits of the waterworks, and the petition was brought to enforce settlement of this and was successful. The trial showed that the water business was a very lucrative one. The progress of the New River ultimately interfered somewhat with the profits, and the proprietor then sold the property to one Richard Soames, a citizen and goldsmith, for £36,000. Soames was a financier and soon brought the business out as a company, with a capital of 300 shares of £500 each. In June, 1767, a fifth arch of the bridge was granted to the waterworks by the Corporation. The works continued until 1822, when they were removed just before the destruction of the old London Bridge and the property was sold to the New River Company.

Moris's water business was the first of the kind started in London, but he had imitators. In 1594 Bevis Bolmar erected a large horse engine at Broken Wharf, near Blackfriars Bridge, to supply the west part of the city with water. The undertaking did not prove a success, and the site was ultimately bought by the New River Company. In 1641 there was a project for bringing water from Rickmansworth. This, however, was not carried out. Maitland speaks of another establishment called the Merchants' Waterworks, which had a windmill in Tottenham Court Field and two other stations—one in St. Martin's and the other in Hartshorn-lane in the Strand—for supplying water from Tyburn.

In the reign of Elizabeth several schemes for the improvement of the water-supply were laid before Lord Burleigh. Of these, one was to bring water from Uxbridge to the north of London. An Act of Parliament was passed in Elizabeth's reign to allow the citizens of London to convey water from Hertfordshire to the city, and ten years were allowed for the completion of the work. Nothing, however, was done. The mayor and corporation of the city of London neglected a great opportunity of supplying the city with good water under their supervision. At that time, however, engineering was not a strong point amongst the members of the corporation, and the undertaking appeared, and actually was indeed, one not to be lightly undertaken. It was reserved for a private citizen, Hugh Myddleton, to carry out the work. On looking through the Records of the Corporation of London two things strike one with regard to the action of the mayor and corporation in all affairs connected with water. The first is that they were always extremely careful to insist on the fact that water for the poor to drink was the first consideration; and, in the second place, it is seen what stringent precautions were taken to punish offenders[3] who took a greater quantity of water than they were entitled to for trade purposes or who stole water from public sources for their own private benefit.

MUNICIPAL-LONDON, WATER-LONDON, AND POLICE-LONDON.

In the report of the Royal Commission on the London Water Supply the Commissioners found it well first to define the areas affected by the inquiry. The administrative county of London is nearly identical with the area called registration London by the General Register Office, but an area called Greater London by the General Register Office includes the districts within which the Metropolitan and City police have jurisdiction (see Fig. 1). But neither of these areas coincides with those supplied by the London water companies. The administrative county of London has an area of 121 square miles, but registration London does not include the hamlet of Penge, and Greater London of the General Register Office includes all parishes wholly situated within a circle of fifteen miles radius from Charing-cross, and all other parishes of which any part is included within a circle of twelve miles radius from Charing-cross. The total area is 701 square miles. The Commissioners in taking evidence gave the name Outer Ring to the area within Greater London and outside the county of London. This is the part which at the present time has the most rapidly increasing population.

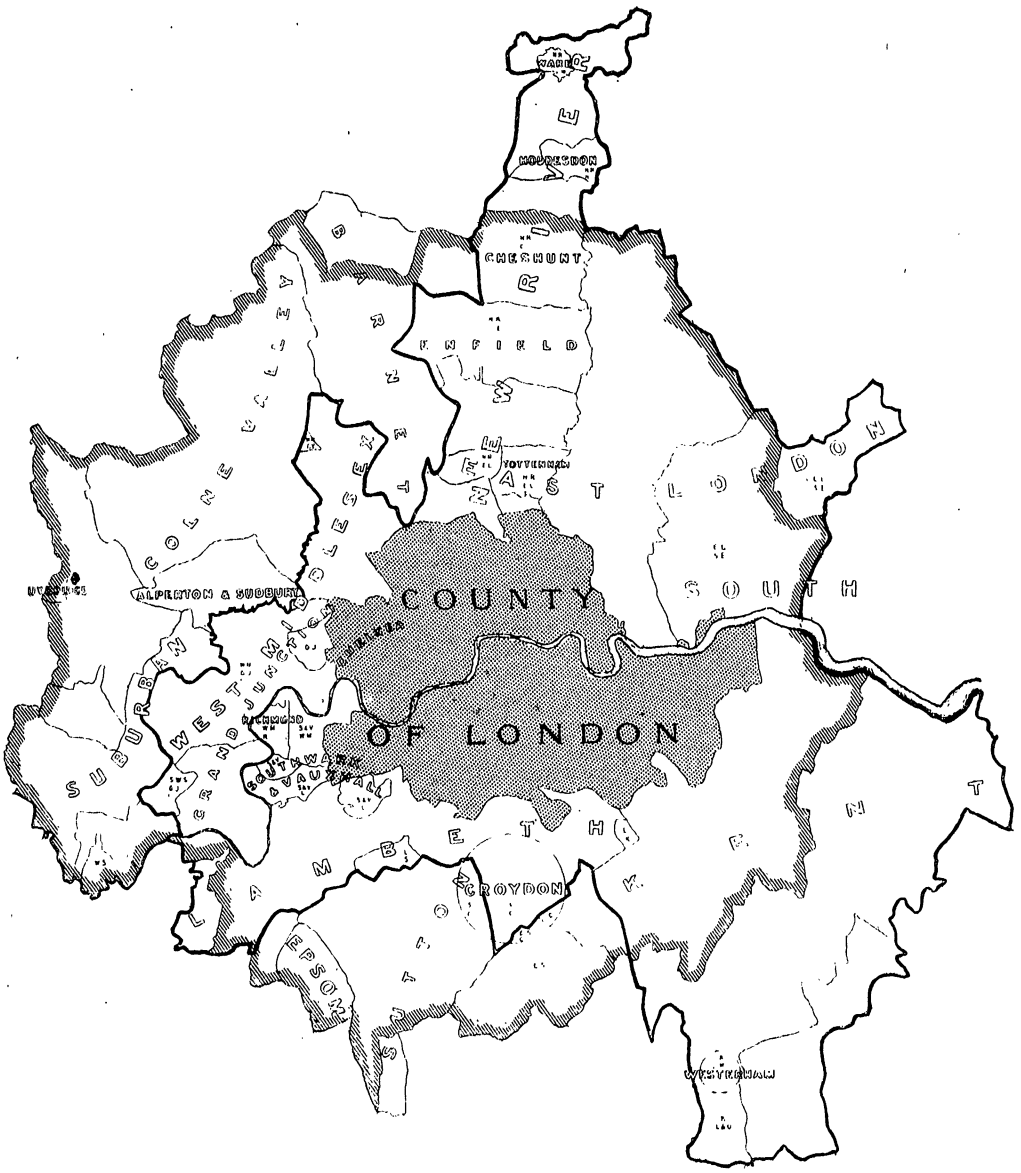
The metropolitan water companies are eight in number; the area they supply does not coincide exactly with either of the areas mentioned. The districts supplied by these companies and the districts over which the companies have Parliamentary powers of supply are called Water London. The area includes the whole of the County of London and part, but not all, of the Outer Ring. It extends, however, beyond it in the north and north-east and in the south-east and south-west. Thus the New River Company's area extends to Ware in Hertfordshire; the East London as far as Romford in Essex; and in the south the Kent Company's area extends to Sundridge and Chevening in Kent; and to the south-west the Lambeth Company's area extends to Esher.

The total area of Water-London is 620 square miles. The Metropolitan water companies are:—The Grand Junction; the West Middlesex; the Chelsea; the New River; the East London; the Lambeth; the Southwark and Vauxhall; and the Kent. In some cases the Parliamentary districts of the water companies overlap one another—i.e., more than one company has a right by its Act of Parliament to supply a given district. In some cases where this has happened the

[3] The City records contain an account of how a resident in Fleet-street succeeded for a time in stealing water and the punishment that was meted out to him. On Nov. 12th, 1478, William Campton of Fleet-street was convicted of having tapped the conduit where it passed his house and conveying the water into his well, "thereby occasioning a lack of water to the inhabitants." The culprit was taken before the Lord Mayor and aldermen and punished in a rather striking manner. He was placed on horseback with a vessel like a conduit on his head and this filled with water which ran out of small pipes over him while he rode round all the conduits in the city.

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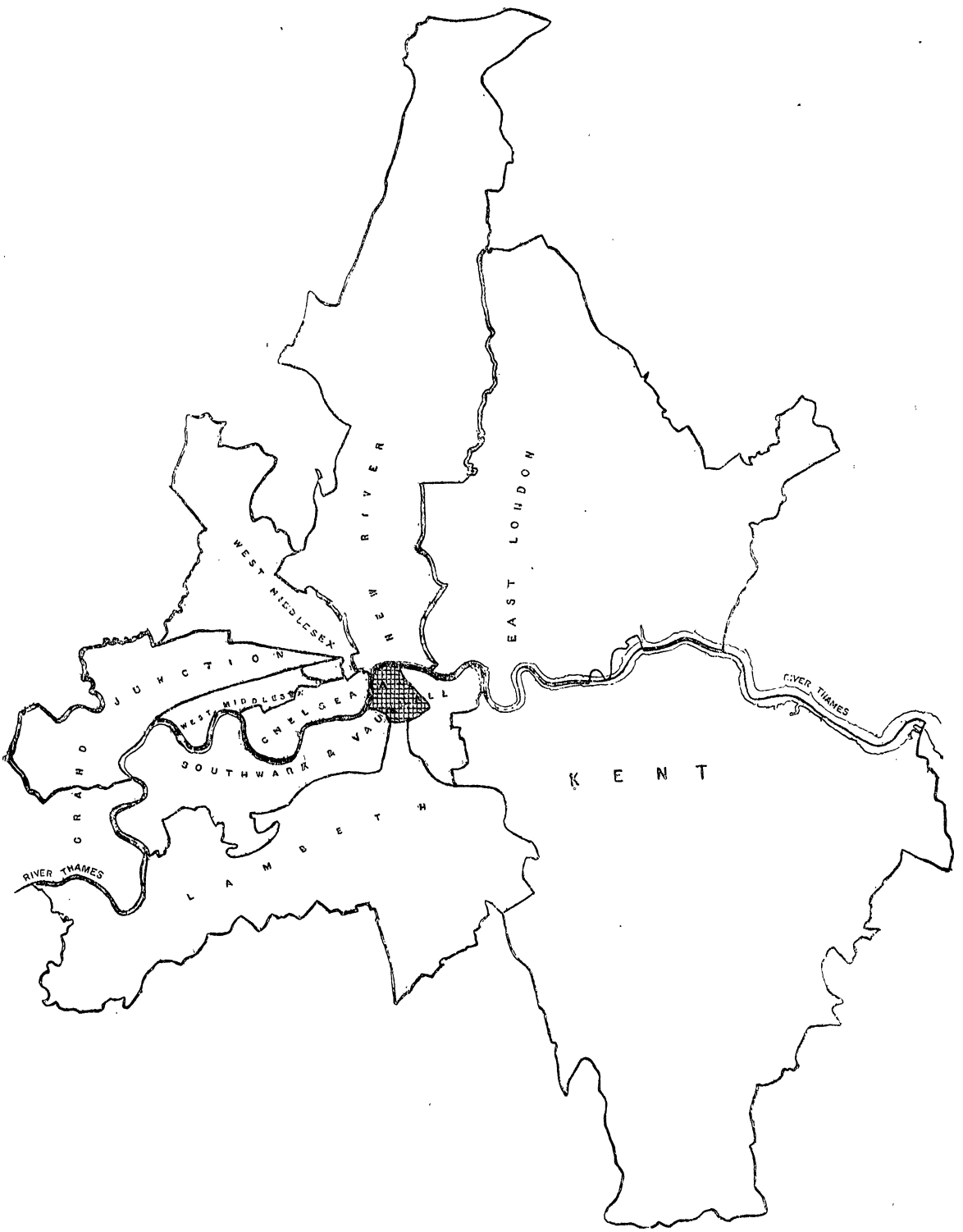
FIG. 1.



The administrative County of London is the shaded area. The black line defines the Metropolitan water-supply. The shaded line defines the Metropolitan and City police.

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FIG. 2.



The outlines define the areas supplied by the eight different companies. The small shaded area is supplied by the Chelsea Company and the Southwark and Vauxhall Company also.

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companies themselves by private arrangements have settled their boundaries to their mutual satisfaction. There are instances in which small areas are still supplied by more than one company. Within the Parliamentary districts of supply of some of the companies water is supplied by other public authorities. There are also private water supplies in London, and not only in London, but throughout the district generally.

THE AREAS SUPPLIED BY THE EIGHT WATER COMPANIES.

Figure 2 defines the areas supplied by the eight different companies.

The New River Company supplies Highgate, Upper Holloway, Kentish Town, Highbury, Stoke Newington, part of Dalston, and the district between these places and the Thames, Hoxton, a great part of the City of London, including the Tower, and all the district along the Thames as far as Charing-cross. At Charing-cross the line of supply goes up Northumberland-avenue, takes in the northern part of Trafalgar-square, then goes in a northerly direction up the Haymarket and Poland-street. The line then extends in a northerly direction up the Tottenham Court-road as far as the High-street in Kentish Town. At the top of Tottenham Court-road the boundary area extends to the north-west to the Small-pox Hospital, Hampstead, then goes in a north-westerly direction to include the Hampstead district. Thus, roughly speaking, the districts supplied are the E.C., W.C., and the parts north of these districts. The company also supplies districts out of the metropolitan area, the total area being 59,520 acres.

The Chelsea Company supplies the districts which lie to the north of the Thames from Fulham to Charing-cross—Fulham, Walham-green, Chelsea, Brompton, Knightsbridge, Pimlico, Westminster, and part of St. James's. The northern boundary area of distribution runs from the Crab Tree at Fulham, up Crown-road, Lillie Bridge-road, Richmond-road, the Old Brompton-road, and then goes in a northerly direction to Prince's Gate and along Knightsbridge and Piccadilly to the north-east corner of the Green Park. The boundary then runs down the eastern side of the Green Park—that is, in the south-eastern direction—for about two-thirds its distance, and then passes to the north-east to include St. James's Palace, Carlton-terrace, and the southern part of Trafalgar-square. Here it is in contact with the New River area. The area supplied by the Chelsea Company is 3482 acres.

The West Middlesex Company has a less compact area of distribution than the Chelsea, with whose area of distribution it comes in contact from Princes' Gate to the Crab Tree at Fulham. The West Middlesex Company supplies Hammersmith, that part of Fulham now called West Kensington, South Kensington, and Kensington, the northern boundary of this part being the Uxbridge-road. The company supplies also the Regent's Park and Portman-square districts, extending as far south as Oxford-street, as far north as Brondesbury, and including the district of St. John's Wood. The area of the West Middlesex Company's water-supply is 17,280 acres.

The Grand Junction Company supplies the western suburbs, Shepherd's Bush, Wormwood Scrubs, and the district which is called North Kensington and Bayswater and part of Paddington. The total area supplied by the company is 29,760 acres.

The East London Water Company supplies part of Stamford Hill, Upper and Lower Clapton, Homerton, Hackney, Bow, Bromley, Poplar, Limehouse, Stepney, the London Docks, Shadwell, and the Isle of Dogs—that is to say, the parts north of the Thames from St. Katherine's in the east to the outlet of the River Lea, and in the county of Essex West Ham, Walthamstow, Leyton, Woodford, and Loughton. The total area of supply is 50,880 acres.

The area of distribution of the companies to the south of the Thames is not so easy to follow as that of the companies on the north because there is much more overlapping. As we have seen, to the north of the Thames, roughly speaking, the East London Company supplies the part popularly called the East-end, the New River Company the central districts and the parts to the north of them. The Chelsea Company supplies Chelsea and Fulham. In the case of the other two companies the distribution is rather less difficult to define. The Grand Junction has, as it were, a wedge of distribution in the centre of the area of the West Middlesex Company. The companies which supply the districts to the south of the Thames are the Southwark and Vauxhall, the Lambeth, and the Kent. Roughly speaking, the Kent Company supplies the south-east, the Southwark and Vauxhall the south-west, and the parts between these districts—that is, Kennington and Newington—are supplied by the Lambeth and Southwark Companies in common.

The Southwark and Vauxhall Company supplies Roehampton, Putney, Wandsworth, Battersea, Clapham, Newington, and Kennington, and part of Brixton is partly supplied by this company and partly by the Lambeth. The area supplied by the Southwark and Vauxhall Company is 19,040 acres.

The Lambeth Company, besides partly supplying the districts already mentioned, distributes water to Bermondsey, Rotherhithe, Peckham, and Dulwich. Its area extends through Dulwich, Forest-hill, Sydenham to the Crystal Palace, Anerley, Brockley-hill, Bell-green, and as far to the south as Beckenham. The Kent Company supplies parts of Hatcham in common with this company. The area of distribution is 39,360 acres.

The Kent Water Company, as far as its area of distribution is concerned, is the largest of them all; as far as population is concerned it is the least. It supplies parts of the south bank of the Thames, from Limehouse on the West to Woolwich, but its area of distribution includes Plumstead, Shooter's-hill, Blackheath, Eltham, and Southend. The total number of acres covered is 113,280.

MIDWIVES REGISTRATION BILL.

THE following is the text of the Midwives Registration Bill, now before the House of Commons:—

The chief object of this Bill is to enable the public, and especially such of the poor as are in the habit of employing midwives, to distinguish between those midwives who have been trained and have given evidence of being competent for their duties and those who have not.

This Bill provides that henceforth no woman shall call herself a midwife unless she has been placed on the midwives' register, and that in order to be placed on the register she must produce evidence either—(1) of having undergone a proper training and subsequent examination, or (2) of having (at the time of the passing of the Bill) been in *bonâ fide* practice as a midwife for a specified number of years. It is not proposed to make it illegal for a friendly neighbour to render assistance to a lying-in woman in an emergency.

A system of examination and certification by various voluntary bodies has been established for several years in the chief centres of population. It is proposed to place the duties hitherto undertaken by these voluntary bodies in the hands of a duly constituted Board, acting under State control. It is further proposed to make provision for the efficient regulation and supervision of the practice of midwives under rules approved by the General Medical Council and for the exercise of discipline amongst those who are enrolled upon the Register.

See Reports of Select Committee on Midwives Registration, together with the proceedings of the Committee. Minutes of Evidence, Appendix, and Index, ordered by the House of Commons to be printed June 17th, 1892, and Aug. 8th, 1893.

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

1. This Act may for all purposes be cited as the Midwives Registration Act, 1897.

2. In this Act—

The term "midwife" means a woman who undertakes to attend cases of labour in accordance with the regulations to be laid down under this Act.

"Midwives register" means a register of midwives kept in pursuance of this Act.

"Midwives Board" means the Board constituted under this Act for the purpose of carrying out the provisions of this Act.

3.—(1) From and after the *first day of January one thousand eight hundred and ninety* —— no woman shall be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition, or description implying that she is registered under this Act, or is specially qualified to act as a midwife unless she be registered under this Act.

(2) Any person who, after the *first day of January, one thousand eight hundred and ninety*——, not being registered under this Act, shall take or use the name of midwife or any other such name, title, addition, or description as aforesaid, shall be liable on summary conviction to a fine not exceeding *five pounds*.

(3) No woman shall be placed on the midwives register until she shall have complied with the rules and regulations to be laid down in pursuance of the terms of this Act.

(4) The certificate of registration under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts in respect of such certificate, or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine or surgery, or that she is qualified to grant any medical certificate or any certificate of the cause of death.

4. Any woman who, before the expiration of *two years* from the passing of this Act, claims to be registered under this Act shall be so registered provided she produces evidence satisfactory to the Midwives

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Board that at the *passing of this Act* she has either been in *bonâ-fide* practice as a midwife for a period of *two years*, or holds a certificate in midwifery from the Royal College of Physicians of Ireland or from the Obstetrical Society of London, or such other certificate as may be approved by the Board.

5. On the *passing of this Act* a Midwives Board shall be constituted by the General Medical Council and shall consist—

(1) of twelve registered medical practitioners, three to be appointed by the Royal College of Physicians of London, three by the Royal College of Surgeons of England, three by the Society of Apothecaries, and three by the Incorporated Midwives Institute; and

(2) of six persons to be appointed for terms of *three years* by the Lord President of the Council.

One-third of the elected members of the Board shall annually retire, but shall be eligible for re-election after the lapse of one year. The duties of the Midwives Board shall be as follow:

(*a*) To make rules for regulating the conditions of admission to the register and the mode of conducting the qualifying examinations.

(*b*) To appoint examiners.

(*c*) To decide upon the places where, and the times when, examinations shall be held.

(*d*) To frame for approval by the General Medical Council rules regulating the admission to the register of women already in bonâ fide practice as midwives at the passing of this Act.

(*e*) To prepare and publish annually a register of midwives.

(*f*) To frame for approval by the General Medical Council rules for regulating, supervising, and restricting within due limits the practice of midwives.

(*g*) To decide upon the conditions under which a midwife may be suspended from practice.

(*h*) To decide upon the removal from the register of the name of any midwife for disobeying the rules and regulations from time to time laid down under this Act by the Midwives Board or for other misconduct and to decide upon the restoration to the register of the name of any midwife so removed.

(*i*) And, generally, to do, subject to the approval of the General Medical Council, any other duty which may be necessary for the due and proper carrying out of the provisions of this Act.

6. There shall be payable by every woman presenting herself for examination or registration such fees as the Midwives Board may, with the approval of the General Medical Council, from time to time determine. All fees paid by midwives or by candidates for examination shall be paid to the Midwives Board. The said board shall devote such fees to the payment of expenses connected with examination and registration and to the general expenses of the Board. Should these fees not equal the expenditure of the Midwives Board, the deficiency shall be supplied from the respective local county funds, in proportion to the number of registered midwives resident in the county.

7. The Midwives Board shall appoint a registrar who shall be charged with the custody of the register, and shall also act as secretary to the Board.

8. A copy of the midwives register for the time being shall be evidence in all courts that the women therein specified are registered according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not registered according to the provisions of this Act. Provided always that in the case of any woman whose name does not appear in such copy a certificate under the hand of the registrar of the entry of the name of such woman on the register shall be evidence that such woman is registered under the provisions of this Act.

9. Every local sanitary authority throughout England and Wales shall, on the *passing of this Act*, appoint its medical officer of health, or other registered medical practitioner or practitioners, as the local supervising authority over midwives in the sanitary district. It shall be the duty of the local supervising authority—

1. To exercise general supervision over all midwives practising within the sanitary district in accordance with the rules to be laid down under the provisions of this Act.
2. To investigate charges of malpractice, negligence, or misconduct on the part of any midwife practising within his district, and if he consider that a *primâ-facie* case is established to report the same to the Midwives Board.
3. To report at once to the Midwives Board the name of any midwife practising in his district convicted of a misdemeanour or felony.
4. To keep a current copy of the midwives register, accessible at all reasonable times for public inspection.
5. To satisfy himself, in the case of any midwife practising or desiring to practise within his district, as to the validity of her claim to be placed on the register.

10. The local supervising authority shall at once report to the Midwives Board the death of any midwife, or any change in the name or address of any midwife in his district, so that the necessary alteration may be made in the register.

11. Any woman who procures or attempts to procure herself to be placed on the register of midwives by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein, shall be deemed guilty of a misdemeanour, and shall on conviction thereof be liable to a fine not exceeding *five pounds*, or to be imprisoned with or without hard labour for any term not exceeding *two months*.

12. Any person appointed to keep the register of midwives wilfully making or causing to be made any falsification in any matter relating to the register of midwives shall be deemed guilty of a misdemeanour and shall be liable to a fine not exceeding *ten pounds*, or to be imprisoned with or without hard labour for any term not exceeding *three months*.

13. Any offences under this Act punishable on summary conviction may be prosecuted, and any fine under this Act recoverable on summary conviction may be recovered, in manner provided by the Summary Jurisdiction Acts.

The expenses of any prosecution shall be defrayed out of the county fund of the district where the prosecution takes place.

14.—(1) An appeal shall be allowed to the Privy Council should any disagreement arise between the General Medical Council and the Midwives Board respecting the carrying out of the provisions of the Act, or of any of them.

(2) Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

15. Nothing in this Act respecting midwives shall apply to legally qualified medical practitioners.

16. This Act shall not extend to Scotland or Ireland.

REPORT OF THE LYING-IN WARDS OF THE LIVERPOOL WORKHOUSE HOSPITAL FOR THE YEAR 1895 AND 1896; OR, WORKHOUSE MIDWIVES, THEIR TRAINING AND PRACTICE.

BY WILLIAM ALEXANDER, M.D. R.U.I., F.R.C.S. ENG.,
VISITING SURGEON, LIVERPOOL WORKHOUSE HOSPITAL.

TWO years ago, in consequence of what I still consider a grave mis-statement made before a Royal Commission, I published the results obtained in the lying-in wards of the Liverpool Workhouse Hospital for twenty-one years.[1] As the midwifery question is still before the profession and the public, and as the practice at this workhouse illustrates many points in dispute, the report for another period of two years, with remarks on the midwifery question from a disinterested observer, may be interesting to readers of THE LANCET.

The total number of confinements were 635. Of these women 221 were married and 414 were single, whilst 309 were primiparæ. A number of these patients, 289, were inmates of the workhouse for some time before being confined, and cleanliness, regular, simple diet, and regular hours were brought to bear upon them; 339 came direct from town in labour, and 7 came from the Lock wards, where they were under treatment for venereal diseases. The maternal deaths within the thirty-one days after confinement were three, and not one of these three had any puerperal trouble. One died from broncho-pneumonia, from which she had been suffering for four days prior to confinement, and she died four days after. A post-mortem examination showed normal pelvic organs and verified the chest disease. The second case was confined in the midst of a spree. She had a rigor the day before, her temperature was 102° F. during her confinement, and she was found to be suffering from acute pulmonary congestion. The labour was accomplished under imminent danger of suffocation, and in spite of medicine, inhalations, stimulants, &c., she died in twenty-four hours from the lung disease. The third case had been in the surgical wards for some time, with head symptoms that pointed to a cerebral tumour without localising it. She was stupid and inert, took her food only when it was given to her, but otherwise took no interest in anything around her. The baby was born, and the recovery proceeded naturally without any febrile symptoms. The condition of stupor gradually deepened, double incontinence and coma supervened, and she died nineteen days after delivery. We could not obtain a post-mortem examination. We have followed all the other cases until they left the workhouse or the thirty-one days of the Registrar-General were fulfilled, and certainly no other of the 635 cases died within that time. These 635 women gave birth to 646 babies—335 males and 311 females, twins eleven times. The presentations were: head, 623; breech, 11; hand, 2; foot, 8; face, 1; cord, 1. The operations consisted in 21 applications of forceps and 4 cases of version, and the complications consisted of 6 cases of hæmorrhage, 1 case of tumour of the brain, 1 of adherent placenta, 3 of retained placenta, and 57 where some increase of temperature took place after delivery.

The class of cases treated in this hospital belong to the lowest stratum of society, and the fact that 43 gave birth to hopelessly dead, and often decomposed, babies shows that neither their health nor their habits tended to uneventful and safe recoveries. The results are as satisfactory as they could possibly be from an obstetrical point of view, and while

[1] Liverpool Medico-Chirurgical Journal, July, 1894.

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it is to be regretted that any deaths at all took place none of the deaths were preventible by any amount of obstetrical skill. How have these results been obtained? By a midwife, acting under the control of the medical staff and the lady superintendent of nurses. The present midwife was trained by us nearly twenty years ago, and she in turn helps to train a large number of midwives and monthly nurses every year. Our own nurses have three years' training in medical, surgical, and obstetric nursing, and three months of this period are devoted to obstetric work. They see fifty or sixty labours and conduct personally a dozen or more themselves, so that they leave well qualified to manage a midwifery case in the ordinary "midwife" way. Besides our own nurses we train a large number of nurses for institutions. These come for one year and have only one month in the lying-in wards. They become very useful as monthly nurses as they also are allowed to conduct a few cases, so that they know the practical work and would not be at a loss in any emergency until help arrived.

Nurses that have had eleven months' training in medical and surgical work, and much more those that have had two years and nine months of that work, are far more susceptible of obstetric training than the widows and other lone women who have been crushed out somehow into the cold and have taken to lying-in work as a means of livelihood. At one time we trained a few of these, but the response to the training on their part was very faint, and when their three months had elapsed they were just beginning to have a glimmering of the meaning of our teaching. Just as dentists have some training in common with medical men, I think obstetric nurses or midwives should have a training in general nursing, as they will then not only be more efficient midwives, but will have a choice of kinds of nursing from which to select according to their inclinations and opportunities.

The example of this institution and of other parochial and voluntary maternity charities throughout the country show that the successful and safe attendance of lying-in women presents no practical difficulties. We must have trained obstetric nurses, or midwives, and to be known to the public and recognised by the profession they must be registered. The second desideratum is medical supervision. I do not think the above-mentioned good results would be obtained at the Liverpool Workhouse by the midwife and her nurses if there were not only medical men to *help* them, but to *watch* them and their cases. Any patient showing febrile symptoms beyond that of the most ephemeral kind is removed at once from the lying-in ward, and if two or three cases become feverish one after another, not only are the wards emptied and purified, but the nurses are turned out for a day's holiday and for disinfection. The nurses attend all natural labours without interference, and although the medical staff visit the wards daily they probably never even speak to two-thirds of the inmates who are confined there. As to defining a natural labour we never meet with any difficulty because we never attempt such a silly task. We content ourselves with defining *unnatural labours*, as those where a nurse or midwife has to send for a medical man, and there is no difficulty at all either with us or the nurses in the matter. Hence no midwife should be allowed to practise for gain unless she is trained so as to know at once when a labour becomes unnatural, and because many labours are, or may become, unnatural their practice must be supported and supervised by a medical man appointed for the purpose. The jealousy of the trained and registered midwife that prompts present medical opposition to a safe, practical method of attending the parturient poor is as unreasonable as it has been illogically fomented by agitation.

Both medical men and midwives have their places, and the further we go down amongst the poor the more does the midwife become necessary and the less the medical man is required. The poor women are stronger, their labours are more natural, and less frequently require skilled assistance; but their surroundings are disagreeable and dangerous, and a trained midwife can dispel the disagreeable and dangerous conditions in a way that unskilled women could not do, and in face of which a medical man alone would be helpless. Whilst the lying-in wards of the workhouse hospital could not get on safely for long without the medical staff, I am afraid the medical staff would soon get into difficulties without the midwife and her staff. The one is a complement of the other, and the trouble that vexes and irritates unthinking medical men at the present time is the uncontrolled and untrained midwifery that exists and which should be remedied. By training and control women will have their fair and natural share of, and emoluments from, midwifery work, whilst medical men will occupy a more manly and dignified position in regard to labours amongst the poor than by the drudgery necessitated by personally attending badly paid confinements, where the wear-and-tear, anxiety, and exposure often lead to premature old age, and where the necessity of quickly terminating a case sometimes leads to dangerous or fatal measures being adopted, that the patience and leisure of the midwife would avoid. When medical men recognise that midwives (or whatever the same persons may in future be called) are their helpers and not their opponents a suitable method can soon be devised of training, registering, and allocating to the latter their suitable duties.

BUBONIC PLAGUE IN INDIA.

WE may say, as it does not appear to be generally known, that Indian medical literature contains a good deal of information regarding past outbreaks of Indian plague from time to time in various parts of that country, described for example, as Pali Plague, Mahamurree. Its first appearance of which there is any full record was in the Provinces of Kutch and Kattywar in the Bombay Presidency in May, 1815. In 1836 there was an extensive and virulent outbreak in Pali, Malwa, and other places, also in Gurhwal, and again in 1852 and 1876 in Gurhwal. The description of the symptoms leaves but little doubt as to the nature of the disease; and it is curious that reference is made in some of these descriptions to the mortality among rats—as in the case of Yunnan in Western China and elsewhere—that was early noticed in the present outbreak of the plague.

There was a very interesting discussion raised by Lord Reay in the House of Lords on Monday last on the subject. The Earl of Onslow, in replying to Lord Reay, quoted the contents of a telegram giving the latest official information concerning the progress of plague. According to this telegram the deaths from all causes in Bombay city for the week ending Feb. 12th were 1835; the deaths returned from plague were 813. Plague had been to some extent checked where first prevalent. Mandvi was now almost free from disease, but the general tendency of plague to extend northwards in Bombay city continued. In Poona there had been an increase from 43 to 47 cases during the week, but the disease was concentrated in certain quarters and so far showed no tendency to spread. One indigenous case had occurred in Poona cantonment. In Karachi there had been 269 cases during the week ending Feb. 12th and no indigenous cases in Sind outside Karachi. The disease was present—chiefly in a sporadic form—at a few other places in India. Calcutta, so far as is known at present, is free from the disease. It is satisfactory to find that the greatest precautions have been taken in all directions, and the amount of energetic work that has been performed in Bombay and elsewhere is remarkable. House-to-house visitation has been established, camps for the accommodation of the population have been opened in various directions, houses have been vacated and demolished or destroyed by fire—as many as thirty-five have been so destroyed in Bombay during the past week—and, in short, everything was being, or had already been, done that appeared necessary or desirable. Extensive powers are given to all district officers under the Epidemic Diseases Act, and the possibilities of extension of the disease to new localities are vigilantly watched.

We may refer our readers, or such of them as have not already perused any account of the discussion in the House of Lords, to the daily papers of the 16th inst. for a full report of what had been done with reference to measures of protective inoculation against bubonic plague. Both Lord Reay and the Earl of Onslow entered very fully into the experimental investigations of Dr. Yersin at Hong-Kong and other parts of China, the further experiments at the Pasteur Institute of France, the valuable remarks of M. Roux, and the researches of Professor Haffkine in India in regard to the discovery and use of a prophylactic serum and the number of inoculations that had already taken place with it in Bombay.

The latest telegram from Bombay (Feb. 10th) states that

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since the outbreak of plague in that city there had been 5960 cases and 4581 deaths.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY, LIMITED.

THE annual general meeting of this society was held at the offices, 12, New-court, Carey-street, Lincoln's-inn, on Tuesday last, Feb. 16th, Dr. Heron (the treasurer) being in the chair.

In recommending the adoption of the fourth annual report and balance-sheet for the year ending Sept. 31st, 1896, Dr. Heron said the past year had been a very quiet one for the society and they had had fortunately no serious expenditure to meet. He then went over the items in the statement of accounts, and *à propos* of the legal expenditure remarked that the society owed a debt of gratitude to their solicitors for the skilful way in which these gentlemen had piloted the society through various cases, some of which might have resulted in considerable expense. He pointed out how four years ago the society started with empty coffers with the help of a very few men interested in medical defence, and that at the close of last year they had a balance of unexpended income amounting to £382. The guarantee fund, which was a fund that could be made available in the event of dire emergency and would be only used in such a case, amounted to £1700, and that, added to the balance of income, made a total of over £2000 available for the purposes of the society. This, he thought, was a very satisfactory state of affairs. The council of the society had determined to place some of this surplus money under trust, and Sir William Broadbent and Mr. T. Pickering Pick had kindly consented to act as trustees of the reserve fund. This fund would be started with the purchase of £300 worth of 4 per cent. New Zealand Stock, which would cost the society at its present market value a little over £340. The fund could only be used to meet some exceptional demands upon the funds of the society on the recommendation of the council and with the consent of the trustees. The ordinary income of the society, he stated, was now more than enough to meet the ordinary expenditure.

On the motion of Mr. Spencer Watson the report and balance-sheet were unanimously adopted.

On the motion of the chairman, Mr. Jonathan Hutchinson was re-elected President of the society. Dr. Heron said that one of the most valuable assets of the society was the fact that Mr. Hutchinson's name appeared on the list of the society's officers as its president, for wherever medical literature was studied the name of Jonathan Hutchinson was respected.

The vice-presidents were re-elected, as were also the members of the council, with the following alterations. In the place of the late Mr. James Savage, Sir Hugh Beevor; and in the place of Mr. H. C. C. Shaw, who retires owing to ill-health, Dr. Major Greenwood. Dr. Heron was re-elected treasurer.

In moving the re-election of Dr. Hugh Woods and Mr. A. G. R. Foulerton, the honorary secretaries of the society, the chairman pointed out that these two gentlemen had given a great deal of time and had worked very hard in the service of the society, but that they had hitherto received no substantial remuneration from the society. He thought the medical profession ought to set its face against the vast amount of unpaid work that was done in connexion with it, and that as the affairs of this society were now in a fairly prosperous condition the time was near at hand when not an adequate remuneration, because that the society could not afford, but a substantial remuneration ought to be paid to the secretaries. This, he desired to say, was purely his own personal opinion, made entirely upon his own responsibility, and was in no sense official.

The two honorary secretaries were then unanimously elected, and after a resolution had been passed recommending that each division of the society should hold an annual meeting and furnish a list of the officers elected at that meeting, and an account of any matters that come under their consideration, the meeting closed with a hearty vote of thanks to the chairman.

THE RUSSIAN CONFERENCE ON SYPHILIS AND VENEREAL DISEASES.

THE Conference on the subject of Syphilis and other Venereal Diseases for which preparations have been carried on for over a twelvemonth was held recently in St. Petersburg. The Conference was organised very much on the same lines as that which met in the same city in the winter of 1892 to deal with the subject of cholera. That is to say, the Government had invited representatives from local authorities throughout the empire, and in addition a large number of experts in the subject under discussion and representatives of universities, hospitals, and other scientific institutions were requested to join in the deliberations of the Conference. The meetings were held in the Medical Department of the Ministry of the Interior and were under the presidency of Dr. Ragozin, the Director of that department. The Conference was opened on Jan. 15th (27th), and morning and evening meetings were held daily until the close of the Conference on Jan. 22nd (Feb. 3rd). The total number of members was considerably over 400.

The opening speech was made by the Minister of the Interior, M. Goremuikin, who stated that his predecessor, M. Durnovo, had taken the first steps towards organising such a congress as long ago as March, 1895. During the interval the Government had been actively collecting statistics and information on the subject of the spread of syphilis in Russia, and their request to the local authorities to coöperate in the matter had led to the collection of a vast quantity of material, which would form the basis of the present discussions. Speeches were also made by Dr Ragozin and Professor Tarnovski. The former stated that the object of the Conference was less to discuss the scientific aspect of venereal diseases than to form a plan of action based on scientific conclusions which should lead to practical results in diminishing the spread of such diseases. Professor Tarnovski briefly reviewed the steps taken in the past by the Government in this direction.

At the subsequent discussions an immense number of resolutions were discussed and carried. As there were over 300 such resolutions it is clear that only a small portion of them can be mentioned in the present report. One large group of conclusions, 17 in number, deal with the prevention of venereal disease in factories and mines and among artisans generally.

Briefly, these resolutions declare the necessity for increased medical and hygienic control over artisans. As their inspection with the avowed object of discovering venereal disease would be likely to meet with opposition it is proposed that a general medical inspection should be made compulsory, that this should be carried out on all new hands engaged in a factory or mine, that it be repeated after every holiday or absence for any length of time, and perhaps, if possible, it might be made periodic at fixed intervals. It is further proposed that hospital treatment be made compulsory, at least during the infectious period, whenever venereal disease appears in an artisan, and that the family of the infected person should be persuaded, by all efforts in the medical officer's power, to submit to inspection. The other resolutions of this group deal with the necessity for the medical and hygienic supervision of fairs and markets, of public baths, workmen's barracks, and similar public institutions.

Papers on the Prevention of Venereal Diseases in the Army and Navy were read by Dr. Sholkofski and Dr. Sukhof. The most important resolutions on the subject were the following. Local conditions and the nature of the service a particular regiment is on appear to be the determining factors in the prevalence of syphilis in the army. The present regulations are well adapted to keep the disease in control, but a few alterations are suggested. Among these is the proposal that in ports and places where troops are stationed the naval or military surgeon should be a constant member of the local medical board, in order that he may have a voice in the general measures for controlling venereal diseases in the district. Medical inspection of the men should be every three weeks instead of every four; special measures should be taken with the individual infected with syphilis, not only while he is in the service, but after he returns home; entertainments, debates, concerts, and so

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forth should be more frequent, to provide the men with a counter attraction to the drinking house and brothel. The proposal of the organising committee of the conference, that men who contract syphilis should be compulsorily detained in the services for two years from the date of infection, was unconditionally vetoed by the members of the conference. Special measures are suggested for the control of syphilis among sailors in foreign waters. Among these may be mentioned the proposal that the daily distribution of *vodka* (a Russian spirit distilled from rye) on board ship should be done away with, some slight improvement in the food being substituted for it; and that, further, the serving out of *vodka* as a reward for special services should be done away with.

A special section of the Congress, under the presidency of Professor Kapustin of the University of Kazan, was devoted to the subject of Syphilis in Villages. Twenty-one resolutions embody the conclusions of the conference on this subject. It recognises that the great difficulty in the battle with venereal diseases in the villages lies in the ignorance and low state of culture of the peasantry. It urges the necessity for increased education, and as a special measure proposes the holding of popular lectures by medical men on health questions. In Russian villages venereal diseases are more usually spread by extra-sexual methods than by sexual, and this is the direct result of the ignorance of the peasants in all hygienic matters. All measures to deal with the evil must be such as involve no compulsion. Inspection of every individual is not recommended, but there should be facilities for it if the peasants are willing. Moving bodies of peasants (such as pilgrims, emigrants, and men seeking work) should be able to get free medical aid in all central towns they may pass through, and on railways and steamers. At present the best means of supervising bodies of workmen seeking work in distant parts of the country is, in the opinion of the Congress, not quite clear; but it is extremely undesirable to institute a system of health certificates on giving the labourer his travelling passport or on his return to the village. The reasons which led the conference to formulate this resolution are not as yet published; they will be read with interest when the final report of the conference is issued.

The spread of venereal disease in the village is undoubtedly increased by the return of conscripts from the army and also by the encamping of troops in or near the village; special measures are therefore suggested to deal with this risk, particularly in the way of supervising the men, both while in the service and after they have left it. All temporary measures, such as the sending of "flying squadrons" of medical men and nurses, such as have for some years past been sent through the country to treat eye diseases, are declared to be undesirable in the case of venereal diseases; but in many places when local means are inadequate the Government might provide assistance in various ways. The provision of crèches for children, and the supervision of school children suffering from syphilis are other measures recommended by the conference. A word of warning is uttered as to the need for care in vaccinating infants and adults. It was resolved that the conclusions of the conference in this section be sent to the local authorities throughout the country.

A group of nineteen resolutions deal with the prevention of Syphilis in Towns. They scarcely require individual mention here; they are based on the general principles of instructing the people and providing facilities for treatment. They touch upon the subject of prostitution, but only incidentally, as for this a separate group of resolutions was reserved. An able paper on this subject, and one which led to prolonged discussions, was read by Dr. Sturmer. The conclusions of the conference were to the effect that prostitution is an ineradicable evil. There are practically two classes of prostitutes, the registered and the secret or unacknowledged prostitute. The latter is the most dangerous factor in the spread of venereal diseases. As harsh compulsory measures only defeat their own end it is recommended that the system now in practice in some places should be introduced into all towns. This system combines a secret control of unacknowledged prostitutes with an open control of acknowledged ones. The former have no police tickets nor is their name even known to the police. Other special measures provide for the severe punishment of people who make money by the prostitution of their own wives, daughters, or other relatives, and wards, and for the special protection of all young girls under sixteen. Resolutions also deal fully with the registration of "ticketed" prostitutes, provision for their supervision and free hospital treatment, and a number of other matters in this connexion.

The final meeting of the conference took place on Jan. 22nd (Feb. 3rd). Dr. Ragozin thanked all the members of the Conference for their untiring attendance, which had enabled them to get through an almost unprecedented amount of labour, and which he hoped would lead to valuable practical results. Other speeches were made by Professor Ghé and Professor Kapustin of Kazan and Professor Tarnovski. Votes of thanks followed to the President and others, and Dr. Ragozin declared the Conference closed. In the evening a complimentary dinner was given to Dr. Ragozin by the members of the Conference.

It is too early yet to form a final opinion as to the value of the work done by the Conference. When the full report of the discussions is issued it will probably contain a great quantity of valuable material relating to the prevalence of venereal diseases in Russia and the methods now in practice for dealing with them. The resolutions proposing fresh measures appear to fall into two groups—those which can at once lead to action and those which will require legislation before action can follow. As most of the members of the Congress were members of the local governing authorities of the district they represented the first-named group of resolutions may be expected to at once lead to results; and, judging by the precedent of the Cholera Conference in 1892, it is exceedingly probable that fresh legislation may be anticipated in the near future in accordance with the conclusions of the recent Conference.

THE LONDON WATER QUESTION.

THE adjourned discussion on Mr. W. J. Dibdin's paper on the Character of the London Water-supply (see THE LANCET, Jan. 23rd, p. 269) was continued at the meeting of the Society of Chemical Industry on the 15th inst.

Mr. BLOUNT re-opened the discussion by congratulating Mr. Dibdin on his method of using the micro-filter. It was a drawback, however, that assumptions had to be made on account of the diameter of the measuring-tube of the micro-filter not being readily known, and he desired to know whether it was not possible to obtain these tubes ready standardised. He suggested that the inevitable "rust and dust" might be due to the wearing of the packing in the joints, and considered that there was not sufficient difference between the "inevitable" suspended matter and the total actually found to cause alarm. He objected to the softening of the water.

Mr. GRANT HOOPER deprecated the method of stating the suspended matter as tons per annum. The quantity was really very small, being only $\frac{1}{10\,0}$th of a grain per gallon. He wished to know how Mr. Dibdin concluded that 30 per cent. of the samples were objectionable. He thought the Kent Company's water was recognised as a standard of purity, but 18 per cent. of the samples of this water were set down as objectionable. He approved of softening the water, but the cost, which had been declared by the Royal Commission of 1851 to be 27*s.* per million gallons, equalling 10 per cent. of the cost of obtaining the water, seemed prohibitive.

Mr. WM. THORP repeated some of his former criticisms, and specially objected to Mr. Dibdin's way of stating the deposit in tons, as an attempt to make analytical results understandable by laymen (Mr. DIBDIN: Quite so.). He thought it was a similar case to a physician explaining symptoms in a popular manner to a lay audience.

Another gentleman called attention to a method for softening and sterilising potable water reported on favourably by THE LANCET.

Mr. E. J. BEVAN pointed to some inconsistencies between the amount of deposit on the micro-filter and the gravimetric determinations. He thought that the concordance between the physical, chemical, microscopical, and biological results was by no means so striking as Mr. Dibdin made out, and called attention to discrepancies between some of the figures for the nitrogen in the suspended matter and the oxygen absorbed. He considered Mr. Dibdin's paper a splendid—indeed, monumental—piece of work.

Mr. WHITTAKER thought that, on the whole, the water companies had done their best with the supply they were able to obtain. At the same time there were risks, and it would be a great advantage if water could be supplied from a source that did not require constant watching. He spoke

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very highly of the softening appliances in use at Southampton. The water dealt with resembles the Kent water and is reduced to six or eight degrees of hardness at a cost of ¼*d*. per 1000 gallons.

Dr. BERNARD DYER admired Mr. Dibdin's micro-filter methods. He regretted that the sample of water had been taken from the mains instead of from the outlets of the filter beds. The consequence was that the results given in Mr. Dibdin's paper and the London County Council report were not comparable with those of the chemists retained by the companies. Dr. Dyer said that what they wanted to find out was whether the water left the filter beds in good condition. It was possible that the large number of organisms found by Mr. Dibdin might be due to multiplication of the few that had escaped the filter beds, and the suspended matter in certain cases might result from the breaking away of the slimy covering of the inside of the pipes.

Mr. GROVES asked questions as to the method of collection of the samples. The amount of suspended matter was of little consequence; it was the nature of the bacteria that was important. The water should have been examined on leaving the filter-beds, as the interior of the pipes was anything but immaculate. He suggested that a large reservoir should be formed higher up the Thames to receive flood-water. This would allow time for the deposit to settle and a small proportion of brine might be added to assist in the destruction of the bacteria.

Dr. RIDEAL considered that the amount of oxygen absorbed was the best means of differentiating between good and bad waters. He had to examine the Kent, Southwark, and Lambeth Companies' waters in his district and found that the waters derived from the Thames absorbed about ten times as much as the Kent Company's water. He considered it most important that the nature of the organisms should be determined by cultivation on agar-agar at blood-heat. There was a marked difference between the colonies yielded by the Thames and Kent water when treated in this manner. All the organisms present in the latter were frequently killed entirely, whilst those from the Thames and Lea waters multiplied at blood heat. He thought that a water should not be considered safe unless 95 per cent. of the nitrogen was present as nitrate.

Dr. MOTT thought that the similarity between the deposit from the filtered and unfiltered water was very serious. The quality of the bacteria present was important and not the quantity. Typhoid infection always came from sewage, and it was essential that the organisms should be stopped by the filter beds. He considered that the proper cleansing of the pipes and cisterns inside the houses was quite as important as attention to the water-supply itself. In Vienna the houses had been thoroughly overhauled when the new water-supply was introduced, and there had been a great decrease in epidemics. He thought that soft water was preferable to hard, especially for gouty people, although hard water was generally purer. In conclusion Dr. Mott highly commended the suggestion of Dr. Rideal that cultivations should be made on agar-agar at blood temperature, and pointed out that Dr. Klein had found considerable quantities of the bacillus coli communis in London water.

In reply Mr. DIBDIN said that he could not find any confirmation of Mr. Burgess's theory that the deposit varied according to the length of main traversed. His early microscopic work showed that large quantities of débris were present, and then quantitative estimations were substituted. As soon as this became known there was a marked and rapid falling off in the quantity of suspended matter. The results from the Welsh rivers were put in for the sake of comparison; five or six samples were taken and they were given for what they were worth. He thought that the softening of London waters was most desirable on the grounds of health, comfort, and economy, and quoted the old saying that lime costs 14*s*. and soap £20 per ton. If London water were softened the difference between Welsh and London water after softening would be *nil*. Although this militated against the contentions of a certain party, he thought that a scientific report should contain the whole truth. Referring to the reports of the analysts to the water companies Mr. Dibdin said that for many years the reports, contained the stereotyped formula, "a few moving organisms," which was subsequently changed to "bacteria." Not a word was said about suspended matter. The strength of a chain was that of its weakest link, and the quality of a water should be judged from the worst results obtained from it and not from the average. Dr. Percy Frankland had stated that the bacteria were in close relation to the suspended matter, yet the reports of the water analysts ignored it, but gave the quantities of carbon and nitrogen, which might be derived from peat, to the third place of decimals. On account of this the companies themselves were not aware of their danger. He had a high opinion of the companies. Far from having a quarrel with them, he thought they did their work well, and when they knew of a danger did their best to cope with it. The examination of the deposit under the microscope was most startling, as great lumps of decaying organic matter, resembling flue from the floor, could be seen. He defended the method of stating deposit in tons as carrying conviction to the lay mind that it existed, whereas decimals would have been pooh-poohed. There was no necessity for standardising the micro-filters. As regards the correction for "rust and dust," of which much had been made, he merely assumed in fairness to the companies that this was unavoidable. He was far from being convinced that it was so—in fact, since the report the minimum had diminished. He considered there was no danger to be apprehended from the water-supply so long as the companies worked as well as they were doing now. But there was always a danger of laxity. If the London County Council should in future be the water authority it should have a Local Government Board inspector to keep it up to the mark. In conclusion, he thought that the water from the main gave the average result of the working of all the filter beds. If taken individually nine filter beds might be doing well, whilst one which might be overlooked might have broken down. In addition, there was no check against the filter beds being by-passed altogether. In taking samples from the standpipes the microscopic results were checked by gelatin cultures inoculated on the spot and the two were found to agree perfectly.

A hearty vote of thanks was accorded to Mr. Dibdin for his paper.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 7454 births and 4128 deaths were registered during the week ending Feb. 13th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 19·2 to 20·8 per 1000, declined again last week to 19·6. In London the rate was 18·6 per 1000, while it averaged 20·3 in the thirty-two provincial towns. The lowest rates in these towns were 12·5 in Croydon, 12·6 in Cardiff, 13·4 in Gateshead, and 14·2 in Halifax; the highest rates were 23·9 in Manchester, 24·2 in Huddersfield, 25·5 in Liverpool, and 26·2 in Plymouth. The 4128 deaths included 337 which were referred to the principal zymotic diseases, against 367 and 361 in the two preceding weeks; of these, 108 resulted from whooping-cough, 62 from diphtheria, 52 from measles, 49 from diarrhœa, 35 from scarlet fever, 29 from "fever" (principally enteric), and 2 from small-pox. No death from any of these diseases was recorded either in Norwich or in Gateshead; in the other towns they caused the lowest death-rates in Plymouth, Derby, and Huddersfield, and the highest rates in Nottingham, Salford, Bolton, and Oldham. The greatest mortality from measles occurred in Oldham and in Bolton; and from whooping-cough in Swansea, Bristol, Nottingham, and Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 62 deaths from diphtheria included 37 in London, 4 in Birmingham, and 4 in Liverpool. Two fatal cases of small-pox were registered in London, but not one in any other of the thirty-three large towns. There were 38 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 13th inst., against 2, 9, and 21 at the end of the three preceding weeks; 20 new cases were admitted during the week, against 7 and 12 in the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3050, against 3354, 3311, and 3153 on the three preceding Saturdays; 226 new cases were admitted during the week, against 249, 254, and 245 in the three preceding weeks. The deaths referred to diseases

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of the respiratory organs in London, which had been 355 and 404 in the two preceding weeks, declined again last week to 373, and were 93 below the corrected average. The causes of 72, or 1·7 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Cardiff, Liverpool, Birmingham, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·3 and 26·6 per 1000 in the two preceding weeks, further rose to 28·8 during the week ending Feb. 13th, and exceeded by 9·2 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 21·4 in Leith and 21·5 in Aberdeen, to 33·3 in Glasgow and 40·9 in Perth. The 857 deaths in these towns included 105 which were referred to the principal zymotic diseases, against 81 and 96 in the two preceding weeks; of these, 39 resulted from whooping-cough, 31 from measles, 19 from diarrhœa, 7 from "fever," 5 from scarlet fever, and 4 from diphtheria. These 105 deaths were equal to an annual rate of 3·6 per 1000, which was 2·0 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased in the three preceding weeks from 26 to 32, further rose last week to 39, of which 27 occurred in Glasgow, 8 in Edinburgh, and 3 in Perth. The deaths from measles, which had been 28 in each of the two preceding weeks, rose to 31 last week, of which 23 were recorded in Glasgow, 4 in Edinburgh, and 3 in Aberdeen. The 7 deaths referred to different forms of "fever" exceeded by 3 the number in the preceding week, and included 4 in Glasgow. The fatal cases of scarlet fever, which had been 5 and 7 in the two preceding weeks, declined again to 5 last week. The 4 deaths from diphtheria were within one of the number recorded in the preceding week, and included 3 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 190 and 229 in the two preceding weeks, further rose to 240 last week, and exceeded by as many as 134 the number in the corresponding period of last year. The causes of 51, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 42·4 and 44·2 per 1000 in the two preceding weeks, declined again to 41·2 during the week ending Feb. 13th. During the past six weeks of the current quarter the death-rate in the city has averaged 40·3 per 1000, the rate during the same period being 19·0 in London and 22·5 in Edinburgh. The 276 deaths registered in Dublin during the week under notice showed a decline of 20 from the number in the preceding week, and included 58 which were referred to the principal zymotic diseases, against 46 and 52 in the two preceding weeks; of these, 26 resulted from measles, 25 from whooping-cough, 3 from "fever," 2 from scarlet fever, 1 from diarrhœa, and 1 from small-pox. These 58 deaths were equal to an annual rate of 8·7 per 1000, the zymotic death-rate during the same period being 1·6 in London and 2·7 in Edinburgh. The fatal cases of measles, which had been 7 and 18 in the two preceding weeks, further rose to 26 last week. The deaths from measles, which had been 27 and 24 in the two preceding weeks, were 25 last week. The 3 deaths referred to "fever" slightly exceeded those recorded in the two preceding weeks, while the 2 fatal cases of scarlet fever showed a further decline from recent weekly numbers. The 276 deaths in Dublin last week included 43 of infants under one year of age, and 62 of persons aged upwards of sixty years; the deaths of infants showed a marked decline, while those of elderly persons slightly exceeded the number in the preceding week. Six inquest cases and 6 deaths from violence were registered; and 77, or more than a fourth, of the deaths occurred in public institutions. The causes of 17, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL W. H. STEELE is about to retire. Surgeon-Major Hunter has been ordered to the Cork District for duty, and Surgeon-Captain A. W. Bewley has been ordered to join at Dublin. Surgeon-Colonel J. P. Rooney has been appointed P.M.O., Scottish District. Surgeon-Major A. H. Burlton will shortly assume medical charge at Dover. Surgeon-Major B. T. McCreery has assumed charge of the troops at Newry. Surgeon-Major E. Butt has proceeded from Newry to Dundalk. Surgeon-Major J. M. Irwin has assumed medical charge of the Station Hospital at Brighton. Surgeon-Major G. H. Sylvester has assumed medical charge of women and children, Stanhope Lines, Aldershot.

The under-mentioned Surgeon-Majors to be Surgeon-Lieutenant-Colonels:—Michael R. Ryan, M.D., Edward O. Reynolds, Henry J. Robbins, M.D., John J. Morris, M.D., Aylmer E. Hayes, D.S.O., John F. Williamson, M.B., John T. Carey, M.B., William J. R. Rainsford, F.R.C.S. Irel., Isaac Boulger, Thomas Boyd, Percy H. Johnston, M.D., Isaac B. Emerson, Eugenius A. Roche, Ulick J. Bourke, Joseph J. Lamprey, William H. Allen, Jones L. Peyton, M.B., Arthur W. Carleton, M.B., F.R.C.S. Irel., George A. Hughes, M.B., Brisbane W. Somerville-Large, F.R.C.S. Edin., Phineas B. Tuthill, M.D., F.R.C.S. Irel., and John P. Hunt, M.D., F.R.C.S. Irel. Surgeon-Captain James R. Forrest to be Surgeon-Major. The under-mentioned Surgeons on probation to be Surgeon-Lieutenants:—George Elliott Frank Stammers, Charles Frederick Wanhill, Wilfrid Edward Hudleston, Martin Percy Corkery, Frederick John Gaine, Leonard Adams Williams, Ernest William Bliss, Malcom MacGregor Rattray, M.B., John Henry Power, Richard Edward Game Phillips, Thomas Henry Matthews Clarke, M.B., and Edwin Walter P. V. Marriott.—*London Gazette.*

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain Parry, A.M.S., on return from leave in England, has been posted to general duty, Aden District. Surgeon-Lieutenant Walker, A.M.S., on arrival from England, has been posted to general duty, Quetta District. The services of the under-mentioned officers (Bengal) are placed temporarily at the disposal of the Government of the Punjab:—Surgeon-Captain R. Heard and Surgeon-Lieutenant C. J. Milne. Honorary Surgeon T. H. Hendley, C.I.E. (Brigade-Surgeon-Lieutenant-Colonel), has been appointed Surgeon-Lieutenant-Colonel of the Bombay, Baroda, and Central India Railway Volunteer Rifle Corps. Surgeon-Lieutenant John Muspratt Comley has been promoted Surgeon-Captain of the Cossipore Artillery Volunteers. The following promotion is made, subject to Her Majesty's approval:—*Bengal Establishment:* To be Brigade-Surgeon-Lieutenant-Colonel: Surgeon-Lieutenant-Colonel Charles Henry Joubert, M.B., vice Brigade-Surgeon-Lieutenant-Colonel G. Massy, retired.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Staff-Surgeon Alfred Page to the *Brisk.* Surgeons: Albert X. Lavertine to the *Pembroke,* additional, Robley H. J. Browne to R.N. Depôt, Walmer, and W. E. Marshall to the *Duke of Wellington.*

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion the Royal Fusiliers (City of London Regiment): William Henry Russell Forsbrook, M.D., to be Surgeon-Lieutenant. 3rd Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant W. A. Renshaw resigns his commission. 2nd Volunteer Battalion the Royal Sussex Regiment: Honorary Assistant-Surgeon C. L. Evershed resigns his commission. 3rd (Dundee Highland) Volunteer Battalion the Black Watch (Royal Highlanders): William Edward Foggie, M.B., to be Surgeon-Lieutenant. 5th (Perthshire Highland) Volunteer Battalion the Black Watch (Royal Highlanders): Edward Ley Paton, M.B., to be Surgeon-Lieutenant.

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the under-mentioned officers of the Volunteer Force:—*North-Eastern District:—Rifle:* 1st Volunteer Battalion the East Yorkshire Regiment: Surgeon-Lieutenant-Colonel Henry Thompson, retired. *Thames District:*

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Artillery: 1st Kent Volunteer Artillery (Eastern Division, Royal Artillery): Surgeon-Lieutenant-Colonel Robert Ross Brown. *Home District: Rifle:* 3rd Middlesex Volunteer Rifle Corps: Surgeon-Lieutenant-Colonel Frederick Orton. 22nd Middlesex (Central London Rangers) Volunteer Rifle Corps: Surgeon-Major Robert Cuff, retired. 3rd London Volunteer Rifle Corps: Surgeon-Major George Hastings. *Scottish District: Rifle:* 3rd (Dumfries) Volunteer Battalion the King's Own Scottish Borderers: Surgeon-Lieutenant-Colonel Andrew Dall MacDonald, M.D.

THE HEALTH OF THE BRITISH ARMY IN INDIA.

We are glad to notice that this subject continues to attract attention and is not being lost sight of amid the variety of political and other topics of public interest at the present time. A communication from "Sanitas" in the *Times* of the 16th inst., in reply to one from Mr. Gregory, publishes some facts and figures derived from blue-books which put the question of contagious disease in a very different light to that represented by the opponents of all protective legislation. The figures show, says "Sanitas," that this class of disease rose in India from 371 per 1000 in 1888 to 482 in 1889 and 504 in 1890. "For the years 1889 and 1890 the Army was practically 'unprotected,' but towards the end of 1890 (Parliamentary Return No. 318 of 1895, page 29) new cantonment rules, affording a modified measure of 'protection,' came into force. In 1891 the admission-rate for these diseases fell to 401, and it was only 410 in 1892. In 1893 the new cantonment rules were condemned by a committee (Mr. G. Russell's) at home. The figures of 'contagious disease' for the years 1893, 1894, and 1895 have been 466, 511, and 537 per 1000. (For the last year see Army Medical Department Report for 1895.)."

MEASLES AT DEVONPORT.

Measles in a mild form has broken out on board the *Impregnable* training ship for boys at Devonport. The disease, which is very prevalent in the district, has attacked five boys in the ship, and they have been removed to the Naval Hospital.

Surgeon-Colonel J. Lane Notter, Professor of Hygiene in the Army Medical School, Netley, proceeds to Venice to attend the International Congress on the Plague.

The transport *Dunera* arrived at Southampton on the 12th inst. She brought home thirty-four invalids for the Royal Victoria Hospital, Netley.

Correspondence.

"Audi alteram partem."

SURGEON-CAPTAIN HEHIR AND THE PARASITE OF MALARIA.

To the Editors of THE LANCET.

SIRS,—In connexion with a long paper by Surgeon-Captain Hehir, given in THE LANCET of Nov. 28th and Dec. 5th, 1896, and entitled "The Hæmatozoon of Malaria and its Discovery in Water and Soil," I feel it my duty to make the following remarks. The paper in question implies not only that the writer has discovered a hæmatozoon in cholera and syphilis, but that he has found new forms of the parasite of malaria and has discovered its existence in water and soil. These discoveries have already been mooted by him in several papers—for example, one on Microscopical Observations on the Hæmatozoon of Malaria, published in 1891, and another on his Cholera Organism, published as a special supplement to the April number of the *Indian Medical Gazette*, 1892. In June, 1893, I called on Surgeon-Captain Hehir with two specimens of malarial blood and persuaded him to give me a demonstration of his malaria parasite. He showed me some examples of his small hyaline bodies; they were the exudation bubbles which escape from blood plates in blood kept for an hour or so. He showed me also examples of his hæmatomonas malariæ stellatum; they were ordinary stellate arrangements of fibrin such as are figured in some text-books of physiology. These facts were publicly referred to and Surgeon-Captain Hehir's conclusions challenged in a paper published by me in the *Indian Medical Gazette*, 1893, page 329; but Surgeon-Captain Hehir has then and since ignored my remarks, though in the same number of the *Gazette* there was an editorial inviting his attention to them. In the same periodical for January, 1894, I gave further a long paper describing various appearances produced by the "third element of the blood" (blood plates) and detailing some of the errors made by Surgeon-Captain Hehir, and in the December number of the same year, as well as in a paper read before the Budapest Conference held at the time, I furnished a list of "pseudo parasites" which had, I thought, deceived many observers, among them Surgeon-Captain Hehir and myself. But Surgeon-Captain Hehir has never that I know of thought fit to refer to any of these strictures. Now, with respect to the hæmatozoon of cholera. In Secunderabad in 1895 having some cases of cholera, I wrote and telegraphed to Surgeon-Captain Hehir inviting him to demonstrate his organism to me (since he was living a few miles away). He replied that he had not time to do so. I wrote again, pointing out that since Mr. Hankin had published a letter (*Indian Medical Gazette*, May, 1895) suggesting that one of Surgeon-Captain Hehir's forms "is nothing but crystals of common salt, others resemble kinds of precipitates, fragments of fibrin, and altered red or white corpuscles," it was incumbent on him to demonstrate his organism to some one, such as myself, familiar with the ordinary appearances of blood. To this letter I received no reply.

Surgeon-Captain Hehir is, of course, not obliged to instruct others; but personally I think that he should have felt himself bound to take a little trouble to demonstrate such very startling discoveries to anyone, even to a person like myself, whom he may have deemed not sufficiently well-informed to understand them. Since he did not do so he cannot complain if I give my opinion of his work very freely, and my opinion is briefly as follows. Surgeon-Captain Hehir's *brochures* on these hæmatozoa of his are so confused that it is almost impossible to understand what he means. For instance, in the article lately published in THE LANCET there are no less than 134 numbered paragraphs, which are generally jumbled together without sequence and in such a manner that paragraphs on staining are abruptly interposed between descriptive paragraphs, while references to future explanations which are never given, and to "larger bodies" and "smaller bodies" and "long and broad varieties" which are never described, leave the intellect of the reader in a state of collapse. At the same time the whole paper is full of learned terms and suggests difficulties of investigations so enormous that I fear no one will be able to confirm Surgeon-Captain Hehir's observations. Nowhere is a plain object plainly described; dimensions are not given; the numbers to be found in a field are not specified; and amount of movement is left indeterminate. Really, those interested in the parasite cannot accept this sort of thing.

When, however, by dint of hard application, we begin to resolve the nebulæ we find only that Surgeon-Captain Hehir still remains a victim of the blood-plate. He says (paragraph 104) that he has discovered "invisible forms of the parasite"; the masses of blood-plates are almost invisible. He says (paragraph 58): "In every instance the more developed the parasite the less distinct and the more transparent and invisible it is." "Where the hæmoglobin is largely dissolved in the plasmotic fluid it gives the appearance of the parasite having been stained." This is an excellent description of a cluster of blood-plates, which accordingly I take to be "in every instance" Surgeon-Captain Hehir's more developed parasites. Again (paragraph 78) he says: "There are also considerable numbers of ciliated spherical bodies, the cilia being long, firm, and pass (ing?) out at right angles abruptly, leaving spaces between each other, in which spaces arise a considerable number of varying sized cyst-like bodies which are set free and become the hyaline spherical body mentioned above." This is a correct description of a unique object which was described by me in "The Third Element of the Blood," being a cluster of invisible blood plates, or microcytes as I called them, surrounded by long filaments of fibrin (Surgeon-Captain Hehir's cilia) and giving rise to exudation bubbles (Surgeon-Captain Hehir's hyaline bodies) between the fibrin filaments. The description confirms Surgeon-Captain Hehir's demonstration to me of his hyaline bodies, which were the exudation bubbles aforesaid, and renders it unnecessary to criticise further his work (either on malaria, cholera, or syphilis). He has evidently mistaken for a parasite a very ordinary object, but one which is not

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generally described in text-books on the blood. In a similar manner he has made mistake after mistake. Blood-plates, fibrin-filaments, clusters of blood-plates (paragraphs 77 to 81) are magnified by his imagination into spores, cilia and flagella, and chlamydospores respectively. Echinoid or hairy corpuscles, so well known, become flagellated red-corpuscles (paragraph 88). There are flagella like silk fibres (paragraph 85). Perinuclear granules of leucocytes have "a nucleus and nucleolus, develop flagella, free themselves, and wander about the field" (paragraph 97). Every part of a parasite, even the framework, is reproductive (paragraph 87). Red corpuscles pair off, fuse their nuclei, and commence sporulation (paragraphs 88 to 91). Flagella disintegrate into micrococcus-like spores (paragraph 105). Fibrin forming a few minutes after the specimen is made becomes "fine flagella appearing in the field in places where nothing had previously been seen" (paragraph 107).

If I have misinterpreted Surgeon-Captain Hehir's descriptions it is entirely owing to the bad manner in which they are written. But I do not think that such misinterpretation is possible, because no other bodies and appearances which in any way resemble those descriptions exist in the blood. Of the large number of able observers who have studied malarial blood not one has even hinted at the existence of such forms. Surgeon-Captain Hehir insists upon the use of high powers and special methods of staining; but other observers have used these without arriving at his results. On the other hand, I really doubt whether he has ever seen the true parasite at all. For example (paragraph 38), he says that "it is often difficult to distinguish red cells from spherical bodies of different kinds, including the spherules which have developed from the unfolding of crescents"; a child could distinguish them. Again (paragraph 76), he says that the red cells (occupied ?) are smaller than the average in the tertian parasite, which is just the opposite of truth, as every beginner knows by this time. He must have been looking at something quite different from what most of us hold to be the parasite of malaria. That a beginner should be misled in this way is credible, but that Surgeon-Captain Hehir should persist in ventilating such matters years after the true nature of his bodies has been exposed (not only by myself, but by Mr. Hankin, and, I think, by others), while at the same time he refuses or omits to answer satisfactorily reasonable criticisms, is becoming a kind of nuisance in medical literature. If he still believes in his discoveries his course is (*a*) to demonstrate to capable persons; (*b*) to publish photographs; and (*c*) to send specimens to impartial experts in Europe. Until his observations are confirmed by others we are, I think, justified in holding that he has been misled by "pseudo-parasites," and that the parasites of malaria and cholera described by him are zoologically impossible and exist only in his imagination. If he pleads that similar things have been said of other discoverers we must reply that they have at least endeavoured to convince others by visual demonstrations and exact descriptions.

I am, Sirs, yours faithfully,
RONALD ROSS, Surgeon-Major, I.M.S.
(Parkes' Memorial Gold Medalist on Malaria).

*** Surgeon-Captain Hehir referred in his paper to illustrations which were to reach us later.—ED. L.

"HAS THE FISH A MEMORY."

To the Editors of THE LANCET.

SIRS,—I have to thank you for quite a number of most interesting letters which were addressed to me in consequence of your article containing my question—Have fish a memory? I see that such studies in comparative psychology interest more people than I believed. Perhaps your readers might take an interest in an address made at the Association of German Physicians and Naturalists, 1896. This address, which was made at the request of the Scientific Committee of the Congress, contains the very essence of my views and forms, as I should say, the prelude to the question you lately were kind enough to insert in your paper.

I am, Sirs, yours truly,
Frankfort-on-the-Main, Jan. 28th, 1897. LUDWIG EDINGER.

To the Editors of THE LANCET.

SIRS,—In a book published by Messrs. Cassell in the early seventies, called "The World of Wonders," occurs the following story:—

"When the late Dr. Warwick resided at Durham *(sic)*, the seat of the Earl of Stamford and Warrington, he was walking one evening in the park, and came to a pond where fish intended for the table were temporarily kept. He took particular notice of a fine pike, of about six pounds weight, which, when it observed him, darted hastily away. In so doing it struck its head against a tenter-hook in a post (of which there were several in the pond, placed to prevent poaching), and as it afterwards appeared, fractured its skull and turned the optic nerve on one side. The anguish evinced by the animal appeared most horrible. It rushed to the bottom, and boring its head into the mud, whirled itself round with such velocity, that it was almost lost to sight for a short interval. It then plunged about the pond, and at length threw itself completely out of the water on to the bank. The doctor went and examined it, and found that a very small portion of the brain was protruding from the fracture in the skull. He carefully replaced this, and with a small silver toothpick, raised the indented portion of the skull. The fish remained still for a short time, and he then put it again into the pond. It appeared at first a good deal relieved, but in a few minutes it again darted and plunged about until it threw itself out of the water a second time. A second time Dr. Warwick did what he could to relieve it, and again put it into the water. It continued for several times to throw itself out of the pond, and with the assistance of the keeper, the doctor at length made a kind of pillow for the fish, which was then left in the pond to its fate. Upon making his appearance at the pond on the following morning, the pike came towards him to the edge of the water and actually laid its head upon his foot. The doctor thought this most extraordinary; but he examined the fish's skull and found it going on all right. He then walked backwards and forwards along the edge of the pond for some time, and the fish continued to swim up and down, turning whenever he turned; but being blind on the wounded side of its skull, it always appeared agitated when it had that side towards the bank, as it could not then see its benefactor. On the next day he took some young friends down to see the fish, which came to him as before, and at length he actually taught the pike to come to him at his whistle and feed out of his hands. With other persons it continued as shy as fish usually are. Dr. Warwick thought this a most remarkable instance of gratitude in a fish for a benefit received; and as it always came to his whistle it also proved what he had previously disbelieved, that fishes are sensible to sound."

Perhaps this story may interest Professor Edinger.

I am, Sirs, yours faithfully,
CREDAT JUDAEUS.

To the Editors of THE LANCET.

SIRS,—From a paragraph in the *Standard* I learn that you are asking for any observations that may have been made having reference to the question as to whether a fish has a memory. I beg to submit the following. A few years ago I kept a small tench in a fish-globe alone and gave it from time to time various articles of food—worms, flies, &c.,—but among all these there was but one thing that raised any excitement in the fish's "mind," and that was the sight of a small worm. This being held at a considerable distance—even so much as six feet—caused a manifest excitement. We used to think it incredible at first that the fish recognised so small an object, but we found upon observation, many times repeated, that the fish was quite well aware of the dainty in store. He would take it greedily from our hand. I cannot conceive but that memory played an important part here. I should have said that the worm was brought from a distance gradually and *not* shown to the fish at first.

I am, Sirs, yours obediently,
Felstead, Jan. 24th, 1897. J. FRENCH.

*** We cannot receive any more communications on this subject. Correspondents are requested to send any facts they may have at their disposal to Professor Edinger, 30, Gärtnerweg, Frankfurt-on-Main.—ED. L.

THE MIDWIVES BILL, 1897.

To the Editors of THE LANCET.

SIRS,—The above Bill was read a first time in the Commons on Feb. 9th and was down for second reading on Friday, 12th. Fortunately, its second reading was not reached. It is truly lamentable that a Bill such as this, which proposes

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to establish a new class of midwifery practitioners, should be placed for second reading and not one word of warning be given us in any of the four weekly medical journals. A copy of the Bill can now be had from Eyre and Spottiswoode, East Harding-street, S.E., price 2*d*.

This Bill is, of all its predecessors, the most dangerous, because it attempts to leave out the chief debateable points, handing these over to the proposed "Midwives Board." But as this Board is to consist of practitioners to be elected, three each, by the College of Physicians, College of Surgeons, and Apothecaries' Society, and Midwives Institute, and six by the Lord President of the Privy Council, we can form a fair idea of the composition of such Board. I should like to know if the Colleges and society have agreed to the above, and if not, what is to happen? My hope is that the Colleges and society will refuse to dirty their hands with any so degrading a proposal. Clause 5 (*b*) proposes that the Representatives of the Colleges shall "appoint examiners"—that is, the Colleges shall appoint examiners both under the Medical Acts to *license* medical practitioners, and also examiners to *license* an inferior class of midwifery practitioners, to be known under the misleading name of "midwives." Surely the Colleges and society will never agree to carry on this double plan of down-grade examination, and so establish two classes of *women* licentiates. Another important point is that no provision is made for the payment of the expenses of the eighteen members of this Midwives Board. If Members of the Medical Council are paid, why should not also Members of the Midwives Board? Badly paid public work is always badly done work.

Again, no provision whatever is made for the election of representatives *of the profession* upon this Board. Why? The profession has, for so far, five direct representatives upon the Medical Council. Yet it is refused representation upon this Board. It is not as if *all* diplomates of the Colleges and Society were to be empowered to elect the representatives of the Colleges and Society upon this Board, because such would be elected by the councils of the Colleges. In these respects, therefore, the Bill is glaringly deficient. Clause 5 is worthy of the closest attention. It is to be noticed that the Board is to frame rules "for *approval* by the Medical Council." But if these rules are for "*approval*" only, what is the good of the Medical Council discussing them? Should the words not be for the "approval or otherwise" of the Medical Council?

Another grave flaw in the Bill is, that it refuses to give the Medical Council power to take any part in arranging the plan for *the education* of intending midwives. Clause 5 lays down the *duties of the Board* in Sub-clauses *a*, *b*, *c*, and *e*, while Clause 5, Sub-clauses *d* and *f*, lay down the duties of the Medical Council. By this clause, therefore, the Medical Council is to be empowered (*a*) to constitute the Board; (*b*) "to approve" (!) rules regulating *the admission to the Register of women already in bonâ fide practice*"; and (*c*) to approve (!) rules for "regulating, supervising, and restricting" the practise of midwives. Therefore, neither in Clause 5, nor in any other of the clauses, is the Medical Council given the slightest power to say in what subjects the intending midwife is to be *educated* and in what subjects she is not. This drafting is painfully at variance with the resolution of the Medical Council, November, 1889, which refers specifically and in detail to "*the education*, examination, and discipline which ought to be established." Clause 9 is of interest to medical officers of health, as it proposes every local sanitary authority shall appoint its medical officer of health to act as the "local supervising authority," and it is proposed that he shall (*a*) supervise all midwives practising in his district; (*b*) investigate charges of malpractice, &c.; (*c*) report to the Midwives Board any midwife convicted of misdemeanour; (*d*) keep a correct copy of the Register of Midwives; (*e*) satisfy himself of the right of any midwife to practise; and (*f*) notify the deaths of midwives to the Board. This will be no small work for any local medical officer of health, but when I state that no provision whatsoever is made in the Bill for payment for such services we can see how it is intended the Bill should be administered. I hope every "local" medical officer of health will write to his M.P.'s asking them to oppose the Bill. An important point is that all through the Bill those responsible for it *have persistently* refused to *define the duties* of the midwife—i.e., they refuse to say whether she is to act as a nurse only and under the direct supervision of a medical practitioner or to conduct confinements on her *sole* responsibility. It is proposed to harness the Midwives Board with the defining of her duties and with defining the undefinable word "natural labour." Now until this is done *in the Bill, and in the Bill only*, we must strenuously oppose it.

When the Midwives Bill was before the Medical Council in 1895 it was referred to a committee of the Council. This committee reported against the Bill as follows: "That the word 'midwives' should be struck out of the title of the Bill and out of the several clauses and that the term 'midwifery nurse' be substituted for it." The committee also proposed and agreed that instead of the midwife being empowered to attend natural labours without the supervision of a medical practitioner the Bill should empower her, "but not to discharge any other duties than those of a midwifery nurse." When this committee report came up before the Council the motion that the words "midwifery nurse" be substituted for the word "midwife" was defeated by only 14 votes to 12. Again, when it was moved by Dr. McVail and seconded by Dr. P. H. Watson that the duties of the midwife shall be to attend natural labours under the direct supervision of a registered medical practitioner this was lost, on a vote, by 14 to 9, no less than seven members present, being so undecided, refusing to vote. Does this look like unanimity of the Medical Council in supporting this society craze to repeal the Medical Act, 1886, and to supply the poor—and, mark this, the poor only—with an inferior grade of midwifery practitioners?

The lessons taught by the late election of Direct Representatives to the Medical Council; the insult offered to the profession in Liverpool when the medical staff of the lying-in hospital was discharged and a midwife placed over them; the action of the Leicester board of guardians in appointing a midwife to take the place of their district medical officer; the action of the Peterborough guardians in petitioning every Poor-law authority to obtain power to discharge their district medical officers, and to appoint midwives in their stead to conduct all confinements; the fact that the Midwives Bill of 1890 proposed to empower midwives to attend *all kinds* of labours and to use instruments; the fact that subsequent Bills proposed to confine the midwife to attending "natural labours," and at the same time persistently shrank from giving a definition of "natural labour"; and the fact that those responsible for this impossible Bill now hope to get over all their difficulties by referring them to a Midwives Board, only proves the truth of Lord Cranbrook's reply when, in March, 1891, he said to a deputation in favour of the Bill: It is "an impossible Bill and one which would not meet the merits of the case." To-day is the day of faddists. How can this Bill be defeated? The Bill is "backed" by the following members of the House of Commons: The Hon. A. de T. Egerton (Knutsford), C E. Schwann (Manchester, North), Sir F. FitzWygram (Fareham, Hants), Skewes-Cox (Kingston, Surrey), H. C. O. Bonsor (Wimbledon, Surrey), C. Fenwick (Wansbeck, Northumberland), Sir J. T. Woodhouse (Huddersfield), C. Harrison (Plymouth), J. Wilson (?), H. R. Graham (St. Pancras), C. Bill (Leek, Staff.), and J. H. Johnstone (Horsham, Sussex). If each practitioner in one or other of the above divisions will write at once to these Members of Parliament asking them to withdraw the Bill as it is strongly opposed by the profession great good will result. Also, if all other practitioners will write their M.P.'s asking them to oppose the Bill, and if they will get their local coroners, county councillors, and local political leaders to write to their M.P.'s, then the Bill will be withdrawn. I would also urge that practitioners resident in Ireland and Scotland do the same. It is said the Bill does not apply to Ireland and Scotland. That is true in theory, but false in fact, because the Midwives Board in England would license midwives to practise in Ireland and Scotland, just as now the medical bodies license practitioners to practise in the Isle of Man. It is to be remembered that there are now eight medical Members of Parliament—viz., Sir W. Foster, Sir Wm. Priestley, Drs. R. Farquharson, G. B. Clark, C. K. Tanner, M. A. MacDonnell, R. Ambrose, and J. A. Fox,—and that as not one of these would put their name to the back of this Bill we can see how our opposition has gained support. In 1890 no less than three medical M.P.'s "backed" the Bills of that year. I believe Sir R. B. Finlay, M.P., and Mr. J. Dillon, M.P., are both of the medical profession. If then practitioners resident in the divisions represented by the above will write to them, and ask them to oppose the Bill, I feel certain a

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courteous reply will be given. I would just add there is little good in supposing that Members of Parliament will be guided by what I alone write to them. The Member of Parliament wishes to know, not what I alone say, but what his constitutents want. If the majority of practitioners in *each constituency* in the United Kingdom write to their M.P. to oppose the Bill, then no Bill can pass.

In *1894* eight medical societies and nine branches of the British Medical Association, comprising 3324 practitioners, voted against Registration of Midwives, and only 392 for.

In *1895* the annual meeting of the British Medical Association passed a very strong resolution against the proposal; and in 1896 the Council of the Association resolved:—

"1. The Bill practically abrogates the existing Medical Acts as regards the practise of midwifery. 2. That it is fraught with danger to the public, inasmuch as it contemplates the creation of an inferior order of practitioners to attend upon the poor. 3. That it is unjust to the medical profession, inasmuch as it proposes to register an inferior order of practitioners, instead of a body of well-qualified midwifery nurses.

"Resolved:—That the Council be requested to prepare a petition for presentation to the House of Commons embodying reasons against the Bill."[1]

Mr. F. Fowke informs me Sir W. Foster presented the petition, May, 1896. In an editorial in THE LANCET[2] reference is made to a midwife who operated upon an infant, it bleeding to death, and where it is stated:—"Midwives are of great value to a community when it is fully recognised that they are specially *trained nurses* and *nothing more*." I shall be glad to hear from any practitioners willing to do their duty and who have received promises of support.

I am, Sirs, yours truly,

ROBERT R. RENTOUL.

Hartington-road, Liverpool, Feb. 14th, 1897.

MR. LOCH AND THE ABUSE OF HOSPITALS.

To the Editors of THE LANCET.

SIRS,—I feel confident that the thousands and tens of thousands interested in the welfare and progress of our hospitals—everyone working for them without fee or reward, as well as those receiving for their services far less than a living wage—and the millions of people too poor to pay for help in sickness, or in consequence of accidental injury, in all parts of the world, will join in begging Mr. Loch and his friends to abstain from further interference with regard to the so-called "abuses" of hospitals and other medical charities during this one year—1897—only. In 1898 we may fully discuss and, I hope, finally settle many of the important and interesting questions again brought forward in his letter to the *Times* of Feb. 12th, 1897, and in other communications with greater freedom and at more leisure than is at this time possible, without fear of damaging the financial interests of our hospitals and other institutions founded and supported for the benefit of our sick poor, and without any risk of wounding the susceptibilities of those whose love of their hospitals is of life-long duration.

For these and some other reasons I think it better to postpone the observations I desire, with your permission, to bring before the profession with reference to the highly important and enormously complicated question of the best means of restoring to health in the shortest time people suffering from sudden, acute, or chronic maladies, who cannot possibly afford to pay for medical services and provide for the expenditure consequent upon inability to work. Many of my medical friends will, I am sure, gladly assist in the consideration of matters of such consequence, and as by that time I shall have completed fifty years of active and almost continuous hospital work I may also be permitted, without being accused of presumption, to bring before the profession some of the views I have been led to form, which differ in many respects from those entertained by Mr. Loch, and persistently advocated by him for many years.

If, however, the organising enthusiasm of Mr. Loch and his friends renders a year's rest from their labours unbearable I venture to recommend during the interim an inquiry into a matter which might be undertaken with advantage, and which bears in some degree upon the causes of the complaints of practitioners in certain neighbourhoods who think that their interests have been seriously affected by the increasing popularity of the out-patient departments of our hospitals, though it seems probable that other circumstances have been operating at the same time and perhaps in greater degree to bring about the state of things which all of us so much regret. Among these must be included the fact of the enormous number of new remedies which have been introduced during the last few years, and new methods of treatment which are continually being pressed upon us. Medicines in the inviting form of tabloids, warranted to cure all sorts of ailments, have been brought into public notice in all possible ways and at vast expense. Now it would be of great service to the public, the profession, and to the poor if the most useful and the many worthless among these could be pointed out. Many have come to us from America and many from Germany; not a few have been found by some of us who have tried them to be of little use, and some positively inert; while a few coming, I think, from France, though, perhaps, made elsewhere, are too violent in their action, and some are uncertain. We desire very much to ascertain the truth with regard to the beneficial action or otherwise of many of these medicines with which we are inundated and which are too numerous to remember. Here, then, is an inquiry useful to the public and the profession, and, at the same time, offering a wide field for the labours of those skilled in financial educational and statistical investigations of much importance in reference to hospital management and finance, for the cheapness of many of these medicines is, indeed, remarkable, and the small space they occupy would enable those skilled in organisation to establish small dispensaries everywhere for sale to the necessitous poor at a very cheap rate—say, a halfpenny for twelve doses and a halfpenny for the advice given. In time the dispensaries would become self-supporting, the out-patient departments of our hospitals would suffer in popularity, and ere long the great desire of Mr. Burdett—the extinction of the present system of treating multitudes of out-patients in our hospitals—would be gratified.

I am, Sirs, your obedient servant,

Feb. 15th, 1897. LIONEL S. BEALE.

"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 13th Mr. Thistle asks, "Has Dr. Gowers any special reason for supposing that accidental lesions of the brain are less liable to be transmitted than similar lesions of the eye or the finger, instances of which are so frequently brought under our notice?" My answer is that I have no reason to believe it, but that no instance of the two examples he mentions has ever come under my notice directly or indirectly. Since it is the opinion of some of those who have given most attention to the subject that such transmission never occurs, Mr. Thistle should certainly publish some of the instances that so frequently come under his notice. An interesting letter appears in the last number of *Nature*, mentioning that Dr. Pritchard long ago anticipated very definitely the recent conclusions of Galton and Weissmann that such transmission of acquired characters does not occur.

I am, Sirs, yours faithfully,

W. R. GOWERS.

Queen Anne-street, London, W., Feb. 15th, 1897.

THE POSITION OF THE AURICULO-VENTRICULAR CUSPS DURING SYSTOLE.

To the Editors of THE LANCET.

SIRS,—I have for some fifteen years been wondering why the theory attributed to Parchappe as to the action of the auriculo-ventricular valves is not taught in England, and during the last few weeks I have several times been made aware that it is generally unknown in this country. Now, since it explains cardiac sounds which are otherwise difficult to understand, and has been accepted by such men as Burdach, Purkinje, and more recently by Malherbe and Fossion, who have developed it, and J. Beclard, who admits it in the seventh edition of his "Physiology" (1880), surely it is time that every practitioner considered it. Marc Sée, in his "Researches on the Anatomy and Physiology of the Heart" (Paris, 1875), still further elaborates it, saying that the effect of the contraction of the musculi papillares, which takes place at the same time as that of the muscular walls of the

[1] See Brit. Med. Jour., May 2nd, 1896, p. 1117.
[2] THE LANCET, Jan. 23rd, 1897, p. 225.

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ventricle, is to stretch the chordæ tendineæ and pull down the auriculo-ventricular curtains, and this in spite of the shortening of the longitudinal diameter of the ventricle admitted by most writers. The musculi papillares of the left ventricle are placed in such a way that they fit into one another and fill up the left part of the ventricular cavity. In contracting they pull the two flaps of the mitral to the left, applying them one against the other and against the wall of the ventricle. In the right ventricle the papillary muscles apply the flaps of the tricuspid to the surface of the partition. Without comment, which is unnecessary, I will ask you kindly to insert this in an early issue of your widely-read journal, and oblige,

Yours faithfully,

Inverness-gardens, W. G. COCKBURN SMITH.

"AN UNUSUAL RESULT OF ABORTION."

To the Editors of THE LANCET.

SIRS,—Dr. Purslow's case of abortion, in which the fœtus was embedded in the unruptured amnion only, is interesting from its rarity. This peculiar result (brought about by the rupture of the external membranes and of the funis at the site of its attachment to the placenta) has been observed and recorded on several occasions. A similar case will be found in the Obstetrical Transactions, vol. xxxiii., p. 462, recorded by the late Dr. Graily Hewitt, with an excellent drawing by Mr. Lawrence, the Curator of University College Museum; also a reference to a case by Dr. Herman and by Smellie. Dr. Winckel has also published an observation of the same kind, with a drawing, in his Text-book of Midwifery.

I am, Sirs, yours faithfully,

Mansfield-street, W., Feb. 12th, 1897. HERBERT R. SPENCER.

"THE GLANDULAR FEVER OF CHILDHOOD."

To the Editors of THE LANCET.

SIRS,—Having had five of my children ill with the above fever I read with interest Dr. Dawson Williams's paper on the subject in THE LANCET of Jan. 16th. I will not go over the ground already traversed by Dr. Williams, as I can endorse most of what he says. I do not, however, find that either the author or those who have written since the date of the paper refer to a complication which occurred in four out of five of my own cases—namely, epistaxis. The youngest child, aged three and a half years, bled from the nose one night to such an extent as to seriously imperil life, and the others bled pretty freely. I also observed that although the fever rose in two of the cases to 104° F. there was neither delirium nor vomiting. When convalescence fairly set in the appetite was voracious, and the recovery has in all cases been complete. It is worthy of note that the first case occurred during a visit to an obscure part of South Wales. A word as to treatment. The severe pain in the neck was relieved by lint smeared with extract of belladonna and glycerine. When this failed lint soaked with tincture of opium and water (1 to 4) and covered with oiled silk always eased the pain. The only drug which appeared to be of any avail was salicin in from three-grain to five-grain doses every four hours. One grain of calomel occasionally, always did good. Grapes were given freely when the pain in the neck allowed of swallowing, and, if anything, they relieved the abdominal pain.

I am, Sirs, yours truly,

Weymouth-street, W., Feb. 10th, 1897. CHAS. W. CHAPMAN.

ANTI-VIVISECTIONIST TACTICS.

To the Editors of THE LANCET.

SIRS,—The death of the great specialist, Sir Spencer Wells, who certainly did not attain his unrivalled skill as an operator—a skill which has prolonged life and restored health in innumerable cases—without resort to vivisection, seems a fitting opportunity for calling attention to the renewal of the unscrupulous attempts of the anti-vivisectionists to blast the reputation of the medical profession and to ruin the hospitals. Twice within the past month I have been called upon—once by a man, apparently a paid agent, and once by two young ladies, who have probably allowed sentiment to obscure reason, canvassing from house to house for signatures to a petition insidiously represented as "for securing kindness to animals," but which is only the old anti-vivisection petition accompanied by literature of exaggerated virulence. I enclose the leaflet left by the canvassers and ask whether something ought not to be done to check this wholesale slanderous vituperation?

I am, Sirs, yours truly,

Feb. 9th, 1897. A. W. BUCKLAND.

CASE OF DERMATITIS DUE TO WEARING A FUR COLLARETTE.

To the Editors of THE LANCET.

SIRS,—As some attention is being drawn to the eruption caused by fur the following case may be of interest. A young woman, who had never been subject to eczema, consulted me in November last as to a rash on her neck. The eruption was about two inches broad, extending, but for a few inches in front completely round the neck and even on to the lower part of the cheeks. There was less behind than at the sides, the eruption being particularly marked on the thin skin over and just posterior to the sterno-mastoids. It consisted of fine discrete papules, intensely irritable, scattered more closely toward the centre, and fading off toward the edge of the eruptive band. It appeared that the woman had recently purchased a fur collarette, and on this lay my suspicions. I requested her to desist from wearing it till it had been subjected to steam cleaning, as I thought then that the eruption was caused by some poisonous dressing. The fur was accordingly steamed and afterwards worn; but the eruption showing no signs of abatement I obtained a piece of the fur in order to make a minute examination of the hairs. I found that the fur was composed for the most part of short, even-lengthed hairs of extreme tenuity, but scattered among them were long, bristle-like hairs which seem absent in good young pelts. These hairs split and fracture very easily, the points of such fractured hairs being extremely sharp and almost horny. It is, therefore reasonable to presume that when pressed in contact with the thin skin of the neck the bristly hairs penetrating the cutis break off and thus give rise to the eruption. I venture to send you a specimen of the fur and a few bristles mounted for the microscope to demonstrate the fractured ends.

I am, Sirs, yours faithfully,

Kensington, W. E. A. B.

*** We may point out that the above conclusions of our correspondent are similar to those we published in the columns of THE LANCET a fortnight ago—conclusions which were based on experimental results with a specimen of both an irritating and a non-irritating fur collarette. At the same time we established the absence of chemical irritants.—ED. L.

THE CANTONMENT AT QUETTA.

(FROM A CORRESPONDENT.)

WHETHER the poison which causes enteric fever and other allied affections be animal, vegetable, or mineral, and whether its habitat be aquatic, aerial, or telluric, the importance of a clean wholesome site for a dwelling must be admitted by all theorists. No conscientious builder would construct a house over an unemptied cess-pit, and yet this is precisely what was done when the present cantonment at Quetta was founded.

During the last war in Southern Afghanistan a great camp grew up by degrees round a remarkable tumulus-like mound known as the "Miri," which is situated in the centre of a spacious alluvial plane at the northern outlet of the Bolan pass. From time immemorial the site had been the regular halting-place for caravans between Kandahar and India, and it is no exaggeration to say that the subsoil was everywhere saturated with noxious organic matter. That, under the circumstances, the troops and followers should suffer severely from diarrhœa, dysentery, enteric fever, and pneumonia was

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a foregone conclusion; but happily—thanks to the magnificent climate, and thanks also, no doubt, to a careful supervision of the water-supply—the mortality, though high, was not so great as might have been expected.

Kandahar having been abandoned in the spring of 1881, the breaking up of the Southern Afghanistan Field Force followed soon afterwards; whereupon the question of a fresh site for the headquarters of the newly-formed Quetta District was immediately raised by the recently appointed principal medical officer. Fully imbued with the hygienic gravity of the situation, this official lost no opportunity of impressing upon the authorities, military as well as medical, the overwhelming advantages of a virgin soil for the new cantonment. To his mind complete removal from a site contaminated by the filth of centuries was an obvious necessity, and he accordingly begged leave to point out two fresh sites in the neighbourhood of the ancient halting-ground which seemed to him to be suitable in every respect. In consequence of these representations a special committee was appointed to inquire into the matter, and after due inspection and deliberation the selected spots were both declared to be at least as free as the old foul site itself was from strategical defects and military objections. The sanitary faults of the existing camp being so self-evident the principal medical officer felt sure his condemnation would be endorsed by the executive in India, but month after month passed without a sign, and at last, when the year (1881) closed in leaving the question still in abeyance, he began to lose hope. By this time buildings instead of tents had commenced to spring up in every direction, and although it was true that these more or less rude shelters were constructed of sun-dried brick and represented little or no money value still the disheartened sanitarian could not but regard them as so many nails in the coffin of a salubrious Quetta.

The inexorable touchstone of events has long since justified this melancholy prognostication. It cannot be denied that during the last sixteen years all the diseases that are usually associated with a foul subsoil, from cholera downwards, have committed terrible ravages in the Beloochistan outpost, but even now at the eleventh hour it is not too late to apply a remedy. The past, unfortunately, is irrevocable, but it is our duty to safeguard the future as far as possible, and to this end the recommendation of 1881 cannot well be improved upon. Attention has been drawn[1] to a recrudescence of enteric fever at Quetta, but the fact that this fatal disease has become endemic is not to be wondered at. The climate, however, of the whole district is so good that our soldiers ought to be quite as healthy at Quetta as in England. Air, food, and water are all of the best; it is only the soil that is at fault, and manifestly nothing short of a complete change of site can effectually remove this extremely serious blemish.

It is given to many people to be wise after the event, but the first Principal Medical Officer of the Quetta district may be included in the rarer category of those to whom prophecy is permissible because they happen to know. The testimony of the crowded cemetery on that far-off table-land is, unhappily, only too conclusively in favour of the genuineness of his foresight, but, Cassandra-like, he failed to convince those with whom was the power. Should the authorities desire to refresh their memories as to the views held by this officer regarding possible sites for a cantonment on the Quetta plain, they will find them set forth at length in the annual (medical) report of the Quetta district for the year 1881, which was duly forwarded to Simla early in 1882. As this was the first document of the kind which emanated from the command it has doubtless been carefully preserved in the archives of the Government of India.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Royal Infirmary.

THE annual meeting of the trustees of the Manchester Royal Infirmary was held on Friday last. In the absence of Mr. E. S. Heywood, chairman of the board, Mr. J. W. Maclure, M.P., presided. The report stated that, as sanctioned by Parliament, the Monsall Fever Hospital was handed over to the Manchester Corporation on Oct. 1st last, "on the payment by them of the sum of £4899 10*s.* 7*d.*" Provision is made for the gratuitous removal and treatment at the hospital of all cases of infectious disease arising at the infirmary or at the convalescent hospital at Cheadle, and the members (of the infirmary medical staff are to have facilities for giving clinical instruction within the wards of the hospitals of the Manchester Corporation. A small second operating theatre has been constructed at the infirmary at a cost of £250, which will greatly facilitate the surgical work of the institution. During the year 1896 4534 in-patients, 36,908 out-patients and surgical casualties, and 1135 home-patients have been treated. The total reaches the large number of 42,577, against a total of 41,205 in the previous year, the increase being chiefly in the out-patients. The following sums have been received from the patients who were able and willing to contribute to the cost of their maintenance:—In-patients, £826 16*s.* 1*d.*; out-patients, £73 13*s.* 6*d.*; Convalescent Hospital patients, £133 17*s.* 2*d.* The report states that from the inquiries made by the District Provident Society into the circumstances of all patients living in Manchester, "it has been ascertained that 93 per cent. of the cases visited last year were fit objects of charitable relief." With respect to this statement, a letter signed "Hospital Reform," which appeared in the *Manchester Guardian* of yesterday, may be noted. It says: "A simple calculation shows that no less than 2979 cases were not suitable objects for charitable relief." In the same isssue Mr. T. Garrett Horder, referring to a paper read by him in November last before the Manchester Medico-Ethical Society, calls attention to the fact that while 249 out of every 1000 inhabitants of Manchester were registered as out-patients at the Manchester hospitals in 1892, the out-patients at the Oldham hospitals only numbered 33 per 1000 inhabitants; and he says that he thinks this great difference may be accounted for by the fact that at the Oldham Infirmary "there is a Special Admission Committee, whose duty it is to make investigation into the circumstances of people who apply for out-patient medical relief." This seems to show that the tests of the District Provident Society are less stringent than those of the Oldham committee; or is it that the difference is caused by the large number of patients applying at the infirmary who are not resident in Manchester and into whose circumstances therefore no enquiry is made? The income of the Infirmary last year was £22,441; in 1895 it was £22,627. The ordinary expenditure during the year was £17,073—Convalescent Hospital, £5621; Monsall Fever Hospital (nine months to Sept. 30th), £11,624. The cost of wines, spirits, and malt liquors was 1*s.* 4½*d.* per patient. The chairman in moving the adoption of the report, said that after the declaration of the trustees they would continue to maintain the hospital on the present site. It was arranged that there should be a friendly conference between representatives of the trustees and of the Manchester Corporation. The committee had been appointed and, he believed, would meet very shortly. Mr. Fildes said he had attended the meeting as a member of the hospital committee of the Manchester Corporation to express his cordial acknowledgments—in which he was quite well aware his committee would desire to associate themselves—of the exceedingly generous and gracious manner in which the transfer of the Monsall Hospital had been made to the Corporation. One point in connexion with this transfer gave rise to some anxiety when the question was first mooted—namely, the provision for clinical teaching in cases of fever, and it is eminently satisfactory that the Corporation, with the guidance, no doubt, of the medical officer of health, has been sufficiently enlightened to continue to the students of the Owens College Medical School the opportunity of obtaining, with the help of the infirmary medical staff, this essential part of a medical education.

Bequests to Medical Charities.

The will of the late Mr. James Parrott, a Salford engineer, who died on the 5th inst., aged ninety-four, besides giving legacies and annuities to relatives and others, makes the following bequests to Manchester medical charities: the Royal Infirmary, Royal Eye Hospital, St. Mary's Hospital, and Salford Hospital, to each £500; to the Homœopathic Hospital, £500; to the Consumption Hospital, £400; to the Ardwick Dispensary, the Chorlton-on-Medlock Dispensary, the Ear Institution, and the Children's Hospital, Pendlebury, each £200. The United Kingdom Alliance, Manchester

[1] THE LANCET, Jan. 9th, page 133.

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receives £500. and the Vegetarian Society, Manchester, £200. Henshaw's Blind Asylum and the Deaf and Dumb Schools, Old Trafford, each receive £500. Various other bequests are made to philanthropic societies, and to "any hospital within Manchester conducted on total abstinence principles and selected by the trustees within ten years, £1000." The residue is to be held as a trust, to be called "The James Parrott Charity," the income of which is to be applied "in making money grants, or weekly or other periodical allowances, towards the succour, aid, or relief, of poor people inhabiting or dwelling within the boroughs of Manchester and Salford, and the district of South Shore [Blackpool, where he died], especially such poor people as, by reason of sickness, infirmity, or age, are peculiarly objects of charity." The will directs that there shall always be three trustees. The deceased gentleman is said never to have used tobacco, to have been a total abstainer from alcohol for nearly seventy years, and to have been a vegetarian for forty years. He certainly did credit to his regimen, for he was a hale, well-preserved old man, who superintended his engineering works in Salford until he was eighty-eight years old.

Feb. 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

St. Andrews and Dundee.

THE anticipation that the recent decision of the Privy Council confirming the ordinances issued by the University Commissioners, by which an incorporating union was established between the University of St. Andrews and University College, Dundee, would conclude the long quarrel between these two academic bodies has been promptly dispelled. At a meeting of the University Court, held on the 10th inst., a letter was read from the Duke of Argyll, Chancellor of the University, intimating that he had taken the opinion of counsel on the ordinances, and was advised that an action for reduction would be competent. Thereupon the Court decided by a majority to take no action in connexion with the ordinances regulating the union of the Dundee College with the University and to intimate their willingness to supply any information that may be needed for the purpose of promoting the suggested legal proceedings. This decision practically ignores the finding of the Privy Council and is in direct opposition to an intimation from the University Commissioners declaring that the ordinances are to be carried out without delay. It will be interesting to see how these two august bodies will deal with what looks like an act of open rebellion against authority. In the meantime it appears to be the determination of the Court to proceed without any recognition of the existence of Dundee or of the authoritative decisions in reference to the College and the University. Thus, at the meeting of the court at which the decision above alluded to was taken the minutes of a committee appointed to make arrangements for the erection of new buildings for a medical school in St. Andrews were adopted, whereas in the scheme of union the medical school of the University was practically to be the college and hospital at Dundee. It is right to add that in this policy the court is by no means unanimous, and the last decision was only carried by the casting vote of the chairman, the Marquis of Bute. The minority includes such influential names as those of Principal Donaldson and Professor Stewart.

Post-graduate Teaching in Glasgow.

It is intimated that Professor Coats is during March and April to conduct two post-graduate courses in the Pathological Institute of the Western Infirmary, one in bacteriology and the other in practical pathology. Each course is to commence on March 4th, and the two may be taken together or separately. The clinical demonstrations to medical practitioners, which were commenced some weeks ago in the Royal Infirmary, have been highly successful. A large and increasing number of practitioners are attending the demonstrations and much satisfaction is expressed at their thoroughly useful and practical character.

Provincial Hospitals.

The annual meeting of subscribers to the Ayr County Hospital was held on the 15th inst. The general condition of the hospital was reported to be satisfactory, but, as in most cases, the income falls below the expenditure. It is proposed to try to raise a sum of money in connexion with the "Diamond Jubilee" for the purpose of removing the debt of £800 and to increase the endowment of the hospital. By the will of the late Provost Alexander of Coatbridge a sum of £30,000 has been placed in the hands of trustees to erect a hospital more particularly for the treatment of patients injured by accidents occurring in the numerous ironworks in the neighbourhood. The erection of the hospital is to be proceeded with immediately.

Feb. 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Health of Dublin.

SOME excitement has been caused here by the leading articles and letters which have recently appeared in the daily journals in reference to the high death-rate which now exists in Dublin. In a leading article on the 10th inst. the *Freeman's Journal*, while repudiating the attitude of an alarmist, maintains that the Dublin death-rate since the beginning of 1897 has been so high as to warrant even more stringent comment than it has actually called forth, and while disclaiming any wish to apportion blame to any public body of staff of officials, the writer fails to see how this important matter can be overlooked. He states that during the first five weeks of the present year the Dublin death-rate averaged 40·1, and was therefore 6·2 above the mean rate for the corresponding period of the past ten years. Every credit is given to the superintendent officer of health and his staff for the fair record which the city returns show for the six years ending with last year, the mean death-rate from zymotic disease in Dublin being for that period decidedly satisfactory and under that of the thirty-three great towns of England, including London. The death-rate, moreover, for the year 1896 was especially favourable. The gravity of the present epidemics and the high mortality now prevailing in Dublin are, on the other hand, prominently noted. Professor Roche's letters and comments have indeed served to draw from Sir Charles Cameron, the superintendent officer of health, full notice, and his reply to all faultfinders is about to take the shape of a communication to the Royal Academy of Medicine in Ireland. It is entitled, "The Recent Failure of Hospital Accommodation in Dublin," and will be read at the meeting of the Section of State Medicine on the evening of the 19th.

The New Belfast Hospital and the Railway Companies.

At a special meeting of the County Down Railway Company, held last week, £1000 were voted to the new Belfast Hospital; but at the meeting of the Northern Counties Railway the chairman announced that the directors, in face of threatened opposition, felt it would not be judicious to put the resolution authorising them to subscribe £1000 towards the erection of the proposed new hospital. It seems that such a proposition can only be carried out by the unanimous vote of the shareholders, and one of them had intimated that he would oppose a grant to any charitable institution. The resolution authorising the directors to give the grant to the new hospital was, notwithstanding what the chairman said, moved and seconded and put to the meeting, and passed by a large majority, but the chairman said it was not a motion the directors would be justified in putting into effect. It was, he said, impossible to carry out the views of the large majority, having regard to the opposition that had been evidenced in the meeting.

Death of Mr. John Dundee, L.R.C.P. & S. Edin.

I regret to announce the death of Mr. John Dundee, who was for several years dispensary medical officer of Carnmoney, near Belfast. Mr. Dundee, who was educated at Queen's College, Belfast, became a Licentiate of the Royal Colleges of Surgeons and Physicians of Edinburgh in 1869. In 1882 he succeeded his father, who was the original dispensary medical officer of Carnmoney, appointed by the Local Government Board, and he discharged the duties of the office most satisfactorily until three years ago, when he contracted influenza, and continued to work on until symptoms of his fatal malady — phthisis — developed, which compelled him in 1895 to resign his appointment. He went abroad for his health last year, but

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was too weak to travel this season. He gradually got lower and died on Feb. 14th at his residence, Hillmount, Carnmoney, County Antrim, and was buried on Feb. 16th, a very large concourse of his former patients and friends being present. Mr. John Dundee was very greatly respected in his district. Naturally of a retiring disposition, he was most attentive to his patients, and it was probably owing to his extreme conscientiousness in looking after the poor in his locality that he contracted the disease which led to his untimely death. His brother, Dr. Isaac Dundee, was appointed dispensary medical officer in his place in August, 1895.

Feb. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Marseilles and the Plague.

THE Municipal Council at Marseilles has begun to understand that it is a difficult matter to make strict hygienic regulations which shall not interfere with the interests of one class or another. At the first announcement of the outbreak of plague in the East there was some fear of street rioting if any infected merchandise should enter the port of Marseilles. Later, however, the inhabitants began to perceive that their commerce would suffer. They learned from the daily press that Europeans had but little to fear from the epidemic as a contagious disorder, that the bacillus plague was easy to destroy, and that the arrangements for disinfection organised at Marseilles were working admirably. Then they began to be less terrified, and though no one cared to avow the sentiment publicly complaints were generally made about the interference with trade resulting from quarantine. The mayor asked for a relief fund of 20,000 fr. for the water-side labourers who had lost their ordinary work of unloading cargo from the East, and the Municipal Council also asked that the decree prohibiting the entry of any merchandise into France except that coming by an ocean or Channel port should be altered, and that no French port should be allowed to receive merchandise from any source, so that other ports should not be favoured at the expense of Marseilles. The Prefect refused to accept this proposition. The town of Marseilles also demanded a special delegate to the Venice Conference, and has even nominated him in advance.

The Evasion of Quarantine.

The first application under the law concerning false declarations has been made at Algiers in the case of the captain of the *City of Edinburgh*, who arrived at Algiers saying that he came from Port Said. He declared upon oath and in writing that he had not come from any infected Indian town, but it has been proved that he came from Karachi and had undergone disinfection at Port Said.

The late Dr. Bourgoin.

We have to regret the death of Dr. Bourgoin, which took place this week. He was Professor at the École Supérieure de Pharmacie and had been formerly attached to the Faculty of Medicine. He was a member of the Academy of Medicine and had written many classical works, notably on Galenical Pharmacy. Three years ago he was elected Deputy for the Ardennes, and it was expected by the profession that he would champion the cause of medical science in the Chamber; but upon a vote being proposed for the sum of 140,000 fr. to meet the expenses of biological laboratories he, with one other Deputy—also a medical man—were the only two found in opposition to the grant.

The Paris Medical Societies.

At the Academy of Medicine the question of corsets has been to the fore. M. Laborde opened the discussion and illustrated his remarks by x ray photographs and the exhibition of a hygienic corset. M. Lucas-Championnière, however, said that the corset in question was nothing but an abdominal belt, and condemned it on the grounds that its constant use enfeebled the muscles of the abdominal wall. At the Surgical Society an interesting discussion has taken place lately on the surgery of the lung and the means of avoiding pneumothorax when it is necessary to open the pleura. M. Tuffier and M. Hallion have made some experiments upon animals. They propose to use a tube inserted into the trachea, and having an outer covering of indiarubber which can be dilated and made to plug the larynx. The lungs can then be artificially dilated by means of the tube, sufficient pressure being employed to prevent the layers of the pleura becoming separated during respiration. M. Quénu said that he preferred simple tracheotomy, the danger of which he considered to be exaggerated. M. Delorme averred that it is only necessary to advise the patient to cough, when the lung will be seen to again become distended.

The Syphilitic Infection of a Wet-Nurse: a Strange Medico-Legal Point.

A recent judicial decision has formed the text for a discussion at the Society of Legal Medicine. It has been decided at a Paris law court that if a nurse contracts syphilis from her nursling she has a right to recover damages from the father and mother of the child. The nurse in this case had contracted syphilis which she had not only given to her own child, who died, but also to her husband. The child who had caused all the trouble had no signs of syphilis at birth; these only appeared later, and it was only then that the nurse became infected. Neither the father nor the mother of the child had any signs of syphilis, and both declared that neither of them had ever had it. The court usually in such case orders damages to be paid to the nurse, but in this case it declared itself unable to decide and called Professor Fournier to clear the matter up. He gave it as his opinion that the parents had no visible signs of syphilis and that the child had signs of hereditary syphilis, therefore the important point was to prove the *bona fides* of the parents. The tribunal did not condemn the parents, but recognised that the nurse had suffered damages. They decided that the responsibility of the father was doubtful, because it was possible that he was not the real father. As for the mother, if she were blameable her fault could not make her husband pecuniarily responsible, for by French law the husband is not responsible for debts which his wife may contract *without his authorisation*. As it was obvious that no one was to blame there was no possibility of anyone getting damages, and the luckless nurse has every reason to remember the proverb, *Summum jus summa injuria*.

Dr. Hutinel, well known for his writings on the diseases of children, has just been made Professor of Medical Pathology at the Paris Faculty of Medicine.

Feb. 15th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Austrian Medical Chambers.

AS I have frequently had occasion to mention the Austrian Medical Chambers (*Aerztekammern*), some account of their organisation and functions may perhaps be of interest to the readers of THE LANCET. There are, in all, nineteen medical chambers in Austria, distributed as follows:—In Bukowina, Dalmatia, Carinthia, Krain, Moravia, Silesia, Upper Austria, Salzburg, and Styria, one each; in Galicia and Lower Austria, two each; and in Istria and Tyrol, three each. Every medical man is obliged to report himself and notify certain particulars to the chamber for the province or district in which he happens to reside. The powers of the chambers are not very extensive; they discuss matters relative to the general interests of the medical profession, they are expected to uphold its privileges and influence, and the courts of law are entitled to ask the chambers for expressions of opinion in special cases. Each chamber consists of at least nine members, who are elected by the medical men of the province or district, and each chamber has a president, a vice-president, and a council of honour composed of from three to seven members. The council of honour has to decide questions of ethics, disputes occurring between medical men, and complaints of various kinds; it is also empowered to take proceedings against medical men who are guilty of professional misbehaviour, and may sentence them to pay fines not exceeding £20. That is the full extent of the power of a chamber, and the medical men whom it has censured or fined have the right of appeal to the law courts. Their powers being so limited it is not surprising that the chambers have but little influence and that the majority of the medical profession consider that they ought to be re-organised and invested with greater authority.

Medical Aid Societies.

The rooms of the Medical Society have never been so crowded as on Feb. 9th, when about 1000 medical men from

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all quarters of Vienna attended a meeting which was held for the purpose of protesting against the Government proposal to make insurance against sickness obligatory on employers and tradesmen. Although it may be impossible to prevent the measure passing into law, yet it was most satisfactory to find that the medical men are so unanimous in their opposition to the scheme. The President (Dr. Heim) in his opening address read letters approving of the objects of the meeting received from the medical chambers of Moravia, Istria, Bukowina, and Silesia; he also submitted a resolution proposed by Dr. Beer to the effect that medical men all over the country should enter into an agreement not to hold any appointment in connexion with the medical aid societies composed of employers and tradesmen. The first reporter, Dr. Scholz, referred to the numerous associations formed for the purpose of supplying medical aid at low rates, not only to the poor, but also to well-to-do patients, and he quoted statistics showing that, according to the conditions of medical practice which either actually exist or may be expected very soon, it is inevitable that only one medical man in six will be able to make a livelihood. He reminded his hearers that they were in duty bound to refrain from intensifying the hardships of the situation by unprofessional competition and by making visits for each of which they would receive a penny. He was of opinion that every medical man should be employed by the State and that the profession should be efficiently organised. Dr. Herz presented a highly interesting report on the evils which the present system of medical aid inflicts both on the profession and on their patients. He said that the Government proposal to establish medical aid societies among the middle classes will be the ruin of the medical profession, for medicine cannot be conscientiously practised except by persons who acknowledge the paramount obligations of morality and honour, but needy practitioners suffering from the stress of competition and inadequate remuneration will be only too likely to disregard ethical considerations. The present system of treating club members is objectionable, for it leaves the patient no choice in the selection of his adviser; moreover, no medical man can make two hundred diagnoses in a day, and in hurrying through so large a number of visits it is impossible to give the requisite attention to individual cases. He recommended the introduction of the "free choice" system which is in force in Berlin, and denounced the proposal that employers and tradesmen should receive medical treatment at the same rates as the working classes. In the result the following resolutions were unanimously adopted: (1) the system under which members of clubs and friendly societies combine to obtain medical attendance is opposed to the interests both of the patient and the medical officer; (2) the proposal to extend the principle of insurance against sickness and to render it compulsory on employers of labour and tradesmen will have a disastrous effect on the medical profession; and (3) the "free choice" system under which patients have the option of selecting their medical attendants is preferable to the existing method.

The Serum Diagnosis of Enteric Fever.

A medical paper claims for Professor Max Gruber priority as the discoverer of the serum diagnosis of enteric fever. The actual fact is that Gruber's articles on the subject appeared in print before Widal's, but the latter has the merit of having proved that the blood of patients affected with enteric fever furnishes a serum which yields a reaction, whereas Gruber applied an agar-culture for this purpose. We, therefore, owe the practical application of this method to Widal and the idea to Gruber, and the process may for this reason be appropriately called the Gruber-Widal reaction.

Pemphigus Vegetans.

At the last meeting of the Medical Society Professor Neumann exhibited a case of Pemphigus Vegetans. In the inguinal and anal folds there were reddish and white efflorescences about the size of a lentil and also moist patches. The patient suffered from dyspnœa, increased temperature, and emaciation. The affection of the skin had been increasing for some weeks and there are now symmetrical papillary protuberances from which there comes a viscid and purulent discharge of a reddish colour. The disease was first described by Neumann and forty cases have been recorded up to the present time. The prognosis is very bad, a single vesicle being a sufficient indication of a fatal result, which, as a rule, occurs within nine months. The histological changes arise in the epidermis and the upper layer of the cutis. Profuse suppuration takes place in the stratum spinosum or undermost layer of the epidermis, elevating the horny layer, the papillary bodies become enlarged, the lymph vessels and bloodvessels become dilated, the hair follicles are obstructed, and the cells of the connective tissue contain pigment.

Professor Schroetter.

Professor Leopold Schroetter, chief of the third medical clinic of the General Hospital, celebrated his sixtieth birthday last week. Professor Schroetter was for many years assistant to Skoda; he subsequently devoted himself to laryngology and published the well-known "Vorlesungen über Krankheiten des Kehlkopfes" (Lectures on Diseases of the Larynx). Some five years ago a third medical clinic was established and he was promoted to be ordinary professor and director of this clinic. For many years he advocated the founding of an asylum for patients affected with pulmonary tuberculosis and his project is now to be realised. On the occasion of his sixtieth birthday a pamphlet was printed containing contributions by Nothnagel, Leyden, and some other eminent physicians.

Feb. 14th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Precautions against the Plague.

THE Superior Council of Health has seriously occupied itself in discussing the measures to be taken in the event of the plague approaching, or being introduced into, Turkish territory. The Government has, no doubt, good reasons to prepare against the invader, as thousands of pilgrims from the panic-stricken districts of India come to Mecca, the holy place of Islam. The sanitary state of the country, even in the capital itself, is far from being satisfactory. The Turkish authorities everywhere evince a good deal of anxiety and make great noise and show when the country is actually confronted with epidemics; but when the immediate danger is over they do not seem to pay the slightest attention to sanitation. These paroxysmal efforts of the authorities have been noticed in all epidemics. The Turkish Government is assured that Russia has taken all the necessary measures against the plague at the Russo-Turkish frontier; so that the Turco-Persian frontier remains to be watched. A military cordon has been appointed at Bassorah to watch the route between that town and Hanekine, the only road of communication. By order of the same council, Dr. Duca, delegate of the sanitary administration of this town to the International Council of Health in Egypt, has been appointed to Camaren, where he, together with Dr. Vaume, will watch the application of hygienic measures ot the Indian pilgrims.

Dr. Tiriakian.

Dr. Tiriakian, an Armenian physician of high repute in Constantinople, left the country some months ago for Persia. We read in the daily papers that he has been nominated member of the sanitary council at Teheran, which has only lately been formed under the presidency of His Majesty the Shah. Dr. Tiriakian is a man of great ability; while at Constantinople he filled several important posts. He was consulting physician to the great Armenian National Hospital, a member of the Armenian Board of Education, and for many years he had a seat at the National Assembly. His loss is felt by us all; at the same time we are happy to hear of his success and prosperity in Persia.

Feb. 6th.

LITERARY INTELLIGENCE. — Messrs. Archibald Constable and Co., 2, Whitehall-gardens, Westminster, have this week published Dr. Fridtjof Nansen's "Farthest North," being the narrative of the voyage and exploration of the *Fram*, 1893-96, and the fifteen months' sledge expedition by Dr. Nansen, with an appendix by Otto Sverdrup. The work is in two volumes, large demy 8vo, and contains about 120 full-page and numerous text illustrations, together with sixteen coloured plates in facsimile from Dr. Nansen's own sketches, portrait, photogravures, and maps. The price is two guineas net.—Sir William Broadbent, Bart., has a work in the press on "The Prognosis and Treatment of Heart Disease," which will shortly be published by Messrs. Baillière, Tindall, and Cox.

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Obituary.

GEORGE DAVID POLLOCK, F.R.C.S. ENG.,

CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

THE profession will learn with great regret, as we have done, of the death of Mr. George David Pollock, Senior Consulting Surgeon to St. George's Hospital, which occurred at his residence, 35, Chester-square, S.W., on Sunday last, Feb. 14th, after a short attack of pneumonia.

Mr. Pollock was the second son of Field Marshal Sir George Pollock, Bart., G.C.B., G.C.S.I., the hero of the Khyber Pass and Constable of the Tower. He was born in 1817, and was, therefore, in his eightieth year. He received his medical education at St. George's Hospital and also as an apprentice to a practitioner in the country; and he was always ready to point out the value of the informal training which he received during that apprenticeship. He became house surgeon to Sir Benjamin Brodie and in 1840 became a Member of the Royal College of Surgeons of England. In 1843, through the great influence of his father and Sir Benjamin Brodie, who was much attached to him, he obtained the post of resident physician to Lord Metcalfe, appointed in this year Governor-General of Canada. The post in the colonial household was no sinecure, for Lord Metcalfe suffered from malignant disease of the face, which at length deprived him of the sight of one eye and compelled him to resign his position in 1845. Pollock returned to England with Lord Metcalfe—who died in 1846—and in that same year became a Fellow of the Royal College of Surgeons of England and was elected Assistant Surgeon to St. George's Hospital. From that time forward his name is associated with that hospital in the minds of many generations of his pupils, for he served upon the honorary staff for no less than thirty-six years. In 1852, upon the foundation of the Children's Hospital in Great Ormond-street, he was elected Surgeon to the new institution, and a little later he was appointed Examiner in Surgery for the Army Medical Staff and the Indian Medical Service. Here his kindness and geniality were found by the competitors to compare so favourably with the grimness of many of the gentlemen by whom they had previously been examined when trying for their diplomas that a notion sprang up that he attached as much importance to the demeanour and appearance of a candidate as he did to his scientific knowledge, a notion which, we need hardly say, was totally erroneous. He was a lenient examiner but a perfectly fair one.

As a surgeon Mr. Pollock was distinguished for his boldness in operating, for the care with which he examined his cases and formed his diagnosis, and for the minute attention he bestowed on every detail of the after-treatment. He was not specially original, he introduced no great advance in surgical science and left no striking work behind him; but those who followed his daily practice in his hospital could best judge of the success with which he carried out the surgical teaching of his masters—Brodie and Cæsar Hawkins. Both of these great surgeons were more celebrated for ability in diagnosis than for brilliancy in the operating theatre: Mr. Pollock was not less careful than they in his attention to diagnosis, but he shrank from no operative difficulties, and rather shone both in the greater operations and in the more delicate proceedings of plastic and ophthalmic surgery. Both in hospital and private practice his geniality of heart and his unwearied kindness endeared him to his patients, many of whom now recall the great obligations they owe to him both as a surgeon and a friend.

As a colleague no one could be more thorough and more perfectly trustworthy. A good colleague is not a man who assents to anything, but one who does not differ without cause, who will hear reason, whose judgment is based on honest motives, and who can be relied on to do what he thinks to be right. Everyone who acted with Pollock knew that he fulfilled all these conditions. He sought no selfish ends, but acted in all things with a single object—the good of the hospital or school of which he was an officer. His opinions on all matters, whether of surgery, of hospital administration, or of school management, were generally sagacious and always sincere; and he was quite ready to re-consider them if good cause were shown why he should do so. Even serious differences on important questions, such as must occur in the management of great institutions, were so treated by him as not to interrupt personal friendship; and he quitted the active service of the hospital retaining the respect and affection of all with whom he had acted.

It remains to speak of the part which Mr. Pollock took in the movement for the reform of the Royal College of Surgeons of England as President of the Association of Fellows. In this, as in all other actions of his life, his motives were the highest; he acted as he thought it his duty to act. His position and reputation as a surgeon would have ensured his early admission into the Council of the College and to its highest offices, but he disapproved of the system on which the College was then administered and would never allow himself to be placed in nomination for the Council till in the last year of his life, when he thought he saw a chance of serving the interests of reform by taking his seat on the Council; and therefore against the opinion of many of his friends he expressed his willingness to serve if elected. It was probably well for him that the constituency preferred younger candidates. But this, as well as every other incident in his connexion with the Fellows' Association, was creditable to his high sense of honour and duty and showed the indomitable spirit which forbade him to shrink from labour at an age which entitled him to repose.

Mr. Pollock's literary contributions to his science were few and consisted of certain articles in "Holmes's System of Surgery"—the subjects of which were Injuries to the Abdomen and Diseases of the Mouth, Pharynx, and Intestines—and one or two papers communicated to the learned societies. That these bodies held him in no lightness of esteem because he was an infrequent reader of papers is shown by the fact that he was President of the Royal Medical and Chirurgical Society and of the Pathological Society. He was also Surgeon-in-Ordinary to the Prince of Wales.

By Mr. Pollock's death we have lost an exponent of old-fashioned manners as well as a justly esteemed leader. The scrupulously professional attire which he invariably wore consorted well with his courtesy and dignity of demeanour, and the two formed a demonstration of his own great respect for his calling. It will probably surprise many to whom his fresh alert face was well known to learn that he had attained so great an age of seventy-nine. He married in 1850 Marianne, daughter of Mr. Robert Saunders, by whom he had five children, three of whom survive him.

A memorial service will be held on Saturday next, at 2 P.M., at St. Michael's, Chester-square.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. E. J. Lebedinski, *privat-docent* of Internal Medicine in the Military Academy of Medicine, St. Petersburg.—Dr. A. F. Prussak, Emeritus Professor of Otology in the Military Medical Academy, St. Petersburg.—Dr. Wannebroucq, formerly Professor of Clinical Medicine in the Lille Faculty of Medicine.

Medical News.

UNIVERSITY OF LONDON.—At the Preliminary Scientific (M.B.) Examination in January the following candidates were successful in the subjects indicated:—

Entire Examination.—First Division: Charles Henry Dawe, Guy's Hospital and University Tutorial College; Charles Wesley Forsyth, Owens College and private study; Somerville Hastings, Middlesex Hospital and University and University Tutorial Colleges; John Borland McVail, private study and University Tutorial College; Percy John Robbins, St. Mary's Hospital; and William Morton Robson, Guy's Hospital. *Second Division:* Charles Edwin Adams, Guy's Hospital; Richard Appleton, B.A., University Tutorial College and private tuition; Agnes Maud Brown, University and University Tutorial Colleges; Henry Butler, University Tutorial College; Herbert Melville Churchill, Brighton Grammar School; James Duncan Clay, King's College; Percy Reynolds, B.A., Yorkshire College and private study; Anna Maude Smith, Alwyne and Birkbeck Institutes; Vere Godsalve Ward, St. Bartholomew's Hospital; and Walter Perceval Yetts, University Extension College, Reading, and University Tutorial College.

Chemistry and Experimental Physics.—Joseph Ebenezer Adams, City of London School; Algernon James Beadel, Guy's Hospital and University Tutorial College; *Maud Bennett, University Tutorial College and Birkbeck Institution; *Victoria E. May Bennett, University College, Cardiff; *Lilly Alice Bilke, Carlyon College; *Alwyn Hewett Bradley, Mason College; *William Wellesley Campbell, King's College; George Arthur Charter, private study;

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*George Brooke F. Churchill, Guy's Hospital and University Tutorial College; *Olive Claydon and *Anne Fenton Cleaver, University Tutorial College; William Henchman Cole, Guy's Hospital and University Tutorial College; Carey Franklin Coombs, University College, Bristol; *Edgar Winn Fox Dolman, Epsom and King's Colleges; Lætitia Nora Ede, private study and tuition; *Frederic Augustus Edmonds, Epsom and University Colleges and private study; Edgar Severn Ellis, Cheltenham Science School and St. Bartholomew's Hospital; *Julian Craig Fleming and Geo. Francis Innes Harkness, University and University Tutorial Colleges; *Frederic Rosenberg Harris, St. Mary's Hospital and private study; *Anne Elizabeth Hooper, University College, Nottingham; *Andrew Ferguson Horn, University and University Tutorial Colleges; Norris Norman A. Houghton, University Tutorial College; Lawson Jervis Hughes, Guy's Hospital and University Tutorial College; *Frances Mary Jenkin, Westfield College and Plymouth Technical School; *Lionel Capper Johnson, Owens College; Henry Arthur Kellond-Knight, St. Bartholomew's Hospital; *Ernest Thomas Kendon, London Hospital; *Reinold Frederic Korte, private study; *Charles Ernest Lakin, Middlesex Hospital, University College, and private tuition; *Alfred Lewthwaite, University Tutorial College; Charles Ernest Wheatley Lyth, Wesley and Firth Colleges; *Agnes Emma Mecklenburg, University and University Tutorial Colleges; *Helen Moore, University Tutorial College; *Mary Eva Hastings Morris, University College, Aberystwith; *William John Morrish, St. Mary's Hospital; Gilbert Phillips Mosscrop, University Tutorial College; *Harold Rundle Fitz Nattle, private study; *Herbert Harland Raw, Kingswood and St. Bartholomew's Hospital; William Arthur Rees, Middlesex Hospital, University College, and private study; George Struan Robertson, Guy's Hospital and Dulwich College; Frederick Cecil Robinson, Guy's Hospital; Charles Edward Rogers, B.A., Yorkshire College and Leeds School of Medicine; *John Bart Rous, St. Mary's Hospital; Charles Chapman Ruchton, Owens College and private study; *Charles Russ, St. Mary's Hospital and Birkbeck Institute; *Agnes Catherine Scott, Yorkshire and University Tutorial Colleges; *Edith Serjeant, private study and University Tutorial College; *Charles William Smith, private study; James Ernest Sutcliffe Smith, Owens College; *Louisa Spicer, and *Ethel Maud Stacy, University and University Tutorial Colleges; James Batson Stephens, University Tutorial College; *Emily Gertrude Stuart, University Lectures, Oxford, University Tutorial College, and private tuition; *Robert Archibald S. Sunderland, St. Bartholomew's Hospital; Alice Taylor, University College and private tuition; Andrew Telfer, B.A., private study and tuition; Louisa Graham Thacker, Bedford College, London; *Albert Edward Thomas, St. Bartholomew's Hospital; *Herbert Kingsley Ward, Mason College; Hugh Watts, Dulwich College and St. George's Hospital; Eugene Christopher Whitehead, Wyggeston School, Leicester; *Arthur Whitehead-Smith, Epsom College and St. Thomas's Hospital; *Clare Aveling Wiggins, St. Mary's Hospital; *John Thomas Williams, University College, Cardiff; Lauriston Leonard Winterbotham, Cheltenham School of Science; *Frank Herbert Wood, St. Bartholomew's Hospital and Alwyne Institute; *Maurice Dunbar Wood, Guy's Hospital; and Graham Pallister Young, University Tutorial College.

Biology.—*Anne Thompson Barnard, Birkbeck Institution; Henry Edgar Barnes, St. Mary's Hospital; *Mildred Mabel Burgess, University Tutorial College; *Brynmor Chiles-Evans, University Colleges, Aberystwith and Cardiff; *Edward Murray Clarke, University College, Cardiff; *George Thomas Collins and *Michael Abdy Collins, University Tutorial College and Guy's Hospital; Lidbrooke Frank Cope, St. George's Hospital; *James Frederick Corson, Owens College and private study; John Cyril Curtis, University College and private study; *Harold John De Brent, St. Thomas's Hospital; *Thomas Scarbrough Dudding, Oundle School and London Hospital; *John Parker Ellerington, Carlyon College and private tuition; *John Evans, University College, Aberystwith and Guy's Hospital; *Arthur Claypon H. Gray, Guy's Hospital and Malvern College; *Charles Alwis Hewavitarna, University College; *Henry Crewe Keates, Guy's Hospital and University Tutorial College; Robert Hammersley Lee, King's College; *George Bartley McKean, private study; Newton Herbert Marshall, B.A., Baptist and University Colleges, Nottingham; Arthur Francis Martin, Owens College; Sydney Wood Milner and *Frank Herbert Noke, St. Bartholomew's Hospital; *William Gibson Parker, Guy's Hospital; *Francis Baldwin Pinniger, Charing-cross Hospital; Henry William Plant, B.A., Mason College; *Frank Leslie Thomas, Guy's Hospital and University Tutorial College; *Robert Nimmo Watson, Westminster Hospital, University Tutorial College, and private study; and Herbert Gresham Wright, King's College.

* These candidates have now completed the examination.

FOREIGN UNIVERSITY INTELLIGENCE.—*Baltimore (Johns Hopkins University):* Dr. L. F. Barker has been appointed Assistant Professor of Anatomy.—*Berlin:* Dr Klemperer and Dr. Rosenheim, *privat-docenten* of Internal Medicine, have been granted the title of Professor.—*Groningen:* Dr. Wiersma has qualified as *privat-docent* of Psychiatry.—*Heidelberg:* Dr. Nissl has qualified as *privat-docent* of Psychiatry.—*Innsbruck:* Dr. Loos has been appointed Extraordinary Professor of Children's Diseases.—*Kazan:* Dr. Darkshevich has been appointed Professor of Neurology. Dr. Savchenko of Kieff has been appointed Extraordinary Professor of General Pathology.

MESSRS. GEORGE MASON AND CO., LIMITED, of Chelsea Works, Walham-green, manufacturers of specialities for invalids, write to state that they have no connexion whatever with the firm of Frederick Mason of Acre-lane, Brixton, against whom a receiving order in bankruptcy has recently been made.

THE annual general court of the governors of Charing-cross Hospital was held on Feb. 17th, when it was announced that the Lord Mayor had consented to hold a meeting on March 5th in aid of the special appeal for £100,000 to rescue the institution from its unfortunate pecuniary position.

FREEMASONRY: ÆSCULAPIUS LODGE, No. 2410.—A regular meeting of this lodge was held at the Café Royal, Regent-street, on Feb. 10th, Thomas Dutton, M.D. Durh., the Master, being in the chair. C. H. Broadhurst, L.R.C.P. Lond., M.R.C.S. Eng., was admitted to the third degree. L. H. Pegler, M.D. Edin., H. S. Lunn, M.A., M.D. Dub., W. E. Gillson, L.R.C.P. Lond., M.R.C.S. Eng., and G. Newton Pitt, M.A., M.D. Cantab., F.R.C.P. Lond., were admitted to the second degree, and E. V. White, F.R.C.S. Eng., was admitted into Masonry. There were a large number of visitors present, and the meeting was very successful. Some forty brethren afterwards dined together.

THE ROYAL FREE HOSPITAL.—The annual report of the Royal Free Hospital shows that during the year 1896 there were 1950 in-patients admitted, 1767 were discharged, cured, or relieved, and 161 died; the average residence of these patients was about twenty-four days. There were 21,660 patients and 17,332 casualty patients. With a view to avoid abuse of the out-patient department Miss Stewart, the hospital almoner, working in connexion with the Charity Organisation Society, makes inquiries into the circumstances of applicants. The total ordinary income for the year, including legacies, was £14,477, and the expenditure was £11,226. A donation of £1700 was given by Mr. John Bentley to the fund for the new buildings. Twenty-three of the students attending the School of Medicine for Women and the Royal Free Hospital became qualified during 1896; there were 159 students at the end of the year.

WIGAN MEDICAL SOCIETY.—The annual meeting of the above society was held on Feb. 5th in the Royal Albert Edward Infirmary, Mr. C. R. Graham, President, being in the chair. The following office-bearers for 1897 were unanimously elected:—President: Mr. C. T. Street. Committee: Mr. Street (President), Mr. Graham (ex-President), Mr. Mitchell Roocroft, Mr. G. H. Monks, Mr. Brady, Mr. Cowan, and Dr. Benson. Hon. Treasurer: Mr. G. H. Monks. Hon. Secretary: Mr. Wm. Berry. Mr. Damer Harrisson read a paper entitled "Brain Surgery," and illustrated his remarks by means of lantern slides. A cordial vote of thanks was accorded to Mr. Harrisson for his paper, want of time preventing a full discussion.—Mr. Hugh G. Jones showed three cases of Double Optic Neuritis and made some remarks.—Mr. Cowan showed a case of Jacksonian Epilepsy which had been considerably improved by Trephining.—Dr. Milroy showed the following pathological specimens: (1) Gangrene of Lung following Poisoning by Ammonia Liniment; (2) Gangrene of the Œsophagus with Perforation, said to have followed injury at football; (3) Dermoid Cyst of Ovary; (4) Sarcoma of Inferior Maxilla; (5) Cystic Kidney; and (6) a Gall-stone weighing 265 grains.

THE HOWARD ASSOCIATION.—At the February meeting of the committee of the Howard Association, 5, Bishopsgate Without, E.C., a resolution was adopted expressing approval of the action of the Local Government Board in deciding that pauper children shall remain as hitherto under the care of the various boards of guardians. The committee think that experience has proved that in many districts the education and boarding-out of such children may be safely entrusted to the boards of guardians and the committees of ladies whom they appoint for the purpose of exercising supervision over details, whereas the placing of the children under a new central Education Board, as suggested by some well-meaning persons, would be an experiment involving undesirable risks and dangers. The committee of the association, moreover, is of opinion that the practice of boarding-out should be extended and that there should at the same time be an increase both of the voluntary visitation and the official inspection of the children under that method of training. The committee have also invited the attention of the Earl of Elgin, Governor-General of India, to the necessity for making provision in Indian prisons for the separation of young girls from adult criminals, prostitutes, and habitual thieves.

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UNIVERSITY OF CAMBRIDGE.—The third examination for the degrees of M.B. and B.C. will begin on April 27th. Names are to be sent in by April 1st. The first and second examinations will begin on June 14th. It is proposed to confer on Dr. Nansen the degree of Sc.D. *honoris causâ* on March 16th. On Feb. 11th the degrees of M.B. and B.C. were conferred on Mr. E. C. Salt, B.A., of Emmanuel, and the degree of B.C. on Mr. R. W. Wakefield of Trinity.

ALLBUTT'S "SYSTEM OF MEDICINE."—The following notice has been issued by Messrs. Macmillan and Co., Limited, to subscribers:—

"The delay in the issue of Volume II. of this important work, which the editor and the publishers regret as keenly as any subscriber can do, has been entirely due to the delay in the issue of the Report of the Royal Commission of Vaccination. Until this was in the hands of those who had undertaken to contribute articles on this subject, it was impossible for them to deal with all the facts of a complicated problem fully and authoritatively in the light of the latest knowledge and opinion. Every possible effort has been made to get these articles completed, and everything is now in the printer's hands. All the rest of the volume has been practically ready for many months, and the whole of Volume III. and the greater part of Volume IV. is already in type, so that subscribers can feel assured that so long an interval will not again elapse between the appearance of one volume and another, and that the whole 'System' will be complete within a reasonable period."

THE Rochdale and District Medical Society at a recent meeting passed the following resolutions unanimously:—"That on and after June 1st, 1897, whenever any registered medical practitioner or practitioner entitled to be registered (other than practitioners empowered by the Medical Act, 1886) either directly or indirectly issues, or sanctions, or takes part in the issuing of, any instrument or document professing to empower the holder of such instrument or document to practise, or to hold himself or herself out as being thereby entitled to practise, any part or branch of medicine, surgery, or midwifery, such practitioner shall, on due proof being given of his or her so doing, be judged by the General Medical Council to have been guilty of infamous conduct in a professional respect and his or her name shall be erased from the Register and registrable qualification taken from him or her." "Seeing that the Midwives Registration Bill would, if it became law, create an independent order of midwifery practitioners, this meeting, while anxious that the training of monthly nurses should be improved, records its emphatic protest against such proposed legislation, and determines to form a committee to watch the progress of, and oppose, any legislation such as that hitherto proposed for the registration of midwives." "That these resolutions be sent to the President of the General Medical Council, the five Direct Representatives, THE LANCET, and the *British Medical Journal*."

PLYMOUTH MEDICAL SOCIETY.—A clinical meeting was held on Feb. 13th.—Mr. J. R. Rolston showed a girl, aged fifteen years, with Hydrophthalmos and Coloboma of Lens. In the right eye the cornea measured 15 mm., and in the left eye 13 mm. In the right eye there was an irregular notching of the temporal margin of the lens and the suspensory ligament could be distinctly seen.—Mr. Woollcombe showed: 1. A man on whom he had operated three months previously for a Fusiform Popliteal Aneurysm. After intermittent pressure on the vessel just before entering Hunter's canal for ten days to establish collateral circulation the vessel was tied with kangaroo tendon and divided at the above point. The man was walking eleven miles a day and doing his work as a mason in addition. 2. A case of Ununited Fracture of Olecranon which he had drilled and brought together with kangaroo tendon four months after the original injury. The boy now (ten weeks after operation) was as strong in this arm as in the other. There was no separation of fragments.—Mr. Row showed (1) a woman with Overgrowth of Hair on Face; (2 and 3) two men with Ulceration of Tongue, one being undoubtedly epithelioma and the other, although it originated as a gumma, thought to have become epitheliomatous; and (4) the Uterus and Appendages from a girl who died after an illegal operation.—Dr. Webber showed a Sternum from a woman who died after an operation for Mammary Scirrhus, and who was found to have extensive visceral deposits. The sternum had extensive marrow infection and was about twice its normal thickness and bowed forward as in extreme emphysema. A microscopic section of the marrow was also exhibited showing its malignant nature.—Mr. Lucy showed an original Automatic Wound Retractor.

THE annual general court of the governors of the City of London Lying-in Hospital was held on Feb. 17th, when the chairman was able to announce that no maternal death had occurred in the hospital during the year.

FOOTBALL CASUALTIES.—In a match played at Wells (Somerset) on the 6th inst. between Wells and Paulton a member of the former team received a severe kick in the face, which fractured his nasal bone.—While playing a match on the 30th ult., at Forest Fach, near Swansea, between the local junior teams, a player sustained injuries in the abdomen. He subsequently gradually sank, and died on the 8th inst.—During a match played in London last week a forward player severely injured his knee.—In the first half of the English Cup Tie at Perry Barr, Birmingham, on Saturday last, between Notts County and Aston Villa, the right half-back of the Nottingham team fractured his right leg badly just above the ankle, and was removed to the General Hospital, Birmingham.

PRESENTATIONS TO MEDICAL MEN.—Mr. James H. Fergusson, F.R.C.S. Irel., L.R.C.P. Edin., L.F.P.S. Glasg., D.P.H., of Killygordon, has been presented by his friends with an address, a complete laboratory (bacteriological, chemical, and hygienic) apparatus, and a purse of sovereigns.—Dr. Wm. A. Russell, of Wingate, county Durham, has been the recipient of a valuable timepiece from the members of the Wingate and District Ambulance Class, as an acknowledgment of his services as Lecturer on Ambulance Aid.—Dr. Hugh Steven, of Codford St. Mary, Wilts, on leaving his medical district at Codford, has been the recipient of a testimonial, subscribed for by patients in each parish of his district, as a grateful recognition of many kindnesses received from him and Mrs. Steven during their residence in the neighbourhood. The presentation consisted of a dining-room timepiece, a silver plated sugar-basin and cream-jug with inscription, an illuminated address, and a list of subscribers.

THE DIFFUSION OF SMALL-POX.—The comparative freedom from small-pox which London has of late enjoyed is no longer a matter for congratulation, fresh outbreaks having occurred. In the four weeks ended on Nov. 28th last there was not a single notification of the disease in the whole of London, and in the succeeding five weeks, which brought the year to a close, there were only 3 notified cases, followed by 8 in the first four weeks of the current year. The admissions of small-pox cases to the hospital ships at Long Reach in the last three weeks of January had been 1, 0, and 7 respectively, and on the concluding day of that month there were 21 cases of the disease on board, as compared with 9 a week earlier. Last week there were other 20 cases admitted to the ships, and Saturday last found no fewer than 38 patients on board. The chief seat of the present outbreak seems to be on the south side of the Thames, Camberwell area apparently being the principal sufferer by the malady. We have become so accustomed of late to look with complacence on the weekly freedom from fatal small-pox that it is startling to hear that last week there were 2 deaths registered from the disease. Such was the case, but no statement was made as to the vaccination of either person, one of whom belonged to Camberwell and the other to Greenwich. Up to the night of the 17th 17 cases had been reported in, and removed from, Camberwell Infirmary.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Vaccination Question.

MEMBERS of Parliament continue to question the President of the Local Government Board with regard to the action, or want of action, on the part of boards of guardians for enforcing the Vaccination Acts. Mr. Chaplin's invariable answer is that the report of the Vaccination Commission in no way alters the law or relieves boards of guardians from prosecuting offenders.

The Army Medical Service.

The vote for the Medical Establishment of the Army was taken somewhat unexpectedly at a late hour on Friday, Feb. 12th, and Dr. Farquharson lost his opportunity of calling attention, as he intended to do, to several matters connected with the examinations and the treatment of medical officers after entering the service. When, however, the report of the vote was taken on Monday, Feb. 15th, he was

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able to put one or two practical points to the Under Secretary for War, who undertook to give them proper consideration.

HOUSE OF LORDS.

MONDAY, FEB. 15TH.

Bubonic Plague in Bombay.

Lord Reay addressed a question to the Under-Secretary for India with reference to protective measures against this disease and with reference to the temporary employment of retired members of the Indian Civil Service. His lordship gave some account of the discoveries of Professor Haffkine and Dr. Yersin and of the results of inoculation, and with regard to retired members of the Indian Civil Service he said there were many who had declared themselves ready at any time to go and assist their brethren in India. He hoped that no hesitation would be felt by the Home Government if an appeal came from India to mobilise those reserve forces, which certainly under the exceptional circumstances now prevailing might be used effectually and without in any way dislocating existing arrangements.—The Earl of Onslow, in reply, said that Dr. Yersin had been commissioned by the Government of Bombay to procure serum for use there, and he was expected to return to the city about the end of this month or the beginning of next provided with a sufficient quantity of it. Speaking generally, the Government of Bombay considered that inoculation appeared to afford considerable protection, but sufficient time had not yet elapsed to estimate the degree of protection or how long it would continue. With regard to the other matter no retired Indian Civil servants had as yet been sent out to India, but the India Office would be prepared to receive the names of any who were willing to volunteer for this service. It did not rest with the India Office to determine whether or not they should be sent out, but their names should be telegraphed to the Viceroy, and if in the exercise of his discretion he thought their services could be made available no doubt he would act accordingly.

HOUSE OF COMMONS.

FRIDAY, FEB. 12TH.

The Army Medical Service.

Mr. Brodrick, Under-Secretary of State for War, made the following statement on this subject in introducing, in Committee of Supply, the Army Estimates—viz., "A thorny subject which we have had to deal with has been the condition of the medical department. For some time past, as the Committee is aware, we have had difficulty in procuring sufficient candidates for the Army Medical Department. Many reasons have been adduced for this, among which may be mentioned the question of rank and social condition, the examinations which were held to be conducted under less favourable circumstances for candidates from Irish and Scotch medical schools than for those attending London schools, the rate of pay in India, and the prolonged terms of foreign service. Lord Lansdowne has given the most careful personal attention to all these questions. He has received various deputations and has spared no pains to get to the root of the difficulty. His conclusion is that as regards the examinations, while every consideration should be given to eminent members of the Scotch and Irish medical schools in filling vacancies on the examination board, the board should be constituted solely with reference to the professional eminence of its members without regard to the mere fact of their coming from one part or another of the United Kingdom. The falling off of Irish candidates, not being more than on a par with the falling off of other candidates, has no special significance or importance. Lord Lansdowne has also reviewed the whole circumstances attending the present titles of medical officers, a question which appears to be closely bound up with their complaints of a lack of social consideration. The truth appears to be this. When the system of attaching medical officers to regiments was abandoned, on grounds which at the time were certainly deemed to be sufficient for the system of appointing them to stations, medical officers lost their special and close personal contact with their regimental brother officers. Attempts have been made to give them a better position—first, by ranking them with combatant officers on the recommendation of Sir Andrew Clark as representing the schools, and then by conceding composite medical and military titles carrying with them substantive rank in their own department. These concessions, though welcomed at the time by the profession, have not altogether acted as was desired. Lord Lansdowne is anxious that every consideration should be shown to the officers of this most valuable and distinguished department. He has, after communication with the India Office, been able to secure to the medical officer an increase of pay in India, and the Indian tour will be decreased from six years to five. Assistance will also be given to form medical messes at the large stations, quarters will be offered in barracks where possible, and opportunities to study on return from foreign service will be given. But none of the proposals which have been submitted to the Secretary of State for giving new forms of army rank to the medical staff appear to him desirable for adoption. He does not believe that by such titles the Medical Department will obtain the status to which their talents and professional acquirements entitle them, and anxious though the War Office is to meet the medical profession on all points, this is not one of those on which further action appears to be desirable.

Health of Troops at Home and at Gibraltar.

Sir Howard Vincent asked the Under-Secretary of State for War if he could inform the House how long had been the average station at Gibraltar of regiments of the line, if they had been generally reported on as inefficient or unfit to fight after service at Gibraltar, how many nights a week privates were as a rule on guard, and if more or less than the Foot Guards at Wellington or Chelsea Barracks; and if regiments suffered in greater proportion there from disease than at home.—Mr. Brodrick replied that the average stay of the last eleven battalions at Gibraltar had been three years. The reports on regiments leaving Gibraltar had not been such as were indicated in the question; the Foot Guards in London as a rule had one night out of bed on guard in every eight nights, and the guard duty at Gibraltar was about the same. The health statistics show that in the last ten years the admissions to hospital at Gibraltar were 39 per 1000 less than in the United Kingdom, the number of men discharged as invalids were 8·71 per 1000 at Gibraltar, while those discharged in the United Kingdom were 16·34 per 1000, and the number of deaths at Gibraltar were 4·90 per 1000, against 5·20 in the United Kingdom.

MONDAY, FEB. 15TH.

Hospital Accommodation at Sierra Leone.

Mr. Powell Williams, replying to a question on this subject put by Mr. Bill, said that the question of where the additional hospital accommodation for Sierra Leone shall be located was still under consideration. An increase to the garrison of Sierra Leone was provided in the Estimates, and additional hospital accommodation would be required for the force thus added.

Private Lunatic Asylums.

Mr. Field asked the Secretary of State for the Home Department whether any regular inspection regarding the management of private lunatic asylums and their inmates was made and reported on by responsible Government officials; and whether the system and working of private lunatic asylums would be inquired into and reported to the House.—Sir Matthew White Ridley replied that all licensed houses were regularly visited by the Lunacy Commissioners—those in the metropolitan area six times a year, and those outside that area twice. The latter are also visited six times a year by three justices and a medical practitioner appointed for the purpose by quarter sessions. He was not aware of any necessity for such an inquiry as the hon. Member suggested.

Venereal Disease in the Army.

Mr. Jeffreys, speaking on the report of the vote for the medical establishment of the army, said he wished to call attention to the terrible increase of venereal disease in the army, notwithstanding the advance in scientific knowledge and the great ability of our medical men. In India there was a tremendous increase in the disease, and a captain told him that a number of his men had to be carried on board ship wrapped up in cotton-wool, so wretched was their condition. He wished to ask the Under Secretary whether the Medical Department could not do something to stop this terrible state of things. It had been complained that our army was too small in point of numbers, but surely it would be better instead of increasing the numbers to try to stop this disease, which incapacitated so many of the men now in the ranks.—Mr. Brodrick, in reply, said that he was afraid that the evil lay, not at the door of the medical officers, but at the door of this House. He would not go back to the whole history of the abandonment of the Acts in 1882, but it would be in the recollection of Members that in 1893, in deference to strong expressions of opinion in Parliament, the Council in India was called upon to re-consider the Cantonments Acts, and these Acts were done away with in that year. Since then it appeared from the statistics there had been a very rapid and serious development of the worst forms of the disease. As to the figures, it was a mistake to quote 400 or 500 per 1000 as the number constantly sick. These figures represented the admissions to hospital during the year. It was to be hoped that not nearly so large a proportion of the army as had been suggested were unable to go on parade at the same time. However, the facts disclosed had constituted so serious an evil that the Secretary of State for India had found it necessary to appoint a departmental committee, and he hoped that the report of this committee would be in the hands of Members before very long. He would only add that the matter was one which must engage the serious attention of anybody who had to do with the military organisation of the country.

TUESDAY, FEB. 16TH.

Vaccination Prosecutions.

Mr. Thomas Bailey asked the Secretary of State for the Home Department whether his attention had been called to the fact that Frederick Pearse of 65, High-street, Andover, had been prosecuted sixty-three times for non-vaccination of his children, and had paid upwards of £42 in fines and costs; and that, notwithstanding the unanimous recommendations of the Royal Commission on Vaccination against repeated penalties, the said Frederick Pearse was committed to Her Majesty's prison on the 10th inst., in default of payment of a further fine; and whether he would consider this case with a view to the release of the prisoner.—Sir Matthew White Ridley replied that his attention had been called to the case, but he could see nothing in the facts stated to justify interference on his part.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARNARD, HAROLD LESLIE, M.B., M.S. Lond., F.R.C.S. Eng., has been appointed Surgical Registrar of the London Hospital.

BENNET, C. J., M.R.C.S., has been re-appointed Medical Officer of Health by the Fairfield Urban District Council.

COLBORNE, H., M.R.C.S., has been re-appointed a Medical Officer to the Hastings Dispensary.

COLEMAN, PERCY, M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Essex and Sunday School Union Convalescent Homes, vice W. Maine, resigned.

CRAWFORD, A. D., M.B., C.M. Glasg., has been appointed Medical Officer and Public Vaccinator for the Maxstoke and Coleshill Sanitary Districts.

CROOKS, JAS., M.D., C.M. Toronto, L.R.C.S. Edin., has been appointed Medical Officer for the Eighth Sanitary District of the Lexden and Winstree Union, vice H. D. Palmer, resigned.

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FAWCETT, W. H., M.D. Brux., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., D.P.H. Lond., has been appointed Medical Officer for the Wimborne Sanitary District of the Wimborne and Cranborne Union.

GREENE, HELEN M., L.S.A. Lond., M.D. Brux., has been appointed to the Staff of the Provident Dispensary, Derby.

HANHAM, F. W., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Southern Dispensary, Bath.

HOLLINGS, C. E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer by the Calverley District Council.

HORT, E. C., L.S.A., has been appointed Medical Officer for the Long Sutton Sanitary District and for the Sutton St. James and Tydd St. Mary District.

JONES, S. EDWARDS, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Bangor and Worthenbury Sanitary District of the Ellesmere Union.

KENDALL, B. C., L.R.C.P. Lond., M.R.C.S., has been appointed a Medical Officer for the Helston Public Dispensary.

KENDALL, GEO., L.R.C.P. Lond., has been appointed an Honorary Surgeon to the Battle Fire Brigade.

LEGGE, SYDNEY C., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Clinical Assistant to the Birmingham and Midland Hospital for Skin and Urinary Diseases.

LISTER, T. D., M.D., B.S. Lond., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Pathologist to the East London Hospital for Children.

MANSELL, E. R., M.R.C.S., has been re-appointed a Medical Officer to the Hastings Dispensary.

MARSHALL, HOWARD, M.B., B.C. Camb., has been appointed Medical Officer for the No. 3 Sanitary District (Bexhill) of the Battle Union.

NICKERSON, W. H. S., M.B., Ch.B. Vict., has been appointed Junior Assistant House Surgeon to the Stockport Infirmary.

O'DOWD, JOHN, L.F.P.S. Glasg., has been appointed Medical Officer for Netherton, of the Dudley Union.

OGLE, CYRIL, M.A., M.B. Oxon., M.R.C.P. Lond., has been appointed Assistant Physician to St. George's Hospital, London.

PARKE, T. H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer and Public Vaccinator by the Bakewell Rural District Council.

POWELL, GEO. W., M.B., B.Ch. Dub., has been appointed an Honorary Physician to the Children's Hospital, Birmingham.

PRICE, J. D., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Southern Sanitary District of the Dudley Union.

READMAN, T., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Workhouse, Skipton.

SANDFORD, H. V., L.R.C.P. Lond., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health for the City of Hereford.

SHORTER, H. G., M.R.C.S., has been re-appointed a Medical Officer to the Hastings Dispensary.

SMYTH, T. E., M.D., B.Ch. Dub., has been appointed Medical Officer for the Milton Abbot Sanitary District of the Tavistock Union.

TURNER, JOHN ANDREW, M.B., D.P.H., M.O.H., has been appointed Medical Officer of Health to the Combined Districts of East Herts and Essex.

TUXFORD, A., M.D. Edin., has been re-appointed Medical Officer by the Boston Rural District Council.

WEARNE, W., M.R.C.S., has been appointed a Medical Officer for the Helston Public Dispensary.

WILDING, W. F. W., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Hindley District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester-street, London, S.W.—Resident House Surgeon for six months. Board, lodging, and washing provided.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon for twelve months. Salary £80 per annum, with furnished apartments, board, and attendance.

BOROUGH OF BURTON-UPON-TRENT.—Medical Officer of Health for the District of the Borough. Salary at the rate of £350 per annum, exclusive of authorised disbursements.—Applications to the Town Clerk, Town Hall, Burton-upon-Trent.

BRISTOL GENERAL HOSPITAL.—Physician-Accoucheur and an Assistant Physician-Accoucheur.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Assistant House Surgeon for six months (non-resident). Honorarium, conditionally, of 25 guineas will be given.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—House Surgeon and Secretary. Salary £95 per annum, with furnished rooms in the Dispensary House, an allowance of £20 for coals and candles, and a further allowance for a housekeeper.

DARENTH SCHOOL FOR IMBECILES, near Dartford, Kent.—Assistant Medical Officer. Salary £160 per annum, rising £20 annually to £200, subject to statutory deduction under the Poor-law Officers Superannuation Act, 1896, with board, lodging, attendance, and washing. Applications to the Clerk to the Board, Norfolk House Norfolk-street, Strand, London.

DERBY BOROUGH HOSPITAL.—Assistant Medical Officer. Salary £100 per annum, with board and washing.

EAST END BRANCH OF THE CHILDREN'S HOSPITAL, Sheffield.—Lady House Surgeon (Out-patient Department only). Salary £70 per annum, with board, lodging, and washing.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis-road, Shadwell, E.—House Surgeon. Board, lodging, &c., provided. No salary.

GENERAL HOSPITAL, Birmingham.—Pathologist, for one year. Salary £100 per annum, with board and residence, £20 per annum being allowed till residence is provided in the new hospital.

GENERAL HOSPITAL, Birmingham.—House Physician, for one year. Salary £70 per annum, with residence, board, and washing.

GENERAL INFIRMARY, Northampton.—Assistant House Surgeon, unmarried. Salary £100 per annum, with furnished apartments, board, attendance, and washing.

KING'S COLLEGE, London.—Professorship of Anatomy.

LEICESTER INFIRMARY.—House Physician, for twelve months. Salary £80 per annum, with board, apartments, and washing.

LIVERPOOL ROYAL INFIRMARY.—Honorary Physician.

LONDON HOSPITAL MEDICAL COLLEGE, Mile-end, E.—Demonstrator of Physiology. Salary £100 a year. Also Assistant Demonstrator of Anatomy. Salary £90 a year.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Resident Medical Officer, for one year or more. Salary 100 guineas per annum; board, lodging, and washing provided.

MANCHESTER CHILDREN'S HOSPITAL.—Junior Resident Medical Officer, for six months, unmarried. Salary at the rate of £80 a year, with board and lodging. Also Medical Officer for the Dispensary, unmarried. Salary £180 a year, without board or residence.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Resident House Surgeon. Salary £80, with board, lodging, and laundry.

ROYAL FREE HOSPITAL, Gray's-inn-road, London, W.C.—Senior Resident Medical Officer for twelve months. Salary £100 per annum, with board, residence, and washing.

SHEFFIELD ROYAL HOSPITAL.—House Surgeon for one year, unmarried. Board (exclusive of wine and beer) and lodging provided, and an honorarium of 25 guineas.

STAMFORD HILL AND STOKE NEWINGTON DISPENSARY, 189, High-street, Stoke Newington, N.—Junior Resident Medical Officer. Salary for the first three months at the rate of £50 per annum, and afterwards at the rate of £75 per annum, with board and residence in each case.

ST. LUKE'S HOSPITAL, LONDON, S.E.—Clinical Assistant for six months. Board and residence provided.

ST. MARY'S CHILDREN'S HOSPITAL, Plaistow, E.—Resident Medical Officer for one year. Salary £80 per annum, with board and washing.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Professor of Anatomy. Applications to the Secretary and Registrar, University College, Cardiff.

VICTORIA UNIVERSITY—YORKSHIRE COLLEGE, Leeds.—Demonstrator of Physiology. Salary £150.

WEST RIDING ASYLUM, Menston, near Leeds.—Second Assistant Medical Officer. Salary £180, rising £10 annually to £230, with board and apartments.

Births, Marriages, and Deaths.

BIRTHS.

BARNES.—On Dec. 13th, 1896, at Wyndham, North-West Australia, the wife of J. Shepperson Barnes, B.A., M.B. Cantab., of a daughter.

DOVE.—On Feb. 15th, at Stapleton-hall-road, Stroud-green, the wife of Percy W. Dove, M.B. Lond., M.R.C.S., L.R.C.P., of a daughter.

MANTLE.—On Feb. 14th, at Savile-place, Halifax, the wife of Alfred Mantle, M.D., of a son.

MUSSON.—On Feb. 15th, at King-street, Clitheroe, the wife of Alfred W. Musson, M.B., B.C. Cantab., of a daughter.

ROWSE.—On Feb. 1st, at Upper Richmond-road, Putney, S.W., the wife of E. Leo. Rowse, M.D., of a daughter.

SIMPSON.—On Feb. 7th, at Whittingham, Preston, the wife of Alexander Simpson, M.D., of a son.

SWINDELL.—On Feb. 11th, at Fairfield, North Finchley, the wife of John J. Swindell, M.R.C.S., of a son.

MARRIAGES.

LUCE—SCOTT.—On Feb. 11th, at St. Peter's Church, Coverack, Cornwall, by the Rev. Canon Diggins, Vicar of St. Keverne, Richard Harman Luce, M.B., F.R.C.S., of Derby, eldest surviving son of Colonel C. R. Luce, D.L., of Malmesbury, Wilts, to Mary Irene, third daughter of the late John Scott, M.R.C.S., of Westover Villa, Bournemouth.

ACKLAND—MACKORY.—On Feb. 13th, at St. Stephen's Church, Westbourne-park, W., Robert Craig Ackland, M.R.C.S., L.R.C.P., third son of the late Robert Ackland, Esq., of Exeter, to Ruth Kathleen, youngest daughter of Edmund Macrory, Q.C., of Pembridge-square, W., and Duncairn, co. Antrim.

DEATHS.

POLLOCK.—On Feb. 14th, at Chester-square, S.W., George David Pollock, formerly of Grosvenor-street, W., F.R.C.S., Surgeon-in-Ordinary to H.R.H. the Prince of Wales, and Consulting Surgeon to St. George's Hospital, the last surviving son of the late Field-Marshal Sir George Pollock, Bart., G.C.B., G.C.S.I., in his 80th year.

BANKING.—On Feb. 9th, at Essendene, Leamington, suddenly, James Lancaster Banking, Surgeon-General late Madras Army, in his 80th year. Indian papers, please copy.

WOOD.—On Feb. 14th, at Ackworth, aged 63 years, George Wood, M.D.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.). City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (27th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (22nd).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Victor Horsley: Traumatic Neurasthenia.—Mr. Hurry Fenwick: Twenty Lumbar Nephrectomies.

TUESDAY (23rd).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. T. S. Ellis: On some Points in the Surgical Physiology of the Foot.

WEDNESDAY (24th).—HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8 P.M. Mr. Victor Horsley: Torticollis and its Treatment. (*Hunterian Lecture.*)

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—5 P.M. Papers:—Dr. Pye-Smith: Varicella Bullosa.—Dr. Stowers: Antecedents of, and Sequel to, a Case of Paget's Disease of the Nipple.—Mr. G. Pernet: Recurrent Herpes Zoster, with remarks on Etiology.—Dr. D. Walsh: X Ray Therapeutics in Skin Diseases. Cases: Dr. Payne: (1) Arsenical Keratosis; (2) Pityriasis Rubra.—Dr. T. D. Savill: (1) Raynaud's Disease; (2) Lichen Planus; (3) (?) Lichen Acuminatus. Also cases by Dr. Abraham and others. Dr. Walsh: Dermatitis and Obliterative Phlebitis.

FRIDAY (26th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. The following cases will be shown:—Dr. S. Coupland: Case of Multiple Subcutaneous Nodules and Bony Growth from the Skull.—Dr. St. C. Thomson: Case of Blood Tumour of the Auricle occurring spontaneously.—Dr. A. Wilson: Case of Dual Consciousness. And other cases. Patients in attendance at 8 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (22nd).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Law: Examination of the Throat and Nose.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Dr. E. H. Starling: The Changes in the Circulation consequent on Heart Failure. (Arris and Gale Lecture I.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. A. Wynter Blyth: The Law Relating to the Supervision of Food Supply.

SOCIETY OF ARTS.—8 P.M. Mr. C. F. Cross: The Industrial Uses of Cellulose. (Cantor Lecture.)

TUESDAY (23rd).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Melancholia and Hypochondriasis.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Psoriasis.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Diagnosis and Treatment of Diseases characterised by Discharge from the Ear.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Gowers: Lecture.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4 P.M. Mr. E. Cotterell: Cases Illustrating the Surgery of the Nervous System.

ROYAL INSTITUTION.—3 P.M. Prof. A. D. Waller: Animal Electricity.

WEDNESDAY (24th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Construction of Dwelling Houses.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Fowler: Clinical Demonstration in the Wards.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Dr. E. H. Starling: The Changes in the Circulation consequent on Heart Failure. (Arris and Gale Lecture II.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—2 P.M. Mr. A. Taylor (conducted by): Inspection and Demonstration in the Parish of St. George's, Hanover-square (number limited).

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.)—Mr. Paget: Surgical Cases.

SOCIETY OF ARTS.—8 P.M. Sir H. Trueman Wood: Reproduction of Colour by Photographic Methods.

THURSDAY (25th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: On the Clinical Significance of Proteid Substances in the Urine of Disease.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Hutchinson: Clinical Lecture.

SOCIETY OF ARTS.—8 P.M. Prof. J. A. Ewing: The Mechanical Production of Cold. (Howard Lecture.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. A. Wynter Blyth: Sanitary Laws and Regulations Governing the Metropolis.

ROYAL INSTITUTION.—3 P.M. Mr. J. W. Gregory: The Problems of Actic Geology.

FRIDAY (26th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Examination of Air, Soil, and Water.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Mr. St. G. Reid: Methods of Bacteriological Diagnosis (illustrated by lantern demonstrations, &c.).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Gunn: Inflammatory Affection of Optic Nerve, &c.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Dr. F. A. Purcell: Abdominal Surgery for Malignant Disease.

ROYAL COLLEGE OF SURGEONS.—5 P.M. Dr. E. H. Starling: The Changes in the Circulation consequent on Heart Failure. (Arris and Gale Lecture III.)

ROYAL INSTITUTION.—9 P.M. Lieut.-Col. C. R. Conder: Palestine Exploration.

SATURDAY (27th).—ROYAL INSTITUTION.—3 P.M. Mr. W. F. Lord: The Growth of the Mediterranean Route to the East.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"LANTERN LECTURES."

To the Editors of THE LANCET.

SIRS,—If "Hygienist" will communicate with me I will give him the information he requires about slides and lanterns for lectures on hygiene and ambulance work. I am, Sirs, yours truly,

WILLIAM EASBY, M.D. Brux.

Westgate, Peterborough, Feb. 15th, 1897.

To the Editors of THE LANCET.

SIRS,—"Hygienist" can obtain full particulars as to hire or purchase of lanterns for lecturing from Messrs. Newton and Co., 3, Fleet-street, Temple Bar, who also have a large supply of lantern slides illustrative of hygiene; from Mr. Walter Tyler, 143, Waterloo-road, S.E.; or from Mr. Luscombe Toms, 78, Queen Victoria-street, E.C., among others. The use of oil or lime light for the lantern is a matter of importance, depending on the presence or otherwise of gas-fittings in the lecture-room and the experience of the operator. If, when "Hygienist" has applied for details to either of the above firms, I can give him any further advice or assistance I shall be pleased to do so.

I am, Sirs, yours truly,

The Lindens, Putney, S.W., Feb. 15th, 1897. J. GAY.

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"THE UNQUALIFIED ASSISTANT."

To the Editors of THE LANCET.

SIRS,—The readers of the THE LANCET will have no difficulty in recognising that your correspondent "A Practitioner" (THE LANCET, Jan. 9th, 1897, p. 148) is but poorly fitted for the *rôle* of reformer either in the medical or any other profession. A more ample acquaintance with historical facts would, granting his capacity to profit from the study of what might tend to extend his power of usefulness, soon convince him that beneficent changes in any direction are not effected by exhibitions of questionable taste or a pyrotechnic display of uselessly harsh expletives. In order to bring him, if only approximately, to a reasonable frame of mind I admit that it would be much better if there were not any unqualified assistants. It also would add to the dignity of the medical profession if some of its members were not, let us say occasionally, guilty of drunkenness, wife-beating, fraud, and neglect. Some have even forgotten themselves so far as to find themselves landed in the criminal dock and convicted—whether rightly or wrongly I leave to "A Practitioner" to decide—of the offences of forgery or criminal abortion. It is sad that such things should occur to mar the fair fame of the noble profession to which "A Practitioner," by dint of unexampled energy, no doubt has succeeded in entering. But, unfortunately, they *do* occur, and to level-headed men do not furnish a pretext for miscalling the *whole* of its members, but rather for feelings of sorrow for poor human nature, its weaknesses and innumerable temptations, through which only the morally strong and prescient can safely steer. It does not necessarily follow that the young man who has wasted or lost for a time his opportunities to master the intricacies of medicine and surgery will, with the aid of the lessons of experience, continue indefinitely to fritter away his time. In a no inconsiderable number of cases students who have wasted their time at college have pulled themselves together, studied hard, qualified, and become useful members of the profession. I know some of that ilk who are now probably as highly qualified and as competent surgeons as your correspondent. On the other hand, how many medical men who were brilliant students have filled the inebriate's grave or misconducted themselves in such a way as to irretrievably blast their career? The fate of the individual, like that of existing social conditions, is inexorably determined by the influence of environment, and if "A Practitioner" wishes to shine as a reformer and extinguish the unqualified assistant he will win greater sympathy in his crusade by treating him with at least some consideration than by ransacking the dictionary for epithets with which to express his obviously ungovernable contempt. Judging from your correspondent's tone he is slightly afflicted with egotism and would have your readers to infer that he is possessed with a monopoly of the love of hard work. He is quite welcome to the flattering self-unction and also to his evidently strong desire to pose as a caustic critic, but I have found that these qualities are not infrequently characteristic of anonymous medical mediocrities who, incapable of otherwise distinguishing themselves, spend their irritatingly ample leisure in penning what cannot by any stretch of the imagination be regarded as either useful, instructive, or ornamental. Of course I am not insinuating that "A Practitioner" comes under this category. Far from it; and I take this opportunity of paying a tribute to his remarkable powers as a writer and dialectitian. I will even go so far as to afford grounds for my respect for the argumentative capacity of "A Practitioner." In one part of his letter he refers to unqualified assistants as "gentlemen," and later designates them as "good-for-nothing idlers." I was not aware, until "A Practitioner" focussed the beams of his transcendent genius on the pages of THE LANCET, that a gentleman could be a good-for-nothing idler. But perhaps your correspondent will favour us with an explanation in your next issue, and still further enhance his reputation as a critic of unqualified assistants and their employers by liberally interlarding his composition with as many adjectives as he can conveniently interpolate in order to give extra polish to the brilliancy of his style. By-the-bye, he expresses surprise that no one has anticipated him in his noble work of "purifying" the profession. He badly wants help, I admit; but I am afraid he will have all the glory to himself, for the majority of practitioners are too busily engaged attending to their duties or are too much impressed by the imperativeness of the time-honoured maxim of "mind your own business" to compete with "A Practitioner" in the elucidation of such portentous themes as "fundamental moral objections."

I am, Sirs, yours faithfully,

ONE OF THE "DAWDLERS."

S. B. H.—(1) It is more strictly correct to write on the card Mr. ——, M.D.Brux., but the other method is very commonly followed. Our correspondent will find in THE LANCET of Aug. 17th, 1895, an exposition of our views. (2) We know well the disabilities of the London student, and hope that soon a remedy will be devised for them. (3) Durham.

IMPROPER PUBLICITY.

A CORRESPONDENT has forwarded us a copy of *Brighton Society*, which contains an open letter to a local medical man. We agree that the publication of such details concerning the merits of a professional man in a lay paper is regrettable. But probably to no one will the silly effusion be more offensive than to the practitioner who is its unhappy victim.

"HYPODERMIC MEDICATION."

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent "Regular Reader" in THE LANCET of Feb. 6th, I can recommend Messrs. Allen and Hanburys' Hypodermic Syringe. Having to give about 400 injections in a year I have used several different instruments, and I can give favourable testimony to the one named in the following respects:—I used one of them during nearly the whole of 1896 daily without anything going wrong with it and without a mishap of any kind. I have just had two more needles fitted to the screw tops, but otherwise the instrument is as good as the day I got it, apparently. This example has the set of the needle to screw into the top of the barrel, and this is an advantage over other appliances that are merely pushed or socketed on, for the reason that the needle section is quite firm, not wearing loose with constant use, never leaking, easily unfastened, and also because it does not force off on pressing the piston sharply, as when one rinses the barrel out with water after use. If the needle is accidentally forced out either into a vessel or otherwise a needle is done for, as many users must have experienced. The piston arrangement ensures never failing equability of resistance, and remains constantly lubricated, and on the whole sterilising can be carried out quite easily and effectually. Some instruments are now made for sterilising chiefly and have little to recommend them in other respects. With ordinary cleanly precautions, and by sterilising very occasionally, I have had no untoward effect follow the use of an Allen and Hanburys' syringe after some 400 applications of it, using the same instrument and the same needles. If sensible asepticity is observed, and a good rinsing with water before and after use, there will be little to trouble about. In reply to the second question, tabloids are certainly the best form of hypodermic medication. They are convenient to store and handle, they will keep a long time while solutions soon go wrong, they ensure uniform dosage, and, when dropped into the barrel of the instrument after water has been drawn in they are the most expeditious and all-round satisfactory form. I find Burroughs, Wellcome, and Co.'s the best, being uniform in dosage and more readily and completely soluble.

I am, Sirs, yours faithfully,

Buckhurst Hill, Feb. 6th, 1897. HAYDN BROWN.

M.B., F.R.C.S.—We fear that nothing can be done. The dissemination of such circulars does not constitute "infamous conduct in a professional respect," and would not be punished by the General Medical Council.

MR. CRITCHLEY, PHILANTHROPIST.

THE *Bristol Times* of Feb. 12th contained the following paragraph:—

> "An inquest was held at Stroud yesterday on the body of Mary Smith, an elderly woman, wife of a carpenter, who died after a day's illness on Tuesday evening. It appeared that she had suffered from heart weakness and stomach trouble for a long time, and that she had taken medicine and used ointment supplied by a man named Critchley, who was neither doctor nor chemist. The ointment was rubbed in over deceased's heart on the day of her death. Critchley was called as a witness. He said he had no qualifications and did not profess to be a medical man. He was a philanthropist, though he made small charges for the medicine and ointment in some cases. A doctor, who was called in after death, said the medicine and ointment were innocuous. The jury returned a verdict of 'Death from natural causes,' adding that a medical man ought to have been called to deceased."

It is not our idea of philanthropy to step between a dying woman and proper medical advice with a potion and an ointment, however innocuous. Mr. Critchley is recommended to seek another outlet for his overflowing love for distressed humanity before he gives a coroner's jury an opportunity of censuring him or worse.

Dr. Harold N. Moyer is thanked for his communication.

"DR. RENTOUL'S EXPENSES FUND."

To the Editors of THE LANCET.

SIRS,—The following is a second list of subscriptions to the above fund. May I ask intending subscribers to send their donations at once and allow the fund to be closed at an early date?

I am, Sirs, yours faithfully,

Gateshead, Feb. 16th, 1897. ALFRED COX, M.B. Durh., Hon. Sec.

	£	s.	d.
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A.E.C. Harris, Birkenhead	1	1	0
Kidderminster Medical Society, per J. L. Stretton	2	2	0
B. Marshall, Atherton	1	1	0
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"ANTISEPTIC MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—From the letter of Mr. J. J. Harding in THE LANCET of Feb. 13th and from other letters which I have read I regret to find that a sentence in my address on this subject is misleading. It is that quoted by Mr. Harding, "Why the sublimate treatment should not be adopted in private practice as well as in hospitals I am at a loss to understand." I did not mean to imply that the sublimate is not largely employed in general practice. It would have been better had I expressed myself thus: "Why the sublimate treatment should not be *universally* adopted in private practice I am at a loss to understand." I have received a large number of letters from all parts of the country since the publication of my address from general practitioners asking me where copies of the lecture I delivered in 1887 giving instructions regarding the use of the sublimate in midwifery practice can be obtained. I do not believe that it is employed at all generally in private practice. If I am mistaken I shall be only too pleased to acknowledge my error. My opinion has been derived from inquiries among medical men I meet in consultation and otherwise.

I am, Sirs, yours obediently,

Grosvenor-street, W., Feb. 15th, 1897. CLEMENT GODSON.

Paterfamilias.—Water that has been boiled is just as suitable for drinking purposes as unboiled water. There is no necessity to boil water unless it is suspected to contain organic impurities. The chief drawback to boiled water is its insipidity and lack of briskness. As to milk, the evidence of clinical experience does not justify the belief that its nourishing qualities are altered to any important extent by careful boiling. It has been asserted that completely sterilised milk, if it is administered without a fresh food, will sooner or later produce scurvy. Milk, however, kept within ten degrees of boiling point for ten minutes is said to be free from pathogenic organisms, while it will not cause scurvy.

A MILLIONAIRE'S EXTRAVAGANCE.

THE *English Illustrated Magazine* for February publishes the following in an article entitled "The Extravagances of a Millionaire":—

> "An example of extravagance is the case of a well-known millionaire who built himself a castle in one of the Midland counties. The water of the place was pure and sufficient, but a case of scarlet fever occurring in the village at a little distance from his residence, he took a dislike to the local water supply, and at a cost of over £80,000 provided himself with a fresh supply from a distance of eighteen miles. Without children or wife, and a great traveller, he does not inhabit his own country place for more than three months in the year. Although he drinks no wine, his water is an expensive beverage. Allowing only 3 per cent. on the money with 1 per cent. sinking fund, his water costs him £50 for every day he visits his castle. This supply, it should be added, is limited to the one house. There is really no reason why it should be shared with others, for, as I have said, the local supply is ample and of good quality."

Puzzled.—The society is not one, so far as we know, which has deliberately set itself against the medical man, but the absence of wage limit condemns it in our eyes. If our correspondent will send us a copy of the rules we shall be able to answer the question more in detail. Are canvassers employed in such a way that the officer of the society lives upon patients obtained by touting from his fellow practitioners?

THE BENEFACTIONS OF JOHN BANCKS.

To the Editors of THE LANCET.

SIRS,—By two indentures, dated May 12th, 1619, John Bancks, citizen and mercer, granted to the Mercers' Company about six acres of land at Holloway, in the Parish of Islington, subject to the following conditions:—"That the wardens and commonalty of the Mercers, and their successors should, for ever, after the decease of the said John Bancks, yearly, for ever, pay and dispose all the said monies, so from time to time, to be paid and delivered to them, as aforesaid, to the purposes following ..... Also to the Company of Barber-Surgeons 20*s.* yearly to be distributed on the 11th day of May, yearly, to twelve poor householders or widows of the said Company." The Barber-Surgeons' share of the rents was about one-twentieth. These "about six acres" (as certified by the Charity Commissioners in 1821) are doubtless now covered by houses, &c. Please tell us in your "Charity" column how much is received yearly by the Royal College of Surgeons as their share of the total rental, which must amount to some thousands of pounds per annum, also how this share is distributed. Perhaps it may interest some of your readers to be reminded that John Bancks' daughter married Waller the poet.

I am, Sirs, yours faithfully,

Jan. 27th, 1897. C. J. B.

*** The Royal College of Surgeons of England is not in receipt of any money from this fund to the best of our belief. The Company of Barber-Surgeons is still in existence, and most probably receives the 20*s.* to which by our correspondent's letter it appears to be entitled.—ED. L.

GALVANIC DILATION OF EUSTACHIAN STRICTURES.

To the Editors of THE LANCET.

SIRS,—May I be permitted to point out that the "New Method of Dilating Strictures of the Eustachian Tube by Means of the Galvanic Current," which appeared in the *New York Medical Journal* of Jan. 16th, and by a rare coincidence is omitted from the Table of Contents of that journal, and is referred to in THE LANCET of Feb. 13th, is the method practised by the late Dr. W. E. Steavenson ten years ago and fully described by him in "Electrolysis in Surgery," p. 98 (J. & A. Churchill, 1890).

I am, Sirs, yours truly,

Mansfield-street, W. W. S. HEDLEY.

WANTED A CONVALESCENT HOME.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me of a convalescent home where two patients could be received for the summer months—a lady and daughter, both affected with pulmonary tuberculosis, but well enough to dine at table and to take gentle exercise. They can afford to pay from two to two and a half guineas per week, but would require medical supervision. An elevated inland situation is desirable.

I am, Sirs, your obedient servant,

Montreux, Switzerland, Feb. 15th, 1897. TUCKER WISE, M.D. Brux.

WANTED A SUGGESTIVE OPINION.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if any of your readers could give me hints for the treatment of the following case. The patient, aged four years, suffers from constantly recurring ulcers of the tongue, which commence near the tip and gradually creep over the dorsum in the form of a ridge, fusing together where they meet. The child seems irritable a day or two before they make their appearance, otherwise he is in good health. He has an attack at least every month, and this state of things has lasted since birth.

I am, Sirs, yours truly,

Feb. 15th, 1897. C. B.

"A THROAT IRRIGATOR."

To the Editors of THE LANCET.

SIRS,—A throat irrigator practically identical with that described by Dr. Leonard Wilde in THE LANCET of Feb. 13th has been in use by me for many years, and is figured at page 171 in my work on "Diphtheria and its Associates," published in 1895. The only difference is that the ball in mine contains a larger quantity of fluid—six ounces instead of three or four—and this appears to be an advantage, since this is as much as is ever likely to be necessary for an irrigation without the trouble of recharging. The instrument is manufactured by Messrs. Mayer and Meltzer.

I am, Sirs, yours faithfully,

London, Feb. 15th, 1897. LENNOX BROWNE.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 18th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 12	30·18	E.	40	38	49	44	39	...	Overcast
,, 13	30·06	S.W.	42	40	52	51	40	0·06	Overcast
,, 14	30·05	W.	50	48	64	54	42	....	Cloudy
,, 15	30·26	N.	48	47	49	49	47	0·03	Overcast
,, 16	30·61	S.W.	41	38	50	47	40	...	Foggy
,, 17	30·53	S.W.	38	37	64	50	37	...	Foggy
,, 18	30·32	S.W.	41	40	78	48	36	...	Hazy

During the week marked copies of the following newspapers have been received:—*Keighley News, Halifax Guardian, Forfar Herald, Oldham Standard, Le Courrier de la Presse, Herne Bay Argus, Rochester Journal, Bedfordshire Independent, Manchester Guardian, Newcastle Journal, Times of India, Sheffield Telegraph, North British Daily Mail, Hull News, Devon Gazette, Dundee Courier, Pioneer Mail, Evesham Journal, Architect, Liverpool Daily Post, Wolverhampton Chronicle, Banffshire Advertiser, Builder, Lynn Advertiser, Bradford Observer, Cape Argus, Leeds Mercury, Wills Standard, Oxford Journal, Carlisle Express, Pullin's Kent Argus, Leicester Post, Portsmouth Times, Hampshire Telegraph, Torquay Times, Western Morning News, Bristol Mercury, Liverpool Courier, Yorkshire Post, Scarborough Evening News, Oban Times, Brighton Observer, Somerset County Herald, Sussex Daily News, Scotsman, Sanitary Record, Willesden Chronicle, Local Government Chronicle, City Press, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Dorset and Somerset Standard, Reading Mercury, Mining Journal, Chard and Ilminster News, Local Government Journal, Surrey Advertiser, Scarborough Post, Richmond and Twickenham Times, Reynolds's Newspaper, Kentish Gazette, Guy's Hospital Gazette, Wexford Independent, Pontefract Advertiser, Eastern Mercury, &c., &c.*

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Y.—Dr. Burney Yeo, Lond.

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The Arris and Gale Lectures

ON

SOME POINTS IN THE PATHOLOGY OF HEART DISEASE.

Delivered at the Royal College of Surgeons of England on Feb. 22nd, 24th, and 26th, 1897,

BY ERNEST H. STARLING, M.D., M.R.C.P. LOND.,
JOINT LECTURER ON PHYSIOLOGY AT GUY'S HOSPITAL.

LECTURE I.

Delivered on Feb. 22nd.

ON THE COMPENSATORY MECHANISMS OF THE HEART.

MR. PRESIDENT AND GENTLEMEN,—In these lectures I propose to deal with certain points in the physiology of the heart and circulation, which are of importance for the understanding of the conditions met with in heart disease. In almost all cases of heart disease we find at some period or other in the course of the disease a hypertrophy of the muscular walls of this organ; and here, as invariably where we meet with hypertrophy of the muscle, we ascribe the hypertrophy to an increased strain thrown on the muscle or to an increased amount of work done by the muscle. We have, therefore, in the first place, to discuss the various physiological mechanisms, in virtue of which the heart is able to re-act to an increased strain thrown upon it in the carrying out of its functions.

The energy of the ventricular contraction is expended in two ways: Firstly, in forcing a certain amount of blood into the already distended aorta, against the resistance presented by the arterial blood-pressure, which itself is directly conditioned by the resistance in arterioles and capillaries; and secondly, in imparting to the mass of blood so thrown out a certain velocity. Thus the energy of the muscular contraction is converted partly into potential energy in the form of increased distension of the arterial wall, and partly into the kinetic energy represented by the momentum of the moving column of blood. The work done at each beat may be calculated from the formula:— $W = w R + \frac{wv^2}{2g}$, where W stands for work, w for the weight of blood expelled at each contraction, R is the arterial resistance or pressure, and v is the velocity of the blood at the root of the aorta. In this equation w R is the work done in overcoming the resistance, and $\frac{wv^2}{2g}$ is the energy expended on imparting a certain velocity to the blood. It will be seen that the energy expended in the second manner is almost negligeable as compared with that spent on distending the arterial wall, and thus on keeping up the mean arterial blood pressure. Thus, if we take the ordinarily accepted figures of 50 grms. of blood for the output from the left ventricle at each contraction, and half a metre per second as the velocity of the blood in the aorta during systole, and 150 mm. Hg as the pressure in the aorta, w R = 102 gram. metres of work, and $\frac{wv^2}{2g}$ = 0·64 gram metres. Even if the velocity of the blood is quadrupled, as may occur after production of hydræmic plethora, this latter amount will only be increased sixteen times, and so will not nearly approach w R. We may, therefore, neglect the velocity factor in considering pathological changes in the work thrown upon the heart. Any important increase in the work done by the heart can only be conditioned by an increase in one or both of the other two factors—viz., w and R—the amount of blood to be expelled at each stroke, and the resistance offered by the pressure obtaining in the arteries, or caused by any morbid narrowing of any of the orifices of the heart.

In almost all cases of heart disease there is an increase in one or both of these factors. Thus in the case which can be most easily imitated experimentally—viz., stenosis of the aorta—R is largely increased. On the other hand, in pure aortic regurgitation, R may be normal or slightly diminished. During each diastole, however, the ventricle is receiving blood from both sides—viz., from the auricles as well as from the aorta. If compensation occurs, the heart expels almost all the excess of blood which it has received, so that there is a large increase in the factor w. If, as is so frequently the case, stenosis is associated with incompetent valves, both w and R are increased, with a corresponding rise in the work thrown on the ventricular muscle.

Now it is found that the healthy heart is endowed to a high extent with what is known as reserve power, and will respond to largely increased demands on it by the performance of more work, so that the nutrition of the peripheral parts of the body may not suffer. The power of adaptation possessed by the heart can be well shown by imitating experimentally certain well-known pathological conditions. Thus, since the maintenance of the normal arterial blood pressure is intimately dependant on the beat of the heart, any inadequacy in the heart-pump will be at once evidenced by a fall of arterial pressure and a rise of pressure in the large veins near the heart, so that the arterial pressure will serve to indicate whether or not the heart is pumping the normal amount of blood from the venous to the arterial side. Now it is found that we can increase the resistance to be overcome by the heart to three or four times the normal amount without altering in any way the quantity of blood expelled at each beat. Thus we may put a ligature round the pulmonary artery and gradually tighten it until the lumen of this vessel is reduced to a third of its normal extent, without causing any material change in the arterial blood pressure, although, if we connect a manometer with the cavity of the right ventricle, we find that this side of the heart has to perform three or four times its ordinary proportion of work, in order to expel the proper quantity of blood into the pulmonary vessels and so into the left heart. This same power of adaptation is shown if the ligature is applied to the aorta instead of to the pulmonary artery. Instead of increasing the resistance to the outflow of blood from the ventricles, we may augment the work thrown on the ventricular walls by increasing the inflow of blood into them during diastole. This increased diastolic volume of the heart may be brought about either by pressure on the veins of the abdomen, so increasing the venous inflow into the heart, or by destroying the aortic valves and allowing regurgitation to take place from the aorta during diastole. In either case the work done by the ventricles is increased, causing a rise of mean arterial pressure in the first instance and preventing any fall of mean arterial pressure in the second instance. A large number of similar experiments may be devised, but they all teach the same lesson—viz., that within very wide limits the output of the heart is independent of the resistance to the output. Thus the heart possesses in a high degree the power of adaptation to changed conditions, which is the essential characteristic of living organisms; and we have now to see how far we can refer this power to the physiological mechanisms with which the heart is endowed.

Wherever in the higher animals one meets with marked powers of adaptation we are at once inclined to refer such powers to the regulative activity of the central nervous system. We know that the heart is intimately connected by afferent and efferent nerves with the central nervous system, and our first inquiry must be how far these connexions are responsible for the adaptive processes met with in this organ. The nerve-supply of the heart is derived from two sources: from the medulla by means of the vagus and from the spinal cord by the upper three or four dorsal nerves through the intermediation of the sympathetic system. In determining the action of these two sets of fibres on the work done by the heart we must measure their effect on w, the output, and on R, the arterial pressure. The measurement of arterial pressure can be easily carried out by connecting some large artery with a mercurial manometer and registering the excursions of the column of mercury. The measurement of output presents somewhat greater difficulties. Stolnikow and Pawlow practically cut out the systemic circulation altogether, and caused the blood from the left ventricle to traverse an instrument (current-measurer, Stromaiche) which rejected automatically the amount of blood that went through it. This method suffered from the defect that the arterial pressure is, in consequence of the absence of external resistance, extremely low, so that the heart is throughout under highly abnormal conditions. It enjoys, however, the corresponding advantage that R,

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though low, is constant throughout the experiment, and the work done by the heart is therefore directly proportionate to the output. Better methods are those based upon the application of plethysmography to the heart *in situ*. We may either, as in Tigerstedt's method, employ the pericardium itself, filled with oil or air, as the plethysmograph, and register the changes in the volume of the heart by connecting the cavity of the pericardium with some form of piston recorder, or we may make use of Roy's cardiometer, a brass sphere which is applied round the heart and is filled with oil. In the latter case the changes in the volume of the heart are recorded by connecting the cavity of the cardiometer with a modification of Roy's oncograph. Useful data may also be obtained by recording directly the extent of contraction of the auricular and ventricular muscle.

Experiments carried out by these methods have led to the following conclusions: 1. On exciting the peripheral end of the vagus the heart is slowed, the diastole prolonged, and the amount of blood expelled at each systole increased. There is, however, a fall of mean arterial pressure, and the increased output is not proportional to the diminished frequency of the beat, so that the total output in any given time is less than that occurring before or after the stimulation. R and w being both diminished, the total work done by the heart is lessened. 2. On excitation of the nerves which reach the heart through the sympathetic system the heart-beat is quickened and there is very often a rise of arterial blood pressure. In nearly all cases the output in a given time is raised above normal, so that the total work done by the heart is increased. The effect of stimulation of these nerves on the output at each systole is variable, and the result of stimulation seems to depend on the kind of nerve-fibre stimulated. Excitation of certain of the cardiac branches of the sympathetic causes a constant increase in the strength of each ventricular beat, and therefore raises the output at each beat. This augmentation of the ventricular contraction may or may not be accompanied by acceleration.

In the living animal the activity of these nerves can only be evoked reflexly or by conditions which affect the medullary centres directly. Of these reflexes the most important are probably those which originate in the heart itself and are carried to the central nervous system by the sensory fibres of this organ. Thus, as Wooldridge showed, stimulation of the central ends of the nerve-fibres, which run to the ventricular walls, may act on the cardiac medullary centres and produce reflexly inhibition or acceleration of the heart's beat or on the vaso-motor centre and cause a rise or a fall of blood pressure. The afferent fibres of the heart, by whose intermediation the reflex fall of blood pressure is produced, in many animals take a separate course, as the well-known depressor nerve.

Now so far as our experiments go, they appear to indicate that all these reflex mechanisms are directed not so much to the compensation of vascular disorders by increased efforts on the part of the heart as to the sparing of the heart by the production of some reflex effect which shall counteract the original deviation. Thus a sudden rise in arterial blood pressure as is produced by a general vascular constriction would in itself tend to increase the work of the ventricles. We find, however, that every such rise of arterial pressure or resistance is accompanied by a slowing of the heart's beat in consequence of stimulation of the vagus centre. This stimulation is partly a direct effect of the high pressure of the blood circulating in the brain and partly a reflex from the walls of the heart itself. Moreover, it seems probable that any increase of resistance to the emptying of the ventricles excites the terminations of the depressor nerve in the heart, so that impulses ascend to the vaso-motor centre which depress the activity of this centre and cause dilatation of the vessels in the abdomen and other parts of the body. On the other hand, a fall of blood pressure is followed by a quickening of the heart-beat, brought about partly by inhibition of the vagus centre and partly by a reflex stimulation of the accelerator fibres. None of these mechanisms, therefore, seem to be directed for the purpose of maintaining that cardiac adaptation which is the necessary condition of compensation in heart disease; and this conclusion is confirmed by the fact that we may divide all the nerves, afferent or efferent, which supply the heart without diminishing to the slightest extent its power of compensation. After such a procedure we find, as before, that an increase of the resistance in the pulmonary artery to three or four times its normal amount does not alter the arterial pressure, the contractions of the right ventricle being augmented in force to the amount of increased resistance to be overcome. The power of adaptation or compensation must, therefore, be an endowment of the muscular tissue itself.

We have now to inquire what are the factors which condition this power of adaptation possessed by the cardiac muscle. Is it peculiar to the heart muscle or does it depend on properties common to all kinds of contractile tissue?

In every case where, in consequence of morbid conditions, increased work is thrown on the heart muscle the contraction is preceded or accompanied by an increased tension of the muscle. In aortic stenosis the increased tension is thrown on the muscle during contraction, whereas in aortic or mitral regurgitation the increase of tension is present just before the contraction in consequence of the augmented diastolic filling of the heart. Now on examining other forms of contractile tissue we find that in all cases increased tension or increased resistance to shortening of the muscle acts as an excitant or additional stimulus, in that the contraction occurring in the presence of such conditions is more powerful and often more extensive than in the unloaded muscle. In recording the contractions of skeletal muscle two methods are made use of, known as the isotonic and isometric methods respectively. In the first the muscle is loaded with a constant weight, which, in order to avoid deformation of the curve, is applied near the axis of the lever which records the muscle contraction. In the second the change of form of the muscle is hindered by making it contract against the resistance of a strong spring. The minimal movement of the spring is magnified to a large extent by a long, light lever, so that we get in this way the changes of tension in a muscle, contracting against a resistance which it cannot overcome. In the first method the tension of the muscle remains the same throughout the contraction; in the second the tension is continually changing, while the length remains practically constant. A comparison of the curves obtained from a muscle by the two methods brings out at once certain important facts. We find that in the isometric contraction the maximum tension of the muscle is attained much sooner than is the maximum shortening in the isotonic curve. Moreover, the isometric curve is flat-topped as compared with the isotonic, so that the effort of the muscle, so to speak, is more prolonged when it contracts against an insuperable resistance than when its contraction or shortening is unchecked. Now the isometric twitch is exactly comparable to the conditions which obtain in aortic stenosis. Under ordinary circumstances the ventricular muscle, after attaining a certain stage of contraction, overcomes the resistance offered by the aortic pressure, and can now shorten without any further check, as is shown by the fact that the systolic plateau of the intra-ventricular pressure curve is usually horizontal. In aortic stenosis, on the other hand, just as in the isometric contraction of the frog's gastrocnemius, the resistance to the shortening of the muscle fibres persists throughout the contraction, so that we have a quicker rise of intra-ventricular pressure to a height above normal and a persistence of this abnormally high pressure somewhat beyond the ordinary duration of a ventricular contraction. Even in the isotonic contractions of voluntary muscle an increase in the load to be lifted, within limits, augments the amount of work done during the contraction. This is estimated by multiplying the weight lifted into the height to which it is raised, and it is found that, although in most cases the height diminishes steadily as the weight is increased, its diminution is not at first proportional to this increase, so that up to a certain point the product of the two factors W and H increases with the increase in W. In a few cases it has been found that there may be even an increase in the height of the contraction with an increase in the weight to be raised.

The effect of tension in augmenting the energy of the muscular contraction is, however, much more strikingly shown if the increased tension be applied before the beginning of the contraction. Thus, if, when using the isometric method, the initial tension on the muscle is raised from 0 to 25 grms., the height of the curve increases steadily with the augmentation in tension. Heidenhain showed that the same held good for isotonic contractions and that a muscle-twitch is always higher in a loaded than in an after-loaded muscle. Moreover, this increase in mechanical effect is accompanied by an augmentation of all

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the chemical processes which take place during contraction, as is evidenced by a considerable rise in heat-production found under these circumstances. This excitatory effect of initial tension seems to be common to all forms of contractile tissue, and was, in fact, studied on heart muscle before it had been established for skeletal muscle. Thus it has long been known that the apex of the frog's ventricle will not contract under normal circumstances, but will do so if its cavity is distended with normal saline at a pressure of from 45 to 50 cm. water. In this case a small mechanical stimulus is usually required to bring about the first contraction, which is then followed by a whole series of spontaneous beats. If the lower third of the frog's ventricle be isolated physiologically in the living frog by crushing a ring of tissue between it and the upper part of the ventricle it will, under normal conditions, never beat again. It can, however, as Heidenhain showed, be made to beat rhythmically by clamping the aorta, so raising the pressure in its interior and thereby the tension on the muscle fibres in its walls. Similar observations have been made on the smooth muscle of the ureter as well as on the thin-walled tube which forms the snail's heart. In the latter case the spontaneous beats may often be entirely abolished if the tension within the heart be reduced by cutting it and allowing the contained blood to escape. The spontaneous rhythmic beats may be at once brought back by raising the pressure in the heart a few mm. water by allowing a little snail's blood to flow into it.

We must conclude, therefore, that this susceptibility to tension is a general property of all contractile tissues. In many respects the effect of tension resembles that of a constant electrical stimulus, so that it is said that tension increases the excitability or is itself an excitant of contraction. The acceptance of this view, however, lands us in apparent conflict with certain other properties of the cardiac muscle. One of the chief distinctions between skeletal and cardiac muscle lies in the fact that whereas in the former the height of contraction is, within certain limits, proportional to the strength of stimulus, in cardiac muscle the contraction is always maximal and is the same whatever strength of stimulus be employed. How, then, can we compare the tension of the muscle to an electrical stimulus and speak of increased excitation by increased tension causing a greater contraction? The same difficulty, however, exists also in the case of voluntary muscle, since the beneficial effects of tension on the subsequent contraction is to be observed even when maximal stimuli are used throughout. The maximal contraction of a stretched muscle is greater than the maximal contraction of a muscle which is unextended before it begins to contract. In the case of the heart all contractions are maximal—that is to say, are not altered by strength of stimulus used. They are, however, altered considerably by the tension on the ventricular walls before and during contraction. What the exact nature of this tension effect is it is difficult to say. That, however, it resembles an excitatory effect in causing increased tendency to katabolism of the muscular substance is shown by recent experiments in Heidenhain's laboratory. This observer found that mere extension of a muscle caused an increased formation of acid in the muscle, just as occurs during an actual contraction. Moreover, as Professor Horsley has recently pointed out to me, although a short loading of a muscle increases its effectiveness, prolonged loading causes fatigue. We must, therefore, at present be contented with regarding the improving action of tension on the contractibility of muscle as a general property of all contractile tissues, leaving an explanation of this action to further investigation.

There is yet a further result of morbid conditions in the heart which we have not yet considered, and that is the dilatation of the cardiac cavities so generally met with in heart disease. Now it must be remembered that dilatation occurs under purely physiological conditions. When we speak of the existence of dilatation we mean that the residual quantity of blood in any of the heart cavities at the end of systole is increased above normal. The experiments carried out by Roy and Tigerstedt by plethysmographic methods, as well as those by Hürthle on the duration of outflow during systole, have proved that under no circumstances are the ventricles completely emptied by their contraction, and the experiments by the two investigators first mentioned have shown that the residual quantity of blood is a varying factor depending, (1) on the resistance to be overcome in the arteries, and (2) on the diastolic filling of the ventricles. The curves given by Roy and Adami indicate a constant increase in the systolic volume of the heart whenever there is a rise of arterial pressure or whenever, by pressure on the abdomen or injection of normal saline or defibrinated blood into the circulation, a rise of venous pressure is produced, with increased diastolic inflow into the ventricles.

It must not be thought, however, that this physiological dilatation is necessarily a beginning or sign of heart failure. I have already pointed out that, although the work performed by a loaded skeletal muscle during its maximal contraction is greater than that performed by an unloaded muscle, yet the amount of contraction—i.e., the height to which a lever is raised—is less in the former than in the latter case. The same thing holds good for heart muscle. If, for instance, we assume, in order to simplify the problem, that the left ventricle is spherical it is evident, as Roy pointed out, that a certain amount of dilatation will increase the efficiency of the contractions of the muscle fibres. For, whereas the length of the muscle-cells will vary directly as the radius or circumference, the tension on them will vary as the square of the radius and the amount of blood contained in their cavity as the cube of the radius. Hence as the heart becomes more dilated, although the tension on the individual muscle-cells is greater, yet a very much smaller contraction or shortening of the muscle-cells suffices to drive out the normal amount of blood than is the case in the undilated condition. In fact, here, as in skeletal muscle, with increased load, we have stretching of the muscle fibres (dilatation), diminished shortening or height of contraction, and increased amount of work done. It is evident, too, that if the abnormal strain on the heart walls is permanent the length of the muscle cells will also become permanently altered, just as—to choose the reverse example—the skeletal muscles become permanently shorter in this relaxed condition when there is a lasting impediment to their extension. It is probable that this permanent change in length is conditioned by the connective tissue framework of the muscle, whether in the heart or limbs.

We are now in a position to examine in detail the sequence of events in the two examples of lesions of the cardiac orifices which we selected at the beginning of this lecture. Supposing, for instance, that aortic stenosis is suddenly produced, as may be done experimentally, the next following contraction of the ventricles is called upon to meet an increased strain. The greater tension thus thrown upon the fibres excites them to more powerful contraction; the augmentation in the contractile power is not, however, sufficient to make up for the increased extension of the muscle fibres, so that at the end of systole there is a certain amount of physiological dilatation, the residual blood is greater than before, and the output during the systole has therefore been below normal. This diminished output is not, however, a lasting effect, for during the next diastole the normal amount of blood flows into the ventricle, so that at the beginning of the next systole the heart is overfull. This increased diastolic distension exercises a strong augmenting effect on the ventricular contraction, so that not only the power but also the extent of the contraction is increased above normal, and this increase might be sufficient to empty the ventricle to its usual degree even against the higher resistance offered by the stenosis. This would leave the heart in the same condition as it was after the application of the ligature round the aorta, so that we should have an alternation of weaker and stronger beats. As a matter of fact, on trying the experiment one finds that the increased contraction excited by the abnormal diastolic distension does not diminish the volume of the heart to its normal systolic amount, but is only sufficient to expel the ordinary quantity of blood into the aorta—i.e., that quantity which it has received in the previous diastole. This, however, is sufficient to secure complete compensation of the lesion; the arterial pressure remains at its normal height through the performance of an increased amount of work by the ventricular muscle. It is evident that this increased work would speedily result in fatigue and failure of the heart muscle were it not for the physiological regulation, which ordains that increased work performed by a muscle is followed by hypertrophy of the muscle, provided that the increase is not too excessive in amount. The exact cause of this hypertrophy has not yet been fully worked out. We know that greater activity of a muscle is followed by vascular dilatation and more plentiful blood-supply, so that there is a more

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abundant transudation of lymph and supply of proteid to the muscle cells. We have evidence that a hypertrophy of any part involving not only increased growth of any individual cells, but also a multiplication of cells, can be brought about by increasing the lymph-supply. Moreover, the katabolic changes which accompany activity of muscle cause a marked rise of osmotic pressure within the muscles, which, therefore, swell up and become turgescent in consequence of imbibition of fluid (lymph) from the surrounding tissue-spaces. Activity, therefore, induces increased supply of nutritive material, especially proteid, to the constituent elements of the active cells, and thus a hypertrophy and multiplication of these cells.

As an example of another kind of lesion we may now take a case in which the mitral valves are incompetent. Here during the systole of the ventricle the blood escapes in both directions into the aorta and through the incompetent mitral orifice into the auricle. The auricle, therefore, during the succeeding diastole is abnormally distended, since the blood flowing into it from the veins is added to that which it has already received from the ventricle. The first strain, therefore, falls on the auricular wall, and here, as in the case of the ventricle. the increased diastolic tension causes more powerful contraction and a larger output of blood into the ventricle. This latter at the commencement of its next systole is therefore over-distended and contracts more vigorously, having at the same time less resistance to overcome than under normal conditions. Again, there is a partial escape of the blood back into the auricle, and this process goes on until the amount of blood expelled from the ventricle at each stroke is sufficient to send the normal amount into the aorta, in addition to the amount which leaks back into the auricles. If the aortic pressure is maintained at its normal height it is evident that in mitral stenosis the work done by the left ventricle must be increased above its ordinary amount, since a certain fraction of the work is wasted in driving blood back into the auricles. Hence the result of mitral incompetence is, first, increased diastolic dilatation of the left auricle and left ventricle, which later becomes more or less permanent; and, secondly, hypertrophy of the muscular walls of both these cavities.

It seems probable that a mere perforation of the mitral or tricuspid valves in a heart otherwise normal gives rise to very little disturbance of the circulation or in the conditions in the heart itself. Owing to the arrangement of the muscular fibres of the heart there is a strong circular band of fibres round each of the auriculo-ventricular orifices. This ring contracts with the rest of the ventricular muscle, thus acting as a sphincter. and practically closing these orifices. It is not until fatigue of the cardiac muscle sets in, or the orifices are held permanently open by development of hard connective tissue around them, that mitral or tricuspid regurgitation can occur to any considerable extent. Unfortunately there is a limit to the adaptive powers of the heart, as of all the other organs of the body. If the strain on the cardiac muscle becomes too great or too prolonged, or the reserve power of the muscle itself is diminished in consequence of malnutrition, we get failure of compensation and the appearance of all those symptoms characteristic of defective working of the heart pump. There is no doubt that cardiac muscle, just like skeletal muscle, is susceptible of fatigue, which, as in the latter, may be caused either by too great a strain on it during its contraction or by too great a stretching or distension between the contractions. If the limit of the reserve power of the heart be once overstepped every contraction of the heart is worse than its predecessor. A vicious circle is established, in which each contraction leaves a greater amount of blood in the heart than before, and the smaller amount flowing into the arteries affects the circulation injuriously, so that the supply of oxygen and fresh nourishment to the heart muscle is diminished. Without a speedy alteration of the circulatory conditions the heart fails within a few minutes, as is the case in asphyxia. As a rule, however, the primary change in the circulation causes reflexly inhibition of the vaso-motor centre and inhibition or functional paralysis of the skeletal muscles, so that a certain amount of relief is necessarily afforded to the over-distended ventricles. A constant recurrence of such condition of overstrain must lead to a steady deterioration of the contractile powers of the heart and the production of the chronic results of the failure of compensation, some of which we shall study in the next two lectures.

The Lettsomian Lectures

ON

DISEASES OF THE NOSE AND THROAT IN RELATION TO GENERAL MEDICINE.

Delivered before the Medical Society of London,

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LECTURE II.[1]

Delivered on Feb. 15th, 1897.

MYCOSIS FUNGOIDES.

MR. PRESIDENT AND GENTLEMEN,—On April 10th, 1895, I showed at the Laryngological Society of London a man aged fifty-two years, suffering from mycosis fungoides. In addition to numerous tumours all over the body and limbs, tumours were seen on the posterior and lateral walls of the pharynx and on the left arytenoid cartilage. The patient had complained of more or less sore-throat for eighteen months, but the speech was not affected. This is, I believe, the first case in which the larynx has been recognised as having been attacked by mycosis fungoides.[2]

RHEUMATISM.

Rheumatic affections of the nose have received but little attention. I cannot say that I have seen any cases in which I could assure myself that rheumatism was the cause of symptoms referred to the nose, with the possible exception of a few cases in which patients complained of pain at the point of emergence of the nasal branches of the superior maxillary nerve, and even in these cases the rheumatic origin of the neuritis is problematical. Freudenthal,[3] however, states that "a number of cases have come under his observation in which the symptoms of nasal rheumatism were distinct and unmistakeable. Two varieties of the disease were noted—one with visible changes in the nose and the other without such changes. The changes consisted of a swelling of the lower and middle turbinated bodies, which obstructed the breathing, and which could not be reduced with even strong solutions of cocaine. In all the cases the pain in the nose was very severe, and all were associated with attacks of articular rheumatism affecting various joints in the body. In all of the cases, too, anti-rheumatic treatment was the only one which had any effect on the nasal symptoms." The epistaxis which we occasionally see during the course of acute rheumatism is almost invariably due to the salicylate of sodium now so generally employed—at all events I can find no reference to epistaxis among the symptoms of acute rheumatism in the pre-salicylate days. One of the first to draw attention to this action of the salicylates was Dr. Greenhow,[4] who, in May, 1880, read a paper before the Clinical Society upon cases of Rheumatic Fever treated by the then comparatively new drug. "Epistaxis occurred in seven cases—in some of them repeatedly—and in more than one of them after ceasing when the medicine was intermitted it returned again when it was resumed." Dr. L. Shaw[5] has also called attention to the occurrence of hæmorrhages, particularly of epistaxis, in patients undergoing salicylic treatment. That the salicyl element is the one at fault is shown by the fact that hæmorrhages occur with salicine as well as the salicylates. Dr. Greenhow's experience of epistaxis in acute rheumatism treated by salicylate seems to have been somewhat unusual, as it occurred seven times out of fifty cases. Possibly the lessened frequency of its occurrence at the present time is due to the greater purity

[1] Lecture I. appeared in THE LANCET of Feb. 6th. Lecture III. will be delivered on March 1st.

[2] Proceedings of the Laryngological Society of London, vol. ii., p. 70; and Transactions of the Clinical Society, vol. xxviii., p. 268.

[3] Journal of Laryngology, 1895, p. 179.

[4] Transactions of the Clinical Society, vol. xiii., pp. 262, 343.

[5] Guy's Hospital Reports, vol. xliv., p. 125.

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of the drug now used. Epistaxis occurring under these circumstances requires no special treatment, and omission of the medicine is usually followed by cessation of the hæmorrhage. In the naso-pharynx the only condition which seems at all dependent on rheumatism is lacunar inflammation of the third or pharyngeal tonsil. I have seen several cases where this tonsil has been affected independently of the faucial tonsils, and the pain and suffering the patient has experienced have been greater than is usual in ordinary tonsillitis. I believe that in some of the cases the rheumatic poison is the cause of the complaint. In two cases it was clearly of influenzal origin. Before the days of rhinoscopy I should have been at a loss to explain the cause of the severe headache, pain referred to the back of the nose, and fever met with in these cases, but a glance in the rhinoscopic mirror shows irregular swelling of the tonsil, which is dotted over with yellowish spots.

Pharyngitis is a very common complication of acute rheumatism. It usually appears a day or two before the onset of the articular pain, but occasionally the throat is only complained of after the disease has fully declared itself. On examination the margin of the soft palate, the tonsils, and the posterior wall of the pharynx will be found of a deeper red colour than normal and somewhat swollen. Occasionally there is œdema of the mucous membrane, more especially of the uvula. Freudenthal[6] describes a benign ulceration of the pharynx which he has only met with in persons affected with chronic rheumatism and which promptly disappears under anti-rheumatic remedies. This I have not seen. In some cases the symptoms of rheumatic pharyngitis are so slight as not to be mentioned by the patient unless questioned on the subject. In the more severe forms the usual symptoms of dysphagia, pain in the ears and difficulty in speaking, are met with. The rheumatic origin of tonsillitis in many cases is now fully recognised. Lacunar tonsillitis is the form which usually occurs in connexion with rheumatism. It must be borne in mind that though cardiac lesions are seldom seen when sore-throat is the chief feature of a rheumatic attack, still, cases do occur in which endocarditis and pericarditis are met with, even when articular pains are entirely absent. In the discussion on tonsillitis at the meeting of the British Medical Association in 1889 I described a typical example of this.[7]

According to Sir Willoughby Wade[8] "tonsillitis is a primary infective disease of the lacunæ, rheumatic fever a secondary disease arising from the absorption of microbes or their products into the system." He adduces facts which point strongly to the conclusion that there is a special rheumatic bacillus, and furthar that this special bacillus may or may not be associated with those of tonsillitis. Suchannek[9] regards acute multiple articular rheumatism as an infectious disease which runs the course of an attenuated pyæmia. The infection starts in a large number of cases in Waldeyer's "pharyngeal ring," especially in the faucial tonsils. In the sore-throat different kinds of bacteria are found, especially staphylococci alone, or combined with streptococci. Their colonies penetrate from the mucous membrane into the deeper structures, fill up the lymph spaces, and pass into the circulation through erosions of the lymphatics and bloodvessels as a result of tissue necrosis. The occurrence of thrombosis is the cause of emboli and metastasis. If the micro-organisms are present in small numbers the tonsils may alone be affected; if, however, they are abundant and there exists a predisposition to joint affections, either inherited or of neurotic origin, then the symptoms of acute articular rheumatism may develop. The outcome of the connexion between the throat and the onset of rheumatic phenomena is the importance of preventing oral respiration and the removal of chronically hypertrophied tonsils. If tonsillitis occur it should be promptly treated with salicylates in the hope of thereby warding off an attack of acute rheumatism.

In some cases the rheumatic poison affects the muscles of the pharynx, giving rise to attacks of pain in the pharynx, much aggravated by swallowing; there may be no objective signs. The rheumatic origin of these symptoms is shown by their occurring in patients with rheumatic antecedents and by their yielding to salicylates. From its exposed condition, both externally and internally, and from the amount of fibrous tissue which enters into its structure, it might have been thought that the larynx would be especially subject to rheumatic affections. This, however, does not seem to be the case, and it is only comparatively recently that attention has been directed to the occurrence of a rheumatic laryngitis. Morell Mackenzie, for instance, whose text-book represents the high water-mark of knowledge of throat diseases extant at the time, though he mentions "rheumatic sore-throat," says nothing about rheumatic affections of the larynx, except the remark that it is probable that ankylosis of the crico-arytenoid joint may be due to primary synovitis, either rheumatic, gouty, or simply catarrhal. I have no doubt in my own mind, however, that in the past many cases of the kind have been misinterpreted; indeed, on looking back through my case book I have found cases which I should now class among rheumatic affections of the larynx, but which formerly I did not recognise as such. For instance, I have noticed in patients subject to other rheumatic manifestations swelling of one or both ary-epiglottic folds accompanied with considerable pain in swallowing and some external tenderness, which have speedily yielded to an anti-rheumatic treatment. If the case proceeds a little further the crico-arytenoid joint becomes involved and we get a condition of affairs such as Hirsch has described in a case I shall mention later. The form of sore-throat described by Hinkel[10] is clearly an allied condition. The patient complains of sudden pain on swallowing and there is slight elevation of temperature. The most painful spot is seated just behind the cricoid cartilage, or outside the superior cornu of the thyroid, or in the posterior wall of the pharynx. The mucous membrane is congested in a patchy way. In some cases a severe cough of a dry and painful character is met with. Freudenthal[11] takes even a wider view of the case and says that in predisposed persons the rheumatic laryngitis may be for weeks or months the only symptom of rheumatism, and it is probably for this reason that the correct diagnosis is not made.

There is one class of affection of the throat in which, though the evidence of connexion with rheumatism is somewhat weak, I nevertheless think that rheumatism plays an important *rôle*—I refer to cases of fixation of a vocal cord from ankylosis of the crico-arytenoid joint. In my book on "Diseases of the Nose and Throat"[12] I recorded two cases which came under my observation. It would perhaps be more correct to place these in the class of arthritis *a frigore*, but the line of demarkation between an arthritis arising from exposure to cold and that due to rheumatism is a very narrow one. In the first case the patient was a music-hall singer who, while staying at the seaside, went out rowing late at night and commenced singing. Next morning he had pain in the right side of the throat, with the loss of voice. When I saw him two or three weeks later the right vocal cord was in the cadaveric position and there was swelling at the base of the arytenoid cartilage. The second case occurred in the person of a medical man aged about forty years, who, while recently convalescent from influenza, went out for a ride on a windy day and had to raise his voice to make himself heard. On his return home he was hoarse and had all the symptoms of an acute laryngitis. I saw him some months after the onset; the right arytenoid was somewhat swollen and the vocal cord was fixed in the cadaveric position. As Freudenthal points out, if articular rheumatism of the larynx is associated with rheumatic affections of other parts of the body the diagnosis is easy; but if, as in the cases recorded above, the larynx alone is affected, it is extremely difficult to say positively that the affection is really of rheumatic origin. In rheumatism of the crico-arytenoid joint the patient complains of an uncomfortable sensation at the angle of the jaw, usually relieved by pressure, which frequently elicits crepitus, and the pain is increased by swallowing. Swelling round about the joint may or may not be present. Swallowing is generally easy at first, but dysphagia comes on later. The cord usually becomes fixed in the cadaveric position. Dr. A. E. Garrod[13] quotes three cases. The first is one related by Schützenberger. The patient, a young woman, died in the course of an attack of rheumatic fever from pericarditis and œdema of the lungs, and the left crico-arytenoid joint was found to contain an excess of fluid. The two other cases are recorded by Hirsch, whose first patient was a young man, aged twenty years, who during an attack of acute rheumatism complained of pain on the right side

[6] Journal of Laryngology, 1895, p. 179.
[7] Brit. Med. Jour., 1889, vol. ii., p. 588.
[8] Ibid., 1896, vol. i., p. 829.
[9] Centralblatt für Laryngologie, vol. xii., p. 160
[10] Ibid., vol. vi., p. 149.
[11] Journal of Laryngology, 1895, p. 179.
[12] P. 361.
[13] A Treatise on Rheumatism, p. 82.

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of the larynx, which was increased by deglutition; the voice was hoarse. On laryngoscopic examination much redness and swelling over the right arytenoid cartilage, extending to the ary-epiglottic fold, was seen. The movements of the right cord were impaired. Within a week the laryngeal signs and symptoms had quite disappeared. In Hirsch's second case the symptoms and laryngoscopic appearances were very similar, but both sides of the larynx were involved. Archambault[14] in his Thesis quotes a case under Desbrousses' care. A patient who had had several local manifestations of rheumatism was attacked on the fourth day with dyspnœa and loss of voice. Nothing was seen at the back of the mouth or pharynx. The patient died, and at the necropsy, the arytenoid cartilages on both sides were found bare, but not necrosed. In the left articulation a reddish serous effusion was seen. A case recorded by Sendziak[15] is a typical example of this condition. The crico-arytenoid articulations were first affected, causing pain, dysphagia, aphonia, high fever, and prostration, followed by affections of the larger joints. I believe that many of the cases of fixation of a vocal cord of doubtful origin—and every laryngologist has met with these cases—are probably due to rheumatic arthritis, and that though the prognosis as regards life is good the voice will always be somewhat impaired; but even in this respect it is sometimes astonishing how good and strong a voice can be produced in spite of the fixation of one vocal cord, owing to the fact that the unaffected cord takes on compensatory action, crosses the middle line, and comes into almost complete contact with the motionless cord. Dr. E. F. Ingals[16] of Chicago believes that laryngeal rheumatism is often mistaken for neuralgia. He finds it occur most frequently in men and most commonly during spring and autumn. Nearly all subjects are of the rheumatic diathesis, the pains come and go in the manner characteristic of rheumatic affections, and they are benefited only by those remedies and surroundings which have proved most useful in rheumatism. A case recorded by Dr. Max Thorner[17] under the head of "Chronic Rheumatic Laryngitis and Pharyngitis" corresponds to the description given by Ingals, and I have had somewhat similar experience; the rheumatic origin of these cases is, however, rather doubtful. Before leaving the subject of rheumatic laryngitis I should like to add that cases of affection of the crico-arytenoid joint from gonorrhœal rheumatism have been recorded. Even if there were no cases reported we might reasonably expect that they had occurred, but had been overlooked, as we know that gonorrhœal rheumatism may affect any joint. Mr. Broadhurst[18] has recorded a case in which there was ankylosis of every joint in succession, and it would therefore be very curious if the crico-arytenoid joint alone escaped. Dr. Lacoarret,[19] in his very interesting paper on Acute Arthritis of the Crico-arytenoid Joint, gives two cases which deserve to be quoted in full.

CASE 1. *Reported by Libermann.*—"X——, twenty-six years of age, a soldier, who had only had some trivial maladies, was, in the course of 1872, attacked with some rheumatic pains. On April 28th, 1873, he contracted gonorrhœa; on May 15th sudden suppression of the discharge; immediately afterwards pains in joints of the shoulder and knee without articular swelling. At the end of three or four days violent pain in the laryngeal region accompanied by complete aphonia. The articular pains have ceased since the appearance of the aphonia. Violent pains in the left laryngeal region coming on spontaneously as well as on pressure. On laryngoscopical examination a considerable swelling of the left arytenoid cartilage is seen, especially at the articular part, which exhibits quite a considerable globular enlargement, over which on passing a laryngeal sound the sensation of fluctuation is clearly enough perceived. The mucous membrane covering the arytenoid is red, but the redness does not pass beyond the cartilage; the adjacent parts are quite healthy. The left vocal cord is narrower than its fellow and does not approach the middle line. When the patient pronounces the vowel 'a' it remains immobile. Examination of the chest does not reveal any pulmonary lesion. He has never had a syphilitic affection. In the presence of these lesions, and on account of the order of succession of the symptoms, I believe that I can diagnose a gonorrhœal arthritis of the crico-arytenoid articulation. Blisters over the laryngeal region, iodised opium painting over the articulation. After some days the pains disappeared, the voice returned little by little, and the patient left cured on June 30th. The laryngoscopic examination made at this time gives the following result: the left arytenoid cartilage and the crico-arytenoid articulation have returned to their normal state, but the left cord has not completely regained its size (slight atrophy of the cord) and it does not quite approach its fellow; the voice is nearly normal."

CASE 2. *Reported by Mr. K. Simpson.*—"S. H., a bachelor, consulted me for the first time on Feb. 23rd, 1888. He had had three attacks of gonorrhœa; the last occurred five weeks before. He has complained of pain and stiffness in the left knee for the last three weeks; similar phenomena showed themselves in the right knee, then in the left hip. The left thumb became equally painful and tumefied; the swelling extended over the anterior part of the wrist and over the back of the hand, and at this time these regions presented the typical appearance of an acute rheumatic inflammation. The throat symptoms had commenced three days before in the morning, with pain on deglutition. The day following there was a little swelling over the lower part of the larynx externally; this swelling had now nearly disappeared. Pain on pressure over the right side of the larynx. In the evening the patient commenced to be hoarse and the pain on pressure became very violent. Dysphagia, then complete aphonia; no cough. The two arytenoids were red and tumefied, the right rather less than the left; appearance of tuberculous laryngitis. The right cord was immobile during phonation. The remainder of the laryngeal mucous membrane was hyperæmic; the left cord a little injected, the right swollen and red. The treatment consisted in the internal administration of salicylate of sodium. From Feb. 23rd to the 28th there was no amelioration in the throat symptoms, the swelling had increased, and the respiration remained embarrassed. Starting from the 28th and after the application of a blister over the right side of the larynx, and after the administration of iodide of potassium, a notable amelioration took place. Improvement continued, and on March 6th the œdema had completely disappeared. The voice had returned fairly well, but the right crico-arytenoid articulation and the vocal cord remained red and only executed feeble movements."

Of these two patients the first case (that reported by Libermann) was certainly a rheumatic subject, and the second (Mr. Simpson's case) presented other articular lesions. The arthritic diathesis of the one, and the multiple attacks in the two cases, do not allow us to affirm that we had to deal with infectious, and not with true and rheumatic, pains coinciding with the gonorrhœa. At the most, the failure of the salicylate treatment in the second patient would suggest that we had before us a real gonorrhœal arthritis.

In connexion with impairment of movement of vocal cords comes the question of rheumatism of the laryngeal muscles. I am not myself a believer in the rheumatic origin of muscular affections generally. I am of opinion that they are more often due to a gouty tendency. I cannot, therefore, give in my adhesion to the view that the muscles of the larynx may be affected with rheumatism and give rise to impaired movement of the vocal cord, and I agree with Dr. Semon when he says that "I believe the less in rheumatic paralysis the greater my experience becomes." Larauza,[20] however, records a case of hyperæmia of the laryngeal mucous membrane with loss of tension in the vocal cords with aphonia in a patient, the son of arthritic parents, but who had not suffered himself from articular rheumatism. On the very insufficient ground of a rheumatic family history and the speedy improvement under the administration of sodium salicylate after other methods had failed, Larauza diagnosed rheumatism of the intrinsic muscles of the larynx. I have not seen any cases which could not be explained on other than a rheumatic theory.

GOUT.

I have but little to say in reference to gouty conditions of the nose. Tophi are sometimes found in the skin of the nose. At the time of writing this I have a patient in the Westminster Hospital with a large tophus in the skin of the

[14] Inaugural Thesis. Paris, 1886.
[15] Journal of Laryngology, vol. x., p. 347.
[16] Sajous's Annual of the Universal Medical Sciences, 1889, vol. iv., 614.
[17] Cincinnati Medical Journal, March, 1893.
[18] Reynolds's System of Medicine, vol. i., p. 961.
[19] Revue de Laryngologie, d'Otologie, et de Rhinologie, 1891, p. 397.
[20] Ibid., 1889, p. 203.

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nose. Sir Dyce Duckworth[21] states that "Painful follicular inflammations in the alæ of the nose have been noted with some frequency in the gouty. These do not suppurate, but are apt to recur again and again." If epistaxis occurs it is usually as a result of changes associated with chronic interstitial nephritis (the gouty kidney) rather than directly due to any gouty condition. In a letter to me on the subject Sir Dyce Duckworth confirms an opinion which I have long held, that "some nasal catarrhs are gouty, sudden, and sometimes fugitive." There is much to be said in favour of the view that in some cases of hay fever there is an underlying gouty tendency or, as Haig would say, a condition of uricacidæmia. I have not, however, found hay fever alternating with, or replacing an attack of, gout. Sir Dyce Duckworth quotes Noël Gueneau de Mussy as being of opinion that cases of hay fever were especially frequent in members of gouty families and, as regarding the changes in the mucous membrane of the nasal passages, as akin to the eruptions which vex the skin of gouty subjects. I have found that a simple unstimulating diet, only a moderate amount of animal food, and no alcohol, suit the victims of hay fever the best. Whilst on the subject of hay fever and paroxysmal sneezing in the gouty, I will take the opportunity of emphasising the importance of a thorough investigation of the patient's general condition before any local treatment is carried out in the nose for these affections. A careful inquiry should be made as to the state of the various functions of the body, especial attention being directed to the condition of the liver and kidneys; the possibility of malarial infection should also be considered. Having done this I would go a step further and if, in spite of general treatment, the sneezing or attacks of hay fever persist I would most certainly carry out local treatment in the nose. Of the methods of local treatment I have found none so efficacious as the use of the galvano-cautery. Given a puffy, spongy condition of the mucous membrane of the turbinated bones, with more or less occlusion of the passages, the application of the galvano-cautery has in my experience been followed by great benefit; it involves little or no risk of any sort and, thanks to cocaine, can be carried out in a perfectly painless manner. Only in exceptional cases is a more severe local treatment necessary, but should there be deflection of the septum partially blocking one nostril it may be necessary to forcibly straighten it and thus restore free nasal respiration. Removal of the turbinated bones is hardly ever justifiable. I have entered somewhat fully into this question of local surgical treatment of nasal neuroses as Dr. Goodhart[22] has, in my opinion, taken up too strong a position when he says "we should remember, in making use of severe measures of this kind, that we are only treating a symptom and, from the nature of the case, adopting a means that is very unlikely to prove of any permanent good." While agreeing with him that "means of this kind are too often meddlesome and bad surgery," I have had so many patients under my care who have derived permanent benefit from the galvano-caustic plan of treatment that I feel it my duty to protest against indiscriminate blame being attached to it, as well as against its unjustifiable abuse. In this, as in most worldly matters, *In medio tutissimus ibis* is the motto to follow.

Though gouty affections of the nose are comparatively rare, the pharynx is frequently the seat of trouble in the gouty—chiefly of a chronic nature, anything like acute gout of the throat being excessively rare. Morell Mackenzie[23] mentions the case of a patient who was "suffering from acute pharyngitis, when the symptoms suddenly disappeared and an acute attack of gout developed in the great toe of the right foot; after three days the gouty inflammation of the toe disappeared and acute hyperæmia of the pharynx supervened." He also mentions a case of acute œdema of the uvula disappearing upon sudden development of gouty inflammation of the big toe.[24] M. Vaton[25] was called to a patient suffering from an urgent attack of dyspnœa with enormous œdematous swelling of the uvula, soft palate and fauces. The patient was the subject of gravel with articular deformities and tophi, and had had gouty attacks previously. The diagnosis of gouty angina was accordingly made and the patient was ordered gargles of chlorate of potassium, sinapisms, and a free supply of Vichy water. As suffocation threatened the uvula was scarified and leeches were applied to it. The swelling suddenly disappeared some days after, simultaneously with the big toe being attacked with severe gout. I have not myself seen anything similar to the above—i.e., acute mischief in the throat being replaced by acute gout, and this in its turn giving way to a return of the throat mischief, on the other hand I have had a good number of gouty patients who have had marked throat symptoms, which seemed to me to be dependent on their general gouty condition. The appearance of the gouty throat is characteristic, the soft palate, the fauces and the posterior wall of the pharynx present a gorged, congested appearance, the uvula is generally enlarged, and sometimes of an enormous size. The colour of the mucous membrane is purplish-red and has a somewhat glistening appearance. As regards symptoms, patients complain of all degrees of discomfort, from slight difficulty and pain in swallowing to sharp pain radiating up to the ear, with excessive pain on swallowing. In some cases the patients complain of pain limited to certain areas, or they have the sensation of tickling or of a foreign body in the throat. These symptoms are especially met with in the lithæmic; i.e., in people with defective liver action but who have not as yet shown any overt manifestations of gout.

I am of opinion that quinsy is sometimes a manifestation of the gouty diathesis and occurs in the children of gouty parents more frequently than in others. In the past the diagnosis of gout has undoubtedly been the refuge of the destitute, and I do not think that we are justified in describing an affection of the throat as being gouty, unless the sufferer has had some other distinct evidence of gout. The gouty nature of the complaint is still further assured if it quickly yields to colchicum and alkalies when other remedies have failed. In connexion with gouty pharyngitis it is not uncommon to find the larynx also affected. The cords are congested and the mucous membrane of the larynx has sometimes a dusky colouration. The patient complains of pain through the larynx, and there may be some external tenderness. There is usually hoarseness, with a frequent hacking cough, and a little viscid expectoration, sometimes streaked with blood, is brought up with difficulty. Sir Thomas Watson, in his classical lectures, writes: "A year or two ago an eminent physician of my acquaintance suffered a violent and dangerous attack of what was considered to be gout in the throat." It is extremely difficult to recognise what was included under the term of "gout in the throat" in the pre-laryngoscopic days, but it is quite certain that nowadays we do not see gout attacking the larynx and threatening life. The only two cases of a definite gouty affection of the larynx which Morell Mackenzie[26] records are (1) gouty deposit around the crico-arytenoid joints on both sides, causing permanent dysphonia, deposit in lobule of left ear; (2) gouty inflammation, producing fungous ulceration of the left ventricular band resembling cancer, cured by a course at Wiesbaden. Sir Alfred Garrod[27] writes: "In one instance only have I seen what appeared to me to be a true gouty disease of the larynx." Inasmuch, however, as no laryngoscopic or post-mortem examination was made the case is not conclusive. In my experience gout as it affects the larynx has been in the form of catarrh, more or less chronic, but yielding to alkalies and iodide of potassium. Careful pathological investigation bears out the comparative rarity of gouty changes in the larynx. Dr. Norman Moore[28] has noted the post-mortem appearances in eighty cases of gout and, as one of his conclusions, states that "the articulations of the larynx rarely contain deposit"—i.e., of urate of sodium. On analysing these eighty cases it will be found that in fifty-seven cases the larynx was normal (except one case where there was tuberculous ulceration), in sixteen cases the condition of the larynx is not distinctly indicated, and in only seven were there any noteworthy changes. In four calcification of the cartilages is mentioned as being present, and in three others gritty deposits, small thickening of white colour, and œdema of the larynx, respectively, were noted. In no case was urate of sodium noted as being present. In the report of a case in the Pathological Society's Transactions Dr. Moore,[29] however, mentions the occurrence of a small deposit looking like urate of soda just below the outer end of each cord. In one case Sir Alfred Garrod[30] met with some points of deposit on the arytenoid cartilages, which

[21] A Treatise on Gout, p. 90.
[22] Harveian Lectures on Common Neuroses, p. 48.
[23] Diseases of the Throat and Nose, vol. i., p. 48.
[24] Journal of Laryngology, vol. iii., p. 313.
[25] Revue de Laryngologie, 1891, p. 148.
[26] Journal of Laryngology, vol. iii., p. 313.
[27] A Treatise on Gout and Rheumatic Gout, third edition, p. 452.
[28] St. Bartholomew's Hospital Reports, vol. xxiii., p. 289.
[29] Transactions of the Pathological Society, vol. xxxiii., p. 273.
[30] Op. cit., p. 205.

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were proved to consist of urate of soda both from their microscopical and chemical characters, and Duckworth[31] states that Virchow has detected "a tophulus" in the posterior part of the right vocal cord. Uratic deposits have been found in the crico-arytenoid ligaments. Ewart[32] quotes cases observed by Litten and Brooks of uratic deposits in the larynx.

OSTEO-ARTHRITIS: RHEUMATOID ARTHRITIS.

Osteo-arthritis affecting the crico-arytenoid joint has up to the present time received but scant attention. Sir Alfred Garrod[33] is inclined to attribute the aphonia, which he has observed in several cases, to implication of the arytenoid cartilages in the disease, but this view has not been confirmed by laryngoscopic or post-mortem observations. Bearing in mind how generalised the joint lesions of this disease are, I cannot but think that cases in which the crico-arytenoid joint is implicated occur fairly frequently but pass unrecognised, for I can see no reason why this joint should be exempt from the ravages of osteo-arthritis, more especially as a neighbouring joint—the temporo-maxillary articulation—is often attacked. Now that the laryngoscope is so commonly employed we may expect to hear of osteo-arthritic affections of the crico-arytenoid joint.

Dr. W. E. Casselberry[34] of Chicago has recorded the case of a woman, fifty-eight years of age, who suffered from laryngeal dyspnœa, marked inspiratory stridor, and a slight degree of laryngitis. The vocal cords could not be abducted on account of ankylosis of the arytenoid joints; the patient suffered from general rheumatoid arthritis of the joints of the hand and foot as well as of the larger joints of the body. The attacks of laryngeal dyspnœa always terminated spontaneously, and they corresponded in point of time to the exacerbations of the constitutional affection. During the attack itself local treatment was necessary in order to keep the larynx free from secretion; without this it would hardly have been possible to avoid tracheotomy. Treatment directed against rheumatism and against gout was carried out for a long time without result. It would seem, therefore, that in this case we had to do with osteo-arthritis of the crico-arytenoid joint.

LEUKÆMIA.

Several cases of laryngeal stenosis due to leukæmia have been reported.[35] In a case under Ebstein's care the arytenoids and ventricular bands were infiltrated. Three months after the first observation the swelling had increased and had extended to the supra-glottic region, the surface being covered with a yellowish secretion. Owing to an increase in the amount of stenosis tracheotomy was required. Death occurred five days later. In another case the laryngoscopic appearance was that of a tuberculous infiltration, and the stenosis was chiefly due to swelling of the sub-cordal mucous membrane extending posteriorly to the sixth tracheal ring. Mager records the case of a patient, fifty-eight years of age, who, after having suffered from leukæmia for a year, became dyspnœic. On laryngoscopic examination the mucous membrane of the larynx was red and swollen; the swelling appeared to be due to a hard infiltration, the vocal cords were swollen, and there was immobility of the right half of the larynx. Death followed tracheotomy in a few days. In this case at the post-mortem examination, in addition to the usual sub-epithelial infiltration by leucocytes, there was perichondritis and necrosis of the right arytenoid cartilage. Leukæmic infiltration of the larynx represents a grave complication; it usually requires tracheotomy and is a precursor of the fatal issue.

HODGKIN'S DISEASE.

In Hodgkin's disease running an acute course œdema of the pharynx, especially of the arches of the palate and the uvula, coming on in successive attacks has been observed.[36] The swelling is probably due to leukæmic infiltration and the administration of arsenic has good effect. In a chronic case of Hodgkin's disease an œdematous granular appearance of the uvula and the anterior palatine arch, which felt hard, was noticed. A similar condition has been seen in the larynx. A child, two years old, had attacks of suffocation and died, notwithstanding the performance of tracheotomy. At the post-mortem examination there existed a general swelling of the lymphatic system, with especial localisation in the ventricular bands and the epiglottis. The swelling of the laryngeal mucous membrane was pale and slightly knobby, caused by accumulation of leucocytes in the sub-epithelial tissues.[37]

LYMPHATIC SYSTEM.

Owing to the universality of its distribution the lymphatic system necessarily plays an important part in all diseased processes. As Moritz Schmidt has pointed out, in a considerable number of cases of recurrent posticus paralysis the cause is quite obscure during life. A likely hypothesis in these cases is that the paralysis has been produced by a swollen mediastinal or cervical gland. I have had the opportunity of watching such a case for the last ten years and though I had always assumed, in the absence of any other recognisable condition, that the paralysis was due to the pressure of enlarged mediastinal glands, it is only within the last few months that the cervical glands have become enlarged and lent support to my original diagnosis.

HÆMOPTYSIS.

There is hardly any symptom which gives rise to more anxiety both to the patient and his medical attendant than hæmoptysis. The rule still holds good that blood which is coughed up should be regarded as coming from the lungs, until there is distinct evidence to the contrary. A simple explanation of some cases of blood-spitting occurring in the early morning is forthcoming—viz., that it may be due to decayed teeth. Patients suck their gums and if the gums are inflamed the blood drawn from them during sleep passes into the throat to be coughed up on waking. Numerous cases are now on record in which a varicose ulcer on the posterior border of the septum, small ulcers and vascular ruptures in hypertrophied tonsils, enlarged vessels in the pharynx, a varicose condition of the veins at the base of the tongue, dilated vessels, or ulceration of the larynx, have given rise to the suspicion of hæmoptysis, and the diagnosis has only been arrived at by the employment of the rhinoscope or the laryngoscope as the case may be. I could not wish to cite a better illustration of the use of these instruments in general medicine. Among the comparatively rare causes of hæmoptysis may be mentioned the presence of a leech in the larynx.[38] A dry laryngitis, in which crusts form on the vocal cords, may give rise to quite a severe hæmorrhage when they become detached, and this, together with the concomitant cough and hoarseness, may, in the absence of a thorough examination, lead to an erroneous diagnosis of phthisis. I have had under observation during the past year a middle-aged lady with the physical signs of a small quiescent cavity in the apex of the right lung, who came to me with the history of having spat blood daily for over a year. There was no rise of temperature and the patient had gained in weight. Examination of the sputa on two occasions showed the absence of tubercle bacilli. I thought that I had discovered the source of the hæmoptysis when I detected bleeding from a vascular point on the septum. The epistaxis I readily stopped by applying the galvano-cautery to the bleeding point, but, alas, the hæmoptysis continued and, though I carefully examined the pharynx and larynx, I failed to find the origin of the hæmorrhage. I am confident, however, that it came from the upper air passages and not from the lungs.

BRONCHITIS.

The intimate connexion between the nasal passages and the bronchial tubes has for a long time been common property. There are certain persons who say that whenever they get a cold in the head it is sure to travel downwards and set up bronchitis. This tendency is, however, much greater in those who suffer from stenosis of the nasal passages interfering with proper nasal respiration. This is one argument I employ when I think it necessary to advise that hypertrophic rhinitis, crests on the septum, and deflected septa should be surgically treated. I point out that, though in early adult life the nasal condition may only be an inconvenience, still with advancing years and the tendency to bronchial affections which comes with increasing age, any interference with free nasal breathing greatly aggravates the risk of being attacked by bronchitis. Oral respiration is always attended sooner or later by chronic pharyngitis and laryngitis, and a little additional upset of the system will start bronchitis, which under these circumstances is

[31] A Treatise on Gout, p. 25.
[32] Gout and Goutiness, p. 208.
[33] Gout and Rheumatic Gout, third edition, p. 519.
[34] Centralblatt für Laryngologie, vol. xi., p. 255. Journal of Laryngology, vol. xi., pp. 233, 237, 272. Centralblatt für Laryngologie, vol. xii., p. 569.
[37] Ibid., p. 499.
[38] Revue de Laryngologie, 1890, p. 31.

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extremely likely to become chronic. Even slight nasal affections, not sufficient to interfere with breathing, may be a predisposing cause to bronchitis. Thus Cahn[39] records a case of bronchitis coming on in an acute manner in a patient with small nasal polypi, and the bronchitis lasted until they were cleared out. Cahn especially notes that there was free nasal breathing.

ASTHMA.

One of the earliest reflex conditions which was recognised as being dependent in some cases upon intra-nasal disease is asthma, and though I cannot agree with some authorities that asthma is usually associated with intra-nasal diseases, still cases of this sort occur with sufficient frequency to render it absolutely necessary for the physician to examine the nose in all cases of asthma. Numerous cases have now been recorded of asthma occurring in persons suffering from nasal polypi, in which the removal of these growths has completely freed the patient from an attacks of asthma. It has not, however, been my fortune to meet with absolute success—that is to say that in all the cases of asthma complicated with polypi which have come under my care in no single instance have I succeeded in curing the patient by removing the polypi. No matter how thoroughly the nose has been freed from the growths, the patient has still suffered from attacks of asthma, though the effect of the treatment has been greatly to diminish the attacks in frequency and severity. Unfortunately, as a rule, patients do not come for treatment of the nasal disease until the asthma has lasted for a considerable period, possibly years, and by this time changes have been set up in the central nervous system and in the lungs which are incompatible with complete restoration to health. In this connexion the following case is of much interest.

A man, aged thirty-eight years, consulted me in April, 1893, on account of asthma from which he had suffered for about six or seven years. At the commencement of the asthma he had some sneezing. On examining the nose I found a spur on the septum, no polypi and nothing abnormal in the naso-pharynx. The chest was emphysematous. I ordered him iodide of potassium three times a day and the following mixture to be taken for relief of cough and shortness of breath: one-third of a minim of liquor trinitrini, half a drachm each of oxymel scillæ and tinctura camphoræ composita, twenty minims of spiritus ætheris nitrosi, and water to half an ounce. He came again in two months' time and reported that he had had great relief from the treatment. He now mentioned that he had a clear, watery discharge from the nose at the time of the attack. I applied the galvano-cautery to the right inferior turbinal I lost sight of the patient until April, 1896, when he again came to see me and said that he had been very well until the last few weeks. On examining the nose I found polypi in both nostrils. I cleared out the nostrils much to his relief in all respects. The particular interest of this case is the connexion of the asthma with nasal trouble. At the commencement of the asthma he had sneezing; the onset of an attack was accompanied by a watery discharge, but it was not until the asthma had existed for at least seven years that polypi developed in the nose. I have seen many cases of asthma complicated with nasal polypi, but this is the only example I have met with in which polypi appeared in a patient already suffering from asthma.

Though polypi represent the intra-nasal lesion most frequently found associated with asthma, any affection of the nose may be the starting point of asthma. Spurs and crests on the septum, deflection of the septum, hypertrophic and atrophic rhinitis have been noted as apparently giving rise to asthma. Adenoids may also cause asthma. A patient of mine, aged twenty-one years, who had suffered from asthma for two years completely lost it after the removal of adenoids. According to Lichtwitz[40] symptoms resembling asthma were seen in five patients as a complication of empyema of the accesory nasal cavities. Believing as I do in the connexion between intra-nasal lesion and the development of asthma, I would strenuously advise that a systematic examination should be made of the nasal fossæ and accessory sinuses, and if any gross lesion is found it should be promptly treated.

EMPHYSEMA.

Emphysema is another lung affection which has intimate relation with diseases of the nose and throat. Any of the various causes of nasal obstruction may, as a result of the chronic pharyngeal and laryngeal catarrh and consequent irritable cough thereby produced, give rise to emphysema. It is probable also that emphysema may be directly due to nasal obstruction; this is borne out by the experiments of Dr. Cervello[41] on dogs. He finds that occlusion of the nostrils invariably produces in a few days pulmonary emphysema in completely healthy dogs. I have seen the progress of a somewhat rapidly increasing emphysema at once checked by the amputation of an elongated uvula, and I have seen equally good results from the treatment of granular pharyngitis by the galvano-cautery. These remarks will, I think, be sufficient to indicate the desirability of looking out for the cause of any chronic cough, and not to be satisfied with simply ordering some cough mixture. Amputation of the uvula is an operation which has been much abused in the past, but there is no reason why on this account it should not be performed in suitable cases. If the uvula is elongated in a patient who is suffering from a chronic cough, with little or no expectoration, and nothing in the chest can be found to account for it, and if the cough is worse at night or on lying down, then the uvula may with advantage be amputated.

PNEUMONIA.

Epistaxis is sometimes observed in pneumonia; it may be an early symptom or occur as one of the critical phenomena. Just as acute rheumatism may follow an attack of tonsillitis, so I believe may pneumonia. Whether the pneumonia is of septic origin or whether the micro-organism (be it the diplococcus of Fraenkel or the pneumococcus of Friedlaender) first sets up inflammatory mischief in the tonsil and then proceeds to affect the lung I must leave to be settled by those skilled in bacteriology. Dr. Wallace of Crick[42] has recorded a case of the kind. The patient, a man thirty-six years of age, had an attack of sore-throat (quinsy) followed by pneumonia. Examination of the sputum showed numerous long chains of streptococci, staphylococci, pneumococci single, double, and in short chains, and zoogleæ of micrococci. In a patient in the Westminster Hospital under my care an attack of acute laryngitis came on during the course of a pneumonia.

SHAPE OF THE CHEST.

The state of the nose and naso-pharynx has a profound influence on the shape of the chest. Any interference with free nasal respiration, whether in the nose or naso-pharynx, in early life will give rise to a characteristic deformity. Adenoid vegetations, as being the most common cause of defective nasal breathing, are usually found to be present. At one time it was thought that enlarged tonsils were the cause of this deformity, but the observations on which this view depended were mostly made in the pre-adenoid days, and as adenoids are almost invariably associated with enlarged tonsils, it is probable that the latter usually play quite a subordinate *rôle* in the production of the deformity in question. That enlarged tonsils alone are capable of causing deformity of the chest is shown by two cases reported by Dr. Norman Moore.[43] He made a cystometrical drawing of the chest in each case before and some time after the removal of the tonsils, and the cup-shaped depression in the chest which was present before the operation was found to have disappeared when the second tracing was made. My colleague, Mr. Tubby,[44] has given an excellent representation of the changes seen in the thorax. "The chest is bulged at its upper and middle part and retracted in its lower part and excavated. The sternum is not so keel-like as in rickets and the lateral vertical grooves are absent. The antero-posterior diameter is increased, while the transverse is diminished." The retraction of the lower part of the chest is due to the contractions of the diaphragm drawing in the chest, which is insufficiently inflated with air owing to the interference with free nasal respiration. If the adenoids or other causes of nasal obstruction are removed before the bones are firmly ossified the deformity may be almost completely cured, and recovery of the shape of the chest is accelerated by the judicious employment of extension and gymnastic exercises. According to Mr. Tubby,[45] during infancy and early childhood the subject of nasal obstruction shows deformity of the chest alone; between the ages of six and ten years kyphosis makes its appearance; and from

[39] Centralblatt für Laryngologie, vol. xii., p. 424.
[40] Journal of Laryngology, vol. xi., p. 161.
[41] Revue de Laryngologie, 1890, p. 773.
[42] THE LANCET, Feb 15th, 1896, p. 416.
[43] St. Bartholomew's Hospital Reports, vol. x., p. 129.
[44] Deformities, a Treatise on Orthopædic Surgery, p. 211.
[45] Op. cit., p. 155.

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ten to sixteen years of age scoliosis supervenes on the kyphosis.

DISEASES OF THE CIRCULATORY SYSTEM.

As we have already seen in connexion with rheumatism the heart may become affected with valvular disease as the result of a rheumatic tonsillitis, but it is not so generally recognised that an infective endocarditis may have a tonsillar origin. A case reported by Charrin[46] is a good illustration of this connexion. On post-mortem examination staphylococcus aureus, which during life had been found swarming on the exudation over the tonsils, was present in the bronchopneumonic patches and the valvular vegetations. Dr. Dreschfeld,[47] in describing the paths of entrance of the microbes in infective endocarditis, says: "Probably the tonsils, which are so often affected in rheumatic endocarditis, may occasionally serve as the means of entrance, and thus again some of the so-called 'primary cases' may be explained." Löri[48] states that in four out of five cases of acute septic endocarditis, which he has observed, ecchymoses have been present in the pharynx, larynx, or trachea. Loss of substance in the larynx and hæmorrhage from the pharynx, larynx, and trachea have been also met with in acute septic endocarditis. Von Stein[49] of Moscow, as the result of an examination of the symptoms observed in fifty patients suffering from cardiac neuroses, and presenting at the same time an increase more or less pronounced in the size of the inferior turbinals, has ventured to draw the following conclusions. 1. A hyperplasia, more or less marked, occupying in the greater number of the cases exclusively the two inferior turbinals, without points of irritation or hyperæmia, but with complete or intermittent obstruction of the nose, causes a sensation of weight, of constriction, and of angina in the cardiac region. 2. When to this condition is added a transitory vascular injection of the ocular conjunctiva and of the extremity of the nose, an injection which is reproduced by lightly touching the nasal mucous membrane, then there will be palpitation of the heart, often accompanied by sensation of giddiness, of want of air, and of pre-cordial weight. Von Stein has found these symptoms disappear after cauterisation of the mucous membrane.

Tachycardia may be associated with intra-nasal disease. Mr. Spencer Watson[50] has reported a case of nasal polyi in which the pulse-rate was 120 per minute, the tachycardia being persistent. After the nostrils had been completely freed from obstruction the cardiac trouble ceased. In contra-distinction to tachycardia, a slow pulse may be met with in certain nasal affections. Lichtwitz[51] reports the case of a patient with empyema of all the sinuses, who had a pulse of from 28 to 30 to the minute, which became normal after treatment. Tachycardia has been observed to follow excision of the larynx.[52] It has been suggested that is was due to division, in the course of the operation, of an abnormal cardiac branch of the superior laryngeal nerve, with functions similar to those of Cyon's depressor nerve. Dr. Toti, however, relates a case in which the patient developed intense tachycardia (from 160 to 180 beats a minute) *thirty hours* after the operation for total excision of the larynx. He continued in that state for twenty-four hours, and ultimately died from cardiac paralysis. If, however, the tachycardia were in this case the result of the division of the nerve, it ought to have appeared immediately after the operation, instead of being delayed for thirty hours. At present, therefore, no satisfactory explanation of the occurrence of tachycardia in these cases is forthcoming. Besides causing tachycardia, nasal lesions occasionally give rise to irregularity in the action of the heart. Dr. Sansom[53] in a discussion following the reading of his paper entitled "The Irregular Heart: a Clinical Study," read before this society on Dec. 12th, 1892, said: "He thought that nasal and aural troubles were amongst the commonest reflexes which started the cardiac derangement."

EXOPHTHALMIC GOITRE.

In exophthalmic goitre, and, as we have just seen, in the allied condition, tachycardia, intra-nasal changes play an important part. Mr. Arthur Maude,[54] who recently presented his valuable series of monographs on exophthalmic goitre to the library of the Royal College of Surgeons of England, has collected the following cases in which operative interference in the nose has been carried out in cases of Graves's disease. "Hack of Freiburg removed part of the inferior turbinated bones, which were the seat of chronic thickening, in a girl, aged sixteen years, in whom exophthalmos had existed since childhood and palpitation and goitre for many months. The operation was performed with the galvano-cautery, and subsidence of the symptoms followed.[55] Fraenkel[56] also reports the amelioration of symptoms which followed the application of the galvano-cautery to the inferior turbinated bones. The application was made to the two sides at some weeks' interval, and the immediate effect on the goitre was limited to the side treated; after application was made to both sides the thyroid enlargement disappeared and the pulse regained its normal rate. Bobone[57] makes a similar observation. Hopmann,[58] by treating chronic atrophy of the mucous membrane of the nose in a woman the subject of exophthalmic goitre, claims to have cured the palpitation and exophthalmos." A case recorded by Mr. Spencer Watson[59] of a woman, fifty-four years of age, with prominent eyeballs, great mental depression and fainting fits, was probably one of exophthalmic goitre. There was extensive hypertrophy of both inferior turbinals, which were removed with great relief to the symptoms. Dr. Scanes Spicer[60] has recorded a case of incomplete Graves's disease associated with nasal polypi. In this case, although the enlargement of the thyroid gland, the tachycardia, the tremor and nervous excitement were well marked, Dr. Spicer elected to call it incomplete Graves's disease from the subordinate character of one of its leading symptoms—the exophthalmos; the polypi were removed with the cold wire snare, and as the nasal passages gradually became pervious the thyroidal swelling diminished and became less defined, the pulsation less, and the slight exophthalmos and tremors disappeared.

Over against the above cases of exophthalmic goitre successfully treated by intra-nasal operative procedures, must be set the remarkable case of unilateral incomplete Graves's disease after removal of nasal polypi recorded by Dr. Felix Semon.[61] The patient was a man, thirty-three years of age, with multiple polypi in both nostrils. After repeated operations with the galvano-caustic loop under cocaine, it was noticed that the patient's right eye had become more prominent than the left, but there was no enlargement of the thyroid gland, the heart action was quiet, and the pulse-rate normal; in fact, no sign of a lesion of the sympathetic except the unilateral exophthalmos. When the patient was shown at the Laryngological Society,[62] four and a half years later, the pulse-rate had increased to about 100, but the exophthalmos had somewhat decreased; on the other hand, complete baldness, extending over both sides of the head, had developed shortly after the first onset of the symptoms. The hair had also come off from other parts of the body. In connexion with this case it may be mentioned that Mr. R. S. Charsley[63] has observed marked enlargement of the glands in the neck and protrusion of the eyeballs lasting for a period of three months after operation for removal of the turbinate body with the galvano-cautery. The pulse had ranged as high as 110, but complete recovery ensued. The only nasal trouble that I have myself noticed in Graves's disease was very profuse epistaxis in a woman aged forty years. The patient was much weakened by the repeated losses of blood, so I applied the galvano-cautery to the bleeding point and at once arrested the hæmorrhage, which gave her no further trouble. The course of the disease was not apparently modified by stopping the loss of blood and the patient eventually died from exhaustion consequent on profuse diarrhœa.

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46 Epitome, Brit. Med. Jour., vol. i., 1896, No. 287.
47 Allbutt's System of Medicine, vol. i., p. 633.
48 Die durch anderweitige Erkrankungen bedingten Veränderungen des Rachens, des Kehlkopfes und der Luftröhre, p. 68.
49 Revue de Laryngologie, 1890, p. 35.
50 Brit. Med. Jour., vol. ii., 1896, p. 1097.
51 Journal of Laryngology, vol. xi., p. 161.
52 Medical Week, Feb. 17th, 1893.
53 Transactions of the Medical Society, vol. xvi., p. 115.
54 St. Bartholomew's Hospital Reports, vol. xxviii., p. 28.
55 Deutsche Medicinische Wochenschrift, 1886, xii., p. 25.
56 Berliner Klinische Wochenschrift, 1888, xxv., p. 111.
57 Annales d'Oculist, 1886, xcvi., p. 260.
58 Berliner Klinische Wochenschrift, 1888, xxv., p. 42.
59 Transactions of the Medical Society, vol. xv., p. 309.
60 Clinical Society's Transactions, vol. xxviii., p. 265.
61 Ibid., vol. xxii., p. 233.
62 Proceedings of the Laryngological Society, 1893, p. 41.
63 Ibid., 1893, p. 41.

GATESHEAD CHILDREN'S HOSPITAL.—The annual meeting of the Gateshead Children's Hospital was held on Feb. 19th in the town-hall, Lord Northbourne occupying the chair. The report stated that everything connected with the actual working of the institution had been of the most satisfactory character; the income, however, was insufficient to meet current expenses and at the end of the year there was a deficiency of £119.

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ALBUMINURIA IN PREGNANCY.

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A FEW weeks ago when reading a paper on renal disease by the most eminent writer of the day on this subject I was surprised to find the mechanical causation of renal complications in pregnancy accepted without doubt, or with but slight reservation. For some years past this factor in the untoward event had been slipping away from my mind; I had not, and have not, made any personal investigations on the subject, but insensibly the mechanical conception had lost its hold upon me. I did not ask myself how far I was alone in this change of opinion, because if I were alone I had not endeavoured to base the new views on exact research, and could not on my own part therefore claim for them any substantial value. And I regret to say that I am still without this justification. I have not made any careful research into the causation of puerperal kidney disorder; all I can do is to set the problem as distinctly as possible, so that each may work it out for himself. Perhaps it is presumption on my part to bring the matter forward at all at this stage; but I think, seeing that the mechanical hypothesis is so dominant as I have said, it is well if there be an opposite hypothesis to mention the alternative. Truth arises more readily even from error than from confusion. To state a problem clearly is to be well on the way to its solution.

Now that the renal complications of pregnancy are due merely to mechanical pressure I believe to be an erroneous opinion. The evidence, whether clinical or anatomical, in favour of it has for many years seemed to me to be very weak. Yet this explanation is by no means confined to the writer I have referred to; it is generally held. I turn to the excellent hand-book of Dr. Coats as representing the current pathological teaching, and I read[1]: "Pregnancy leads to a chronic nephritis, in all probability by obstructing the vessels of the kidneys by the pressure of the uterus." He adds that there is extreme hyperæmia of the kidney in these cases, a statement which is not universally, if generally, true. Dr. Hamilton seems to have overlooked the subject altogether. To Cohnheim I shall refer hereafter.

Let us examine this facile explanation of venous obstruction a little more closely. It depends apparently on the supposition that the enlarged uterus presses upon the renal veins and thereby raises the venous blood pressure. If the topography of the parts is considered for a moment it will be seen that this encroachment is not so easy as is supposed; it is not easy, however, to pursue the argument from anatomy on this occasion when the parts cannot be demonstrated. Again, complete thrombosis of the renal veins is not followed by renal symptoms which are averted by collateral circulation. Moreover, swelling of the legs and other such signs of venous obstruction get more and more as pregnancies increase in number, whereas albuminuria and eclampsy are evils of the primipara. But, turning to other tumours in the abdomen, see what comes of them. Like all practitioners of large experience I am only too well versed in cases of the huge encapsulated fibroid tumours of the female pelvis, yet I do not remember a single case in which the tumour produced serious kidney disorder, though disturbance of micturition and even pressure on the ureters, followed by dilatation of these tubes, and even by pyelitis, may occur. But in pregnancy there is little evidence of serious pressure on the ureters; I am not aware that dilatation of these tubes is seen as a complication of pregnancy except in rare cases. Again, there are frequent examples of a rise of venous blood pressure in the kidneys in heart disease; but both clinically and pathologically the course of clinical events is very different, I may say wholly different, from that in the renal disturbance of pregnancy, and the morbid anatomy of the kidneys is by no means common to both cases. In the cardiac kidney little degeneration is found and very little inflammation. The capsule as a rule strips off easily; there is not much evidence of cirrhosis, if any; cyanosis and hyperæmia are the most prominent features, and, indeed, there is so little structural damage that the kidney can in a bad case well recover if the circulation were restored. Now, in the puerperal kidney we find a great contrast to the cardiac kidney. So far from being a mere congestion, there are signs of acute degenerative processes penetrating the organ in all its tissues. It is not hard as is the cardiac kidney, and it is often pale. Scattered throughout it are points, or more than points, of broken-down structure, and the anatomical elements throughout are blurred and deteriorated. Many vessels are plugged. The kidney looks as if it had been subjected rather to some more intimately mischievous, I had almost said corrosive, action than to a mere mechanical interference. It does not seem, therefore, that the puerperal kidney would fall into the class of venous congestions; it is not the kidney of heart disease; it presents rather the character of an irritation too acute to give time for the cirrhotic reaction which we see in kidneys subjected to the more gradual effects of poisons acting over a long time. Cohnheim, perceiving these difficulties, suggested that the renal disturbance in pregnancy is due to a spasm of the renal arteries—a hypotheis which was suggested to him by the anuria of lead colic, followed by free urinary discharge on the cessation of the colic.

Now is there any alternative to the mechanical hypothesis and to that of spasm of the arteries? On the mechanical hypothesis we assume the kidneys to be so injured by the back pressure that suppression of urine takes place and the patient may thus die of uræmia. I have said that even if one is satisfied that considerable pressure on the abdominal veins is likely to take place in pregnancy such an event is most unusual, to say the least of it, in other cases, such as the cardiac, known to depend on venous retardation. In other such states the kidneys can do work enough to keep the patient from auto-intoxication, and there is some collateral circulation. Yet in the puerperal woman uræmia is only too common. It is idle to be content with the plausible generalisation that the puerperal woman is in a heightened nervous state, due to reflex excitement from the uterus, which makes her obnoxious to perturbations which are comparatively harmless, say, to a patient with heart disease. To go a step backward and ask why this heightened nervous state exists—a state which is adduced as the efficient cause of vomiting, chorea, whimsical fancies, and so forth—will the hypothesis of simple uterine reflex prove satisfactory? Is there anything else in the system which is able to produce this morbid excitability and other symptoms less obviously nervous?

I will consider what is seen in the pregnant woman, especially in the primipara. Braun taught that puerperal albuminuria and eclampsy always depended upon Bright's disease—a view now exploded. Tyler Smith and Leishmann explain eclampsy as a nerve reflection arising eccentrically in the uterus, and the albuminuria he refers to the high arterial blood pressure—a consequence wholly unsupported by evidence. One of the first signs of pregnancy is vomiting, of which the superficial explanation is that the awaking uterus irritates certain nerves which by reflex action set up the symptom. One hears, also, of headaches, faints, nervous irritability, and so forth, as symptoms of like causation. Can there be any agent more directly concerned in these phenomena than the "heightened reflex excitability" so easily assigned? It may be noted that many of the infections begin with vomiting, and in them, as in pregnancy, the vomiting may be persistent, so much so as to signify danger, and even the utmost peril. In many of these infections, also, albumin appears in the urine after a longer or shorter time, and may herald the approach of uræmia, with its eclampsy or coma or both. In the pregnant woman Dr. Barnes and other close and experienced observers give the assurance that the arterial blood pressure is increased, a fact better evidenced by the report of the skilled finger than by illusory sphygmographs. Not only so, but in a pamphlet by Dr. Max Dreysel the assertion, first made by Larcher in 1828, that the heart of pregnant women is hypertrophied is submitted to a close scrutiny, a scrutiny both of published evidence since Larcher's time and of his own personal observations. Dreysel decides that in pregnancy the heart is enlarged in both ventricles and in capacity as well as in thickness of the walls; the hypertrophy is of the so-called "excentric" form. The left ventricle is more enlarged than the right. This hypertrophy is said to occur in all well nourished young mothers; it increases during the course of gestation, is at its

[1] A Manual of Pathology, 1889 edition, p. 810.

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height at childbed, and disappears at once when delivery is completed. This hypertrophy is attributed by some writers to increased resistance in the peripheral circulation; by others to an increase of the mass of the circulating blood; by others, again, to the interpolation of the placental circulation. Dreysel himself attributes the hypertrophy to the plethora of pregnancy—a position which does not carry conviction to my mind, or even, as it would appear from his words, to his own; he seems to give it for lack of a better.

Now, if in scarlet fever we were to see first vomiting, then nervous disturbances, then albuminuria, then enlargement of the heart—what would be the conclusion in the case? Surely that there is some toxin circulating in the body. Why then in pregnancy should we fail to consider the conclusion which is drawn so readily and so correctly in cases where the presence of a poison is better known? Because we are possessed by the prejudice that pregnancy is a normal process, as no doubt it usually is. But what then? Do we not know that our bodies even in health are dying daily, hourly, momentarily. That we are saved from poisoning ourselves only by the unceasing vigilance of our excretory organs. That if this vigilance be relaxed, or the organs over-taxed, but for a day we feel "bilious," or we become "feverish," or in some other way we exhibit signs of intoxication by waste matters defectively excreted, or perhaps arrested at some stage before that of fitness for excretion. Now can it be in pregnancy that there is some circulating poison which sets up vomiting, albuminuria (which we know that other poisons do) and ultimately even eclampsy. Is there any evidence of such a poison? We must remember that even in Bright's disease, wherein we speak glibly of uræmia as if we knew all about it, we know precious little. The poison of uræmia is as yet undetected. All we can say is that it is not this or that; it is not urea, not uric acid, not kreatin, and so forth. Still it is slowly perverting the peripheral circulation, enlarging the heart, and leading on that series of changes which may ere long burst out suddenly as uræmia, as vomiting, headache, eclampsy, or coma. Such a series we can see in lead poisoning; the poison of lead acts the whole play for us; it embarrasses the peripheral circulation raises the arterial blood pressure, prevents excretion by overtaxing and laming the kidneys, and this leads to uræmia in its full manifestation. It would seem that two poisons at least are concerned, the one leading to convulsions, the other to coma. In some not infrequent cases the two acting together produce convulsions followed by coma.

The next question is whether, on consideration of this argument from analogy and on searching accordingly for such a poison in pregnancy, there is any direct evidence of a poison capable of causing peripheral resistance in the bloodvessels, vomiting, often severe, sometimes uncontrollable, albuminuria with damage to the kidney as it passes out or tries to pass out, and ultimately, perhaps, an appalling attack of uræmia? There is some such evidence: in the first place it is known that there is a toxin as yet unseparated in healthy urine. The kidney, like the bowel, is a means of escape for poisons formed in the course of degradation of our working tissues or by parisites. In 1881 Feltz and Ritter began to work at the subject of toxins in the urine, and wrote in that year a thesis entitled "Urémie Expérimentale." Their labours were taken up by Bouchard and others, and although the very poison itself defied detection, yet its presence was demonstrated by them beyond question. Healthy urine filtered and neutralised is poisonous to a rabbit in a mean dose of 40 c.c. per kilogramme of body weight. Thus the whole urine of twenty-four hours would kill 30 kilogrammes of rabbit; or to put it otherwise would kill the man himself in 52 hours supposing man to be as susceptible as rabbit and to have no time advantage in excretion. The symptoms produced by this toxin are myosis, even to the degree of punctiform pupil, accelerated respiration, somnolence, falling of temperature, and coma without convulsion or with light twitchings. At first diuresis is observed, until the attempts of the kidneys to get rid of the poison are overborne. In the rabbit towards the end exophthalmos and dilatation of the vessels of the ear are noted. Now what is this poison be it one or more? As I have said it has not been isolated and it is as yet indicated by negatives; it is not urea, it is not uric acid, it is not kreatinin, it is not potassium chloride which, though poisonous, and contributing to the very poisonous quality of the urine of herbivora, can be removed before the experiments are begun. Dr. Thudichum thinks that it lies in the colouring matters of the urine. On the whole it seems as yet most probable that the toxin, or one of several, is absorbed from the bowel, for it is less in amount in a fasting animal, in hibernation, and in the urine after sleep. As it is strengthened by fatigue, as is found when the urine after eight hours labour is used, "fatigue products" may form some part of it; on a day after great exertion the urine is more toxic. On the other hand moderate exercise seems to clear the body, or at any rate the urine, of the poison.

In the next place we inquire where this poison is formed. Is it formed in the kidney? Some experimenters regard the kidney as a mere filter; others regard it as a gland. There is every probability that both sides are right, the glomeruli being filters; the convoluted tubes being glandular in function. The glomeruli are dialysers; if their epithelium be stripped off it seems that their powers of retention, say of albumin, are weakened; and albumin then appears in the urine. But the albumin is not the toxin: merely to alter the venous pressure will produce albuminuria, as we have seen. But the circulation of certain toxins will do the same as that of diphtheria, scarlet fever, of the tubercle bacillus, or again as the products of ordinary putrefaction. Whether these agents in causing lesions of the elements of the kidney act directly or indirectly through the vaso-motor system or still more indirectly by impressing the heart or nerve centres (probably they injure the renal epithelium and allow the albumin to escape) we cannot tell. However these things may be, there is no doubt at any rate that the kidney, like the bowel, is often the channel of the escape of the toxins; and so long as the renal functions are intact, so long the toxin may escape, and usually does so escape, without doing any harm. But this brings us back to the inquiry where are the toxin or the toxins formed? We cannot penetrate so far as this, but we can go one step backward and show that the liver is at fault. The toxin itself, indeed, may be absorbed direct from the bowel, as such bodies are absorbed daily without harm to us; but the means of our impunity is the liver, which, besides its glycogenic functions and its urea-forming functions, is also charged with the neutralisation of the toxins which find their way into the circulation. The tendency to acute atrophy of the liver in pregnant women is well established. The liver may well be a large organ; in the fœtus it is relatively very large, a fact to which I shall return presently. If then for any reason this protective function of the liver be checked, or a larger quanty of toxin be turned into the blood than the liver can deal with, the excess will fall directly on the kidney, and probably will so injure its finer structures that albumin can leak through. More than this it may inflict serious and permanent damage on the kidney itself, not to mention other parts of the body to which it is injurious. My own working opinion is that all Bright's disease is toxic in origin. Uræmia then is a retention of these toxic bodies in the system, and here one word of warning may be spoken, namely, not to regard the mere aqueous element of the urine as a gauge of the elimination of toxines; free urinary discharge may be consistent with a poor content of matters in solution. In fact, if the patient be showing signs of poisoning, it may well be that the urine, whether aqueously abundant or not when injected into the test animal, may be found not more, but less, toxic than at an earlier date. Indeed, this is found to be the fact: when the urine is taken from a puerperal woman suffering from albuminuria and uræmia, and whose kidneys therefore are presumably overtaxed, this urine is found not more but less toxic to animals. Massieu[2] not only arrived at this result as others had done, but he went on to the logical consequence and showed that the serum of such a patient on the other hand is more toxic, and other authors have corroborated his statement. Tarnier and Chambrelent say that the toxic power of this serum is to ordinary blood serum as 3 to 6 c.c. per kilogramme is to 10 c.c., that is, from 3 to 6 c.c. will prove the equivalent of 10 c c. of normal serum; in other words, the serum of an eclamptic woman is always twice as poisonous as the normal serum, and sometimes is three times as poisonous. We have a familiar illustration of this in the fact that the fœtus is too often the test animal; in cases of puerperal albuminuria with symptoms of uræmia the fœtus is poisoned, it is either killed outright or is more or less seriously injured. Hence one great reason for hastening delivery. The serum of such a fœtus has also been found highly toxic, as we should expect; in two experiments it was as 4 c.c. to 10 c.c., in a

[2] De la Toxine de la Sérum.—Thèse de Bordeaux, 1893.

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third as 6 c.c. to 10 c.c. As I have said just now it is well that the fœtus has a relatively large liver; its kidneys do little or no work till after birth and it is surrounded by fountains of toxins. The water of the amnion contains no toxins; but probably the placenta has some protective functions. In this direction we may find the mode of Colles' law; the syphilitic fœtus slowly distils its poison through the placenta, and the mother is slowly inured to the poison and gains immunity. If poisons be injected into a fœtus and the umbilical cord be tied no harm comes to the mother, but as soon as this ligature is removed the mother suffers at once. This Gusserow has shown conclusively.

To return to the puerperal woman in whom uræmia is established, do we find in her any effect of toxins in other parts of the body? More than one necropsy has been made from this point of view. Perhaps the most careful one was published in 1892 by W. Lindemann of Moscow[3]; the case is useful in this argument as it was not a case of eclampsy, but of persistent vomiting, a symptom which I would indicate as another evidence of a circulating toxin, and not of mere nervous reflex. Lindemann made a most minute investigation of the whole body, and if his observations are supported by other observers the evidences of auto-intoxication will become very strong. It is impossible to give Lindemann's results in full or even in abstract; but I may say in brief that he found those evidences of acute degenerative changes in the liver and kidney which are characteristic of toxic influence. The spleen was also enlarged as has been found in other cases of the kind; indeed, I believe I may say it is usually enlarged in eclampsy and in other deaths in pregnancy and it is vaguely attributed to a "need of compensation in the circulation." Neuritis was well marked in several tracts. The fœtus showed participation in the effects of poisoning and, if not actually killed outright, was not viable.

Now all these features bring the pregnant state into some comparison with the infections. Those who have had large midwifery experience are aware how often albumin, an early sign of a toxic condition of the system, is found in healthy pregnant women, or rather in women showing no other departure from health. I find its frequency variously estimated by sundry authors—namely, from 2 per cent. to 6 per cent. and even to 10 per cent. In these estimates, or in some of them, primiparas are indiscriminately mingled with multiparas; if I take primiparas alone, the percentage is as high as 5 per cent. to 6 per cent. Blot and Litymann, indeed, believe it would be found, if carefully sought for throughout, in 20 per cent. of all pregnant women and much higher in primiparas (Leishmann). I do not go fully into my authorities for these estimates, which would involve some comparison of their respective trustworthiness; it may be sufficient to say that albuminuria is found in a substantial percentage of pregnant women who show no other sign of ill health. As a rule, this albumin disappears within a day or two of delivery, though in primiparas it is longer delayed and is fraught with more danger to the kidneys so irritated. Casts do not seem to have any relation to the amount of albumin or to have any great prognostic value.

Another necropsy illustrative of my present argument was published by Stembo[4] last year. This was made also in a case of uncontrollable vomiting; and signs of extensive polyneuritis were discovered. Albumosuria is found even more often than albumin in these cases; but I will not enter into this part of the evidence, as the albumose may be absorbed from the amniotic fluid, as the lactose, also found in the urine of pregnant women, is derived from the milk. I will turn rather to another interesting point of the present argument—namely, the deterioration of heart diseases in pregnancy. All writers agree that pregnancy bears hardly on sufferers from heart disease; the harm is not altogether or even largely dependent on the strain of labour—it would rather seem that there is something in the pregnant state prejudicial to weak hearts, that in it the cardiac muscle is deteriorated. If this be so, there is no agent so well calculated to deteriorate it as a circulating toxin. Bar and Renon[5] in a case in which a woman died from mitral failure in pregnancy, examined the blood serum in search of the cause. They found the toxicity of her blood serum and also of the urine considerably increased. The kidneys were acting, therefore, better than the state of the heart would have suggested. Our next question will be, whence come this toxin? Is there a microbe of pregnancy, or is the poison generated by the changes incident to pregnancy? If the latter be the case is this poison generated in all cases; or is it peculiar to cases which have gone wrong in some way? Very careful search has been made for a microbe, and certain investigators believed that they have found the offensive parasite. Bar and Renon whom I have already referred to as workers in this field, found streptococci in one case of peurperal eclampsy, but in two subsequent cases they were unable to find any microbe. In all three cases the toxicity of the blood was very high. Leusden[6] made a minute bacteriological examination in two necropsies of puerperal eclampsia. He decided that there was no evidence of a bacterial origin for the toxins. He concluded that the cause of eclampsy is a toxin formed from the blood in the course of metabolism. There were no signs of placental changes. There was no evidence of embolism or of thrombosis to account for the symptoms, whether by travelling "giant cells" or liver cells, or clots. Any such changes found were obviously accidental. In 1892 Favre induced puerperal convulsions by injecting bacteria into pregnant animals, but this proves no more than that the nervous centres were already in a hypersensitive state, which we know to be the case in all pregnancies, a sensitiveness or heightened excitability due in my opinion to some circulating toxins. Here ends what I have to say on the pathology of the question. I will now briefly turn to the symptoms of pregnancy, or rather to some of them.

We know that toxins tend to expend their malignant power largely upon the nervous system; and in proportion, as the nervous system is developed their effects become the more perilous. This is the case in all the infections. Now, the abnormal excitability of the nervous system in pregnant women has been insisted upon by many obstetricians, by none more strongly than by Dr. Barnes. To the many nervousnesses of pregnancy I need not do more than allude, our own experience will supply the examples. We know, moreover, how liable puerperal women are to such nervous diseases as severe headache, chorea, and neuralgia of a peculiarly obstinate kind relieved at once on delivery. Chorea gravidarum, if it does not cease, is modified for the better on delivery. To the vomiting I need not again refer. Dyspnœa is described by many writers and referred to the reflex neuroses. Tetany again is not very uncommon in pregnancy. Neumann has recently reported two cases, and many moreare on record. To eclampsy I need not again refer. Again, it is more and more recognised that neuritis is no very rare sequence of pregnancy. Mobius has just recorded two more cases[7]; and, finally, insanity is but too well known as a result of child-bearing. If, again, we turn our eyes to other symptoms which may well be due to a toxin in the blood, we remember at once the liability of pregnant women to blood disorders, such as phlebitis and thrombosis of the vessels of the brain and other parts. The terrible susceptibility of pregnant or recently delivered women to septic poisoning is too painfully present to our minds; and it suggests that the blood in these cases is already in a state of unstable equilibrium; a state for which a pre-existing toxin therein might account. Finally, as in lead-poisoning and in Bright's disease, we find the red cells diminished both in number and in hæmoglobin value.

One word on the value, if any, of this toxin point of view to practitioners. I fear that I can say no more than this—that the more we know of the real nature of the morbid states with which we have to deal the better we shall be able to treat them. Of definite and immediate advantages I fear I have none to advance. But we are enabled to see more distinctly the reasonableness of certain measures which we have empirically learned to take in cases of danger. Especially does this theory of a circulating toxin in all pregnancies assure us of the usefulness of the precaution of promoting early delivery in cases which lend themselves to this treatment. Even in dangerous and persistent vomiting, if the mother's life be in danger we must bring about expulsion of the fœtus. In eclampsia this is a still more pressing step. We shall most carefully keep an eye on albuminuria, not regarding it as a mere mechanical accident, but as the signal of a danger essentially implicated in the process of pregnancy itself. Any other signs of a

[3] Centralblatt für Allgemeine Pathologie Jena, Aug. 20th, 1892.
[4] Deutsche Medicinische Wochenschrift, 1896, No. 27.
[5] Société de Biologie de Paris, reported in Progrès Médical, No. 9, 1874, p. 148.
[6] Beiträge zur Pathologischen Anatomie der Puerperal Eclampsie. Virchow's Archiv, Band cxlii.
[7] Münchener Medicinische Wochenschrift.

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toxic state must be minutely observed with a view to the prevention, if possible, of further mischief. As the toxin may, in part at any rate, be absorbed from the bowel, a patient should be carefully dieted from the time of any suspicious symptoms, such as Chaussier's symptoms of violent pain in the stomach—always a precursor of eclampsia. All substances likely to promote gastro-intestinal catarrh—that mother of poisons—should be forbidden. It may indeed be necessary to reduce the diet to milk, which we find to be the diet which lends itself least to the generation of toxins in the body. At the same time by the administration of such antiseptics as salicylate of bismuth, salol, benzo-naphthol, and occasional mercurials we shall try to keep the bowel as clean as possible. Again, knowing now the important part of the liver in neutralising toxins, whatever their source, we shall jealously watch the condition of this precious organ; and if necessary, by estimating the excretion of urea and so forth, we shall keep ourselves informed of its activity. The presence of albumin again will not be overlooked, but rather we shall be diligent in search for it from early periods of pregnancy, especially in primiparæ; and, not being bound by the mechanical hypothesis, we shall remember that albuminuria is by no means a constant forerunner or concomitant of eclampsia. If we have the opportunity of so doing we may test the toxicity of the urine on rabbits, but this is not of much direct help, as a free excretion of toxin is consistent with the retention of much more in a case in which the poison is very actively formed and to test the toxic co-efficient of the blood serum is not often convenient, even if we make the observation. Lapique, at a subsequent sitting of the Société de Biologie, reported that unfortunately he could not find that any diet controlled the toxo-genetic process, nor, indeed, could he find any law or concomitant variation in its oscillations. Happily, it seems beyond all doubt that in the last resort we can stop its formation at once by inducing premature labour, and in cases either of danger to life, or even of danger to an important organ such as the kidneys, we have this means in our hands. Chambrelent[8] stated that the toxic co-efficient of the urine in normal cases of pregnancy falls on delivery, almost at once, from 0·46 to 0·25.

In conclusion, I may be asked why these toxic accidents are prevalent in primiparas rather than in multiparas. Here is, so far as I know, the one argument of those who take the mechanical view of the causation of puerperal albuminuria and kidney disease. My reply to this difficulty is, I admit, a theoretical one. We know that the formation of the toxins is not peculiar to the primipara. On the contrary, the toxic co-efficient of the urine of the multiparous woman is no less than that of the primipara. Her immunity lies not in the prevention of the poisonous brew but in a protection of the system against its consequences. I believe that immunity is gained against the poison of pregnancy as it is against so many other toxins—as, for example, that of scarlet fever. Whether this lies in the brewing of an antitoxin, or in an education of the cells of the body, or, again, in a reinforcement of the capacities of the liver and kidneys enabling them to deal more summarily with the offending element, I cannot say. That primiparas do suffer in large proportion is well shown by Olshausen,[9] who reported that of 200 consecutive cases of eclampsia extending over five and a half years of his experience 74 per cent. were in primiparas. Of these, again, 25 5 were old primiparas. I repeat that the blood serum and urine are as hypertoxic in the multipara as in the primipara. We must surmise, then, that a protection is established during a first pregnancy of a like kind to that of a first attack of many infectious diseases.

Cambridge.

[8] Société de Biologie, Feb. 20th, 1892, vide la Semaine Médicale. 1892, No. 10.

[9] Volkmann's Sammlung Klinischer Vorträge, 1892, No. 39.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.—The annual court of governors of the City of London Hospital for Diseases of the Chest was held on Feb. 18th, Mr. Julian Hill, the treasurer, presiding. The report showed that during the past year there were 939 in-patients under treatment; there were also 16,166 out-patients, who made 68,231 attendances. It had been found necessary to raise a loan as the expenditure had exceeded the income by £2430.

SOME SMALL-POX STATISTICS.

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(*Concluded from p. 513.*)

The types of small-pox.—There is yet another test that can be applied to the alleged influence of vaccination upon small-pox analogous to that derived from a comparison of death-rates. It is that which concerns the *type* of the disease—a study that is further of value as affording opportunity for noting the remarkable modification in course and character that is often exhibited. But this very modification enhances the difficulty of instituting an exact comparison in this respect between the vaccinated and unvaccinated. Small-pox manifests itself in many ways. The peculiar character of the exanthem, the definite stages of its evolution, and the extent of its distribution afford a ready means of classifying cases according to their severity. In no other infective disease is so precise a division possible. Nevertheless, these various types, based on the character of the rash, do not precisely correspond with degrees of severity or gravity. In a class apart stand the truly hæmorrhagic or "malignant" cases, resembling the malignant forms of other specific fevers, where the intensity of the intoxication is such as to cause profound changes in blood and tissue, leading to speedy death, generally before any characteristic papulation has appeared. Or the typical rash may be in abeyance and, so far as the skin is concerned, the only lesions be a wide-spread erythematous or finely morbilliform rash, associated with abundant petechial hæmorrhages. Such cases ought to be clearly distinguished from the other—not infrequent—variety of "hæmorrhagic small-pox," where the hæmorrhage takes place into vesicles or pustules, and where, too, hæmorrhage may occur from mucous membranes, as in the malignant cases. Yet there is this difference between the two forms—the truly malignant is invariably, the secondarily hæmorrhagic not always, fatal. It is not difficult to discriminate four categories based upon the character of the rash, although obviously there are transition forms, which may be placed in one or other group according to the judgment of the observer. These types are—(1) the confluent; (2) the coherent (or semi-confluent); (3) the discrete; and (4) the mild or "sparse," to which the term "varioloid" is sometimes applied—a term just as applicable to any of the other forms that fail to undergo the typical evolution. These abortive cases in the confluent series are characterised by an arrest of the process at the stage of maturation, the desiccation takes place rapidly, without the secondary septic fever intervening, and the abundant staining left after the separation of the scabs is not followed by any marked "pitting." In the coherent class these "formes frustes" exhibit a similar abrupt arrest in evolution, the pustules not developing to the full, whilst in the discrete and mild types the process may be, and very often is, cut short at the papular stage, maturation entirely failing. Now, in both classes of subjects—vaccinated and unvaccinated alike—I have seen this arrest of the stages of the variolous exanthem occur, but with far less frequency in the latter than in the former. It may almost be said to be the rule in the vaccinated and the exception in the unvaccinated, but the term "modified" is hardly applicable to every case if this phrase be solely restricted to the influence of vaccination. Conversely, the eruption in the majority of the unvaccinated goes through all its stages, but in the vaccinated this "unmodified" course is mainly restricted to adults. I am unable to give statistical expression to this experience, and must therefore ignore it here, treating each of the various classes as if it was in its individual components of uniform severity, whereas, had it been possible to have further analysed them in respect to the occurrence or not of secondary fever, the arrest or not of the rash at various periods of its evolution, and the duration of the acute stage, a most instructive comparison might have been obtained. The clinical records of well organised small-pox hospitals can, however, supply this deficiency.

In considering the question of the proportionate distribution of the types of small-pox it will not be necessary to limit the cases to those upon which the attack rates were calculated, and I will therefore include in the analysis all the cases of small-pox known to me to have occurred in the three districts,

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excluding only those of which particulars as to age and type were not ascertained. This latter deduction made, there was a total of 3342 cases of small-pox—viz., Dewsbury, 1009, Leicester, 357, and Gloucester, 1976, which may be thus classified:—

TABLE IX.—*Types of Small-pox.*

—	Malignant and confluent.	Coherent and discrete.	Mild.	Total.
Dewsbury	272	466	281	1009
Leicester	96	134	127	357
Gloucester	852	619	505	1976
	1220	1209	913	3342

The greater proportionate severity of the cases in the Gloucester outbreak, already seen in its high mortality, is here again apparent, for in that place the "malignant and confluent" types furnished 43 per cent. of all attacked (there were actually seventy-three cases of *malignant* small-pox), at Dewsbury and at Leicester they supplied in each 27 per cent. On the other hand, at Leicester, where the mortality was exceptionally low, the "mild" cases were in excess of the proportions at either Dewsbury or Gloucester, being 35·6 per cent. of the whole number attacked, as compared with 27·8 and 25·6 per cent. in those towns respectively.

Age in relation to the type of small-pox.—Of the whole number 3342 persons attacked by small-pox 1031 (or about 31 per cent.) were under ten years of age, 1477 (or 42 per cent.) were at ages between ten and thirty years, and 894 (or 27 per cent.) were aged thirty years and upwards, figures which correspond with those previously given in respect to the excessive incidence of the disease upon young children. Even if allowance be made for a possibly greater liability on the part of the very young to suffer severely when attacked, it is yet remarkable how much above the ratio just given was that of the same age-period in the severer types of the disease. For of all the cases of "malignant and confluent" small-pox, 53 per cent. were in children under ten years of age, 27 per cent. in persons of from ten to thirty years, and 20 per cent. in those aged thirty years and upwards, whereas of "mild" small-pox only 12 per cent. are to be found in the youngest series, 57 per cent. in the next, and 31 per cent. in the oldest. These ratios of severity of attack, indeed, approximate more closely with the ratios of the vaccinated in these several age-periods, except that as age advances the proportion of the severer types amongst the vaccinated rises. For at ages under ten years the vaccinated were to the unvaccinated as 4 to 74, at ten to thirty years as 55 to 22, and at thirty years and upwards as 41 to 4. These ratios may be better contrasted when placed side by side in tabular form.

TABLE X. — *Proportionate (Percentage) Distribution of Small-pox Attacks.*

Age.	All classes.	Malignant and confluent.	Coherent and discrete.	Mild.	Vaccinated.	Unvaccinated.
Under 10 years	31	53	22	12	4	74
From 10 to 30 years	42	27	47	57	55	22
30 years and over...	27	20	31	31	41	4
	100	100	100	100	100	100

I propose now to consider the relative distribution of these types of small-pox in each of the three districts and at these several age-periods with more precise reference to their relationship to the vaccination condition of the attacked. For the sake of completeness it is necessary to deal with them from two points of view: first, to ascertain the proportionate distribution of these various types of the disease between the vaccinated and unvaccinated respectively; and second, to ascertain the proportion of the vaccinated and unvaccinated amongst the cases of each of the types of small-pox. In Tables XI. and XII. the actual numbers and the percentage rates are given for every place and age on these points, whilst Diagrams 1 and 2 illustrate the general results obtained by combining the figures derived from the three sources.

Proportionate distribution of types of small-pox between the vaccinated and unvaccinated (Table IX.).—It is impossible not to be struck by the fact that amongst the unvaccinated, at every period of life, there was a close correspondence between the proportions of the malignant and confluent attacks, the variations (on the whole series) not amounting to more than 6 per cent., the mean ratio of this type being 67 per cent.; and this correspondence is carried out also in respect to the other types of the disease amongst the unvaccinated, the mean for the mild cases being about 5 per cent. On the other hand, the vaccinated class shows less uniformity in the distribution, for the malignant and confluent cases range from 6 per cent. in subjects under ten years to 24 per cent. in those of thirty years and over, the mean being 17 per cent. The "mild" cases amongst the vaccinated form 72 per cent. of those of this class under ten, and diminish to 33 per cent. at ages thirty years and over, the mean being 41 per cent. Had these variations been merely accidental, and had vaccination no part in creating them, the distribution of the types would have been very different from what actually obtained. For of all the groups, the proportion of malignant and confluent cases was 36·5 per cent., of coherent and discrete 36·2, of mild 27·3 per cent., which would have yielded, had these proportions been equally maintained in each class, amongst the *vaccinated* (2056 persons) of malignant and confluent cases 751 instead of 354, of coherent and discrete 744 instead of 860, of mild 561 instead of 842; whilst the *unvaccinated* (1286 persons) should have yielded of malignant and confluent cases 469 instead of 866, of coherent and discrete 466 instead of 349, and of mild 351 instead of 71 cases.

The information supplied by Table XI. requires little to supplement it. In the age-period "under ten years" the very small figures of the vaccinated class rather diminish the value of the percentages, but it is at any rate of interest to note that at Leicester only two cases, and these of mild type, fall into this category, and that at Dewsbury and Gloucester together there were only five of malignant and confluent type out of 73 attacked, the percentage of mild cases being 74 and 65 for each of these places respectively. On the other hand, the proportion of mild attacks amongst the unvaccinated class was precisely the same at Dewsbury as at Leicester—namely, 9·3 per cent., and only half this figure at Gloucester, where, out of a total of 677 attacks, no fewer than 501 were of the malignant and confluent types. In the age-period "ten to thirty years" it is interesting to observe that the proportion of malignant and confluent cases amongst the vaccinated was much higher at Gloucester than elsewhere, and lowest at Leicester, which also yielded by far the highest ratio of mild attacks. On the other hand—and this again shows the comparative mildness of its outbreak—the proportion of malignant and confluent cases at Leicester amongst the unvaccinated was far below that which obtained either at Dewsbury or Gloucester. In the age-period "thirty years and upwards" the numbers of the unvaccinated are so few as to render the percentages of small value, nevertheless, there is the same predominance of severe cases in this class at each place. Amongst the vaccinated it will be observed that Gloucester again far exceeds Dewsbury or Leicester in the proportion of severe cases.

Proportionate distribution of the vaccinated and unvaccinated amongst the types of small-pox.—Viewing this question from the other side (Table XII.) it is seen that for the whole series the vaccinated were about 62 per cent. of the attacked, that amongst the malignant and confluent they constituted 29 per cent., amongst the coherent and discrete 71 per cent., and amongst the mild cases 92·2 per cent. The great preponderance of unvaccinated children in these communities (93 per cent. of all attacked under ten years) necessarily results in a large proportion of each type being of this class, yet in spite of the small numbers of the vaccinated at this age very nearly one-half of the "mild" attacks were in this category; although the differences between the three communities are very great, owing to these small numbers of the vaccinated attacks. In the other age-periods the smaller proportions of the unvaccinated do not affect the mean being considerably exceeded for the severe cases, and the ratio similarly lowered for the mild attacks, whilst as regards separate districts, the proportion of the vaccinated amongst the severe types is much higher at Gloucester than elsewhere. Thus, then, apart from

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TABLE XI., SHOWING DISTRIBUTION OF VARIOUS TYPES OF SMALL-POX BETWEEN THE VACCINATED AND UNVACCINATED.

1.—AT ALL AGES.

	All classes.				Vaccinated.				Unvaccinated.			
	D.	L.	G.	Total.	D.	L.	G.	Total.	D.	L.	G.	Total.
Malignant and confluent	272	96	852	1220	54	17	283	354	218	79	569	866
Coherent and discrete	456	134	619	1209	332	70	458	860	124	64	161	349
Mild	231	127	505	913	260	112	470	842	21	15	35	71
	1009	357	1976	3342	646	199	1211	2056	363	158	765	1286
Proportionate Distribution (Per Cent.).												
Malignant and confluent	26·9	26·8	43·1	**36·5**	8·3	8·5	23·3	**17·1**	60·0	50·0	74·4	**67·3**
Coherent and discrete	45·2	37·5	31·3	**36·2**	51·4	35·2	37·8	**47·9**	35·0	40·5	21·0	**27·1**
Mild	27·8	35·6	25·6	**27·3**	40·3	56·3	38·8	**41·0**	6·0	9·5	4·6	**5·5**

2. UNDER 10 YEARS.

Malignant and confluent	96	54	504	654	2	—	3	5	94	54	501	649
Coherent and discrete	72	43	151	266	10	—	6	16	62	43	145	250
Mild	51	12	48	111	35	2	17	54	16	10	31	57
	219	109	703	1031	47	2	26	75	172	107	677	956
Proportionate Distribution (Per Cent.).												
Malignant and confluent	43·8	49·5	71·6	**63·4**	4·3	—	11·5	**6·6**	54·6	50·5	74·0	**67·9**
Coherent and discrete	32·8	39·4	21·5	**25·8**	21·3	—	23·1	**21·4**	36·0	40·2	21·4	**25·1**
Mild	23·3	11·0	6·8	**10·8**	74·4	100·0	65·4	**72·0**	9·3	9·3	4·5	**6·0**

3.—FROM 10 TO 30 YEARS.

	All classes.				Vaccinated.				Unvaccinated.			
	D.	L.	G.	Total.	D.	L.	G.	Total.	D.	L.	G.	Total.
Malignant and confluent	130	28	169	**327**	23	5	118	**146**	107	23	51	**181**
Coherent and discrete	268	52	250	**570**	209	32	240	**481**	59	20	10	**89**
Mild	157	81	282	**520**	154	77	278	**509**	3	4	4	**11**
	555	161	701	**1417**	386	114	636	**1136**	169	47	65	**281**
Proportionate Distribution (Per Cent.).												
Malignant and confluent	23·5	17·4	24·1	**23·0**	6·0	4·5	18·5	**12·8**	63·3	48·9	78·4	**64·4**
Coherent and discrete	48·2	32·3	35·6	**40·3**	54·0	28·0	37·7	**42·4**	34·9	42·5	15·4	**31·7**
Mild	28·2	50·3	40·2	**36·7**	40·0	67·5	43·8	**44·8**	1·8	8·5	6·1	**3·9**

4.—30 YEARS AND OVER.

Malignant and confluent	46	14	179	239	29	12	162	203	17	2	17	36
Coherent and discrete	116	39	218	373	113	38	212	363	3	1	6	10
Mild	73	34	175	282	71	33	175	279	2	1	—	3
	235	87	572	894	213	83	549	845	22	4	23	49
Proportionate Distribution (Per Cent.).												
Malignant and confluent	19·5	16·1	31·3	**26·6**	13·6	14·4	29·5	**24·0**	77·2	50·0	73·9	**70·3**
Coherent and discrete	49·4	44·8	38·1	**41·9**	53·0	45·8	38·6	**43·0**	13·6	25·0	26·0	**20·5**
Mild	31·0	39·1	30·6	**31·5**	33·3	39·7	31·8	**33·0**	9·1	25·0	—	**6·1**

TABLE XII., SHOWING DISTRIBUTION OF THE VACCINATED AND UNVACCINATED AMONGST TYPES OF SMALL-POX.

1.—AT ALL AGES.

	All cases.				Malignant and confluent.				Coherent and discrete.				Mild.			
	D.	L.	G.	Total	D.	L.	G.	Total	D.	L.	G.	Total.	D.	L.	G.	Total.
Vaccinated	646	199	1211	2056	54	17	283	354	322	70	458	**860**	260	112	470	**842**
Unvaccinated	363	158	765	1286	218	79	569	866	124	64	161	**349**	21	15	35	**71**
	1009	357	1976	3342	272	96	852	1220	456	134	619	**1209**	281	127	505	**913**
Proportionate Distribution (Per Cent.).																
Vaccinated	64·0	55·7	61·2	**61·5**	19·8	17·7	33·2	**29·0**	72·8	52·2	74·0	**71·0**	92·5	88·2	93·0	**92·2**
Unvaccinated	36·0	44·3	38·8	**38·5**	80·2	82·3	66·8	**71·0**	27·2	47·8	26·0	**29·0**	7·5	11·8	7·0	**7·8**

2.—UNDER 10 YEARS.

Vaccinated	47	2	26	75	2	—	3	5	10	—	6	**16**	35	2	17	**54**
Unvaccinated	172	107	677	956	94	54	501	649	62	43	145	**250**	16	10	31	**57**
	219	109	703	1031	96	54	504	654	72	43	151	**266**	51	12	48	**111**
Proportionate Distribution (Per Cent.).																
Vaccinated	21·5	1·8	3·7	**7·2**	2·0	—	0·6	**0·8**	14·0	—	4·0	**6·0**	68·0	8·3	35·4	**48·6**
Unvaccinated	78·5	98·2	96·3	**92·8**	98·0	100·0	99·4	**99·2**	86·0	100·0	96·0	**94·0**	32·0	91·7	64·6	**51·4**

3.—FROM 10 TO 30 YEARS.

	All cases.				Malignant and confluent.				Coherent and discrete.				Mild.			
	D.	L.	G.	Total.	D.	L.	G.	Total.	D.	L.	G.	Total.	D.	L.	G.	Total
Vaccinated	386	114	636	1136	23	5	118	146	209	32	240	**481**	154	77	278	**509**
Unvaccinated	169	47	65	281	107	23	51	181	59	20	10	**89**	3	4	4	**11**
	555	161	701	1417	130	28	169	327	268	52	250	**570**	157	81	282	**520**
Proportionate Distribution (Per Cent.).																
Vaccinated	69·5	70·8	90·7	**80·2**	17·7	18·0	69·8	**44·6**	78·0	61·5	96·0	**84·4**	98·0	95·0	98·6	**97·8**
Unvaccinated	30·5	29·2	9·3	**19·8**	82·3	82·0	30·2	**55·4**	22·0	38·5	4·0	**15·6**	2·0	5·0	1·4	**2·2**

4.—30 YEARS AND OVER.

Vaccinated	213	83	549	845	29	12	162	203	113	38	212	**363**	71	33	175	**279**
Unvaccinated	22	4	23	49	17	2	17	36	3	1	6	**10**	2	1	—	**3**
	235	87	572	894	46	14	179	239	116	39	218	**373**	73	34	175	**282**
Proportionate Distribution (Per Cent.).																
Vaccinated	90·6	95·4	96·0	**94·5**	63·0	85·6	90·0	**85·0**	97·5	97·5	97·3	**97·3**	97·3	97·0	100·0	**98·9**
Unvaccinated	9·4	4·6	4·0	**5·5**	37·0	14·4	10·0	**15·0**	2·5	2·5	2·7	**2·7**	2·7	3·0	—	**1·1**

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the question of manifest modification of the form of the disease, a primary vaccination does undoubtedly exert an appreciable influence in determining the type from which the patient suffers, an influence most marked in early life, but not entirely in abeyance even in advanced age.

In conclusion, I may perhaps be permitted to add that throughout these several inquiries every endeavour was made to deal with the question without bias, and in collating the information to compile the statistics without any preconceptions of their bearing on the main problem. The figures are small indeed compared with those which have been furnished from all quarters upon the question, but at any rate no pains have been wanting to avoid the fallacies which are liable to vitiate returns of this kind. Perhaps the point of chiefest importance in connexion with them is that they are based on small-pox outbreaks in comparatively "unvaccinated" communities, where there could seldom be any doubt as to the fact of non-vaccination or as to this being due to the subject being of delicate constitution. Moreover, on the other side it must not be forgotten that the class of the "vaccinated" is a heterogeneous one, comprising individuals in whom little or no trace of vaccination remained or where it had obviously been very imperfectly performed. I do not find myself able to offer any reliable data upon the attack-rates of the re-vaccinated, who formed, however, a very small contingent of those attacked by small-pox.

DIAGRAM 1.

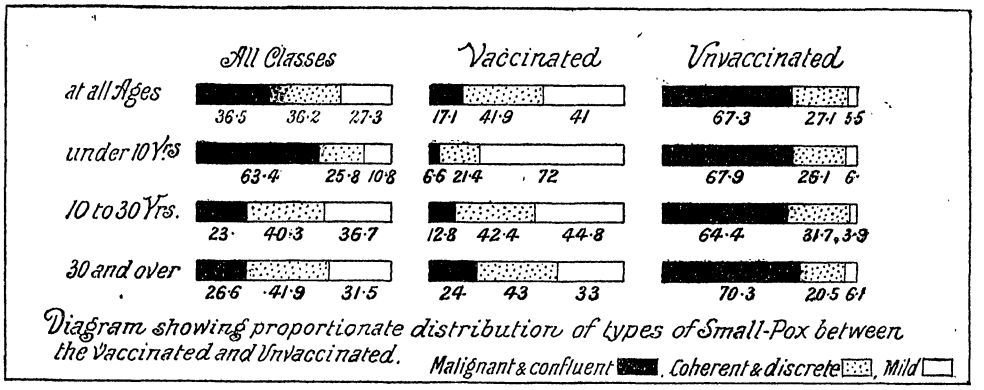
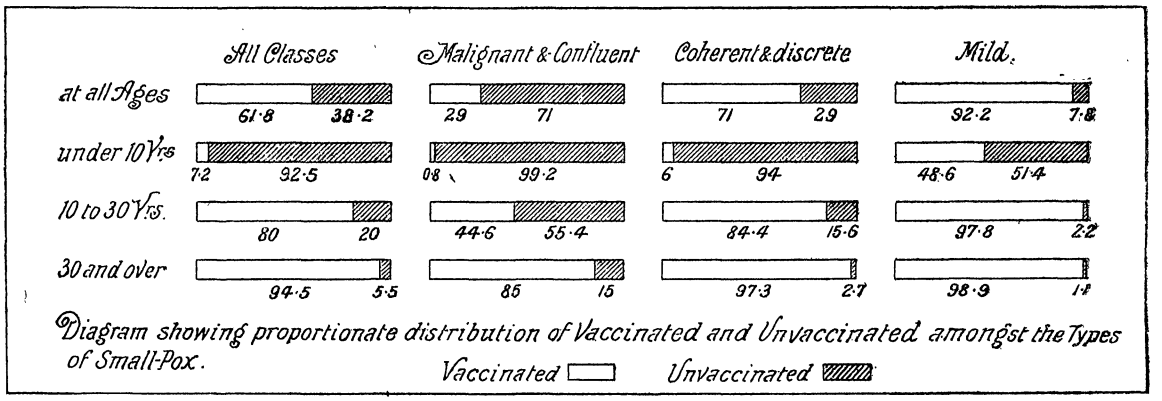


DIAGRAM 2.



Queen Anne-street, W.

CHRONIC INTERSTITIAL NEPHRITIS IN CHILDHOOD.[1]

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WHEN an adult aged upwards of forty years complains of headache and vomiting, drowsiness, languor and wasting, and on examination we find him sallow, cachectic-looking, and emaciated, the pulse hard, the heart hypertrophied, the urine of low specific gravity and increased in quantity, with or without a trace of albumin, we do not usually hesitate to diagnose granular kidney, although there may never be a sign of dropsy. Then if he dies comatose after a series of convulsions or gets a large cerebral hæmorrhage, the course of the case is not unusual. It is too common to be worth recording. But it is otherwise when young children suffer from similar symptoms. It is true that granular kidney is no longer regarded as essentially a disease of old age, but all agree that it is excessively rare under twenty.

I have collected seven cases of children aged between five and fourteen years who succumbed to chronic interstitial nephritis. In all of these the diagnosis was confirmed by post-mortem examination. Two of these, a girl and boy aged twelve and fourteen years, are recorded by Dr. Dickinson.[2] Dr. Goodhart quotes two from Dr. Ashby of Manchester, both girls, aged ten years and eleven and three-quarter years respectively. He also mentions a boy aged six years who died from the complaint.[3] Dr. W. H. Barlow[4] has related very fully and completely the history of a girl aged five years in whom typically granular kidneys were found after death. Finally I have myself met with a little girl, aged seven years, who suffered from characteristic symptoms of granular kidney during life and in whom the lesions of interstitial nephritis were disclosed by post-mortem examination. A more

[1] A paper read before the Harveian Society of London on Nov. 19th, 1896.

[2] Albuminuria, second edition, p. 194.

[3] Keating's Encyclopædia of Children's Diseases, p. 541.

[4] THE LANCET, Aug 1st, 1874, p. 151.

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extended research into the literature of the subject would doubtless reveal additional numbers, but those collected are sufficient to show the general nature of the symptoms and physical signs which may be expected in the course of the disease. I shall supplement them by impressions drawn from other cases which, being imperfect, I shall not mention in detail.

In this paper the so-called granular kidney is regarded as the product of interstitial nephritis in its last stage. In some of the cases in childhood to which reference is made the kidneys in all respects answered to the classical description of small, red, granular or contracted kidney. In others, as in my own, they were only on their way to become granular or contracted. The process is, I believe, the same in all. It consists in small round cell infiltration of the renal stroma, apparently beginning in the cortex, and spreading in the form of bands towards the centre of the organ. It chiefly involves the glomeruli and blood-vessels at first. In time these bands of cellular infiltration become converted into fibroid tissue which contracts and thus causes peculiar distortion and shapelessness of the kidneys. The capsules gradually become adherent, and sometimes the inflammation spreads beyond into the perinephritic cellular tissue, and may involve the suprarenal capsules, perhaps thus causing definite symptoms resembling those of Addison's disease. The entire process is extremely gradual, and affects successive portions of the kidney until the whole is involved, and the organ becomes generally contracted, or granular. Patches of recent cellular infiltration may be seen side by side with contracting areas of fibrosis. The effects on the secreting structures of the kidney are secondary to infiltration, and subsequent contraction of their stroma. The tubules become narrowed or strangulated and may form small cysts. Their epithelium undergoes fatty or granular degeneration. The Malpighian tufts shrink, and are converted into hyaline or amorphous masses, whilst their capsules are thickened. Parenchymatous changes are always less apparent than interstitial. The walls of the blood-vessels share in the general enlargement which affects those of the arterioles throughout the body. I shall refer to this more fully in dealing with cardio-vascular hypertrophy. Finally, the entire process is extremely insidious and generally slow. The duration of the symptoms affords no clue to that of the disease. There are reasons for believing that interstitial nephritis may commence in early childhood, or even infancy, and not prove fatal for many years. The time at which it causes death will depend on the speed and the degree with which successive portions of the kidney become affected; and also, I believe, on the extent to which cardio-vascular compensation occurs and is maintained.[5]

PHYSICAL SIGNS AND SYMPTOMS.

The most striking physical signs which attend the disease are :—1. Wasting. 2. Dryness, absence of perspiration, coarseness, inelasticity, and pigmentation of the skin, together with anæmia. 3. High arterial tension and cardio-vascular hypertrophy.

The chief symptoms are :—1. Cerebral, including headache, vertigo, vomiting, and convulsions. Tetany and visual disturbances, such as amaurosis or diplopia, have been noted and also cerebral hæmorrhage in two cases.[6] 2. Gastro-intestinal, consisting of easily excited attacks of vomiting and diarrhœa, not necessarily uræmic. Sometimes there may be obstinate constipation or constipation alternating with diarrhœa, epigastric or abdominal pain. 3. Urinary symptoms including polyuria, often associated with thirst, and sometimes with enuresis. Low specific gravity of urine, albuminuria, and hæmaturia. 4. Pulmonary symptoms such as dyspnœa, bronchial catarrh, and those of pulmonary œdema have been noted. Asthma as in adults may possibly occur. 5. Cardiac symptoms, such as præcordial pain or distress with dyspnœa may arise. They do not appear to be so marked as in adults. 6. Dropsy is rarely met with in cases of interstitial nephritis. Yet sometimes slight general anasarca may occur, seldom lasting more than a day or two. It usually is noticed in connexion with an attack of headache or vomiting, and is associated with scanty, smoky, and albuminous urine containing blood casts. Such attacks might be considered to mark the onset of the mischief, but the general appearance and condition of the patient show that the disease is of long standing, although the dropsy and hæmaturia have been the first indication of illness.

Wasting.—The patients are generally stunted, undersized, and wizened. The wasting is usually of long standing and often dates from some illness in infancy or early childhood associated with vomiting, diarrhœa, and great prostration. Wasting, when of long standing, is apt to be regarded as constitutional, or as the patients' normal condition. Advice is not sought because they are thin, but because they easily take cold or bronchitis and suspicions of phthisis have been aroused, or on account of headaches with or without attacks of diarrhœa or vomiting. More rarely we see them because they are always thirsty, pass large quantities of urine and are supposed to be diabetics. (Diabetes, by the way, like "consumptive bowels," is more readily suspected by the public than by medical men.) With polyuria and thirst there may be incontinence of urine, and this is the first symptom which has attracted attention. Wasting is from the first associated with a peculiar dryness and deficient perspiration of the skin, which later on becomes inelastic, and when pinched up, tends to remain in folds and wrinkles. This inelasticity is a most unfavourable sign. Dr. Eustace Smith has drawn attention to the condition which he rightly regards as significant of renal mischief in infants and young children. It is also met with in adults who are suffering from interstitial nephritis. Commonly the gums and conjunctivæ are singularly pale, but there is general capillary congestion which produces a dusky flush in the face and masks the anæmia.

Pigmentation.—With dryness, coarseness, absence of perspiration, and eventually inelasticity of the skin there is often pigmentation or discolouration, varying from mere sallowness to marked bronzing usually general in distribution, sometimes intensified in patches. Pigmentation is a physical sign which, although alluded to in text-books, has not, I think, received the attention it deserves. Bartels says: "In this disease [granular nephritis] the skin not infrequently assumes a dirty faded colour." Dickinson mentions that one of his patients exhibited an appearance which he describes as "pallor luteus." Barlow was struck by the "brownish yellow" discolouration of the skin, contrasting with the steely whiteness of the conjunctivæ which his patient presented. My first patient, who died, looked dirty, though not actually so. Her general appearance was that of an anæmic person who had been much browned by the sun. Here and there the skin assumed a purplish hue due to capillary engorgement. Other cases seen since have led me to regard this pigmented appearance as a great aid in the diagnosis of interstitial nephritis. On several occasions I have been led by this alone to test the urine of children and usually it has been found in such cases to be slightly albuminous and of low specific gravity. Further examination has also brought to light other symptoms and signs of the disease. The pigmentation in many respects strongly resembles that of Addison's disease, but it has not been found to affect the mucous membrane, neither have the "sepia spots" and melanosis of old scars, characteristic of Addison's disease, been observed. It is usually more marked about the abdomen and flanks than elsewhere, but sometimes is seen to excess in the folds of the axillæ and groins. Within the last four years I have met with three girls, aged nine, ten, and eleven years respectively, who all showed marked pigmentation of the body generally. In two of them a diagnosis of Addison's disease had been actually given. But in all three it seems more likely that interstitial nephritis was the primary condition, for two of them had fairly well-marked signs of cardio-vascular hypertrophy and slight albuminuria, whilst the urine of the third is habitually of low specific gravity and its amount is considerably above normal. The duration of the pigmentation—eight, ten, and four years—the absence of perspiration and presence of a dry, coarse skin are also against the diagnosis of Addison's disease in all three cases. Two of these are at present under observation; the history of the third cannot, unfortunately, be traced. Such pigmentation occurs in adults also and may lead to confusion.

I have post-mortem notes on two women, both aged thirty-six years, who died in the North-West London Hospital. They were both under the care of my colleague, Dr. Harry Campbell. My notes state that both showed marked general umber-brown discolouration of the skin, not more

[5] The pathology as given above is not in accordance with the more modern views that granular kidney is the product of parenchymatous atrophy rather than of interstitial inflammation. A discussion as to the correctness of either theory would be out of place in a paper which deals with diagnosis and treatment rather than morbid anatomy.

[6] Filatoff records a third in a child aged eleven years. Emmet Holt, Diseases of Infancy, 1897, p. 621.

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excessive about the neck, axillæ, and inguinal folds than elsewhere. Both bodies were much emaciated, but not dropsical. The kidneys in both instances showed most advanced granular degeneration. The suprarenal capsules appeared normal in one case, but in the other the right adrenal was firmly adherent to the under surface of the liver. In the latter case the heart showed no signs of hypertrophy, neither were the arteries thickened, but in the former cardio-vascular hypertrophy was very considerable. Dr. Campbell tells me in a letter concerning them: "The first case I was actually inclined to diagnose as Addison's disease on account of the pigmentation, anæmia, prostration, and vomiting (which latter was, as it turned out, uræmic). I did not suspect granular kidney in the second case until the albumin was discovered, for the cardio-vascular changes were not obtrusive. I can recall two other cases of granular kidney recently seen in which the pigmentation was well marked. These patients were well past the middle age, and there could be no mistake about the diagnosis."

I would draw attention to the fact that children often suffer from severe enteritis at the commencement of their troubles. I shall presently mention cases which seem to show that acute interstitial nephritis may occur in infancy with mainly gastro-intestinal symptoms, and shall suggest that this may end in the more chronic varieties of granular kidney.

The cause of pigmentation in interstitial nephritis is sometimes probably interference with the functions of the suprarenal bodies by the morbid processes affecting the adjoining kidneys. It is true that with the exception of Dr. Campbell's case to which I have alluded no mention is made of the suprarenal capsules in the fatal cases which I have collected, and the presumption is that they appeared healthy. But in my own fatal case there was considerable inflammatory matting noticed about the peri-nephritic cellular tissue. It is possible that although the adrenals themselves looked healthy yet their vessels and lymphatics may have been involved in the inflamed tissues around, and thus the organs may have been rendered functionless. Dr. Rolleston [7] suggests a similar explanation of cases of Addison's disease, in which the adrenals have been healthy, whilst the sympathetic or semilunar ganglia have been involved in adhesions or a new growth, such cases having been held to support the sympathetic origin of Addison's disease. Dr. Rolleston's explanation may account for pigmentation in some cases of interstitial nephritis; or it may be that general deterioration of the blood in interstitial nephritis tells on the adrenals as on other organs and interferes with their functions. In cases of long-standing exophthalmic goitre the skin often becomes deeply pigmented as in Addison's disease. In the museum of St. Bartholomew's Hospital there is a coloured picture of a female, labelled "Addison's and Graves's disease." One of the most marked degrees of pigmentation that I have ever seen was in a woman, aged about sixty years, whom I visited in consultation with Dr. Rountree of Camden Town. She was dying from heart failure consequent on Graves's disease of many years' duration. She died shortly afterwards, but unfortunately a post-mortem examination was not allowed. The causation of pigmentation in Graves's disease is as obscure as in interstitial nephritis, pregnancy, and, one may add, in Addison's disease itself. Morbid conditions of the abdominal sympathetic will not alone account for it because they are not constant. Perhaps when we have said that toxæmia is the result of disease affecting the thyroid gland, the suprarenals, and the kidneys, and that such toxæmia in some manner interferes with the disposal of pigment by the "carrier" cells, we have admitted as much as our present knowledge of the subject allows.

The causes of pigmentation cannot be fully discussed here; the point on which stress is laid is that pigmentation practically indistinguishable from that of Addison's disease is a most important diagnostic sign of interstitial nephritis in both old and young, although not existing invariably.

Cardio-vascular conditions.—In all the fatal cases but one marked hypertrophy of the heart was noted; in the remaining one the heart is said to have been found widely dilated after death. Probably the dilatation here was secondary to hypertrophy. In an unfinished case of Dr. Goodhart's it is stated that the heart and vessels were normal, and also in one of Dr. Campbell's cases to which I have alluded. Thickening of the vessels in the kidneys and elsewhere was observed in several of the fatal cases. Though it is not mentioned in all yet it is almost certain that the condition would have been found if looked for. Cardio-vascular hypertrophy is, therefore, in children as in adults, a most useful indication of interstitial nephritis. Increase of pulse-tension during life is not recorded except in my own cases, where it attracted attention from the first. Yet there can be little doubt that when the heart is found hypertrophied and the vessels thick after death there must have been high pulse-tension at one time or another during life. Possibly it escaped observation, as in most of the fatal cases the diagnosis of interstitial nephritis was not completed during life. One's estimation of the hardness of a pulse is apt to depend to some extent on the knowledge that albuminuria is present. If albumin is found the nicety of one's perception appears to be increased, and a pulse is recognised as hard which was previously not accounted so. I do not mean to imply by this that the high tension is imaginary, but that it may be unrecognised unless one is prepared to find it. In young children the pulse-tension may in some cases be difficult to gauge owing to the smallness of the vessel, but, as a rule there is no such difficulty. As regards the physical signs of cardiac hypertrophy, by the time children come under observation, increase in size of the left ventricle is usually obvious; but in earlier stages the hypertrophy is only manifest after repeated examination. It should be remembered that in young children the apex beat is normally nearer the nipple than in adults. Even when increase in cardiac dulness cannot be made out, the heaving, forcible impulse, dull, heavy first sound, and the accentuation or re-duplication of the second sound point to incipient hypertrophy. In later stages temporary bruits are often heard over various parts of the heart. Sometimes they are merely hæmic, but at others they suggest temporary incompetence of the various valves and indicate failure of cardiac compensation.

For practical purposes signs of cardio-vascular hypertrophy may be regarded as constant in children suffering from this disease. But there may be apparent exceptions to this rule. For instance, a heart which is naturally smaller than the average may become very considerably hypertrophied and yet remain well within the limits of normal weight and thickness. I have notes of a necropsy on an adult female whose heart weighed only three ounces. Except that the great vessels looked disproportionately large the organ seemed in every way healthy. Such a heart might have increased its bulk fourfold and yet would not have been regarded as hypertrophied. A similar explanation may apply to cases in which the walls of the vessels do not appear to be unduly thickened.

Absence of dropsy, its causation and connexion with cardio-vascular hypertrophy and high arterial tension.—In all the fatal cases of interstitial nephritis which I have mentioned, with one exception, dropsy was said to be entirely absent; in the exceptional case it only occurred shortly before death and was apparently limited in extent. In an adult one is quite prepared to suspect the existence of nephritis, although there may not be the slightest sign of anasarca. But in a child all will agree that the outward and visible sign of nephritis is dropsy, and if this sign is absent one does not readily think of nephritis, although the symptoms may be precisely similar to those of the adult. Dropsy was absent in all but one of these cases, and it is within the scope of this paper to inquire why. As to the causation of dropsy, it is sufficient to say that the recent researches of Dr. Starling [8] have done much to confirm the view that dropsy depends on (1) difference between intra-capillary and extra-capillary blood pressure; and (2) on increased permeability of the capillary walls. In cardiac dropsy it is probable that increase of intra-capillary blood pressure, due to cardiac incompetence and subsequent venous engorgement, is the prominent factor. In renal dropsy it seems likely that increased permeability of the capillary walls due to lowering of their vitality and nutrition by the circulation of impure blood is the primary cause; whilst if such permeability is increased it is obvious that any excess of intra-capillary pressure will favour transudation or dropsy, and that it will be further favoured by stagnation of blood within the capillaries. To counteract the effects of increased permeability of the capillary walls intra-capillary pressure must therefore be kept low. Intra-capillary blood pressure may be lowered by general constriction of arterioles, the

[7] Goulstonian Lectures (1895), THE LANCET, March 23rd and 30th, 1895.

[8] The Arris and Gale Lectures (1896), THE LANCET, May 9th, 16th, and 23rd, 1996.

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result of which will be to deliver less blood in a given time to the capillary area than usual. But such constriction will produce an enormous increase of labour for the heart. If the heart fails to meet it and becomes incompetent or dilated, backward pressure must occur in the veins; this will spread to the capillaries, and, given the fact that the permeability of their walls is increased, one may expect increased transudation or dropsy. Therefore, constriction of the arterioles alone is not sufficient to lower intra-capillary pressure by reducing the blood supply unless the heart remains competent. But, supposing the heart by becoming hypertrophied is able to meet the increased labour thrown upon it by constriction of the arterioles in front, the result will be that the blood supply from the arterioles to the capillaries will be reduced in volume. Its velocity will also be increased, for Bayliss and Starling[9] have shown that the result of general constriction of arterioles is the equivalent of plethora, whilst Cohnheim has demonstrated that in plethora the velocity of the blood is largely increased. It seems reasonable to suppose that transudation through damaged capillary walls will be lessened by the delivery of smaller volumes of blood at a higher rate of speed than normal into the capillary area, and also that stagnation in the capillaries which must naturally favour the occurrence of dropsy will thereby be prevented. In interstitial nephritis constriction of arterioles and increased force of cardiac action undoubtedly exist, and it may be that the absence of dropsy in this disease is due to the increase in velocity and diminution in volume of blood delivered to the capillary area thus produced.

In other words, cardio-vascular hypertrophy and high arterial tension are the direct antagonists of dropsy.[10] The clinical evidence of this is (1) that the initial dropsy of renal disease tends to decrease *pari passu* with increase of pulse-tension and hypertrophy of the left ventricle;[11] (2) that if the arterial tension remains low dropsy increases (Sansom); and (3) if, whilst pulse tension remains high, the heart does not become hypertrophied but dilated with incompetent valves, dropsy is again the result.

But what are the causes of cardio-vascular hypertrophy itself? The left ventricle enlarges because it has increased work to do owing to obstruction in front. The obstruction must to some extent occur in the capillaries if it be true that their walls are damaged by the circulation of impure blood. This is Dickinson's view. But the late Sir George Johnson always held that the obstruction was due to spasmodic contraction of the muscular walls of the arterioles and not to capillary resistance. It is obvious that such spasmodic contraction would produce high arterial tension and throw increased work on the heart, which accordingly would become hypertrophied. But what is the evidence that the arterioles are in a state of spasmodic contraction in nephritis? It is (1) that high arterial tension can be lowered in early cases where it exists by nitrite of amyl (Sir W. Broadbent); and (2) also that the muscular walls of the arterioles are found hypertrophied after death. This hypermyotrophy can only depend on the constant exercise of the muscular function of arterioles, which is to contract. Discrepancy as to the existence of hypermyotrophy of the arterioles may be explained by the fact that the muscular coats of vessels require prolonged staining before showing their characteristic structure. (For this observation I am indebted to Dr. T. Savill.) Increase of the fibrous tissues of vessels, which is also present but less marked than that of the muscular coats, may perhaps depend on congestion of the vasa vasorum. Few at the present day accept the view of Gull and Sutton that granular kidney is merely a part of a general arterio-capillary fibrosis affecting viscera and vessels alike. On the other hand, it is not disputed that such general arterio-capillary fibrosis may occur as part of senile degeneration. There is, therefore, evidence which warrants the belief that high arterial tension is due largely to muscular contraction of the arterioles, and that this leads both to hypertrophy of the left ventricle and hypertrophy of the muscular arterioles themselves; whilst it has been maintained that muscular contraction of the arterioles combined with increased force of cardiac action will have the effect of delivering small quantities of blood at a higher rate of speed to the capillary area, and thus transudation through unduly permeable capillary walls or dropsy will be lessened and intra-capillary pressure reduced. Thus cardio-vascular hypertrophy is nature's method of relieving and preventing dropsy. When it fails to occur or to be maintained dropsy is the result.

Why is dropsy early and extreme in parenchymatous nephritis, whilst it is late and usually insignificant or absent in interstitial nephritis? I take it that these differences depend chiefly on the natures of the two morbid processes. In parenchymatous nephritis the secreting portions rather than the stroma of the organ are affected, and the whole at once rather than successive portions. This must lead to enormous accumulation of poisons in the blood with corresponding damage to, and increase of permeability of, the capillary walls. But this is not all. High arterial tension prevails as much in parenchymatous as in interstitial nephritis. But in the former the resulting strain on the heart occurs before it has time to acquire sufficient force to meet it. As Sir W. Broadbent has pointed out, the cardiac phenomena of acute parenchymatous nephritis are those of acute dilatation.[12] Hence the resultant dropsy in early parenchymatous nephritis is partly cardiac, as is the case in its later stages. In interstitial nephritis, on the other hand, the secreting structure is only involved slowly, secondarily, and by degrees. Elimination is carried on for a lengthened period whilst polyuria prevails. Yet the blood must be impure and the arterioles resist its passage by becoming constricted. But the resistance is gradual and insidious as is the rest of the morbid process. The heart has time to acquire sufficient strength and becomes by degrees hypertrophied in order to meet the increasing labour thrown upon it. Finally, as in parenchymatous nephritis, the heart gives way, for compensation cannot go on for ever, and dropsy of the true cardiac type is the result.

Summary.—1. Toxæmia is present in all forms of nephritis. 2. The poison irritates and lowers the nutrition, thereby increasing the permeability of the capillary walls. 3. It also causes spasmodic constriction of the arterioles either by direct irritation or through the vaso-motor centres. 4. The result of spasmodic constriction of the arterioles is: (*a*) to reduce the capillary blood supply; and (*b*) to produce hypermyotrophy of the arterioles and usually in time of the heart. 5. If the heart is able to meet the labour thrown upon it, the velocity of the blood stream into the capillaries is increased, whilst its volume is lessened by constriction of the arterioles. These conditions of the circulation will tend to lessen transudation through the capillary walls, lower intra-capillary blood pressure, and therefore control dropsy. 6. If the heart fails to meet the demand, whether in early or later stages of renal disease, dropsy is maintained in the one case and produced in the other.

(*To be continued.*)

[9] Journal of Physiology, April 17th, 1894.

[10] Cf. W. H. Dickinson, Baillie Lectures, THE LANCET, July 20th, 1895, p. 139.

[11] Cf. Proceedings of the Royal Medical and Chirurgical Society, 1892, p. 113, et seq.

THREE CASES ILLUSTRATING THE IMPORTANCE OF A MINOR POINT IN THE ANATOMY OF FEMORAL HERNIA.

BY LEONARD MOLLOY, M.A., M.D. DUB,
HONORARY SURGEON TO THE BLACKPOOL HOSPITAL.

CASE 1. — The patient was a woman, aged seventy years, suffering from abdominal distress, uncontrollable vomiting, and consequent prostration. In her right groin I found a tumour the size of a pigeon's egg, and this I learned had appeared three days previously during a ride over bad roads in a landau. From the symptoms and the position of the tumour I concluded I had to deal with a strangulated femoral hernia, although on palpation and percussion the swelling did not present quite the usual features. It was not clearly tympanitic and felt doughy and solid over the more prominent portion, but on grasping that part of it which lay deep over the femoral ring a slight impulse could be felt on coughing. Some doubt was cast upon the correctness of the diagnosis by

[12] Transactions of the Royal Medical and Chirurgical Society, 1892, p. 123.

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one of the two gentlemen whom I asked to assist me, but feeling confident I was right I decided to chloroform the patient and, if taxis failed, to cut down on the tumour forthwith. On doing this latter the main part of the swelling was seen to consist of an enlarged lymphatic gland, and my doubtful colleague was still more inclined to think I was on the wrong track. However, on drawing the gland aside I was able to display a small, deeply congested knuckle of intestine tightly gripped in the femoral ring; this, after examination, was returned to the abdominal cavity, and the operation was completed in the usual way.

CASE 2.—A woman, aged fifty-three years, had an acutely tender swelling in her right groin, which had appeared a few days previously; that portion of the tumour which was nearest the femoral ring was tympanitic, had a slight impulse on coughing and all the characters of a hernia, but the more prominent and tender portion was felt to be a solid body. Owing to the extreme tenderness reduction of the hernia was impossible without an anæsthetic, but on administering chloroform the bulk of the swelling was made to disappear with a characteristic gurgle, leaving, however, a tumour the size of a walnut still in the groin. On passing the finger underneath and so behind this the dilated femoral canal could be distinctly felt. Rest in bed and the application of anodynes restored the patient to her normal condition.

CASE 3.—A man, while endeavouring to close a heavy sliding door which had jammed, felt a pain in his left groin and a tender swelling appeared there. I saw the patient four days afterwards. He had on the left side over the femoral ring a tumour the size of a large walnut, extremely tender, but the skin over it in nowise inflamed; it was not tympanitic, had no impulse on coughing, and to the touch it appeared solid. It could be lifted away from the deeper structures by pushing the finger behind it, and by this manœuvre the femoral canal could be explored and was found to be distinctly dilated, and on pressing the finger into it, when the patient coughed, a knuckle of intestine could be felt to press into it and to strike against the finger-tip. Rest in bed and the application of belladonna extract and glycerine caused the tenderness to disappear and the tumour to shrink. Twelve years previously this man had been operated upon for a strangulated hernia on the right side. From the appearance of the old operation wound I should judge this hernia to have been femoral.

The interest in the foregoing cases lies in the fact that the disturbing element in the diagnosis in each instance was the enlargement of that lymphatic gland which Quain[1] says is constantly placed in the crural ring, which Gray[2] states occasionally fills up the interval between the femoral vein and the inner wall of the sheath, and by which Ellis[3] says the same interval is filled. With reference to this point Erichsen[4] speaks of the canal as usually containing a gland or two, while Treves[5] draws attention to the fact that an enlarged gland over or about the hernial sac often complicates matters. What the lymph supply of the gland closing the inner compartment of the crural sheath is seems to be uncertain; the efferent vessels of some of the superficial inguinal glands are said to pass through it, but it seems probable that in Cases 1 and 2 the enlargement was due to the irritation set up by the presence of a hernia in the canal. In Case 3 I am unable to account for it, seeing there was no lesion in the region supplying either set of superficial inguinal glands, except by supposing that before I saw the patient the knuckle of intestine which I could feel at the abdominal end of the canal had come down during his violent effort to close the door and given rise to sufficient disturbance of the surrounding tissues to cause the gland to enlarge, but had subsequently spontaneously become reduced, or that as a result of the effort one of the deep muscles in the region supplying the gland had been injured.

Blackpool.

[1] Quain's Anatomy, ninth edition, vol. i., p. 530.
[2] Gray's Anatomy, tenth edition, p. 779.
[3] Ellis's Demonstrations of Anatomy, ninth edition, p. 464.
[4] Erichsen's Science and Art of Surgery, sixth edition, vol. ii., p. 816.
[5] Treves's System of Surgery, vol. ii., p. 726.

THE Manchester Medico-Ethical Association has arranged for a special debate on Hospital Reform, to take place on Friday, March 26th.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

COMPLETE LATERAL DISLOCATION OF FOREARM.

BY EDWARD SUTCLIFF, M.D., C.M. ABERD.

THIS being, I believe, a rare form of injury, the following notes, jotted down at the time, of a case which occurred a short time back in my practice may be of some interest. A stonemason, a strong and muscular man, but of spare habit, slipped and fell heavily on his right elbow and forearm, the inside of the former striking the curbstone. He was brought to my surgery within a very few minutes of the occurrence of the accident and before any swelling of the injured joint had supervened. Owing to this and to the fact that he carried no superfluous flesh the diagnosis was remarkably easy and clear. On examination the forearm was found to be somewhat flexed and semi-pronate, extreme deformity being produced by the excessive widening of the joint. The internal condyle was very prominent, almost protruding through the tightly-stretched skin, and the whole contour of the posterior and inferior portion of the trochlear surface of the humerus could be distinctly mapped out, giving the impression that there was little but skin and fascia between the finger and the surface of the bone. On the outer side of the joint the margin of the great sigmoid cavity was well defined and the fingers could be well dipped into its hollow. On rotating the forearm, which could be readily done to a moderate extent, the head of the radius was felt revolving in the orbicular ligament. By the aid of chloroform, making extension round my knee, and manipulating the joint, reduction was obtained without much difficulty. I had an opportunity of examining the joint a few weeks since, it being then six months after the receipt of the injury, and I found it normal in every respect. Motion was perfect, and the patient declared that he felt no inconvenience whatever in the performance of his accustomed work.

Torrington.

A CASE OF ANGINA LUDOVICI OCCURRING IN THE ACUTE STAGE OF SYPHILIS.

BY P. CLENNELL FENWICK, M.B. LOND., M.R.C.S. ENG., L.R.C.S. LOND.,
LATE SURGEON TO THE NEW ZEALAND SHIPPING COMPANY.

A FIREMAN, aged forty-eight years, was suddenly seized with pain in the head and vomiting, his temperature being 105·6° F., falling that night to 99·8°. There was a well-marked syphilitic rash all over the abdomen and a hard chancre on the penis. The temperature continued hectic till the third day, when the patient was apparently nearly well, complaining only of numbness in the limbs and weakness in the legs. There were no signs of typhoid fever or any pulmonary trouble. On the morning of the ninth day I was called at 7 A.M. by the night watchman, who stated that the patient's face had begun to swell at 5 A.M. I found him almost unrecognisable, the face and neck forming one hard, swollen mass extending from the sternum to the malar bones. There was no fluctuation and no emphysematous crackling in the tissues. The jaw was fixed and the tongue was pressed against the roof of the mouth, both speech and swallowing being impossible. The pulse was 140 and the temperature normal. The neck was packed in ice and stimulants were administered as far as possible. At 9 A.M. the patient was cyanosed, and could scarcely breathe. Tracheotomy was performed with great difficulty owing to great swelling of the tissues and the rolling of the vessel. The operation afforded great relief, but an hour later the increased swelling of the tissues forced the tube out of the trachea, and it was with great difficulty replaced. This accident happened again, and it was then found impossible to replace the tube, but the loss of blood having apparently relieved the œdema and congestion of the

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trachea and larynx the patient was able to breathe naturally, though with great difficulty. He finally grew weaker and died at midnight.

The question is, was this a true case of angina Ludovici? I have searched the literature on this subject as far as possible and can find no mention of syphilis as one of the causes of this disease. In this case it was so markedly present that I could not help attributing the angina to this cause. It was quite impossible to make the lateral incisions in the swelling, as some writers recommend, but the median incision for the tracheotomy relieved him greatly. No post-mortem examination was possible. There was no history of insect bite, or wound on the neck, nor had the patient been working in the docks. Any bacteriological examination was of course impossible owing to the absence of staining reagents and even of a microscope.

Harley-street, W.

A CASE OF QUADRUPLETS.

BY EDWIN T. GOODE, L.R.C.S., L.R.C.P. IREL.

THE rarity of the occurrence of quadruple births encourages me to bring before the profession a few details of a case I have just attended. It was unfortunate that I was not called in earlier to the case, but the patient resided in a village two miles away and her mother hoped to be able to manage without the aid of a medical man.

On Jan. 22nd, 1897, the woman gave birth to two children, her mother being in attendance, and as the "afterbirth" did not come away satisfactorily I was sent for the next morning. On my arrival fifteen hours after the birth of the first two children I found the mother considerably blanched from loss of blood, and on examination a bag of membranes presented, which on rupture was followed by the birth of the third child. Again examining a fourth child could be felt, and this was born in due course. There were three distinct placentæ and four cords. The presentations were—the first a vertex, the second a footling, and the last two vertices. The children were all stillborn at between the fifth and sixth months. The commencement of labour was caused by the mother falling down. She has made an uninterrupted recovery. It was her third confinement.

Doncaster.

A Mirror of HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL INFIRMARY, NEWCASTLE-UPON-TYNE.

POPLITEAL ANEURYSM; LIGATURE OF THE FEMORAL ARTERY; RECOVERY.

(Under the care of Mr. F. PAGE.)

SUCCESSFUL ligature of the femoral artery for the cure of popliteal aneurysm has been recorded so frequently that it requires an explanation when such a case is published at the present day. We publish this one as a means of attracting the attention of our readers to the remarks by Mr. Page on the change in treatment suggested in the work to which he refers. The result of ligation of the artery in Scarpa's triangle is recognised by the profession as so very satisfactory that some good reason for changing the practice must be given. One of our greatest authorities[1] says that "the return of pulsation in the sac after the operation for popliteal aneurysm is by no means of frequent occurrence, yet it has been met with in some instances." This confirms the opinion of Mr. Page and agrees with our experience. We do not think that there is anything like the tendency to abandon this operation to the extent which is suggested, nor do we think it likely that an operation so easily performed as this, and which gives such good results, will be given up without better reasons, for one which is more difficult and involves the application of a ligature at a spot where the presence of the aneurysm may cause serious inconvenience from its encroaching on the area of operation, and where the artery is more likely to be diseased and the anatomical structure of the parts makes the operation more difficult even to the skilled operator.

A man, aged thirty-six years, was admitted on Nov. 21st, 1895, suffering from a large right popliteal aneurysm of some four months' duration. The patient had served in the army and contracted syphilis in 1880. His arteries were very atheromatous and both the aortic and mitral valves were extensively diseased. He complained of severe pain in, and about, the knee. On Nov. 23rd the artery was tied at the apex of Scarpa's triangle with a catgut ligature. The wound healed by first intention. A portion of the skin over the inner side of the great toe sloughed. The patient was discharged cured in January. In June the patient died from heart disease; there was no recurrence of the aneurysm.

Remarks by Mr. PAGE.—On page 659 of the "New System of Surgery," edited by Mr. F. Treves, it is stated: "Failure to cure the aneurysm, or so-called recurrent pulsation, is frequent" after ligature of the femoral artery at the apex of Scarpa's triangle. With all respect I demur to this statement. Mr. Syme, in the days of the septic ligature, tied the artery at the apex of Scarpa's triangle twenty-two times, and in every case the patient was cured. In the Royal Infirmary at Newcastle-upon-Tyne during the last eleven years the femoral artery has been tied at the apex of Scarpa's triangle for popliteal aneurysm twelve times, and all the cases but one were cured. Gangrene occurred in one, but gangrene is due to conditions the opposite of those which give rise to recurrence. If recurrence were frequent one would expect to find the condition dealt with frequently in the various London hospitals, but that does not seem to be the case, judging from the hospital reports. On the contrary, it is altogether exceptional, so far as I can ascertain. I have heard of recurrence after ligature, but in most instances pressure had been previously employed and failed. Mr. Pearce Gould, who writes the article on Aneurysm in Mr. Treves' book, makes the further statement: "Ligature of the highest part of the popliteal artery has been recommended of late, and in practice has been found very successful." I should much like to know the precise grounds upon which the statement that this method of treating popliteal aneurysm has been very successful in practice is based. It would seem to be an unwise thing to depart from a well-tried, simple, and successful operation upon any other than the most substantial grounds.

Cases of Popliteal Aneurysm treated by Ligature of the Femoral Artery during the Years 1885–1895 at the Royal Infirmary, Newcastle-on-Tyne.

No.	Year.	Date.	Age.	Operator.	Result.
1.	1885	Jan. 21st	40	Mr. Page	Cured.
2.	,,	Jan. 31st	28	Mr. Page	Cured.
3.	,,	Oct. 7th	47	Mr. Page	Cured.
4.	1889	March 29th	40	Mr. Page	Cured.
5.	,,	May 14th	39	Mr. Williamson	Cured.
6.	1891	May 2nd	26	Dr. Hume	Cured.
7.	,,	July 2nd	30	Dr. Arnison	Cured.
*8.	1892	March 14th	50	Dr. Hume	Gangrene.
9.	,,	July 1st	28	Mr. Williamson	Cured.
10.	,,	Nov. 26th	35	Mr. Page	Cured.
11.	1893	Jan. 9th	27	Dr. Hume	Cured.
12.	1895	Nov. 23rd	36	Mr. Page	Cured.

* The limb was amputated and the man made a good recovery.

[1] Erichsen: Science and Art of Surgery, tenth edition, vol. ii.

LONDON FEVER HOSPITAL.—The annual meeting of the London Fever Hospital was held on Feb. 19th at the Hotel Victoria, Lord Balfour of Burleigh presiding. The report showed that during the past year 769 patients were admitted, including 637 cases of scarlet fever, 65 of diphtheria, 23 of measles, and 14 of German measles. The accommodation had been so fully occupied that it was necessary to refuse 184 applications for admission.

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Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Surgical Physiology of the Foot.

A MEETING of this society was held on Feb. 23rd, Dr. HOWSHIP DICKINSON, President, being in the chair.

Mr. T. S. ELLIS read a paper on some points in the Surgical Physiology of the Foot. He referred to the view on which he had for many years been insisting—that the plantar arch was formed, was maintained, and, when destroyed, might be restored by renewal, in specially active degree, of the functions of the foot—i.e., by muscular action. Till recently, however, he had been unable to fully explain why the plantar arch was so rarely over-formed as the result of excessive action in the case of stage dancers. Excessive formation did sometimes occur as a morbid condition, as seen in pes cavus or claw-foot. The principal object of the paper was to show that the two features of the deformity which gave the alternative names were due to a common cause. A model in wood with the essential features of the human foot was shown in which elastic cords imitated the muscles which support the arch and act as "formators" of it, and those which control its formation, and act as "limitors." It was shown by this model that the combined flexor brevis and adductor hallucis acted not only (as so-called flexors) to hold down the first phalanx of the great toe, but also as "limitors" of the arch. Removal of cords imitating these muscles produced immediately hollow- *and* claw-foot, and at the same time the head of the metatarsal bone projected into the sole, a condition which in the living subject gives rise to painful callosities. The exaggerated arch was most evident in the middle line, because it was there that the weakened flexor brevis muscle arose. He thought that the condition might arise from a growing boy having boots too short for him, so that he found it more comfortable to walk on tip-toe. In this way the short flexors which normally depressed the arch were relaxed and the bowstring action of the flexor longus was increased. The foot was permanently held in the equinus position and the calf muscles served more and more as ligaments rather than muscles and became wasted. In order to correct the condition a very pronounced lengthening of the tendo Achillis was required, often to the extent of two inches. In the stage dancer the short flexors were specially needed to keep the great toe in a straight line, and these counteracted the excessive influence of the long flexors in tending to increase the arch. The fleshy mass of hypertrophied sole muscle filled up the hollow of the sole and produced an appearance of flattening. To sum up, hollow- or claw-foot was due to persistent action of the long flexor, with failure of the short flexor and adductor, while flat foot was due to failure of muscular action in both groups. Mr. Ellis insisted that the position of the hanging foot at rest was one of inversion, and maintained that there was loss of power and undue strain in walking with the foot everted and urged that the military march should be reformed. He maintained that the small toes even when encased in boots were of great use to break the shock of contact with the ground and to protect their corresponding metatarsal bones from pressure. The position of rest for the great toe was extension, the hallux lying somewhat over the second toe. If it be packed beneath the second toe it moved in a plane for which the joints were not adapted, and grinding of the cartilage and constant irritation were the necessary result. The toe became rigid, and owing to muscular inactivity flat-foot often ensued.

Mr. BARWELL thought some of Mr. Ellis's conclusions were open to controversy. The model, although extremely ingenious, could hardly be taken as representing the actual conditions in the foot. The action of the flexor brevis, with its extensive attachment to bone, could be but inadequately represented by a cord stretched between two points. He had found no tendency to flat-foot in dancers. It was true that the sole was filled up by muscle, but the instep was always high, indicating a good plantar arch. He did not think that a short boot would make a boy walk on tip-toe, but that it would cause crowding of the toes just like a narrow-toed boot.

Mr. DAVIES-COLLEY dissented from the view that the flexor longus threw the foot outwards. With reference to the muscles tending to depress the arch he thought that the muscles attached to the dorsum, especially the tibialis anticus and peroneus tertius and the extensors, were as important as the sole muscles. In some cases of pes cavus he had removed a piece of the tendon of the extensor proprius hallucis and fixed it to the base of the first metatarsal bone.

Mr. ELLIS, in reply, said that the action of the flexor longus hallucis could be demonstrated to throw the ankle outwards by putting the toes together and rising on tiptoe. With regard to the other controverted points he saw no reason to depart from the conclusions to which his investigations had led him.

MEDICAL SOCIETY OF LONDON.

Traumatic Neurasthenia.—Value of the Cystoscope in the Early Diagnosis of Renal Conditions.

A MEETING of this society was held on Feb. 22nd, Mr. C. B. LOCKWOOD, Vice-President, being in the chair.

Mr. VICTOR HORSLEY read a paper on the subject of Traumatic Neurasthenia. He pointed out that the symptoms of traumatic neurasthenia were essentially the same as those of neurasthenia from overwork. The cases fell into two classes—(*a*) those in which the symptoms began acutely and were mixed with general symptoms of concussion, and in which there were possibly some associated small lesions; and (*b*) those which were sub-acute and came on after a distinct interval. In the first group one of the most striking symptoms was the irregular pyrexia which was almost always present. The rises of temperature were often sudden and might go as high as 111° F. In one such case the attacks of pyrexia were accompanied by delirium and hallucinations. The pyrexia differed from that due to coarse cerebral lesions in being at once controlled by sponging. Even after a patient had apparently recovered any nervous shock or excitement might again cause similar attacks of pyrexia. In the second group of cases the latent period was usually about a week, but might be two or three. The symptoms, as pointed out by Dr. Hughlings Jackson, were of two kinds, which often occurred together—viz., those due to diminished functional activity (general weakness, localised paralyses, and anæsthesiæ), and those due to over-action (contractures and pains). In traumatic cases the localised paralyses were usually on the left side and almost always affected the lower limb; but one unusual case was mentioned in which there was paralysis of the muscles of the chest on the left side. One of the most common sites of spasm was the tongue, which in functional hemiplegic cases was usually drawn over to the opposite side, a point of great importance in diagnosis. There were often also contractures of the limbs. Anæsthesia usually began in the upper limb on the post-axial border, a position in which it also occurred, as shown by Dr. Ormerod, in overworked sempstresses. The characteristic sites for pain were: (1) painful pressure sensations at the bregma; (2) shooting occipital pain along the supply of the second cervical root, often accompanied by a clicking sensation; (3) infra-mammary tenderness; (4) tenderness and pain made worse by movement or jarring at the dorso-lumbar junction; and (5) tenderness and aching over the sacrum and posterior superior iliac spine. The knee-jerks were much exaggerated at first, but later diminished and might even be lost. Ankle-clonus might also be present in neurasthenic cases. There was usually increased quantity of urine, with lowered specific gravity. He had never detected sugar or albumin. There was nearly always increased frequency of micturition, but he had never seen retention. Although it was usually easy to detect wilful malingering, it was always difficult to know how far there was unintentional exaggeration as one of the symptoms of the neurasthenia itself, and there was often room for much difference of opinion. In many of the cases recovery was ultimately complete, but there was a great tendency to relapse. The most obstinate symptoms were anæsthesia of the special senses, such as hemianopia, deafness, and loss of tactile localisation. In one case, in which after a blow on the occipital region a patient had left hemianæsthesia and left hemianopia, no lesion could be found when the patient ultimately died. Pain, especially the dorso-lumbar pain, was also very persistent. The most successful

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treatment was on the lines of the Weir-Mitchell treatment: isolation, at any rate for the first month; massage, general and local, for six weeks, and over-feeding. Where this treatment could not be employed simple tonics might be given, but the improvement would be much slower. In conclusion Mr. Horsley urged that in all cases of this kind which came to litigation the medical men concerned should always have a consultation beforehand, so as to avoid an unseemly conflict of evidence in the witness box.—Mr. SPENCER WATSON remarked that these symptoms did not occur unless there was neurotic predisposition. He inquired if there were any special changes in the urine during the pyrexial stage.—Dr. CHURTON said that cases of this description were common among miners, and in most of them there had been previous blows on the back from falling coal. He confirmed the statement that the knee-jerks might be lost.

Mr. HURRY FENWICK brought forward a series of twenty-one cases of Nephrectomy with two deaths to demonstrate the value of the cystoscope in detecting early stages of malignant and tuberculous disease of the kidney. He gave two illustrative cases of malignant disease being removed six weeks and three months after the onset of profuse hæmaturia. The disease was localised by seeing through the cystoscope blood issue from one ureter. He referred to cases of calculous pyelitis in which the cystoscope showed pus issuing from one ureter. He advised nephrectomy for tubercle before the stage of sclerosing peri-nephritis had set in, and then only when the lower organs were free from the same disease. If the kidney was densely attached by a thick, firm layer of gelatinous adhesions (a characteristic of a later stage) it would be safer and better to leave it. He believed that those tuberculous kidneys in which the ureters were blocked with tubercle would give the best results in nephrectomy, for the obstructed ureter virtually confines the disease to the kidney in these cases for comparatively long periods of time. When there was at all extensive tuberculous disease of the bladder he thought supra-pubic cystotomy was of little service.—Mr. LOCKWOOD thought that general surgeons were getting to use the cystoscope habitually just as physicians used the ophthalmoscope. He mentioned cases showing its value in indicating the side of the renal disorder. He thought that he had seen cases of tuberculous disease of the bladder relieved by supra-pubic cystotomy. Mr. G. R. TURNER also believed that he had seen good result in one case in which there was a single ulcer, apparently tuberculous.—Mr. HORSLEY said that he had regretted operating on two cases of tuberculous disease of the bladder and thought it was generally inadvisable. He asked whether Mr. Hurry Fenwick found it necessary to make an abdominal incision and introduce his hand for purposes of exploration as recommended by Mr. Knowsley Thornton.—Mr. HURRY FENWICK, in reply, said that single ulcers of the bladder were rarely tuberculous. He had not seen any good from scraping and drainage in any cases that were at all extensive. He considered Mr. Knowsley Thornton's double incision unnecessary.

HARVEIAN SOCIETY OF LONDON.

The Dangers and Diagnosis of Breech Presentation and its Treatment by External Version towards the End of Pregnancy.

A MEETING of this society was held on Feb. 18th, Dr. MILSON, President, being in the chair.

Dr. HERBERT SPENCER read a paper on the Dangers and Diagnosis of Breech Presentation and its Treatment by External Version towards the End of Pregnancy. He stated that since the days of Hippocrates the dangers of birth by the breech or feet had been recognised. He gave statistics showing that from nearly one-fifth to nearly one-half of the children delivered in this manner were stillborn. He discussed the causes of the high rate of mortality and the injuries (fatal and non-fatal) to which the child was exposed in this mode of delivery, and he described in detail the method of diagnosing presentation of the breech by abdominal palpation. Dr. Spencer advocated the abdominal examination of all patients at the seventh month of pregnancy, and the treatment of breech presentation by external version at seven and a half months, followed by the wearing of an abdominal belt. He mentioned six cases which he had treated in this way, and in which the children were born as vertex presentations and survived, and twenty-six cases similarly treated in Dr. Pinard's clinic with one immediate infantile death, two other children subsequently succumbing, and he urged a further trial of this little operation, which was very easy, safe, and painless, and had few contra-indications.

Mr. H. C. PHILLIPS mentioned a case of breech presentation in which there were imperforate anus and hydrocephalus which rendered diagnosis of the presenting part difficult.

Dr. DUTCH suggested that in cases where the cord was short and twisted round the fœtus there might be a risk on manipulation of detaching the placenta, thus exposing the patient to the danger of accidental hæmorrhage.

Dr. COCK mentioned that he had twice performed the operation successfully at the eighth month. He had been led in each case to make an external examination and found that the presentation was a breech one and that the head was against the liver, and that as the uterus contracted the hard head compressed the tender liver against the ribs and caused the considerable pain for which his patients had consulted him. The external version had been of the easiest description and the subsequent presentation at birth had been of the head.

Dr. BOXALL pointed out that in estimating the mortality of breech presentation it was important to bear in mind that frequently some underlying condition existed which favoured presentation by the breech in preference to the vertex. Such, for instance, occurred in minor degrees of contraction of the pelvis, in placenta prævia, and in some cases of fibroid and ovarian tumours, which conditions in themselves tended to increase the mortality apart from the presentation. Dr. Boxall fully endorsed Dr. Spencer's opinion as to the value of systematic examination of the abdomen, not only in breech labours, but also in other obstetric cases, and considered that to obtain the full benefit of such examination it should be undertaken before examination *per vaginam*.

Dr. AMAND ROUTH emphasised Dr. Spencer's method of abdominal palpation by the flat of the hand instead of the finger tips. The hands and the abdominal wall must move together over the fœtus *in utero*. He had recently diagnosed at the eighth month a case of breech presentation with one if not both legs extended. He asked if Dr. Spencer would advise external cephalic version, and if so, how the extension of the legs could be overcome. He congratulated Dr. Spencer on his successful efforts to familiarise the profession with abdominal diagnosis and treatment.

Dr. HANDFIELD-JONES agreed with Dr. Spencer's main contentions, but thought that mortality percentages based on maternity returns were too high.

Dr. GOW quite agreed with Dr. Spencer's suggested method of treatment, although he did not believe that when properly conducted the mortality in breech deliveries was as high as that stated by Dr. Spencer. The chief practical difficulty would be to induce patients to present themselves for examination between the seventh and eighth months of their pregnancies.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

The Climatic Treatment of Phthisis.

A MEETING of this society was held on Feb. 10th at Limmer's Hotel, Conduit street, W., Dr. MYRTLE being in the chair. Twenty-four new members were admitted to the society.

Dr. W. V. SNOW read a paper on the Climatic Treatment of Phthisis, in which he referred to the value of the climate of South Africa in the interior and the necessity of better accommodation and sanitation and food; the superiority of mountain climates; the value of a voyage up the Nile for the wealthy; the good results of sea voyages; the climate of New Zealand; the mistake so frequently made of sending patients in an advanced stage of the disease to Australia; and the possibility of carrying on the open-air treatment, both in winter and in summer, in England.

Dr. THEODORE WILLIAMS considered that the benefit which sea voyages ought to produce was largely lost on account of the want of exercise, which led patients to gravitate to the smoking-room, and that often became practically a drinking-room. He believed that results as good as, if not better than, those afforded by many foreign

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places to which phthisical patients were sent might be obtained by the more thorough employment of the open-air treatment in English resorts.

Dr. BAGSHAWE spoke of the danger arising from subsoil moisture in connexion with some of the resorts in the South of France, where the presence of decaying vegetable matter constituted an additional danger. It was well, therefore, to advise patients to go to modern villas and hotels on the hillsides in those places.

Dr. HERON doubted if an exceptionally large number of bad cases were sent to English health resorts or of good ones abroad. A cold winter climate was undoubtedly the best for young patients who could take active exercise and lead an out-of-door life. He quoted the experience of Hudson Bay life in support of this. Patients, he thought, went to the Riviera, with its delightful climate, to slide down to the grave as quietly and comfortably as they could; he did not think that life there was calculated to cure tuberculosis.

Dr. LAING GORDON gave his experience of the disadvantages to be encountered in the South African resorts, and discouraged the sending of phthisical patients there haphazard and without proper instructions.

LIVERPOOL MEDICAL INSTITUTION.

Operation versus Glasses for Squint.—Litholapaxy in Children.—Tubo-ovarian Abscess,—Fibrinous Rhinitis.—Permanent Cure of Nasal Duct Obstruction.

A MEETING of this society was held on Feb. 11th, Dr. RICHARD CATON, President, being in the chair.

Mr. RICHARD WILLIAMS read a note on the Importance of Treating Squint by Means of Operation. He pointed out that the routine practice of ophthalmic surgeons was to give glasses in cases of squint; his practice was to correct any errors of refraction with glasses in squint cases, but he drew a marked distinction between giving glasses for errors in refraction and giving glasses for squint. He never ordered glasses for the squint itself, but always operated. As a defence of this practice he said that there were many cases of squint in which no errors of refraction could be found. To give glasses in these cases was, he considered useless. He further said that the annoyance of having to wear glasses was greater than the annoyance of a simple operation, which was sure to be successful.—Mr. SHEARS said that in young children with convergent squint, where one eye was markedly defective in vision and in fixation, the majority of surgeons were possibly over-cautious in refusing to operate under the age of six years for fear of divergence resulting. When, however, the squint was alternating, and the vision good in each eye, he would hesitate to operate even though the hypermetropia was very small in amount. The immediate operation would avoid the many inconveniences of spectacles, but he had sufficient faith in Donders' theory of squint to first try the effect of glasses.—Mr. EDGAR BROWNE said that to treat all cases of squint by operation was to disregard all the advance of the past few years. Squint was primarily an attempt on the part of the nervous system to compensate for a structural or functional defect in the peripheral sense organ. Cases of concomitant squint presented three stages: (1) the periodic, (2) a period when one eye was definitely selected for fixing and squint apparent but not necessarily permanent, and (3) when the squint had become the position of rest. Cases in the first stage must not be operated on. In the second stage operation might be performed, but many would not need it if sufficient care in treatment could be exercised. In the third all cases must be operated on.

Mr. R. W. MURRAY related five cases of Litholapaxy in Children, the ages of the patients ranging from two years and ten months to twelve years. The results had been extremely satisfactory, and he warmly advocated a crushing rather than a cutting operation for stone in children.—Dr. RAWDON said that his experience of litholapaxy in children was limited to two cases, both little girls, aged five and eight years respectively; both cases were highly successful. He had more experience in lateral lithotomy in children, and had performed the operation sixty-seven times with two deaths. He felt, however, that in a few years the operation recommended by Mr. Murray would come to be regarded as the best general operation for stone in children.—Mr. LARKIN said that he had for some years considered that litholapaxy was the true method of removing stone from the bladder, and that only exceptional circumstances could justify any other operation. It was not a difficult operation when the stone was of the size usually met with in this country and the parts were fairly normal.

Dr. J. E. GEMMELL read notes of a case of Double Tubo-ovarian Abscess in which he had performed abdominal section. The disease had commenced in the Fallopian tube; there was occlusion of the fimbriated end of the tube, as it was glued firmly to the ovary. There was a history of occasional discharge of pus from the uterus, pointing at an attempt at drainage through the uterus.

Dr. HUNT read notes of four cases of Fibrinous Rhinitis to illustrate its relation to diphtheria. In one patient it was followed in three weeks by an attack of true diphtheria; in another it came on a month after faucial diphtheria whilst the paralytic sequelæ were still present; in a third instance two persons living in the same house with the patient were subsequently attacked with diphtheria. He thought the disease was in most cases only a modified form of diphtheria in which the local symptoms were present without the systemic poisoning, for in over 50 per cent. of all cases the Löffler bacillus had been found in the membrane.

Mr. BICKERTON read a paper on the Permanent Relief of Nasal Duct Obstruction. He gave a historical sketch of the treatment of the affection from very early times down to the present date, and described a modification he had made in a certain form of style which could be worn by the patient permanently for the relief of the distressing symptoms.—Mr. SHEARS held the opinion that long-standing obstruction of the nasal duct was incapable of cure in the true sense of the word, but that in a fair proportion of cases treatment by probes (and especially by prolonged irrigation with antiseptics through a hollow tube) so far relieved the symptoms that the fluid in the sac became quite clear, and the running over of tears only took place when the eye was subjected to strong stimulation.—Mr. R. J. HAMILTON thought that there was no cure, only a relief, from the most distressing symptoms by the continuous use of these styles. A patient under his observation kept her nasal duct open by passing a probe herself about once a month, and had been doing so for about fifteen years. He thought many of these chronic cases might be taught this accomplishment without any risk.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Removal of the Uterine Appendages.—Exhibition of Specimen.

A MEETING of this society was held on Feb. 17th, Dr. MUTCH, Vice-president, being in the chair.

Mr. CHICKEN opened a discussion on the Indication for and Results of Removal of the Uterine Appendages. He said that this operation should not be undertaken unless there is no possibility of otherwise curing the woman. He thought the conditions under which it might be performed were: (1) whenever such coarse disease exists in ovary or tube so as to destroy entirely their function; (2) where affected by malignant disease; (3) to induce an artificial menopause in certain cases; (4) as a means of preventing conception when the pelvis is contracted; and (5) in certain cases of fibroids of the uterus. He thought the operation should not be performed for simple inflammation of tube or ovary, and he expressed strong disapproval of Tait's dictum, which stated that both ovaries should be removed where only one was diseased. He thought hernia not infrequently followed the operation because the abdomen was opened through the linea alba; he recommended an incision, not median, but through the rectus muscle.—Dr. MICHIE advised the operation for all those cases where the tubes contained pus, as in this event resolution did not take place; also in hydro- and hæmato-salpinx and in tubal gestation the operation should be performed without delay. For the arrest of the growth of myoma of the uterus it should be performed, but in these cases care must be taken to remove all the ovarian tissue. He had undertaken this method of treatment for uterine myomata in about fifty cases, and in all except two had had a favourable result. It should be carried out for

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some forms of infantile uterus where intense pain occurred at the menstrual periods. He further drew attention to the frequent presence of the alcoholic habit in persons who suffer from uterine disease and thought that this habit was responsible for some of the failures which were often attributed to the operation. — Dr. TRESIDDER thought there would be a general agreement that the operation was not only justifiable, but should be performed where coarse disease of the ovary or tube existed. He thought where the operation was done for nervous affections, such as hystero-epilepsy, little good resulted; even for uterine fibroids he thought it was still an open question what the nature of the results was. He certainly thought the results generally obtained were not so good as those of Dr. Michie, which gave 96 per cent. favourable. He differed from Dr. Michie that the menopause artificially produced presented no material distinction from that occurring physiologically, as he thought the nervous disturbance in artificial menopause was much more profound, dread of impending evil being a marked feature.—Miss GRAY drew attention to the fact that the effect of the operation was not immediate either in the production of the menopause or in its curative effect; disappointment was often the result of not being aware of this. — Dr. BLURTON also emphasised this fact. — Dr. ROTHERA related a case where the beneficial effects of waiting before resorting early to operation was exemplified, the fibroid sloughing and being expelled. He further related two cases where the operation was a failure. In one the patient was now bedridden; in the other, performed for menorrhagia, no benefit followed. He further thought that the induced menopause differed vastly in its nervous effects from the physiological.—Mr. O'MULLANE and Dr. BOLTON related cases.—Dr. MUTCH agreed with Dr. Michie that alcoholism was responsible for some of the failures of this operation.—Mr. CHICKEN and Dr. MICHIE replied.

Dr. MICHIE showed a Pregnant Uterus that he had removed ten days before affected with myoma which had become impacted in the pelvis. The patient made a good recovery. The operation was performed by the abdominal method and the entire organ was removed.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Porro's Operation.

A MEETING of this society was held on Feb. 11th, the President, Mr. RECKLESS, being in the chair.

Dr. SORLEY related notes of the following cases: (1) Abscess of the Liver; (2) Cancer of the Pleura and Lung; and (3) Concurrent Scarlet and Enteric Fever.—The PRESIDENT, Dr. BURGESS, Mr. LOCKWOOD, and Dr. RICHARDS discussed the cases.

Dr. KEELING related a successful case of Porro's Operation and showed the uterus and ovaries which had been removed. The particulars were as follows. The patient, thirty-five years of age and married for about three years, was a rather small, slim woman, but except being very deaf was in good health and not at all deformed. Her first child was born in January, 1895. Labour was normal and no peculiarity about the os externum or cervix was noticed. The term of her second pregnancy was completed in August, 1896, and on the 23rd of that month she fell in labour. During the previous week she had symptoms of eclampsia and four convulsive fits occurred three days before labour. Relief was obtained by purgatives and bromide and the convulsions ceased. On the day of labour pains began about 7 A.M. and continued through the day. In the afternoon the medical man, a skilful and experienced accoucheur, was summoned. On examination he could find absolutely no trace of the os or cervix. Dr. Martin of Sheffield was sent for, but his examination proved equally fruitless. Towards midnight Dr. Keeling was summoned and he also failed to find any external os. An anæsthetic was then given and the whole hand introduced into the vagina, and at last a dimple surrounded by a slight ridge was made out. This was believed—as it proved correctly—to indicate the position of the os and cervix, and an attempt was made to open the os with a sound, the uterus being steadied from above and pressed down towards the pelvis. This expedient apparently succeeded, and first the tip and then the whole of the forefinger was passed, but it was soon evident that an entrance had been made, not within the cervix, but behind it into the peritoneal cavity. In this emergency it was decided that the safety of the patient would be best consulted by Cæsarean section, and she was carefully moved for this purpose to the Jessop Hospital, a distance of four miles. Consent of the patient and husband being given and the staff assembled, the operation was commenced with the intention of its being limited to Cæsarean section by Sänger's method. The abdominal and uterine incisions were made in the usual way. The placenta was found immediately beneath the uterine wound, and as soon as it was reached the hand was slipped between it and the wall of the uterus and the child seized by the leg. Both child and placenta were extracted without difficulty. Hæmorrhage at this moment was free, but scarcely excessive. The cavity of the cervix was then opened into the vagina and the ovaries excised. Up to this point Cæsarean section only had been contemplated, but the atony of the uterus was so marked and the continuous oozing of blood so great that it was thought better to complete by Porro's method. The remainder of the broad ligament on each side was accordingly secured by fine catgut, then a strong double ligature of the same material was passed through the cervix, each half of which was tied separately, and then the two halves as a whole by another loop of ligature. On each side of the cervix one end of the ligature was left long for after use. The uterus was then cut away obliquely so as to form a front and back flap, the bottom of the cup-shaped wound was scraped, iodoform was freely applied, and the flaps were sewn together. The stump was then drawn into the lower angle of the abdominal wound and secured by the ligatures left for the purpose; these were passed through the parietal peritoneum, but not through the skin. An additional stitch between the parietal peritoneum and the stump was inserted on each side, and in closing the abdominal wound the lowest silkworm suture was also made to take a hold of the peritoneal covering of the stump. The rest of the abdominal wound was closed as in ovariotomy. No drainage was used at first, but a gauze chain was found useful at a later stage. Rigid antiseptic precautions were of course observed throughout. For a few hours after the operation the condition of the patient was very critical. She then rallied and afterwards made an excellent recovery. The temperature never rose higher than 101·2° F. and by the eleventh day it had fallen to normal. As the stump wasted a deep hole formed, from which the discharge was abundant and offensive; the rest of the abdominal wound healed straight away. Two ligatures from the broad ligament (each with a small slough) came away, one on the twenty-first and the other on the twenty-sixth day after operation. The thick ligature round the cervix was not again heard of. The deep sinus at the lower angle of the wound had completely closed seven weeks after the operation and the patient left the hospital a fortnight later. The cicatrix had remained firm, and there was at present no sign of hernial protrusion. Mother and child were quite well. After detailing the case Dr. Keeling briefly discussed the questions of complete occlusion of the os externum in labour, the justifiability of the operation which had been undertaken, the respective merits and applicability of Sänger's Cæsarean section, Porro's operation and laparo-elytrotomy, and defended the method of dealing with the stump which had been employed in this case.—The PRESIDENT and Mr. PYE-SMITH made remarks.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Rapid Absorption of Tuberculous Masses in the Abdomen.—Blockage of the Common Duct by a Gall Stone.—Cerebral Injury.—Implantation Cyst of the Iris.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Feb. 5th, Mr. J. W. TEALE, President, being in the chair.

Dr. CHURTON showed three cases of Rapid Absorption of Tuberculous Masses in the Abdomen. 1. A boy, aged ten years, was admitted into the Leeds Infirmary on Aug. 26th, 1896, with ascites. His parents were very poor. The treatment was by rest, good food, and one grain of iodoform with gentian extract every four hours; the abdomen was painted with tincture of steel. On Sept. 20th the fluid was all gone, but two thick masses remained, one extending from the left

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costal margin to the umbilicus, and the other in the right lower epigastrium. On Nov. 12th the size of the mass (which then extended from the left costal margin to a point two and a half inches to the right of the umbilicus and was oblique and curved, with the convexity downwards) was 8 in. by 2 in. by (?) ¾ in. On Feb. 1st, 1897, there was only a very small area of thickening above and to the right of the umbilicus. 2. A woman aged thirty-seven years, was admitted on Aug. 4th, 1896. Her temperature during the first week averaged 98°F. in the morning and 102° in the evening. Similar treatment was followed out as in the first case with the addition of one ounce of quinia mixture (five grains) three times a day. On Sept. 7th the ascites had disappeared. The patient had never looked ill; the disease was localised in the abdomen. She had lived in a damp house on a farm and drank much unboiled milk. On the 12th the patient went home. On Oct. 25th the abdomen began again to enlarge. On Dec. 8th she was re-admitted. On the 12th she was tapped and 440 ounces of serum fluid were withdrawn. The former treatment was resumed. A mass, the size of two small closed hands, in the mid-abdomen was found. By Feb. 6th, 1897, the mass had gradually and entirely disappeared. She took two grains of iodoform and three grains of gentian extract every four hours, and one ounce of quinia mixture (three grains) three times a day during her stay in the hospital. 3. In a man lately under observation, less favourably placed and less healthy, the absoption of a similar mass occupied nearly a year.

The PRESIDENT described a case that had been under his care of a lady, aged seventy years, who after general malaise and colic for a fortnight was laid up with complete jaundice, which was diagnosed as a blockage of the common duct by a Gall Stone. After five weeks, as the general health was giving way, an operation was decided on after a consultation with Mr. Pridgin Teale. On the day it was to be performed the patient begged off, as she was certain some change had taken place and that the gall stone had changed its position. It was decided to wait, therefore, and there was a marked increase of bile in the motion. A fortnight later, after severe rigor, intense pain followed first by local and then general peritonitis set in, and death seemed imminent; but she rallied under opium and the third motion afterwards was full of bile. Unfortunately the one in which it is assumed that the gall stone passed was not examined owing to the critical state of the patient. From that time she made a steady but gradual recovery and is now quite well and walking about out of doors. There was complete blockage for eight weeks and three days.—In the lengthened discussion that took place and which turned on the indications for operative interference in such cases the following gentlemen joined:—Mr. PRIDGIN TEALE, Dr. BARRS, Dr. CHURTON, Dr. GRIFFITH, Dr. GORDON BLACK, and Mr. LITTLEWOOD.

Mr. E. SOLLY read the notes of a case of Cerebral Injury presenting certain unusual features. A lad aged nine years fell from a wall about 8 ft. high on to the ground falling probably on the back of the head. He was able to walk home a distance of about a-quarter of a mile without assistance but shortly afterwards became gradually drowsy. Some slight convulsive movements were noticed but unfortunately no definite observation was taken of them. The family medical attendant then arrived and finding the symptoms of coma developing, telegraphed to Mr. Solly to come and bring trephining instruments, as he supposed the case to be one of meningeal hæmorrhage. In the interval of about forty minutes before Mr. Solly's arrival the patient gradually began to show signs of returning consciousness, and all idea of immediate operation was negatived. The patient, after passing through a stage of "cerebral irritation" lasting a few days, made a gradual but steady recovery, and is now quite well and strong, exhibiting no sign of cerebral lesion whatever. Mr. Solly commented on the fact that the supervention of coma after an interval of consciousness following a head injury was generally taken as evidence of meningeal hæmorrhage, and for such trephining was generally held to be the proper treatment with a view of securing the damaged vessel. This case he considered worth quoting as showing that the symptom, at any rate in children, did not point to the absolute necessity of surgical interference.

Dr. WHITEHEAD read notes of a case of Implantation Cyst of the Iris in a man aged twenty-nine years, upon whom iridectomy had been performed in India five months previously. The cyst formed within a period of three months and caused glaucomatous symptoms. Tapping the cyst and removal of a portion of the cyst wall failing to afford relief the eyeball was enucleated. A microscopical examination showed that the cyst was lined with laminated epithelium, and originated in the implantation of a portion of corneal epithelium in the substance of the iris during the performance of the operation of iridectomy.

The following cases and specimens were shown:—

Mr. NUNNELEY: A Case of Acromegaly with Bi-temporal Hemianopsia and Incomplete External Ophthalmoplegia.

Mr. MAYO ROBSON: Patient from whom the whole of the upper jaw and the nose were removed a year previously for Rodent Ulcer.

Dr. BRAITHWAITE: Uterus removed entire for Fibroid Disease.

Dr. BRONNER and Dr. LOCKWOOD: A Case of Cerebral Abscess of aural origin operated on eighteen months previously.

Mr. WARD: (1) Sacculated Aneurysm-like Tumour on Saphena Vein; and (2) Part of Calcified Wall of an old Empyema.

Dr. BARRS: (1) Raynaud's Disease: and (2) Multiple Rheumatic Myositis.

Dr. MANTLE: Heart showing Ulcerative Endocarditis, the patient dying from Embolic Hemiplegia.

MIDLAND MEDICAL SOCIETY.

Exhibition of Cases and Specimens.—Auditory Hallucinations.

THE sixth ordinary meeting of this society was held on Feb. 17th, Dr. SHORT being in the chair.

Mr. PROSSER showed a woman, aged seventy years, who for many years had suffered from a Pulsating Tumour in front of the Right Outer Ear. The diagnosis of aneurysm of the internal carotid artery had been made and the right common carotid had been ligatured some time back. The pulsation disappeared after the operation and the swelling decreased, but before very long both re-appeared and have now been stationary for some years. At one time considerable hæmorrhagic oozing occurred from the swelling, but was controlled by the local application of styptics.

Mr. HEATON showed an infant, aged fourteen months, with a Swelling in the Left Side of the Perineum just in front of the anus. The left testis was absent from the scrotum, which latter was undeveloped on that side. The case was an illustration of the somewhat rare deformity of ectopia testis, as distinguished from undescended testis. He proposed to dissect up the organ from its abnormal position and fix it in the scrotum, an operation which he had done with success in a similar case two years ago.

Dr. GANNER showed a Pendulous Polypoid Tumour springing from the wall of the duodenum about five inches below the pylorus. It had dragged the peritoneal coat into the stalk in the form of a narrow funnel about half an inch in depth. The elongations of the tumour were probably due to the intestinal contractions. It was removed in the dissecting-room from the body of a man aged forty-nine years.

Dr. KAUFFMANN showed a Liver containing a solitary Retention Cyst near its Upper Surface. The cyst was limited by a layer of epithelium and the wall showed signs of dissepiments; the contents were about one and a half ounces of thin, blood-stained fluid. It was regarded as a retention cyst due to cicatricial obstruction of part of the bile-carrying apparatus.

Mr. PIETERSEN read a paper on Auditory Hallucinations. After a short review of the psychology of auditory hallucinations Mr. Pietersen referred to their occurrence in mental health and showed that the limit of health might be determined by their effect upon the conduct of the individual. A clinical review followed of auditory hallucinations, their characters, and mode of occurrence. The facial signs of obscure hallucinatory cases were referred to, and stress was laid on the impossibility of giving a definite prognosis in all cases of this sensory disorder.

EDINBURGH OBSTETRICAL SOCIETY.

Exhibition of Specimens.—Pressure in the Growing Pregnant Uterus.

A MEETING of this society was held on Feb. 10th, Dr. MILNE MURRAY and afterwards Dr. BARBOUR, in the absence of the President, being in the chair.

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Dr. R. C. BUIST showed a Velamentous Placenta.

Dr. J. W. BALLANTYNE showed: (1) an Anencephalic Fœtus, and (2) a Congenital Fibroma from the Scalp of a new-born Infant, which was about the size of the thumb of the child and was excised a week after birth with a successful result. Microscopically it consisted of sebaceous glands and fibrous tissue.

Dr. MILNE MURRAY showed his modification of the Axis-traction Forceps with improvements in the method of detaching the traction rods and also in the position of the joint of the traction handle.

Dr. MILNE MURRAY also read a paper on Is there a Positive Pressure in the Growing Pregnant Uterus? It was suggested by a discussion at the December meeting of the society on the deviation of the pregnant and puerperal uterus. The physical relation of the growing pregnant uterus might be best realised by regarding it as a sac enclosed within a distensible capsule, which was composed of the abdominal walls, the diaphragm, and the pelvic floor. Assuming the intra-abdominal pressure to be neutral at the commencement of pregnancy, the uterus as it grew would require to push aside or lift up the viscera, and a gradual increase of the intra-abdominal pressure would result. This increase of pressure could only be obviated if the abdominal muscles underwent physiological enlargement to the same extent as the enlargement of the uterus. The anterior walls bulged obviously; and the question was, Did this bulging occur with the same tension as in ordinary circumstances, or during pregnancy was this bulging attended with increase of tension due to increased pressure behind them? That this tension was increased was evident by different facts: the fœtal head in all primiparæ and in many multiparæ was kept in position in the pelvis by the tension of the resisting abdominal muscles; the walls in the majority of cases became thinner as pregnancy advanced; the presence of striæ gravidarum or cracks; the discomfort due to even slight degrees of flatulence in the compressed intestines; the shallowness of the respiration showing the diaphragm was impeded in its action; and the projection of the pelvic floor. Before the commencement of pregnancy the cavity of the uterus was only a potential sac, its walls being in close apposition. With the arrival of the ovum it became an actual cavity, and by the time it had undergone sensible increase of its size the cavity was lined by a closed membranous sac in which its contents lay. Separation of the walls could only be effected by a pressure on the part of the ovum greater than that of the extra-uterine region. The only state by which the walls of the growing uterus could be in the condition of a flaccid sac devoid of positive internal pressure would be if the cavity of the abdomen were opened and the uterine walls grew in area at a rate greater than the development of its contents in bulk. But, as this consideration was absent, it seemed self-evident that a positive pressure must exist in the sac of the ovum, otherwise the growth of the sac against the abdominal pressure would be a physical impossibility. Until recently no one had had any doubt but that the contents of the pregnant uterus filled its cavity and that its walls were in a sense tight over them. Doubt had been raised because it has been observed that the walls of a pregnant uterus removed from the body were loose and flabby; but the walls of such a uterus had lost their vital tone and were, like other dead muscle, relaxed and lengthened. If living voluntary muscle was cut across its ends separated; if a dead muscle was divided no such gaping occurred. The living uterus might be tense while the dead was flaccid. The evidence that seemed to have had most effect in changing the opinion of some had been derived from the observation of frozen sections; but it was of paramount importance in estimating the value of any evidence derived from this source that the tissues were dead and that the muscles, external and internal, voluntary and involuntary, were devitalised and toneless, and a flaccid condition of the uterine sac might well be put down to post-mortem relaxation and to be no sure evidence of the condition which held in the living subject. Frozen sections had been of enormous importance in advancing the knowledge of the anatomy of the pelvic and abdominal organs, but there were limitations to their value. As Dr. Barbour had said: "Great care is required in carrying over into clinical work the results gained from frozen sections. It is always a more or less cogent criticism that in them we are dealing with the dead, not the living, body—with anatomy rather than with physiology; with the machinery rather than with its movements." When a body was being frozen it was most likely placed on its back surrounded by a mass of ice and salt, in which it lay for days or it might be weeks. A certain amount of the freezing mixture was in contact with the skin. There was thus on the outside of the skin, which was a porous septum, a fluid with a high endosmotic equivalent, and inside the skin there was a fluid, like the liquor amnii, with a low endosmotic equivalent. A comparatively rapid flow of fluid from the body must pass into the salt solution, and by the end of the process one was not surprised that the sac of the uterus was flaccid and collapsed. Dr. Murray also referred to the direct evidence of the fact that the growing uterine wall was drawn tight over its contents—or, in other words, that there was a positive intra-uterine pressure—from the condition of the uterus at a Porro's operation, from the result of puncturing the membranes, from the experimental incision of the sac of a rabbit's uterus, and from the tension of the anterior uterine segment with tilting of the os uteri. Dr. Murray illustrated some of the points in the physics of the paper by different experiments on models.

Dr. BARBOUR agreed in opinion with much of the paper, differing only with regard to the question of amount of pressure. The simple question of the weight of the contents of the uterus had to enter into the physics of the matter. The tone of the abdominal walls varied in different patients and at different times of pregnancy; these abdominal walls formed part of the capsule surrounding the uterus and thus varying pressure was exerted on it. He considered that the evidence derived from frozen sections was not fallacious in a high degree, there being little difference in the facts obtained from them and those observed in life.

Dr. R. C. BUIST alluded to the fact that in labour there was a spherical bag of membranes even if no pain was present; the uterine walls in a state of tonic contraction must exert pressure on its contents.

Dr. J. W. BALLANTYNE stated that the evidence obtained from frozen sections was valuable so far as it supported clinical evidence. He differed from Dr. Murray in his opinion of the conditions under which the frozen sections were made. He always wrapped the body in mackintosh, and after some degree of freezing put it into a zinc case and surrounded it with the ice mixture; the results obtained could thus only be affected to a slight degree by the weight of ice or exosmosis.

Dr. HAULTAIN, Dr. ARMOUR, Dr. HAIG FERGUSON, Dr. FORDYCE, and Dr. MCVAIL joined in the discussion.

Dr. MILNE MURRAY, in reply, stated that the results obtained by the study of frozen sections did not determine the small points of physics in the living body. He also alluded to the experiments on the horn of the pregnant uterus in rabbits, which on puncture showed a positive pressure of 1½ in., and to the fact that if the uterine wall happened to be incised over the site of the placenta this would protrude through the wound.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

General Paralysis of the Insane.—Paralysis of the External Rectus Muscle.—Treatment of Diphtheria by Antitoxin.

A MEETING of this society was held on Feb. 19th, Professor MCCALL ANDERSON being in the chair.

Dr. R. D. HOTCHKIS read notes of a case of General Paralysis of the Insane, and showed microscopic sections of the brain tissue. The patient, a young man aged twenty-five years, manifested at the outset of his illness expansive ideas and delusions, but soon after admission to the asylum he improved so much that this diagnosis was departed from. He gained two stones in weight, and though distinctly weak-minded and unable to follow a continuous train of thought he was free from the mental and paralytic phenomena characteristic of general paralysis. In this condition he remained for ten months and the diagnosis was that of mild dementia. Then he suddenly broke down, general restlessness rapidly passing into acute mania developed, with refusal to take food and general degradation of habits, which continued for six weeks and terminated in exhaustion. There were no congestive attacks and no paralysis, and he recognised his friends twelve hours before death. The post-mortem examination showed the distinctive changes of general paralysis.

Dr. LESLIE BUCHANAN related a case of a woman, aged thirty years, in whom Paralysis of the External Rectus Muscle

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of the right eye developed without manifest cause and after persisting some weeks gradually disappeared. Shortly after this an identical experience occurred on the left side. There was no history of syphilis, rheumatism, or hysteria, and the patient has remained quite well and free from all evidence of nervous disease for a period of two years. It was argued that time had established a strong presumption against any organic disease of the central nervous system and that under the circumstances the recurring paralysis must be regarded as a hysterical or functional condition.—Dr. MAITLAND RAMSAY, in discussing the case, insisted upon the importance of recognising paralysis of any of the ocular muscles as frequently an early event in the evolution of structural disease in the central nervous system. The very fact that the paralysis is transitory makes its significance in this respect all the greater.—Professor MCCALL ANDERSON expressed his substantial agreement with this statement.

Dr. WALKER DOWNIE read a paper on the Conditions necessary for Success in the Treatment of Diphtheria by Antitoxin. He discussed these under four heads—viz.: (1) the use of fresh serum, (2) early administration, (3) full dosage, and (4) repetition of the dose as required. Time was often lost in waiting for the result of a bacteriological examination, and similarly the use of too small a dose frequently led to failure. He used 5 c.c. of serum as a first dose or double that quantity if there were evidences of marked toxæmia or of laryngeal obstruction. Dr. Downie also showed the Tonsils removed in consequence of obstinate Mycosis Tonsillaris and exhibited microscopic sections illustrating the keratosis of the tonsillar epithelium.

Reviews and Notices of Books.

Deformities: a Treatise on Orthopædic Surgery, intended for Practitioners and advanced Students. By A. H. TUBBY, M.S. Lond., F.R.C.S. Eng., Assistant Surgeon to, and in charge of the Orthopædic Department, Westminster Hospital; Surgeon to the National Orthopædic Hospital; Surgeon to Out-patients, Evelina Hospital for Sick Children, &c. Illustrated with 15 Plates and 302 Figures. 1896. London: Macmillan and Co. Pp. xxii. and 598. Price 17*s.*

ALTHOUGH it may be urged with a great deal of reason that there is no really natural bond uniting the morbid conditions which are classed as Deformities, yet custom and practical convenience amply justify the practice, and, indeed, several other lesions, such as tuberculous diseases of the bones and joints, might with propriety be included under the same name.

It is only within the last forty or fifty years that the practice of orthopædics has been established on a satisfactory scientific basis, and towards the progress which has been made of recent years all civilised countries have contributed. We are glad to see that Mr. Tubby takes adequate recognition of the very great work in orthopædics which has been done by American surgeons. In fact, it is hardly too much to say that the most striking advances which have been made lately in this department of surgery have emanated from the other side of the Atlantic.

In a volume containing almost 600 pages there is obviously a great deal of scope for controversial statement, but we have found surprisingly little with which we cannot agree. The descriptions are clear and are greatly assisted by the very numerous illustrations that accompany the text; these amount to more than 300 in all, and though of somewhat unequal merit they nearly always demonstrate very clearly the conditions they are intended to portray. The portion of the volume which is on the whole most distinctively the author's is the account which he gives of his work on the reparative processes which take place in tendons after tenotomy. The classical observations of Adams will always remain very valuable, but microscopic methods have in many ways so improved that the questions were well deserving of re-examination. Mr. Tubby has made an extensive series of experiments on the tendo Achillis in rabbits. Tenotomy was performed and the results were carefully examined after various intervals from three days to thirteen months. The conclusions at which he arrived may be summed up as follows:—First, the new tissue is formed by plasma cells, derived in part from the connective tissue spaces of the tendon and in part from the dilated vessels of the inflamed tendon-sheath; secondly, the leucocytes play only a subordinate part, merely forming a pabulum for the development of the plasma cells; thirdly, for rapid union and for subsequent smooth working of the regenerated tendon it is essential that the tendon-sheath be interfered with as little as possible; and fourthly, that tendon is not capable of perfect regeneration after division.

The section devoted to talipes is very complete and occupies over 180 pages. We concur with the author in the preference he expresses for the open operation for section of the sterno-mastoid for torticollis as opposed to subcutaneous tenotomy; with modern asepsis there is practically no increased risk of infection, and the diminution of danger of wounding important structures is very great. Coxa vara has an interesting chapter devoted to it, with some excellent reproductions of photographs. In the prophylaxis of lateral curvature Mr. Tubby insists that great care should be taken to adopt the seat and desk to the child who has to use them, and he points out that a foot-rest is of great importance. Failure in attending to this point, especially in music-stools, is undoubtedly responsible for no small number of the cases of scoliosis, for in all cases where the feet have no resting-place very awkward attitudes have to be adopted merely for the purpose of maintaining the balance. There are a few points to which we are inclined to take exception, but it must be acknowledged that they are all unimportant. On page 19 Petit's triangle is described as being bounded posteriorly by the outer edge of the erector spinæ instead of by the anterior border of the latissimus dorsi. The spelling "rhachitis" cannot be supported by any etymological argument, as the word certainly does not mean "inflammation of the spine." The word was really formed by conferring a pseudo-classical appearance on the English word rickets. In comparing the supra-trochanteric osteotomy (Adams's operation) with the infra-trochanteric method (Gant's operation) the author is inclined to prefer the former, as he considers that by the latter operation a "very ugly angle" is likely to be left, and that non-union is apt to follow. We are inclined to think that these objections are theoretical rather than deduced from the results of operations.

Notes of a hundred cases are given, coming for the most part from Mr. Tubby's own case-books; they add greatly to the interest of the work. A copious index completes the volume. After a careful consideration of this book we feel justified in expressing the opinion that it is one of the most satisfactory and useful works on orthopædics in the English language. The paper and printing are excellent.

Aristotle on Youth and Old Age, Life and Death, and Respiration. Translated, with Introduction and Notes, by W. OGLE, M.A., M.D. Oxon., F.R.C.P. Lond., sometime Fellow of Corpus Christi College, Oxford. Longmans, Green, and Co., London, New York, and Bombay. 1897. Pp. 135.

THE literary members of the medical profession owe a debt of gratitude to Dr. Ogle for his admirable translation of these three little-known tracts of Aristotle as being the thoughts and ideas of a scientific philosopher who, though inaccurate in many ways, yet dominated physiological thought for many centuries after his death. The translation is prefaced by an introduction of some sixty pages wherein Dr. Ogle gives a scholarly and most interesting account of

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the general doctrine in physiology held by Aristotle himself, his predecessors and successors, practically down to the end of the eighteenth century. "Life," says Dr. Ogle, "is ascribed by Aristotle to the presence of a soul of whose activity it is the manifestation. There is a soul in all living things ..... not itself corporeal, but yet inseparable from the body." The word translated soul is ψυχὴ, and must be carefully distinguished from the other word also translated in many instances soul—namely, πνεῦμα. The first word ψυχὴ means the principle of life, and exists in every animal, including plants; the second word πνεῦμα is applied only to humanity, and, perhaps, would be always better translated spirit, which would avoid confusion. This soul was considered by Aristotle to have its seat in the heart, and heat or fire was the necessary agent of its existence, being "the material substratum in which the soul was incorporate and without which it could not exist." This fire had to be fed by some fuel, and this fuel was supplied by the food. But excess of heat is as fatal to life as loss of heat, and so some provision had to be found for keeping it within bounds. This provision Aristotle finds in respiration for such animals as have lungs and for other animals in the bathing of their gills or the general surface of the body in a medium colder than themselves. He is thus brought to deal with respiration, and to this he devotes the chief part of his treatise. Shortly, his theory of respiration is as follows. Excess of heat will put a fire out, for if the air be excluded from the embers in a chafing-dish the fire will go out because the air tempers the excess of heat, so that if this tempering be removed the fire is extinguished by its own excess. Dr. Ogle quotes as an illustration of this theory remaining to the present time the popular idea that the sun shining on a fire will put it out. Perhaps a still more striking illustration of the notion that refrigeration was necessary for perfect combustion will be found in the controversy which raged in the early years of this century about the relatives merits of the hot and cold blast in the Scotch iron works. When James Neilson, about 1825, was trying to introduce his new invention of the hot blast he met with the strongest opposition from the iron masters. They argued, with perfect truth, that the furnaces worked much better in winter than in summer, but when they proceeded to find reasons for this fact they went hopelessly astray. Of course, they said, it is colder in winter than in the summer, therefore the colder the air the better the furnace will work; so, arguing on this wholly erroneous theory, they proceeded at great expense to devise means for cooling the air before blowing it in.

To return to Aristotle. The heart was constantly getting hot and had to be cooled; by getting hot it expanded the lungs; when these expanded in rushed the cold air and by cooling the central heat kept it within due bounds. This idea lasted until the middle of the seventeenth century and was upset by Boyle and Haller, the former showing that an animal confined with a limited supply of air died even though this air was kept quite cold, and the latter demonstrating that an animal could live in air at a much higher temperature than that of its own blood.[1] Altogether, the book is a most interesting summary of the various steps by which our present views on the great principles of physiology have been reached, and Dr. Ogle is to be warmly congratulated on the clearness with which he has set them forth.

LIBRARY TABLE.

Sir James Y. Simpson. By EVE BLANTYRE SIMPSON. Famous Scots Series. Edinburgh and London: Oliphant, Anderson, and Ferrier. Post 8vo, pp. 160, price 1*s.* 6*d.*—This is a very interesting and well-written little book, and we congratulate the writer on the way in which she has avoided the pitfalls she mentions in her preface. It is scarcely possible, indeed, to say too much in praise of a man such as Simpson, but it would be easy to cavil at that praise as set forth by a daughter, who naturally starts with a bias in favour of the object of her laudation. There is nothing though in this book that might not have been written by anyone conversant with Simpson's life and work. The book opens with a charming account of Simpson's parentage and childhood. They were passed in a very humble sphere, for his father was the village baker in Bathgate, Linlithgowshire. He lost his mother when only nine years old, and his only sister took her place. His up-bringing was in many ways scarcely such as the modern scientific worker would approve of; many old customs still held sway in the country side. For instance, when a murrain was devastating the cattle his grandfather had buried a cow alive as a sacrifice to the devil, and on buying a new farm a small piece of ground—needless to say, the most unproductive-looking portion—was carefully walled off for the use of the same individual. To pass on. When fourteen years old Simpson entered as a student at Edinburgh University, winning a bursary of £10 per annum. We have not space here to record all his struggles and trials, fought against and overcome with the indomitable perseverance characteristic of his race, for those our readers must search the book itself. Simpson's work is known to all the world, but his personal attraction is not so known. We may quote the following passage, which shows the manner of man he was (pp. 151–2). The incident occurred while he was on a journey. "One bitter winter's morning the train came to a standstill, when snow blocked the way, and while all the passengers, chilled, cross, and hungry, fumed, Sir James, in a long seal-skin surtout a grateful patient had given him, walked up and down to warm himself, for, notwithstanding all his furs, he was cold. He found a third-class carriage of shivering, starved children crying with misery. He got the station master coaxed into making some tea, piled his rug and newspapers upon the little ones, incited others to help, inspired all into more hopeful views of life, till the fire of his presence thawed them into geniality, and when the delayed train reached Edinburgh it was commented on as being the first which had arrived that day not filled with enraged and grumbling passengers. 'It's all that man,' said the guard, pointing to Sir James, who was hurrying off. 'It's a mercy we a' like him and coont it a pleasure to aye find his belongings, or he'd never own a rug or a portmanteau.'" The end of a very noble life came quietly on May 6th, 1870, and he was buried in the new cemetery at Warriston, although a last resting place was offered in Westminster Abbey. We can recommend to our readers this little book, for it is full of interest and charm. There is an interesting specimen of old chemical nomenclature which occurs on pp. 57 and 61, where chloroform is called "*per*chloride of formyl."

A Guide to the Examination in Practical Chemistry for the Conjoint Board. By P. A. E. RICHARDS, F.I.C., F.C.S., Demonstrator of Chemistry and Public Health at the Charing-cross Hospital Medical School, Public Analyst to the parish of St. Martin-in-the-Fields. London: Baillière, Tindall, and Cox. 1896.—We entertain as a rule a strong objection to books dealing only with the synopsis of a given examination, but in this case we may modify that opinion, inasmuch as in the first and third parts of this little work we find a well-prepared and accurate system of procedure laid down for the guidance of the student in detecting simple salts, and in making ordinary chemical preparations. No practical value, except for passing the examination, can be attributed to the three or four pages dealing with

[1] Vide Introduction, p. 51.

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organic analysis; but this is of course due to the fact that a few substances only have been included in the synopsis by the authorities who direct the examination at the Board. It seems to us that it would be far better, if any real knowledge of practical organic chemistry were required, that it should be fairly stated, and not limited to odds and ends, such as urea and sugar, oxalates, &c., the composition and properties of which must be studied in practical medicine and physiological chemistry and might well be omitted from this part of the course unless it is taught in some well-defined relation to chemical science. The book is certainly an able guide to the examination.

The Private Sanatoria for Consumptives. By Dr. ARTHUR VON JARUNTOWSKY of Posen. Translated by E. CLIFFORD BEALE, M.A., M.B. Cantab., F.R.C.P. Lond., Physician to the City of London Hospital for Diseases of the Chest, &c. The Rebman Publishing Company. Price 1*s.* 6*d.*—Dr. Beale has done a most useful piece of work by translating this pamphlet. It gives in 46 clearly printed pages the essence of the means used in some of the best-known sanatoria abroad for the treatment of phthisical patients. The value of such sanatoria is only just beginning to be fairly recognised in this country, and the possibilities of the successful development of similar institutions here are, with few exceptions, not recognised at all. In spite of the small size of the book it is full of facts of much usefulness.

Water and Its Purification. By SAMUEL RIDEAL, D.Sc. Lond. London: Crosby Lockwood and Son. 1897.—Dr. Rideal has written this compact volume at an opportune time. There are very few handbooks on this important subject that deal with the various phases of the question right up to the present time, and yet no question has received greater attention and discussion of late than that in connexion with the purity of water supplies. Despite its conveniently small size the book covers the whole ground of recent developments even as far as the now admitted worthlessness of the majority of domestic filters and the value of Dibdin's method of examining with minute exactness the insoluble matter in water, the recent application of which led a few months ago to an unfavourable opinion on the quality of the London supply and the function of the companies' filtering beds. The work is written with singular clearness and freedom from technicalities, the practical side of the question being treated with the same consideration as the theoretical side, including those questions affecting the methods of analysis for determining the fitness of waters for drinking purposes. The last chapter on the Analysis and Interpretation of Results is especially good, summing up the value of both bacteriological and chemical analysis without prejudice for or against the respective merits of these two methods. As a work dealing as clearly as it does with the various ramifications of such an important subject as water and its purification it may be warmly recommended. Local authorities and all those engaged in sanitary affairs, and others interested in water-supply, will read its pages with profit. We have noticed but one slip, and that is in connexion with the quality of Loch Katrine water. It has not, as is stated on page 117, any objectionable action upon lead, and no cases of lead poisoning have ever been traced to the drinking of this water, despite its great purity and softness. Curiously enough the author says as much some pages further on (137).

The Progress of Medical Chemistry. By J. L. W. THUDICHUM, M.D. Giessen, F.R.C.P. Lond. London: Baillière, Tindall, and Cox. 1896. Price 5*s.*—No more forcible argument in favour of the medical student possessing a sound knowledge of chemistry, and more especially of that portion of the subject bearing directly on physiology, pathology, and medical practice, could be advanced than that which is contained in the interesting chapters of the volume before us. The contribution appeals as plainly as anything can appeal for a closer study of and attention to the interesting and very important field of medical chemistry. As might be expected, the bulk of the work is devoted to the chemistry of the urine, but in Chapter xiii. (there are in all seventeen chapters) we come to the discussion of the chemical composition of the brain. This subject has been fiercely debated, and Dr. Thudichum, in recounting the history of the subject, makes some severe remarks upon the methods of the partisans of the protagon hypothesis. This is followed by a chapter on the new organo-therapy. Finally, there is a chapter on "A Shady Side of Biological Literature," in which the author, in a somewhat edifying way, refers to the "blunderings" and "forgeries" which he states characterised certain published results of research. Here also he animadverts on "cooked researches," which he defines as "compounds in which known data are skilfully blended with more or less new matter in such a manner as to make the whole appear as new," and upon "'trimmed researches' which are mostly new data of an inferior kind to which an appearance of greater precision is given by clipping or adding particularly to analytical figures to make them fall in with pre-conceived hypothesis," and so on. It is to be feared that Dr. Thudichum is in many cases correct in what he says in regard to this matter, and he supports it by citing some apparently notorious cases. We welcome the publication of investigations which belong to this really important section of medical science, and of published contributions of this sort there is not an abundance.

Handbook for the Bio-chemical Laboratory. By JOHN A. MANDEL, Professor of Chemistry at the New York College of Veterinary Surgeons. London: Chapman and Hall, Limited. 1896. Price 6*s.* 6*d.*—This is essentially a book for the laboratory bench, containing a description of the methods of preparation of physiological substances, while at the end of the volume will be found numerous tests for various pathological products arranged alphabetically. A book of reference of this kind has long been wanted, as hitherto the laboratory student was compelled to refer to more or less big and bulky works on physiology, in which the practical information and direction of testing he required to know are more or less scattered through the pages of the volumes. The present book facilitates this kind of reference and affords at once that requisite information concerning the processes of preparation of such important bodies as glycogen, inosite, fibrin, nuclein, ptyälin, protagon, urea, and many other physiological products. Those who are engaged in this important branch of study will readily appreciate the value of such a convenient publication.

The Manufacture of Aërated Beverages, Cordials, &c. By W. STEVENSON and R. HOWELL. Fourth Edition, revised and enlarged. Published by the authors at 95A, Southwark-street, S.E. 1896. Price 5*s.*—Primarily, this is a book of receipts and contains also some useful and sound information on the points to be observed for the production of a satisfactory temperance beverage. The book is evidently appreciated by the trade, since it has reached its fourth edition, and much new and valuable matter has been added.

JOURNALS AND REVIEWS.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., and W. F. R. WELDON, F.R.S. Vol. XXXIX, Part 4. January, 1897. London: J. and A. Churchill. Pp. 202. Price 10*s.*—The present part concludes the thirty-ninth volume of this journal. It contains two original and highly interesting articles, the first by Lily Hine, on the Changes in the Cell Organs of Drosera Rotundifolia produced by Feeding with Egg Albumin; the second by J. T. Wilson, Professor of Anatomy,

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and J. P. Hill, Demonstrator of Biology in Sydney University, Sydney, New South Wales. The author of the first paper quotes some of the observations of Darwin, Cohn, De Vries, and Gardiner on the effects of feeding the drosera and then proceeds to give the results of her own observations, which were partly performed in Scotland and partly carried out in the physiological laboratory, Oxford. She gives the formulæ for various fixing fluids she has found serviceable and describes in detail the structure of the glands. Well-executed drawings are given which show the microscopical structure presented by unfed leaves and by leaves examined at various periods, varying from one minute to a week, after being fed. The article concludes by stating that an appropriate stimulation of the gland cells of drosera by food leads to the using up of the basophile cytoplasm, which is ultimately represented by a very scanty eosinophilous plasm. The restoration of the cytoplasm is brought about by the nucleus absorbing food material, metabolising it, and then excreting it into the cytoplasm. The reasons that have led her to this conclusion are then given. The article of Professor Wilson and Mr. Hill on the Development and Succession of the Teeth in Perameles, or the Bandicoot, one of the Marsupials, as well as in the Dasyurus, Phascogale, Trichosurus and Macropus. The dentition of these animals has always been held to possess special interest, the authors observe, as they have been considered likely to afford important clues to the phylogenesis of the teeth in mammalia generally. On examination, however, the subject is found to present many difficulties which have led to great differences in the interpretation of the phenomena of dentition in the marsupials generally. After giving in full detail and with continuous criticism the views of other observers, the authors state they are satisfied that the permanent teeth of marsupials are the homologues of the permanent teeth of higher mammals, that the deciduous premolar is a true milk tooth and is not the sole representative of the series to which it belongs, since the so-called prelacteal teeth are in reality milk teeth which have undergone reduction and have well-nigh wholly disappeared under the operation of influences unfavourable to their development; finally, the lingually situated down-growths of the dental lamina by the sides of the developing teeth are not rudimentary enamel germs, but are portions of a quite indifferent "residual dental lamina." The article is illustrated by several plates and many drawings.

The Journal of Physiology. Edited by MICHAEL FOSTER, M.D. Lond., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. xxi., No. 1. London: C. J. Clay and Sons. February, 1897. Price 5s.—The articles contained in this number are:—1. The Oscillations of the Auricular Tonus in the Batrachian Heart, with a Theory on the Function of Sarcoplasma in Muscular Tissue: by Dr. Phil. Bottazzi, of the Physiological Laboratory, Florence. This is an endeavour to explain, amongst other phenomena, the reason of the superposition of two contraction curves caused by two stimuli following each other within a short space of time. The author holds that it is due to the sarcoplasm, which, being in its phase of contraction when the second stimulus comes into action, "supports" the doubly refractive substance during the second contraction, which accordingly rises higher. The evidence for this theory is given at length. 2. The second article is by Mr. C. B. Davenport and Mr. W. B. Cannon of Harvard College, on the Determination of the Direction and Rate of Movement of Organisms by Light. The problem which the authors of this article have attempted to solve is whether the migration of organisms towards or from a source of light is to be accounted for by differences in intensity of light along the path taken or by the direction of the incoming rays, and they believe the latter view to be correct. 3. On Reciprocal Action in the Retina as Studied by Means of Some Rotating Discs, by Dr. C. S. Sherrington, F.R.S. This paper is illustrated by many ingenious modifications of Maxwell's discs. 4. Ingestion and Excretion of Iron in Health, by Dr. Ralph Stockman, and Dr. E. D. W. Greig. The authors show that the amount of iron ingested and egested is very small and can be very accurately determined. 5. On the Mode of Absorption of Fats, by Mr. B. Moon and Mr. D. P. Rockwood.

The Journal of State Medicine. Vol. V., No. 2. London: Baillière, Tindall, and Cox. Price 2*s.*—The recent experiments in sewage treatment at Exeter form the subject of the first paper in this number of the journal. These experiments by Mr. Donald Cameron, the city surveyor of Exeter, were treated in full in our columns on Dec. 5th, 1896, under the heading of "The Utilisation of Micro-organisms in the Purification of Sewage." Dr. A. Campbell Munro contributes a paper on the Inter-Notification of Infectious Diseases among Local Authorities, in which he discusses the system at present in force in and around Glasgow. Dr. Munro advocates the extension of the system to the whole of Scotland and suggests as possible centres Glasgow, Edinburgh, Dundee, and Inverness. He thinks that until some such system as he sketches is adopted full advantage will not be taken of compulsory notification. Mr. A. B. McDonald, C.E., the city engineer of Glasgow, contributes a paper on Formulæ relating to Capacity, Velocity, Flow, and Discharge of Sewers.

To the *Veterinary Journal and Annals of Comparative Pathology* for February Mr. R. Stewart MacDougall, M.A., B.Sc., contributes an interesting paper on the Bacteria of the Soil, based on the experiments of Professor Nobbe and Dr. Hilltner. This article contains most valuable information as to the conditions necessary for the absorption of nitrogen from the soil and from the atmosphere. Short articles on Gangrenous Dermatitis and Veterinary Education in America, Extracts from Foreign Journals, Notes and News, and reports of the various veterinary societies make up the number.

The Veterinarian for February keeps up the high standard that we are led to expect for the articles in its columns. The first original paper, by Dr. Carlier of the Physiological Laboratory of the University of Edinburgh, gives the commencement of a description of the Pancreas of the Hedgehog during Hibernation. This part of the paper is devoted almost entirely to methods of preparation and to a discussion of the nature of certain portions of the pancreatic cells, but the paper promises to be of high scientific value. Veterinary-Major F. Smith contributes the first part of an interesting account of the Symptoms and Lesions of Anthrax in the Horse. Mr. Dollar has translated Nocard's case of Ulcerating Lymphangitis simulating Glanders-Farcy in the Horse, which appeared in the *Annales de l'Institut Pasteur* towards the end of last year. The interesting points in this case are—(1) the multiplicity and rapidity of formation of the abscesses; (2) the rapid cicatrisation of unhealthy-looking wounds; and (3) the absence of lesions in the lymphatic glands, especially as it was clear that infection took place through the lymphatics. A number of clinical cases are also given. Perhaps the most striking feature in this month's *Veterinarian* is the number of good abstracts included under the Month's Progress. Then follow reviews; an interesting biographical sketch of the veterinary officers of the Board of Agriculture, Mr. Cope and Mr. Duguid, accompanied by exceedingly good photographs of these gentlemen; a pass-list of examinations; and full accounts of the meetings of various veterinary societies and of the Royal College of Veterinary Surgeons. The activity displayed amongst members of the veterinary profession and amongst those who have the conduct of the education of these members gives promise of much valuable work.

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THE LANCET.

LONDON: SATURDAY, FEBRUARY 27, 1897.

ON Friday, the 19th inst., there was a large gathering in the theatre of the United Service Institution to listen to a paper read by General R. L. DASHWOOD on the health of our troops in India and at other foreign stations. The paramount subject for consideration at the present time, however, is that affecting the British army in India. The reading of General DASHWOOD'S address was followed by an animated discussion, and the figures which formed the basis of it were sufficiently startling to arrest attention. Some of the speeches were good and pertinent, and among them Sir DONALD STEWART'S; some struck us as either wide of the mark or involving erroneous or doubtful assumptions. There is probably no civilised nation in which there exists a state of things similar to that which obtains with our army in India at the present time. The returns of Continental armies do not show anything approaching the amount of venereal disease that prevails among our troops in that country; and we can quite understand that the extent of the evil is a matter of grave consideration to those responsible for the military efficiency of the British force serving there. It is very important, however, seeing that figures and statistical data are so apt to be misleading to those who are little accustomed to deal with them, that we should not allow ourselves to be diverted from the main point at issue by statistical discussions about figures, ratios, and decimal points. We advert to this because of the confusion that apparently exists in the minds of some writers and speakers. To take an elementary point as an illustration. An admission-rate does not mean that each admission represents a separate and different individual, nor is the ratio of 500 admissions per 1000 per annum the equivalent of 500 men, or half of a regiment 1000 strong, because the same man may be admitted more than once during the year with the same disease, and with the class of disease under consideration this was most probably the case. The public requires to be told authoritatively the exact figures representing the amount of inefficiency caused by these diseases in the British Army in India. We are glad to learn, therefore, from Lord GEORGE HAMILTON, the Secretary of State for India, that a Departmental Committee had been appointed under the presidency of Lord ONSLOW, of which Sir JAMES PEILE, Member of the Council of India, Surgeon-Major-General TAYLOR of the Army Medical Staff, and Surgeon-Colonel J. RICHARDSON, a retired officer of the Indian Medical Service, are the members, to inquire into, and report upon, the actual state of the army in India in this respect. The report of that committee may be confidently expected shortly, if it has not already been published, and there will then be no longer any room for cavil or doubt on the subject.

But statistics cannot, after all, give any adequate measure of the extent of an evil of this nature. An individual contracts small-pox, scarlet fever, or other infectious fever; he lives or dies, and there is an end of it. He is legally compelled to remain isolated during the attack and if he recovers he returns to his family or occupation when he is no longer a source of danger to others. But with a syphilitic infection the case is far otherwise and far worse. No statement about the quantity, or even the severe or virulent quality, of the poison covers the subject; a constitutional taint has been acquired of the most chronic and insidious kind, from which the patient may never recover, and in many cases the sequels of the infection, from its initial stage to its remotest consequences, make up a terrible medical history; nor is the individual sufferer the only victim of the infection, for it may, and frequently does, involve the innocent and the unborn. These facts are so well known to the medical profession that the bare statement of them amounts to a platitude. We endeavour to limit the spread of infectious fevers on the grounds of public health and public policy. Why should we not, then, deal with this disease as we do with other infectious diseases, in which the reasons for doing so are less numerous and far less imperative? As regards the cruel results of our negligence in India in this respect and the virulent nature of the poison, Mr. H. W. WILSON, M.P., and others interested in the subject, may determine these for themselves by a visit to Netley.

But it may be said that the compulsory Lock Hospital system as it was tried in India proved an inadequate measure and failed to accomplish all, or anything like all, that was expected from it. Still, we have now had proof that it did exercise a repressive influence, especially in checking the increasing prevalence of this disease. Without going into the exact measure of this influence in figures, in order to avoid entering upon any contentious matter, this fact remains and cannot be gainsaid. But we agree in thinking that the mere return to the cantonment lock hospital system as it was worked in the past would be an inadequate way of dealing with the evil. We do not at all desire to discount or minimise the difficulties in the way of dealing with the subject, but as far as India is concerned it calls for serious and honest consideration. We are confronted, let it be remembered, with two questions—the safety of the empire and the welfare of future generations. What is required to be done now is just that which an intelligent exercise of common sense—and it may be added common justice to our short service army in India—would dictate, namely, to ask those best acquainted with all the present conditions of that country to formulate some scheme after due inquiry by which they would propose to deal with the subject as a whole. We are glad to notice that there is a growing desire on the part of people who are not faddists to give the Government of India a free hand in this matter. Among the number of officials and others in that country—men of the highest character and capacity with general and local, as well as military and medical, experience to guide them—it seems ridiculous to

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suppose that there are none who can be relied on to suggest measures for dealing with a growing evil the gravity of which they all recognise.

ALTHOUGH Lord CROMER'S annual report on the finances, administration, and condition of Egypt is published this year somewhat earlier than usual, it nevertheless contains the usual amount of interesting matter, expressed in his customary forcible and concise language. As a diplomatist the British Consul-General admittedly occupies the first rank, but no one can find fault with the lucidity and straightforwardness of his declarations; and in the present case it is not too much to say that within the moderate compass of twenty-seven pages everything of importance connected with our protectorate is clearly and adequately dealt with. Finance, being the foundation of all administration, naturally comes first, but we can only give a hasty glance at this portion of the subject. The system of furnishing the accounts hitherto in force, being calculated to cause misapprehension as to the amount of money at the disposal of the Treasury authorities, has been amended, and in future only the actual sum which the Egyptian Government is at liberty to employ will be shown as surplus. This change is, however, merely one of form. "The substantial facts connected with the financial situation of the Egyptian Treasury remain unchanged." According to the estimates for last year the probable excess of revenue over expenditure was set down at £E17,000 only, but as a matter of fact on Dec. 31st the savings under this head were found to amount to £E316,000. This, of course, would have been a handsome balance out of a total of ten millions, but, unfortunately, it did not in reality exist. The Soudan expenditure had not been included in the accounts, and there were, "moreover, further liabilities, amounting in all to about £E500,000" which will have to be made good. Instead of holding an available cash surplus the Egyptian Treasury is consequently in debt to the extent of £E780,000. It is true on the other hand, that the Commissioners of the Caisse de la Dette are in possession of upwards of £5,700,000 sterling, this enormous accumulation being solely due to the reforms that have been instituted under English guidance; but, as Lord CROMER has often explained, the funds controlled under international arrangement are practically out of reach so far as local needs are concerned. With the finances of the country in this condition it is vain to hope for sanitary reform on anything like an adequate scale. The Consul-General's arguments in this connexion are, unfortunately, irrefutable. Commencing by quoting ROGERS Pasha that—"There is but one satisfactory way to safeguard a country against cholera, and that is to put it in such a sanitary condition that, even if introduced, the disease will not find a favourable soil for its development," Lord CROMER goes on to observe—"There can be no doubt of the truth of these remarks. It is, however, the misfortune of the sanitary reformer that the sums of money required to execute his very necessary reforms are large. ..... Amongst the objects which most nearly concern the general welfare of Egypt it cannot be doubted that the re-conquest of some portion, at all events, of the Soudan takes a very high place. It is to the accomplishment of this object that the attention of the Egyptian Government must, for the time being, be mainly directed. More than this, the development of the system of irrigation should not be long delayed, more especially as the returns to be obtained from money spent on irrigation will certainly in the end provide funds for expenditure in other directions. No Government, and certainly not the semi-internationalized Government of Egypt, can afford to embark at once and at the same moment in a number of expensive and difficult operations. I do not doubt that the day of the Egyptian sanitary reformer will come, but under the circumstances to which I alluded above, I fear, though I say it with regret, that some little while must yet elapse before the question of improved sanitation in Egypt can be taken seriously in hand."

Although it has been found necessary on financial grounds to allow the larger issues connected with the improved sanitation of the country, including the sewerage of Cairo and other large towns, to stand aside for the moment, it must not be supposed that all sanitary progress is in abeyance. On the contrary, several minor improvements of considerable importance have been made. Until a few years ago the mosque latrines were allowed to drain into the nearest water-supply, but in 1892 a law was passed under which power was conferred on the Minister of the Interior to close all establishments of this description which were pronounced to be dangerous to public health. The number of mosques dealt with last year in virtue of this law was 167. Again, in January, 1894, a long-considered law was passed allowing the sanitary authorities to cause the transfer of cemeteries whenever the adoption of such a measure was deemed necessary for the public weal. In 1896 the number so transferred was 179. Needless to add that these reforms are of primary importance from a hygienic point of view, and although they both deal with subjects upon which Mahommedan opinion is naturally somewhat sensitive, it is extremely satisfactory to find them progressing steadily without exciting the slightest ill-will or opposition on the part of the population. In addition to the foregoing another highly important sanitary innovation is mentioned by Lord CROMER. In 1895 water of apparently good quality was found near Tantah at about seventy-five feet below the surface. This water has now been pronounced by a competent authority to be of the best possible quality for human consumption, being entirely free from bacteria of any kind. A well is consequently being sunk for the supply of the town, and it is hoped that the pumps will be erected, and the pipes for distribution laid, during the course of the ensuing summer. It is impossible to exaggerate the importance of this new departure, for no hygienic boon can surpass a pure and plentiful water-supply. Experiments regarding the subsoil water are also to be undertaken at Zagazig, as well as in several other towns, both of Upper and Lower Egypt. With regard to new constructions Lord CROMER informs us that during the year one hospital, five disinfecting stations, five slaughter-houses and a hygienic institute were erected. The alterations at the Kasr-el-Aini Hospital at Cairo are also approaching completion and will probably be finished next March. The total cost of this work is £E22,000, of which £E5800 were

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expended in 1896. Further, we find that ten new dispensaries have been opened in the provinces and that up to the end of October 292,000 persons were successfully vaccinated, the lymph for 40,000 of them being obtained from the local vaccine institute.

On the whole Lord CROMER'S record indicates anything but hygienic stagnation and Egyptian sanitarians have no cause to be downhearted. Everything comes to the man who knows how to wait. The chief authority in the land is fully impressed with the importance of sanitary reform, and as soon as the requisite money is available it will doubtless be freely accorded.

LAST week ought not to be without its influence in the history of vaccination; indeed, it might not inaptly be termed "Vaccination week." On Feb. 16th an able paper by Mr. NOEL HUMPHREYS was read at the Royal Statistical Society on English Vaccination and Small-pox Statistics, and on Feb. 19th there was read at the Epidemiological Society a most exhaustive paper dealing with the Dissentients' Statements in the Report of the Royal Commission on Vaccination. The writer of this paper was Dr. MCVAIL, whose knowledge of, and methods of handling, small-pox questions are unsurpassed, and we should like to see a copy of this crushing reply to the anti-vaccinationists placed in the hands of every Member of Parliament and every public vaccinator. On the same day, too—but at an earlier hour—a discussion took place at the Society of Medical Officers of Health upon the paper which Dr. BOND of Gloucester recently read. These discussions should end in some practical good and in recommendations which will strengthen the hands of our legislators in guarding this country against the ravages of epidemic small-pox. Mr. HUMPHREYS has clearly but little respect for the recommendations of the Royal Commissioners, "who conclude a report teeming with evidence as to the value of vaccination by recommending a course of action which would practically make the compulsory clauses a dead letter without repealing them." He obviously sees that it is to re-vaccination we must look if there is to be any relaxation whatever as to primary vaccination in this country. The Epidemiological Society are evidently of a similar way of thinking, and they have passed a resolution which will, we imagine, be presented to Parliament, strongly advocating that if the recommendations of the Commission as to primary vaccination be adopted re-vaccination should be placed on practically the same footing. We expect, too, that the Society of Medical Officers of Health will have little doubt as to the necessity for advising re-vaccination. If the two societies here referred to are practically unanimous in their opinion as to re-vaccination the legislature will be incurring a very grave responsibility should it disregard such an expression.

At the present crisis—for it is a crisis—there is one object that the medical profession must keep steadily in view, and that is re-vaccination. If, as seems not unlikely, the recommendations of the Commission with regard to primary vaccination become law, and owing to postponements and general laxity there grows up all over the country, instead of, as at present, in a few centres only, a mass of unprotected infants, it is very necessary that some compensating influence should be at once introduced, and that influence must be re-vaccination carried out through the agency of our educational system. Re-vaccination is necessary to protect the public against small-pox, and it is the only course which will carry conviction to the minds of the less educated electorate. The masses who are influenced by such anti-vaccination clap-trap as was heard last week from Mr. MILNES at the Royal Statistical Society are unable to discriminate between vaccination and re-vaccination, and the arguments of the anti-vaccinationists obtain an easy ascendancy. So long as a large number of vaccinated persons are found in our small-pox hospitals, so long will the ignorant masses refuse to believe in the efficacy of vaccination, as illustrated by primary vaccination; but when by the use of re-vaccination at, say, ten years of age we prevent the primarily vaccinated from becoming inmates of our hospitals we shall then have furnished an argument which will be clearly understood by the people. If we fail to insist upon practically universal re-vaccination, while still allowing the conscience clause of the Commissioners to be operative, we shall, in spite of all our efforts as to isolation, bring primary vaccination more and more into discredit until the people who govern this country will be so discontented with it as to insist upon the complete removal of even the machinery of vaccination. The agitators who have led the anti-vaccination campaign are men of energy, of ability, and above all, of ambition, and they will continue their work. Let not, therefore, the medical profession be led away by any red herring of "sanitation," whether as an adjunct to, or a substitute for, re-vaccination. The anti-vaccinationists are but too anxious to lead us away on this scent, as was clearly evident at the debate on Feb. 16th on Mr. HUMPHREYS' paper. The point at issue now is the value of *re-vaccination*, and it is to be hoped that the medical profession will recognise and avoid the false trails laid by the anti-vaccinationists and their friends. Let us extend isolation accommodation by every means in our power, but let us at once limit its requirements within the bounds of practicability by a well-considered system of re-vaccination. No one who is familiar with the difficulties of sanitary administration can believe for one moment that isolation accommodation for small-pox alone can ever be provided in advance or at the time of an outbreak sufficient to cope with small-pox of the type which prevailed at Gloucester. It is this variation in type and infectivity which is the keynote to this question of isolation. At Leicester the type was mild and apparently not of a high order of infectivity, but even there, with the much-vaunted sanitary organisation and the defective hospital accommodation of that town, there was much chaos. The hospital apparently spread the disease, in spite of the fact that the town council pretended to have a perfect sanitary organisation. If the suggestions of the Commission that vaccination be performed indiscriminately by all medical men, and that the age of moderate compulsion be postponed is acted upon, we shall have a large number of children imperfectly protected with but one small mark. This it appears to us is inevitable, and we believe it would be the conscientious opinion of the vast majority of public vaccinators and vaccination officers throughout the country. Under these

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circumstances there is but one effective course open, and that is to compensate for indifferent primary vaccination by a system of re-vaccination of children before they cease attending the elementary schools.

We are fully aware that the political and social exigencies of the situation must decide exactly what form legislation should take, but it is nevertheless the serious moral duty of the medical profession to state plainly and with no uncertain voice what is necessary to control small-pox and to prevent it from steadily reverting to what it was before the days of JENNER.

Annotations.

"Ne quid nimis."

THE NINTH INTERNATIONAL CONGRESS OF HYGIENE.

IT will be remembered that the Eighth International Congress of Hygiene and Demography, which met at Budapest in 1894, accepted the invitation of the Spanish delegation to hold the next Congress at Madrid in 1897. We regret to state, however, that it is almost certain that this Congress will be postponed. The most ardent partisans and efficient organisers of these congresses are undoubtedly the French sanitary reformers and notably the members of the Society of Public Medicine and Professional Hygiene. This society has consequently become a sort of international link between various organisations of sanitary reformers in different countries. The organisers of the Spanish Congress have therefore communicated with the French Society of Professional Hygiene and at first suggested that the Congress should be held this autumn. The date chosen clashed, however, with the period of the medical examinations held in France. As the students who obtain their diplomas are exempted from full military service the examinations take place earlier than was formerly the case, so that the candidates may know the result before the usual time for joining their regiments. Were the Congress to be held at the date first mentioned none of the French medical men engaged on the examination boards could attend. Many of the most distinguished and prominent French delegates would have to be absent. This difficulty was explained to the Spanish organisers, and they were requested, if possible, to alter the date. Their reply went a good deal further than the altering of the date, for they pointed out that Spain was at the present moment suffering terribly from the strain caused by two great colonial wars. At the same time, the Spanish press alluded to the Congress in very doubtful terms, and it seemed as if, at least for the moment, the task of holding the Congress was beyond the power and capacity of its organisers. There was also this difficulty, that the climate of Madrid is too hot in summer and far from agreeable in winter. The choice of suitable seasons is limited to the spring and late autumn. In the face of these hesitations and difficulties the French have proposed to their Spanish colleagues that the Congress should be postponed till Easter next year. At no time of the year is Spain so pleasant and so interesting as at Easter, and to postpone the Congress till that date would involve a delay of not more than about six months. To this it may be objected that, though Spain is near to France, it is far removed from most other countries, and as the Easter holidays are of short duration many delegates of the more distant nationalities may not have time to go so far. Then, again, it is unfortunately not at all certain that the political situation in Spain will have very materially improved by Easter, 1898. In that event, there is reason to fear that the Congress may collapse altogether. Luckily, we may take it as certain that though no vote has been given, no invitation issued, and no opinion expressed save in private conversations, the Congress will meet in Paris during the Universal Exhibition of 1900. A great European war alone would prevent this happy consummation. At the same time this would imply a lapse of six years between the holding of the seventh and eighth congresses, and such a delay cannot be viewed as otherwise than most injurious to the cause of international sanitary progress. It confirms once again the opinion we energetically expressed during the International Congresses of Hygiene held in London in 1891 and in Budapest in 1894. We then maintained that the congresses had become utterly unmanageable. It was possible to control the earlier congresses. Some 500 delegates, representing about twenty nationalities, can be suitably entertained and their discussions brought to a practical issue. Now, however, that these congresses are attended by something like 3000 delegates, the number of towns in Europe that possess adequate halls or assembly rooms and sufficient wealth and accommodation to receive hospitably and with credit to themselves so vast a gathering is very limited. It will not be surprising if, in their present distress, our Spanish colleagues find the task beyond their strength. But it is precisely in such countries as Spain, where sanitary reform has not made much progress, that the leading hygienists of the world should gather together and, by their presence, stimulate the movement. This, however, can only be done when alterations have been introduced in the management of the congresses which will reduce the expense and the number of delegates.

ITALY AND THE PLAGUE.

OUR Romec orrespondent writes:—Touched at many points by Indian traffic—abounding in *entrepôts* of travel between the great British dependency and Europe—Italy is, more than any other Continental Power, exposed to the risk of contagion from the pestis bubonica; but what is she doing in self-defence? Holding meetings of her Consiglio Superiore di Sanità; giving hospitality to the International Conference at Venice; issuing orders for the prohibition of suspected ships from her ports; and little or nothing more. Compare her inaction or inertia with the conduct of France, which is much less exposed to the danger, and what do we find? At the Pasteur Institute in Paris there are already 100 horses "immunised" and capable of furnishing the "serum anti-pestiferum" in ample quantity Italy, on the other hand, has no such precautionary energy to show. Not that her medical men are idle in the matter. They are constantly appealing to the Government to initiate the French example and enlightening the public as to the safeguard it may possess in presence of the danger. But, as usual, the profession in Italy is far ahead of the administrative or municipal authorities, and has to gain the ear of one or other only by informing the public and raising the *vox populi* for sound hygiene. Italian medical schools number no more able pathologist and sanitarian than Dr. Guido Banti, Professor of Pathological Anatomy in the "Istituto di Studi Superiori" of Florence, and in a communication addressed not so much *ad clerum* as *ad populum* he puts the country in possession of facts to which the State cannot long be indifferent. Sero-therapy, he maintains, can cope successfully with the plague if properly and opportunely applied; nor is the "serum anti-pestiferum" difficult to be had. Inject under the skin of a horse a certain quantity of pestiferous culture and at the point of inoculation the tissues get presently inflamed. For some days the animal is in fever, but this having run its course it gets well again. Repeat the injection with a greate

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quantity of the culture and the same phenomena are presented once more. Still repeating it, we find the blood of the animal has acquired special properties. It is bled and the blood is allowed to coagulate in vessels, separating into two parts the red coagulum and a liquid, transparent and yellowish, which is the serum wanted. This is a veritable antitoxin for the plague. Inoculate a few milligrammes of it in a rat and then infect the animal with the "cultura pestifera." Its health is unimpaired. Infect with the same culture another rat which previously has not been treated with the serum and it dies invariably. Take a rat already suffering from the plague and inoculate it with the serum and it almost invariably recovers. Such, briefly stated, is the practice of Yersin, who in twenty-six subjects ill from the plague has achieved by it twenty-four cures—the two who died having been treated too late. In a disease which numbers 90 per cent. of fatalities the Yersin practice is, indeed, a boon which Professor Banti and his brethren do well to bring before the lay public with a view to its being pressed upon the State. Thanks to the same enlightened action of the profession the public are taking a less superstitious view of sanitary cordons and such protective measures. In the recent epidemics of cholera, says Professor Banti, those measures were useless if not positively harmful. But plague is different from cholera, as in this connexion he proceeds to show. In 1815 it appeared at Noia in the Abbruzzi, and a military cordon was at once drawn around the city and rigorously maintained. "Il male si spense ove era nato" (The disease was extinguished where it was born). Again, in 1878-79 the plague ravaged the provinces of Astrakhan in Russia, and again the same measures, severely enforced, circumscribed and choked it. Why so? Because, replies Professor Banti, the bacilli of plague are extremely delicate bacteria, dying easily and easily losing their virulence, not holding out against desiccation—in a word, "they are micro-organisms even more fragile than the vibrios of cholera." Rigidly practised, therefore, such measures can protect the country from the intrusion of plague. Again, even if it has effected an entrance, Italy (though in a less degree than France) is not the Italy of "sixty years since"; she has shared in the modern movement of hygiene, public and personal, and is *pro tanto* protected against a malady which, under insanitary conditions, reaps its thousands. For plague propagates itself neither through the air nor the water and the bacteria which produce it are easily destructible—they can, for instance, be prevented from contaminating the soil, that indispensable condition for the development of plague. A truce, then, to the fumigations, inspired by panic, at frontier stations. Suspected cases, at once isolated, but not in "lazzaretti," and subjected for a few days to medical surveillance, are excluded from all possibility of diffusing the contagion; and if the malady declares itself in its true colours there is always the "serum anti-pestiferum" to combat it. But no time must be lost by the State in providing the protective measures, on the one hand, and the antitoxin, in sufficient quantity, on the other. It has had ample warning from medical authority already. All the greater must be its responsibility if, in the light of such warning, it adheres to its favourite maxim, "inertia sapientia," from which Italy has suffered so heavily in the past.

CORONER AND MEDICAL MAN.

IN THE LANCET of Feb. 20th we had occasion to comment upon a regrettable incident that occurred at an inquest, and from the reports before us we considered that the action of the medical man was consistent with both the spirit and the letter of the law. It is now our duty to draw attention to a conflict between a coroner and medical man in which other issues were raised. An inquest was recently held at Grays by the deputy coroner touching the death of an infant aged five months. Deceased had suffered from "discharge from the head during the few days previous to its death." On Feb. 5th the child was left in bed by the mother apparently asleep. The bedclothes were clear of the face. Shortly afterwards it was noticed that something was wrong and Dr. Snell was sent for, but before his arrival the child was dead. The report of the inquest relates that Dr. Snell stated in his evidence that "he had not the slightest information as to whether the child died a natural death or the reverse; and at the request of the father he made a post-mortem examination and found the cause of death to be asphyxia." When asked the cause of death Dr. Snell refused to answer on the ground that the coroner had not issued an order for a post-mortem examination, and that he should not divulge the secrets obtained by a necropsy privately paid for by the parents. That an inquest was necessary in this case there can be no doubt. That a necropsy was desirable seems probable, but upon the coroner was cast the duty to determine these points. We have frequently asserted that where the cause of death cannot be determined beyond reasonable doubt from the general and medical evidence a post-mortem examination should be made. The coroner, acting within his discretion, thought it was not called for and declined to make an order. In the first place Dr. Snell was clearly in the wrong. From his own evidence it is obvious that he could not give a certificate of the cause of death, and hence it follows that the body passed into the possession of the coroner, and to make a necropsy without an order was a mistake. The fourth section of the 6 and 7 Will., c. 89, provides that "no fee or remuneration shall be paid to any medical practitioner for the performance of any post-mortem examination which may be instituted without the previous direction of the coroner." It is obvious that Dr. Snell could not legally claim a fee for what he had done without official authority. Could he then be compelled to state the result of his examination? The question is open to argument, but on the whole we are of opinion that, bound by his oath to give in evidence concerning the death "the truth, the *whole truth*, and nothing but the truth," he could not on the ground of professional secrecy decline to divulge the knowledge he had acquired at the post-mortem examination. We are glad to learn that a more conciliatory attitude was assumed towards the close of the inquest and that the coroner eventually made the order claimed by Dr. Snell. It is not our desire to criticise unduly the procedure adopted by coroners, who have frequently a difficult duty to perform, being exposed to the charge of carelessness and parsimony on the one hand and to undue prodigality with the ratepayers' money on the other. After an impartial consideration of the facts we cannot escape the conclusion that Dr. Snell, finding he had overstepped the line of prudence in making a post-mortem examination without an order from the coroner, might have avoided a conflict by timely compromise.

AN UNPLEASANT MISTAKE.

To fondly nurture an egg which only results in the hatching of an ungrateful and venomous reptile is a favourite figure in the pages of fiction and romance, but the figure was almost literally realised in the circumstances of a legal action reported this week. A woman ate what she thought were sweets, when they proved to be those "eggs" which incubate rapidly into a "Pharaoh's serpent" on applying a light. It appears that the plaintiff, a confectioner, purchased from the defendants a number of farthing packets, one of which she sold to a child. The child, however, brought it back, as luckily her father had tasted the contents of the packet and wisely expressed the opinion that they were nasty. The lady confectioner, however, anxious to show

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that she sold innocuous things, ate one herself, regarding it as a sweet, with the result that she was taken very ill and was medically attended for several weeks. This was the ground of the action, and very justifiable ground too. Unless the confectioner's business was of a mixed kind it is inconceivable that sulpho-cyanide of mercury pills, of which the "eggs" are composed, should be sent to a dealer who sells sweets. Judge Lushington decided that the negligence was on the part of the defendant and not of the plaintiff, and he gave judgment for the latter for the full amount claimed (£50). Sulpho-cyanide of mercury does not appear to be a very powerful poison, and the quantity in each "egg" is stated to be somewhat over a grain. Its poisonous properties may be referred to the mercury rather than to the cyanogen in its composition. On applying a light, however, the vapours given off are very decidedly mercurial, which fact alone suggests that some measure of restriction should be imposed upon the sale of these apparently innocent "eggs."

PROCEDURE UNDER THE SALE OF FOOD AND DRUGS ACT, 1875.

HOPES have been held out that when a number of matters of greater (?) importance than the health of the people shall have been satisfactorily disposed of, the attention of Parliament will be directed to a revision of the laws dealing with the adulteration of food, which have been practically untouched for over twenty years. The Act of 1875 is in many respects open to amendment, especially as to the inadequacy of the penalties for repeated offences, which, as experience has amply shown, instead of acting as deterrents, too often amount to no more than a small tax on enormous illicit profits, and the difficulties often found in obtaining convictions or in reaching the real offender, while instances of hardship are not altogether unknown. But the most serious defect is undoubtedly in the procedure enjoined for obtaining samples, which is uncertain and haphazard, and, indeed, demoralising to all parties. A consciously fraudulent dealer soon learns to recognise as a suspicious customer an inspector, policeman, or other officer or servant of the sanitary authority, and even a woman or child put forward by the inspector waiting outside. The probability of such person being served with an adulterated article is small, although a large business may be done in such goods under other circumstances, and the subterfuges, or, in plain language, the lies, to which a clever and successful inspector is driven to resort are by no means creditable to the law, while often serving to evoke sympathy with the accused, whom an astute counsel may easily represent as the victim of a mean conspiracy. The procedure, too, is applicable to the retail trade only and cannot be brought to bear on the wholesale dealer or manufacturer, who does not sell his goods in small quantities and to all customers over the counter; the only way in which such offenders can be reached being by a further action entered against him by the retailer, and not even then when the latter was a party to the fraud by buying at a price he knew to be incompatible with the purity of the article and of course without a warranty. We would call the attention of those on whom the drafting of a new Bill may devolve to the procedure under the Italian Public Health Act, although we have reason to believe that its provisions are by no means as strictly enforced as they are wisely designed, though this is doubtless the fault of the local authorities and their officials, and not of the able framers of a comprehensive and highly scientific piece of legislation By it the medical officer of health, accompanied, if he prefer, by the public analyst, is empowered to enter any shop, warehouse, or factory, wholesale or retail, for the preparation or sale of any articles of food or drugs, and at his leisure to inspect the entire stock, selecting and taking samples, with prescribed precautions for identification, for examination or analysis. Every element of chance and possibility of evasion is thus precluded, everything is open and fair to all parties, and the opportunity afforded of reaching the wholesale dealer directly is really a protection to the small tradesman, who is as often deserving of pity as of blame.

"SEAMEN'S HOSPITALS."

THE litigation concerning the testamentary intentions of Mr. W. F. Waller of Gravesend, under which a bequest for "Seamen's hospitals" was made to the acting Lord Mayor, is now at an end, and the bank shares—the subject of the bequest—have been transferred to his lordship. The will gives the Lord Mayor absolute discretion in deciding what is a "seamen's hospital," the only condition imposed by the testator being that the money should be applied "for the benefit of such hospitals or hospital for seamen in some or one of the cities or counties which border on the River Thames in England, as he may think fit." The legacy, after payment of legacy duty, will amount to about £9250. Any hospitals for seamen claiming to come within the words of the bequest should send in particulars of their claim to the City Solicitor.

THE PATHOLOGY AND THERAPEUTICS OF SCURVY.

IN our issue of Feb. 13th we referred to Dr. Nansen's experiences with regard to scurvy. Not a single case occurred during the whole time that the expedition was away although the food necessarily consisted very largely of preserved meats. Dr. Torup, Professor of Physiology at the University of Christiania, was of opinion that if meat was badly preserved certain poisons allied to the ptomaines were produced which caused scurvy and consequently great care was exercised in preparing food-stuffs for Dr. Nansen's expedition, with the result already stated. Especially interesting in this connexion is the article recently published by Dr. A. E. Wright, Professor of Pathology at the Army Medical School, Netley. He points out that our knowledge of scurvy is incomplete, inasmuch as it does not furnish us with any explanation of the fact that a regimen consisting entirely of preserved meats and cereals, or of either of these separately, induces the symptoms of scurvy. According to Dr. Nansen's experience, however, this statement must be modified, the word "improperly" being inserted before "preserved." Dr. Wright refers to experiments made by Walther under Schmiedeberg's directions. These experimenters had in view the object of determining the effect of administering mineral acids to animals. The results varied with different animals. In the herbivora there is no special provision for the neutralisation of acids, and consequently rabbits speedily succumb to "acid intoxication" when free acids are administered. This is in conformity with the fact that these animals, so long as they feed exclusively upon herbage, have no need for any such provision, seeing that they are feeding upon alkaline food-stuffs which continually replenish the blood with alkaline salts. In the carnivora there exists a very effectual provision for neutralising acid by means of the waste ammonia of the body, and consequently a dog, for example, bears up perfectly well against even a considerable acid ingestion. Contrary to what happens in the rabbit, the ingested acid does not in the dog either rob the blood of its alkaline salts or diminish its coagulability. Man occupies with respect to his power of neutralising acid a position which is intermediate between that of the dog and the rabbit. He is, therefore, able to bear up without

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injury against a moderate degree of acid intoxication. If he is plied with acids beyond a certain point the alkalinity and coagulability of his blood will diminish and will finally succumb to the acid intoxication. Dr. Wright suggests that our next step, after we have thoroughly digested these facts, must be to consider carefully what would inevitably happen if this process of setting off the alkalies of our vegetable food against the acids of our animal food were to be forcibly interrupted by the omission of all fresh vegetables and fruits from our dietary. It is obvious to reflection that under these conditions we should inevitably lapse into a condition of acid intoxication. But, again, experience shows that it is precisely under these conditions that we lapse into a condition of scurvy. We may, therefore, at least provisionally conclude that scurvy is a condition of acid intoxication. This theory is supported by therapeutical considerations—namely, the successful treatment of scurvy by fresh vegetables and lime juice. But the recent experiences of Arctic explorers add another important fact—namely, the treatment and prophylaxis of scurvy by administration of blood or of fresh meat with the blood in it. We have consequently to examine this new and important clinical fact and to see whether it can be explained upon the theory that scurvy is an acid intoxication. Dr. Wright does not hesitate to reply to this question with an emphatic affirmative, for he shows that not only is blood an alkaline food-stuff, but that it is comparable in its yield of alkaline salts to lemon and orange juice. We thus see, says Dr. Wright, that the acid intoxication theory of scurvy furnishes us with a complete explanation of the fact that these explorers remained perfectly free from scurvy although they fed on an exclusively animal dietary, for those who have heard or read Dr. Nansen's lectures will remember that bear's blood and fresh flesh were frequently partaken of. This, however, was not constantly the case, and no doubt Dr. Torup's theory and the consequent care expended in preserving the meats had much to do with the immunity from scurvy enjoyed by Dr. Nansen and his companions.

PREVENTIVE MEDICINE AND GEOGRAPHY IN THE "NINETEENTH CENTURY."

THE question as to the expediency or desirability from a professional standpoint of a medical man writing upon medical subjects in the lay journals is a question which must be decided individually and with due regard perhaps to the exact nature of the subject treated of. The diffusion, however, of obsolete opinions or of opinions averse to the best considered practices of the present time cannot be a matter of indifference to the medical profession, nor can errors of elementary geography be altogether ignored in discussions relative to the distribution or progress of any given disease. In the current number of the *Nineteenth Century* is an article on Plague to which the writer must have devoted considerable labour. We read, however, with some astonishment the following sentence: "In China the plague raged from Singapore to Shanghai and Hong-Kong from 1892 to 1896, whence it is supposed to have been carried in bales of cotton to Bombay, where the present outbreak is assuming such grave proportions." As to the conveyance of plague through the agency of cotton bales we may have something to say in another issue, but the position of Singapore is a question which has much disturbed us. We had no notion that this port had been removed to China or that the Chinese frontier had been so extended as to embrace it. Under considerations as to the distribution of plague amongst animals we are told that the cat seems rarely to suffer—an exemption for which its "natural cleanliness" is offered as an explanation. Quarantine, Dr. Lubbock tells us, undoubtedly prevents the importation of plague; but surely numerous instances could be given to show that quarantine has in the past frequently failed in such prevention. The most remarkable portion of the article is, however, that which relates to preventive measures. Most of us have read how in the great plague of London the invaded houses were shut up and the healthy confined with the sick, but it was hardly to be expected that a medical man, even through a lay journal, should in these days advise "isolation of the affected person by closure of the house in which he lives, or, if this is impossible, by placing every suspected case in a special and isolated hospital." It will be noted that the closure of the affected house is the procedure to which preference is given. Science, we are told, "has within recent years taught us the nature of plague." Has it? Dr. Lubbock reposes but little faith in Yersin's serum treatment, since he observes that "medical treatment appears to have little, if any, influence upon the progress of the disease."

A CRUSADE AGAINST DIRTY HOUSES IN BRIGHTON.

UNDER the ægis of the Brighton town council Dr. Newsholme is commencing a new and rigorous crusade—this time against dirty and overcrowded houses. To this cause he attributes the excessive death-rates of certain wards, four of them being 23·2, 22·1, 19·4, and 18·7 respectively, as against 13·9 only in the rest of the borough. Especially is this noticed in the mortality from phthisis, chest complaints, and measles. Dr. Newsholme makes allowances for the accompanying poverty and excessive drinking, and goes on to point out that his present powers of reaching the former evils are dilatory, the compliance temporary and partial, and the evil recurrent. A considerable portion of the offenders are foreigners and he asks for special by-laws. He gives, chapter and verse, the ground for his grumbles—the offending streets and areas and individual cases. He wishes to bring these sub-let houses to the level of common lodging-houses, and he desires to have all the powers under section 90 of the Public Health Act, 1875, which the corporation does not possess under private Acts, for dealing with houses let in lodgings. These, he says, will enable them to reach and partially remedy some of the evils they cannot reach by sanitary inspections. He speaks of the all-round improvement of the last nine years in structural arrangements and adds that these new by-laws are needed to get at the evils for which the tenants are responsible.

A REMARKABLE CASE.

THE *Morning Post* of the 22nd inst. records under the above heading a case with regard to which an inquest was held by Dr. Wynn Westcott. The facts were then stated to have been as follows The patient's husband went to work at 7.30 A.M., his wife then appearing to be in her usual health. When he came back to breakfast at 9 o'clock he found his wife lying dead on the bed, and the body of a child on the floor. Although there was a woman in the next room no sound was heard during his absence. The husband gave evidence that he had no idea his wife was pregnant and, also, that he did not think she knew it herself. On this the coroner remarked that the case was the most remarkable on record. We may say that the woman's death was due to hæmorrhage, and that the child, who is described as having been fully developed, died from suffocation. The case is an interesting and remarkable one, but is far from being unprecedented. As regards unconsciousness of advanced pregnancy in *unmarried* women, though their statements must obviously be accepted

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with reserve, it seems to have been established that when intercourse has taken place under such circumstances the occurrence of pregnancy appears to the woman to be impossible and she may naturally and in good faith attribute her symptoms to disease rather than to pregnancy. Coming now to the case of a married woman, the probability of her remaining unconscious of her condition in advanced pregnancy is much less, but there is also generally more reason for accepting her statement as true. That a married woman may remain ignorant of her condition up to the time of full term labour is established by Dr. Tanner's case, quoted by Guy and Ferrier, of a woman, aged forty-two years, and three years married, who menstruated scantily for five or six months, and then menstruation ceased for nine months. She was taken in labour and delivered of a mature female child by instruments. Both parents are said to have been anxious to have children, but the woman had no idea she was pregnant and could scarcely believe not only the fact of the pregnancy, but that she had been in labour for ten hours. Another case, the Hawkins divorce case, also quoted by Guy and Ferrier, shows that those about the patient, even her husband sleeping with her till within five minutes of her delivery, may remain ignorant of the pregnancy. In that case the Lord Chancellor was convinced that the petitioner (the husband) had remained ignorant of his wife's condition even in the circumstances above stated. Presumably, in the case on which an inquest has just been held, the husband had been sleeping with his wife till within an hour or so, of her confinement, yet he said he had no idea of her condition, and there seems no reason, such as might have been present in the Hawkins case, for doubting the truth of his statement. The present case is, therefore, extremely interesting; it establishes still more clearly than before the possibility of ignorance of pregnancy existing on the part both of the woman and of her husband up till the very last moment.

MEDICAL POLITICS IN AUSTRIA.

OUR readers will have noticed in the letters of our Vienna correspondent how many of the questions which agitate the profession in England do so as much or more in countries where it is more severely regulated by law than is the case here. Not the least interesting part of his communication in THE LANCET of Feb. 20th is the account of the Austrian medical chambers, which are nineteen in number and scattered through all parts of that country. They cannot be called medical councils. At least, they do not discharge the functions in regard to medical education and registration which our General Medical Council discharges. But they have considerable powers of an ethical kind. Each medical man is required to report himself, with various particulars, to the chamber of the particular district in which he resides. The chambers are not bound too closely or hampered, as our General Medical Council sometimes seems to be, by the hard terms of an Act of Parliament, but can discuss matters relating to the general interests of the profession. They are expected to uphold its privileges, and the courts of law are entitled to ask them for the expression of opinion. Questions of honour and ethics are not decided by the chamber, but by a council of honour composed of from three to seven members. To crown all, the principle of Direct Representation is in full force. The chambers are elected by the medical men of the province or district. It is complained that the powers of the chambers are limited. But there is a power of imposing fines not exceeding £20 on medical men for professional misbehaviour which might well be a very valuable means of bringing erring brethren to better ways, and more merciful than the system of erasure. We have remarked in a previous number on the grave evils in Austria connected with a wholesale State system of insurance against sickness. Such a system means inevitably a cheap system of medical attendance. Hitherto in Germany and in Austria the system has been confined to the working-class; but it is proposed to extend it to employers and tradesmen. So strong is the feeling against such action by the Government that an unprecedentedly large meeting of medical men from all parts of Vienna, numbering a thousand, has been held to protest against it. It is pitiable when a strong Government, which is exacting in its educational demands, interferes in the domain of private practice and caters for those who are quite capable of taking care of themselves. The system threatens to ruin private practice altogether, and we sincerely urge our brethren in Austria to resist it in every possible way. But it is not the State alone that injures the profession. Its own members are scarcely less to blame for joining medical associations which confound the poor and the well-to-do and use methods of low competition which are as inconsistent with the welfare of the patient as with the dignity of the medical practitioner. Dr. Scholz referred to cases in which the practitioner received a penny a visit. Surely the end of such methods must be the rapid degradation of the profession. When Dr. Scholz recommends as a remedy the employment of every man by the State he probably means that the poor for whom the State provides attendance should have a choice of the medical men. Apart from the poor, the more free medical practice is from State control, and the more private and personal the relation between the medical man and his patient the better. The evils so vividly described are to be met by strong organisation in the profession and by a powerful and united protest from all the organisations of the profession to the Government.

THE ENDEMIC FEVER OF THE MEDITERRANEAN.

WE have received a copy of a paper by Surgeon-Captain M. L. Hughes, of the Army Medical Staff, which was read before the Royal Medical and Chirurgical Society in April last and reprinted from the volume of the society's Transactions. As the subject is one of considerable interest, about which a good deal has been written from time to time, we may very briefly call attention to it. The first accurate description of the fever of the Mediterranean, says the writer, was published by Dr. Marston while serving as an army surgeon in Malta in 1861, and since that time it has been written upon by numerous medical officers and others, ending with the discovery in 1887 by Surgeon-Major Bruce of a causal micro-organism. The disease has a wider geography than that implied in its name, for there is reason to believe that the same fever exists on the borders of the Red Sea and probably elsewhere. Surgeon-Captain Hughes describes its symptomatology under three separate groups, the malignant or fatal type, the undulatory, and the intermittent type. He points out its special symptoms, its differential diagnosis from typhoid and other forms of fever, its pathological anatomy, founded on the reports of sixty post-mortem examinations at thirteen of which he was present, and its bacteriology, based upon thirteen cases in which a micro-organism was found by him similar to that described by Surgeon-Major Bruce. The fever commonly runs a very variable but protracted course, and is often complicated with, or followed by, various nervous, rheumatic, or glandular affections, and does not respond to any specific treatment. In fatal cases there is no lesion of Peyer's glands to be discovered. It is often curiously localised to certain rooms in buildings or to certain households and seems greatly to depend upon causes of insanitation—fæcal contamination of soil and air, with warmth and moisture and a drying soil, and insufficient superficial space

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or ventilation. Change from an enervating Mediterranean climate to this country is generally necessary and always desirable during the warm weather in severe or protracted cases, although it may be preferable for certain cases to remain in the Mediterranean during the winter months in order to avoid the cold of this country at that season.

THE CROONIAN LECTURER AT THE ROYAL SOCIETY.

THE Council of the Royal Society has invited Dr. Sherrington, F.R.S., Holt Professor of Physiology in University College, Liverpool, to deliver its Croonian Lecture this year. The lecture will be given in April and the subject will be the Spinal Cord and Reflex Actions. The official recognition thus extended to Professor Sherrington's work is of a particularly complimentary character inasmuch as it is the custom of the society to invite a foreign *savant* to deliver the Croonian Lecture.

STIVEN *v.* WELSFORD.

WITH reference to our article upon this interesting case it has been represented to us that we have done the defendant an injustice by making it appear as though he had forced the matter into court and had been vindictive in his method of defence. We do not think that any passages in our article bear out such constructions, but we are happy to say that we had no intention of making either suggestion. We are informed that Dr. Welsford was from the first willing to refer differences between Dr. Stiven and himself to medical arbitration, feeling that the issues could be better dealt with by a scientific tribunal.

AFFECTIONS OF THE CAUDA EQUINA.

IN a recent number of the *Archives de Neurologie* there is an abstract of an important lecture on this subject by Professor Raymond. The lecture appeared at length in the *Nouvelle Iconographie de la Salpêtrière*. It commences with a reference to the anatomical relations of the nerves of the cauda and to the muscles and sensory areas which are supplied by them, and two cases are related in which the symptoms briefly were a paralysis, incomplete and limited to certain regions, a similarly circumscribed cutaneous impairment, and interference with micturition and defecation. Certain additional phenomena are also referred to, such as trophic disturbances, sexual impairment, modification of the reflexes, and altered electrical reactions. In regard to sensory changes in such cases the pain is usually situated in the sacral region, radiating into the lower limbs. It is intermittent as a rule, but has not usually the shooting character of the pains of tabes. The anæsthesia is constant, circumscribed, usually symmetrical, and as a rule involves the vesical and rectal mucous membranes and the perineal and pudendal regions, or it may also affect the lower limbs in different ways. Its distribution in the limbs gives an indication as to the roots which are implicated in the disease. Various forms of paræsthesiæ are also present. The motor troubles comprise paralysis and atrophy of certain groups of muscles in the lower limbs, the distribution of the paralysis indicating the nerves affected. Incoördination is unusual as a symptom, although slight unsteadiness is not uncommon. Genito-urinary troubles are always present—i.e., incontinence or retention of urine, and also sexual incompetence. The affections of the cauda equina are either tumours or inflammation. The latter may be of the substance of the conus or nerves or of the meninges, and may be either idiopathic or the result of traumatism, and the treatment to be pursued is either medical or surgical. The medical treatment will be determined by the general conditions affecting inflammations of the spinal cord, and if the diagnosis of tumour can be definitely or even probably determined surgical interference may be successful. More than one case is now on record in which a tumour has been removed from this region. The lecture forms an excellent *résumé* of the symptomatology of this condition, and the two cases related are interesting and illustrative.

THE QUEEN'S COMMEMORATION IN BRISTOL.

BRISTOL is setting a good example in the art of fitly commemorating the notable reign of Her Majesty. At an influential meeting on Monday, presided over by the Mayor, Mr. R. H. Symes, it was proposed, on the motion of Mr. Joseph Storrs Fry, seconded by Sir Charles D. Cave, as a fitting expression of thankfulness for the national benefits accruing from Her Majesty's reign, and as a memorial of her greatness, her worth, and of the services she has rendered to the Empire, to establish a convalescent home for the benefit of the patients of the Bristol Royal Infirmary, and the Bristol General Hospital, at a cost of £50,000, half to be reserved for endowment. A committee was appointed to carry out the undertaking, and some substantial sums were announced at the meeting. No purpose could be more in harmony with the genius of the year. A good convalescent home is now an essential complement of a good hospital, and, as Mr. Fry said, relieves its funds. It is an economical way of treating patients that are advanced in recovery. Besides, it gives them an immense impulse in the recovery of hope and health. The suggestion united men of all political and religious parties in Bristol, and we hope ere long to report its brilliant success.

THE INFLUENCE OF SMALL-POX HOSPITALS.

THE current number of *Public Health* contains an interesting abstract by Dr. Meredith Young on the Local Government Board (Medical Officers') Report, 1894-5. Dr. Young, in dealing with the question of small-pox, points out that though the thesis of the aerial convection of this disease is regarded by the "bulk of authorities" as a settled question there are many still unconvinced, and he draws attention to the experience of Hastings in 1894, where the facts observed form yet another illustration of the danger of placing these hospitals near to human habitations. It was found in that instance that out of thirty-six cases which occurred within 500 yards of the Hastings Small-pox Pavilion the percentage of small-pox attacks to population varied as follows:—

	Attacks.
Within 100 yards circle	4·2 per cent. of population.
,, 100 to 200 yards zone ...	2·7 ,, ,, ,,
,, 200 ,, 300 ,, ,, ...	1·9 ,, ,, ,,
,, 300 ,, 400 ,, ,, ...	0·9 ,, ,, ,,
,, 400 ,, 500 ,, ,, ...	0·2 ,, ,, ,,
Total within 500 yards circle ...	1·3 ,, ,, ,,

Dr. Young adds that the diffusion of small-pox occurred apart altogether from any communication of contagion by infected persons or things, as a most painstaking inquiry showed.

EUCAINE AS A LOCAL ANÆSTHETIC.

EUCAINE, which is, according to Professor Charteris, a "methyl ester of a benzoylated oxypiperidine, carbooxylic acid," possesses some undeniable advantages over cocaine. It is capable of synthetic manufacture and so is cheaper; and it does not possess the mydriatic effect of cocaine. Whether, however, it deserves all the encomium lavished upon it in respect to its greater safety appears open to doubt. Professor Ponchet, in a paper read before the Société de Thérapeutique on Jan. 27th, asserts that eucaine is a powerful cardiac depressant, and in some instances produces sudden death without warning. Injection of 2 milligrammes into a frog caused slowing and irregular action of the heart,

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while a like dose of cocaine produced no effect. He regards eucaine as inferior clinically and as far more dangerous than cocaine. Upon the other hand, Professor Charteris and Dr. MacLennan recently communicated to the Royal Society of Edinburgh a paper dealing with the physiological action of eucaine, which gives that body a more favourable aspect. Solutions were injected hypodermically into guinea-pigs. A lethal dose of eucaine was found to be 0·09 gramme (per kilogramme of body weight), that of cocaine being 0·068. The phenomena of dying under eucaine showed less head rotation, less opisthotonos, less salivation, and less difficulty of breathing; the symptoms, moreover, took longer to develop than was the case with cocaine, while larger quantities than of the latter were required to produce toxic effects. The influence upon the heart is not mentioned. It must be confessed that we do not at present possess sufficient knowledge of the physiological and clinical behaviour of eucaine to pronounce a definite opinion upon it.

THE "YORKSHIRE POST," "THE LANCET," AND THE LEEDS INFIRMARY.

THE *Yorkshire Post* is certainly one of the best informed and most readable papers in England, but in its criticism of our Special Commissioner's article upon the Leeds Infirmary —the sixth article in the series entitled "Hospital Abuse"[1]—it has done us scant justice. Our Commissioner has sought to collect impartially all the available information bearing upon the subject. For instance, in his first article on Manchester he set forth the arguments adduced by the consultants of that town and by the visiting staff of the hospitals. This practically constituted an indictment of the general practitioners. Then in the subsequent articles he gave the opinion of the general practitioners, which in its turn constituted an indictment of the hospitals and of the consultants. Now at Leeds the principal feature which distinguishes that town from other towns is the influence and powerful organisation of the Workpeople's Hospital Fund. Naturally our Commissioner gave us as fully and as forcibly as possible the arguments and the opinions of this important organisation. Thereupon the *Yorkshire Post*, in a leading article, attacks THE LANCET. If we were to attack the *Yorkshire Post* because of the opinions expressed by a Liberal leader whose speech was reported in the columns of that paper the position would be the same. Our Commissioner seeks to describe all views that bear upon the question of hospital abuse; that does not mean that he approves or that we approve of these views. Such views are held, they exercise a certain influence, and we record the fact. That is all. The *Yorkshire Post* would not refuse to publish one of Mr. Gladstone's speeches, though it is opposed to the political opinions of that statesman. We cannot hope to solve the problem of hospital abuse unless we hear all sides of the question. The *Yorkshire Post* has every right to attack the opinions of the friends and advocates of the Leeds Workpeople's Hospital Fund, but it is not justified in fastening these views upon our Commissioner as if they were his views and his opinions.

THE RE-ENDOWMENT OF GUY'S HOSPITAL.

THE interim report of the Re-endowment and Sustentation Funds in connexion with Guy's Hospital, which has just been issued, shows that the amount received on the re-endowment fund account up to Sept. 30th, 1896, was £161,907 19*s.* 4*d.* Of this sum, £18,826 16*s.* 8*d.* was devoted to the repayment of a loan to the hospital, and the sum of £142,981 2*s.* 8*d.*, less £6364 1*s.* 3*d.*, the expenses of the appeal and of the festival, has been invested in approved securities. The amount received on sustentation fund account up to Sept. 30th, including £13,932 11*s.* 3*d.*, the balance transferred from the old special appeal fund of 1886, was £34,417 11*s.* Of this total certain items amounting to £6965 1*s.* have been transferred to the re-endowment fund. The sum taken from the sustentation fund since its inception to supplement the deficiency in the ordinary income of the hospital was £11,206 13*s.* 10*d.* The appeal has been necessitated by reason of the growing depression in agriculture, the endowment of Thomas Guy, which from 1725 to 1886 provided for all the financial requirements of the charity, having fallen in 1895 to about one-half of its previous value. The treasurer states that of the £500,000 asked for only about one-third has as yet been forthcoming and 150 beds still remain closed.

THE LATE M. BLONDIN.

IT is but a just tribute to M. Blondin on the part of the press to devote a few columns to his unprecedented feats as an acrobat. There was a pluckiness about him which wel became one with his muscles and his nerves, and which was strikingly manifest at both ends of his life—in his childhood, when at nine years of age he was left as an orphan and resolved to look out for himself; and in his advanced age, when, after losing his money, he had to begin the world afresh and repeat the achievements which caused the spectator to hold his breath. His actual feats, including the crossing of the Falls of Niagara, with a man or a lion in his care, or blindfolded, or on stilts, are likely to remain long unrivalled, and perhaps properly so. Meantime they are a record in the region of physiology of simply marvellous command and coördination—of feet with the sensibility of hands and of a brain working with equal perfection in its way. Possibly the most striking thing was the long continuance of his remarkable powers. It is one thing to do such feats at twenty and another to retain the power at seventy or more. And yet so lately as 1896, when he must have been seventy-two years of age, we read that he performed in Belfast. This is the more remarkable, as fully ten years ago, after it is understood, reverses in fortune, Blondin showed unmistakeable indications of physical degeneration. We may question the ethics of such a use of fine nerves and limbs, but we can scarcely question the heroism of the man in battling with life according to his methods and his faculties.

CORTICAL EPILEPSY SURGICALLY TREATED.

Dr. WEISSGERBER has published in the *Münchener Medicinishe Wochenschrift* a paper in which are given the details of two cases of epilepsy with localised fits which were treated surgically. An abstract of the paper appears in the last number of the *Neurologisches Centralblatt*. The first case was that of a boy, aged ten years, who at the age of one and a half years had sustained a compound fracture of the skull. Several pieces of bone came away before the wound healed. In June, 1891, and in August of the same year the two first attacks, characterised by movement of the left upper and lower extremities, took place, and these were succeeded by recurrences taking place every eight or ten days and lasting for two or three minutes at a time. An operation was carried out dealing with the site of the old scar. A defect was found in the bone and adhesion of bone, dura mater, and brain. These were all removed or separated, even part of the cortex being taken away. Rapid healing took place and the boy remained for two years without an attack, and he has remained since April, 1894, quite free from fits and in a satisfactory mental condition. The second case was that of a man aged

[1] THE LANCET, Feb. 13th, 1897.

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twenty-eight years, who at the age of ten years had received a blow on the head which was followed by prolonged suppuration. A few weeks after the accident there were cramps in the right arm and afterwards weakness of that and of the corresponding leg, with headache. A year later all these symptoms disappeared. At the age of seventeen years Jacksonian attacks became established, commencing in the right side, but affecting also the opposite one, and the scar on the head simultaneously became painful. The attacks occurred frequently, and finally operation was undertaken. There was found a considerable defect in the skull and underneath this a cyst containing clear fluid. Some of the bone was taken away, the dura mater was separated, and the cyst wall with part of the brain substance removed. The attacks remained in abeyance for four weeks and then recurred about once in five weeks, but the patient had at the time of writing been quite free from them for more than eighteen months.

BELGIAN GUARDIANS CLAIM MEDICAL RELIEF FOR THEMSELVES.

THE effrontery—not to say dishonesty—with which well-to-do people continue to obtain medical attendance for little or nothing is, of course, not confined to this country. Indeed, in many parts of the Continent matters are probably even worse than with us. Thus, the medical practitioners residing in a certain district in Belgium have recently drawn up a list of persons who have the right to gratuitous attendance, but who are quite able to pay for it. The very modest demand that such people should no longer be authorised to laim the services of the district medical officer has met with a refusal and the grievance is now being discussed in the political journals. From the correspondence published we learn that for the last twelve years the medical men in the district have had grave cause of complaint regarding the medical attendance on the poor — for which a fixed yearly salary is paid — inasmuch as the list of "poor" has been drawn up so as to include nearly all the well-to-do people in the place, including shopkeepers, farmers, and most of the guardians of the poor and communal councillors themselves (!) which is said by the writer to be definitely illegal, as, of course, it ought to be. No wonder that there should be some difficulty about getting the list revised. It appears that the whole of the local profession is now determined to make a stand against this injustice.

THOMSEN'S DISEASE.

AT a recent meeting of the Berliner Gesellschaft für Psychiatrie und Nervenkrankheiten, of which an account appears in the *Neurologisches Centralblatt*, Dr. Pelizaeus showed an interesting example of this peculiar disease, offering, however, some marked differences from the usual type. The patient was twenty-seven years of age and had come from a healthy family. His trouble began at the age of sixteen years, and now his muscles showed considerable departure from the normal. There was not the universal over-development of those which is met with in most cases of myotonia, for some of them actually showed an atrophic condition, as the deltoid and the muscles of the ball of the thumb on both sides. If the patient extended the arm or hand he could in a comparatively short time flex them again, but if he first flexed them extension required both time and considerable effort. There were also symptoms of some bulbar affection, his articulation having a nasal character, and on an attempt to blow out a light air came through the nose and there was a marked tendency to choke, especially in swallowing liquids. The affection seemed to be a progressive one, and a sister of the patient, aged twenty-one years, was similarly affected. In the discussion which followed, Professor Jolly mentioned a case of muscular atrophy which he had shown at the society, which afterwards became one of Thomsen's disease; and Professor Remak mentioned a case published by Professor Hoffmann in which there was neuritis of the median nerve, possibly from the severe pressure of the contracting muscles. There seems to have been a general agreement that the case shown was really one of Thomsen s disease.

CHEAPENING THE CARRIAGE-RATES FOR CIDER.

THE first great step towards the revival of the cider industry has been accomplished in the promise of the railway company serving the Herefordshire district to convey cider at a cheap and special rate. This should give a distinct impetus to the revival of a once important industry, since the high cost of distribution is a powerful factor against success. It is hoped that the same proportionally low scale of rates will be conceded also by other companies. The whole movement is not a fad, but one of national importance as tending to promote the availability and use of an undoubtedly refreshing and wholesome beverage, and we congratulate Mr. Radcliffe Cooke on the evident progress he is making towards this end.

A SUBLIMELY RIDICULOUS STATEMENT.

"THE sublime and the ridiculous," says the *Medical Press and Circular*, "seem to be curiously illustrated in the regulations, written and unwritten, which belong to the Royal College of Physicians, London." Our contemporary then proceeds to state that no Fellow or Member of the College is permitted to publish anything on syphilis, understanding that "only recently a Fellow of the College was severely taken to task by the President for having so far offended against the traditions of the College as to publish an important communication upon the forbidden subject." Were it not that the rest of the article is peppered over with such adjectives as "grandmotherly," "narrow," "illiberal," "fatuous," and "ignoble," we should have supposed the *Medical Press and Circular* to be poking fun at the profession. But thus to abuse the College on false grounds would be carrying fun to such an indecent length that we are forced to believe that our contemporary has been made the victim of a hoax by one of its contributors. If so, the hoax is all the more cruelly opportune because on Tuesday last the Royal College of Physicians of London appointed a strong committee to inquire into the working of the Contagious Diseases Acts in India, and a knowledge of syphilis will be expected of each gentleman selected to serve. The present President of the College has sat on two such Commissions previously, and, as a further reason why Dr. Wilks should not "take seriously to task" any Fellow or Member of the College for dealing with the subject, we may remind our readers that he himself published a lecture on syphilis—and a very admirable discourse, too—in our columns in 1867. This lecture was delivered to the students of Guy's Hospital, and the very first sentence lays down the obvious truth that constitutional syphilis must be regarded as, "strictly speaking, a medical disease." How does the *Medical Press and Circular* think that diseases of the nervous system, for instance, are to be treated if the subject of syphilis may not be mentioned by the physician? We hope that our contemporary will see the fitness of expressing some regret for its misapplied abuse of the Royal College of Physicians of London.

A COPY of the memorial to be presented to the Royal College of Physicians of London by the Hospital Reform Association has been sent to us by the honorary secretary of the association and lies for signature in our offices.

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OWING to some misapprehension we are asked to state that the memoir contained in the volume of "Essays and Addresses by Sir John Russell Reynolds," recently published, was written by Dr. Squire Sprigge.

THE anonymous benefactor who has undertaken to re-build and extend the University College Hospital in Gower-street, London, at a cost of £100,000 is now formally stated to be Sir J. Blundell Maple.

LORD LISTER, who was introduced by Lord Watson and Lord Playfair, on Tuesday last took the oath and his seat in the House of Lords on his elevation to the peerage.

THE two vacancies in the Executive Committee of the General Medical Council have been filled by the appointment of Mr. Brudenell Carter and Dr. Glover.

WE understand that Surgeon-Major Horace Pinching has been appointed Medical Officer to Mr. Rennell Rodd's Mission to King Menelik.

THE Duke of Bedford has accepted the office of President of University College Hospital.

THE INTERNATIONAL SANITARY CONFERENCE.

SPEAKING of the International Conference at Venice in THE LANCET of the 13th instant we alluded to the different standpoints from which the delegates from this Government and their Continental *confrères* would probably regard the question of quarantine and international precautionary sanitary requirements. We pointed out that if our experience had taught us to lean with more confidence on sanitary preparedness than on strict measures of quarantine, sanitation, nevertheless, in its broadest and best sense, was necessarily of slow growth, and meant time and money, and that Continental nations with the enemy at their door very naturally sought to close the door and endeavour to exclude the foe by those severely restrictive measures of quarantine on the efficacy of which they relied; and we added that we hoped all the delegates would approach the discussion of the questions to be considered by them in a dispassionate and eminently conciliatory and reasonable spirit. If that were done we confidently believed that some practical line of action would be the result of their deliberations. It is very gratifying, therefore, to find that this spirit appears to have animated the members of the conference in all the proceedings which have so far taken place.

The opening sitting was held at the Royal Palace at the western end of the Piazza San Marco on the afternoon of February 16th, when some fifty delegates, representing all the principal Powers, were present. Surgeon-Colonel Richardson appeared on behalf of the Indian Government pending the arrival of Surgeon-Major-General Cleghorn from India. The opening day's proceedings were mainly of a formal and complimentary character. Count Lützow, Austrian Minister at Dresden, after returning thanks for the delegates to Count Bonin Longare, Under-Secretary of State for Foreign Affairs, for his welcome in the name of the King of Italy, proposed Count Bonin as President, which was unanimously agreed to.

The subsequent progress of the proceedings of the conference from day to day has been satisfactory, and considerable advance has been made towards the settlement of several vexed questions. Without taking up all the points stated to have been raised for discussion, which would prove a tedious and impossible task, we must content ourselves with touching upon the more salient of them. First, then, as regards the ratification of the Paris Convention of 1894, Mr. Herbert, the diplomatic representative of Great Britain, announced the readiness of the English Government to ratify the Convention with three reservations, the details of which he stated to the Conference. The announcement made a most favourable impression upon the Conference and is regarded as an earnest of British goodwill towards the cause of international sanitation.

The reports which have appeared in the *Times*, from their special correspondent at Venice, have been particularly full and interesting, and we cannot do better than follow the account of the proceedings of the Conference that have been published in the columns of that journal. Judging from a week's proceedings the present Sanitary Conference, says the *Times* correspondent, is a decided improvement on its predecessor as regards the conciliatory spirit of all the delegates. The Austrians and French in particular have manifested towards England and the Indian Government a degree of consideration which is warmly appreciated and reciprocated. Count von Lützow and M. Barrère, the Austrian and French diplomatic representatives, have shown themselves especially anxious to promote a good understanding, while the technical authorities, such as Professor Proust, Professor Brouardel, and Dr. Thorne Thorne, have been no whit behind the diplomatists. The issue of the present conference is civilisation *versus* plague rather than theoretical prophylaxis *versus* commerce, as has been the case on some previous occasions. The action of the English Government with regard to the ratification of the Paris Convention has stimulated these friendly feelings and enhanced the probability of the Conference being thoroughly successful. The only obstacle to the application of the Paris Convention is Turkey, which country is without a diplomatic representative at Venice. Since the provisions of the Convention would affect Turkish territory more than that of any other country the ratification of the Convention by the Porte is almost a *sine quâ non* of its efficacy. Energetic efforts are being made to obtain a reply from the Porte, and the Conference will probably sit until such reply is forthcoming. In the event of a refusal measures of sanitary or commercial coercion might be devised.

Surgeon-Major-General Cleghorn, the representative of the Indian Government, joined the Conference on the 20th inst., and his arrival brought up the total number of delegates to sixty-five. The delegate from India gave a detailed description of the precautionary sanitary measures in force at Bombay and Karachi since October last, and his observations are stated to have created a favourable impression. He was able to assure the Conference that there was a rigorous individual examination of all pilgrims on shore before embarkation and of passengers on board their vessels before starting. The work was executed by a large staff of male and female medical practitioners, twenty of whom were engaged on the steamer which brought him from Bombay to Brindisi. The impression entertained by the most competent authorities is that the danger of the introduction of plague into Europe has been greatly exaggerated, and the probability of its conveyance by merchandise very small; indeed, the probability of plague being transmitted from India is much less than in the case of epidemic cholera.

Two sub-committees have been organised to consider the means for combating the plague outside Europe and to concert measures of defence in Europe respectively, and these bodies have already passed in review a number of propositions of a more or less technical character with regard to some of which practical conclusions have been agreed upon.

THE BARKER PRIZE.—The Royal College of Surgeons in Ireland announces that a Barker Prize of £26 5*s.* is offered for competition and is open to any student whose name is on the anatomical class list of any school in the United Kingdom. The prize is offered for a dissection of the region in front of the sterno-mastoid above the cricoid, with special relation to lateral pharyngotomy, the removal of tonsillar tumours and of infiltrated glands in cancer of the tongue. The preparation must be sent to the curator of the museums, Royal College of Surgeons in Ireland, before June 1st, 1897, marked with a *nom de plume* and accompanied by a sealed envelope bearing outside the same signature and containing within (*a*) the full name of the competitor, and (*b*) a declaration that the work of the preparation has been carried out by himself; the printed form necessary for this declaration can be obtained from the curator. The dissections are to be mounted in vessels fitted with glass covers, but the covers must not be sealed down. The cost and risk of transport must be borne by the student. The prize will not be awarded unless sufficient merit is shown.

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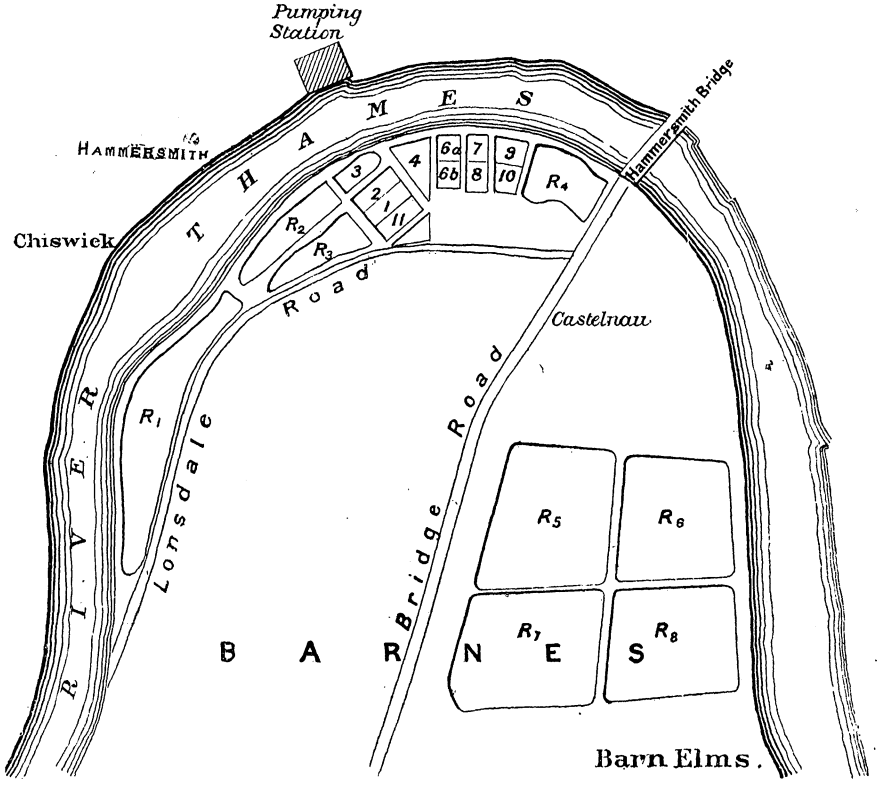
The Lancet Special Commission
ON
THE METROPOLITAN WATER-SUPPLY.

II.[1]

WEST MIDDLESEX WATERWORKS COMPANY.

IN the early part of the present century an engineer named Dodd projected some new waterworks to supply the West-end of London, and in the year 1806 an Act was passed to allow the scheme to be carried out. Hammersmith, Kensington, Paddington, and part of Marylebone were to be supplied, and Mr. Dodd's original plan was to make the works at Hammersmith, but later he wished to have them at Poole's Creek, near Fulham. The shareholders of the company disapproved of the change of plan. Mr. Dodd left their service, and in 1807 a new engineer was employed and the works were constructed at Hammersmith as originally proposed. Wooden pipes were at first used for the conveyance of the water and stone ones were afterwards adopted, but as these proved unsatisfactory cast-iron pipes were substituted in the following year. In 1809 land was bought on Campden-hill and a reservoir capable of holding over 3,500,000 gallons was constructed there. This was done with the intention of supplying parts of the district of Marylebone, but difficulties were placed in the way of this extension. The original Act of Parliament authorised the company to supply "certain parishes and places as well as parts adjacent." The company construed the expression "parts adjacent" to mean the whole of Paddington and Marylebone, but the select vestry of Marylebone objected to the pavements being taken up for laying the pipes. In 1810 the company obtained an extension of their authorised area of supply and this difficulty was therefore overcome. In 1825 a reservoir was built on Barrow-hill, near Primrose-hill. It was constructed to contain 4,750,000 gallons of water and was situated at an elevation of 190 ft. above ordnance datum. This reservoir was supplied from Hammersmith. In 1838 subsiding reservoirs were made at Barnes and the water from them was taken to the engines at Hammersmith through a pipe laid in the bed of the river. An Act of 1852 (15 and 16 Vict., cap. 159) provided that water for the supply of London should not be taken from the tidal portion of the Thames. The West Middlesex Company selected Hampton for their new station, the intake was removed, and engines were put up to pump water to the subsiding reservoirs at Barnes. These works were completed in the year 1855. Filter beds were made at Barnes and the reservoirs at Barrow-hill and Kensington were covered over. In 1860 the filtering area was enlarged and the pumping power increased. In 1866 the company obtained leave to supply parts of Hampstead, Hendon, Willesden, and part of Acton, in the county of Middlesex, and a reservoir was made near the Finchley-road 323 ft. above ordnance datum. Afterwards a second 36-in. conduit was laid across the Thames from Barnes to Hammersmith, and a covered reservoir was constructed at Willesden. In some of the districts a constant supply of water was given in 1872. In 1886 the Thames Conservancy entered into an agreement by which the company was allowed to take from the river 4,500,000 gallons of water in addition to the 20 000,000 gallons which they had previously taken. In 1896 large reservoirs were completed at Barne Elms and two others were begun.

FIG. 1.



The Reservoirs and Filter Beds of the Company at Barnes.

General description.—The West Middlesex Waterworks Company's area of supply includes Hammersmith, Earl's Court, the Regent's-park district, Portland Town, Kilburn, Child's-hill, Willesden, and extends as far north as Hendon. The district supplied by the company is bounded on the west by the Grand Junction district, on the south partly by the Chelsea district and by the Thames, and on the east by the New River Company's area of supply. The company's stations are—Hampton, intake; Barnes and Barn Elms, reservoirs and filter-beds; Hammersmith, pumping station; Campden-hill, reservoir; Barrow-hill, pumping station and reservoir; Kidderpore, reservoir; Willesden, pumping station and reservoir; and Shoot-Up hill, reservoir.

Hampton.—The intake is at Hampton from the Thames.

[1] No. I. was published in THE LANCET of Feb. 20th, 1897.

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The unfiltered water is pumped through mains which pass through Twickenham, cross under the Thames at Richmond, then run through Mortlake and Barnes, where the storage reservoirs and filter-beds are situated. From Barnes the filtered water crosses the Thames to Hammersmith and is pumped thence to the district in the immediate neighbourhood and the reservoirs at Campden-hill (Kensington), Barrow-hill (Primrose-hill), and to Willesden. There are also reservoirs at Kidderpore (Hampstead) and Shoot-Up-hill, and these are supplied by pumping from Barrow-hill and Willesden.

Source of water.—The whole of the water supplied by the company is taken from the Thames at Hampton. The water first passes through a coarse-meshed iron screen placed in front of an intake bay. The bars of the screen are placed ¾ in. apart. The width of the inlet is about 30 ft. and the height of the Thames is regulated by the Thames Conservancy, so that the water does not fall to a lower level than 2 ft. from the top of the pipes. There are two mains each 48 in. in diameter. The water first passes into a screen-house.

Screen-house.—The water passes through two screens of galvanised iron, of which the meshes are ¼ in. These screens prevent small leaves and other débris from passing in. They are arranged so that they can be drawn up to be cleaned; the cleaning is done with a broom, always once a day, and more frequently if necessary. From the screen-house the water passes in two 48-in. mains to a circular shaft 20 ft. in diameter, from which the water is distributed to the various engine wells.

Engine-house.—There is one of Simpson's horizontal engines, which is capable of pumping 24,000,000 gallons of water a day to Barnes. The steam is generated by five Cornish boilers. The second engine-house contains two vertical Worthington engines, each of which is capable of pumping 16,000,000 gallons a day to Barnes. The steam for these engines is supplied by four Lancashire boilers, and the arrangements are such that any of the engines can be worked by either set of boilers. There are no subsidence reservoirs or filter-beds at Hampton, but the water, after passing through the screens which have been described, is pumped direct to Barnes.

Course of the mains.—Two 36-in. iron pipes convey the water along the high road to Richmond. At Richmond they go under the river a few yards below the bridge and then along the high road to Barnes. There is a connexion with the Southwark Company's mains opposite the Black Horse public house at Marsh Gate, near Richmond.

Barnes and Barn Elms.—The subsidence reservoirs and filter-beds are all situated at Barnes, where the company possess one hundred and ninety-six acres of ground near the banks of the river. (See Fig. 1.)

Subsiding reservoirs.—There are now in use six subsiding reservoirs. Into the first reservoir the water passes through a bell-mouthed opening, and the water flows out after the manner of a miniature fountain. This arrangement was devised by the late Dr. Tidy to ensure that the water should become aerated as much as possible. The area of this reservoir is seventeen acres and it is capable of storing 57,000,000 gallons of water. From the first reservoir the water passes to the second, which is at a lower level, the fall being 4 ft. 6 in. Some of the water falls over in the form of a cascade, but the greater part passes through a tunnel. The second reservoir has an area of about five and a half acres and a storage capacity of 17,750,000 gallons. The third reservoir is at the same level as the first, has an area of about seven acres, and a storage capacity of 18,750,000 gallons. A caretaker's cottage is situated between these three reservoirs. A fourth reservoir, situated near Hammersmith Bridge, has an area of about seven and a half acres and a storage capacity of 24,000,000 gallons. Two other large reservoirs have just been completed at Barn Elms. These have an area of about fifty acres and are capable of containing 167,000,000 gallons of water. The slopes forming the sides of the new reservoirs are lined with concrete and brick at the upper part, and at the top of the slope is a flat berme and a breast wall. This arrangement is designed to prevent the water from being blown over in windy weather.

Filter beds.—The filter beds are situated between the Lonsdale-road and the river and between the third and fourth reservoirs. The number of the filter beds is eleven and their total area fifteen acres. Nos. 1, 2, and 3 have an area of one and one-third acres; No. 4 has an area of two and a quarter acres; No. 5 has an area of one and three-quarter acres; Nos. 6a and 6b have an area of one acre each; No. 7, 8, 9, and 10 have an area of one and one-sixteenth of an acre each; and No. 11 has an area of one acre. The filtering material consists of 2 ft. 6 in. of sand resting on 1 ft. of ballast. The only difference in the arrangement of the filters is that for the collection of the filtered water. The greater number of them have earthenware collecting drains, placed at intervals of 30 ft., to conduct the water to the central collecting channel. Four of the filters (Nos. 7, 8, 9, and 10) rest on square earthenware tiles, which are placed quite close together. The remaining filter (No. 11) is floored with stones and has no collecting channel except the central one. The size of the ballast varies from about ⅛ in. up to 2 in., the smaller ones being placed at the top and the larger ones at the bottom. The rate at which filtration is carried on is on an average one and one-third gallons per square foot per hour. After filtration the water passes under the Thames in two 36-in. iron pipes to Hammersmith pumping station. The pipes can be seen in the bed of the Thames at low water, and it is proposed shortly to construct a tunnel in the clay under the Thames and to run the pipes in this.

Hammersmith.—The chief pumping station is at Hammersmith, whence the water is distributed into the district, to the reservoir on Campden-hill, and the subsidiary pumping stations at Barrow-hill and Harlesden. From Barrow-hill the water is pumped to Kidderpore and to Shoot-Up-hill, if required. From Willesden it is re-pumped for the supply of Shoot-Up-hill reservoir. At Hammersmith there are four Cornish engines capable of pumping 14,000,000 gallons into the district daily. There are three compound beam engines capable of pumping 13,500,000 gallons a day. There is also a compound Worthington engine which can pump 5,500,000 gallons a day, and two triple expansion Worthington engines capable of pumping 3,500,000 gallons. The steam is generated by thirty-two Cornish boilers.

Campden-hill, Kensington.—The reservoir is situated at an elevation of 120 ft. above ordnance datum on the eastern slope of Campden-hill rather below that of the Grand Junction Company, which is situated on the other side of the road, (and is marked by the tower which is a conspicuous object from a distance) The reservoir is built of brick, and is not covered with earth at the top. It is capable of holding 3,762,000 gallons of water, which is pumped here from Hammersmith. One 21-in. main from Hammersmith passes down the South side of the Company's property. The overflow from the reservoir passes into a brick drain of about 2 ft. by 1½ ft. There is a house for the assistant engineer and a cottage for the turncock here.

Barrow-hill.—The company's station on Barrow-hill is next the open space on Primrose-hill. The height above ordnance datum is 190 ft. There is a covered reservoir built on arches capable of holding 4,750,000 gallons of water. As to engines, there is a single cylinder beam engine capable of pumping 1,200,000 gallons daily, a single cylinder horizontal engine capable of pumping 1,750,000 gallons, and a compound horizontal fly-wheel engine capable of pumping 2,930,000 gallons daily. The engines are worked by six Cornish boilers. The assistant engineer's house and two cottages are situated at Barrow-hill.

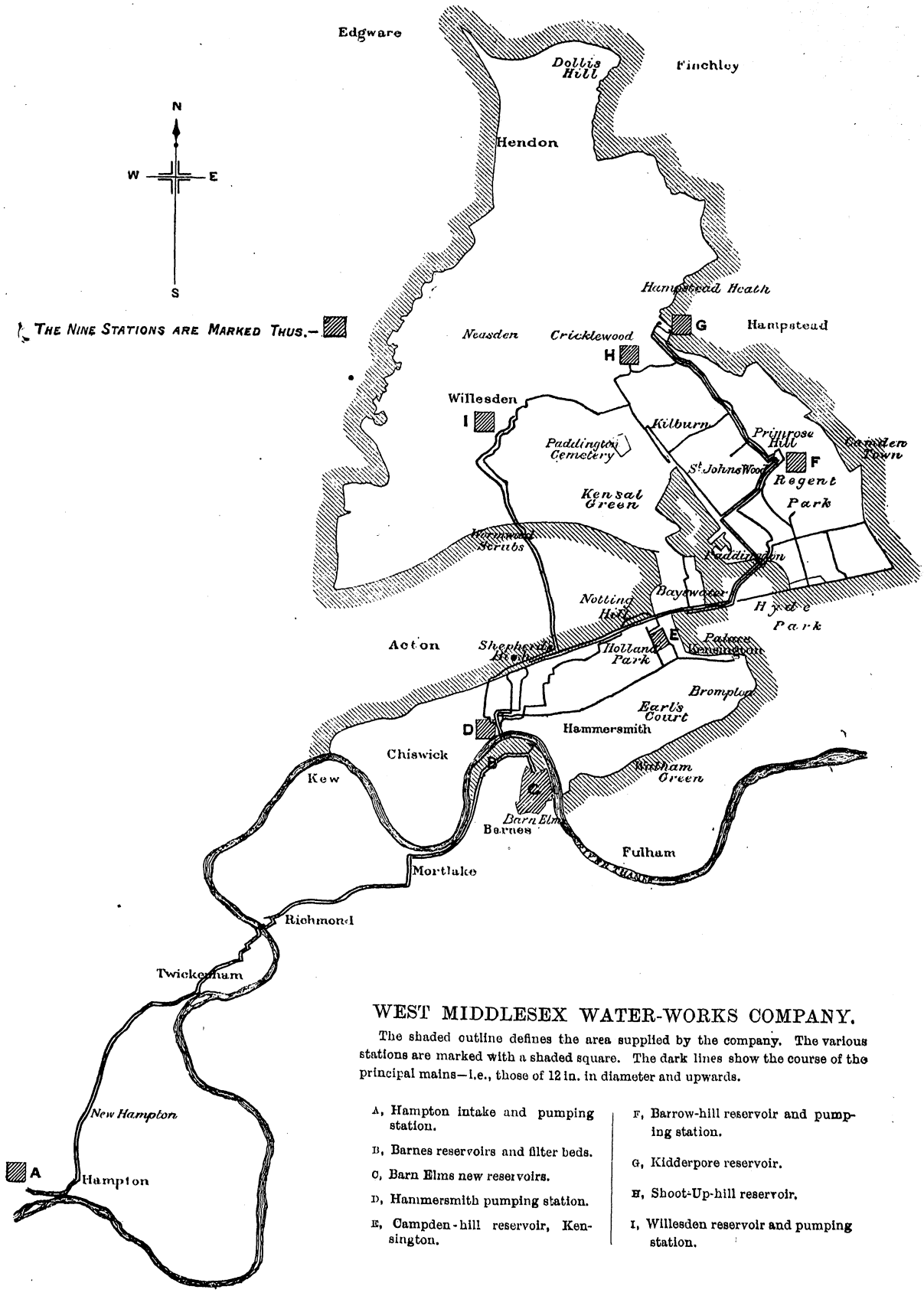
Shoot-Up-hill.—On the plateau at the highest point of Shoot-Up-hill is a reservoir built on arches. It is 250 ft. above ordnance datum and is capable of holding 6,000,000 gallons of water. Water can be supplied to this reservoir either from Willesden or from Barrow-hill (Primrose-hill). The quantity of water taken is regulated by a 16-in. screw cock situated at the bottom of the hill. This reservoir formerly belonged to the Grand Junction Company.

Kidderpore.—At an elevation of 323 ft. above ordnance datum there is a reservoir capable of holding 2,500,000 gallons. The reservoir is covered in with brick arches and the roof is not earthed over. A caretaker's cottage is situated here.

Willesden.—At Willesden there is a pumping station and a reservoir. There are two compound horizontal fly-wheel engines capable of pumping 2,000,000 gallons each daily. The steam is generated by two Cornish boilers. The water is pumped to Shoot-Up-hill. The reservoir which is situated 190 ft. above ordnance datum and is covered by strong brick arches and earth, is capable of holding 2,500,000 gallons.

Length of pipes.—In 1895 16,708 yards of new pipes, ranging from 3 in. to 48 in. in diameter, were laid. In 1896

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WEST MIDDLESEX WATER-WORKS COMPANY.

The shaded outline defines the area supplied by the company. The various stations are marked with a shaded square. The dark lines show the course of the principal mains—i.e., those of 12 in. in diameter and upwards.

A, Hampton intake and pumping station.

B, Barnes reservoirs and filter beds.

C, Barn Elms new reservoirs.

D, Hammersmith pumping station.

E, Campden-hill reservoir, Kensington.

F, Barrow-hill reservoir and pumping station.

G, Kidderpore reservoir.

H, Shoot-Up-hill reservoir.

I, Willesden reservoir and pumping station.

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the length was 16,723 yards. The total length of pipes on Dec. 31st, 1896, was 480 miles.

Number of hydrants.—The number of hydrants erected in 1895 was 156, and in 1896 was 204. The total number on Dec. 31st, 1896, was 942.

Communication with other companies' mains.—Filtered water—Grand Junction: (1) at the junction of Edgware-road and Bayswater-road; and (2) at Kilburn. New River: (1) at the junction of Tottenham-court-road with Oxford-street; and (2) at the junction of Tottenham-court-road with Euston-road. Unfiltered water—Southwark and Vauxhall: at Marsh-gate, near Richmond.

Houses under constant supply.—The number of houses receiving constant supply on Dec. 31st, 1894, was 50 985; on Dec. 31st, 1895, 55,933; and on Dec. 31st, 1896, 64,701.

Total number of houses supplied.—The total number of houses supplied on Dec. 31st, 1894, was 78,486; in December, 1895, 79,644; and in December, 1896, 80,697.

Percentage of houses under constant supply.—On Dec. 31st, 1896, the percentage of houses under constant supply was 80.

Average daily supply.—In 1895 the average daily supply per head was 35·66 gallons. In June the maximum was attained, the amount per head being 40·59 gallons, and the minimum occurred in the month of February the amount per head being 31·52 gallons. In the year 1896 the average daily supply was 34·5 gallons. The maximum supply was given in July and amounted to 39·8 gallons per head. The minimum supply was given in December and amounted to 31·3 gallons per head.

Area of Supply.

The Act of 1852 authorises the West Middlesex Company to supply the following places:—

Partly supplied.—Chelsea (St. Luke, west of the boundary defined in the Act[2]), Chiswick (St. Nicholas), Ealing (St. Mary), Fulham (All Saints), Hammersmith (St. Paul), Kensington, (St. Mary Abbott), Paddington, Soho (St. Anne), St. Marylebone, St. Pancras (south of Fig-lane), Westminster (St. Margaret), and so much as lies within the town of Kensington.

Not supplied.—Barnes (St. Mary), Battersea (St. Mary), Bloomsbury (St. George), Brentford (Old), Brentford (New), Hanwell (St. Mary), Heston, Hounslow, Isleworth, Kew (St. Anne), Mortlake, Putney (St. Mary), Richmond (St. Mary Magdalene), Strand (St. Mary-le-), St. Clement Danes, St. Giles-in-the-Fields, St. Paul (Covent-garden), Westminster (St. James), and Wandsworth (St. Mary).

The Act of 1866 authorises the supply of Willesden, which is wholly supplied. Partly supplied: Acton (north of Great Western Railway), Hendon, and St. John (Hampstead).

New Works in Progress and Projected.

Reservoirs.—At Barn Elms two large reservoirs are in course of construction and will be completed in the early spring. They are situated near to the new ones described and are constructed on the same plan. They will be capable of storing 133,000,000 gallons of water.

Tunnel under the Thames at Hammersmith.—It is proposed to make a tunnel under the Thames between Barnes and Hammersmith for the conveyance of the mains which carry the filtered water under the Thames.

ERRATUM.—By an obvious error the word "Chelsea" was written for "Lambeth" in the description of the map on page 543 of THE LANCET in last week's issue. The map is perfectly correct.

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[2] Section 32 of the West Middlesex Waterworks Act, 1852, is so framed as to enable the Chelsea Company to exact a penalty from the West Middlesex Company in the event of the latter supplying within a certain defined part of the eastern portion of the parish of Chelsea.

THE ANTI-TOBACCO LEAGUE AND JUVENILE SMOKING.—The members of the English Anti-Tobacco Society and Anti-Narcotic League met recently in Manchester to the number of about a score. A letter of apology for absence was read from Mr. S. Smith, M.P., in which he said that he thought there would be no chance of passing the Bill suggested by the League to prevent juvenile smoking, but if any member liked to introduce it he would be glad to put his name to the back of the Bill. Dr. Martin of Manchester read a paper on Juvenile Smoking, in which he dealt with the injurious physical effects of the habit.

ARMY MEDICAL DEPARTMENT REPORT FOR THE YEAR 1895.[1]

[CONCLUDING NOTICE.[2]]

AMONG the diseases that were unduly prevalent during the year 1895 among the troops stationed in the colonies may be mentioned enteric fever at Bermuda, malarial fever at Mauritius, and venereal diseases in the Straits Settlements. At Bermuda in an average strength of 1447 enteric fever caused 107 admissions and 20 deaths, equal to ratios of 73·9 and 13·82 per 1000, considerably higher than the average rates for the previous nine years. The disease appeared early in June at Warwick Camp, being conveyed thence, it is believed, to other stations in the command. At St. George's, where the drains were defective and the drainage works had been suspended owing to the great heat, the disease seems to have partaken of the nature of a severe outbreak, for there were 46 admissions to the station hospital there and 13 deaths. There should not be any great difficulty, with proper attention to water-supply and to the prevention of the leakage of sewage from drains and cesspits into the soil, in preventing the frequent recurrence of those outbreaks of enteric fever in Bermuda. We suspect, from what we have heard, that much of the disease of the digestive system at this station is attributable to food and cooking; the supply of food is not sufficiently good and varied; it is also apt to become tainted in such a hot, moist climate and the cooking is far from the best imaginable.

The Mauritius is a very unhealthy station owing to malarial fevers. Happily, the average strength (657) is small. Enteric fever caused 15 admissions and 6 deaths during 1895, but malarial fevers were the greatest cause of sickness. There were 460 admissions and 3 deaths—equal to ratios of 700·1 and 4·57 per 1000 respectively. The cases were returned as follows: ague 294, remittent fever 159, and malarial cachexia 7; 2 of the deaths were due to remittent fever and 1 to malarial cachexia. The invaliding-rate was also a heavy one. For very many years past the Mauritius has been a most unhealthy station as regards malaria—a very marked change in this respect having taken place since the severe and fatal epidemic of malarial fever that occurred over a quarter of a century ago at the time when Sir Henry Barkly was governor. Port Louis is particularly bad in this respect, and will continue so, it is feared, until extensive works are undertaken for subsoil drainage. Curepipe, in the uplands, is far healthier, and the troops are as far as possible quartered at this and other stations in the island.

As regards the Straits Settlements the amount of venereal disease among the troops is deplorable. Including all its forms the admissions amounted to 853, the number constantly sick to 62·55, more than half the admissions and constantly sick from all causes. The admission ratio was 623·5 per 1000 in 1895, which is higher by 257·6 than the corresponding rate of the previous year and above the average rate by 210·0. A good deal of this increase, it should be remarked, was attributable to a battalion having arrived during the year from India, bringing the disease with it. The reports of the medical officers make no allusion to anything else affecting the health of the troops.

As regards India our comments and remarks must be brief. Enteric fever caused 1544 admissions into hospital, 383 deaths, and the constant sickness of 219 77 men, being in the ratios of 22·6, 5 61, and 3·22 per 1000 respectively. This disease was rife among the troops, by the way, on the route to and from Chitral. A good deal is being said at the present time about the large prevalence of venereal diseases in India. Taking all forms together, the ratio of admission amounts to 536·9 per 1000, which is more than that of the preceding year by 25 2, and in excess of the average rate by 127·6, while for constantly sick the ratio was 46·31, representing a loss of 3164·84 men to the efficient strength of the force from these diseases, higher than the rate in 1894 by 3·17, and above the average by 14·39. The reports of several medical officers dwell upon the virulent type of the disease,

[1] Army Medical Department Report for the Year 1895, with Appendix. Vol. xxxvii. London: Printed for Her Majesty's Stationery Office by Harrison and Sons, Printers to Her Majesty. 1896. Price 4*s*.

[2] The first and second notices appeared in THE LANCET of Jan. 30th, and Feb. 13th, respectively.

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the severity of the constitutional infection, and the very serious extent and nature of the inefficiency to which it gives rise.

Passing on to the appendices to the report we come to that on the progress of hygiene for the year 1896, by Surgeon-Colonel J. L. Notter, the Professor of Military Hygiene at the Army Medical School, Netley, which summarises and reviews the chief points of hygiene that have attracted attention during the past year. The information contained in these articles is considerable and must obviously be valuable and very useful to medical officers. All kinds of subjects bearing on sanitation are touched upon, and under the head of special points of hygiene Ehrlich's test and the so-called serum diagnosis for enteric fever are briefly described.

Under the head of a list of operations performed at the Royal Victoria Hospital, Netley, during 1896 we find an epitome of the surgery at that institution, with some excellent comments and remarks on the cases from the Professor of Military Surgery and the late assistant professor at Netley. The cases of abscess of the liver are well worth reading—indeed, the whole report is instructive. The highly important and successful case of ligature of the common iliac artery by laparotomy for diffuse aneurysm of the external iliac and common femoral vessels, the details of which were published in THE LANCET of Jan. 25th, 1896, is alluded to, together with that of a death from chloroform published in THE LANCET of Sept. 26th, 1896.

The report on the Ashanti Expedition, 1895-96, by Surgeon-Major-General W. Taylor, M.D., late Principal Medical Officer of the expedition, strikes us as uncommonly good. The material is well arranged, the description and remarks are to the point, lucidly expressed, and of an eminently practical character. Surgeon-Major-General Taylor begins his report by saying that the experience gained in the Ashanti Expedition of 1874 was of the greatest assistance in planning the medical part of the present one, and rendered it comparatively easy to decide on what lines the arrangements should be made in view of the prevention and treatment of disease. He lays down in general terms what were the preventive measures followed; they were, in our opinion, wise and good, and, what is more, they were eminently successful. As regards the selection of men we quite concur in thinking that men who have been previously exposed to and suffered from malarious disease should not be sent on such an expedition. Touching clothing, he remarks that drill is neither as cool nor as warm as serge; putties, such as worn in India, are, without doubt, more comfortable and suitable than leggings or gaiters. With regard to the issue of a spirit ration, his remarks are very judicious and sensible; used, as everything else containing a potency for good or evil must be, with care and discretion it is good. The Pasteur Chamberland filters sent out to the expedition were not a success. Their construction was defective and they did not deliver more than an average of five or six gallons in the field. Ice was found of the very greatest service for hospital use. Quinine was issued prophylactically, but, like Surgeon-General Sir A. D. Home's experience in the last expedition, was not found to be of much, if any, good; officers and men who had taken the drug for weeks (as much as 300 grs.) were apparently as liable to fever as those who had not taken any. Arsenic was found to be of service in cutting short ague and remittent fevers. It was given in very bold doses—as much as forty minims or one drachm of liquor arsenicalis were given for a dose without, it is stated, any bad result, provided the precaution were taken of giving a cupful of milk, barley water, or soup immediately beforehand. There are a great many excellent hints and practical observations in the report which may be very usefully read. Not only companies and sections, but individuals, were looked after by officers personally, who saw that each man rubbed himself down and changed into dry underclothing at the end of each march; that he had his tea, cocoa, or soup before starting and immediately on arrival in camp, and that he drank no water that had not been boiled. That the expedition was, from a hygienic and medical point of view, well designed and admirably carried out is the opinion both here and on the Continent.

There is a very good report by Surgeon-Captain H. N. Thompson on the cholera camp at Kokrail, Lucknow, from July 31st to Aug. 27th, 1894. It will be remembered that the severe outbreak was traced to the use of Macnamara's filters. Surgeon-Captain Thompson says that the weak link in the chain of evidence for the truth of the filter theory is that the epidemic decreased immediately after the water-supply was changed, even though it was still passed through the filters, and it also decreased simultaneously in the neighbouring city and district. If the filters were breeding the microbes why did they not, he asks, continue to do so?

Dr. A. E. Wright, the Professor of Pathology at Netley, has an elaborate and well-reasoned paper on the Pathology and Therapeutics of Scurvy, in which he works out the view that all the symptoms of scurvy are perfectly consistent with the theory that the disease consists essentially in an acid intoxication. The article is an acutely and exhaustively reasoned one and will repay careful perusal.

BUBONIC PLAGUE IN INDIA.

WE are glad to begin our report and chronicle this week by the statement that there is at length, according to telegraphic intelligence from Bombay of the 23rd inst., sign of improvement in the epidemic, the mortality tables for Bombay during the preceding six days showing a distinct decrease as compared with the past few weeks.

According to the official returns telegraphed to the Secretary of State for India, in continuation of those already published, it appears that the deaths from all causes in Bombay city for the week ending Feb. 19th were 1772 and the reported deaths from plague 843. The disease continues to show greatest activity in northern portions of the city. Two new hospitals are being prepared. Poona city returns show no increase; one indigenous case occurred in the cantonment during the week. In Coorla, Bandora, Bhiwandi, and the rest of the Thana district the cases have somewhat increased in numbers, but the disease has not spread to fresh places. In Karachi the deaths from plague for the week ending Feb. 19th have been 235; the disease has shown a slight tendency to spread, but it is diminishing in those quarters where it was formerly worst, except in the poorest Mahommedan quarters. Six indigenous cases have occurred in Sind, outside Karachi. Notwithstanding the free egress of the population which has taken place from Bombay in the past and that some of the fugitives have carried the disease with them, so that cases have occurred as far to the south as Bangalore and Belgaum and northward as far as Delhi, the disease has not acquired any firm foothold in the country. Up to the present there have been no cases in Calcutta and the plague has not succeeded in effecting any lodgment in Upper India. Under the Epidemic Diseases Act local officers have full powers of action, and the efforts to deal with the disease generally, to prevent or limit its spread, and to evacuate and improve the sanitation of infected towns and places have been of the most radical, strenuous, and energetic kind and are being systematically carried out. One Indian paper, the *Bombay Gazette*, we may parenthetically remark, has entered a strong protest against the sensational telegrams that have been sent to, and published in, this country, giving rise to an unnecessary amount of alarm both here and on the Continent. There is, no doubt, a natural tendency during times of more or less panic to exaggerate and to "pile up" the figures and details. Be this as it may, the effect of the prevailing epidemic on the material interests of Bombay has been very considerable; but we hope that the worst is now over, and we may also hope and believe that it has not been without some compensatory advantages in that the epidemic has compelled attention to the sanitary state of the city and has led to improvements in this direction not only in Bombay but in many of the other cities and large towns of India.

Dr. Yersin of the Pasteur Institute, whose scientific and bacteriological work in connexion with the plague in China is well known, has left for Bombay, and we may soon expect to hear of the employment of his anti-plague serum in that town and elsewhere in India. Meanwhile Professor Haffkine has been preparing and using in India a prophylactic lymph. Rogers Pasha, the Director-in-Chief of the Egyptian Sanitary Department, has arrived in India, and has been interviewed by one of the staff of the *Times of India*. It appears that in many respects Bombay does not compare at all unfavourably with Cairo and other towns of Egypt as regards sanitation.

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THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

THE NATURE OF THE CANCER CELL.

MR. HAROLD J. STILES, F.R.C.S. Edin., who has been engaged for some time in researches on the origin of the cancer cell, discussed that question in a lecture before the Royal College of Surgeons of Edinburgh on the 19th inst He confined his lecture to a consideration of the origin and nature of the more important of the structures which have been described as parasites in cancer. He did not propose to discuss the wider question as to whether or not cancer was a parasitic disease. During the lecture a large series of micro-photographs from the lecturer's own preparations were shown upon the screen. The appearances presented by the various stages of development of the coccidium oviforme of the rabbit were first shown in order that they might be compared with the cancer bodies subsequently shown. The photographs illustrative of Paget's disease of the nipple showed that the peculiar cell elements found in that affection were not psorosperms, but epithelial cells which had undergone a malignant metaplasia, thus confirming the observations of Karg and others. Passing to the ordinary squamous epitheliomata, the lecturer first discussed the nature and formation of the "cell nests," and pointed out that the majority of the structures which had been referred to in these tumours as parasites owed their origin to what Unna terms a hyaline degeneration of the epithelial cells. This degeneration furnishes the chief source of the fuchsin bodies of Russell and of the psorosperms of Darier and Wickham. Typical examples of the "amœbæ" of Korotneff and Kurloff were shown and demonstrated to be due to the hyaline degeneration affecting certain of the systems of protoplasmic fibrils, which, as Kromayer has shown, unite together the prickle cells of the epidermis. The methods of Unna were advocated as particularly valuable for demonstrating the various morphological forms presented by cells undergoing hyaline degeneration. The greater part of the lecture was devoted to the so-called parasites in glandular cancers. Mr. Stiles found most difficulty in tracing the origin of the bodies which had been singled out as parasites, more especially by Ruffer. The lecturer had never been able to satisfy himself that typical Ruffer's bodies occurred in the ordinary skin cancers, although he had no difficulty in demonstrating them in cancers of glandular origin. He referred to the great delicacy of these bodies, and pointed out how much their satisfactory demonstration and correct interpretation depended upon the employment of good microscopic technique. Mr. Stiles had got the best results by making films of scrapings taken from perfectly fresh tumours and treating them according to the principle recommended by Dr. Robert Muir for studying histological changes in the blood. The films are placed at once in the fixing solution, and at no time during the staining or mounting are they to be allowed to dry. This method has the further advantage of doing away with the heat and shrinking attendant upon section cutting by the paraffin method. Photographs were demonstrated to show that the larger forms of Ruffer's bodies were produced by the degeneration of an invaginated cell. Some of the medium-sized forms result from the degeneration of the nucleus of a uninucleated or multinucleated cell. The smaller forms, single and multiple, resulted, in the lecturer's opinion, from degeneration occurring in connexion with a fragmented nucleus, as well as in connexion with fragments of chromatin, or parachromatin, which had become detached from the nucleus. Mr. Stiles was inclined to agree with Pianese, that still other forms were derived from limited degenerations of the cell protoplasm, and possibly also from perversions of cell secretions which had accumulated within the cell. In referring to the work upon pathogenic blastomycetes (yeasts) done within the last two years by Italian observers the lecturer pointed out that while the blastomycetes had a certain morphological resemblance to the appearances already noted, no proof whatever had been adduced to show that they were causally present in cancer, or that they could give rise to the cancerous process when inoculated into animals. At the conclusion of his lecture Mr. Stiles said he wished to direct attention to the recent and valuable histological researches of Pianese upon the pathology of the cancer cell. So far as he had been able to confirm this writer's observations, he agreed with him that all the so-called parasites which had up to the present been described as occurring in cancers were susceptible of explanation as degenerations of one or all of the constituents of tumour-cells or as metamorphoses of their secretion.

At the close of the lecture Mr. Stiles was highly complimented by the President of the College, Emeritus Professor Struthers, on the value of his work towards the elucidation of the important question to which the lecture related. The President announced that the next lecture of the series would be delivered by Mr. Caird.

THE BATTLE OF THE CLUBS.

A SCHEME FOR THE ESTABLISHMENT OF PROVIDENT MEDICAL ASSOCIATIONS.

DR. FREDERICK PEARSE, honorary secretary of the Portsmouth Medical Union, has sent us the draft of a scheme for the universal establishment by medical men of medical clubs throughout the country. Under the working of his scheme he considers that the sick poor would obtain adequate medical treatment, while the evils rampant under the lay management of certain associations would disappear.

There is undoubtedly, as he points out, a large number of the struggling working classes in which the weekly payment of subscriptions to a medical benefit is the only method by which the medical man gets paid at all. A certain class of these people are not to be trusted for the private account of even a few shillings. The provident scheme is, therefore, favourable to the profession. His scheme aims at giving the poor the advantages of private patients while being sufficiently comprehensive to provide for the medical relief of all the classes between those who are in receipt of parochial relief and those who are just able to pay the lowest private fees.

Medical Men must Unite.

It is necessary, runs the draft, for each section of the profession, be it in town or country, to show a united front. Medical men in every town and district should combine and establish a Provident Medical Association with the object of controlling the administration of medical relief to the working classes. Such an association may be stated to have for its object:—"To provide medical advice and physic for the working classes according to a sliding scale and adjusted to their means with the advantage of a selection of their medical attendant."

The acting medical officers should be the executive body with the support of any or all other practitioners as honorary staff and members of a general committee or council. Private medical clubs and medical aid associations must be given up before joining the staff of this mutually benefiting organisation. Powers must be given to the staff to deal with members of their body guilty of unprofessional conduct.

Scale of Payment.

The following graduated tariff seems to Dr. Pearse just:—

	Each member at the rate of
Single members—	
Earning 20*s.* a week and under	4*s.* per annum.
Earning from 20*s.* to 30*s.* a week	5*s.* per annum.
Married members—	
Earnings of family 20*s.* a week and under ... Family tickets at the rate of 20*s.* per annum.	4*s.* per annum.
Earnings of family from 20*s.* to 30*s.* a week ... Family tickets at the rate of 30*s.* per annum.	5*s.* per annum.
Earnings of family from 30*s.* to 40*s.* a week ... Family tickets at the rate of 42*s.* per annum.	6*s.* per annum.

Single persons earning over 30*s.* a week and married persons where the income of the family exceeds 40*s.* a week should not be admitted; while persons renting houses over £20 a year will be assumed to be earning over £2 a week. The subscription could be paid weekly or monthly, but the services of a collector would have to be used, only under rigid instructions that he was not to canvass.

A Few Important Points.

Candidates for membership would be, of course, examined, and invalid or unsound lives are accepted at special rates.

An option is given to benefiting members to select their own medical attendant—a privilege which has been almost denied to the poor.

To obviate useless calls, except in cases of sudden urgency, some extra charge should be demanded for special visits. Probably the sum of 1*s.* would be suitable to all parties. Members of the acting staff might coöperate "with one another" in cases requiring additional assistance at the following rates:—Consultation Fees, 10*s.* 6*d.*; Administration of Chloroform, &c., 10*s.* 6*d.*; Assistance at Midwifery Case or at Operation, 10*s.* 6*d.*

The expenses of such an association would be reduced to a minimum. No particular building is required, as the patients go to the surgeries of the medical officers. Printing, stationery, and salary of clerk are alone taken out of the Doctor's Fund.

We commend Dr. Pearse's scheme to our readers, especially in districts where the tyranny of the lay managers of

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certain clubs has begun to make itself felt. If the profession unites in its demand for fair treatment the profession must win. And no one save those who are blinded by self-interest can fail to see that a wage limit must be imposed or the medical profession will be, as it is, cruelly exploited.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia of the Fellows of the Royal College of Physicians of London was held on the 23rd inst., Dr. WILKS, F.R.S, President, being in the chair.

A communication was read from Sir F. Bateman containing a memorial from medical practitioners of Norfolk asking the College to consider the question whether it was right for the College to countenance medical officers of aid associations in consultations. It appears that the Norwich Medical Institute, having some 10,000 members, employs two salaried medical officers, and until recently two consultants, who have resigned their offices. This institute has accumulated large funds; the members' annual subscription is 3*s*., which entitles them when ill to the services of the medical officers. At a meeting of the medical profession in Norwich there was a unanimous opinion that it was unbecoming of any medical man to take office in such an institution, and the College was asked for its opinion as to the propriety of physicians meeting in consultation any such medical officers.—On the motion of Sir W. Priestley, M.P., seconded by Dr. Cullingworth, the memorial was referred to the Council for consideration.

A somewhat similar communication was read from the Portsmouth Medical Union complaining of Licentiates of the College, who belonged to aid societies or who had their own private clubs, "touting" for patients.—This was referred to the Censors' Board on the motion of Dr. Dickinson, seconded by Dr. F. T. Roberts.

Letters were read from Dr. Rentoul and from the Midwives Bill Committee, the one inviting opposition to, and the other seeking approval of, the Bill now before Parliament.

A report was presented from the delegates of the Royal Colleges on the question of a Teaching University of London, and after a lucid description of the situation by Dr. Allchin, who moved the adoption of the report, which was seconded by Dr. Norman Moore, the report was unanimously agreed to. It embodied the following resolution:—

"That the Royal College of Physicians of London and the Royal College of Surgeons of England, in full accord with their previous action, express the earnest desire that Her Majesty's Government will at the earliest opportunity re-introduce a Bill for the reconstitution of the London University by Statutory Commission on the general lines of the Report of the Cowper Commission, and do assure the Government that such a course will have their approval and support."

It was also resolved that copies of this resolution should be forwarded forthwith to the Lord President of the Council, the Right Hon. A. J. Balfour, and the Senate of the University of London.

The President explained the steps that had been taken at a meeting of Presidents of scientific societies, convened by the President and Council of the Royal Society to further a scheme for the promotion of science in commemoration of the sixtieth year of Her Majesty's reign, by the establishment of a fund to be called "The Victoria Research Fund," to be administered by representatives of the various scientific societies, for the encouragement of research in all branches of science. It was resolved that the College do concur in the scheme and that the President be requested to act on behalf of the College in the matter.

On the motion of Sir Dyce Duckworth, seconded by Sir W. Priestley, M P., it was resolved:—

"That a committee be appointed to advise the College on the desirability of making a formal declaration of opinion to the Government in favour of the re-enactment of the Contagious Diseases Acts in India, or of some such modification of them as may prevent the spread of contagious diseases."

The President nominated the following Fellows to serve on the committee: Sir Dyce Duckworth, Dr. Church, Dr. Payne, Sir J. Ewart, Sir W. Roberts, Dr. Bowles, Dr. Barlow, and Dr. J. Anderson, C I.E.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Sunderland Urban Sanitary District.—Dr. H. Scurfield, the medical officer of health of Sunderland, has recently furnished an interesting report on the methods of excrement disposal in his district, and he supplies at the same time some useful information with regard to excrement disposal in the principal towns of the kingdom, together with the general, enteric, and diarrhœa death-rates in the respective towns. In one table is furnished a list of towns in which the number of privy middens exceeds or approximates "5 per cent. of the population," and in another a list of what are termed "watercloset towns." From the average rates for 1890–95 in the respective tables it is to be learnt that in the privy midden towns the general, fever, and diarrhœa rates amount to 20·7, 0·26, and 1·08 per 1000, as against rates of 18 3, 0·15, and 0·52 for the watercloset towns. In the latter group is to be noted the high enteric fever death-rates for Dublin and Liverpool, but in the former instance Sir Charles Cameron regards the saturation of the soil by the privy middens, which until recently obtained, as a powerful factor in the maintenance of the disease in Dublin; and in the latter case the enormous density of population which prevailed in what was formerly the urban sanitary district of Liverpool (prior to the borough extension) had, Dr. Scurfield thinks, an important bearing upon the rates. The whole town-rates are, as Dr. Scurfield doubtless recognised, open to certain fallacies, and he has therefore supplied in his report other tables showing for certain large towns the incidence of enteric fever in houses served with privy middens as compared with those served by water-closets. Amongst these tables may be mentioned those relating to Birmingham, Leicester, and Middlesborough. The figures relative to the latter town we furnished recently in our columns when reviewing Dr. Bruce Low's report on that town. There are in Sunderland some 10 351 privies and ashpits and the annual death-rates from "fever" for that town during 1890–95 amounted to 0·62 per 1000—a rate which is very greatly in excess of other privy-midden towns with the solitary exception of Widnes, which has a similar rate, and it is interesting to note that the privy middens of Widnes have recently been strongly condemned by Dr. Bruce Low. Altogether Dr. Scurfield makes out a very strong case against the privy-midden system, and it is much to be hoped he has succeeded in persuading the sanitary authority of Sunderland to adopt the water-carriage system. The privy middens in his district cover, he points out, some ten acres, and the contents are continually soaking into the ground, the result being that the soil is becoming more and more sewage-logged every year.

Stockport Sanitary District.—In his annual report for 1895 Dr. Charles Porter states that the Sanitary Committee of the Stockport council has called the attention of the guardians to the large number of children unprotected by vaccination; the guardians in their turn have called upon the vaccination officer for an explanation. We wonder if the guardians have in the past prosecuted defaulters according to law. In connexion with autumnal diarrhœa Dr. Porter has continued his observations on the relation of this disease to the temperature of the earth at four feet, and his results, which now extend over four years, fully endorse the discoveries of the late Dr. Ballard. Referring to the subject of "return" cases of scarlet fever, Dr. Porter aptly remarks "that if sanitary authorities are to continue to isolate scarlet fever patients in public hospitals it is absolutely essential that the public should be made to understand that, despite the exercise of every care, it is as wholly impossible to guarantee freedom from infection on discharge as it is to guarantee freedom from death whilst under treatment." Dr. Porter appears to have very kindly undertaken to conduct six patients, who had been bitten by a rabid dog, to Paris for treatment at the Pasteur Institute. Although this is not one of the duties of medical officers of health as laid down by the Local Government Board, it is no doubt an action of which that Board would highly approve. Dr. Porter is not the only medical officer of health who has been good enough to personally conduct patients to Paris

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and it may be useful to other sanitary authorities if we state that the inclusive cost of sending these six patients with the medical officer of health to Paris was but £73 1*s.* 6*d.*

Aston Manor Urban District.—Mr. Henry May, in his annual report for 1896—which, by the way, is the first printed report for that year we have received—draws attention to the extent to which inefficient vaccination prevails in his district, many "vaccinated" children presenting, he tells us, but one small cicatrix. It would surely be better for the cause of vaccination if medical men who thus bring children within the ranks of the "vaccinated" were to refuse to perform the operation unless they are allowed to procure proper protection. Mr. May points out that although the only efficient manner of controlling small-pox is by vaccination and re-vaccination, it will be necessary in Aston, owing to the neglect of this precaution, to do what can be done to increase the isolation accommodation for small-pox, and the sanitary authority have, it appears, procured a site remote from habitations for the erection of a small-pox hospital. Diphtheria during 1896 showed a very marked increase in Aston Manor; in fact, it appears to have shown a similar behaviour in this respect as in Birmingham, upon which district it abuts. An attempt was made in 1896, possibly on account of the success of a somewhat similar case in Birmingham, to obtain damages from the district council owing to the occurrence of a "return" case of scarlet fever. The council, however, refused to recognise any responsibility and instructed their clerk to defend any action which might be brought. No more was heard of the case.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6715 births and 3970 deaths were registered during the week ending Feb. 20th. The annual rate of mortality in these towns, which had been 20·8 and 19·6 per 1000 in the two preceding weeks, further declined last week to 18·8. In London the rate was 17·8 per 1000, while it averaged 19·5 in the thirty-two provincial towns. The lowest rates in these towns were 13·7 in West Ham, 14·2 in Brighton, 14·9 in Huddersfield, and 15·1 in Portsmouth; the highest rates were 23·2 in Salford, 23·8 in Liverpool, 25·1 in Burnley, and 25·8 in Preston. The 3970 deaths included 316 which were referred to the principal zymotic diseases, against 361 and 337 in the two preceding weeks; of these, 94 resulted from whooping-cough, 59 from diphtheria, 55 from measles, 45 from diarrhœa, 40 from scarlet fever, 22 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded last week either in Birkenhead or in Halifax; in the other towns they caused the lowest death-rates in Sunderland, Swansea, and Derby, and the highest rates in Gateshead, Plymouth, Bolton, and Salford. The greatest mortality from measles occurred in Salford, Gateshead, Bradford, Bolton, and Plymouth; and from whooping-cough in Salford, Huddersfield, Gateshead, Bristol, Blackburn, and Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 59 deaths from diphtheria included 40 in London, 2 in West Ham, 2 in Cardiff, and 2 in Birmingham. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns. There were 34 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 20th inst., against 9, 21, and 38 at the end of the three preceding weeks; 3 new cases were admitted during the week, against 7, 12, and 20 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2901, against 3311, 3153, and 3050 on the three preceding Saturdays; 227 new cases were admitted during the week, against 254, 245, and 226 in the three preceding weeks. The deaths from diseases of the respiratory organs in London, which had been 404 and 373 in the two preceding weeks, further declined to 335 last week, and were 149 below the corrected average. The causes of 54, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bradford, Leeds, Sheffield, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Norwich, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 24·3 to 28·8 per 1000, declined again to 25·5 during the week ending Feb. 20th, but was 6·7 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 19·9 in Edinburgh and 21·7 in Dundee, to 29·4 in Glasgow and 30·7 in Perth. The 761 deaths in these towns included 45 which were referred to whooping-cough, 42 to measles, 22 to diarrhœa, 4 to scarlet fever, 4 to "fever," and 2 to diphtheria; in all, 119 deaths resulted from these principal zymotic diseases, against 96 and 105 in the two preceding weeks. These 119 deaths were equal to an annual rate of 4·0 per 1000, which exceeded by 2·5 per 1000 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased in the four preceding weeks from 26 to 39, further rose to 45 last week, and included 33 in Glasgow, 8 in Edinburgh, and 3 in Perth. The deaths referred to measles, which had been 28 and 31 in the two preceding weeks, further increased to 42 last week, of which 38 occurred in Glasgow and and 2 in Aberdeen. The 4 fatal cases of scarlet fever showed a slight further decline from the numbers recorded in recent weeks, and included 2 in Glasgow. The deaths referred to different forms of "fever," which had been 4 and 7 in the two preceding weeks, declined again to 4 last week, of which 3 occurred in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 229 and 240 in the two preceding weeks, declined to 218 last week, but exceeded by 113 the number in the corresponding period of last year. The causes of 37, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 44·2 and 41·2 per 1000 in the two preceding weeks, rose again to 43·4 during the week ending Feb. 20th. During the past seven weeks of the current quarter the death-rate in the city has averaged 40·7 per 1000, the rate during the same period being 18·8 in London and 22·1 in Edinburgh. The 291 deaths registered in Dublin during the week under notice showed an increase of 15 upon the number in the preceding week, and included 72 which were referred to the principal zymotic diseases, against 52 and 58 in the two preceding weeks; of these, 43 resulted from measles, 16 from whooping-cough, 5 from scarlet fever, 5 from "fever," 2 from diarrhœa, and 1 from diphtheria. These 72 deaths were equal to an annual rate of 10·7 per 1000, the zymotic death-rate during the same period being 1·4 in London and 2·3 in Edinburgh. The fatal cases of measles, which had increased from 7 to 26 in the three preceding weeks, further rose to 43 last week. The deaths referred to measles, which had been 24 and 25 in the two preceding weeks, declined to 16 last week. The 5 fatal cases of scarlet fever exceeded by 3 the number in the preceding week, and the 5 deaths referred to "fever" exceeded those recorded in any recent week. The 291 deaths registered in Dublin last week included 59 of infants under one year of age, and 48 of persons aged upwards of sixty years; the deaths of infants showed an increase, while those of elderly persons were below those recorded in any recent week. Three inquest cases and 6 deaths from violence were registered; and 83, or more than a fourth, occurred in public institutions. The causes of 29, or nearly 10 per cent., of the deaths in the city last week were not certified.

THE *Glasgow University Magazine* states that the Students' Representative Council have passed, among others, the following recommendation: "That a petition be sent to the Senate begging them to request the University Court to make such arrangements with the managers and directors of the Western Infirmary as will enable the Professor of Materia Medica and Therapeutics to teach, not only theoretically, but also clinically, so important a branch of medical science as therapeutics."

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THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR R. H. S. SAWYER has been ordered to Dublin for duty. Surgeon-Captain E. Eckersley embarks for service on the West Coast of Africa. Surgeon-Major D. O'Sullivan has embarked in the transport *Dunera* for Bombay.

Brigade-Surgeon-Lieutenant-Colonel Edmond Townsend, M.D., to be Surgeon-Colonel, vice M. Cogan, retired. The under-mentioned Surgeon-Lieutenant-Colonels retire on retired pay:—H. J. Robbins, M.D., Isaac Boulger, Thomas Boyd, Joseph J. Lamprey, Phineas B. Tuthill, M.D., F.R.C.S. Irel., and John P. Hunt, M.D., F.R.C.S. Irel. The surname of Surgeon-Lieutenant L. Addams-Williams is as now and not as stated in the *Gazette* of Feb. 16th, 1897.—*London Gazette.*

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain F. Wyville-Thomson, Bengal Establishment, is appointed to be Medical Officer, Lawrence Military Asylum, Sanawar, vice Surgeon-Captain C. H. Bedford. Surgeon-Major W. F. A. Street, D.S.O., and Surgeon-Captain A. J. Heath, have respectively delivered over and received charge of the office of Deputy Sanitary Commissioner, Central Registration District. Surgeon-Captain A. E. Smithson, A.M.S., is appointed to the Civil Medical Charge of Ranikhet, in addition to his military duties. Surgeon-Captain S. B. Smith, Bengal Establishment, whose services have been placed temporarily at the disposal of the Chief Commissioner, Central Provinces, by the Government of India, Home Department, is posted to the Jubbulpore District on special famine duty. Surgeon-Lieutenant C. Thomson, Bengal Establishment, whose services have been temporarily placed at the disposal of the Chief Commissioner of India, Home Department, is posted to the Sangor District on special famine duty.

The Queen has approved of the following admissions to the Indian Medical Services:—To be Surgeon-Lieutenants: Andrew Augustine Frayne McArdle, Jasper Maxwell Woolley, Clayton Arbuthnot Lane, Thomas Bernard Kelly, James Henry Hugo, William Hamilton Kenrick, Charles Henry Watson, Charles Hope Septimus Lincoln, Raymond Herbert Price, Edgar Francis Eardley Baines, Geoffrey Orr Fern Sealy, and Reginald Bryson.—*London Gazette.*

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Staff Surgeon: John Jenkins to the *Calliope*. Surgeons: Sidney Croneen to the Royal Marine Depôt, Walmer; Rowland A. Kirby to the *Victory*, additional; Alfred H. L. Cox to the *Alecto;* and Frederick J. Burns, M.D., to the *Wildfire.*

The following Surgeons have been promoted to the rank of Staff Surgeons in Her Majesty's Fleet:—Henry Erskine South, Alfred Matthew Page, Alfred Cropley, John Jenkins, Horace Elliott, Ernest Denman Minter, and Robert Forbes Bowie.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major E. Shedd to be Surgeon-Lieutenant-Colonel. Surgeon-Captain H. H. Smith, having resigned his appointment in the Volunteers, ceases to be an officer of the Army Medical Reserve.

VOLUNTEER CORPS.

Rifle: 8th Volunteer Battalion the Royal Scots (Lothian Regiment): Ronald Cadell Macdonald, M.B., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry): Surgeon-Lieutenant F. Lace to be Surgeon-Captain. 4th Volunteer Battalion the Cheshire Regiment: Eugene Charles McCarthy, M.B., to be Surgeon-Lieutenant. 1st Wiltshire: Herbert Lorraine Earle Wilks, gent., to be Surgeon-Lieutenant. 4th (Stirlingshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): John Gilfillan Ronald, M.B., to be Surgeon-Lieutenant. 8th Middlesex: Edmund Ultain Frederick MacWilliam Bourke, gent., to be Surgeon-Lieutenant. 1st Tower Hamlets: Surgeon-Lieutenant J. P. Simpson, M.D., to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The Glasgow Companies:—Quartermaster William Kidston resigns his commission.

THE SERVICE EXAMINATIONS.

The following is a list of successful candidates for commissions in the Army Medical Staff and Indian Medical Service at the recent examinations in London:—

ARMY MEDICAL STAFF.

Name.	Marks.	Name.	Marks.
S. L. Cummins	2272	J. G. Walker	2005
C. H. Hopkins	2207	H. G. F. Stallard	1948
J. McArdle	2159	Q. D. Jephson	1887
P. Mackessack	2158	H. L. W. Norrington ...	1876
L. J. C. Hearn	2143	J. Poe	1847
J. McD. McCarthy	2065	J. Crean	1828
E. Brodribb	2055	R. W. N. Bowen	1809

INDIAN MEDICAL SERVICE.

Name.	Marks.	Name.	Marks.
F. G. P. Murray	2823	J. A. Dredge	2574
S. Anderson	2814	R. W. Knox...	2530
F. H. G. Hutchinson ...	2646	R. Fenton	2506
J. L. Marjoribanks	2603		

THE MILITARY WORKS BILL.

We are very glad that the system upon which the House set its seal in 1890 to replace barracks which were worn out or insanitary by barracks fit for the habitation of troops is to be continued. With reference to the provision of barracks it was, said Mr. Brodrick, impossible to over-rate the importance of the proposals of the Government. It was a scandal to see that the huts erected at Aldershot, the Curragh, and other places had been allowed to continue so long. They were in an insanitary condition and, he was afraid, not free from vermin. He was glad that they were about to make provision for better quarters for their soldiers generally, and especially for the married soldiers. The work that has either been already completed or is going on at our home and foreign stations is very considerable, and includes barrack or hospital accommodation at Bermuda, Gibraltar, Halifax, Malta, the Cape, Mauritius, and Hong-Kong abroad, and at a great many of our large camps and stations in this country.

PROFESSOR DELORME.

Among contemporaneous military surgeons few names are better known than that of Médecin-Principal Edmond Delorme, who so ably occupies the chair of Clinical Surgery in the Val-de-Grâce School. At a recent election to fill a vacancy in the Académie de Médicine this distinguished officer obtained 70 votes out of a possible 74, a fact which affords conclusive proof not only of his professional merit but also of his personal popularity. Born at Lunéville in 1847 Dr. Delorme entered the army in 1866 and has served continuously ever since. In 1871 he took his M.D. degree at the Faculty of Paris, and six years later competed successfully for admission into the professorial fold. In addition to carrying off a great number of the prizes offered by the Académie de Médecine and the Institut de France, he is likewise a frequent contributor to periodical literature; but the work by which he is best known to fame in his History of French Military Surgery, published in two volumes by Alcan.

THE BENIN EXPEDITION.

We always seem to have some small war or other on hand. A punitive expedition to Benin after what had taken place was, of course, required, and it has been most successfully carried out with a relatively small loss of life. We much regret to notice the name of Surgeon C. J. Fyfe, R.N., of the *St. George* among the killed. With the capture of Benin we do not appear to have succeeded in capturing the king of that place; but let us hope that there will henceforth be an end of the fetich sacrifices and human massacres of which our sailors had such gruesome evidences on entering Benin.

DEATHS IN THE SERVICES.

Surgeon-Major E. R. Power, A.M.S., aged forty-two years. He was appointed Surgeon in 1878, and was promoted to the rank of Surgeon-Major in 1890. For his services in the Egyptian War of 1882 he obtained the Medal and Khedive's Star. He also held the Soudan Clasp of 1885 for the Soudan Campaign, in which he also served.

At a meeting of the Service Member's Committee of the House of Commons last week the Contagious Diseases Acts and other important matters were discussed.

Her Majesty has conferred the Distinguished Service Order upon Surgeon-Major G. D. Hunter, A.M.S., for services with the Egyptian Army.

Surgeon-Colonel Ross, Inspector General of Civil Hospitals, Bengal, has been granted eight months' furlough.

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Correspondence.

"Audi alteram partem."

THE MIDWIVES REGISTRATION BILL.

To the Editors of THE LANCET.

SIRS,—I shall be glad to be allowed to explain to the profession one or two points in reference to the Bill which appear to have been somewhat misunderstood. First, with regard to the omission of the words "natural labour," you have so fully recognised this as an improvement on previous Bills that I need not occupy your space with the reasons that weighed with the committee in making the alteration further than by saying that it was guided very much by the considerations to which you call attention and also by the conviction that Parliament is not the most suitable place for discussing what is and what is not "natural labour." Such a duty seems more appropriately assigned to the Midwives Board. The same considerations led the committee to avoid any attempt to lay down precise rules for regulating the education, examination, and discipline of midwives. The duty of formulating these rules is that for which the Board is specially called into existence. Details of this kind are out of place in an Act of Parliament.

With regard to Dr. Rentoul's point as to the absence under the Bill of power on the part of the General Medical Council "to take any part in arranging the plan for the education of intending midwives," there is no disposition on the part of the framers of the Bill to restrict the powers of the General Medical Council; indeed, the Board is under its general superintendence (Clause 5, i.). It is distinctly stipulated that all the rules and regulations for the practice of midwives must be "approved" by the General Medical Council, and if the General Medical Council does not approve of any of the regulations or of the general policy of the Midwives Board it can withhold consent to its action until it does approve or until the Privy Council has decided the matter. If the addition of the words "or otherwise" would make this still clearer by all means let them be inserted.

Two other points remain to be considered—namely, the constitution of the Board and the appointment of a local supervising authority. With regard to the former I can scarcely think, in the light of recent events, that Dr. Rentoul's plea for the direct representation of the medical profession on the Midwives Board is likely to meet with general support. The appointments are surely better left in the hands of responsible bodies such as those named in the Bill. Dr. Rentoul has omitted to notice that the six persons to be appointed by the Lord President of the Council need not be medical practitioners and need not even be all of the same sex. These six persons represent the public and are to safeguard its interests. Without them the Board would be too exclusively professional. Lastly, with respect to the appointment of the medical officer of health as the local supervising authority the precise wording is as follows: "Every local sanitary authority ..... shall appoint its medical officer of health or other registered medical practitioner or practitioners as the local supervising authority over midwives in the sanitary district." If, therefore, the medical officer of health does not care for the remuneration or for the work he need not be appointed. As a rule, however, he will probably be found to be the most suitable person, especially as he has offices and staff at command. Dr. Rentoul's amusing remark that "this Bill is, of all its predecessors, the most dangerous" may be left to take care of itself. Surely, however, none of your readers will be influenced by the reiterated assertions which Dr. Rentoul puts forward in the place of arguments. One or two of the statements he makes in his letter I have already taken occasion publicly to deny. They ought not to have been repeated.—I am, Sirs, yours truly,

ROWLAND HUMPHREYS,
Honorary Secretary, Midwives Bill Committee.
Buckingham-street, Strand, W.C., Feb. 22nd, 1897.

To the Editors of THE LANCET.

SIRS,—As there is no evidence that the Parliamentary Bills Committee of the British Medical Association has taken, or is about to take, any action with respect to Mr. Tatton Egerton's Bill for the registration of midwives, at present before the House of Commons, the council of our branch has determined not to share in such apathy and in such utter disregard of the frequently expressed wishes of the Members of the British Medical Association. At a recent meeting of the council of our branch the following resolutions were adopted: "(*a*) The Council of the Lancashire and Cheshire Branch of the British Medical Association disapproves of Mr. Tatton Egerton's Bill for the registration of midwives and will endeavour to prevent its passing into law; (*b*) that five members of the council be, and are now, appointed as a deputation to wait upon the Lancashire and Cheshire members of Parliament urging them to oppose the second reading set down for Feb. 26th or any future date; (*c*) that the members of the deputation be requested to draw up a circular pointing out the objections to the Bill and the reasons for opposing it, such circular to be sent to every member of the House of Commons and the House of Lords. The members of the deputation are Dr. Brierley, Dr. Macfie Campbell, Dr. Gledhill, Dr. Arthur Helme, and Dr. Woodcock. Dr. Helme will also act as secretary to the deputation.—I am, Sirs, yours faithfully,

JAMES BARR,
Honorary Secretary to the Lancashire and Cheshire
Feb. 20th, 1897. Branch of the British Medical Association.

To the Editors of THE LANCET.

SIRS,—Will you allow me, on the near approach of the second reading of the above-named Bill, to say, as one loyal to our profession and at the same time deeply solicitous for "the poor" (in whose interest, the memorandum on the Bill informs us, it is "especially" propounded), that I protest against it, first, as being unstatesmanlike in that it deliberately avoids taking the best and surest guarantees for the well-being of the nation's mothers and for the nation's perpetuation in its preference for cheap and nasty substitutes; and, secondly, as being retrograde in its proposal to lower the standard of medical service, even beneath present Poor-law regulations, by instituting an inferior, incompletely trained body of midwifery practitioners, who shall be foisted, under State sanction and armed with diplomas, upon the poorest and most ignorant of the populace. It would provide, not, indeed, "especially"—as the memorandum falsely pretends—but *only* for the poor, and *only because they are poor*, in their hour of need, when contributing with the fruit of their bodies to the nation's continuance and growth, the attendance of a body of women by intention so imperfectly trained that no single man of the well-to-do promoters or supporters of the Bill would for a moment entrust his own women to their care, nor would the fine society ladies who are so loud in its favour ever dream of leaving their precious selves in such ignorant hands. This consideration ought, I think, by itself to condemn the measure. The truth, of course, is that the life and well-being of all citizens, be they of high or of low degree, rich or poor, are alike the concern of the State, while the claims of humanity are not diminished but increased and intensified by poverty. By all means let us have nurses galore trained for lying-in, as for medical and surgical, cases, but let them be prohibited from undertaking attendance on confinements *except as awaiting the supervision of a qualified practitioner*, who shall be held primarily responsible. For patients too poor to pay let such thoroughly skilled professional service be secured by means of dispensaries, maternity hospitals and clubs, and by freer recourse to the excellent provisions of the Poor-law. Those three forms of existing voluntary agencies should be generally extended, better organised, and, if need be, rate-aided and brought under popular control. Every parish or other suitable district, every church and chapel, might have its maternity club, worked on the same lines as clothing and coal clubs. Under the Poor-law relieving officers and overseers can grant orders available, not only for the Poor-law medical officers, but for any medical man or woman who can be found to respond to the call, and, indeed, in a case of emergency no order at all is requisite, but the guardians can pay the medical man's fee when they are satisfied that the patient is unable to do so. No stigma of pauperism, no disfranchisement, or other social ban attaches to such medical relief. It is the statutory right of the impoverished citizen. Let us, then, throw ourselves into a sane, honest, and truly humane movement to make all the existing machinery more general and effective. Let us, above all—Members of Parliament, medicals, and

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citizens at large—refrain from doing unto *other men's* wives that which we would not do unto *our own*.

I am, Sirs, yours faithfully,

Lofthouse-place, Leeds, Feb. 23rd, 1897. THOS. M. WATT.

SLOW PULSE AND SYNCOPAL ATTACKS.

To the Editors of THE LANCET.

SIRS,—I would like to express my appreciation of Dr. Ogle's most interesting paper on Some Cases of Unusual and Persistent "Slowness" of Pulse, presumably dependent upon Interference with the Intrinsic Nerves and Ganglia of the Heart in THE LANCET of Jan. 30th. I have considered the subject briefly in one of my recent lectures on Angina Pectoris and Allied States. I was particularly interested in the original description by Stokes and Adams of those cases of slow pulse in which cerebral symptoms developed—what Stokes called false or pseudo-apoplexy. While vertigo and syncope are the two most common associated features, epileptiform attacks may develop, as in two of Dr. Ogle's cases, as well as in those of Dr. St. George Mivart and Dr. Gibbings, to which he refers. They have also been described by Dr. Kinnicutt in a case in which the pulse was between 30 and 40, and during the attacks as low as 13, and once 7.[1] Dr. Jacobi at the same meeting referred to cases with convulsive seizures. In the case of J. W——, given in my lectures, I have recently had a note from his physician stating that Mr. W—— has as many as twenty-five attacks of vertigo and transient losses of consciousness in the day, and that his pulse now is permanently at 30 per minute.

A very interesting feature is the long duration of some of the cases. I saw in October a man, aged seventy-four years, who had been told thirty years ago that he had serious heart trouble and that his pulse was only 50 per minute. It remained slow until two or three years ago. In 1891, following a good deal of effort in preaching, he had an attack of angina pectoris, after which the pulse for three days beat at less than 38 to the minute. When I saw him he had cardiac dyspnœa without the bradycardia; he died suddenly one night. In another case, seen on Dec. 14th, the patient, a man, aged sixty-five years, had a pulse of 40 per minute. He had had two attacks of prolonged unconsciousness, one in June, 1895, after which he felt a good deal dazed, and the other in June, 1896, when he was unconscious for twenty minutes.

Huchard's discussion of this syndrome, or, as he calls it, "maladie Stokes-Adams," is most interesting and deserves more attention than it has received from English writers. I do not know the source of the statement made in my text-book (to which Dr. Ogle refers) as to Napoleon's epilepsy. Part at least of the vocation of an author of a work of that kind is "endless imitation," though I have tried in many points to go to original sources. Those acquainted with Archbishop Whately's famous pamphlet, "Historic Doubts Relative to Napoleon Bonaparte," will feel thankful to Dr. Ogle that he has left two at least of the three interesting medical features in the history of that great man.

I am, Sirs, very truly yours,

Feb. 12th, 1897. WILLIAM OSLER.

P.S.—It is possible that Colonel Townshend's case belongs to this remarkable group ("English Malady," second edition, p. 307). The disappearance of the pulse was associated with syncope. Colonel Townshend's statement, as given by Dr. Cheyne, was that "he could die or expire when he pleased, and yet by an effort or somehow he could come to life again, which it seems he had sometimes tried before he had sent for us." The physicians in attendance were very unwilling that he should make the trial in his weak state, but he insisted. His pulse became more and more feeble until it disappeared. He remained pulseless and breathless for about half an hour, and then he began to breathe quietly and speak softly. This was at 9 A.M., and he died at five o'clock the same evening. Apparently this is the only reference in literature to Colonel Townshend's case. I have tried in vain to get any other information as to his supposed power of stopping the action of the heart. It is not even mentioned whether he had ever tried it before his final illness in Bath. The necropsy showed a chronic tuberculous disease of the right kidney, a condition often associated with hypertrophy of the heart.

[1] Transactions of the Association of American Physicians, vol. iv.

"AN UNUSUAL CASE OF TUBAL ABORTION."

To the Editors of THE LANCET.

SIRS,—In connexion with this case[1] I have to plead once more that a correct nomenclature is of importance even in gynæcology. The case as narrated is one of tubal pregnancy with recurrent hæmorrhage through the ostium. Tubal abortion it most certainly was not. Had abortion occurred the products and the clot would have been speedily absorbed and no operation would have been necessary. Mr. Sutton's nomenclature is another example of the confusion I predicted when he first introduced the phrase "tubal abortion."

I am, Sirs, yours truly,

Birmingham, Feb. 20th, 1897. LAWSON TAIT.

HOSPITAL FOR INCURABLE FISTULÆ, &c.

To the Editors of THE LANCET.

SIRS,—When the question of distributing the enormous funds which must shortly accrue to the hospitals through the energy of the Prince of Wales, aided by the zeal of the daily papers, duly arises, I trust that the numerous class of most unhappy sufferers for such maladies as the above will not be lost sight of. They are not relieved by any of the existing institutions, which must of necessity refrain from admitting into their wards patients whose lesions emit offensive effluvia and are not quickly remediable by operation. These "pariahs," chiefly female, are usually too poor to pay for the costly personal attention they really need, and hence are a life-long burden to themselves and their friends. A special home for such is a real and urgent want, as I am sure scores of medical practitioners will readily testify. The present year of jubilee would seem to offer an opportunity of remedy.

I am, Sirs, yours faithfully,

Gloucester-place, W., Feb. 13th, 1897. HERBERT SNOW.

"A QUESTION FOR ANÆSTHETISTS."

To the Editors of THE LANCET.

SIRS,—Mr. Lucas's "Question for Anæsthetists" has long been an interesting one to me. For many years past I have always scalded my ether apparatus out after using it. I find two advantages from this: one, the apparatus lasts longer, for nothing in my experience spoils rubber and metal quicker than moist, foul mucus; the other is that I feel that I have not put over my patient's face an apparatus that I would not like to have put over my own. As to the question of causing pneumonia by direct contagion, I think the answer is in the negative, otherwise that disease would be infinitely more common than it is. I believe that the irritation of the ether so injures the mucous membrane of the lungs that a doorway for the bacillus to enter is opened. I suppose, too, that the bacillus pneumoniæ is fairly common in the dust and air, more especially in hospitals where cases of the disease are nearly always present. Of two persons on an athletic sports ground who get chilled or wet, the one who has undergone the fatigues of a race is more likely to get pneumonia than he who is a mere spectator of the race. So here we have a patient depressed by the fear of the operation, by the operation itself, and when we add the intense hyperæmia and even congestion caused by the ether it is no wonder if the bacillus takes up its abode in such a suitable soil as the injured mucous membrane. I am under the impression that so long as we have to deal with a strong irritant like ether we shall have cases of pneumonia following its use, but I do not think they are many in number. Mr. Lucas's "question," however, will do good if its answer is the increasing care by anæsthetists of cleanliness in their work.

I am, Sirs, yours faithfully,

F. WILLIAM COCK, M.D. Durh.

Porchester-houses, W., Feb. 23rd, 1897.

"AN UNUSUAL RESULT OF ABORTION."

To the Editors of THE LANCET.

SIRS,—On Jan. 24th a patient of mine had an abortion starting with sharp labour pains and profuse hæmorrhage. A

[1] THE LANCET, Feb. 13th, 1897, p. 432.

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fœtus of from fifteen to sixteen weeks was expelled enclosed in an unruptured amniotic sac (with liquor amnii) forming a perfectly transparent envelope without any chorionic or placental tissue. The cord was torn through at the placental insertion and the torn end appeared at the bottom of a depression in the amniotic sac. The placenta was partly adherent to the uterine wall and had to be removed by the finger. During the pregnancy there had been periodic losses of blood. As this was an unusual condition I preserved the specimen with a view to sending it later to a museum. I find now that it agrees with the description in Dr. Purslow's note in THE LANCET of Feb. 13th.

I am, Sirs, yours faithfully,

Appledore, Devon. ALLAN MAHOOD.

"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—Dr. Gowers sees no reason to believe that accidental lesions are transmitted and asks me to quote instances. 1. A. B., aged ten years, had one eye destroyed by the lace of a football. His children all had that eye smaller and weaker than the other. 2. C. D. asked me to look at the eyes of his children. He thought they all squinted. The right eye in each case was measurably smaller than the left. C. D., when eight years of age, had his right eye rendered sightless by a needle in a dart thrown by a playfellow. 3 E. F. lost an eye in childhood. His daughter had defective sight; his grandchild is blind. 4. G. H. had his right little finger entangled in a rope when seven years of age and permanently deformed. His children all inherit the deformity.

These cases, amongst others, came under my own observation. I would also refer those who are interested in this subject to an article by Dr. Brown-Séquard,[1] in which he gives many instances as the result of experiment and remarks: "I have never seen epilepsy (in guinea-pigs) except in those having had certain injuries able to produce that nervous complaint, or *in the young born of those injured and therefore epileptic animals.*" As a result of his observation and experiments he concludes: "These facts, added to others mentioned by P. Lucas and Darwin, clearly prove the possibility of hereditary transmission of effects of mere accidental injuries."

The case quoted by Dr. Langworthy[2] is remarkable. He delivered a child whose right eye and right arm were wanting. The father had lost his right eye and had been wounded in the right arm. Dr. Clark[3] attended a child with a stiff knee-joint bent exactly in the same position as the father's, which was also stiff. But it is unnecessary to multiply instances, which abound in the writings of Darwin, the late Professor Rolleston, and others whose observation was keen enough to detect them. If any meaning is to be attached to the term "heredity" it is difficult to exclude the operation of accidental causes or we should be almost driven into the belief that hereditary qualities have always been the "property" of the family in which they occur and have never had an origin. With all due deference, therefore, to Dr. Gowers I consider that a physician is not justified in advising an accidental epileptic to marry or in offering him any prospect of immunity for his possible offspring. I am, Sirs, yours truly,

Feb. 22nd, 1897. WILLIAM G. THISTLE.

THE LATE MR. GEORGE POLLOCK.

To the Editors of THE LANCET.

SIRS,—It may be of interest to record that Mr. George Pollock was in his youth a pupil of the Rev. W. C. Twiss at Wrestlingworth, Beds. The Rev. Mr. Twiss was a man of great originality and humour, and he loved to recount with gusto the escapades of his brilliant pupil. The attachment between the two was very great, and during the last illness of Mr. Twiss, who died in 1888, at the age of ninety years, Mr. Pollock made a special journey down to see him—forty-one miles by rail and seven by road—when himself at the age of seventy-one years. The meeting was not without its pathetic side, and Mr. Pollock afterwards contributed a most touching and affectionate account of the life of his old friend to the *Bedfordshire Press*. I am, Sirs, your truly,

Biggleswade, Feb. 2rd, 1897. J. B. EMMERSON.

[1] THE LANCET, Jan. 2nd, 1875.
[2] THE LANCET, Jan. 26th, 1850.
[3] Medical Times and Gazette, Sept. 5th, 1857.

THE NEW THEORY OF MALARIA.

To the Editors of THE LANCET.

SIRS,—Dr. Bignami, in his most interesting article summarising the different hypotheses to account for the infection of human beings by the malarial organisms, including the comparatively new theory of inoculation by mosquitos, gives facts which appear to militate against the ground air theory. My object in writing is to ask for a little more light on one of the facts. Great stress is laid upon the experiments showing that it is impossible to pass organisms contained in air through earth, and especially is it difficult to do so when the earth is saturated with water. It seems to me possible to hold that the rainfall increases malaria by raising the subsoil water and so the malarial organisms are forced out of the damp soil where they are produced to the surface in water, and when the water subsides the organisms are retained at the surface. Buchner's theory of the breaking up of the liquid lamellæ scattering the organisms into the ground air would explain, as pointed out by the writer, the passage of the organisms from the surface into the air. Can facts be given disproving the theory of the forcing upwards through the soil of malarial organisms contained in water? I have never heard of earth-worms being considered as vehicles for the passage of malarial organisms to the surface, and yet I see no reason for ignoring them.

Malaria was at one time prevalent in certain parts of England. Were mosquitos to be found in England then? Even now occasional cases of ague are to be found in Kent, Essex, Suffolk, and Lincolnshire. At the great outbreak of malarial disease at Paris, when the Canal St. Martin was excavated, were mosquitos concerned in spreading the malarial organisms?

In 1885 I suggested that the immunity to yellow fever noticed among the negro race and acclimatised Europeans was probably due to a state of the blood the result of malarial poisoning, and in a paper on Immunity which I read to a medical association I suggested that the serum from persons suffering from malaria should be tried in yellow fever. I have since thought that the serum of pigeons affected with the malarial parasites would be more suitable for experimental purposes.—I am, Sirs, yours truly,

HENRY ALSTON,

Feb. 3rd, 1897. Trinidad Medical Service.

THE CONTAGIOUS DISEASES ACTS.

To the Editors of THE LANCET.

SIRS,—In the present state of agitation for the resumption of these Acts in India and the East it may help to strengthen the hands of those interested in this subject if I give, as shortly as possible, the result of my experience of their action during my tenure of office of colonial surgeon and inspector of hospitals in Hong-Kong from 1858 to 1871, during which time they were carried out under my immediate superintendence. The principal medical officers of both navy and army loyally supported me in the matter, and had it been the duty of the health officer of the port to inspect all merchant seamen venereal disease might have been nearly stamped out. No leave was granted to seamen of the Royal Navy without previous medical inspection and detention in hospital if found diseased. The soldiers were carefully watched by their own medical officers, and the whole of the police force underwent a special medical examination once a month. All merchant seamen known to be diseased residing in any boarding-house were obliged under a heavy penalty to be reported to the harbour master and transferred to hospital. All known prostitutes, with the exception of a few Europeans and some half-caste Portuguese who ought not to have been exempted, were examined on an average once a week and if found diseased were detained in hospital; and very few, once I had got the system in proper working order, made any objection, soon being satisfied that it was for their advantage to be so dealt by.

Now what was the sanitary result of all this elaborate machinery? In 1859 both among naval and military invalids the syphilitic amounted to nearly 25 per cent. of the whole,

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and there was very nearly the same proportion in the Government Civil Hospital. In one crew numbering in all 523 hands, of which 300 had been on the sick list during the last quarter, seventy-seven of these were for venereal diseases, being at the rate of 25·66 per cent. of the total sick, or 14·72 per cent. of the total strength, and that, be it remembered, in a single quarter. In the Government Civil Hospital the proportion of venereal cases was 138 out of 591 admissions, being in the proportion of 23·18 per cent. Exactly ten years later, in 1869, as the result of the working of the Contagious Diseases Acts, that disease had greatly decreased. In the Government Civil Hospital, even in spite of the great number of cases sent in by the harbour master, the percentage of syphilitic cases was reduced to 15·82. In the garrison the percentage of primary disease to the total strength was only 6 83, according to a return furnished me by Dr. Heffernan, Deputy Inspector-General. In the police it was 16·66 against 31·00 per cent. in 1862.

Dr. Maccoun, of the United States ship *Delaware*, on the eve of his departure from the colony, wrote me under date March 12th, 1870, a letter, from which I take the following extracts:—"Since my arrival on this station in the spring of 1868 I have been struck with the benefit derived from the system of registration and inspection of public women so ably carried out in this colony." "During our visits to Hong Kong but few have been infected, and the type of the disease is mild." "Out of a crew of 470 men, only five cases of chancre have been noticed." Dr. W. Home, Principal Medical Officer of the Army, wrote:—"On behalf of the army medical officers stationed here, I have pleasure in expressing to you the great advantage we have received from the excellent sanitary arrangements in force in regard to prostitution." "Venereal disease, from being but a few years ago one of the most common causes of unfitness for duty here has now become of comparatively rare occurrence." Inspector-General Robert Pottinger was still more emphatic and wrote on Dec. 28th, 1870:—"During the years 1849, 1850, and 1851 I was surgeon of the *Reynard* sloop of war on the China station, and though, unfortunately, I am not in possession of my journal for that vessel, I have a vivid remembrance of the sufferings of the crew from syphilitic disease in Hong-Kong. On every occasion when the men had leave ashore, a large proportion of them became affected with the disease, which showed itself in the form both of hard chancre and large, phagadenic sores. Secondary symptoms were also of frequent occurrence, often requiring the patients to be invalided and sent home. The altered state of things at the present time is very striking. During the past nine months that I have had charge of this hospital I have not seen a case of regular Hunterian chancre contracted in Hong Kong, and only a few soft sores which healed readily. Judging from my own experience I should say that syphilis has *all but* disappeared from the colony." Surely the foregoing evidence is sufficient to convince all unprejudiced persons that it is possible to a great extent to reduce, if not to entirely prevent, the spread of this disease by legislative measures. In this short notice I have not entered into any of the questions, moral, sentimental, or otherwise, or the system on which the examinations were based and which met with the unanimous approval of naval medical officers of many different nations; I have limited my remarks to the plain statement of facts, which if required I can greatly extend. I am, Sirs, yours faithfully,

Scarborough, Feb. 22nd, 1897. IVOR MURRAY, M.D. Edin.

HOSPITAL REFORM ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—Now that the subject of Hospital Reform has been fairly placed both before the public and the profession it seems a fitting time to sketch out what our line of action should be in the future. In the first place it is very desirable that the memorial that we have prepared for presentation to the Royal College of Physicians of London should receive the signatures of a large number of practitioners. Sir William Broadbent has stated that a searching and dispassionate inquiry is very desirable, and it would be difficult to find a body better qualified to conduct such an inquiry than the Royal College of Physicians of London. In times gone by many of the most distinguished Fellows of that College took a very warm interest in the question of Hospital Reform; and it is to be sincerely hoped that the same interest will be taken by those Fellows of the College who may be fairly termed leaders of the profession at the present time. The letters of your Special Commissioner have shown that hospital abuse is just as prevalent in some of our large provincial towns as it is in the metropolis, and it will, therefore, be necessary to extend the investigation beyond the limits of London. My association purposes at an early date to organise meetings of the profession in Liverpool, Manchester, Birmingham, Leeds, and Bristol in order that the subject may be thoroughly discussed. May I, in conclusion, make an appeal to the profession to join our ranks? To carry on the work we have undertaken requires both men and money, and although we have no reason for being despondent concerning our future, yet we feel that to ensure success we must have a larger following than we possess at present.

I am, Sirs, faithfully yours,

Cardiff, Feb. 13th, 1897. T. GARRETT HORDER.

HUMANISED MILK.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if any of your readers who have special knowledge on the point could give me an authoritative answer to the following question:—Is the exclusive use of "humanised milk," as supplied by the large dairy companies, liable to produce rickets or scurvy-rickets in infants?—I am, Sirs, yours faithfully,

JOHN MACKERN, M.D. Camb., F.R.C.S. Eng.

Blackheath, Feb. 20th, 1897.

"ELECTIONS OF MEDICAL OFFICERS OF HEALTH: A PROTEST."

To the Editors of THE LANCET.

SIRS,—Of the published appeals for journalistic sympathy which it has been one's lot to read, the ill-conditioned farrago over the patently inappropriate signature "Justitia," in THE LANCET of Feb. 13th at p. 482, appears, on the writer's own statement of the case, to be the most shallow, perverted, and groundless. His grievance is, forsooth, that a young man, holding both a first-rate degree and a first-rate diploma in sanitary science, and possessing the invaluable recommendation of fifteen months' practical work with the health officer of a very large sanitary combination, should be elected to one of its constituent districts which his chief has resigned in preference to your correspondent, although the latter in his letter adduces no evidence of previous practical experience, and has apparently neglected or failed to obtain from his vaunted "courses of instruction in hygiene, bacteriology, and public health chemistry" their ordinary concrete sequel—viz., a D.P.H. He complains that influence was used to secure his well-equipped rival's election, and implies that but for such influence he would himself have been appointed, presumably on what he is pleased to consider his merits. Herein I submit he stultifies himself, for if the appointment were decided solely on the candidates' respective merits, "Justitia," being without previous experience and a D.P.H., would not have had a "look-in," and therefore, in any event, could only have succeeded by that very exercise of influence of which he would now have us believe he is so righteously abhorrent. Further, in admitting that the county medical officer's influence could secure the appointment he confutes his own imputation as to the payment of that official's assistant, for if the medical officer practically *gave up* one of his districts to his assistant (as he has done), is he not to all intents and purposes paying him out of his own pocket? Then, again, his objection that "the assistant will hold it only long enough to get a larger plum," &c., is, as I know from personal experience of a very similar competition with an opposite result, one that may, despite all assertions to the contrary, apply with equal force to "Justitia" himself, and if otherwise, surely his vexation at failing to secure "such a small appointment" is somewhat unaccountable.

The "red-herring" clap-trap about expense to the ratepayers in railway fares and advertising needs no comment, and when your complainant's wrathful disappointment has subsided it is to be hoped he will vindicate his right to his *nom de plume* by recognising the council's wisdom in appointing the candidate to whose superior training and

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fitness he has involuntarily testified so highly. I may add that my only knowledge of the affair is from your correspondent's letter. I am, Sirs, yours truly,

Feb. 13th, 1897. COUNTY BOROUGH M.O.H.

"MIRROR SPEECH."

To the Editors of THE LANCET.

SIRS,—In connexion with your annotation on mirror speech [1] and Dr. William Elder's paper on Agraphia, read before the Edinburgh Medico-Chirurgical Society,[2] the following suggestions in a letter by M. Gaston Legros [3] may be of interest:—"The right hemisphere contains a centre which presides over the images of letters and words as well as over the movements necessary for their formation, but in right-handed people it remains in a more or less rudimentary condition. In a patient afflicted with right hemiplegia and verbal cecity this rudimentary centre becomes the directing power, and the resulting written speech—which naturally retains the centrifugal direction—is the so-called mirror writing. Let us now consider mirror speech. Here, too, we find evidence of action on the part of the rudimentary right centre. The patient, by reason of the annihilation, or suspension, of his left centres, calls upon those in his right hemisphere; but is it not admissible to infer that the latter in their rudimentary state are not able to act independently of each other? They strive to adjust their individual insufficiency by association. The patient sees his words—having, as it were, written them down in his brain—before articulation, and consequently they are produced orally in centrifugal order. There is here analogy with Charcot's cases of verbal cecity, where the visual memory of a word was supplemented by its graphomotor image and the patients could only read when in the act of writing. The stimulus of the movements required for the formation of the words served to awaken a sense of their signification. A patient with mirror speech can only speak as the result of action in his centres on the healthy side." The foregoing hypothesis is distinctly in favour of the existence of an independent psychic motor which acts through the material brain.

I am, Sirs, yours faithfully,

Jan. 30th, 1897. KITHOGUE.

P.S.—Professor Charles Richet informs a Parisian contemporary that Leonardo da Vinci was in the habit of writing mirror-wise. In his magnificent work on the flight of birds, recently edited in Paris by Th. Sabatchnikoff, the writing is absolutely unintelligible if looked at in the ordinary way, but at once becomes legible when the sheet is reversed and held against the light or before a mirror. Professor Richet believes he has seen it stated that the celebrated painter wrote in this fashion in order to save his discoveries from the pilfering of his rivals, but this hypothesis cannot be founded on fact because it is not likely that pilferers would be deceived by so transparent an artifice. In any case, he adds in conclusion, the fact of the mirror writing is incontestable, and proves that this mode of expressing oneself is not incompatible with genius of the very first order.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The New General Hospital.

THE date of the visit of the Princess Christian to open the new hospital on behalf of Her Majesty has been arranged for the first week in July, the exact day being left to be fixed by Her Royal Highness. Much work still remains to be done in order to render the hospital fit for the reception of patients, but it is expected that sufficient advance will be made during the next few months to justify the opening ceremony being accomplished by that time.

Mason College: Resignation of Professor Wilders.

The following resolution has been passed by the Council of Mason College:—"That Professor Wilders letter be received and entered on the minutes, and that in accepting the resignation by Professor Wilders of the chair of forensic medicine the Council desires to record its regret that on the ground of ill-health Professor Wilders feels himself obliged to sever his connexion with the college and to relinquish a chair which he has honourably and usefully occupied, first at Queen's College and later at Mason College, for a period of thirty years. The council further desires to express its sympathy with Professor Wilders in the cause which has led to his resignation and, as a mark of appreciation of his services in the past and of his position as senior member of the professional body, it requests him to accept the title of 'Emeritus Professor.' The council further desires to have the foregoing resolution suitably engrossed, and, after the signatures of the members of the council and the officers have been appended, to forward it to him." This just and graceful recognition of his services must be very gratifying to the recipient and afford him much satisfaction and pleasurable memories. Already there are five candidates for the vacant post, each with local claims more or less prominent—Mr. Jordan Lloyd, Mr. J. T. J. Morrison, Dr. R. M. Simon, Mr. Wm. Thomas, and Mr. Wright Wilson.

Food Adulteration.

As already mentioned the Health Committee of the City Council have been active in the prosecution of the vendors of adulterated food and drugs. At a recent meeting of the magistrates a local firm was fined £5 for selling sugar which was largely contaminated with foreign matter. The analysis of Dr. Hill, the borough analyst, proved that the samples submitted contained 25 per cent. of carbonate of lime. This is said to be used largely in the bleaching of sugar, but the amount represented appears to be excessive in this instance. The public, we are told, look for a bright and sparkling appearance of the sugar, but they can hardly be credited with the knowledge of how this is obtained or how it can be profitably used in the face of an expert examination. In other cases also the subject of prosecution, two drysalters, were fined £3 and costs for selling glycerine adulterated with 50 per cent. of glucose and labelling the penny bottles "pure glycerine." The defence was a lame one—that others did the same, but it did not exempt them from the infliction of the fine. It is a notorious fact that many persons trading as chemists under the style of drysalters and drug stores are not qualified to dispense drugs, and from them syrup of poppies, paregoric, laudanum, red and white precipitate, and other poisons are obtainable in quantities likely to produce very evil results in their indiscriminate use.

The Treatment of Diphtheria.

An important conference has taken place recently between the health committee and representatives of the board of guardians in order to promote a more general use of the antitoxin treatment of diphtheria. It was stated that in 1896 out of 70 cases of diphtheria which developed in the hospital and were thus treated there was no death. The diagnosis in every case was confirmed by bacteriological examination. It was also pointed out that in 1894 in Birmingham 316 cases of diphtheria were notified in the ordinary way and 50 deaths occurred. In 1895 there were 640 cases and 163 deaths, and in 1896 1100 cases and 246 deaths, giving a percentage of deaths to cases notified for the three years of 21·5 per cent. Some additional information of an interesting kind was also adduced. In relation to this epidemic the following circular has been addressed to the profession in the locality, signed by the Presidents respectively of the Medical Institute, the Midland Medical Society, and the Birmingham Branch of the British Medical Association. "At the request of the health committee of the City Council we have decided to convene a meeting of the members of the medical profession practising in Birmingham, to be held at the library of the Medical Institute on Thursday, Feb. 25th, at 4 P.M., to discuss the best means of dealing with the present epidemic of diphtheria."

Birmingham General Dispensary.

The 103rd Annual Report has just been issued. It states that the income for the year was £7,662 3*s.* 5*d.*, and the expenditure £7,141 6*s.* 7*d.* The total number of patients admitted by tickets has been 35,098, an increase of 2324, and the average cost per patient was 3*s.* 8*d.* There have been 6374 teeth and accident cases admitted without tickets. The amount expended in relief has been over £600, rather more than in previous years.

Feb. 23rd.

[1] THE LANCET, Dec. 19th, 1896, p. 1773.
[2] THE LANCET, Jan. 23rd, 1897, p. 245.
[3] Le Progrès Médical, Dec. 19th, 1896, p. 473.

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LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Female Sanitary Inspectors.

THE sanitary sub-committee of the City Council have recommended, upon the suggestion of the medical officer of health, that two lady sanitary inspectors be appointed. Dr. Hope said the main duties of the female inspectors would be to visit the houses of the lower classes who were habitually dirty, whose dwellings were habitually filthy, and who paid no attention to their own cleanliness or that of their children. The main usefulness of the female inspectors would lie in that direction. Dr. Hope did not anticipate that the female inspectors would meet with opposition in visiting houses, and thought their influence would be similar to that of district nurses—wherever they went cleanliness would follow. Lady inspectors had been a success in Glasgow, and they had been tried in Manchester, but not exactly on the same lines.

The Eye and Ear Infirmary.

The Liverpool Eye and Ear Infirmary appears to be financially in a condition calculated to excite the envy of less fortunate institutions, whose annual reports constantly show an increased debit balance. This happy result has been attained by the receipt of several handsome donations. At the same time the committee wish the charitable public to know that had the funds been in a more prosperous condition at the close of 1895, when there was a debit balance of £355, these donations, amounting to £750, would have been applied to the extinction of the mortgage debt, which still remains at £1000. The hospital possesses no invested funds, and whilst the annual expenses amount to £2200 the reliable sources of income do not exceed £1700. The Hospital Sunday and Saturday contribution amounted to £440. In the out-patient department 6153 new eye cases, and 2204 new ear cases were treated. These cases have been attended to and prescribed for 21,843 and 7538 times respectively. The number of minor operations on out-patients was 1139. The number of important operations in the in-patient department, where 765 patients occupied beds during the year, was 549. The treasurer said this was almost the only instance during his twenty-three years' treasurership when he had been able to show accounts with a credit balance, which now was £55. The term of office of the honorary surgeons to this charity, which is limited to twenty years, differs from that of all the local general hospitals where the sixty years age-limit is the rule. In Mr. Edgar Browne's case this meant retirement at a comparatively early age, when his judgment and operative skill were of especial value to the hospital. While no harm can possibly result from the adoption of the prevalent age-limit, much benefit to the charity would attach to the retention of matured services.

The Lunacy Fee Dispute in the Prescot Union.

The reply of the Commissioners in Lunacy to the communication addressed to them by the clerk of the Prescot Board of Guardians referring to the refusal of Dr. Hall and the other medical men in Prescot to accept a reduced fee of half a guinea for examining and certifying for the removal of pauper lunatics to asylums was in the terms anticipated in my last letter. The Commissioners in Lunacy stated in their reply that they were unable to give authoritative legal opinions on the construction of Acts of Parliament. They also pointed out that a medical man could lawfully refuse to give a certificate for a pauper lunatic unless he was allowed to charge his own fee. If anything serious had happened in the case of Martin Weir from his violence after the medical man had refused to sign the certificate of lunacy, they did not think the latter could have been held responsible. The Commissioners thought that Section 235 of the Lunacy Act, 1890, gave discretion to the justices in regard to fixing a reasonable fee; but if the medical man examined an alleged lunatic before fixing his fee, he could not afterwards demand more than the sum which the justice thought was a reasonable one. The clerk pointed out to the guardians that the Lunacy Act contained a section stating that if the justice would not certify for a guinea fee, the guardians would have to settle the matter with their medical officer.

"The Bacteriology of Fish and the Connexion of Fish with Disease."

This was the subject of a lecture delivered at University College by Professor Boyce. Among the practical points to which he alluded was that of the bacteria which, getting into the alimentary canal of the fish, were not injurious to the fish itself, though the means of communicating typhoid fever and other dangerous diseases to mankind. The precautions to be adopted included frequent and effective cleansing of fish boxes, the gutting and cleansing of the fish at the earliest opportunity, keeping the fish at a low temperature with ice, &c. The lecturer described a disease which sometimes attacked codfish, and which made them as red as salmon; he had some years ago read of a Liverpool costermonger having been brought up on a charge of wilfully dyeing codfish to make them look like salmon. The bacteria which caused this redness of colour had been traced to the salt with which the fish were cured. The preventatives were thorough cleanliness in the fish factories and sterilising the salt of this particular bacterium by subjecting it to artificial heat, not necessarily of a very high degree. A few lantern slides were shown in illustration of the subject, and also of other deleterious changes, such as phosphorescence, which take place in fish.

The Liverpool contributions to the Indian Famine Fund now amount to £21,673 14*s.* 5*d.*

Mr. Heywood Bright has been elected chairman of the General Committee of the Royal Infirmary in the room of Mr. Hamilton B. Gilmour, resigned.

The medical officer of health reports that the death-rate for Liverpool, although still high (25·1 per 1000), is lower than the average for the last ten years.

Feb. 23rd.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The University College of South Wales and Monmouthshire.

THE annual meeting of the court of governors of this College was held on Feb. 10th at Cardiff. The President, in reference to the building fund, stated that the Treasury had promised the second £10,000 in three instalments—the first of £5000 and two others of £2500 each. The first £5000 had been paid, and this had been met by a similar sum contributed locally. Last year the Treasury had contributed £10,000 to meet a similar sum contributed in South Wales and Monmouthshire, making a total, with the amount received from their generous friends in the district, of £30,000 towards the building fund. Since then he had been endeavouring to get a sum of £2500 from the subscribers in order to ask the Treasury for another instalment. The chairman reminded the court that the whole £20,000 must be obtained by the end of March. The total amount promised towards the fund was £20,500, and of that sum £16,780 had been paid, and if he could get £750 next week the sum of £2500 could be obtained from the Treasury. The need for new buildings was keenly felt owing to the increase in the number of students. The day students this year had been returned at 418, as against between 370 and 380 last year. Lord Windsor and Dr. W. T. Edwards were elected vice-presidents of the College. Lord Tredegar, Archdeacon Griffiths, Mr. J. Duncan, and Mr. J. A. Jenkins were appointed to represent the College on the Court of the University of Wales for a period of three years.

A Convalescent Home for Bristol.

At a meeting held in Bristol on Feb. 22nd, under the presidency of the Mayor, it was determined that the permanent memorial for the Queen's Diamond Jubilee should take the form of a convalescent home, and that an effort should be made to raise £50,000, one half of this sum being reserved for endowment. A sum of nearly £8500 has been already promised, besides a building which might be converted, at a comparatively small outlay, to the purposes of a home. When the formal appeal for funds is made the residents of Bristol and the neighbourhood will doubtless respond in a generous manner.

The Bristol and Clifton Society for the Prevention of Cruelty to Animals.

The annual report for 1896 shows that during the year 322 cases were brought under the notice of the society's officers; 92 prosecutions were instituted; 91 convictions were obtained; 67 animals were destroyed, either after proceedings and as the alternative to a heavy fine or through the intervention of the

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society's officers without prosecution; 37 cases were investigated when either the evidence was insufficient or the complaint groundless; and 123 cases were deemed to be sufficiently dealt with by a caution only. The committee of the society regret that but little progress appears to have been made in giving effect to the resolution of the sanitary authority in favour of the establishment of public slaughter-houses, as recommended in the report of the medical officer of health for Bristol (Dr. D. S. Davies).

Cardiff and the Queen's Commemoration.

The Cardiff Chamber of Commerce on Feb. 17th discussed the question of celebrating the Queen's long reign, and a resolution was adopted in favour of erecting a permanent hospital for sailors in lieu of the *Hamadryad* hospital ship. The mayor will shortly call a public meeting in favour of the scheme. The *Hamadryad* has been in use about twenty-five years, and last year 379 in-patients and 11,060 out-patients were treated. The old ship is now getting worn out and will shortly have to be replaced. It is used, not only by seamen, but by townsmen who are injured in the vicinity of the docks. There is every prospect that the project will be carried out.

The Barnstaple Board of Guardians and Vaccination.

Some time ago the magistrates of the county bench at Barnstaple, by the advice of their clerk, held that a vaccination officer must produce written personal authority by resolution of his board for prosecution. The clerk to the guardians did not share this opinion, but believed that these officers were bound by law to prosecute on their own initiative. At the last vaccination prosecution this gentleman informed the magistrates that although he had the authority of the board he did not intend to use that reason, but relied on a recent decision of Mr. Justice Wright and Mr. Justice Bruce. The clerk to the magistrates then adopted this view and the prosecution proceeded without the authority being called for. The clerk to the guardians reported the fact to the meeting held on Feb. 19th, and from the debate which followed it appears that for the future it will be illegal to move that no prosecution shall be taken against vaccination defaulters and the vaccination officers will themselves prosecute whenever necessary without troubling the board. The clerk of the guardians is to be complimented upon his action and it is to be hoped that other boards will follow the example of Barnstaple.

Water-supply of Rhayader.

An inquiry was held on Feb. 10th by one of the inspectors of the Local Government Board in reference to an application made by the Rhayader rural district council to borrow £2120 for works of water-supply for the parish. It is proposed to lay new mains to replace the old ones, which have become corroded, and to supplement the existing supply by means of pumping from the River Wye in dry seasons. The objectors to this scheme opposed the pumping from the river and advocated a gravitation scheme from Nantsarn, which had been commenced but abandoned because an analysis of the water was not satisfactory. A petition in favour of this was presented, which showed that many thousands of sheep were washed in the River Wye and that the sewage from 118 houses entered the river above the intake. The inspector announced that he would have independent analyses of the water made.

Death of the Son of Dr. John Beddoe of Bradford-on-Avon.

Much sympathy is felt with Dr. and Mrs. Beddoe of Bradford-on-Avon, whose son, Mr. C. Beddoe, has met with a fatal accident while with Captain Lugard's exploration party in Central Africa.

Proposed New Hospitals.

Lord Wimborne has offered to make a free gift to Poole of the house and ground known as Poole Mansions to be used as a hospital for Poole and neighbourhood. Lord Wimborne suggests that an endowment fund for the hospital should be the form which the memorial of Her Majesty's Diamond Jubilee should assume, and offers to head the list with a donation of £1000. Lord Wimborne's gift represents about £4000.—At the meeting of the Barry Urban District Council, held on Feb. 5th, the chairman suggested that the Queen's Diamond Jubilee should be celebrated by the erection of a general hospital for the town, and an influential and representative committee of councillors and other gentlemen was appointed to take the question into consideration and to report.

Feb. 23rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Chair of Medical Jurisprudence and Public Health in Edinburgh.

IT has been intimated here that the profession was interested in the future of this chair, from which Sir Douglas Maclagan has retired; and the profession generally will be pleased that the University Court has declared its approval of the chair being divided. It is understood that this decision has been made practicable by some thousands of pounds left for the purpose by the late Mr. A. L. Bruce and the promise of several thousands towards the same object by an anonymous donor. The new arrangement requires a special ordinance by the Universities' Commission, and that takes several months to obtain. Meanwhile the duties of the combined chair are being performed by Sir Douglas Maclagan's University assistant.

The Edinburgh Medico-Chirurgical Society.

This society held another of its afternoon meetings last week. It, like the former one, was devoted to an exhibition of patients and specimens. As is usual on such occasions, there were a goodly audience and a very interesting exhibition of patients. The cases were mainly surgical, and while in the majority of them nothing but a scar was demonstrable their histories were records of great surgical successes. Necessarily the surgeons have the best of a show of this kind, and after them come the dermatologists. A number of the specimens were related to the cases shown, and thus greater interest attached to them.

Lecture at the Royal College of Surgeons of Edinburgh on "The Parasites in Cancer."

On Friday of last week Mr. Harold J. Stiles delivered one of the newly instituted lectures at the Royal College of Surgeons of Edinburgh. His subject was "The Parasites of Cancer," and the lecture was admirably delivered and illustrated. While it was mainly destructive in its criticism, and not necessarily convincing, it was a contribution of value to the knotty question with which it dealt [1]

Annual Meeting of the Church of Scotland Deaconess Hospital.

The second annual meeting of this hospital was held on Monday. It was stated that a number of deaconesses and missionaries has been trained in the hospital since it was opened two years ago. The average daily number of patients was twenty and the expenditure per bed had only been £36 9s. The hospital is in the happy position of having an income larger than its expenditure.

Royal Hospital for Sick Children, Edinburgh.

The annual meeting of this hospital was held on Monday last. The report showed that 1101 patients were treated during the past year in the wards, while in the out-patient department 7455 medical and 5885 surgical cases were treated. The expenditure for the year exceeded the income by £1043. The number of both the in-patients and the out-patients had considerably increased. The ordinary income had increased, but not in proportion to the increase in the expenditure.

The Indian Famine Fund and Edinburgh Students.

Last week two successful entertainments were given in the Students' Union under the auspices of the Edinburgh Indian Association with the laudable object of raising money for the Indian Famine Fund.

Glasgow Royal Infirmary.

It is understood that a proposal to be endorsed by the Lord Provost and intended as a local memorial of the "Diamond Jubilee" is shortly to be placed before the citizens to the effect that a sum of money be raised for the purpose of effecting considerable alterations in the buildings of the Royal Infirmary. This object is sure to command wide sympathy, and yet it may be fairly questioned whether the proposal is wisely inspired. The Royal Infirmary has now been standing for over a hundred years, and though various alterations have been made at different times the building is for the most part sadly defective in the light of modern hospital requirements. Further, it may be questioned whether any alterations that are within the reach of possibility can ever

[1] A brief abstract of this lecture will be found on page 618.—ED. L.

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really fit it to meet these requirements. A large sum of money may be spent, and yet in the end, both for treating patients and teaching students, the accommodation and equipment remain most unsatisfactory. The new wine, in short, cannot be contained in the old bottle. But the attention of the directors may be drawn to a more heroic proposal—viz., the re-building of the hospital on a new site. This would secure an entirely new building in harmony with modern demands and also surroundings more suitable to a general hospital than those in the neighbourhood of the present building. Such a site could certainly be found without going too near the limits of the city boundaries, and by a determined effort the money could surely be raised. The infirmary is by far the oldest in Glasgow, it has a long list of distinguished traditions, and its appeal is to the entire community. The occasion which was offered once before has again presented itself. To miss it will almost certainly perpetuate the present unsatisfactory condition for many years, whilst a mere patching up of the old building is not only a much less stimulating proposal, but is a scheme the wisdom of which is fairly open to question.

Medical Appoi ntments.

Mr. George A. Turner, M.D. Glasg., and Mr. J. M. Munro Kerr, M.B. Glasg., have been appointed physicians to the dispensary of the Western Infirmary in the department for Diseases of Women. Mr. W. Burns Macdonald, M.B. Edin., has been elected Medical Officer of Health for the burgh of Dunbar.

Royal Hospital for Sick Children, Aberdeen.

The average length of stay of patients treated in the wards during 1896 was 39⅝ days; annual expenditure per bed occupied, £36 10*s.* 3*d.*; deficit for year (after absorbing legacies), £247 15*s.* 9*d.* The additions now being built will cost £3000, of which £1700 have been already subscribed.

Feb. 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

A Case of Leprosy in Dublin.

THE state of the public health of Dublin is still a topic of engrossing interest and of great anxiety to the medical profession as well as to the citizens. The fact that a case of leprosy has been diagnosed by competent authorities in the person of a young man living at the north side of the city is not calculated to allay the feeling. The superintendent officer of public health has been communicated with and arrangements are being made to ensure the deportation of the unfortunate patient.

The Preliminary Examination at the Royal College of Surgeons in Ireland.

It has been stated publicly that the Education Committee of the General Medical Council is now moving for the abolishment of the preliminary literary examinations of the Royal Colleges of Physicians and Surgeons in Ireland. All such examinations have already been given over in England, where certificates of general education must now be produced by aspirants to registration as medical students from competent literary examining bodies. This seems to be a move in the right direction, for it is notorious that many of the examiners in medicine and surgery of the licensing colleges in Ireland have frequently complained of the deficient general education of candidates, and felt themselves obliged to furnish separate reports referring to that deficit as distinguished from want of knowledge of purely medical and surgical subjects.

The Microbe of Bubonic Plague.

The germ associated with the epidemic of bubonic plague in India was exhibited by Professor McWeeney at a meeting of the Scientific and Literary Society of the Catholic University on Monday, Feb. 22nd. It resembles a diplococcus, and is found in large quantities in the blood of infected patients.

The Ulster Hospital for Women and Children.

At the annual meeting held on Feb. 19th it was announced that during the past year there had been 161 children and 80 women admitted into the wards, and 9081 children and 1425 women seen in the out-patient department. The maternity nurse had attended 161 cases. About 4*s.* per head covered all expenses. The establishment of an isolation ward had been of the greatest service, and by its use the medical staff had been able to safeguard the wards from any serious outbreak of infection. Financially there is a sum of £154 to the credit of the institution.

Sir William MacCormac.

A proposal has just been made that the medical profession of Belfast and the vicinity should entertain Sir W. MacCormac, President of the Royal College of Surgeons of England, at a dinner on the occasion of the unveiling of his portrait on March 15th next by the Marquis of Dufferin and Ava at Queen's College, Belfast. Sir W. MacCormac, who is an old student of the College, was, prior to his going to London, surgeon to the Royal Hospital, Belfast.

Belfast Royal Hospital.

At the quarterly meeting of the supporters of this hospital, held on Feb. 22nd, it was reported that during the past quarter 528 intern patients had been treated, while during the same period there had been 5401 new extern cases. The financial condition of the hospital is not satisfactory; the present financial year commenced with a balance against the hospital of £1068 1*s.* 2*d.*, while the expenditure for the five months ending Jan. 31st has been £4340 3*s.* 7*d.*, making a total of £5408 4*s.* 9*d.* The income for the same period has been £3013 1*s.* 5*d.*, leaving a balance against the hospital of £2394 11*s.* 4*d.* The only source of income that has shown any elasticity is that from the working classes, which is £69 7*s.* 2*d.* more than at the same period of last year.

Cork District Lunatic Asylum.

The importance of early treatment in cases of insanity is well shown in one of the statistical tables appended to the report of the medical superintendent of the Cork District Lunatic Asylum for the year 1896. It was found that 40 per cent. recovered among those who had been less than three months ill, but only 13 per cent. were discharged cured of those who had been ill for more than three months before admission, while of those ill twelve months only 8 per cent. recovered. Patients who have once been in an asylum frequently relapse from a slight cause, on the removal of which recovery again takes place; 26 per cent. of those recovered were relapsed cases.

Feb. 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Private Hospitals.

M. MICHELIN, a deputy, has laid before the Chamber a Bill for the Regulation of Private Hospitals. A scandal has recently electrified Paris, where two months ago two medical men were accused of having procured abortion in a private hospital. They are at present in prison awaiting their trial. The Bill of M. Michelin provides that no private hospital should be allowed to be open without the express sanction of the Prefect of Police, under pain of a fine of from 50 to 500 francs and a term of imprisonment varying from eight days to six months, and that such hospitals, being always under police surveillance, shall be closed upon the first complaint. Every medical man convicted of having performed, or having caused to be performed, a useless operation will be prosecuted as a swindler. The forms of swindling instanced are where the patient's consent is obtained either by an untrue promise of permanent cure or by prognostication of serious complications by which representations an unnecessary operation would be forced upon the patient or money extorted from him. The profession in Paris is naturally irate at these proposals, which lead the public to believe that every private hospital is a dangerous place and that all their surgeons should be under police surveillance. It is quite possible that the medical man accused of having found a fœtus in the patient on whom hysterectomy was performed acted in all good faith. M. Brouardel, Dean of the Faculty of Medicine, drew up a very severe report upon the evidence of the post-mortem and it was mainly this report which led to the arrest and trial. The two medical men who are accused were arrested a long time ago and they are still awaiting trial. The case should have come on at the end of this month but has been adjourned because M. Brouardel has gone to Venice as a delegate to the Sanitary Conference.

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France and the Plague.

Excitement about the plague seems to be evaporating. Some articles have recently appeared in the daily press saying that quarantine regulations are illusory because they are not applied universally, and that complete disinfection of the whole of a ship's cargo is impossible. One prominent effect of the regulations is to increase the trade of those ports where they are not in force. Ships which are refused the right of entry to the port of Marseilles discharge their cargo at Genoa, where there are no quarantine regulations, and the merchandise arrives in France by the railway. It has been found that the certificates of certain "ships' doctors" are very often incorrect. These "doctors" are chosen by the shipping companies without any official control and are frequently unqualified men whose only means of livelihood is the holding of a post of this kind. Therefore they often conceal the fact that there are sick on board, the notification of whose illness would delay the unloading of the ship and bring the company into public disfavour. A new law proposes to oblige the companies to carry no one as surgeon who is not properly qualified and has not also passed a special examination in hygiene, epidemiology and bacteriology. The medical men at present holding these appointments have asked leave to continue to hold them without passing this examination which they say is difficult and for which they have no time for study as they are always on the sea. It is true that the greater part of these "doctors," not really belonging to the profession, would starve if they were dismissed without a pension, but on the other hand incomplete or inaccurate certificates are a source of great danger in a time of epidemic.

The Health of the French Navy.

At the Academy of Medicine MM. Vincent and Burot presented some statistics of mortality in the navy. For the five years 1891–95 out of 198,313 men there were 2253 deaths, or 11 per 1000. Tuberculosis was responsible for a quarter of this mortality, and was found to be more frequent in the navy than in the army. Malaria, dysentery, and cholera also showed a heavy death-rate, and so did accidental deaths and drowning. The mortality among the medical officers and dispensers was 19 per 1000.

Regulations for Match Manufactories.

At the same meeting M. Valin read a report which he had prepared to send to the Finance Minister, who had requested the Academy to report upon the question of rendering the manufacture of matches less dangerous to health. The report advised the general adoption of *phosphore blanc*, thorough ventilation of the shops, a careful selection of workers so as to keep out those with any predisposition to bone lesions, and the employment of machinery enclosed in glass cases, so that the worker would be protected from the fumes.

Narrow Escape of a French Alienist.

Whilst engaged seeing fresh patients recently Dr. Charpentier, physician to the Bicêtre Asylum, Paris, had a wonderfully narrow escape from assassination. Soon after he had taken his seat a man, whose appearance afforded no indications of excitement, advanced to the table and said, "Good morning doctor, do you remember me?" "Yes," replied Dr. Charpentier, you are Recq, a former ——." The other, however, did not wait for the conclusion of the sentence. Raising his right hand, which hitherto he had kept concealed in his coat pocket, he aimed a revolver point blank at Dr. Charpentier, so that the muzzle almost touched his breast and fired. Happily the bullet impinged on the victim's sternum, which it failed to penetrate; while with admirable presence of mind M. Siegel, who was standing by, threw himself upon the would-be murderer and prevented him from discharging the other barrels of his weapon. The missile caused a contused wound with slight hæmorrhage, and became flattened against the bone; but Dr. Charpentier was able to continue his service and has not felt any bad effects. It seems that Recq was formerly an inmate at Bicêtre under Dr. Charpentier, and that he has also been confined in other asylums. When he was interrogated as to the motives that induced him to commit such a crime he replied with great coolness that he had been unjustly imprisoned and consequently wished to kill someone in order that attention being thereby drawn to his case he might obtain justice. The certificate, drawn up by Dr. Charpentier, on the strength of which Recq left Bicêtre in 1890, was couched in the following terms:—"A lunatic, persecuted, troublesome, who under the influence of prolonged sequestration has become calm, industrious, submissive; he has abandoned his frenzied ideas and seems to be actuated by good intentions. We are of opinion that he may be set at liberty, but we cannot affirm that he is free from risk of relapse, or that he may not again become dangerous."

Feb. 23rd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Private Hospitals.

IN large towns like Berlin there are many private hospitals where patients are received for the purpose of having operations performed by surgeons and gynæcologists and other specialists. The necessity for these institutions arises in part from the circumstance that in Germany the opportunities of obtaining appointments in connexion with public hospitals are comparatively few—considerably fewer than in either England or France, and if it were not for the private hospitals many rising young surgeons would have but little scope for the exercise of their talents. Many patients also require special nursing, which they cannot get at home, but for various causes are not eligible as inmates of the public hospitals; they accordingly enter the private hospitals; and it not infrequently happens that surgeons attached to the public hospitals attend such patients and perform operations in the private hospitals. It appears, however, that private hospitals are not looked on with much favour in official circles, and those who are responsible for their management are now placed in a position of some difficulty by the issue of stringent regulations on the subject of their internal arrangements. The requirements of these new regulations are, in fact, so onerous that the entire abolition of the private hospitals seems to be the real object in view. For instance, the windows of patients' wards must not look towards the north, fresh air must be warmed before it is admitted into the rooms, the staircases must have a width of 1·30 metre (4 ft. 4 in.), and the passages a width of 1·80 metre (6 ft.), there must be a sitting-room on each floor, and there must be a garden for the use of the patients. Hardly any of the hospitals and institutions for convalescents at present existing fulfil these requirements, and it would seem that medical men will no longer be able to open establishments of this kind unless they are prepared to have buildings specially erected for the purpose. The new regulations were discussed recently at a meeting of the Public Health Society, and the majority of the speakers were of opinion that such sweeping measures were not in the interest either of the medical profession or the public. If the regulations are enforced the cost of carrying on a private hospital will be greatly increased and the proprietors will naturally protect themselves by raising the fees. Another token of systematic hostility to these hospitals is the fact that they are now officially classified by the Tax Office as industrial establishments, and the proprietors have been requested to pay the so-called industrial tax in like manner with shopkeepers and others engaged in money-making businesses. The medical men connected with the private hospitals naturally consider that they have just grounds of complaint and they have held a meeting in Langenbeck House to protest against the action of the authorities. Professor Bergmann, who was in the chair, pointed out that it is quite unwarrantable to assume, as has been done, that private hospitals are carried on as sources of profit; it is, in fact, sufficiently well known that many medical men not only do not earn anything from their hospitals, but have even to contribute to the expenses. It was also stated that much scientific work is done in the private hospitals, and on various grounds the action of the authorities was strongly condemned. It was eventually decided that the proprietors of private hospitals should form themselves into a union and that they should refuse to pay the industrial tax; arrangements were also made for engaging legal assistance and for bringing the cases before the law courts.

The Antitoxin Treatment of Tetanus.

Dr. Jacob of Petersdorf in Silesia reports in the *Deutsche Medicinische Wochenschrift* a case of tetanus successfully treated by Behring's antitoxin. A boy, aged fourteen years, was shot through the right shoulder on Oct. 13th. Two paper wads, together with stones, pieces of cloth, &c., were

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removed from the wound, and a week afterwards it was covered by healthy granulations. On Nov. 13th the patient tried to move his arm for the first time, but was unable to do so on account of the rigidity of the muscles. On Nov. 16th Dr. Jacob was sent for in haste and found the patient in a typical state of tetanus. His face was contracted, trismus and opisthotonos had developed, there were tonic convulsions of the muscles of the abdomen, the chest, and the extremities; respiration and deglutition were difficult; there was retention of urine, the bowels were constipated, and violent convulsions occurred when the patient tried to open his mouth. The temperature was 37·6° C. (= 99·6° F.), and the pulse was 160. The urine, which was drawn off with a catheter, was free from albumin and sugar. Morphia and chloral were administered, but without any good result. On the following evening five grammes of Behring's antitoxin dissolved in fifty grammes of water were injected at five places on the right side of the chest and abdomen and one gramme (= 15½ grains) of chloral was given. The patient slept for four hours, but in a day or two the paroxysms were as severe as at first. He could, however, open his mouth better and move his right leg. On the evening an exanthem like scarlet fever appeared on the face, the chest, and the arms. Next day urine and fæces could be passed freely and the right arm and the legs could be moved. On Nov. 20th several convulsions of the extremities were observed, but they were not so strong as before. A second injection of five grammes was given on Nov. 22nd, and since that time the patient's state obviously became better. On Nov. 24th he was able to move his head of his own accord and to open his mouth. On Nov. 25th he could laugh, whistle, and move the vertebral column, in addition to which the convulsions, though still present, were of less duration. By Dec. 11th, when the patient first left his bed, the general attacks had entirely disappeared, but short convulsions of the muscles of the face and the left arm continued till the end of December. Dr. Jacob states that the time of incubation was about twelve days, and that the illness did not begin as usual with trismus, but with a contraction of the muscles near the wound. The beneficial action of the antitoxin was well marked, although it was not possible to give the first injection sooner than the fifth day after the onset of the symptoms, when they had already become severe. The effect of the injection was not immediate, but developed itself slowly, a fact in accordance with the observations of Tizzoni and Cattani.

An Epidemic of Trachoma.

Eastern and Western Prussia, Posen, and Silesia have recently been visited by an epidemic of trachoma, and the cases are very numerous, especially in some districts near the Russian frontier, where the general standard of living is low. The reports of the medical officers of health show that in the district of Johannisburg there are 2343 patients, and in the district of Lyek 3913, of whom 994 are in the town of Lyek, the remainder being in the country. As the town contains only 10,000 inhabitants the number of patients amount to 10 per cent of the total population. In Sensburg there are 913 and in Pillkallen 1322 patients. In the latter district the prevalence among school children is especially remarkable, no fewer than 571 of them having contracted the disease. The Medical Department of the Government organised a conference at Berlin, which was attended by the members of the Department, by delegates from the local authorities concerned, and by the district medical officers of health. It was decided to set apart special wards for trachoma in the ophthalmic hospital of Königsberg University and in the municipal hospitals of Danzig and Königsberg. Lectures on trachoma with practical demonstrations will also be delivered at the above hospitals at the expense of the Government, no fees being charged either to the medical officers of health or to any medical men who may care to attend. Experts are to be appointed by the Government to travel through the infected districts and to attend the poor in conjunction with the local medical men. Trachoma formed the subject of a paper read before the Berlin Medical Society by Dr. Kirchner of Königsberg, one of the medical men who had come to the conference. He said that the above-named eastern districts may easily become the focus of an epidemic owing to the carelessness of the population in hygienic matters. He was of opinion that children should be taught in school the dangers of this disease, and recommended the establishment of public dispensaries in the district towns, together with other measures which may enable poor persons to obtain medical advice and treatment. The district affected by this epidemic is the one where leprosy has recently become prevalent.[1]

The Medical Congresses.

The programmes of this year's medical congresses are now issued. The twenty-sixth Congress of the German Surgical Association will be held at its headquarters, Langenbeck House, in Berlin, from April 21st to 24th, under the presidency of Professor von Bruns of Tübingen. The principal papers to be read are: (1) the Surgical Treatment of Gastric Ulcer, by Professor von Leube of Hamburg and Professor Mikulicz of Breslau; (2) the Value of the x Rays in Surgical Practice, by Dr. Kümmel of Hamburg; and (3) Operations for Prostatic Enlargement, by Professor Helferich of Greifswald. An exhibition of surgical apparatus, dressing materials, &c., will be arranged as usual in connexion with the meeting. The Congress of Internal Medicine will meet this year in Berlin from June 9th to 12th, under the presidency of Professor Leyden. Among the subjects of discussion are: (1) the Treatment of Rheumatic Arthritis, by Professor Baümler of Freiburg and Dr. Ott of Marienbad; (2) Epilepsy, by Dr. Unverrich of Magdeburg; (3) Graves's Disease, by Professor Eulenburg of Berlin; (4) the Aims of Modern Treatment by Means of Drugs, by Professor Liebreich of Berlin; (5) the Prognosis of Spinal Diseases, by Professor Leyden; and (6) the Pathology of Diarrhœa in Children, by Professor Baginsky of Berlin.—The Balneological Association will meet at Berlin from March 11th to 15th.—The German Association of Public Health will meet in Karlsruhe from Sept. 14th to 17th; the subjects to be discussed are: (1) the Disinfection of Dwellings from a Scientific and Practical Point of View; (2) the Diminution of Intemperance; (3) Measures to be taken against Food Adulteration; (4) on School Building; and (5) the Prevention of Epidemics in Health Resorts.

Despatch of a Plague Commission to India.

The German Commission for the study of the plague will leave Germany for India next week. The members are Professor Koch, Professor Pfeiffer of the Institution for Infectious Diseases, Professor Gaffky of Giessen, Dr. Disuderic and Dr. Sticker of the Imperial Health Office. Professor Koch will travel direct to Bombay on the completion of his investigations in South Africa, and till his arrival the leader of the commission will be Professor Gaffky, who was with Professor Koch in British India during the great cholera epidemic of 1884, and assisted him in the researches which finally lead to the discovery of the comma bacillus.

Feb. 22nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Italian Army Medical Reports.

FOR the last few years the army medical reports have registered a steady improvement in the health and the general sanitary condition of the Italian troops; but according to the report for 1895, which has just appeared, the results recorded in that year were less favourable than ordinarily. In 1894 the average mortality was 5·2 per 1000, the sickness was 723 per 1000, and the average number of patients in hospital was 30 per 1000; but for 1895 the corresponding numbers were respectively 7·0 per 1000, 743 per 1000, and 33 per 1000, the total on the sick-list being 157,890, of whom 1100 died. The least favourable returns came from the provincial corps and the most favourable from the carabineers. The unhealthiest months of the year, so far as the troops were concerned, were the first four, whereas September, October, and November showed the lightest sick-list. The highest death-rate occurred in the military division of Turin, and the lowest in those of Perugia, Salerno, Naples, Florence, Leghorn, and Rome. Measles and scarlet fever were most prevalent immediately after the arrival of the conscripts in quarters; typhoid fever predominated at the close of summer and the beginning of autumn; and malarial manifestations were most common in July, August, September, and October. The death-rate due to accidents, and also to suicide, reached its maximum in the carabineers, but there was no case under either heading among the bersaglieri, the Alpine regiments,

[1] THE LANCET, Dec. 5th, 1896, p. 1632.

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r the engineers. The mean force of the troops under arms n 1895 was 202,913. The manner in which the report is drawn up is highly creditable to its author, Surgeon-Major Goria; unfortunately it does not give any account of the health of the troops in Africa.

Latest Views on Malaria.

Italy has hitherto maintained a foremost place in the study of malaria, mainly on the etiological or pathogenic side, and a notable contribution to our knowledge of its prophylaxis has just appeared from the pen of the sanitary engineer, Signor Filadelfo Fichera, whose work, "Pel Risanamento delle Campagne Italiane rispetto alla Malaria," has been brought out by the well-known publishers, Hoepli of Milan. It consists of two large volumes, profusely illustrated, in the first of which, after a survey of the latest laboratory research, the author proceeds to discuss the means open to sanitary engineering for combating the fever, first in its diffusion and ultimately in its genesis. An exhaustive bibliography is appended.

Statistics of Sero-therapy in Diphtheria.

The "Società Piemontese d'Igiene," at a recent meeting under the presidency of Professor Bizzozero, discussed the mortality from diphtheria under the new as compared with the old treatment. From statistics carefully compiled by Dr. Abba it appears that 55 per cent. was the proportion of fatal cases up to 1894, whereas in 1895, when sero-therapy was practised for the first time, it fell to 34 per cent. and in 1896 to 31 per cent. Another point made clear by the discussion was the superior safety of rectal injections as contrasted with those practised hypodermically—the former, moreover, being quite as certain as the latter. To save time, always of primary importance, Dr. Abba would apply sero-therapy at once without waiting for bacteriological diagnosis, and longed for the day when families would allow the medical man far greater power of initiative than he now possesses. There was some objection to the postponement of bacteriological examination of pseudo-membrane, as recommended by Dr. Abba; but this was overruled by the President, who threw the weight of his authority on the side of immediate action.

The Health of the Pope.

It is nineteen years almost to a day since Leo XIII. ascended the pontifical throne, and on the 2nd prox. he will have completed his eighty-seventh year. In view of the celebrations prescribed by either anniversary Dr. Lapponi has been peculiarly vigilant in saving His Holiness all needless exertion. The fatiguing functions connected with the coming canonisations, moreover, are another "rock ahead," and Dr. Lapponi seeks to obviate their strain by reducing meanwhile the number of audiences and shortening their duration. His Holiness is at present in very good health; indeed, till the other day Dr. Lapponi's visits had been suspended for weeks at a time. The authors of recent announcements as to "fainting fits" and "intestinal catarrhs" are not well-inspired in the occasions they select for their "industry," as His Holiness invariably stands the winter well, and it is only when the great heat sets in that anything approaching the "deliquii" in question are to be dreaded.

Revision of the "Farmacopea."

The Italian Pharmacopœia is revised every five years, and another revision is imminent. The committee appointed for this work consists of Dr. Emanuele Paternò, Professor of Applied Chemistry in our University (who acts as president); Dr. Luigi Balbiano, lecturer on Pharmaceutical Chemistry and Toxicology in the "Scuola di Farmacia" and Dr. Vincenzo Cervello, Professor of Materia Medica in the University of Palermo. The committee has held its first sitting and important innovations in the text of the Pharmacopœia are expected.

Feb. 23rd.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Scarlet Fever in Budapest.

AN elaborate paper on Scarlet Fever in Budapest since 1882 has just been read before the Budapest Medical Association by Dr. E. Jurkiny. No data of any accuracy were available for the period before 1882 as notification of infectious diseases was not made obligatory until that year. From 1882 to 1896 no fewer than 19,952 persons suffered from scarlet fever in Budapest, the average death-rate being 13·5 per cent. The number of cases was generally lowest in winter and highest in autumn, the latter being the season in which the public schools are re-opened. Dr. Jurkiny found that there was not one single week during the last fifteen years without an occurrence of scarlet fever, and he was in consequence led to the conclusion that the disease must be considered to be endemic in Budapest. At intervals its prevalence assumes the proportion of an epidemic, and there have been three such epidemics since 1882. The first began in May 1886 and lasted eight months; the second began in August, 1890, and lasted till October, 1892, that is to say for a period of twenty-six months; the third lasted from October, 1895, till December of the same year, that is three months. A disinfecting institute opened in September, 1892, succeeded in quickly putting an end to the second prolonged epidemic and was no doubt the means of reducing the third epidemic to a duration of merely three months. Dr. Jurkiny pointed out several causes which combined to neutralise all efforts to stamp out the disease. I will quote only two. First, it happens often enough that poor persons do not call in a medical man, partly because they are unwilling to incur expense, but chiefly because they object to their children being compulsorily removed to a hospital and fear that their furniture will be damaged by disinfection. The present system under which even the poorer classes of the population are made to pay the heavy hospital expenses for their children does not appear to be a good one, especially in view of the fact that the patients are removed to hospital not so much for their own sake as for the benefit of the community at large. Another factor very influential in promoting the disease is the really miserable state of the dwellings of the poor. The town council may spend large sums in providing a better water-supply and better drainage, and in carrying out other sanitary reforms, but it will not put an end to the endemic of scarlet fever until it radically improves the housing of the poorer classes.

Intubation preceding Tracheotomy.

Professor J. Bókay recommends intubation as a preparatory operation in difficult cases of tracheotomy, having very often found that tracheotomy was exempt from accidents of any sort when free respiration was provided for by means of intubation. His first operation of this kind was performed quite independently of others as early as the year 1891, and he has since then repeated it some sixty times.

Feb. 19th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

Corporal Punishment.

RESORT to the rod, if one might believe some sensational writers, is as common in Russia as imprisonment in other countries. That it was so at one time—or rather, that resort to the rod used to be more frequent in Russia than elsewhere—may possibly be true. With the unlimited power formerly possessed by the landowner over the serf, it is not very surprising that this was so. But since the great Act of Emancipation in 1861 not only has corporal punishment come to be much more rarely inflicted than in the old days, but public opinion, or, more exactly, the opinion of the *intelligentzia* or educated classes, has undergone a considerable change in the way it regards this question. There has been a growing feeling that the use of the rod has a degrading and demoralising effect on the individual submitted to it, apart from the serious and unjustifiable physical injuries it sometimes produces. The power of inflicting corporal punishment is now no longer in the hands of the serf-owner, but in those of the *zemstvos*, and several *zemstvos* have in recent years decided to abolish entirely this mode of punishing crime in their district and have even approached the Government urging its universal abolition throughout the country. At the last conference of Russian practitioners in memory of Pirogof the question was the subject of brief discussion, though no formal conclusion was arrived at. It was, however, decided to form a committee to collect information bearing on the subject, and this committee has now

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addressed a circular to the profession asking for information on the following points:—1. What facts are there indicating that corporal punishment may lead to severe psychical, nervous, or other "somatic" derangements of the health of those submitted to it? 2. Are there instances of persons already in ill health—e.g., with phthisis, heart disease, &c.—having been subjected to corporal punishment? 3. Points bearing on the medico-legal aspect of the question. 4. The literature of the subject. It was requested that all information on these points should be sent to Dr. Jbanof, Smolensk, or to Dr. Yakovenko in the Government of Moscow.

The Jubilee of Anæsthesia.

The first operation under ether in St. Petersburg was performed just fifty years ago by the great surgeon Pirogof. It was a removal of the breast in a woman and the whole procedure was done most successfully and rapidly in no more than a minute and a half. The patient was quite unconscious and felt no pain. On the same day—Feb. 14th (26th), 1847—and in the same hospital—the large military hospital on the quays of the Neva—Pirogof operated with equal success on another patient, and two days later he performed two more operations under the newly-introduced anæsthetic in the Obukhovski Hospital. It is stated that a week before Pirogof's first operation ether had been employed in a similar case in one of the Moscow hospitals, but the patient is said to have felt pain, although she had inbaled ether for twenty minutes. On Feb. 23rd (March 7th) a woman underwent amputation of the thigh without feeling any pain whatever, but the administration of ether had lasted as long as forty-five minutes in her case. It seems probable that imperfections both in the purity of the ether and in the form of the inhaler contributed to the delay in producing complete anæsthesia.

Lectures on Plague.

In view of the outbreak of plague in India the Imperial Army Medical Academy in St. Petersburg has arranged for two extra courses of lectures—one on the History of Plague, by Dr. Skoritchenko, Professor of the History and Encyclopædia of Medicine; and a second on the Clinical Aspect and Bacteriology of the disease, by Dr. S. Botkin, Professor of Infectious Diseases and Bacteriology.

Anti-diphtheritic Serum as a Prophylactic.

A certain educational institution recently requested an opinion from the Academy on the desirability or otherwise of inoculating every pupil in the institution with anti-diphtheritic serum as a prophylactic measure, diphtheria having already made its appearance among the pupils. The matter was submitted to the *Conferentzia* of the Academy (or committee of professors), and their reply was recently published. It is to the effect that such prophylactic injections would, in their opinion, be useless. This *ex cathedrâ* statement seems worthy of record.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

The Syrian Protestant College.

THIS college was opened in 1866 at Beirut in Syria, and during the last quarter of a century the medical department has sent out many graduates who are employed in civil and military careers in Egypt. The college is under trustees in New York, and depends locally upon a committee of twenty-four American and British residents in Syria and Egypt, nearly all of whom are reverend missionaries. English is now the language of all three departments of the college, preparatory, collegiate, and medical, but all Arabic-speaking students are given, besides, a thorough course of instruction in their own language. Chemical, zoological, and bacteriological laboratories are now provided for the students, besides an astronomical observatory, museums of all sorts, and a library containing 8000 volumes, mostly English. The medical faculty consists of seven professors, who divide the professional subjects between them. Medical students are not admitted till the age of seventeen, and are then put through a course of four years. The following text-books among others are used:—Attfield's Chemistry, Gray's Anatomy, Bruce's Materia Medica, Parkes's Hygiene, Kirkes's Physiology, Roberts's Medicine, Druitt's Surgery, and Hart and Barbour's Gynæcology. The average number of medical students is between fifty and sixty, and there are in addition fifteen pharmaceutical students. When successful in their final examinations at the college they have to go to Constantinople to be examined for their degrees before the Imperial Medical School. Ward work is provided in the Johanniter Hospital near the college, where there are sixty-three beds and an out-patient department of 14,000 cases in the year.

Quarantine Board at Alexandria.

The presidency of this most important department has just become vacant owing to the ill-health of Mr. Miéville, who has held the post since 1884. Dr. Armand Ruffer, who had hardly settled into the chair of pathology at the Medical School in Cairo, has now been selected to preside over the international members of the Quarantine Board. This is a loss to the Medical School, but a great gain to Egypt. It is believed that the new president will be able to make authoritative statements about disease which it will be difficult for the most anti-English member to gainsay. Dr. Mackie, who has been for many years the English member of the board, is also obliged to resign by reason of ill-health and his place at Alexandria will be filled by Dr. D. H. Attfield, at present quarantine officer at Suez and director of the pilgrims' camps during the Haj.

Venice Congress.

The Government officials selected to represent Egypt at the Plague Congress at Venice are Muhammad Pasha Cherif, Under Secretary of Foreign Affairs, and Mr. Milton, Director of Kasr-el-Aini Hospital.

Cairo, Feb. 10th.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Members of the College, and are now entitled to practise medicine, surgery, and midwifery:—

Allen, Charles Percival, L.R.C.P. Lond., Middlesex Hospital.
Allen, James Lynn, L.R.C.P. Lond., Cambridge University and St. George's Hospital.
Ambrose, George Patrick, L.R.C.P. Lond., Westminster Hospital.
Arthur, Joseph Hugh, L.R.C.P. Lond., London Hospital.
Ashford, William, L.R.C.P. Lond., St. Thomas's Hospital.
Baird, Roy Fearon, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Barton, Charles Nathaniel, L.R.C.P. Lond., St. George's Hospital.
Beards, Ernest Jonathan, L.R.C.P. Lond., Mason College, Queen's, and General Hospitals, Birmingham.
Bebb, Richard, L.R.C.P. Lond., London Hospital.
Bennetts, Archibald James, L.R.C.P. Lond., St. Mary's Hospital.
Bernhardt, Dudley Richard, L.R.C.P. Lond., St. Mary's Hospital.
Berry, Herbert George, L.R.C.P. Lond., St. Bartholomew's Hospital.
Berry, Sidney Herbert, L.R.C.P. Lond., Charing-cross Hospital.
Binckes, Frederick William, L.R.C.P. Lond., St. Thomas's Hospital.
Blackwood, John, L.R.C.P. Lond., University College Hospital.
Bletchly, George Payne, L.R.C.P. Lond., Middlesex Hospital.
Booker, Charles William, L.R.C.P. Lond., Guy's Hospital.
Bottomley, Francis Carr, L.R.C.P. Lond., Cambridge University and St. George's Hospital.
Bremridge, Richard Harding, L.R.C.P. Lond., Oxford University and St. Bartholomew's Hospital.
Buendia, Nicolas, L.R.C.P. Lond., University of Columbia, Botago, and St. Bartholomew's Hospital.
Burney Charles Dudley Francis, L.R.C.P. Lond., Charing-cross Hospital.
Burt, Albert Hamilton, L.R.C.P. Lond., King's College Hospital.
Caley, Thomas Aloysius, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds, and Royal Infirmary, Edinburgh.
Carnes, William, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Chevallier, Claude Lionel, L.R.C.P. Lond., St. Thomas's Hospital.
Clarkson, Colin Campbell, L.R.C.P. Lond., University College Hospital.
Clough, William Henry, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Cobbledick, Arthur Stanbury, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Coutts, John Morton Sim, L.R.C.P. Lond., University College Hospital.
Dakin, Thomas Burns, L.R.C.P. Lond., London Hospital.
D'Amico, Carmelo De Piro, L.R.C.P. Lond., University of Malta.
Densham, Walter Arnold, L.R.C.P. Lond., Charing-cross Hospital.
Dobie, Robert Douglas, L.S.A. Lond., King's College Hospital.
Dodson, George Everard, L.R.C.P. Lond., St. Bartholomew's Hospital.
Dykes, Charles Reginald, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Eardley, William, L.R.C.P. Lond., Cambridge University and London Hospital.
Eddy, James, L.R.C.P. Lond., Middlesex Hospital.

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Edleston, Richard Shafta Chambers, L.R.C.P. Lond., St. Bartholomew's Hospital.
England, Humphrey, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital and Hants Royal County Hospital.
Evans, Wilfred Felix, L.R.C.P. Lond., St. Bartholomew's Hospital.
Farr, Arthur, L.R.C.P. Lond., Charing-cross Hospital.
Finch, William Stanley, L.R.C.P. Lond., University College, Liverpool, and University College, London.
Fogarty, Daniel, L.R.C.P. Lond., Ledwich School, Dublin, and St. Mary's Hospital.
Fordham, John William, L.R.C.P. Lond., London Hospital.
Fox, Edward Joseph, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Fulton, Henry, L.R.C.P. Lond., Guy's Hospital.
Gilbert, Leonard, L.R.C.P. Lond., St. Thomas's Hospital.
Godson, Francis Arthur, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Goffe, Ernest George Leopold, L.R.C.P. Lond., University College Hospital.
Goldie-Scott, Thomas, L.R.C.P. Lond., Edinburgh University.
Good, Hardman Allgood, L.R.C.P. Lond., King's College Hospital.
Grant, Alfred James, L.R.C.P. Lond., St. Thomas's Hospital.
Greenwood, Arthur Rowland, L.R.C.P. Lond., Middlesex Hospital.
Greenwood, Henry Harold, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Grummett, Charles Christopher, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Harding, William Joshua, L.R.C.P. Lond., St. Bartholomew's Hospital.
Harris, Noel Hugh, L.R.C.P. Lond., St. Bartholomew's Hospital.
Hartley, James Victor, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Hasslacher, Francis Joseph Maria, L.R.C.P. Lond., King's College Hospital.
Haynes, George Secretan, L.R.C.P. Lond., St. Bartholomew's Hospital.
Herrington, Edmund William, L.R.C.P. Lond., St. Mary's Hospital.
Howlett, George Dalziel, L.R.C.P. Lond., St. Mary's Hospital.
Hudson, Corrie, L.R.C.P. Lond., University College and Royal Infirmary, Bristol, and Charing-cross Hospital.
Hughes, John Brierley, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Hunt, Edward Lewis, L.R.C.P. Lond., St. George's Hospital.
Jennings, Richard Edward William, L.R.C.P. Lond., University College and Royal Infirmary, Bristol, and St. Bartholomew's Hospital.
Joynson, Alfred William, L.R.C.P. Lond., Royal College of Surgeons and Adelaide Hospital, Dublin, and Charing-cross Hospital.
Langdon, Henry Charles Theodore, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Langworthy, Edward Southwood, L.R.C.P. Lond., St. George's Hospital.
Lewis, Cecil Ernest Millington, L.R.C.P. Lond., Cambridge University and Middlesex Hospital.
Liversidge, William, L.R.C.P. Lond., University College Hospital.
Lynch, Stephen Frederick, L.R.C.P. Lond., King's College Hospital.
Marriage, Herbert James, L.R.C.P. Lond., St. Thomas's Hospital.
Marsh, Henry Rupert, L.R.C.P. Lond., Guy's Hospital.
Mayston, Robert William, L.R.C.P. Lond., Guy's Hospital.
Michôd, Frederick Archibald Hope, L.R.C.P. Lond., St. Mary's Hospital.
Millichamp, George Ernest, L.R.C.P. Lond., Toronto General Hospital and Toronto University, and London Hospital.
Moore, Julius, L.R.C.P. Lond., Guy's Hospital.
Mudd, Frank Burnand, L.R.C.P. Lond., Middlesex Hospital.
Neild, Newman, L.R.C.P. Lond., Owens College and General Infirmary, Manchester.
Norrington, Lawrence Weekes, L.R.C.P. Lond., University College and General Infirmary, Bristol.
Oxley, Alexander Wemyss, L.R.C.P. Lond., University College Hospital.
Oxley, William Henry Francis, L.R.C.P. Lond., Firth College, Sheffield, and St. Bartholomew's Hospital.
Parker, Lionel Edmund Longworth, L.R.C.P. Lond., St. George's Hospital.
Parsons, Harold Campbell, L.R.C.P. Lond., Toronto General Hospital and Toronto University.
Parsons, Henry Francis, L.R.C.P. Lond., University College and Royal Infirmary, Bristol.
Priestley, Thomas, L.R.C.P. Lond., Firth College, Sheffield, and University College Hospital.
Reynolds, Leonard Grugeon, L.R.C.P. Lond., Guy's Hospital.
Richards, William Jones, L.R.C.P. Lond., St. Bartholomew's Hospital.
Roach, Sidney, L.R.C.P. Lond., St. Bartholomew's Hospital.
Robinson, John Charles Reynolds, L.R.C.P. Lond., St. Thomas's Hospital.
Ross, Murdoch William, L.R.C.P. Lond., Otago University, New Zealand.
Scanlon, Leonard Edmund, L.R.C.P. Lond., Owen's College and Royal Infirmary, Manchester.
Scowby, Edward Thomas, L.R.C.P. Lond., Guy's Hospital.
Sessions, Frederick Leonard, L.R.C.P. Lond., Owen's College and Royal Infirmary, Manchester.
Somers, Charles Dudley, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Stansfeld, John Stedwell, L.R.C.P. Lond., Oxford University, Royal Infirmary, Glasgow, and Charing Cross Hospital.
Stevens, Herbert John, L.R.C P. Lond., Charing Cross Hospital.
Sutcliffe, William, L.R C.P. Lond., Mason's College, Queen's and General Hospitals, Birmingham.
Sworn, Arthur Benjamin Richman, L.R.C.P. Lond., University College Hospital.
Tarbet, William Edward, L.R.C.P. Lond., University College, Liverpool, and University College Hospital.
Taylor, Frank Edward, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Temple, Percy George, L.R.C.P. Lond., Guy's Hospital.
Thomas, Ellis Rae, L.R.C.P. Lond., Guy's Hospital
Thomas, Herbert John, L.S.A. Lond., University College and Royal Infirmary, Bristol, and Guy's Hospital.
Thomas, Robert Russell, L.R.C.P. Lond., St. Bartholomew's Hospital.
Torrance, James, L.R.C.P. Lond., Otago University, New Zealand, and St. Bartholomew's Hospital.
Townsend, Henry William Worth, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Tulk-Hart, Thomas John Augustus, L.R.C.P. Lond., Guy's Hospital.
Turnbull, Hugh Prideaux, L.R.C.P. Lond., St. Georges's Hospital.
Vulliamy, Justin Theodore, L.R.C.P. Lond., St. Thomas's Hospital.
Walker, William Percival, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Wall, James Bligh, L.R.C.P. Lond., St. Mary's Hospital.
Wallis, William, L.R.C.P. Lond., Anderson's College, Glasgow, Firth College, Sheffield, and Charing-cross Hospital.
Ward, Ellacott Leamon, L.R.C.P. Lond., Middlesex Hospital.
Waters, John Frank William, L.R.C.P. Lond., Middlesex Hospital.
Waters, William Arthur Pernow, L.R.C.P. Lond., Oxford University and Middlesex Hospital.
Watkins, John Prestwood, L.R.C.P. Lond., Guy's Hospital.
Watson, George Trustram, L.R.C.P. Lond., Cambridge University and St. George's Hospital.
Whicher, Stanley, L.R.C.P. Lond., Guy's Hospital.
White, Malcolm, L.R.C.P. Lond., St. Thomas's Hospital.
Wiggins, William Denison, L.R.C.P. Lond., St. Mary's Hospital.
Willis, Harry Alexander Legge, L.R.C.P. Lond., St. Mary's Hospital.
Wills, Bertram Shera, L.R.C.P. Lond., St. Thomas's Hospital.
Wood, John Hutchinson, L.R.C.P. Lond., Durham University and St. Bartholomew's Hospital.

CONJOINT BOARD OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations have been admitted Diplomates in Public Health—viz.:

Boulton, Arthur, M.R.C.S. Eng., L.R.C.P. Lond., Cambridge University and Charing-cross Hospital.
Erskine, Alexander McConnell, M.B., B.Ch., B.A.O. R.U.I., Queen's College, Belfast, and Royal University of Ireland, Dublin.
Evans, John Morton, L.R.C.P. Lond., M.R.C.S. Eng., Glasgow and London Hospital.
Gardiner, Peter, M.B., C.M. Glasg., Glasgow University, Edinburgh and St. Mary's Hospital.
Howse, Percy William McDowall, F.R.C.S. Eng., L.R.C.P. Lond., L.S.A., London Hospital.
Jones, William Black, M.D. Lond., L.R.C.P. Lond., M.R.C.S. Eng., St. Bartholomew's Hospital.
Mapleton, Henry Banbury, M.B., C.M. Edin., Edinburgh University and University College Hospital.
Maynard, Edwin, M.R.C.S. Eng., L.R.C.P. Lond., London Hospital.
Parker, Henry Thomas, M.D. Lond., M.R.C.S. Eng., L.R.C.P. Lond., St. Bartholomew's Hospital.
Richards, Joseph Stewart, M.D. Lond., L.R.C.P. Lond., M.R.C.S. Eng., St. Bartholomew's, University College, and Guy's Hospitals.
Roberts, George Augustus Edward, M.R.C.S. Eng., L.S.A., Middlesex Hospital.
Russell, Charles Henry, L.R.C.P. Lond., M.R.C.S. Eng., Charing-cross Hospital.
Smith, Sydney Calvin, L.R.C.P. Lond., M.R.C.S. Eng., Middlesex Hospital.
Steegman, Edward John, M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond., Durham University, St. Mary's and University College Hospitals.

Nine gentlemen were referred for six months.

UNIVERSITY OF LONDON.—At the Intermediate Examination in Medicine in January the following candidates were successful in the subjects indicated:—

ENTIRE EXAMINATION.

First Division.—Frederick Charles Borrow, St. Bartholomew's Hospital; and Percy Cooper Colls, King's College.
Second Division.—John White Alared, Owens College; Cornelia Bonté Sheldon Amos, London School of Medicine for Women; Hanway Richard Beale, St. Thomas's Hospital; Harold Selwyn Capper, University College; Clement Woodthorpe Chaplin, London Hospital; David Davies, University College; Henry George Drake-Brockman, St. George's Hospital: Annie Chapman Gowdey, London School of Medicine for Women; John Lupton Holt, Yorkshire College; William Sam Inman, Sheffield Medical School and Firth College; Kenneth Fraser Lund, University of Cambridge and University College, Liverpool; Louisa Martindale, London School of Medicine for Women; George Norman Meachen, Guy's Hospital; Bernard Elwell Potter, Charing-cross Hospital; Herbert Midgley Reeve, Guy's Hospital; William Hartley Tattersall, Owens College; Ethel Miller Vernon, London School of Medicine for Women; and William Bertram Watson, St. Mary's Hospital.

EXCLUDING PHYSIOLOGY.

First Division.—Frederick Fenn Elwes, Middlesex Hospital; and Erle Evans, London School of Medicine and Birkbeck Institute.
Second Division.—Ernest Clarkson Bourdas, St. Thomas's Hospital; Charles Richard Brown, Harold Burrows, William Henry Cazaly, B.A., and John Moore Collyns, St. Bartholomew's Hospital; Wilfrid Henry Coltart, Birmingham Medical School; Walter Seymour Danks, St. Bartholomew's Hospital; John Bernard Davey, Middlesex Hospital; Edward Percy Hughes Dudley, St. Bartholomew's Hospital; Susan Jane H. Eastwick-Field, London School of Medicine for Women and Royal Free Hospital; Alexander Fraser, Guy's Hospital; Cecil Scarlett Frost, Thomas Hall Gandy, and John Stansfield Gayner, St. Bartholomew's Hospital; Ernest Cutcliffe Hadley, Mason College; William Walter Harrison, Guy's Hospital; Philip Maynard Heath,

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University College; James Gerald Fayrer Hosken, and Seymour Alfred Millen, St. Bartholomew's Hospital; Arthur Moon, Guy's Hospital; James Robert Morton, London Hospital; Bertram Wilmore Moss, Guy's Hospital; David Thomas Price, Bristol Medical School; Charles Gabriel Seligmann, St. Thomas's Hospital; Walter Grahame Stewart, Guy's Hospital; Philip Graham Stock, University College, Bristol; Margaret Helen Style, London School of Medicine for Women; Alfred Bertram Vine, Middlesex Hospital; John Frederick Walker, London Hospital; Charlotte Louise Weetman, London School of Medicine for Women; Albert John Walton Wells, St. Bartholomew's Hospital; and Robert Bardley Byam Wilmot, St. Mary's Hospital.

PHYSIOLOGY ONLY.

First Division.—Thomas Aubrey, University College, Bristol; George Valentine Miller, University College; Walter Bernard Secretan, Guy's Hospital; and John Godfrey Cresswell Taunton, Mason College.

Second Division.—Frank Butterfield, Owens College and Manchester Royal Infirmary; Arthur Hunton Carter, Guy's Hospital; Charles Edwin Durrant, St Thomas's Hospital; Herbert Devas Everington, St. Bartholomew's Hospital; Herewald Evelyn Croker Fox, Guy's Hospital; Edward Alfred Gates and Francis Ley Augustus Greaves, St. Thomas's Hospital; Helen Beatrice Hanson, London School of Medicine for Women; Henry William Harding, St. Thomas's Hospital; Ronald Hatfield, St. Bartholomew's Hospital; Edgar Leach, Owens College; Theodore Marles Thomas, University College; Joseph Arthur Mawson, Yorkshire College; John Austin O'Dowd, Mason College; George Chetwode Owsley, Guy's Hospital; Arthur Ricketts, University College; Harold Alfred Schölberg and Sydney Richard Scott, St. Bartholomew's Hospital; Jeremiah Thornton, London Hospital; and Lewis Augustus Walker, St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND: Fellowship Examination.—Mr. Ernest George Fenton, L.R.C.S. Irel., &c., having passed the necessary examination, has been admitted a Fellow of the College.

The following gentlemen have passed the primary part of the Fellowship examination:—

F. Warren, J. M. M. Crawford, S. R. Godkin, and H. Pringle.

FOREIGN UNIVERSITY INTELLIGENCE.—*Tomsk:* Dr. Th. T. Romanoff has been appointed Extraordinary Professor of Pathological Anatomy.—*Breslau:* Dr. Heinrich Sachs has qualified as *privat-docent* of Internal Medicine.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—Dr. Max von Schleiss Löwenfeld, formerly Body Surgeon to King Maximilian II. of Bavaria, at the age of eighty-seven years. He published works on many subjects, especially dealing with language from a psychological point of view. His latest work was "Theses cosmologicæ septuaginta," which appeared in 1882. His father was an authority on medical jurisprudence and a great champion of vaccination in Bavaria.

SOUTHPORT CONVALESCENT HOSPITAL.—The annual meeting of the Southport Convalescent Hospital was held on Feb. 11th. Alderman J. Unwin presided, and remarked that the hope he expressed last year that the number of patients would exceed 5000 had been fulfilled, for there had been 5058. The governors of the Cotton Districts Convalescent Fund had sent 1767, as against 1636 in 1895. The committee had decided to make a grant of £500 from year to year to the governors of the Cotton Districts Convalescent Fund to assist them in an extension of the hospital, which would provide about fifty additional bedrooms and would increase the day-room accommodation.

THE SOCIETY OF MEDICAL OFFICERS OF HEALTH AND THE VACCINATION COMMISSION.—A meeting of the Society of Medical Officers of Health was held at the offices of the Board of Works for the St. Giles's District on Friday last, Dr. T. P. Bate, the president, being in the chair. Dr. R. Dudfield presented a draft report from the council upon a paper on the "Report of the Royal Commission on Vaccination," communicated by Dr. Bond. In the report the council endorsed all that the Commissioners said in favour of general re-vaccination and expressed regret that no suggestions had been made by which such general re-vaccination might be secured. They held that the State should not waive its right of compulsion in relation to vaccination by introducing a "conscience clause" in any future legislation, and recommended the society to oppose such alteration of the law, as being a dangerous innovation, both on social and hygienic grounds, as they considered the danger of vaccination to have been greatly exaggerated. The report concluded with a long list of recommendations of changes in the mode of enforcing vaccination in the event of a Bill being introduced to give effect to any, or all, of the recommendations of the Royal Commission.

DR. LAWRIE of Weymouth has promised a donation of £100 towards establishing a Children's Convalescent Hospital in the town in commemoration of the Queen's reign.

DR. FERRIER has been elected a member of the Athenæum Club under the complimentary provisions of Rule II., which empowers the annual election by the committee of nine persons of distinguished eminence in science, literature, the arts, or for public services.

UNIVERSITY OF CAMBRIDGE.—Dr. Donald MacAlister has been appointed an Elector to the Professorship of Pathology; Professor Clifford Allbutt an Elector to the Professorship of Surgery; Dr. S. Ringer an Elector to the Downing Professorship of Medicine; and Sir W. H. Flower an Elector to the Professorship of Anatomy.

A DEPUTATION from the Bradford and District Medico-Ethical Society has interviewed Mr. Wanklyn, Member of Parliament for the Central Division of Bradford, and explained to him the strong objections to the Midwives Registration Bill. Mr. Wanklyn promised to oppose the Bill. The society obtained a promise to the same effect from Captain Greville, the Member for the Eastern Division of Bradford, at the time of his election last year.

ON the 20th inst, at a meeting of the Crickhowell branch of the St. John Ambulance Association, Lady Bailey, the wife of the Lord Lieutenant of Brecknockshire, presented those members who had recently qualified in "first aid" with their certificates. Subsequently her ladyship, on behalf of the class, presented to the lecturer, Mr. P. E. Hill, M.R.C.S. Eng., a handsome silver-mounted malacca walking-stick, bearing a suitable inscription.

AT a recent meeting of the subscribers to the Sir Augustus Harris Memorial Fund it was decided that the memorial should take the form of a drinking-fountain, to be erected by the western wall of the Covent-garden Opera House and the provision of a bed at the Charing-cross Hospital, to be known as the Sir Augustus Harris Memorial Bed. An executive committee was appointed to carry out these objects, and it is understood that £2000 have been subscribed.

LIVERPOOL CANCER HOSPITAL.—The annual meeting of the Liverpool Cancer Hospital was held on Feb. 19th at the town hall, Alderman Radcliffe presiding. The report for 1896 showed that there were 232 in-patients during the year, being an increase of 52 over the number for 1895. The average daily number in the hospital was 25 and the whole of the beds were frequently in use at the same time. The attendances of out-patients were 30,561, or an average of over 100 per day, and it was now absolutely necessary to enlarge the out-patients' department. The accounts showed a considerable excess of expenditure over income.

MANCHESTER ROYAL LUNATIC HOSPITAL.—The report of the committee of the Manchester Royal Lunatic Hospital, better known perhaps as the Cheadle Asylum, states that during the whole of last year the accommodation for patients, both in the main building as well as in the neighbouring houses, has been taxed to the uttermost. Mr. Mould, the medical superintendent, in his report, says that the recoveries for the year were more than 50 per cent. on the total number of admissions. The deaths were somewhat in excess of the usual average, the greater number from general paralysis and hopelessly incurable brain diseases. The great age attained by many of the patients was remarkable, and the average age at death was sixty-five years.

PROPOSED INFECTIOUS DISEASES HOSPITAL IN CHESTER.—The Chester town council have applied for a loan of £20,000 for the erection of an infectious diseases hospital, the proposed site for which is part of an estate at Sealand belonging to the corporation. At an inquiry held at the Chester town hall by the inspectors of the Local Government Board the town clerk explained that the present arrangements for the treatment and isolation of fever cases were inadequate, and the infirmary board did not see their way to continue them. The hospital would provide accommodation for forty-six beds. The inspectors after examining the plans proceeded to visit the locality, and will report to the Local Government Board on the subject.

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UNIVERSITY OF BRUSSELS.—At the February examination for the M.D. degree Mr. J. R. Gaudoin, L.S.A., passed with honours. Mr. John O. Moore, L.R.C.P., F.R.C.S. Irel., and Mr. Charles Butler, L.R.C.P. Lond., M.R.C.S. Eng., also received the degree.

MEDICAL MAGISTRATE.—Mr. William Kickham Heffernan, medical officer of the Killenaule Dispensary, has been appointed to the commission of the peace by the Lord Chancellor on the recommendation of the Earl de Montalt, Lord-Lieutenant of the County Tipperary.

LEEDS GENERAL INFIRMARY.—Two new operating theatres, divided from one another by the instrument room, have just been provided at the Leeds General Infirmary. They have skylights in the roof and windows at the sides and are also lighted by electricity. A plot of land in Sunnybank-terrace, immediately behind the Infirmary, has been recently bought, and will be used as a site for a supplementary Home for the nurses.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL.—The extension of the Monkwearmouth and Southwick Hospital was formally opened on Feb. 16th by Lady Williamson, who unlocked the Williamson ward with a golden key presented to her on behalf of the executive committee. Sir Hedworth Williamson, the president of the hospital, made a speech congratulating the managers on the successful completion of the work. On the afternoon of the following day the general public were freely admitted to inspect the new wards.

FINSBURY DISPENSARY.—At the annual court of governors of the Finsbury Dispensary, Brewer-street, E.C., held on Feb. 18th, the committee announced that Mr. R. D. Dalál, M.R.C.S. Eng., L.R.C.P. Lond., had been appointed resident medical officer in succession to Mr. Alfred Philipps, M.R.C.S. Eng., L.S.A., who had resigned after twenty-six years' tenure of office, and had been made an honorary life governor. Mr. Dalál is a Parsee and a native of Bombay; he studied medicine at St. Bartholomew's Hospital and is supposed by some to be the first of the Queen's Indian subjects to receive a public medical appointment in England. At the same meeting Sir Dinshaw Petit, Bart., of Bombay, was elected a vice-president of the institution.

NOTTINGHAM HOSPITAL FOR WOMEN. — The annual meeting of the Castlegate Hospital for Women, Nottingham, was held on Feb. 17th at the Exchange, Mr. E. Bond presiding. The report of the medical staff stated that the work of the hospital during the past year had been highly successful. There had been 145 in-patients, on whom 111 operations had been performed, and there had been 7 deaths, including 2 cases which were admitted in a semi-moribund condition. In the out-patient department 843 new cases had presented themselves for treatment. Anæsthetics had been administered 111 times with no casualty and no case of septic disease had arisen in the hospital. The statement of accounts showed that the whole of the debt on the building fund had been paid off and that the balance due to the bank had been reduced to £608.

ABERDEEN ROYAL INFIRMARY.—The 157th annual report shows that 2124 cases were treated in the infirmary during 1896 at a total cost of £7903 14*s.* 10*d.*, or £49 17*s.* 4*d.* per bed. The ordinary income (£6769) was £1134 short of the ordinary expenditure, and £1458 was applied out of the extraordinary income (£3818) to meet the deficit. Lady students are now admitted to attend hospital practice. It is hoped the new medical block—the last part of the re-construction scheme—will be fit for occupation before Midsummer. The Hospital Saturday movement brought £550 to the infirmary and £50 to the convalescent hospital; 175 patients were admitted to the latter institution. Satisfactory progress is being made with the construction of the new convalescent hospital at Hillhead of Pitfodels. Of the 2124 infirmary patients, 776 were medical and 1348 were surgical cases. Deducting patients who died within forty-eight hours of admission the death ratio in medical cases was about 1 in 8·7 and in surgical cases 1 in about 29. Besides the above, there were 3249 out-patients—viz., 224 medical, 692 surgical, 1437 casualty, and 896 eye cases. The average number in hospital was 158·5 and the average number of days in hospital, 29·5.

CAMBRIDGE AND DISTRICT MEDICO-ETHICAL SOCIETY.—The following officers have been appointed:—President: Dr. Carver. Vice-President: Professor Allbutt. Treasurer: Mr. Deighton. Secretary: Mr. Penberthy. Committee: Professor Bradbury, Mr. Edwards, Mr. Cox, Mr. Fordyce, Mr. Hyde Hills, Dr. Roper, Dr. Ingle, and Mr. Syme.

GUY'S HOSPITAL INSTITUTION FOR TRAINED NURSES.—The twelfth annual report of the Guy's Hospital Institution for Trained Nurses shows that the work of the institution has been carried on during the past year with increasing activity and success. Applications for nurses have reached 1191, as compared with 1150 in the preceding year, and the applications have exceeded by 240 the actual number of cases for which nurses were supplied. The number of cases actually nursed was 951 and the fees received by nurses amounted to £6798. The nurses vary in number from 85 to 90. The institution is managed by a board consisting of four *ex-officio* members—the President, the treasurer, the superintendent, and the matron of the hospital, together with three representatives of the governors and two representatives of the medical and surgical staff elected annually.

HUNTERIAN SOCIETY.—The annual meeting was held at the London Institution on Wednesday, Feb. 10th, 1897, at 8 P.M., the President, Dr. G. E. Herman, in the chair. The following is a list of the officers who were elected for 1897-98:—President: Dr. G. E Herman. Vice-Presidents: T. H. Openshaw, M.S., Hingston Fox, M.D., S. H. Appleford, M.D., and F. J. Smith, M.D. Treasurer: F. Charlewood Turner, M.D. Trustees: H. I. Fotherby, M.D., and F. M. Corner, M.R.C.S. Librarian: T. H. Arnold Chaplin, M.D. Orator: Peter Horrocks, M.D. Secretaries: A. H. Tubby, M.S., and Arthur T. Davies, M.D. Council: Sir Hugh Beevor, M.D., J. S. E. Cotman, M.R.C.P. Edin., L. A. Dunn, M.S., Fortescue Fox, M.D., Hope Grant, F.R.C.S. Edin., J. W. Oliver, M.D., W. Rawes, M.D., H. J. Sequeira, M.R.C.S., St. Clair B. Shadwell, M.D., L. E. Shaw, M.D., G. J. B. Stevens, M.R.C.S., and J. F. Woods, M.D. After the annual meeting the society adjourned to the Theatre of the London Institution to hear the Hunterian Oration by Dr. Hingston Fox on the "Life and Times of Dr. William Hunter," an abstract of which was published in our columns last week.

DIPHTHERIA IN LONDON.—There was noticeable diminution in the amount of diphtheria in London during the first four registration weeks of the current year, as compared with the preceding like periods. In the last five weeks of 1896, which year had fifty-three weeks for registration purposes, there were no less than 1442 notified cases of diphtheria in the county, and these yielded a weekly average of 288, four districts of the metropolis having as many as 432 cases notified in them in the period and all the sanitary areas suffering invasion. In the succeeding four weeks ended with Jan. 30th there were only 915 notified cases, and one district recorded no notification of the disease, the weekly average for the county being 229, and only three districts having upwards of 50 notified cases, with 246 in the aggregate. Other three districts had only 4 notifications between them. Thus, in so far as amount of disease is concerned, the period was of a distinctly more hopeful character than many of its predecessors. In the last period of 1896 the deaths registered yielded a weekly average of 51, and presented a per case mortality of 17 8 per cent. of the notifications. In the four weeks of the present year the registered deaths were 239 in number, and the per case mortality as high as 26·1 per cent. Of course we have here to contend with deaths in many instances resulting from cases notified in the preceding period, but even so the mortality rate is very high. Coming to the three completed weeks of February we find that matters so far as fatal diphtheria is concerned are still favourable. Thus in the week ended Feb. 6th the deaths, which in the three preceding weeks had numbered 52, 63, and 53 respectively, fell to 46, although still 5 in excess of the corrected decennial average for the fifth week of the period 1887-96. Camberwell was credited with 7 deaths and Hackney with 5 deaths. The whole of the 46 deaths were of young persons aged under twenty years, and 883 patients suffering from the disease were left in hospital at the close of the week. There were as many as 14 deaths registered from diphtheria in the week in the outer ring, of which 8 occurred

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in persons residing in the West Ham district. In the week ending Feb. 13th there was a further satisfactory fall in the number of registered deaths to 37—a number actually 2 below the corrected decennial average for the particular week. Only one of these was in the person of an adult over twenty years of age. Mile-end Old Town and Camberwell had each four deaths credited to them, and the hospitals at the close of the week contained 877 diphtheria patients, the admissions in the week having been 104, as compared with 93, 116, and 95 in the three preceding weeks. In the outer ring there were 11 deaths registered, 3 being in West Ham district. In other words, there were 25 deaths in the suburbs of London in the fortnight, as compared with 49 in the thirty-two great towns of the Registrar-General outside London in the same period. Last week the deaths registered from diphtheria in London numbered 40—a number 5 in excess of the corrected decennial average for the seventh week. Camberwell area had 6 deaths credited to it, Lambeth and Greenwich each 4, and Wandsworth 3 deaths. Only one of the 40 deaths was of a person aged over twenty years, and 5 were of infants under one year of age. The admissions to hospital in the week were 104 in number and the cases remaining in hospital on Saturday last 853, against 881 at the same period of January. The deaths registered from diphtheria in the outer ring last week fell to 8, half of which were in the West Ham registration district.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Petroleum Lamp Accidents.

THE House of Commons has re-appointed the Select Committee on the keeping, selling, using and conveying of petroleum and other inflammable liquids, and the precautions to be adopted for the prevention of accidents with petroleum lamps. The committee consists of Sir Thomas Carmichael, Mr. Jesse Collings, Mr. Alexander Cross, Mr. Fortescue Flannery, Sir Edward Hill, Mr. Wootton Isaacson, Mr. Lyon, Mr. McKillop, Mr. Mundella, Mr. Pollock, Mr. Harold Reckitt, Mr. Compton Rickett, Sir Benjamin Stone, Mr. Tully, and Mr. Ure. The Committee will meet at once, and it is hoped will very shortly complete its inquiry, which has already extended over two sessions.

Medical Officers to Volunteer Corps.

During the debate in Committee of Supply on the vote for the Volunteers Colonel Sir H. Howard Vincent called attention to the work of medical officers in volunteer corps, and represented to the War Office that these officers should receive the equipment allowance of £20 recently given to combatant officers in the same service.—Mr. Brodrick, Under-Secretary of State for War, undertook to consider the matter.

Introduction of Lord Lister.

Lord Lister took his seat in the House of Lords for the first time on Tuesday, Feb. 23rd. His lordship was introduced by Lord Watson and Lord Playfair.

HOUSE OF COMMONS.

THURSDAY, FEB. 18TH.

Pauper Children in London.

Mr. Hazell asked the President of the Local Government Board whether the remanded children, who were one of the classes for whom it was proposed to establish the new Metropolitan Children's Asylums' Board, under the Local Government Board, were already under the Home Office and the London School Board; and whether, seeing that it was through the action of the School Board that many of them were first apprehended, and that they were subsequently placed under the Home Office, he would consider the advisability of leaving the temporary provision for them in the hands of one or other of the authorities which already had to deal with them.—Mr. Chaplin replied that under the existing law the guardians, and the guardians alone, were responsible for the care and maintenance of children who, prior to the question of an order being made for removal to an industrial school being determined, were remanded to the workhouse. In many workhouses there was no suitable accommodation for these children, or only accommodation which did not properly provide for their being kept separate from other inmates. The provision of such accommodation for children of either sex in each of the thirty unions in the metropolis, with the necessary staff for supervision, would entail a very considerable expenditure—an expenditure greatly in excess of what would be entailed by separate provision for children of the class referred to. The total number of such children for which provision would be required would probably be not more than 100 or 120.

Disease in the Army in India.

Lord George Hamilton, replying to a question on this subject, informed the House that the Departmental Committee consists of Lord Onslow, President, Sir James Peile, member of the Council of India, Surgeon-Major-General W. Taylor, Army Medical Department, and Surgeon-Colonel J. Richardson, Indian Medical Service (retired).

FRIDAY, FEB. 19TH.

The Payment of Medical Officers.

Sir Walter Foster asked the President of the Local Government Board whether his attention had been called to the action of the West Bromwich Guardians in appointing a district medical officer at a fixed salary, which was to include payment for all those cases which the Consolidated Order of July 24th, 1847, expressly provided should be paid for as extras, and whether Articles 177 to 183 of this Order had been suspended as regards the West Bromwich Union; if so, whether he would inquire if the reasons which justified the suspension still held good, seeing that the Local Government Board last year called special attention to the articles of the order which required that district medical officers should have extra remuneration for operations and certain other cases.—Mr. T. W. Russell, on behalf of Mr. Chaplin, replied: The operation of the articles in the regulations relating to the payment of extra fees to medical officers in the West Bromwich Union was suspended in 1862 on the application of the guardians. The guardians stated that they proposed this arrangement in consequence of continual disputes in connexion with claims by the medical officers to fees. All the medical officers of the Union who have been appointed since that time have been appointed at salaries inclusive of the extra fees. The Local Government Board have not received any suggestions from the guardians or the officers that the arrangement is not working satisfactorily.

Death-bed Evidence.

Sir Matthew White Ridley, replying to a question put to him by Mr. Pickersgill, said he had seen the newspaper reports of the trial of the case Regina *v.* Greatorex Smith, an indictment for performing an illegal operation. It appeared from those that the learned judge decided that, under the circumstances, the statement made by a young woman when in a dying condition was inadmissible in evidence. That being so, it became, of course, a matter of regret that she should have been troubled upon her death-bed. He was satisfied, after careful inquiry, that the police inspector in reading over to the prisoner on his arrest a portion of the statement which the young woman had made, and, secondly, in taking the prisoner to the bedside of the dying woman and putting questions to her in his presence, did no more, under painful and difficult circumstances, than his duty in endeavouring to obtain the evidence of the young woman—the sole witness—by the only means in his power. He could not admit that his conduct deserved censure. If he thought that it was a growing practice on the part of detective officers of the Metropolitan Police to attempt to get in as evidence statements which would otherwise be inadmissible by arranging that they should be made in the prisoner's presence or read over to him, he would certainly take action in the matter.

MONDAY, FEB. 22ND.

Vaccination in the Post Office Service.

Mr. Channing asked the secretary to the treasury, as representing the Postmaster-General, whether the attention of the Post Office authorities had been called to the case of Miss Annie Jane Maxted, appointed six months ago as an assistant or clerk to the department, then pronounced healthy and strong, compelled as a condition to appointment to be re-vaccinated, suffered in consequence it is stated for six months, terminating in death on the 2nd instant; whether there was any authority by statute to enforce the above condition; whether it was ordered by the department assuming the power; and whether, while the recommendations of the Royal Commission were unconsidered by Parliament, the order would be continued.—Mr. Hanbury: The attention of the Postmaster-General has been called to the case of Miss Maxted, but the facts are not as represented to the hon. Member. Miss Maxted was not pronounced healthy and strong six months ago; on the contrary, the medical officer who examined her reported that she was not strong and was suffering from an enlargement of the superficial cervical glands of the neck. The cause of her death is certified to have been lymphadenoma (Hodgkin's disease), and as a secondary cause dermato-melasma suprarenale (Addison's disease), and neither of these resulted from the re-vaccination. Re-vaccination as a condition of appointment in the Post Office is enforced, not by Statute, but by Post Office regulations. The regulation has been in force since 1863, and in view of the remarkable immunity from small-pox enjoyed by Post Office servants under this regulation it is not proposed to alter it.

Metropolitan Pauper Children.

Mr. Chaplin, replying to a question put by Dr. Farquharson, said he was informed by the managers of the Metropolitan Asylum District that during the year 1896 275 children suffering from scarlet fever and 15 from diphtheria were removed from Poor-law schools in the metropolis (including two certified schools) to asylums of the managers. There were no cases of small-pox. The schools from which children were removed were the separate schools of Islington, Hackney, Strand, Holborn, Shoreditch, Bethnal Green, St. George-in-the-East, Lambeth, and Westminster, and the schools of the Kensington and Chelsea, Central London, Forest Gate, and North Surrey school districts. Children were also removed from the *Exmouth* training ship and from the North Hyde and St. Agnes Orphanage certified schools. The managers further informed him that it was not possible to state with precision what had been the cost of each patient per week, but that the average cost might be put at about 21*s.* per week per patient, this sum including maintenance and common charges.

TUESDAY, FEB. 23RD.

Mortality in India.

Lord George Hamilton said, in reply to a question, that he had received the following information regarding mortality in the Central Provinces. The total number of deaths for the year 1895 was 349,137 and for 1896 it was 468,469. The latter year was exceptionally unhealthy, and it appeared that cholera deaths were 37,479 in excess of those in 1895; fever, 69,342; diarrhœa and dysentery, 9566; small-pox, 1103; other causes, 11,842. This mortality gave for the whole year a death-rate of 36·03 per 1000 in 1895 and of 49·03 per 1000 in 1896 on the present population.

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BELL, F. O., M.B., C.M. Edin., has been appointed Medical Officer for the Workhouse and the Second Sanitary Wareham District of the Wareham and Purbeck Union.

COPEMAN, A. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the South Welvey Sanitary District of the Downham Union.

COWIE, GEO., M.B., C.M. Aberd., has been appointed an Assistant Medical Officer of the Infirmary, City of London Union.

DYSON, WILLIAM, M.B., Ch.B. Vict., has been appointed a House Surgeon to the Manchester Royal Infirmary.

FAGGE, *d.* W., M.R.C.S., has been appointed a House Surgeon to the Leicester Infirmary.

FLETCHER, D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for Applecross, Ross.

FOULERTON, A. G. R., F.R.C.S., has been appointed Pathologist to the Chelsea Hospital for Women, Fulham-road.

FOX, E. J., M.B, C.M. Edin., has been appointed a House Surgeon to the Manchester Royal Infirmary.

FOX, G. M., L.R.C.P. Lold., M.R.C.S., has been appointed Medical Officer for the Walsall Workhouse, vice J. Wood, retired.

HAMPER, C. N., M.B., C.M. Edin., has been appointed *pro tem.* Medical Officer to the Chislehurst, Sidcup, and Cray Cottage Hospital.

HARDING, ANNIE, L.S.A. Lond., has been appointed on the Medical Staff of St. Stephen's Hospital, Delhi, in connexion with the Cambridge Mission.

HAWLEY, ARTHUR, L.R.C.P. Lond., M.R.C.S., has been appointed an Honorary Medical Officer to the Coventry and Warwickshire Hospital.

HERBERT, W., M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Royal Hants County Hospital, Winchester.

HIGGINSON, C. G., L.R.C.P. Lond., M.R.C.S., has been appointed a House Physician to the Manchester Royal Infirmary.

HOWLETT, EDMUND H., F.R.C.S., has been appointed Surgeon to the Hull Royal Infirmary, vice J. Sherburne, resigned.

MCARTHUR, D. C., L.R.C.P. Lond., M.R.C.S., has been appointed *pro tem.* Medical Officer for the Fifth Sanitary District of the Hertford Union.

MONTGOMERY, R. J., M.A., M.B. T.C.D., F.R.C.S. Irel., has been appointed Assistant Surgeon to the St. Mark's Ophthalmic Hospital, Dublin.

PARK, J. W., M.D., C.M. Edin., L.D.S. Eng., has been appointed Dental Surgeon to the North-Eastern Hospital for Sick Children, Hackney-road, Shoreditch.

PAYNE, G. S., M.R.C.S., has been re-appointed Medical Officer of Health by the Thorney Rural District Council.

POMFRET, H. W., M.D. Vict., Ch.B., L.R.C.P. Lond., F.R.C.S., has been re-appointed Surgical Registrar to the Manchester Royal Infirmary.

RODGER, JAS., M.D., C.M. Aberd., has been appointed a Consulting Physician to the Aberdeen Royal Infirmary Incorporation.

ROXBURGH, WM., M.B., C.M. Glasg., has been appointed a Certifying Factory Surgeon for the district of Troon, Ayrshire.

STORRS, C. S., M.B., B.C. Camb., has been appointed Clinical Assistant to Out-patients at the Chelsea Hospital for Women, Fulham-road.

WALKER, F. J., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Spilsby Union.

WHITWELL, JAMES R., M.B, C.M. Edin., has been appointed Medical Superintendent to the Suffolk County Asylum, Melton.

WILKINSON, A. T., M.D., M.R.C.P. Lond., M.R.C.S., has been appointed Medical Registrar to the Manchester Royal Infirmary.

YARROW, G. E., M.D. Heidelb., L.R.C.P. Lond., M.R.C.S., D.P.H., has been re-appointed a Medical Officer for the City of London Lying-in Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester-street, S.W.—Resident House Surgeon, for six months. Board, lodging, and washing provided.

BRENTFORD UNION.—Medical Officer and Public Vaccinator for the parish of Chiswick. Salary as Medical Officer £150 per annum, with certain stipulations as to medicines, midwifery, and vaccination fees. Applications to the Clerk, Union Offices, Isleworth.

BRISTOL GENERAL HOSPITAL.—Physician-Accoucheur and an Assistant Physician-Accoucheur.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—House Surgeon and Secretary. Salary £95 per annum, with furnished rooms in the Dispensary House, an allowance of £20 for coals and candles, and a further allowance for a housekeeper.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant for three months.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician, for six months. Salary at the rate of £30 per annum, and board and residence provided.

EAST LONDON HOSPITAL FOR CHILDREN, Glamis-road, Shadwell, E.—House Surgeon. Board, lodging, &c., provided. No salary.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Junior Resident Medical Officer. Salary £50.

GENERAL INFIRMARY, Northampton.—Assistant House Surgeon, unmarried. Salary £100 per annum, with furnished apartments, board, attendance, and washing.

HULL ROYAL INFIRMARY.—Honorary Assistant Surgeon for the out-patient department, for five years.

LIVERPOOL ROYAL INFIRMARY.—Honorary Physician.

LONDON HOSPITAL MEDICAL COLLEGE, Mile-end, E.—Demonstrator of Physiology. Salary £100 a year. Also Assistant Demonstrator of Anatomy. Salary £90 a year.

PARISH OF WESTRAY, Orkney.—Medical Officer and Public Vaccinator. Salary as Medical Officer £90 sterling per annum. Applications to Mr. Jas. Sinclair, Clerk, Parish Council, Westray.

ROYAL SURREY COUNTY HOSPITAL, Guildford. — Resident House Surgeon. Salary £80, with board, lodging, and laundry.

SHEFFIELD PUBLIC HOSPITAL FOR DISEASES OF THE EAR, THROAT, AND SKIN.—Honorary Physician for the out-patients. Also Honorary Physician for the out-patient department for Diseases of the Throat.

STAMFORD HILL AND STOKE NEWINGTON DISPENSARY, 189, High-street, Stoke Newington, N.—Junior Resident Medical Officer. Salary for the first three months at the rate of £50 per annum, and afterwards at the rate of £75 per annum, with board and residence in each case.

ST. LUKE'S HOSPITAL, LONDON, S.E.—Clinical Assistant for six months. Board and residence provided.

ST. THOMAS'S HOSPITAL, Westminster-bridge. — Resident Assistant Physician.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Professor of Anatomy. Applications to the Secretary and Registrar, University College, Cardiff.

WARWICK COUNTY LUNATIC ASYLUM, Hatton.—Second Assistant Medical Officer. Salary £130, rising to £150, with full board.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon, for six months. Board and lodging provided.

WHITECHAPEL UNION INFIRMARY, Vallance-road, E.—Resident Assistant Medical Officer. Salary £120 per annum, in addition to rations, furnished apartments, coal, gas, and washing. Applications to the Clerk to the Guardians, Union Offices, Vallance-road, Whitechapel, E.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for twelve months. Salary £60 per annum, with rooms, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ALEXANDER.—On Feb. 17th, at Mayhurst, Paignton, the wife of James Alexander, M.D., of a son.

MORRIS.—On Feb. 16th, at *Gordon Lodge*, Charlton-road, Blackheath, the wife of Clarke K. Morris, M.R.C.S.E., of a daughter.

SHERRINGTON.—On Feb. 21st, at Grove-park, Liverpool, the wife of C. S. Sherrington, M.D., F.R.S., of a son.

SOULBY.—At Grimsby, on Feb. 17th, 1897, the wife of C. Ernest Soulby, M.D. Brux., M.R.C.S. Eng., of a daughter.

TRACEY.—On Feb. 19th, at The Gables, Willand, Cullompton, Devon, the wife of H. Eugene Tracey, M.B., of a son.

WARDE.—On Feb. 18th, at Knowsley, Prescot, the wife of Wilfrid B. Warde, M.B., of a daughter.

MARRIAGES.

BOTT—RICHARDSON.—On Feb. 23rd, at the Chapel Royal, Savoy, by the Rev. Paul Wyatt, M.A., Chaplain, Dr. William Gibson Bott, of Newington, to Janet Campbell Richardson, of Glenholm, Whitehaven, second daughter of the late Robert Richardson, Esq.

FRY—PRINCE.—On Feb. 24th, at Marylebone Parish Church, Walter Ernest Fry, M.R.C.S., L.R.C.P. Lond., of Wateringbury, to Frances Mary (Cissie), eldest daughter of Julius Charles Prince, Esq., of Wimpole-street W.

HENSLEY—LOW.—On Feb. 24th, at the Priory Church, St. Bartholomew the Great, Philip John Hensley, M.D., F.R.C.P., of Henrietta-street, Cavendish-square, to Marie, eldest daughter of Maximilian Low, Esq., late of Park-road, Haverstock-hill.

JOSCELYNE—BEASLEY.—On Feb. 18th, at St. Augustine's, Penarth, Glamorganshire, Edward Walter Joscelyne, M.B., of Southwick, Sussex, to Constance Emily Warren, daughter of Ammon Beasley, of Northcliff, Penarth.

TIDCOMBE—BULL.—On Feb. 23rd, at St. Peter's, Hammersmith, Francis Sitwell Tidcombe, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., of Bognor, Sussex, to Alice Jane Frances, second daughter of the late Henry Bull, solicitor.

DEATHS.

CRAIGIE.—On or about Feb. 3rd, at Pietermaritzburg, Natal, John Craigie, M.D., aged 54 years.

CRAWFORD.—On Feb. 14th, suddenly, William Smyth Crawford, B.A., F.R.C.S. Edin., of Mount Pleasant, Liverpool, in his 38th year.

GOSSE.—On Dec. 29th, at Wallaroo, South Australia, John Gosse, M.R.C.S. Eng., in his 51st year.

HUTCHINGS.—On Feb. 12th, at Young, New South Wales, Arthur Carey Hutchings, M.D., in his 46th year.

MOORE.—On Feb. 15th, at Chardwar, Bourton-on-the-Water, John Moore, M.R.C.S., aged 76 years.

POWER.—On Feb. 17th, at Hoe-park-terrace, Plymouth, Surgeon-Major Edward Richard Power, late Army Medical Staff, aged 42 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (3rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (4th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (6th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (1st).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. F. de Havilland Hall: Diseases of the Nose and Throat in Relation to General Medicine. (Lettsomian Lecture.)

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Paper:—Mr. J. H. Badcock: Copper Amalgam, its Merits and Demerits; and also an affiliated paper on the same subject by Mr. A. Goadby.

TUESDAY (2nd).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Papers: Mr. J. Hutchinson, jun., and Mr. E. Frazer: (1) Series of Specimens of Epithelioma of the Penis; Specimens illustrating the Changes in the Submaxillary Gland secondary to Cancer of the Mouth.—Dr. F. J. Smith: Aneurysm of the Aorta in a Boy.—Dr. C. Ogle: Dermoid Growth involving the Lung.

THURSDAY (4th).—NEUROLOGICAL SOCIETY OF LONDON.—8.30 P.M. Communications on Muscle Spindles by Dr. F. E. Batten, Prof. Victor Horsley, and Prof. Sherrington.

HARVEIAN SOCIETY.—Clinical Evening.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.15 P.M. Discussion on Anæmia.

FRIDAY (5th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8 P.M. Clinical Evening. The following cases will be shown:—Mr. Keetley: (1) Congenital Dislocation of Hip after Operation; (2) Sarcoma of Male Breast.—Mr. Bidwell: (1) Operation for Extensive Epithelioma; (2) Gastro-jejunostomy.—Dr. S. Taylor: (1) Congenital Spastic Paraplegia; (2) Bell's Palsy in a Child; (3) Hydrocephalus surviving to Puberty.—Dr. Clippingdale: Congenital Ichthyosis.—Dr. Chapman: Thoracic Aneurysm.—Dr. Potter: Tumour of the Upper Jaw.—Mr. McA. Eccles: Patient after Removal of Tumour of Upper Jaw.

SATURDAY (6th).—MEDICAL SOCIETY OF LONDON.—7 P.M. Anniversary Dinner at the Whitehall Rooms, Hôtel Métropole.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (1st).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Mr. W. G. Spencer: The Pathology of Lymphadenoid Structures (Spleen, Lymphatic Glands, Bone Marrow). (Erasmus Wilson Lecture.)

LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. C. Wilkin: Nasal Polypi.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.)—5 P.M. Dr. Ball: Throat Cases.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Dr. A. Newsholme: Nature of Nuisances, including Nuisances the abatement of which is difficult.

SOCIETY OF ARTS.—8 P.M. Mr. C. F. Cross: The Industrial Uses of Cellulose. (Cantor Lecture.)

TUESDAY (2nd).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Stupor, Katatonia, Dementia and Senile Insanity.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Eczema, its Treatment.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Diagnosis and Treatment of the forms of Tinnitus Aurium.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ormerod: Clinical Lecture on Tabes and Allied Cases.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4 P.M. Dr. H. Campbell: On Cases of Peripheral Neuritis.

ROYAL INSTITUTION.—3 P.M. Prof. A. D. Waller: Animal Electricity.

SOCIETY OF ARTS.—8 P.M. Mr. M. Webb: Gesso.

WEDNESDAY (3rd).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Mr. W. G. Spencer: The Pathology of Lymphadenoid Structures (Spleen, Lymphatic Glands, Bone Marrow). (Erasmus Wilson Lecture.)

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: House Drainage.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. H. Mackenzie: Bronchiectasis.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Mr. F. Ruddle (conducted by): Inspection and Demonstration at L.C.C. Common Lodging House, Parker-street, Drury-lane (number limited).

SOCIETY OF ARTS.—8 P.M. Mr. G. Gordon: English Orchards.

THURSDAY (4th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Separation of Proteid Substances occurring in Urine.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. C. T. Williams: Clinical Lecture.

SOCIETY OF ARTS.—8 P.M. Prof. J. A. Ewing: The Mechanical Production of Cold. (Howard Lecture)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Dr. J. F. J. Sykes: Objects and Methods of Inspection.

ROYAL INSTITUTION.—3 P.M. Prof. P. Gardner: Greek History and Extant Monuments.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Cheatle: Organisms which Infect Wounds.

FRIDAY (5th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Mr. W. G. Spencer: The Pathology of Lymphadenoid Structures (Spleen, Lymphatic Glands, Bone Marrow). (Erasmus Wilson Lecture.)

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Anthrax and Malignant Œdema.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Gunn: Lecture.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. F. Bowreman Jessett: On Hysterectomy.

ROYAL INSTITUTION.—9 P.M. Mr. S. Bidwell: Some Curiosities of Vision.

SATURDAY (6th).—ROYAL INSTITUTION.—3 P.M. Right Hon. Lord Rayleigh: Electricity and Electrical Vibrations.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Mr. C. J. Kilgallin (conducted by): Inspection and Demonstration at the Marylebone Stoneyard, Richmond-street, Edgware-road, W.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 25th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 19	30·27	S.W.	49	48	54	51	41	0·16	Raining
,, 20	30·16	S.W.	48	48	65	56	48	0·08	Raining
,, 21	30·29	N.W.	48	43	83	64	47	...	Fine
,, 22	30·55	W.	51	49	85	58	47	...	Cloudy
,, 23	30·60	S.W.	48	47	79	55	47	...	Cloudy
,, 24	30·57	S.W.	48	45	58	51	47	...	Overcast
,, 25	30·23	S.W.	49	47	58	52	48	...	Cloudy

During the week marked copies of the following newspapers have been received:—*Bury Guardian, Oban Times, St. Andrews Citizen, Scotsman, Bath Journal, East Anglian Daily Times, Sheffield Telegraph, Eastern Morning News, South Wales Daily News, Halifax Guardian, Darlington Times, Blackburn Standard, Bournemouth Directory, Times of India, Cambs. Times, Pioneer Mail, Lowestoft Standard, Dereham Standard, Cromer Post, Birmingham Post, Leeds Mercury, Luton Reporter, Sussex Daily News, Rugby Advertiser, Hampshire Post, Worcestershire Chronicle, Leicester Post, Bristol Mercury, Architect, Craven Herald, Exeter Flying Post, Builder, Liverpool Daily Post, Maryport News, Warwick Times, Leigh Chronicle, Barnsley Independent, Grimsby News, Manchester Courier, Wiltshire Mirror, Loughborough Monitor, Devon Weekly Times, Warwick Advertiser, Yorkshire Post, Worcester Journal, Western Morning News, Leamington Advertiser, Reading Mercury, Stockkeeper and Fanciers' Chronicle, City Press, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Hertfordshire Mercury, Glasgow Magazine, Surrey Advertiser, Hong-Kong Weekly Press, Le Courrier de la Presse, Midland Free Press, Mining Journal, Liverpool Courier, Sunderland Daily Echo, Sanitary Record, Evening Express, Liverpool, Stalybridge Reporter, West Middlesex Herald, Tenby and County News, Isle of Wight Herald, Great Harwood Post, Local Government Journal, &c.*

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

A ROD FOR QUACKERY.

ALL sensible people will sympathise with the sentiments of an admirable letter which appeared recently in the *Belfast News* from the pen of Mr. John Jellie of Carrickfergus. His contention that nowadays "men and women of ordinary intelligence have less excuse for swallowing quack prescriptions in the indiscriminate way of their ancestors of fifty years ago" is excellently written and supported.

Puzzled.—There is nothing whatever to be said against the institution. The members are allowed to employ any medical man they choose at terms which seem to us quite reasonable, having regard to the class of people who would join as *beneficiares*. The medical man is thus neither sweated nor pitted in unfair competition against his professional brethren.

THE RESURRECTION OF A NEEDLE.

To the Editors of THE LANCET.

SIRS,—On the 18th inst. a very stout man, aged thirty-five years, complained of a pricking sensation in the lower part of the abdomen. On examination a long, thin substance was felt under the skin lying transversely three inches above the pubes and one inch to the left of the middle line. Under chloroform this was easily removed, and proved to be an entire needle, moderately thick, and one and a half inch long. It was quite black and rusty in patches. The only history available was that when the patient was twelve years old he was said to have swallowed either a needle or a pin. Is it possible that such a foreign substance could have remained in the soft parts of the body for twenty-three years without causing any inconvenience?

I am, Sirs, yours faithfully,

EDGAR ELLIOTT, M.R.C.S. Eng., L.R.C.P. Edin.

Wolverhampton, Feb. 21st, 1897.

Inquirens.—A retired medical man is not generally charged by his medical attendant, and the same courtesy is usually extended to his family residing with him. But a point of etiquette may be too much insisted upon, and where the attendant is a poorer man than his retired brother professional, or where much medical attendance is required, it is our feeling that fees—some fees, if not full fees—should be paid. There is no obligation whatever upon the medical man to attend a curate gratuitously, though many practitioners are happy to do so.

J. B.—We can quite understand our correspondent's feelings, but we do not think it would be advisable to open our columns to possible correspondence upon matters of so personal a nature.

A SCOTTISH DULCAMARA.

A CASE with a most wholesome result was heard before the sheriff of Glasgow upon Feb. 18th. John Sutherland, calling himself a physician and surgeon, pleaded guilty to having during the months of October, November, and December, 1896, and January, 1897, in Glasgow or elsewhere in Scotland, wilfully and falsely pretended to be a physician, &c.

Mr. R. P. Lamond, writer, who appeared for the prosecutors (and to whom we are indebted for an account of the proceedings), the Scottish Branch of the General Medical Council, said the complaint was one brought—firstly, under the Medical Act of 1858 against a man who pretended to be a doctor of medicine, a surgeon, and a qualified medical practitioner, or alternatively at common law, falsely and wilfully impersonated his deceased uncle, Daniel Sutherland, who was at one time a registered medical practitioner, and who was struck off the roll by order of the Medical Council for conduct disgraceful under the Medical Act. Respondent, he might add, both published pamphlets and advertised to the effect that he was Dr. Daniel Sutherland, whereas his name was John. In reply to some innocent party who communicated with him he wrote, upon paper of his deceased uncle:—

"October, 1895. Dear Sir,—Your favour to hand and I am much obliged. I herewith forward to you a copy of my little pamphlet. I will be very happy to take you under my professional care, and from my extensive experience in all private complaints you may rely upon being perfectly and permanently cured in a very short time. "With best wishes, I am,

"D. SUTHERLAND."

The agent for respondent stated that the late Dr. Daniel Sutherland came to Glasgow from Edinburgh some sixteen or seventeen years ago to practise the profession there. His nephew, John Sutherland, was his assistant for about fourteen years prior to his death. He became executor to the estate after his uncle's death, and thought there would be no harm if he continued to carry on the business in the same manner.

"The sheriff characterised the offence as a very serious one. Respondent had had no medical training or medical education. He knew nothing about the matter except what he might have picked up in the course of assisting Dr. Daniel Sutherland. It was bad for him to say he was Dr. Sutherland, but it was a great deal worse for a person in his position, who probably knew nothing about medicine or medical matters, to take advantage of the weakness and folly of individuals, and profess to deal with diseases of a serious character. He had no hesitation in imposing a penalty of £15 15*s.* and £10 as the expenses of the prosecution."

These remarks of the sheriff are eminently just and satisfactory, but we cannot help thinking that the penalty for frauds of this description is not half heavy enough. The man who pretends to be in possession of degrees or qualifications implying that he has undergone a definite course of instruction, and who by this implication deludes people into the belief that he knows how to treat diseases, is neither more nor less than a potential murderer. So also is the adulterator of food and the seller or consigner of bad meat. People of this description make enormous profits, and, if fined at all, should be mulcted in hundreds, not in tens.

Variola and R. L.—We do not think any useful purpose would be served by prolonging the correspondence.

"THE UNQUALIFIED ASSISTANT."

To the Editors of THE LANCET.

SIRS,—With the arguments of "One of the 'Dawdlers'" it is not worth while to deal. They neither support the contentions of "Student" (THE LANCET, Dec. 19th, 1896) nor traverse any of my statements in reply to those contentions. With the sarcasms and personalities, which constitute by much the larger part of your correspondent's long letter, I decline to deal.

I am, Sirs, yours faithfully,

Feb. 23rd, 1896. A PRACTITIONER.

Alpha.—The pursuit would be particularly bad for the complaint, and we cannot think that any saddle would obviate the harm.

NOT RIGHT.

WE have received a specimen of a large poster which is being exhibited in Brighton under the auspices of the local centre of the St. John Ambulance Association. In a prominent place are the names of the executive committee, with their addresses, and among them we notice those of four local medical men, three of whom have their qualifications appended as well. We do not think it desirable that medical men should have even their names and qualifications placarded like this, but the addition of the addresses is unpardonable. Doubtless the poster was issued without the knowledge of the gentlemen in question, but, at any rate, we appeal to their sense of what is fitting for members of the medical profession to stop such an unseemly display.

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A NORTHERN DOGBERRY.

MR. BEILBY is a superintendent of the North Riding Constabulary and he also gave evidence upon Feb. 23rd before the Royal Commission on the Liquor Laws. He said that the *bonâ-fide* traveller in his district caused the police a great deal of trouble, which we can well believe, and he was of opinion that the "traveller clause" ought to be expunged from the licensing laws. He did not think that the "traveller" evil would be diminished by increasing the three mile limit to seven or eight miles: the only thing for it was abolition or the adoption of a plan of this kind—"that a person going into the country on a Sunday should present himself at police headquarters, state his destination, and obtain an official permit to obtain refreshment. Of course, the police would discriminate between respectable persons and parties who presented themselves in red handkerchiefs and clogs, and were accompanied by terrier dogs." This plan, we think, would give the police an infinity of trouble and we do not see how it would work. There is nothing to prevent any publican from serving a man who had not got a ticket except by having a corps of *agents provocateurs*, and that system is not regarded with favour by the majority of the British people. It has always seemed to us that the real way to lessen drinking is to increase the punishment for it. If a man gets so drunk as to be a nuisance to his neighbours or has to be taken to a hospital to be revived he should be heavily punished. At present, unless he commits an assault, he can give infinite trouble to numbers of people and get off scot free. People will drink and no one can prevent them, but the consequences of getting drunk should be made as disagreeable as possible.

L. N.—Another, in fact more than one other, correspondent has already employed the *non de plume*. Our opinion is an opinion, not a decision. L. N.'s guardians have used their discretion and decided one way. The Local Government Board, we are sorry to say, reads the Act differently.

"ANTISEPTIC MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—In your last number Mr. Harding, writing on Antiseptic Midwifery, quotes me as recommending the following solutions:—

Carbolic acid, 1 in 50.
Tincture of iodine in water—to a sherry colour.
Condy's Fluid, 1 in 80.
Perchloride of mercury, 1 in 2000.

Permit me to say that this was taken from an old edition of my work on Midwifery, published eleven years ago, and that there is not one of them which I should recommend now as a thoroughly reliable antiseptic. The more recent experience of lying-in hospitals has conclusively shown, I think, that the only antiseptic to be thoroughly relied on for the purification of the hands is a 1 in 1000 solution of perchloride. This, however, is too strong for vaginal injections, or for ablutions of the genitals. For these purposes, I think, the best antiseptic is a solution of creoline in water, which can be conveniently carried in a concentrated liquid in the obstetric bag in the form of Jeyes' "Liquor Antisepticus." The perchloride solution is also injurious to forceps and other metallic instruments. They can best be purified by boiling, or by thorough heating in the flame of a spirit lamp, and subsequent immersion in the creoline solution, which also acts as a lubricant. Tincture of iodine, dropped into water, still finds a useful application in the exceptional cases in which it is found to be necessary to wash out the uterine cavity.

I am, Sirs, yours faithfully,
Grosvenor-street, W., Feb. 18th, 1897. W. S. PLAYFAIR.

C. G. H.—1. It has been hitherto a general rule, but it is a matter of feeling rather than of etiquette. There is, of course, no legal obligation. If the interests of the profession and those of nursing become antagonistic the rule may fall into disuse. 2. If the rule is to be generally obeyed it should cover most special cases, and the fact that the patient is not resident in the town should make no difference. 3. If the rule is not generally obeyed a special exception might well be made in favour of those resident in town. Such attendance, we think, should be given gratis.

Transfer.—See "Form of Deed for the Assignment of a Medical Practice" in Chapter iii. of "Medical Partnerships, Transfers, and Assistantships," by Mr. William Barnard and Mr. G. Bertram Stocker (Stevens and Sons, 119 and 120, Chancery-lane, London). The Form of Deed in its various developments occupies sixteen pages in this book. The stamp duty would probably be ½ per cent, or £3 15s. for £750.

Sister Julia Tudor.—No amount of contradiction would alter so prejudiced a person's views. He has not the special knowledge to enable him to understand wholly the scientific side of the things he writes about, and those who do understand such matters prefer to let him alone. He has not described what he saw so much as what he thinks he saw.

FOOTLIGHT PHYSIOLOGY.

VEGETARIANS have hitherto been regarded as the most self-denying of mortals in the matter of food, but a new prophet has arisen and it behoves them to look to their laurels. The immortal Hiya, or She-who-must-be-obeyed, enunciated the aphorism, "Fruit is the only true food for man"; and now we have Miss Loie Fuller, the *danseuse*, declaring, through the medium of an illustrated paper, that the sole way to prolong life like the patriarchs of old to a hundred years or more is by becoming strictly frugivorous. Skirt-dancing is scarcely an occupation calculated to develop or foster asceticism in any form, but the fact remains that one of the most talented exponents of the pastime has made her appearance as an uncompromising denouncer, not only of animal food in general, but even of edibles containing starch. "We are governed by custom, whereas we ought to be led by the promptings of nature," cries this fervent disciple of Plato in her exordium, and then with some inconsistency proceeds to the solemn warning, "We are slaves to the palate, let us strive to become its master." That Miss Fuller's physiology is as novel as it is ingenious the following example will show: "The sugar in the sweet fruits serves the same end as starch in other things. Starchy substances must change first into dextrine and then into glucose ere they reach the stage dates and figs have already attained. The ripening process has brought them to the condition whereto starch is reduced in the human body. On this development nerve force is exhausted, and the tissues are gradually weakened, all which may be avoided by replacing starchy foods with naturally sweetened ones." In fact, the entire article is brimming over with learning, but, alas! that we should have to say so, it is the kind of learning against which Pope warns us.

Enquirer.—Alterations having recently been made in the Canadian medical curriculum we think that our correspondent's wisest course would be to communicate directly with the authorities in the colony. It would be best to graduate at the McGill University, Montreal, or Toronto University. Details concerning the fees to be paid and the dates of the examinations can be obtained from the deans of the medical schools at either institution.

A RARE CASE.

To the Editors of THE LANCET.

SIRS,—The following case is of interest owing to its rarity. In several hundred midwifery cases, with their endless variety, I have never met with, nor can I find, a similar one on record. On Feb. 8th I was called to attend Mrs. ——, a young primipara, who had been in labour about nine hours. Digital examination discovered a large, soft mass on the external genitals. I at first thought this was an abnormally large bunch of varicose veins, but on inspection found it to be anasarca extending on both sides of the vulva, from the pubes to the anus, being over three inches in breadth and so deep that the index finger was completely covered before it could enter the vagina, and this was only accomplished with considerable pressure. The anasarca entirely disappeared in eight days. The patient had no sign of any œdema elsewhere and her urine was free from albumin.

I am, Sirs, yours truly,
Midhurst, Feb. 22nd, 1897. A. E. PETERS.

W. B. G. writes as follows:—"W. H., farmer and carrier, club patient, paying 3*s.* 6*d.* per year, under my care six months, case purely surgical, inflamed bone and abscesses, visited seventy-five times, travelling 300 miles, had two consultations over the case. Am I entitled to fee for consultations? W. H. refuses to pay?"—We fear our correspondent has no remedy. The patient, of course, should not be a club patient. But being one, and accepted as such, he has contracted himself out of all his honourable obligations and can claim any amount of our correspondent's attendance that he may require.

A MODERN MINERVA.

THE following verses have been sent us by a correspondent, who does not say whence he obtained them:—

"She is fair in form and feature, quite an airy, fairy creature, and of art a leading teacher; she can talk and play and sing, too, in a manner quite divine.

"She contributes to THE LANCET, can survey with chain and transit, name a dance and she can dance it, and in golf and tennis playing she is always first in line.

"She can act as well as Sarah, that dramatic 'avis rara,' she is what all folk declare a very wonderful young lady who has wisdom without stint.

"She is versed in Greek and Latin, paints on canvas, plaques, and satin; quoting poetry she's pat in; but she cannot bake a biscuit that is half as soft as flint."

We appear to have been entertaining an angel unawares.

Sceptical.—No such name as H. S. Schultess-Young, M.D., appears in the current Medical Register.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

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An Inaugural Address

ON

THE UNDIMINISHED MORTALITY FROM PUERPERAL FEVER IN ENGLAND AND WALES.

Delivered before the Obstetrical Society of London on March 3rd, 1897,

BY CHARLES J. CULLINGWORTH, M.D. DURH., F.R.C.P. LOND.,

PRESIDENT OF THE SOCIETY; OBSTETRIC PHYSICIAN AND LECTURER ON MIDWIFERY AND DISEASES OF WOMEN, ST. THOMAS'S HOSPITAL.

GENTLEMEN,—Notwithstanding the risk of repeating what every newly elected President has said before when rising for the first time to address those to whom he owes his distinction, I cannot let such an opportunity pass without expressing my sense of the honour you have conferred upon me in calling me to occupy this responsible position. It is no mere empty form of words when I say that I enter on my duties with diffidence and a keen sense of the responsibilities I am undertaking. I sincerely trust that my term of office may be one of prosperity and peace, and I think there is every probability that it will be. But whether it should be my good fortune, whilst in command of the vessel, to have prosperous winds and a calm sea, or whether it be otherwise, you may rely on my doing my utmost to follow the best traditions of the society, to uphold its dignity and interests, and to help it to fulfil the great objects for which it was founded and which it has hitherto so faithfully and successfully carried out. I have sometimes thought that the society suffers from a plethora of presidential addresses. It is the custom for every President to deliver three addresses during his two years' tenure of office—viz., an inaugural address, a valedictory address, and a sort of interim report at the close of his first year of office. One consequence of this arrangement is that every second year it happens, as on this occasion, that the time of the society is occupied at two successive meetings by an address from the chair. It is conceivable that such an arrangement might come to be a serious interruption to the ordinary business of the society, though at present the list of communications in the hands of the secretaries is not a long one.

Perhaps the most usual conception of the function of an inaugural address is that it should embrace a survey of recent progress. My own notion is that it should be regarded as an opportunity to give utterance to thoughts, bearing on the society's objects and work, that have been occupying the speaker's own mind and that are of too general a nature to form the subject of an ordinary communication. Retrospects of the kind just alluded to undoubtedly have their uses, but, besides their tendency to become monotonous, they have to my mind this additional drawback—that they concentrate our attention too exclusively upon the bright side of the picture and miss the lessons to be learnt from our disappointments and failures. Presidents of scientific societies are not singular in this habit of recording successes, and ignoring or passing lightly over the failures. It is the tendency of human nature in general, and presidents of scientific societies, notwithstanding all the dicta of Miss Cobbe and her coterie to the contrary, are very human.

I cannot help thinking, however, that it must be a good thing to have our attention called, at least once now and then, to the darker and more disheartening aspect of affairs, to be brought face to face with the actual facts of the situation, so that, recognising our errors, we may endeavour to repair them, and, having our weak places pointed out, we may set to work to strengthen them, and that we may be stimulated to gird ourselves with new and more serviceable weapons for the struggle in which we are severally engaged. In our own profession it has passed almost into a proverb that there is often more to be learnt from a record of failure than from a story of success. It is from a strong conviction of the truth of this that I have decided to utilise this occasion for the purpose of drawing the attention of the profession to the death-rate from puerperal fever in this country, and to the humiliating fact that, notwithstanding the introduction of antiseptics, the almost complete banishment of the disease from our lying-in hospitals, and the general advance in our obstetrical knowledge, the death-rate has not only not diminished, but in some districts has actually increased during the past few years. Attention has already been called to this fact by others, especially by Dr. Boxall[1] and by Dr. Williams of Cardiff,[2] to whose valuable papers I am indebted for much of the information I am about to bring before you. But there seems good reason to think that the profession has not as yet realised the enormous importance and significance of the facts to which these writers have invited attention, and has not by any means laid to heart the lessons to be learnt from them or the urgent necessity that exists for a radical alteration in our present midwifery practice. It appears to me that at the present moment there is no obstetrical or gynæcological subject that can compare in importance with this question of the undiminished death-rate from puerperal fever.

Three or four years ago Dr. Boxall was appealed to by a physician to one of the insurance companies for facts bearing on the alleged diminution in the mortality of childbirth. The directors of the company were considering how far they would be justified in relaxing the rule by which 1 per cent. had hitherto been added to the insurance premium in the case of women expecting their first confinement. The result of the inquiry instituted by Dr. Boxall, in response to this appeal, proved startling even to himself. It was well known that the mortality from puerperal fever had during the past few years diminished almost to the vanishing point in the lying-in hospitals, and the knowledge of this fact had led to the impression that the general mortality from puerperal fever had diminished. Indeed, it had so far come to be taken for granted that speakers and writers on the subject repeatedly referred to this alleged diminution as a matter of common knowledge and as an occasion for legitimate jubilation. When the returns of the Registrar-General came to be examined, however, it was found that this rejoicing had been premature. The figures showed that, so far from having diminished, the death-rate from puerperal fever in England and Wales had considerably increased. The mortality returns of the Registrar-General are arranged under two headings—viz, (1) puerperal fever or metria, and (2) accidents of childbirth. The latter includes cases fatal from hæmorrhage, eclampsia, puerperal mania, pulmonary embolism, &c. Deaths occurring during childbed from pre-existing disease or from causes not directly connected with childbirth, though taking place during labour or during the lying-in period, are left out of account. The returns under the two headings mentioned, therefore, comprise all the deaths known to have occurred *from* childbirth, though not all that occurred *in* childbirth. I am not concerned on this occasion with the mortality from the accidents of childbirth, though I may have to allude to them incidentally. My purpose is to call attention to the deaths from puerperal fever.

In the accompanying table is shown in detail the actual

TABLE I.—*Showing Mortality from Puerperal Fever in England and Wales from 1847 to 1895.*

Year.	No. of deaths.	Per 1000 births.	Year.	No. of deaths.	Per 1000 births.	Year.	No. of deaths.	Per 1000 births.
1847 ...	784	1·5	1864 ...	1484	2 0	1881 ...	2287	2·6
1848 ...	1366	2·4	1865 ...	1333	1·8	1882 ...	2564	2·9
1849 ...	1165	2·0	1866 ...	1197	1 5	1883 ...	2616	2·9
1850 ...	1113	1·9	1867 ...	1066	1·4	1884 ...	2468	2·7
1851 ...	1009	1 6	1868 ...	1196	1 5	1885 ...	2420	2·7
1852 ...	972	1 6	1869 ...	1181	1·5	1886 ...	2078	2·3
1853 ...	795	1·3	1870 ...	1492	1·9	1887 ...	2460	2·8
1854 ...	954	1·7	1871 ...	1464	1 8	1888 ...	2386	2 7
1855 ...	1079	1·7	1872 ...	1400	1·7	1889 ...	1852	2·1
1856 ...	1067	1 6	1873 ...	1740	2·1	1890 ...	1956	2·2
1857 ...	836	1 3	1874 ...	3108	3·6	1891 ...	1973	2·2
1858 ...	1058	1·6	1875 ...	2504	2·9	1892 ...	2356	2·6
1859 ...	1238	1·8	1876 ...	1746	2·0	1893 ...	3023	3·3
1860 ...	987	1·4	1877 ...	1444	1·6	1894 ...	2167	2 4
1861 ...	886	1·3	1878 ...	1415	1·6	1895 ...	1849	2·0
1862 ...	940	1·3	1879 ...	1464	1·7	—	—	—
1863 ...	1155	1·6	1880 ...	1659	1·9	—	—	—

[1] The Mortality of Childbirth, THE LANCET, July 1st, 1893.
[2] Puerperal Mortality, Transactions of the Epidemiological Society, March, 1896.

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number of deaths returned annually under that head from the year 1847 to 1895 inclusive, together with the death-rate estimated in relation to the number of registered births—that is, to the number of children born alive.

It will be seen that in 1881 there was a rise both in the actual number of deaths and in the percentage. It is quite true that the figures of that year had been exceeded on two occasions previously—viz., in 1874 and 1875; but after those two years the figures fell again, whereas since 1881 the increase has been maintained. It is this which gives significance to the rise in 1881. It should, however, be mentioned that in that year, with a view to making the returns more complete, the Registrar-General, in certain cases in which the certificates of death were not satisfactorily filled up, wrote to the medical men who had signed them for further particulars. Thus a letter was sent in every case in which a woman of child-bearing age was stated to have died from either peritonitis, septicæmia, or pyæmia. As a result of these special inquiries, which have been continued to the present time, numerous deaths have been added under the heading of puerperal fever. I am perfectly willing to make full allowance for this and to concede that the sustained increase in the mortality from puerperal fever during the last fifteen years is to be partly accounted for in this way. But when all this has been granted we are still face to face with the fact that the mortality has not appreciably diminished during the past fifteen years, and that the year 1893 was conspicuous for a puerperal fever mortality only once exceeded since 1847, the year in which the Registrar-General first issued a separate return. It is not pretended that the Registrar-General's returns give the figures with absolute correctness. No system that depends upon the accuracy of statement of a large number of people ever can be perfect. Besides which, as I have elsewhere pointed out, there is a natural tendency on the part of medical men, partly on personal and partly on public grounds, to avoid attributing deaths directly to the effect of childbirth. If, however, the figures err, they err in the direction of being *below* the truth, not *in excess* of it. Moreover, the sources of fallacy are not limited to a single year; they are the same throughout a long series. Hence they do not affect the comparison of one year with another, which is what I am now chiefly concerned with. Indeed, there can be no doubt that, if we could obtain perfectly correct returns, they would bring out even still more strongly the point to which I am directing attention, for while the number of deaths and the percentage would both be higher the comparability of the figures of any one year with those of other years would remain unaffected.

Before proceeding to inquire into the causes of the persistently high mortality from puerperal fever it may be well to ask your attention for a few minutes to its geographical distribution. In London the total death-rate from childbirth has considerably diminished. The diminution is due, however, not to any appreciable lowering of the mortality from puerperal fever, but to a lessened mortality from the accidents of childbirth. In the provinces, on the other hand, the total death-rate from childbirth remains practically unaltered; but whilst, as in the case of London, there has been a diminution in the mortality from the accidents of childbirth, the mortality from puerperal fever has increased to such an extent that instead of being accountable for less than a third of the total mortality it is now accountable for more than one-half. In a paper read before the Epidemiological Society in March of last year (1896) Dr. Williams, the medical officer of health for the county of Glamorgan, showed that, of the various districts and counties of England and Wales, those with the heaviest death-rate from puerperal fever between the years 1848 and 1894 were Lancashire (2·4), which heads the list, North and South Wales, Northumberland, and Cheshire (2·2). Close behind them came Cumberland, Durham, the West Riding of Yorkshire, Derby, and London (2·1). Surrey had the lowest mortality, and very near to it came Cornwall, Sussex, Hants, Dorset, and Rutland (all under 1·4). Taking the shorter and more recent period embraced between the years 1885 and 1894, Lancashire, Cheshire, and North and South Wales still maintain their unenviable pre-eminence in the black list; Northumberland disappears from it; and Derbyshire and the West Riding of Yorkshire take its place. Dr. Williams points out that as a general rule the rate is "highest in the Western Counties, especially in the hilly Welsh division, or, roughly, in those counties and parts of counties west of a straight line drawn from the mouth of the Severn to that of the Tees."

It would be impossible in the limited time at my disposal this evening to enter into a detailed inquiry into the conditions of life and other circumstances which might serve to explain the relative mortality from puerperal fever in all these various districts. It must suffice if I select one district—namely, that of Wales. I make this selection because in the paper already alluded to Dr. Williams has furnished, ready to our hands, very ample materials for forming an estimate of the determining causes of the high death-rate from puerperal fever in that part of the country. After giving a table of the death-rate for each Welsh county for a period of ten years, Dr. Williams observes that density of population does not seem to be "a factor of much importance in determining puerperal mortality; on the contrary, both the mortality from puerperal fever and from accidents of childbirth display a marked tendency to prevail in those counties where the only features in common between them is that they are mountainous, hilly, and sparsely populated, and that consequently locomotion is tedious and medical assistance difficult to obtain in time. On the other hand, the mortality seems to be generally lowest in the flatter counties." He then proceeds to speak more particularly of the registration county of Glamorgan, of which, as the medical officer of health, he has an intimate knowledge. The county of Glamorgan "has an estimated population of some 800,000, over half the population of Wales. It covers 516 966 statute acres, and includes the two county boroughs of Cardiff and Swansea." The county is divided into eight registration districts, and it is instructive to follow Dr. Williams in his summary of the relative mortality from childbirth in each of these and the conditions of life that prevail in them. In the Cardiff registration district the puerperal mortality exactly corresponds with the mean for England and Wales (2·0 per 1000 births). "Its sanitary condition is satisfactory, and confinements are attended generally by the medical men and trained midwives." In the Pontypridd district the puerperal mortality is excessive (4·1). Its sanitary condition is generally unsatisfactory, and most of the confinements are "attended by untrained midwives." In the Merthyr Tydvil district the death-rate from puerperal fever is higher than in any other district in Wales—viz., 4·7 per 1000 births. The greater number of confinements are attended by midwives, of whom only a few, if any, are trained. As to its sanitary condition, although that of Merthyr itself is highly unsatisfactory, that of the other parts of the district is fair. In the next district on the list—that of Bridgend—the mean annual mortality from puerperal fever for the past ten years closely approaches that of the Merthyr Tydvil district, being 4·5 per 1000 births. This district includes one small town, a small seaside resort, four mining valleys, "and an extensive rural district with an agricultural and mining population." In the mining valleys the greater number of colliers' wives are attended by unskilled and ignorant midwives, none of whom are trained or registered. The sanitary condition of the district is in some localities exceedingly unsatisfactory. In the Neath registration district there are five towns with a population varying from 4000 to 12,000, "together with an extensive area studded with mining villages and farmhouses. In the mining valleys many confinements are attended by midwives, but in the towns only a few comparatively. The sanitary condition is fair." The death-rate from puerperal fever in this district is very variable. The mean annual rate for the ten years ending 1894 was 2·8 per 1000 births—that is, higher than that of the Cardiff district, but much below that of the other three districts already mentioned. In the Pontardawe registration district, containing three mining and tin-plate towns, skilled medical assistance can be procured at short notice. The puerperal fever mortality is low (1·6). The Swansea registration district, besides the town of Swansea, includes a scattered mining population. The sanitary condition is unsatisfactory and midwives are employed to a considerable extent. The death-rate from puerperal fever is fairly high (3·0). In the Gower registration district, which is largely agricultural, the sanitary condition is fair, but the rate of mortality from puerperal fever is high (3·8). Dr. Williams points out that as regards the towns the puerperal fever mortality is much the same as in similar towns elsewhere. In the densely populated mining valleys, on the other hand, the mortality is exceedingly high. He attributes this in a great measure to the systematic employment of unskilled and ignorant mid wives. "From my experience in Glamorgan," he says, "I can prove without a doubt that they often spread puerperal fever broadcast, and are often not interfered with." "The

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conditions of life," he continues, "consequent upon the physical features of the country, especially in North Wales, often make it impossible to obtain skilled assistance in time; and if any [assistance] is to be obtained it must be from untrained midwives." Even these are not always available, for in such districts friends and neighbours are often compelled to give the help that is needed.

I have considered the case of Wales at some length because the information at our command is so definite. No one, I think, after hearing the above facts, can have any doubt as to the causes which mainly determine the excessive death-rate from puerperal fever in that country. I have not time, as I said before, to inquire at any length into the conditions of life amongst the working classes in all the districts in which the mortality from puerperal fever is excessive, but I cannot refrain from saying a word or two about Lancashire with regard to which we have some very important evidence. In the year 1892 Dr. T. E. Hayward, the medical officer of health for the district of Haydock, in Lancashire, appeared before the Select Committee on Midwives' Registration. The following is an abbreviated extract from the minutes of his evidence: "Haydock is a coal-mining district. The population is 6535; there were 272 births registered last year; the average number for the past few years is 250. ..... I am in a position to state that scarcely a fifth part of those confinements are attended at any stage by a doctor. The work is done by women who practise as midwives," but who "are, with few exceptions, untrained and in very many cases grossly ignorant and incompetent." "The same condition of things holds good more or less in the whole of that part of Lancashire." In support of that statement he quoted the report of the medical officer of health for the county borough of St. Helens, with a population of over 70,000, in which it was stated that the great majority of confinements in St. Helens "are attended by midwives, a large number of whom have no other qualification than that of being mothers themselves." It will thus be seen that, at least in one important particular, the conditions under which the death-rate from puerperal fever is excessive in Lancashire are similar to those which prevail in Wales. It must not, however, be supposed that I am going to lay the entire blame for the present deplorable loss of life from puerperal fever upon the midwives. The evidence is incontestable that they are responsible for much of it, but on this head I have probably for the present said enough. I desire now to bring the inquiry nearer home.

By the kindness of Mr. Shirley Murphy, the medical officer of health for the administrative county of London, I have been supplied with a statement of the number of cases of puerperal fever notified in the various parishes within the London sanitary district during the five years 1891–5, and also with a statement of the number of births in each parish during the same period. From these two statements I have been enabled to draw up a list showing the number of notified cases of puerperal fever to every thousand births in each of the forty-one parishes. In other words, I have constructed a table of the relative incidence of puerperal fever in the London sanitary district during 1891–5. The result, which is somewhat unexpected, has been embodied in a map of the district, prepared for me by my friend Mr. R. E. Holding. In this map the parishes where puerperal fever is most prevalent are shaded black, those in which the prevalence is a little below the highest, but still greater than in London taken as a whole, are marked by cross lines and dots, those in which the rate is less than that for the whole of London are marked by horizontal lines, while those in which the proportion of cases to the number of births is comparatively small are left white. Hampstead heads the list, for, although the actual number of cases is smaller than in many other parishes, the proportion of cases to the number of confinements (as estimated by the number of births) is the highest in London. As regards the actual number of cases Islington had by far the largest—viz., 169; next to it, though at a considerable distance, came St. Pancras with 88, Lambeth with 86, and Battersea with 84.

The parishes that figure in the black list, then, are Hampstead, Islington, Battersea, Wandsworth, and Lewisham. All these show a rate of over 3 cases per 1000 births. After them come, in the order named, Fulham, Paddington, Greenwich, St. James, Bethnal Green, St. Pancras, Hammersmith, Lee and Plumstead, Stoke Newington and Hackney, Kensington and Chelsea. The rate in all these is higher than that for London generally. It will be observed that Westminster, Lambeth, Whitechapel, St. George-in-the-East, and Shoreditch, which might have been expected to appear high up in the list, show a much smaller proportion of cases than Hampstead and Islington, and even St. James, Kensington, and Chelsea. In St. Martin-in-the-Fields not a single case was notified, while Bermondsey, St. George (Southwark), St. Olave, St. Giles, Strand, and St. Luke all show a remarkably small percentage. A comparison between this map and the map on which the parishes are shaded according to the number of persons to each acre clearly shows that the prevalence of puerperal fever is not proportionate to the density of population.

TABLE II.—*Showing the Relative Incidence of Cases of Puerperal Fever in the respective Parishes of the London Sanitary District from 1891 to 1895.* (*See Maps.*)

No. in maps.	Parish.	No. of notified cases per 1000 births.	No. in maps.	Parish.	No. of notified cases per 1000 births.
1	Hampstead	3·64	22	Woolwich...	1·75
2	Islington	3·48	23	St. Saviour, Southwark	1·71
3	Battersea...	3·25	24	Holborn	1·62
4	Wandsworth	3·12	25	Marylebone	1·59
5	Lewisham	3·02	26	St. George-in-the-East..	1·55
6	Fulham	2·86	27	Shoreditch	1·47
7	Paddington	2·85	28	Newington	1·47
8	Greenwich	2·77	29	Poplar	1·45
9	St. James...	2·71	30	St. George, Hanover-square	1·32
10	Bethnal Green ...	2·49			
11	St. Pancras	2·48	31	City of London	1·32
12	Hammersmith ...	2·46	32	Mile End Old Town ...	1·31
13	Lee and Plumstead	2·41	33	Rotherhithe	1·31
14	Stoke Newington and Hackney	2·29	34	Clerkenwell	1·30
			35	Bermondsey	1·07
15	Kensington	2·26	36	St. George, Southwark	1·02
16	Chelsea	2·23	37	St. Olave	0·93
17	Limehouse	2·14	38	St. Giles	0·80
18	Camberwell	2·09	39	Strand	0·67
19	Westminster	2·06	40	St. Luke	0·53
20	Lambeth	1·86	41	St. Martin-in-the-Fields	0·00
21	Whitechapel	1·86			

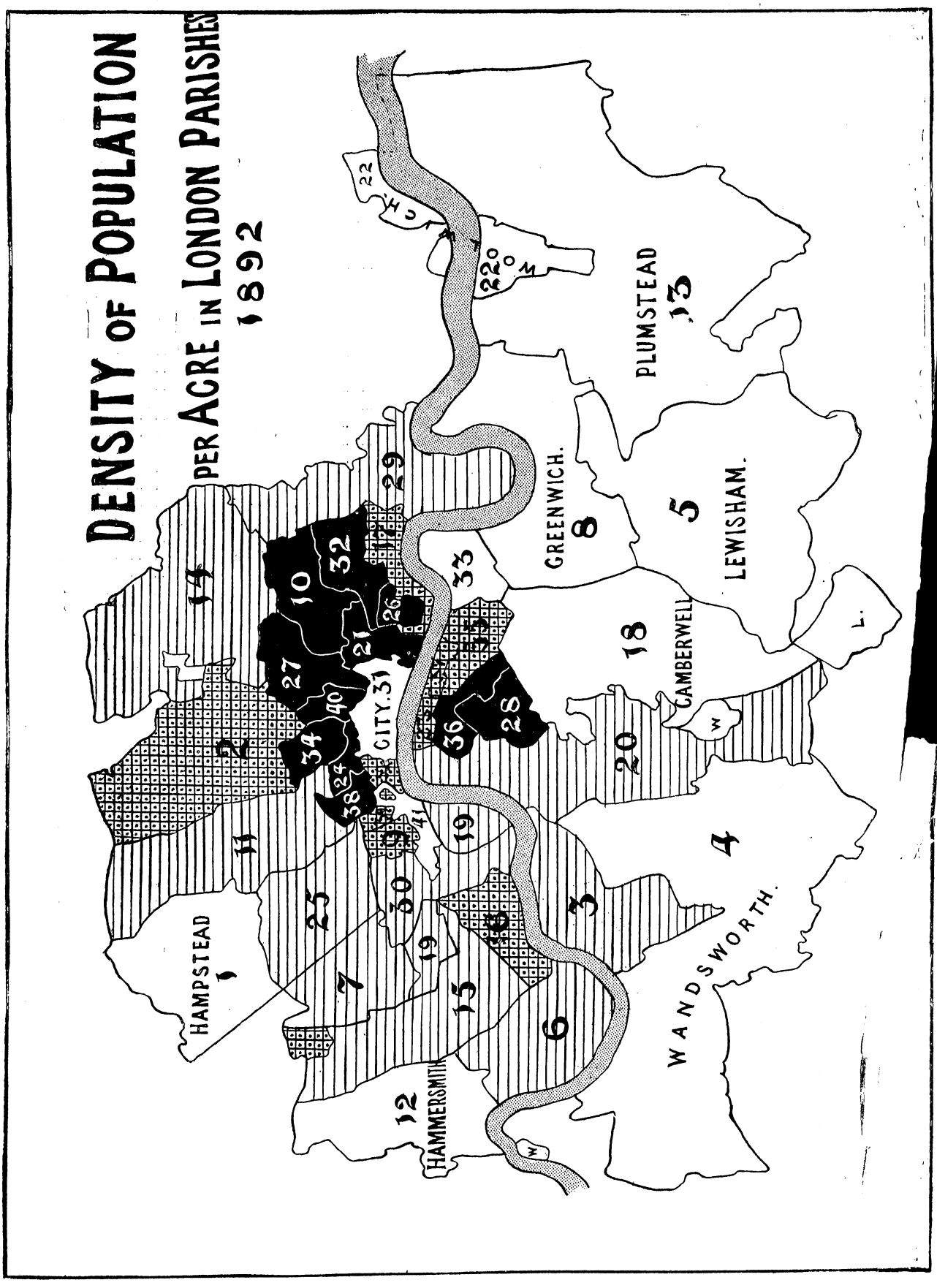
Rate for the whole sanitary district of London, 2·17.

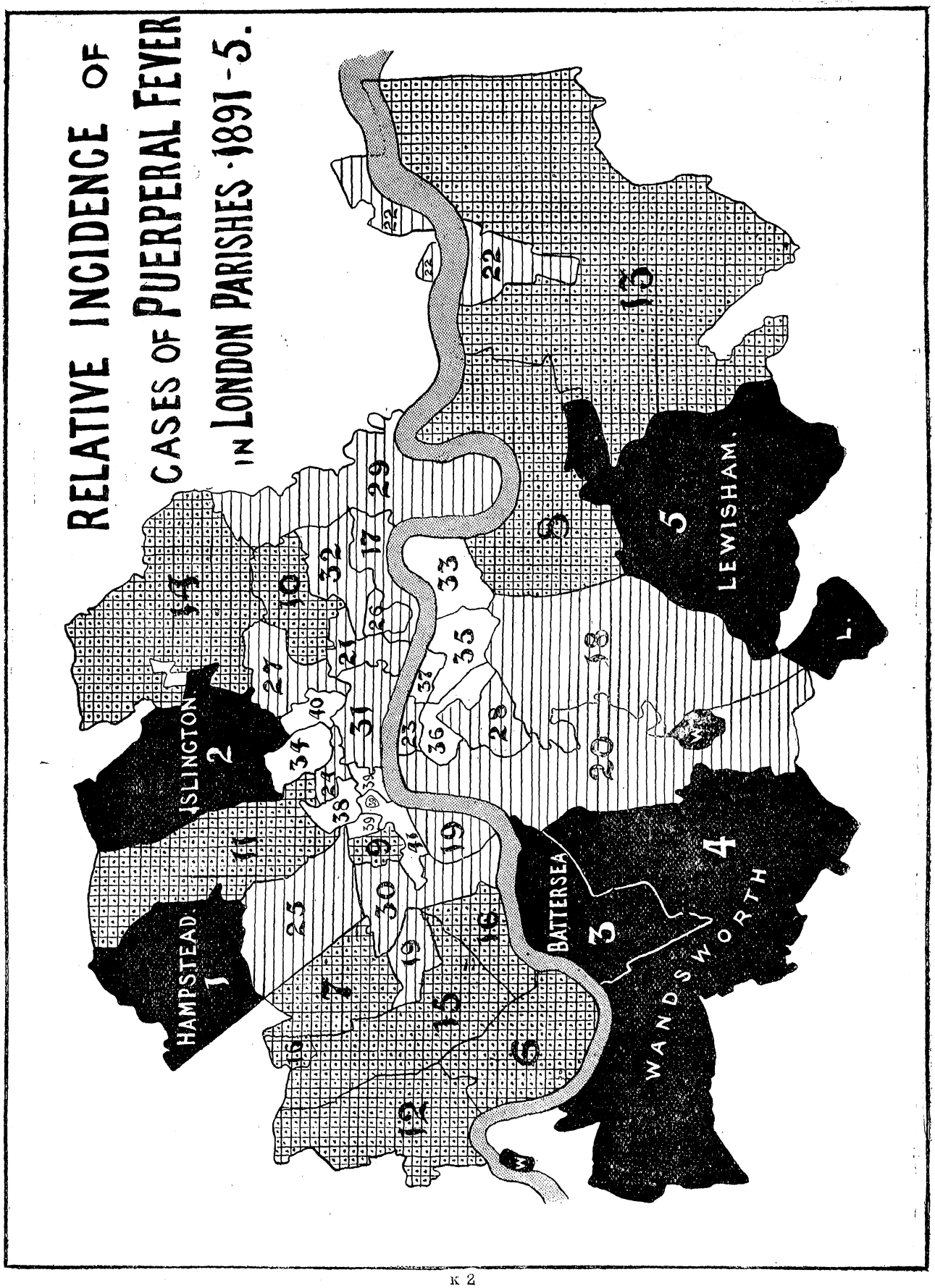
The number of deaths recorded for the whole of London in the returns of the Registrar-General (1305) so nearly approximates the number of notified cases that it seems safe to infer that the cases notified were for the most part fatal, and that the result of the inquiry would not have been materially different if it had been based on the number of deaths in each parish instead of on the number of notified cases.

It is no part of my present purpose to inquire into the special conditions of the various parishes with a view to determining the causes of the greater prevalence of puerperal fever in one parish than in another. Such an inquiry would possess great interest and great value, but it would lead me too far afield this evening. I have alluded specially to the mortality in London in order to show that puerperal fever still claims its victims, not only in thinly-peopled country districts, but also in places densely populated, where, whatever the causes may be, the difficulty of obtaining medical assistance cannot be one of them. Although puerperal fever has practically become a thing of the past in our lying-in hospitals—witness the remarkable record of the General Lying-in Hospital and the equally remarkable results that Dr. Godson was able the other day to point to as having followed the introduction of antiseptics at the City of London Lying-in Hospital[3]—it is impossible to ignore the fact that there has not been a corresponding diminution of mortality from puerperal fever in ordinary private practice. It was not to be expected that those who had already been engaged for some time in practice would at once assimilate the new ideas and adopt what appeared to many of them not only new but revolutionary and unnecessary methods. But as time wore on

[3] THE LANCET, Jan. 23rd, 1897.

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DENSITY OF POPULATION
PER ACRE IN LONDON PARISHES
1892
HAMPSTEAD
1
CITY.31
GREENWICH.
8
PLUMSTEAD
13
LEWISHAM.
5
CAMBERWELL
18
WANDSWORTH.
4
HAMMERSMITH
12
220
22
29
33
32
10
27
21
26
40
34
38
24
36
28
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and a younger race of men came upon the scene it was not unnaturally hoped that an improvement would take place, and that a mortality which had been conclusively shown to be preventable would show some signs of diminution. How is it that this hope has not been realised? Either the profession is not convinced of the possibility of stamping out puerperal fever by the methods that have been proposed or it has failed to carry out those methods with the thoroughness that can alone ensure success. As a responsible teacher of midwifery I have often asked myself the question how far the teaching is at fault. Do we teachers sufficiently impress upon the minds of our students the infinite importance of this subject? Are we ourselves careful to show by our own example the importance of the precautions that we lay down in the lecture theatre? Are we careful never to convey, by thoughtless word or careless act, the impression that the rigid adoption of antiseptic measures is excellent in theory, but does not, after all, matter so very much in practice? If we are not, is it to be wondered at that when our students go out into the world and are released from the discipline of the school and hospital they should forget how much depends on attention to minute detail, and should discharge their consciences in this matter of antiseptics by pouring a few drops of carbolic acid or a drachm of tincture of iodine into the water in which they wash their hands, or even by simply bidding the nurse administer a similarly prepared solution as a douche? I am not painting an imaginary picture. The methods at present employed by many who if questioned would be quite ready to proclaim their belief in antiseptics, and who glibly assure one they have used "every antiseptic precaution," are often so crude and imperfect as to be a ludicrous travesty of genuine antiseptic midwifery.

The questions I have just been asking I ask of myself as well as others. It is clear that something is wrong. We shall be most likely to find out what that something is by a process of self-examination, both on the part of teacher and taught, however disagreeable that process may be. A great deal has been written on the superiority of asepsis as compared with antisepsis, and it has become the fashion in some quarters to speak of antiseptics as though they had had their day and to maintain that a condition of asepsis can be attained by cleanliness alone. It is well, however, to bear in mind that the triumphs of our lying-in hospitals have all been won by the scrupulous use of antiseptics, and that sterilisation, which is the essential element in aseptic surgery, is impossible in midwifery practice. When we have thoroughly washed our hands, as we all now recognise the necessity of doing before making an examination in the lying-in room, it costs very little trouble to adopt the additional safeguard of immersing them for a few moments in an efficient antiseptic solution. And as a matter of experience those who are most diligent in the use of antiseptics are also the most diligent in carrying out all the details of elementary cleanliness. I firmly believe that if the simple antiseptic precautions with which everyone is familiar were conscientiously adopted puerperal fever would be as rare in private practice as it is now in the best lying-in hospitals. "The only way," as I have elsewhere observed, "to avoid (the present) terrible mortality, and to avoid also the terrible amount of puerperal disease, which, because it is not fatal, is apt to remain unrecorded, is for every practitioner in midwifery to recognise his personal responsibility in the matter."

In an excellent little book of advice to mothers the writer, herself a woman, after doing me the honour to quote the foregoing passage, makes the following significant comment: "Now I maintain," she says, "that *women themselves* have a *personal* responsibility in this matter also. They should not be content passively to allow their lives to lie in the hands of others who may or may not choose to use antiseptics. Women who are expecting their confinements should satisfy themselves beforehand that the doctor and the nurse engaged to attend will conscientiously use these safeguards."[4] This is plain speaking, but who will be disposed to find fault with it? It will be gathered from what I have said this evening that, in my opinion, the high death-rate from puerperal fever in this country is attributable mainly to the large number of confinements attended by ignorant and untrained midwives and to laxity and half-heartedness in the use of antiseptic precautions in private practice. The remedy for the first of these evils is to insist that women who call themselves midwives shall possess at least such an elementary knowledge of the subject as shall enable them to know how to prevent septic infection. The remedy for the second evil is thoroughness.

It is now nearly nine years since I published, in the form of an introductory address at St. Thomas's Hospital, a plea for the more general adoption of antiseptics in midwifery practice.[5] In that address I brought together as concisely as possible the evidence that had been gradually accumulated in proof of the preventability of puerperal fever, and I showed in a series of tables the magnificent results that had followed the introduction of antiseptic measures into the leading maternity hospitals of Europe and the United States. I have reason to know that the arguments I then brought forward were not without effect upon the practice of individual members of the profession. I ought perhaps to apologise for returning to-night to a subject that may seem to many to have been long ago thrashed out. The temptation was indeed great to choose some newer topic for an occasion like the present. But the more I reflected on the matter the more it was borne in upon me that it was my duty once more to raise my voice on behalf of the mothers of this country. The Obstetrical Society of London has always been foremost in the effort to reduce the present terrible mortality from childbirth. It seemed to me that I could not more suitably signalise my succession to this chair than by calling attention to the sad and disappointing fact that has formed the text of this address. If anything I have said shall have the effect of stirring the minds of my professional brethren on this subject and of diminishing to ever so slight an extent the present terrible death-rate from a disease which is now generally acknowledged, nay, proved, to be almost wholly preventable, I shall feel that I have achieved something worthy of the occasion and have done something towards justifying your choice of a president.

[4] Stacpoole, F.: Advice to Women on the Care of the Health Before, During, and After Confinement. London: Cassell and Co., 1892, p. 81.

[5] THE LANCET, Oct. 6th, 1888.

The Erasmus Wilson Lectures

ON

THE PATHOLOGY OF THE LYMPHADENOID STRUCTURES.[1]

Delivered at the Royal College of Surgeons of England on March 1st, 3rd, and 5th, 1897,

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LECTURE I.

Delivered on March 1st.

GENTLEMEN,—The organs composed of lymphadenoid tissue are the bone marrow, the spleen, the thymus, and the glands and follicles in the mucous membrane of the alimentary and respiratory canals, but new formations may also appear in connective tissue where normally there is little sign of it. Lymphadenoid tissue is a specialised kind of white fibrous tissue in the meshwork of which free cells collect. These cells produce blood corpuscles and also retain the fundamental digestive powers of unicellular organisms. In consequence of the situations in which lymphadenoid tissue is developed waste products of tissue change are prevented from entering the circulation until they have been rendered harmless, and thus its function of protecting the body from waste products—metabolites—of normal origin is capable of extension and is thus able to offer some resistance to the spread of disease, either by counteracting the poisonous substance resulting from diseased tissues or by actually destroying the germs of disease themselves. The pathological conditions to which lymphadenoid tissue is itself subject arise in the course of the performance of the protective functions. Being excited to over action lymphadenoid

[1] These lectures were illustrated by specimens from the Anatomical and Pathological Museums of the Royal College of Surgeons of England and of the Westminster Hospital.

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tissue becomes the starting point of new growth, or it is replaced by scar tissue as a consequence of inflammation, so that the production of the red and white blood corpuscles is disturbed and the rest of the body thereby affected.

THE ORIGIN OF LYMPHADENOID TISSUE.

Lymphadenoid tissue is produced—(1) as lymphatic glands around the plexus of lymphatic trunks where they join in the axilla, groin, &c.; (2) around epithelial masses and glands, as the tonsils, thymus, salivary glands, and intestinal follicles; or (3) in the wall and sheath of the small blood-vessels in the spleen and bone marrow, favoured by the slow rate of the circulation. Fibrous connective tissue is changed into retiform tissue by a splitting up of its individual fibres, and into the meshwork so formed white cells emigrate from the capillary bloodvessels, and there, by multiplying, establish germinating centres. Fine capillaries permeate these germinating masses, but not so the lymphatics. The latter begin in a sinus outside the follicle, into which the young cells pass as they are pushed out from the centre by still newer formations.

Lymphadenoid tissue, like connective tissue generally, is prone to vary. An increase of the blood flow accelerates the multiplication of cells and so causes an overgrowth; a diminution in the blood-supply promotes a fatty metamorphosis, from which a renewal of lymphadenoid tissue may at any time take place—red marrow replaces the yellow, lumps of apparent fat develop again into glands, or minute glands consisting of only a single follicle can as the result of irritation become compound glands.

THE FUNCTIONS OF LYMPHADENOID TISSUE.

A.—The Formation and Destruction of Red Corpuscles.

The red corpuscle, although varying in type among vertebrates, is uniform in each species after embryonic life and during health. Its sole function is to carry oxygen, and in no other way can this action be carried out; the imperfect red corpuscles which gain access to the blood in disease appear incapable of properly doing this work. Further points of difference between it and the white corpuscle are that the red are never produced in excess, neither do they take part in new formations of any kind, nor have they any digestive powers, nor do they produce a protective secretion.

1. Red blood corpuscles are first formed from colourless cells outside the bloodvessels. They are first seen in the area vasculosa of the chick—i.e., outside the embryo itself, arising from cells of the mesoblast, previously colourless, which develop hæmoglobin in their protoplasm. There is therefore no *a priori* objection to the development at later periods also of young red cells or erythroblasts from colourless cells since the erythroblasts have in the beginning an origin in common with the young white corpuscles or leucoblasts (Neumann). On the other hand it is held that the erythroblasts of the embryo form a distinct order of cells which remain throughout life the only source of the red corpuscle (Bizzozero). The cells which form the blood islands begin to show hæmoglobin before the bloodvessel has developed around them, so that the first formation of red cells may be called extra-vascular. Later there is a very similar appearance in all the blood-forming organs, but it has not yet been settled whether the groups of erythroblasts undergoing division are placed in the lumen of the capillary or within a diverticulum of the capillary, whether they form the capillary wall itself at the point, or whether they are in the tissue outside separated from the blood stream by a layer of endothelium.

2. Red corpuscles after being formed in connective tissues are produced in later embryonic life in special organs. Erythroblasts are met with widely in the connective tissue and especially in the case of the mammalian embryo, in the walls of the umbilical vesicle, intestines, and bladder, as well as in the subcutaneous tissue (Saxer).[2] As the lymphadenoid tissues develop erythroblasts gradually disappear from the blood and only re-appear under abnormal circumstances. They also gradually disappear from the walls of the intestines and umbilical vesicle and their production becomes concentrated in the liver. The liver of the mammalian embryo takes a very important part in blood formation; it is relatively a very large organ, in the capillaries of which erythroblasts and leucoblasts are seen undergoing mitosis side by side, and according to Kostanecki[3] they have an origin in common. In late embryonic life this formation in the liver diminishes and ceases before birth. Erythroblasts are also seen during the latter part of embryonic life in the hilum and follicles of lymphatic glands, in the spleen, and in the thymus.

3. After birth the formation of red corpuscles becomes gradually confined to the red marrow in the higher mammals and man, although in lower vertebrates lymphadenoid tissue, especially the spleen, retains this function throughout life. The red marrow of birds forms a good material for demonstrating the various structures (Muir and Drummond).[4] In the capillary lumen are seen fully developed red corpuscles, in the wall are young red cells or erythroblasts which, although they project into the lumen, are fixed and show signs of mitosis; in the tissue around the capillary are the white cells rapidly dividing and passing towards the capillary channel.

On the whole it would appear most probable that the red corpuscles originate after birth from the small white cells of the marrow, and that the erythroblasts represent an intermediary stage. The alternative view is that the erythroblasts seen in the red marrow of the adult are a special class of cells directly derived from those found in the embryo.

Anæmia and regeneration of the red corpuscles.—There is an entire absence of clinical and experimental evidence as to the production of red corpuscles in excess. At any rate there is nothing comparable to leucocytosis and leucocythæmia in the case of the red corpuscle. A diminution in the rate of production of the red corpuscles seems to be the cause of the anæmia which occurs in women leading an indoor life, in those who have an insufficient supply of albuminous food, as well as in old age. And clinical experience definitely shows that the recovery up to the normal rate of production is a slow process. Anæmia can be produced experimentally in one of two ways, either by removing a considerable amount of blood or by the introduction into the circulation of some material which will increase the rate at which the red corpuscles are destroyed.

The regeneration of the blood after loss is seen when a considerable amount of blood has been taken from an animal by repeated venesections; the marrow then exhibits an increased mitosis both of colourless and coloured cells and becomes more red, the spleen swells up and erythroblasts showing mitosis are found within it, and similar immature nucleated red corpuscles are seen free in the blood stream (Freiberg[5] also Autokonenko[6]). According to Grünberg[7] erythroblasts are also to be seen in lymph glands, the intestinal follicles and tonsils, more especially when the spleen had been removed before the venesections were made. The lymph glands most affected were those of the mesentery, axilla, groin, and neck, which appeared to the naked eye enlarged and reddened. The lymphatics leading from the enlarged glands were filled with true red corpuscles, nucleated ones, and white cells. The germinating follicles of the lymph glands were exceedingly rich in leucoblasts undergoing mitosis. He speaks of the erythroblasts and red corpuscles as being in the lymphatic gland sinus, but only of leucoblasts within the stroma of the gland itself—under the foregoing condition no erythroblasts and red corpuscles were seen in the thymus (Braunschweig[8]). Venesection appears therefore to excite the leucoblasts to more rapid production, and there is a return to the embryonic state as regards the production of the red corpuscles. The alternative explanation of the appearances seen after great loss of blood is that the production of erythroblasts in the marrow is stimulated and that some are detached and carried to the spleen and lymph glands, where they continue to divide until the loss is restored, when the formation of red cells is again confined to the red marrow (Zenoni[9]; also Disse[10]).

Destruction of red cells in connexion with the spleen and also in the liver is attended by an increased production of leucocytes, and it is the increased production of these cells which appears to be the cause of the hæmolysis. According

[2] Saxer: Centralblatt für Allgemeine Patholo und Pathologische Anatomie, 1896, vol. vii., p. 421.

[3] Vide Kostanecki: Anatomische Hefte, 1892, Band i.

[4] Muir and Drummond: Journal of Anatomy and Physiology, 1894, vol. xxviii., p. 125.

[5] Freiberg: Inaugural Dissertation, Dorpat, 1892. Centralblatt für Pathologie, &c., 1893, Band iv., S. 460.

[6] Autokonenko: Archives des Sciences Biologiques, 1893, vol. ii., p. 516.

[7] Grünberg: Dissertation, Dorpat, 1891; quoted by Disse, vide infra.

[8] Braunschweig: Ibid.

[9] Zenoni: Virchow's Archiv, 1895, Band cxxxix., p. 185.

[10] Disse: Ergebnisse der Anatomie und Entwickelungsgeschichte von Merkel und Bonnet, 1895, Band v., s. 30.

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to Hunter an increased destruction of red cells takes place during digestion in the spleen at a time when there is an increased production of leucocytes by that organ and by the gastro-intestinal wall. Hæmolysis in a greater degree can be brought about by acting either directly upon the blood or indirectly through the spleen and gastro-intestinal lymphadenoid tissue by injecting such a drug as toluylendiamin. The spleen enlarges several fold owing to engorgement with venous blood, iron containing pigments collect in the spleen and liver, and there is an increased secretion of bile, some of which may be absorbed and produce jaundice. Red corpuscles in various stages of degeneration are to be seen in the spleen. When, however, the spleen is first of all removed much larger doses of the drug are required to produce the hæmolysis which then takes place through the lymphadenoid tissue of the intestinal wall. The toluylendiamin at the same time markedly increases the number of white cells in the blood, and the explanation of its action is that it first excites leucocytosis, especially in the spleen, but also in the intestinal wall, and that it is the leucocytosis which is the cause of the hæmolysis. When drugs are injected which destroy the blood directly the removal of the spleen causes no alteration in the result (Hunter).[11] The anæmia, therefore, which is seen in the diseases of the lymphadenoid structures appears to originate in an excessive production of white cells, which hurry on and push out into the circulation whilst immature the red corpuscles in such a state that they cannot act fully as normal oxygen carriers and are liable to be destroyed.

B. *The White Blood Corpuscles.*

Leucocytes are all alike throughout the vertebrata, although in many species they can be divided into several kinds. They seem to be distinct from the fixed cells of the tissues, but this point is by no means definitely settled. White blood corpuscles, small marrow cells, the wandering cells, the lymphocytes as well as the free cells in the mouth, intestines, and bronchi, all originate from the cells in the meshes of lymphadenoid tissue. They are practically protozoa which can be kept alive outside the body and so be studied under the microscope. In the course of lymphadenoid disease the leucocytes, except for a temporary occasional diminution to a slight degree, are increased, sometimes, indeed, ten or twenty times, due to the abnormal excitation of lymphadenoid tissue.

1. In whatever situation these cells are found they exert a protective function due either to their secretion or to their ingesting and digesting powers. In the course of normal digestion an excess of leucocytes appears in the blood, and at the same time there is a marked enlargement of the spleen from which the cells are derived. This normal leucocytosis seems to have as its object the removal of some harmful products of digestion. In a less regular way some leucocytosis may occur during pregnancy and in the newborn infant.

2. Leucocytes play an active part in the removal of embryonic structures. Metchnikoff has described the removal by this means of the tadpole's tail, and Kowalewski that of the organs of the larva to make way for those of the imago. The epithelial structure of which the thymus is at first composed disappears before the invasion of the lymphadenoid tissue.

3 Free leucocytes in the mouth derived from the tonsils, in the intestine from the solitary and agminated follicles, and also similar cells in the bronchi, all have a deterrent action upon the growth of micro-organisms in these cavities.

4. As to inflammatory reaction, upon the inoculation of disease germs into an animal capable of offering a resistance to their attack, a local inflammatory reaction takes place, consisting of an increased circulation, but more especially of a rapid collection of leucocytes, and by multiplying rapidly these cells and their secretion may prevent the spread of the disease. If the organisms succeed in developing, the lymphadenoid tissues placed on the line of the lymphatics running from the site of inoculation may present a second line of defence against the invasion of the body. There is an increased circulation through the gland and rapid mitosis, so that more cells are produced, the gland appearing swollen and redder than usual. In it bacilli such as those of tubercle may lodge and be there digested. If, however, the bacilli gain the circulation they may be destroyed in one of two ways. They may be destroyed in the blood stream, an increased production of leucocytes being excited in all the lymphadenoid organs by the destruction of cells, or the organism may lodge in the spleen, as in anthrax and relapsing fever, and be there included by the splenic cells. If the animal, however, presents no great resistance, the micro-organisms quickly develop, whilst but few leucocytes gather round them. Even if they are checked for a time at the lymphatic glands, the organism succeeds in growing through and gains the circulation, which before death contains numbers free in the plasma, not included either in the white blood corpuscles or in the spleen cells.

The destruction of diseased germs may be due either to the cell ingesting them whilst still alive or by the secretions or products of the cell killing the organisms, and after they are dead the white cells swallow and digest them. It is generally agreed that white cells swallow and digest dead bacilli in the same way that unicellular organisms take in their food, a vesicle containing a peptic secretion is developed, the food material is dissolved, and the débris evacuated. But there has been much opposition to Metchnikoff's view that bacilli are ingested alive.

Wooldridge was the first to show that the secretions and cell products of lymphadenoid tissue can hinder or prevent the development of micro-organisms. In some experiments which I had the opportunity of watching he demonstrated that rabbits could be made immune to the inoculation of anthrax bacilli by injecting material derived from the thymus gland. Hankin and others have since then developed the large subject connected with the defensive proteids or alexins which are formed in connexion with the white cells. One method of experiment to show the power of the fluids in a resisting animal is to wrap the bacteria up so that no cells can come in contact with them, and in this way the most resisting anthrax spores may be destroyed. According to Kanthack and Hardy[12] the granules seen in some leucocytes, such as those which stain with eosin, represent the secretion of the cell.

Leucocytosis.—The production of leucocytes in excess of the normal can be brought about by the injection of the products of animal and of vegetable cells. Of animal products there are especially those derived from nuclei such as nucleo-albumin, nuclein, nucleic acid, uric acid, also other nitrogenous products such as urea, peptone, albumose, spermin, and bacterial products, pyocyanin, tuberculin; among vegetable materials are curara, papayotin, abrin, pilocarpin, terebinthin, and cinnamic acid. These either excite lymphadenoid tissue directly or do so indirectly by destroying cells. Many diseases cause a considerable leucocytosis probably in the same way; it is met with in cancerous cachexia, in the stage before death, after hæmorrhage, in inflammation of serous membranes, and in pneumonia. This leucocytosis when it occurs in the general diseases of lymphadenoid tissue is termed leucocythæmia or leukæmia. A slight degree of leucocytosis may exert a favourable influence. Löwy and Richter[13] found that rabbits required much larger doses of such virulent materials as culture of diphtheria, chicken cholera, pig typhoid organisms, or pneumococci, in order to affect them after a certain degree of leucocytosis had previously been produced whether by the injection of spermin, pilocarpin, &c., or by the production of hyperpyrexia by puncture of the corpus striatum. Pawlowsky[14] found rabbits in which a local leucocytosis was produced at the site of the inoculation of an anthrax culture by the injection of papayotin or abrin recovered, whereas the control animals similarly inoculated, but in which no leucocytosis was afterward produced, died. An excessive leucocytosis or leucocythæmia is unfavourable, not only by destroying red cells and disturbing the production as already pointed out, but by promoting an excessive destruction of white ones also. This continued cell destruction keeps up the excessive production by the lymphadenoid tissue and liberates from the nuclei of the cells proteids which set up intra-vascular coagulation, and hence the thromboses, ulcerations, and hæmorrhages which accompany leucocythæmia. It is the mature white corpuscles probably which have the chief protective power; the young white cells hurried into the blood in leucocythæmia

[11] Hunter: Physiology and Pathology of Blood Destruction, THE LANCET, Nov. 26th, Dec. 3rd, 10th, and 17th, 1892, pp. 1259, 1318, 1371. The Pathology of Jaundice, Journal of Pathology and Bacteriology, 1895, p. 259.

[12] Kanthack and Hardy: Philosophical Transactions, 1894, vol. clxxxv., p. 279.

[13] Löwy und Richter: Centralblatt für Wissenschaftliche Medicin, 1895, S. 445.

[14] Pawlowsky: Atti dell' XI. Congresso Medico, Roma, 1894, vol. ii., Patologia generale, 165.

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before they have developed cannot exercise the power, and they also tend quickly to break down.

We have thus traced back the anæmia and leucocytosis or leucocythæmia seen in connexion with the diseases of lymphadenoid tissue to the same cause—an excess of cell-products which excite the divisions of the leucoblasts, in consequence of which unripe red cells are hurried into the circulation from the bone-marrow, and, being inefficient as oxygen carriers, are soon included and destroyed in the spleen; at the same time the immature white cells which get into the circulation cannot fulfil their protective functions and may soon liberate substances which cause intravascular coagulation.

THE SPLEEN.

The spleen is an important blood-forming organ in amphibia and fish, and also in the mammalian embryo, but no proliferating red cells are to be seen in the healthy adult spleen of man. The centre of the Malpighian bodies is the site of the active germination of white cells, which pass to the periphery of the follicle and so get into the lymphatics, leaving the spleen; thence they pass through glands about the tail of the pancreas through the cœliac glands into the thoracic duct. The cells lining the spaces of the spleen pulp, through which the blood slowly flows, englobe and destroy red corpuscles and other foreign and harmful material. This function is especially active during digestion when the organ swells. The inherent rhythmical contractility residing in the unstriped muscle of the capsule and trabeculæ of the spleen favours the return of venous blood from the pulp spaces, especially after these have become distended during digestion. This rhythmical contractility has been not only the subject of experiment in animals, but has been observed during operations upon man. The spleen has been seen to contract under the eye when the return of venous blood had been hindered previously by its displacement. The spleen when prolapsed into a wound, so that the efferent veins are compressed, quickly becomes enormously swollen.

The effect of removal of the spleen.—Complete splenectomy produces a temporary anæmia and enlargement of lymph glands, but neither condition is well marked. They occur both after experimental splenectomy in animals and also in the human subject when a spleen has been removed which had up to a short time before been healthy—e.g., when the spleen has been removed for injury or on account of a twisted pedicle (Ballance).[15] No change follows upon the removal of a diseased spleen, either in the blood or in the lymph glands, for the functions of the spleen have already been assumed by the lymph glands, &c., before the operation. Some experimenters on animals have found them little affected by it. The existence of a spleniculus which hypertrophies when the spleen is removed may explain this absence of symptoms, or, owing to a small portion of the spleen being left on the proximal side of the ligature, the spleen may re-form (Laudenbach).[16] After partial resection, however, healing takes place simply by scar tissue without any hypertrophy.

The protective functions of the spleen.—The cells of the spleen pulp can stop and remove from the circulation abnormal blood corpuscles, pigment, and some forms of organisms. Large cells are seen enclosing red or white corpuscles, bacteria, &c. (cellules d'arrêt: Cæsaris Demel).[17] According to Metchnikoff[18] and Soudakewitch[19] the spirilla of relapsing fever multiply rapidly in the blood, but on reaching the spleen they are taken up and destroyed. If the cells become exhausted spirilla escape, and becoming again free in the blood rapidly increase again. Werigo[20] noted that anthrax bacilli injected into the ear vein of a rabbit reach the spleen and liver and are there included by cells. But soon free bacteria are found in the spaces of the spleen pulp, and then they multiply rapidly and cause the spleen to swell. During the last stages of the disease the bacteria escape into the general blood stream. There are other parasitic diseases—such as typhoid fever, diphtheria, and malaria—where the spleen appears also to play, in part at least, a protecting *rôle*. But, on the other hand, there are conditions in which it remains unaffected.

The pathological changes in the spleen arise either in connexion with disturbances of its circulation or are due to inflammatory changes consequent upon the collection of morbid products in it. A diseased spleen affects the body generally either by producing leucocythæmia and anæmia or by acting as an abdominal tumour.

Circulatory disturbance.—Venous obstruction concurrent with obstruction to the portal circulation causes first an engorgement of the pulp, then a general increase of connective tissue which does not especially pick out the follicles. Embolism affects the spleen according to the vessel, whether a main vessel is affected or several small ones. In pyæmia the necrosis goes on to suppuration around the bacteria which have lodged there. Infarcts from thrombosis are a special feature of the spleen. They are met with in typhoid fever, malaria, and leucocythæmia owing to the coagulation produced by the breaking down of leucocytes. A wedge-shaped mass is formed abutting on the surface, which can thus be distinguished from other changes.

Inflammatory changes the result of infection.—The spleen is rarely affected by tubercle until the disease has become generalised. The bacilli have to pass through lymphatics and lymphatic glands into the blood stream before they can reach the spleen. The tubercles generally form in the sheath of the bloodvessels and in the Malpighian bodies. The Malpighian bodies appear as pale, firm masses which may easily be confounded with the changes due to lymphadenoma. Syphilis, especially when inherited, affects the spleen either directly in the form of gummata or by a general overgrowth of connective tissue or indirectly by starting amyloid disease. Amyloid disease may commence in a previously healthy spleen from some cause other than disease of lymphadenoid tissue, and by commencing in the follicles form the so-called "sago spleen," or it may be widely diffused around the vessels of the pulp, and give rise to a hyalin appearance on section which has been compared to bacon rind. Amyloid disease may also affect a spleen previously altered by malaria, tubercle, syphilis, &c.

The spleen in malaria.—In malaria the spleen is primarily affected by an increased vascularity, in connexion with which there is an inclusion by the cells of the pulp of the corpuscles which are degenerating owing to the parasites, and there is left behind much pigment. This increased vascularity may cause only a temporary swelling of the spleen, and the organ afterwards subsides. The more permanent enlargement is due to an increased connective tissue formation whether specially of the follicles or diffusely of the pulp. Infarcts also occur. The stopping function of the spleen may be so far successful that the patient ceases to suffer from malaria. Presumably in such a case the spleen has taken a prominent part in removing the parasites from the circulation. The spleen may not, however, subside after the cessation of the malaria, but remains an abdominal tumour, obstructing by its large size the abdominal circulation, and being in danger of causing at any time intra-peritoneal hæmorrhage either by the rupture of the tumour itself from some slight injury or often adhesions which have formed between the capsule and neighbouring structures. Such patients remain thin and anæmic, and an improvement in health may follow on splenectomy, always provided that the malaria has subsided and there is no leucocythæmia present. The improvement may be due simply to the removal of an abdominal tumour forming a mass of diseased tissue.

THE BONE MARROW.

Red and yellow marrow.—From the time when ossification commences in the previously non-vascular fœtal cartilage by an invasion of bloodvessels from the perichondrium there appear erythroblasts developing into red corpuscles, and at a later period leucoblasts, which form the small colourless cells. Wherever ossification is going on there is an active formation of red corpuscles; and not only in cartilage and membrane, but also in exceptional cases of ossification, such as those which occur late in life in the laryngeal and rib cartilages, Neumann found erythroblasts. The formation of the red corpuscles in the red marrow is a feature common to all vertebrates, and is only absent in those fish whose cartilage persists throughout life as solid rods. In adult mammals it is the sole manufactory for the red corpuscles. The red marrow, however, gradually disappears from the bones of the extremities, being last of all found in the cancellous tissue of the upper

[15] Pitts and Ballance: Transactions of the Clinical Society, 1896, vol. xxix., p. 102. Also discussion by Ballance, Bland Sutton, &c., THE LANCET, Feb. 22nd, 1896.

[16] Laudenbach: Virchow's Archiv, 1895, Band cxll., s. 201.

[17] Cæsaris Demel: Archives Italiennes de Biologie, 1896, tome xxvi., p. 83.

[18] Metchnikoff: Virchow's Archiv, 1887, Band cix., S. 176.

[19] Soudakewitch: Annales de l'Institut Pasteur, 1891, tome v., p. 545.

[20] Werigo: Ibid., 1894, tome viii., p. 1.

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end of the humerus and femur. It is present in the flat bones, especially in those of the vertebræ and skull, although even in the flat bones yellow marrow takes the place of much of the red late in life. The yellow marrow which fills the long bones of the adult must not be regarded as identical with the fat of connective tissue. It must be compared with the fatty masses which replace the thymus and lymphatic glands, for under certain circumstances the yellow again changes to red. It is also asserted that the administration of yellow marrow has had a beneficial effect in anæmia by promoting the production of red corpuscles, a result which cannot be attributed to simple fat. Marquis[21] has described the marrow in the long bones of the frog, which is red during the active period in spring, becomes mixed with yellow during the summer, but during the autumn and winter rest is entirely yellow. Yellow marrow may, therefore, be regarded as red marrow in a state of quiescence. In chronic wasting diseases such as pulmonary emphysema, tuberculosis, chronic renal nephritis, and also on account of starvation nearly all the fat may be absorbed, causing the yellow marrow to have a jelly-like appearance. The fatty marrow may, on the other hand, increase accompanying eccentric atrophy of the bone until the bone becomes a mere shell and it may even float in water. This occurs especially in cases of senile osteomalacia.

The myeloplaxes or giant cells of the marrow.—The multinucleated myeloplaxes are found in Howship's crypts bordering on the marrow. They show marked powers of movement on the warm stage and also englobe particles. If carmine be injected into the marrow cavity, it is found included in the giant cells near the site of the injection. If an excess of the carmine be injected, the giant cells containing these particles are easily seen in the blood, and carmine is also found in the lungs, liver, spleen, and kidneys, showing that there is an easy exit from bone (Arnold).[22] Multinuclear giant cells are carried into the blood and appear there under a number of circumstances. But their presence in the blood does not indicate any excessive production of them in the marrow.

Lymphoid marrow.—The yellow marrow may be replaced by marrow varying in colour from a pinkish grey up to a deep red. But the lymphoid marrow as met with in disease is by no means the same as the red marrow of the young healthy animal. There is in lymphoid marrow not only a marked increase of the small colourless marrow cells and of the nucleated red cells, but many of the latter are found free in the capillaries, and there is an increase of blood pigment without there being evidence that this pigment can be worked up again as hæmoglobin. The excess of pigment is the result of hæmorrhages due to thrombosis of the blood-vessels, and this thrombosis is a sign that a destruction of leucocytes is in progress. Lymphoid marrow is best marked in pernicious anæmia, in which disease the prevailing factor is the excessive destruction of blood in the spleen and liver. In a like manner chronic septic absorption, especially chronic suppuration of bone, tends to produce lymphoid marrow. In cancerous cachexia a similar condition of the marrow may be also found, but it is necessary to distinguish lymphoid marrow from a diffuse infiltration of the marrow by secondary cancerous growths, which is often difficult. It is difficult to draw a sharp distinction between the lymphoid marrow produced by lymphadenoma accompanied by leucocythæmia and anæmia and new growths of lymphadenoid structure originating in the marrow from the small marrow cells (myeloma or lympho-sarcoma), except that these growths are circumscribed, at any rate in the earlier stages.

The inflammatory diseases of the marrow, as compared with those of the spleen and lymphatic glands, are limited in variety, for the organisms of most infectious diseases are not arrested in the bone. Only a few kinds are so stopped—e.g., tubercle bacilli, the organisms of syphilis, and pyogenic cocci. They infect especially the ends of the long bones of young subjects in which red marrow is still present, and which are especially vascular in the neighbourhood of the epiphyses. These organisms arriving by the circulation settle down and grow, being especially favoured if a blood-clot due to some slight injury be present. In older patients the periosteum, as the most vascular part of bone in the adult, is more likely to be affected than the marrow.

[21] Marquis: Inaugural Dissertation, Dorpat; also Centralblatt für Pathologie, &c., 1893, Band iv., S. 459.
[22] Arnold: Virchow's Archiv, 1895, Band cxli., S. 411.

The Arris and Gale Lectures

ON

SOME POINTS IN THE PATHOLOGY OF HEART DISEASE.

Delivered at the Royal College of Surgeons of England on Feb. 22nd, 24th, and 26th, 1897,

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LECTURE II.[1]

Delivered on Feb. 24th.

THE EFFECTS OF HEART FAILURE ON THE CIRCULATION.

MR. PRESIDENT AND GENTLEMEN,—In my previous lecture I discussed the conditions which may lead to a failure of the compensatory mechanisms of the heart. In this lecture I propose to deal with the effects of such failure on the circulation generally, that is to say, on the blood, and the pressure and velocity of this fluid in the different parts of the circulatory system.

I would, in the first place, remind you of some of the elementary facts in the physiology of the circulation. It must be remembered that the vascular system forms a closed circuit of elastic tubes. In one part of this circuit is included a pump—the heart, the contractions of which will, in consequence of the presence of valves, propel the contained fluid in one direction only. In this system there is a resistance to the flow of blood in consequence of the friction between the blood and the vessel wall in the small arteries and to a lesser extent in the capillaries. There is also a difference in the structure of the walls of the tube on the arterial and venous sides, so that a small rise of pressure in the veins will cause a considerable dilatation and increase in capacity of these vessels, whereas on the arterial side the injection of a small quantity of fluid will bring about a large rise of pressure. If the blood is at rest in the system, and assuming that all parts of the system lie in one plane, it is evident that the pressure in all parts of the system must be the same. This pressure was termed by Weber the mean systemic pressure (not to be confused with mean arterial pressure), and amounts in a large dog to about 10 mm. Hg. If the heart now commences to beat, fluid is pumped from the venous side into the arterial side, where it accumulates to a certain extent in consequence of the resistance in the smaller arteries and capillaries, so raising the pressure on the arterial side and lowering the pressure on the venous side. The fall, however, on the venous side is not directly proportional to the rise on the arterial side, since, as I have pointed out above, a large change in the capacity of the veins is only attended by a small variation of the pressure within them, whereas the blood removed from the veins cannot be pumped into the much less distensible arteries without causing in them a considerable rise of pressure. Somewhere in the circulation there must be a point where the pressure is neither raised nor lowered and where, therefore, the pressure is independent of the cardiac activity. At first sight it might be thought that this neutral point must lie in the situation of the peripheral resistance—viz., between the arterioles and capillaries. It must be remembered, however, that even when the blood is circulating there is not necessarily, although there may happen to be generally, a fall of pressure all the way round the system. What does fall from the heart through the arteries, capillaries, and veins back to the heart is the energy in the fluid at any given point. The total energy of a mass of blood at any point in the system is represented, not only by the hydrostatic pressure at that point, but also by the kinetic energy of the moving mass of fluid ($= \frac{1}{2} mv^2$). In the capillaries, in consequence of the great area of the bed, the velocity is very small and rapidly increases in the veins. Hence the proportion of the total energy represented by $\frac{1}{2} mv^2$ is relatively small in the capillaries and relatively large in the veins. The other

[1] Lecture I. appeared in THE LANCET of Feb. 27th, 1897.

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factor—the pressure—must be therefore relatively large in the capillaries and small in the veins. It thus follows that the neutral point in the vascular system, where the mean systemic pressure is neither raised nor lowered by the inauguration of the circulation, lies considerably on the venous side of the capillaries—at any rate, in most parts of the body.

Now in such a system it is evident that a failure of the heart pump, however induced, whether by vagus-inhibition, by damaged valves, aortic stenosis, or cardiac fatigue, can only cause a return of the pressures in the various parts of the system to one level—the mean systemic pressure. We shall, therefore, have a rise of pressure on the venous side of the neutral point and a fall of pressure on the arterial side. By actual experiment we may ascertain the extent and direction of the change of pressure in the various parts of the circulation. To this end we may register the pressure in the arterial system, in the vena cava, and in the portal vein. We may deal in the first place with the case in which the vessels are removed from the interference of the vaso-motor centre by section of the cord or splanchnic nerves, so that we may study the pure effects of cessation of the circulation. In such an experiment the pressures before cardiac inhibition were: Femoral artery, 58 mm. Hg; portal vein, 73 mm. H_2O; and femoral vein, 62 mm. H_2O. On exciting the peripheral end of the right vagus the heart stopped, and ten seconds later the pressures were: Femoral artery, 20 mm. Hg; portal vein, 72 mm. H_2O; and femoral vein, 68 mm. H_2O. After three minutes the pressures were: Femoral artery, 6½ mm. Hg = 84 mm. H_2O; portal vein, 83 mm. H_2O; and femoral vein, 82 mm. H_2O; so that complete equilibrium was established between the pressures at all parts of the system. Here the total failure of the heart pump caused a considerable fall in arterial pressure, a considerable rise in the vena cava pressure, and practically no alteration in the portal vein. The last represents, therefore, a neutral point of the system; in all parts distal to the portal vein there must have been a fall of pressure. The only part of the body, therefore, where heart failure can by itself cause a rise of pressure is in the large veins of the trunk and possibly in the capillaries of the liver.

In the living body, however, we never get a reproduction of so uncomplicated conditions. In a closed circuit of tubes, as described by Weber, the mean systemic pressure can only be increased by injecting a further amount of fluid into the system or by diminishing the capacity of the system. In the body neither the amount of circulating fluid nor the calibre and capacity of the vessels forming the system are constant quantities, and it is possible that changes in the heart leading to its failure may have as an immediate consequence an alteration either of the capacity of the system or of the amount of circulating fluid. We might therefore have, as the remote effect of heart-failure, an increase in the pressures, not only near the heart, but also in the peripheral capillaries. Thus, if we repeat the experiment of vagus inhibition just described, but carry it out on a normal animal, we find that at first the results of stoppage of the heart are exactly similar to those already described. After the inhibition has lasted from twenty to forty seconds the anæmia of the brain causes a strong excitation of the vaso-motor centre. We therefore get extreme vascular constriction, with diminution in the capacity of the system, as is evidenced by a considerable rise in portal, vena cava, and arterial pressures. We may, in fact, in consequence of this constriction, obtain a doubling of the mean systemic pressure. Another point which we must bear in mind is that the quantity of circulating fluid is intimately dependent on the pressures at various parts of the vascular system. Almost every fall of arterial pressure gives rise to a diminished concentration of the blood due to the taking up of fluid by the blood-vessels from the tissues, whereas a rise of blood pressure augments the concentration by causing increased transudation. With these varying factors to take into account it is impossible to predict in our study chairs what will be the effect of failure of the heart pump on the pressure and distribution of the blood throughout the different parts of the body, but we must in each case have recourse to experiment.

In attempting to deal with this subject experimentally one is met at the outset by the difficulty of reproducing clinical phenomena in the laboratory. We have to choose a method of interfering with the action of the heart-pump which resembles in some degree the chronic processes of nature; artificial stenosis or valvular lesions are useless for this purpose, owing to the wonderful powers of compensation possessed by the normal heart, so that the margin between complete compensation and absolute failure becomes too narrow for experiment. The best method is perhaps that adopted by Cohnheim—viz., the interference with the action of the heart by the injection of oil into the pericardium. By this means we may effect an impairment of the heart's action of considerable duration without running the risk of stopping its action altogether. In the experiments of this nature carried out by Cohnheim, this observer measured the pressures in the carotid artery and in the jugular vein, and noticed that as the diastolic expansion of the ventricle began to be affected by the injection of oil into the pericardium there was a fall of arterial, accompanied by a rise of venous, pressure. The jugular vein is, however, so near the heart and so influenced by the diastolic suction of this organ that one cannot deduce a general rise of venous pressures from the occurrence of a rise in this vessel. I have, therefore, repeated Cohnheim's experiment with two modifications. In the first case I have measured simultaneously the pressures in the inferior vena cava, in the portal vein, and arterial system, while at the same time oil was being injected into the pericardium. In the second series of experiments I have observed the influence of the pericardial injection on the circulation in the limbs, using as my guide the volume of the limbs.

We will consider, in the first place, the effects of injecting oil into the pericardium on the pressures in the portal vein, vena cava, and in the arterial system. In these experiments the animal having been anæsthetised with a large dose of morphia and A.C.E. mixture, cannulæ were placed in the central end of the splenic vein, all other vessels of the spleen having been ligatured, in the central end of the iliac vein, and in the central end of the carotid or femoral artery. The venous cannulæ were connected with manometers filled with coloured $MgSO_4$ solution, so that the height of the fluid could be easily read off on the graduated scales behind the tubes. The arterial cannula was connected with an ordinary mercurial manometer, the excursions of the meniscus being registered on the blackened surface of a kymograph. At the end of the experiment, the abscissæ having been taken, the readings were plotted out as curves. After the attachment of the manometers the chest was opened in the middle line and a cannula tied into an opening in the pericardium for the injection of oil, which was allowed to run in from a graduated burette. In one experiment of this sort the pressures at the beginning of the experiment were: arterial, 90 mm. Hg; portal vein, 128 mm. $MgSO_4$; and vena cava, 36 mm. $MgSO_4$. 20 c.c. of oil were then allowed to flow into the pericardium. This had no influence on the pressures in any of the vessels. Injection of another 20 c.c. then caused a slight rise in the vena cava to 40 mm. $MgSO_4$, but no distinct change in the other vessels. Injection of another 20 c.c. caused a rise—the vena cava to 58 mm. $MgSO_4$, a slight but temporary fall in the arteries, and no change in the portal vein. Another 10 c.c. injected gave a large rise to 76 mm. in the vena cava, a slight rise to 134 in the portal vein, and practically no effect on the arterial pressure. I had now arrived, after the injection of 70 c.c. of oil, at the limits of compensation possessed by the heart and vascular system for the hindered diastolic expansion. Injection of another 20 c c. of oil now caused a very marked change in all the pressures. The arterial pressure sank to 56 mm. Hg, while the portal pressure rose to 160 mm., $MgSO_4$, and the vena cava pressure to 124 mm. $MgSO_4$. The injection of a further 10 c.c. put a stop to the circulation altogether. The arterial pressure sank to 26 mm., and then as the heart stopped to 18 mm., while the portal vein and vena cava rose first to 180 and 170 mm., and then with the stoppage of the heart, to 215 mm., the pressures in both vessels being practically the same. The oil was now suddenly let out of the pericardium, and the heart, after a short pause, re-commenced beating. The first effects of the re-establishment of the circulation were striking. With the very first heart-beat the pressure in the vena cava sank with extreme rapidity to its normal pressure of 36 mm., and then rose slightly to about 40 mm. $MgSO_4$. The arterial pressure rose with equal rapidity to a point far above its previous height—viz., 146 mm. Hg., to fall rapidly to 84 and then rise gradually towards the end of the experiment. The pressure in the portal vein, instead of falling, like that in the vena cava, continued to rise rapidly

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on the re-commencement of the heart-beats until it attained the enormous height of 322 mm. $MgSO_4$, whence it fell in the course of the next six minutes to 148 mm. $MgSO_4$—i.e., somewhat above its height at the beginning of the experiment.

How are we to explain these results? It is evident that we have here at least two factors at work—viz., first, the gradual impairment and ultimate failure of the heart pump; and, secondly, a diminution of the capacity of the vascular system and consequent rise of the mean systemic pressure, brought about by the activity of the vaso-motor centre. We have already seen that the effect of a pure stoppage of the heart is to cause a rise of pressure in the vena cava and a fall in the arteries, while the pressure in the portal vein, which represents the neutral point of the system, remains practically unchanged. In this case, however, the vena cava pressure not only rises to the height of the normal portal pressure, but attains nearly double this amount, this rise being accompanied by a parallel rise in the portal vein and a large fall in the arteries. Now we know that any anæmia of the vaso-motor centre, however caused, excites its activity, and therefore active constriction of the vessels all over the body, but especially in the splanchnic area. As soon, therefore, as the hindrance to the diastolic expansion becomes sufficient to diminish the normal outflow of blood from the heart in a given time there is a fall of arterial pressure, and the vaso-motor centre is excited and endeavours to restore the arterial pressure to its normal height by an active constriction of all the arteries. That at the moment in the experiment when the heart stops the bloodvessels are constricted is shown by the enormous rise in pressure which occurs directly the heart re-commences to beat. The heart, which is richly supplied with blood from the distended venæ cavæ, propels this into the arteries, fills them up, and then has to overcome the resistance of the constricted arterioles, so that the pressure rises high above its normal amount, to sink again as this raised pressure furnishes a sufficient supply of blood to the vaso-motor centres of the brain, which, it seems, from the work of Bayliss and Hill and other observers, do not participate in any general vascular contraction. The rise of pressure in the portal vein is analogous to that which occurs in the arteries, and is due to the constriction of the branches of the portal vein in the liver, so that the trunk of this vessel is supplied with blood more rapidly than can be passed through the liver into the vena cava. This experiment brings out two facts which are of importance for our knowledge of the conditions in heart disease. In the first place, any heart failure will tend to be accompanied by active vascular constriction and a rise of mean systemic pressure, so that the pressure at the neutral point of the system, as well as on the venous side of this point, must be raised considerably above normal. In all cases, therefore, of heart failure there will be a large rise of pressure in the capillaries of the liver. In the second place, the existence of this vascular constriction shows that the heart, although inadequate to perform its functions, cannot relieve itself by calling on the depressor mechanisms when by so doing it would diminish below what is necessary the blood-supply to the vaso-motor centre.

We have now the important question to decide as to how far back this rise of venous pressure goes. Is the diminution in the capacity of the vascular system consequent on the vaso-constriction ever so great as to raise the pressure in the small veins and capillaries in the peripheral parts of the body such as the limbs? To determine this question one must carry out an experiment similar to the above, but at the same time enclose one limb in a plethysmograph and record changes in its volume by means of a Marey's tambour or a piston-recorder connected with the plethysmograph. If an experiment be arranged in this way and oil injected into the pericardium, it is found that, while the arterial pressure remains constant, practically no change occurs in the volume of the limb, although there may be a rise of pressure both in the portal vein and vena cava. As soon, however, as the compensatory mechanisms become inadequate and the arterial pressure begins to sink, the volume of the limb also diminishes. Thus the volume of the limb, and presumably therefore the pressure in its smaller vessels, including its capillaries and veins, is directly proportional to the arterial pressure, and is not altered by considerable changes in the venous pressures consequent on heart failure. We may conclude, therefore, that, even with coincident vascular constriction, the effect of heart failure must be a fall and not a rise of blood pressure in the capillaries and smaller veins of the limbs. Since this conclusion is opposed to the ordinarily accepted view, which we owe largely to Cohnheim, that failure of compensation in heart disease leads to a general rise of venous and capillary pressures in all parts of the body, we must inquire whether there may not be other factors at work by which a rise of pressure might be produced. Especially we can elevate the mean systemic pressure, not only by vascular constriction, but also by increasing the amount of fluid contained in the system—i.e., by causing a plethora. Are there any conditions in heart failure which might lead to a plethora sufficient to raise the venous and capillary pressures in the limbs in the absence of any arterial rise?

I pointed out last year that a slight degree of plethora must be the invariable consequence of any heart failure, since a fall of capillary pressure increased the fluid taken up from the tissues and diminished the transudation into the tissues. We therefore get a fall of specific gravity of the blood whenever the arterial pressure is lowered by heart failure or by bleeding. It will be noticed, however, that such an increased absorption of fluid from the tissues must come to an end as soon as the cause of the absorption is removed—i.e., as soon as the capillary pressure is restored to its normal amount, so that a plethora brought about in this way could never be made responsible for a rise of capillary pressure in the limbs. Of course, even when the pressure in the limb capillaries has attained its ordinary amount there is one factor left tending to produce a hydræmia or hydræmic plethora—viz., the diminished urinary flow in consequence of lowered arterial pressure,—and last year I thought that possibly this factor would be sufficient to cause a condition of hydræmic plethora in heart disease and raised capillary pressure in the limbs. Whether this is or is not the case can only be decided by direct clinical observation. If a condition of hydræmic plethora be present in uncompensated heart lesions we should expect to find—(1) a diminution in specific gravity of the whole blood; and (2) a diminution in the amount of hæmoglobin and number of corpuscles present in the blood.

With regard to the first point, it has been shown fairly conclusively by Lloyd-Jones that in failure of compensation there is a marked diminution in the specific gravity of the whole blood. Now this diminution might be due to a hyperplasmia of the blood, possibly brought about by a condition of plethora or to a decrease in the solids of the plasma or corpuscles or of both—i.e., either to hydræmic plethora or to hydræmia. In order to decide which of these two conditions is responsible for the lowered specific gravity we must have recourse to the determination of the hæmoglobin and corpuscles in the blood of such persons. On referring to the various researches on the subject we find a considerable discrepancy. According to the majority of writers, the relative number of corpuscles in the blood of patients suffering from heart disease is increased, whereas according to others, such as Stintzing and Gumprecht, the exact opposite is the case. In face of this discrepancy Dr. Fawcett has undertaken a series of observations on the amount of hæmoglobin and the number of corpuscles in the blood of patients suffering from heart disease, whether accompanied or not by signs of so-called "backward pressure." Although these researches are not completed, he has kindly allowed me to quote some of his results in this lecture.

The first case investigated seemed at first to favour the hypothesis of the existence of hydræmic plethora.

CASE 1. *Mitral disease.*—This patient, aged thirty-three years, was admitted to hospital on Oct. 30th, 1896, with œdema and ascites of a month's duration. On Nov. 3rd the hæmoglobin amounted to 48 per cent.; on Nov. 14th it was 50 per cent.; on Nov. 24th, 54 per cent.; on Nov. 30th, 65 per cent.; and on Jan. 10th, 1897, 85 per cent. Here there was a marked increase in the percentage amount of hæmoglobin during the patient's stay in the hospital. It must be remarked, however, that the œdema and ascites had disappeared entirely by Nov. 11th, when the hæmoglobin was only 50 per cent., and that the condition of the blood only commenced to improve markedly with the administration of iron, which began on Dec. 7th. In all the other cases investigated the amount of hæmoglobin, even when marked ascites was present, was either above normal or very little below.

CASE 2. *Mitral stenosis and regurgitation, with tricuspid*

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regurgitation.—This was a patient aged twenty-eight years. On Nov. 11th the hæmoglobin amounted to 100 per cent. and there were œdema of the legs and ascites. On Dec. 12th the hæmoglobin was 97 per cent., and the ascites and œdema had disappeared.

CASE 3. *Mitral stenosis (ulcerative endocarditis).*—This was a patient aged forty-one years. On Nov. 11th the hæmoglobin was 105 per cent., and there was much œdema. On Nov. 24th the hæmoglobin had risen to 110 per cent.; there was still much œdema, and the patient died on Nov. 27th.

CASE 4. *Bronchitis with heart failure.*—This was a patient aged twenty-three years. On Nov. 18th the hæmoglobin amounted to 97 per cent., and there were œdema and ascites. On Dec. 7th the hæmoglobin was 90 per cent., and the patient was in the same condition and died on Dec. 8th.

In nearly all cases it was found that the number of corpuscles was increased to a greater extent than the hæmoglobin, so that the corpuscles themselves contained less hæmoglobin than normal.

It will be seen that these results lend no support to the view that failure of compensation is attended by a condition of plethora. They tend rather to show that the amount of blood in the circulation is subnormal, unless we adopt the unlikely supposition that the defective aeration of the blood in this disease acts like mountain air, in stimulating the production of red corpuscles and hæmoglobin. We must, therefore, conclude that there is no condition of the plethora, hydræmic or otherwise, in heart disease, and that the lowering of the specific gravity of the whole blood is due to a diminution of solids of the plasma, and possibly also of the corpuscles—i.e., there is hydræmia, but no plethora. Since the volume of the fluid contained within the vascular system is not increased, the only factor which can contribute to the raising of the mean systemic pressure, and a consequent production of a rise of pressure in the peripheral veins and capillaries by failure of the heart-pump, is the active vascular constriction caused by the anæmia of the vaso-motor centre. We have already studied the limits of a rise of systemic pressure so produced, and have seen that it is inadequate to bring about a rise of capillary pressure in the limbs when the heart fails. We must, therefore, conclude that the ordinarily accepted notion is erroneous which assumes that the pressure in the capillaries and veins all over the body in uncompensated heart disease is raised. The pressure must in these situations follow the arterial pressure, and thus be lowered. The only parts of the body where there can be a rise of pressure in heart disease are the capillaries of the liver (whence the well-known "nutmeg" liver of this disorder) the great veins near the heart, and possibly in the system of capillaries which surround the tubules of the kidney. In the limbs, and probably in the abdominal viscera other than those just mentioned, the capillary pressure will be lower than in the normal individual.

For many years, and, indeed, since the time of Richard Lower, we have been wont to pride ourselves on our exact understanding of the factors responsible for the production of anasarca and ascites in heart disease, and have confidently ascribed the increased serous exudation to the rise of pressure in the capillaries due to the transmitted backward pressure from the incompetent heart, and the dropsy of heart disease is generally regarded as affording striking support to Ludwig's filtration hypothesis of lymph formation. The whole argument is, however, based on the false assumption that there is a rise of pressure in the smaller veins and capillaries in heart disease; whereas, as I have just shown, the reverse is the case. We must, therefore, seek for some other explanation of the dropsy in this disease.

VICTORIA HOSPITAL, SWINDON.—The ninth annual meeting of the Victoria Hospital, Swindon, was held on Feb. 13th. The report of the general committee showed the total expenditure for the past year to have been £419, against receipts amounting to £500; the sum of £107 was due to the treasurer on account of the building and furnishing fund. There were 153 patients admitted in 1896, against 131 in 1895, the average cost of each being 2*s.* 11½*d.* daily. The committee suggested that the celebration to be held in Swindon on account of the Queen's long reign should take the form of raising funds for the benefit of the hospital.

A SUCCESSFUL CASE OF INTRAVENOUS INJECTION OF SALT SOLUTION AFTER LAPAROTOMY IN A CASE OF RUPTURED TUBAL GESTATION.

BY ARTHUR H. N. LEWERS, M.D. LOND.,
OBSTETRIC PHYSICIAN TO THE LONDON HOSPITAL.

ON April 20th, 1896, I was called in by Dr. Fennell of Dalston to see a married woman, aged thirty years, when the following history was obtained. She had been married nine years and had had four children, the last nineteen months previously. There had been no miscarriages. Instruments were used at the first confinement, but not at the others. She generally got up ten days after her confinements, but after the last confinement she was in bed nearly two months on account of what the medical attendant told her was peritonitis. Menstruation was quite regular up to Feb. 26th, 1896, but she "saw nothing" in March. She took some pills on April 4th with a view to bringing on the period; these gave her great pain. On April 6th a vaginal discharge containing blood began, and she had been losing blood more or less ever since up to the day when I first saw her (April 20th). The patient said that a solid substance came away from the vagina on April 11th when passing urine. She had had some pain in passing urine and had suffered from constipation since April 6th. She said that she had had pain at the lower part of the abdomen, especially over the left iliac region, for some days before I saw her, and there was an especially sharp attack of pain on the early morning of April 20th. On examination of the abdomen there was some resistance in the left iliac region and some tenderness there. The breasts did not appear active. On vaginal examination there was a little blood to be seen about the external parts. The uterus was anteverted and slightly flexed and distinctly larger than normal, although the sound only passed three inches. A swelling was felt behind and to the left of the uterus occupying the left posterior quarter of the pelvis. It was distinctly elastic and could be displaced a little by upward pressure. The case appeared to me in all probability to be one of extra-uterine pregnancy. The question arose as to whether the substance passed by the patient a few days before I saw her might not have been an ovum, and the case one of ordinary miscarriage, with possibly some peri-uterine inflammation; but, on the whole, it seemed to me much more probable that the case was really one of tubal pregnancy, and that the substance in question said to have been passed, if anything more than a clot, was probably a decidual cast of the uterus. The arrangements of the patient's home were not very convenient for performing abdominal section, and accordingly I had her removed to the London Hospital, where she was admitted under my care on April 21st.

Operation.—On April 23rd she was anæsthetised with the A.C.E. mixture; the abdomen was opened in the usual way and was found to contain blood and masses of clot. The left Fallopian tube was considerably enlarged and had ruptured. The left ovary contained a large corpus luteum with a well-marked yellow convoluted border. The uterine appendages on the right side were also slightly enlarged, and the uterus was considerably enlarged. The appendages on both sides were removed in the usual way and the peritoneum well washed out with saline fluid. A Keith's tube was inserted and the rest of the abdominal incision was closed. When this had been done it was observed before the dressing was put on that the Keith's tube had become full of dark blood. This was withdrawn once or twice, but the tube very soon became again full of blood. The abdomen was therefore re-opened to discover the source of the bleeding; the stumps of the broad ligaments were pulled up and inspected, but no blood was coming from them. On looking at the back of the uterus there were some quite superficial tears in the peritoneal coat near the level of the internal os, from which blood was coming rather freely. Several attempts were made to control this bleeding by passing silk ligatures on a curved needle under the tissues at the bleeding point and tying, and also by applying Wells's forceps; but the tissues were so friable that the more manipulation took place in the neighbourhood of the tears

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the worse the bleeding became. I therefore decided to perform supra-vaginal hysterectomy; the uterine arteries were ligatured on each side outside the uterus, and then the body of the uterus was cut away. A large pair of Wells's forceps was left on, but the surface of the stump oozed rather freely, and two silk ligatures were passed right and left from before backwards and tied firmly to check it. Some iodoform gauze was packed over the stump, a small piece being left sticking out at the lower end of the wound. A Keith's tube was inserted and the remainder of the wound closed in the usual way. The re-opening of the wound and the various measures that were required to permanently control the bleeding had occupied a considerable time, and, besides, a good deal of blood had been lost, taking into consideration what was extravasated in the abdomen by the extra-uterine sac before operation, and also reckoning the amount that was lost from the superficial tears on the back of the uterus. How these were produced I am unable to say positively. My impression is, however, that some of the masses of clot removed were partially adherent to the uterus, and that in removing them the peritoneal coat of the uterus must have been slightly torn, and then the tissues were so friable that almost any kind of manipulation—sponging, pulling up the uterus, and the like—seemed to increase the laceration and the hæmorrhage. At all events, at the end of the operation, when the patient was put back to bed, her face was quite white, her hands and feet quite cold, and no pulse could be felt at the wrist; and I have no doubt whatever that had she been left without further treatment she would certainly have died, probably without regaining consciousness at all. I decided, however, to try the effect of injecting salt solution into the veins. Our stock of boiled water had been exhausted in washing out the abdomen during the operation, so that the water used in making the salt solution for intravenous injection was merely the water out of the kettle and out of the tap. The salt solution, however, was sterilised, because we keep a concentrated solution of it which is carefully prepared and boiled before each operation. A glass reservoir was filled with salt solution at the temperature of 100°F. and containing a drachm of common salt to each pint. The injection was made into the median cephalic vein of the left arm, the necessary pressure being obtained simply by hanging up the glass reservoir on the wall about three feet above the patient's head. After one pint had been injected the patient's pulse at the wrist could be felt. After four pints had been injected the pulse was as good as it had been before the operation. The patient made a good recovery. I have seen her several times since she left the hospital; the abdominal wound is soundly healed, and she remains quite well.

Harley-street, W.

ON THE APPLICATION OF THE SERUM TEST TO THE DIFFERENTIAL DIAGNOSIS OF TYPHOID AND MALTA FEVER,

AND ON THE FURTHER APPLICATION OF THE METHOD OF SERUM DIAGNOSIS TO THE ELUCIDATION OF CERTAIN PROBLEMS IN CONNEXION WITH THE DURATION OF IMMUNITY AND THE GEOGRAPHICAL DISTRIBUTION OF DISEASE.

BY A. E. WRIGHT, M.D. DUB.,
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AND
SURGEON-CAPTAIN F. SMITH,
ARMY MEDICAL STAFF.

IT is notorious that every clinician in tropical and sub-tropical countries is constantly meeting cases of continued fever of which he finds it impossible to say whether they are cases of typhoid fever, of Malta fever, of malarial fever, or of some other (possibly as yet undescribed) variety of continued fever. In cases of this kind, and further in cases where it is desirable that a diagnosis should be arrived at early in the course of the disease, the prompt and accurate methods of diagnosis which medical research has recently placed at our disposal will be everywhere welcomed. Three of such methods of diagnosis are at present available. In the first place, the blood may be examined microscopically with a view to determining the presence or absence of pathogenic micro-organisms. This method is of particular utility in connexion with the determination of the presence or absence of the micro-organisms of malaria and of spirillum fever. In the second place, the excretions (and, in particular, the urine[1]) may be examined by appropriate cultivation methods with a view to determining the presence or absence of pathogenic micro-organisms. This method is applicable to typhoid fever. It is probably also applicable to Malta fever. Lastly, the method of serum diagnosis may be applied. By this method the blood of a patient who is suffering, or who has suffered, from a continued fever is tested in turn with any pathogenic micro-organisms that may be available, and in particular with the micro-organisms which are causally associated with typhoid fever and Malta fever. We have recently been applying this serum test to the diagnosis, and especially to the after-diagnosis, of tropical and sub-tropical continued fevers. Convalescents from these fevers come under observation in Netley in the persons of soldiers and others who are invalided home from military stations abroad.

METHODS.

Blood is readily obtained in sufficient quantities from the finger tip by puncturing the back of the finger near the nail. It is then drawn off into a pipette, such as is represented in Fig. 1. This pipette is converted into a blood capsule by sealing it in the flame at the points indicated in the figure by the letters *x x*. After twenty-four hours, or as soon as the blood has duly separated into serum and clot, the ends of the blood capsule are broken off and the separated serum is drawn off by a capillary pipette, as indicated in Fig. 2. The amount of serum which is drawn off is indicated by placing a mark *y* on the outside of the capillary pipette. The serum is then blown out into a watch glass and is diluted first fivefold by filling up the capillary pipette four times in succession with normal salt solution and by blowing this salt solution out into the serum in the watch glass. In this manner any desired dilutions are obtained. It is convenient to make 5-, 10-, 25-, 50-, and 100-fold dilutions of each sample of serum.

Having diluted the serum in this manner a small quantity of the diluted serum is allowed to run up into the sedimentation tube[2] represented in the diagram by Fig. 3. For the sake of clearness let it be supposed that diluted serum has been allowed to run up the tube to the point indicated by the letter *a* in Fig. 3. This point is now indicated on the outside of the sedimentation tube by a red mark. Having filled in the tube in this manner with the desired amount of diluted serum, the point of the capillary pipette is now turned upwards, so as to admit a bubble of air into the point of the capillary pipette. The diluted serum now occupies the position indicated in Fig. 3 by the space *c* to *d*, the bubble occupying the space between the letters *b* and *c*. Having thus introduced our bubble of air, which is to serve the purpose of an index, the end of the capillary pipette is immersed into a perfectly fresh emulsion made from a young culture of either typhoid or, as the case may be, Malta fever bacteria. The emulsion is allowed to run in until it reaches the point *a*. We have now introduced an equal quantity of diluted serum and of typhoid or Malta fever emulsion into our sedimentation tube. The next step is to mix the bacterial emulsion with our diluted serum. This is easily done by aspirating by means of the india-rubber tube T the contents of the capillary pipette two or three times in succession into the mixing chamber *z*. Having thus obtained an intimate mixture of an equal portion of the diluted serum and of the bacterial emulsion, we blow the contents of the tube down into the stem of the pipette, taking care not to blow it down too near the end of the pipette, and we seal the point of the pipette in the flame. We then label the capillary pipette 1 in 10, if we have mixed an equal volume of 5-fold diluted serum with a bacterial emulsion; 1 in 20, if we have employed a 10-fold diluted serum, and so on. We then put up a control tube of the bacterial emulsion

[1] The importance both from a diagnostic and a hygienic point of view of recognising the presence of typhoid bacilli in the urine was pointed out in a paper which was written by one of us in conjunction with Surgeon-Major Semple (THE LANCET, July 27th, 1895). The results which were arrived at in that paper have been recently confirmed and somewhat extended by Dr. P. Horton Smith (Royal Medical and Chirurgical Society, Feb. 7th, 1897).

[2] Mr. A. E. Dean, jun., 73, Hatton-garden, E.C., is, at my suggestion, making sero-sedimentation tubes of stout glass. Provision is made in these tubes for preventing the escape of the contents when the tubes are placed upright so as to allow of sedimentation.

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mixed with normal serum or with salt solution, and finally we place the whole series of sedimentation tubes upright in an ordinary test-tube labelled with the name of the patient and the date. Figs. 4 and 5 represent such capillary pipettes after the lapse of twenty-four hours. In Fig. 4 the dark shading seen at *x* represents a pellet of either typhoid or Malta fever bacteria which have been immobilised and agglomerated by a serum from a person who is undergoing, or who has undergone, the specific fever which corresponds to the variety of bacteria which have been employed. Fig. 5 represents the control pipette which in the case of the eminently motile Malta fever or typhoid bacteria remains evenly turbid.

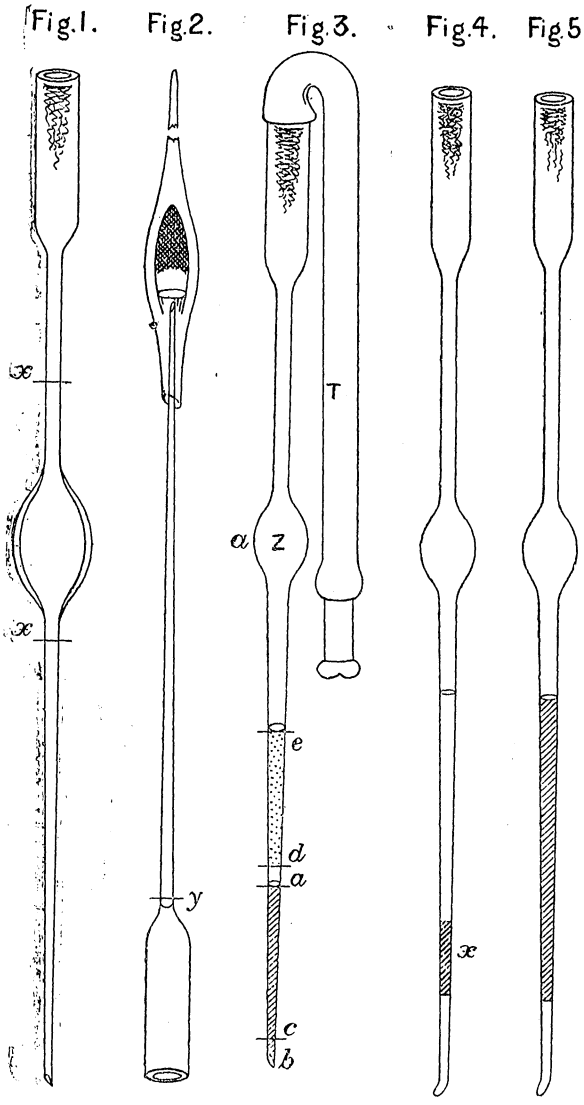


Fig. 1. Capillary pipette for drawing off blood from finger.
Fig. 2. Method of drawing off serum from blood capsule.
Fig. 3. Sedimentation tube filled in and ready for mixing.
Fig. 4. Sedimentation effect produced by specific serum. The pellet of agglomerated bacteria is seen at *x*; the supernatant fluid is clarified. Fig. 5. Control tube. No sediment is seen at bottom of tube; the fluid is not clarified.

Examples of the application of the method.—The following are typical examples of the application of the method of serum diagnosis to the differentiation of Malta fever from typhoid fever.

Example I.—Sergeant L——, of the Medical Staff Corps, arrived from Aldershot in October, 1896, having been detailed for duty at Netley. A few days after arrival at Netley the patient "reported sick" and was admitted to hospital with a recrudescence of a fever from which he had suffered some months before. His papers showed that this fever had been diagnosed to be typhoid fever. The patient's serum showed absolutely no reaction with the bacillus typhosus. His serum in 10-, 25-, 50-, 100-, and 200-fold dilutions showed a very marked reaction with the micrococcus Melitensis of Bruce. Inquiry into the patient's history revealed that when he went into hospital at Aldershot he had only recently returned from Gibraltar.

Example II.—Sergeant F——, of the Medical Staff Corps. The patient was admitted to hospital in Malta on Oct. 2nd, 1896. He died in hospital on Nov. 20th. Some of his symptoms, such as diarrhœa associated with blood in the stools, were suggestive of typhoid fever. The necropsy, however, showed only slight ulceration of the colon, and the absence of any implication of Peyer's patches. In the light of the facts, his case was diagnosed as having in all probability been a case of Malta fever.

A *stepson of the above*, aged nine years, contracted fever in Malta and died at the end of November after ten days' illness. The case was diagnosed as probably one of typhoid fever.

Another stepson, aged seven and a half years, contracted fever in Malta at the beginning of last December, and was immediately invalided home. Doubts were expressed in his papers as to whether the case was one of Malta fever or of typhoid fever. He is now quite convalescent. His serum gives an absolutely negative reaction with the micrococcus Melitensis, but gives a very marked effect in 10-, 25-, 50-, a 100-fold dilutions with the bacillus typhosus.

The *wife of Sergeant F——* contracted fever in Malta in the month of September. She was in bed for ten days. The serum gives an absolutely negative reaction with the bacillus typhosus. The serum, however, gives in 10-, 25-, and 50-fold—but not in 100-fold—dilutions a characteristic reaction with the micrococcus Melitensis.

A *child of Sergeant F——*, a girl aged three years, contracted fever in Malta in May, 1896 She suffered severely from fever till the end of September, 1896. She is now quite convalescent. Her serum gives absolutely no reaction with the bacillus typhosus, but the serum in 10-, 25-, 50-, 100-, and 200-fold dilutions gives very marked reaction with the micrococcus Melitensis.

It will be obvious how very difficult a clinical problem was presented by this last series of cases, and how very easily clinical problems of this kind can be re-solved by the employment of the method of serum diagnosis.[3]

Example III.—Private P—— (at present under treatment in Netley), invalided home from India for secondary syphilis. He has suffered for the last four months from a continuous but very irregular fever, which has some resemblance to to the typical curve of Malta fever. Examination of history discloses that the patient left England in March, 1892, for Gibraltar. He continued in good health until the autumn of that year, when he was attacked with continued fever, which, from its long duration (103 days in hospital) and from the fact that the patient was constipated throughout, may not unreasonably be assumed to have been Mediterranean fever. The patient left Gibraltar for India with his regiment in December, 1893, feeling perfectly well. In India he was noted as having suffered occasionally from attacks of fever. These attacks of fever were, however, not severe enough to require treatment in hospital. The patient began to suffer again from fever very soon after he was put under orders for home. His blood has been examined by us with negative results for malaria, and his urine has recently been examined by us with negative results both for the presence of typhoid and Malta fever micro-organisms. His serum exerts no influence upon the bacillus typhosus. It manifests, even in 1000-fold dilution, a very characteristic effect upon the micrococcus of Malta fever. It is obvious that the interpretation of the results of serum-diagnosis was here complicated by the fact that the patient has presumably suffered some four years ago from Malta fever, and that a reaction with the micrococcus of Malta fever might possibly have persisted for this period. In view, however, of the fact that the serum shows the specific reaction in such an enormous dilution, and, further, in view of the fact that four years have elapsed since he suffered from fever in Gibraltar, and lastly, in view of the fact that the patient is now suffering from pains in the joints, it seems to us practically certain that this patient is suffering from Malta fever.[4]

[3] Our experience with monkeys has shown us that the specific reaction to the micrococcus Melitensis is generally already present on the day after inoculation.

[4] The question of greatest clinical interest in connexion with this case is, of course, the question whether the patient was re-infected with Malta fever in India, or whether the attacks of fever from which he suffered at intervals in India were mere recrudescences of his original Malta fever. In view of the facts which one of us has, in conjunction

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Having sufficiently illustrated this last point we may now subjoin in tabular form the results which we have obtained by the application of this method of serum diagnosis.

The results which are tabulated below were obtained by testing the reaction of the serum in the capillary sero-sedimentation pipettes which have been described and illustrated above.

*In the tables which are subjoined a voluminous sedimentation is indicated by the sign + ; a slighter but still perfectly characteristic sedimentation is indicated by the sign * ; a negative result is indicated by the sign* 0.

TABLE I.—*Cases Diagnosed as "Malta Fever" which showed Reaction on the Micrococcus Melitensis of Bruce.* [5]

No. of case.	Period elapsed since illness.		Degree in which serum was diluted.				
	Years.	Months.	1 in 10.	1 in 25.	1 in 50.	1 in 100.	1 in 200.
1†	—	5	*	*	*	0	0
2‡	—	6	+	+	+	—	—
3	—	6	+	+	+	+	+
4	—	8	+	+	+	+	+
5	1	8	+	+	+	+	+
6‖	1	9	+	+	+	+	+
7	3	—	+	*	*	0	0
8§	Now ill.		+	+	+	+	+

† Said to have been a very slight attack.
‡ Higher dilutions not tried.
‖ Marked effect in this case up to 1 in 300.
§ Gives a positive reaction up to, but not above, a 1000-fold dilution.

TABLE II.—*Cases diagnosed "Typhoid Fever" which showed Reaction on Typhoid Bacillus.*

No. of case.	Period elapsed since illness.		Degree in which the Serum was diluted.				
	Years.	Months	1 in 10.	1 in 25.	1 in 50.	1 in 100.	1 in 200.
1	—	5	+	+	*	0	0
2	—	6	*	*	0	0	0
3	—	6	+	+	+	+	+
4†	—	6	+	+	+	—	—
5	—	6	*	*	0	0	0
6	—	7	*	*	0	0	0
7†	—	9	+	+	+	—	—
8	—	9	+	*	0	0	0
9	—	10	+	*	0	0	0
10	1	2	*	*	0	0	0
11	1	8	+	+	*	0	0
12	2	—	+	*	0	0	0
13†	6	—	+	+	—	—	—
14	6	—	+	*	0	0	0
15	12	—	*	*	0	0	0

† Higher dilutions not tried.

TABLE III.—*Cases diagnosed "Typhoid Fever" which had no effect on the Typhoid Bacillus, but showed a distinct Reaction on the Malta Fever Micrococcus.*

No. of case.	Place in which illness occurred.	Period elapsed since illness.		Degree to which the serum was diluted.				
		Years.	Months	1 in 10.	1 in 25.	1 in 50.	1 in 100.	1 in 200.
1	Aldershot.	—	9	+	+	+	+	+
2*	Sabathu, India.	—	7	+	+	+	+	+
3*†	Ditto.	—	7	+	—	—	—	—

* India was the only foreign station in which the patient had served.
† Higher dilutions not tried.

TABLE IV.—*Cases Diagnosed "Typhoid Fever" which showed no Reaction on either the Typhoid or Malta Fever Organism.*

No. of case.	Place in which illness occurred.	Period elapsed since illness.	
		Years.	Months.
1, 2, 3, and 4	Sabathu, India.	—	8, 8, 6, and 6
5	Nowshera, India.	—	7
6	Lucknow, India.	—	10
7	Line of march, India.	—	3
8	Rangoon, Burmah.	—	6
9	Shwebo, Burmah.	—	9
10	Cannanore, India.	—	10
11	Hong-Kong.	—	9
12	Benares, India.	—	8
13	Umballa, India.	—	6
14	Natal, South Africa.	17	—

TABLE V.—*Cases diagnosed "Malarial Fever," or not specifically diagnosed, which showed Reaction on the Malta Fever Organism.*

No. of case.	Place in which illness occurred.	Period elapsed since illness.		Sedimenting effect.				
		Years.	Months.	1 in 10.	1 in 25.	1 in 50.	1 in 100.	1 in 200.
1†	Nowshera, India	—	11	+	+	+	+	+
2	Hong-Kong.	—	6	*	*	0	0	0
3‡	Meean-Meer.	Now ill.		+	+	+	+	+

† India was the only foreign station in which the patient had served.
‡ Distinct effect up to 1000-fold dilution.

TABLE VI.—*Case diagnosed "Malta Fever" which showed no Reaction on the Micrococcus Melitensis, but which showed a Distinct Effect on the Typhoid Bacillus.*

No. of case.	Place in which illness occurred.	Period elapsed.		Degree to which the serum was diluted.				
		Years.	Months.	1 in 10.	1 in 25.	1 in 50.	1 in 100.	1 in 200.
1	Malta.	Ill at time of examination.		+	+	+	*	0

A not inconsiderable number of interesting facts are disclosed by a study of these tables. The following are perhaps the more important of these :—(1) Consideration of Table I. discloses the fact that the micrococcus Melitensis, which was discovered by Surgeon-Major D. Bruce, is in reality, as he asserted it to be, the true cause of Malta fever. Out of nine clinically more or less well-characterised cases which were examined by us, the eight which are tabulated here have shown a perfectly characteristic reaction to the micrococcus Melitensis. The only one of the nine cases which failed to react was that of a patient who had suffered from Malta fever five years previously to the date of our examination. We may not unreasonably surmise that the specific power of sedimenting the micro-organisms of Malta fever may, in this case, have passed away. (2) Consideration of Tables III. and V. discloses the fact that Malta fever is, as Bruce and others have long surmised, a disease which is not by any means confined to the Mediterranean basin. We have here what we take to be definite evidence of its existence in three stations in Northern India. We have, further, what we take to be probable evidence of its existence in Hong-Kong. (3) Table III. shows that a certain number of cases which are from their clinical symptoms diagnosed to be typhoid fever, are in reality cases of Malta fever. (4) Table IV. shows that a considerable number of cases which are from their clinical characters diagnosed to be typhoid are in all probability neither cases of typhoid fever nor cases of Malta fever. It is

with Surgeon-Major Semple, elicited on the survival of the micrococcus Melitensis in the spleen of monkeys who have perfectly recovered from Malta fever, both these interpretations appear to us to be equally admissible.

[5] We are deeply indebted to Surgeon-Captain L. Hughes for sending us a culture of this micro-organism. The culture which was sent to us was obtained in Malta from a fatal case of the disease.

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possible that the fevers from which these particular patients suffered may have been malarious in character. It is also possible that these fevers may have belonged to some as yet undefined category of continued fever. What is important for us to note is the fact that any tropical fever which is unaccompanied by the presence of malaria parasites in the blood, and which can by the method of serum-diagnosis be shown to be neither typhoid fever nor Malta fever, is a fever which might very profitably be made the subject of bacteriological investigation. (5) Tables I. and II. show that the specific agglomerating and sedimenting power, which is acquired by the blood in cases of fever, persists in the blood for a considerable term of years. We have been able to demonstrate its existence in the blood in the case of typhoid fever after no less a period than twelve years. Similarly, we have been able to demonstrate its persistence in the blood for at least three years after an attack of Malta fever.

These facts are of the greatest importance, if, as was urged in a paper on Typhoid Vaccination [6] which was written by one of us in conjunction with Surgeon-Major D. Semple, the sedimenting and agglomerating power of the blood is in reality a true index of the condition of immunity.

Duration of the immunity against cholera which is conferred by undergoing either an anti-cholera inoculation or an attack of actual cholera.—With a view of further elucidating this question of the association of the sedimenting power of the blood with immunity we have recently examined the blood of one convalescent from (supposed) cholera, and further the blood of five patients who had submitted themselves to Mr. Haffkine's cholera inoculations. The results of these blood examinations are of a certain amount of interest, even though their interpretation is a matter of considerable difficulty and even though they have no very close relation with the question of immunity against septicæmias, such as typhoid fever and Malta fever.

TABLE VII.—*A Case Diagnosed "Cholera" and Cases of Cholera Vaccination which showed no Reaction on the Cholera Vibrio.*[7]

No. of case.	Place in which illness or vaccination occurred.	Period elapsed since illness.		Period elapsed since vaccination.		Result of the application of the serum test.
		Years.	Months.	Years.	Months.	
1	Poonah, India.	—	4	—	—	Absolutely negative.
2*	Dinapore, India.	—	—	2	—	,,
3*	Poonah, India.	—	—	—	4	,,
4†	Poonah, India.	—	—	—	4	,,
5*	Ranikhet, India.	—	—	3	4	,,
6*	Lucknow, India.	—	—	3	4	,,

* Vaccinated in two operations. † Vaccinated in one operation only.

In conclusion we desire to advert to a possible application of the method of serum-diagnosis to the differentiation of the buboes which are due to syphilis or ordinary pyogenic micro-organisms, from the buboes which are due to the entrance of the plague bacillus into the body. Necessity for some such method of differentiation arises, first in connexion with the study of the geographical distribution of plague, and secondly in connexion with the early diagnosis of mild cases of plague. This question of the differential diagnosis of buboes seems to us to acquire a certain importance in view of the fact that one of us when Medical Officer of Health for Penang, had occasion to observe and to call attention to the increased number of non-venereal buboes which occurred in Penang very soon after the outbreak of the great epidemic of plague in Hong-Kong.

Netley.

[6] Vide Brit. Med. Jour., Jan. 30th, 1897.

[7] In view of the differences which exist between various varieties of cholera it is perhaps worth noting that the cholera with which we tested these bloods is a cholera which was kindly placed at our disposal by Professor Pfeiffer. It is a cholera which shows the perfectly characteristic agglomeration and sedimentation when it is treated with the serum of Pfeiffer's immunised goats.

ISOLATION HOSPITAL FOR BLANDFORD, DORSETSHIRE.—Lord Portman has promised £500 towards the erection of an isolation hospital for Blandford, and if necessary will also give the site.

REMARKS UPON VIRTUAL OR RELATIVE MITRAL STENOSIS.

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THE object of this paper is to draw attention to an occasional state of the mitral valve in which there are all the anatomical characters of stenosis, but on so large a scale that stenosis does not actually exist. The segments are thickened and welded together, and perhaps depressed into the cavity of the ventricle so as to approach the form of a funnel. The passage, however, is absolutely as large as, or larger than, natural, though small in relation to the ventricle which is dilated. Clinically, the blowing murmur of mitral regurgitation is always present, and frequently also a more or less typical murmur of the kind called "presystolic." Upon first meeting with such a case post mortem the question naturally presents itself whether there had not been actual mitral stenosis, till, perhaps only at last, the valve became enlarged as the ventricle dilated. However, it is very improbable that a valve which has once attained an important degree of stenosis and rigidity can afterwards become uniformly enlarged. It is true we sometimes find that valves which obviously have been, and perhaps are still, stenosed have undergone a certain amount of widening from laceration of the segments or rupture of the chordæ tendineæ; but such lesions have generally been produced through the medium of ulceration, and although the ulceration was doubtless invited by strain it is not with such irregular deformities that we are dealing here. A more satisfactory explanation is that the valve, though naturally tending to stenosis, has been held open from the first by the dilatation of the ventricle. In all such cases the disease of the valve and the disease of the ventricle seem to have originated at or about the same time. Most of them are instances of adherent pericardium in young persons, a condition which, arising in the rheumatic pericarditis of childhood, is attended equally by dilatation of the ventricle and mitral endocarditis of that limited kind which, if free to pursue its natural course, would end in stenosis. In others there is aortic regurgitation, the dilatation of the ventricle resulting from which has evidently overtaken the mitral disease while the valve was yet pliant and extensile, even if the latter set in first. In one of our cases there was neither adherent pericardium nor aortic regurgitation, but the ventricle had been kept dilated by persistence of the same attack of rheumatism which caused the disease of the valve. Under such circumstances, where dilatation of the ventricle is the more acute and violent mischief, the state of the valve we are considering is clearly beneficial. The orifice being fully large does not directly obstruct the circulation in the lungs, while by tending to stenosis it moderates the mitral regurgitation which is always present in these cases and which is free in proportion as the valvular segments yield to the strain. It is preferable, therefore, to describe the condition as "relative" rather than "virtual" stenosis; the latter term would imply the effects as well as the resemblance of the actual thing. We append an abstract of three illustrative cases from among a dozen of the same kind of which we have taken clinical and post-mortem notes.

CASE 1.—The patient was a girl aged twenty years. She had been liable to palpitation for the last two years and œdema of the legs for six months. The impulse of the heart was extensive and turbulent. The apex was in the fifth left space far outside the nipple line. At the apex there was an early rough murmur, accompanied by a thrill, ending in a snap, and followed by a blowing systolic murmur. The patient died from pneumonia. At the necropsy the two layers of the pericardium were found to be completely united by old adhesions. The right auricle was dilated and the right ventricle hypertrophied. The tricuspid and pulmonary valves were healthy. The terminal branches of the pulmonary artery were atheromatous. The left auricle was greatly dilated and had partly compressed the left bronchus. The mitral orifice fairly admitted two fingers. The edges of the segments and the

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chordæ tendineæ were thickened and the latter shortened, so that the valve appeared pulled down into the ventricle somewhat in the form of a funnel. The left ventricle was hypertrophied and greatly dilated. The myocardium and the aortic valves were healthy.

CASE 2.—The patient was a man aged twenty-nine years. He had had rheumatism twelve years before and œdema and dyspnœa for the last six months. He suffered from angina. At the apex of the heart a rumbling diastolic murmur and blowing systolic murmur were heard. There was a double murmur on the sternum. At the necropsy the pericardium was found to be normal. The heart weighed thirty-four ounces. The right side was small. The left auricle was thickened. The mitral orifice nearly admitted three fingers, but from the thickening and welding together of the cusps it appeared to have been at one time stenosed and subsequently opened out by the dilatation of the left ventricle. The chordæ tendineæ were thickened and some of those belonging to the anterior cusp were eroded. This cusp showed an incipient aneurysm. The left ventricle was greatly dilated and hypertrophied. The myocardium was fatty. The aortic valves were sclerosed and incompetent; there were a few vegetations.

CASE 3.—The patient was a woman aged twenty-seven years. She had suffered much from rheumatism of late years. She had had cardiac symptoms for the last five months. The apex of the heart was in the fifth left space, five inches from the middle line. There was a short "presystolic" and loud systolic mitral murmur. She died cyanosed, with thrombosis of the axillary vein. At the necropsy the pericardium was found to be normal. The heart weighed twenty ounces. The right auricle was dilated and the appendix thrombosed. The tricuspid orifice was dilated and the segments were thickened. The pulmonary artery was atheromatous and contained some thrombi. There were pulmonary apoplexies in both lungs. The left auricle was dilated and hypertrophied. The mitral orifice admitted two fingers, but gave the impression of having been smaller, the segments being greatly thickened and retracted into the ventricle by shortening of the chordæ tendineæ. The myocardium was swollen. The aortic valves were healthy.

A SUCCESSFUL CASE OF CÆSAREAN SECTION IN A COTTAGE.

BY SIDNEY A. BONTOR, M.D., M.S. DURH.

THE question of what should be done when a child cannot for any reason be delivered per vias naturales is a sufficiently difficult one for the practitioner in towns where specially skilled assistance is available and where special institutions exist for the treatment of such cases; but it is even more serious and difficult for the country medical man far removed from aids of this description and who must depend upon his own resources; and the following case, in which both mother and child were saved and which occurred in a country cottage under considerable difficulties—*e.g.*, a levy had to be made on the neighbours to obtain sufficient utensils, &c.—is offered as a contribution to the subject.

The patient was a woman aged thirty-four years. Labour commenced at the full term about noon on Dec. 4th, and the "waters broke" about 7 P.M. on that day; the pains were slight, and occurred at rather long intervals. She continued thus until the morning of Dec. 6th, when the cervix was found to be fully dilated, but the uterine contractions were exerting no expulsive force upon the fœtus; there was a considerable caput succedaneum. Chloroform was administered and the forceps applied, but although considerable force was exerted the child did not advance. The forceps were then removed and re-applied, but the result was as before; so further attempts at delivery in this manner were abandoned, and I consulted with my friends, Dr. King and Mr. McBride, as to the best method of procedure, and after considering the case from all points we decided to advise the Cæsarean section, and to this the husband consented after having the alternative methods explained to him. The patient being already under chloroform the necessary arrangements had to be rapidly made. We had a considerable quantity of water boiled and stored for use in clean jugs, and while I selected and boiled my instruments Dr. King prepared the patient by washing the thighs, abdomen, &c., with ether and soap and water, and then applying a compress wrung out of a 1 in 1000 solution of perchloride of mercury; he then passed a catheter and gave a vaginal injection of a similar solution and applied a like compress over the vaginal orifice. The operation was then performed, Dr. King assisting and Mr. McBride continuing the anæsthetic. An incision about five inches long was made in the linea alba from about one inch above the umbilicus to two inches above the pubes, the bleeding points secured, and the peritoneum opened throughout the length of the wound. The uterus being thus exposed, Dr. King pressed the edges of the abdominal opening firmly against the uterus without extruding it, but in such a manner that fluids from the uterus could not pass into the peritoneal cavity nor bowel escape from the abdomen. A short incision was then made through the uterine wall down to the membrane and extended upwards and downwards by scissors on the finger as director to about four and a half inches in length; the membranes were then divided and the child extracted. The placenta was easily removed and the uterus contracted well; as it did so Dr. King squeezed the abdominal wall against it so as to extrude it for facility of suturing, and at the same time, by keeping the edges of the abdominal opening pressed together behind it, fairly closed the abdominal cavity; the uterus was then lightly sponged with sublimate lotion and sutured with seven deep and five half deep sutures of silkworm gut, the edges of the wound being thus brought into excellent apposition; it was then once more sponged and returned into the abdominal cavity. The deep sutures were so inserted that while they embraced the whole thickness of the muscular wall they avoided the decidua, and were placed at sufficient distance from the edge of the wound to avoid cutting out. The peritoneal cavity was flushed with plain boiled water, and the wound closed with interrupted sutures of silkworm gut, dusted with boracic acid, and dressed with cyanide gauze, covered with sal-alembroth wool, and kept in position by strapping. No drainage tube was used. The patient had some slight pain that night, for which an injection of a quarter of a grain of morphia was given, but beyond this there is little to add. Both mother and child made excellent progress, and there was not a single unfavourable symptom; the lochia passed freely, and were not excessive; the temperature did not rise above 99·4°; the pulse was good, and the tongue moist and clean throughout; the wound was dressed on the sixth day, and was found completely healed. The patient was nursed by the ordinary monthly nurse, who had never seen a surgical operation before.

Great Berkhamsted.

A CASE OF TRAUMATIC INTRA-THORACIC RUPTURE OF THE TRACHEA WITHOUT FRACTURE OF THE CHEST WALL.

BY SURGEON-LIEUTENANT CLAYTON A. LANE, M.D. LOND., I.M.S.,
LATE HOUSE SURGEON TO ST. MARY'S HOSPITAL.

A RAILWAY-VAN GUARD, aged fourteen years, was brought to St. Mary's Hospital on May 4th, 1895, having twenty minutes earlier had his chest crushed between a heavy van and an iron-edged platform. So far as was known his head was not injured. When seen he lay crying out wildly, but answering no questions; he threw his right arm and leg about freely and repeatedly, but did not move his left limbs at all; his face he distorted by grimaces and both sides of it moved equally. There were no signs of injury about the head or on the chest. No broken ribs were discovered, and though the chest was tender to the touch its movement and resonance were normal. Loud rhonchi were heard all over both lungs, rendering completely inaudible the heart sounds. The pulse was feeble; the abdominal organs were normal. The patient had been perfectly well, without cough, up to the time of the accident. At midnight he was very restless, took but little notice of his surroundings, and was somewhat blue with orthopnœa. There was more movement of the left limbs. He had

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surgical emphysema of the left side of the upper part of the chest and of the left side of the neck and face as high as the supra-orbital ridge, so that the left eye was partly closed by the emphysematous swelling. No bony crepitus could be made out after a further search in the chest. On percussion the chest was found to be normal except for a hyper-resonant note inside the left nipple. Coarse crepitations were heard with inspiration and expiration all over the chest, and during a pause in breathing fine crackling was heard over the heart and the presence of emphysema of the mediastinum inferred from this sign. There was no expectoration. The pulse-rate was 120 per minute, and the wave very easily compressible. The patient looked so ill that it seemed unlikely that he would live till morning. He was ordered a canopy and steam kettle, and half an ounce of brandy every three hours. Next morning (May 5th) he was more conscious and could feed himself when a cup of milk was put in his hand. He was cyanosed, with a respiratory rate of 44 per minute; the alæ nasi were working, and there was inspiratory recession of the lower intercostal spaces. There was marked rattling uniformly heard all over the chest and evidently originating in the larynx or trachea; no evidence of fluid or air in either pleural cavity was to be obtained. The pulse-rate remained at 120. In the evening there was inspiratory recession of the lower part of the thorax on each side, and less crepitation in the chest, so that the entry of air was evidently less. The respirations were 50, the pulse rate 144, the temperature 103·8°, and the surgical emphysema and left-sided weakness were unchanged. The patient passed a restless night, but next day was quieter, the pulse-rate being 180; the respirations gradually increased to 72 per minute, the temperature rose to 106°, and he became more cyanosed and died at 3·30 P.M. from asphyxia.

At the post-mortem examination the cranium and its contents were found to be normal except for congestion; there was no bruising of the scalp, no intracranial hæmorrhage or embolism, and no softening, though there was some flattening of the convolutions, especially of the right side. No fracture of the ribs or of the sternum was present, nor was there any dislocation of the rib cartilages or of the clavicles. There were ecchymosis and surgical emphysema of the mediastinum and parietal pericardium, and ecchymosis on the posterior surface of the heart, the valves of which were normal. Extending upwards vertically for two inches from the bifurcation of the trachea a rent separated the tracheal rings from the soft posterior wall on the right side, and was, therefore, intra-thoracic. Surrounding this rent was an abscess lying outside the trachea. The bronchi contained pus; the lungs were congested with a few patches of pneumonia; there was no air nor fluid in the pleural cavity; the abdomen was normal.

I am indebted to Mr. Page for permission to publish this case.

Devon.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—At a meeting of the Council held on Feb. 23rd Mr. D. B. Balding, F.R.C.S. Eng., chairman of council, presided. Dr. W. Gayton was elected treasurer, in the place of Mr. C. M. Frost; Mr. Arthur Greenwood hon. secretary, in the place of Mr. J. W. Barnes; and Mr. F. H. Oliver auditor, in the place of Dr. W. Smith. The office of the association was changed from 3, Bolt-court, Fleet-street, to 9, Copthall-avenue, London-wall, E.C., the offices of Messrs. Beckingsale and Co., solicitors to the association. It was unanimously resolved that the passing of the Poor-law Officers' Superannuation Act had by no means rendered the further existence of this society unnecessary, and that it was highly desirable that the Poor-law medical officers of England and Wales should still have an association to watch over and protect when necessary their special interests in the somewhat serious differences which of necessity occasionally arise between them and the various boards under which they hold office. Application was made by several public vaccinators that counsel's opinion should be taken respecting the legal position of those officers under the recent Superannuation Act, and after some discussion it was resolved that one-third of the cost of putting a case before some eminent counsel should be defrayed by the association if the remainder were subscribed by those of the class interested.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

RECOVERY AFTER TAKING 1 oz. OF CHLORODYNE AND 250 GRAINS OF SULPHONAL.

BY KEITH CAMPBELL, M.B. EDIN.,
ASSISTANT PHYSICIAN TO JAMES MURRAY'S ROYAL ASYLUM, PERTH.

A MAN was lately admitted to this asylum who had for months suffered from insomnia, for which he had got sleeping draughts containing chloral hydrate. Owing to business anxiety the insomnia got much worse and his general health broke down. His power of self-control was also diminished. He went on a visit to a relation at the seaside, and on Jan. 11th, 1897, he took the boat to a neighbouring watering-place, where he bought an ounce bottle of chlorodyne. He went on board the next boat and took the whole of this. He got off at the next stopping place and bought at two separate druggists two bottles of sulphonal tabloids, each containing twenty-five tabloids with five grains of sulphonal. He had thus 250 grains of sulphonal in his possession. He was now feeling dazed and utterly reckless, and he went to an hotel, took a bedroom, and ordered hot water to be sent up. He mixed and took the whole of the sulphonal. This was in the afternoon of a Monday. He remembers nothing more till the morning of the following Thursday, when he had some breakfast. It was afternoon, however, before he could give directions for a telegram to be sent to his friends, under whose care he went home next day. From Sunday night till next Thursday morning he had just one cup of bovril. On admission as a voluntary patient on the following Monday he was in a state of nervous breakdown, restless, unable to sustain any effort, querulous, and irritable. He looked ill and worn. There was considerable gastric catarrh, and his urine contained a large amount of sugar. His pupils were unequal. He is an undersized man with a highly neurotic family history. In a week, under appropriate treatment and diet, the sugar disappeared, and his general health is now very fair.

Two cases of larger doses of sulphonal have been recorded. The first case was when thirty grammes (463 grains) were taken, causing 114 hours' sleep with a short interval, no bad effects resulting.[1] In the second case, reported in THE LANCET by a Berlin correspondent, the same dose was taken by a workman, who slept thirty hours and after a short interval twenty hours. In neither case was any other drug taken. In the present case the drugs were bought at three different druggists in two towns in which the patient was a stranger, so that it is almost impossible to check the facts. The patient was perfectly frank about it, however, and related the whole circumstances clearly and without any bravado. At the time of taking the drugs he had no idea of what quantity he was taking; he only knew it was a large dose. Short of absolute certainty, there is every reason to believe that his statements are quite reliable.

Perth.

A CASE OF RUPTURED UTERUS.

BY PTOLEMY A. COLMER, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.,
HON. SURGEON TO THE YEOVIL DISTRICT HOSPITAL.

I WAS called at 10 P.M. on Jan. 28th to attend a very stout woman, aged forty years, in her fifteenth confinement. I found the os about the size of a five shilling piece, with head presenting, the membranes ruptured, and pains occurring about every seven or eight minutes but not sharp. The patient was up and walking about, in fact, she told me I was not wanted yet. I left, giving instructions to call me again when the pains became frequent and more severe. I was

[1] THE LANCET, May 4th, 1889, p. 915.

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called again at 3 A.M. on the 29th, and on entering the room noticed how ill the patient (who was now in bed) looked. On examination I found the chin caught on the perineum and with very slight traction, with the finger in the mouth it easily slipped out, and with a little more traction the rest of the body of a fine male child in a very advanced state of putrefaction was born. The placenta was easily expelled with a large clot. The uterus contracted well and there was very little hæmorrhage. The patient now began to complain of faintness, but no pain. Her pulse was quick and extremely feeble, and she had an anxious expression. I kept my hand on the uterus which appeared to keep well contracted and there was very little hæmorrhage. About 4.20 A.M. she seemed to rally, her pulse improved and she expressed herself as feeling better, but a quarter of an hour later the pulse became quicker and smaller and the breathing hurried and shallow. The patient, who showed extreme restlessness now began to get blanched and at about 5 10 A.M. she died. Immediately after death on introducing my hand into the uterus (which had just become flabby) I found coils of intestines and blood clots and could even feel the liver. No post-mortem examination was allowed. I may add that out of her fifteen confinements the patient had had only three natural ones, the rest being instrumental; one or two had been transverse and several had been breech presentations. There appeared to be no pelvic contraction. This case illustrates how obscure the symptoms of rupture of the uterus may be, as I was quite unable to find anything to account for her extreme prostration until the ast moments of life.

Yeovil.

NOTE ON A CASE OF LICHEN PLANUS CURIOUSLY AFFECTING SCRATCHES.

BY R. W. INNES SMITH, M.B. EDIN.,
LATE RESIDENT ASSISTANT MEDICAL OFFICER, ANCOATS HOSPITAL, MANCHESTER.

ON Feb. 13th I saw a woman, aged thirty-eight years, married but having no family, who complained of an eruption on the wrists, backs of the hands, the forearms, and the front of the right thigh. The eruption was generally typical of lichen planus. It consisted of discrete papules, the surfaces of which were flattened and often glazed. In some places the papules had run together, forming thickened patches with a small amount of scaling. There was some itching, but the patient complained more of a "tingling" sensation, especially when the papules were in their early stage. The eruption was first noticed by the patient last December on the inner aspect of one wrist. The curious point of this case, however, was that in places where the skin had been scratched each scratch had taken on the type of the eruption, and thus appeared as a raised, reddish, polished "line," composed of papules running together. Thus on first looking at the case these "lines" appeared as the more important part of the lesion, but from their general arrangement were easily recognised as the positions of old scratches. A further point in the case was that after a scratch was inflicted it seemed to heal in the usual way, leaving, however, a faint line, which was best seen on putting the skin on the stretch, this "line" gradually becoming developed into the condition described above.

The cause seems difficult of explanation. The patient herself traces the first affection of the scratches to "washing a cat which had skin disease," the animal retaliating by scratching her forearms and hands severely. This happened some weeks after the first appearance of the rash. It seems, however, to be merely a coincidence, as undoubtedly many of the scratches are the patient's own production. Possibly there is a parasitic element in the disease which would explain this peculiar affection of the scratches.

Duncan-terrace, N.

HEALTH OF LLANDRINDOD WELLS.—At the last monthly meeting of the Llandrindod Wells urban district council Mr. F. H. Roberts, the medical officer of health, presented his annual report for 1896, from which it appeared that the death-rate had been 8·27 per 1000 and the birth-rate 26·3 per 1000. Mr. Roberts referred approvingly to the sewerage extension scheme now contemplated at a cost of £6000, and to the electric light installation which is being laid down.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

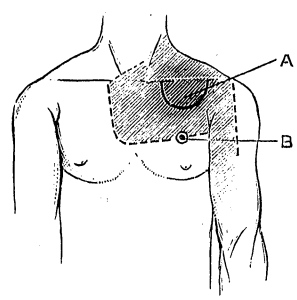
BULLET LODGED BEHIND THE CLAVICLE DETECTED BY MEANS OF THE ROENTGEN RAYS, AND CAUSING SYMPTOMS LIKE THOSE OF ARTERIO-VENOUS ANEURYSM.

(Under the care of Mr. HENRY MORRIS.)

FOR the notes of this case we are indebted to Mr. W. D. Perry, house surgeon.

The patient, a young man aged twenty years, was admitted to the Middlesex Hospital on May 11th, 1896, with a self-inflicted wound from a revolver bullet on the left side of the chest. On admission he had lost a large quantity of blood and was in a very collapsed condition. The bullet had entered at the upper border of the third rib three inches from the left border of the sternum and had then apparently passed upwards and inwards towards the root of the neck, but it could not be felt. Hæmorrhage had ceased when he was brought to the hospital, but there was a large quantity of blood effused beneath the pectoral muscles. No pulsation could be felt in the left radial and axillary arteries. On placing a stethoscope over the upper part of the chest on the left side there could be heard a loud roaring bruit, which was rather louder during the heart's systole, but continuous throughout diastole. It was most distinct at a point half an inch below the clavicle and two and a half inches from the left border of the sternum, and could be traced upwards into the supra-clavicular fossa, inwards across the chest to the right border of the sternum, and outwards along the line of the axillary and brachial arteries to a point midway between the shoulder and the elbow-joint, and more faintly even down to the elbow. (See diagram, Fig. 1.) It could be heard

FIG. 1.



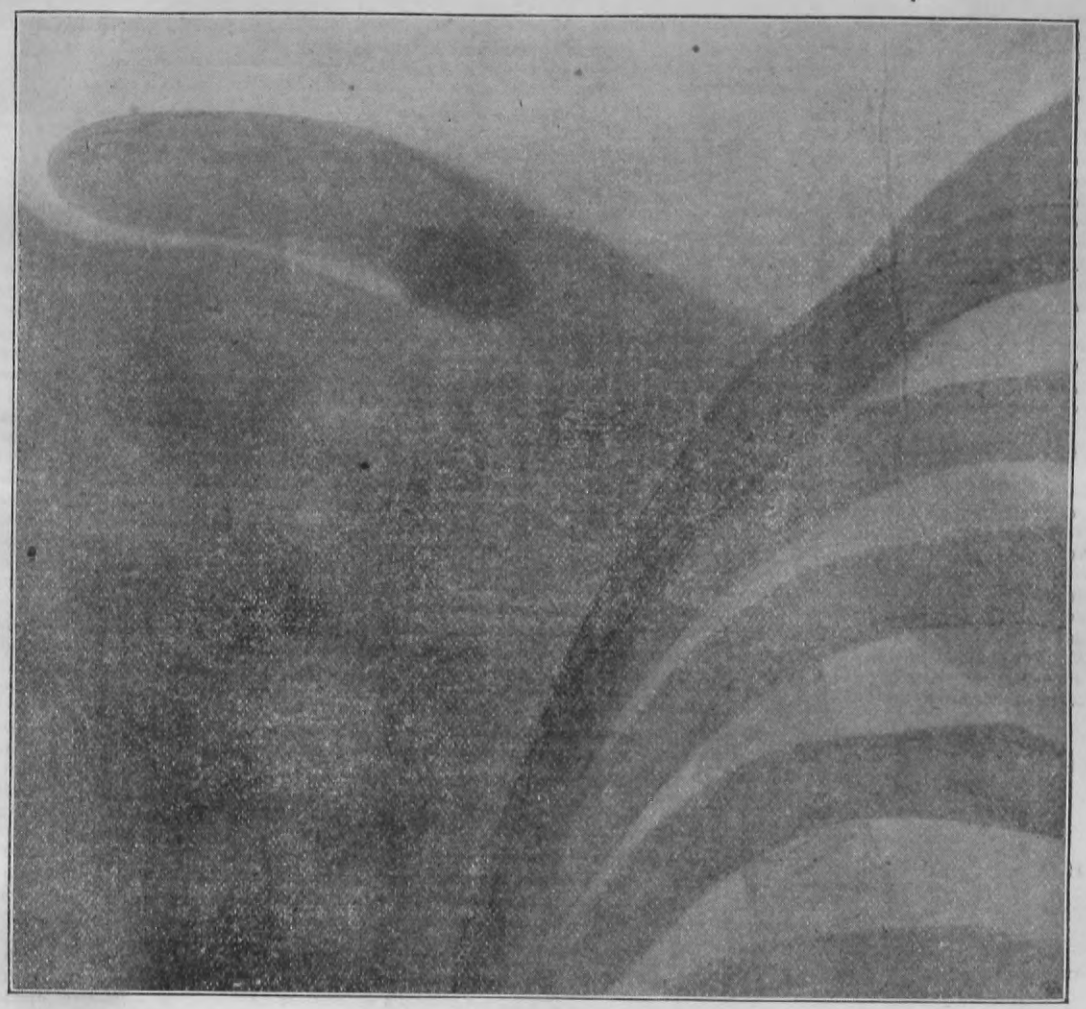
A, Point where bruit was loudest. B, Point of entrance of bullet. The bruit was heard over the whole of the shaded area.

on the chest above a line drawn transversely from the wound, but not below it, and disappeared entirely when the subclavian artery was compressed. Shortly after admission the hæmorrhage re-commenced and was so severe as to lead one to think that the subclavian artery had been wounded. However, after compressing the proximal side of the subclavian artery the hæmorrhage ceased. About two hours after the injury was inflicted the patient was placed under an anæsthetic and an attempt was made to find and extract the bullet, but without success. The wound was enlarged and the track searched both by means of bullet-searchers and the little finger. The loud, roaring, and rasping bruit pointed to some injury to the subclavian vessels, and was very similar, indeed, to the sound produced when a communication between artery and vein exists. Whilst under the anæsthetic a feeble pulsation in

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the artery at the wrist was felt. Under treatment the wound healed rapidly, and though there was a numbed feeling in the second and third fingers of the left hand, which only lasted for two days, no symptoms of importance developed. The pulse in the left radial artery began to return shortly after admission, and a fortnight later was quite distinct but feebler than the pulse at the right wrist. During the month succeeding admission the patient complained of attacks of pain shooting down the left arm, but not traceable along the course of any of the large nerve trunks. After the wound had healed and the patient had become convalescent several attempts were made to localise the bullet by means of the Roentgen rays, and on July 3rd a very satisfactory photographic negative was obtained. (See Fig. 2.) This showed the bullet to be lodged exactly behind the clavicle, about one and a half inches from the acromio-clavicular joint. At this time the condition of the bruit above mentioned was much the same as before. The left radial pulse was distinctly weaker than the right, but synchronous with it. There was no impairment of sensation in any of the fingers. On the 8th the patient was anæsthetised, and an incision made along the upper border of the clavicle about three inches in length, the outer end reaching to the inner margin of the clavicular attachment of the trapezius muscle. A careful dissection was made behind the clavicle, and the bullet felt lying rather beyond the outer end of the incision behind and below the edge of the trapezius. The incision was prolonged outwards for half an inch and a few fibres of the aforesaid muscle were divided, which enabled the bullet to be extracted without difficulty. (Fig. 3.) The wound healed by first intention, and the patient left the hospital on July 21st quite well. The bruit, however, had not altered in character, and the difference in the radial pulses was as marked as before. On July 31st the patient was again seen. The bruit was much the same as before, but very little difference could then be detected in the size of the pulses in the radial arteries of the two sides. No œdema, coldness, or numbness of the left forearm and hand had been observed nor any distension of the veins of the limb. With the persistence of the loud bruit and the similarity of it to that heard in cases of aneurysmal varix one was led to expect the development of some aneurysmal condition in the future. As the patient is not now living in England, it has not been possible to make an examination of his present condition, but a relative informs us to-day (Feb. 26th, 1897) that he has recently married, has never been in better health than he is now, that during the late summer and autumn he was rowing on a river, and all the present winter has been carrying on his business. There is, therefore, every reason to believe that there does not exist a direct communication, even of small size, between the artery and vein.

FIG. 2.



View of upper part of chest and front of shoulder showing the bullet in position in the body.

FIG. 3



Exact size and shape of bullet after extraction.

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MISSION HOSPITAL, KASHMIR.

A CASE OF RENAL IRRITATION SIMULATING CALCULUS OF THE KIDNEY CURED BY NEPHROTOMY.

(Under the care of Dr. ERNEST F. NEVE.)

MOST surgeons of experience have met with cases in which renal pain was thought to be due to calculus, where subsequent operation has relieved the symptoms for which treatment was sought, but has not shown the presence of a stone. In some instances no stone has been found, although it was present, in consequence of imperfect search; the stone has been small and placed in the substance of the kidney, or it has been fixed in a deeply lying calyx. Careful and systematic search is required, but we have seen a small calculus escape detection altogether by skilled hands until the kidney was fully incised after nephrectomy. Mr. Greig Smith[1] puts the proportion of failures to find a stone as one-fifth of the operations undertaken for the purpose of nephrolithotomy. Mr. Jacobson[2] gives the following list of the chief conditions which simulate renal calculus: (1) lithiasis; (2) tuberculous kidney; (3) slight pyelitis; (4) moveable kidney; (5) aching kidney; (6) nephralgias due to disease in parts adjacent to the kidney; (7) gall-stones retained in the gall-bladder; (8) spinal disease; (9) interstitial shrinking nephritis; and (10) new growth of kidney in its early stage. It is, however, only necessary to mention most of these to prevent anyone exercising ordinary care, from making a mistake in diagnosis.

A native, aged forty years, had complained for three years of periodical attacks of severe renal pain. His general condition was good. The urine was loaded with oxalate crystals and showed traces of pus. There was distinct but slight tenderness on pressure over the right kidney. On Oct. 7th, 1895, I made an incision four inches long almost horizontally backward from the tip of the last rib. Displacing the ascending colon and peritoneum forwards, the kidney was found after some searching, and was exposed by scraping through the fat with the finger. No stone could be detected on palpation. There was a little doubt as to whether, on needling, a slightly gritty-feeling area was traversed. On incising the pelvis and sounding systematically there was no sign of stone. The renal wound was stitched, also that in the loin, a drainage-tube of small calibre being left in. This was gradually shortened, and finally removed on the twenty-second day. The patient was dismissed on May 1st, 1896, free from pain, having had no return of his old symptoms.

[1] Abdominal Surgery, vol. ii.
[2] Jacobson: The Operations of Surgery, second edition, p. 705.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Annual Meeting.

THE annual general meeting of this society was held on March 1st, the President, Dr. HOWSHIP DICKINSON, being in the chair.

The report of the Council was read. The report showed the flourishing state of the society, a record number of forty-eight Fellows having been elected during the year. The death roll had also been unusually heavy, twenty-five Fellows having died during the twelve months. The arrangements for converting the original 4 per cent. debenture loan into 3 per cent. debentures had been satisfactorily accomplished, and would result in a saving to the society of about £350 per annum.—After some remarks by Mr. T. HOLMES and Dr. THEODORE WILLIAMS the report was adopted.

The PRESIDENT, in his annual address, referred with satisfaction to the success of the conversion of the loan. The dinner at the Hotel Cecil, which is a new departure, had been a success, and he hoped that it would become an annual institution. The customary obituary notices of deceased Fellows closed the address, special reference being made to the lives of Professor Du Bois Reymond, Sir J. Russell Reynolds, Sir George Humphry, Sir George Johnson, and Mr. George D. Pollock.

After the usual votes of thanks had been passed the officers and council were elected to serve during the ensuing year. The following list was chosen: President: William Howship Dickinson, M.D. Vice-Presidents: William Marcet, M.D., F.R.S.; James Edward Pollock, M.D.; Frederick James Gant; and Charles Sissmore Tomes, F.R.S. Honorary treasurers: William Selby Church, M.D., and J. Warrington Haward. Honorary secretaries: Norman Moore, M.D., and Robert William Parker. Honorary librarians: Samuel Jones Gee, M.D., and Rickman J. Godlee, M.S. Members of Council: John Abercrombie, M.D.; Robert Leamon Bowles, M.D.; John Mitchell Bruce, M.D.; David Ferrier, M.D., F.R.S.; Joseph Arderne Ormerod, M.D.; William Watson Cheyne, F.R.S.; Henry Hugh Clutton; Frederick S. Eve; William Appleton Meredith; and Robert Alexander Gibbons, M.D.

PATHOLOGICAL SOCIETY OF LONDON.

Exhibition of Cases and Specimens.—Epithelioma of the Penis.—Changes in the Sub-maxillary Gland Secondary to Cancer of the Mouth.

A MEETING of this society was held on March 2nd, Mr. BUTLIN, the President, being in the chair.

Dr. F. J. SMITH and Mr. J. H. TARGETT showed a case of Aneurysm of the Aorta in a boy eight years of age. There was practically no history, the boy having been suddenly seized with dyspnœa only a few hours before his death, which occurred almost immediately after his admission to hospital. Post mortem a sacculated aneurysm the size of an orange was found projecting backwards from the upper part of the descending arch of the aorta and pressing on the œsophagus. The heart and œsophagus were perfectly free from disease, and to the naked eye the inner coat of the aorta was not degenerated. There was, however, a stenosis of the aorta, apparently congenital, just beyond the origin of the left subclavian artery; but as this was on the cardiac side of the aneurysm it was not easy to see what part the stricture could have played in the formation of the aneurysm.—At the suggestion of the PRESIDENT the specimen was referred to the morbid growths committee.

Dr. CYRIL OGLE showed a specimen of Dermoid Growth with Invasion of the Lung. The specimen was removed from the body of a man, twenty-eight years of age, who died from profuse hæmoptysis. He had suffered intermittently from cough and hæmoptysis for five years. On admission the temperature was hectic and the expectoration fœtid, the physical signs suggesting empyema. At the necropsy a cavity about four inches in diameter was found in the lower lobe of the right lung, which communicated freely with the middle primary division of the bronchus. It contained: (1) offensive grumous pus; (2) cheesy material, evidently sebaceous; and (3) five or six cream-coloured bodies like swollen digits, flabby, and covered with skin and fine hairs. Their attached ends were fused together into a firm mass which could be traced through the wall of the cyst, and was continuous with a mass which reached forward into the anterior mediastinum. Embedded in the central core was a large tooth. A microscopic section of one of the tongue-like processes showed a covering of stratified epithelium over a stroma of fibrous tissue containing some fat cells. There was evidence of inflammation near the surface only.—Mr. GODLEE said that these rare tumours did not appear to give rise to symptoms till adult life, and that then the symptoms were often those of empyema, and a purulent effusion did occur. In a case he had observed the symptoms began acutely in adult life, with expectoration of pus containing a few hairs. A few years later an incision was made into the cavity, which contained the same finger-like processes and some long hairs. The cyst was lined by a membrane exactly similar to that covering the digitations. In another case the symptoms commenced suddenly with a pleural effusion, at first serous and afterwards bloody. Later a tumour formed at the ensiform cartilage, and an incision liberated thick brown pus and greasy matter, possibly sebaceous. The wound ultimately healed, but later a fresh sinus formed near the clavicle and discharged for some time, but at length closed.

Mr. HUTCHINSON and Mr. E. FRAZER read a paper, with lantern demonstration, on Epithelioma of the Penis. They

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pointed out that the clinical features of different forms varied considerably, and that several varieties might be distinguished. Of these the chief were—(1) the warty or papillomatous form; (2) the fungating form; (3) the flat disc or indurated ulcer; (4) the purely eroding or destructive form; and (5) carcinoma of the urethra. In the usual varieties starting on the glans penis, or inner aspect of the prepuce, it was shown that, however extensive the growth was, the urethra and corpora cavernosa were but rarely invaded, and hence the deduction was made that amputation at the root of the penis by the Thiersch-Gould method was only indicated in exceptional cases. Microscopically the malignant growths of the penis were shown to differ as greatly as the naked-eye appearances. The large squamous-celled epithelioma with cell-nests is the commonest; another variety is the large alveolar type without cell-nests, a third the small alveolar with tendency to assume a tubular appearance, and as a rare occurrence a small-celled carcinoma starting in the urethra. Evidence was adduced in favour of the belief that the last named might start in the glands opening into the fossa navicularis, &c. The frequent occurrence of cyst-like spaces, lined with smooth epithelial walls and containing leucocytes and free, swollen, epithelial cells, was illustrated from six different cases of epithelioma of the penis, and their origin was discussed. Such cyst-like spaces in the epithelial down-growths were found in cancer of the vulva sometimes, and comparatively rarely in epitheliomata of other parts of the body.—The PRESIDENT said that the malignancy of epithelioma of the penis did not rank high. He agreed that complete ablation was not necessary unless there was direct involvement of the parts at the root.—Mr. TARGETT thought that the cystic changes which had been described occurred in other parts besides the penis—as, for instance, in epithelioma of the gum. The surrounding inflammation was due to septic infection with pyogenic organisms.—Mr. SHATTOCK was also familiar with cyst formation in squamous epithelioma in other parts. In his cases the cysts were found to be due to degeneration of the cells themselves, and there were no signs of inflammation. He agreed that involvement of the corpora cavernosa was very rare, but there was one specimen in the museum of St. Thomas's Hospital in which there was quite a horny mass in the corpora cavernosa.

Mr. J. HUTCHINSON, jun., and Mr. E. FRAZER exhibited specimens of Inflammatory Changes in the Sub-maxillary Gland occurring with Epithelioma of the Tongue and Floor of the Mouth. Part or the whole of the gland may become replaced by fibrous tissue and lymphoid cells, the alveoli of the gland undergoing atrophy and largely disappearing. These changes are perhaps due to irritation of the gland from pressure on Wharton's duct, and are of clinical interest from the induration which they cause being liable to be mistaken for secondary deposits of the growth. The actual invasion of the salivary gland by deposits of epithelioma in the lymphatics in the former was also discussed.—Mr. CECIL BEADLES said that he had examined seventeen specimens of sub-maxillary gland from cases of cancer of the mouth. In only one was the enlargement found to be due to actual epitheliomatous deposit.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A CLINICAL meeting of this society was held on Feb. 26th, the President, Dr. BUZZARD, being in the chair.

Dr. SAMUEL WEST showed a case of Unusual Syphilitic Eruption in an Infant. The child was in good health till she was eight months old. She then had a number of concentric patches on both cheeks, which began as circular spots and spread at the periphery. She had a group of condylomata at the anus, and there was also a general lichenous eruption which had probably no connexion with the other skin lesions. The patches increased in size for a time, but ultimately healed without leaving a scar. Fresh patches appeared while the child was under treatment, and pursued a similar course to the older ones. He thought it was a rare case of syphilitic eruption, although there was not much direct evidence of its specific nature. An exactly similar case was figured by Hutchinson in his Atlas.

Dr. COUPLAND showed a young man with Multiple Neuromata, Osseous Growth of the Frontal Bone, and Nervous Symptoms of doubtful origin. The neuromata were of varying size, fifteen in number, and situated in the subcutaneous tissues of the arms and trunk, the largest being about three inches long. They had been noticed since he was ten years of age. The osseous growth projected from the left side of the frontal bone and had been growing for the last three years. During the last twelve months curious nervous symptoms had shown themselves. There were loss of memory and some general mental alteration, a curious high-pitched voice, staggering gait, total deafness of the left ear, some weakness of the left arm and left side of the face, and double optic neuritis. There was also proptosis of the right eye, which was probably due to the high degree of myopia present (−15 D). He had difficulty in deciding whether the nervous symptoms were due to neuromata involving the cranial nerves and spinal roots or were associated with the tumour of the frontal bone.

Dr. F. PARKES WEBER showed a case of Aortic Stenosis with Bradycardia. The patient was a young man suffering from persistent dyspnœa and syncopal attacks. For some months there was a systolic aortic murmur only, but during the last few days a diastolic murmur had developed. The pulse-rate was persistently slow. The aortic dulness was higher on the right side than the left, but he thought that this was due to general enlargement of the right side of the heart rather than to an aneurysm. There was a history of syphilis many years ago, but the symptoms came on rather suddenly soon after an injury. — Dr. ORMEROD referred to a case of Aortic Stenosis in which a diastolic murmur appeared after the patient had been under observation for many months. — Dr. S. WEST mentioned the case of a man, thirty-five years of age, with signs of Aortic Stenosis and whose pulse-rate was seldom over thirty. He was under observation for several years and did not develop a diastolic murmur.—Dr. A. MORISON said that in cases where there was bradycardia there was usually good compensation; and dyspnœa, such as this patient showed, was very unusual in association with it.

Dr. ALBERT WILSON showed a girl, fifteen years of age, who exhibited Dual States of Consciousness. The case was exhibited before the society a year ago. The symptoms had followed an attack of what was believed to be meningitis attended with maniacal excitement. In her normal state she was bright and intelligent, in the abnormal stage she was semi-imbecile and infantile in her ways and her mode of expressing herself, and appeared to be almost blind, although there were no ophthalmoscopic changes. During this abnormal period she showed some capacity for drawing, although she had none in her normal state. She passed abruptly by turns from one stage to the other, and when in the normal condition had no recollection of the events which had happened in the abnormal stage.

Dr. ST. CLAIR THOMSON showed a man, thirty-three years of age, with a Hæmatoma of the Antihelix of the left Auricle which had developed spontaneously. It subsided without the scarring that was usual in insane cases. He exhibited a photograph of an ancient bronze statue of a pugilist armed with a cestus whose ears showed signs of many hæmatomata. — The PRESIDENT pointed out that there were no signs of general paralysis, the pupils being equal and reacting normally, and the knee-jerks were not exaggerated.

Dr. BEZLY THORNE showed a case of Aneurysm of the Aorta treated by mineral baths, graduated walking exercises, and free ingestion of fluids. When he commenced treatment in November, 1896, the patient had increased cardiac dulness, tumultuous action of the heart, and great dyspnœa on the slightest exertion. After six weeks he could walk with comfort. The apex beat was one and a half inches nearer the sternum, but there was not much diminution in the dulness to the right of the sternum. A skiagraph showing the outline of the aneurysm was made by Dr. Campbell Thomson before and after the treatment, and showed that in spite of the exercise allowed there was no increase in its size. There had been some recurrence of the symptoms, which had at once yielded to the same treatment.

Dr. FLETCHER LITTLE showed a case of Raynaud's Disease occurring in an otherwise healthy young woman, nineteen years of age. After having been subject to attacks of blueness of the fingers for some months, she was attacked during the cold weather with gangrene of the index, middle, and ring fingers of both hands The toes were unaffected. The cheeks were somewhat thickened and sclerodermatous. The association of scleroderma with Raynaud's disease was noticed by

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Raynaud himself, and the observation was confirmed by Dr. Coupland. Relief had been afforded in this and another similar case by the administration of nux vomica.

Dr. S. WEST showed a man, thirty-nine years of age, who had suffered from Weakness of the Arms for two years. The deltoids and the muscles around were strong and well developed, and the muscles of the hands were unaffected. The muscles of the arm and forearm, however, were very weak and much wasted. A few of the muscles in the forearm showed the reaction of degeneration imperfectly. He inclined to the view that it was a case of myopathy rather than one of progressive muscular atrophy.

Mr. F. C. WALLIS showed a new method of treating an Intractable Ulcer of the Leg. The ulcer had increased in spite of the ordinary treatment. He found that Thiersch grafts were not successful when implanted on the surface of a chronic ulcer. He therefore made two long parallel incisions a little distance from the borders of the ulcer, and having separated the skin from the subjacent tissues he was able to bring the edges of the ulcer together. Two gaps were thus made at the site of the lateral incisions, and these he had filled by Thiersch grafts. So far the results were satisfactory.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The Royal Commission on Vaccination.

A MEETING of this society was held on Feb. 19th, Dr. G. P. BATE, President, being in the chair.

Dr. ARMSTRONG resumed the discussion on the recommendations made by Dr. Bond at the last meeting (Jan. 15th) by calling attention to the amount of insufficient vaccination, which was for all practical purposes no vaccination at all. He considered that the society should take up the matter seriously, impressing the fact upon the Legislature especially in reference to the report of the dissentient members of the Royal Commission, who studiously ignored degrees of sufficiency—indeed, if uniformity could not otherwise be secured he would have the practice of vaccination restricted to responsible public officers.—Dr. NEWSHOLME thought that one advantage accruing from the postponement of the operation would be that the eruptions so frequent in early infancy would have already appeared, and therefore would not be, as they were now, on the *post ergo* principle, ascribed to vaccination.—Dr. MITCHELL WILSON (Doncaster) looked on the demand for better inspection of common lodging-houses as a reflection on the officials of the sanitary authorities unless it involved the power to re-vaccinate, which they had not at present. But in workhouses, where the guardians could enforce labour, &c., their compulsory powers might be extended to include vaccination, for the tramp in the casual ward was in a different position from the free man in a lodging-house.—Dr. ARMSTRONG interposed that the tramp on the tramp was more dangerous than he was in the workhouse or lodging-house.—Dr. BOND complained that, so far from encouraging the use of calf lymph, the Local Government Board resented frequent applications for it.—Dr. RENNER followed on the same lines, expressing his preference for glycerised lymph, which was used long ago in Italy and which Dr. Copeman had shown improved, instead of deteriorating, by keeping. All vaccinations should be inspected on or before the eighth day, after which it was no longer possible to complete an imperfect success by additional insertions.—Dr. COPE, approaching the subject from the standpoint of the public vaccinator, maintained that the station system could not be superseded. Much might be said in favour of home vaccination, but it would impose great trouble on the public vaccinator, and he would appear as a tout and a rival to other medical men. The school was still more objectionable; he would there come into collision with the officials of the School Board and Education Department, and with absence, evasion, or actions for assault. At the stations publicity made the parents civil and the infants clean, and their retention was necessary for the teaching of students. The Vaccination Officers' Association had for twelve years pressed on the Local Government Board most of the recommendations now put forward by the Commissioners.—Dr. WILLOUGHBY said that both in the press and at the meetings of the society he had pleaded for a form of certificate that should indicate the degree of success obtained, but that this should be expressed by the number of vesicles, which could always be counted, rather than by their aggregate area, which it was impossible to verify after the lapse of years; besides the lessened risk of wound infection from delayed healing when numerous small vesicles were substituted for a few large abrasions. He insisted on the importance of re-vaccination about the age of puberty, without which the operation should be considered as only half performed. It was to forty years of this practice that the city of Frankfort enjoyed immunity from the epidemic that during the Franco-German War ravaged the rest of Germany and Europe, and to its adoption throughout the empire was due the almost complete extinction of small-pox in Germany, the deaths in that country having for some years past been as 1 to 100 in Switzerland, 110 to 120 in England, 260 in France, and 640 in Holland, and even these were mostly those of foreigners or on the frontiers of Russia and France, and the victims of the imported infection were for the most part infants not yet vaccinated or persons who, born before 1860 and not having passed through the army, had escaped re-vaccination. He approved the use of calf-lymph as a concession to popular prejudice only, and not from any belief in its superiority. But he would urge on the Institute of Preventive Medicine and the Local Government Board the duty of producing and supplying new strains of lymph obtained by variolation of the cow, as had been done by Voigt of Hamburg in 1881, and subsequently by Haccius, Fischer, King, Simpson, and others, and the superiority of which was shown by the fact that whereas in Germany generally 97 per cent. of the legal re-vaccinations were successful, in Hamburg, where Voigt's lymph had been almost exclusively used since 1882, the majority of native children were as yet insusceptible.

Dr. BOND replied shortly to each of the preceding speakers, expressing his belief that the difficulties of home and school vaccination had been exaggerated.

HUNTERIAN SOCIETY.

Torticollis and its Treatment.

A MEETING of this society was held at the London Institution on Feb. 24th, the President, Dr. G. E. HERMAN, being in the chair.

Mr. VICTOR HORSLEY delivered the second Hunterian Society Lecture and chose for his subject "Torticollis and its Treatment." He first enumerated the different forms of torticollis and gave a description of each, and then gave an account of their causation and of the experimental evidence as to their production. The treatment by drugs, electricity, and surgical methods suitable to each form was dwelt upon. The lecture was illustrated by several photographs thrown on the screen by limelight. At the conclusion of the lecture a hearty vote of thanks proposed by the PRESIDENT was carried unanimously.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Retention of Menstrual Blood.—Puerperal Septicæmia Treated by Tincture of Digitalis.

A MEETING of this society was held at the Medical Institution, Liverpool, on Feb. 19th, Dr. ARCHIBALD DONALD, Vice-President, being in the chair.

Mr. E. STANMORE BISHOP showed: (1) Fibroid Uterus with Cervical Carcinoma, removed by vaginal hysterectomy; (2) Fibroid Uterus with Double Cyst, removed by vagino-abdominal section, ligature of the lower half of the broad ligaments was the first step and the operation was completed by suturing the vaginal opening and no drainage of the abdominal cavity; (3) Dermoid Cyst, removed by abdominal section from a girl aged fourteen years; and (4) Ovarian Abscess with Fibroid Uterus.

Dr. LLOYD ROBERTS showed: (1) A portion of a Lead Pencil removed from the Bladder of a married woman aged thirty-seven years. The pencil shown was a "stub" of an ordinary long lead pencil measuring two and a half inches in length and deeply encrusted with a phosphatic deposit. At the part least mutilated by the forceps in removal the diameter of the foreign body—pencil and crust—was rather more than half an inch. (2) Left Ovary and portion of the Fallopian Tube removed by posterior vaginal cœliotomy. The ovary was

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the size of a Tangerine orange and cystic, and was firmly adherent to surrounding structures.

Dr. T. B. GRIMSDALE showed the Fallopian Tubes removed by abdominal section for Tuberculous Salpingitis. The tubes were studded with miliary tubercle in their peritoneal covering and distended with fluid; they measured six inches in length and were of about the thickness of the index finger. The fimbriated end of the tube was enlarged.

Dr. ARTHUR WALLACE read notes of a case of Retention of Menstrual Blood in the Right Imperforate Half of a Septate Vagina and Uterus Bicornis et Bicollis. The patient was aged twenty-two years. Menstruation commenced at sixteen years, and she was regular. There was a swelling in the abdomen occupying the right iliac, lumbar, and umbilical regions, and measuring four inches in diameter. *Per vaginam* a swelling was felt which appeared to lie outside the vaginal wall on its right side and to be continuous by a constricted portion with the abdominal swelling, forming a dumb-bell-shaped swelling. The vaginal swelling was tapped and eighteen ounces of treacle-like blood escaped, after which the cervix was felt high up behind and to the left of the swelling, and the sound passed three inches.

Dr. GLYNN WHITTLE read a paper describing ten cases of Puerperal Septicæmia treated by tincture of digitalis, the primary aim being direct control of the pulse. An accompanying benefit, but one following as a secondary result, was relaxation of tonic contractile spasm of the sphincter at the os uteri internum, leading to flow of the lochia and consequent diminution of temperature. Rapid improvement was usually effected, followed by complete recovery in about five or six days. The dose given was ten minims every three hours, the dose being doubled or trebled if necessary according to the indications of the pulse. In seven of the cases the uterine douche was not used. The maximum amount of tincture of digitalis swallowed by any one patient was twelve fluid drachms and thirty minims in five days. Criticism was specially directed to the "fool's paradise" of the uterine douche in unskilful hands, a calamitous record of treatment which has led to the loss of countless lives.—Dr. DONALD, Dr. LLOYD ROBERTS, Dr. STOOKES, Dr. DAVIES, and Dr. GEMMELL took part in the discussion which followed, and Dr. WHITTLE replied.

LIVERPOOL MEDICAL INSTITUTION.

Successful Brain Localisation and Operation for Idiopathic Insanity.—Membranous Cast of Trachea and Bronchi.—Treatment of Dacryocystitis.—Treatment of Lateral Curvature of the Spine.

A MEETING of this society was held on Feb. 25th, Dr. RICHARD CATON, President, being in the chair.

Mr. STREET and Mr. DAMER HARRISSON related a case of Successful Brain Localisation and Operation for Idiopathic Insanity. The patient was a man, who for two years had hallucinations of hearing, without any previous head injury. He became depressed, was unable to sleep, and took to drink. The voices were those of friends far away, and they goaded him to destroy himself in order to avoid disgrace. He had constant headache on the left side. He took six grains of opium daily without procuring sleep. He had attempted to cut his throat. Mr. Damer Harrisson trephined, making a large opening over the centre for hearing and opened a serous cyst. The result was entire recovery, and the man is now at work.

Dr. P. DAVIDSON showed a Membranous Cast of the Bronchial Tubes with numerous branches. It had been coughed up by a child supposed to be suffering from diphtheria. Part of this examined microscopically was found to contain almost a pure cultivation of micrococci. No Löffler's bacillus was discovered. Dr. Davidson, however, considered the case undoubted diphtheria. There was membrane on the tonsils and in the respiratory tract. Tracheotomy had been performed for dyspnœa. Diphtheria antitoxin had been injected. The patient was shown still wearing a tracheotomy tube. Dr. Davidson remarked that in several of the most marked cases of diphtheria that he had seen no Löffler's bacillus had been found in the membrane examined.—Mr. BARK drew attention to the value of curetting the trachea and bronchi through the tracheotomy wound in cases of diphtheria where dyspnœa occurs after the operation.

Mr. HUGH E. JONES read a paper on the Treatment of Dacryocystitis. Of fifty consecutive cases of mucocele, blennorrhœa, and abscess of the lacrymal sac, thirty-seven had neither cicatricial stricture of the nasal duct nor obvious disease of the nose. The remaining thirteen were divided amongst various forms of organic stricture and of coarse nasal disease. The cause of the obstruction in the large majority of cases was engorgement of the erectile tissue around the duct and catarrhal swelling of the lining membrane. Later the obstruction was due in a large measure to over-distension of the sac. The objects to be kept in view during treatment were—(1) to avoid interference with, and to preserve as far as possible the physiological integrity of, the organ; (2) to render the whole tract aseptic and to restore the mucosa to a condition of health; and (3) to reduce reflex irritation of the lacrymal gland to a minimum. The prolonged use of probes (especially large ones) and styles (apart from direct injury) induced sclerosis of the tissues, made the canaliculus of no physiological use, and sometimes caused periosteal stricture of the duct. These means of treatment should be classed among *derniers ressorts*. Partial slitting of the canaliculus followed by antiseptic irrigation, as suggested ten years ago by Edgar Browne, was by far the best, most scientific, and most rapidly successful treatment. The fact encouraged him (Mr. Jones) to dispense with slitting the canaliculus in suitable cases, and he made instead an opening in the dome of the lacrymal sac above the tendo oculi. In incipient cases of obstruction injections of a solution of cocaine and pinol in paroleine, made with Anel's syringe through the undivided canaliculus, seemed the most rational, paroleine being very diffusible and cocaine reducing vascular engorgement.—Mr. BICKERTON said he would adopt the irrigation treatment in all cases where symptoms of obstruction of the nasal duct had existed for a comparatively short time. But he dissented from the following statements of Mr. Jones: (1) "that undoubted cicatricial periosteal and bony stricture was rare"; (2) that treatment "by large probes, Stilling's knife, and styles were *derniers ressorts*"; (3) that they should be classed with such extreme methods as excision of the lacrymal gland and obliteration of the lacrymal sac; (4) that "the assumption (in practice) that the prime cause of dacryocystitis is in nearly every case stricture (i.e., cicatricial stricture) of the nasal duct cannot be sustained"; and (5) that "the prolonged use of probes and styles in treatment induces sclerosis of the tissues and sometimes causes stricture of the nasal duct." The rest of the discussion on this subject was adjourned to the next meeting.

Mr. BANKS read a paper on Practical Experience in the Treatment of Lateral Curvature. He dealt with the early symptoms of lateral curvature of the spine, such as rotation of the vertebræ, projection of the transverse processes and prominences of the scapula and ilium; with the theories of the production of these; with the general points to be held in view during treatment; and, finally, with the details such as couches, seats, exercises, mechanical appliances to the body, correction of bad habits of posture, &c. The paper was illustrated by diagrams and specimens.—Mr. ROBERT JONES said that the causation of the curves was still obscure, despite the experiments of Judson, Bradford, and Lovett. Amongst early symptoms care should be taken to discriminate between the lateral deviation due to unilateral absorption in spinal caries and starting scoliosis. He strongly deprecated the use of shoulder straps and poroplastic jackets.—Mr. RUSHTON PARKER and Mr. A. MACLEOD ROSS also took part in the discussion.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens.

A PATHOLOGICAL meeting of this society was held on Feb 19th, Dr. BRAITHWAITE, Vice-President, being in the chair.

Dr. CHURTON showed a specimen of Sarcoma of the Kidney. The patient had been under observation eight years. There was no secondary growth elsewhere.

Dr. WARDROP GRIFFITH showed specimens of Changes in the Osseous System. Among these was one of Osteo-arthritis of the Spine, with thickening and ossification of the anterior common ligament of the bodies causing ankylosis of eight

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vertebræ. At one point this splint-like mass was fractured and a false joint had developed.

Dr. WARDROP GRIFFITH and Mr. LITTLEWOOD showed an Intestine from a patient who died from empyema, but who was operated on two years ago for a foul-smelling abscess in the region of the cæcum. The point of interest was that the only evidence of any operation was a slight dimple in the peritoneum opposite the skin incision and some very slight extremely delicate adhesions around the appendix which did not present any evidence of disease beyond slight thinning of its mucous membrane at one point and in the peritoneum. Close to this was a small mass of cheesy-looking pus the size of a pea.

Dr. BASIL HALL showed a series of Casts of Deformities of the Feet. These included single and double club-foot, pes cavus and acquired talipes equinus, and calcaneus.

Dr. BRAITHWAITE showed some sections of Glandular and other forms of Fungosities of the Uterus.

Dr. BARRS showed the Viscera from a case in which the diagnosis lay between splenic anæmia and idiopathic anæmia.

Mr. C. J. WRIGHT showed some large Masses of Molar Tissue removed from the uterus on two occasions, four weeks after the birth of a full-term living child. The patient, who had had three confinements and was thirty-six years of age, had a natural labour, but the uterus still remained large, leading to the supposition that there was another fœtus. On the twenty-seventh day she was brought to Mr. Wright with a protrusion from the vagina the size of a cocoanut. Dense, offensive membranous masses which filled a pint basin were removed, and the next day under ether the uterus was emptied and cleansed. The patient made a rapid recovery. There had probably been a twin conception with one ovum blighted.

Dr. SELBY showed—(1) a Tuberculous Kidney which had become converted into a Fibrous Structure containing Embedded Calcareous Masses; and (2) a specimen of Double Calculous Pyo-nephrosis, the right kidney containing numerous calculi with a quantity of fœtid pus, and the left being converted into a loculated pyonephrosis containing about two pints of very foul pus.

Dr. HELLIER showed Shäffer's Gynæcological Plates and a Uterus removed by Vaginal Hysterectomy for Carcinoma, the patient eventually recovering.

Mr. LITTLEWOOD showed Sixty Calculi removed by suprapubic operation from the bladder of a patient aged sixty-nine years.

Mr. SECKER WALKER showed the two halves of an Eyeball incorporated with a Spindle-celled Leuco-sarcoma which filled the orbit.

Mr. WALTER THOMPSON showed the Large Intestine of a patient who had died suddenly twenty-four hours after the administration of ether per rectum for an operation on the mouth which lasted forty minutes. Four ounces of ether were used. The mucous membrane was congested and almost all over was marked by extravasations of blood.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF ANATOMY AND PHYSIOLOGY.

Exhibition of Lantern Slides.—The Applied Anatomy of the Rectum.—Organic Sulphates of the Urine.

A MEETING of this Section was held on Feb. 5th, Dr. JOHNSON SYMINGTON, the President, being in the chair.

Dr. A. FRANCIS DIXON exhibited a number of lantern slides illustrating Early Human Embryos. The first slides illustrated an unopened chorionic sac, measuring 8 mm. by 7 mm. by 3 mm., the probable age of which was estimated at fourteen days. The flattening of the sac was assumed to be due in great part to shrinking of the decidua by which it was surrounded when first obtained by Dr. Murphy. The greater part of the sac was covered all over by short, stout, slightly branched villi. Over one pole, however, there was a bare area of small size. The presence of this bare area and the size of the sac would fix the age of the ovum at fourteen days. This determination agreed sufficiently well with the history of the case from which it was obtained. The second series of slides illustrated the external anatomy of two embryos of from twenty-two to twenty-three days. In one the amnion and yelk sac had been removed, while the other was photographed through the amnion, and the yelk sac was in position. Finally, three photographs were shown of an embryo of from thirty-three to thirty-four days. In this last embryo the photographs displayed not only the external markings on the embryo itself, but also gave a good view of the allantoic and vitelline arteries.—The PRESIDENT asked Dr. Dixon what preservative he used for the embryos. He himself had found corrosive sublimate the most satisfactory.—Dr. BIRMINGHAM inquired as to the method in which the photographs were taken.—Dr. DIXON, in reply, said he had always used methylated spirit for preserving his human embryos. Nitric acid was best for preserving fowl embryos. In photographing, the specimens were placed in glass cells with dark bottoms, the cells were completely filled with spirit and the cover slid on, so as to exclude all air bubbles. Special care had to be taken with the lighting.

Dr. EDWARD H. TAYLOR made a communication upon the Applied Anatomy of the Rectum, which he illustrated by lantern slides of frozen sections and of dissections specially prepared to illustrate the structures met with in perineal and sacral excision of the rectum. Having demonstrated the principal relations of the rectum in both sexes he referred to its sphincteric apparatus, which is constituted by the two sphincters and the levatores ani muscles. The latter were shown and the *rôle* played by them as rectal sphincters pointed out. It was evident, from the antero-posterior direction taken by the fibres of these muscles by the sides of the rectum, that in contracting they compressed the bowel laterally. In proof of this statement Dr. Taylor mentioned that if the finger were introduced into the rectum in the living subject both the extent and the tonicity of the anal canal (sphincteric zone) could be well determined. It was possible to appreciate a deep and a superficial contracting zone. The latter was certainly due to the external sphincter, whereas the former was evidently caused by the levatores ani, the contractions of which were both voluntary and sudden, thus differing from the internal sphincter, which contracted slowly and independently of the will. In perineal excision of the rectum Dr. Taylor laid stress upon the importance of always making an attempt, even when the sphincteric zone of the rectum had to be removed, to re-construct a modified sphincteric apparatus, and showed how this might be done by carefully preserving as much of the levatores ani muscles as possible and afterwards connecting them with the healthy end of the gut by a series of deep sutures. The applied anatomy of sacral excision was then considered and illustrated by photographs of dissections.—The PRESIDENT was glad to see that Dr. Taylor had emphasised the distinction between two parts of the rectum—the sphincteric and the supra-sphincteric areas; he (the President) would go further, for he held that they were functionally and anatomically distinct—the former was capable of acting as a reservoir, while the latter, which he had called the anal canal, was not.—Dr. BIRMINGHAM expressed the opinion that the internal sphincter was not a real functional sphincter of the anus at all. Its use was to force the fæces through the canal during defecation. The levatores ani, he believed, were the chief sphincter.—Dr. PURSER was inclined to agree with Dr. Birmingham's view of the nature of the internal sphincter.

Dr. COFFEY read a note on Organic Sulphates of the Urine.

TAUNTON AND SOMERSET HOSPITAL.—The annual meeting of the governors of the Taunton and Somerset Hospital was held on Feb. 11th, under the chairmanship of Dr. E. Liddon, J.P., the retiring president. The report of the committee congratulated the subscribers upon the continued and increasing usefulness of the hospital and the nursing institute. There was a deficit on the general account of £660, and a surplus of £243 on the nursing institute account. The committee suggested that this year, in which would be celebrated the sixty years' reign of the Queen, might be made the occasion of some special effort to improve the financial position of the hospital and enlarge the scope of its work, and it was decided to ask the Lord-Lieutenant of the county, the Earl of Cork, to call a public county meeting with this object in view. The Hon E. W. B. Portman was elected president for the ensuing year.

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Reviews and Notices of Books.

The Diagnosis and Treatment of Diseases of the Rectum. By WILLIAM ALLINGHAM, F.R.C.S.Eng., ex-member of the Council of the Royal College of Surgeons of England; and HERBERT W. ALLINGHAM, F.R.C.S.Eng., Surgeon to the Great Northern Central Hospital and Assistant Surgeon to St George's Hospital. Sixth Edition. 1896. Baillière, Tindall, and Cox. Pp. xvi. and 485. Price London: 12*s.* 6*d.*

THE most striking characteristic of this volume is its eminently practical aim. Very little space is allotted to the discussion of abstruse questions of etiology and pathology, though these are by no means ignored, but the diagnosis and the treatment of the various morbid conditions are dealt with very fully and receive the greatest share of attention.

As a practical treatise on the diseases of the rectum we consider the book to be deserving of sincere praise, yet there are several points on which we cannot fully agree with the views put forward by the authors. In the description of the varieties of internal hæmorrhoids we find one variety called the "arterial hæmorrhoid." It is true that it is by no means uncommon to find a fairly large artery in the centre of an internal pile, but it is never found that a hæmorrhoid consists entirely or even in great part of arterial vessels, for such hæmorrhoids do not exist. Those which are so named consist for the most part of dilated veins. We heartily endorse all that the authors say as to the undesirability of injecting carbolic acid for the cure of hæmorrhoids, and, in fact, the method is but little practised at the present day in this country, but we must express our dissent from the condemnation which they also give to the treatment of hæmorrhoids by "crushing." When carefully employed excellent results are obtained, especially when combined with the use of the actual cautery, for by this treatment no hæmorrhage occurs, and this was the only drawback to Pollock's method. We acknowledge that ligature, the operation which the authors of this book chiefly favour, gives very satisfactory results, but this fact should not be allowed to discredit unduly other operative procedures.

As to Whitehead's operation, we are told that it is "one of the worst operations for piles," and yet with curious inconsistency the authors go on to say that for those who persist in employing this method an instrument devised by themselves is of "great assistance in simplifying this operation and in remedying some of its defects." We must protest against the statement that the operation is "difficult to perform," and certainly in suitable cases its results are unsurpassed. The book has reached a sixth edition, a distinction which it well deserves, for it supplies a very readable treatise on the diseases of the rectum.

The Practice of Midwifery: A Guide for Practitioners and Students. By D. LLOYD ROBERTS, M.D. St. And., F.R.S. Edin., F.R.C.P. Lond., Physician to St. Mary's Hospital for Women and Children, Manchester, Consulting Obstetric Physician to the Manchester Royal Infirmary, &c. Fourth Edition. London: J. & A. Churchill. 1896. Price 10*s.* 6*d.*

THE new edition of Dr. Lloyd Roberts's favourite little text-book has been considerably enlarged, containing nearly 200 pages more than its immediate predecessor, and the number of illustrations has also been considerably increased. The work has been revised, and many of the chapters have been re-written. We are glad to observe that the subject of antiseptics in midwifery has been given a chapter to itself, for although the author says "there is no need to insist upon the necessity for surgical cleanliness on the part of *medical attendants* and *nurses*," he implies that it is, in fact, of the greatest importance to take every possible care to obtain it, and proceeds to give a clear account of what must be done with this object in view. We observe that, while mentioning a solution of perchloride in glycerine as a lubricant for the examining finger, he rather prefers sapo mollis B.P., with 5 per cent. carbolic, or 1 per cent. lysol—as these "facilitate subsequent washing"—for the purpose in question.

There are a few points here and there on which the information in the text is a little open to criticism; for instance, in describing ballottement the author says: "The point of one finger is passed to the cervix uteri and a sudden impulse made in an upward direction," &c., whereas of course the right position for the finger in order to obtain this sign is in the anterior fornix. Again, in speaking of mento-posterior positions of the face, it is stated that "mento-posterior cases are dangerous because of the stretching and pressure on the bloodvessels of the extended neck. It is advisable to relieve this as soon as possible, and forceps are to be used early if rectification does not occur naturally or by means of the method indicated above"; but it is not impressed on the student, as we think it should be, that delivery with the chin posterior is impossible in the large majority of cases, and that, unless the chin can be made to rotate forwards, craniotomy will be required. We think also that at the present day the description of transfusion of blood for hæmorrhage might well have been omitted, since this operation has been very generally replaced by the intravenous injection of saline fluid. At the same time these are minor defects and do not materially detract from the general excellence of the work. We have no doubt it will be found by the present generation of students to be a useful exposition of the subject—concise and generally reliable.

A Manual of Clinical Diagnosis by Means of Microscopic and Chemical Methods. By CHARLES E. SIMON, M.D. London: Henry Kimpton. 1896. Price 16*s.*

THERE is little need in the present day to dwell on the value and importance of the assistance given to clinical diagnosis, and therefore to treatment, by a thorough microscopical and chemical examination of the products of disease or of the blood and the various excretions. So important is it that within the past decade many a work has been published devoted solely to this one branch of clinical investigation, and there is no medical school where instruction upon it of a systematic kind is not to some extent imparted. Nevertheless, this necessary extension of the field of observation is in itself so wide and comprehensive that it becomes more and more difficult for the practitioner to follow. It needs a special department and a staff of highly trained experts to carry it out to the full; and it is this class of work which is being so well undertaken in this country by the Clinical Research Association. The author of the volume before us has enjoyed at the Johns Hopkins Hospital, Baltimore, ample opportunities for the study of the subject, and his treatise is in every respect excellent. Covering practically the same ground as the well-known work of Professor von Jaksch, the book contains in some sections even more information than does that volume. It is evident, too, that the author has himself largely confirmed the statements which he makes, and occasionally he feels bound to differ from the somewhat too dogmatic teaching that has dominated parts of the subject. We have, after a careful review of the contents of the book, no hesitation in commending it as one of the best and most compendious manuals for the clinical laboratory that has yet appeared. The subject-matter is arranged on a very systematic plan, the text is not burdened by references to literature, and the descriptions of apparatus as well as the instructions for the performance of tests are

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clear and concise. Perhaps the best section is that devoted to the urine, occupying about one-half of the volume, but the sections on the blood and on the gastric juice and gastric contents are little, if at all, inferior in scope and fulness. In his preface Dr. Simon pleads for a more thorough recognition of these studies in places of instruction, and urges the younger members of the profession to pursue them with diligence. As he says, "It is inconceivable that a physician can rationally diagnose and treat diseases of the stomach, intestines, kidneys and liver, &c., without laboratory facilities." Whether his suggestion that physicians might usefully employ a laboratory assistant to enable them to carry out this duty will ever be realised, time with its advance of knowledge can alone show.

The Fall of the Congo Arabs. By SIDNEY LANGFORD HINDE, Medical Officer of the Interior, British East Africa, late Captain, Congo Free State Forces, &c. London: Methuen and Co. 1897. Price 12*s.* 6*d.*

This is an interesting book about an interesting and, to the average reader, little known country. Mr. Hinde served for some three years as medical officer to the Congo Free State forces during the campaign undertaken by the Belgians against the vassals and successors of Tippu Tib. The commandant was Baron Dhanis. All records of bush-fighting have a great resemblance the one to the other, and Mr. Hinde's are no exception to this rule, but he gives us a number of facts about the various tribes he encountered of whom perhaps the most remarkable are the Batwa, "the little people of the forest." These pygmies live in the dense forest of the Congo basin, are under four feet in height, and are armed with bows and arrows. Though feeble weapons to look at, they are extremely deadly, firstly because they are poisoned, and secondly because their owners can send three or four arrows so rapidly in succession that the last leaves the string before the first reaches its mark. The nature of the poison is unknown, and Mr. Hinde does not venture upon any speculations as to what it may be. "A man will die in from three to ten minutes after having been scratched. An elephant ..... scratched on the haunch by a poisoned spear fell down dead before going a hundred yards." Most of the tribes in the Congo basin are cannibals, and Mr. Hinde's followers after a fight always ate up the killed. The author's experiences with small-pox are worthy of notice, and we commend them to those ignorant fanatics who delight in risking the spread of disease in Leicester and Gloucester. "Our Hauswas were, with one exception, all vaccinated, and this man was the only one in the company who caught small-pox, and he died of it. In the Elmina company there were only two men unvaccinated, both of whom got small-pox and one of whom died of it. Of our Lower Congo porters very few had had small-pox, and only some half-dozen had been vaccinated. Among this body of 200 men rather over two-thirds took small-pox, and there were 65 deaths among them." Many tribes inoculate with small-pox, not having any vaccine; and unfortunately all the vaccine sent out to Mr. Hinde proved apparently inert. The book, though full of adventure and out-of-the-way matter generally, is very simply and modestly written.

JOURNALS AND REVIEWS.

The British Journal of Dermatology for January and February contains a Case of Myoma Multiplex of the Skin, by H. Radcliffe Crocker, with chromo-lithograph in the January number and microscope drawings in the February number; a comprehensive account and abstracts of all the published cases of this rare disease are appended to the history of the case. Malignant Syphilis is ably discussed by A. Neisser of Breslau. L. Wickham in a letter from Paris gives some interesting notes on Lichen Planus of the Mouth without Skin Eruption, which appears to be less known in France than in England; on Acanthosis Nigricans; and on Hereditary Syphilis of the Bones and Teeth. Reports of the Dermatological Societies and the usual abstracts from foreign sources conclude the January number. In the February number, besides the conclusion of the article on myoma alluded to, there is the record of some careful work by Justus of Budapest on the Alterations of the Blood Produced by Syphilis, in which he shows that the amount of hæmoglobin is greatly reduced in the secondary period without treatment, while with large doses of mercury there is a rapid and considerable further diminution which is soon recovered. This sudden diminution after the administration of mercury only happens in syphilitics and no longer occurs when the syphilis remits or is cured. W. T. Freeman gives a note on skin irritation caused by handling hyacinth bulbs, and H. Skinner furnishes a useful pharmaceutical criticism on some new remedies and formulæ. It will be seen, therefore, that the articles are of scientific, clinical, and practical interest.

Archiv für Dermatologie und Syphilis. Vol. XXXVIII. 1897. Parts I. and II.—This old-established periodical keeps up its reputation. Part I. contains an elaborate illustrated article by Max Joseph on the Anatomy of Lichen Ruber Planus, Acuminatus and Verrucosus. A case of Lichen Planus is reported which was treated at the Breslau Hospital by subcutaneous injections of arsenic which produced arsenical pigmentation, keratosis of palms and soles, and peripheral neuritis, though the author, Max Dreysel, was inclined to consider alcohol as the cause of the last symptom. C. Bruhns, of Bern, relates his investigations on the much vexed question of the etiology of trichorrhexis nodosa, a disease of the hair which appears to be common in Bern. While his own experiments were negative as far as adducing proof of the bacteriological origin of the disease is concerned he concludes that therefore it cannot be proved to be a bacterial disease, although there are some facts in favour of it. Kopp gives a short account of a case of Multiple Angiomata in a young man. They seem to have been numerous stellate capillary striæ, of which cases have been described and figured in this country. Finally, J. Schütz recommends that Lupus Erythematosus should be treated by repeatedly painting with a diluted Fowler's solution 1 to 5 or 8, until some redness and swelling is produced, when the part is soothed until the inflammation has subsided and then the painting is resumed. In Part II. the original articles are:—1. A. Kozerski describes a Case of Actinomycosis of the Skin treated with success with large doses of iodide of potassium. Photographic illustrations before and after treatment are given. Ten grammes of iodide a day were reached. He states that suppuration may be produced by the actinomycosis fungus alone without the intervention of pus cocci. Some writers recommend washing out the sinuses with the iodide solution. 2. K. Herxheimer describes three cases of what he designates as Impetigo Contagiosa Vegetans, and in connexion with their histology he discusses the pathology of the protoplasm of epithelial cells. 3. L. Wallsch gives a further communication on the Pathology of the Hyphomycoses, taking the anatomy of pityriasis versicolor as his special theme. 4. M. Hintner adds yet another case of Multiple Skin Gangrene in an anæmic, strongly nervous girl, aged twenty-one years, but rejects the theory of its being self-induced. 5. E. Spiegler contributes Histological Studies on Eczema Marginatum, illustrated with three plates. He finds the fungus exclusively in papules formed by the altered horny layer and that it never penetrates into the rete. 6. Löblowitz advocates the use of airol, an iodine compound with dermatol, in dermatological practice, and

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thinks that it may even supersede iodoform. Both numbers conclude with the usual reports of societies and copious extracts from dermatological literature.

Chirurgia. Vol. I., No. 1. January, 1897. Edited by Professor DIAKONOF. (Monthly, 8 roubles per annum.)—This is the first number of a new Russian journal, published under the editorship of the Extraordinary Professor of Operative Surgery in the University of Moscow. As its name implies it is devoted entirely to surgery. Nearly half the present number is taken up by Dr. Pomerantzef's article on Brom-ethyl as an Anæsthetic. The subject is discussed mainly from its chemical aspect; the writer regards brom-ethyl as a safe anæsthetic, suitable for country practice, as it can be kept for a long time without decomposing, while the yellow discoloration shows at once if decomposition has set in. The chemical tests of its purity are also very simple and easily applied. Dr. Sventzitzki discusses the technique of Trephining. Dr. Ikavitz reports a case of Wound of the Liver through the Thorax followed by recovery; and Dr. Varnek describes two successful cases of treating Tuberculous Peritonitis by operation. An article on Extra-uterine Pregnancy by Dr. Bobrof completes the original communications. The remainder of the number contains brief abstracts of a group of twenty-six articles in different languages on Diseases and Injuries of the Head, a series of reviews of current surgical literature by the editor, and short notes and news. The journal is well printed on good paper. The editor's address is Moscow, Tverskaia, No. 69.

Among the monthly publications of the Religious Tract Society the *Sunday at Home* has a brief article on Stangate Creek, the Medway Quarantine Station. At one time it was the custom to bury those dying on board a quarantined vessel in the adjacent marshes, and there still exists one solitary gravestone which serves to mark, not only the burial place of many victims of fever and plague, but also the resting place "of one of the many heroes of the medical profession who, in seeking to save life, have lost their own." This is the grave of Sidney Herbert, a surgeon of the Royal Navy, who succumbed to fever while attending to the sick on board H.M.S. *Eclair*. The vessel was placed in quarantine on her return home from the West Indies in 1845.—The *Leisure Hour* contains several articles of interest, among them a sketch of Mr. Ruskin's Social Experiment, the St. George's Cottages, Barmouth.—The *Girl's Own Paper* and *Sunday Hours* are interesting as usual.

St. Mary's Hospital Gazette.—The February issue contains an editorial reply to our question asking whether it would not "be possible for the new medical officer [the casualty physician] while making his selection of suitable cases from a medical point of view to give an eye to each case with regard to the worthiness on the part of the patient to receive free treatment." Says the editor: "To the initiated it is clear that the strictly professional duties of the casualty physician will be more than sufficient to occupy his attention without entering into the social conditions of the patients." We can only say that if "to the initiated it is clear that the strictly professional duties of the casualty physician will be *more* than sufficient to occupy his attention," he would be far better employed in the occupation suggested by us. If his duties will be more than sufficient to occupy his attention, it was a farce to make the appointment.

Guy's Hospital Gazette.—The first part of a Clinical Lecture by Dr. Newton Pitt in the current number will be read with interest, as the number of cases admitted into the medical wards has very greatly increased of recent years. "R. O. M." concludes his Notes from a Holiday in Persia with a hint to patients suffering from nervous debility or from eating or drinking too much. "I could most highly recommend," he says, "the ride from the Caspian Sea to the Persian Gulf as a variation on the traditional sea voyage and baths."

The March number of the *Practitioner* contains some wholesome editorial remarks upon Hospital Reform, one of which is as follows: "I am convinced that until some penalty is attached to the abuse of medical charities things will remain pretty much as they are." Mr. Morris suggests that any deliberate abuse might be dealt with as fraud, or, at any rate, as begging. Coming to the more purely professional papers Sir Dyce Duckworth has an interesting communication upon Cirrhosis of the Liver, laying stress upon the fact that it is not a merely local disease, but only a local manifestation of a very general disease. He also points out that in the later stages great benefit to the patient, if not to the complaint, arises from the giving of a little alcohol. Mr. Quarry Silcock writes upon Empyema of the Frontal Sinus, and Dr. Archibald Donald upon Phantom Tumour, which, he says, is by no means always hysterical, and quotes an interesting case where the tumour was a reflex symptom produced by pelvic peritonitis. Dr. Greig Smith brings forward facts to prove that Robert Houston did not perform an ovariotomy in the celebrated case of Margaret Millar, but only incised and drained an ovarian cyst.

THE INTERNATIONAL SANITARY CONFERENCE.

THERE is not very much to be chronicled this week in regard to the International Sanitary Conference at Venice, but a good deal of work has nevertheless been done and things are progressing favourably; the discussions that have taken place have served to clear the atmosphere, as it were, and their general trend has been of a business-like character and in a practical direction. The technical committees have done much in formulating their reports. The announcement of the Hon. M. Herbert at a general sitting of the Conference that the Indian Government had entirely prohibited this year's pilgrimage was received with general applause. We are mainly indebted to the excellent accounts which have appeared in the *Times* for our facts regarding the Conference. Surgeon-Major-General Cleghorn's description, too, of all that has been or was being done at Bombay was apparently regarded as satisfactory, although, as might have been anticipated, some of his deductions and views in regard to the nature of the plague and its intimate connexion with and dependence upon local conditions rather than upon its purely contagious properties did not carry conviction to all. He said that since the outbreak in Bombay about 300,000 people had left the city and that the disease had only been carried to and effected any lodgement in one other place (Karachi), and that the panic prevailing in Southern Europe was to be deprecated. The delegates of the various Powers followed with announcements of the action taken or proposed by their various Governments. Russia has prohibited all, even Christian, pilgrimages within her dominions. Persia announced the suppression of Shiite visits to Mesopotamia and described the composition of the Sanitary Council at Teheran. Turkey, holding that pilgrimage was one of the cardinal points of the Mohammedan faith, declared that it could not be prohibited. No decision has apparently yet been arrived at by Turkey in regard to the ratification of the Paris Convention.

THE CANCER HOSPITAL (FREE), BROMPTON, LONDON, S.W.—The annual meeting of governors was held on Wednesday, Feb. 24th, Sir George Samuel Measom being in the chair. The report showed that during the past year 2345 new patients were received, 829 as in-patients and 1516 as out-patients, whilst the total number of attendances of out-patients was 13,786, these figures being in excess of any previous year. The report and balance-sheet were adopted and the usual vote of thanks accorded, after which the proceedings terminated.

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THE LANCET.

LONDON: SATURDAY, MARCH 6, 1897.

IT is undeniable that the subject of the abuse of hospitals is coming to the very front of questions affecting the prosperity of these institutions. The response to the kind and wise appeal of the PRINCE OF WALES and the munificent gift of Sir BLUNDELL MAPLE are proofs, if any were wanting, that money enough will be forthcoming if the public can be satisfied that it is well used. It is, indeed, possible that more than enough money may be forthcoming—a possibility which only makes it the more proper to take precautions against such a sum being used in a way to swell the existing evils. We are persuaded that many who are working most cordially and actively for the success of the PRINCE OF WALES'S Hospital Fund for London are sincerely anxious that it shall do the greatest amount of good and the least amount of harm. But the ardent friends of hospitals are apt to fall into a completely one-sided view of schemes for the benefit of these institutions. It is on record, as Mr. LOCH has pointed out, that Sir SYDNEY WATERLOW, in the early days of the Hospital Sunday Fund, was careful to point out that hospitals were not meant to exempt the working classes from making their own provision for attendance on themselves and families in the ordinary sicknesses of life—a provision which many of them make in medical clubs, or friendly societies, or, best of all, by application to a local practitioner. But in later years Sir SYDNEY WATERLOW has been increasingly reluctant to see the growing abuse of hospitals, which to everybody else is so apparent, and to use the great power of the Council of the Hospital Sunday Fund for its friendly correction. Mr. BURDETT is a still more striking example of the danger of a one-sided view of the hospital question. He has represented the evils of the out-patient system to be such as called almost for its abolition—at least, for a time. Yet when an opportunity offered in the Council of the Hospital Sunday Fund for helping the friends of reform he came to the conclusion that the Council was "only a collecting body, and the proper persons to deal with hospital abuse are the members of the medical profession"! Can anything be said more ikely to belittle the Council of the Hospital Sunday Fund or the religious bodies which so generously contribute to it as to represent them as mere collectors, without intelligence or responsibility for securing the right use of what they collect? The public prominence which is now being given in the medical and the lay press to the facts of hospital abuse will soon convince Mr. BURDETT that mere collectors are not so numerous or so blind a species as he seems to think; but that sooner or later the facts will have to be faced and a remedy for abuses provided if subscriptions are not to fall off. And laymen who represent hospitals and administer the funds of the public subscribed for this purpose must take their share in devising remedies.

Still, the profession has an enormous responsibility in this matter. Its leaders work the hospitals. Their skill and their opinion, to be had gratis in the hospitals, and that almost without let or question, make the attraction of hospitals and make it more and more irresistible. This attraction has come to be so great as to draw practically a fourth part of the inhabitants of the wealthiest city in the world, including—it has been demonstrated over and over again—a proportion of really wealthy and comfortable people, and, of course, a much larger proportion of well-paid workpeople. There is nothing else like it in any other department of life. Huge establishments for supplying all comers with clothes or food of the best on gratuitous terms would be scouted as demoralising to the applicants and unfair to subscribers, who meant only to help those who cannot help themselves. But in the matter of medicine pauperism is cultivated on a large scale by the laxness of hospital administration. It is excused on the score of the exigencies of the medical schools, though a distinguished surgical teacher of a great school has said that there are four times as many applicants as are needed for purposes of medical education. It seems the cruellest inconsistency in the world, on the one hand, to draw students by the thousand, and, on the other hand, to encourage the competitive action of hospitals by attracting the classes to which the students as young practitioners are to look for honest and self-respecting patients. Yet this is the demonstrated working of the out-patient system as at present administered, and in the last result it is upheld by the medical staffs of hospitals, as many of them are now beginning to see. It is a matter of urgent importance that it should be made clear to all members of medical hospital staffs that in the promiscuous services of the unregulated out-patient department they are encouraging a system which tends to dry up the springs of charity on the one hand and of providence on the other, and which saps the foundations of medical practice in all but the wealthier sections of society.

We are satisfied that this action of hospital physicians and surgeons is unintentional. They do not realise that they are unconsciously doing all this harm in work which superficially considered has a certain air of kindness and humanity. How can this impression be corrected? There is only one way, and that is by friendly discussion of the subject within the profession itself. Let there be no strife over the discussion. A conference should be organised by the coolest heads of the profession for the purposes of such a discussion, and the object of such a conference should be the union of the profession on this subject. If we are to be divided into consultants and non-consultants, if every man is to have his own remedy and reject every compromise, things had better remain as they are. But that would be a confession of failure, meaning alike the degradation of hospitals to the level of cheap dispensaries and the degradation of private practice to the starving point. There are indications in high quarters that this question of hospital abuse will have recognition. If the profession is united we shall succeed. If it is not we shall fail, and we shall deserve to fail. But one thing is certain, that the medical

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staffs of the hospitals have the power to save hospitals and the profession by firm and united action. The present occasion is apt for such action, and we would earnestly impress upon those members of the profession concerned the absolute necessity of seeing that such an opportunity shall not be allowed to slip from their grasp.

IN a leading article in THE LANCET of Sept. 26th, 1896, we commented on the action of the Aberdeen students in getting rid of a professor who, while full of ability and erudition, had not the art of interesting or instructing them. First overt protest, then silent abstention from the class-room, was their plan of campaign. And it was successful. The University authorities, sitting in conclave on the situation, found the students so far justified that they requested the professor to retire on half the proceeds of the chair, and appointed a successor who, though not superior in natural or acquired ability, had the power of arousing and maintaining interest in the business of the class.

How differently they manage such matters abroad! From causes more or less cognate to that which impelled the Aberdeen students to action, the University of Athens, for instance, has had to be closed, the students holding the building in defiance of the military; while at Bologna, "the mother of universities," Senatus and students have been at open war, again requiring the intervention of armed troops. Bordeaux, too, has been recently the scene of similar collision, though on a minor scale, and Austria-Hungary and Russia have quite lately been furnishing object-lessons of a like deplorable kind. It would seem, in fact, as if only the Teutonic civilisation in general and its English-speaking branch in particular were capable of respecting and practically illustrating the exalted purpose for which universities are organised and maintained. Rare in Germany, academic indiscipline proceeding to violence is rarer still in the English-speaking world; and one result of this moral and social superiority is the undoubted fact that the scientific output of their schools is in quality and quantity greater than that of the whole outside world. There is one condition prevailing in Great Britain and denied to the nations of Southern Europe which may serve to explain the contrast between their academic records. In these islands there is pre-eminently the "settled government" which is of itself a factor in the maintenance of order and respect for authority. Greece and Italy, on the other hand, having thrown off within the century the foreign yoke which kept them down, have not yet thrown off the traditions inseparable from that ordeal. In both countries the elderly and middle-aged generation have passed their youth in an atmosphere of revolution. Their stirring, often noble, experience is still fresh in the minds of their sons, and between the two, the old and the young, the incidents of political upheaval and rehabilitation are fresh enough to mould and colour their attitude and thought towards the existing order. They are quick to perceive and quick to resent aught that savours of "authority" or "tyranny," and the consequence is seen, as successive Ministers of Public Instruction can too painfully attest, in the difficulty of exercising discipline or maintaining order in the universities of either country. If the Minister relies on the prestige of office or Cabinet rank he is reminded in the Chamber of Deputies that the students have their representatives there also—representatives drawn from the generation of their fathers—who began life in "the revolution." Our Rome Correspondent has recently commented on the opening of the winter session of the "Sapienza" and the collision between the Minister of Public Instruction and the students, provoked by the inflammatory address of the Professor of Moral Philosophy. The latter functionary had in consequence to receive a pointed reprimand, and the indignity thus inflicted on a rhetorical idol has been resented by the students ever since. The "solidarity" subsisting between all undergraduates throughout the kingdom explains the zeal with which the grievance of the Roman students has been taken up by their fellows in Naples, Palermo, Turin, and principally in Bologna, where the Minister, Signor GIANTURCO, was subjected to indignities which evoked the interference of the Senatus and the deplorable scenes of violence reported in the public press. His Excellency was on a State visit, prompted by the desire to do something for a vigorous, yet all too meagrely equipped, school—to furnish, *inter alia*, improved laboratories, cliniques, and other imperative conditions of academic efficiency. But this loyal purpose did not protect him from insults and violence on the part of the "socialist" students, whose ill-inspired conduct aroused, it is fair to say, a counter-demonstration on the part of their "monarchical" fellows. Between the two, however, in spite of professorial intervention, arose the collisions which brought in the military. The leading organ of the Italian Government, the *Opinione*, lately declared that it saw but one remedy for the recurrence of these tumults—the exclusion of "sectarian politics" from the universities. This, however, must be a work of time. The "premature publicist" is too rank, as well as too recent, a growth in Young Italy to be easily eradicated. The hour for that, as for other consummations, will not come until the great D'AZEGLIO'S aspiration be fulfilled: "Having made Italy, we have now to make Italians."

ALTHOUGH there is no prospect of the Food and Drugs Act being dealt with this session, the Bill providing for its consolidation and amendment has been prepared and was ordered by the House of Commons to be printed on Jan. 27th, 1897. We received a copy of this Bill last week, and we may say at once that it is a clear and very comprehensive measure and practically in complete accord with the recommendations of the recent Select Committee. We doubt, however, whether in its present form its sponsors will secure for it a calm and steady passage through the Houses of Parliament. Its very comprehensiveness will invite, if we are not mistaken, considerable contention. The object of the Bill is primarily to ensure the purity and quality of food and drugs sold to the public, but it must not be forgotten that it must very decidedly affect the traders and the trade of this country, and the interests of the traders must be safeguarded—in short, the Bill must be fair both to the purchaser and to the seller. On the face of it, while

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the new Act is undoubtedly a somewhat drastic proposal, yet no one can honestly say that what are described in its provisions as offences are wrongly or unjustly so described. In our opinion it is an offence in any case for a person to sell to the prejudice of the purchaser any article of food, or drug, or clothing, or what not, which is not of the nature, substance, and quality of the article demanded by such purchaser. The public only want educating as to what they are entitled to ask for, and if that article is not supplied in accordance with this demand, an offence, we maintain, is committed.

There is little doubt that the new Act, if it come into force, will put an end to much of the farcical procedure in the police-courts, cases of which during the last decade have occurred with irritating frequency. The definition of food according to the present Act has opened the way of escape to many an offender. The addition of alum to baking powder, for example, was permissible, but not to bread or flour. The term "food" is now to include every article "used for food or drink by man, other than drugs or water," and, moreover, "any article intended to enter into or be used in the preparation of human food and flavouring matters and condiments." The definition of the term drug is also widened, and is now to mean any substance, vegetable, animal, or mineral, used in the composition or preparation of medicines, whether for external or internal use. The penalties suggested are more severe in regard to repeated offences. Thus, for a first offence the person charged is liable to a penalty not exceeding £20, for a second offence not less than £5 and not exceeding £50, and for a third or subsequent offence to not less than £20 and not exceeding £100, or, at the discretion of the justices, to imprisonment, with or without hard labour, for a period not exceeding three calendar months. An interesting return to the wholesome methods of punishment of our forefathers is clearly suggested in Section 4, where, in the event of a convicted person repeating the offence, a court may order a notice of the facts to be affixed for a period not exceeding twenty-one days to the premises occupied by him, or may also order them to be published by advertisement in such newspapers as the court may decide, the person so convicted being bound to pay the costs thus entailed. We think this an admirable proposal, and we hope it will commend itself to the majority, at any rate, of our legislators.

As to the administration of the Acts, the new proposals, as generally set forth, are, we think, commendable. The appointment of the analyst, his dismissal, and remuneration are at all times to be subject to the approval of the Local Government Board, and not to be left, as before, in the hands of local authorities or vestries. The number of samples to be taken is not to be less than one sample per annum for every 1000 inhabitants living within the area of such local authority. In the event of the local authority refusing or neglecting to do this the Local Government Board will appoint an officer to take the number of samples provided and thus to enforce this provision. The cost of the appointment and functions of this officer is to be defrayed by the negligent authority. This is as it should be, and is a provision which ought to do away entirely with the unpardonable apathy of the local authorities in this matter, of which we have so frequently complained in these columns for several years past. Lastly, immediately after the passing of this Act there is to be appointed a Board of Reference, and we are in entire concurrence with the choice of representatives that is suggested. The Board is to consist of the principal officer of the Laboratory at Somerset House, a person nominated by the Board of Agriculture, and persons to be nominated by the following bodies—two by the Society of Public Analysts, one by the General Medical Council, one by the Institute of Chemistry, one by the Pharmaceutical Society, one by the London Chamber of Commerce, and one by the Association of Chambers of Commerce, and if need be of three other persons, the appointment of all of whom is to be subject to the approval of the Local Government Board. The duty of this Board will be to deal with such matters as the qualification of analysts and inspectors and with questions concerning definitions of purity and the standards of composition of articles of food, as well as to decide upon the amount and kind of foreign substances to be allowed for the preservation or flavouring of preserved foods.

As a measure intended to raise the standard and quality of our daily articles of food we have not a word to say against the proposed Act; but, as must be admitted, it attempts to deal with a subject that presents considerable difficulties from the practical legislative point of view. With the growth of technical knowledge, the advance of technical skill, and the progress of scientific methods applied to manufacture and industrial pursuits, the task of successfully grappling with fraudulent practices in connexion with food-supply becomes involved in deeper difficulty day by day. To us it is interesting to reflect how enormous has been the development of this section of administration since the days of THE LANCET Analytical Commission, when the Founder of this Journal, the late Mr. WAKLEY, showed, by the startling results which were published in the earlier numbers of THE LANCET, the necessity of immediate legislative interference to check the pernicious practices which he proved to be going on in regard to the adulteration of food. At that time it was one man with a small band of assistants who brought to light the frauds committed upon the public; since then the Food and Drugs Act (1879) has been in force, which has required not only a large staff of analysts under the control of the Local Government Board to carry out its provisions, but in reality also a Society of Public Analysts to devise new methods for the detection of new frauds; and, again, in the new Bill of 1897 it is proposed to appoint a court of experts to modify any legislative procedure that is suggested as the outcome of the increased ingenuity of unscrupulous persons. The discussion of this Bill in the House of Commons will be watched with considerable interest; but for this we fear we must wait awhile.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY. The February meeting was held at Lewisham Infirmary on the 27th ult., the President, Mr. Walter Burney, being in the chair. Dr. F. S. Toogood showed cases of Progressive Muscular Atrophy, Tuberculous Peritonitis, Abdominal Tumour, &c. The annual general meeting and dinner will be held at the Inns of Court Hotel on March 27th, at 6.30 P.M.

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Annotations.

"Ne quid nimis."

THE EXECUTIVE COMMITTEE OF THE GENERAL MEDICAL COUNCIL.

THE proceedings of the Executive Committee, as representing the General Medical Council in the interval of sessions, have always a certain importance. On this occasion the number was short, owing to the vacancies created by the resignation of Mr. Wheelhouse and Sir Walter Foster not being filled till the day of meeting. As our readers know, Mr. Brudenell Carter and Dr. Glover were appointed but did not take their seats. Intimation of a change in the representation of the University of Aberdeen was received, Mr. R. W. Reid, M.D. Aberd., F.R.C.S. Eng., Professor of Anatomy, succeeding Dr. Angus Fraser, who was a very useful member of the Council. The committee had various communications on the subject of midwives. The Midwives Bill was referred to the General Medical Council by the Lords of the Privy Council. A letter was received from Mr. G. W. Duncan, secretary of the Midwives Bill Committee. Resolutions against the Bill were received by the committee from the Rochdale and District Medical Society. A communication from Dr. Rentoul, asking the Executive Committee to move the Government for certain returns as to the Poor-law employment of midwives, was read; also another from the same gentleman, suggesting the preparation by the Council of a new statistical report of the profession, and a third, regretting the small result of his exertions *re* the diplomas granted by the Rotunda and Coombe Hospitals. On the subject of the Midwives Bill the committee resolved to inform the Government that the Council will not meet till May, but has forwarded a copy of the resolutions of the Council on the Bill of 1895. The committee resolved that it was not within its province to ask the Government for the returns wished for by Dr. Rentoul. Such returns would certainly be interesting, and Dr. Rentoul might induce some member of the House of Commons to ask for them. Correspondence with the Registrar-General on the easy registration of deaths without medical certification was read. The answer of the Registrar-General cannot be regarded as satisfactory, though it confirms the view of the Council that registrars do not break the law in accepting statements by unregistered persons in lieu of medical certificates. Doubtless the President will carry out the wishes of the Council and seek an interview on this subject with the President of the Local Government Board. The Registrar-General has intimated his intention to put into his official list for 1897 the names of medical practitioners and dentists which have been removed from the registers. The subject of defective preliminary education was raised in communications from the Director-General of the Navy, which will be forwarded to the qualifying bodies affected. The Executive Committee through a sub-committee, will continue its attention to the subject of the disciplinary functions of the qualifying authorities. A communication from the Portsmouth Medical Union asked for an expression of the Council's opinion on the subject of "tendering" for appointments and underselling, but the Executive Committee resolved that the question raised does not fall within the statutory duties of the Council. A resolution passed by the Royal College of Surgeons in Ireland to the effect that the employment of unqualified assistants by medical men is most injurious and should be prohibited by the General Medical Council was received and entered on the minutes. In the dental part of the committee's business the chief matter was the correspondence between the Council and the Privy Council in regard to the case of Mr. A. P. Merrill, who claimed registration in the Dentists' Register both as a foreign dentist and a colonial dentist, and under Section 37 as a person articled as a dental pupil and whose articles expired before Jan. 1st, 1880. The Council had declined to register Mr. Merrill. He appealed to the Privy Council, and their lordships dismissed the appeal. The arguments will interest the dental profession, and are set forth at length in the correspondence published in the minutes.

THE AUER INCANDESCENT LIGHT AND ITS EFFECT UPON THE EYE.

SOME interesting discussion has taken place of late in regard to the effect upon the eye of the Auer incandescent light. The mantle of this incandescent system of lighting consists, as is now pretty generally known, of a network of the rare oxides (chiefly of thorium with a small proportion of cerium), which on being heated in the Bunsen flame emits a brilliant white light. As might be expected, this light is comparatively rich in the ultra-violet or chemically active rays that are identical with those in sunlight, and it has been urged that this richness in actinic rays may possibly be productive of injury to the sight. This argument appears to be based on measurements of wave lengths made by means of the spectroscope. The arc electric light, it is said, has similar effects, but of a more pronounced character. As yet there is no evidence of experience, as far as we know—and the Welsbach light has now been in use for several years—that the slightest injury to the optic mechanism where the system has been in use for domestic lighting has ever been produced; and unless a person deliberately stared at the naked light for some hours every day it would be surprising to learn that real injury could be referred to this cause. It is well known that the radiation of light downwards from the incandescent mantle is feeble, so that without a reflector or some reflecting surface at the top of the mantle, as in the ordinary way would be provided by a ceiling, much of the illuminating power would be lost. From the particular point of view under discussion this is, however, an advantage for the lighting of rooms, since reflected and not directly transmitted light is pleasanter and more agreeable to the eye, besides which in the phenomenon of reflection partial absorption takes place, so that the light becomes pleasantly diffused and of a healthy tone. In any case, if any apprehension should exist that the rays proceeding from an incandescing mantle are injurious because of their chemical activity—an activity which in sunlight gives life to the plant world—these rays could be readily and effectually filtered out by the simple expedient of surrounding the light with a tinted globe, such as red or orange, which need reduce but very little the originally high illuminating power. Even then the light is over 100 per cent. higher in illuminating value than the ordinary gas flame. Artificial light, of course, is most in request in the dark days of winter, and in that season, at the best of times, we receive but little more than eight hours' light from the sun, and then frequently it is largely filtered from its chemically active rays by the medium of a murky atmosphere. On the other hand, we enjoy in the summer just twice as much sunlight, which is then of greatly increased power, and the chemical activity of which is infinitely greater than could possibly be furnished by any known form of artificial light. Taking these simple facts into consideration we should almost expect to find in some form or other some manifestation or deterioration in the eyesight during the summer period, due to a largely increased exposure to the chemically active rays of solar light. We are not aware that any such manifestation has been observed. The argument that nature

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intended us to rest from the effects of light as soon as the sun is below the horizon demands, if it can be reasonably applied at all, the rejection of all artificial means of lighting, since there can be no light of any kind of any aid to the eye whatever that can be without some chemical activity. Still less practicable does such a suggestion become when applied to the lands of the midnight sun and other places or to the arctic winter of several months' darkness. Clearly this theory could only be prompted by the consideration of the limited conditions of environment in the temperate zone. No men probably are exposed more freely and continuously to the chemically active rays of the sun than our sailors, yet their acuteness of vision and penetrative power of sight is a matter of admiration and wonder to everyone. Sunlight is by a thousand circumstances widely and uniformly diffused making it more acceptable to the eye, and during its journey to earth it undergoes an important modification, for in passing through the air it is deprived of some of the red rays, while the blue rays pass on—a circumstance which explains the azure character of the sky. In view of these facts, it is difficult to receive the theory with any seriousness that because there may be a certain proportion of ultra-violet rays in a given artificial light it is necessarily injurious. It would be a sorry thing if these same rays were for ever filtered out of the light of the sun by the medium of constant fog or cloud, as so often happens in the days of winter. Exposure to a purely elementary light, as red, yellow, or blue, does undoubtedly prove injurious either positively or negatively. The distress produced on working for some time, to quote one instance, in a red or yellow light, as in the dark room of the photographer, who employs one or other of these colours on account of their chemical inertness, is well known. Absence of sunlight is held to be synonymous with the absence of life, and the life-giving and invigorating qualities of solar light are largely, if not entirely, dependent upon the chemically active rays, and certain lines of scientific research have shown that without the great phenomenon of insolation going on day by day life would be unendurable and finally extinguished. White light, therefore, as afforded in its entirety by the sun, is a necessity of existence.

THE INTERNATIONAL MEDICAL CONGRESS AT MOSCOW.

A MEETING of the English committee was held at 13, Harley-street, W., on Feb. 13th. The following members were present: Sir W. Mac Cormac (in the chair), Sir Dyce Duckworth, Mr. Langton, Dr. Lauder Brunton, Dr. Allchin, Mr. Henry Morris, Surgeon-Major-General Hooper, Dr. Champneys, Professor Thane, Dr. A. E. Garrod, and Mr. Makins. The secretary reported that fifty members, representing the various English universities, medical schools, and medical societies, had joined the committee, and several matters relating to the Congress were discussed. The preparations for the meeting at Moscow are now in an advanced state, the programme of work in several of the sections being nearly complete. Papers may, however, still be announced, the last date being June 1st next. The secretary-general, Professor W. K Roth, announces that the English Consul, Mr. Medhurst, is in communication with the principal members of the English colony residing in Moscow with a view to the entertaining of guests to the Congress; further, that ample hotel and lodging accommodation at reasonable charges will be forthcoming. It is hoped that the members of the Congress will be received at a Court reception by the Czar, and arrangements are being made for *fêtes* to be held at St. Petersburg after the termination of the meeting at Moscow. The cost of the railway journey to Moscow, returning by St. Petersburg, will be approximately as follows: A circular ticket from London, *viâ* Paris, Strasburg, Munich, Vienna, Oderburg, and Granica (frontier station for Moscow), and home *viâ* Eydtkuhnen (frontier station from St. Petersburg), Königsberg, Berlin, Cologne, Brussels, and Calais to London, available sixty days, first class, £17 5*s.*; second class, £12 4*s.* 6*d.*; 56 lb. of baggage free to Avricourt on the out journey and from Blandain on the home journey. For the remainder of the journey baggage must be paid for. The tickets for the Russian portion of the journey must be taken at the frontier stations, the cost being as follows:—Granica to Moscow, first class, 38 roubles 43 kr.; second class, 24 roubles 68 kr. Moscow to St. Petersburg, first class, 20 roubles 76 kr.; second class, 12 roubles 21 kr. St. Petersburg to Eydtkuhnen, first class, 17 roubles 90 kr.; second class, 10 roubles 74 kr. No return tickets are issued on the Russian railways. Taking the rouble at 2*s.* 3*d.* the approximate cost of the railway travelling will thus be: first class, £26; second class, £18; and it will be necessary to give eight days' notice to Messrs. Cook in order to obtain the circular tickets. The Secretary-General holds out some hope of the fares on the Russian lines being considerably reduced. All visitors will be required to be provided with passports. Forms of inscription as members of the Congress may be obtained from Mr. Makins, 47, Charles-street, Berkeley-square, W.

LEICESTER AGAIN.

LEICESTER, unlike the heroines of modern novels, has a past of which it may well be proud. But its present seems to be given up to the fostering of every kind of fad, and, like the gentleman whose politics were summed up in the simple words, "Agin the Government," Leicester seems to be always in opposition. Its views on vaccination are well known; consignments of "cheap tans" made, not of leather, but of "compo," come from there and figured in the Whitechapel County-court last year; and now it has started another fad. There is Mr. Pickering, who claims to cure fevers by giving baths, and the Leicester Board of Guardians have intimated to their medical officer, Mr. Bryan, that they would like the Pickering system tried in cases of fever brought to the workhouse infirmary. The house committee accordingly wrote to Mr Bryan asking the following questions: 1. Whether you have had an opportunity of ascertaining the methods employed by hydropathists, particularly those used by Mr. John Pickering, and the results obtained under such treatment? 2. Whether you are of opinion that the advantages claimed for this treatment are actually obtained; whether the course of the fever can be stopped, and the risk of complications and spread of infection prevented? 3. Whether you are prepared to adopt such treatment, either permanently or as an experiment? We are both pained and surprised to see the Leicester Board of Guardians suggesting a method of treatment "as an experiment" upon patients. However, we may safely leave them to the wrath of the Personal Rights Association and the Anti-vivisection Society, and we will pass on to Mr. Bryan's answer. He wrote—(1) that he was perfectly conversant, in common with the rest of the medical profession, with the use of baths, &c., in lowering temperatures, and that Mr. Pickering professed to destroy germs by a temperature of from 102° to 110° F.; (2) that he would not trifle with human lives; (3) that he had been medical officer to the workhouse for sixteen years and had never had a single death from scarlet fever; and, finally, that he would not allow any interference with his treatment, for which he alone was responsible. These obvious truths pained the house committee, and the clerk wrote back saying, among other matters, that "your statement that Mr. Pickering claims to destroy such fever germs as you refer to by means of baths is not correct."

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Now some time last year Mr. Pickering was interviewed at Leicester, and we published portions of the interview in our issue of Jan. 2nd, 1897. There Mr. Pickering was reported as saying: "Extremes of temperature are destructive of germ or organic life in the blood. Cold water at 36° F., or hot water at 102° F., are conditions under which no fever can live." Supposing Mr. Pickering to have been rightly reported—and our quotation has never been contradicted—these words can only mean that Mr. Pickering considers that germs can be destroyed by a temperature of 36° F. or 102° F. The letter also asked if Mr. Bryan would watch some cases now being treated by Mr. Pickering. To the second letter Mr. Bryan replied that he would have nothing whatever to do with Mr. Pickering or his treatment, that he would not argue a purely medical subject with anyone outside the profession, and that he hoped Mr. Pickering and his admirers would find some other way of airing his fad than on the sick poor who are not their own masters. At the meeting on Feb. 16th some resolution of the committee was adopted *nem. con.* We do not know what the resolution was, but apparently the "system" is being adopted in the town. Mr. Bryan has protested in vain; it remains for the Local Government Board to do its duty. There is one cheering incident in connexion with this exhibition of folly, and that is that Mr. Pickering has been summoned under the Public Health Act for unlawfully exposing a patient suffering from scarlet fever by removing her in a hackney carriage on Jan. 11th. The Bench decided to convict and fined Mr. Pickering £2 and costs.

HAZARDOUS COMMODITIES.

WE have frequently expressed the opinion that the Government would sooner or later have seriously to consider the question of placing under proper control certain new and rapidly developing sections of chemical industry. Several more or less dangerous articles of chemical manufacture are becoming so largely employed in our midst for a variety of useful purposes now that some restrictions as to their sale, conveyance, and storage are, in the interest of the public safety, imperative. In this opinion we were not mistaken. Certain substances that were previously regarded as chemical curiosities have ceased to be so, and are now important commercial commodities and made on a very large scale. Thousands of gallons of "liquid" carbonic acid gas in steel cylinders under high compression may now be seen every day being conveyed in carts from place to place, and similarly other gases are stored under pressure in "tubes," as, for example, oxygen, hydrogen, nitrous oxide, and so on, all of which may expose the public to danger. Solid bricks of metallic sodium, again (kept under naphtha, of course), are every day carried from port to port as part of a ship's cargo, and very serious accidents have occasionally arisen from the intermixture of various chemicals on board ship by the damaging effect of a rough passage upon the packages. The trade in cylinders of compressed gases has already been placed under control. Still another chemical substance of comparatively recent discovery is now so extensively used as to have given rise to the necessity of a Home Office Order being recently issued. We refer to carbide of calcium, which on simply becoming moist gives off the exceedingly inflammable gas acetylene. Carbide of calcium is useful for a variety of purposes, but chiefly because on simply placing it in water it evolves pure acetylene, which possesses a remarkably high illuminating power. The employment of this method of generating a gaseous illuminant for optic lanterns, for photographic purposes, and for lighting private dwelling-houses has already been tried. It is quite obvious that some restriction should be placed upon the sale and storage of this substance, which is now being manufactured on a large scale, and which simply in a moist atmosphere gives off an inflammable gas which with air forms an explosive mixture. Carbide of calcium is now to be brought under the 14th section of the Petroleum Act, 1871, and after April 1st, 1897, it will be unlawful to keep carbide of calcium except in virtue of a licence to be obtained from the local authority under the Petroleum Act. Doubtless the recent accidents that have been reported from time to time by the employment of acetylene in this way have prompted the Home Office to issue this Order, together with a memorandum showing the character of the risks to be guarded against, and giving suggestions as to the nature of the precautions likely to be most effectual for securing safety.

SANITATION IN HUNGARY.

THE *Gyógyászat* of Budapest publishes a series of articles by the Government sanitary inspector, Dr. Jenö Farkas, on the Prophylactic Measures and Treatment of the Plague should it unfortunately reach Hungary through Turkey or Russia. Dr. Farkas has evidently been careful to follow the literature of the epidemic, and has deduced therefrom his conclusions. He estimates quarantine at its proper value—as worthless and mischievous—and insists that it is the duty of the authorities in Hungary to seriously consider and to carry out without further delay the all-important improvements in respect of dwellings, food, and general hygiene of the poorer classes. He warns the public, and particularly the medical profession, against the mischievous supposition which seems to have been adopted in some quarters as an excuse for doing nothing, that the plague bacterium is the primary cause of the epidemic and that if that be prevented from entering Europe other measures are of secondary importance. Views on hygiene, as expressed in the medical press of Hungary, coincide with those of our own. Poverty and its accompaniments of dirt, unwholesome food, and insanitary and overcrowded dwellings are hotbeds of all zymotic diseases and foci of epidemics. The high mortality and the alarming increase of tuberculosis testify to the insanitary evils present in a high degree at Budapest, and until these are seriously taken in hand and remedied they will remain a standing danger to public health, from which the inhabitants of the splendid palaces in the Hungarian metropolis will not be spared.

PREVENTION BETTER THAN CURE.

A CORRESPONDENT writes:—"In spite of all our stringent efforts to stamp out infectious diseases our large day schools are still well known to act as foci of epidemic disease. That children should be herded together, some of them possibly in the incubating stage of disease, without any medical supervision, seems incredible in the present state of science. The mere detention of a child from school from an infected house where a disease is already developed is not sufficient. Why should there not be in all our large day schools a daily medical inspection, or 'health parade,' every morning or afternoon? Local practitioners might be found in every district surrounding a day school who would, in consideration of an annual payment, devote an hour every morning or afternoon to this health inspection. The children might be placed in rows, down which the medical inspector might walk. An observant inspector would probably see at a glance signs of malaise or indisposition in a child. Such a child might be told to 'fall out,' in order that he or she might be more fully examined afterwards. Those who had passed the inspection might be told off at once to begin their classes, so as to delay the work of the school no longer than absolutely necessary. The time taken up by the inspection would, of course, vary with the size of the school

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In cases of very large schools two or more medical inspectors might be employed. With regard to payment, the plan would have to be worked out in detail, as this only claims to be a 'suggestion.' In dealing with endowed schools there would be comparatively little difficulty. A board school medical inspector might be paid out of the rates. One attending a high school might be paid by means of an extra 4*s.* or 5*s.* per annum being charged. Parents would probably not grudge some small sum for the greater feeling of security against infection being brought home from school to younger brothers and sisters." The suggestion is one that is eminently sensible, and can only possibly be objected to on the score of expense. Yet if ratepayers would only bear in mind that the prevention of epidemic disease is far more economical than its dissemination, that objection could not be sustained; whilst school managers and parents would welcome the introduction of a system which would safeguard their pupils and children from infection.

TUBERCULOUS MENINGITIS AFTER HEAD INJURY.

EVERYONE who has seen many cases of tuberculous meningitis must have been struck with the frequency with which the symptoms come on after injury; but it is not often so easy to connect the two as in a case recently published by Dr. Buol and Dr. Paulus in the *Correspondenz-blatt für Schweizer Aerzte*, of which an abstract appears in the last number of the *Neurologisches Centralblatt*. A young, strong man, aged twenty-eight years, received during a fall an apparently insignificant head injury. Immediately after he developed headache, slowing of the pulse, aphasia, and finally unconsciousness, and he died fourteen days after receiving the injury. At the necropsy there was found very distinct tuberculous meningitis over the convexity of the brain, and in the centre of the tuberculous area were found two splinters of bone from the inner table. The tuberculous nature of the disease was confirmed by microscopic examination. The patient had suffered in 1893 from right-sided pleurisy and apical catarrh, and it seems almost unreasonable to doubt that the injury in this case was the means of determining the local outbreak of the tuberculous process in the brain.

"PESTIS MINOR."

IN "Some Remarks on Plague," which Dr. Lowson contributed to THE LANCET of Feb. 13th, the interesting question is raised as to the nature of certain glandular swellings which occurred at Hong-Kong during the recent outbreak of plague in that island. Dr. Lowson is disinclined to argue with Dr. Cantlie that the glandular swellings to which Dr. Cantlie referred in his paper before the Epidemiological Society were of the nature of "pestis minor" or "pestis ambulans." Dr. Lowson differentiates in these terms between these two forms of "pestis." "Pestis minor is that bubonic disease which occurs (?) before an outbreak of plague, while pestis ambulans is the designation applied to glandular enlargements occurring during or after an epidemic which may probably be due to a less potent infecting power." As to the existence or non-existence of "pestis minor" or "pestis ambulans" in Hong-Kong, we can but rely upon those observers who were present during the outbreak, and it is unfortunate that there is this difference of opinion. There can, however, be no doubt that the existence of anomalous glandular swellings during prevalences of bubonic plague is recognised by many observers and by most writers, and that there should be these anomalous expressions of the plague is what upon general epidemiological grounds is to be expected. One of the best known instances where these glandular enlargements were seen was in the outbreak of plague which occurred in Mesopotamia in 1876–77, and of which a most interesting account may be found in part 11, vol. iv. of the Transactions of the Epidemiological Society. The account is written by Dr. E. D. Dickson, physician to the British Embassy at Constantinople, and is compiled largely from the notes of Dr. Giovanni Cabiadis, which were made by him as the result of his observations at Hillat and Bagdad. In this account Dr. Dickson thus writes as to the history of the outbreak:—

"Two or three months previous to the manifestation of plague in Mesopotamia *glandular swellings free from fever* prevailed in that country. They showed themselves in the groin, armpit, or neck, and were not accompanied by other symptoms. They began to appear amongst the inhabitants about the end of autumn and continued through the winter, but towards the end of it the plague broke out and reached its acme of intensity in the spring. ..... On the cessation of the plague *apyretic glandular swellings* re-appeared again precisely similar to those which had preceded the outbreak, and they continued to manifest themselves for about two months longer. These glandular swellings were frequently met with and were distinct from the chronic adenitic swellings met with in subjects of scrofulous tendency and evidently unconnected with any special diathesis."

It is "pestis minor" or "pestis ambulans" in the above sense which the medical officers of health in such of our ports as have communication with India will do well to be on the look-out for.

"THE EMPIRE AND THE ARMY."

UNDER this heading the *Spectator* of Feb. 27th has an article with the spirit of which we quite agree. *Apropos* of the proposal to restore the name of the Royal Canadian Regiment and place its dépôt at Toronto, our contemporary says it would like to see the territorial system extended to the colonies in order to make them feel that they form a part with this nation of one and the same great organism and are taking their place under a common flag. For this purpose it is suggested that the depôt of a British regiment might be located in Australia, New Zealand, and the Cape, in addition to one in the Dominion of Canada. Setting aside the idea, which is probably destined to develop until it becomes a dominating idea, of a confederated Empire in which all shall bear a part, we should be in this way widening the area of our recruiting ground, and this is very desirable and will soon become necessary if the growing responsibilities of British rule are to be fulfilled. Our Army is a volunteer army and not maintained by conscription. When work is plentiful recruits are scarce; when it is slack recruiting is brisk. But the Army establishment is fixed by Parliament and cannot be exceeded, and the consequence is that we are constantly shifting the standard of physical requirements according to the state of the labour market, instead of taking recruits when we can get them of the most desirable kind. The British Army, it is true, shows no decadence of enterprise and courage. We have had numerous expeditions and little wars of late in which our soldiers and sailors have borne themselves as well as ever they did, but on physiological and medical grounds it is obviously very desirable that we should attract an increasing number of intelligent and enterprising young fellows of superior physique into our Army. This proposal promises to open out a way of effecting this object. Of course, there are difficulties of an official and financial nature to be overcome, but they are surely not of an insuperable kind. If we could manage to weld our colonies into closer connexion with us and get them to bear their share of responsibilities which are mutual and common to both all anxiety about the maintenance of land and sea forces on a scale adequate to our requirements would be dissipated. The statesman who could devise a scheme for accomplishing this, by opening out a career in the Army and Navy for our young colonists, or, in other words, by suggesting a method by which each of our large English-speaking

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colonies and dependencies should contribute its quota to the strength of the Army and Navy, would most deservedly make for himself a great reputation. We believe that it could be done, and the trend of things goes to show that one day it will be done.

"EARTH TO EARTH BURIAL."

SIR F. SEYMOUR HADEN contributed a paper on "Earth to Earth Burial" last week at a meeting of the Church of England Burial, Funeral, and Mourning Reform Association, held at the Westminster Palace Hotel. Mr. H. D. Greene, Q.C., M.P., presided. Sir F. Seymour Haden in the course of his paper said it was absurd to enclose the bodies of the dead in hermetical enclosures, which only hindered nature's process. Properly buried the body rose from the grave in the form of elements necessary for the renewal and growth of plants. In the case of a body buried a foot deep this process was accomplished in a year, and in the case of a greater depth at about the rate of another year for every foot of depth.

BIRMINGHAM AND THE DIPHTHERIA EPIDEMIC.

WE congratulate the gentlemen who attended the meeting held at the Birmingham Medical Institute, under the circumstances described by our Birmingham correspondent in our present issue, upon the eminently satisfactory result of their deliberations. A disease so generally fatal and so insidious as diphtheria should be met and fought in every possible way, and the sooner it is attacked the sooner it will be overcome. Prompt isolation, which connotes prompt diagnosis, is the first line of defence, and the use of a genuine anti-toxic serum at the earliest possible moment is the chief weapon of attack. If Birmingham, as she is apparently going to do, provides herself with these munitions of war against disease, she may possibly reduce diphtheria to a vanishing point.

HEMIANOPSIA IN ABSCESS OF THE BRAIN.

AN interesting case is related by Lannois and Jaboulay in a recent number of the *Gazette Médicale de Paris*, in which the prominent symptoms were alexia, agraphia, word-blindness, right-sided hemianopsia, and facial paralysis. Ear disease was present, and the symptoms pointed to the presence of abscess. No pus was found at first on operating, but three weeks later puncture was again tried and a collection evacuated. Eleven days later the patient died, and a large abscess was found in the centre of the left occipital lobe and diffuse encephalitis affecting the central and frontal convolutions of the left hemisphere. There was also a small purulent collection in the third frontal convolution. The points in the case which are of special interest are that pus was not found on the first occasion, a mishap which the writers ascribe to a blocking of the hollow needle with which the puncture was made. The second point is the presence of hemianopsia, and they rightly insist upon the importance of looking for this symptom in all cases of suspected abscess. It is not unfrequently present.

RAPIDLY OCCURRING HEMIPLEGIA IN ACUTE LEAD POISONING.

DA COSTA[1] relates the following case. The patient was a woman, aged thirty-five years, in good health. Some rooms in the house, but not her bedroom, were painted, and the house became filled with the odour. From the first she complained o headache, which became so severe in three days that her medical attendant was summoned. He found that her speech was thick, the tongue slowly protruded and deviated to the right, and that there had been vomiting. Movement of the right arm and leg was much impaired, especially of the latter. This had been preceded by numbness. The loss of power increased and she was forced to remain in bed. Shortly after the right side was affected, numbness and a sense of coldness on the left side were noticed, but never motor weakness. Four weeks after the attack, when he saw her, the right arm could be feebly moved, but the grasp was very weak and the leg powerless. There was no wrist-drop, foot-drop, tremor, or muscular atrophy. No facial paralysis existed, and the tongue was protruded straight. The knee-jerks were exaggerated, especially the right. There was an increased reflex in the forearm both on tapping the flexors and extensors. There was no anæsthesia or tender spots in the course of the nerves. Tactile sensations were well preserved in the hands. With a strong light a bluish line was found on the gums, especially round the lower left incisors. Iodide of potassium and sulphate of magnesium were prescribed, and she gradually recovered. The case is remarkable in many respects. The onset of paralysis three days after exposure is unprecedented. Tanquerel des Planches[2] mentions three cases in which it occurred in eight days. The form of paralysis—viz., hemiplegia—is the rarest of all. The absence of hemianæsthesia, as far as could be observed, is unusual; so is the affection of the nervous system without preceding colic. In 102 cases Tanquerel found this to have happened in only fourteen.

PROFESSOR KOCH'S RESEARCHES ON RINDERPEST.

IN a report to the Cape Secretary for Agriculture, dated "Kimberley, Jan. 31st, 1897," Professor Koch gives an account of his investigations upon the rinderpest up to that time. He first shows that the micro-organisms discovered by Dr. Edington cannot be the cause of the disease, since inoculation with cultures of these microbes did not produce any effects and, further, animals so treated were found to be just s susceptible to subsequent inoculation with rinderpe blood. His experimental inoculations on sheep and goats, carried through several generations, did not result in any evidence that the virus had been markedly attenuated by this process; indeed, it would rather seem as if, so far as the sheep were concerned, the cultivation rather increased the virulence than diminished it. On the other hand, in the goats there was evidence of a slow attenuation. His observations upon these animals have led him to the belief that in farms infected by rinderpest sheep and goats may at first contract the disease in so mild a form as to escape notice, and that the disease becomes more virulent by being continuously propagated through these animals. This view would explain the discrepant statements made as to the liability of sheep and goats to be attacked by the disease. He found that rinderpest blood mixed with glycerine or with phenol lost its infective property, and that although in the case of an animal inoculated with the glycerine mixture the animal was still susceptible to the disease, there was a marked resistance to the effects of subsequent inoculation with unmixed rinderpest blood in an animal treated with the phenol mixture. Dilution with distilled water or normal saline solution carried even to an extreme degree did not appreciably affect the virulence of rinderpest blood. Desiccation of the rinderpest blood did, however, deprive it of its infectivity. The most interesting part of this report is that where Professor Koch shows that animals who have recovered from an attack of rinderpest are not only themselves immune from the disease, as proved by their being unaffected when inoculated with rinderpest blood, but that the blood of such immune animals exerts a protective power—for an animal

[1] American Journal of Medical Sciences, February, 1897.

[2] Traité de Maladies de Plomb, tome ii., p. 19.

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"vaccinated" with the serum and blood from the immune animal proved to be insusceptible to inoculation with a large quantity of rinderpest blood. He states that further observations will be necessary before he is in a position to say how long this period of immunity can endure or whether it is possible to produce it artificially. He has not been able to find any other animals than ruminants susceptible to rinderpest, numerous experiments having been made with negative results on various species of birds and rodents. Dogs, too, are perfectly immune; but he had not completed his observations upon the pig in reference to this point. In an issue of the *Cape Times* which appeared after the number containing the text of Professor Koch's report there is some interesting correspondence between Mr. H. A. Lawrance, F.T.C., and the Secretary of Agriculture, carried on in October and November of last year, in which it appears that Mr. Lawrance, observing the immunity from a second attack possessed by animals which had recovered from one attack of rinderpest, had suggested that the blood of such naturally immunised animals might be used as a protective agent, a suggestion that is shown by Professor Koch's experiments to be supported by fact.

STRIKE OF BUTCHERS IN ROME.

THE Rome correspondent of the *Times* says that the butchers in that city have struck as a protest against the slaughter of horses for food. Great inconvenience has arisen and the price of meat has much increased, so that the poor are suffering greatly. There are one or two municipal slaughter-houses, but these are quite insufficient to supply the necessary amount of meat, and the strike is extending to other dealers in food. This is certainly a serious state of matters. There can be no possible objection to eating horse-flesh if the same precautions for procuring it sound and tender are taken as obtain in the case of ox-flesh. But the fact remains that horses used as food have generally died either from disease or have been killed to prevent them dying from accident or overwork, and the flesh of such cannot be wholesome. We have no statistics at hand of the quantity of horse-flesh consumed in Rome, but we fancy it cannot be very great, and perhaps it would be wise of the municipality to prohibit its use altogether as human food, on account of the hygienic dangers to which we have referred above.

THERAPEUTICS OF THE X RAYS.

So far the clinical value of radiography has been mainly, if not entirely, diagnostic. There are some observers, however, who, in spite of apparent discouragements, have not lost faith in its ultimate usefulness as an instrument in the actual treatment of disease. They recall the fact that in whatever way it may act sunshine (and particularly the violet rays of the solar spectrum) has been reasonably credited with a germicide property, and they expect the same result from the ultra-violet and chemically active x rays. Unfortunately for the support of this theory experiments conducted by various observers to show the action of these rays on different germ-cultures have yielded contradictory results, and have not, on the whole, confirmed the expectation that the microbes could be weakened or destroyed in this way. On the other hand, some results of clinical observations are more encouraging. The experiments conducted by Professor Lortet of Lyons and published in June of last year[1] belong to this category. In these experiments two series of guinea-pigs were inoculated with tubercle. Glandular enlargements, suppuration, and general illness followed in those not exposed to the rays, while in the others which were irradiated for an hour daily during twenty-five days no such effects were observed and the animals even gained flesh. Dr. E. Ausset, after a failure to diminish by means of the rays the activity of tubercle bacilli in a virulent culture, recently employed the same method in the treatment of a long-standing case of pulmonary and abdominal tuberculosis.[2] The patient was a child aged seven years. Her abdomen was exposed to the rays and regularly treated thus during three weeks for an hour daily. During this period she improved in general condition and gained in weight. The treatment had then to be discontinued for want of apparatus. At once there was a change for the worse in the patient's condition, and she died three weeks later. A necropsy showed evidence of advanced pulmonary phthisis with miliary tubercle in the peritoneum and caseation of the mesenteric glands. In such a case the distinction between effects *post hoc* and *propter hoc* is not easily drawn. At the same time it is to be remembered that in this instance the disease was well advanced, and that nevertheless the action of the x rays was followed by apparent benefit not otherwise accounted for. The subject is worthy of more attention than it has yet received, and Dr. Ausett's suggestion that radiography (which should be prolonged for a considerable period) may stimulate tissue resistance, and may prove distinctly useful in a case taken early, should not be too lightly set aside.

[1] Académie des Sciences.

"WALLACE-ISM!"

WE are delighted to see that the man Wallace, upon whose little ways we commented in our issue of Feb. 20th, has been mulcted in the sum of £20 12*s.* under the Pharmacy Act of 1878 for selling a poisonous drug to a person not known to him, without inquiry, without entering the fact of such sale in a book, and without being a chemist registered for the sale of such drugs. The prosecution was instituted by the Treasury, and arose out of the death of a person after taking some of "Wallace's Specific No. 1." Dr. Luff, having been supplied through the agency of a detective with a bottle of No. 1, said that on analysis the bottle proved to contain a considerable quantity of aconitine, so much so that one-sixth of an ounce would probably prove fatal. If the strength of the Pharmacopœia tincture of aconite was taken as 1, the strength of the specific would be represented by $\frac{1}{3}$. On the other hand, Mr. J. B. Cuppock, analyst to the Lancashire County Council, said that according to his analysis an ounce bottle only contained $\frac{1}{160}$th of a grain, but he admitted that this was the first practical experience he had had of aconitine. Eventually Wallace was fined in the amount mentioned above. This is some consolation, but the proper punishment for all quacks would be to make them take their own nostrums. In the majority of cases they would suffer but little harm, for most of the quack medicines are inert or, at best, somewhat aperient; in this case, however, the result might have been different. The proprietors of inert patent medicines should be fined, say, in thousands for deceiving the public by their advertisements.

OPERATIVE TREATMENT OF SPINAL CURVATURE.

CHIPAULT'S treatment of caries of the spine has been recently described in the *Therapeutische Wochenschrift*. A longitudinal incision is made over the spinous processes, so as to extend well above and below the limits of the curvature. When the processes are exposed and the soft parts drawn aside the spine is straightened as much as possible by an assistant, who pulls it into its proper position. This being done, a silver wire is passed through the interspinous ligament above the highest process to be ligated, at the bottom, near the root. The wire is then cut, leaving on

[2] Journal de Clinique et de Thérapeutique Infantile, Feb. 11th.

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each side a piece twice as long as the wound. The spine is then laced up with these two ends, crossing them backwards and forwards and passing them through each interspinous ligament from the highest process downward until the lowest is reached, when the two crossed ends are twisted together. The wires must be passed through the ligaments close to the lower edge of the process above, so as to afford as firm a support as possible. The soft parts are then sutured without drainage, the wound bandaged, and the patient put to bed. This method is only applicable to moderate curvatures of recent origin, and cannot be used in long-standing curvatures or those involving many vertebræ, but the presence of an unopened cold abscess or of paralysis is said not to contra-indicate these operative measures.

SHERE EXTRAVAGANCE.

SEVEN years ago it was thought that the parish of Shere, near Guildford, ought to be drained. Difficulties blossomed like the proverbial flowers in May. A Local Government Board inquiry was held in November, 1890; another in April, 1891; and another in May, 1891. Item, £118 7*s.* 9*d.* Another inquiry was held in September, 1893—in the meantime nothing apparently happened—and a fifth in October, 1893. Item, £108 17*s.* 6*d.* Then there was another slumber until November, 1895, when a sixth inquiry cost £54 19*s.* 6*d.* Just a year later a seventh inspector "inquired," and as yet only £7 5*s.* 8*d.* has been paid for this last little luxury, but the big bill has not come in. However, in February, 1897, the Council has received permission to borrow £950 to pay for the drainage. They have already spent £290 on preparations.

A PURVEYOR OF GARBAGE.

MR. CHARLES CARRINGTON is a person who describes himself as a "publisher of medical folk-lore and scientific works." We do not know in which category he would place a book which he has had the insolence to forward to us for review, bearing the innocent title of "Untrodden Fields of Anthropology." We are not going to accord this work the honour of a review unless Mr. Carrington likes to consider what follows in the light of such. The book, said to be written by a French army surgeon, is solely a record, and a very badly written record, of garbage from the sewers of human nature. It has no scientific importance whatever. It is of no interest to the student of human nature or of natural history. We shall be happy to supply the Paris police with Mr. Carrington's address and to hand over the book with its accompanying prospectus to Her Majesty's Postmaster-General, so that he may, if he will, take steps to stay the dissemination of such abominations by the agency of his department.

PULSATING VESSELS IN THE PHARYNX.

THE recognition of this very rare condition is of importance to all surgeons. Otherwise the use of a bistoury in a case of tonsillar or retro-pharyngeal abscess or the performance of tonsillotomy may be disastrous. McBride[1] has seen only three cases of abnormal pulsation in the pharynx. The first was that of a woman aged sixty-seven years. Both pillars of the fauces pulsated. By digital examination a large arterial trunk could be traced across the posterior pharyngeal wall. The second was the case of a man who showed a fluctuating and pulsating tumour in the region of one tonsil, which was suspected to be aneurysmal, but which was a cyst resting on the carotid artery. The third was the case of a female aged sixty-one years. Pulsation was seen at the junction of the posterior pharyngeal with the lateral wall on each side. The right vessel was seen to a less degree than the left, which latter extended more towards the middle line. On the other hand, the pulsation on the right side was communicated to the corresponding tonsil. The condition of the circulatory system in general was abnormal. There were epigastric and episternal pulsations, a systolic aortic murmur, and accentuated second sound. The carotid, subclavian, axillary, and brachial arteries showed marked pulsation. The right radial was abnormal, crossing to the back of the forearm superficially to the supinator longus. There was also pulsation in the abdomen, and the posterior tibial arteries and dorsal arteries of the foot. On the skin were some small rævi as well as a tendency to diffused but patchy dilatation of the capillaries. The largest number of vascular anomalies of the pharynx have been recorded by Farlow[2]—viz., thirteen cases. All the patients except one were females, and their ages varied from seventeen to sixty-eight years. The pulsating vessels varied in position from half way between the uvula and the sides of the pharynx to the extreme right or left.

[1] Edinburgh Medical Journal, December, 1896.

SOME DEFECTS OF LONDON HOUSES.

DR. G. V. POORE holds a recognised position among authorities on practical hygiene, especially in connexion with a process for dealing with the sewage question as it presents itself in country districts. The difficulties of this problem are sufficiently familiar both in villages and in isolated houses, but Dr. Poore claims that he has satisfactorily solved them, and explains his system in his "Essays in Rural Hygiene," a very interesting book, embodying the results of several years' practical experience. In an address on the Dwelling-house, delivered at the London Institution, Finsbury-circus, on Feb. 4th, he showed that it was quite possible for a country householder to make himself independent of the sewerage arrangements devised by the officially constituted local authorities. Modern methods of sanitation as applied in towns are, according to him, attended by the serious disadvantage that they give a fatal facility for overcrowding which is certain eventually, if not checked, to do more harm than the sanitation has done good. The most obvious defects of the better class of London houses were, he said, their extreme height in proportion to the space on which they stand, the dark, underground basements, the absence of back doors for the delivery of goods or the removal of refuse, the ill-ventilated staircases, and the close "areas" shutting in the gullies leading to the sewer. The cost of London houses was also steadily increasing; an instance quoted from Marylebone showed that the rates had risen 87 per cent. in twenty-three years, and that the aggregate of the rent, rates, water-rate, and taxes amounted to over £2 per annum per square yard of occupied land.

A CASE OF QUINTUPLETS.

IN our issue of Feb. 27th (p. 590) Mr. Edwin T. Goode of Doncaster published a case of quadruplets which occurred in his practice, and we have since found that a case of quintuplets is recorded in the *Medical and Surgical Reporter* of Feb. 13th by Dr. S. J. Mathews of Mayfield, Kentucky, who states that on April 29th, 1896, he "delivered Mrs. Oscar D. Lyon of five boys, weighing respectively in the order of their birth four, four and a quarter, four and a quarter, four and a quarter, and five pounds. At birth they seemed perfectly healthy, and there was no apparent cause why they should not have lived, but for some reason they failed in health and died one by one. May 4th, at 3.20 P.M., the smallest one died, having lived only four days, seventeen hours, and twenty minutes.

[2] Boston Medical and Surgical Journal, vol. cxvi., p. 302, and vol. cxxiii., p. 6.

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The second followed May 11th at 6.30 A.M., eleven days, eight hours, and thirty minutes after birth. The third died May 12th, at 11.30 P.M., aged thirteen days and two hours. May 13th, at 2.30 P.M., the fourth died, having lived thirteen days, eighteen hours, and thirty minutes; and the fifth died May 14th, at 12.30 P.M., at the age of fourteen days, two hours, and thirty minutes. All have been embalmed and will be put on exhibition for the benefit of the family, who are very poor. The mother was almost helpless for about three months before her confinement, which took place at a little over the seventh month of her pregnancy. There was one placenta, which I had photographed and preserved in alcohol. The mother has not regained her strength at this writing. Her normal weight is 112 pounds, and her height five feet one inch. She has a very dark complexion, as also has her husband. I have been their family physician for eight years, having been frequently in attendance." Dr. Mathews adds that both parents were born in Kentucky, the father in 1849 and the mother in 1857. They were married in 1874, and moved to Mayfield, Graves County, Kentucky, in 1888. They had had seven children before the birth of these five boys, the oldest of these being now over twenty years and the youngest two and a half years. The same journal also publishes a confirmatory letter from the Rev. D. F. Kerr of Mayfield, who baptised the five children.

THE RESPONSIBILITY OF PUBLIC BODIES.

ONE of the cases tried at the Hants Assizes recently was a claim in the Nisi Prius Court by a gentleman named Dent against the corporation of Bournemouth. Mr. Dent claimed £1000 as the result of damage to his property owing to the defective arrangement of the corporation's drains. He bought an estate in the valley known as the Burwood Glen in 1894, and from July of that year he was subject to a constantly recurring nuisance owing to the overflow of the sewer. Every time there was an ordinary rainfall, he said, his lawns and gardens were flooded and on the water draining off a filthy sediment remained. The cause, it was contended, was that two other drains had been connected with the sewer complained of. This was of 15 in. and 18 in. diameter, but in one place only 12 in., hence the trouble. For the corporation it was pleaded that the spot, being low-lying, was always liable to flood, and that nothing was done from 1894 until a recurrence in 1895, when, however, the necessary work was carried out. Afterwards plaintiff's garden was put in an even better state than before by the corporation's own men at a cost of £60. The sediment complained of was like that to be found on a road where a gully was blocked. In the end, however, the jury found for the plaintiff with damages at £170. We do not quite see how the sediment complained of could be like "that to be found on a road when a gully is blocked," for that sediment is only composed of road-sand and possibly horse-droppings, whereas water which overflows from sewers leaves a sediment containing all kinds of filth. It is possible that the plaintiff's garden will be found to have gained in fertility by the sewage manure, but any way we think he was fully entitled to the damages he was granted.

BIRMINGHAM AND THE FOOD AND DRUGS ACT.

THERE are some interesting items contained in that section of Dr. Hill's report dealing with the adulteration of food and drugs in the city of Birmingham for the last quarter of the past year. The proportion of articles adulterated was 24 per cent., but 15 per cent. of these were regarded as adulterated owing to the presence of preservatives. In this direction the committee appear to have taken very active measures recently and with interesting results. The following articles proved to be preserved either with salicylic or boric acid "cream," "ham and tongue," "German sausage," "Sheffield polony," "pork pies," "pickled tongue," and sundry samples of jam. An examination of certain sweetmeats disclosed the fact that "Cocoanut chumps" and "Woodbine cigarettes" were adulterated with from 2½ to 6 per cent. of paraffin wax. We have on a former occasion commented upon this objectionable practice. Finally, Dr. Hill found that a sample of chlorodyne lozenges contained no morphia, but as there is no legal standard for it he was not able to certify it as adulterated. We presume, of course, that the lozenges were purchased at the shop of a registered druggist, as otherwise had the lozenges contained morphia it would have been a proper case for bringing to the notice of the Pharmaceutical Society.

A MALFORMED TIGER'S SKULL.

ON Jan. 16th we described a series of cases dealing with irruption of teeth into the nasal cavity. We have received from Mr. Phipson, the honorary secretary of the Bombay Natural History Society, a copy of the journal of the society of Jan. 12th, which contains a letter from Captain R. Wapshare of the 3rd Lancers, describing this curious malformation as having taken place in a tiger:—

"Last hot weather," writes Captain Wapshare, "I shot a medium-sized tiger, and on examining the head I found that both canine teeth in the upper jaw were missing. The right canine tooth had evidently become decayed, as there was a hole running right up into the root of the tooth. The place where the left canine tooth should have been was perfectly smooth and covered over with the gum. It looked as if the tiger had never grown this tooth at all. I thought no more of the matter at the time, and the skull has been put away with others ever since. Yesterday I took several tiger skulls out and put them to soak in cold water previous to cleaning them, and my attention was drawn to this skull. On examining it closely I found a large canine tooth lying inside the cavity of the nose. I could only take it out with a great deal of difficulty, as it was well covered with thin bone. The tooth is a large one, but is deformed, and the point is worn rather fine, as if it had wasted away. The tooth had evidently been forced back through the socket and must have been in this state for some time because the base of the tooth had become deformed. It must have originally been in its normal position in the jaw, as it shows the enamel as in an ordinary tooth, and this also goes to prove that the injury took place after the animal was full grown. I may mention that in order to remove the tooth I had to extract it through the nose."

TYPHOID FEVER DISSEMINATED BY A DRINKING FOUNTAIN.

THE localised outbreak of typhoid fever in the town of Halstead, a report of which by the medical officer of health for the county (Essex) will be found in another column, is of considerable interest, inasmuch as the origin has been traced to the use of water supplied by a public drinking fountain which had become specifically infected with the sewage from an isolation hospital in which there were patients suffering from typhoid fever. That the outbreak was not of a much more serious character was due to its occurrence during the very cold weather, when drinking fountains are little resorted to, and to the very commendable promptitude of Dr. Gordon Roberts, the medical officer of health, in plugging up the tap immediately his suspicions were aroused. This water had been observed to become turbid after the heavy rains of Dec. 2nd and 4th, indicating that the supply was liable to pollution. The District Council ordered a sample to be analysed, but as a "fine weather" sample was selected for this purpose very little organic matter was detected and the analyst reported that he did not think any suspicion could be attached to the water. Dr. Roberts did not regard this as satisfactory, and

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the county medical officer was consulted. He pointed out the absurdity of relying upon such an analysis and the danger of acting upon the report. He asserted that the mere fact of the water becoming turbid after a heavy rain was in itself a proof of intermittent pollution, and recommended that the cause should be immediately ascertained. With some reluctance this advice was acted upon, and it was then discovered that the fountain water was being from time to time polluted with the sewage from the isolation hospital. It is to be regretted that some analysts still persist in giving opinions as to the safety or otherwise of drinking waters submitted to them for examination based merely upon the results of their analyses. This practice cannot be too strongly condemned. In this particular instance no analysis of a "fair weather" sample could justify an opinion that the water was free from suspicion. Fortunately, however, the common sense of the medical officer of health had more influence than the analyst's opinion; and an epidemic, which might otherwise have become serious, was nipped in the bud.

A MINISTRY OF HEALTH.

WE have been asked to comment on a proposal that a Minister of Health should be appointed and that his department should include the following: (1) The Registration department; (2) the Local Government department; (3) the Factory and Workshop department; (4) the Analytical and Chemical department; (5) the Veterinary department; (6) the Public Works and Prisons departments; and (7) the Lunacy department. The proposal we believe to be generally sound, except that we recognise that as an "interest" a strong claim could be made for the veterinary department to retain its connexion with the Board of Agriculture. On the other hand, however, there is increasing evidence of relationship between the health of human beings and the health of the lower animals, and for the purposes of progress of knowledge as to this relationship, and particularly for the purposes of the institution of a proper and sufficient health administration, there would be distinct advantage in the association of the veterinary department with the Minister concerned in the protection of human health. But it is not clear to us on what grounds it is proposed to bring under the control of the same Minister the functions of the Office of Works, though some re-arrangement of duties might, of course, have to be made. There is another office which must eventually be made, which must be thought of in connexion with this subject, viz., that of the Medical Officer of the Government. At the present time Dr. Thorne Thorne ably fills the office of Medical Officer of the Local Government Board, but for all purposes of making international arrangements for the prevention of disease the Government has no adviser. At the present moment Dr. Thorne is acting in this capacity in Venice, but by no stretch of imagination can this be regarded as one of the functions of the Medical Officer of the Local Government Board. The Foreign Office has obviously to borrow from the Local Government Board the officer who is appointed for an entirely different purpose. With any constitution of a Ministry of Health we presume there must be also a re-arrangement of this branch of the work of the Foreign Office. Among the proposals on which we are asked to comment is one that the Minister of Health should be appointed for life—that is, he should not go out of office with the Government, and that he should have a seat in Parliament. These suggestions we do not regard as practicable. He should, we think, enter Parliament by the ordinary method and have Cabinet rank. Without being a Cabinet Minister his opportunities would be enormously diminished, and it is obvious he could not occupy this position if he were not in political sympathy with the Government in office.

AT a meeting held at the Royal United Service Institution on Saturday, Feb. 27th, a provisional committee was formed to obtain the protection of H.M. Forces in India from contagious diseases. The following are among those who have joined this committee:—Sir James Fergusson (chairman), General Sir Havelock Allan, V.C., Sir Terrence O'Brien, K.C.M.G. (Hon. Treasurer), Admiral Sir Edmund Commerell, V.C., Brigade-Surgeon Lieutenant-Colonel Hill-Climo, M.D., R.U.I., Sir Henry Cunningham (vice-chairman), Major-General Dashwood, Surgeon-Major-General Hamilton, Sir James Hills-Johnes, V.C., Colonel F. C. Keyser, C.B. (Hon. Sec.), Dr. J. F. Payne, Lord Raglan, Mr. Shillitoe, Hon. Evelyn Ashley, and Viscount Downe.

THE meeting of the Ophthalmological Society on March 11th is to be devoted to a discussion on Retro-ocular Neuritis. Mr. Marcus Gunn will open the debate, and the medical aspects of the subject will be discussed by Dr. Buzzard. Dr. Gowers, Mr. G. A. Berry (Edinburgh), and Dr. Hill Griffith (Manchester) will also take part. We are asked to state that medical men who are not members of the society will be welcomed as visitors.

A LETTER from the Clerk of the Privy Council, Sir Lennox Peel, was read at the meeting of the Executive Committee of the General Medical Council, postponing the hearing of the appeal of the Apothecaries Hall of Ireland against the decision of the Council not to appoint assistant examiners to Monday, March 22nd, 1897, at 11 A.M.

AT a special meeting of the staff of the Medical School of Guy's Hospital a resolution was adopted expressing the hope that the Government would this session introduce a measure to appoint a Statutory Commission for the reconstruction of the University of London in accordance with the report of Lord Cowper's Commission.

A MEETING was held on Saturday last at the Museum of the Royal Botanic Society of London, at which Mr. W. Martindale, F.C.S., read a paper on the Desirability of Establishing an Institute for Teaching Botany in the Royal Botanic Gardens.

MR. H. M. CROOKSHANK, M.R.C.P. Irel., F.R.C.S. Edin. (Pasha), Director-General of Egyptian Prisons, has been selected by the English Government to succeed Mr. Hamilton Lang, C.M.G., as British Controller of the Daira Sanieh.

IT is announced, says the *Times*, that Lord Iveagh has subscribed £12,500 to the commemoration fund for providing trained Queen's nurses for the Irish poor, in addition to a like amount to the Prince of Wales's Hospital Fund.

TUBERCULOSIS IN BRIGHTON.—Speaking at the annual dinner of the Brighton Butchers' Association on Feb. 24th, Dr. Newsholme, the medical officer of health, gave some figures as to the meat condemned in the town during 1896. Owing to the coöperation of the butchers the number of animals condemned was larger than in any previous year. Yet the total was only 49 out of an estimated total of 120,000 animals killed in the town, or about 1 in 2400. Of these only 26 were condemned for tuberculosis. He expressed the opinion that hopes of Government compensation for such animals were groundless. He suggested a system of insurance against such loss, or combination to buy only animals which were completely warranted. Every butcher would thus become a sanitary inspector, and this plan he favoured of the two; it would attack the evil at its fountain head, and bring pressure upon farmers to remedy the evil condition of byres, &c., which now served to propagate these diseases.

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The Lancet Special Commission
ON
THE METROPOLITAN WATER-SUPPLY.

III.[1]

THE CHELSEA WATERWORKS COMPANY.

History.

THE Chelsea Waterworks Company dates from the reign of George I. In 1722 an Act was passed for better supplying the city and liberties of Westminster and parts adjacent with water. By this Act commissioners, undertakers, and trustees were appointed for effecting the works necessary for bringing water from the Thames into canals and ponds, from which it was to be raised into convenient reservoirs between Oliver's Mount and Hyde-park. The commissioners and trustees were formed into a corporate body under the title of "The Governor and Company of Chelsea Waterworks." In 1723 George I., by letters patent under the Great Seal, appointed the commissioners and granted a charter to enable the Company to raise the necessary funds for carrying out the work. In 1726 the company was authorised to convert two ponds in St. James's-park into reservoirs and in 1727 to construct a reservoir in Hyde-park. In 1733 the authorised capital of the company was increased and the company was obliged to keep books of account. By the year 1726 considerable progress had been made in the work, and the canals made from the Thames served to supply reservoirs in St. James's-park, so that Whitehall and parts of Westminster were supplied with water in August, and the engines were of sufficient power to raise the water to the reservoir in Hyde-park. This reservoir was capable of holding 25,000 hogsheads (or 1,350,000 gallons) of water, and the one in St. James-park held almost as much, so that the company was "in a condition to serve upwards of 10,000 houses with water at a cheaper rate than the New River Company or any other company at that time." The advertisement of the company asserted that if there were no other water to serve the cities of London and Westminster and parts adjacent they would be able to supply the whole as soon as their pipes could be laid for that purpose. The severe winter of 1739–40 caused much trouble, and "a variety of unforeseen obstacles and difficulties occurred." The works were frozen up or destroyed by the severity of that dreadful winter. In 1767 the amount of water raised was 784,000 gallons, and in 1809 1,456,000 gallons daily. In 1809 an Act was obtained to enable the company to take water from the Thames near Ranelagh Creek and to lay pipes in the river bed for a distance of 240 feet, so that water might be obtained below low-water mark. At this time the water was distributed without purification; later it was allowed to subside in settling reservoirs before distribution.

The first filter bed in London was constructed in the year 1829, and was designed by Mr. James Simpson, engineer to the Chelsea Company. Mr. Simpson made a variety of experiments during the years 1825–26 and in the following year began experiments on a larger scale, being desired by the directors of the Chelsea Company to direct his whole attention to the subject. It may be interesting to describe the first filter bed that was made in London. It occupied about one acre, its sides were formed with brickwork, and it was supplied by reservoirs which had an area of about one and a half acres. The water was first pumped into the subsiding reservoirs and passed from them to the filter bed, the water being allowed to flow through small pipes without disturbing the sediment. By this means, to quote a contemporary account, "the greater part of the extraneous matter being separated by the deposition of its feculence whilst standing in the reservoirs the water rapidly percolated through the gravel and sand of which the beds are formed. ..... The filter bed before being filled with water had the appearance of several channels parallel to each other formed by banks which are broad at the bottom and gradually slope on each side to a point at the top." The sides were built of brickwork and the filtering material was formed of three different strata of gravel and sand laid over brick tunnels; the tunnels were built without mortar. Immediately over the brickwork fine gravel was laid, above this finer gravel mixed with coarse sand, and on the top fine sand. Each of these layers was 2 ft. in thickness, so that the water passed through 6 ft. of filtering material. The sand and gravel were washed before they were used. The fine sand used at the top had the advantage of removing the feculent matter which was chiefly deposited on its smooth surface, and the accumulated sediment was easily removed by scraping. It was found that the matter deposited discoloured the sand for a depth of about 3 inches, but the greater part of the matter was deposited on the surface, so that when half an inch of the upper layer of sand only was removed it renovated the efficiency of the filter. It was found that the inclemency of the seasons did not affect the action of the filter, and that when the ice was several inches thick filtration went on uninterruptedly.

About the year 1826 considerable improvements were made in a reservoir which the Company possessed in the Green-park. Mud, which had been collecting in it for several years, was removed, and the reservoir was deepened. The bottom of the reservoir was lined with hard bricks cemented together and it was surrounded by a brick wall. At this time also the machinery for regulating the sluices was altered and a very "ingenious contrivance" invented by Mr. Simpson obviated the necessity of replacing the upright pipe which formerly stood at its western extremity, and is shown in a characteristic drawing of Rowlandson, now in the print room at the British Museum. The path round the reservoir was at the time a fashionable promenade. The length of the reservoir was 220 yards, the width 35 yards, and the space occupied with all its appurtenances was about two acres. The height above Thames high-water mark was 45 ft. At this time about 25,000 tons of water were usually stored in the reservoir, although it was capable of holding a larger amount, and the engines pumped up the water every four days. The mains were 10 ft. below the surface of the water when the basin was full and served to supply houses in Westminster and Pimlico.

In 1852 an Act entitled "The Chelsea Waterworks Act of 1852" was passed. It authorised the Company to take water from the Thames at Seething Wells, in the parish of Kingston-on-Thames, and to construct new works in that parish, and allowed water to be taken from Chelsea Reach until the work was finished. Filter-beds were constructed at Seething Wells and mains laid down to conduct filtered water to service reservoirs on Putney Heath, from whence it was distributed by gravitation, passing across an aqueduct over the Thames at Fulham. These works were completed in 1856. In 1875 an Act was obtained to enable the Company to remove their intake from Seething Wells, which is below the junction of the Mole with the Thames, to West Molesey and to put up the necessary works there for that purpose. These were completed in the autumn of 1877.

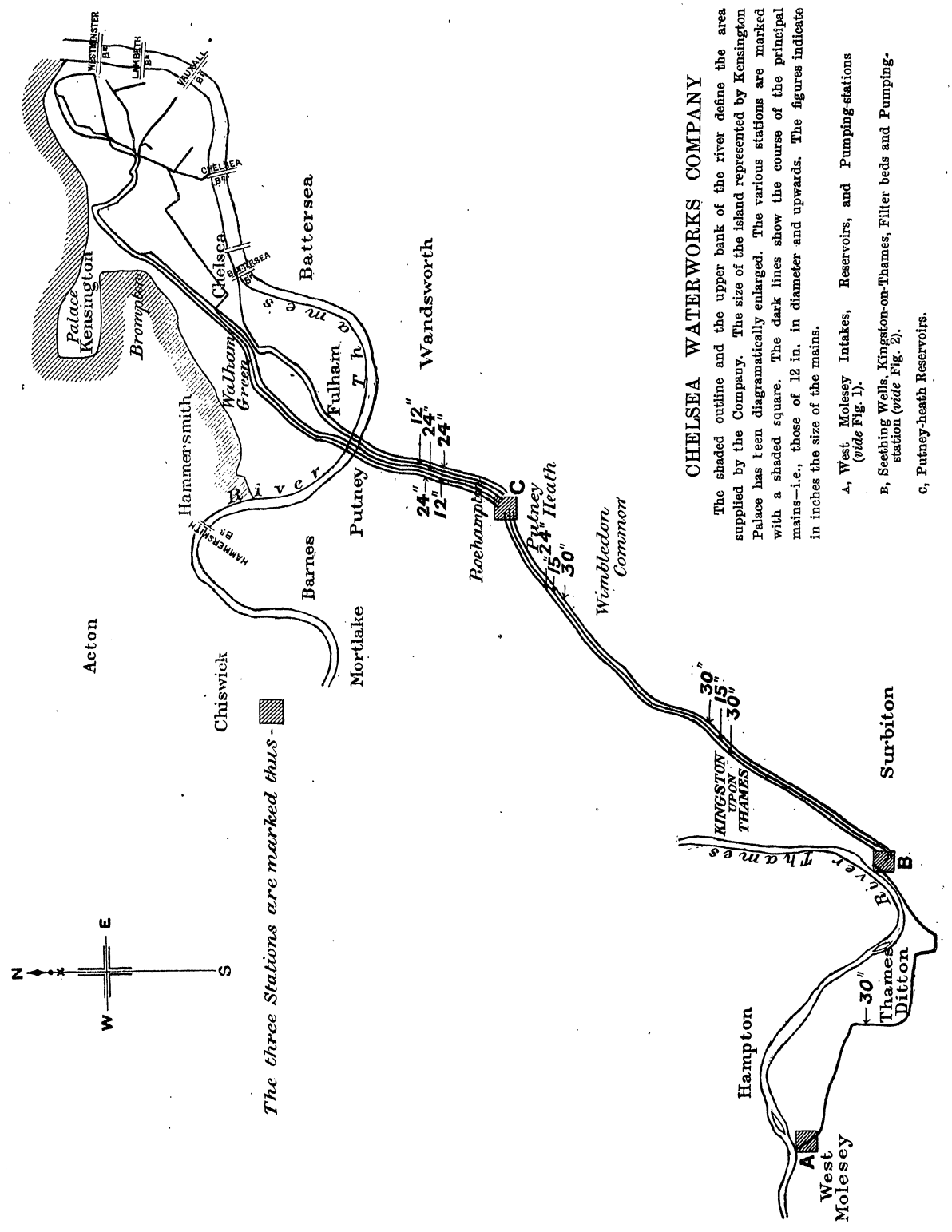
Present State: General Description.

The Chelsea Waterworks supply Fulham, Walham-green, Chelsea, Belgravia, Pimlico, and part of Westminster. The district is bounded on the west and on the south by the Thames, and extends along the bank of the river from the Crab Tree public-house to the lower part of Northumberland-avenue; the northern boundary runs along Crown-lane and the Old Brompton-road and Knightsbridge adjoining the districts supplied by the Grand Junction and West Middlesex Companies, and on the east the district supplied by the New River Company. The intakes are at Walton, West Molesey, and Surbiton. There are subsiding reservoirs at Molesey and filter beds at Surbiton. After filtration the water is pumped to reservoirs on Putney Heath; from Putney it passes over the bridge between Putney and Fulham and is then distributed by gravitation.

The intakes.—The chief intakes are at Walton and West Molesey on the south bank of the Thames. (See Fig. 1, B and A.) The water first passes through a 1 in.-grating. The gratings are 6 ft. in width and 3 ft. in depth. Of these gratings there are fifteen, and they are placed three deep. The gratings keep out the coarser impurities—for example, leaves, small pieces of wood, &c. They are cleansed from the river side from a boat. From the intake two 36-in. pipes pass under the towing-path into the company's grounds, which adjoin the towing-path.

[1] Nos. I. and II. were published in THE LANCET of Feb. 20th and 27th, 1897, respectively.

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CHELSEA WATERWORKS COMPANY

The shaded outline and the upper bank of the river define the area supplied by the Company. The size of the island represented by Kensington Palace has been diagramatically enlarged. The various stations are marked with a shaded square. The dark lines show the course of the principal mains—i.e., those of 12 in. in diameter and upwards. The figures indicate in inches the size of the mains.

A, West Molesey Intakes, Reservoirs, and Pumping-stations (*vide* Fig. 1).

B, Seething Wells, Kingston-on-Thames, Filter beds and Pumping-station (*vide* Fig. 2).

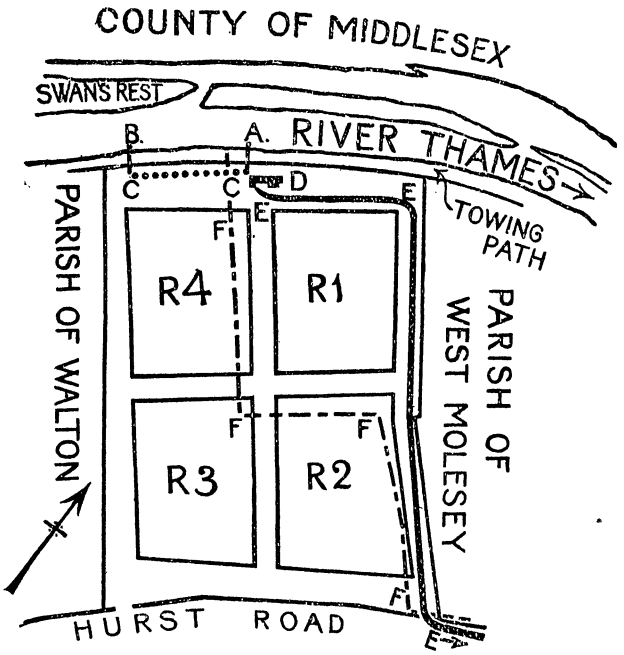
C, Putney-heath Reservoirs.

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The pipes are controlled by two regulation cocks. The water first passes into a well through five bays. The bays are 6 ft. on inside measurement and are fitted with screens. Some of the screens are of galvanised iron, the newer ones are of copper wire. The screen used is an unusually fine one containing twenty-five meshes to the square inch. The frequency with which the screens are cleansed naturally varies according to the state of the river; sometimes it is found necessary to cleanse them twice a day. When the river is in a comparatively pure state it is not thought necessary to clean them more than twice a week, or even less often. Through the screens the water passes into a brick culvert of which the dimensions are 4 ft. 10 in. by 4 ft.

The Molesey intake (Fig. 1, A) has outside screens similar to those which have already been described. The water

FIG. 1.



Walton and Molesey Station. A, The new intake (West Molesey). B, The old intake (Walton). C C, Brick culvert into which the gravel water flows. D, Engine house. E E, Main which conducts water to Seething Wells (Kingston). F F, Parish boundary. R 1, R 2, R 3, R 4, Reservoirs.

passes by two 30-in. pipes into a tank 20 ft. in depth through a number of screens 6 ft. by 4 ft. The screens are fastened on iron frames which are fixed into grooves. From the tank the water flows into the engine house.

Water from the gravel bed.—There is a brick culvert extending from the old to the new intake. (See Fig. 1, C C.) This culvert is used for obtaining a certain amount of water from the gravel. At the sides of the culvert iron valves are arranged. When these valves are raised the water can flow through the stratum of gravel into the culvert. The culvert is 75 ft. from the river and has fifteen valves in it—that is to say, there are fifteen places through which the water can pass into it from the gravel bed. The gravel beds just outside the culvert are in part artificially made; larger sized stones were placed in the immediate neighbourhood of the inlets into the culvert. It is found, practically, that little water can be obtained from this source except during the times when the Thames is at flood. When visited on Dec. 8th the river was 4ft. above its normal height and the gravel water was being used and it was understood that no water was being taken directly from the river and that the water which was going to Seething Wells was derived entirely from the subsiding reservoirs and from the gravel beds. The Thames on this day (Dec. 8th) was very turbid, but the water derived from the gravel was almost clear.

Engine house.—The engine house contains a Worthington engine of 150-horse power, which can pump 24,000,000 gallons daily into the reservoir. In the same house there are two vertical engines of 50-horse power each, which work bucket and plunger pumps. The steam is generated by six Cornish boilers and one Lancashire double flue boiler.

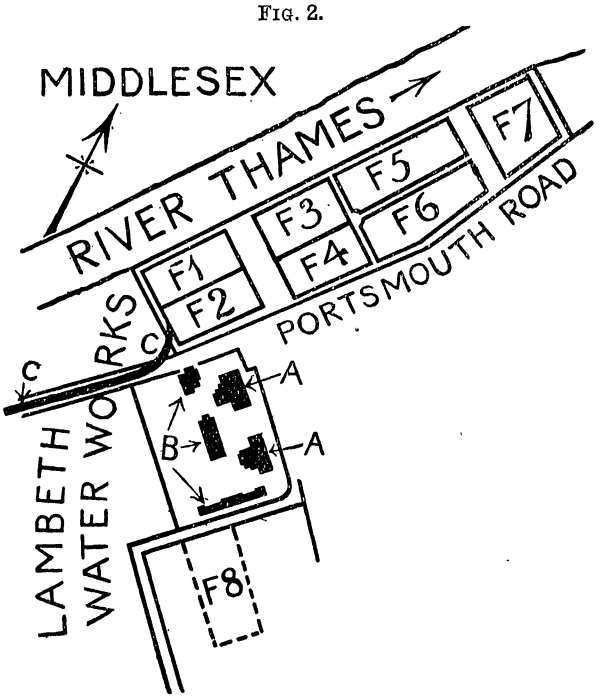
Subsiding reservoirs.—The water from the Thames is pumped into four subsiding reservoirs. These are situated between the Thames and the high road (Fig. 1, R 1, R 2, R 3, R 4). They are more or less square in form. Each has an area of about ten acres, and is capable of holding 35,000,000 gallons. The water is first pumped into one of the two reservoirs which are next the river; having remained there for some time it is allowed to flow into the second, then into the third, and finally into the fourth. It is found that the reservoir into which the water first flows contains a deposit three or four times as great as that found in the fourth reservoir. From Molesey the water flows by gravitation, or is pumped through a 36-in. pipe to Kingston.

Seething Wells, Kingston.—The Kingston station contains the filter beds and the engines which pump the water to Putney (Fig. 2).

Filter beds.—There are seven filter beds having a total area of seven acres. Each filter is capable of holding about 1,100,000 gallons of water. The rate at which water is usually filtered is 1¼ gallons per square foot per hour. The sand is washed by a hose and jet, under a pressure of 200 ft. of water.

Engine house.—The engine house contains two Simpson's double-action pumps of 150-horse power, and two bucket and plunger pumps of 150-horse power. The steam is generated by thirteen Cornish boilers. Another engine house contains four Simpson's engines of 600-horse power working bucket and plunger pumps. At one time the intake of the company was at Kingston; now all the water is usually taken at West Molesey and Walton, and having passed through the subsiding reservoirs there goes as described to Kingston. The old inlets by which the water was formerly taken from the Thames at Kingston remain, and are used in cases of

FIG. 2.



Seething Wells, Kingston-on-Thames. A A, Engine houses. B, Office, coalshed, workshop. C C, Main from West Molesey. F 1, F 2, F 3, F 4, F 5, F 6, F 7, Filter beds. F 8, Filter bed now in course of construction.

emergency. From Kingston the filtered water is pumped to covered reservoirs on Putney-heath.

Putney-heath reservoir.—The property at Putney-heath consists of eight acres situated at a height of about 177 ft. above ordnance datum. There is a stand-pipe by means of which an additional head of 22 ft. of water can be obtained. There are three reservoirs having a total capacity of 11,000,000 gallons. From Putney-heath there are three 24-in. pipes and two 12-in. pipes, which pass through Putney and over the bridge between Putney and Fulham to Chelsea

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and distribute the water. The main pipes pass in the direction shown in the plan.

Area of Supply.

The Act of 1852 authorises the Chelsea Company to supply the following places:—

Supplied: Brompton; Buckingham Palace and the precincts; Close of the Collegiate Church of St. Peter, Westminster; Kensington Palace and precincts; St. James's Palace and precincts; and Scotland Yard.

Partly supplied: Chelsea; Fulham; Kensington, St. Mary Abbott; St. George, Hanover-square; St. James, Westminster; St. John the Evangelist, Westminster; St. Margaret, Westminster; St. Martin-in-the-Fields; Whitehall; and Westminster Palace and precincts.

Not supplied: Hammersmith; Liberty of the Duchy of Lancaster; St. Mary, Paddington; St. Anne, Soho; St. Clement Danes; St. George, Bloomsbury; St. Giles, Bloomsbury; St. Giles-in-the-Fields; St. John the Baptist, Savoy, Strand; St. Marylebone; St. Mary-le-Strand; St. Paul, Covent Garden; and Savoy precincts.

The following table gives the average daily supply per head and the dates of the maximum and minimum supply per head for the years 1895 and 1896. It will be seen that in both these years the maximum supplies were given during the month of July, but the minimum supply in 1895 occurred in January, and in 1896 in February.

TABLE I.—*Showing Average Daily Supply.*

Year.	Average daily supply per head.	Maximum		Minimum	
		Month.	per head.	Month	per head.
1895	43.05 gallons	July	47·96 gallons	January	38·45 gallons
1896	42·90 gallons	July	51·80 gallons	February	38·70 gallons

Length of pipes.—The length of the company's mains in December, 1896, was 245·91 miles.

Number of hydrants.—The number of hydrants erected during the year 1895 was 333; during the year 1896, 322; and the total number on Dec. 31st, 1896, was 1386.

Communication with other companies' mains.—There is a communication with the main of the Grand Junction Company, near St. George's Hospital, Hyde-park-corner.

Houses under constant supply.—The number of houses under constant supply on Dec. 31st, 1894, was 23,314; on Dec. 31st, 1895, 27,104; and on Dec. 31st, 1896, 30,787.

Total number of houses supplied.—The total number of houses supplied by this company on Dec. 31st, 1894, was 36,941; on Dec. 31st, 1885, 36,941; and on Dec. 31st, 1896, 37,362.

Percentage of houses under constant supply.—On Dec. 31st, 1895, the percentage of houses under constant supply was 73·00, and on Dec. 31st, 1896, 82·00.

New Works in Progress and Projected.

Filter bed.—A new filter bed is in course of construction at Surbiton. (See Fig. 2, F 8).

New main.—A new 36-in. main is being laid from Molesey to Seething Wells, Surbiton.

OUTBREAK OF TYPHOID FEVER TRACED TO SPECIFIC POLLUTION OF A WATER-SUPPLY.

BY JOHN C. THRESH, M.D. VICT., D.SC. LOND.,
MEDICAL OFFICER OF HEALTH, ESSEX COUNTY COUNCIL.

THE following brief account of a localised outbreak of typhoid fever is of considerable interest inasmuch as the origin has been clearly traced to the use of a spring-water which had become polluted by sewage at a time when the sewage was specifically infected with the excreta of one or two persons suffering from that disease.

The outbreak occurred in the small town of Halstead, in the northern portion of the county of Essex. The town is supplied with water from a deep well in the chalk. There are a few shallow wells still in use, and on Mount-hill, on the northern outskirts of the town, there is a public drinking fountain by the roadside fed by the subsoil water collected on the hill. The surplus water from this fountain is piped to some works in the town, and supplies the cottage of a workman who resides on the premises. The only persons who use this water for domestic purposes are the inmates of this cottage, and the fountain is little used in the cold weather save by children in passing to and from school. Near the top of the hill and above the source of the spring supplying the fountain an isolation hospital has recently been erected. On Nov. 17th a baker, who is constantly driving about the country, was notified to be suffering from typhoid fever, and on the following day he was removed to the hospital. On Dec. 7th a daughter of this patient was notified and removed the same day. How the baker became infected we have been unable to ascertain. On Dec. 28th the man residing at the cottage supplied with water from the Mount-hill spring was attacked. As he had had no communication with the baker's family and had not been away from the town for over two months, a local cause was strongly suspected. The water-supply came under suspicion inasmuch as it had been observed that early in the month, after a heavy rainfall, the water was turbid. As such a condition had never before been observed it necessarily was remarked. As soon as suspicions were aroused the water was examined by the chemist at the works, and at the request of Dr. Gordon Roberts the Urban District Council caused two samples to be examined by a local chemist, one sample being taken from the fountain and the other from a small tank into which the water flows to feed the fountain. At the time these samples were taken the water had again become clear. The analyses proved satisfactory, the local chemist certifying that the analytical data "are in both cases quite satisfactory and do not afford any indication of contamination, the quantity of organic matter actually present being in each case extremely small and insignificant. Examined microscopically nothing objectionable could be detected in either. ..... I do not think any suspicion can be attached to either water." Between Jan. 22nd and 30th four children residing on Mount-hill were notified to be suffering from typhoid fever, all of whom acknowledged to drinking more or less frequently at the fountain when passing. As the water had on several occasions been observed to be turbid after rain, and no other cause save the use of the water seemed capable of explaining the dissemination of the infection, Dr. Roberts plugged up the fountain tap and wrote asking my assistance. After my visit and at my request every other probable cause, such as the milk supply, attendance at any party or school treat, &c., was investigated, but with negative results. Recognising the futility of examining the fountain water when it had become clear, I asked that a sample of the water when next observed to be turbid should be taken and sent to me; meanwhile I recommended that the pipes conveying the water to the tank and fountain should be traced and uncovered to discover the cause of the turbidity which resulted after a heavy rain. A few days after a sample of the turbid water was sent me, and the District Council ordered the pipes to be uncovered, after debating the necessity for such action for some time. The pipes conveying the water were found to cross over the roadway, passing under the sewer (leading from the isolation hospital and cottages above) and almost in contact therewith. They consisted of ordinary agricultural drain pipes, whilst the sewer was of earthenware with "plugged" joints, and four of the pipes nearest to and over the water pipes were damaged. The sewer was laid twenty years ago, but it appears probable that the pipes were only broken some six months ago, by the passing over of the steam road roller. During dry weather any leakage from the sewer might not directly enter the water pipes, but during heavy rains the escape would be considerable, and would pass straight into the land drain or water pipes, and so contaminate the water supplying the fountain and infected cottage.

The turbid water upon analysis proved to be very impure, the organic ammonia and oxygen absorbed being very much higher than in samples previously examined. Bacteriologically the water was carefully examined to detect the presence of the bacterium coli commune and the bacillus typhosus. The growth in phenolated broth was rapid and abundant. From this a phenolated plate culture was made which gave a large number of colonies, none of which liquefied gelatin, and which in appearance resembled those of the bacillus coli and typhosus. Certain of these in a gelatin culture produced gas bubbles, others did not, and these latter when grown in broth did not produce indol. Compared with the typical typhoid organism no test which we were able to

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apply revealed the slightest difference, and I have no doubt in my own mind that the water actually contained the typhoid organism. As the hospital contained typhoid fever patients from the middle of November there is little doubt that the water became infected during the heavy rains of Dec. 2nd and 4th, and has been infected from time to time since.

On Feb. 6th another child was attacked with typhoid fever. Four children in this house attended the same school, but only the one attacked had drunk the fountain water, and this on several occasions when passing on his way to and from a pond upon which skating and sliding were going on during the frost.

The above outbreak exemplifies in a marked manner the danger arising from placing too great reliance upon the analysis of a water. The very fact that the character of the water in question was so markedly influenced by a heavy rainfall was sufficient to excite the gravest suspicion, and any opinion based upon a fine-weather sample was bound to be misleading.

HISTORICAL NOTES ON MEDICINE, SURGERY, AND QUACKERY.

I.

IN the diary of Nicholas Blundell of Crosby, near Liverpool, we find several medical men mentioned. On July 27th, 1702, he records that "My Father went after diner to wate of my Lord Molineux at ye New Stand, where he was sodanly taken so very ill that he sent for me to wate of him home and bring ye Coach for him. July 28th. I sent for Dr. Farington to come to my Father, but he was not to be found. July 29th. I went to Wigan and brought Doctor Frances Worthington along with me to Crosby. Aug. 1st. Coll. Edm: Butler came from Durham in his Way to Ireland, he sent to Wigan for Doctor Tho: Wor: who came late that night. I sent Tho: Howard to Whit-Church for Doctor Bostock, but he came not." Valentine Farrington, M.D., a younger brother of Wm. Farrington of Worden, Esq., resided at Preston. Dr. Thomas Worthington is mentioned in "A Cavalier's Note Book," the cavalier being Mr. Nicholas Blundell's grandfather. Dr. T. Worthington died Nov. 27th, 1702. He was practising at Wigan in conjunction with his son Francis when he was summoned to Crosby. Dr. Bostock of Whitchurch had a considerable local reputation. Doctors, however, "were in vain," for the patient died on Aug. 2nd. "About half an Hour after Tenn in ye morning being Sunday, many People in the Roome hearing Mass, and Mass just almost finished, My Dearest Father departed this life, being much lamented by all; as his life was virtuous and edifying, so was his Death. Sweet Jesus Receive his Sole." On Oct. 17th the diarist "was at ye Buriall of Doctor Tarlton's Wife." The Tarletons were an old Liverpool family, one of the streets in the town being named after them. On March 15th, 1703, Mr. Blundell receives a visit from Dr. Lathom, who "came hither to shew ye Petission wch was presented to ye Queen by Mr. Bannerd Howerd in behalf of ye Said Dr. Lathom," &c. Dr. Lathom had practised surgery in Liverpool and his wife Judith had kept a school; but the penal laws being against them as Roman Catholics they were persecuted by the town officials. In 1686 a royal mandate was issued in their favour. It was addressed: "To all the archbishops & bishops, & to their Chancellors and Commissaries, & to all other persons, exercising ecclesiastical Jurisdiction, & to the *Custos rotulorum*, Judges of Assize & gaol delivery, Justices of the peace for our County of Lancaster, & to all other officers and persons whom it may concern. James Rex, 15th March. Whereas we are informed that Richard Lathom, of Leverpoole, in our Countie of Lancaster, Chirurgeon, & Judith his wife, who keepes alsoe a boarding schoole for the education of youth, at Leverpoole aforesaid, have latelie been molested or prosecuted or threatened to be soe, for, or in respect of, their exercising the said severall vocations without license, or by reason of their religion, being Roman Catholics. Now wee being assured of the loialtie of the said Rd. Lathom & Judith his wife, & of their abilitie to exercise their respective vocations, we doe hereby authorize & license them to use & exercise the same respectively; & our pleasure is, and we doe hereby direct you, & everie of you respectively, to supersead & forbeare all prosecution against the said Rd. Lathom & Judith his wife, for or by reason of his exercising the art of chirurgerie, or his or their keepinge a boarding schoole, or socouring, teaching, or educatinge youth; & if anie sentence is or hath bene given or pronounced, or penalty recovered against, or fine sett upon him or her, for, or touching the premises, our pleasure is that the same be discharged, & that you permit and suffer ye sd Richard Lathom & Judith his wife, & each of them quietlie to exercise the said severall vocations without anie molestation or disturbance whatsoever, & for soe doing this, or the entire or inrolment thereof, wth or before you respectivelie shall bee unto you & everie of you respectivelie a Sufficient warrant. Given att our Court at Whitehall ye fifteenth day of March in the second yeare of our raigne. By his Maties. command.—SUNDERLAND." The subject of Dr. Lathom's petition above mentioned is not stated. He retired to Aintree, where he died in 1713.

Mr. Blundell, having married "Lord Langdale's Doughter" at Hathrop, carried his wife home to Crosby in a "Charriot." On July 2nd, 1703, he says: "I came from Colebrook, bated at Warington, was met by Dr. Lathom & treated by him in ye Road. I brought my wife to Crosby. July 8th. Sr Wm Gerard, Merchant Houghton, & Dr. Tarlton dined here." In August he was with his wife at Lathom "Spaw," which was destroyed by the sinking of coal shafts early in the present century. It was situate opposite what is now called Spaw Farm in Lathom. It was in good repute during the last two centuries. Dr. Borlase of Chester wrote two treatises in its praise and sent copies to "the Cavalier," who wrote in reply: "To these waters next under God I do certainly owe my life. 'Tis now about four or five weeks since I gave them another visit by reason of our old acquaintance. I was pretty well when I went; I drank them eleven or twelve days & returned perfectly well home. Yet I find them somewhat costly, for my stomach is so good that I eat all before me." This was in 1672. "Jany 4, 1704. I went," remarks the diarist, "to see Parson Richmond, found with him Mr. Marsden, Mr. Danvers, and Mr. Poole of Leverp: I think Parson Rich: had nuly been cut for ye stone." (Parson R. was father of Dr. Hy. Richmond.) "Jany 23rd. My wife sent for Dr. Fabius, he said she was with child." (Dr. Daniel Fabius lived at Low Hill.) "Feby 5th. I hunted about Litherland and Walton wth Leverp: Doggs in Company of Mr. Silvester Richmond & Mr. Molineux of Leverp: we had a long Chace." "Feb. 19th. I saw Ri: Jump married to Cath: Fisher." "Feb. 20th. She quarrelled with me about her not tacking Phisick & my not coming to see & pitty her." "May 2nd. Dr. Shaw & Mr. Edw. Molineux of Formby shot Rooks with Stonbows at Ince." "May 12th. I went to Ormskirk to ye Buriall of Dr. Barton." On the 27th he went to Wigan and lodged at Dr. Worthington's. "June 13th. I went to Low Hill to ye Doctors & to Leverp: I drunk wth Mr. Gleast & Dr. Tarlton; it was a wet night." At Holywell on June 25th he "went into ye Well with Severall of ye Pilgrime Sisters &c. Smiths by name in Sropshire." "July 3rd I was at Great Crosby Race between Mr. Silv. Richmond's Bay Mair and Mr. Atherton's Gray." "July 14th. I went to advise with Dr. Fabius, I dined there, thence went to Leverpoole." "July 20th. I rode to Adams Spaw to drink the waters." "Nov. 3rd. Mr. Guildus came to draw a Tooth for my wife." "April 11th, 1705. I went with my wife to Dr. Fabius." "June 22nd. I tryed an experiment wth eleven living Miss [mice?] in a hot pot." "July 10th, Uncle and Aunt Gerard &c Lodged here."

Dr. Gerard had settled as a physician in Durham and married Bridget, youngest daughter of the "Cavalier." He was of the Garswood family. "August 7th. I went to Speak [Speke] to wish Joy to Mr. Norris, I dined there, and called at Aigbourth." Dr. Norris had been married on July 12th to Anne, sole daughter and heir of Peter Gerard of Crewood, co. Chester. Dr. Norris's grand-daughter married Rich. Pennant (Lord Penrhyn). "August 14th. I gave 6*d.* in presence of ye two Mr. Witheringtons to Mrs. Aspinwall ye Midwife, for wch she is to give me six Guineys whensoever she is Married to anyone."

Silvester Richmond was evidently of a sporting turn, for the diarist records under date, May 15th, 1706, "I was at ye Great Plate at Lev: where Lord Molineux his Hors beat Mr. Sil: Richmond's Maor, I drunk a horsback with Alderman Tyarer, &c." In 1706 we find him visiting his uncle Dr. Gerard at Durham; then playing at bowls with Dr. Edward Norris of Speke, Lord Gerard, and Sir Thos. Aston. In

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January, 1707, he says, "My wife went to Mrs. Bootle of the Peele to show her her finger that was burned." Mrs. Bootle appears to have been a sort of amateur lady doctor, for in July we read, "Mrs. Bootle of ye Peel came to Blood me for my fall." Probably she was an ancestress of the present Earl of Lathom. The Silvester Richmond so frequently mentioned by the diarist was probably a son of the physician of that name, who died in 1692. Further on, under date 1727, he is called "Old Sil: Richmond." Early in the present century there was another Sil. Richmond, who wrote election squibs. He was a searcher in the Customs and the "prince of Liverpool wits."

The following entries are interesting as showing the habits of medical men and squires of the last century:—"Mar. 10th, 1707. I made Coz: W. Ge: Salve alias Captain Midletons for a Bruse or Cut. April 3. Dr. Fabius came to see Tho: Gower, he let him Blood. Sept. 20th. At Leverp: I drunk with Dr. Tarlton, James Houghton, and Wm. Atherton. I payed 20*s.* at ye Exchange Coffyhous for a Periwig. October 10th. Mr. Aldred and I came from Hooton, Dr. Tarlton treated us with Wine at his own house, Mr. Plumb tryed his Lamp with two Weaks. Oct. 13th. Mr. Plumb and Dr. Tarlton came to Cource with me. Decr. 18th. Doctor Tarlton came to Great Crosby and sent to borrow my Grewhounds. Mar. 8, 1708. We called to see Parson Wairing, he was trobled with ye Stone and Gravell. April 10th. Mr. Ald: (his R. C. Chaplain) shaved my head. April 17th. I dined at Mr. Plumbs; he and Doctor Tarlton drunk with me at ye Woolpack. April 24th. I went to Leverp: and drunk at Dr. Tarlt: wth him Parson Stith and Mr. Walsh. June 19, 1708. One and twenty Adders were taken on my Midings. June 21st. I sent Mrs. Ann Rothwell with a Present of 22 Adders to ye Doctors of ye Low. [This would be Dr. Daniel Fabius of Low Hill.] June 23rd. Mrs. Bootle blodyed my Wife. I gathered some Flowers for Flowering Great Crosby Cross tomorrow. June 24th. My wife and I were at the Flowering of Great Crosby Cross. I Steeped my Feet in hot Whey for about two Hours to make my corns come out by ye Roots, but I think 'twill doe no good.' July 12th. Darby Wife brought a picture for Mr. Aldr: Alter-peece from Dr. Lathom's which he had lent me." On July 26th Mr. Blundell and other Roman Catholics had to appear before Dr. Norris and two other "Justises of ye Peace" at Ormskirk Sessions to Compound to prevent conviction on account of their religion. "Augt. 30, 1708. I began ye first time to make Milk Punch. Sept. 13. I went to Ormkirk to see Dr. Gerard. Oct. 29. I made up some Doses of Powder for ye Falling Sickness for Mary Pilkington's sister. Nov. 9th. I dined at Mr. Aldreds with Mr. Moston, Mr. Thornton, and Dr. Worthington, it being ye Doctor's birth day he gave us a bole of Punsh. Nov. 16th. I Began to make a dose of Phisick for Wm. Tompson for ye Dropsy. April 1st, 1709. I went to Leverp: and sold my Rabet skins to Leversage. Mr. Scofild, ye apothecary, gave me some Jue Jubs and Date Stones. May 1st. Duke Bluddyed my wife, Rich: Johnson, Wm Gray, I, &c., were present. May 7th. I went to Leverp: I set a great while wth Mr. Sil: Richmond at his Hous, we discoursed about Planting, sowing Cole Seed and improving Grond. May 13th I sowed one Buss: of Barley in ye Cowhey dressed with Oyle and other Ingredients as Powder of Coleseed, &c., but it did not answer expectation. May 17th. Mr. Silv. Richmond came hither, I went out with him to look at some ground to see if it was proper for Coleseed. July 11th. Ince Gardiner helped Jo: Banister to Innoculate. Augt. 7th. I went to Dr. Lathom's and asked him for a Receipt for one at York Schoole." The difficulties of travelling in those days are described in the following account of a journey to Whitchurch to consult Dr. Bostock. "August 18th, 1709. My wife & I began our Journey toward Whit-Chourch, we came too late for ye boats at Leverp: so we went over at Runkhorne, after wch we lost our way & went to Windy Weston, where we got a guide that brought us to Fradsom. Aug. 19th. We went from John Webster's, the signe of ye Bear's Paw, at Fradsom to Whit-church to Mr. Benbow's, ye signe of ye Red Lyon, where we dined and discoursed Dr. Bostock about my Wive's Paine in her back. From Whitchurch we went to Chester, where we lodged at Mr. Taylor's, ye Signe of ye Golden Lyon. August 20th. We saw several of ye Paletines in the Wool-hall, &c. We dined at Chester & thence went to ye Rockhous, but the Boat was gon, so we got a Smoke made, but no Boat coming to us we went to ye Wood-side, where Mr. Darcy Chantrell came to us and got a Boat for us, so we came home. Sept 3rd. I wated of Dr. Clayton at his Brother's. Jany. 9, 1710. Dr. Smithson came to see me and let me blood. Feb 6th. I Rosted my Steeped Wheat to make Coffy on, but it did not doe well. April 29th. I went to Leverp: & drank at Mr. Silv: Richmond's with him & Parson Foxcroft, who was formerly Curate of Sefton. June 8th. We met Mr. Blundell Coming home from Dr. Bostock. June 15th. Went to Leverp: & saw ye play acted called *Sephonisba;* or *Haniball's Overthrow.* I discoursed Dr. Smithson about his Ordering too much Lodinum for Mr. Lancaster. June 16th. I began to still some Eye-bright. June 24th. Dr. Cawood the Oculist from Dublin came to look at my Eyes; he Lodged here. June 28th. I went with Doctor Cawood to Leverpoole to assist him in geting Acquaintance & to procure a Chamber for him where his Patients may Come to him; we drank at the Post Office with Doctor Smithson, Doctor Person, &c. July 14th. I began to learne of Dr. Cawood to play at Picket. July 17th. Dr. Cawood & I went to Prescot; I went to Mr. Oliver Lime to know whether he would venture with Dr. Cawood for his Eyes; we light at the Signe of ye Ship & discoursed our Land-Lord, Tho: Moss. July 20th. I Began by Orders of Dr. Cawood to take Drops, Eye-bright Tea, and to put Clary Seeds into my Eyes. July 22nd. Dr. Caw: and I went to Leverp: we Looked at ye Dock that is in making, & we went to see ym make White-Mettle Mugs. July 24th. Dr. Caw: went to ye Flowering of Ince Cross. August 10th. I waired 24*s.* in Chinea in my Hale for my Wife. Mr. Ald: Dr. Cawo: and I went to the Grange Greene & saw a Match Boweled there between two young Men of Ince & two old Fellows of Formby, a Slave come from Turkey was on the Green. Oct. 20th. Widdow Bolton a Chirurganess Came hither to dress a cut that Fanny has got over her Eye. Nov. 30th. I Went to Chorley Town to meet young Mr. Gerard of Highfield and Pothecary Gerard's Son [I fancy that Pothecary Gerard's son was destined to be the physician who invented Everton Toffee]. Jany. 27th, 1711. I went to Leverpoole with my wife, &c. We saw ye great Saxon Maxemilian Christofer Miller. I drank at ye Wool-pack with Mr. Plumb, Mr. Allison, and Dr. Fabius & with Mr. Ford ye Putear, Dr. Traps &c."

It is astonishing the number of medical men with whom this worthy squire dined, played at bowls, and hobnobbed. Mrs. Blundell appears to have had more faith in lady quacks. "March 12th. I cut a good deale of Eye-bright for me to smoke. March 30th. Rich: Cartwrit lett my Wife blood in ye foot. April 24th. My Wife rid behind Mr. Ald: (the priest) to Dr. Lathom's to prayers, they dined there." (Dr. Lathom, being old and infirm, had a private chapel at his house at Aintree.) On May 1st he mentions that "Cap. Sidall, Dr. Farrington, &c., played at Inn and inn" at a coffee-house. "In" signified that there was a doublet, or two dice alike out of the four; "In and in" that there were either two doublets or that all of the four dice were alike, which swept all the stake. "June 3rd. Mr. Ald: and I went to Ince to welcome home Mr. Blundell from Whitchourch." (He had been to consult Dr. Bostock and died very shortly after this visit.) "June 18th. My Wife went to Mrs. Bootles of ye Peele to shew her a Soar place she has in her Legg. Jany. 16, 1712. I went to Aintry and looked at Doctor Lathom's Housing called Aintry Hous to see in what repair it was in. Mar. 27th. Rich: Cartw: let me blood. March 30th. Being extreamly ill of a Continuall Fit of Heckoping which lasted for about 15 Hours without ever any Long intermission both Dr. Will: Lancaster and Dr. Andrews came to me. April 1st. Doctor Lanc: came to see me. I got up being on ye mending hand. May 23rd. My wife went to ye Peele to shew her foot to Mrs. Bootle which was soar with being bluddied." Mrs. Bootle's treatment must have been successful or the "soar" very slight, for a month later he records: "My wife began her journey towards Holywell; she Rid to Leverp: and designes to walk the rest." "July 7th. I was very busy most of ye afternoone shaping Tinsall, &c., for the Garland for my New Marl-pit and after Supper ye Women helped to paste some things for it. I began to teach the 8 Sword Dancers their Dance wch they are to Dance at ye Flowering of my Marl-pit. Dr. Cawood played to them." (There were grand preparations going on for some days, with plenty of music & dancing, and on the 15th July a large bull was baited in the Marlpit, the bull behaving to admiration, "not above two Doggs but what were very ill hurt.") "July 31st. I went to Mr. Ald: where I found Mr. Tho: Ford ye Puterar, Jack Whit ye Barber, Doctor Barret and Pothecary Lathom." It appears that this Thomas Ford, a Brazier, could write his name upon a wall at arm's length

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with half a hundred weight hanging at his little finger. "Sept. 18th. Dr. Caw: helped me to examain my Simballing things. Sept. 21st. I called at Dr. Lathom's & Chaptered Betty Lathom about her unkindness to her Uncle & Aunt. Feby. 24th, 1713. I went to Wigan & discoursed Doctor Tho: Worthington about seting his Hous ready Furnished, it was for my Brother Langdale. June 12th. I took a Drought of Sack and Oil but found no great good by it. June 13th. I went to Leverp: with my Wife, she showed her Legg to Mrs. Maginis. June 24th. I being one of Dr. Lathom's Executors I went to his Hous to order his Buriall, he was carried on my Coach Carriage to Walton Church; there was at his Buriall Jo: Tyrer, Mr. Bower & his Wife, Mr. Crisp, &c.; there was at the Hous Mr. Shaw of Ormsk: John Crew, &c. July 8th. I met Ri: Tatlock & sold him some of Dr. Lathom's Chirurgicall Instruments. Novr. 17. I took some of ye Picturs as were Dr. Lathom's to Ned Howerd's, some of them I hung up there in ye Chappell. Jany. 5th, 1714. I removed ye Ship in ye Hall & Charg'd ye Gunns against tomorrow. Jany. 6th. Mr. Plumb, Doctor Lancaster and I, &c, was at Mrs. Anns Cocking, there were three Battles. Tatlock was here, we had a Merry-Night and Fier'd ye Gunns of my Ship. Jany. 11th. I took in hand to Cure Ginnet Blundells Legg. but she did not long continew my Pasient. Augt. 2, 1714. Tho: Kerklington ye old Simpler of Herbs, & Picture Seller lodged here. Augt. 5th. Mr. Gilb: Barrows Pothecary of Leverp: Dined here. Sept. 11th. I went to Leverp: with Mally & got a Rotton Tooth of hers pulled out by a Mountebank. Jany. 26th, 1715. I gave a Poore Woman a Doce for ye Falling Sickness. April 23rd. I shewed Dr. Only my Reel and Bottle and my Little Calf, and some other of my Curiossitiss. Augt. 14. I dined at Mosburgh wth Black Dr. Lanc: and Cap: Rob: Faz: Parson Low came to us, Oct. 19, 1715. Duke let my Wife blood in her Arme. Oct. 29th. We expected the Hors Militia to come Serch here. Oct. 31. I came not in till dark Night expecting a call. Nov. 16th. I set in a Streat place for a fat man. [The house was searched by the soldiery and Mr. Blundell was hiding; a little later he left home, made his way to London, thence to the Continent, where he and his family lived for some time.] Oct. 6th, 1717. It being near Full Moon I cut my Wive's Hair off. Dec. 9, 1718. Mr. Bower made some proposalls to me for the Purchass of Dr. Lathom's Fifteen Aiker. Dec. 13th. I went to Leverp: and drank with Mr. Rech at ye Wool-pack; he is to be Land-Lord there. Pothecarry Par gave Jolly Brown & me a Bottle of Wine at his Hous. May 14th, 1719. I went to Ormsk: and shoed my Toe to the Mountebank Dr. Fry, I drank at the Swan with Dr. Lancaster. [It would have been better had he "shoed" his toe to Dr. Lancaster and drank with the mountebank.] Nov. 14th, 1719. I dined at the Woolpack in Lev: with four Strangers, I suppose they were Londoners; I saw Matthew Buckinger, who was born without Hands or Feet, I saw him writ very well with his Stumps and tipe very dexterously some nine Pins down & play Tricks of Leger-de-Mesne; Mr. Whitley & Mr. Bayron went with me to see the Little Man play his Tricks. [The Squire himself sometimes entertained his friends with tricks of "Leger-de-Mesne."] Dec. 23, 1719. I went to ye Buriall of Wm Bawer, but came too late so that I met ye Corps & went to Sefton; when the Buriall was over I stayed drinking at the Aile-Hous with Dr. Lancaster, Selsby of Ormskerk, Young John Yates. Feb. 3rd, 1721. I Scoaped 30 Leomonds, ye Juce of them made one Pint, & about the fourth of a Pint, I put to it one pint of Brandy. I also made some shrub; the proportion was Brandy 2 Qts., Crab Vargious 1½ pt., leomonds 6, Dubble Refined Sugar 1 lb. The proportion of mixture for my last Brue of Aqua Coelestis was Brandy 2 Qts., Crab Vargeus 1 Pt. and ⅛th of a Quart, Lime Juce ⅛th of a Qt., Lisbon Sugar 1 lb., Leomonds 3, and being the Brandy was very good I put to it 4 Qts. and 1 pt. of Water, the water was first bouled, the outward Rine of the Leomonds was infused into it, so they were also in the Shrub, but the Brandy and Leomond Juce had not any Rine infused in it. This Night I had a Cargo of 16 Larg ones brought to Whit Hall." The worthy Squire, although he moved in the best society in Lancashire, was not above doing a little contraband business occasionally. On April 3rd, after the funeral of Widdow Maile of Maile, he "stayed drinking at ye Ail-Hous in Sefton Church Yard a good while with Doctor Lancaster, Richard More, &c." "May 10th, 1721. I sowed some Cowcomber Seeds; they had been steeped in New-Milk about twenty-four Hours." On July 8th he and Mrs. Blundell travel to Holywell and on the 9th he says: "My wife & I went into ye Well, I was much out of Order after I came out & Continewed so for some Hours." "Sept. 2nd, 1721. We called at Ormkerk & wished Joy to Dr. Lancaster & his Wife recently married. Sept. 15th. I gave Pat: Clifton [the priest] some Eye-Balsom being one of his Eyes is very bad. Oct. 12th. Being Pat: Gelib: [Father Gellibrand probably] took Phisick to-day we dined with him in his Roome. Jany. 16th, 1722. I saw young Mr. Yats & Doctor Orme set William Marrows Thigh, he broke it yesterday coming from Preston Faire. June 8th. Tho: Marrow, Junior, showed Betty Bolton his Thumb and Rob: Weedow his Foot, I had them both in Cuar. Sept. 1st, 1722. I Burned above one Groce of Pipes in ye Washhous Grate. I mixed some Pouders together for Convultion Fits." He plays bowls and drinks at Crosby with Apothecaries Lathom & Parr; dines at Wooton with Dr. Lawson of Chester, and is Visited at Crosby Hall by Mr. Blundell and Dr. Molyneux and their wives. This does not prevent him from "faulting" the two gentlemen later on for shooting near his wood. "Jany. 31. 1723 My wife went to Leverp: to show her finger to Betty Bolton Feby. 22nd. I made my Incomperable Salve for a Cut or a Bruse. March 2nd. I discoursed Mr. Peters concerning removing Will: Sumner's Doughter out of ys towne ere she be delivered. March 23rd. Mr. Sadler payed me £50 for ye Purchas of Dr. Lathom,s late Hous and Teneament. May 26th. We went over from Leaverp: in Eastom Boat and dined at Hooton with Dr. Low, thence to Chester. Augt. 26th. I went with my Doughters to Bartholomew Fair, we saw a Droll, a Little Man & a Popit Play. I met Lawyer Culcheth, Dr. Eyre and Sr. Franc: Anderton at the Castle Tavern in Drury Laine. Sept. 9th. My wife & I saw Humphrey Anger & Joseph Midleton Hanged at Tyburn. Sept. 10th. We four made a Viset to my Lady Westmoreland at Twitnam and dined there. Coming home we were overturned, Fanny's Arme & my Side was hurt, Surgeon Gihee let me blood. Sept. 16th. Mally & I saw the Corps of Mr. Fetherston carried in Forme by ye undertaiker. Oct. 29th. Pothecary Livlesley came hither & desired I would make use of him being I had made use of Mr. Latham his Master for my Apothecary. April 22, 1724. Pat Bartlett let Mally blood. Augt. 14th. Before three this morning I disturmbed two Cupple of Woosters Jane Withington, Nelly Howerd & their Sparks. August 15th. Mat: Withington came to chapter his Doughter for Courting in ye Night. Augt. 17th. Jane Withington & Nelly Howerd left their Service, they went to Darby [West Derby] Waikes. August 30th. Margarit Gray was Seased this Morning very ill after the same Manner as several of the Neighbours are, & in the Evening she took a Vomit. Novr. 2nd. Dr. Augier came ye first time to see me. [Dr. Samuel Augier, an eminent physician, resided in Union-street, so called from the union of Sir Cleave Moore with Ann, daughter of Mr. Joseph Edmund.] Decr. 4th. Fanny & I went to Wigan to be under Dr. Francis Worthington, our health being very bad; the coach was overturned, & when we came neare Wigan it was laid faste ye Rode being so deep, so we left it in ye laine al Night, and we went with our Horses to Wigan where we Lodged at Kendall's, the Leggs of Man. Jany. 17th, 1725. My wife and Mally went to Leverpoole with Fanny she is to be under the care of Dr. Bromfield. She Lodges at Mrs. Williamson's. Feby. 13th. Fanny was so ill of ye Convultion Fits that Mr. Aldred gave her the Holy Oyles. Dr. Ferniho of Chester met Dr. Dickins here, they had a consult. June 6th. Fanny had one of her Violent Convultion Fits, it was occasion'd by seeing a Mous in her Roome. June 9th. I went with Dr. Bromfield and Pat: Hardesty [priest] to Crosby, I bowled four Bowles out of Hand against Mr. Cripps' three. ..... I came directly home without going into the Aile hous. July 27th. Mrs. Bravarius came to look at my Wive's Legg. [She was housekeeper at Ince Blundell.] Sept. 25th. It being Fanny's Birth day Tatloc play'd here; we danced both before and after supper. Mr. Hen: Blundell sup'd here, we play'd with him at Chaising ye Whistle. Sept. 27th. She drank too much Burch Wine. Jany. 12th, 1726. 'Pat Bartlet Lanced Mary Molineux in her Gumbs for the Tooth-Aich, and mixed some Powder of Roman Vitriall with her Blood.' [The operator in this case was a priest.] Jany. 23rd, 1726. Mr. Livlesley sent his Brother hither with some Phisick; he fell in Rimrose as he came. Jany. 30th. Roscow went to Ince to show her lame Arme to Mrs. Prevarius [the housekeeper]. April 1st, 1726. We began to make some Wine of 60 Sivell Oringes and 30 Leomons; they cost 6s 8d.; four doz. Pound of Lisbon Sugar cost £1 4s. It made six dozen Bottles wch comes to 5s. 1¼d. p Doz. May 1st. From Ormskirk I went with Fanny to Coz

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Gillib of Astley, where she is to stay for some time for Change of Aire in hopes to Cure her Ague-Fits. Augt. 2. Apothecary Livsey and his Brother the Churcheon who is lately come out of France made me a Visit. Sept. 13th. Dr. Clayton, son to Daine Clayton in Ireland, and Lawyer Radcliff dined here. Pat: [Father] Curedon went hence to live at Sefton and to help at Croxtath, he has ben a Gest here, I think more one yeare. Sept. 30th, 1726. Coz: Butler and I went a Fox-hunting with Lord Molineux, there was Surgeon Livsey, Dr. Rice, &c. Oct. 28. I had seaven Lads of this Town beaton at my Gate-Hous with a Sterrop-Leather, some by their Fathers, others by their Masters and some by other Persons, for Stealing my Apples and for other Peevish tricks. Jany. 21st, 1727. I went to Leverp: and made Major Broadnax a viset; he told me that in March next he will be 108 years of Aige, he has his Memory perfectly well, and talks extreamly strongly and heartally without any seeming decay of his Spirrits. [He died in the following January and was buried at St. Nicholas's Church.] March 27, 1727. Lord Barrymore went abroad upon Business. Old Sil: Richmond and his Doughter dined at Rocksavage. April 12th. I went to Crosby Greene; there was Parson Brooks, Parson Davys, Bannion of Ormschurch, Mr. Haymar, Doctor Bromfield, &c.: there were several Cocks brought from Leverp: and Ormsch: which fought upon the Green, I saw three or four Battles. June 11th. I was at prayers at Mr. Tempest's of Broughton, Dr. Traps was there. June 8th. I put the Leaves of Whit Lillys into two Glass-Bottles, they are to make Oyl on for a Burn or Scald. March 23rd, 1728. Mr. Chisleton, Dr. Ferniough, &c., came to my lodging (Golden Talbot in Chester); I advised with him about Mally's eyes and mine and about Fanny's Laimnes. Coz: Butler and I made a Viset to Sr Hen: Bunbury, we drank there with Mr. Semor Chalmondeley, &c."

On April 4th the diary closes abruptly, though the genial squire lived nine years longer and doubtless had many drinks and games at bowls with physicians, "apothecaries," parsons, and other neighbours. He does not appear to have been the source of much profit professionally to the medical men of his acquaintance. The rest of the diary is extremely interesting and valuable as a faithful picture of the period in which the diarist lived. He had a decidedly good time of it on the whole in spite of the religious disability he laboured under.

THE PARIS CARNIVAL: NEW SANITARY REGULATIONS.

THREE years ago we pointed out some of the dangers to health which attend the Paris Carnival.[1] We then explained that the old Carnival had to a great extent died out. Formerly the butchers, wearing fancy dresses, paraded a fat bullock in the streets of Paris on Shrove Tuesday; but the weather is doubtful so early in the year, and the butchers and their bullocks did not awake any very keen interest in the minds of the Paris population. The students were better inspired when they sought to organise another Carnival in Mid-Lent on the day consecrated to the patron saint of the washerwomen. The dirty work of a laundry is perhaps scarcely more poetic than the slaughtering of cattle. However this may be, it will be readily understood that the youths of the Paris University are much more interested in the fête day of the laundresses than in that of the butchers. Thus it has come about that the Mid-Lent Carnival eclipsed in its brilliancy the more ancient Carnival held on the butchers' day. This year, however, the butchers have made a strenuous effort to come to the fore again, and instead of one street Carnival and cavalcade there are two cavalcades. Now the special feature or the new feature of these Carnivals is the Battle of Confetti. The confetti consist of small discs of paper about a quarter of an inch in diameter, with which since we last wrote on the subject the British public have, in their turn, become familiar. We explained that though this paper is extremely light yet about a million kilogrammes of confetti were thrown in the streets of Paris at the Mid-Lent Carnival of 1894, and that 3,500,000 *serpentins* of paper were likewise employed. As these ribbons of paper measure in length about 75 metres each, sufficient paper ribbon was used in the course of one single day to encircle the world six times. We pointed out that the throwing of so much paper in the streets had a tendency to clog the sewers. But what was more serious was that to avoid the expense of buying confetti many persons picked up handfuls from the ground. In thus using the ammunition twice over they naturally gathered up dust, small gravel, and dirt of every description. The throwing of confetti into people's faces was therefore attended with considerable danger. People's eyes were injured and their faces cut. But the greatest success that can be scored in encounters of this sort is to surprise someone who is imprudently shouting or speaking and to quickly discharge a handful of confetti into his or her open mouth. If the confetti are clean, no great harm is perhaps done; but if they have been scraped up from the pavement after many persons have trodden upon them, then the practice is at once dirty and dangerous. This practice also led to quarrels. Many persons naturally resented receiving showers of dirt and pebbles, so that good-humoured frolic soon degenerated into street squabbles. Since 1894 the authorities have been greatly troubled to find a practical means of dealing with these grievances. To suppress the confetti altogether would have been a very unpopular measure, so efforts were made to water the streets and render it impossible for people to pick up the confetti. But this made a horrible mess and tended to spoil the costumes of the masqueraders. Also the watering apparatus could not be brought to bear in the midst of the dense crowd where the fun was fast and furious and where it was most needed. This year, however, the authorities have hit upon an extremely ingenious device. The Prefect of Police issued orders that anyone throwing or selling confetti of mixed colours was to be arrested. Thus the bags contained confetti of only one colour. The purchaser might buy blue, red, green, or yellow confetti according to his fancy, but he could only throw one colour at a time. A similar regulation is in force in Belgium. On the other hand, the contents of the bags as they fall get mixed, and thus any confetti picked up from the pavement would be of various colours, for they would come from different bags. In this manner those who picked up old confetti, either for the purpose of throwing or of selling them again, could at once be detected and the abuse stopped. The weather proving exceptionally fine, all Paris joined in the fête. Besides, the cavalcade was really well worth seeing. To impart an aspect of historical romance the fat ox stood under a Druidical altar and was accompanied by Celtic warriors. When to this is added that there were some 11,000 masqueraders and many cars in the cavalcade, notably one consisting of a painter's palette twenty feet long on which female forms gracefully reclined and by the colours of their dresses represented the paint on the palette, it will be seen that there was attraction enough to bring together an immense crowd. This only rendered the necessity of sanitary precautions the more urgent, and it is satisfactory to know that means have at last been found to ensure that the Battle of Confetti shall be fought with clean, unsoiled confetti.

[1] See THE LANCET, March 10th, 1894. "The Sanitary Aspect of the New French Carnival."

BUBONIC PLAGUE IN INDIA.

THE total returns for Bombay up to Feb. 25th, according to a telegram through Reuter's agency, amount to 7638 cases and 6198 deaths. The week's mortality from all causes up to that date was 1650, as compared with 1728 in the previous week.

The latest official telegram on the subject of plague received by the Secretary of State from the Governor of Bombay is in continuation of that of Feb. 21st. We extract the following information from it:—"Deaths from all causes in Bombay city for the week ended Feb. 26th, 1525; reported plague deaths, 730. For the week ended Feb. 25th 102 dwellings condemned, 130 recommended for alterations, tiles removed from 1216, floors dug up in 604, and 2029 limewashed, 393 vacated, 38 destroyed by fire, and several otherwise demolished. The distinct reduction of the total number of deaths a satisfactory sign, but some of the people who left Bombay are now returning from infected places outside and have re-infected places which had become almost free. People entering Bombay as well

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as leaving will have to be examined and watched, and steps to this end are being taken. The two new hospitals are opened. Similar steps will have to be taken in regard to people leaving Poona, where plague is much worse than was feared and has rapidly increased. It has so far been found impossible to get an accurate statement of deaths from plague in Poonah, but in January deaths from all causes were 497, against quinquennial average of 261. Up to Feb. 26th deaths were 882, against quinquennial average of 225. The most drastic measures will be enforced and aid of military called in. In the Thana and Surat district plague shows tendency to spread. Plague still severe in Coorla, Bandra, and Bhiwandi."

Sporadic cases of plague have been reported at some other districts and places for the week ending Feb. 26th. Quarantine camps have been established at railway stations in Sholapur district, and fairs and pilgrimages in the Bombay Presidency have been stopped where necessary.

"At Karachi plague deaths for the week ended Feb. 26th 205. Effectiveness of measures taken increasing; opposition of people diminishing. No indication of general spread of plague in Sind."

Dr. Rogers Pasha, chief of the Egyptian Sanitary Department, has returned to Cairo from Bombay, whither he had gone to study the conditions of the plague. He believes that the danger of infection to Egypt is not so great as was at first supposed, and that, seeing how slowly it travels, measures similar to those adopted during last year's cholera may be relied upon to control it. The sanitary conditions of the chief towns of Egypt are, in his opinion, worse than those of Bombay.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6642 births and 4096 deaths were registered during the week ending Feb. 27th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 20·8 to 18·8 per 1000, rose again last week to 19·4. In London the rate was 19 0 per 1000, while it averaged 19·7 in the thirty-two provincial towns. The lowest rates in these towns were 12·8 in Huddersfield, 13·3 in Brighton, 13 5 in West Ham, and 13 6 in Halifax; the highest rates were 23·1 in Bristol, 23·2 in Oldham, 24·0 in Liverpool and in Salford, and 24·1 in Norwich. The 4096 deaths included 379 which were referred to the principal zymotic diseases, against 336 and 316 in the two preceding weeks; of these, 120 resulted from whooping-cough, 88 from diphtheria, 65 from measles, 41 from diarrhœa, 32 from scarlet fever, 32 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded last week either in Brighton or in Halifax; in the other towns they caused the lowest death-rates in Croydon and Blackburn, and the highest rates in Salford, Bolton, Birmingham, Sunderland, and Plymouth. The greatest mortality from measles occurred in Salford, Bradford, Bolton, and Plymouth; from scarlet fever in Leicester; and from whooping-cough in Wolverhampton, Birmingham, Burnley, Sunderland, and Bristol. The mortality from "fever" showed no marked excess in any of the large towns. The 88 deaths from diphtheria included 62 in London, 4 in Birmingham, and 3 in West Ham. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns. There were 43 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, Feb. 27th, against 21, 38, and 34 at the end of the three preceding weeks; 18 new cases were admitted during the week, against 12, 20, and 3 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2817, against 3050, 2901, and 2815 on the three preceding Saturdays; 237 new cases were admitted during the week, against 245, 226, and 227 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 373 and 335 in the two preceding weeks, rose again last week to 368, but were 183 below the corrected average. The causes of 67, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Oldham, Bradford, Newcastle-upon-Tyne, and in fourteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 28·8 and 25·5 per 1000 in the two preceding weeks, further declined to 25·3 during the week ending Feb. 27th, but was 5·9 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12 4 in Leith and 17·8 in Greenock, to 28·7 in Glasgow and 30·7 in Perth. The 756 deaths in these towns included 32 which were referred to whooping-cough, 30 to measles, 13 to diarrhœa, 5 to scarlet fever, 5 to diphtheria, and 1 to small-pox; in all, 86 deaths resulted from these principal zymotic diseases, against 105 and 119 in the two preceding weeks. These 86 deaths were equal to an annual rate of 2·9 per 1000, which exceeded by 1·1 per 1000 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 28 to 42 in the three preceding weeks, declined again to 30 last week, and included 24 in Glasgow and 5 in Edinburgh. The deaths referred to whooping-cough, which had increased in the five preceding weeks from 26 to 45, declined to 32 last week, of which 19 occurred in Glasgow, 4 in Edinburgh, 3 in Dundee, and 3 in Aberdeen. The 5 fatal cases of scarlet fever exceeded by 1 the number recorded in the preceding week, and included 4 in Glasgow. The deaths from diphtheria, which had declined from 5 to 2 in the three preceding weeks, rose again to 5 last week, of which 2 occurred in Glasgow and 2 in Dundee. The fatal case of small-pox was registered in Leith. The deaths referred to diseases of the respiratory organs in these towns, which had been 240 and 218 in the two preceding weeks, rose again to 231 last week, and exceeded by 111 the number in the corresponding week of last year. The causes of 45, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 41·2 and 43·4 per 1000 in the two preceding weeks, declined again to 37·6 during the week ending Feb. 27th. During the past eight weeks of the current quarter the death-rate in the city has averaged 40 3 per 1000, the rate during the same period being 18·8 in London and 22·5 in Edinburgh. The 252 deaths registered in Dublin during the week under notice showed a decline of 39 from the number in the preceding week, and included 55 which were referred to the principal zymotic diseases, against 58 and 72 in the two preceding weeks; of these, 34 resulted from measles, 12 from whooping-cough, 3 from diphtheria, 2 from scarlet fever, 2 from "fever," and 2 from diarrhœa. These 55 deaths were equal to an annual rate of 8·2 per 1000, the zymotic death-rate during the same period being 1·8 in London and 2·1 in Edinburgh. The fatal cases of measles, which had increased in the four preceding weeks from 7 to 43, declined again last week to 34. The deaths referred to whooping-cough, which had been 25 and 16 in the two preceding weeks, further declined to 12 last week. The 3 fatal cases of diphtheria exceeded the number registered in any week since March, 1896. The mortality from scarlet fever and from "fever" showed a decline from that recorded in the preceding week. The 252 deaths in Dublin last week included 47 of infants under one year of age, and 51 of persons aged upwards of sixty years; the deaths of infants showed a decline, while those of elderly persons slightly exceeded the number in the preceding week. Six inquest cases and 1 death from violence were registered; and 72, or more than a fourth, of the deaths occurred in public institutions. The causes of 13, or more than 5 per cent., of the deaths in the city last week were not certified.

WALTON CONVALESCENT HOME, CLEVEDON.—The annual report of the Walton Convalescent Home, Clevedon, has just been issued, and states that 318 patients were admitted during the past year. The balance-sheet shows the receipts to have been £660 and the expenditure £630.

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THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN E. ECKERSLEY has embarked for Sierra Leone. Surgeon-Major E. D. Bringhurst-Farmar is posted for duty in the North-Eastern District. Surgeon-Major T. A. Dixon has proceeded to Strensall Camp for duty. Surgeon-Major S. C. B. Robinson has assumed Medical Charge of the Station Hospital, York, in relieving Surgeon-Major L. W. Swabey.

The under-mentioned officers retire on retired pay:—Brigade-Surgeon-Lieutenant-Colonel William H. Steele and Surgeon-Lieutenant-Colonel Edward O. Reynolds.

INDIA AND THE INDIAN MEDICAL SERVICES.

The under-mentioned officers of the Army Medical Service, on arrival from England, are posted as follows:—Surgeon-Major Stevenson to the Bombay District; Surgeon-Lieutenant Kiddle to the Poona District; and Surgeon-Lieutenant Staddon to the Bombay District. Surgeon-Major Lyons is appointed First Physician to the Jamsetjee Jejeebhoy Hospital, and Surgeon-Major J. P. Barry to act as Civil Surgeon, Belgaum. Surgeon-Captain C. T. Hudson is appointed to act as Civil Surgeon, Thana, pending further orders. Surgeon-Lieutenant Leumann to be on special duty under the orders of the Physician, St. George's Hospital, Bombay, and Surgeon-Lieutenant S. Evans to be on special duty under the orders of the Health Officer of the Port of Bombay. Surgeon-Captain Jones is appointed to act as Deputy Sanitary Commissioner, Central Registration District. Surgeon-Lieutenant W. J. Niblock and J. W. Cornwall to be on special duty at Kurrachee under the orders of the Commissioner in Sind, and Surgeon-Lieutenant W. G. Richard to be on special duty under the orders of Surgeon-Major A. W. F. Street, D.S.O. The services of the under-mentioned officers (Bengal) are placed temporarily at the disposal of the Chief Commissioner of the Central Provinces for employment on famine duty:—Surgeon-Captain W. H. Ogilivie and Surgeon-Lieutenant C. Thomson. Surgeon-Colonel W. S. M. Price, A.M.S., is brought on the Administrative Medical Staff of the Army, vice Surgeon-Colonel W. Graves, transferred to the Home Establishment.

NAVAL MEDICAL SERVICES.

The following appointments are announced:—Fleet-Surgeon William Dudley Wordsworth has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets. Fleet-Surgeon Michael Fitzgerald to the *St. George*. Staff Surgeon Alexander G. P. Gipps to the Medical Charge of the *Malacca* hospital ship.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant A. B. Lyon, M.B., to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 1st Hampshire (Southern Division, Royal Artillery): Surgeon-Lieutenant V. J. Blake, M.B., resigns his commission. *Rifle:* 3rd Volunteer Battalion the Royal Fusiliers (City of London Regiment): Surgeon-Lieutenant Arthur Anthony Howell resigns his commission and is appointed Lieutenant. 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment: Surgeon-Lieutenant E. H. Douty, M.B., to be Surgeon-Captain. 5th (Isle of Wight, Princess Beatrice's) Volunteer Battalion the Hampshire Regiment: Victor John Blake, M.B., to be Surgeon-Lieutenant. 1st Volunteer Battalion the South Staffordshire Regiment: Surgeon-Lieutenant W. F. M. Jackson resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement; Henry Spencer Hughes, gent., to be Surgeon-Lieutenant. 1st London: Surgeon-Captain H. F. Stokes to be Surgeon-Major. 3rd London: Surgeon-Major G. Hastings to be Surgeon-Lieutenant-Colonel. 6th Volunteer Battalion the Gordon Highlanders: Surgeon-Lieutenant George Lyon, M.B., resigns his commission and is appointed Captain.

THE HEALTH OF THE BRITISH TROOPS IN INDIA.

This subject still occupies a prominent place with all interested in the health and well-being of the Army. It is not likely, in the language of the day, "to take a back seat" until the matter has been threshed out and something has been definitely settled in regard to it. There was a large and important gathering at the Royal United Service Institution on the occasion of the reading of Major-General Dashwood's paper, and since that the subject has not been allowed to rest in the House of Commons. The sooner the results of the inquiry into the facts by the departmental committee are published the better. The main points, after all, lie in a nutshell. We have an army of young and inflammable material in India living in a state of celibacy enforced on them for the good of the State. No efforts—that is, no adequate efforts—are made to protect them against themselves or the temptations to which they are exposed, and the consequences are that the amount of venereal disease among them is infinitely greater than it is in all other armies where protective measures are taken. As far as the soldier is concerned everything has been tried in the way of occupation—physical and mental exercises and amusements, institutes, and so forth; but nothing has been done as regards the women with whom soldiers consort, with consequences which, if they continue to increase in the way they are doing, will threaten the safety of the Empire as they surely threaten already to some extent the well-being of the class of society from which our young soldiers are drawn and to which they are supposed to return. Are the opponents of all legislative restrictions on the propagation of disease willing to put their hands in their pockets and pay in taxes the enormous amount that would be required to provide a young married army, even supposing that it would be safe and practicable to do this, which it certainly would not? What, then, do they propose to do? Are they to leave matters as they are, or are they willing to leave them in the hands of those who have an intimate knowledge of India, of the hereditary castes, habits, and customs of its people, and a practical experience of the temptations to which the soldier is exposed and the social and other conditions environing him, as well as some knowledge of what can, and cannot, be done as regards the European military force in that country? It is easy to call every effort that is made to control this class of disease the licensing of vice, but we cannot shut our eyes, except wilfully, to the fact that the sexual appetite is an instinct born in a man with his birth, and that if it were not the dominating one it is the population would certainly not be what it is.

DEATHS IN THE SERVICES.

Surgeon Charles James Fyfe, R.N., on Feb. 18th, in the attack on Benin. He entered the service as surgeon in 1891, and as surgeon of the flagship *Raleigh* served in the naval brigade landed by Rear-Admiral Bedford at Bathurst, on the river Gambia, West Coast of Africa, in February, 1894, in coöperation with two companies of the 1st West India Regiment, for the punishment of Fodi Silah, a rebellious slave-raiding chief. He was mentioned in despatches and received the General Africa Medal, Gambia, 1894, with clasp. As surgeon of the *St. George*, flagship, he served in the punitive expedition against King Koko, of Nimbé, the chief town of Brass on the Niger, in February, 1895. He was also with the naval brigade landed by Rear-Admiral Rawson at Mombasa on Aug. 17th, 1895. He was mentioned in despatches. He was also present at the bombardment of the Sultan of Zanzibar's palace in August, 1896, by Rear-Admiral Rawson's squadron, and was again mentioned in despatches. The death of such a promising officer is to be deeply regretted.

Deputy Surgeon-General Joseph C. Hornsby Wright, on Feb. 26th, at Hampstead, aged sixty-six years. He took part in the Crimean war, served with the Royal Artillery, was present at the battles of Alma, Balaclava, and Inkerman, and at the siege and fall of Sebastopol, and received the medal with four clasps and the Turkish medal. Subsequently he was with the Abyssinian Expedition. He joined the Service in 1852, was promoted to surgeon-major in 1872, brigade-surgeon in 1879, and retired with the rank of honorary deputy surgeon-general in 1880

Surgeon-Lieutenant-Colonel William Andrew Durnford Fasken, at Futtehghurh, North-West Provinces, on Feb. 1st, aged forty-eight years. He joined the Indian Army in 1872, and was promoted to surgeon-lieutenant-colonel in 1892.

MILITIA MEDICAL STAFF CORPS.

The training of the Corps has been fixed as follows:—The Hampshire Company will assemble at Netley on May 1st for sixty-three days' Preliminary Drill, the Annual Training for twenty-seven days to commence on July 3rd. The Middlesex Company will assemble at Woolwich on May 3rd, the Annual Training to commence on July 5th. The Surrey Company

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and the Eastern Counties Company will assemble for Preliminary Drill on May 3rd, and for Annual Training on July 5th. The Hampshire, Surrey, and Eastern Counties Companies will be placed under canvas, the Middlesex Company being quartered in huts near the Herbert Hospital.

It is announced that new Companies of the Corps will be formed on April 1st, which will furnish six vacancies for fresh commissions.

THE NAVY ESTIMATES.

The Navy Estimates for 1897-98 amount to a net total of £21,838,000, as against £21,823,000 in 1896-97. It is proposed to increase the numbers voted last year by 6300, bringing up the total strength of officers, seamen, boys, coastguard, and Royal Marines to 100,000. The expansion of the fleet has necessitated further additions to various classes of officers. Orders in Council have been obtained authorising increases in various establishments and among these the strength of medical officers has been augmented from 416 to 450. A new arrangement as regards the entry and training of naval cadets will come into force in the present year. It has been decided to gradually raise the age for entering naval cadets by one year and to shorten their course of instruction in the *Britannia* by sixteen months. In future, cadets will be entered three times a year instead of twice, by which 190 cadets will be passed through the *Britannia* yearly instead of 125 as at present.

THE LEE-METFORD BULLET.

The military officials in India have been indefatigable in their endeavours to perfect the Lee-Metford bullet, and according to the accounts received from that country their efforts have been quite successful. It will be remembered that experience in the Chitral expedition showed that the Lee-Metford bullet did not possess sufficient stopping powers. The latest experiments with the new bullet show, however, that it has these and other advantages in addition. A slight alteration at the base of the bullet saves the barrel and gives the rifle a longer life, and in practice at 500 and 1000 yards it gives better target results. Altogether the bullet, as modified and improved in India, is stated to render the Lee-Metford rifle practically about perfect as a weapon.

"WHOLESALE PLUCKING OF MEDICALS."

The *Leeds Mercury* of Feb. 27th, under the above heading, prints the following:—"Out of forty medical students who lately presented themselves for examination for commissions in the Army, only twelve passed the necessary tests for the Army Medical Staff. Evidently the medical schools lack the ability to instruct students up to the present requirements of the service." The *Leeds Mercury* has the facts right, but the deduction is entirely wrong. The plain inference is that the best students do not at present care to compete for commissions in the Service, and that this is the truth every one knows.

THE ARMY MEDICAL SERVICE.

Our Service contemporaries of last week contain articles *apropos* of Mr. Brodrick's speech in connexion with the Army Estimates and his remarks on the Army Medical Service. Mr. Brodrick has told us that the Government has already conceded, or is conceding, several important points, but one which was recommended by Lord Morley's and Lord Camperdown's committees is conspicuous by its absence—viz., the fusion of the Army Medical Staff and Medical Staff Corps into a single corps. We presume that it is the question of military titles for medical officers which bars the way.

THE NIGER EXPEDITION.

There has been some more sharp fighting in Africa, and Ilorin has been captured after a brisk engagement near the Oyon River on Feb. 15th. Major Arnold's column subsequently crossed the river and took Ilorin. Only one British officer was wounded, and the health of the force is understood to be good.

MILITARY NURSES.

A new order of military nurses to be known as the "Army Nursing Reserve," and consisting of a reserve of nurses to supplement the regular nursing service in the Army in time of war, has been approved by the Secretary of State for War.

The following officers are permitted to accept and wear the following decorations conferred by the Khedive of Egypt for services in the recent Dongola Expedition:—Surgeon-Lieutenant-Colonel A. T. Sloggett, A.M.S., the Osmanieh of the Fourth Class, and Surgeon-Captain W. H. Pinches, A.M.S., the Medjidieh of the Fourth Class.

Correspondence.

"Audi alteram partem."

THE VACCINATION PROBLEM.

To the Editors of THE LANCET.

SIRS,—In your leading article of Feb. 27th you insist with much force on the importance of making compulsory re-vaccination an essential plank in any platform that may be constructed for the purpose of influencing Parliament in regard to impending legislation on the subject of vaccination. You also express the opinion that in order to meet the exigencies of the situation "there is but one effective course open, and that is to compensate for indifferent primary vaccination by a system of re-vaccination of children before they cease attending the elementary schools." The second proposition is obviously the necessary complement of the first, for to attempt to make re-vaccination compulsory outside the limits of school age is impracticable. If it cannot be enforced during the period of attendance at school it cannot be enforced at all, except in certain special cases, such as the employés of the State, school teachers, &c. But it may not unreasonably be asked, if we are to impress upon the Legislature the importance of compulsory re-vaccination and are to urge that it shall be made a necessary incident of school life, as is the case in Germany—which we must do if our recommendation is to carry any more weight than that of a mere academic resolution—why should we not urge the identification of primary vaccination also with school life in all cases in which it has not been effectively performed before the child has reached the school doors? From a tactical point of view it will be no more difficult to carry both points than to carry one. The people who will object to the public vaccinator entering the school to vaccinate a child of five years who had not been effectively vaccinated before will object just as strongly to his doing so to re-vaccinate a child of ten. To be content with passing abstract resolutions in favour of universal compulsory re-vaccination is merely to shoot into the air whilst our opponents are levelling their guns at a very definite objective. It has been said that it is not for the medical profession to do more than to express their opinion as to what is theoretically desirable; it must be left to the legislator to give effect to such opinions. Such a course might be very good in Utopia, but we have to deal with a Legislature which will be only influenced by what can be shown to be practicable as well as advisable, and for this purpose we must be prepared to put forward some definite suggestions as to how our views can be carried into effect.

This brings me to the core of the problem with which we have to deal. The Royal Commissioners have *unanimously* reported in favour of meeting in some way the opposition of parents who refuse to have their children vaccinated and who prefer to be fined or to go to prison rather than obey the law. The dissentient minority of two found their recommendation partly upon a disbelief in the efficacy of vaccination, as compared with isolation and other sanitary precautions, and partly upon the alleged injustice, inexpediency, and impracticability of enforcing the vaccination of infants in the teeth of the objection of their parents. The majority of eleven Commissioners, whilst attaching considerable weight to the latter of these two considerations, mainly found their recommendations on *the interests of vaccination itself*, which they consider would be promoted by rescinding the present compulsory clauses of the Vaccination Acts in such a way that, whilst the present undesirable conflicts between the law and recalcitrant parents would be avoided, the withdrawal of children from vaccination through the mere indifference or negligence of their parents would be prevented. In conformity with the opinions which they express as to the value of vaccination the dissentient Commissioners recommend that compulsion in every shape should be abolished, and in so doing they are joined by two of the majority—viz., Messrs. Whitbread and Bright. The nine other Commissioners submit for consideration a scheme which, whilst suggested as a means of meeting what they designate "conscientious objections" only, would, as may be easily shown, lead to wholesale evasion of vaccination. But two of them, Sir Guyer Hunter and Mr. Jonathan Hutchinson, probably seeing that this would be the necessary result of their colleagues' proposals,

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recommend a modification of the scheme which would greatly lessen the chance of so disastrous a consequence.

Now, I venture to suggest that in this chaos of conflicting opinions, complicated as it is still further by political and other considerations, the lines upon which the supporters of vaccination should proceed are these: (1) to accept loyally the recommendation of the majority of the Commissioners as to the discontinuance of the present mode of enforcing infant vaccination *on the grounds on which it is based by them*—viz., that it is in the interest of vaccination that this should be done; (2) to insist that it is not in the interests of vaccination or of the community that a concession made to wrongheadedness and ignorance, at a period of the child's life when it is difficult to avoid making it, should assume the form of a permanent withdrawal of the child during the whole of its after life from the control which the majority of the Commissioners admit that the State should exercise over all children; (3) that consequently such concession should be made simply in the form of a suspension of the enforcement of vaccination until such time as the operation can be properly and conveniently performed — that is on the commencement by the child of school-life; and (4) that as primary vaccination would thus be associated with the child's entrance into the school re-vaccination should be connected with its arrival at the age when in public elementary schools it would be about to leave.

In a paper which I read before the Society of Medical Officers of Health, to which you refer in your leading article, I endeavoured to show that this scheme is not only one which can be defended as carrying out in spirit the recommendations of the majority of the Commissioners, but that it would offer an opportunity for effecting a reconstruction of the public health service which is urgently needed. I venture to think that if this scheme, which I have elaborated with some detail in the paper referred to, were to meet with the support, not only of those organisations which represent the general opinion of the medical profession, but also that of those members of it who have given special attention to sanitary questions, it would not be difficult to obtain for it the support of boards of guardians, sanitary authorities, and other public bodies throughout the country, and thus to back it up with such a general consensus of opinion as would justify the Local Government Board in giving effect to it in any legislation which they might introduce into Parliament.—I am, Sirs, yours faithfully,

FRANCIS T. BOND, M.D. Lond.,
Gloucester. Hon. Secretary to the Jenner Society.

"THE MIDWIVES REGISTRATION BILL, 1897."

To the Editors of THE LANCET.

SIRS,—I would call attention to the very absurd financial proposals made in Clause 6 of the above Bill. It proposes that, if the income of the Midwives Board, from fees for examination and registration, be not sufficient to pay the expenses of the Board, "the deficiency shall be supplied from the respective local County funds." This proposal could only be made by persons utterly ignorant of taxation, and it converts the whole proposal into a screaming farce; as well might they propose that the expenses of the Board be defrayed out of the Poor-rate. The absurdity of the proposal will be seen if it were suggested that the Governing Bodies of the Solicitors, Chemists, Veterinary Surgeons, &c., were to be kept going by the County rates. I have called the attention of the "County Councils Association" to this great financial blunder and I am now in a position to state that the Parliamentary Committee of that Association has passed a resolution in favour of opposing Clause 6. I have also called the attention of the "Association of Municipal Corporations" to it. Neither has the eminently parochial proposal escaped the Medical Council, because at the meeting of its Executive Committee, on Feb. 22nd last, it has forwarded objections to the Lord President of the Privy Council, in which it is pointed out (*a*) that if the Bill pass, the Medical Council will have to devote part of its time to the business of the Midwives Board: (*b*) that as the funds of the Medical Council are obtained solely from practitioners, it is unfair that such money be used in connexion with the Midwives Board: (*c*) that although the Act does not refer to Ireland and Scotland (?) the money paid by practitioners in these two countries would go to defray part of the expenses of the Board: and (*d*) that the Treasury should make a grant to the Medical Council and to the Board.

I think this suggestion in the Bill that practitioners should not only hand over all their confinements to midwives, but that they should actually help to supply the funds for administering a Midwives Act, is a piece of most sublime impudence, of course the Midwives Association, and the practitioners who back these midwives up, would not dare to make such a proposal to any business men. It would be hooted out of existance. However they think that practitioners have so failed to organize their political influence and power that any gross insult can be offered to us. I have always contended that if we recognise midwives we must also recognise medical Herbalists, and bone-setters. Fortunately events support my contention. In July last (1896) the Medical Herbalists held their annual meeting at Hull, when the President said:—"The law needed to be widened, so as to admit all schools of medical thought." Who can honestly question the accuracy of this President's statement, when he has the action of practitioners connected with the obstetrical Society of London, trading in Midwifery Diplomas? I would wish all success to the Medical Herbalists Association of Great Britain, if the Midwives Bill pass! I wonder why some other medical Society—with a Status similar to that of the Obstetrical, if such can be found—does not start granting diplomas purporting to qualify the holders to practise minor medicine and surgery. Let me tell them there is money in it! From 1872 to 1894 a few practitioners connected with the London Obstetrical Society have *put into their own pockets* about £2324, through the "granting" of diplomas, while a few practitioners in Liverpool have followed suit to the tune of £1435 in 12 years. Now if a few members of "the Godlike Profession" with a high contempt for "filthy lucre," openly "make a ring" in this money-making business, why, I ask in the name of everything fair and equitable, should other poor practitioners not do likewise? A few years ago some simple-minded persons, who were *not* members of "the Christlike Profession," started the "General Council of Safe Medicine Limited" they also following the noble example of the "Christlike" practitioners granted "a few diplomas." Why not? Did we practitioners not set them the example — the noble, honest, aboveboard, and essentially gentlemanly example?

Sirs, the Medical Act 1886 enacts that if any man or woman wish to lawfully practise any part or branch of Physic, such person must (*a*) pass an entrance Examination, (*b*) study for at least (5) five years, (*c*) pass qualifying examinations, and (*d*) be registered. This Act was passed in the sole interest of the Public. Why then do a few practitioners connected with the Obstetrical Society and the Midwives Association wish to repeal this enactment? I would urge that practitioners go on coaching their M.P.'s in the real aims of the instigators of this outrageous Midwives Bill. Certain trading in diplomas has been going on; and it is hoped to make this very questionable trading lawful, by having a Midwives Bill passed. The Medical Herbalists, bonesetters, and midwives are all busily engaged in asking the M.P.'s to vote for this Bill; while constant and persistant lobbying is going on. I am glad to see that at Rochdale and Burnley practitioners have appointed Committees to oppose the Bill. May I suggest that the practitioners in every town and city in the United Kingdom at once Establish local Medico-Ethical Societies for the purpose of defeating this dangerous, degrading, and retrograde Bill. By local organisation all just aims can be accomplished by us. Co-operation with organization—two points too frequently ignored by Practitioners—must prevail. Therefore I urge the immediate formation of Medico-Ethical Societies in every town.

As showing how vigorously the supporters of the Bill are working, I supply the following from the Leicester *Mercury*:—"Mrs. Creighton.—Mrs. Creighton, the wife of the Bishop of London, will preside about the middle of next month over a meeting to be held at London House in support of the Midwives Registration Bill. The promoters of the measure are receiving many assurances of sympathy from all parts of the country." Now, will each practitioner, his wife, and her friends at once ask the wife of their clergyman to write to Mrs. Creighton and ask her to grasp the fact that the existing agencies by which poorer women can be helped in their confinements are more than sufficient, as will be seen on

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referring to my address on "How are Midwives to be done without," in THE LANCET of Jan. 16th, 1897.

I am, yours etc.,

Liverpool, Feb. 28th, 1897. ROBERT R. RENTOUL.

To the Editors of THE LANCET.

SIRS,—Your correspondent Mr. Watt asks that every confinement may be directly supervised by a medical man. The idea, all must admit, is excellent and much to be desired, but how is it to be carried out? He says, clubs, dispensaries, and the poor-law; but he does not take into account medical men. A large number—I think I may say the greater number—of medical men in established practice would not care to undertake four or five times as much midwifery as they already do: many would not have the time, some would not have the physical endurance necessary, and others from various reasons would feel they were not capable of doing this extra work; and then many—I think very many—would not only be disinclined, but would absolutely refuse, to undertake a large number of midwifery cases. In proof of this assertion I would point to the advertisements of practices for sale. How often we see stated as a special attraction "Very little midwifery," "Hardly any nightwork," or some such expression. We certainly do not want any addition to our ranks to enable us to cope with this new imposition, as we are already far too crowded.

Clubs and dispensaries are well as far as they go, and they might go further with the help of midwives in a manner I have suggested before,[1] without any injury to the public or the profession. Poor-law fees at present are quite inadequate; that, of course, might be remedied, but the machinery is very cumbersome, and, in spite of Mr. Watt's assertion, that "no stigma of pauperism ..... or other social ban attaches to such medical relief," I feel sure he will find many to differ from him who live and practise among the working classes, at any rate in rural districts; the poor do not want to be paupers, neither is it good political economy to encourage them to be. Although the law may allow the guardians to pay anyone for attendance at a confinement, they would, I take it, in actual practice only pay medical men who were not Poor-law officers in cases of emergency. All medical men, I presume, are agreed that the present state of things is too bad to be allowed to continue. The opponents of registration are convinced that there would be danger from want of control and supervision of the proposed midwives, and the promoters of registration are equally certain that medical men cannot possibly do all the work themselves. If only the holders of these two latter opinions could see and admit that there was some truth in their opponents' views the ground would be considerably cleared for useful work and there would be some chance of coming to a definite and useful decision.—I am, Sirs, your obedient servant,

Freshford, March 1st, 1897. CHAS. E. S. FLEMMING.

"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—The statements made by Mr. William G. Thistle in THE LANCET of Feb. 27th require immediate and unqualified contradiction. Dr. Gowers is absolutely correct in stating that there is no reason to believe that accidental lesions are transmitted from parents to offspring. Mr. Thistle states that "instances abound in the writings of Darwin, the late Professor Rolleston, and others." Nothing could be further from the truth. Neither of the writers named was able to cite a single well-established instance of such transmission, nor did they profess to do so, except in regard to Brown-Séquard's guinea-pigs, concerning which recent experiment and inquiry have raised considerable doubt. In view of the fact that Mr. Thistle is so completely mistaken as to what is known and accepted on this subject, I am myself unable to attach any value at present to the cases A B, C D, E F, G H, which he states came under his own observation. Mr. Thistle apparently is not aware that a great deal more evidence is required than the mere statements of patients in order to establish such facts as those which he believes in with reference to the transmission of the effects of lesions. If he can satisfactorily establish by a full history and independent testimony any one of the cases cited by him, he will have made a really valuable contribution to science. Hitherto all such supposed cases (to the number of hundreds) have broken down when carefully inquired into.

I am, Sirs, yours faithfully,

Oxford, Feb. 26th, 1897. E. RAY LANKESTER.

To the Editors of THE LANCET.

SIRS,—The cases cited by Mr. Thistle in favour of the hereditary transmissibility of acquisitions are not convincing. Of the four which he gives from his own experience three pertain to the eye, and one of these (Case 3) is useless for purposes of argument. Can we eliminate from the other two the element of coincidence, seeing how numerous are the cases on record in which a parent has lost his sight through accident without any visual defect being transmitted in consequence? Is it not an accepted fact in institutions for the blind that those who have lost their vision through accident, such as small-pox, purulent ophthalmia, and injury, may marry without fear of the defect being transmitted? Apart from the possibility of Mr. Thistle's first two cases being coincidences, is it not also possible that in each of these cases the accident which destroyed the sight of one eye was predisposed to by defective vision in that eye, the defect in the corresponding eye in the offspring being inherited in the usual way? I mention this in order to show how easily error may creep into observations of this kind. Case 4 affords, perhaps, an even better illustration of this. It is highly probable that the deformity of the little finger to which Mr. Thistle refers as having been transmitted from the father to his children is an instance of a well-known deformity which tends to run in families, and that it was not acquired by the father. Deformities of this kind are generally attributed to accident. I am here reminded of a remarkable case which quite recently came under my observation. A medical student damaged his left little finger in football, with the result that it became bent and stiff. Shortly afterwards his father returned from India, and the son noticed exactly the same deformity in his left little finger, and was surprised to hear that it also had been produced by a recent accident. Now, had this accident befallen the father before the son was got, the case would have been cited as an unmistakeable proof of the inheritability of acquisitions.—I am, Sirs, yours faithfully,

Devonshire-street, W., March 1st, 1897. HARRY CAMPBELL.

"A QUESTION FOR ANÆSTHETISTS."

To the Editors of THE LANCET.

SIRS,—The importance of the questions raised by Mr. Clement Lucas in a communication to THE LANCET of Feb. 20th must be recognised by all, both surgeons and anæsthetists alike; but, I think, after a little examination the charges brought against the safety of ether inhalation will be shown to have no substantial basis in fact.

Firstly, as to whether the administration of ether ever causes inflammation of the lungs. During an experience of ten years as an anæsthetist Dr. Hewitt[1] only found two cases in which bronchial irritation followed the use of ether, and only one case, that of an exhausted patient with ovarian tumour, out of twenty-seven reported fatalities for the years 1880–89 inclusive was due to pulmonary congestion. Ether produces an increase of mucous secretion from the respiratory tract; but beyond this in thousands of cases there is neither cough, dyspnœa, nor other symptom of irritation after its inhalation. Now if ether caused lung inflammation at all it surely would be that form we designate catarrhal pneumonia, not due to the pneumococcus, but only secondary to bronchial irritation. Mr. Lucas, however, makes the astonishing suggestion as a second charge that his patient may have been infected with pneumococci by means of the ether inhaler. This is not even a scientific probability, for bacilli do not fly about in a moist atmosphere, but remain adherent to the surfaces upon which they were deposited, and, again, pneumococci are found in the epithelium of the healthy mouth[2] and are therefore present in the respiratory tract in many cases before the ether inhaler is applied. Every inhaling bag, mask, and facepiece should be thoroughly washed, or scalded out if possible, between each case, but with this precaution the addition of the inhaler

[1] THE LANCET, May 2nd, 1896, p. 1249.

[1] Hewitt: Anæsthetics and their Administration, p. 170.
[2] Baumgarten: Thesis ii., p. 244.

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subjects the patient to no more risk of lung infection than a ride from Gower-street Station to Portland-road Station on the Metropolitan Railway.—I am, Sirs, yours faithfully,

H. BELLAMY GARDNER,
Assistant Anæsthetist to Charing-cross Hospital.

Welbeck-street, Cavendish-square, W., March 2nd, 1897.

To the Editors of THE LANCET.

SIRS,—Probably other anæsthetists will reply to Mr. Clement Lucas's article "A Question for Anæsthetists," yet I should like to say a word or two on the subject. If the cases of pneumonia after operation which he mentions were due to septic infection from the inhaler, surely the condition of the inhalers must have been filthy in the extreme. At the Middlesex Hospital the interior of the ether bags and face-pieces are carefully cleansed with an antiseptic solution every day after use; but even before that precaution was adopted I never heard of cases such as Mr. Clement Lucas describes, and if they had occurred frequently I imagine that one would not have been left in ignorance on the point. As to the remark about the anæsthetist distending the ether bag with his own breath, I can only say from a pretty large experience in ether administration that in no case whatever can such an objectionable proceeding be necessary.

I am, Sirs, yours faithfully,

THEODORE G. A. BURNS,
Anæsthetist to the Middlesex Hospital.

Welbeck-street, W., Feb. 24th, 1897.

To the Editors of THE LANCET.

SIRS,—We would point out, in answer to the question asked by Mr. Clement Lucas in THE LANCET of Feb. 20th, that it is quite possible to render aseptic all the apparatus for giving ether or gas and ether supplied by us, and that without any difficulty. At the suggestion of Dr. Dudley Buxton we made the rubber portions easily removeable, so that an antiseptic solution can be run into and through them and any like treatment can be applied short of boiling or baking, which, of course, is impossible in the case of rubber. Were there any large demand for such a thing a bag could be devised which could be replaced for every operation, daily or weekly, at a very small cost. We would also point out that it is not necessary for the bag to be inflated by the administrator's breath. If the cone end of our bag is held five or six inches from the mouth a slight blow will fill it, and that not by the administrator's breath, but by the surrounding air. The latest form of chloroform inhaler designed by Dr. Dudley Buxton is made so that the face-piece and all except the rubber parts may be boiled.

We are, Sirs, yours faithfully,

MAYER & MELTZER.

Great Portland-street, W., Feb. 25th, 1897.

"CORONER AND MEDICAL MAN."

To the Editors of THE LANCET.

SIRS,—In your annotation on "Coroner and Medical Man" in THE LANCET of Feb. 27th you lay down very clearly certain points, and I am fully willing to admit my technical error. Nevertheless, I should like to point out that *before I was sworn* I stated that I had had no order to make a post-mortem examination and that from the nature of the case the inquest could not possibly be concluded without the evidence arising from one. Nevertheless, in the face of this the coroner announced his intention not to give such an order. To quote your article, "The coroner, acting within his discretion, thought a post-mortem examination was not called for, and declined to make an order." To think that a post-mortem examination was not called for in the face of my positive statement that no conclusion could be arrived at without was absurd. You do not allude in any way to the other side of the case—namely, what would have happened if I had found some natural cause for death, and so rendered an inquest unnecessary. This was, of course, my reason for making the post-mortem examination, and on my making the remark to the coroner: "If I had found a natural cause of death and so saved the bother and expense of an inquest, you would certainly not have stated that my action was illegal." With this he fully acquiesced. One more question, if I may occupy your space. Is it legal for a coroner to give an order for burial with a certificate of the cause of death without holding an inquest?

I am, Sirs, yours faithfully,

Feb. 27th, 1897. SIDNEY H. SNELL, M.D., B.S. Lond.

THE ETIOLOGY OF BERI-BERI.

To the Editors of THE LANCET.

SIRS,—There has recently been an epidemic of beri-beri at the Richmond Asylum, Dublin. As I take much interest in this disease—almost one-third of all patients I see are suffering from it—and in view of tin poisoning being a possible cause, I should be glad if I could find out through the medium of THE LANCET if there is any possibility of tin-poisoning occurring at the Richmond Asylum. One of the questions which has suggested itself to me is whether the water of the place is conducted through tin-lined pipes. It is probably an acid water, as are many of the waters of this country. I shall be much obliged for an answer to this question, and offer my thanks in anticipation.

I have the honour to be, Sirs, yours faithfully,

J. TERTIUS CLARKE,
Acting Resident Surgeon, Negri Sembilan,
Straits Settlements.

Jan. 28th, 1897.

THE DUBLIN SLAUGHTER-HOUSES.

To the Editors of THE LANCET.

SIRS,—I beg to ask you to allow me to correct an error into which I was led as to the number of slaughter-houses in Dublin. The mistake arose from the numbers having been allowed to remain on the buildings in the order in which licences were granted during the past 100 years. Thus, although these numbers run up to 359 at least, only 66 actually exist at present, in addition to the public abattoir. It is therefore a satisfaction to find that the number actually in use at present has fallen from 87 in 1879 to 66 as seen in the registered list, which has been kindly shown to me by Sir C. Cameron, the chief medical officer of health, and to learn that measures are being taken to extinguish three others. An attempt to abolish others *failed* under the Public Health Act. It is to be hoped that these measures will be continued, although their abolition is attended with expenses.—I am, Sirs, yours faithfully,

Dublin, March 2nd, 1897. CHAS. F. MOORE.

"ALBUMINURIA IN PREGNANCY."

To the Editors of THE LANCET.

SIRS,—I see, to my great regret, that my article on Albuminuria in Pregnancy is published to-day without my revision. The manuscript was written in haste for reading at the Hackney Branch of the British Medical Association on Oct. 5th, 1896, and, as my revised slips will show, stood in need of much amendment. You will remember that when you accepted the paper it was on the understanding that I should be at liberty to alter it freely in slip. The fault, I admit, is mine, as I received the slips at the beginning of the week, but with no intimation that the article would be published that week. Was not the time allowed rather short? In fact I was too much pressed by other work to be able to return it sooner than I did. I hope that you will kindly publish this letter in explanation of a misfortune which has led to the appearance of my article in what I consider—and I fear my friends likewise will consider—to be a very rough and inaccurate state. The corrected slips would reach you on the day of publication.

I am, Sirs, yours truly,

T. CLIFFORD ALLBUTT.

St. Radegund's, Cambridge, Feb. 26th, 1897.

P.S.—In the first paragraph I appear to point to a particular author as a supporter of the mechanical causation. By my revised slips you will observe that such an attribution was not intended.

"AN UNUSUAL RESULT OF ABORTION."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. C. E. Purslow's request for instances of similar experiences made at the end of the account published under the above heading in THE LANCET of

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Feb. 13th of a case of abortion where the "fœtus contained in its amniotic sac had been expelled" apart from the placenta and the remainder of the membranes, I wish to say that twice in the past seven months I have met with two specimens of a like nature. The first of these I regret to say is not to be had. Through the bursting of the amniotic sac and consequently the loss of the liquor, it was not preserved. The other happily is in existence, and is in the possession of Mr. E. Webster of this place, to whom I presented it. The particulars I met with are, practically speaking, the same as are given by Dr. Purslow. In each instance the fœtus, plainly visible even to the distinguishing of the sex, was enclosed in the intact amniotic sac, the latter being completely free from the presence of any chorionic or placental tissue, which came away separately. In fact the amniotic sac with the fœtus within resembled somewhat the appearance of an egg with the shell off. I should mention, perhaps, that in neither case did I know anything of the pregnancy until I was summoned in attendance, and with regard to the specimen I saved, it was found in and removed from the vagina. Roughly estimating, it was about the size of a goose's egg, and, as far as I could judge, the result of conception of from three and a half to four and a half months' standing. The only difference between Dr. Purslow's description and what I found is in reference to the umbilical cord. This was in my case connected to, and by its weight it caused a dimple to be present on the outer surface of, the sac. No discharge whatever took place previous to the sudden onset of these abortions. I can remember nothing different worthy of notice in connexion with the lost specimen, except that in comparison with the preserved one it was smaller in volume and was found lying in the bed on my arrival.

I am, Sirs, yours faithfully,

R. HILL SHAW, M.B., B.Ch. Dubl.

Brighton, Feb. 18th, 1897.

THE ESSAYS AND ADDRESSES OF THE LATE SIR J. RUSSELL REYNOLDS.

To the Editors of THE LANCET.

SIRS,—We all feel grateful to Lady Reynolds for the publication of these essays, though we have to forego the author's revision. Wanting this, I have to correct the passage in a speech at the University College dinner which refers to the first use of ether at the hospital, where, from a slip of the tongue or of the pen, the name of Mr. Peter Squire is given in place of mine. An old friend writes on Feb. 26th last:—"I perfectly well remember the story of the first anæsthetics from Dr. Reynolds himself, and that he said it was Dr. Squire who administered it." My own recollections of this period were given in the *British Medical Journal* of Oct. 16th, 1896.—I am, Sirs, yours faithfully,

WILLIAM SQUIRE, M.D. St. And., F.R.C.P. Lond.

Ealing, W., March 2nd, 1897.

"ELECTIONS OF MEDICAL OFFICERS OF HEALTH: A PROTEST."

To the Editors of THE LANCET.

SIRS,—In replying to your correspondent, "County Borough M.O.H.," perhaps you will kindly give this an equal prominence to your correspondent's letter. I wish to say that it appears he has yet to learn that abuse is no argument. As to my letter being ill-conditioned, I will leave that matter to others who, judging from his comments, will be more capable of forming a just opinion. I have no doubt in the case of your correspondent it is a question of "a fellow feeling making one wondrous kind." I should have left his communication "severely alone" had there not been some glaring inaccuracies and general misrepresentation in it. If he had given my letter any consideration except to pick holes in it he would have perceived that the point raised was not as to the relative merits of the individual candidate. I may, however, for your correspondent's information say that I have had many years' experience as medical officer of health of an urban sanitary district and was qualified twenty years ago, and that, I dare venture to say, was before he acquired his greatly prized D.P.H. According to your correspondent, anyone who has not the D.P.H. is not to be considered as eligible for a public health appointment. Why not turn out those now in office in large and small districts who have not that diploma? This is the logical sequence of "County Borough M.O.H.'s" argument.

Another argument used by your correspondent shows that he is a special pleader, and is specious but not convincing—viz., that the medical officer of health, in giving up part of his district to the assistant, thereby pays his assistant out of his own pocket. If a man is unable to attend his practice or if anyone cannot do his work through illness or from some other cause, and another man does the work and gets the pay, I fail to see how it comes out of the sick man's pocket. My object in writing to you, whatever your correspondent or others may say, was simply to expose what I considered then and now as an injustice, and I may now say that the members of the Council informed me when the usual process of quizzing was gone through that they did not wish, or, as they expressed it, "the feeling of the Council was against, any man coming into the district to practise." In my application I offered to reside in or near the district. Here what is for the advantage of the district (if a medical officer of health is of any use at all) is considered a barrier. Perhaps your correspondent will say that it is no advantage having the medical officer of health near a wide rural district instead of forty miles off. The fact is, the whole thing when looked at without prejudice may be summed up simply as a farce; and, *pour encourager les autres*, ought to be made known.

Notwithstanding your correspondent's sophistry I retain the *nom de plume*, and beg to remain,

Sirs, yours truly,

March 1st, 1897. JUSTITIA.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Birmingham and the Epidemic of Diphtheria.

THE meeting of Birmingham medical men which was convened at the request of the health committee of the Town Council and held at the Medical Institute on Feb. 25th to discuss the treatment of diphtheria brought out some interesting expressions of opinion. The value of the antitoxin treatment, if taken in hand early and the serum used in sufficient quantities, was strongly insisted upon, Dr. Hill, the medical officer of health, bringing forward the very favourable results obtained from the treatment in post-scarlatinal cases which had occurred in the Scarlet Fever Hospital. Dr. Saundby, President of the Medical Institute, said that it was essential, in the first place, that all cases of diphtheria should be promptly notified, but that, as the absolute diagnosis of diphtheria was impossible in the absence of a bacteriological examination, it was essential also, with a view to obtaining correct statistics, that facilities should be given for a bacteriological diagnosis in each case. He therefore suggested that the proper tubes for obtaining specimens of the morbid secretion should be supplied by the health committee to the medical practitioners making the returns. It was essential that antitoxin should be of good quality and that it should be obtained readily. The serum was an expensive article, and medical practitioners attending the poor could not be expected to supply it at their own cost, while their patients were unable to provide it. He therefore suggested that it would be necessary to supply antitoxin gratis. He also thought that the health committee should arrange for special hospital accommodation for diphtheria, as they had already done for small-pox and scarlet fever. Mr. Alderman Cook, chairman of the health committee, said he understood that the medical profession desired three things—(1) a special diphtheria hospital; (2) an establishment for bacteriological examinations; and (3) an arrangement for the gratis supply of serum. He promised to bring these views before the health committee.

Inquest on a Coroner.

Very rarely does it become necessary to record the death of a medical coroner under circumstances demanding an inquiry of the kind conducted so frequently by himself in his own court. An exceptional instance in the death of Mr. D. R. Wynter, coroner for Central Warwickshire, demands a notice. On Feb. 24th Mr. Wynter, not feeling well, remained in bed; he subsequently sent his housekeeper to a druggist with a prescription for an ounce of prussic acid.

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Shortly afterwards he was found dead with the bottle half empty by his side. Worries and anxieties of a financial kind were shown to have preyed much upon his mind of late and no doubt disturbed his mental balance. Mr. Wynter had been a Member of the Royal College of Surgeons of England since 1861 and practised at Kenilworth. His manner was always kindly and genial, his public duties were conducted in an exemplary manner, and his friendship was held in esteem by all who knew him. He was unmarried.

March 3rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester and Salford Sanitary Association.

THE annual meeting of the Manchester and Salford Sanitary Association was held on the 19th ult., Dr. Leech presiding, in the absence of the Lord Mayor. The report showed the existence of serious overcrowding in Manchester, and also that a large proportion of the present dwellings were unfit for human habitation and could not be made so by structural alterations. Some attention was, therefore, given to the question of coöperating with the City Council in their efforts to supply improved dwellings. A good deal of prejudice, fairly to be called ignorant, has existed against the block of workmen's dwellings in Oldham-road, and in consequence of "an outcry" having been raised a deputation visited them and reported "that the arrangements for health and comfort seemed quite satisfactory and that the tenants of the dwellings were invariably satisfied." Opportunities at the various lectures given under the auspices of the association were taken advantage of to combat the prejudices against the so-called "barracks." But more practical coöperation was thought to be needed, and arrangements have been made by the association for a conference on the subject, "which it was hoped might lead to the initiation of some plan for supplementing, by means of private enterprise or otherwise, the provision of dwellings made by the Corporation." The committee were indebted to their colleague Mr. William Thomson for a series of reports on the débris of exploded lamps received from the police through the courtesy of the Chief Constable, and in consequence of the evidence thus obtained they were induced to press upon the Government "the importance of raising the present low flash-point of the mineral oils imported to this country." A conference is also to be held at an early date to discuss the sewage question, which is an important one for Manchester just now. An important event in the past year was the publication of the report of the committee for testing smoke preventing appliances—an offshoot of one of the branches of the association. This report—not a hasty one, for it had taken six years to prepare and embodied an enormous amount of close and accurate work—"demonstrated that the smoke produced by steam-boiler furnaces and in some manufacturing processes might be prevented." The committee therefore had joined other kindred associations in preparing a memorial to the Local Government Board in favour of Government inspection and control of the nuisance. The committee also memorialised the Home Secretary on the subject of carbolic acid poisoning. The association does good work for the community, and might do more to an almost indefinite extent if it were not crippled by want of funds. Manchester is not often charged with want of public spirit, but it is not to its credit that so little is shown towards this association that the income has "dropped to the low sum of £144, which was inadequate to pay ordinary standing expenses." In contemplation of the approaching conferences, &c., an appeal is made for special donations and subscriptions. In moving the adoption of the report Dr. Leech stated that at the present death-rate Manchester and Salford paid a death-toll of 4400 lives more than if the health conditions of Manchester and Salford were equal to the average of those which prevailed generally in England. He spoke of the educational work of the association by lectures and tracts, the special and practical teaching in hygienic matters by the Ladies' Health Society and of the influence it was enabled to bring on various authorities. As regards infectious disease, "of late an advance had been made which placed Manchester in front of almost all, if not of all, other towns." The medical officer of health, Dr. Niven, and Professor Delépine have arranged that in cases of suspected infectious disease "materials were sent to the bacteriological laboratory which enabled a diagnosis to be made at once." The result was communicated to the medical officer of health, and a saving of two or three days often effected in what might be a very serious case. As Professor Delépine said, but for the facilities offered by Owens College it would be necessary for the Corporation to equip and maintain on their own account a bacteriological laboratory.

St. Mary's Hospital: End of the Stanley Grove Scheme.

The annual meeting of the subscribers to the St. Mary's Hospital was held on the 22nd ult., Mr. Duncan Matheson presiding. The most important part of the report related to the negotiations with the Lewis Trustees to establish an amalgamation with the Manchester Southern Hospital, which the trustees made a primary condition for the grant of £70,000. These negotiations have lasted three years, and the Board thinks they have in many respects been needlessly prolonged. "The whole may be briefly summarised as an offer to bestow the gift only on the condition of a transfer of the whole assets of the hospital, which now exceed £100,000, and that the joint hospital should be built in Satnley-grove on land belonging to the Owens College." The Board states that the conditions of the Lewis Trust "involve the abolition of St. Mary's Hospital and the absorption of the whole of its acquired property for the endowment and maintenance of a hospital under the control of the Owens College." It declines to remove the hospital to a site "beyond the sphere of its operations, not only in Salford, but in Hulme, Ancoats, Oldham-road, and many other like districts of congested population, whence the majority of the patients at St. Mary's are supplied." The statement of the financial position shows that in 1895 the total income was £3171 14*s.* 3*d.* and the expenditure was £3899 16*s.* 5*d.*, or a deficiency of £728 2*s.* 2*d.* In 1896 the income was £3245 14*s.* 6*d.* and the expenditure £3901 16*s.* 11*d.*, showing a deficiency of £656 2*s.* 5*d.* The annual deficit thus approaches £700, "which is occasionally relieved by bequests received of less than £500," which, under the by-laws, may be so appropriated. Whatever opinion may be held as to the wisdom of declining to enter into the proposed scheme, there is no doubt as to the desire of the Board to come to a right decision.

The Children's Hospital, Pendlebury.

The sixty-eighth annual meeting of governors was held on the 24th ult., when the need for wider financial support was strongly urged by the Dean of Manchester, who presided.

The Manchester Consumption Hospital.

The annual meeting of supporters of this charity was held the week before last, and as a pleasant contrast to the despondent tone of too many such documents the report showed a sound financial position. This state of affairs warranted the Board in declaring their intentions to bring about some excellent developments in future.

March 2nd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Report of the Police Establishment on the State of Crime in Newcastle-upon-Tyne during the year 1896.

CAPTAIN NICHOLLS, the chief constable of Newcastle-upon-Tyne, has just issued his twenty-eighth annual report showing the amount of crime dealt with during the year 1896. The report shows an increase of drunkenness, particularly among women, accounted for in the opinion of the police by the improved condition of trade. The increase of 15 per cent. in the cases of drunkenness among women accounts to some extent for the large number of children brought before the magistrates on account of their being neglected or ill-treated by their parents. One hundred and nine parents were proceeded against by the police for the ill treatment or neglect of their children; 167, as against 92, children under sixteen years of age, a large majority of whom were considerably under sixteen years of age, were arrested for stealing. Forty-seven children were committed to reformatories, industrial schools, or to the workhouse. Attention, too, is drawn to the very large number of young persons proceeded against for misconduct in the streets, such as gambling and the

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minor offences of stone-throwing and football. A graceful compliment is paid to Dr. W. D. Arnison and Dr. Beattie for the way in which ambulance instruction has been given by them to the city police. The general health of the police has been good. The report shows a wonderful immunity from serious crime, notwithstanding the increase of drunkenness.

Dr. Arnison.

The rule at the Royal Infirmary at Newcastle-upon-Tyne under which members of the honorary staff have to resign upon reaching the age of sixty years now applies to the senior surgeon, Dr. Arnison, who has tendered his resignation. Dr. Arnison, who has been connected with the institution for upwards of thirty years, has already received the thanks of the committee representing the governors for the valuable services he has rendered to the charity during his long career, and he will be appointed consulting surgeon to the infirmary. Everyone regrets Dr. Arnison's retirement from active duty.

Tynemouth Infirmary.

Mr. Edwards of Corbridge has offered to pay the salary of a resident medical officer at Tynemouth Infirmary for three years if the committee will appoint such an officer, and in addition he will make a donation of £100 to the funds of the institution. At present there is no resident medical officer, and the need of one is much felt. It is proposed to amalgamate the dispensary with the infirmary, and till this is accomplished Mr. Edwards's generous offer is to stand over. There can, however, be little doubt that it will be the means of hastening the amalgamation.

March 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Town Council and the New City Hospital.

AT a special meeting of the Edinburgh Town Council, held last week, the public health committee submitted a report anent the new City Fever Hospital, in which they recommended that accommodation be provided for 600 beds and laid before the council probable estimates of the cost of buildings to accommodate 400, 500, and 600 beds respectively. The estimates ran as follows: For 600 beds, £233 700; for 500 beds, £212,678; and for 400 beds, £181,989. The medical officer of health, the consulting physician, and the medical superintendent of the hospital were all in favour of accommodation being provided for 600 beds. In moving the adoption of the report Bailie Pollard indicated the extent to which demand for accommodation in the hospital had increased during the last few years. Five years ago the average daily number of patients in the hospital had been 150. In the year 1895-96 there had been on an average 302 beds occupied daily, the number ranging from 459 to 250, and he thought the council might be sure that after the new hospital was built the public would be still more ready to send their cases of infectious disease to it for treatment. In seconding the report Mr. Mitchell Thomson argued that, although at present 500 beds might be sufficient for them, it would cost much more in the end if they delayed the erection of part of the hospital. In the discussion that followed there was a considerable difference of opinion as to the size of the proposed hospital. The accommodation provided for fever patients in such towns as Glasgow, Sheffield, Leeds, Manchester, and Dundee was cited as showing that the proposed accommodation in the new hospital was much in excess of what the population in Edinburgh required. Glasgow with its population of 703,000 had 700 fever beds, Manchester with 536,000 of population had 580 beds, Leeds with 402,000 had 400 beds, and in Sheffield, where the inhabitants numbered 350,000, they had only 234 beds; while in Edinburgh, with a population of only 292,000, they proposed erecting accommodation for 600 fever patients. In the end 25 votes were given for 600 beds, and 11 for 500. The recommendation in the report of the public health committee having thus been adopted it was remitted to the public health committee to obtain estimates for the work.

Royal Edinburgh Asylum for the Insane.

The annual meeting of the corporation of this asylum was held in Edinburgh last week, when the managers' report showed a very satisfactory position. After its adoption Dr. Clouston presented his annual report as physician-superintendent. In it he stated that the total number of patients treated in the asylum during the year had been 1354, the average daily number being 901. There had been 115 deaths, 70 of whom were men and 45 women. Dr. Clouston spoke of the limitations that continually met them in their treatment of disease, and showed how the brains of many human beings were doomed, even before birth, as a result of heredity and how a man's brain might be so treated by himself as to bring about pathological changes that could not be recovered from. He spoke of the terrible damage done by an excessive indulgence in alcohol, and stated that during the past year drinking had been the cause of insanity in an unusually large proportion of their cases. He thought that this was possibly due to the fact that the previous winter had been an open one and trade good, and therefore money more plentiful. Dr. Clouston said that the past year had been one of those common since 1890 in which cases of depression of mind were equally frequent with those of morbid elevation of mind. He believed influenza to be the cause of this change of type in mental disease. It had appeared in this country in 1890, and had never since left it. The appearance of this powerful influenza poison in the world was to him the most striking medical fact of his time. He went on to state that the progress of the year had been satisfactory and the health of the patients on the whole good. Speaking of his visit to the East last spring, Dr. Clouston contrasted the treatment of insane patients in the East and at home, saying that an asylum he had seen at Damascus when compared with Craig House was as Hades to Paradise. The Eastern Christian looked on an insane person as one possessed by the devil, and treated him with terrible forms of exorcism. The Mohammedan, on the other hand, looked on insanity as an evidence of special favour from the Almighty, and he was therefore tolerably kind to those thus afflicted.

Medical Lectures at Glasgow.

At a meeting of the Glasgow Philosophical Society on the 1st inst. Dr. Neil Carmichael read a paper on House Sanitation, in which he discussed the circumstances in connexion with the house which influence health, and more especially as these exist in large cities. Dr. Carmichael argued that frequently health was prejudiced by gas filtering through the soil, a condition which could only be met by laying the whole basement with concrete. In connexion with drainage he advocated that all appliances for the removal of waste should be placed in shafts or towers shut off by doors from the house proper. He pointed out that in Glasgow the prevalence of pulmonary tuberculosis was inversely as the cubic space in the house per occupant. This was as distinctly a lesson teaching the need for fresh air as cholera demonstrated the need for pure water. If the lesson were learned with regard to the construction of houses, the arrangements of streets, and the provision of open spaces, the health of the city would be enormously improved. Medical men and sanitary authorities could do something to educate public opinion, but the main responsibility rested upon architects, who practically had the solution of the question in their hands.—At a recent meeting of the Glasgow Dairymen's Association a lecture was delivered by Dr. R. Cowan Lees on Tuberculosis in Relation to Milk-supply.—The free public lectures instituted by the senate of the University of Glasgow continue to realise decided success. On the last occasion Professor John Young, M.D. Edin., was the lecturer, and he attracted a large audience to hear him discourse on the Historical Significance of some of the Coins in the Collection in the Hunterian Museum. The next lecture is by Professor McKendrick, F.R.S., whose subject is to be Sound Waves and the Phonograph.

Glasgow Cancer Hospital.

The annual meeting of subscribers was held on the 25th ult. The medical report was submitted by Dr. Duncan Macartney, and a report on the district nursing by Dr. Robert Jardine. These were adopted. Speeches defining the position and scope of the hospital were made by Dr. Beatson and Dr. Renton. No one doubts that the hospital does good work in relieving many who suffer from cancer in various forms, but the general verdict of the profession is that all this might have been accomplished without the expense of a hospital to enter into competition with the general hospitals, and without the formal organisation of a new hospital staff.

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Handsome Gift to the Dundee Royal Infirmary.

Mr. James Key Caird, Dundee, has sent a letter to the directors of the Royal Infirmary offering to provide the necessary sum to build a hospital for the treatment of diseases of women. The full details of the offer have not yet been disclosed, but it is understood that in the first instance a sum of £5000 is placed at the disposal of the directors.

Woodilee Asylum.

In view of the new regulation obtaining in medicine, the Barony Parish Council on appointing two clinical clerks at Woodilee Asylum, Lenzie, have decided to make the appointments open not only to graduates in medicine, but also to fourth and fifth year students, provided always that such students have taken out classes in practical pathology. The clinical clerks will be boarded in the asylum, and will be provided with railway season tickets between Glasgow and Lenzie to allow of their attendance, if they desire it, on special classes in Glasgow. The appointments are to be for six months, three months on the male and female sides alternately. In special cases a three months' appointment may be made.

Aberdeen and the Queen's Diamond Jubilee.

In connexion with a suggestion by Mrs. Ogston, wife of Dr. Alexander Ogston, Professor of Surgery, University of Aberdeen, that children labouring under incurable disease be admitted to Morningfield Hospital — where at present only adult incurables are received — the expense of the maintenance of such children being met independently of the hospital funds, the directors have passed the following resolutions. Children are to be admitted and steps taken to raise funds for the erection and maintenance of a children's wing in commemoration of the sixtieth year of Her Majesty's reign. Meantime, two small wards (with accommodation each for five children's cots) will be furnished and utilised for the purpose. A new wing, containing two wards, accommodating in all twenty children, besides nurses, will cost £2500 to erect, and the annual expense would be £500. It is believed the scheme will be carried out, especially as it is understood that the Thurburn Trust (about to be wound up) will give a substantial contribution. Mrs. Ogston has already received £45 2*s.* 6*d.* in aid of the project.—The managers of Aberdeen General Dispensary in their annual report refer to the necessity for increased accommodation, and suggest as a commemoration of the Diamond Jubilee that a fund might be raised for the enlargement or re-building of the dispensary. A gift of £250 is stated to be in hand to form the nucleus of such a fund. During 1896 10,056 cases were treated and 34,967 prescriptions were dispensed. There was a deficit for the year, which required £400 to be drawn from the general capital.

The late Brigade-Surgeon-Lieutenant-Colonel D. A. Leslie.

The remains of the late Brigade-Surgeon-Lieutenant-Colonel D. A. Leslie, M.D. Aberd., A.M.S., medical officer in charge of the troops at Perth, were interred with military honours on the 1st inst. in Welshill Cemetery, Perth.

March 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Notification of Infectious Diseases Act.

THIS Act, which has been adopted by the corporation of Belfast, came into force on March 1st, and the medical officer of health, Dr. Whitaker, has sent a memorandum to the members of the medical profession explaining very clearly the working of the Act. Many members of the profession think it is rather a pity the corporation adopted the Act before they had done what is absolutely necessary for its being successfully carried out — built a hospital for infectious diseases, as it is impossible really to properly work the Act without having such a place. Never was an infectious hospital more needed than at present, when there is so much zymotic disease in the city—scarlet fever being very prevalent—and when, according to the latest statistics of the Registrar-General for the week ended Feb. 20th, the death-rate had reached the high figure of 30·6 per 1000. At the present time there are only two places available for cases of infectious disease—the Royal Hospital and the Union Hospital. The former institution has only a few fever beds, while the middle and better classes naturally will not go to a union hospital. The corporation decided some time since to build a new infectious hospital, but there would seem to be some extraordinary delay, and up to the present they have not agreed finally on the site.

St. Mark's Ophthalmic Hospital, Dublin.

Mr. R. J. Montgomery, F.R.C.S. Irel., has been appointed assistant surgeon, and Mr. F. Chetwode Crawley, M.B., house surgeon to St. Mark's Ophthalmic Hospital.

The New Hospital for Tyrone.

Arrangements are being made for the holding of a great bazaar next year in connexion with the new hospital in Omagh. The old building there is becoming too small and too antiquated for the demands made on it, and the want of a new building is now being very much felt. It is proposed to inaugurate a committee for the purpose of securing collectors in the different centres in co. Tyrone to raise shilling contributions. The Duke and Duchess of Abercorn, who have granted their patronage for the coming bazaar, are taking the deepest interest in the erection of the new hospital.

Belfast Dispensary Committee.

At the monthly meeting of the Belfast Dispensary Committee, held on March 1st, a letter was read by the secretary from the Local Government Board, enclosing copy of a communication received by them from two members of the committee, who complained of the unpunctuality on the part of the officers of the dispensary station situate at Craven-street, Shankhill-road, Belfast. These two gentlemen alleged that on visiting the dispensary station on the morning of Feb. 8th they found a number of poor people in attendance, but not a member of the staff there except the caretaker. This was shortly after 10 o'clock in the morning, the hour at which the station should open. The first officer appeared at 10.25 A.M., and the others came afterwards. The answer of the officers to the charges was a very complete one. It seems that recently the Registrar-General has (at the suggestion of the Trades' Council) altered the registration hours from 12 to 1 o'clock (on Mondays and Thursdays) and 7 to 8 o'clock (on Saturdays) to 9 to 10 o'clock A.M. and 3 to 4 o'clock P.M. respectively. As a consequence it is quite impossible for the officers to finish their registration duties and be at the dispensary station at ten o'clock in the mornings, the distance from the various places being considerable. After discussing the matter the dispensary committee resolved unanimously that the Local Government Board be informed, in reply to their communication, that the lateness of the hour of attendance of the dispensary officers was due to the time fixed by the Registrar-General for attendance at the registration offices, and request him to change the hour so that it may not clash with the hour for dispensary attendance.

Health of Belfast.

At the monthly meeting of the city council, held on March 1st, it was reported that the health of the city for the past month has been very unsatisfactory, the death-rate being 35·2 per 1000 from all causes, while it was 3·7 from zymotic diseases and 15·9 from chest affections. This terrible mortality from diseases of the respiratory organs is much higher than it has been for a number of years. There is an epidemic of measles and scarlet fever, but the mortality from each is diminishing. The mortality from whooping-cough and typhoid fever still keeps high, and, what is most unusual, eight cases of typhus fever have been reported, with one death. Not for several years has there been a more unhealthy winter than the present in Belfast, and all over the north-eastern part of Ireland there has been an unusual wave of sickness, the mortality of Londonderry being 38·8 per 1000, while further south the death-rate of Dublin has reached the appallingly high figure of 48·3 per 1000.

March 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Hygiene of Marriage.

DR. TOULOUSE has just put forward a scheme which greatly exercises the public mind, although it is not absolutely new. He desires to prevent the marriage of

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persons affected with transmissible disease, or at least to punish those who have deceived their partners by concealing before marriage their taint with any malady making the production of degenerate children possible. Dr. Toulouse is a conjoint director of the Mental Asylum of St. Anne in Paris, and has been lately much to the front on account of his book upon Émile Zola. With the view of making a very complete and detailed inquiry into the physical characters of men of genius Dr. Toulouse commenced with Zola, whose personality is allowed to be remarkable, and published in a large volume the most complete details of the eminent author's constitution. His visual acuity, his various psychical re-actions, and details of his special senses all came in for notice, as did the daily *régime* and mode of life, his cardiac and respiratory tracings, and even the amount of urine he passes daily. This "pipi du génie" has greatly amused Parisians, though Zola is known to have agreed to the inquiry in the interest of psychological physiology, of which science he is a declared partisan. Dr. Toulouse's present idea is that selection should be applied to the choice of partners before marriage with the same care that breeders apply to the choice of animals. To eliminate every chance of the transmission of hereditary physiological taint, he would have epilepsy, mental weakness, cancer, recent syphilis, alcoholism, and tuberculosis regarded as obstacles to marriage. He proposes that every Frenchman shall be provided with a "livret sanitaire" in which the medical attendant should be compelled to inscribe the names of certain diseases if the person in question be affected by them, the list of these diseases to be fixed by a committee of medical men. Dr. Toulouse considers that such declarations could be as legitimately exacted from medical men as those notifying epidemic or contagious disorders. The *livret* in question would be deposited at the prefecture, and in fifty years' time instructive tables of statistics on the laws of heredity could be compiled from them. Until then no one, not even a legal tribunal, would have the right to consult these documents, and a system of key numbers would prevent their comprehension by any non-initiated person. At the expiration of that time the conclusions of so vast an inquiry could be enforced by law, but in the meantime Dr. Toulouse considers that we must prevent by every possible means the marriage of persons affected with diseases known to be transmissible. He would compel intending couples to declare their maladies on pain of divorce should concealment be afterwards discovered to have been practised. As an alternative to divorce a fine might be paid to the non-responsible partner in the case of the birth of a sickly child. If a declaration of ill health be made in the marriage contract, and the marriage is agreed to in spite of it, the law will not attempt to stop the union, for that would be an impossibility; but those who wilfully conceal a morbid taint will be regarded as having committed a breach of trust and will have to make reparation for the damage done. It is generally considered that this scheme is purely Utopian, however much it reflects the legitimate wishes of a learned man desirous to prevent the degeneration of the race, and while such procedure would be a violation of individual rights it would considerably augment the number of illegitimate births.

The Decrease of the Birth-rate.

The question of the decrease in the birth-rate has for some time been a burning one in Paris, and a society has been formed to promote the increase of the population and has held numerous sittings. In all the forthcoming Bills dealing with taxation a diminution of taxation proportional to the number of children in a family is proposed. To do away with the fear which parents have of seeing their fortune divided among a numerous family (for the French law demands an equal division), M. Javal proposes to debit every father with three children at least, so that an only son would succeed to but one-third of the estate and two children to only two-thirds. But in spite of the movement the Malthusian Society still has disciples, and a certain gentleman, noted for his unfortunate attempts at the education of the two sexes in common in a municipal school, has published a pamphlet dealing with methods of checking large families. The "Repopulation" Society has asked that this pamphlet shall be made the subject of a prosecution.

Medical Responsibility.

A medical man of St. Nazaire has just been held responsible for an error in diagnosis. A woman was arrested on a charge of infanticide, and an expert declared that she presented all the signs of recent delivery. Two days later she was delivered of a child which died. She therefore prosecuted the medical man, who was fined 1000 francs, although the *procureur-général* asked the court to acquit him.

The Health of the Army.

The War Minister has published an important report addressed to the President of the Republic upon the Health of the Army. It shows an eminently satisfactory state of matters. In 1896 the death-rate was 5·29 per 1000, the lowest that has ever been observed. This result is due to the steady progress of hygiene. Small-pox is decreasing, and in 1896 there were ninety-seven cases and two deaths. Diphtheria, since the employment of the serum treatment, accounts for only twenty-two deaths per annum. Enteric fever also shows a decrease, although there were 2442 cases with 441 deaths. All the barracks are supplied with spring water filtered through a Pasteur-Chamberland filter, and those places where enteric fever was endemic have become absolutely free since the enforcement of this regulation. The report advises for the future the general use of sterilised water, and sterilisers will be constructed for the supply of water in large quantities. Every army corps will have portable sterilisers, which can be transported to the scene of an outbreak of enteric fever.

A Case of Malingering.

The War Minister, in answering a question put to him in the Chamber relative to the death of a soldier at Marseilles, a death attributed to want of care on the part of the military surgeons, said that the man had brought about his illness on purpose. To get off duty and to be sent to the infirmary he ate six portions of haricot beans; intestinal obstruction and gastro-enteritis supervened, from which he died.

A Terrible Mistake.

Dr. Contjean, the son of the director of the medical school at Besançon, a young medical man well known for his work in biological chemistry, has just died at the age of thirty-two years under very sad circumstances. He suffered from gastric pains, and during the night he got up and taking, as he thought, a packet of bicarbonate of soda poured the contents into a glass of water and swallowed them. The packet contained corrosive sublimate, and he died after terrible suffering.

March 2nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Alimentation of the Poor.

DR. ANGELO CELLI, professor of hygiene in our University and director of the Gabinetto Igienico at the University Institute, is at work on a series of researches having for their object the improvement of the alimentation of the labouring classes, particularly of the workers in the fields. These latter, or about two-thirds of them, live on the meal of "granturco" (Turkish wheat). Its low nutrient power obliges them to consume it in large quantities, very often bad in quality and rendered still worse by imperfect modes of preparation. The result is seen in their defective physique and, at its worst, in that frightful scourge "pellágra," which, mainly visible in the integument, is also evident in various other lesions, mental alienation included. State medicine has vied with private philanthropic effort to find a substitute for the "granturco," but in vain. It is impossible to combine the two conditions of lower price and superior quality. Professor Celli has set himself to work in another direction to see whether, taking the "granturco" as it exists, its quality and digestibility can be improved without adding to its cost. This result, he thinks, he has attained, at least in one direction—namely, in better grinding processes, from which the meal emerges richer in nitrogenised substances than under the traditional system, while at the same time poorer in husk and indigestible cellulose, and poorer also in fat, which is the chief cause of its rancidity. One defect, however, appeared to neutralise this improvement. Finer and more nutrient, the meal was much less adapted for baking purposes and also

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for cooking as "polenta" (porridge). Professor Celli, in consequence of this, has sought a remedy in another mode of manipulating the meal. With the coöperation of several skilled members of the baking guild he has succeeded in turning out a paste either from the "granturco" pure and simple or by the admixture of this with the meal of ordinary grain (in the proportion of from 25 to 50 per cent.). Richer in albuminoid substances than the "polenta" of "granturco," richer in the same substances than paste from the other grain even when of the best quality, this composite paste, relatively to nutrient power, is actually cheaper than the aforesaid "polenta." Professor Celli is anxious to have the results of his laboratory findings tested on a grand scale, and will, it is hoped, receive the countenance and support of the Government in the practical extension of his discovery to the alimentation of the poor.

Feb. 28th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Professor Kaposi and the Socialists.

IN the course of a lecture delivered last week Professor Kaposi said that owing to the mildness of the winter only a few cases of phtheiriasis had recently come under his observation, and he added that sufferers from this disease may be found at the meetings which are about to be held in connexion with the Parliamentary elections. These remarks were repeated by the *Arbeiterzeitung*, a journal which circulates among the working classes, and on the evening of the same day some hundreds of Socialists assembled in front of his house and created a disturbance. Next day the newspapers published a statement by Professor Kaposi in which he denied that what he said was capable of an offensive interpretation, and he moreover referred to the gratuitous treatment which he had freely given to necessitous patients for the last thirty years.

Vomiting and Pregnancy.

Dr. Dirmoser has published in the *Medicinische Wochenschrift* an account of twenty cases of hyperemesis gravidarum which he has observed in the course of eight years. There are, according to Lang, three stages of this complaint. In the first stage the symptoms occur at short intervals varying from an hour to five minutes. In the second stage the pulse is accelerated, the temperature is increased, and the urine becomes turbid; patients presenting these symptoms sometimes recover. In the third, which is the comatose or nervous stage, the vomiting decreases, but there are grave cerebral complications; and sometimes strabismus and jaundice. In six cases in which the urine was analysed a great quantity of urobilin was found, as well as hæmoglobin, acetone, peptone, hyalin, and granular tube casts. The presence of urobilin indicates a decomposition of hæmoglobin in the body, and the tube casts point to serious derangement of the kidneys. In three cases Dr. Dirmoser also observed indoxyl and skatoxyl, substances which are products of decomposition in the intestine and are of great significance, indicating a general poisoning of the system and co-existing with increase in the bulk of the liver, spleen, and kidneys. According to Dr. Dirmoser the disease is due to the enlargement of the uterus irritating the motor nerves, as well as the sympathetic and the vagus, both of which when stimulated cause contraction of the stomach. Experiments made by Conteyon have shown that irritation of the vagus increases the secretion of the glands of the mucous membrane of the stomach, promotes the formation of mucus, which neutralises the acid gastric juice, and causes hyperæmia of the stomach. These effects predispose to the formation of toxins, which is further assisted by the atony of the intestine. Dr. Dirmoser accordingly recommends that the stomach should be washed out with a solution of boric acid, that the gases of the stomach should be absorbed by means of powdered charcoal made from the wood of the lime tree, and that food should be given by the rectum. When the patient is eventually able to take food by the mouth it should at first consist of somatose[1] and rice-water.

The Pituitary Body and the Thyroid Gland.

At the last meeting of the Medical Society Dr. Schiff discussed the influence of the pituitary body and the thyroid gland on the metabolism of the tissues. The relation between these two organs has been studied ever since Marie proved that the pituitary body undergoes a change in cases of acromegaly and suggested that it exercises an influence over tissue change. Hypertrophy of the pituitary body has been observed after extirpation of the thyroid gland and in cases of myxœdema. Experiments made by Dr. Schiff with extract of pituitary body show that it leaves the excretion of nitrogen unaltered, but that it increases the excretion of phosphorus, a result indicating the decomposition of a tissue containing phosphorus, which may be either the structures forming the central nervous system, or, on the other hand, the bones. Dr. Schiff considers that it is the bony tissue which is affected. In his investigations of the functions of the thyroid gland Dr. Schiff made four experiments with iodothyrin, and came to the conclusion that its action is by no means identical with that of thyroid extract, a result quite at variance with the opinions of Baumann, who considered that iodothyrin represents, both quantitatively and qualitatively, the efficient part of the gland. Dr. Biedl then referred to the experiments made by him on cats with a view to the investigation of the symptoms which appear after extirpation of the pituitary body. He operated through the mouth, first performing tracheotomy, then partly dividing the velum palati, and finally opening the base of the cranium with a trephine. Sometimes the animals succumbed to hæmorrhage either from a cranial sinus or from the circle of Willis. In one case the animal lived for twenty-four hours, and then died with peculiar spasms similar to those occurring after extirpation of the thyroid gland, and due no doubt to an extravasation into the middle cranial fossa. He confirmed the results obtained by Oliver and Schäfer, who found that the extract of thyroid gland causes a decrease in the blood pressure, whereas the extract of pituitary body, like suprarenal extract, has the effect of increasing the blood pressure.

Accidental Injuries received at the Time of Death.

Dr. Haberda has published in the *Klinische Wochenschrift* a highly interesting case in which a lesion of a necessarily fatal character was sustained at the moment of death. It not unfrequently happens that dying persons receive severe injuries through falling down as they become unconscious. The results of such accidents, of course, vary in extent and severity, ranging from abrasions and bruises on the forehead, the back of the head, the nose, and the knee to fractures of the nasal bones and the extremities, and even to fracture of the skull with extravasation into the cerebral tissue. Dr. Haberda's patient was a woman, aged sixty-five years, who died suddenly. Post-mortem examination showed that the pericardium was fatty and contained about 40 c.c. of turbid blood. The right heart was soft, and on the anterior aspect, close to the anterior longitudinal furrow, there was a longitudinal fissure of the right ventricle. The mitral valves were hard and the posterior aortic valve was thickened; the entrance to the left coronary artery was contracted, but that of the right was normal. The small quantity of blood in the pericardium indicated that the rupture of the heart was not the cause of death, and the absence of suffusion at the place of the rupture proved that it occurred only after the heart's action had ceased.

Thoracic Diagnosis by Means of the Roentgen Rays.

Professor Benedikt has published an account of the observations made by him with the Roentgen rays on a man who suffered from dyspnœa, and who said that two years ago he had an attack of pneumonia and hæmorrhage from the lungs. On the right side in front there was dulness over the apex and bronchial respiration, and there was also dulness of the left back. By means of the Roentgen rays shadows of the heart and the diaphragm were obtained which showed no change in the position of these organs during expiration and inspiration, so that there evidently was an adhesion between the costal pleura and the diaphragm. There was condensation of the lung tissue, and the shadows cast by the lungs were studded with black patches; moreover, an abnormal shadow extending to the axilla corresponded to a situation where there was dulness without any other symptoms, so that no doubt the pleura was thickened and the pneumonia spoken of by the patient had really been pleurisy. The dyspnœa was due to the interference with the action of the diaphragm and to the diminution of the respiratory surface.

Amusing Reply to an Examination Question.

Medical circles in Vienna have been much amused by an

[1] See THE LANCET, Feb. 2nd, 1895, p. 294.

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answer given by a student who was being examined in pathological anatomy and was asked to name the organs of the body in which cysts most commonly occur. He enumerated several, but omitted to mention the ovary, whereupon the examiner good-naturedly said: "Try to think of an organ which you do not possess," and the candidate, who was of Jewish extraction, immediately replied: "Oh, the prepuce"!

Feb. 28th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Pilgrimages to Mecca.

WE are now well advanced in the Mussulman fasting month of Ramadan, and very soon the devout will be making preparations for the annual pilgrimage so as to be at the holy places before the great feast which will take place this year about April 13th. The French have very properly stopped all idea of pilgrimage from their colonies. The Indian Government seems afraid to take this step, and the Khedive of Egypt can hardly be expected to be more courageous than his English advisers. The Hadj of last year was the largest since 1893, partly because the chief day of the feast fell on a Friday, and the year was therefore considered to be a sacred one; 62,000 pilgrims landed at Jeddah, and the concourse at Mouna was reckoned at 250,000. Jeddah, in spite of its population of 20,000 people, had no money for scavenging purposes, because the Customs revenue destined for sanitation was swallowed up in paying the Government officials, whose salaries were eight months in arrear. The stinks and dangers in the town of Jeddah can be better imagined than described. It is true that the Sultan sent three medical men from Constantinople to inspect, a pasha and two beys, and they reported well of everything they saw. There was no cholera during last year's Hadj, but plenty of small-pox and a corresponding dearth of vaccine, while the other chief diseases were malarial fever, dysentery, and rheumatism, all treated by one sovereign remedy—the actual cautery! One of the greatest wants is a railway from Jeddah towards Mecca. There is apparently no religious difficulty to this, but the amount of backsheesh required by the Bedouins is so enormous that the idea has been reluctantly postponed. One Arab tribe lives during the whole year upon the results of dastardly murders committed by it upon unprotected pilgrims. Nothing can be reformed until the Powers coerce Turkey. Every pilgrim should be provided before landing at Jeddah with a certificate of good health and at least £15 in his pocket. Many now land with less than 15*s.* in their possession, and hundreds are sent back every year by charitable persons. The British Indian pilgrims, I am ashamed to say, are the greatest offenders, about half of them being paupers. The Javanese, on the other hand, are the richest, because Holland insists on every pilgrim possessing an adequate sum. The Persians are universally pitied, because their Consul-General is said to levy very heavy contributions on them. In fact, the pilgrims are robbed everywhere—in Jeddah, *en route* by the Bedouins, and then again at Mecca. The Grand Shereef himself is a famous robber, and among other perquisites receives 8*s.* for each camel hired by the pilgrims. He is not very rich himself by all accounts, because of the large presents he has to send to Turkey. This completes the vicious circle, for it is Turkey which stops all sanitary reform in the Hedjaz, and it is idle to expect that Turkey will ever seriously mend matters there until she is forced to do so by the European Powers. When Europe found herself menaced by plague from Egypt in 1820 she compelled Egypt to create sanitary reforms up to the level of the European knowledge of the day. Has not the time come for Europe to put similar pressure on Turkey and the holy places?

Strongylus Subtilis.

This hitherto unknown worm was discovered at several necropsies in Cairo and Alexandria by Dr. Looss in 1895, and was then reported by him.[1] In the fæcal matter of one of Dr. Sandwith's ankylostomiasis patients, an Egyptian peasant, Dr. Looss has now discovered the eggs of the strongylus subtilis, and this is necessarily the first time that this parasite has been recognised in a living patient. The man now being studied is improving under the ordinary thymol and iron treatment.

Medical Appointments.

Crookshank Pasha, who has been Director-General of the Prisons Department in Egypt since its creation by Mr. Clifford Lloyd in 1884, has now been promoted to the important post of English Controller of the Daira Sanieh. This post carries with it a salary of £2050 a year, and is by far the most lucrative appointment which has yet been given to an English medical man in this country. The Daira Sanieh consists of the personal estate of the Khedive Ismail Pasha, and was reclaimed from him in 1876, at the time of settlement of the national debts. It comprised originally more than 400,000 acres, nearly all being cultivated land, chiefly sugar estates and factories; but to try to reduce the yearly deficit on the revenue several parcels of land have of late years been sold or exchanged to Government servants in lieu of pensions. The Prisons appointment has now been given to the Chief of the Cairo Police. This is, at first sight, a retrograde step, for the weak point of the Egyptian prisons has so far been hygiene and not discipline. It is apparently intended that the future sanitation of the city and provincial prisons shall be regulated by the already deeply pledged sanitary department. Dr. Warnock of the Government Lunatic Asylum and Dr. Wilson, Professor of Physiology at the Medical School, have both had their appointments permanently confirmed. Dr. W. Grant, a son of the late Dr. Grant Bey, has been appointed to the second medical post at Mombasa.

Animal Vaccine Institute.

The statistics for 1896 are very satisfactory. The number of primary vaccinations in Egypt during the year was 17,176 and of these only 577 failed. It must be remembered in addition not only that the vaccinators are all natives, but also that the custom of the country is to vaccinate each child on both its arms. This really means, therefore, a double number of successful results.

Feb. 24th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The National Museum of Hygiene.

WHILE the museum concerns hygiene generally, it has much to do with ships. Here quarters and berths are arranged for the sick on shipboard in models representing several methods. There should be seen in this exhibit a perfect hospital ship—one equipped with all modern conveniences in addition to the best medical and surgical means—as an example for those who construct as well as for those who use. The present sick-bays of warships are altogether inadequate to the exigencies of battle, and berth-decks, or rather makeshifts, could in no manner meet requirements as would properly constructed special hospital ships. These would, indeed, be floating homes of refuge, recognised by all nations as sacred to the unfortunate. In another portion of the building there is a ship-disinfecting apparatus, by the use of which long detention at quarantine is unnecessary, for with it purification is rapidly accomplished in the various parts of the vessel, while all germs contained in the clothing, bedding, &c., of passengers and crew are destroyed by a separate process. In the latter work the possibly infected material is subjected to extreme degrees of heat in closed cylinders, in which are moveable carriers, mounted upon a wheel track used for running material in and out. In fumigating a vessel with the apparatus mentioned two sulphur furnaces are used—one on a tugboat which lies alongside, and the other located on a wharf and mounted upon a track, so that it can be wheeled opposite any part of the ship. Each furnace is provided with a rotary suction blower driven by a steam-engine and connected with the hold of the vessel by galvanised iron pipes. The air is drawn from the hold through one pipe, forced over large pans of burning sulphur, and is driven back through another duct into the hold purified by heat and mixed with sulphur dioxide. While it has been said upon good authority that the best way in which to take wounded men from the hold is to carry them upon the back, effective mechanical arrangements for this purpose

[1] Centralblatt für Bakteriologie und Parasitenkunde, Band xviii., No. 6.

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have been invented, and the exhibit contains a number of these. The Museum of Hygiene offers a fine opportunity for the medical student in Washington, and many avail themselves of this source of information. Classes from the Naval Medical Department find here much that has to do with the hygienic care of ships and the prevention of epidemic disease.

The Common Communion Cup.

The rector of the Church of the Advent, East Oakland, California, has asked the Board of Health to take such steps as will do away with the common communion cup now used in the celebration of the sacrament. He thinks it is dangerous, and the more since California is a sort of "Mecca" to which phthisical pilgrims from every part of the United States come. "As a result there is a greater percentage of so-called consumptives in the population of California than anywhere else except Colorado. As consumption is now definitely known to be a contagious disease, and as all Christians attend to their religious duties more faithfully when ill than at other times, it follows that there is a particular need of safeguards in this State about the common cup in the communion service. May your petitioner presume to ask which member of your board would be willing to sip from a cup from which fifty strange persons had drunk, some of whom were known to be affected with phthisis pulmonalis?"

"Sweat Shops" in High Places.

According to recent investigation by the factory inspectors some of the most fashionable millinery and dressmaking establishments in New York City are quite as veritable "sweat shops" as are to be found in the tenement districts of the east side, where clothing is made by wretchedly underpaid workers huddled together in the most narrow and unwholesome quarters. The following is a summary of some of the worst cases. On Fifth-avenue the inspector found twenty-five girls working in a cramped room which would hold only nine if due regard to health and comfort were paid. In another fashionable place the space adapted to eighteen girls actually held twenty-eight. In a dressmaking establishment twenty-seven were found working where there should have been but thirteen. Miss Cane, the inspector, says that insanitary crowding is general among the fashionable establishments. The lower floors are usually spacious, with luxurious furnishings. The upper floors, where the girls work from early morning until midnight, are cramped and crowded in as direct a violation of the State laws as any place discovered in the poorer class of tenement houses.

A Training School for Coloured Women.

The scheme of the New Orleans University Medical College to found a training school for coloured women as nurses is well under way and is assured of success. The aim is to supply at moderate rates nurses who will be competent for all the duties performed by white nurses and willing and able also to relieve the strain put upon an ordinary household by sickness, instead of, as is now sometimes the case, aggravating it. Careful inquiry was made by the physicians interested in the movement to make sure that there would be a paying demand for the graduates of the school, and the result was satisfactory. No one who has had much experience with sickness is ignorant of the fact that the trained nurse of to-day is, though indispensable, extremely expensive, directly and indirectly, or that there may be many cases in which less costly, even if less accomplished, attendants would be a great convenience. If coloured girls can be trained to meet this need—and they unquestionably can—it will open to their race an occupation which those fitted by intelligence and character now entirely lack.

Semi-centennial Anniversary of the Academy of Medicine.

The semi-centennial anniversary of the New York Academy of Medicine occurred on Jan. 29th. An audience of upwards of 3000 citizens assembled in Carnegie Hall, and among the distinguished persons on the stage was the President of the United States. Of the 150 physicians who assisted in the organisation of the Academy fifty years ago only eight are still living. Dr. Lewis A. Sayre, one of the incorporators, was present and addressed the meeting. Dr. Purple, a former President and an original member, gave a history of the growth of the Academy and especially of its library, which is now second only to the library of the Surgeon-General at Washington. The ceremonies were concluded with an address by the President of the United States on "The Physician as a Citizen." After alluding to the evils of unrestricted charlatanism he remarked: "I need not suggest that such evils are allowed to exist by reason of the insufficiency of our laws or a laxity in their execution. I have intimated that for this condition you are not responsible in a professional sense; but are you sure that as citizens you are doing all in your power to remedy the situation? We cannot but think that the discoveries and improvements in the medical practice which we now enjoy are dearly bought if the members of the profession in their onward march have left behind them their sense of civic obligation and their interest in the general public welfare. We cannot accuse you of utter neglect of your duty to the country; and yet we cannot keep out of mind the suspicion that if your professional work in exposing evils were more thoroughly supplemented by labour in the field of citizenship these evils would be more speedily corrected. If laws are needed to abolish abuses which your professional investigations have unearthed, your fraternity should not be strangers to the agencies which make the laws. If enactments already in force are neglected or badly executed, you should not forget that it is your privilege and duty to insist upon their vigorous and honest enforcement. If members of your profession were oftener found in our national and State legislative assemblies ready to advocate the reformatory measures you have demonstrated to be necessary and to defend your brotherhood against flippant and sneering charges of impracticability, the prospect of your bestowal upon your fellow-men of the ripened results of your professional labour would be brighter and nearer. You will, I hope, permit me, in conclusion, to enjoin upon you the duty of an active and general interest and participation in public affairs for the promotion of your country's good in all its phases. No object of personal ambition and no activity of professional life should be permitted to withhold from our Government the tithe of devotion and service due from its thoughtful, intelligent, and educated citizens."

Feb. 20th.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in the under-mentioned subjects in February:—

Surgery.—J. T. Brickwell, Guy's Hospital; E. C. Corfield, St. Bartholomew's Hospital; C. E. Covernton, Guy's Hospital; C. I. Ellis, Aberdeen and St. Thomas's Hospital; H. Fulton, Guy's Hospital; F. Harvey, St. Bartholomew's Hospital; H. Lewkowitsch, Breslau; H. H. Mouckton, King's College; C. W. Moore, Manchester; A. W. Oxford, Charing-cross Hospital; F. M. Simmonds, Edinburgh; E. G. Smith, Westminster and London; and S. K. Vines, Birmingham.

Medicine, Forensic Medicine, and Midwifery.—G. W. Dutton, Middlesex Hospital; R. B. Greaves, Sheffield; J. L. F. De Gannes, University College; F. Harvey, St. Bartholomew's Hospital; G. E. H. Sargent, London; and S. F. Smith and L. W. Seymour, St. George's Hospital.

Medicine and Forensic Medicine.—H. R. Rice, Birmingham and London.

Medicine.—P. H. Collingwood, St. Thomas's Hospital; T. Jones, Middlesex Hospital; C. W. Moore, Manchester; A. P. Mürtz, King's College; and F. M. Simmonds, Edinburgh.

Forensic Medicine.—E. P. Hewitt, St. Mary's Hospital; and J. P. Race, Manchester.

Midwifery.—F. Adams, St. Thomas's Hospital; A. H. Grace, Bristol; and M. Sharp, Royal Free Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery: Messrs. Dutton, Fulton, Grace, Harvey, Hewitt, Mürtz, Oxford, Race, Sargent, S. F. Smith, and Miss Sharp.

ROYAL WEST OF ENGLAND SANATORIUM, WESTON-SUPER-MARE.—The annual meeting of the Royal West of England Sanatorium, Weston-super-Mare, was held on Feb. 13th, under the presidency of Sir C. D. Cave. The honorary secretary in his report stated that the receipts were £3016, which with a balance brought forward from 1895 of £601 made a total of £3617, as against £3415 the previous year. The expenditure was £2950, as against £2814 in 1895. The number of convalescents admitted had been 1441—viz., 782 men and 659 women; last year 1391 had been admitted (643 men and 748 women). The hot and cold sea water baths still continue to afford invaluable benefit to many convalescents. The number of baths taken during last year was 5078, the number in 1895 being 4198. The report adds that these baths are of immense importance to the institution.

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FOREIGN UNIVERSITY INTELLIGENCE.—*Rouen:* Dr. Albert Martin has been appointed Professor of Clinical Midwifery.—*Heidelberg:* Dr. Karl Kaiser has been appointed Extraordinary Professor of Physiology.

CLEVEDON COTTAGE HOSPITAL.—In the recently issued report of the Clevedon Cottage Hospital it is stated that a larger number of patients were received at the hospital during the past year than during any preceding year. There were 91 cases admitted, and 55 were discharged as recovered, 20 as improved, 3 as no better, 2 were removed, 1 died, and 10 remain. The receipts from all sources were £446, payments were made to the extent of £420, and a balance of £26 remains.

ABERYSTWITH INFIRMARY AND CARDIGANSHIRE GENERAL HOSPITAL.—The annual meeting of the subscribers of the Aberystwith Infirmary and Cardiganshire General Hospital was held on Feb. 6th, under the presideney of Mr. H. C. Fryer. The report showed that 183 patients had been admitted during the year, as against 175 in 1895. There had also been 1449 out-patients, being a decrease of 67 from the previous year. There was an adverse balance at the end of the year of about £12. Mr. J. G. W. Bensall was elected President.

CRIME IN NEWPORT (MON.).—The annual report of the head constable of Newport (Mon.) shows that the number of indictable offences reported to the police during 1896 were 355, for which 293 persons were apprehended or summoned—viz., 230 males and 63 females. This showed a decrease of 80 offences reported and 23 persons arrested or summoned as compared with 1895. Of the 293 persons proceeded against, 270 were tried summarily, 8 were discharged on withdrawal of prosecution, 4 were discharged on the evidence, and 11 were committed for trial.

MUNIFICENT BEQUESTS.—Mrs. Worthington, widow of the late Mr. William Henry Worthington, head of the well-known firm of brewers, who died last week, has left her residence, Derwent Bank, Derby, to the Derbyshire Infirmary for the purpose of a convalescent home. Should the infirmary authorities deem the mansion unsuitable they are empowered to sell it and benefit the institution to the amount of £10,000. There are other bequests for charitable purposes amounting in the aggregate to £50,000.

LISKEARD COTTAGE HOSPITAL.—The first annual meeting of the Liskeard (Cornwall) Cottage Hospital was held on Feb. 18th. The report stated that from April 28th, 1896 (when the building was opened by Mrs. Passmore Edwards), to the end of the year fifty-four patients had been admitted and eighteen out-patients had been treated. The total expenditure had been £543 and the receipts £615, leaving a balance of £72 in hand. The receipts include a cheque for £200 from Mr. Passmore Edwards towards furnishing the hospital, the total cost of which, including the dispensary, amounted to £320. Mr. Edwards was re-elected patron.

ROYAL UNITED HOSPITAL, BATH.—On Feb. 16th the Earl and Countess of Cork assisted at the opening of a bazaar which has been organised at Bath for the benefit of the Royal United Hospital. The funded income of the hospital is £500, and at the close of 1896, notwithstanding the receipt during the year of legacies amounting to over £2000, there was an adverse balance of £1245. The present hospital was opened in 1826. A new wing was added in 1865, and more recently a children's ward has been provided. Better accommodation for the nursing staff and a new kitchen are urgently required, and so it was decided to hold this bazaar, by which it is hoped to raise a sum of at least £1500.

HEALTH OF TAUNTON.—Dr. H. J. Alford, the medical officer of health for the urban and rural districts of Taunton, in his annual report for 1896, states that in the urban district the birth-rate was 31·9 per 1000, the death-rate 16·9 per 1000, the zymotic death-rate 3·5 per 1000, and the infant mortality 145 per 1000 births. The health of the town during 1896 was remarkably good, and had it not been for an epidemic of measles, which caused a heavy mortality, the year would have compared most favourably with its predecessors. In the rural district the birth-rate was 29 per 1000, the death-rate 14·2 per 1000, the zymotic death-rate 1·04 per 1000, and the infant mortality 79·5 per 1000 births. The number of cases admitted to the sanitary hospital during the year was 65.

IT is arranged that the tenth annual Cookery and Food Exhibition shall be held from May 12th to May 19th at the Niagara Hall, St. James's-park. Further particulars respecting the exhibition may be obtained from the honorary secretary, 329, Vauxhall-bridge-road, S.W.

PRESENTATION TO A MEDICAL MAN.—On Feb. 18th a handsome walking-stick was presented to Mr. John Howard-Jones, M.B., C.M., D.Sc. Ed., by the ambulance class of the Newport (Mon.) borough police force, as a mark of appreciation for his services as honorary lecturer of the St. John Ambulance Class.

SALISBURY INFIRMARY.—The half-yearly statement of the receipts and expenses of the Salisbury Infirmary has just been issued. The total receipts, including church collections £756, subscriptions £922, donations and legacies £522, made a total of £3422, and the expenditure amounted to £4006, leaving a balance of £584 due to the treasurer.

WILTSHIRE COUNTY ASYLUM.—The visiting committee of the Wiltshire County Asylum have decided on the erection of a new boiler house and other additions connected with the provision of steam for heating, cooking, &c., and to raise by loan for such purpose and for the installation of electric lighting at the asylum a sum of £5000 in addition to the loans previously sanctioned by the county council.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—The annual meeting of the subscribers to Weston-super-Mare Hospital and Dispensary was held on Feb. 15th. The report showed that 341 patients had been admitted and that 602 out-patients had been treated. The casualties relieved were 881. The dispensary now has 2650 members entitled to claim its benefits. The expenditure slightly exceeded the income, the year beginning with a surplus of £27 and ending with a deficit of £4.

ROYAL PORTSMOUTH HOSPITAL.—At the annual meeting of the Portsmouth Hospital, held on Feb. 23rd, plans were presented of a new hospital which it is hoped will ultimately be built on the present site. This will be done gradually. In commemoration of the sixtieth year of Her Majesty's reign it is proposed to erect two new pavilions, each to contain forty beds. Miss Weston, "the sailors' friend," who has recently been an inmate of the hospital after a serious bicycle accident, has contributed through Mr. Rundle, F.R.C.S. Eng., £100 to the building fund, which now amounts to over £6500.

FOOTBALL CASUALTIES.—In a match played between Clifton and Bridgwater Albions on Feb. 20th, at Bristol, a member of the former team dislocated his knee.—On the same day, during a match between Middlesbrough and Stockton Corporation Officials, one of the players fractured his clavicle.—In a match on Jan. 30th last, between the Star Athletic and Homerton Clubs, a player, a youth of Bromley-by-Bow, aged fifteen years, received a blow on the head, from the effects of which he gradually became worse, and died last week from exhaustion.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A clinical meeting of this society was held at Stanley's, Lavender-hill, on Feb 10th, Dr. Benjamin Duke being in the chair. Mr. John Gay showed a Skiagram of a case of Fracture about the Elbow in a Child. Mr. J. B. Howell showed a Fœtus with Spina Bifida. Mr. A. E. Dodson read short notes on the following: (*a*) a case of Spina Bifida; (*b*) a case of Unusually Slow Pulse; and (*c*) a case of removal of Foreign Body from the Ear. Mr. T. A. I. Howell read short notes on a case of Vaccination with Rare Complications.

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES.—The annual meeting of the Manchester and Salford Hospital for Skin Diseases was held recently, the Mayor of Salford presiding. The report stated that the number of new out-patients for the past year was 3271 against 3504 for 1895. The committee attributed this decrease of 233 to a considerable extent to a more careful and regular inquiry as to the claims of certain applicants to be afforded charitable relief. Owing to want of funds the in-patient department was small, but had proved to be of great benefit since it was established eighteen months previously. During the year forty-four patients were taken in for treatment. The subscriptions during the year had increased by nearly £100, but the balance-sheet of the year showed a deficit of £330.

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NORTH OF ENGLAND CHILDREN'S SANATORIUM.—The annual meeting of subscribers to the North of England Children's Sanatorium was held recently at the institution, Southport, under the presidency of the Mayor, Mr. G. H. Pollard, M.D. Edin. The report showed that 842 children had been inmates during the year, 335 of whom had been sent by the governors of the Cotton Districts Convalescent Fund. The amount received from the children was £937. A recent rule, by which a cot can be appropriated for one year by a donation of fifteen guineas, was becoming much appreciated, nearly £240 having been received on this account.

MIDDLESEX HOSPITAL.—The annual general court of governors of the Middlesex Hospital was held in the board room on Feb. 25th. Mr. Custance (the secretary of the Hospital Sunday Fund) presided, and amongst those present were the Right Hon. Sir Ralph Thompson, K.C.B., Mr. Francis Hoare and Mr. G. J. Marjoribanks (the treasurers), Colonel the Hon. Herbert Eaton, Sir Arthur Townley Watson, Dr. Cayley, Dr. Coupland, and other governors to the number of thirty. The report for the year 1896 spoke feelingly of the great movement set on foot by H.R.H. the Prince of Wales in support of the hospitals, and after dealing with the year's working of the hospital gave some details of the new convalescent home which had recently been opened at Clacton-on-Sea, from which it was to be gathered that there was still the sum of £28,000 to be collected to free this home from debt. During 1896 there were 3598 in-patients, whose average stay in hospital was about twenty-nine days, and among whom there were 355 deaths; there were also 44,484 out-patients treated, whilst 393 patients were sent to convalescent homes. The report also alluded to the satisfactory manner in which the newly constituted Medical School Council was performing its functions. Dr. Coupland, who has held the office of Dean for four years, has resigned that post, and has taken his place as an elective member of the Council. Dr. William Pasteur has accepted the office of Dean, for which he is well qualified by his services as secretary to the Medical School Committee. After the conclusion of the formal business Dr. Cayley, the senior physician, proposed that Dr. Cecil Yates Biss, who had been connected with the hospital for sixteen years, should be granted the title of Physician to Out-patients, which was duly conferred upon him. We understand that H.R.H. Princess Christian has consented to lay the foundation-stone of the New Cancer Wing of the hospital on July 1st next.

COMPLAINTS AGAINST AN ISOLATION HOSPITAL.—Prolonged inquiries by the Guildford, Godalming, and Woking joint hospital board have been held during the last month or two into complaints made by the father of a child who was admitted for scarlet fever. While recovering in the hospital she was accidentally burnt owing to her clothes catching fire through the bars of the fireguard. The father complained and a strict investigation was made, the medical men appearing to agree that the injuries were severe though fortunately not of a permanent nature. Further, the father complained that the child's head was dirty on her discharge. The child was six weeks in the hospital and was reported as "clean" on admission. As to this matter the committee reported that "it is clear that the precautions taken by the staff of the hospital to prevent the transmission of parasites from head to head cannot be said to have been satisfactory." As to a complaint that it was some hours before the child received medical attendance, the committee explained that this arose from the absence of the superintendent and a nurse. On the latter's return the girl was temporarily attended to. The medical man arrived three hours later. As to a complaint of shortness of food, the committee thought this charge unfounded, but said the method of distribution needed amendment. Further, the parents were assured that the case was a slight one; the committee had ascertained that for some days it caused the whole staff much anxiety. Finally, the committee agree that the whole question of the administration of the hospital requires consideration with a view to reform and improvement, and are of the opinion that fuller inquiries should have been made earlier, such inquiries being prevented by a request from the mother that the neglect of one of the staff at the time of the accident might be forgiven. The board are considering the question of reform in committee.

LITERARY INTELLIGENCE.—Messrs. J. & A. Churchill will shortly issue a small work on "Antiseptic Principles for Nurses," by Mr. C. E. Richmond; and "Deformities of the Fingers and Toes," by Mr. William Anderson, surgeon to St. Thomas's Hospital. Also the following new editions: The fifth edition of Dr. Waring's "Bazaar Medicines," revised by Dr. Aitchison; the fourth edition of Tomes's "System of Dental Surgery," with forty new illustrations; and the seventh edition of "Mechanical Dentistry," considerably enlarged by the author, Mr. Joseph Richardson.

UNIVERSITY OF CAMBRIDGE.—Two reports on degrees for women students have been laid before the Senate. One signed by nine members of the Syndicate advocates the grant of the titles of B.A., M.A., D.Sc., and D. Litt., but no medical or divinity degree, to women who take honours in a Final Tripos Examination after the periods of residence in Cambridge required in the case of men. The other, or minority report, signed by five members, while conceding that it may be desirable to grant an academic title to duly qualified women, whether they have resided in Cambridge or not, proposes that the degree should be a new one, like M.Litt. or M.Sc., which would not suggest membership of the University, with its accompanying privileges in regard to government. The majority report rejects an application from the Royal Holloway College that its students may be deemed eligible for titular degrees. The reports will come before the Senate for discussion on Saturday, March 13th. On Feb. 25th the degrees of Bachelor of Medicine and Bachelor of Surgery were conferred on G. E. Hadow, M.A., Caius; L. B. Rawling, B.A., Caius; and H. W. P. Young, B.A., Caius. Dr. A. W. Williamson, F.R.S., Emeritus Professor of University College, London, has been appointed an Elector to the Chairs of Chemistry and Organic Chemistry (Jacksonian), now held by Professor Liveing and Professor Dewar respectively.

DIPHTHERIA IN LONDON.—Fatal diphtheria showed a most decided rise in London last week as compared with earlier weeks, the deaths registered having been 62, as compared with 46, 37, and 40 in the preceding three weeks. The 62 deaths were 27 in excess of the corrected decennial average for the eighth week of the period 1887-96. Islington and Shoreditch were each credited with 6 deaths, Lambeth and St. Pancras each with 5 deaths, and Poplar, Camberwell, and Lewisham sanitary areas respectively with 4 deaths. The admissions to hospital in the week were 102, against 95, 104, and 104 in earlier weeks, and last Saturday there were 855 patients suffering from the disease under isolation. All the 62 deaths were of young persons aged under twenty years. In the Outer Ring there were 7 deaths registered, 4 of which belonged to the West Ham registration district.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Summer Clothing for the Metropolitan Police.

THE Home Secretary has communicated to those who have been taking an interest in the matter that arrangements have at last been made for the issue of light clothing to the Metropolitan Police for use in the summer months.

Verminous Persons Bill.

A Bill with this title is now before the House of Commons. It was introduced on Monday, March 1st, and its purpose is to permit local authorities to provide cleansing and disinfection for persons infested with vermin.

The Whipping of Prisoners.

Mr. Joseph Pease has introduced into the House of Commons a short Bill "to prohibit the personal correction of prisoners." The Bill is down for second reading upon Tuesday, March 30th.

HOUSE OF COMMONS.

THURSDAY, FEB. 25TH.

The Oyster Question.

Mr. Henniker Heaton asked the President of the Board of Trade whether he was aware that, owing to the publication by the Local Government Board of a report on cholera and of another report on oyster culture in relation to disease, public confidence in the wholesomeness of oysters had been so much impaired that the annual consumption of oysters had fallen off to the extent of three-fourths and a large number of the fishing population had been reduced to distress;

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whether he had observed that the reports alluded to condemn only a few small oyster layings round the coasts of England, while many of the chief layings, including the whole of those on the coast of Kent, were declared free from contamination; whether he was aware that the Kentish layings thus pronounced free from disease were more extensive than all those in the rest of the kingdom put together; and whether he was aware that they had suffered from the lack of demand equally with the polluted layings; whether, with a view to restore public confidence in a valuable article of diet and assist the fishing population, he would recommend the appointment of inspectors of layings, and also of all shops and stalls for the sale of oysters, authorised to enforce such conditions of sanitation as might effectually safeguard the public against disease; whether he was aware that foreign oysters were frequently introduced into this country from polluted layings, and that the only instance of enteric fever in an epidemic form arising in England from oysters was traced to the eating of Dutch oysters; and whether he would, therefore, recommend that it should be made a penal offence to sell oysters brought from foreign layings without declaring their origin at the time of sale and without plainly marking such origin.—Mr. Ritchie replied: I have little doubt that the reports referred to have, to some extent, impaired the confidence of the public in the wholesomeness of oysters, but I venture to think that my hon. friend over-estimates the decrease in their consumption. I am aware that whilst only a certain number of beds are condemned others have suffered from the reduction in demand. The trade has brought the matter to the notice of the President of the Local Government Board, whose province it is to deal with questions affecting the public health; but if it should be found that the Board of Trade can take any useful action in the matter I shall be ready to give careful consideration to any proposals which may be laid before me. As at present advised, I do not think that the marking of foreign oysters would be either feasible or an efficient remedy.

Vaccination in Ireland.

Mr. Gerald Balfour, replying to a question by Mr. Pinkerton, said the Local Government Board in Ireland have power to issue any regulations they think fit to prevent the spread of dangerous infectious diseases such as small-pox, and thus to compel compliance with the vaccination laws. No boards of guardians in Ireland have refused to do their duty in this respect.

Venereal Disease among the Troops in India.

Lord George Hamilton, questioned by Mr. Cameron as to the terms of the reference to the departmental committee on this subject and the intended action of the Government, made the following statement, viz.:—The terms of reference were as follows: To examine the official returns of venereal disease among British troops stationed in India and to report what changes, if any, have taken place during recent years in the prevalence of such disease and in its character and intensity; also, to obtain and report any information which may be available with regard to the presence of venereal disease and its character and intensity among foreign armies. The report is now under my consideration and will be published. The evidence on which it is founded, being almost entirely documentary, has not been separately recorded, but is embodied or referred to in the report. I am at present unable to say what course may be taken by Her Majesty's Government; but undoubtedly the House will have an opportunity of discussing any decision we may arrive at.

FRIDAY, FEB. 26TH.

The London Water Question.

At the commencement of this sitting the Bill of the East London Water Company was read a second time. Mr. Sydney Buxton took the opportunity of saying that he did not intend to oppose the Bill in any way, because it was essential that the company should have the powers they sought to carry out the projected works. But he felt constrained to express the regret which he believed the ratepayers of London felt that the question of the water-supply of the metropolis was being dealt with piecemeal, thus involving great additional trouble and expense. It had been understood that the Government were prepared to deal with the whole question last session, and that not having done so they would have introduced a Bill this session. But it was evident that they did not intend to legislate on the matter. After the motion for the second reading had been agreed to it was decided to instruct the committee to whom the Bill is referred to insert such provisions as will insure the acquisition by the local authority of such a suitable area of open space as in the judgment of the committee ought fairly to be substituted for the common rights proposed to be extinguished under the Bill. These common rights are over land in the neighbourhood of Tottenham, where the company propose to construct a new storage reservoir.

MONDAY, MARCH 1ST.

The Stamping Out of Rabies.

Mr. Bigwood asked the President of the Board of Agriculture whether his department was now prepared to adopt the recommendation of the departmental committee and make a determined effort to stamp out rabies by exercising directly the powers which they already possess under the Diseases of Animals Act.—Mr. Walter Long replied: There appears to me to be great force in the recommendations of the committee, and I am now engaged in the consideration of some of the practical questions which the adoption of those recommendations involves. I hope to be in a position to make some further announcement on the subject at no distant date.

Food Adulteration.

Mr. Kilbride asked the President of the Local Government Board whether a Bill dealing with the adulteration of food would be introduced this session by the Government, and, if so, when; and whether the Bill would embody the recommendations of the committee which considered the question of food adulteration, or whether it would deal with an amendment to the Food and Drugs Act as distinct from the Margarine Act.—Mr. Chaplin said that the question whether a Bill would be introduced in the present session on this subject must depend on the progress made with other Government Bills. The Bill which had been prepared dealt with the subject as a whole, and it would be premature to make any statement on matters such as those referred to in the latter part of the question.

TUESDAY, MARCH 2ND.

Rabies in London.

Mr. Walter Long, replying to a question put by Mr. Stephens, said that fresh cases of rabies had occurred recently within the metropolitan area, and the circumstances of the situation pointed clearly to the necessity for the issue of a muzzling order applicable to the whole of the metropolitan district irrespective of the boundaries of particular local authorities. The form which such an order should take was now engaging his attention, especially with regard to the description of muzzle to be used, and he hoped to be able to make an announcement shortly.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, Bedford-street, Strand, London, W.C.
Wasted Records of Disease. By C. E. Paget. 1897. Price 2s. 6d.

CASSELL AND COMPANY, London.
Clinical Papers on Surgical Subjects. By H. W. Page, M.A., M.C. Cantab., F.R.C.S. 1897.
The Practitioner, edited by Malcolm Morris. July to December, 1896.

CHATTO AND WINDUS, 111, St. Martin's-lane, London.
Herbert Fry's Royal Guide to the London Charities. Edited by John Lane. Thirty-third Annual Edition. 1896. Price 1s. 6d.

CHURCHILL, J. AND A., Great Marlborough-street, London.
A Contribution to the History of the Respiration of Man, being the Croonian Lectures in 1895. By W. Marcet, M.D., F.R.C.P., F.R.S. 1897. Price 12s. 6d.

CLAUSEN, CARLO, Torino.
Archivio Italiano di Otologia, Rinologia, e Laringologia. Vol. 5. 1897.

COBLENTZ, OSCAR, Berlin.
Pathogenese der Mercuriellen Stomatitis und Salivation. Von Dr. Alfred Lanz. 1897.

COX, HORACE, Bream's-buildings, London, E.C.
Pheasants: their Natural History and Practical Management. By W. B. Tegetmeier. Third Edition. 1897. Price 7s. 6d.

FISCHER, GUSTAV, Jena.
Ueber Eierstockstuberkulose. Von Dr. J. Schottlaender. 1897.

HIRSCHWALD, AUGUST, Berlin.
Die Mikroskopische Diagnose der Bösartigen Geschwülste. Von Dr. David Hansemann. 1897.

LEWIN, T., AND CO., Amen-corner, Paternoster-row, London.
International Clinics: a Quarterly Collection of Clinical Lectures. Edited by J. Daland, M.D., Philadelphia, J. M. Bruce, M.D., F.R.C.P. Lond., and D. W. Finlay, M.D., F.R.C.P. Aberd. 1896-97 Series. Vols. I., II., and III. 1896. Price 12s. 6d. net per volume.

LEWIS, H. K., Gower-street, London, W.C.
Ligaments, their Nature and Morphology. By J. Bland Sutton. Second Edition. 1897. Price 4s. 6d.
A Handbook of the Diseases of the Eye and their Treatment. By H. R. Swanzy, A.M., M.B., F.R.C.S.I. Sixth Edition. Illustrated. 1897. Price 12s. 6d.

MEYER, JOH. H., Braunschweig.
Die Farbenblindheit und ihre Diagnose. Von Dr. M. Ohlemann. 1897.

REDMAN PUBLISHING COMPANY, Adam-street, Strand, London.
Anomalies and Curiosities of Medicine. By G. M. Gould, A.M., M.D., and W. L. Pyle, A.M., M.D. Illustrated. 1897. Price 34s.
Injuries and Diseases of the Ear. Being Reprints of Papers on Otology. By Macleod Yearsley, F.R.C.S. 1897. Price 2s.

SCIENTIFIC PRESS, Southampton-street, Strand, London, W.C.
The Menopause and its Disorders. With Chapters on Menstruation. By A. D. Leith Napier, M.D., F.R.C.S. Edin., M.R.C.P. Lond. 1897. Price 7s. 6d. net.

SMITH, ELDER, AND CO., Waterloo-place, London.
An Account of the Life and Works of Dr. Robert Watt. By James Finlayson, M.D. 1897. Price 3s. 6d.

SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE, Northumberland-avenue, London, W.C.
Our Secret Friends and Foes. By Percy F. Frankland, Ph.D., B.Sc. Lond., F.R.S. Third Edition. 1897. Price 3s.

SPOTTISWOODE AND CO., Gracechurch-street, London, E.C.
Minutes of the General Medical Council and its Various Committees and Branch Councils for the year 1896, with 22 Appendices. Vol. XXXIII. 1897.

THE NEW SYDENHAM SOCIETY, London.
A Collection of the Published Writings of William Withey Gull, Bart., M.D., F.R.S. Edited by T. D. Acland, M.D. Memoir and Addresses. 1896.

WHITAKER'S ALMANACK OFFICE, Warwick-lane, London, E.C.
A Directory of Titled Persons for the year 1897. Designed as a Companion to Whitaker's Almanack. Price 2s. 6d.

WRIGHT, JOHN, AND CO., Bristol.
Herbal Simples, Approved for Modern Uses of Cure. By W. T. Fernie, M.D. Second Edition. 1897. Price 6s.
Elementary Bandaging and Surgical Dressing. By W. Pye, F.R.C.S., and G. B. Smith, F.R.C.S. Seventh Edition. 1896. Price 2s.
The Medical Annual and Practitioner's Index. 1897. Price 7s. 6d. net.

The Physician's Formula Book, Fourteenth Edition (McKesson and Robbins, New York, 1897).—Queen Victoria's Bounty, or the Voluntary

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Penny, a Suggestion to John Bull (E. Marlborough and Co., 51, Old Bailey, London, E.C.); price 2d.—The Proposed Jungfrau Railway, rising to an altitude of 13,670 feet, considered from its Scientific, Technical, and Financial Aspects; with maps, plans, &c. (F. Schulthess, Zürich, 1897).—Clinical Excerpts relating to the New Pharmaceutical Products of the Farbenfabriken vorm Friedr. Bayer and Co., Elberfeld, Germany (English Offices, Elberfeld Farbenfabriken Company, St. Dunstan's-hill, London, E.C.).—Archiv für Schiffs- und Tropen-Hygiene unter besonderer Berücksichtigung der Pathologie und Therapie, 1 Band, 1 Heft (Th. G. Fisher and Co., Cassel, 1897).—Chirurgia: Edited by Professor P. E. Diakonov; vol. i., No. 1, (Moscow, Jan., 1897).—Catechism Series: Surgery, part 4 (E. & S. Livingstone, Edinburgh); price 1s. net.—Russian Surgery, Part 13. (St. Petersburg, 1897).—Journal of Medical Chemistry and Pharmacy, (St. Petersburg, Dec., 1896).—Encyclopædic English-German and German-English Dictionary: by Muret-Sanders. Teil II. Deutsch-English (H. Grevel and Co., King-street, Covent-garden, London, 1897). —Moods, their Mental and Physical Character: by F. Phillips (J. & A. Churchill, London, 1897).—Die Chirurgische Asepsis der Hände: von Dr. W. Poten (Williams and Norgate, Henrietta-street, Covent-garden, London).—Die Lepra im Kreise Memel: von Dr. A. Blaschko (Williams and Norgate, London, 1897).—Magazines, &c., for March: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, and English Illustrated Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ASHBY, WM., L.S.A., has been appointed Medical Officer for the Ninth Sanitary District of the St. Saviour's Union, Southwark.

BABINGTON, S. N., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

BARKER, T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Corfe Sanitary District of the Wareham and Purbeck Union.

BINCKES, F. W., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

BURTON, R. G., M.D. Edin., L.R.C.S. Edin., has been re-appointed Medical Officer by the Greenford Urban District Council.

BYASS, THOMAS SPRY, L.R.C.P., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Dorchester District of the Wallingford Union, vice Wm. C. Byass, resigned.

DAWNAY, A. H. P., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

DRINKWATER, R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Llangollen Sanitary District of the Corwen Union.

FAIRBAIRN, J. S., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

GERVIS, F. H., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

GILBERT, L., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

GURNEY, ALEXANDER C., M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior House Surgeon to the Blackburn and East Lancashire Infirmary.

HAMILTON, SAMUEL, B.A., M.B., B.Ch. R.U.I., has been appointed Medical Officer and Public Vaccinator to the Marshfield District of Newport (Mon.) Union.

HEPBURN, WM. A., M.D. St. And., F.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Durham Rural District Council.

HICHENS, P. S., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed Senior Ophthalmic House Surgeon to St. Thomas's Hospital.

HOLDEN, J. F., M.B., C.M. Edin., has been appointed Assistant House Surgeon to the Preston and County of Lancaster Royal Infirmary.

HOME, A. L., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

HOPKINSON, E., B.A. Oxon., L.R.C.P., M.R.C.S., has been appointed Junior Ophthalmic House Surgeon to St. Thomas's Hospital.

JEPSON, EDWD., M.D. Durh., M.R.C.S., has been re-appointed Medical Officer of Health by the Durham Rural District Council.

JONES, C. E., L.R.C.P., M.R.C.S, has been re-appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

JONES, J. M., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Glynceiriog Sanitary District of the Corwen Union.

LOWNE, B. T., M.D. Durh., F.R.C.S. Eng., has been appointed Medical Officer for the Third Sanitary District of the Hartley-Wintney Union.

MACKVOY, H. J., M.D., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

MARTIN, GEO., L.R.C.S., L.R.C.P. Irel., has been appointed Medical Officer to the Cumberland and Westmorland Convalescent Institution at Silloth.

MARTINEAU, A. J., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

MAY, G. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Ware Union, vice H. May.

MONCKTON, WM., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Portishead Urban District Council.

MURRAY, WILLIAM, M.A., M.B., C.M. Aberd., has been appointed Junior House Surgeon to the Preston and County of Lancaster Royal Infirmary, vice T. H. C. Derham.

PARSONS, F. J. C., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health for the Bridgwater Urban and Rural Sanitary Districts.

PATERSON, W. H. J., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

PULLEN, RALPH S. McD., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Provident Institution of the Royal Albert Hospital, Devonport; also Hon. Anæsthetist to the South Devon and East Cornwall Hospital, Plymouth.

RICHARDS, L. W., M.B., B.S. Durh., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

ROBBS, E. C., B.Sc. Lond., M.B. Camb., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Gravesend and Milton Union.

SCATCHARD, J. P., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

SELIGMANN, C. G., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

SHETTLE, R. C., M.D. St. And., M.R.C.S., has been appointed Consulting Physician to the Royal Berkshire Hospital.

SIKES, A. W., B.Sc. Lond., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

STAINER, E., M.A., M.B., B.Ch. Oxon., has been appointed House Physician to St. Thomas's Hospital.

STEPHENSON, D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Soothill Nether Sanitary District of the Dewsbury Union.

STONE, W. G., M.A., M.B., B.Ch. Oxon., F.R.C.S., has been appointed Clinical Assistant in the Special Dephrtment for Diseases of the Ear at St. Thomas's Hospital.

STRANGE, R. G., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

TAYLOR, G. E. O., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

TOMBLESON, J. B., B.A., M.B., B.Ch. Oxon., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

TUKE, A. W., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

WHITTINGTON, R., B.A. Oxon., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for the Diseases of the Skin at St. Thomas's Hospital.

WRIGHTSON, R. B., M.D., B.Ch. Dub., has been re-appointed Medical Officer of Health by the Aldeburgh Town Council.

YOUNG, EDWD., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Hawkhurst Sanitary District of Crowbrook Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BOROUGH OF CREWE.—Medical Officer of Health for the District of the Borough. Salary £300 per annum. Applications to the Town Clerk, Municipal Offices, Earle-street, Crewe.

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £60 per annum, with board, lodging, and washing, but no wine, spirits, or beer.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Assistant House Surgeon for six months. Non-resident. Honorarium of 25 guineas granted conditionally.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician, for six months. Salary at the rate of £30 per annum, and board and residence provided.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Honorary Surgeon.

DUNDEE ROYAL INFIRMARY.—Resident Clinical Assistant. Board, lodging, and washing provided.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Junior Resident Medical Officer. Salary £50.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E. — Four qualified Clinical Assistants and eight unqualified Clinical Clerks in the Out-patient Department.

GENERAL INFIRMARY AT LEEDS.—Qualified Casualty Officer. Salary £100 a year, with board, lodging, and washing.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Knowle, Fareham.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

HULL ROYAL INFIRMARY.—Honorary Assistant Surgeon for the out-patient department, for five years.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT, 26, Margaret-street, Cavendish-square, London, W.—Physician-in-Ordinary. Also a Visiting Physician.

LIVERPOOL ROYAL INFIRMARY.—Honorary Physician.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W. — Assistant Resident Medical Officer for six months. Board, lodging, and washing provided, and an honorarium given at the end of the term of appointment.

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PARISH OF ST. MARY, Islington.—Two Resident Assistant Medical Officers at the Workhouse and Infirmary, St. John's-road, Upper Holloway. Salary of the first Assistant £120 per annum, and of the second Assistant, who will also be required to act as Dispenser of medicines, £80 per annum. Both will be provided with rations, apartments, and washing. Applications to the Clerk, Guardians' Offices, 131, St. John's-road, Upper Holloway, N.

PARISH OF WESTRAY, Orkney.—Medical Officer and Public Vaccinator. Salary as Medical Officer £90 sterling per annum. Applications to Mr. Jas. Sinclair, Clerk, Parish Council, Westray.

RIPON DISPENSARY AND COTTAGE HOSPITAL, Ripon.—Resident House Surgeon and Dispenser; unmarried. Salary £70 per annum, with board and lodging.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant Physician.

ROYAL SURREY COUNTY HOSPITAL, Guildford. — Assistant House Surgeon. Board, residence, and laundry provided. No salary.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Honorarium £10, with board and residence.

SOUTHPORT INFIRMARY.—Junior House and Visiting Surgeon for six months. Honorarium at the rate of £30 per annum. Residence, board, and washing provided.

ST. LUKE'S HOSPITAL, LONDON, S.E.—Clinical Assistant for six months. Board and residence provided.

ST. THOMAS'S HOSPITAL, Albert Embankment, Westminster-bridge, S.E.—Resident Assistant Physician.

TOWNSHIP OF MANCHESTER.—Assistant Medical Officer at the Workhouse at Crumpsall and Resident Assistant Medical Officer at the Workhouse in New Bridge-street, for twelve months. Joint salary of £110 per annum, with furnished apartments, fire, light, washing, and attendance. Applications to the Clerk to the Guardians, Poor-law Offices, New Bridge-street, Manchester.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for twelve months. Salary £60 per annum, with rooms, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

DURRANT.—On Feb. 27th, at Market Harborough, the wife of T. Arnold Durrant, surgeon, of a son.

MCSWINY.—On Feb. 15th, at Strada Cathedrale, Sliema, Malta, the wife of Staff Surgeon McSwiny, R.N., of a son.

MOORE.—On Feb. 23rd, at Oakdene, Walton-on-Thames, the wife of S. J. Moore, M.D., of a son.

RATTRAY.—On Feb. 27th, at Pemberton-gardens, N., the wife of P. W. Rattray, M.A., F.R.C.S., of a son.

MARRIAGES.

BRICKWELL—SANDERS.—On Feb. 24th, at Chigwell Church, Henry Taylor Brickwell, M.R.C.S., L.S.A., Hainault Lodge, to Laura May, eldest daughter of the late Charles Sanders, M.D., the Haylands, Chigwell.

CARGILL—SHEARWOOD.—On March 1st, at All Saints', Colville-gardens, Lionel Vernon Cargill, F.R.C.S., of Stratford-place, W., to Emma, only daughter of the late William Lachlan Shearwood, of Cromwell-road, South Kensington.

DOVASTON—FOSTER.—On Feb. 25th, at Christ Church, Brondesbury, Milward Edmund Dovaston, M.R.C.S., of Hova House, Hove, to Grace Ethel, second daughter of the late Edward Foster, of Berkhampstead.

HIGGINSON—CHARLTON.—On Feb. 17th, at St. Lawrance's Church, Church Stretton, George Higginson, B.A. Camb., M.R.C.S., &c., to Margaret Whitfield, widow of the late Captain Charlton, of the O.S.N. Co., and of Shanghai.

LEIGH-SODIPE—THOMAS.—On Feb. 17th, at Wesley Church, S. A. Leigh-Sodipe, M.B., L.S.A., eldest son of J. S. Leigh, of Lagos, W. Africa, to Sabbina Patience Oyinkou, daughter of the Hon. J. J. Thomas of Lagos.

MADDOX—WHEELER.—At St. Thomas's, Belfast, Ralph Henry Maddox, M.B., Surgeon-Captain, Indian Medical Service, to Lucy Lillian, fourth daughter of the late Walter J. Wheeler, Lennoxvale, Belfast.

MAYNARD—BISHOP.—On Feb. 25th, at St. Mary Abbot's, Kensington, Edward Charles Maynard, M.R.C.S., L.R.C.P. Edin., of Richmond, Surrey, to Kate, only daughter of the late William J. Bishop, of Richmond, Surrey.

MEYRICK-JONES—BLYTH.—On Feb. 24th, at St. Mary's, Chelmsford, Hugh M. Meyrick-Jones, M.B., B.S., of Guilsborough, Northampton, to Georgiana, daughter of the late Robert Blyth, Solicitor, of Chelmsford.

ROBINSON—STEVENTON.—On Feb. 25th, at St. Andrew's Church, Stockwell, J. C. Reynolds Robinson, M.R.C.S., L.R.C.P. Lond., to Bertha Mary, second daughter of the late William Steventon, M.D., Inspector of Hospitals, Jamaica.

DEATHS.

FASKEN.—On Feb. 1st, at Futtehgurh, North-West Provinces, India, Surgeon-Lieutenant-Colonel Fasken, M.D., elder son of William Fasken, M.D., Deputy-Inspector-General of Hospitals and Fleets, R.N., aged 48 years.

WAY.—On Feb. 21st, at Warrigl, on service with Benin Expedition, Surgeon Richard Henry Way, R.N., M.R.C.S., L.R.C.P., formerly of Wincanton, Somerset, aged 29 years.

WRIGHT.—On Feb. 26th, at Ellerdale-road, Hampstead, N.W., J. C. Hornsby Wright, Deputy-Surgeon-General, aged 66 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.). City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (10th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (11th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (13th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (8th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. C. B. Lockwood: A Review of the Operation for Excision of the Knee, together with an account of a new procedure (Osteo-plastic Excision of the Knee).—Mr. C. Dent: Some Cases of Intestinal Neurosis.

TUESDAY (9th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. H. E. Durham: On the Clinical Bearing of some Experiments on Peritoneal Infection.—Mr. A. Marmaduke Sheild: A Case of a Large solid Tumour removed with success from the Retro-peritoneal Space.

WEDNESDAY (10th).—HUNTERIAN SOCIETY.—Pathological Evening. Dr. A. T. Davies: Ulcerative Endocarditis. Also specimens by Dr. F. J. Smith, Mr. T. H. Openshaw, and Mr. A. H. Tubby.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens:—Mr. K. Gordon: Specimen of the Pharynx from a Fatal Case of Scarlet Fever, treated by Anti-streptococcic Serum.—Dr. L. Lack: Case of a Man after Operation for Sarcoma of Nose, with microscopic specimen.—Dr. D. Grant: (1) Case of Anterior Turbinotomy in an Elderly Man; (2) Case of Anterior Turbinotomy in a Female Patient; (3) Case of Functional Aphonia with Ventricular Band Phonation in an unmarried middle-aged Female.—Dr. J. B. Ball: Case of Chronic Laryngitis in a Man aged twenty-five years.—Mr. H. T. Butlin: Case of Sarcoma of Larynx in a Man aged about forty years.—Dr. St. Clair Thomson: A Man, aged fifty-seven years, who has had Double Abductor Paralysis apparently for twenty-six years, no Tracheotomy; he now presents himself for a new Growth at Base of Tongue.

SOUTH-WEST LONDON MEDICAL SOCIETY (Surveyor's and Sanitary Offices, High-street, Wandsworth).—8.30 P.M. Mr. E. Owen: A Common and an Acute Inflammation of the Bones of Children and Young Persons which sometimes escapes recognition.

THURSDAY (11th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Specimens:—Mr. Mayo Robson: (1) Case of Porro's Operation for Suppurating Ovarian Tumour completely blocking the Pelvis, Recovery of Mother and Child; (2) Tubal Mole associated with extensive Intra-peritoneal Hæmatocele.—Dr. Purcell: Myoma Uteri removed by Pan-hysterectomy. Papers:—Dr. Armstrong: On Dr. Beatson's Treatment of Inoperable Cases of Cancer of Mamma.—Dr. Snow: On the Value in Abdominal Malignant Disease of Exploratory Laparotomy *per sc.*

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8 P.M. Card Specimens: Mr. H. Juler: Case of Supposed Congenital Pigmentation of the Retina. 8.30 P.M. Discussion of Retro-ocular Neuritis. Speakers: Mr. M. Gunn, Dr. Buzzard, Dr. Gowers, Mr. G. A. Berry, Dr. Griffith, and others.

FRIDAY (12th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. E. W. Goodall: A Case of Scarlet Fever in which Death was due to Spontaneous Thrombosis of the Veins of Galen.—Dr. A. E. Garrod: A Case of Sclerema Neonatorum.—Mr. C. B. Lockwood: A Case of Peripheral Hyperostosis considered in relation to Pulmonary Hypertrophic Osteo-Arthropathy.—Dr. H. D. Rolleston: A Case in which excessive Urobilinuria followed and apparently depended on the Administration of Trional.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (8th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. A. W. Mayo Robson: Diseases of the Gall Bladder and Bile Ducts, and their Surgical Treatment.

LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Stoker: Chronic Glandular Diseases of the Nose and Naso-Pharynx.

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TARY INSTITUTE (Parkes Museum, Margaret-street, W.).—Prof. A. Bostock Hill: Factories, Workshops, and Offensive

(9th).—LONDON POST-GRADUATE COURSE.—Bethlem Hos-.M., Dr. Craig: Delusional Insanity, Paranoia.—Hospital Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Lichen nd Accuminatus.

L LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. : The Diagnosis and Treatment of Aural Vertigo.

AL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Blooms-.—3.30 P.M. Mr. Horsley: Lecture.

ND HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, eck-street).—4 P.M. Dr. T. Dixon Savill: On Cases of Muscular or.

INSTITUTION.—3 P.M. Prof. A. D. Waller: Animal Electricity.

SDAY (10th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. . Mayo Robson: Diseases of the Gall Bladder and Bile Ducts, their Surgical Treatment.

ON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, 4.30 P.M., Prof. A. Wynter Blyth: Sources of Water.

ITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Habershon: hological Demonstration.

SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—0 P.M. Mr. W. G. Lacy (conducted by): Inspection and Demonstration of Disinfecting Apparatus and Model Steam Laundry at St. hn's Wharf, Fulham. 8 P.M. Mr. B. Latham: Indian Sanitation.

IETY OF ARTS.—8 P.M. Mr. F. Bathurst: The Prevention of Fires ue to the Leakage of Electricity.

RSDAY (11th).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. W. ollingridge: On Quarantine. (Milroy Lecture.)

NDON POST-GRADUATE COURSE.—Brit. Inst of Preventive Medicine, t. Russell-st., W.C., 3 30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: On Sugar and other Reducing Substances found in the Urine of Disease.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Cantlie: Supra-Hepatic Abscess.

HE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. J. O. Smith: Construction and Arrangements of School Buildings.

ROYAL INSTITUTION.—3 P.M. Prof. P. Gardner: Greek History and Extant Monuments.

SOCIETY OF ARTS.—4.30 P.M. Sir C. A. Elliott: Prevention of Famine in India.

IDAY (12th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. A. W. Mayo Robson: Diseases of the Gall Bladder and Bile Ducts, and their Surgical Treatment.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Tuberculosis and Leprosy.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Ballance: Lecture.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. W. H. Elam: Cancer of the Gall Bladder.

ROYAL INSTITUTION.—9 P.M. Prof. A. Smithells: The Source of Light in Flames.

SATURDAY (13th).—ROYAL INSTITUTION.—3 P.M. Right Hon. Lord Rayleigh: Electricity and Electrical Vibrations.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Inspection and Demonstration at Aylesbury Dairy Co.'s Premises, Bayswater (number limited).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 4th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 26	30·17	S.W.	52	49	93	60	49	...	Cloudy
,, 27	30 30	N.	48	45	75	53	47	...	Fine
,, 28	30·25	E.	43	41	74	50	39	0·07	Cloudy
Mar. 1	29·55	S.W.	42	40	90	53	40	0·36	Cloudy
,, 2	29·74	W.	40	38	83	50	36	0 39	Hazy
,, 3	29 75	S.W.	43	40	55	43	38	0·13	Stormy
,, 4	29 49	S.W.	40	38	48	45	37	...	Overcast

During the week marked copies of the following newspapers have been received:—*Glossop Times, Huntly Express, Derbyshire Times, Brighton Gazette, Richmond Herald, Surrey Comet, Hereford Times, Chatham News, Worcester Herald, Kidderminster Shuttle, Salisbury Journal, Herne Bay Argus, Times of India, Pioneer Mail, Worcestershire Advertiser, Newcastle Journal, Cheltenham Mercury, Kentish Express, Liverpool Daily Post, Hastings News, Scotsman, Western Morning News, Rocket, Bedfordshire Mercury, Architect, Rochester Journal, Oban Times, Birmingham Mail, Eastern Morning News, Yorkshire Post, Somerset County Herald, Wolverhampton Chronicle, Builder, Leicester Post, Leeds Mercury, Forfar Herald, Salisbury Journal, Manchester Courier, Australian Register, Sussex Daily News, Leamington News, Bristol Mercury, Portsmouth Times, Oldham Standard, Oswestry Advertiser, Express and Star, Sheffield Telegraph, Richmond Herald, Bristol Times, Gillingham Record, Carlisle Express, Litchfield Mercury, Sanitary Record, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Mining Journal, Reading Mercury, Educational Times, City Press, Cape Times, Hertfordshire Mercury, Carlisle Patriot, Local Government Journal, Surrey Advertiser, West Middlesex Herald, East Anglian Daily Times, Devon and Exeter Gazette, Pioneer, Public Health, Stroud Journal, &c., &c.*

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

"THE HIPPOCRATIC REVIVAL."

Indian.—The translation referred to in the Annotation under the above heading is that of Dr. Robert Fuchs, whose work is thus entitled: "Hippokrates' sämmtliche Werke ins Deutsch übertragen und ausführlich commentirt von Dr. Rob. Fuchs." (The collective works of Hippocrates translated into German and fully annotated by Dr. R. Fuchs.) It will consist of three volumes octavo, two of which are already published—Vol. I. costing 11 fr. 80 centimes, and Vol. II. 13 fr. 40 centimes. The translation improves upon (though it does not supersede) its predecessor—viz, that of Littré in French, and that of Dr. Francis Adams in English, the former (with revised text), published by Baillière, the latter (without text) by the old Sydenham Society. Even Dr. Fuchs's version will, in turn, have to be revised on the completion of the new recension of the Greek text by Kuhlewein, of which the first volume appeared rather more than a twelvemonth ago in the Bibliotheca Scriptorum Græcorum et Latinorum (Teubner, Leipzig).

M.D.—It is better to choose the school before purchasing particular text-books. All the principal London hospitals provide the necessary facilities for study. Our correspondent is advised to consult our most recent Students' Number (Sept. 5th, 1896), where he will find the scale of fees at the various hospitals and notes upon the most valuable text-books. The best course will be to settle upon the particular school first and then consult the Dean of the School concerning the date at which it will be advisable to enter and the classes that should be attended. Different lecturers prefer different text-books.

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"DR. RENTOUL'S EXPENSES FUND."—THIRD LIST.

To the Editors of THE LANCET.

SIRS,—The following list contains all sums to hand up to date. Very little more than half the sum required has been subscribed. If the remaining 6500 or so of Dr. Rentoul's voters will send in a small subscription—even one shilling each—our object will be more than attained. I am, Sirs, yours faithfully,

Gateshead, Feb. 23rd, 1897. ALFRED COX, M.B. Durh., Hon. Sec.

	£	s.	d.
J. T. Abbott and F. Routch, Tunbridge Wells	0	10	0
A. J. D.	0	2	6
S. Alexander, Bromley, E.	1	1	0
T. M. Allison, Newcastle-on-Tyne	0	10	6
C. A. Anderson and A. A. Watson, Burnley	0	10	6
R. S. Anderson, Spennymoor	0	5	0
W. Aspinall, Haslingden, Lancs...	0	5	0
E. C. Barnes, Hammersmith-road, London ...	0	5	0
W. W. Baxter, Manningtree, Essex	0	5	0
T. Carlyle Beatty, Clacton-on-Sea	0	5	0
T. Benson, Stanley, Durham	1	0	0
H. C. Bevan, Blaina, Mon.	0	5	0
J. H. Blight, Cardiff ...	0	5	0
J. D. Boyd, Tyldesley ...	0	2	6
C. F. Brookhouse, Brockley, S.E.	0	5	0
George Brown, Denby Dale, Huddersfield ...	0	5	0
J. H. Buchanan, Sowerby, Thirsk	0	5	0
W. M. Buxton, Blackpool	0	2	6
C. E. A....	0	2	6
J. Charles and D. A. Dewar, Stanley, Durham	0	10	0
C. K. T.	0	2	6
J. Crocker, Bingley	0	2	6
John Cunnigham, Sunderland	0	10	6
T. Davies, Whittlesey, Peterborough	0	2	6
E. H. Davis, West Hartlepool	0	10	0
A. A. G. Dickey, Colne ...	0	5	0
E. W. Diver, Jarrow ...	0	2	6
J. U. Duff, Whitehaven...	0	5	0
E. E. Dufty, Masborough	0	7	0
W. J. Durant, Gateshead	0	10	6
C. W. Evans, Bakewell ...	0	2	6
M. G. Evans, Caerphilly	0	5	0
F. C. L....	0	5	0
J. B. Fisher, Whitehaven	0	5	0
Thomas Fort, Oldham ...	1	1	0
Alfred Freer, Stourbridge	0	10	0
Thomas Gallacher, Sherburn-hill, Durham ...	0	5	0
W. Galloway, Wrekenton, Gateshead	0	10	0
H. E. Gamlen, Hartlepool	0	10	6
E. B. Garland, Bristol ...	0	2	0
G. G. S. T.	0	5	0
H. J. Gilbert, Gateshead	0	5	0
H. Gough, Barnton, Northwich	0	5	0
A. Green, Gateshead ...	0	10	6
H. Habgooed, Eastbourne	0	5	0
J. G. Hall, Swansea... ...	0	10	0
James Haworth, Filey ...	0	5	0
J. T. Haworth, Filey ...	0	5	0
J. N. Hawtin, Leeds ...	0	5	0
P. Z. Hebert, Berners-street, W....	0	5	0
John Hedley, Middlesboro'	0	10	6
W. A. Hepburn, Coxhoe, Durham	1	1	0
Joseph E. Holden, Preston	0	5	0
Robert Howard, Hyde, Cheshire	0	5	0
H. S., Leeds	0	10	0
A. J. Hubbard, Hemel Hempstead	0	10	6
T. S. F. Hudson, Tipton...	0	10	0
H. O. Hughes, Abergele...	0	10	0
K. Marion Hunter, Heathcote-street, W.C.	0	10	0
D. W. Inglis, Hebburn-on-Tyne	0	2	6
J. B. Isaac, Broadmoor, Crowthorn	0	5	0
J. A. B.	0	5	0
W. H. Jalland, York ...	0	10	0
A. Jolly, Sefton Park, Liverpool...	0	10	0
R. Thomas Jones, Penygarth, Harlech	0	5	0
S. Edwards Jones, Bangor, Isycoed	0	10	6
J. H. Keeling, Sheffield...	2	2	0
J. J. Lace, Frizington ...	0	2	6
H. A. Latimer, Swansea...	0	2	6
R. R. Law, Sidcup	0	2	6
J. Lawrence, Darlington	0	2	6
H. A. Lawton, Poole ...	0	2	6
Henry Longford, Thirsk	0	2	6
Alfred T. Lowe, Boothstown, Manchester... ...	0	5	0
J. B. Lyth, Rotherham ...	0	5	0
J. G. Macaskie, Bamburgh	0	3	0
D. Mackechnie, West Hartlepool	1	1	0
John Macphail, Barnsley	0	5	0
F. Macpherson, Liverpool	1	1	0
G. W. Malins, Rochdale...	1	0	0
Jas. McArdle, Durham ...	0	10	6
G. W. McOoull, Stocksfield-on-Tyne	0	10	0
W. McGeagh, Liverpool...	0	10	0
C. H. Miles, Stentonbury	0	5	0
G. Victor Miller, Stockton-on-Tees	0	5	0
S. Moore, Holbeck, Leeds	0	5	0
Thos. Moreton, Hartford, Cheshire	0	10	6
W. Vincent Morgan, Narberth, Pembroke	0	2	6
T. A. Mulcahy, Portsmouth	0	5	0
J. O'Connor, St. Anne's-on-Sea	0	2	6
E. J. O'Mullane, Nottingham	0	1	0
J. W. Paton, Rockferry ...	0	5	0
J. R. Philpot, Parkstone, Dorset	0	5	0
G. O. Pidcock, Hampstead	1	1	0
J. R. Polson, Worcester...	1	1	0
J. Hope Potter, Cullompton	0	5	0
J. M. Pringle, Lambley, Carlisle	0	2	6
Arthur I. Richards, Collyhurst, Manchester ...	0	2	6
J. W. Robey, Hyde	0	5	0
J. W. Roe, Ellesmere ...	1	0	0
J. F. Ronayne, Liverpool	0	10	6
Jos. H. Rowe, Cowling, Keighley	0	10	6
W. H. Rowthorn, Masborough	0	2	6
A. Hall Ryall, Hunslet, Leeds...	0	10	6
W. G. Scarth, Woodhouse Hall, Leeds	0	5	0
C. B. Scott, Brighton ...	0	5	0
W. W. Scott, Brighton ...	0	5	0
H. Shelmerdine, Bexleyheath	0	2	6
W. T. Sheppard, Liverpool	0	10	6
H. Smith, Durham... ...	0	5	0
J. Barker Smith, Herne Hill, S.E....	0	2	6
C. E. Solomon, Liverpool	0	10	0
W. H. Spurgin, Newcastle-on-Tyne	0	10	0
J. A. Stewart, Normanton, Yorks	0	5	0
F. E. Lee Strathy, Harborne, Birmingham ...	0	7	6
Alfred Sutcliffe, Burnley	1	1	0
R. Jocelyn Swan, Camberwell New-road, S.W.	0	10	0
J. C. Sykes, Cleckheaton	0	7	6
Lawson Tait, Birmingham	1	1	0
W. A. U. Thomas, Maidenhead...	0	3	0
Alfred Taylor, Bolton ...	0	7	6
C. Bell Taylor, Mapperley Park, Notts	1	1	0
R. H. Taylor, Liverpool...	0	5	0
D. McVeagh, Coventry ...	0	5	0
C. Vokes, Lozells, Birmingham...	0	2	6
H. Walker, Hammersmith-road, London	0	5	0
W. Wallis, Groombridge	0	2	6
W. H.	0	5	0
Widnes Medical Society, per O. H. Edwards ...	1	1	0
Dr. Franklin Williams, Liverpool...	0	10	0
J. P. Wills, Bexhill	0	5	0
Philip Wilmot, King's Lynn...	0	10	0
Alfred J. Wright, Leicester	0	5	0
W. E. Wyllys, Gt. Yarmouth	0	10	6

THE NEW MORALITY.

UPON Feb. 23rd Mr. Millson, the medical officer of health for ton, made an application for the immediate burial of a ch had died from measles. The child had died on the 5th, and lying in the mortuary since the 12th. The parents were to bury the body, and the relieving officer refused to bury th without an order, because the parents were unmarried a Guardians considered that to bury the child at the expense parish would be to encourage people to live in a state of concub The next Burials Bill might well contain a clause to prevent idiotic conduct in future.

Hillary-street.—We do not think any useful purpose would be se by publishing the letter. It might provoke correspondence o acrimonious sort.

Locum T.—The clinical practice of a hospital is generally open to old students of that hospital. The London Post-Graduate Col might be of service to our correspondent, who should apply prospectus, &c., to Dr. Fletcher Little, 32, Harley-street, Cavendi square, W.

JAMES BARRY, M.D., THE FEMALE MEMBER OF THE ARM MEDICAL STAFF.

To the Editors of THE LANCET.

SIRS,—A few months ago some letters appeared in THE LANCE commenting upon the career of the late Dr. Barry, Inspector-Genera of Hospitals. I have just finished a charming book, "Fifty Years o my Life," by the Earl of Albemarle, and extract from p. 96, vol. ii., the following note which will no doubt interest some of your readers. Lord Albemarle was at the time returning from the Mauritius to England with his regiment, stopping while *en route* at the Cape, where he was a frequent guest of the then Governor-General, Lord Charles Somerset. He writes:—

> "There was at this time at the Cape a person whose eccentricities attracted universal attention—Dr. James Barry, staff surgeon to the garrison and the Governor's medical adviser. Lord Charles described him to me as the most skilful of physicians and the most wayward of men. He had lately been in professional attendance upon the Governor, who was somewhat fanciful about his health; but the Esculapius, taking umbrage at something said or done, had left his patient to prescribe for himself. I had heard so much of this capricious yet privileged gentleman that I had a great curiosity to see him. I shortly afterwards sat next him at dinner at one of the regimental messes. In this learned Pundit I beheld a beardless lad, apparently of my own age, with an unmistakeably Scotch type of countenance—reddish hair, high cheek-bones. There was a certain effeminacy in his manner which he seemed to be always striving to overcome. His style of conversation was greatly superior to that one usually heard at a mess-table in those days of non-competitive examination.
>
> "A mystery attached to Barry's whole professional career, which extended over more than half a century. While at the Cape he fought a duel, and was considered to be of a most quarrelsome disposition. He was frequently guilty of flagrant breaches of discipline, and on more than one occasion was sent home under arrest, but somehow or other his offences were always condoned at headquarters.
>
> "In Hart's Annual Army List for the year 1865 the name of James Barry, M.D., stands at the head of the list of Inspectors-General of Hospitals. In the July of that same year the *Times* one day announced the death of Dr. Barry, and the next day it was officially reported to the Horse Guards that the doctor was a woman. It is singular that neither the landlady of her lodging nor the black servant who had lived with her for years had the slightest suspicion of her sex. The late Mrs. Ward, daughter of Colonel Tidy, from whom I had these particulars, told me further that she believed the doctor to have been the legitimate granddaughter of a Scotch earl, whose name I do not now give, as I am unable to substantiate the correctness of my friend's surmise, and that the *soi-disant* James Barry adopted the medical profession from attachment to an army surgeon who has not been many years dead."

In later years when he visited Constantinople he met with another member of the same sex who had gone through some curious vicissitudes in the combatant line, Madame la Comtesse de Guilleminot, wife of his Excellency General Count de Guilleminot, Charles X.'s representative at the Porte. Of this lady he writes: "Nor was she, like her husband, any stranger to the battlefield. At the breaking out of the French Revolution she and her sister, les demoiselles Fering, entered Dumouriez' army as privates in a hussar regiment. They shared in most of the French victories at that period. Their gallantry in the field soon obtained for them commissions. The sister of Madame de Guilleminot was killed at the battle of Valmy (1792). One of the sisters—I forget which—received a sword of honour for her conduct in the face of the enemy. In the dignified and graceful deportment of the ambassadress of a Royal Court it was difficult to realise the idea of the young Republican *sabreuse*."—I am, Sirs, yours truly,

ALBERT A. GORE, Surgeon-Major-General.

Calcutta, Jan. 24th, 1897.

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THE GENEROSITY OF JOHN ANDREWS, POTATO MERCHANT.

A CORRESPONDENT has sent us the following advertisement from a local paper:—

FREE Medical Attendance and Medicine.—Having succeeded in engaging the services of an eminent and very successful Professional Gentleman, I offer the above to all my customers.—John Andrews, Wholesale and Retail Provision and Potato Merchant, Lincoln-road, Fratton.

John Andrews's "eminent and very successful Professional Gentleman" is, of course, a quack, as no registered practitioner would lend his assistance to such a scheme for the inflation of the potato merchant's business. We ask John Andrews, therefore, how he will feel if his proprietary quack should kill some poor potato purchaser, either directly by administering the wrong remedy, or indirectly by preventing application to a properly informed practitioner. There is nothing in the business of a potato merchant calculated to steel the vendor's heart against human misery. Why, then, should John Andrews desire to inflict upon his customers the miseries that spring from quackery? But, to leave humanitarian questions aside and come to cold commercial reasoning, is John Andrews's departure likely to lead him to wealth? We think not. Personally we should prefer to get our potatoes where the price paid was made up to us in the sterling worth of the tubers. If we were offered more than potatoes for our money we should suspect that the potatoes were not worth the money asked for them, so that something had to be added. We should suspect, in this instance, that the wages of the quack had to come out of the price paid for the potatoes and should seek a market where the vendor's methods led to no suspicion of the excellence of his wares.

R. D. writes:—"Will any of the readers of THE LANCET kindly inform me how Sanguinal s prepared, its chemical composition and dose?"

M.D. asks if any readers of THE LANCET can refer him to literature on the subject of the progress of medicine during the present century?

Ignoramus.—The case is apparently one of molluscum fibrosum.

"ANTISEPTIC MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 27th, 1897, Dr. Playfair recommends a solution of "Creoline" as an efficient antiseptic for vaginal injections and ablution of the genitals. Before adopting "Creoline" one would like to know something more about its bactericidal and spore-killing properties. If a solution of 1 in 50 carbolic acid is not now recommended by Dr. Playfair as a reliable antiseptic, what strength of the "Creoline" solution would be necessary to fulfil the requirements?—I am, Sirs, yours truly,

Huyton, March 1st, 1897. R. L. WOOD.

To the Editors of THE LANCET.

SIRS,—I fear we have got into a maze over this perchloride of mercury as an antiseptic in midwifery. In THE LANCET of Feb. 20th we find Dr. Clement Godson writing: "Why the sublimate treatment should not be 'universally' adopted in private practice I am at a loss to understand," and in the very next issue of the same paper an equally eminent authority in the person of Dr. Playfair tells us "he should not recommend it as a thoroughly reliable antiseptic." I shall not place myself in the invidious position of the "fool stepping in where angels fear to tread," but will leave to those gentlemen the settlement of the question. I would, however, draw Dr. Playfair's attention to the fact that in quoting from his work of 1886 I gave the above date.

I am, Sirs, yours faithfully,

Ballincollig, March 2nd, 1897. JAMES J. HARDING.

X. Y. Z.—The medical man having been engaged must be paid. His services really begin with the arrangement entered into for attendance, and not with the first medical visit. But if before his medical services are required he should contract any illness, the nature of which would make it reasonably likely that he would not be well enough to fulfil his part of the engagement, the propriety of his resigning the case becomes obvious. The patient, however, should certainly make no arrangement with another medical man without communicating with the medical man engaged and ascertaining if he is able and willing to attend. The merits of the case rest on the special circumstances—the nature of the illness, for example.

PROOFS BEFORE LETTERS.

A MEDICAL man has in his possession two engravings after Gustave Doré's popular pictures "The Dream of Pilate's Wife" and "Moses and Aaron before Pharaoh." Both prints are proofs before letters, duly signed by the artist, and in perfect condition. The original cost was twenty-four guineas, and the owner will refuse no reasonable offer.

R. H.—It is difficult to lay down any general rule in this matter, but a completely malted or cooked food is probably more suitable since free undigested starch is not found in normal or natural infants' food.

A STRANGE CASE OF A FORGED MEDICAL CERTIFICATE.

A MAN, about thirty years of age, went to Llandaff, in Glamorganshire, on Jan. 20th and took lodgings, giving the name of "Jenkins." On Jan. 29th he removed to other lodgings, and on Feb. 8th he was found dead in bed. No papers were discovered in his possession except a certificate, which was as follows: "47, Bessborough-gardens, S.W., Jan. 2nd, 1897.—This is to certify that Mr. Jenkins is suffering from heart disease and may die at any moment.—R. N. Smith." On inquiries being made by the London police Mr. Nitch-Smith stated that the certificate was a forgery. It had apparently been written out or copied by the deceased himself, as it was in the same handwriting as the name "W. Jenkins" borne by the label on his portmanteau. His linen had been originally marked "W. Cross," but the name "W. Jenkins" had lately been written over these words. From this and some other facts the coroner, Mr. Bernard Reece, came to the conclusion that the name of the deceased was probably Cross, and he advised the jury to state in their verdict "that he was an unknown male person, that he was found dead in bed, and that he had died from rupture of the aorta." It was subsequently discovered that the deceased's name was Cross and that he came from York. The post-mortem examination showed that the medical certificate contained a correct diagnosis, but it has not been ascertained how the name of Mr. Nitch-Smith came to be attached to it, neither is it known why the deceased carried it about with him.

Dr. Tucker Wise thanks the numerous correspondents who have been good enough to reply to his inquiry respecting a convalescent home for a lady and her daughter. The ladies are now suited.

Mr. Norman B. Elliot.—The secretaries of the various associations will send their prospectuses. Our correspondent probably refers to a report made by THE LANCET on the relation of the medical profession to many of these associations. This report is published at the office of THE LANCET, price 1*s.*

FALSE COLOURS.

To the Editors of THE LANCET.

SIRS,—My attention has been called to your perfectly unexceptionable reply to a correspondent in THE LANCET of Feb. 27th. You say "the name of H. S. Schultess-Young, M.D., does not appear in the Medical Register." Of course it does not, nor on the roll of the Jockey Club, nor in that of aldermen who have passed the chair. But inasmuch as it might be hastily inferred that I have ever represented myself as an M.D. *tout court* or by any inference upon the Medical Register, allow me to contradict that supposition with great emphasis. Nor do I know of any person who has even by inference so described me. I have the misfortune to differ greatly from the orthodox medical man. Up to a certain point I have gladly undertaken and passed the admirable examinations imposed by the Conjoint Board, but beyond this the principles which I hold with the minority will not allow me to go. At the same time, I respect the opinion of the recognised medical professional world and do not seek to run counter to it. I claim no connexion with the British medical fraternity, but it is with regret. And the fact being as I have stated, you will, I hope, allow me the advantage of so assuring your professional readers, many of whom I am proud to claim as friends.

I am, Sirs, yours truly,

H. S. SCHULTESS-YOUNG, M.A., Balliol College, Oxon., Barrister-at-Law.

Essex-court, Temple, E.C., March 2nd, 1897.

*** We received from a correspondent a printed notice announcing a meeting of the National Anti-vaccination League. This notice gave a list of gentlemen who would support the chairman on the occasion. The last name in that list was "H. S. Schultess-Young, Esq., M.A., M.D.," and we were asked if the description was accurate. Our answer intimated that we believed the National Anti-Vaccination League to have misrepresented Mr. Schultess-Young's professional position and to have introduced that gentleman to the public under false colours, and we are glad to see that it was a correct answer. Mr. Schultess-Young is not a member of the Jockey Club, he tells us. Would he consider it fair of an Anti-Gambling League to announce him as a supporter *and* a member of the Jockey Club?—ED. L.

Phenad writes:—"Can any reader kindly tell me where, in Charcot's works, can be found his writings on Traumatic Neurosis and the Wasting of Muscles connected with that condition?"

M.R.C.S., L.S.A.—If the other medical man declined to meet our correspondent, it seems to us that our correspondent was at liberty to attend the case on his sole responsibility. The affair seems a very small one to cause anything like friction between two gentlemen of the same profession, and it is quite possible that the patient has caused the trouble by not understanding all the amenities.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

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ON

QUARANTINE.

Delivered at the Royal College of Physicians of London,

BY WILLIAM COLLINGRIDGE, M.A., LL.M., M.D., D.P.H. CANTAB.,

MEDICAL OFFICER OF HEALTH OF THE PORT OF LONDON.

LECTURE I.[1]

Delivered on March 11th.

MR. PRESIDENT AND GENTLEMEN,—I have, in the first place, to express my gratitude for my nomination to the honourable position of Milroy lecturer. I have selected as a subject Quarantine, limiting myself almost entirely to the progress of this system in England, its development, and subsequent supersession by the more rational system of medical inspection—a supersession which has only become possible on account of the great attention which in recent times has been paid to the sanitation of the country generally and to the gradual but steady growth of public opinion, which has been taught to rely upon the general health conditions of the whole country as the only means of preserving the people from the ravages of epidemic disease. I was led to choose this subject, not only because I deem it to be of the utmost practical importance to a commercial country, but also of the close connexion of the subject with the name of Dr. Gavin Milroy, the founder of these lectures. To his labours to overthrow an obsolete and oppressive system and to further the interests of commerce without jeopardising the public health is due to a large extent the present free and unrestricted intercourse enjoyed with all parts of the world by our merchant navy. Though it was not his lot to see the full fruition of his work, his name will always be honourably associated with the public health defence of the nation, to the furthering and the development of which he freely devoted so large a portion of his life work. The laws of quarantine, whatever form they may take, are framed with the idea of protecting a nation from the importation of disease, a risk which is practically in proportion to the extent of its trade. Such regulations are sanctioned in principle by international law, which, recognising the necessity for the constant interchange of goods and commodities between various States, allows each country to protect itself in any way that it may deem fit or expedient. Thus, whatever restrictions any one State may adopt, these must be submitted to by all others as the only conditions under which trade with such a State is possible. It is true that from time to time representations have been made by our Government to induce the relaxation of some unusually harsh or stringent regulation, but this has only been as a question of grace or favour when there appeared to be some exceptional reason, and not as a matter of international right.

Few subjects can have the same vital interest for a country such as England (whose very existence depends upon her commercial intercourse with other countries) as quarantine. On the one hand is the extreme importance of free and untrammelled commerce, and on the other the no less essential point of safeguarding in every possible way the public health. England, enjoying as she does trade with every part of the known world, is from this very fact exposed at all times, though with varying intensity, to the danger of the importation of epidemic disease. The history of quarantine in this country is that of a long and fierce struggle between these two great interests, which for many generations have been deemed to be more or less in conflict, but which the advancement of science and the development of rational principles have eventually brought into harmony and accord. It can be shown that the antagonism of these interests is more apparent than real, and it has happily been demonstrated that the utmost freedom of the trade of the country can be best promoted by the very means adopted for the preservation of the public health. It has frequently been asserted that quarantine is essentially a modern institution and that only within the last four hundred years has the system been actually in force. Thus thirty-five years ago a writer on quarantine says: "Quarantine has no ancient origin. In vain do we consult any of the writers of ancient or even middle ages for any traces of this system. In ancient times there were no bills of health or passports. The traveller passed from country to country unquestioned. There were at this time no officers of health or policemen. In the best days of Greece and Rome there were no lazarets, nor imprisonment of sick or healthy. The Mediterranean was indeed an open sea, and persons enjoyed free communication thereon. So recently as the fifteenth century was the first interruption to this state of affairs.'[2] This, however, is scarcely an accurate statement of the facts. In an elementary and crude form health precautions were taken long before this period, though obviously in the days when commerce (especially at sea) was in its infancy such measures were but imperfect, and necessarily attracted but little attention. Further, it is clear that so long as epidemics were deemed to be direct visitations of the Almighty as a punishment for some national offence, and the influence of communication by human agency was not recognised, it was not to be expected that any complete system should be in vogue for attempting to arrest the spread of disease. In connexion with quarantine it is not possible to overlook the directions given by the ancient lawgiver Moses, by which the Israelites became possessed of a code of sanitary law which, when divested of the ritual with which it was clothed, remains to this day as inculcating an example of a standard of sanitation which has scarcely been excelled by any nation, and certainly not yet reached by many who boast themselves of their civilisation. While there has been much discussion as to the nature of the disease referred to as leprosy in Leviticus xiii. and xiv., the position of the priest was clear. Acting with direct Divine authority, his duty was to examine each suspected case and decide as to whether the patient was suffering from the true disease or not. If the diagnosis was certain, then the sick man was declared unclean and was compulsorily isolated: "he is unclean, he shall dwell alone, without the camp shall his habitation be." If there was any doubt as to the nature of the disease, the patient was isolated for a period of seven days, at the end of which time he was again examined, and the period of seclusion was again and again repeated until the priest was able to definitely pronounce him clean or unclean. Again, in verses 47 to 59 instructions are given as to the purification of infected clothing; while in chapter xiv., verses 33 to 48, are laid down detailed regulations as to the cleansing, &c., of infected houses and clothing.

Except from the fact that under the Levitical law the priest acted with Divine authority, he fulfilled exactly the same duties and functions as the medical officer of health and sanitary inspector of our own days, and it is universally conceded that to the complete sanitary code under which they lived is due to a great extent the marvellous power of resistance to disease that has at all times characterised this remarkable nation.

In considering the question of quarantine it is important to exactly define the term, inasmuch as the word has been applied indiscriminately to many different systems of dealing with the prevention and control of infection. Thus it has even been applied to the period during which isolation is considered necessary after recovery from an infectious disease such as small-pox or scarlet fever. Limiting the word to measures designed to prevent the importation of disease into a country by means of maritime commerce, it may be defined as "the enforced detention and segregation of vessels arriving in a port, together with all persons and things on board, believed to be infected with the poison of certain epidemic diseases, for specified periods." At first such periods were purely arbitrary and bore no reference to the possible incubation period of the diseases against which they were directed.

The question of infection was but imperfectly realised, and beyond the general vague idea that a person coming from an infected place might in some way or other convey the pestilence, there were no definite opinions or theories on which to base any uniformity of practice as regards the period of segregation. Later, with the advancement of medical science,

[1] Lectures II. and III. will be delivered on March 16th and 18th respectively.

[2] British and Foreign Medical and Chirurgical Journal.

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there was some attempt in a crude way to make the detention correspond with the supposed duration of incubation or latency of the poison. The essential point of quarantine, from its earliest inception up to its fully developed existence at the present day, is that it estimates the danger, and thereupon the precautions to be taken according to the state of health of the port whence the vessel has arrived, and has no reference to the condition as regards health or sickness of the vessel and its inhabitants. Though quarantine has been employed as a protection against many diseases, originally it was against the danger of plague only that it was directed. The whole theory of the system obviously rests on a belief in contagion. As soon as this was even suspected the natural sequence was to isolate those coming from suspected places as a means of protecting the general public. Dr. Granville, writing in 1819, states that the idea of segregation as a means of preservation can be traced to a much earlier epoch than the Crusades, for it is found explicitly mentioned in the Acts and Edicts of the Eastern Emperors during the sixth century. These, issued to prevent the importation of plague, ordained that those persons who came from an infected country should repair to a particular spot and remain there under observation for forty days, in order to ascertain whether they carried with them the seeds of the disorder. The first known law for the seclusion of persons from infected districts for a probationary period was enacted under the Emperor Justinian in 542. The earliest definite regulations against the spread of disease are those contained in letters sent by Duke Bernados to the prefects in 1374, when plague was devastating Lombardy, in which it was ordered that any person who should be attacked with any disease should forthwith leave the city or camp in which he was at the time and go into the fields or the woods until he either died or was set free, and further, following exactly the idea of the Jewish Levites, the priests of the parish churches were ordered under severe penalties to examine the sick and report the nature of their sickness to certain officers appointed for the purpose. Those who attended on the sick were ordered to remain isolated for at least ten days after the death of a patient before they held any communication with other persons. None but those appointed for the duty were to be allowed to attend upon the sick under penalty of confiscation of goods and life. In 1383, when the plague again invaded Lombardy, Bernados ordered that no person should be allowed to enter his kingdom from any infected place under the penalty of the yoke (*Sub pœna furcarum*); while in 1399 John Galeaz, Duke of Milan, for the same reason had guards placed at the gates of the city with instructions to prevent anyone entering who had come from a plague-stricken district. It was at the same time enacted that no house in which a case of plague had occurred should be again inhabited until it had been purified by fire and freely opened up for eight or ten days. These, however, were but solitary instances of precautionary measures. While trade was small and confined within certain narrow limits the danger from infection, scarcely yet believed in, called for no extraordinary measure of defence. Soon commenced the great movement of the Crusades. Originally inspired with the idea of preserving the Holy Land from the attacks of its enemies and of avenging the insults offered to Christianity, this movement rapidly grew and as rapidly degenerated, until the first great motive was almost entirely lost sight of in the unbounded opportunities it afforded for adventure, licence, and cupidity. In the first Crusade it was computed that nearly one million persons followed the standard of the Cross in its triumphant advance from Nice to Antioch, Edessa, and Jerusalem. But whatever the motive of those following the Crusades, and however sordid the reasons which guided them, one great result was the inevitable opening up of trade with the East. At the time the new disease—the plague—was attracting much attention, and it was naturally noticed that where plague was prevalent those who had kept aloof from the victims were by this fact to a certain extent protected therefrom. This isolation was at the best but partial, but its influence was observed, and its efficacy seen to be in proportion to its strictness. This gradually led to the idea that by preventing intercourse with infected places the importation of the pest might be entirely avoided. "Thus something in the shape of quarantine establishments began to be formed, not only to prevent intercourse with plague spots, but also to prevent free intercourse for some time after it was said to have subsided."[3] By continued experience of these facts, added to from time to time, developed the laws of quarantine, at first very imperfect and very varied in their form and restriction in various States, but all alike having their origin and bases in the one fundamental idea—viz., the doctrine of communication of disease by means of contagion. According to Boccaccio[4] Florence had adopted measures for its preservation from imported disease in 1384. To the Venetians, however, must be given credit for the first complete code of quarantine regulations. As early as the year 1150 they were said to have obtained from the Pope special sanction to enter into trade with the infidels of Alexandria and Aleppo and, according to Belou, had their own consul at the latter port before the middle of the fifteenth century. They were undoubtedly then and for a long time the only traders with Turkey. Venice was at that time the great centre of trade with the East, and its inhabitants were, therefore, more exposed to the importation of disease than those of any other State. According to Baker[5] it is probable that their first regulations were issued as early as 1127, but in 1448 a complete code was issued which served as a model for all others up to a very recent period. This code laid down as a principle that plague (against the introduction of which the law was established) "was a contagious disease capable of engendering a contagious matter, capable of adhering to certain inanimate substances, of being retained by them for an almost indefinite time without losing its activity, and, on the other hand, incapable of attracting itself to other inanimate substances and which might consequently be handled with absolute impunity and security. All merchants and persons coming from the Levant were compelled to remain in the house of St. Lazarus for a period of forty days before admission into the city. Thence is derived the term lazaret in use at the present day. There has always been some considerable doubt as to the origin of the period of forty days which gave rise to the name of the system. It seems probable that it was derived from the Jewish ceremonial, and was continued under various systems and laws until it became a settled period, the origin of which was lost, and the only justification for which was its antiquity. It ofttimes happens that a custom arising from some vague theory or speculation (which resting upon no sound basis is soon lost sight of) becomes after a lapse of time unassailable on account of its antiquity, and comes to be eventually considered as the result of the experience of ages, and as such venerated and preserved." The merchants settled in Turkey appeared to have formulated certain definite precautions against the plague, and our own merchants, who were not established in that country until close on the sixteenth century, doubtless influenced by their predecessors, at once began to adopt similar protective measures. These, however, were optional on their part and were not required by the law of the land. Bills of health were instituted by the Turkish Company for their own ships, for an English traveller at Aleppo mentions his having "a clean bill" (Moryson's Travels), and the English merchants at Aleppo established the same system as early as 1600.

In England in 1603 an Act for the relief and ordering of persons affected with plague was certainly passed, but this provided only for the isolation of persons in the country, and contained no provisions as to maritime quarantine. In the year 1636 the question was referred to the College of Physicians and certain "Directions" were issued by them. The second article stated: "It is likewise necessary that there be care taken that neither man nor goods may come from any suspected places without a certificate of health or else either to be sent suddenly away or to be put to the pest-house (or such like place) for forty days *according to the custom of Italy*." When these articles were re-published in 1665 the title of the second was changed from "Men and Goods from Infected Places" to "Prevention of Propagating the Infection from Place to Place," and reads: "As to the provisions already made by authority upon occasions of prohibiting persons and goods coming from infected places." From this may be inferred that quarantine having been at that time definitely established, it was no longer necessary to recommend its imposition.

The first commercial treaty between the Ottoman Empire and any European Power was that concluded in 1535 by Francis I. and Solyman the Magnificent. Venice followed

[3] Dr. White: Treatise on Plague. London, 1846.
[4] Decameron. Amsterdam, 1679.
[5] Nautical Magazine, 1896, p. 992.

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in 1580, and England a little later. In 1664, owing to the action of the Crown in destroying the monopoly of the Levant Company and throwing the trade open to all, the regulations became more stringent. These regulations required: (1) That no vessel should leave any port of Turkey or Egypt without a bill of health; (2) that all enumerated goods brought from Constantinople to Smyrna for Great Britain should, if there were any sickness at Constantinople, be landed and aired for twenty-one days; (3) that no goods from Cairo should be shipped at Alexandria when there was sickness there unless landed and aired for twenty-one days; (4) that no bill of health should be given until the expiration of forty days from even a single case of plague; and (5) that if the contagious sickness should appear on board any vessel in a Turkish or Egyptian port she should not be allowed to leave unless her cargo was landed and aired for at least forty days. It is especially noticeable that even at this early period the Levant Company took the precaution of inquiring into the health of the vessel at the port of departure. No provisions, however, were made for dealing with infected persons or for the disinfection of the vessel. As Sir James Parker says in his "Observations": "When we are certain as to the health of the crew of a ship we may make ourselves easy with regard to any fears which may arise from the merchandise" (p. 44), and that "the length of the voyage is a security against the importation of disease by persons" (p. 444). Before the Quarantine Act of 1754 a vessel from Turkey with a clean bill of health could land her passengers at any port, each one having his own individual patent. Dr. Pringle, in "Rational Inquiry," says: "Turkey being seldom free from plague, our trade there being increased so considerably within the last fifty years, it would be impossible for us to escape it (who have never made use of the Italian custom) if goods were sufficient to communicate it."

The first quarantine Act in England was passed in the ninth year of the reign of Queen Anne. Up to this period all quarantine regulations were issued by the King in Council without the intervention of Parliament. This is clearly shown in the preamble of the Act. This Act, like nearly all the subsequent ones, was passed under the influence of panic, the plague then raging in the Baltic. The Bill received Royal Assent eight days after it had been introduced into the Lower House, and came into force two days later. As an instance of the result of such hasty legislation it is to be noted that the power to open and air cargo (in which so much confidence was placed) was accidentally omitted, and only added by a special rider the day before the Royal Assent. Upon another alarm of plague at Marseilles in 1720 a second quarantine Act was passed in the same hasty manner; ordered to be drawn in December, it was read for the first time on Jan. 18th, and received Royal Assent on the 25th of the same month. The title was—"An Act for Repealing an Act and for the better preventing of plague being brought from foreign parts into Great Britain or Ireland, the isles of Guernsey, &c., and to hinder the spreading of infection." This Act was to continue in force for three years only. The outbreak of plague at Marseilles was the occasion for the passing of two Acts in the following session—the one "to enable His Majesty effectually to prohibit commerce for the space of twelve months with any country that is or shall be infected with plague," and the other "to prevent the clandestine running of goods and the danger of infection thereby and to prevent ships breaking their quarantine." The first received Royal Assent in February, 1721, and the second in March of the same year. All these three Acts of George I., being temporary, expired, whereupon the Act of Queen Anne again came into force. In the first year of the reign of George II. another Act, nearly word for word with that of George I., was passed. The power of prohibiting intercourse with any country for twelve months was again inserted, and also the power of preventing anyone coming from an infected place under a penalty of £500. The importer of prohibited goods was to forfeit double their value in addition to loss of ships and goods. Among the chief clauses of former Acts repealed was one empowering His Majesty in Council to make orders for the regulation of quarantine and another giving the power when plague existed in any foreign country to order vessels coming from infected places, or laden with goods from such places, or having on board any infected persons, to be burnt together with the whole or any part of the cargo. The order for opening and airing *after the quarantining of ships and crew* was continued. This Act, again, was only temporary and expired in 1731. In consequence, however, of the appearance of plague abroad it was revived in 1733 for a further period of two years. On its expiry in 1735 and until 1753 the Act of Queen Anne was once more the quarantine Act of the land. During the outbreak of plague in 1743 in the absence of the King the Lords of the Regency ordered all vessels from the Mediterranean to perform quarantine in Stangate Creek. In 1752 Parliament once more dealt seriously with the question, and two quarantine Acts were passed in the following year and came into force twelve months later. This was the first time that the Legislature had approached the subject deliberately and without the fear of an epidemic hanging over them, and as a consequence the Acts passed were far more thorough and complete. In the 26th Chapter George II. the 12th clause enacted: "That no goods nor merchandise liable to retain the infection of the plague and coming from the Levant without a clean bill of health shall be landed in Great Britain until it shall appear to the satisfaction of His Majesty that the same goods or merchandise have been sufficiently opened and aired at the lazarets of Malta, Ancona, Venice, Messina, Leghorn, Genoa, Marseilles, or one of them." The principal new provisions were as follows:—1. All vessels with plague being to the northward of Cape Finisterre were to proceed to New Grimsby (afterwards changed to St. Helens). 2. The master of a vessel performing quarantine was to deliver to the appointed officers a bill of health, consular manifest, log book, and journal under a penalty of £50. 3. The powers as to dealing with individuals were still very vaguely expressed: "They shall be subject to such orders as they receive from proper officers." 4. The omission of the words, "All ships coming from infected places or from any place known to trade with any place actually infected," and the substitution therefor of the words, "All ships, persons, and goods coming from places whence His Majesty in Council may deem it possible that infection may be brought." 5. The order for airing goods after quarantining of ships and crew was no longer specified. Up to this period all detention in quarantine had been carried out on board ship, but in 1752, the House having decided "that the present system of quarantine by airing goods on hoys and vessels is not well calculated to prevent infection, and is inconvenient and expensive to the merchant," further agreed, "that for the better and more effectual performance of quarantine a lazaret should be erected," and after considerable discussion Chedney-hill was selected as a suitable spot. Nothing, however, was done at the time, and twelve years passed without action, when, doubts having risen as to the sufficiency of the powers granted, a short Act was passed confirming the previous proceedings and voting the sum of £5000 to proceed with the work. This was the first step towards the provision of a lazaret in England, which, curiously enough, was never carried to completion, for after large sums had been expended on the scheme it was eventually discovered that the position was unsuitable. It was therefore abandoned and the materials sold. In spite, however, of the care bestowed upon the quarantine Act it was still from an administrative point of view very unsatisfactory. In all cases the details were left to the Privy Council, a body which had neither the time nor the means to attend to them properly. As an instance of this in 1770—i.e., twenty-seven years after passing the Act—an Order was issued that vessels from Dantzig or Pomerania were, when coming to the Thames or Medway, to perform quarantine for forty days in Stangate Creek, but if proceeding to any other port the officers of Customs were to appoint proper quarantine ground, from which it is clear that the Council had not already made such arrangements. This was, however, still more evident in 1790, when, on account of the prevalence of plague in Russia, seven stations were named in an Order of Council then issued. Again, in July, 1783, plague being prevalent in Poland, vessels coming thence were ordered to perform quarantine for forty days. The Privy Council had not considered the possibility of some of these vessels being laden with grain, which is not mentioned in the quarantine Act; and within a few days Edinburgh, being threatened with famine, presented a memorial showing the oversight and the serious consequences that might arise therefrom. A second Order was, therefore, hastily issued to permit all vessels laden solely with grain to discharge without any quarantine or airing of their cargoes, providing that the master made an oath that the crew were free from infection

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and that the vessel had not communicated with any vessel from an infected place. In 1805 another Act was passed which, while in no way interfering with the existing system of quarantine, materially modified the charges which had been so serious a burden to the commerce of the country. A report of the Select Committee on the foreign trade of the country in 1824 gives some startling figures as to the burdensome character of these charges. It states that the quarantine charges in the case of a vessel with a clean bill of health amounted to 7*s.* 6*d.* per ton, and with a foul bill of health to no less than 15*s.* per ton register, 1*s.* extra being paid in London. Further, that these charges were levied upon the gross tonnage of the vessel, whether she carried a full cargo or not. The report goes on to say that, apart from the serious delay, in many cases the quarantine charges amounted to 35 per cent. of the value of the cargo, and one instance is given in which they exceeded 90 per cent., although there had been no sickness on board the vessel. The last quarantine Act of this country was the 6th George IV., cap. 78, which repealed all former regulations, and enacted that all vessels arriving from any places whence His Majesty by the advice of his Privy Council shall have declared it probable that the plague or other infectious disease or distemper highly dangerous to the health of His Majesty's subjects may be brought, and all persons and goods, shall be liable to quarantine. That all vessels from the continent of America or the West Indies (when yellow fever prevails there) shall come to anchor at certain appointed places in the port for the purpose of having the health of the crew ascertained. The opening and airing of such goods as were considered susceptible were still insisted on. By the 39 and 40 Vict., cap. 36, the powers of the Privy Council were ordered to be carried out by Her Majesty's Commissioners of Customs, and this continued until the repeal of the Quarantine Act by the Public Health Act, 1896. Long before this, however, the enormously increased importance of our foreign trade and the obvious futility of the strict enforcement of quarantine had excited the attention of thinking men. Dr. McLean was one of the principal movers in this direction, and his able statement of opinion led the House of Commons in 1817 to refer the matter to a Select Committee. This committee examined twenty medical witnesses, the majority of whom, however, were stated to have had no experience of the disease, and their report stated that all these gentlemen, with the exception of two, were in favour of the received opinion that the plague is communicable by contact only, and differs in this respect from epidemic fever. In this opinion the committee acquiesced, and added that they saw no reason to question the validity of the principles upon which such (quarantine) regulations appeared to have been adopted. This report is the more unsatisfactory inasmuch as the College of Physicians, when consulted by the Government in the previous year, had given their opinion in a much more guarded form as follows: "That although some epidemic diseases are not propagated by contagion, it is by no means proved that the plague is not contagious or that the regulations of plague police are useless or pernicious." "The doctrine of contagion appears to us to be wholly unshaken by any argument which Dr. McLean has adduced; at the same time we think it probable that some of the personal restrictions enforced in quarantine establishments might be modified without injury to the public health." Clearly showing that they recognised the unnecessary restrictions of the system as then carried out. Within a few years Sir Wm. Pym (the superintendent of quarantine) recommended considerable relaxation of quarantine, giving as his reason that he had never known a single instance of a case of plague occurring in a vessel from the Levant, and his belief that, with due regard to ventilation, infection would not spread. The only reasonable way of judging as to the actual value of the system was clearly to collect the experience of other European countries as well as our own. Progress in this direction was slow, for twenty years had elapsed before Sir Wm. Pym could say: "That there was no evidence to show that a single case of plague had ever been known to occur in any country from the manipulation of suspected or infected merchandise landed in lazarets." The records of lazarets also proved that the disease seldom or never spread from even the sick to any other of the inmates or to any of the officials of the establishment. As has been previously mentioned, up to the beginning of the present century quarantine had been directed against plague only. Yellow fever was at that time scarcely thought of, and cholera was not recognised as a danger to Europe. The experience of 1831-32 of quarantine as a protection against cholera was most unfavourable, and so clearly was this recognised that on the second visitation, in 1847, it was not relied upon. Nor was it at all evident that this country suffered in consequence or was more seriously affected than other European nations, which still kept up their rigorous system in spite of its obvious failure to protect them in their previous unsuccessful attempts to exclude the disease. A proposal for a general congress of delegates from States having ports on the Mediterranean had been made by the French Government in 1838, but fell through owing to various difficulties which arose. In the same year a proposal was made to send competent medical men to visit the chief European ports and collect information on the subject. Instead of this, however, Sir William Pym suggested that certain questions should be submitted to the consuls of Constantinople, Smyrna, Aleppo, Alexandria, Cairo, Odessa, and Malta asking for replies thereto. These questions were as follows: 1. Is plague communicated by contagion? 2. Is it communicated by contagion alone or by other means; if so, by what means? 3. Is actual contact with an infectious person necessary for communicating plague, or will a close approach to such a person communicate the disease? 4. Can substances which have been in contact with an infected person communicate the plague, and if so, what substances? 5. How long will the contagious matter of plague remain dormant in an infected person before it declares itself by evident symptoms? 6. How long will the contagious matter of plague when lodged in inanimate substances retain its infecting power? 7. What are the means by which substances containing contagious matter of plague can be purified?

A despatch of Lord Palmerston in 1839 to the English Ambassador in Constantinople on certain harsh measures enacted in Turkey is worthy of quotation as showing that the medical knowledge of the Government of the day was far in advance of its actual practice. "With reference to the proposed regulations, I have to instruct your Excellency to endeavour to strongly impress upon the Turkish Government that they would more effectually prevent the spreading of the plague by introducing cleanliness and ventilation into the city and suburbs of Constantinople than by such violent disturbance as is proposed with the domestic arrangement of families. It is quite certain that the plague is much aggravated, if not actually generated, by the want of cleanliness in streets, by the want of sufficient ventilation in houses, and by the want of proper drainage in places contiguous to habitations; and if the Turkish Government would in the first place apply vigorous measures to correct these evils they would strike at once to the causes of the disease, whereas the measures which they have now in contemplation will only be productive of inconvenience and suffering to numerous individuals."

A further attempt by the British Government to bring about a general conference in 1843 failed owing to the view of Austria that such conferences would be premature until exact information had been obtained from a committee of medical authorities appointed by each State to report as to (1) the maximum and minimum terms of quarantine for persons, (2) terms of quarantine necessary for goods and merchandise, and (3) the best measures for disinfection of objects susceptible of contagion.

Towards the close of 1844 a Commission was appointed by the Royal Academy of Medicine of France to report upon the whole subject. After a deliberation of more than twelve months they presented a most exhaustive report. Their general conclusions were that plague had arisen spontaneously in Egypt, Syria, Turkey, and in other countries, but could always be reasonably attributed to certain determinate conditions, the chief of which are residence upon marshy soil in low, crowded, badly ventilated dwellings, especially in a warm, moist climate and atmosphere, exposed to the actions of putrescent animal and vegetable matter, unwholesome and insufficient food, and great physical and moral wretchedness.[6] The characteristic features of epidemic diseases are:—1. They generally manifest in their progress three distinct periods of commencement, persistence, and decline, often displaying neither the

[6] M. Hamont states that Egypt before it came under Ottoman rule was a rich and prosperous country, and calculates that at one time its population must have been nearly one hundred millions, while in 1846 it was estimated at one and a half millions only. At the same time its social and physical condition has deteriorated at the same rate.

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same symptoms, lesions, nor gravity during these periods. 2. During the prevalence of an epidemic other diseases are less prevalent, and they receive the stamp of the epidemic. 3. During an epidemic even persons in good health feel its morbific effects more or less. 4. Epidemics not unfrequently return and cease at the same season, and have usually the same duration. 5. An epidemic is often preceded by some other affection as a precursor. The Commission was of opinion that plague was not to any extent transmissible beyond or away from epidemic foci, for the following reasons. When an epidemic is dying out all, or nearly all, the sick recover and no new cases recur. There are still cases in hospital, all the conditions favourable to spread exist, and yet none takes place, and even an infected person coming from an epidemic focus is then to be feared no more than a sporadic case. If it is doubtful whether goods or clothing can convey plague during an epidemic, it is certain that they cannot after it has died away. They decided that the period of incubation was, as a general rule, from three to five days, and finally advised:—1. That for vessels having a medical officer on board from Egypt, Syria, or Turkey, with a clean bill of health the period of quarantine should be a full ten days calculating from the date of departure, provided that no case had occurred on board. That with a foul bill this period should be fifteen days for a healthy vessel. 2. For merchant vessels without a medical man the same period should be imposed, but that it should in all cases date from the time of arrival. The report itself is exceedingly valuable and instructive, but its conclusions do not in any way justify the severity of the practical recommendations.

In October 1844, Sir Wm. Pym, having visited all the principal Mediterranean ports, was of opinion that the periods of quarantine both for persons and vessels might be considerably reduced and in some cases altogether abolished, especially in the case of vessels from the Black Sea and those which had crossed the Atlantic. During the Crimean War an interesting experiment was made as to the value of quarantine as a safeguard against cholera. Owing to the exigencies of international warfare the whole system of quarantine throughout the Mediterranean and Baltic was practically suspended. Although cholera existed on the Continent, it was seen that many places freely exposed to risk of infection from the arrival of infected vessels and the landing of sick persons suffered less than on former occasions. This was notably the case with Malta and Gibraltar.

In 1865 was published the eighth report of the Medical Officer of the Privy Council. The remarks therein made by Sir (then Mr.) John Simon, marking by their clearness, power, and scientific accuracy a distinct epoch in the position of this country, remain and will remain as a record of his acumen and farsightedness in this as in many other directions. He says: "The precautions generally which may be taken against contagious disease are of two kinds—first, if possible, to prevent the entrance of the contagion; secondly, if the contagion be present, to annihilate as far as possible the circumstances which favour its spread. Thus, as regards cholera, a first, an incalculably important, question to be answered by those who have to care for the public health of a country is the question whether by any measures of quarantine they can provide that all contagion of the disease shall be kept outside the limits of the land. Subject to one qualification, which is not an important one for the present argument, it may, I think, be accepted as certain that quarantine conducted with extreme rigour and with the precision of a chemical experiment will keep cholera out of every part of Europe in which the extremely difficult conditions can be absolutely fulfilled; and thus, if I speak to the dry question of medical practice, I have no hesitation in saying that England ought to resist cholera by quarantine. On the other hand, though I cannot pretend to discuss with any kind of authority the non-medical aspects of the question, it would be mere pedantry for me to ignore that facts which are of common notoriety and considerations which are of common sense conflict with that medical conclusion. A quarantine which is ineffective is a mere irrational derangement of commerce, and a quarantine of the kind which ensures success is more easily imagined than realised. Only in proportion as a community lives apart from the great highways and emporia of commerce or is ready and able to treat its commerce as a subordinate political interest—only in such proportion can quarantine be made effectual for protecting it. In proportion as these circumstances are reversed it becomes impossible to reduce to practice the paper plausibilities of quarantine. The conditions which have to be fulfilled are conditions of national seclusion, and fulfilment of such conditions by England would involve fundamental changes in the most established habits of the country. In order to illustrate this view the medical postulates of quarantine, purporting to be effectual, cannot rest satisfied with excluding from entry such persons as are obviously sick, but, indispensably for its purpose, must always refuse to admit the healthy till they shall have passed in perfectly non-infectious circumstances at least as many days of isolation as the disease can have days of incubation or latency; this condition often involving as its consequence that if one case of disease arise among a number of persons in quarantine the whole number of apparently healthy must re-commence their period of probation, and this perhaps again and again. Now, setting aside as not essential to quarantine the cruelties which its mal-administration involves, and which in practice are almost identical with its exercise; criticising only the conditions which quarantine, if it is to be effective, must involve; and for the moment not even counting as an objection the cost of that gigantic establishment which has to be permanently maintained in order to meet occasional exigencies, I here insist only upon the restrictions. Considering what they, when carried into effect, must involve—what inconvenience to persons, what interruptions to commerce, and on how vast a scale and for what indefinite duration—no one can expect, in regard of great trading communities, that Governments, if they go so far as to enact, will have much success in enforcing quarantine. Against the efficiency of it when enacted there operate some of the strongest law-breaking influences—on the one hand instincts of contempt for the narrow self-protectiveness which it represents, and on the other those eager commercial instincts which now mainly govern the world. Contraband of quarantine, like ordinary smuggling, is developed as soon as the inducements for it are considerable. And thus, practically speaking, where great commercial countries are concerned it can scarcely be dreamt that quarantine restrictions will be anything better than elaborate illustrations of leakiness. In respect of England, moreover, there are other facts to be stated. In 1832–33, when some sort of quarantine against cholera was adopted here, the results gave no encouragement to repetition. Then followed the erroneous belief (which subsequent better knowledge has corrected) that the spread of cholera is unaffected by human intercourse. Under these and other influences the thought of quarantine in England became more and more obsolete, and the possibility of enforcing it, if ever so much desired, fell more and more towards nothingness. Probably there was the practical conviction that against any contagious disease on the continent of Europe quarantine of the utmost strictness which England could hope to attain would not give results worth the sacrifice. I dare say that quarantine in England was never otherwise than very lax, and at all events it has for many years past in every medical sense been abolished. Further, with its virtual extinction the establishment for giving it effect has declined. As successive Governments advanced further and further in relinquishing what probably at its best was only a sham of quarantine corresponding reductions of establishments were made. And the result of the entire progress may be told in these very few words—that at the present moment England has not in readiness the means of properly quarantining a single vessel. It is not for me to say that this state of things may be deemed final. But if reversal of that policy which it expresses were ever so much desired it could not be effected offhand. Enormous first expenditure of money in creation of proper lazarets would be wanted as well as subsequent very large annual outlays for maintaining the necessary establishments. And the time which would be required for bringing the organism into work forbids the supposition that this could ever be done on emergency. So far in England, under present circumstances, quarantine against cholera, as existing in the countries which are nearest to us is a precaution of which there can be no serious thought. Were the country ever so ready to endure those extreme restrictions, without which the whole thing is fruitless and absurd, the means for imposing them do not exist. To extemporise a cordon sanitaire is simply and totally impossible, and no partial quarantine can be relied upon for national purposes. Not only as regards cholera, but generally as regards all contagious diseases, the position

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which now has to be recognised and dealt with is that contagion current on the continent of Europe must be deemed virtually current in England."[7]

This clearly represented the position of the country at that time with reference to quarantine as a means of defence, and from this position there has since been no reason to recede. But quarantine was not yet got rid of. Originally established to prevent the importation of disease, when this object was shown to be futile the system was still retained in order to prevent interruption to trade. It was clear that while other countries kept up the practice any official abandonment would only lead to an indiscriminate quarantining of British vessels. That this was no imaginary danger has been shown on many occasions. In 1853 the countries where quarantine was most rigorously carried out were Spain, Portugal, Greece, and Sweden. As soon as cholera appeared in this country Spain called upon Gibraltar to impose quarantine upon all arrivals from our ports, and on account of some delay all communication with the mainland was at once cut off except such as was carried on by smugglers, and in self-defence the authorities were compelled to yield. This same pressure during the present year has caused Gibraltar to impose quarantine upon vessels from Indian ports. Any hesitation to comply would have invited a complete cessation of the important defence works in course of construction there. Again, in 1825, when some vessels with foul bills of health were admitted to pratique by order of the Government, the whole United Kingdom was put in quarantine by the Mediterranean Powers and every arrival from Great Britain subjected to a lengthy detention. And, to quote one more recent instance, the *Helene*, a small German vessel, which arrived in London in August, 1893, with two cases of cholera on board, was refused pratique at a South American port nine months later, the reason assigned being that she had not yet undergone quarantine, having been only subjected to disinfection in this country.

At the close of the cholera epidemic in 1851, on the invitation of the French Government, delegates once more attended at Paris from France, Great Britain, Austria, Russia, Turkey, Greece, Spain, Portugal, and some other Powers to consider the question. They decided that henceforth only two degrees of quarantine should be recognised—viz, quarantine of observation and quarantine of rigour, the quarantine of suspicion being abolished. That only two forms of bills of health should be allowed—viz., clean and foul, and that these should be granted after the health of the port of departure had been thoroughly ascertained and not on conjecture, as heretofore. That the measures taken should apply equally to the vessel, crew, and passengers in consequence of the health of the port of departure, and that no regard should be paid to the condition of the health or sickness during the voyage in determining the nature of the quarantine which was to be directed against the infected country generally. The diseases against which quarantine was to be employed were reduced to three—viz., cholera, yellow fever, and plague. It is worthy of note that Austria opposed the inclusion of cholera on the ground that she had tested quarantine against it in 1831 and found it not only useless but dangerous. England, France, and Sardinia alone opposed quarantine entirely and stated that they had retained it only in consequence of the position of other European Powers. Spain and Portugal, while admitting that the utmost protection could be afforded by measures of general sanitation, held that till these have been universally carried out reliance must be placed upon compulsory segregation. The final decision, carried only by five votes, was that all arrivals from a cholera-infected port should be liable to five days' full quarantine, the voyage being included, but that if any case had occurred on the voyage the detention should date from the time of the arrival. That it was not necessary to land cargoes, but that free ventilation on board was sufficient. Power, however, was to be given to any State to impose a shorter quarantine than three days on vessels coming from a port which, though still healthy, was in close proximity to or in communication with one already declared infected. For yellow fever the minimum detention was fixed at from five to seven days, and the maximum at from seven to fifteen days. If the voyage exceeded thirty days, if there were no sickness on board during the voyage, and if the vessel was in good sanitary condition on arrival, this term might be reduced to three days. If the voyage were of more than ten days' duration and no sickness had occurred on board, simple aeration would suffice for the cargo. But if the voyage was shorter than ten days, or if there had been any case on board, then the cargo might be required to be landed and disinfected. As against plague the minimum detention was fixed at ten days, and the maximum at fifteen, and this could only be performed at such ports as were duly provided with lazarets and appliances for landing and disinfecting persons and cargo. Disinfection was to be required for all highly and moderately susceptible goods. Further to increase the value of the bills of health it was decided that a clean bill should not be granted until the expiry of a specified period after the certified cessation of disease in a port. This period was fixed at ten days for cholera, thirty days for yellow fever, and thirty for plague. Although quarantine proper was to be limited to these three diseases, still a local authority was to be allowed to impose a mitigated quarantine in the case of a vessel on board of which typhus fever or small-pox actually existed at the time of arrival.

To mark the Conference's view of the importance of the sanitary condition of vessels it was decided that foul or filthy ships should be treated as though they carried foul bills. Unfortunately, however, no corresponding privileges were given to those vessels which arrived in good sanitary condition. A Convention drawn upon the lines of the decision of the Conference was agreed to by France, Sardinia, Portugal, Tuscany, and Turkey. England naturally declined to accept these terms on account of the severe and unnecessary restrictions. It is a somewhat significant fact that in more than one of the countries agreeing to this convention regulations became thereafter more rigorous than before.

Thus, although the deliberations of the Conference lasted for more than three months, the total result was unsatisfactory in the extreme. It had begun to be understood in this country that whatever advantages were supposed to be gained by quarantine could be more effectually obtained by other and more reasonable methods. In 1848, when the old system was discontinued upon the recommendation of Dr. Southwood Smith, it was explained that in the place of the rigorous detention of vessels from infected ports with their crews and passengers for a lengthy period a system of strict sanitary supervision of the vessels themselves and of all persons on board by a medical officer should be substituted. The Social Science Quarantine Committee in 1861, after having submitted a long list of questions to Her Majesty's Customs and others, from the information thus obtained formulated a most valuable report which was published by the Board of Trade. After stating that the object was to amend and utilise, not to destroy, the existing machinery, they reported that while the practice of quarantine varied in different ports there were great difficulties in obtaining information on account of the lack of systematic and accurate reports on the subject; that bills of health were drawn up in different forms and from various sources of information, often erroneous and affording no real guarantee as to the health of the country; that even in strict quarantine countries the regulations were of necessity relaxed at certain times—notably in case of war or the arrival of particular vessels; that lazarets and other arrangements were not adapted for their purpose, causing not only discomfort but even actual injury to persons detained in them; that the division of cargoes into classes of susceptible and non-susceptible, &c., was utterly valueless, and that, moreover, the spread of disease from a cargo was practically unknown; that those countries which were most rigorous in the enforcement of quarantine were no more exempt from epidemic diseases than those which adopted more lenient and simple precautions; that stringency was apt to defeat its object by leading to concealment; and that the sanitary arrangements of ships and ports were, generally speaking, exceedingly faulty. They therefore recommended: — 1. That under ordinary circumstances vessels which have had no sickness during the voyage and are in good sanitary condition on arrival should be admitted to free pratique without regard to the health of the port of departure. 2. When any detention of a vessel is necessary, either from the fact of sickness existing or on account of the foul or unwholesome condition of the vessel, a careful examination should be made of her and of all the persons on board by the quarantine medical officer, who should have the power to adopt, and should be charged with the responsibility of adopting, such measures as each case demands. The

[7] Report of the Medical Officer of the Privy Council, p. 40.

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healthy should not be detained, and the sick should be removed to hospital as speedily as possible. Where small-pox exists on board a ship all unprotected persons should be vaccinated. 3. Vessels from abroad should be required to pump out their bilge water and clean their bilges before entering harbour, and the hold should be aired so far as possible before arrival. 4. Before a bill of health is given an examination should be made as to the sanitary condition of the vessel and the health of the crew, and the results of such examination noted on such document. 5. Medical quarantine officers should be required to keep accurate records of all matters relating to quarantine, and to prepare an annual report thereon.

The Erasmus Wilson Lectures

ON

THE PATHOLOGY OF THE LYMPHADENOID STRUCTURES.[1]

Delivered at the Royal College of Surgeons of England on March 1st, 3rd, and 5th, 1897,

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LECTURE II.[2]

Delivered on March 3rd.

THE THYMUS.

GENTLEMEN,—The thymus is a remarkable organ, since it appears under three different forms. The primary thymus is composed of glandular epithelial cells, the secondary of lymphadenoid tissue, and the tertiary of fat. The primary thymus of glandular epithelium persists in some fish and secretes mucus; in the higher animals all that normally remains of it at birth are the concentric cell masses of Hassall. But Chiari[3] has shown that the cysts of the thymus which are found in infants, and to which the names of tubercle, syphilis, and abscesses have often been given according as their contents are caseous, solid, or puriform, are really true degeneration cysts lined by epithelium. These cysts represent the mucus secreting follicles of fish, which usually shrivel up into the concentric bodies, but may be found in the kitten as cysts lined by ciliated epithelium (Capobianco, *vide infra*). Epithelial remnants may also be the source of dermoid cysts, of malignant tumours—in Rolleston's[4] case as mucus secreting cells, or as epithelioma with true nest cells in the case described by Paviot and Gerest.[5] It is this primary thymus which is so closely related in its manner of origin to the thyroid gland. The secondary thymus, composed of lymphadenoid tissue, is a paired organ in birds. In mammals it is generally fused into one mass, which may have processes running up to the trachea representing the position of the primary diverticula. It has a peculiar arrangement of lobes and lobules, which distinguishes it from compound lymphatic glands. Each lobule is divided into a polyhedral cortex, having a germinating mass of cells and a medulla in which are found the concentric bodies. It is an organ which is richly supplied with blood, and the lymphatics leading off from the sinuses round the polyhedral follicles, after passing through the glands of the superior mediastinum, join the thoracic and right lymphatic duct to enter the veins of the neck. This lymphadenoid thymus, which commences to develop and remove the primary one about the fourth month, reaches its fullest development at birth. It certainly forms leucocytes, and during embryonic life at least red cells also, even in the highest mammals. The formation of leucocytes takes place earlier in the thymus than in the lymphatic glands. The thymus was first removed by Friedleben,[6] and his experiments have lately been repeated by Tarulli.[7] The young animals did not suffer from the loss. After birth it persists for a variable length of time up till puberty before it changes into the tertiary fat organs. It persists throughout life as a lymph-adenoid organ in some fish and reptiles, and may be met with in man long after puberty. The thymus may be diseased at birth owing to the cysts already mentioned. If hæmorrhage into these cysts or inflammation sets in rapidly increasing dyspnœa may ensue (Durante[8]), and the organ being hidden behind the sternum the cause of the dyspnœa may remain unsuspected. Sudden death from asphyxia frequently occurs from this cause in newborn infants and young children, and the enlarged thymus is only discovered post mortem. A large lymphadenoid thymus may be met with in adults associated with enlarged thyroid, and may form an additional unsuspected cause of dyspnœa which is not relieved by an operation upon the thyroid. Perhaps the pressure on the large veins at the root of the neck causes venous congestion and enlargement of the thymus, as happens in the spleen from similar causes. The thymus is also enlarged in the cases of lymphadenoma to be afterwards referred to. The tertiary fat thymus is always to be found in man, the peculiar lobulation of the fat showing that it has been derived by a metamorphosis of the lymphadenoid organ (Waldeyer,[9] Capobianco[10]). The fat is, however, but a quiescent stage of lymphadenoid tissue as is the yellow marrow of bone, and so reappearance of the lymphadenoid tissue takes place in adults suffering from lymphadenoma. A large lymphadenoid thymus is met with in diseases accompanied by anæmia, such as Addison's disease and the acromegaly of Marie, &c. There is some antagonism between the thyroid and thymus gland. The thymus is well developed in cretins; feeding with the thymus gland relieves exophthalmic goitre.[11] Siegel cured a child aged two and a half years threatened with asphyxia by displacing the enlarged thymus from the anterior mediastinum into the subcutaneous tissue.[12]

LYMPHATIC GLANDS.

True lymphatic glands are only found in birds and mammals. The thymus supplies their place in the lower forms. There are also lymphadenoid masses in connexion with the kidney of fish; the salamander has lymphadenoid tissue round its liver. In the frog the thymus early changes into fat, and the spleen has no Malpighian bodies, but there are besides the marrow, which is red in the spring, also rudimentary tonsils and the fat bodies in the abdomen, which are during part of the year lymphoid in structure. Lymphatic glands are few and small in rodents, more numerous in the carnivora and ungulates, but most numerous in man (Gulland[13]). In some mammals, such as the sheep, small glands, intermediate between the spleen and lymph glands, are found in front of the vertebræ in the mesentery and contain blood in them, the so-called hæmolymph gland.[14] But they have not been shown to exist in man. Lymphatic glands are developed relatively late in embryonic life, they do not appear until after the middle of this period—i.e., after the thymus has become developed as a lymph-adenoid organ. Lymphatic glands vary much, some having only a single follicle forming a minute mass from 1 to 2 mm. in diameter. There are others with more than one follicle varying in number up to the ordinary compound lymphatic gland. Lymphatic glands undergo retrograde metamorphosis, especially in old age, and turn into fat like the bone marrow and thymus. But at any time they may be excited to regeneration, a compound gland may develop from a single follicle, or a new formation of

[1] These lectures were illustrated by specimens from the Anatomical and Pathological Museums of the Royal College of Surgeons of England and of the Westminster Hospital.

[2] Lecture I. appeared in THE LANCET of March 6th, 1897.

[3] Chiari: Zeitschrift für Heilkunde, 1894, Band xv., s. 403.

[4] Rolleston: Journal of Pathology and Bacteriology, 1896, vol. iv., p. 228.

[5] Paviot et Gerest: Archives de Médecine Expérimentale et d'Anatomie Pathologique, 1896, tome viii., p. 606.

[6] Friedleben: Die Physiologie des Thymusdrüse in Gesundheit und Krankheit. Frankfort, 1858.

[7] Tarulli: Atti dell' XI. Congresso Medico Internazionale, Roma, 1894, vol. ii., Fisiologie, p. 19.

[8] Durante: Comptes rendus de la Société de Biologie, 1896, p. 282.

[9] Waldeyer: Sitzungaberichte der Akademie der Wissenschaften, Berlin, Band xxv., s. 433.

[10] Capobianco: Archives Italiennes de Biologie, 1892, vol. xvii., p. 55.

[11] Owen: Brit. Med. Jour., vol. ii., 1896, p. 1017.

[12] Centralblatt für Chirurgie, 1896, S. 1141.

[13] Gulland: Development of Adenoid Tissue, especially the Tonsil and Thymus; also Nature and Variety of Leucocytes, Laboratory Reports of the Royal College of Physicians of Edinburgh, 1891, vol. iii.; also The Development of Lymphatic Glands, Journal of Pathology and Bacteriology, 1894, vol. ii., p. 447.

[14] Vincent and Harrison: Journal of Anatomy and Physiology, 1897, vol. xxxi., p. 176.

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lymphatic glands take place in connective tissue. The process is the same as in the embryonic formation, leucocytes emigrate into the connective tissue and split up its fibres into retiform tissue. The only difference in the lymphadenoid tissue arising from the excitation of diseased products is that the arrangement of germ centres is not so well defined as in the normal gland.

Lymphatic glands have two functions, the production of leucocytes and the protection of the circulation from the entrance of organisms through the skin and mucous membranes. Organisms may be carried to a gland where they are arrested and ultimately destroyed, or they may grow through the gland, destroying it meanwhile, and so reach the circulation. But those of the highest virulence either enter by the bloodvessels and so escape the lymph glands or they pass at once through the gland without stopping and without setting up any reaction. Besides the lymphatic glands, through which all lymph has to pass, the mucous membranes of the respiratory and alimentary canal have a further means of preventing the entrance of organisms and their products in the shape of follicles situated in it, and there is also a considerable development of the tissue in the mucous and sub-mucous coats not specially gathered up into follicles, but diffused throughout it. This development of lymphadenoid tissue becomes more striking when we see how slight is the development of lymphadenoid tissue in connexion with the pelvis of the kidney, the ureters, and the bladder, and the absence of lymphadenoid tissue in connexion with the cerebro-spinal lymph spaces. The cerebro-spinal fluid is practically lymph in an extensive system of sinuses, yet this lymph passes directly into the venous blood, and there are therefore cell products or metabolites due to brain activity which do not need to be rendered harmless before they are allowed to enter the circulation. A diffuse form of lymphadenoid tissue is met with in the mucosa and sub-mucosa of the conjunctivæ, nose, pharynx, larynx, bronchi, stomach, and intestines, in some parts less marked than in others—e.g., in the œsophagus; but in all parts capable of being abnormally developed in the course of disease. Of the special masses of lymphadenoid tissue the palatal tonsils develop around epithelial sacs which remain as the crypts. The pharyngeal tonsil forms around the epithelial crypt developed in connexion with the hypophysis, and the lingual tonsil is a lymphadenoid mass about the foramen cæcum. The solitary and agminated follicles develop in the mucosa between the glandular epithelium of the ileum, cæcum, and appendix. But the function of this tissue is not limited to arresting or rendering harmless materials about to be absorbed, the follicles also produce cells which freely pass into the mouth, intestine, and bronchi, and prevent the excessive development of organisms in these canals. Foreign bodies can easily enter through an intact mucous membrane, whereas in the case of the skin there must be a lesion of the surface or the material must be well rubbed into the mouths of the hair follicles and sweat glands. Coal dust when inhaled passes through the intact epithelium of the bronchi and alveoli to the neighbouring glands. Carmine which has been mixed with the food of the animal passes out through the intact wall of the intestines, especially by way of the solitary and agminated follicles. Of all micro-organisms the tubercle bacillus has yielded most interesting experimental results. If a culture of tubercle bacilli be injected into the trachea of an animal the bacilli pass through the intact mucous membrane and infect the neighbouring glands. Similar results may be obtained by feeding animals on material containing tubercle or anthrax bacilli, which pass through the uninjured intestine. In the human subject in connexion with tuberculous glands in the neck a visible lesion in the mouth or on the tonsil is quite the exception, a carious tooth being the only frequent one. Indeed, the local inflammation causing hypertrophy of the tonsil or adenoid vegetations seems very rarely to be followed by tuberculous glands in the neck. It is quite the exception to see a combination of hypertrophied tonsils or adenoid vegetation and tuberculous glands in the same patient.

Lymphatic glands and follicles may be affected through the circulation, like the spleen and bone marrow. The affections are generally sub-acute or chronic rather than acute. The specific fevers, syphilis, and tubercle when generalised, may cause a widespread enlargement. The acutest form of general enlargement is the hæmorrhagic swelling characteristic of plague. More frequently diseases are due to direct infection of the follicles and infection of the glands by way of the lymphatics. In acute inflammation there is an increased circulation through the gland with a more rapid production of cells. The inflammation may subside owing either to the destruction of the organisms or because the infection has passed on through the gland into the circulation. One of or all the follicles of the gland may pass from the stage of inflammation to that of suppuration, which may extend outside the gland, the lymphadenoid tissue forming a slough in the centre. This is often seen in gonorrhœal buboes and in the intestinal follicles. Another form of acute inflammation is due to streptococci, as in diphtheria, scarlet fever, and erysipelatous complications; there is then marked infiltration of the gland and the surrounding connective tissue with œdema and fibrin. A chronic inflammation of lymph glands and follicles consists at first of a simple overgrowth of the gland formed chiefly by an increased number of cells in the meshes, and the distinction between the germ follicles and the medulla is less clearly marked. But if the chronic inflammation continues there is an increase in the connective tissue derived from the capsule and septa of the gland, and thus the amount of lymphadenoid tissue, including cells, becomes really diminished although the gland may be apparently enlarged. The stopping power of lymphatic gland tissue varies with the different diseases. Thus, in syphilis, although the gland enlarges there is no evidence of any power of arresting disease. The attempt to arrest syphilis by excising the hard sore and the glands has been a complete failure. On the other hand, it seems to have a considerable power in preventing the extension of tubercle. Usually the tubercle bacilli are caught in the germ follicle, where they form tubercles which afterwards caseate. Less often there is no definite formation of tubercle, or indeed of giant cells, nor is there any early tendency to caseate, but diffuse infiltration of the whole gland structure. It is then extremely difficult to distinguish a gland so affected by tubercle from lymphadenomatous glands by simple microscopic examination, although inoculation if successful may demonstrate that the disease was of a tuberculous nature. Repair and healing take place in lymph glands by scar tissue derived from the connective tissue, capsules, and septa, the lymphadenoid tissue proper taking no share in it.

LYMPHADENOMA.

Lymphadenoma is a suitable term for those affections the various forms of which have one feature in common—viz., a growth of lymphadenoid tissue closely resembling in structure that of lymphatic gland. The subdivisions of lymphadenoma are excessively confusing from the tendency to classify by some one prominent feature and from the desire of splitting up clinical cases into an endless number of groups. The names in use are employed in very different senses, and it would be difficult to find any two cases of a series which do not exhibit striking differences. We must anticipate in the classification of cases of lymphadenoma the recognition of its definite cause, and as there are many indications that the causes are not very far separated from that of syphilis and tubercle we can take as our guide the analogy of tubercle and distinguish a local disease, local lymphadenoma, from a general disease, generalised lymphadenoma or lymphadenomatosis, in which lymphadenoid tissue is involved in widely separated positions, although to a very various extent. Of local lymphadenoma we may further mark out two kinds, one simple or benign local lymphadenoma, in which the cause is apparently more or less continuously acting upon the lymphadenomatous tissue from the surface of the mucous membrane or skin; whereas in the more malignant form, malignant local lymphadenoma, there is a lack of evidence as to the external source of the irritation, or such irritation as may be present is inadequate, the essential feature being the continuous proliferation of cells from some cause which must be within the tumour itself. So also in generalised lymphadenoma or lymphadenomatosis we can recognise the local origin of the growth from some cause which widely affects lymphadenoid tissue, but in which the development of the disease can be controlled by treatment, and, on the other hand, a malignant generalised lymphadenoma in which the cause must reside within the growths themselves as in other forms of cancer. In a tabular form, then, the divisions of lymphadenoma are: (*a*) Local lymphadenoma: (1) simple or benign; and (2) malignant. (*b*) Generalised lymphadenoma or lymphadenomatosis: (1) benign; and (2) malignant. The other names in common use—leucocythæmia

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or leukæmia, pseudo-leukæmia, Hodgkin's disease, and lymphosarcoma—I can affirm from an examination of the literature of the subject to be used scarcely by any two writers in the same sense. The term "Hodgkin's disease" should be employed as synonymous with "lymphadenoma"; Dr. Hodgkin's paper is entitled "Some Morbid Appearances of the Absorbent Glands and the Spleen." He did not describe any such a well-defined disease as, for instance, did Dr. Addison. The attempt to apply his name to any special form of lymphadenoma cannot be sustained. Leucocythæmia or leukæmia (some writers distinguish the two) are names for one of the signs of the disease which may be present or absent, or absent in the early stages, present later, and finally disappear before death. It has often been used as a name without there being evidence that the blood was even examined; its existence may have been overlooked where only one examination has been made, on account of the sudden variations. An increase of leucocytes may arise from some temporary inflammatory cause or be merely relative owing to the diminution of red cells. Some writers call a slight increase of white cells leucocytosis, some call it pseudo-leukæmia, and others use the term pseudo-leukæmia when no increase of white cells was noticed. Another complexity has been added since the division of the white corpuscles, for which we are indebted to Professor Ehrlich. From a careful comparison between the microscopical examination of the blood, the clinical features of the disease, and the results of the necropsy I do not believe that we can decide from the examination of the blood alone as to the parts of the lymphadenoid organs specially affected. For instance, cases have been called "myelogenous leucocythæmia" from one examination of the blood in the entire absence of clinical and post-mortem confirmation. Lymphosarcoma is a term liable to be confounded with sarcoma growing in a lymphatic gland. It is often used as indistinguishable from lymphadenoma; for instance, we read of multiple "lymphosarcoma" being cured by arsenic. Dr. Wilks[15] was really the first to bring this subject of lymphadenoma forward, and it was after his earlier observations had been made that he lighted on Hodgkin's paper, which had until then received no attention. His name "anæmia lymphatica" for the generalised form is better than "leucocythæmia," seeing that it is the decrease of red cells and not the increase of the white ones which is the more important. The only rational way at present of grouping the various cases of lymphadenoma is by taking the point of origin in each case. Although we remain as yet ignorant as to the causes, yet by considering the probable ways of entry we shall be prepared to receive further evidence of causation without having to make extensive changes in the system of classification. This will be much better than naming the case after some one particular sign of the disease which happens to be prominent.

[15] Wilks: Guy's Hospital Reports, 1856, p. 103; 1859, p. 109; and 1865 p. 56.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.—A deputation from this society was appointed to interview the Members of Parliament representing the counties of Lancashire and Cheshire for the purpose of obtaining their active opposition to Mr. Tatton Egerton's Bill for the Registration of Midwives. Along with the deputation from the Lancashire and Cheshire Branch of the British Medical Association they were, through the kindness of Mr. J. W. Maclure, received by a number of local members and others, among whom were Mr. J. W. Maclure (in the chair), Lord Balcarres, Sir Henry Howorth, Sir Blundell Maple, Mr. T. P. O'Connor, Mr. Tatton Egerton, Colonel Forster, Mr. Isaacson, Mr. Lees Knowles, and Mr. C. Schwann. Two members of the Lancashire and Cheshire branch having spoken, a member of the deputation addressed the meeting and stated several points which were essential to the drafting of any Bill aiming at the registration and control of midwives. The danger of all such legislation was touched on, and objection was taken to the Bill as a whole, on the ground that any amendment thereof would, in order to be satisfactory, entirely alter the complexion of it, and that it could not be expected or hoped that such radical alterations would even probably be effected during the progress of the Bill through committee. In an after discussion of an informal nature with some of the members the deputation had a further opportunity of explaining their views.

The Arris and Gale Lectures

ON

SOME POINTS IN THE PATHOLOGY OF HEART DISEASE.

Delivered at the Royal College of Surgeons of England on Feb. 22nd, 24th, and 26th, 1897,

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LECTURE III.[1]

ON THE CAUSATION OF DROPSY IN HEART DISEASE.

MR. PRESIDENT AND GENTLEMEN,—The main object of the experiments on the circulation which I described in the last lecture was to determine so far as possible the factors which are responsible for the production of the anasarca and serous effusions met with in heart disease. In dealing with this question it must be remembered that dropsy consists in the accumulation of lymph or the fluid which has transuded from the bloodvessels in the connective tissue spaces, and depends therefore on a disturbance of the balance which normally exists between the production and absorption of lymph in the affected parts. Since the questions to be considered and their experimental investigation differ according as we are considering the production of anasarca or of serous effusions, I shall treat of the causation of dropsy in these two situations under separate headings, although I hope to show that the factors involved in each case are essentially identical. We may deal first with the question of the production of œdema in the connective tissues in the limbs. In my previous lectures on the principles of lymph production I dealt chiefly with the lymph flow from the abdominal organs, since the existence of a continuous flow from the abdominal viscera in the animal at rest makes this region the most adapted for experimental investigation. As a result of my experiments I came to the conclusion that lymph formation must be looked upon as the product of two factors—viz., the pressure of the blood in the capillaries and the permeability of the capillary wall. The process, therefore, is analogous to filtration—increase of the filtration pressure or diminution of the resistance of the filtering membrane increasing the amount of filtrate—i.e., lymph. When we attempt to test the truth of these principles on the lymph production in the limbs, we are met at once by the difficulty that if one places a cannula in one of the large lymphatics in the limb of an animal at rest one obtains no lymph flow at all. In order to obtain any lymph in this manner it is necessary to knead or massage the limb or to carry out passive movements. We must not, however, conclude from the absence of a lymph flow through the lymphatics that there is no lymph produced in the resting limb, since it is quite possible that lymph or fluid may have transuded from one portion of the capillaries and been absorbed by another portion. We have, in fact, in order to explain the absence of lymph flow from the resting limb, to consider not only the mechanism of the lymph production, but also the absorption of the transuded fluid. In this case we can evidently leave the absorption by way of the lymphatics out of the question, since it is the flow, or rather the absence of flow, along these vessels that we are considering. It seems, indeed, probable that the lymphatic drainage system of the connective tissues carries on its functions only during activity of the limb or its component parts. All the experiments which have been made on the flow of lymph from the limb lymphatics bring out strongly the fact that extensive alterations in the filtration pressure—i.e., the pressure in the blood-capillaries—cause only slight changes in the lymph flow, in no way comparable to the effect which would be produced by similar changes in the vessels of the abdominal viscera. We must conclude, therefore, that, compared with the latter, the limb capillaries are extremely impermeable—i.e., present a great resistance to filtration. Now, as I have shown, the permeability of a

[1] Lectures I. and II. appeared in THE LANCET of Feb. 27th and March 6th respectively.

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capillary wall, as of an organic filter, may affect not only the quantity of fluid transuding from the plasma under a given pressure, but also the composition of this fluid. Thus if we filter serum through filter paper the filtrate has exactly the same composition as the original fluid. If we use a Chamberland filter we find that the filtrate contains less proteid than the original fluid, and the proteid which passes through becomes less and less as the filtration is continued and the pores become more and more stopped by the retained proteid. By soaking the porous cell in a solution of gelatin so as to fill all its interstices with this substance we may, as Martin has shown, make this impermeability to proteids absolute, without in any way affecting the passage of water and salts through the filter. Hence we may use this method to obtain the crystalloids and water of the serum or blood absolutely free from the proteids and other colloid constituents of these fluids. We should therefore expect to find that the capillaries of the limbs, which present so great a resistance to filtration, would at the same time keep back the larger part of the proteids, so that the transuded fluid would be extremely poor in these substances. Now, on analysing the few drops of lymph which can be squeezed from a cannula placed in a lymphatic of the limb, we find that the difference between the composition of this lymph and that obtained from the permeable capillaries of the liver is by no means so great as we should expect from the relative effects of changes of intra-capillary pressure on the amounts of transudation in these two situations. Whereas the lymph derived from the liver contains from 6 to 8 per cent. of proteids (almost as much as the blood-plasma itself), that from a lymphatic of the limbs contains 2, 3, or 4 per cent. We have no right, however, to assume that the lymph as obtained from a cannula in a limb lymphatic represents in composition the lymph or interstitial fluid which is transuded from the capillaries. Indeed, it may be shown that the fluid flowing from the cannula must be considerably more concentrated than the original transudation. In order to understand this point we must consider carefully the conditions under which transudation and absorption are going on at all times in the connective tissues of the limb.

We have already seen that, given a certain degree of impermeability, the filtrate through a membrane contains less proteids than the original fluid. Now we know in the case of dissolved salts that the separation of water from the solution, leading to the concentration of such a solution, involves the expenditure of a considerable amount of energy. This concentration can be effected by evaporating the solution, in which case the necessary energy is supplied in the form of heat; but we may effect this concentration in a different way. A porous cell is permeable to water and dissolved salts; if, however, an amorphous precipitate of copper ferro-cyanide be deposited in the meshes or pores of such a filter it will then be found that the cell wall is no longer permeable to dissolved salts. A cell wall thus impregnated with copper ferro-cyanide is generally spoken of as a semi-permeable membrane. If such a cell be filled with a solution of salt or other crystalloid, and be then sealed and immersed in distilled water, it will be found that, although no salt can diffuse out of the cell, water diffuses into the cell until the pressure inside has attained a considerable magnitude. In the few cases in which it has been possible to measure the pressure thus produced it has been found that this "osmotic pressure" is approximately equal to that which the dissolved molecules would exert if they were present in the cell in the form of gas. If now the pressure inside the cell be raised artificially above the osmotic pressure of the dissolved substance, pure water will pass out of the cell, and the solution inside will become more concentrated, until its osmotic pressure is equal to the hydrostatic pressure in the cell. The question now arises whether similar reasoning may not hold good in the case of the separation of colloids—such as proteids—from their solutions. Since the osmotic pressure of a substance is equal to that pressure which it would possess were it in the form of a gas, it is evident that in a solution of given strength the osmotic pressure must be smaller the greater the molecular weight of the substance—i.e., the smaller the number of molecules present. Although our knowledge of the nature and properties of colloids is still very imperfect, it seems practically certain that all of them possess enormous molecules, if not in point of size, at any rate in point of molecular weight. That their size is probably also large seems to be indicated by the difficulty with which these colloids pass through fairly coarse pores, such as those of a Chamberland filter. We should, therefore, expect that the proteids of the plasma and serum, if colloids can be regarded as at all analogous to crystalloids in their solution, would possess a certain osmotic pressure, small, no doubt, in comparison with the huge osmotic pressures of fairly dilute salt solutions, but still large enough to be considered in relation to the forces acting in the body. In attempting to determine directly the osmotic pressures of salt solutions, the very size of the results is the cause of great difficulty in their accurate measurement, the vessels leaking or bursting before the final pressure has been reached. Moreover, it seems to be very difficult to prepare a reliable semi-permeable cell by Pfeffer's method. In the case of the colloids of serum these difficulties do not arise. We have only to soak any disc of parchment, peritoneal membrane, or even fine wire gauze in gelatin to obtain a membrane perfectly impermeable to colloids, and the pressures we have to deal with are so small that a very little support of the membrane suffices to prevent leakage. If, for instance, we take a thistle funnel, over the open end of which such a membrane is stretched, fill its bulb with serum, and immerse it mouth downwards in salt solution (isotonic or even hypertonic as compared with the serum), we find that fluid (water and salt) passes into the serum and causes a considerable elevation of fluid in the stem of the funnel, which may amount to a height corresponding to a pressure of from 30 to 40 mm. Hg. Since this result is invariably obtained and the height of the pressure is proportional to the amount of proteids contained in the serum, we must look upon from 30 to 40 mm. Hg. as representing the osmotic pressure of the proteids of the serum. If at the beginning of the experiment the stem be also filled with serum to a height of, say, a metre, the fluid rapidly sinks in the stem, owing to the filtration of water and salt through the gelatin membrane, until the height is equal to 30 or 40 mm. Hg. So that to concentrate a proteid solution by filtration one must employ a pressure which is greater than the osmotic pressure of the proteid in solution; and in this concentration, since the osmotic pressure of the fluid increases, its potential energy, as measured by it power of attracting water and raising it to a height, is increased. We must therefore conclude that whenever a proteid solution is filtered through a membrane more or less impermeable to proteids, with the production of a more watery filtrate, a certain amount of energy is used up in the process, the hydrostatic pressure used for the filtration being converted into an increased osmotic pressure of the concentrated fluid. In such a case the fluid within the cell or vessel will attract the more watery fluid outside with a force represented by the difference in the osmotic pressure of the two fluids, whereas the force causing filtration or transudation is only represented by the amount by which the hydrostatic pressure inside the vessel exceeds this difference in the osmotic pressure.

We may now apply these principles to the conditions as they exist in the living body. As the blood passes from the arterioles through the capillaries into the veins it gets from a region of high into a region of low pressure. We may therefore, in order to dissociate more easily the processes occurring in the tissues, divide the capillaries into two parts—the arterial and the venous capillaries. In the arterial capillaries the blood plasma is at a pressure which exceeds the osmotic pressure of the plasma proteids. From these capillaries, therefore, a transudation of a watery fluid takes place much poorer in proteids than the plasma. The transudation thus produced reaches and bathes the outside of the venous capillaries. In these vessels, however, the pressure of the blood has fallen to a point below that corresponding to the osmotic pressure of the plasma proteids. Here, therefore, the force tending to the absorption of the water and salts—viz., the osmotic pressure of the plasma—is greater than the force causing transudation—viz., the hydrostatic pressure of the blood in the vessels. Now this absorption will affect only water and salts, since we know of no mechanism by means of which the proteid lying outside the vessel wall could be absorbed. We have therefore a continual exudation of a fluid very poor in proteid from the arterial capillaries and a continual taking up of the water and salts of this fluid by the venous capillaries. It is evident that the resultant of these two processes, the fluid which remains in the tissue spaces and is squeezed along the lymphatics with every movement of the limb or pressure on the spaces, must contain a considerably higher percentage of proteids than was contained in the fluid as it originally left the bloodvessels. Hence the difference between

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the proteid percentage of liver lymph and limb lymph is by no means so great as would correspond to the difference in the permeability of the vessels in these two situations. When the fact of the absorption of fluid by the bloodvessels was once definitely established it seemed difficult to account for the presence or use of the lymphatics. Why should a complete and special system of absorbents be developed in all parts of the body if the whole office of absorption might be and was normally carried out by the bloodvessels? If we assume, as many authorities do, that the vascular wall has the power of actively taking up proteids and fluids from the surrounding tissue spaces no work is left for the absorbents. There appear to be no grounds for such an assumption, and I have sought in vain for any evidence for the absorption of proteids by the bloodvessels. Any proteid which leaves these vessels with the transuded lymph is lost for the time to the vascular system. If it is not used up by the tissue elements it must be collected by the lymphatics and restored to the vascular system by way of the thoracic or right lymphatic duct. It is on account of this inability of the bloodvessels to absorb effusions which contain more than a certain percentage of proteids that it is so often necessary to remove such effusions by surgical means. In such cases there is no lack of bloodvessels in close connexion with the fluid to be absorbed. It is, however, the blocking of the surrounding tissue spaces and obliteration of the lymphatic channels which determines the failure of absorption. It might be thought that this impermeability of the limb capillaries would be of disadvantage to the organism, since it limits the supply of proteids to the tissues of the limb. So far as we know, however, the proteid metabolism of these tissues forms but a very small fraction of the total metabolism of the body. Increased functional activity of the muscles, for instance, causes hardly any increase in the excretion of urea, while a marked increase is observed in the excretion of CO_2—that is to say, the muscle derives its food supply chiefly from the diffusible constituents (e.g., dextrose) of the blood. On the other hand, it would be extremely disadvantageous if the limb capillaries at all approached the liver capillaries, or even those of the intestines, in permeability. The smallest change in position, in consequence of the effects of gravity, would alter the pressure in the capillaries and cause large changes in the amount of lymph poured out, so that the legs would have to be provided with a series of lymph hearts to pump up the lymph which was turned out in the upright position. We have an opportunity of observing the effects of such changes in the hydrostatic pressure of the blood in cases where the permeability of the capillaries has been altered in consequence of inflammatory conditions. In such cases the beneficial effects of raising the limb in relieving tension—i.e., the distension of the tissue spaces by lymph—are well known.

We may now proceed to utilise the knowledge we have gained of the factors regulating the formation and composition of lymph in the limbs under normal conditions for the purpose of explaining the œdema of heart disease. As I have already mentioned, it has been customary to classify the œdema of heart disease with that due to venous obstruction, such as occurs when the large veins are pressed upon by growths or obstructed by thrombi. The production of œdema in consequence of venous obstruction was shown to be possible by the experiments of Paschutin and Emminghaus, and still more strikingly by Ranvier's experiment. The latter observer showed that if the inferior vena cava were ligatured and the sciatic nerve on one side cut, the leg on the same side became œdematous in consequence of the increased transudation induced by the high pressure in the capillaries. Many authors have observed the production of œdema as the result of an elastic ligature round the upper part of a limb. In all these cases, however, the rise of pressure in the capillaries necessary to produce œdema is very considerable; and Cohnheim himself, in discussing the point, concludes that the œdema is not sufficiently explained by the increased venous pressure in heart disease. In my last lecture I showed that the immediate as well as the remote effect of heart failure, however caused, was to bring about a diminution rather than an increase of capillary pressure, and we know that such a diminution of pressure in the capillaries causes increased absorption from the connective tissue spaces, and therefore a less amount of fluid in these spaces. An experiment of Cohnheim gives some clue to the explanation of the difficulty. It is well known that ligature of one femoral vein in the dog is not followed by any œdema. Cohnheim found, however, that if a dog be bled every few days for a week or two before the operation, so as to render his blood hydræmic, ligature of one femoral vein gives rise to œdema of the leg, extending all round the neighbourhood of the wound. If the hydræmia be brought about just before the ligature, by bleeding the dog and injecting a corresponding amount of saline fluid, no œdema results. Cohnheim concludes, therefore, that long continued hydræmia alters and injures the vessel wall, so making it more permeable, so that a rise of capillary pressure, which would be without effect in a normal animal, is now able to considerably increase the lymph transudation and cause distension of the tissue spaces. We have seen that, although there is no plethora, there is hydræmia in heart disease. Moreover, the nutrition of the vessel wall is injuriously affected by the failure of the circulation and consequent absence of a proper renewal of oxygen and nutrient material to the capillary wall. These factors coöperate in increasing the permeability of the wall to such an extent that a very slight increase in the intra-capillary pressure, such as may be brought about by a dependent position of any part, is sufficient to cause increased transudation and consequent œdema. In heart disease the capillary pressure is not higher, but rather lower, than in a normal animal. The dropsy is entirely conditioned by the state of the capillary wall.

In adopting this view as to the exclusive responsibility of the change in the capillary wall for the œdema of heart disease we are confronted by an apparent difficulty. We are accustomed to regard increased permeability as connoting not only an increase in the amount of fluid transuded, but also in the concentration of the fluid. Now if we analyse the fluid of œdema in heart disease we find that it contains only from 0·3 to 0·5 per cent. of proteids—i.e., considerably less than that found in the lymph from the limbs of normal animals. How, then, can we speak of the permeability of the vessel wall being increased under these conditions? I think the answer lies in the fact that increased concentration is not the necessary sequence of increased permeability. Thus, to return to the example of various filters, a porous cell saturated with gelatin presents a much greater resistance to filtration than does a film of peritoneal membrane which has been soaked in the same substance. Yet in each case the composition of the filtrate is the same, no proteids having come through. On the other hand, we may increase the permeability of the gelatinised Chamberland filter by boiling it and dissolving out all the gelatin. After this, not only is the amount of the filtrate under a given pressure increased, but the filtrate is qualitatively different in that it now contains proteid. It is quite possible that the changes wrought on the capillary wall by the mingled effects of hydræmia and stagnation of the blood have the same result as the thinning of the colloid filtering membrane—i.e., merely a quickening of filtration. On the other hand, the changes met with in inflammation are much severer and have for an effect the utter alteration of the quality of the membrane.

It being allowed, then, that the qualitative permeability may be normal while the quantitative permeability is increased, it is easy to account for the small amount of proteid present in the œdema fluid. For then not only is the original blood plasma poorer in proteid than it is normally, but the chief factor tending to increase the concentration—i.e., the absorption by the bloodvessels—is practically abolished. For the effect of the slow blood current is to equalise the pressures in veins and arteries, so that if the hydrostatic pressure in the arteries is sufficient to cause abnormal transudation an almost equal amount of fluid will be poured out by the veins. Absorption by the bloodvessels can now only occur when the capillary pressure in a part is considerably reduced by raising it above the level of the heart. It seems probable that the obstruction to the flow of lymph from the thoracic duct into the blood, as well as the distension of the duct from the largely increased lymph flow from the liver, may contribute to the production of œdema in the rest of the body. This factor must, however, be only a subordinate one, and is far transcended in importance by the increased transudation from the vessels which occurs in this disease.

The production of effusions into the serous cavities.—The arrangement of the vascular supply is so different in the case of the pleural and peritoneal cavities that it is desirable to consider the causation of effusion into these two cavities separately, and we will deal first with the question of pleuritic effusion. On this point a number of experiments were made by Leathes and myself, and we found that the

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conditions governing increased effusion into these cavities are very similar to those we have just studied in the limbs. Thus in the latter we saw that so long as the vessels are normal it is impossible by any moderate increase in the capillary pressure to produce any marked œdema or effusion. On the other hand, it is easy to produce effusion by alterations in the vessel wall, and when such alterations have been effected every rise of pressure is followed by a considerable increase in transudation. In our experiments on the pleura we attempted, first, to produce effusion by increasing the capillary pressure in the part. Since the blood from the pleural parietes has several different channels of exit, the only method one can use to bring about a rise of capillary pressure is the injection of large quantities of normal saline solution into the circulation. We tried at the same time to intensify the rise by obstructing the vena azygos at its opening into the superior vena cava, and also ligatured both thoracic ducts. Although in these experiments an enormous degree of œdema was found in the retro-peritoneal tissue and in the posterior mediastinum the pleural cavities themselves contained only 2 or 3 c.c. of fluid. On the other hand, the injection of small amounts of jequirity into the pleural cavity produced a typical pleuritis, with destruction of the endothelium, and fibrinous and serous exudations. In such cases the injection of large quantities of normal saline into the circulation caused a large and rapid transudation of fluid through the injured capillaries into the pleural cavities, and the death of the animal within two or three hours from asphyxia. A simple destruction of the pleural endothelium, as by scalding or the injection of sodium fluoride into the pleural cavities, had no effect in producing effusion. We therefore concluded that for the production of effusion it was necessary that the tissues, and especially the blood-vessels in the peripleural connective tissue, should be affected. Any fluid which is poured out in the tissues lying under the pleural endothelium, whether in the chest wall or in the mediastinal tissues, rapidly finds its way into the pleural cavities, so that it is possible to kill an animal by asphyxia by allowing fluid to run into the carotid sheath, which is continuous with the connective tissue spaces of the posterior mediastinum. In such cases at the death of the animal both pleural cavities are found full of fluid, although the endothelium separating the mediastinum from the pleural cavity is still intact, and presents no apparent openings for the passage of the fluid.

The hydrothorax, therefore, of heart disease must, like the œdema of the limbs, depend in the first place on an alteration and increased permeability of the vessel wall occasioned by the stagnation and poor quality of the blood. Since, moreover, we have seen that obstruction of the thoracic duct causes distension of the mediastinal tissues, and that fluid can pass easily from these tissues into the pleural cavities, it seems probable that the obstruction to the flow of lymph into the blood through the duct, which is present in uncompensated heart disease, must materially contribute to the hydrothorax. Whether an increased transudation in the lungs may also aid in the production of the effusion we have no experimental evidence to show.

In the peritoneal cavity there are two distinct systems of capillaries, either of which might be responsible for the production of ascites. On the one hand, we have the capillaries of the spleen and alimentary canal, which form the radicles of the portal vein; on the other, the liver capillaries which drain into the hepatic vein. We have already seen that these capillaries differ markedly both in their permeability and in the effect on the pressure in them of various changes in the circulation. Heart failure, for instance, such as is brought about by injection of oil into the pericardium causes a marked rise of pressure in the hepatic capillaries, but a fall of pressure in the intestinal capillaries. With regard to the ascites determined by changes in the portal system of capillaries, it would seem that the result of increased flow of lymph in this capillary region depends on the condition of the peritoneal endothelium. Thus ligature of the portal vein causes a very large increase of the lymph flow from the thoracic duct, but only a slight exudation of fluid into the peritoneal cavity; if, on the other hand, we increase the permeability of these capillaries by plunging several coils of intestine into hot water, or even into distilled water, at the temperature of the body, we find that, although the lymph flow from the thoracic duct is hardly changed, there is a considerable exudation into the peritoneal cavity. In the latter case the transudation from the intestinal capillaries, instead of being confined beneath the endothelium and compelled to traverse the lymphatics towards the cisterna and thoracic duct, can escape easily through the damaged endothelium and adopts this path of least resistance. In heart disease, however, the most important source of the ascitic fluid is probably the liver. Even in the normal animal a slight exaggeration of the conditions present in heart disease will induce an ascites, which seems to be derived from the liver capillaries. Thus in one experiment I ligatured the thoracic duct and obstructed the inferior vena cava above the liver in order to raise the capillary pressures in this organ. A condition of hydræmic plethora was then produced by the injection of 1500 c.c. of normal saline solution. Two hours later the animal was killed and the abdomen found to contain 100 c.c. of fluid. In another experiment the lymphatics of the liver were ligatured as they pass out of the portal fissure, and hydræmic plethora produced as before. In this case 230 c.c. of fluid were found in the peritoneum.

Since we know that the capillary pressure in the liver is largely increased in heart disease—and these experiments show that even in the normal animal an increased transudation in the liver combined with obstruction to the lymph flow causes ascites—we are warranted in concluding that the chief, if not the only, source of the ascitic fluid in this disease is the capillaries of the liver. This conclusion is confirmed to some extent by Halliburton's analyses of the ascitic fluid in different disorders. He found that in heart disease the concentration in proteids of this fluid was greater than when the ascites was due to portal obstruction or cirrhosis of the liver. We know now that a similar difference in concentration obtains between liver lymph and lymph from other parts of the body, and it is on this account that the effusion in heart disease is more concentrated than that found in other disorders. From these experiments one would expect that ascites should be one of the most constant and earliest symptoms of heart disease. I do not know how far clinical observations would bear out this conclusion.

In these lectures I have endeavoured to give a connected account of the factors which lead to the production of dropsy in consequence of the failure of the heart-pump. The views which I have put forward must, however, be regarded only as the most probable in the light of our present physiological and pathological knowledge, and it is quite possible that we may have to modify them to some extent on further investigation of the subject.

SANITARY INSPECTORS' ASSOCIATION.—The fourteenth annual dinner of the Sanitary Inspectors' Association was held at the Holborn Restaurant on March 6th, Sir John Hutton, the President, being in the chair. Among those present were the Archdeacon of London, Sir Arthur Arnold, Professor Corfield, Professor Crookshank, Mr. T. P. Teale, Dr. J. M. Rhodes, Dr. W. J. Collins, and Mr. Shirley Murphy. The chairman, in the course of the evening, said that the association was founded in 1883 and now had very nearly 700 members. Many branches had been established during last year. The association was at present giving much attention to the subjects of superannuation, fixity of tenure, and the holding of examinations which sanitary inspectors will be required to pass.

ROYAL SURREY COUNTY HOSPITAL.—The annual meeting of the Royal Surrey County Hospital at Guildford was held on Feb. 27th, the Rev. Dr. Haig-Brown presiding. The report for the year ending Dec. 31st, 1896, showed that the income for the year was £4970 and the expenditure £4280. A long discussion took place in reference to home visits which had for many years been paid to patients in Guildford by the house surgeon of the infirmary, but which had been discontinued since the end of 1896 in pursuance of an arrangement made by the governors in 1891. It seems that when the hospital was first opened it acquired the funds and took over the work of a previously existing dispensary whose members were entitled to be visited by the medical officer at their own homes in the event of their being unable to attend at the dispensary. The hospital authorities had not bound themselves to carry on home visits permanently, and in discontinuing them they were within their rights; but there now seemed to be a strong feeling in favour of the visits being resumed. In the result it was resolved to appoint a committee to confer with the municipal authorities on the subject and to consider all the aspects of the question.

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The Lettsomian Lectures

ON

DISEASES OF THE NOSE AND THROAT IN RELATION TO GENERAL MEDICINE.

Delivered before the Medical Society of London,

BY F. DE HAVILLAND HALL, M.D., F.R.C.P. LOND.,

PHYSICIAN TO THE WESTMINSTER HOSPITAL, AND JOINT LECTURER ON THE PRINCIPLES AND PRACTICE OF MEDICINE IN THE WESTMINSTER HOSPITAL MEDICAL SCHOOL.

LECTURE III.[1]

Delivered on March 1st, 1897.

ANEURYSM.

MR. PRESIDENT AND GENTLEMEN, — In aneurysm of the aorta the laryngoscope is oftentimes of inestimable service in enabling the practitioner to make an early diagnosis, and consequently to allow of the institution of prompt treatment. It may be laid down as an axiom that when the left vocal cord is immobile in the cadaveric position pressure of an aneurysm upon the recurrent laryngeal nerve is the first thing to be thought of, and it is only after an aneurysm has been excluded that other causes for the paralysis of the laryngeal muscles need be considered. This is more especially the case in males between the ages of thirty and sixty years. It must be remembered that, in accordance with Semon's law, "there is proclivity of the abductor fibres of the recurrent nerve to become affected sooner than the adductor fibres, or even exclusively, in cases of undoubted central or peripheral injury, or disease of the roots or trunks of the pneumogastric, spinal accessory, or recurrent nerves," consequently the first effect of pressure on the recurrent nerve is to cause abductor paralysis on the affected side. Now, unilateral abductor paralysis presents such slight symptoms that in the absence of a laryngoscopic examination it is generally overlooked; still, numerous cases have been recorded in which this condition has been observed as a symptom of thoracic aneurysm. When, however, the adductor fibres become implicated and the cord passes into the cadaveric position the effect on the voice is so marked that the patient feels that something is amiss with him, and consequently seeks advice. In looking over the notes of sixteen private cases of aneurysm of which I have full particulars I find that they were all males, the youngest twenty-nine and the eldest sixty-one years of age, the average age being almost exactly forty-seven years. Of these sixteen cases, in one case there was bilateral paralysis of the abductors, the left vocal cord was in the cadaveric position in eight, in five there was impaired movement (loss of abduction) of the left vocal cord, and in two the laryngoscopic appearances were normal. The right vocal cord was only affected in the case of bilateral paralysis of the abductors. The proportion of cases in which the left vocal cord was partly or completely paralysed is, of course, much greater in my practice than in ordinary general practice, inasmuch as several of the patients consulted me on account of hoarseness and had no suspicion that they were suffering from any serious affection; still, this only emphasises the importance of a laryngoscopic examination in all cases of hoarseness, and, as I have said before, a loss of mobility of the left vocal cord in a middle-aged male, especially if the cord is in the cadaveric position, should at once arouse the suspicion of an intra-thoracic aneurysm. The reason why the right vocal cord is so seldom affected depends upon anatomical considerations; the right recurrent nerve winds round the subclavian artery, and is therefore situated at a considerable distance from the arch of the aorta. Should, however, the sac of the aneurysm involve the innominate artery the right recurrent nerve may be implicated, or the trachea may be displaced by an aneurysmal tumour in such a way that its convexity may press on the right recurrent and pneumogastric nerves, causing paralysis of the right vocal cord, or centripetal irritation of the trunk of the left vagus may act on the nervous centre, and through it upon the nerve-supply to the laryngeal muscles on the right side. I have found the combination of complete paralysis of the left vocal cord due to pressure on the left recurrent nerve by malignant disease, together with the existence of valvular disease and enlargement of the heart, extremely difficult to distinguish from an intra-thoracic aneurysm. In some cases it is possible to recognise the direct pressure of an aneurysm upon the trachea by means of the laryngoscope. The bulging forward of the posterior wall can be seen, and with a good light and a tolerant patient pulsation may even be distinguished.

DISEASES OF THE DIGESTIVE SYSTEM.

The possibility of chronic gastric catarrh being kept up by the irritation produced by swallowing fœtid secretion from the nose and naso-pharynx should be borne in mind by the physician who finds that his patient does not readily respond to the usual treatment. Whether as the result of the improvement of the general health or from the cessation of the local cause of irritation, I have noted that symptoms of dyspepsia have disappeared after the nose and accessory sinuses have received attention. That the stomach may be involved secondarily to the upper air passages is pretty generally agreed, but it is not so easy to prove that affections of the upper air passages may occur as a result of stomach derangements. Various theories may be propounded to explain the connexion between affections of the upper air passages and diseases of the stomach. We may appeal to the theory of reflexes or we may attribute to the ubiquitous bacillus the *rôle* of disturbing the functions of remote organs. In speaking of the treatment of granular pharyngitis in my book on "Diseases of the Nose and Throat" I say that "it is most important that attention should be paid to the general health of the patient. If there be any symptoms of indigestion these should be seen to." Further experience has only confirmed what I have therein stated, and I am convinced that the state of the pharynx is much influenced by the condition of the stomach and liver.

DISEASE OF THE LIVER.

In connexion with hepatic diseases I have only to remark that very severe epistaxis is not uncommonly an early symptom of cirrhosis of the liver, the bleeding occurring from dilated veins at the posterior part of the nose. In a middle-aged person the occurrence of epistaxis is almost as suggestive of cirrhosis of the liver as are piles. Hæmorrhages from, and ecchymoses in, the mucous membrane of the pharynx and larynx may be recognised in some cases of cirrhosis and cancer of the liver; also in acute yellow atrophy. A recent development of throat specialism is the doctrine that a varicose condition of the veins at the base of the tongue is one of the objective causes for many subjective throat symptoms of the nature of "globus hystericus." A lengthy discussion which took place in the columns of THE LANCET in the early part of last year has been the means of relegating lingual varix to its proper position. That an enlargement of the veins at the back of the tongue does occasionally exist I am quite ready to admit, but that this condition is "an etiological factor in many obscure pharyngeal and laryngeal symptoms" does not agree with my own observations. I have found that with attention to diet, the administration of saline aperients, and limiting the amount of alcohol taken the patients have speedily improved and have not required any local treatment.

BRIGHT'S DISEASE.

Epistaxis is a frequent symptom of chronic interstitial nephritis and is occasionally met with in the other forms of Bright's disease. It may be quite an early sign of granular kidney; the urine should therefore be examined in cases of abundant or frequent epistaxis. The bleeding is dependent upon the altered blood state, changes in the vessels of the Schneiderian mucous membrane, and upon the cardiac hypertrophy and increased arterial tension. The exact connexion between Bright's disease and œdema of the larynx is still a matter of discussion. The probable explanation is that Bright's disease determines the onset of the œdema in cases in which, under ordinary circumstances, the local irritation would have been too slight to have caused it.

LOCOMOTOR ATAXY.

Nasal conditions associated with tabes are rare. That

[1] Owing to the present great pressure on our space we have been reluctantly compelled to abbreviate this third Lettsomian Lecture. Lectures I. and II. appeared in THE LANCET of Feb. 6th and Feb. 27th respectively.—ED. L.

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there is hyperæsthesia of the nasal mucous membrane is shown by the fact that laryngeal crises can at times be elicited by irritating the nasal fossæ. In the pharynx both the sensory and the motor nerves may be affected. All varieties of sensorial disturbance may occur—viz., anæsthesia, hyperæsthesia, and paræsthesia. On the motor side there may be paralysis or spasm with contraction. The mucous membrane of the larynx, like that covering the pharynx, may be the seat of anæsthesia, hyperæsthesia, or paræsthesia. On the motor side three kinds of affections are seen in the larynx as a result of tabes—(1) spasm of the adductors; (2) paralysis of the abductors; and (3) incoördination of the laryngeal muscles. The last mentioned of these laryngeal affections of tabes is a true ataxy of the vocal cords, and is perhaps one of the earliest laryngeal signs of tabes.

[Dr. de Havilland Hall here made short references to Syringomyelia, Paralysis Agitans, Labio-glosso-laryngeal Paralysis, and Reflex Epilepsy of Nasal Origin.]

HYSTERIA.

The neuromimetic conditions affecting the upper air passages are so numerous that I can only briefly describe some of the most important. It has been stated that a regular attack of hysteria may be produced by the irritation of certain parts of the nasal mucous membrane, the so-called hystero-genetic zones, and that after the application of the galvano-cautery to these areas the attacks have ceased to occur. Though I have been examining the interior of noses for the last twenty years, and have constantly used the probe, I have never succeeded in starting off an attack of hysteria. The motor neuroses of the pharynx may be due to spasm or paralysis. The so-called globus hystericus is nothing more or less than spasm of the pharyngeal muscles. Hysterical paralysis of the muscles of the pharynx may, by causing dysphagia, give rise to the suspicion of malignant disease, especially if the patient is middle-aged; the diagnosis is readily effected by means of the œsophageal bougie. A curious condition to which the term inspiratory spasm or perverted action of the vocal cords has been applied is occasionally seen in hysterical persons. In this affection the voice remains normal, but on attempts at inspiration the vocal cords, instead of separating, approximate in a convulsive manner. Sometimes they come in contact and cause grave interference with respiration; at other times they remain in the cadaveric position, giving rise to inspiratory stridor. Another form of spasm is the "barking cough of puberty."

NEURASTHENIA AND MELANCHOLIA.

The subject of the various reflex nasal neuroses has received much attention of late years and there has been a tendency, I think, to exaggerate the effect of the various intra-nasal lesions. As I frequently examine the noses of patients—no matter what their complaint—I have come across numerous instances of deflected septa, nasal crests, and spurs in patients in whom there is no symptom of any nasal or reflex nasal affection. On the other hand, there is no doubt that these same conditions in neurotic or neurasthenic patients would produce symptoms of a reflex character curable by local treatment in conjunction with suitable general treatment. Some patients become quite hypochondriacal as to the state of the nose and are constantly craving for an application of some kind or the other to be made to it. I have recently had under my care a lady, forty years of age, who, on account of paroxysmal sneezing, "suffered many things in the way of removal of bone, cautery, &c." She certainly lost the sneezing, but since it disappeared she has suffered from flatulent dyspepsia, acidity, intestinal catarrh, and constipation, accompanied by neuralgia and various sensations referred to the pelvic viscera. She has lost flesh, is terribly depressed, and is a typical example of neurasthenia. She dates all her present symptoms from the time she ceased to sneeze, and attributes them to the shock of the numerous and severe operative procedures carried out in her nose. Her medical man takes the same view, and I am disposed to agree with him.

HEADACHE.

There is hardly any nasal affection but has headache for a symptom. Hence a careful examination of the nose and accessory cavities should be carried out before headache is regarded as being of a neurasthenic or neuralgic origin. Chief among the nasal causes of headache may be mentioned hypertrophy of the turbinals giving rise to nasal stenosis; deflection of the septum may also have a similar effe Furthermore, I should here like to direct attention to the pain referred to the nape of the neck and the occipital region radiating towards the ear, which is met with in some pharyngeal affections.

[Dr. de Havilland Hall here referred briefly to Meningitis, Cerebral Abscess, Cerebral Hæmorrhage, and Epistaxis.]

CONCLUDING REMARKS.

I have purposely refrained from saying anything about diphtheria because the subject is too wide to be treated in an adequate manner in the time I could devote to it. Moreover, it is somewhat outside the limits I laid down for my own guidance when I commenced writing these lectures. For similar reasons I have not discussed the manifestations of tubercle, syphilis, and malignant disease in the nose and throat, as these are well described in the various text-books on the subject. The plan I proposed to myself was to group together the various affections of the upper air-passages as they may occur in connexion with general or local diseases, and also to point out the diseases of remote organs which may arise as a result of affection of the upper respiratory tract. A secondary object I had constantly before me was to accentuate the importance of a systematic examination of the nose, naso-pharynx, pharynx, and larynx. I am quite conscious that I have omitted many points of interest, but the task of selection is rendered difficult by the very abundance of material.

CHRONIC INTERSTITIAL NEPHRITIS IN CHILDHOOD.[1]

BY LEONARD G. GUTHRIE, M.A., M.D. OXON., M.R.C.P. LOND.,
PHYSICIAN TO THE REGENT'S PARK HOSPITAL FOR PARALYSIS; PHYSICIAN TO OUT-PATIENTS AT THE PADDINGTON-GREEN CHILDREN'S HOSPITAL AND THE NORTH-WEST LONDON HOSPITAL.

(*Concluded from page 688.*)

PHYSICAL SIGNS AND SYMPTOMS (*continued*).

Mental characteristics.—Children suffering from this complaint seem to be shrewd, precocious, and intelligent beyond their years. This was noted particularly in Dr. Barlow's fatal case. In my own fatal case there was a peculiar mental perversity. The patient apparently soon discovered that she was an object of interest, and did all she could to attract attention. She would scream incessantly and feign unconsciousness during the friends' visiting hour at hospital, but afterwards would confess that she knew all that was going on. She would beg that poison might be given her and disturb the whole building by her shrieks at night, but would be quiet directly she had succeeded in having the house physician called up to see her. It was difficult to ascertain whether she were actually in pain or only counterfeiting it.

I have observed in other cases that intelligence appears to be above the average. It is possible that the active cerebral circulation in such cases due to cardio-vascular hypertrophy may conduce to premature mental development. There may be more truth than W. S. Gilbert supposed in his ballad concerning the precocious child, who died "an enfeebled old dotard at five."

Cerebral symptoms.—Headache and vomiting were prominent features in four of these fatal cases. In two headaches were frequent, but there is no mention of vomiting. In one vomiting was frequent, but not headache. Vertigo and amaurosis accompanied headache and vomiting in my own fatal case. The localisation of headaches is of no value; it is usually frontal, but may be occipital, coronal, or lateral. They resemble those of migraine in their periodicity, severity, and association with visual disturbance or vertigo, and in being often relieved by vomiting. Also, at first they commonly occur on waking in the morning, as in migraine, though later they may happen at any time of the day. I

[1] A paper read before the Harveian Society of London on Nov. 19th 1896.

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shall mention presently points by which they may be distinguished from other headaches. As to the cause of headaches in interstitial nephritis, in many cases they are doubtless uræmic, especially when occurring late in the course of the disease. But they may also be produced by alterations in the cerebral circulation, dependent on the increase of arterial tension which prevails. Their occurrence in the early morning may depend on sudden increase of tension in arterioles which have been previously relaxed during sleep. The later or more strictly uræmic headaches may also occur chiefly on first rising, owing to the effect of the accumulation of toxins in the blood during the night.

Vomiting may occur either with or without headaches; it may be independent of food or otherwise. It may be strictly cerebral and, like headache, produced by vascular conditions of the brain. Sometimes it seems to be purely gastric and due to congestion, catarrh, and irritability of the stomach. These are probably the causes in early stages of the disease, whilst late vomiting is, like late headache, dependent on uræmia. There can be no doubt that uræmia occurs far later and is far graver in interstitial nephritis than in parenchymatous.

Albuminuric retinitis might be expected to occur in children as in adults suffering from chronic interstitial nephritis. But it is not mentioned in any of the cases collected, and in my own patients I have never discovered it. Convulsions were prominent in two of the cases; in two they only occurred just before death; in one they were absent, death being due to gradual exhaustion; in one there were attacks of tetany and opisthotonos, after one of which the boy died comatose; and in one, recorded by Dr. Goodhart,[2] there were also attacks of tetany and cramp in the legs, but the subsequent history is unknown to me. Convulsions are, therefore, fairly common in this disease; but they are far more common, they occur earlier, and are more usually recovered from, in cases of parenchymatous than in interstitial nephritis. In adults it is not uncommon to find granular kidneys in a patient who has remained in apparent health until attacked by a series of convulsions during or directly after which he has died.

A point of interest about my own fatal case is that the convulsions were almost entirely unilateral. I do not doubt that they were uræmic, although the right side was chiefly affected. Large hæmorrhages in the right cerebral hemisphere were found after death, which probably, although not directly involving the motor tract, lowered its power of conducting impulses from the cortex downwards. A few days before death there was some transitory left hemi-paresis. Had the convulsions been due to the hæmorrhage, of course they would have affected the left and not the right side. Cerebral hæmorrhage occurred in one of Dr. Dickinson's fatal cases as well as in my own. I have not met with any other cases of hæmorrhage into the substance of the brain due to nephritis in children.[3] Cerebral apoplexy in children from any cause is, indeed, rare. It occurs in cases of purpura, commonly of scorbutic origin, but is usually then meningeal, forming the condition known as pachymeningitis hæmorrhagica. It is rarely intra-cerebral. Sometimes hæmorrhage, either intra- or extra-cerebral, is caused by rupture of miliary aneurysms of the arteries. The aneurysms themselves may be produced by syphilitic endarteritis or by weakening of the vessel wall consequent on embolism or thrombosis. During paroxysms of whooping-cough hæmorrhages into the brain or meninges or elsewhere may take place. In my own case no source of the larger hæmorrhages could be discovered, but one at least of the smaller extravasations was in the neighbourhood of a small thickened arteriole which had apparently burst. The larger hæmorrhages may have been similarly caused. The character of the symptoms rendered it unlikely that they were due to sudden rupture of large vessels.

Some cases of infantile hemiplegia or monoplegia are doubtless caused by hæmorrhage. But they are seldom fatal at the time, and when death occurs many years later all traces of hæmorrhage have disappeared, or else cysts may be found which may or may not have been hæmorrhagic in origin.

The intestinal symptoms are not peculiarly distinctive of interstitial nephritis. Sometimes the appetite is capricious or enormous, and, as already stated, there may be extreme thirst. Diarrhœa, like gastric vomiting, may be dependent on catarrh or irritability of the bowels. It is provoked by the slightest indiscretion in diet. The motions are slimy, mucous, or frothy, and at times contain blood. There may be epigastric or abdominal pain. The attacks are soon over as a rule, but when obstinate and of long standing one must suspect the occurrence of albuminuric ulceration of the bowels. Sometimes constipation alternates with diarrhœa. One of Dr. Dickinson's patients suffered before death from purulent peritonitis. I have only seen one instance of this complication. But this was in a child, aged four years, who died from general dropsy and uræmic convulsions. Parenchymatous and not interstitial nephritis was found after death, and the kidneys contained abundance of uric acid crystals. Probably peritonitis in children, as in adults suffering from chronic nephritis, occurs in a proportion of about 10 per cent. It was found in 46 out of 406 cases collected by Sir William Roberts.

Urinary symptoms.—Polyuria was noted in four of the fatal cases, as much as three, four, or even five pints of urine being passed per diem. It is probably an early symptom in all cases, but is not likely to attract attention unless, as in Dr. Barlow's patient, it is associated with enuresis. Even in adults suffering from granular nephritis the symptom is rarely made the subject of complaint—in fact, it is usually regarded as a favourable sign that urine is passed freely; diminution in quantity, on the other hand, both in the child and adult, at once excites alarm. The amount, however, shows considerable variations, and when at its lowest eclampsia is wont to occur. In my own fatal case the average amount of urine passed per diem was forty-eight ounces, but on the two days on which fits occurred the amount fell to twenty-five ounces and eighteen ounces. On the days immediately succeeding the fits the amounts were fourteen ounces and eighteen ounces, whilst on the second days following the fits the quantities rose to eighty-four ounces and 106 ounces respectively. A similar reduction in quantity of urine in association with eclampsia is noted in two other cases. Generally speaking, there is something to be said for the popular view that polyuria is a favourable sign, indicating as it does the completion of cardio-vascular compensation. Naturally, the greater the quantity of urine the greater the elimination of toxins. It is none the less an important symptom of a grave disease. Polyuria was associated with thirst in three of the fatal cases.

The specific gravity is generally low. In my own fatal case it was almost invariably 1010, occasionally 1008, and once only reached 1015. In two other cases, where it is mentioned, the specific gravities were 1004 and 1005 respectively, whilst in a third it varied between 1010 and 1020. It does not appear to be influenced by the amount of urine passed to any great extent. In my own fatal case it was 1010 when 106 ounces were passed in twenty-four hours, but only 1015 when the amount was fourteen ounces. Whilst Dr. Barlow's patient was passing from four to five pints of urine a day the specific gravity was 1015, and it only rose to 1020 when the amount had declined to three-quarters of a pint.

The albumin varies greatly in quantity. It may be entirely absent at first. Generally speaking, the amount is not large—or not so large as in cases of parenchymatous nephritis. In one only the urine is said to have become at times almost solid on boiling. This occurred during attacks of vomiting and tetany, when, instead of the usual polyuria, there was marked scantiness of the urine.

Casts in the urine are rare. They are usually of the hyaline variety, but sometimes are granular. Blood casts may occur in association with the acute exacerbations already mentioned in the course of the disease. Ordinarily there is seldom abundance of any deposit. The urine generally is clear, pale, and acid.

No statement is made as to the percentage of urea in any of these cases. In all probability it would have been found reduced below normal. To avoid fallacy it is worth remembering that children normally pass a larger relative quantity of solid matter than adults. (According to Dr. Eustace Smith the average amount passed by a child is five grains for each pound of body weight. In the adult Dr. Parkes estimates the amount as 3½ grains per pound weight.)

Pulmonary symptoms.—Children suffering from interstitial nephritis are often subject to recurrent attacks of bronchial catarrh as well as of gastro-intestinal catarrh, and may first be seen on this account. They are often somewhat breathless after exertion, but the dyspnœa is not usually extreme

[2] Keating's Encyclopædia of Children's Diseases.

[3] A third case has been reported by Filatoff in a child aged eleven years. (Emmett Holt: Diseases of Children, 1897, p. 621.)

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except in the last stages of the disease, when pulmonary œdema is common. In adults the recent occurrence of attacks of spasmodic asthma in a patient who is not a typical asthmatic and who does not suffer from chronic bronchitis or heart disease suggests uræmia. Such attacks when uræmic are of extemely fatal augury. Asthmatic attacks, however, are not necessarily uræmic; the speedy relief afforded by nitrite of amyl suggests that they may be due to constriction of the pulmonary arterioles in some cases. I have not met with them in children suffering from interstitial nephritis. But my experience is limited; and as the symptoms in children in other respects precisely resemble those of adults, it is probable that children also might suffer from asthma. In adults suffering from granular kidney, pleurisy, pleuro-pneumonia, and pericarditis commonly end the scene. I have not met with such instances in children, nevertheless they may doubtless occur.

Cardiac symptoms are not obtrusive. There may be slight præcordial pain or distress on exertion. In two of my cases these were amongst the first symptoms which arose. Probably slow cardiac hypertrophy is unattended by symptoms unless it is on the point of failing.

ETIOLOGY OF CHRONIC INTERSTITIAL NEPHRITIS.

Once it was thought that all granular kidneys were simply large white kidneys in their final or contracted stage. But this cannot be so in all cases, because a large white kidney sufficiently diseased to end in contraction must have been attended by definite symptoms of severe illness, including dropsy. Yet the majority of those who die with granular contracted kidneys have not been severely ill until shortly before death and are said never to have had dropsy, and dropsy is not a condition which can be readily overlooked.

Possible scarlatinal origin.—One naturally thinks of scarlet fever in these cases. This is undoubtedly the origin in some, but in the majority there is no history of scarlet fever. Mild scarlet fever may easily escape recognition, it is true, and so may subsequent desquamation and also slight attacks of nephritis. But attacks of scarlet fever so mild as to escape recognition at the time are hardly likely to be followed by lasting progressive and finally fatal renal mischief. Even in the worst cases of undoubted scarlatinal nephritis the prognosis is generally good. Children very rarely die from it. And if the prognosis is good in the worst cases it must be better in the mildest. Otherwise, the milder the initial fever the more hopeless would be the prospect. Scarlet fever cannot be regarded as the cause of all cases of interstitial nephritis, though doubtless it is so in some.

The character of the nephritis.—Is the nephritis of an ascending character due to previous bladder trouble or obstruction of the ureters or exit of the bladder? In my own fatal case and also in the two recorded by Dr. Dickinson the kidneys were very unequal in size and the pelvis or upper part of the ureter connected with the smaller kidney were found somewhat dilated. In one of Dr. Dickinson's patients a vesical calculus had been removed many years before death, and he suggests that in both cases there may have been some bygone obstruction to the exit of urine, although no actual obstruction was found after death. Dr. Goodhart[4] was struck by the cases he had himself seen and by those recorded by others, in which a shrunken kidney was found with a dilated pelvis. He regarded the latter condition not necessarily as a proof of obstruction, but possibly merely an indication of atony of the ureter. At the same time he held that impaction of small calculi in the ureters was not uncommon in children. This is indisputable, but it is difficult to see how impaction of a calculus in one ureter should produce interstitial nephritis in both kidneys. For the affection of the two kidneys only differed in degree, and not in kind. Yet I am inclined to think that the dilatation of the ureter on the side of the kidney most contracted (though not the nephritis) may be dependent on obstruction brought about as follows: Polyuria is a marked symptom of granular nephritis. The result of this would be more or less constant fulness of the bladder with a certain amount of backward pressure in the ureters. Now if granular kidneys secrete more water than normal it follows that the more granular the kidney the more water it will secrete. Hence if any obstruction to the entrance of water into the bladder is occasioned by distension of the latter it follows that the obstruction will be most felt by the kidney which secretes most water. We may therefore get dilatation of the ureter on the side of the most contracted kidney. However, such obstruction would be secondary to nephritis, and not its primary cause.

Cystitis.—As regards their dependence on cystitis, no mention of the bladder is made in any of the cases which I have quoted, and I can only assume that it was healthy in all, as it undoubtedly was in my own.[5] Hence I must regard all the cases as being interstitial nephritis of primary nature. Dr. Dickinson gives as the causes of granular kidney gout, lead, alcohol, cardiac changes leading to renal congestion, pregnancy, obstructional anuria, mental conditions, worry, &c., perhaps intermittent fever, and "a general fibrotic tendency affecting many organs and tissues, notably the arteries and kidneys." The last I have already referred to in the section on cardiac vascular changes. Lead and alcohol may be excluded in all the children to whom reference has been made. Of the other causes we may dismiss without discussion all but the first—namely, "gout," or rather uric-acidity, which may be regarded as the equivalent of gout, in childhood.

Uric acid nephritis.—Children who have what is termed the uric acid diathesis often suffer from attacks of pain referred to the loins or especially the sites of the ureters or bladder. These attacks are commonly associated with headache or gastro-intestinal disturbance. The urine is usually highly acid and of high specific gravity, irritating, and small in quantity. It contains abundant crystals of uric acid or oxalates. Often there are intermittent attacks of hæmaturia, hæmoglobinuria, or albuminuria. It is believed that the urinary symptoms are due to the passage of sharp and lacerating crystals of uric acid or oxalates through the urinary tracts, and it is certainly conceivable that a long continuance of such irritation might lead to diffuse nephritis. Dr. Eustace Smith[6] says: "In a case where a child habitually passes large quantities of uric acid I should be disposed to fear the occurrence of Bright's disease; and the occasional presence of a trace of albumin would add strength to my apprehensions." My own experience of such cases, which are common enough, is that the patients speedily get well so far as the urinary symptoms are concerned under very simple treatment. They are, however, prone to run the whole gamut of rheumatic affections, such as tonsillitis, pericarditis and endocarditis, chorea, arthritis, and peliosis. I am inclined to think that the occasional presence of blood, free or in casts, and of albumin, are purely accidental in uric acid cases, and are due, as I have said, to slight renal laceration, and are not to be taken as evidence of nephritis.[7] In none of the fatal cases of interstitial nephritis which I have collected was the passage of uric acid a feature, and in none of them is there mention of the occurrence of rheumatic symptoms. I would therefore regard cases of so-called uric acid nephritis as in a totally different category to that of true interstitial nephritis.

Primary cause of granular kidney.—Dr. Emmet Holt[8] has collected twenty-three cases of primary nephritis in infants aged between two and a half months and two years, and of these eleven were fatal. Post-mortem examinations were made in ten. In five the kidneys showed ordinary parenchymatous nephritis, but in the remaining five the conditions found were regarded as those of acute interstitial nephritis characterised by infiltration of the renal stroma by small cells in scattered areas, with sometimes formation of new connective tissue. These cases, verified by post-mortem examination, prove that young infants may suffer from an acute form of interstitial nephritis. The characteristic lesions were found in one case after an illness of only three days' duration, in some after the disease had lasted several weeks. The symptoms are mainly gastro-intestinal, such as vomiting, diarrhœa, or looseness of the bowels. In many there are marked cerebral symptoms, restlessness, screaming, convulsions, drowsiness or coma, as in meningitis. High fever is common, and hyperpyrexia may occur. The symptoms are not characteristic of nephritis. Dropsy was absent in all the fatal

[4] Keating's Encyclopædia of Children's Diseases.

[5] In the Transactions of the Pathological Society, 1896, I have reported the case of an infant, aged ten weeks, in whom suppurative interstitial nephritis with dilatation of the ureters were caused by congenital malformation of the bladder and consequent cystitis.

[6] Diseases of Children, p. 757.

[7] It must be admitted that most forms of nephritis may be associated with the passage of uric acid in the urine, and after death in such cases uric acid may be found in the kidneys. Whether the uric acid is the cause of the nephritis, or only a product of disordered metabolism, dependent on the nephritis, must be left an open question. Many people pass large quantities of uric acid for a considerable portion of their lives, and appear, like birds and reptiles, none the worse for doing so.

[8] Archives of Pediatrics, 1897 vol. iv., p. 1.

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cases in which interstitial nephritis was found. The condition of the urine may or may not afford a clue to the nature of the disease. The urine may often be suppressed or scanty and of low specific gravity. Albumin was found in eight of Dr. Holt's cases, in one of them only three days before death, the illness having lasted more than two weeks. In one it was only found in the bladder after death. Casts (blood and hyaline) were present in four cases. Blood and pus were present in two.

As to the causation of acute interstitial nephritis.—Scarlet fever may be fairly excluded. Dr. Holt regards its existence as non-proven in all his cases. There is no evidence that any of these were cases of secondary or ascending nephritis or that the inflammation was syphilitic or tuberculous. Primary parenchymatous nephritis, when not scarlet fever, is usually held to be due to exposure to cold. Dr. Eustace Smith draws attention to the custom of short-coating babies at an early age and thus leaving them practically naked below the armpits and exposed to chills. He regards this practice as the possible cause of infantile parenchymatous nephritis, and, if so, it may also account for the interstitial form of the disease.

It might be thought that the deep situation of the kidneys in the body would afford them protection against the effects of chill to the surface of the skin. But mere depth of covering cannot render them immune any more than other organs. Otherwise, the obese would lead a charmed life. There can be no doubt that exposure to cold will produce nephritis in one person just as in others; it may be the exciting cause of tonsillitis, acute rheumatism, pneumonia, pleurisy, or hepatitis. Probably in all cases chill to the surface vitiates the functions of the blood, thus causing either actual generation of toxins or hindrance to their elimination, or perhaps imperfect phagocytosis. The organs which are weakest in the individual will be those to suffer. We cannot predict whether it will be his tonsils, his lungs, his liver, or his kidneys, or explain why one organ should be attacked rather than another. If all are sound he may escape all ill effects. The nature of the poisons generation or non-elimination of which cause inflammation of the kidneys, as well as that of the poisons which are retained in the system in consequence of nephritis, remain unknown at present.

Granting the existence of a primary interstitial nephritis caused by chill, we can well believe that in such cases as recover from the immediate effects new connective intertubular tissue may gradually become contracted and produce in time the characteristic appearance of granular kidney. This may account for cases of renal cirrhosis of long standing even in adults in whom evidence of the other causes enumerated is wanted.

SUMMARY.

Diagnosis.—In some cases the diagnosis presents no difficulty. We must suspect the existence of interstitial nephritis in a child who is emaciated, whose skin is coarse, dry, inelastic, and pigmented; who suffers from uncontrollable periodic attacks of vomiting, vertigo, and maddening headaches. Then if we find the heart's apex displaced outwards, the left ventricle hypertrophied, the second sound accentuated, the pulse hard, the urine of low specific gravity, increased in quantity, and albuminous, the diagnosis of interstitial nephritis is complete. Yet in such a case the disease is already far advanced and the end is not far off. It is characteristic of the complaint, both in adults and children, that the symptoms do not attract attention until there can be but little hope of recovery. Hence it is of the greatest importance to discover the disease in its earliest stages. Probably wasting, gradual and progressive, is the first symptom to occur. Polyuria and thirst are also early symptoms. The first indication of polyuria may be enuresis. Pigmentation is also an early sign, though it may amount only to mere sallowness at first. A patient suffering from interstitial nephritis never looks well, although he may not complain of any symptoms. Headache, vomiting, and diarrhœa may not occur until the disease is well advanced. In all cases when suspicion of nephritis is aroused one examines the skin for dryness, coarseness, inelasticity, and pigmentation, the heart for incipient hypertrophy, the pulse for hardness, the urine for low specific gravity and albumin. When one or more of these conditions are absent others may take their place. Pigmentation may be wanting or slight in degree, but anæmia, with rough, dry skin, will be found. On the other hand, pigmentation, when the skin remains moist, smooth, and supple, is rather suggestive of true Addison's disease than of adrenal disease secondary to Bright's. But in true Addison's disease the heart is not hypertrophied and the pulse remains feeble and soft throughout, whereas in interstitial nephritis cardio-vascular hypertrophy and high arterial tension are almost universal. Yet cases of interstitial nephritis may run their course without apparent thickening of the heart or vessels. When this is so there may still be albuminuria to guide us. With cardio-vascular hypertrophy are usually associated headaches, increasing quantity and low specific gravity of the urine, but there may be no albumin. In adults, when compensating cardiac hypertrophy fails and gives way to dilatation, the urine usually is reduced in quantity, becomes albuminous, and dropsy appears. But in children suffering from interstitial nephritis dropsy is very rare, yet it may occur and may be the first symptom, together with scanty, smoky, and albuminous urine which draws attention to the disease. The condition of the skin and vascular system will serve to distinguish such attacks from those of ordinary acute nephritis. The differential diagnosis in these cases is most important. The absence of albumin, even after frequent and systematic testing, does not exclude the possible existence of the disease. Albumin may only occur occasionally or not till late. Hence the importance of frequent and systematic testing for its presence.

History of infantile nephritis.—Some help towards the diagnosis may be gained from a past history of a tedious gastro-intestinal complaint in a child who has remained emaciated, cachectic-looking, and with easily disturbed digestion ever since. The significance of violent periodic headaches, especially if associated with vomiting or vertigo, and occurring in the early morning, is very great. Like convulsions, they may not appear until the last stage of the disease is at hand, but whenever they do occur urinary symptoms or cardio-vascular changes will almost certainly be present to aid the diagnosis. The somewhat similar attacks due to cerebral tumour may be distinguished from them by being less periodic than chronic, with exacerbations and by the presence of optic neuritis. Probably there will also be other nervous symptoms and conditions, such as paralysis or focal epilepsies, which will make the diagnosis of tumour certain. Wasting is in cases of cerebral tumour rare, except in the latest stages, unless the tumour is part of general tuberculosis; whilst in interstitial nephritis it is, I believe, universal. Headaches due to local conditions of the eyes, nose, throat, ears, and teeth are easily identified. Headaches due to simple anæmia, constipation, and general debility require no comment. Migraine headaches may at times be difficult to distinguish from those of interstitial nephritis, but they are unaccompanied by permanent cardio-vascular and urinary changes. Uric acid headaches may resemble those of interstitial nephritis, and the diagnosis may be further obscured by the occurrence of temporary attacks of hæmaturia and albuminuria and also by the cardiac enlargement often present in those of the so-called uric acid diathesis. But the presence of uric acid or oxalate crystals in the urine sufficiently accounts for the hæmaturia and albuminuria and does not *per se* indicate interstitial nephritis. The enlargement of the heart dependent upon valvular disease or pericarditis met with in uric acid or rheumatic cases may be distinguished from that which forms part of the cardio-vascular changes of interstitial nephritis by the presence or history of other rheumatic signs and symptoms, such as tonsillitis, arthritis, appendicitis, peliosis, and chorea.[9] The distinction is important, especially in the case of pericarditis, as this complication is, I believe, speedily fatal in adults suffering from granular kidney, and would probably be so in children, whereas the immediate prognosis of ordinary rheumatic pericarditis in children is fair. Pulmonary symptoms in the interstitial nephritis of children are probably the same as in adults. Slight dyspnœa and attacks of bronchial catarrh may first lead the patient to seek advice. Pulmonary œdema in late stages of the disease may mark the onset of uræmic convulsions. In either case the patient's appearance, heart, pulse, and urine will serve to distinguish such attacks from those of the ordinary pulmonary affections of childhood. Finally, it may be said that the symptoms of interstitial nephritis are as

[9] The permanence and fixed locality of the bruits in ordinary valvular disease will distinguish them from the temporary and shifting murmurs met with in commencing failure of the hypertrophied heart in interstitial nephritis.

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insidious and gradual as the morbid process itself. In many cases we can only suspect the existence of the disease. It may be months or even years before such suspicions prove to be well founded or set at rest.

Prognosis.—Interstitial nephritis may go on for many years without causing the patient or his friends to think there is much amiss. The typical granular kidney must require a very long time to arrive at its condition. It is even possible that in an adult it may date from an attack of acute interstitial nephritis occurring in infancy. Yet the duration of the symptoms of which complaint is made rarely exceeds a few years, and may be only a matter of months or even weeks In one of the fatal cases collected symptoms had lasted three weeks. In two the duration was three months, and in three symptoms had been observed for two, three, and five years respectively. As I have endeavoured to show, the effects of cardio-vascular hypertrophy are to avert, or at all events to compensate, for those of renal disease. Dropsy is reduced or is prevented by the circulatory changes, and uræmia by the polyuria which occur. Cardio-vascular compensation attains its height in interstitial nephritis, and the onset of symptoms depends to a great extent (1) on the failure of such compensation, and (2) on its being carried to excess. In adults failure and dilatation of the heart and degeneration of the bloodvessels are often the chief causes of the fatal symptoms. But in children and also in adults they may be actually due to excess of cardio-vascular compensation. Thus may be produced the violent headaches for which advice is often first sought. Extremely high general tension due to constriction of arterioles, combined with a powerfully acting heart, may cause hæmorrhage or cerebral apoplexy. Constriction of pulmonary arterioles may give rise to dyspnœa, asthma, or pulmonary apoplexy, or in the extremities it may cause Raynaud's disease or gangrene, whilst constriction of renal arterioles when carried to excess may, instead of increasing the amount of urine, actually reduce it, and so bring about uræmia as well as further damage to the kidneys. So the prognosis will largely depend on the degree at which cardio-vascular hypertrophy is maintained and on our ability to aid or thwart its progress as required. Bad signs will be commencing heart failure, headaches, vomiting, dyspnœa, with diminution of urine, increasing albuminuria, progressive wasting, and pigmentation. It is needless to point out that the prognosis will be more grave when symptoms of Addison's disease are superadded to those of interstitial nephritis. The surroundings of the patient and his liability therefrom to chills and consequent inflammations so often fatal in this disease must be considered in the prognosis. Finally, although the conditions of heart, pulse, skin, and urine make the existence of the disease evident, life may not be endangered unless signs of failing or of excessive cardio-vascular compensation arise. In the first case the child is no better off than the adult—both are doomed; but in the second case treatment may ward off danger for the time.

Treatment.—The treatment is symptomatic rather than curative; yet it is rational and follows the lines of pathology laid down. In parenchymatous nephritis, when dropsy threatens or is present and cardio-vascular hypertrophy is slow to occur and at first insufficient, we give digitalis, squill, and citrate of caffein, which are not only powerful heart tonics, but also have a constricting effect on the arterioles and thus promote diuresis. The utility of ergot and cantharides may be similarly explained. Citrate and acetate of potash become converted into alkaline carbonates in the "primæ viæ," and Brunton, Cash, and Gaskell [10] have shown that the effect of alkalies is to contract bloodvessels, whilst that of acids is the reverse. Bi-tartrate of potash is also a remote antacid. If it be true, as I have contended, that dropsy is averted or cured by constriction of arterioles and increased cardiac force, we can understand that the use of such drugs is rational. In interstitial nephritis, on the other hand, cardio-vascular compensatory hypertrophy is carried out to perfection, and this, together with consequent polyuria, prevents dropsy and also uræmia from occurring. Hence these drugs—cardio-vascular tonics—are not called for in interstitial nephritis, unless cardio-vascular compensation fails. But it must be admitted that nature's endeavours to cure are at best imperfect. Cardio-vascular hypertrophy may be carried to excess in interstitial nephritis. Thus may be produced headaches or even apoplexy by rupture of vessels owing to excessive tension, dyspnœa and possibly asthma by constriction of the pulmonary arterioles, Raynaud's disease and gangrene by constriction of the arterioles in the extremities, and, above all, uræmia by suppression of urine due to constriction of the renal arterioles. The treatment commonly followed in such cases is rational. We lower arterial tension and relieve the heart by giving vascular depressants such as nitro-glycerine, nitrite of amyl, nitrites and nitrates generally; we promote elimination from the skin by warm or vapour baths, liquor ammoniæ acetatis and other diaphoretics, and from the bowels by hydragogue cathartics. Similar treatment is followed in cases of parenchymatous nephritis where pulse tension is high and the heart threatens to give way owing to the obstruction in front. This is the "cardio-vascular depressant" as opposed to the "cardio-vascular excitant" mode of treatment. It is logically combined with catharsis and diaphoresis. So the treatment of interstitial nephritis in some cases consists in counteracting the effects of excessive cardio-vascular hypertrophy and at the same time promoting the action of the skin and bowels in order to compensate for deficient elimination through the kidneys. In the later stages of interstitial nephritis, however, the whole system of cardio-vascular compensation tends to fall through, and then we must have recourse to the cardio-vascular excitants which are so useful in the early stages of parenchymatous nephritis. Possibly when supra-renal inadequacy is indicated by the presence of pigmentation, treatment by supra-renal extract may be of use, and this extract has also an extreme power of constricting vessels, which therefore may be beneficial in another way. The general conduct of the case aims at prevention of complications arising from chill by supplying suitable clothing and, if possible, climate. As to other complications: iron is always necessary to combat progressive anæmia; dyspepsia due to gastric congestion and irritability is best treated by bismuth, arsenic, and prussic acid; eclampsia may be checked by inhalation of chloroform or by rectal injection of chloral and bromides. Headaches may also be relieved by the latter taken internally, but free purgation is the most rational mode of treatment. Venesection is, I believe, both useless and dangerous in the late eclampsia of interstitial nephritis in children. Catharsis and diaphoresis are the best methods of depletion. Dry-cupping, however, may be useful in pulmonary œdema, pleurisy, and pericarditis. Finally, no drug can cure a damaged kidney. Sooner or later the morbid process going on must end in death. Treatment at best can only be palliative, yet by it we may hope to stave off the evil day, and I am convinced that the guiding principle should be—"Watch the heart and pulse."

Upper Berkeley-street, W.

[10] Brunton: Disorders of Digestion, 1886 edition, p. 343.

A REVIEW OF THE OPERATION FOR EXCISION OF THE KNEE, TOGETHER WITH AN ACCOUNT OF A NEW PROCEDURE—OSTEOPLASTIC EXCISION OF THE KNEE.[1]

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IN this communication I propose to describe an operation for excision of the knee which I have performed on several occasions since 1889. Although the operations are not numerous, yet they are enough to show that the proceeding is quite practicable. Moreover, I hope to prove that it has certain advantages over the usual operation. At the outset it is to be understood that it is not to be done in every case of tuberculous arthritis of the knee. On the contrary each should be treated on its merits, and with regard to the kind and degree of the disease, and to the condition and environments of the patient. Thus, during the past ten years I have treated tuberculous arthritis of the knee by rest and local applications, by drainage, by arthrectomy, by the

[1] A paper read before the Medical Society of London on March 8th, 1897.

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ordinary excision, and by the operation which I am about to describe. The last was done upon cases of progressive tuberculous arthritis with pulpy synovial membrane and ulceration of cartilage, but with little caries or displacement of the ends of the bones. Before deciding to operate every effort was made to allay the disease by rest and local applications. But it is important not to delay until sinuses have formed. In the last case a sinus had formed, and the operation was followed by a severe outbreak of septic inflammation. As with most new attempts, errors have been made and failures have occurred. All of these will be clearly pointed out for the guidance of anyone who may be encouraged to imitate my example.

The method of excision which I always see performed, and which is described by all our more recent writers,[2] has certain faults which can be overcome. To these are attributable some of the ill results by which it is not infrequently followed. For instance, during the last few years I have had three times to remove wedges of bone to straighten limbs which had become flexed and rotated after the knees had been excised by the ordinary method. That operation is briefly as follows. A flap of skin and subcutaneous tissue is lifted from the front of the knee by a curved incision; then the capsule and the internal and external lateral ligaments are divided and the patella is taken away, with division of its ligaments; next, the crucial ligaments are cut and a slice or slices of the articular ends of the femur and the tibia sawn off; and, in addition, the synovial membrane is taken away. Abroad von Esmarch,[3] von Bergmann,[4] and others[5] describe the same operation, as do also Ollier[6] of Lyons and Farabeuf.[7] A number of others have been described, but as a rule they only differ from one another in the way in which the joint is opened or in the treatment of the patella. Farabeuf[8] gives no less than six different incisions, and others might be added. However, no operation seems to enjoy the same repute as that which I have just sketched and called the usual operation.

With regard to the ordinary operation I would remark that the mere skin incision is of small importance, provided it fulfils the first of the principles upon which the operation is founded and therefore permits the whole disease to be removed. Sometimes I have used the so-called antero-internal vertical incision of Langenbeck,[9] because it seemed to give better access to the supra-patellar pouches and to spare the patella and its ligament. But it was found to have the disadvantage of not thoroughly exposing the posterior angles of the joint, especially that behind the outer condyle. So of late the transverse or semilunar incision has been used. But the indiscriminate removal of the patella is a much more serious matter. It brings about the destruction of the attachments of the quadriceps extensor femoris and is one of the main causes of the flexion to which I have just referred. As Sir Charles Bell has pointed out, a peculiar harmony pertains to the contraction and relaxation of opposing groups of muscles. When one group is weakened or destroyed the other being unopposed distorts the limb. Sometimes the patella may be too diseased to be kept, but even then the aponeurosis over it and at either side of it can be preserved. When the patella is sound it ought to be kept for another reason. In one case I was able to peg its sawn surface to the joints of the tibia and femur, both of which had been sawn to receive it. The ligaments, too, perform important functions. In extension of the knee, as is well known, they are all on the stretch and keep the femur and the tibia in the closest contact and prevent rotation. The crucial ligaments are particularly important. They obviously prevent displacement of the tibia backwards and forwards. Also, in extension, as Bruce Young[10] has shown, they screw home and lock the tibia and femur. The lateral ligaments assist the crucial ligaments and combine with them to bring about that rigidity and immobility for which the extended knee is remarkable. Obviously in the ordinary operation all this is quite ignored. The shape of the articular ends of the femur and tibia are accessory to this screwing home and locking. And, in addition, the spine of the tibia, being fitted into the intercondylar notch of the femur, effectually prevents lateral displacement of the tibia when the knee is extended. It is hardly necessary to say that the usual operation of resection of the knee sacrifices all the advantages which may be secured by leaving the patella and its ligament, the lateral ligaments, and the crucial ligaments, or by preserving the interlocking of the articular ends. Moreover, it leaves bony surfaces which, besides being unsupported by ligaments, are themselves flat and smooth and easily displaced.

To obviate the disadvantages of the usual operation and to retain the advantages which the arrangements of the ligaments and articular ends afford I have, in suitable cases, performed the following operation. First, the knee being bent at half a right angle, a transverse or slightly curved incision is carried across the centre of the ligamentum patellæ, from one tuberosity of the femur to the other. The ligamentum patellæ is divided and the joint opened. As I have already said, opening the joint by the vertical incision at the inner side of the patella was tried, but was given up because it made the removal of all the synovial membrane difficult or perhaps impossible. This quite outweighs the advantages of the vertical incision. Some surgeons have exposed the interior of the knee by sawing through the patella. But this was not done in any of the cases, because that bone is often tuberculous and because it does not unite with so much certainty as the ligament. Moreover, the divided patella is not adapted for fastening to the tibia and femur. The knee-joint having been freely opened and bent to a right angle the extent of the disease is ascertained. Then the synovial membrane is removed with knife and scissors as carefully as if it were full of malignant disease. Sometimes to get at the upper part of the synovial membrane the ends of the transverse incision have had to be carried upwards. If any synovial membrane be left behind tubercle is likely to grow in it; also it is apt to inflame and secrete fluid which may accumulate and become septic. In removing the synovial membrane it is convenient to leave the part behind the condyles until the femur has been sawn. As the synovial membrane is taken away the ligaments come into view. Healthy ligaments are to be preserved. Whether it is always right to keep both the crucial ligaments remains to be seen. It is certainly very hard to remove all the synovial membrane without cutting the anterior. Nevertheless, as I have pointed out, the crucial ligaments help very powerfully to hold the tibia and femur together; the posterior one prevents the tibia falling backwards as the leg lies extended on the bed; after the ordinary excision there is a tendency for the tibia to fall backwards. Fortunately the posterior crucial ligament can often be preserved and is of service in preventing that accident. The anterior crucial ligament prevents displacement of the tibia forwards, and is therefore less important; it has hardly anything to do with backward displacement. But it would be better to destroy one or both crucial ligaments rather than leave any diseased synovial membrane behind. This was shown by a case in which my anxiety to preserve the crucial ligaments led me to leave behind some synovial membrane which quite spoilt the operation. The patient was a sailor with tuberculous disease of the knee. The disease in the synovial membrane was extensive with considerable ulceration of the articular cartilages. The ligaments were kept; the wound healed by first intention, and he went in six weeks to a convalescent home with the limb in plaster. He had, of course, strict injunctions not to walk on the leg. A month or so afterwards he came back and complained that his leg hurt him when he walked about on it. It was clear from the swelling that the tuberculous process was still progressing, although the union was wonderfully firm considering what he had been doing. My colleague, Mr. Peyton Beale, in my absence, kindly removed the tuberculous disease, which he told me was quite at the back of the joint, behind, I believe, the crucial ligament. The ultimate result in this case was highly satisfactory.

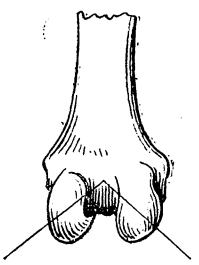
The internal and the external lateral ligaments, being outside the joint, are much easier to save. In the next stage of the operation, after the femur and the tibia have been sawn, these ligaments are of the greatest use in keeping the bones firmly together. So far the operation

[2] Jacobson: The Operations in Surgery, third edition, 1897, p. 184 et seq. Treves: A Manual of Operative Surgery, 1891, vol. i., p. 684. Marsh: Diseases of the Joints and Spine, 1895, p. 331.
[3] The Surgeon's Handbook, 1888, p. 317.
[4] Operations-Cursus, Berlin, 1892, p. 170.
[5] Allgemeinen und speciellen Chirurgie, Pitha und Billroth, 1882: Article by Lossen, p. 31.
[6] Traité des Résections, 1891, tome iii., p. 206 et seq.
[7] Précis de Manuel Opératoire, p. 775.
[8] Loc. cit., Figs. 592 to 595.
[9] See Farabeuf, p. 791, Fig. 593.
[10] R. B. Young on the Grooves Separating the Patella from the Menisco-tibial Surfaces of the Femur, and on Locking of the Knee-joint in Full Extension. Memoirs and Memoranda in Anatomy, by Cleland, Mackay and Young, 1889, p. 147.

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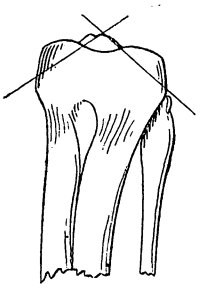
has hardly differed from many others; but in the next step—namely, the treatment of the bones—it is quite different from any I have been able to find described. First, the articular surface of the patella is sawn off and, if necessary, its cancellous tissue is gouged. Then the trochlear surface of the femur is sawn off, leaving a flat surface upon which the upper part of the patella fits. The femur itself is next raised vertically by the assistant and the greater part of its articular surfaces taken away by two saw cuts which begin at the convexity of the condyles at the edge of the articular cartilage. These saw cuts are carried obliquely into the intercondylar notch of the femur until they converge, entering the notch at the edge of the articular cartilages and below the attachments of the crucial ligaments (*vide* Fig. 1). In making these cuts the lower part of the rather extensive attachment of the crucial ligament cannot always be saved, but as the upper attachments spread out a good deal the greater part can be saved. The antero-posterior plane of these cuts should be at right angles to the axis of the femur. By these saw cuts a deep notch is made in the femur, leaving some articular cartilage in the front and back of the condyles. This cartilage is either torn off or removed with a sharp spoon or gouge. The tibia is treated upon the same principles as the femur. With a narrow saw two oblique cuts are carried upwards from the epiphysial line to converge at the base of the spinous process (Fig. 2). Here, again, the articular cartilages can be removed

FIG. 1.



Showing section of femur.

FIG. 2.



Showing section of tibia.

without destroying the lower attachments of the crucial ligaments. This is quite feasible because these structures occupy but a small area of the upper surface of the tibia in front of and behind the spine; indeed, the posterior is attached to the posterior surface of the tibia in the popliteal notch. This stage of the operation is easily accomplished without destroying the lower attachments of either the external or of the internal lateral ligaments, the latter being attached down the shaft of the tibia quite out of harm's way. The antero-posterior direction of the plane of these saw cuts is at right angles to the axis of the tibia; their obliquity should correspond to that of the sawn surfaces of the femur.

The advantages which may be claimed for this method of sawing the femur and tibia are as follows. The original fitting of the tibia into the intercondylar notch is preserved and any lateral displacement of the tibia is still impossible. Further, the same wedging in of the tibia effectually prevents rotation of that bone upon its long axis, and, therefore, the foot falls neither inwards nor outwards. To these advantages may be added that large areas of sawn bone are brought in apposition, and this with the smallest removal of either epiphysis. The whole thickness of the femoral epiphysis is left at either side and the whole thickness of the tibial in the middle. If the knee be extended after the bones have been sawn, the benefit of preserving the ligaments becomes apparent. As the leg is extended they become tight and jam the wedge of the tibia into the notch in the femur. Here it is firmly fixed so long as extension is maintained. As I have pointed out, if the crucial ligaments can be preserved a further advantage is gained, because in extension the posterior prevents the tibia falling backwards and the anterior prevents its displacement forwards. The operation is finished by sewing together the ligamentum patellæ with buried silk sutures and by subsequently closing the wound. In one case the patella was fastened with ivory pegs to the femur and tibia, but lately this has been omitted. The patella seems to form very strong connexions without the pegging. The front of the tibia and the front of the femur were wired together in one case so as to prevent flexion. Afterwards the limb is kept for a month or six weeks on a Gant's splint. But after this operation the immobility which is so essential for success is much easier to preserve. Indeed, as the tibia cannot slide to either side or backwards and cannot rotate, we have only to guard against flexion. That movement is one of the easiest to prevent and has little tendency to occur if the patella has been preserved and its ligament sutured. When the limb comes off the Gant splint it is put into a leather splint. A patten having been put on the sound foot the patient goes about on crutches swinging the resected limb. I have hitherto advised that this treatment be continued for a year, but perhaps this time might be shortened.

I have been unable to learn that any surgeon has performed a resection of the knee at all similar to that which has just been described. Mr. Treves[11] remarks that "Dr. Fenwick of Montreal saws both femur and tibia in a curved line, so as to make them fit together more closely and accurately than they would do otherwise." The bones have been sawn in all kinds of ways[12]—obliquely by Billroth, in a kind of zigzag by Albert, and the exact reverse of that which I have described by Sédillot. However, none of these methods seem to be based upon the principle of attempting to retain the original fitting of the bones and the action of the ligaments.

The operation which has just been described has been done four times since 1889. A youth who was operated on in 1889 was earning his living three years afterwards and his father wrote: "He gets about freely and does not complain of it in any way; it is filling out very nicely and straight." Mr. Mark Taylor, writing about a youth operated upon in April, 1896, says that now "the leg is in very good position; no pain or tenderness anywhere." The photographs which Mr. Taylor sent certainly bear out the statement as to the position of the limb and also show that it is exceedingly well developed. In a third case done nearly a year ago the patient has a good and straight limb, but I doubt whether the union is yet bony. She had a septic sinus at the time of operation and the wound suppurated. The fourth case was, as I have already said, a comparative failure, because I did not thoroughly remove all the synovial membrane about the crucial ligaments and behind the condyles. This omission evidently needs to be particularly guarded against.

So far this operation seems to me to have the advantage of treating the bones so as to make it much easier to keep their cut surfaces in contact and at rest; no lateral movement or rotation is possible. Also, under favourable circumstances no falling backwards of the tibia can occur; next, the growth of the epiphyses is less interfered with; and, finally, the ultimate result is a very solid synostosis, with hardly any tendency to flexion. To gain these advantages the patient runs no risks beyond those of the usual operation.

Upper Berkeley-street, W.

A CASE OF ACTINOMYCOSIS TREATED BY IODIDE OF POTASSIUM.

BY COLVIN B. M. SMITH, M.B. DURH.

IN view of the facts that three cases of actinomycosis, treated by iodide of potassium at the Bristol Royal Infirmary, have been recently recorded[1] and that there has been some discussion as to the efficacy of the drug as a specific for this disease, the following note of a case may be of interest. A man, a farm-servant, aged twenty-seven years, consulted me on Dec. 7th, 1894, about a swelling in the cheek which caused him pain and prevented him from opening his jaw properly. He first noticed in October, during the harvest time (in Aberdeenshire) a small lump, "like the head of a pin," on the side of his neck, behind the lobe of the ear. This lump, he said, was moveable and could be pushed up and down under the skin with his finger. This increased in size

[11] Treves: Operative Surgery, vol. i., p. 692.

[12] Allgemeines über Resectionen, Handbuch der Chirurgie. Pitha und Billroth, 1882, p. 193.

[1] THE LANCET, Jan. 30th, 1897, p. 311.

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steadily, so at last he sought medical advice. His condition was as follows. There was a hard swelling under the zygoma, extending downwards for about an inch and outwards below the ear for about an inch. The skin over the tumour was slightly red, and there was pain on pressure. He was unable to open his mouth more than half an inch, and therefore it was almost impossible to ascertain the condition inside, but, so far as could be seen, there was neither carious tooth nor wound of any kind. He was recommended to stay at home, to apply poultices, and to take one drachm three times daily of the syrup of iodide of iron. During the next three days the swelling increased and became more painful, and on Dec. 10th the patient was almost unable to open his jaws. The syrup disagreed with his stomach and was discontinued, and iodide of potassium ointment was used externally. On the 11th the swelling, which appeared to be travelling downwards, showed signs of fluctuation, so an incision was made, but only a little blood came away and very slight relief was obtained. No improvement followed during the next few days, and the mouth could not be opened wide enough for the tongue to be protruded. On the 17th the abscess was opened below the lobe of the ear, and a good deal of pus was obtained, in which no granules were noticed. The inflammation descended along the course of the sterno-mastoid towards the clavicle; and on the 27th another incision was made below the angle of the jaw. The pain was now constant, and the jaws were closed. On Jan. 9th, 1895, the swelling had descended to the clavicle, leaving behind an indurated track of a purplish-red colour, with inflamed lymphatic vessels extending up the neck. An incision was made above the clavicle, and a copious flow of pus resulted, in which nothing special was noticed. It was not until three days later that I, while dressing the neck and syringing the sinus with boracic lotion, noticed, in a bad light, several yellow granules. On questioning the patient, he told me that several days previously, while changing the dressing, he had "squeezed the lump in his cheek with his fingers," to relieve itching, and that "scores of bright yellow little lumps dropped down on to the floor." During the next few days the patient was much better and several granules were obtained. On Jan. 20th, however, the inflammation had increased, there was a copious discharge of pus, and the last opening was surrounded by an intensely red erysipelatous area. The patient was ordered to take fifteen grains of iodide of potassium three times a day. After this date there was no further extension of the inflammation and on the 28th the discharge had ceased, though the sinus was still open, and the indurated track from the cheek to the clavicle was easily felt. After this the improvement was continuous and the dose of iodide of potassium was gradually decreased and finally stopped. On Feb. 7th the patient was quite well. The sinus was closed and the incisions were healed, and the induration along the track of the inflammation was the only mark of the disease. This gradually faded and there was no recurrence.

In the first two cases at the Bristol Royal Infirmary the exact period of incubation is given, and was in each case about fourteen days. In my case no date could be given for the actual inoculation, but in all probability it occurred during the harvest (which is late in Aberdeenshire), and the period of incubation may be calculated at about two or three weeks. Dr. W. B. Ransom mentioned [2] that in Germany 77 per cent. of cases of actinomycosis occurred between the months of August and January, and Dr. Septimus Gibbon noted the prevalence of the disease during damp seasons. The harvest of 1894 in Aberdeenshire was a particularly wet one. With regard to the treatment, the cure was either spontaneous or the result of the exhibition of iodide of potassium. If it was spontaneous it is at least curious that it should have occurred, after months of no improvement, coincidently with the exhibition of the iodide of potassium. The iodide of potassium ointment seemed to be useless—probably it was not absorbed. I may mention that the patient declined to permit any surgical treatment.

Strichen.

[2] Proceedings of the Royal Medical and Chirurgical Society, November, 1891.

QUEEN CHARLOTTE'S HOSPITAL.—The Cloth-workers' Company have sent a donation of £250 in aid of the extension and improvement fund of Queen Charlotte's Lying-in Hospital, Marylebone-road.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TWO CASES OF ŒDEMA OF THE LUNGS IN CHILDREN TREATED WITH STROPHANTHUS.

BY A. MACGREGOR, M.D. ABERD.,
ASSISTANT PHYSICIAN TO THE NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.

THE sudden and unexpected development of œdema of the lungs in the first case, and the gravity of the symptoms and the rapid and satisfactory action of strophanthus in both cases, may invest with sufficient interest the following notes to merit a place among the clinical memoranda of THE LANCET.

CASE 1.—A boy, aged seven years, suffered from chronic pleurisy and peritonitis. During the first six weeks in which he was under my care the temperature oscillated between 98° and 102° F. Suddenly œdema of the lungs developed, there was distressing dyspnœa, the pulse-beats numbered from 156 to 172 per minute, and the temperature rose to 103 8°. He was given carbonate of ammonia and tincture of digitalis in mixture, with the result that the frequency of the pulse was slightly diminished, but the general condition was not only not improved, but much worse. On May 1st, lividity of the face was very marked and the orthopnœa was most distressing. The pulse-rate was 144, the respirations 70, and the temperature 102°. The mixture of carbonate of ammonia and digitalis was discontinued, and one minim of tincture of strophanthus given every four hours. On May 2nd the pulse-rate was 132, the respirations 54, and the temperature 101° in the morning and 99° in the evening. The dose was increased to two minims every four hours. On May 3rd the pulse was 120, and the respirations 44; the morning temperature was 99°, and the evening temperature 99 4°. On the 4th the pulse was 108, and the respirations 36; the morning temperature was 98°, and the evening temperature 98 5°. On the 5th the pulse was 110, and the respirations 30; the temperature was 97 8°. On the 6th the pulse was 108, and the respirations 26; the morning temperature was 97 6°, and the evening temperature 98·5°. On the 7th the pulse was 100, and the respirations 24; the temperature was 98 5°. The lungs had now almost completely cleared up, the lividity and dyspnœa disappeared, and from the very acute pulmonary œdema the patient rapidly recovered.

CASE 2.—A girl, aged nine years, was seen by me for the first time on Nov. 9th, three weeks after the onset of an attack of scarlet fever. The skin was desquamating, there was general anasarca, the face and lips were very livid, there was orthopnœa with incessant, short, distressing cough, the lungs were water-logged, and there was considerable effusion into the pericardium; the pulse-rate was 164, the respirations 74, and the temperature 102° F. No urine had been passed for some time. Two minims of tincture of strophanthus were given every three hours; brandy was also given, and jacket poultices were applied to the chest. On Nov. 11th urine amounting to about four ounces was passed for the first time, the bowels also acting at the same time. The patient was easier, the cough was now only occasional, and the œdema of the lungs was found to be passing away. The pulse was 128, the respirations were 52, and the temperature 101°. The dose of strophanthus was increased to three minims every three hours. On Nov. 12th the pulse was 60, respirations 30, and the temperature 99°. The strophanthus was reduced to two minims every six hours. On the 13th the pulse was 76, respirations 28, and temperature 99°. On the 14th the pulse was 64, respirations 22, and temperature 100°. The first specimen of urine obtained for examination was found to contain numerous blood corpuscles, and blood and epithelial casts. The quantity passed daily continued to increase. On Nov. 16th twenty-nine ounces were passed; the specific gravity was 1014, and there was only a trace of albumin. The pulse-rate was then 60, and the strophanthus was discontinued. The patient made a rapid and complete recovery.

Harley-street, W.

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ACUTE PEMPHIGUS (?), AND EPIDEMIC ACUTE ECZEMA.

BY DR. JÓN JÓNSSON (OF REYKJAVIK),
GOVERNMENT MEDICAL OFFICER IN ICELAND.

IN THE LANCET of Oct. 31st, 1896, an unusual lesion of the skin was described (on page 1212) by Dr. James Priestley, who further mentioned that he was in hopes of obtaining suggestions as to the diagnosis from those who had experience of similar cases. Dr. Priestley's patient presented numerous large bullæ over the greater part of the body, most of them on an erythematous base, and some on normal skin; there was high fever; and death occurred after the symptoms had continued for about five and a half days. Just a year ago I had a case in which the lesion of the skin was apparently very similar, although the illness followed a milder course. The patient was a man, fifty years of age, and came under my care on March 22nd, 1896, a week after the beginning of the eruption. The vesicles were at first small, but in a few days developed into large bullæ, which measured from an inch to an inch and a half in diameter and spread themselves over the whole surface of the body, being confluent in various places. Both scapular regions were totally denuded of epidermis, and presented a raw surface about 18 cm. (7¼ in.) long and 10 cm. (4 in.) wide. In the iliac and inguinal region there was a band encircling the body, from four to five inches wide, totally denuded of epidermis and ulcerated. It was quite impossible to find on the body a place as large as the palm of the hand free from bullæ except on the legs, ankles, and feet, the eruption being more scattered there than elsewhere. The edges were inflamed, but there was no infiltration of the skin except on the right knee, where I applied carbolic acid lotion, with the result that the growth of the vesicles was stopped and healing followed, with desquamation of the epidermis at the infiltrated place. On the first evening of my attendance the temperature was 39° C. (102·2° F.) and the pulse 100. During the ensuing eight or nine days the temperature varied between 38 5° and 41° C. (between 101 2° and 105·8° F.), the latter being the highest temperature which was noted; the pulse ranged between 100 and 130. The eruption was copious on the hairy scalp and there were several vesicles on the tongue, but there was no pharyngitis. I estimate that an area extending over more than two-fifths of the whole surface of the body was denuded of skin. After this date the fever rapidly diminished, repair of the skin commenced, and in from sixteen to eighteen days all the ulcers were healed. The patient was a healthy man of a full habit of body; he had passed through an attack of typhoid fever some time before. There was no other case associated with this one, and the cause of the illness was unexplained.

Dr. Paul of Nagasaki, Japan, writing in THE LANCET of Feb. 13th, 1897 (p. 437), referred to Dr. Priestley's article, and described a case observed by himself in 1894, in which an infant suffered from acute pemphigus and acute eczema of the face, the two diseases being intercurrent, but independent in course. In connexion with this subject I may add that in the years 1893–94 Iceland was visited by an epidemic of acute eczema of the face, or contagious impetigo, especially attacking young persons and children. Many of the infants affected with the eczema suffered also from severe dermatitis with large bullæ on all parts of the body except the head. These two diseases—the eczema on the face and the pemphigus on the body—were apparently distinct; most of these cases terminated fatally.

A CASE OF SUPERFŒTATION.

BY H. W. MILLS, M.R.C.S. ENG., L.R.C.P. LOND.

AS superfœtation is undoubtedly a very rare occurrence—the mere possibility has been denied by some authorities—it is advisable that all apparently genuine cases of this abnormality should be recorded.

On Sept. 2nd, 1896, I was called to a woman, aged forty-two years, who was reported to have had a miscarriage. She had only had one previous pregnancy, which resulted six months previously in a three months' abortion. On examination I found a piece of umbilical cord projecting through the external os; the internal os just admitted one finger. I removed piecemeal the placenta, which was firmly adherent. I then turned my attention to a vessel full of blood-clots passed before my arrival, and discovered a fœtus of about sixteen weeks old and also a perfectly fresh healthy ovum of about seven weeks. This case much resembles one recorded by Dr. Tyler Smith, quoted by Dr. Galabin,[1] and, as in that case, the woman had had periodical discharges of blood, three in number, though she cannot be certain whether or no they correspond in point of time with what would have been her ordinary menstrual periods. Such cases as these do not, of course, conclusively prove the possibility of superfœtation, for they are open to the explanation that the younger fœtus—though apparently quite fresh and healthy—may have been retained dead without decomposition for two months or so; but I think the evidence points rather to the former than to the latter explanation, and affords about as strong proof as we are likely to get under the circumstances. It is difficult to see what should have caused the death of the younger fœtus; there was no history of syphilis on either side; moreover, "the struggle for existence" cannot be so very severe at seven weeks. The uterus in this case was not double.

Ruardean, Gloucestershire.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

CARCINOMA OF THE RECTUM; KRASKE'S OPERATION; RECOVERY; REMARKS.

(Under the care of Mr. FREDERIC EVE.)

THIS operation has not yet obtained that position in the estimation of the profession which its advantages entitle it to possess. The idea of cutting through the sacrum in order to get at the rectum appears to many as such a formidable procedure that they hesitate to recommend it in the early stage of disease when it can be carried out most satisfactorily, and perhaps only give it a trial when the patient himself demands it because his sufferings are becoming more than he can bear. Heidenhain considers that "the only local contra-indication to the operation is the extension of the growth to the prostate, bladder, or ureter."[2] There can be no doubt, however, that if the loose connective tissue about the rectum is involved the case is very unfavourable, as it also is if the retro-peritoneal glands are affected. Dr. Allison states that "the reported cases of excision of the rectum after Kraske's method for cancer show a mortality of 30 per cent., with a recurrence in 40 per cent. of the recoveries. This includes, however, many inoperable cases, as is proved by a mortality of 8 per cent in the hands of some surgeons in properly selected cases."[3] Senn writes "that the surgeon who removes the cancer of the rectum by excision will have a great mortality, while the one who follows the loose connective tissue spaces, resorts to blunt instruments, and carefully guards against hæmorrhage will show the best results."[4]

A man, aged fifty-one years, broken down and prematurely aged, was admitted to the London Hospital with advanced cancer of the rectum. The disease occupied the upper part of the bowel and could just be reached by the finger. The affected area was evidently adherent anteriorly, although not firmly. There was no evidence of enlargement of the liver. The patient's attention had first been drawn to the trouble by the passage of blood and watery discharge commencing two months previously. His condition was

[1] Manual of Midwifery, pp. 263, 264.
[2] Jackson Clarke: THE LANCET, Jan. 16th, 1897, p. 162.
[3] Sajous's Annual of the Universal Medical Sciences, 1896, vol. iii. D 6.
[4] Ibid.

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explained to him and that it might be impossible to remove the whole of the disease; but he expressed an urgent wish that an attempt should be made, and it was therefore decided to perform Kraske's operation. On April 9th, 1896, a preliminary inguinal colotomy was done in the usual way. On May 12th (the patient's general condition having meanwhile improved) Kraske's operation was performed, Heinecke's incision being adopted. A vertical cut was made from the coccyx upwards over the middle of the sacrum; this was joined by a horizontal incision at the level of the third sacral foramina. The sacrum and coccyx were then divided with the saw in the middle line as high as the horizontal incision, and the lateral sacral wings severed with the chisel just below the level of the third foramina. The two osseous and cutaneous flaps were then turned aside and the rectum exposed. An attempt was made to separate the rectum from the bladder by dissection and with the finger, but failed on account of intimate adhesions. The lower part of the incision was therefore prolonged around the anus, and the separation of the bowel was commenced from below upwards. The carcinoma was found to extend above the level of the reflection of the peritoneum. This was divided, and after a sufficient extent of the mesorectum had been severed between ligatures the whole of the diseased portion of the bowel was readily brought down into the wound. Above the growth a ligature was passed around the bowel, which was divided below it. The surface to which the growth was adherent was thoroughly scraped and cauterised and the opening into the peritoneal cavity closed with sutures. The rectal stump was fixed to the skin at the upper part of the wound, the divided surface of the sacrum united by sutures passed through the periosteum, and the wound in the integuments closed. Subsequently the sutures attaching the rectal stump to the skin gave way and the stump became retracted, thus opening up the large cavity from which the bowel had been excised. This required packing with iodoform gauze, but the cutaneous incisions united by first intention. The patient is now doing his work, and is much improved in health. A slight fistula discharging mucus remains at the point where the stump of the bowel was attached to the integument.

Remarks by Mr. EVE.—The operation bears out all the advantages claimed for it by its advocates. There was very little loss of blood after the first incisions were made. The field of operation was fully exposed to view. An extensive and adherent mass of carcinoma occupying the first part of the rectum was apparently completely removed. The hollow of the sacrum could be thoroughly explored for infected glands. It can scarcely be doubted that the preliminary colotomy was a wise precaution in consideration of the seat and extent of the disease, and condition of the patient's health. The progress of the above case contrasts favourably with one reported by me in the Transactions of the Clinical Society of London for 1887. In this five inches of the rectum were removed through the ordinary anal incision, the reflection of the peritoneum being divided all round. This allowed the bowel to be very freely brought down. Some time afterwards the patient was admitted to the hospital in my absence with chronic obstruction, and died unrelieved. The post-mortem examination showed that the obstruction was due to adhesions of coils of small intestines to the cicatrix in the pelvis. This would not have occurred had it been possible to suture the opening in the peritoneum. It is noteworthy that there was no recurrence of the disease *in situ* and no secondary growths existed in the liver. I may say, in conclusion, that I would in future perform one or other of the modifications of Kraske's operation in place of the old operation, except for disease limited to the lowest portion or for circumscribed recent growths quite at the lower part of the middle portion of the rectum.

THE CENTRAL LONDON OPHTHALMIC HOSPITAL.—The annual meeting of the Central London Ophthalmic Hospital was held on Feb. 25th, Mr. J. Stamford Burrows presiding. The report showed that during 1896 there were 197 in-patients; there were also 10,520 out-patients, who made 26,200 attendances. The total income received for general purposes during 1896 was £1171, and the expenditure was £1174; the corresponding figures for 1895 were £887 and £929 respectively. Owing to the great increase in the number of the patients there was an urgent necessity for an enlargement of the buildings; a building fund had therefore been opened and £2046 had been received, but a further amount of £15,000 would have to be raised.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Clinical Bearing of some Experiments on Peritoneal Infections.—Removal of a large solid Tumour from the Retro-peritoneal Space.

A MEETING of this society was held on March 8th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

Mr. HERBERT DURHAM read a paper on the Clinical Bearing of some Experiments on Peritoneal Infections. He referred first to the researches of Issaef, who had shown that a considerable degree of general resistance against pathogenic microbes was afforded by inducing leucocytosis. It was found that if sterilised water or broth or serum was injected into the peritoneal cavity on the preceding day the animal could take with impunity fifteen times the ordinary lethal dose of a culture of cholera vibrios The protective effect was much increased if serum from an animal immunised against the cholera vibrio was employed. Mr. Durham, experimenting on these lines, had succeeded in protecting guinea-pigs by sterile injections of nutrient broth against bacterium coli, bacillus pyocyaneus, bacillus prodigiosus, and bacillus typhosus. The protection was due to two factors—(1) increased bactericidal power of the peritoneal fluid after injection, and (2) the presence of a very large number of active phagocytes which are not seen in normal peritoneal fluid. Mr. Durham suggested that an attempt might be made to afford protection in man before operations through the peritoneum in such cases as perityphlitis, tubal abscess, and the like, in which there was some chance of pus getting into the peritoneal cavity. In the majority of cases the active organisms were streptococci, and he thought it would be advisable to protect the peritoneum with anti-streptococcic serum the day before proceeding to open the abdominal cavity. The bacterium coli appeared to be much less potent in the production of peritonitis than was often taught. Mr. Durham pointed out that there might be no lymph and no organisms present in the peritoneal fluid in cases which died rapidly, but that in the lymph spaces of the omentum and other peritoneal membranes abundant organisms could be demonstrated. The injection of anti-streptococcic serum would not only increase the general resistance of the tissues, but would afford specific immunity against streptococcal invasion. Mr. Durham then drew attention to the treatment of general suppurative peritonitis and insisted on the importance of thoroughly cleansing the omentum and the space between the liver and the diaphragm, as microscopic examination showed that it was there that organisms were most thickly aggregated.—Mr. C. B. LOCKWOOD agreed that all the ordinary naked signs of peritonitis might be absent at the necropsy, and yet examination microscopically would reveal masses of organisms in the lymphatics. There was undoubtedly a great difference in the course of the disease according to the organisms present, and the streptococcal forms were much more virulent than those due to the bacterium coli. Owing to the multiplication of the microbes in the substance of the membranes, and not on their surface, it was practically impossible to dislodge them, and if Mr. Durham's plan of preparing the tissues to resist their entrance proved to be efficacious it would be a very valuable expedient.—Mr. HARRISON CRIPPS said that it was curious that in those cases where fœtid pus escaped into the peritoneum during an operation the more severe forms of peritonitis were very rare. Possibly the previous existence of the pus in close contact with the peritoneum had some protecting effect. He did not see how the washing out of the space between the liver and the diaphragm was to be carried out, as it was so high and the surfaces were in such very close apposition.

Mr. MARMADUKE SHEILD read a paper on the Removal of a large solid Tumour from the Retro-peritoneal Space. The patient was a woman, fifty-two years of age, who was the subject of complete uterine prolapse. There was a large abdominal tumour passing up from the pelvis almost to the ensiform cartilage. It was soft, elastic, and semi-fluctuating, and was believed to be ovarian. When laparotomy was performed there were many laminæ of condensed fibrous tissue in front of the tumour which had to be stripped off the tumour, which was found to be lying in front of the spine,

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but was readily separated from the aorta and vena cava. The tumour was definitely encapsuled, but was firmly adherent to the bladder. Owing to the rapidity with which the operation had to be performed the exact relations of the tumour could not be accurately made out. There was an extraordinary number of adventitious adhesions containing large vessels. The tumour proved to a fibro-myoma when examined by Dr. Rolleston. The exact origin of the tumour was not easy to determine. It might be a sub-peritoneal fibroid which had become detached from the uterus and formed new attachments or it might have grown from the unstriped muscle found in the broad ligament and the root of the mesentery, Most of the recorded cases had been fibro-lipomata, so soft as to give rise to a diagnosis of ascites. Sarcomata also occurred. The diagnosis was usually one of extreme difficulty. Often the intestines became so flattened by pressure that it was not possible to obtain resonance over the colon which lay in front of the tumour.—Mr. F. S. EVE thought that the tumour originated in the unstriped muscular tissue which was found at the root of the mesentery. He had examined a tumour removed from this situation by Sir Spencer Wells, which proved to be a fibro-lipoma.—Mr. LOCKWOOD remarked that sarcomata in this position were usually encapsuled and showed little tendency to infiltrate locally, and that their removal was easy unless they were very soft. He thought that an important point in diagnosis was the occurrence of varying areas of resonance over the colon.—Mr. HARRISON CRIPPS agreed that there was very little tendency for retro-peritoneal tumours to infiltrate and they were less apt to recur than those in other parts. He thought that many of them grew from the broad ligament and were not, strictly speaking, retro-peritoneal. He thought that probably in this case the tumour was originally a detached uterine fibroid. In operating on such cases the surgeon was often embarrassed by the number of adhesions that he had to cut through, so that he did not know whether he had got down to the peritoneum. In those circumstances it was best to follow Sir Spencer Wells's plan and extend the incision upward, and to get into the peritoneal cavity higher up; it would then be easy to get one's bearings.

MEDICAL SOCIETY OF LONDON.

Excision of Knee.—Intestinal Neurosis.

A MEETING of this society was held on March 8th, the President, Mr. REGINALD HARRISON, being in the chair.

Mr. C. B. LOCKWOOD read a paper in which he reviewed the operations for Excision of the Knee and described a new procedure—Osteoplastic Excision. The paper will be found printed in full on page 732 of this issue.—Mr. MARMADUKE SHEILD thought the operation would prove to be a good one, as it appeared satisfactorily to resist the tendency to lateral displacement of the knee which often caused the surgeon to be disappointed with the result of his operation. Such displacement might occur even twelve months after the operation, and was most liable to occur among hospital patients, who could not carry out the prolonged rest which was essential, and the operation, therefore, would be especially useful for such patients. Complete fixation was an absolute necessity, and he thought that Howes' splint, which allowed the dressings to be changed without removal of the splint, answered all purposes. In performing Mr. Lockwood's operation great care would have to be taken that no disease was left behind in the condyles or in the patella.—Mr. STANLEY BOYD said that in young subjects he had performed arthrectomy in preference to excision because injury to the epiphysis was thus avoided. In Mr. Lockwood's operation the whole of the epiphysis was not removed, and it would be interesting to observe whether the portion of the epiphysis left would be sufficient for growth. He did not think there was much advantage in retaining the action of the quadriceps: complete fixation was best. He preferred Thomas's splint to the limb being fixed in position with sterilised bandages before the dressing was applied. He was accustomed to fix the bones by two two and-a-half inch carpenter's screws. There was no satisfactory explanation why bony union was so difficult to obtain. He suggested that it was owing to the injury being almost confined to the bone, the periosteum being hardly implicated.—Mr. G. R. TURNER pointed out that Senn had found a method based on the same principles successful in obtaining union in ununited fracture.—Mr. LOCKWOOD, in reply, said that it was useful to preserve the quadriceps, because it prevented the flexion which was otherwise apt to occur. He thought that Howes' splint was admirable for many purposes, but he did not think that any splint was effectual in keeping the surfaces in perfect apposition unless the hip-joint was also controlled, and he considered that a splint should reach up to the axilla and prevent the patient sitting up in bed.

Mr. CLINTON DENT read a paper on some cases of Intestinal Neurosis, especially with regard to the question of surgical interference. The first case was that of a man, thirty-five years of age, who had suffered from symptoms attributed to internal stricture of the small intestine, extreme wasting, and severe epigastric pain occurring at a regular interval after food. When he was placed under an anæsthetic a swelling the size of a sausage could be felt above the umbilicus. An exploratory incision was made, but nothing was found. All the symptoms disappeared and the patient completely recovered. The second case was that of a young man, twenty-seven years of age, who commenced with symptoms pointing to renal calculus. The kidney was explored; nothing was found, but the renal symptoms disappeared. A few weeks later, however, he was seized with attacks in which he had headache and pains in the thighs; his temperature rose to 103° F., he had rigors with profuse sweating, and frequent vomiting. A swelling like a thick cord could be felt occasionally in the right iliac fossa. On opening the abdomen the only structural alteration that could be made out was a small adhesion between the cæcum and omentum. But either from the manipulations or exposure to the air the first few inches of the colon were seen to contract into a rounded mass, which had no doubt been the cause of the intermittent swelling felt in the iliac region. Only temporary relief was given to the symptoms by breaking down the adhesions. Afterwards relief was afforded by washing out his stomach, but at the present time symptoms had returned and closely simulated biliary colic. The third case was that of a man, fifty years of age, who had attacks in which he was seized with pain in the right ischium, which quickly radiated over the whole abdomen. This was followed by copious eructations and often by vomiting. There was no evidence of organic disease, and all the symptoms were relieved by abdominal massage. In many cases these symptoms were associated with some lesion which by itself would be insufficient to cause them, as in the case of a man, admitted for syphilitic brain disease, who was suddenly seized with abdominal pain, &c. The stomach was found on operation to be bound down by adhesions. These were freed, but as the symptoms persisted pyloroplasty was performed. The relief, however, was only temporary, and he still has very frequent vomiting, which appears to have very little effect on his general health. Purely functional cases showed a great tendency to relapse, and he thought that laparotomy, unless there was clear evidence of organic trouble, was inadvisable.—Mr. MARMADUKE SHEILD thought that the recovery from symptoms of renal calculus by operation when no stone was found was due to the squeezing of the kidney during the operation. The cases described by Mr. Dent were very puzzling, as it was difficult to know how much weight to attach to the symptoms. Sometimes hysterical manifestations might make one overlook evidence of organic disease. He quoted the case of a young woman who was admitted to St. George's Hospital suffering from pain, wasting, and almost constant vomiting, which was at first believed to be neurotic. On exploring the abdomen, however, the peritoneum was found studded with tubercles, and there was a band which bound down the jejunum. When this was relieved the symptoms disappeared and complete recovery followed.—Mr. LOCKWOOD thought that there was often some actual disease present. In one case in which he explored for calculi in the gall-bladder and found everything apparently normal, he thought now that there might have been some duodenal ulceration.—The PRESIDENT referred to the extensive train of nervous symptoms which are sometimes associated with a varicocele of inconsiderable size, which could not be directly due to the physical conditions present.

HARVEIAN SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on March 4th, the President, Dr. R. H. MILSON, being in the chair.

Dr. G. A. SUTHERLAND showed a girl eleven years of

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age suffering from Tachycardia and Cyclic Albuminuria. There were other disturbances present in connexion with the heart and the kidneys, but he considered that they were functional rather than organic in origin.—The PRESIDENT stated that he had a patient whose pulse had averaged from 128 to 130 beats in the minute, and frequently reached 140, for the last ten years. Although he had seen many physicians, the cause of the quickness had never been determined.—Dr. COCK mentioned a case of a healthy woman, aged thirty-six years, whose pulse was normally 100, and that this quickness had persisted after an attack of puerperal septicæmia from which she suffered ten years ago.

Mr. JACKSON CLARKE showed a child, aged five years, who had a Marked Lateral Deviation of the Spine to the Left in the Dorsal Region. There was a slight deformity present at birth, and this had become worse during the first two years of life owing, he believed, to the child having suffered from rickets. At the end of this time the case came into the hands of Mr. John Poland, who had applied the splint (Chance's), which Mr. Clarke demonstrated. No further deviation had occurred since the splint had been worn. The importance of recognising and treating rickety curvature of the spine, whether it took the more usual form of a single posterior incurvation or the less common lateral deviation, was emphasised.—Mr. NOBLE SMITH remarked that the case of lateral curvature shown by Mr. Jackson Clarke was probably due to rachitic softening of the vertebræ, but such cases were rare. The pathology of lateral curvature had not yet been satisfactorily described. He could not adopt the view that weakness of muscles alone was the usual or at all a common cause. Only 1 or 2 per cent. of the cases which he had seen were clearly rachitic, and the softening and relaxation he referred to were due to some other pathological condition or to excessive rapidity of growth. Sometimes lateral curvature occurred in young people whose muscles were well developed, and he showed photographs of such cases in youths whose muscles were obviously strong. He also showed photographs of cases of lateral curvature in which a condition of osteoporosis existed. In discussing the treatment Mr. Noble Smith urged that the popular treatment by exercises alone was only suited to those few cases which were hysterical or very slight, and that for the very large number of patients who suffered from real lateral curvature mechanical help was necessary, and if judiciously applied was always successful. The splint which Mr. Jackson Clarke had shown, and which was used at the City Orthopædic Hospital, was very efficient. It was constructed upon quite different principles from those devised by instrument makers. These principles of construction demanded not only mechanical knowledge, but also the whole knowledge of the surgeon. By the use of this apparatus the muscles were encouraged to act, instead of being interfered with; the chest was developed, not depressed; and the shoulders were drawn backwards, not pressed up by crutches. In very weak patients the strength of the spine was insufficient at first to tolerate special exercises; but by means of this support the ordinary exercises of play and movement were freely permitted, while the spine was prevented from falling into wrong positions. The result was that when the patient had been made straight and subsequently had grown strong the apparatus could be thrown aside without fear of a relapse. In some cases exercises in addition to the mechanical support were of great benefit, and massage and hand pressure were also valuable remedies.

Mr. E. W. ROUGHTON showed: 1. A case of Sacro-iliac Disease which had been completely cured by scraping out the joint. The chief symptom of disease in the case was a cold abscess which formed over the dorsal aspect of the joint, and when the latter was opened it was found to be completely disorganised. 2. A case of Congenital Deformity of both Hands in a woman. The three central digits were shortened. A skiagram showed that the shortening lay in the metacarpals and not in the phalanges.[1]

Mr. SEFTON SEWILL showed a young woman in whom he had treated an Empyema of the Antrum by making an opening through the alveolus of a molar or bicuspid tooth and exhibited the instruments he employed. In cases where he removed a tooth immediately before operation he found the three sizes of trocars shown all that was necessary to perforate. In edentulous cases spear-headed drills driven by the dental engine were a great assistance, indeed, almost indispensable. He next described the drainage apparatus, consisting of a gold tube of as large calibre as possible, its lower orifice being closed by a split pin during mastication. This tube fixed to a gold plate held *in situ* by bands round adjacent teeth provided efficient drainage, and had this advantage, that a patient could syringe out the antrum without removing the plate and tube.—Dr. PEGLER, Dr. HILL, Dr. SCANES SPICER, and others discussed the case.

[1] We have received these skiagrams from Mr. Roughton, and hope to publish them shortly.

OBSTETRICAL SOCIETY OF LONDON.

Exhibition of Specimens.—President's Inaugural Address.—Cyclical or Wave Theory of Menstruation.

A MEETING of this society was held on March 3rd, Dr. C. J. CULLINGWORTH, President, being in the chair.

A letter of condolence on the death of Sir Spencer Wells from the Berlin Obstetrical and Gynæcological Society was read.

Mr. W. DUNCAN showed five Fibromyomata removed by abdominal section.

Mr. A. F. STABB showed a Uterus with Interstitial Fibroid removed by abdominal hysterectomy in a young woman aged twenty-six years.—The PRESIDENT and Mr. ALBAN DORAN made remarks.

Dr. CULLINGWORTH then gave his Inaugural Address on the Undiminished Mortality from Puerperal Fever in England and Wales, which was published in full in THE LANCET of March 6th.

Dr. W. S. PLAYFAIR moved a cordial vote of thanks to the President for his most interesting and instructive address, and said he could conceive no topic more useful or one more likely to have a beneficial effect.—This was seconded by Dr. CHAMPNEYS and carried unanimously.

Dr. ARTHUR E. GILES read a paper on the Cyclical or Wave Theory of Menstruation, based on observations on the temperature and the pulse before, during, and after menstruation. The temperature observations embraced fifty menstrual periods in forty-five patients; from the fifty cases a composite curve had been drawn up, which might be regarded as the type of the temperature curve in relation to menstruation. It showed that the temperature was lowest at the middle of the inter-menstrual period; it gradually rose, attaining its maximum two days before menstruation. There was a sudden drop on the day preceding the flow, with a second slighter drop at the end of the period. It rose slightly for the first week after the cessation of menstruation, and there was a third fall at the beginning of the inter-menstrual period. The observations of Jacobi and Reinl had been similarly employed in the construction of composite curves; these present features similar to those shown by Dr. Giles's curve. As regarded the pulse, sphygmographic tracings had been obtained from seven patients, covering nine menstrual periods and forty observations. They show that the blood pressure was greatest on the first two days of menstruation and on the day preceding; it was lower during the remainder of the period, rising again slightly after its cessation. The total variation, both in temperature and pulse, was comparatively limited. Dr. Giles then discussed the bearing of these facts on the cyclical theory of menstruation, and concluded that this theory as ordinarily stated was insufficient as an explanation of the origin of menstruation. But, taken in a modified form, the cyclical or periodic theory might be accepted as giving a connected idea of the meaning of menstruation, which might be regarded as the conclusion of the reproductive phase of an alternation of nutritive and reproductive activity or, in other words, as a repeated preparation for the reception and nutrition of a fertilised ovum. In the absence of such an ovum menstruation occurred as a "missed pregnancy."

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

An Apparatus for Preventing Talking during Sleep.—Copper Amalgam as a Filling Material.—The Discolouration of Copper Amalgam.

AN ordinary meeting of this society was held at 40, Leicester-square on March 1st, Mr. J. FAIRBANK (Vice-President) being in the chair. The minutes of the previous meeting were read and confirmed.

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Mr. ROBBINS mentioned the case of a patient who applied to him for an apparatus which would interfere with his articulation and so prevent him talking in his sleep, for being a Government official and having to live in a bungalow where the partitions between the sleeping rooms were very thin he was afraid he might divulge some official secrets. Mr. Robbins explained and exhibited the appliance he had made, and stated that the result produced was most satisfactory.

Mr. J. H. BADCOCK read a paper on Copper Amalgam as a Filling Material, its merits and demerits. He remarked that it possessed the advantage of working smoothly and adapting itself perfectly to every part of the cavity, the shrinkage so common with most amalgams being in all probability entirely absent. Its supposed power of arresting caries by virtue of its antiseptic action was of no practical utility, and should be absolutely disregarded as being without clinical significance. Referring to the disadvantages of copper amalgam, he thought the most important was its tendency to "waste," more especially near the gum margin, with the result that caries recurs, and is frequently not discovered until the pulp of the tooth is exposed. The great tendency to discolouration was also an important disadvantage, and for this reason he considered that it should never be used in any tooth when staining would be objectionable. The opinions of various writers, both in this country and America, were quoted, Mr. Badcock giving a most concise and complete *résumé* of the whole question.

Mr. KENNETH GOADBY read a paper on the Discolouration of Copper Amalgam. He first dwelt upon the supposed antiseptic properties of copper amalgam and enumerated researches he had undertaken in this connexion. Plates of agar and gelatin were inoculated and small pellets of amalgam dropped on them. In the gelatin plates, three in number, a development of bacteria took place right up to the filling, and practically the same condition was seen in the agar plates. A series of tubes of broth, saliva, and gelatin were also inoculated with cultures (1) from the mouth direct; (2) with streptococcus brevis; and (3) with impure cultures from the mouth. In all cases development of bacteria took place. His results, therefore, seemed to point to the fact that copper amalgam has practically no antiseptic action. With regard to the black discolouration of copper amalgam Mr. Goadby stated that it was due to the formation of copper sulphide, and recounted the following experiments he had made in connexion with this point. Several tubes of saliva were taken and small pellets of amalgam dropped in; a solution of sulphuretted hydrogen was next added and the tubes placed in a chamber at the body temperature, within a short space of time the familiar sooty appearance was to be seen. Upon gently rubbing the black deposit a shiny surface was exposed, due no doubt to the mercury set free, and on again placing the amalgam in the solution the black sooty layer appeared. The "green" stain seen in connexion with copper amalgam was also referred to, Mr. Goadby recounting several experiments he had made with the object of discovering the actual cause of the colouration, and stated that as the result of his investigations he had no reason to suppose that the staining was due to copper sulphate as supposed by some. It, however, seemed probable that it was due to a salt of the nature of an amide.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

The Housing of the Insane and the Size of Asylums.—Exhibition of Cases.

A GENERAL meeting of this association was held at the Borough Asylum, Mapperley-hill, Nottingham, on Feb. 18th, under the presidency of Dr. JULIUS MICKLE.

Dr. RAYNER opened a discussion on the Housing of the Insane and the Size of Asylums. He drew attention to the fact that the number of patients housed in county and borough asylums in England and Wales had increased from 15,844 in 1859 to 63,957 in 1896, the increase since 1892 having been 8448, an average of more than 2000 per annum. He thought it was desirable, in the interests of the insane and of the community, to consider whether some improvement might not be made in the plan which now obtains of aggregating vast numbers in one building, by adopting plans of segregation in the degrees in which they may be useful and practicable. He divided the insane into the following groups: (1) the acute or hospital class; (2) the asylum class; (3) the employed or employable class; and (4) the helpless or workhouse class, with a terminal group—the infirmary dement. He considered success in treatment to be evidenced not only by the percentage of recoveries, but by the proportion of those who have improved so far as to be trusted with a great share of liberty. He considered skilled individual attention to be the basis of treatment, but that no amount of experience and skill will enable a physician to give the requisite attention to more than a certain number of cases, the amount of attention required varying greatly with the different groups. Individuality of responsibility is the corollary of individuality of attention, and should be delegated largely to assistant or deputy physicians. He considered that what was needed for London was not a lunatic hospital, but receiving houses or infirmaries, or even special wards in connexion with general hospitals, in which cases not yet certified or certifiable could be received for treatment, and from which, if necessary, they could be sent to the asylum. He considered that with adequate preventive treatment in the stage preceding the certifiable condition a certain proportion of cases might be saved from becoming bad enough for asylum treatment. He advocated also the further development of the colony system and of "boarding out" in suitable cases as a means of relieving our growing institutionalism. He concluded: (1) that the defect in the provision of treatment in the earliest stages of mental disorder was utter and complete; (2) that the defect in dealing with the improved or occupation class was very great indeed; (3) that the helpless workhouse class were massed in too great numbers and were too much isolated from their friends; (4) that the responsibility for treatment was not sufficiently and clearly delegated when the insane were treated in large masses; and (5) that the number of medical attendants was too limited. He considered that an establishment under one director should be made up as follows: a male and female side, each having a hospital for 200 beds, an asylum of from 300 to 400 beds, with farm or occupation colonies for 500 or more distributed over an estate of 1000 acres or more and with annexes for the helpless imbeciles and terminal dements, supplemented by a special organisation for developing "boarding out" in town or country. Each of these divisions should be under a physician absolutely responsible for the treatment of the patients under his charge, aided by junior assistants, but supervised by the physician-director. The line of advance in the treatment of the insane at present should be summarised as a need for "more brains and fewer bricks."

A discussion ensued in which the PRESIDENT, Dr. E. WHITE, Dr. THOMSON, Dr. SPENCE, Dr. MCPHAIL, Mr. HAYES NEWINGTON, Dr. MERCIER, Dr. CLAPHAM, Mr. ALEXANDER, Mr. EVAN POWELL, Dr. KAY, and Dr. T. W. MCDOWALL took part.

Dr. VINCENT and Dr. MONTGOMERY showed cases of interest from the wards of Mapperley-hill Asylum.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held on March 5th, Mr. W. BRUCE CLARKE, the President, being in the chair.

Dr. CLIPPINGDALE showed a boy, aged ten years, who suffered from Congenital Ichthyosis. The areas of skin free from the disease were the front of each elbow, the back of each knee, and the face and neck.

Dr. C. W. CHAPMAN showed a man, aged forty-one years, with Aneurysm of the Thoracic Aorta.

Dr. H. P. POTTER showed a man, aged fifty-six years, with a Sarcoma of the Upper Jaw. The growth had been observed for about nine months. It measured five inches from side to side and four and three-quarter inches from above downwards. The sub-maxillary glands were slightly enlarged.

Mr. MCADAM ECCLES showed a man, aged fifty-two years, who had had his left Superior Maxilla removed for Sarcoma. The glands at the angle of the jaw were removed at the same time. The patient made a good recovery after the operation.

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Mr. SWINFORD EDWARDS showed a man, aged fifty years, with Papillomatous Dermatitis around the Anus. The disease had lasted for four months. There were no signs of syphilis in other parts of his body. The anus was entirely surrounded by papillæ.

Dr. SEYMOUR TAYLOR showed:—1. A boy, aged fourteen years, with Hydrocephalus. The head began to enlarge at the age of seven months, continuing until the tenth year. The left side was more enlarged than the right. He had signs of a descending lesion affecting the crossed pyramidal tract on either side of the spinal cord. He was fairly intellectual. He had a lateral spinal curvature. 2. A boy, aged eight years, with Congenital Spastic Paraplegia. His parents were healthy. There was no history of forceps delivery. He had rigidity of both the upper and lower extremities, especially the latter. There were also flexion and adduction with increase of deep reflexes.—Remarks were made by Dr. W. S. COLMAN, Mr. MCADAM ECCLES, and Dr. SHUTTLEWORTH.

Mr. KEETLEY showed (1) a case of Congenital Dislocation of the Hip-joint after operation, and (2) a man from whom he had removed a Mammary Sarcoma.

Mr. L. A. BIDWELL showed a man, aged forty-six years, from whom he had removed an Epitheliomatous Tumour of the Abdominal Wall. The patient first noticed a pimple on the abdomen twelve months ago, which had gradually increased in size.

Mr. SWINFORD EDWARDS showed a man, aged thirty-two years, from whom he had removed a Renal Calculus.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Different Varieties of Aortic Regurgitation.—Exhibition of Cases.

A MEETING of this society was held on March 3rd, Dr. W. B. RANSOM, the President, being in the chair.

Dr. HANDFORD read a paper upon the Different Varieties of Aortic Regurgitation, and emphasised particularly the essential difference between those in which the lesion was stationary and those in which it was progressive, as well as the difference between the rheumatic and the atheromatous cases. The chief characteristics of the rheumatic cases were: (1) the disease came on at a much earlier period of life than atheroma, and was the main cause of aortic regurgitation arising between the ages of five and thirty-five years; (2) the arteries were generally sound; (3) the heart muscle was comparatively sound; and (4) apart from fresh attacks the valvular disease soon ceased to be progressive. In all these respects rheumatic aortic regurgitation differed essentially from the atheromatous, and the prognosis was very much more favourable. Not infrequently free regurgitation might exist for years with a complete absence of symptoms, even though the patient led an active life. The atheromatous cases were by far the most numerous and serious, and presented the following distinctions: (1) the disease was essentially a degeneration and arose in middle life, rarely before the age of thirty-five years, except where syphilis was the main cause; (2) the arteries were always involved to a considerable extent; (3) the heart muscle was rarely sound; (4) the disease was almost always progressive; and (5) it affected the male much more frequently than the female. Of the atheromatous cases there were four chief sub divisions, according to the mode of production: (1) the syphilitic, arising generally between the ages of thirty and fifty years, affecting sometimes mainly the aorta and branches, and sometimes mainly the valves, difficult to distinguish from fusiform aneurysm, and rapidly progressive; (2) those arising from laborious work in strong, muscular men, generally between the ages of forty and fifty years; (3) the arterio-sclerotic, arising between the ages of fifty and sixty-five years in the gouty and in men who habitually ate and drank too much, especially when combined with hard mental work; and (4) cases arising from "old age," about seventy years. No general rule could be laid down for all cases as regarded the use of digitalis. It was most useful where there was consecutive mitral disease with dropsy, next in the rheumatic cases and those arising from laborious work; the latter could often be enabled to continue their work by daily doses of digitalis. The chief cause of failure of compensation was degeneration of the ventricle from fibroid change, the prognosis of which depended mainly upon the degree of occlusion of the coronary arteries. When the fibroid change was advanced digitalis had little tonic stimulating effect upon the heart, and not only failed to do good, but did positive harm, because it still caused tonic contraction of the small arteries and increased the work of the failing heart. Digitalis was of great use in failure of compensation from temporary causes. It generally did harm in the syphilitic, the arterio-sclerotic, and the aged cases.—The PRESIDENT alluded to the group of cases occurring in young athletes which depended on over-exertion. He agreed that the condition of the cardiac muscle was the most important guide in the use of digitalis.—Dr. CATTLE remarked on the clinical difficulty of deciding whether a heart was "fatty."

Mr. A. R. ANDERSON showed a man on whom he had successfully operated nine months previously for Actinomycosis originating in the Vermiform Appendix and honeycombing the whole thickness of the greater portion of the anterior abdominal wall.

Dr. C. BELL TAYLOR showed: (1) a case of Double Iridectomy from one blow without injury to the vision; (2) Cataract in a patient aged seventy years dispersed by Electricity; and (3) Cyclitis followed by Atrophy of both Globes, with Secondary Cataract and Synechiæ, in which good vision had been restored by operation.

MANCHESTER MEDICAL SOCIETY.

Exhibition of Specimens and Skiagrams.—Subphrenic Abscess.—Detection of Sugar in the Urine.

A MEETING of this society was held on March 3rd, Dr. GRAHAM STEELL, President, being in the chair.

Dr. MORITZ showed the Larynx and Trachea and related the further history of a patient whom he had shown to that society in March, 1895.[1] The patient was then suffering from an agglutination of the vocal cords the consequence of syphilis, and had been tracheotomised. Inter-laryngeal operations proved only of temporary benefit, and the patient refused to undergo any further operative interference. In October, 1895, she again began to suffer from urgent dyspnœa, which was found to be due to stenosis of the trachea. This was gradually and efficiently dilated by means of Schroetter's catheters introduced through the tracheal opening. The patient did not show herself from April until September, 1896, when she again became dyspnœic. But now Schroetter's catheters of even a larger size (No. 4 or 5) could be passed without meeting with any apparent obstruction and gave no relief. It was therefore concluded that there was another stricture lower down. The patient died in October, 1896, from suffocation. She was seen shortly before her death, and though the inspirations were accompanied by some stridor the dyspnœa was most expiratory, and at each expiration a peculiar click-like sound, as that of the closing of a valve, was heard. At the post-mortem examination the larynx was found entirely occluded by cicatricial tissue down to the lower edge of the cricoid cartilage. The mucous membrane of the trachea was free from cicatrices. The lumen of the trachea showed a slight constriction at its lower part, whilst above this there was a fusiform dilatation in which the rest of the trachea was involved. At the constricted part the tracheal cartilages were extensively softened, and to this condition the dyspnœa and click-like sound were due. There was, further, a stenosis of the right larger bronchus just before its bifurcation. The right lung was emphysematous and the left lung normal. Dr. Moritz also made some observations on the comparative facility of inspecting the trachea through a tracheotomy opening by means of aural or nasal specula (Zaufal's), with the head of the patient extended well backwards

Dr. MCNAUGHT related a case of Subphrenic Abscess, probably due to rupture of the stomach and complicated by empyema, successfully treated by incision and drainage, and subsequent incision and resection of rib.

Mr. G. A. WRIGHT showed (with lantern slides) a collection of Skiagrams illustrating the Uses of the Process in General Surgery.

Dr. R. T. WILLIAMSON referred to the Difficulty of Detecting with certainty Small Quantities of Sugar in the Urine.

[1] THE LANCET, March 16th, 1895, p. 720.

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Every test had some weak point, but by the following combination of tests a definite conclusion could be easily arrived at:—1. Apply Fehling's test. If no oxide of copper be reduced, or if there be a good reduction and other indications of diabetes be present, no further test is required. 2. In some cases other indications of diabetes are absent or the reduction of copper is slight. In such cases try the phenyl-hydrazin test — simplified method (test tube filled for half an inch with powdered sodium acetate, for half an inch with phenyl-hydrazin-hydrochlorate in powder, and the tube half filled with urine; keep boiling over a lamp for two minutes). A negative result shows that the substance reducing Fehling's solution is not sugar, and no further test is required. A positive result (deposit which under the microscope consists of yellow needle-shaped crystals in sheaves) indicates glucose; if scanty, possibly glycuronic acid. Lactose yields small yellow globules with very short spines. 3. Try the fermentation test (for twenty-four hours), using two tubes, one containing the suspected urine and the other normal urine for control (yeast = $\frac{1}{10}$ by volume). Excess of gas in the former tube indicates glucose. A negative result shows glucose to be absent or less than 0·1 per cent. 4. If the results be negative at the end of twenty-four hours, apply Fehling's test to the mixed urine and yeast. If Fehling's solution is no longer reduced, glucose which has been destroyed by the action of yeast is indicated. If Fehling's solution be still reduced, the reducing substance is not glucose.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Specimens.—Smegma Bacillus.

A MEETING of the Pathological and Microscopical Section was held on March 4th, Mr. F. T. PAUL being in the chair.

The following specimens were exhibited:—

Mr. T. H. BICKERTON: Intra-ocular Tumours mounted in glycerine jelly.

Dr. BUCHANAN: Specimens and drawings of Tuberculous Tumour of the Iris removed by Mr. Bickerton. The patient, a negro, aged four years, in June, 1893, had a small speck in the iris, which increased rapidly, the eye being enucleated in October. Twelve months later symptoms of cerebral tuberculosis set in and the boy died. The sections exhibited bacilli, giant cells, and early tubercle in the iris and choroid.

Mr. G. NEWBOLT: (1) A Villous Tumour of the Bladder which had been passed by the patient; and (2) Vermiform Process removed from a femoral hernia in a woman on account of strangulation.

Dr. LESLIE ROBERTS: (1) Parasitic Flora of Skin, cultures and sections under the microscope; and (2) Psoriasis, Lichen Planus, and Morphœa.

Mr. THELWALL THOMAS: A Dissection of the Neck in a case where all the carotid arteries and jugular veins had been divided with many nerves in the left side of the neck in a man whose case was recorded in 1895.[1] He lived for only two years, and died from lung mischief on the right side. From the root of the neck to the base of the skull on the left side only one small part of the external carotid artery could be found giving off the lingual and superior thyroid arteries; the stumps of the common carotid and internal jugular veins were merged in a cicatricial mass, which also involved the cut sympathetic and pneumogastric nerves. The circle of Willis was normal, the only apparent attempt at collateral circulation being a large vertebral artery on the left side, the deep cervical artery being smaller than that on the right side.

Mr F. C LARKIN: (1) Acute Necrosis of the Os Calcis. (2) Appendix Cæci removed from a Strangulated Hernia in which the cæcum and appendix were found in a child; and (3) Hypertrophic Prostate.

Dr. A. W CAMPBELL: (1) Tuberculous Growths in the White Matter of the Spinal Cord Posterior Columns; and (2) Tumour of the Posterior Nerve Root in the Sacral Region and Heterotopia Spinalis.

Dr. J. WIGLESWORTH: Cerebral Asymmetry.

Mr. PAUL, Mr LARKIN, Professor BOYCE, Dr. BUCHANAN, and Dr CAMPBELL joined in the discussions.

Dr GRÜNBAUM read a note on the Smegma Bacillus, and mentioned that he had succeeded in growing the organism in milk.

Mr. PAUL, Professor BOYCE, and Dr. N. E. ROBERTS joined in the discussion.

[1] Brit. Med. Jour., Dec. 7th, 1895.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases, Specimen, and Photographs.—A Case of Tetanus.

A MEETING of this society was held on Feb. 25th, the President, Mr. RECKLESS, being in the chair.

The following cases, specimen, and photographs were exhibited:—

Mr. HARRY LOCKWOOD: A case of Myositis Ossificans (previously shown) to demonstrate the progress of the disease.

Mr. HARVEY: (1) An adult with Facial Hemiatrophy; and (2) a child with Marked Congenital Asymmetry of the Head and Limbs.

Mr. ARCHIBALD YOUNG: A case of Intra-thoracic Growth.

Dr. WEARNE CLARKE (Chesterfield): Photographs of a case of Raynaud's Disease. He related particulars and made general remarks.

Mr. DALE JAMES: A case of Raynaud's Disease.

Dr. RICHARDS (Chesterfield): An album with many striking photographs illustrating Varieties and Stages of the Small-pox Rash.

Dr. ARTHUR HALL: (1) A Brain with Multiple Hæmorrhages, the most conspicuous being a primary ventricular hæmorrhage; and (2) a case of Syphiloderma, which at one time looked so like Scrofuloderma as to be mistaken for it.

Dr. EASTES read notes of a case of Tetanus.—Dr. SORLEY, in discussing Dr. Eastes' paper, related the history of a case of tetanus recently treated at the Sheffield Union Infirmary. The points of interest in the case were the absence of any evidence of injury and the occurrence of a rigor which apparently marked the commencement of the symptoms. There was trismus and marked opisthotonos, but no clinic spasms, unless, perhaps, the occurrence of severe paroxysms of pain beginning in the epigastric region and passing round the body and shooting upwards along the spinal column. Nourishment of a fluid kind was freely taken, and the patient was conscious up to the end, which occurred suddenly in a paroxysm, the patient dying in a rigid attitude. The brain and spinal cord seemed healthy. The whole course of the disease lasted five days. No antitoxin was employed.—Mr. RICHARD FAVELL, Mr. SNELL, and Dr. SINCLAIR WHITE joined in the discussion.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

The Typhoid Bacillus.

A MEETING of this Section was held on Feb. 19th, Dr. J. M. REDMOND, President, being in the chair.

Dr. MCWEENEY gave an account of some of the most recent researches into the Distribution and Identification of the Typhoid Bacillus. He dealt in the first instance with the results obtained by Dr. Cartwright Wood in his recent experimental investigation of the relation between oysters and the typhoid bacillus. The matter might be summed up as follows. The specific bacilli can remain alive for lengthened periods in sea water, though without multiplying. They can remain alive for lengthened periods in the oyster-fluid, though not in the interior of the oyster itself. At somewhat warm temperatures they can multiply in the fluid of the oyster, and this may happen after removal of the mollusc from the sea during the storage period that precedes consumption. All oysters from beds subject to recent contamination should be condemned. The other research which he described was more recent still, having been published in the current number of the *Annales de l'Institut Pasteur* by Dr. Remlinger and Dr. Schneider, of the French Army Medical Department. Their object was to ascertain whether the typhoid bacillus occurred in nature apart from cases of the disease. They employed Elsner's method for the raw material—soil, water, and fæces of non-typhoid patients—and, in addition to the elevencharacters relied upon by Lösener, they applied the serum test by bringing serum from a horse immunised against Eberth's organism in contact with the organism under examination. With the same object they used the serum of typhoid fever patients. Finally, they inoculated suspected cultures into guinea-pigs with and without protective serum injections. Only when the suspected organism

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re-acted precisely in the same way as typical typhoid bacilli under the same circumstances did they consider the identification complete. Bacilli answering all the above tests were isolated from various samples of drinking water, soil, and fæces of patients who had never had typhoid fever. The observers were obliged to conclude that the typhoid bacillus is extremely diffused and that it only needs favourable circumstances, such as temporary individual vulnerability, in order to effect a lodgement in the human system. Attacks and epidemics may therefore originate, so to speak, *de novo*—that is, without connexion with any previous case of the disease, which amounted to a re-instatement of Murchison's views. In conclusion Dr. McWeeney demonstrated naked-eye reactions of typhoid serum on the specific bacilli. Tubes prepared by Wright's method were handed round, showing the precipitation of the bacilli by serum from a typhoid fever patient, whilst a central tube treated with a similar amount of non-typhoid serum was turbid owing to the diffusion of the mobile organisms.

Dr. J. W. MOORE believed that all physicians admitted that the eating of oysters might be followed by illnesses that were often accompanied by diarrhœa, high temperature, &c., but were certainly not typical cases of typhoid fever. He had seen two cases of what he called "oyster fever": one was that of a physician who had eaten oysters and in two or three days had symptoms resulting in a fever which certainly was not typhoid fever. The patient recovered in about a fortnight, having had some slight rise of temperature, &c. He believed that oysters were capable of conveying many diseases.

Dr. PARSONS thought the fact stated by Dr. McWeeney with regard to the extreme prevalence of the typhoid bacillus, that in seven out of ten samples of soil typhoid bacilli should have been isolated by the two French experimentalists, was a very astounding one.

Dr. MCWEENEY, in reply, said that he did not question the results of the French experimentalists, because they had worked very diligently and with very great detail, and he thought that their results had been honestly arrived at. It was well known that the tetanus bacillus was very widely distributed. He believed that bacilli bearing a very close resemblance to typhoid bacilli were everywhere around us.

Reviews and Notices of Books.

A Collection of the Published Writings of William Withey Gull, Bart., M.D., F.R.S., Physician to Guy's Hospital. Edited by THEODORE DYKE ACLAND, M.D. Oxon., Physician to St. Thomas's Hospital. London: The New Sydenham Society. 1896.

THE first volume of these collected writings was published in 1894 under the same editorship, and contained the late Sir William Gull's more purely medical works. The present volume contains a memoir commenced by Sir Henry Acland, and finished by the editor with the assistance of Dr. Pye-Smith and others, some fragments, notes and aphorisms, and sundry addresses. The memoir is a well-written and very interesting account of a very remarkable man, for Gull, though modern as far as his science went, was of a cast of mind akin to those seventeenth century thinkers whom he loved so well, Sir Thomas Browne and George Herbert. He was truly a spiritual philosopher, and had the same intense love of nature that characterised Henry Vaughan, also a medical man, the Welsh poet and mystic. Dr. Acland quotes the well-known passage from the "Religio Medici," as a favourite one with Gull and as according well with his feelings, which commences: "At the sight of a crucifix I can dispense with my hat, but scarce with the thought or memory of my Saviour." Two addresses are given upon the Study of Medicine, both delivered at Guy's Hospital—the one in 1855, the other in 1874—and in both the chief canon laid down is that the study of medicine is the study of nature. He rightly lays down a very high ideal as the thing to be aimed at, so high that many of his hearers must have despaired of ever attaining it; but the consciousness of never doing so well as he would wish to do has been the making of many a successful man.

Perhaps the most useful of the addresses to the busy practitioner will be those upon the Collective Investigation of Disease, for the others in the collection, though scholarly, philosophical, and learned, demand more mental application for their comprehension than most men have the leisure or training to provide. The collective investigation of disease was a subject which Gull had deeply at heart and furthered by every means in his power, and though, perhaps, less advance has been made in the thirteen years or so which have elapsed since the addresses were written than he hoped would be the case, still it must be remembered that good and lasting work is invariably slow and that hasty deductions are worse than useless. In the first of these addresses occurs the following passage, which we quote as being eminently characteristic of Gull's way of reconciling apparently contradictory propositions. He is speaking of the help which the general practitioner should give in collective investigation. "It will perhaps be objected, and naturally, that it is almost impossible to organise for any useful purpose the labours of men already overburdened by the cares and fatigue of practice, and that there is neither time nor fitness for delicate inquiries on their part ..... that, further, it cannot be denied that when we see the meaning of the apparent trifles which in practice would otherwise oppress and worry us our burden is thereby much lightened, and that nothing could encourage us more than to feel that even one daily observation recorded was adding to our general store of knowledge and making the path of practice more easy. ..... We, indeed, owe it to those members of our profession who are admittedly overwhelmed by the apparently senseless details of their work to promote a movement like this, the object of which is to bring order into their chaos and to help them to stamp a scientific value upon facts hitherto only burdensome. If we compare the unflagging interest of any pursuit where the aim is high and clear with the tediousness and wearisomeness felt when working in the dark we shall readily admit that we are actually lightening the burdens of practice by thus adding to them, and by giving some portion of them a sense and meaning." This is a passage eminently true, if perhaps somewhat a counsel of perfection, and reminds us of the old statical paradox of preventing a body falling by adding a weight to that side to which it tends to fall, but in both cases the thing is a possibility. Thinkers of every class owe a debt of gratitude to Dr. Acland for the issue of these thoughts of a noble mind.

A Manual of Practical Anatomy. By D. J. CUNNINGHAM, M.D. Edin., F.R.S., Professor of Anatomy and Chirurgery, University of Dublin. Vol. I. Second Edition. Illustrated with Engravings. Edinburgh and London: Young J. Pentland. 1896. Price 12*s.* 6*d.*

AMONG the many excellent manuals of dissections which exist we know of none of which we can speak more highly than of the work before us, and therefore we welcome the appearance of the second edition of the first volume. There are two dangers which have to be avoided by the writer of a manual of practical anatomy. On the one hand, he must refrain from describing so fully the structures exposed that the student is wearied by the description; and on the other, the work must be a great deal more than a mere catalogue of the objects to be seen. There is a far greater tendency to err on the side of excess than in the opposite direction, and the rule should be to describe only so much as can be observed by a student of ordinary intelligence, while the less obvious facts and the more detailed statements find their appropriate place in a work on

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systematic anatomy. This rule has been observed by Professor Cunningham. The descriptions are careful, and though by no means brief they contain but very little that could be omitted without impairing their completeness. The book represents what may be called the Edinburgh School of Anatomy, though the differences at the present day between the methods of dissection at different medical schools are only slight.

This volume deals with the upper and lower limbs and the abdomen, the description of the thorax and the head and neck being contained in the second volume.

The nomenclature employed is, on the whole, that which is in common use in this country, and the terminology recommended by the committee of the Anatomical Society of Germany in its recently published report has, when different, been added; but there is discernible a slight tendency to the over-use of terms in the Latin form—for instance, the triangle of Petit appears only as the "trigonum Petiti," while the triangle of Hesselbach retains the English form; but, on the other hand, the trigone of the bladder is never called "trigonum vesicæ." Some of the terms recommended by the German Anatomical Committee are decidedly cumbrous, and we can only hope that they will never displace their more common equivalents; thus, "Canalis adductorius Hunteri" is a poor substitute for "Hunter's canal." Also, it is by no means an advance in nomenclature to call both the glenoid and cotyloid ligaments "labrum glenoidale." Professor Cunningham himself seems in doubt as to the value of these additions, as they are not given in the index.

Numerous figures illustrate the text, and we are glad to see that they are diagrammatic; in many recent text-books attempts have been made to represent exactly the appearances to be met with in a dissection. These attempts to be artistic are useless, for a diagram to be of any real value must be diagrammatic, and may on occasion *accentuate* features of importance. Figs. 9, 10, 56, and 88 are good examples of this. A figure which merely represents accurately what can be seen in the dissection is out of place in a work on practical anatomy, for the student should see it in the part dissected and not in the book.

The surgical anatomy is very satisfactory. Especially can we speak with favour of the surgical anatomy of hernia. A very full index concludes the volume.

Microscopic Researches on the Formative Property of Glycogen. Part I. — Physiological. By CHARLES CREIGHTON, M.D. Aberd. London: Adam and Charles Black. 1896. Price 7*s.* 6*d.*

IN this monograph Dr. Creighton describes his microscopic studies in a domain where some of his earlier work was done. The object of his researches is one of some interest: it is to determine to what extent glycogen plays a part in the building up of the animal tissues. The presence of this substance in fœtal and placental structures was known to Claude Bernard, and references to its distribution and possible function as a primordial element have found their way into the writings of physiologists since his day. But we believe that these studies of Dr. Creighton form the most complete and most systematic attempt to interpret the true significance of animal starch. The procedure for its detection in tissues is of the simplest; it consists in the obtaining of the well-known re-action of iodine upon glycogen (the wine-red re-action) to be obtained on microscopic sections of organs and tissues. The general conclusion to which Dr. Creighton has been led by his investigations may best be given in his own words. He says: "Briefly expressed, the formative property of glycogen is analogous to, or parallel with, that of hæmoglobin. Whether animal starch is a derivative of hæmoglobin in the sense in which vegetable starch is a derivative of chlorophyll is a question of chemical origins upon which I do not profess to throw light. But from evidence proceeding upon altogether different lines I have been led to the conclusion that glycogen plays the part of a carrier to the tissues, that it contributes somewhat to the building up without losing its own molecular identity, that it is present at the formation of tissues and employed therein without becoming part of them, and that it acts thus in some cases as the precursor or deputy of hæmoglobin, and until such time as the vascularity of the part is sufficiently advanced, in other cases as the substitute of hæmoglobin from first to last in those tissues which are built up in whole or in part without direct access of blood."

The evidence upon which such conclusions are based has been derived from histological studies of the growth of the bronchial tree, of the kidney, of the choroid, of the intestinal mucosa and of muscle, skeletal and cardiac, among vascular structures; whilst for non-vascular structures the tissues examined comprise the enamel and dentine of teeth, hoof, nail, and hair, and hyaline cartilage. In these latter sites it would distinctly appear that the glycogen plays the part of blood, and it is interesting to observe that in ossifying cartilage the glycogen first appears in spots, which subsequently become centres of ossification. Observations were also made upon glycogen in the placenta and developing mammary gland and also in the fat cells of hibernating animals, this latter forming a new contribution to the physiology of hybernation. The appearances described are well illustrated in the plates that are appended to the text. A second part of the monograph will deal with the pathological side of the question.

LIBRARY TABLE.

Herbal Simples Approved for Modern Uses of Cure. By W. T. FERNIE, M.D. Durh. Bristol: J. Wright and Co. Second Edition. 1897. Price 6*s.*—This enlarged edition of a work we reviewed in our issue of Sept. 21st, 1895, contains a quantity of old-world lore about herbs and plants which is exceedingly interesting. The modern cook knows but little of the many charming dishes of vegetables which our ancestors ate, and the modern housewife nothing. Instead, too, of the cordials and essences which were the delight of our great-grandmothers, people now dose themselves with "Specific No. 1," or "Mother Bunch's Tea," or "Dr. Dee's Boluses for Burdened Believers," or one of the many "amides" or "phenazones" manufactured from coal tar. At one time the "green end of a goose-dropping" was considered a sovereign remedy for fits, and, though scarcely a herbal simple, was preferable to nastinesses sold in bottles with a Government stamp. We are glad to see that Dr. Fernie lauds garlic in cookery, for this excellent bulb is far too little used in our country.

Medicine in Shakespeare. By JOHN MOYES, M.D. Glasg. Glasgow: James Maclehose and Sons. 1896.—This little book is an expansion of a thesis for the Doctorate of Medicine presented to Glasgow University in 1886. The writer died in 1894, and these labours of his appear under the editorship of Dr. James Finlayson. Shakespeare was a genius so many-sided that it is not surprising to find that all his delineations of disease could scarcely be improved upon by a modern physician. The subject of insanity, a disease which the poet pictured with no less vividness than other disorders, Dr. Moyes has left untouched, but he refers to Dr. Bucknill's "Psychology of Shakespeare," published in 1859, and reviewed in our issue of Oct. 15th of that year. Dr. Moyes, however, deals very fully with the other diseases incident to humanity, and has produced a very readable little book.

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Our Secret Friends and Foes. (Romance of Science Series, Society for Promoting Christian Knowledge.) By P. F. FRANKLAND, F.R.S. Third Edition. Price 3*s*.—Dr. Percy Frankland has here given us an enlarged and revised edition of his book about bacteria written in popular language. In addition to the part played by micro-organisms in the production of diseases, an account is given of their agency in various commercial phases, such as butter-making, brewing, cheese-making, and nitrification. The book can be cordially recommended to anyone desirous of getting a clear idea of the importance of these organisms and of the strides recently made towards a better understanding of their mode of action.

The Management of Infancy. By ANDREW COMBE, M.D. Edited by Sir ARTHUR MITCHELL, K.C.B., M.D. Aberd. Edinburgh and London: Oliphant, Anderson, and Ferrier.—This is an abridgement of the tenth edition of the late Dr. Combe's book, and is published by desire of the Combe trustees, "so as to bring the work easily into the hands of working people." There is no doubt that the matter of the book is admirable, nor is there any doubt that a knowledge of how to manage an infant is sadly to seek among the middle and lower classes; but we rather fancy that the style of this work puts it above the heads of most of those for whom the present edition is intended. Still, the publication of it is an experiment well worth trying.

Musa Medica: A Sheaf of Song and Verse. By J. JOHNSTON, M.D. Edin. London: The Savoy Press. 1897. Price 2*s*. 6*d*.—Dr. Johnston has here published a collection of songs and verses. The former mostly deal with medical subjects, and are well suited for a medical smoking concert — notably, The General Practitioner and John Bolton, C.P. The other verses are concerned with rural sights and sounds.

Everybody's English Song-book, with Melodies. By BASSO. London: Saxon and Co.—A collection of well-known songs, some good and some the reverse, being what Thackeray called "simple appeals to the affections" of the T. H. Bayly school. However, there are one or two gems, such as Waller's "It is not that I love you less," and Ford's "Since first I saw your face."

A Young Congo Missionary. By WILLIAM BROCK. London: H. R. Allenson. Price 1*s*. 6*d*.—The missionary was Sidney Roberts Webb, M.D. He served the office of house surgeon to the Mildmay Mission Hospital for a year, and then proceeded to the Congo under the auspices of the Baptist Missionary Society, where he worked for five years; and, eventually being attacked with black water fever, died and was buried at sea on the way home. The book is a simply told record of a very earnest, self-denying life.

JOURNALS AND REVIEWS.

Archives de Physiologie. Fondées par M. BROWN-SÉQUARD. Publiées par MM. BOUCHARD, CHAUVEAU, et MAREY. Cinquième Série, Tome IX., No. 1, Janvier, 1897. Paris: Masson et Cie., Éditeurs.—The following articles are contained in this part. 1. M. J. E. Abelous: Estimation of Reducing Extractives in Organs. 2. M. J. Lefèvre: Variations in the Refrigerant Power of Water in Respect to Temperature and Season: (*a*) On Man. 3. M. N. Paulesco: The Coagulability of Hepatic Blood. The author finds that in fasting dogs there is no difference in point of time of coagulation between the blood of the portal vein, that of the general venous circulation, and that of the hepatic vein, whilst in dogs in full digestion the blood of the hepatic vein coagulates more slowly than that of the vena portæ, and this coagulates more slowly than that of the venous system generally. The quantity of fibrinogen, or, speaking generally, of the globulins, varies but little in these three kinds of blood. 4. M. Alexandre N. Vitzou of Bucharest: New Formation of Nerve Cells in the Monkey's Brain after Complete Ablation of the Occipital Lobes. The conclusions at which the author arrives are that the brain of the young monkey possesses the power of repairing loss of substance and of recovering in part the loss of its anatomical and physiological properties. Thus the recovery of the visual sense lost by ablation of the occipital lobes is due to regeneration of nerve tissue and re-establishment of function. Drawings are given of the appearances seen. 5. M. Bosc and V. Vedel on Free Intravenous Injection of Normal Saline Solution (7 per 1000) in the Treatment of experimentally produced Colibacillary Infection, which they find serviceable, but requiring precaution and care. 6. MM. Piéri et Portier on the Presence of an Oxydase in Certain Tissues of Acephalous Mollusks. 7. Denis Courtade: Contribution to the Rhythmic Function of the Heart. 8 and 9. M. J. Tissot on the Laws of Energetic Movements in Muscles contracting Voluntarily (static contraction) established after the study of respiratory changes, and on the Creation of Elasticity and the Energy which it has Generated in Voluntarily Contracted Muscles. 10. MM. L. Hallion and Ch. Comte on the Form of the "Total Pulse," as indicated by the authors' plethysmograph. 11. M. A. M. Bloch: The Pneumoscope. 12. Dr. W. H. Thompson of Belfast: The Action of Peptone on the Vaso-motor System. He finds that the peptone of De Witte in doses of ten milligrammes per kilogramme of the body weight of the animal lowers the arterial pressure due to peripheral vascular action. It also has an action in the dog on the coagulation of the blood, varying with the quantity administered. 13. M. M. Lambert: The Influence of Cold on the Urinary Secretion. 14. Dr. Alex. Rouxeau: An Account of 103 Operations of Thyroidectomy in the Rabbit, in the course of which he demonstrates that four-fifths of the animals operated on present formidable nervous symptoms indicative of some lesion of the nervous system. 15. M. P. Langlois on Functional Alteration of the Adrenals. 16. MM. E. Wertheimer and L. Lepage on the Movements of the Limbs produced by Stimulation of the corresponding Cerebral Hemisphere. 17. M. A. Charrin: Experimental Epilepsy. 18. Henri Lamy: Medullary Lesions produced Experimentally by Aseptic Embolisms; an important article illustrated by many woodcuts. 19. J. Laudenbach of Kiew: Experiments on the Hæmopoictic Function of the Spleen. 20. MM. S. Dastre and N. Floresco on Fibrin Ferment. 21. M. A. Chauveau: A Criticism on Hirn's Experiments on Thermodynamics and Work.

The *Cornhill Magazine* for March continues its series of Famous Trials, the one for the current number being that of Dr. Pritchard. In most of the famous trials for murder by poison the defendants have been medical men, probably owing to the fact that they have a facility for obtaining poisons which is denied to the ordinary layman, that is to say, as regards the rarer poisons—witness the case of Dr. Lamson. Pritchard, however, used the easily detected poison antimony, as did his fellow criminal Dr. Smethurst—if, indeed, the latter did attempt the crime for which he was tried. Pritchard was perhaps as cold-blooded a scoundrel as ever existed, and in addition to two murders was probably guilty of arson under most aggravated circumstances. For this, however, he was never brought to trial.

In the *Westminster Review* for March Dr. Prosser James has a note upon the Hamilton Association for Providing Trained Male Nurses, an association which provides for a much felt want.

Knowledge.—The contribution to the series of articles on

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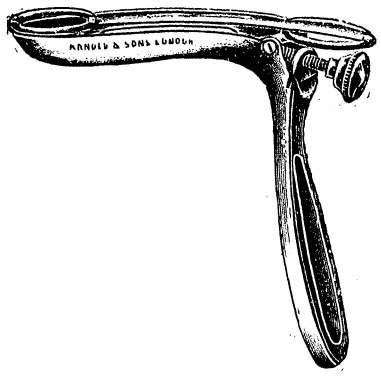
the Science of the Queen's Reign this month is by Hugh Robert Mill, D.Sc., F.R.S. Edin., and deals with the progress of geography during the past sixty years. Dr. Nansen's achievements are noticed in a separate article.

New Inventions.

A NEW COMBINATION SPECULUM.

THE difficulty of keeping the anterior wall of the vagina from obstructing the line of vision while using duck-bill specula must be my excuse for publishing the modification (or rather combination instrument) represented in the illustrations. In nulliparæ it is sometimes no easy matter, even with the patient in the Sims' position, to

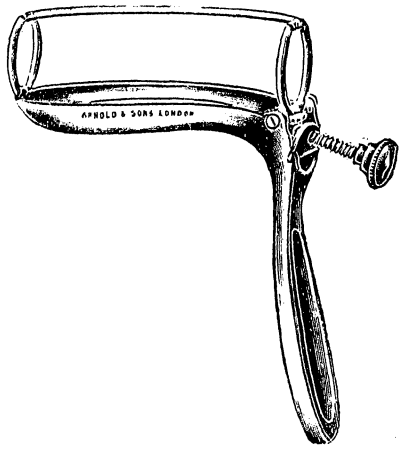
FIG. 1.



Speculum with rings lying flat for introduction.

obtain a clear view of the cervix uteri, the anterior vaginal wall frequently obstructing the view. The illustrations represent the union of my "ring speculum" and Sims' duck bill in one instrument, which can be easily introduced while the rings lie flat; and on turning the screw at the base the rings open at right angles to the duck bill

FIG. 2.



The same with rings upright so as to stretch the vaginal wall.

and force the anterior vaginal wall forward and render the instrument self-retaining. This speculum will be found easier to introduce than the cylindrical speculum of the same size, as all expansion takes place after introduction. The makers are Messrs. Arnold and Sons of Smithfield, London.

Cheltenham. ALEXANDER DUKE, F.R.C.P. Irel.

THE BATTLE OF THE CLUBS.

THE BRADFORD AND DISTRICT MEDICO-ETHICAL SOCIETY.

WE have received a copy of the rules and by-laws of the Bradford and District Medico-Ethical Society. This society has completed twenty-five years of existence, and last year fought and conquered the Bradford School Board over the question of medical certificates. This matter was fully reported in THE LANCET of July 25th and Aug. 2nd, 1896. The action of the society has also brought about that the minimum fee for a club patient shall be 4*s.* per annum. There is nothing very remarkable about the rules, which lay down a standard of conduct such as would be generally approved by the members of an honourable and learned profession, but the suggestions for a scale of fees are, we think, worthy of notice. The principle laid down is the following:—

The general standard is ruled by the average fees charged by the leaders of the profession in any locality. Where the senior practitioners of repute are satisfied with low fees the junior and less known ones are necessarily condemned to accept inadequate remuneration. It is right and expedient that, as is the rule in almost every other profession, increased experience and reputation should bring to the medical practitioner also an increased standard of fees, and not merely a larger number of the small fees with which young and unknown men must be content.

This seems to us to be a very sensible way of looking at things. Those who, like Albert Smith's Mr. Koops, undersell their brethren cannot set a very high value either on their services or the calling they pursue. The following is a portion of the scale of fees decided upon:—

Class.	House rental.			Fee for visit or consultation, to include medicine.					
	£		£	£	s.	d.		£	s. d.
I.	Up	to	25	 0	2	6	to	0	3 6
II.	25	to	50	 0	3	6	to	0	5 0
III.	50	to	75	 0	5	0	to	0	7 6
IV.	75 and upwards, the minimum fee to be 7*s.* 6*d.*								

In exceptional cases the charges for attendance to be at the discretion of the medical attendant.

For each additional patient seen in a house a fee to be charged.

SPECIAL SERVICES.

Such as a first visit or special second visit to be a fee and a half. Night visits—that is, from 10 P.M. to 8 A.M.—a double fee; mileage, beginning two miles from the medical man's house, to be for Class I., 1*s.*; Class II., 2*s.*; Class III., 3*s.*; Class IV., 4*s.* per mile, in addition to the ordinary fee. Sunday visits and consultations to be a fee and a half.

MIDWIFERY FEES.

Class.	£		£	£	s.	d.		£	s. d.
I.	Up	to	25	 1	1	0	to	1	11 6
II.	25	to	50	 1	11	6	to	2	2 0
III.	50	to	75	 2	2	0	to	4	4 0
IV.	75	to	100	 4	4	0	to	5	5 0

In cases of very poor people with house rents less than 4*s.* 6*d.* a week the midwifery fee to be 15*s.*, if paid at the time (except in first cases); if not, to be 21*s.* Extra midwifery services, such as turning, forceps, craniotomy, removing retained placenta, &c., to be a fee and a half. Visits to midwifery cases not completed in twenty-four hours from the first visit to be charged for as ordinary visits.

DOCKYARD MEDICAL CLUB, PORTSMOUTH.

At the annual general meeting of the Portsmouth Dockyard Medical Benefit Society, held recently in St. Faith's Mission Hall, Landport, one of the speakers was so kind as to confirm our statements that lay managers of these clubs do not behave fairly or politely to their medical officers. In moving the adoption of the report this person said that the society ought to have the whip hand of the medical officers and let them see that they were the servants of the society. One of the medical gentlemen had taken exception to certain members being allowed to belong to the society, expressing the opinion "that it was not right for many of the members who were possibly better off financially than himself to be allowed to remain in the society, and he thought some scheme could be arranged to exclude this class of members." This, said the speaker, was dictating as to who should and who should not belong to the society.

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THE LANCET.

LONDON: SATURDAY, MARCH 13, 1897.

DR. CULLINGWORTH did not err in the choice of a subject for his opening address as President of the Obstetrical Society. There is no greater joy to medical men than for one of their number to point out *desiderata* in therapeutics and the means of their accomplishment. And there is no one department of practice in regard to which such service is more acceptable than the obstetric department. The profession has pretty well agreed that puerperal fever can generally be prevented, and every contribution made on good grounds and in good judgment towards this end by a teacher or a practitioner of medicine is to be received with thankfulness.

Dr. CULLINGWORTH illustrates his subject somewhat differently from those who have in various ways taught us the same lesson. Like Sir JOHN WILLIAMS, Dr. BOXALL, and Dr. GODSON, he founds his argument on the experience of the lying-in hospitals, the existence of which was seriously threatened as being hopeless foci of puerperal fever, but which by dint of diligent and thorough use of antiseptics—notably of the perchloride of mercury—have been practically cleared of this pest. He then goes on to compare with this state of things the continued, almost the increasing, prevalence of puerperal fever in private practice. He selected for illustration certain districts of the country where the facts have been specially made out or where the undue prevalence of puerperal fever strikes the student of such questions. There is one significant point to be noted in this and in other discourses of the kind—the admission that in respect of deaths from what are called the accidents of childbirth as distinguished from deaths from puerperal fever (that is, from hæmorrhage, eclampsia, puerperal mania, embolism, &c.) there is a diminution in both London and the provinces, especially in London. This is a most satisfactory revelation, and shows that in respect of obstetric education and art there is a decided advance of late years. But the fact only makes it the more remarkable that there should not be a corresponding improvement in the mortality from puerperal fever. The difference, or what we may call the inconsistency, is so curious that we are almost led to suspect that there must be fallacy in the figures or in the way of using them. It is scarcely credible that new generations of medical students are being so trained as to be more skilful in dealing with the accidents of childbirth and less so in the use of a douche and other comparatively simple precautions that are to avert "death and all the sad variety of pain" covered by the expression "puerperal fever." This aspect of the case requires a little more attention than it has received. Whatever may be the explanation of this inconsistency, let us look at the statements of Dr. CULLINGWORTH. He deals impartially with all classes affected by his statistics—whether midwives or medical men, and whether residing in the provinces or in the metropolis, in the East-end or in Hampstead. We give him credit for the simple desire to get at facts and to carry the improvement of midwifery and the fame of medicine to their highest points. He sets forth the districts in which puerperal fever or mortality from it is highest. Unfortunately he does not always deal with the same sort of statistics in comparing different parts. Thus, in regard to provincial districts he deals chiefly with mortality from puerperal fever, while in respect of London he supplies and reasons from the mere notifications of the disease. True, he says that the conclusions would come out much the same, but there is a great difference between notifying a case of puerperal fever and a death from puerperal fever. What is puerperal fever? Is any pyrexia in the puerperal period to be dignified with this epithet? Clearly there is much ground for vagueness and unreliableness in the mere notification of cases. One man, not necessarily with more candour than another, but with less decision and less power of definition, may notify a passing pyrexia as puerperal fever which another would regard as one of the many febriculæ to which the lying-in woman is exposed on the slightest provocation. The statistics concerning London are based on the *notifications* of puerperal fever kindly supplied to Dr. CULLINGWORTH by Mr. SHIRLEY MURPHY, medical officer of health of the Administrative County of London. They bring out the fact that puerperal fever is noticeably prevalent in some of the better parts of London. Thus Hampstead, with its comfortable villa population and the Heath in proximity, heads the list. Islington is not much better, and its best and least populated part has most cases. On the other hand, this is a very densely populated parish and has more excuse than Hampstead for such cases. But why should its best parts have more cases? Here we may suppose that a report of *deaths* would be corrective of a report of mere notifications. "For its size," Mr. HARRIS, the medical officer of health, in his report for 1895, says, "the parish is remarkably healthy." He reports twelve deaths from puerperal fever in 1895, or 1·21 per 1000 births; the mean rate for England and Wales is 2·0 per 1000 births. No doubt, according to present and most wholesome doctrine, 1·21 per 1000 is 1·21 per 1000 too many; but it is a very different thing from 3 per 1000, the notification number as given by Dr. CULLINGWORTH. But it is in the provinces that the mortality returns are most serious, especially in some parts of Wales and in Lancashire. In the Pontypridd district it is 4·1 per 1000. In the Merthyr Tydvil district it is 4·7 per 1000. In the Bridgend district it is 4·5 per 1000. In the Haydock district of Lancashire the mortality is excessive. In all these districts the majority of cases are attended by midwives, mostly untrained and grossly ignorant. In Haydock the medical officer of health, Dr. HAYWARD, avers that scarcely one-fifth are attended by medical men, and, it must be added, the districts are insanitary.

To bring all such facts into the light of the clearest criticism is the plainest duty of medical teachers and medical journalists, and the paper on which we have commented should receive the anxious attention of every practitioner.

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We cannot help suspecting that there are some fallacies in the presentation of this subject. It is inconceivable that private practitioners should be less careful of antiseptic precautions than they were ten or twenty years ago. The contrary is notorious. Yet this is the assumption required by the prevalent doctrine of obstetric teachers. But of one thing we are certain—namely, that the practitioners of the country will consent to no permanent superiority in the results of lying-in hospital practice as compared with their own.

AT the present time, when we read of the action of certain European Powers in respect to cargoes of cotton from plague-invaded ports, it may not be out of place to inquire briefly upon what evidence this fear of the importation of plague through the agency of such articles as cotton or wool is based. It is an easy matter to assume that when an infectious disease is prevalent within any given district there may be fear of such disease being conveyed through the agency of merchandise from the invaded centre; but when we ask upon what evidence this fear is based we are not so easily supplied with an answer which is proof against destructive criticism. We read in the text-books of plague having been conveyed from one place to another through the agency of bales of cotton or wool, but the evidence which is given as supporting this statement is as a rule somewhat scanty. Indeed, it seems that when some of these questions are approached in a spirit of unbiased inquiry there is but little evidence tending to support the text-book statements. For instance, among European nations the French are not behindhand in their dread of the importation of infection through the agency of certain merchandise from infected Indian ports, but it does not seem that the French in taking up this attitude, are mindful of a certain Report which was made to the French Government in 1846 by a Special Commission appointed by the French Academy of Medicine upon this very subject, and which Report was brought before the Lord President of the Privy Council by Sir JOHN SIMON in 1875.

In bringing forward the evidence adduced in this Report Sir JOHN SIMON pointed out that Western Europe had not suffered from plague for more than 150 years, and that up till quite recently the disease had been frequent in the Levant, from which plague-invaded district wool had in all times been exported without apparently any case of plague having been caused thereby. Allegations, dating from 150 to 200 years back, that merchandise from plague-infected districts had carried infection are not, Sir JOHN SIMON observes, such as can be accepted in the present day (1875) without much careful scientific sifting; and against the probability of these statements having any basis in fact there is not only the negative evidence just referred to, but also the delivery of the Commission of 1846. The delivery was as follows: "Rien ne prouve que les marchandises puissent transporter la peste hors des foyers épidémiques"; and the arguments upon which this conclusion was based were there: "En 1835 la peste épidémique sévissait à Alexandrie sur les employés de tout grade habitant dans les magasins du gouvernement Egyptien. Cependant une très grande quantité de balles de coton journellement maniées par les hommes de peine furent expédiées de janvier à juin, c'est-à-dire pendant toute la durée de l'épidémie, dans tous les grands ports de l'Europe sans qu'il en résultât aucun accident de peste. Il en fut porté en 1835: en Angleterre, 31,709 balles; à Marseille, 33,812; à Livourne, 424; en Hollande, 150; à Trieste, 32,263; dans divers ports, 32. Ces balles de coton, nous le répétons, ne donnèrent la peste à personne, quoique aucune précaution n'eût été prise pour les désinfecter. Soumises à la presse, en dehors du navire, elles étaient ensuite entassées dans un espace aussi étroit que possible; les écoutilles étaient fermées, et on expédiait ainsi le navire. Sur 16 navires anglais chargés de coton qui quittèrent Alexandrie du commencement du janvier à la fin de juin, 8 eurent la peste à bord, et cependant le coton chargé sur ces navires ne fut pas plus dangereux que celui des navires non infectés. Nous terminerons, messieurs, ce que nous avions à dire sur la transmissibilité de la peste par les marchandises, en arrêtant votre attention sur un fait d'une grande portée, et qui est positivement et officiellement reconnu. Depuis 1720, aucun des portefaix employés dans le lazaret de Marseille au déchargement et au maniement des marchandises n'a contracté la peste." Sir JOHN SIMON thus concluded his report: "Under these circumstances I evidently have no facts which would justify me in stating it to be necessary for the public safety that wool or other merchandise from Eastern places infected with plague should be excluded from this country."

We are far from asserting that it is impossible for plague when its virus is in a certain phase of activity to be conveyed through the agency of cotton or wool, but in endeavouring to arrive at any conclusion on this question the very important negative evidence furnished above should receive its due share of consideration; and it is to be regretted that articles on plague in the text-books are, for the most part, silent as to the conclusions of the French Commission, although at least sufficient prominence is given to "reports" in the other direction. If action were taken upon the statements contained in some of the text-books, it is conceivable that under certain circumstances much misery might be produced in some of the manufacturing districts of England, loss and misery which would be, perhaps, hardly justified upon the evidence obtainable upon this point.

THE important question as to the share taken in the spread of diphtheria by the aggregation of children in the public elementary schools is one upon which a marked difference of opinion exists between the medical officers of the Administrative County of London and of the London School Board respectively. Upon the general thesis as to the liability of this, as of other infectious diseases, to be disseminated by this means there is no room for disagreement, the proposition is self-evident. The persistence of diphtheria in the metropolis, its steady yearly increase, and its fateful roll of child mortality does, however, most urgently demand the determination of the extent to which school influence operates. Mr. SHIRLEY MURPHY'S careful and impartial studies of this subject have led him to the very definite conclusion that the school factor is one of the chief agencies to be considered in the search for

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a rational explanation of the extension of this disease. He has shown how the tendency of diphtheria to attack in undue proportion children of "school age" has increased *pari passu* with the increase of elementary schools, and, further, that during the period when schools are closed for the holidays there is so marked a decline in the incidence and mortality from the disease as to compel the conclusion that school attendance has much to do with its spread. It is needless to dwell upon the gravity of such a conclusion, which cannot be dismissed without a thorough investigation, one too that places a heavy responsibility on those directing such schools in respect to the provisions they make for preventing the spread of infection. The special report made by Dr. W. R. SMITH at the request of the School Board in April, 1896, was an attempt to show that the spread of diphtheria in London could not be explained on the ground of the increasing liabilities to infection at schools, the multiplication of which, on the first hypothesis, would mean the multiplication of foci of infection. He did not limit himself to London, but supported his argument by an appeal to the variable distribution of diphtheria in all parts of the country and at different periods of years, contrasting this with similar changes in the geographical distribution of other specific infectious diseases. Dr. SMITH holds that age, *per se*, is the chief factor to be considered, and that the age incidence of the disease commences earlier than the school age period, whilst he maintains that there is comparatively little direct evidence of infection at schools. He does not, however, appear to observe that the age incidence has changed with increase of school attendance.

This conflict of opinion on a matter of such importance to the community has now been brought within a narrower compass in connexion with an outbreak of diphtheria which occurred at Lewisham in the course of last year. Here, at any rate, we have a concrete instance wherein the question of school influence is capable of being put to the test; and we have before us certain documents that enable an opinion to be formed upon it. These consist of (*a*) a report, dated Nov. 16th, 1896, of the medical officer of health of the Administrative County of London presenting a report of Dr. HAMER on the outbreak in question, and (*b*) a report, dated January, 1897, of the medical officer to the London School Board dealing with the preceding. We do not propose to enter minutely into the details discussed in these papers, especially as the question has still to be dealt with by the County Council; but in view of more recent outbreaks in Camberwell and Wandsworth, in both of which places infection through school attendance has been highly probable, we feel it incumbent to direct attention to them without delay. The outbreak was limited to a small area of the Lewisham district, about a quarter of a mile square, and having a population of 7882 persons in March, 1896. During 1895 and the first half of 1896 there had been a disproportionate incidence of diphtheria upon this area, but from the twenty-seventh to the forty-fourth weeks of 1896 this disproportion was excessive — no fewer than 108 cases occurring within this small part of Lewisham out of 158 for the whole district. Dr. HAMER found that the disease attacked children of school age in undue proportion, for whereas in the period from 1893 to the thirty-sixth week of 1896 the relative incidence on children aged three to twelve years was 58·5 per cent. of all attacked, from the thirty-sixth to the forty-fourth week of 1896 it was 73·6 per cent. He also showed that the comparative mortality at school age was higher by one-third in this "affected area" during the period named than it was for the whole of London in the years 1893–95. Analysing the facts more closely he showed that amongst families who were attacked the *first* to suffer were to be found in greater proportion at this school-age period, and that the proportion of such children ("first sufferers") was higher amongst attendants at the two chief schools of the district (the Lewisham Bridge Board School and the National School) than amongst those attending other schools or no school at all. He further found that particular classes in these schools yielded these cases; and including cases of sore-throat, which were known to precede diphtheria in a family, he was able to show that during the weeks named there was every ground for attributing much of the disease to school infection. Dr. SMITH traverses the arguments adduced by Dr. HAMER in almost every particular, but unfortunately he does not appear to have covered quite the same ground, so that the statistics of the two reporters are not strictly comparable. There is, however, one point which is most material to the issue that seems to have been ignored by Dr. SMITH, and that is in respect to the chances of infection, not among classmates only, but amongst the school children generally; whilst his conclusions—that, of 137 cases, in 116 the evidence is such as to exclude the school as the source of infection, and in the remaining 21 the evidence of such infection is insufficient—are quite at variance with those arrived at by Dr. HAMER.

It is, we think, much to be regretted that the medical officer of the School Board should have adopted so inflexible an attitude in respect to this question; nor can we agree with him that closing a school or certain classes in it where infection is probable would not diminish the risks of the spread of the disease. But, of course, if he adopts the view that the incidence of diphtheria upon school children is merely a fortuitous circumstance due to age influence and not to school infection, it is useless to attempt to convince him on the point. Meanwhile diphtheria spreads in the metropolis, and one potent factor in its spread, according to general opinion, is suffered to remain untouched. It is a serious responsibility that is thus entailed on those in authority, with whom may rest the power to check the course of this scourge of modern life and so prevent the sacrifice of the lives of many children.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—The annual general meeting of the Royal Westminster Ophthalmic Hospital was held on the premises on March 5th, Sir Charles Turner presiding. The report showed that during last year there were 558 in-patients, the number having been 468 in the preceding year; there were also 10,301 new out-patients and the total attendances of out-patients were over 28,000. The income was £2251 and the expenditure £2386. The chairman pointed out that the building fund, which had now been open for three years, had strong claims on the charitable public.

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Annotations.

"Ne quid nimis."

THE CHOICE OF AN ANTISEPTIC IN MIDWIFERY.

WE publish in another column a letter from a practitioner signing himself "Antiseptic" and asking for information on various points as regards the use of antiseptics in midwifery. "Antiseptic" refers especially to the antiseptics he has himself used for washing out the uterus. We should like, in the first place, to emphasise the point that the fundamentally essential thing in applying the principles of antiseptics in the practice of midwifery is the thorough disinfection of everything that is to come into contact with the patient, more especially the hands of the attendant, before touching her. There are, of course, occasions on which it is necessary to wash out the uterus. But the washing out of the uterus after labour is only exceptionally necessary, and is certainly not part of the regular routine that should be adopted in every case in order to avoid the risk of puerperal fever. The same is true of vaginal douching after delivery. We suppose, although it is not stated in our correspondent's letter, it is rather with regard to deciding which is the best antiseptic to use for disinfecting the hands that he wishes for information. The three agents he mentions are mercuric chloride, mercuric iodide, and carbolic acid. There can be no doubt that, as regards practical results, much more depends on the thoroughness of the cleansing, followed by disinfection of the hands, than on the choice of this or that antiseptic from the above list. Certainly the great improvement as regards both morbidity and mortality in lying-in hospitals has been obtained with perchloride of mercury. It is stated, however, in Norris's "American Text-book of Obstetrics" that "some large clinics, such as those of Copenhagen and Vienna, yet cling to the use of carbolic acid, and obtain just as good results as those in which this drug has been supplanted by bichloride of mercury." The truth is that the personal factor must be remembered, as on this as well as on the particular antiseptic employed depends the thoroughness of the disinfection. We wonder if "Antiseptic" can call to mind his early experiences in the class of practical chemistry. For ourselves, we remember well that often after the lecturer had carefully described and performed the steps of some simple test there were almost always some members of the class who could not get the test to "come off," or who obtained some physical phenomena altogether different from what should have resulted, according to the teacher's description and demonstration. And what was the explanation? Why, in a large number of cases, simply dirty test-tubes. The student had not sufficiently washed his test-tube, or perhaps had failed to give it the final washing with distilled water before trying the test. The application of this illustration to the question of personal disinfection is obvious. With the same reagents and apparatus failure may result from want of thoroughness in practically performing the steps of what may rightly enough in many cases be regarded as a test. When the test does not give the desired result, or, in other words, when symptoms of puerperal septicæmia arise, the blame is not due to the antiseptic, if it be one of the three given by our correspondent, but rather to a want of thoroughness in using it. As between perchloride of mercury and mercuric iodide, the latter is much more expensive than the former, while perchloride of mercury has been clearly shown to have at all events so much efficiency that by properly using it for the hands the safety of the patient is practically secured. As a matter of detail, many prefer to use iodine water (two drachms of tincture of iodine to a pint of water) for washing out the uterus when, exceptionally, this may be required. We are inclined to regard it as a safer agent for the purpose than either perchloride of mercury or carbolic acid.

BEES IN MEDICINE.

WHEREVER the bee has found a home honey has almost invariably been used both for food and medicine. From the papyri we know that honey played not an unimportant part in the composition of many of the Egyptian medical potions, and H.H. Sir Bhagvat Sinh Jee, M.D., has told us in his recently issued History of Aryan Medicine, the *rôle* which honey took in the native pharmacopœia of India. Among the medical writers of the past who have alluded to its use may be mentioned Hippocrates and Galen. In the current issue of the *St. Bartholomew's Hospital Journal* Mr. John Gutch gives some interesting gleanings from old writers who have mentioned bees and honey in a therapeutic connexion. Although honey has been used as a medicament, it is not perhaps generally known that not only the sweet product of the bee, but the bee itself has been used in therapeutics. According to the author of the article quoted above, bees drowned in honey have been recommended for clearing the eyes, for staying vomiting, and as useful also for deafness. The curious injunction is given when using the medicine for clearing the eyes that the patient is to be bound, for such is the violence of the medicine that he cannot otherwise patiently endure it. The following remedy is given by Celsus: "The bodies of bees taken newly from the comb and powdered and drunk with Dierretick wine powerfully cures dropsy."

THE THERAPEUTICS OF THE GOOD SAMARITAN

IN last week's Parliamentary debate on the Greco-Turkish imbroglio the action of Greece in coming to the rescue of her Cretan compatriots was likened by the Leader of the Opposition to that of the Good Samaritan who relieved the wounded victim of highway robbery after the priest and Levite—typifying the Concert of Europe—had passed on unregardful of his sufferings. With the political application of the parable we have nothing to do any more than with the retort of the Leader of the House that the Good Samaritan would not have been admired for eighteen centuries if as a result of his intervention he had added largely to his personal estate. Our interest in the parable lies in its medico-historical aspect—in the treatment to which the wounded man was subjected and in the light it throws on first-century practice. The parable, we need hardly remind our readers, comes to us on the authority of what M. Renan calls "le plus beau livre qu'il y ait"—the most beautiful book in all literature—the work, we may add, of a Physician whose familiarity with Hippocrates has been proved by Hobart and Plumptre, and whose practice seems to have lain, at least for one memorable period, in the mercantile marine of the Mediterranean. Till recently the only version of the parable accessible to English readers represented this capable practitioner as reporting the Good Samaritan to have bandaged the victim's wounds—incised, punctured, or lacerated—and then to have poured into them oil and wine. That mistranslation continued to puzzle generations of the devout till the Revised Version put matters right by substituting "pouring on" for "pouring in"—the Authorised rendering having been adopted from a misinterpretation of the Vulgate, which gives "infundens" as the equivalent of St. Luke's ἐπιχέων, though "infundo" means to "pour upon" as well as to "pour into." The Good Samaritan's therapeutics are thus vindicated as conforming to the recognised practice of the time, whether Greek or Jewish. The bandage having been adjusted, it was saturated with a mixture of oil and wine,

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an emollient and a stimulant, presumably to keep the cloth from stiffening while rousing the reparative or healing process. It was the practice employed in circumcision, as we read in the rule: "If there is no mixed oil and wine ready each may be added separately." Galen, writing about a hundred and thirty years subsequently to St. Luke, describes a paste, in which oil and wine are the principal ingredients, to be applied to wounds. The Elder Pliny, whose "Historia Naturalis" was nearly contemporary with St. Luke's Gospel, refers to the same practice. The Good Samaritan's therapeutics, as reported by St. Luke, were, indeed, *secundum artem;* and if they have caused any difficulty to the non-classical reader, that has been removed by the revisionist substitution of "pouring on" for the meaningless "pouring in."

PRESERVATIVES IN PHARMACY.

AN interesting and thoroughly practical paper on the Preservatives of Pharmacopœial Preparations was read before the Pharmaceutical Society by Mr. William Martindale on March 9th. Alcohol, he said, is not a germicide; when present to the extent of 20 per cent. by volume of absolute alcohol it has an inhibitory effect on the germination of most of the micro-organisms occurring in aqueous solutions of vegetable and animal substances, but the germs propagate readily as soon as it evaporates. Salicylic acid is the preservative employed for the official solution of hydrochlorate of cocaine, which contains 1½ per mille of the acid, with 10 per cent. of the cocaine salt. This solution, even if diluted with four times its volume of water, still keeps free from the fungoid growths to which cocaine solutions are so liable. Salicylic acid, however, cannot be added to solutions of either morphia or apomorphia intended for hypodermic use as it causes the formation of a crystalline deposit. Mr. Martindale's address contained some valuable suggestions on the preparation of dilute mercurial solutions. He especially objected to the addition of chloride of ammonium to solutions of corrosive sublimate, on the ground that white precipitate is liable to be deposited on dilution with common water, and most of the mercury may in time be withdrawn from the solution.

THE CONDITION OF CONVICTS IN THE PRISONS OF NEW YORK STATE.

THE Legislature of New York State have lately passed a law enacting that the convicts in their prisons shall not be allowed to work while under sentence at any trade or occupation whereby they may compete in any way with free labour. This state of affairs was brought about by the action of the American Federation of Labour, and practically condemns the convicts to solitary confinement. The effect of this law, even within the short time it has been in force, has proved most injurious to the health of the prisoners. Already a man who was confined in Sing-Sing has committed suicide as the result of the influence of compulsory idleness, and the authorities are at their wit's end to devise means of remedy for this unfortunate situation. As the law now stands the convicts are not allowed to do any description of work for the State. Exception is taken to such occupations as printing and bookbinding, and fault is even found with printing for the use of the prisoners only; in fact, their sole distraction is the exercise which they are allowed to take for a short time daily. It has been suggested that the men be taken out and put on the public roads improvements and fortifications, as is the custom in England, but there are so many difficulties in the way that this suggestion is declared to be unworkable. A long term of isolation has been conclusively proved to be hurtful in a high degree both to the mind and body of a man; it was found in England after the system had been thoroughly tested that long periods of solitary confinement weakened the minds of the convicts. In America some critics contend that the moral efficacy of any period of strict separate confinement is more than doubtful, and go so far as to assert in the present case that unless some measures are taken to give the prisoners work to occupy their time more asylums for insane criminals must be built. After all is said and done the object of criminal punishment is not vengeance but the improvement of the offender, and besides it is surely punishment to a lazy man to be compelled to work, to a drunkard to be compelled to keep sober, and to a dissolute man to be compelled to lead a clean life. The true conception of a prison, as we take it, is that of a hospital for the remedial treatment of depraved bodies and diseased minds. The mere temporary caging of the criminal like a wild beast is a protection to society for a time, but it is only for the time being; for when he is let out he is in most instances more dangerous to society than when he went in. The criminal should be treated as a man, and not as a wild beast. No one is in any way benefited by driving convicts crazy and making their lives miserable and useless. Humanity and sound economy both dictate that prisoners shall be engaged daily at something which will occupy their time and energies, and it is not enough that criminal jurisprudence should be humane, it should also be intelligent. The prisons and reformatories of New York State have for a long time taken high rank amongst like institutions in different parts of the world for the humane and intelligent manner in which they have treated their prisoners—in fact, in many respects they have acted as pioneers, and it is to be hoped that the present deadlock may be but temporary.

STILL THEY COME!

MESSRS. GUY, Beecham, Seigel, Page Woodcock, Williams, Hood, Clarke, and the rest of the nostrum-selling fraternity will have to take a back seat. A new constellation has arisen. We have seen the following statements in print, so they must be true! They are sworn to before solicitors, and the attestor in one case is a publican and in the other a schoolmaster; moreover, we regret to add, a parish schoolmaster. He has for nine years been suffering from pains in the stomach and bowels. The pain was of the most "excrutiating" (*sic*) nature, and night after night he was killed with a pain that doubled him up in the most painful manner. He had scores of bottles of doctors' medicine, with the same result—no relief, but constant pain. He also had a very serious case of bleeding from a bloodvessel bursting at the bottom of his stomach, and on Oct. 30th, 1896, he read one of Messrs. Forshaw and Snow's circulars and entered their shop. Here Mr. Forshaw at once "told me what I ailed—viz., inflammation of the mucous membrane of the stomach. He told me more than this—viz., that he could cure me. I determined to place myself in his hands, and he gave me a course of his excellent Infirmary Pharmacy Blood Purifier and Stomach Mixture and Digestive Extract. I went home and can honestly say that from the first moment I took the first dose of his mixtures I have never had one single moment of pain. Why is this? Simply because Messrs. Forshaw and Snow understood my case, and knew what would do me good and gave me it." The publican was in even worse plight. Instead of being killed every night, "life to me was becoming a burden, and every day became longer and my sufferings more severe." He was not content with bottles of doctors' medicine, but "went on trying first one doctor then another till I was as weak as a child." Then a light arose in the darkness and he read one of Messrs. Forshaw and Snow's pamphlets, and after taking one bottle of the Infirmary Pharmacy, &c, and a few doses more he was happy, cheerful, and full of fun and life. We may remark that the Infirmary Pharmacy has

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nothing to do with the Bradford Infirmary, although the active partner in the firm, we are informed, used to be dispenser at the infirmary. We have not the least doubt that both publican and schoolmaster could have got the identical mixture at the infirmary, only it would not have been called such a long name, and, of course, would not have been puffed in pamphlets "left on the bar window." The rejoicing sufferers whose story is here set forth live in Bradford. Now at Leicester we expect this kind of thing, but that Yorkshiremen should be so confiding is remarkable.

THE ROENTGEN RAYS AS A DEPILATORY.

NUMEROUS writers, both in Europe and America, have published accounts of the injurious effects produced on the skin by a too prolonged exposure to the Roentgen rays, the symptoms varying in nature and intensity from "sunburn" to dermatitis, vesication, and ulceration. Loosening of the hair, sometimes carried so far as to result in baldness, was frequently observed, and this peculiar property of the rays has been ingeniously turned to useful account by Dr. Leopold Freund of Vienna in the case of a child, four years of age, who suffered from a pigmented hairy nævus covering almost the whole of the back. The patient's neck was in the first instance submitted to the action of the rays, and after ten exposures lasting two hours each the hair commenced to fall out, apparently in consequence of atrophy of the bulbs. Eight days later dermatitis was first observed. The child was shown at a recent meeting of the Gesellschaft der Aerzte of Vienna six weeks after the discontinuance of the treatment, and all the parts which had been exposed to the rays were then quite devoid of hair. The rays only act in this particular manner by slow degrees, from nine to twelve days being required for the development of the effect. It was found that the hair of the scalp was more easily attacked by the rays than the abnormal hair of the pigmented nævus. There is much reason to suppose that the Roentgen rays may therefore be a valuable addition to our methods of treating hypertrichiasis. In the course of the discussion on this case Professor Kaposi suggested that the first stage of the action consisted in the rays irritating the deeper bloodvessels of the skin, and that the hair subsequently came out in consequence of the nutrition of the skin being thus interfered with. He also remarked that the dermatitis caused by the Roentgen rays resembles that from which Alpine climbers suffer after exposure to the glare of sunshine reflected from snow or glaciers.

PHYSIOLOGICAL INFLUENCE OF MUSIC.

MM. BINET and J. COURTIER give in the *Revue Scientifique* an account of experiments made by themselves and others on human beings and animals of the effects of music on the heart and respiration. M. Patrizi, an Italian physiologist, had a patient with a wound in the skull which laid bare the brain. He was thus enabled to observe the actual effect of music on the cerebral circulation. Music occasioned an increase in the size of the brain itself. The effect on the cerebral circulation was variable, the vessels being sometimes constricted and sometimes dilated. At other times no effect was produced. MM. Binet and Courtier experimented on a musician. Isolated notes, chords in unison, and discords were first tried. Both major chords struck in a lively manner and discords quickened the respiration, the latter more especially. Minor chords tended to retard respiration. When melodies were tried it was found that all, whether grave or gay, produced quickened respiration and increased action of the heart. The lively tunes produced the greatest acceleration. The subject also sometimes unconsciously endeavoured to synchronise his respirations with those of the singer. In *rallentando* and *diminuendo* passages the respiration was retarded. Where the sound was wholly uncomplicated by emotional ideas, as in single notes or chords, the heart's action was accelerated, but not in so marked a degree as when a melody either grave or gay was played. During operatic pieces or those well known to the subject the acceleration attained its maximum. The subject had a strongly marked capillary pulse. The influence of music on the capillary circulation was tested by a plethysmograph attached to the right hand. The capillary tracing usually showed a diminution of pulsation. This diminution was occasioned by the sound of single notes, chords, or discords. In sad melodies, especially minor ones there was almost no diminution, whilst in lively airs the diminution was marked.

THE REGISTERS OF MEDICAL PRACTITIONERS AND OF MEDICAL STUDENTS.

THOSE who are interested in the numbers of medical men will like to know that the Medical Register and the Register of Medical Students for the year 1897 are now published and may be obtained from the publishers, Messrs. Spottiswoode and Co., 54, Gracechurch-street. As regards the principal facts of the Medical Register for 1897 they have been already published by us, through the kindness of the Assistant Registrar, on Feb. 6th. Speaking summarily, they show that the new registrations in 1896 were 1385, as compared with 1446 in the preceding year. Nevertheless, the numbers on the present Medical Register are 34,478, as compared with 33,601 in the preceding year. Coming to the new registrations of medical students in 1896, and therefore in the Register now published, we find them to be 1741, as compared with 1838 in 1895. Of these registrations 919 were in England, 557 in Scotland, and 265 in Ireland. The respective Registers are full of various information and carefully prepared tables. They supply much material for reflection, and certainly none for anxiety as to the supply of medical men. Not the least interesting part of the Students' Register is the names of the various schools from which the students date as commencing medical study.

THE MEDICAL SOCIETY OF LONDON.

THE Medical Society of London celebrated its 124th anniversary on Saturday, March 6th, by a dinner in the Whitehall Rooms of the Hôtel Métropole. The President, Mr. Reginald Harrison, occupied the chair, and 130 Fellows and guests were present. Among the latter were Lord Lister, President of the Royal Society; Sir William MacCormac, President of the Royal College of Surgeons; Dr. Dickinson, President of the Royal Medical and Chirurgical Society of London; Mr. Butlin, President of the Pathological Society; Dr. Savage, President of the Neurological Society; Mr. Bigham, Q.C., M.P., Mr. Lawson Walton, Q.C., M.P., Professor Bridge, Sir William Mackinnon, Sir J. Crichton Browne, Sir William Dalby, Sir Dyce Duckworth, Sir William Roberts, and Dr. Farquharson, M.P. The toast of "The Sister Societies" was proposed in a humorous speech by Mr. Frederick Treves. Lord Lister, in rising to respond, received an enthusiastic ovation, and in referring to the peerage which Her Majesty had conferred upon him he said that it was an honour entirely unsought by him, and that in fact he was not asked beforehand if he would accept the honour. The kind way in which the members of his own profession had hailed his admission to the House of Lords had been inexpressibly gratifying to him. Sir William Dalby, in proposing the toast of "The Visitors" twice "brought down the house," first by his graceful congratulations to Sir William MacCormac on his recovery from his recent illness, and afterwards by a sympathetic allusion to the "cruel persecution" to which Dr. Cullingworth had been subjected. The toast was responded to by

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Mr. Butlin and Mr. Bigham. A capital musical programme was provided, and the dinner was one of the most successful in recent years. The Royal Medical and Chirurgical Society last year instituted a dinner which promises to be an annual function, and the other societies might well occasionally imitate the example thus set them by their elders.

THE PREVENTION OF TUBERCULOSIS IN NEW YORK.

THE Health Department of New York has taken the step of declaring pulmonary tuberculosis to be an "infectious and communicable disease dangerous to the public health." It has also ordained that notification of each case of the disease coming under the notice of medical practitioners in the city shall be made within a week of its first coming to the knowledge of the practitioners, and that public and private institutions and dispensaries shall also notify all cases heard of; but how far the duty is to be one for which remuneration is to be given is not stated. The provision of hospital accommodation for the poor suffering from the disease is enjoined by the medical members of the department, these poor sufferers being regarded as active sources of danger to the community. All institutions taking in cases of the malady are to be systematically and officially inspected, and the people generally are to be educated to regard the malady in the grave light in which it is medically held, and to take in consequence adequate means for its repression. A close supervision over individuals suffering from the disease in crowded localities and workshops is to be maintained. The medical members of the department regard it as quite feasible, even in face of the present estimate of 20,000 tuberculous citizens in New York, to restrict tuberculosis within the narrowest bounds, and eventually perhaps almost to exterminate it. Future comparative records from New York will prove to be of interest in this connexion. To our way of thinking the whole scheme is Utopian.

THE PHYSIQUE OF THE ARMY.

WE are very glad to see that the question of the physique and stamina of the officers and men of our Army is attracting attention. It is a subject of great and growing importance to which we have from time to time referred in the columns of THE LANCET for some years past. We are living in an age when the strain on physical and moral qualities, of which competitive examinations take little or no account, is often very considerable. Manliness, vigorous health, physical activity, and complete integrity of the sense organs in themselves count for a great deal in the officers of our Army, and they are usually accompanied by coolness of judgment, a dogged indifference to danger, and powers of endurance—the very qualities on which officers and men have had very frequently to rely of late in India and Africa. A competitive examination, we have always held, should be competitive all round, and the possessor of these physical qualities or of any physical superiority should, in the interest of the State and the Army, reap some advantage from them. They enable an officer to endure fatigue, help him to resist disease, and inspire trust and confidence in the men he has to lead, and these are the very qualities that eminently fit a man for the military service. It is notorious, of course, that great mental and physical activity are often combined in men of relatively small stature; but these, if strong, healthy, and well proportioned, need not—and, indeed, could not, considering the numbers they represent—be excluded from competing for the military services. As it is at present, however, we are excluding a number of most desirable candidates because they mature mentally very slowly and are not bookworms or have not those studious habits which are very distasteful at the ages at which candidates are taken for the Army and Navy. The Board of Visitors to Woolwich and Sandhurst in their last reports very wisely, in our opinion, express a hope that the military authorities will seriously consider whether it be not possible to introduce into the examinations into and out of both the Royal Military Academy and the Royal Military College a test for the physical capacity of the candidates. Although most people are agreed on the principle, it is when we come to apply it to practice that difficulties arise. And it is in this respect that we may call attention to a communication in the *Times* of the 8th inst. for some practical suggestions as to how the regulations for admission into these institutions might with advantage be amended with the view of securing this end.

THE NEW CHAIRMAN OF THE LONDON COUNTY COUNCIL.

WE congratulate Dr. W. J. Collins on attaining to the honourable position of Chairman of the London County Council, the most important municipal post, after that of Lord Mayor of London, in the world. The work of the London County Council in relation to medical and hygienic matters has been above reproach, so that we record with particular pleasure the election of a medical man to preside over its deliberations for a time. Of Dr. Collins's great abilities no one who has come into contact with him can have any doubt, while we believe that he will also display judicial impartiality and official dignity in the discharge of his new and onerous duties. With our congratulations to Dr Collins on his election we should like to couple a word of thanks to his predecessor. Sir Arthur Arnold was an excellent chairman from every point of view, and carries with him into the comparative privacy of ordinary membership of the Council the well-earned respect of the citizens of London.

THE VAGARIES OF VISION.

ON Friday evening, March 5th, Mr. Shelford Bidwell delivered before the Royal Institution a lecture on some curiosities of vision, and performed a number of experiments to illustrate the phenomena known as persistence and recurrence of vision. Perhaps the most interesting part of the lecture was that in which the lecturer attempted to throw some light upon a curious little optical toy which was brought before the public about a year ago, consisting of a number of discs of cardboard having black lines drawn upon them in such a manner that when the discs were rotated the black lines would appear as continuous bands, which bands appeared to the eye to be coloured, the tint varying according to the rate of rotation. The lecturer referred to some simple experiments which he had made in which black lines were made to appear as red. If a piece of brown paper is taken, a hole cut in it about half an inch square, and a pin fastened across the opening midway between and parallel with two sides with some stamp paper, and the whole moved backwards and forwards before a lamp, the pin will appear to have a border of red. Again, in the case of a printed book if placed before the eyes and alternately screened and exposed, either with the hand or a piece of cardboard, the black lines will appear for about a second to be of a red colour, the experiments showing that whenever a bright image falls upon the retina after short period of darkness the image appears with a coloured border which, under ordinary conditions, is of a red colour. The optical toy referred to is constructed on the principle of alternate periods of light and darkness, and whatever may be the cause of the red colour appearing in Mr. Shelford Bidwell's experiments it is probable that it bears some near relation to the varying bands of colour on the rotating discs. It is not everyone who will be able to see these effects upon a first

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experiment, because the sensitiveness of the eye to colour is sometimes very feeble, but in almost all cases sensitiveness can be strengthened by practice. In the study of optical effects, too, the fact cannot too often be emphasised that we must know exactly what to look for and also the right spot to which the attention should be directed. We believe that an instrument called the "Chromoscope" which has been designed to show the effects referred to, can be purchased from Messrs. George Philip and Son of Fleet-street.

THE TWELFTH INTERNATIONAL CONGRESS OF MEDICINE.

THE committee in charge of the organisation of the Section of General Pathology and Pathological Anatomy desire to receive as quickly as possible the titles of any communications which our readers may be intending to send to the International Congress at Moscow, as well as brief abstracts of the principal conclusions to be drawn from the papers. The following questions have been suggested by the committee for discussion, and views upon them will be submitted by the scientific authorities whose names are severally appended: The Botanic Specificity of Pathogenic Microbes (Professor Hueppe of Prague), the Pathology of Thrombosis (Professor Cornil and Dr. Marie of Paris), the Origins of Different Forms of Diabetes (Professor Lépine of Lyons and Professor Minkowsky of Strasburg), the Pathology of Myxœdema (Professor Brissaud of Paris, Professor Ewald of Berlin, and M. Gley of Paris), the *Rôle* of Antitoxins in the Production of Artificial Immunity (Professor Behring of Berlin and Professor Bouchard of Paris), the Pathology of Inflammation and the Parts Played by Bloodvessels and Parenchyma (Professor Stricker of Vienna and Professor Klemensiewicz of Gratz). All correspondence with regard to the section should be addressed to M. G. Dourdoufi, Pretschistinsky boulevard, Jerusalmskoe Podvorie, Moscow.

THE PROPOSED LEGISLATION FOR HABITUAL DRUNKARDS.

IT is sincerely to be hoped that the Government will be able to carry out during the current session their intention of amending the laws relating to the treatment of habitual drunkards. Among members of the medical profession there is little, if any, important difference of opinion upon this subject. The necessity for some system of restraint and tutelage is generally admitted, and if no particular method has up to the present time been actually employed this is assuredly not from the want of either will or occasion. In the meantime certain recognised plans of treatment are becoming discredited. The lunatic asylum and the dipsomaniac are frequently found to be mutually unsuitable, and this incompatibility is absolutely certain where the habit of drunkenness does not amount to lunacy in the strict sense. Nor is the common prison the proper place of seclusion for such persons. This part of the subject was recently discussed at a meeting of the Society for the Study of Inebriety, when Mr. J. J. Pitcairn, assistant surgeon to the Holloway and Newgate prisons, expressed himself strongly against the system of prison detention, and showed that in many cases the prison ward is for the drunkard virtually a form of hospital, while, on the other hand, the terms of incarceration assigned by law to such inmates are too short to ensure any practically curative effect. The same writer, nevertheless, gives utterance to a widespread impression that the prolonged detention of confirmed inebriates in specially adapted institutions would go far to remedy this diseased propensity. Side by side with this arrangement must go, of course, an arrangement for the transfer to other hands, for so long as may be necessary, of their domestic and business interests. The first part of this plan is certainly desirable if it can be carried out, and there is little doubt that private enterprise, guided, of course, by legal regulation, would prove equal to the task. Whether it is incumbent upon Governments themselves to make provision for the charitable maintenance of such institutions is another matter, and it is open to question whether such an obligation should be enforced. Herr Schlangenhausen regards the establishment of asylums for drunkards in Great Britain and Ireland as only a question of time;[1] but the ratepayer would probably remind him, if consulted, that it is also a question of money and a subject for discussion. Even this part of the ideal scheme may by degrees be brought within the circle of possible attainments, but its execution must largely depend for some time to come on the energy of private enterprise. The other part, which has to do with the transfer of responsibilities which can no longer be regularly exercised by the drunkard, entails no public burdens. Our views upon this subject were briefly stated in THE LANCET of Dec. 5th, 1896. The system of trusteeship there suggested conforms in its general purpose, though not necessarily in all details, to that of Curatel, which was fully explained in connexion with our reference to Herr Schlangenhausen's opinions. We believe that the true solution of the problem will be found when this principle of trusteeship is embodied in a simple and effective mode of legal procedure.

CEREBRAL SURGERY.

IN a recent paper by Professor Hitzig, an abstract of which appears in the *Neurologisches Centralblatt*, an account is given of four cases of tumour of the brain in reference especially to the non-success of operation. The first case was that of a man, aged thirty-four years, who had received a blow from a hammer eight years before he came under observation. He had weakness and convulsive movements in the right arm and, later, weakness of the right leg and headache, but no sickness or optic neuritis. He was thought to have a cortical tumour, but none was found at the operation, although there was evidence of increased intra-cranial pressure. Three weeks later there were papillitis and sickness and convulsive movements of both legs. He rapidly passed into an unconscious condition and died. A large sarcoma was found apparently commencing in the centrum ovale, thence spreading into the cortex and also the corpus callosum. The second case was that of a woman, twenty-three years of age, who had vomiting, giddiness, gradual failure of vision in the right eye and also in the left. There was internal strabismus first on the left and later on the right side. There were optic neuritis and slight spastic paralysis of the left extremities and weakness of the right side of the face. It was supposed that there was a tumour in the cerebellum, but an operation did not confirm this. The patient afterwards died, and at the necropsy a large cystic glioma was found in the right frontal lobe which had flattened out the optic nerves, the third, the sixth, and the fifth nerves, and had compressed the right half of the pons. The third case was that of another woman, thirty-four years of age, who had attacks affecting the right arm beginning in the fingers and slightly affecting the head and the leg without loss of consciousness. There was rather laboured speech and slight right-sided weakness in the arm. Operation failed to reveal any tumour, and three years later her condition remained unchanged. The fourth case was that of a man who three years before had had an injury to the right side of the head, and who suffered from giddiness and increasingly severe headache, with subsequent right-sided paresis. This became permanent, and there were also right-side Jacksonian attacks commencing in the foot. There was tenderness on the left

[1] Vide THE LANCET, Dec. 19th, 1896.

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side of the head, and at the operation a large endothelioma was removed. This apparently grew from the dura mater, and covered a large area of the convexity of the hemisphere and compressed the central region and the gyrus fornicatus. Death followed from shock.

ROYAL BOTANIC SOCIETY OF LONDON.

AT a meeting of this society held on March 6th Mr. John Birkett, F.L.S., in the chair, the Duke of Bedford, Sir G. Hamond Græme, Bart., and nineteen others were elected Fellows. A paper was read by Mr. Martindale calling attention to the great desirability of establishing in London an institution for the purpose of teaching botany similar to those in existence on the Continent, and proposing that the Council should take charge of the scheme and utilise a portion of their ground for the erection of the necessary buildings. From its central position and the fact of all the requisite material for study being at hand in a living condition, no other site in or near London would be so suitable for the purpose. The great fault of the present system of botanical teaching in England outside the medical schools and universities was that too much attention was given to botany solely with the object of enabling students to pass examinations, while economic and physiological botany was scarcely touched upon. If a young German were desirous of emigrating, previously to doing so he could attend a short course at one of the institutions at home and learn all that would be of most use to him about the grasses, fruits, and vegetable products of the country he proposed to settle in; but in England there was no such means of acquiring knowledge of this kind, and it was for the purpose of supplying such a deficiency that the establishment of the institute was proposed. Among those present who gave the scheme their hearty support were Professor Oliver of University College, Mr. D. H. Scott of Kew, Professor Henslow, Professor Greenish, Mr. M. Carteighe and Mr. E. M. Holmes of the Pharmaceutical Society.

A SUCCESSFUL SOCIETY!!

MR. STEPHEN COLERIDGE, on behalf of a so-called "anti-vivisection" society, has written to His Royal Highness the Prince of Wales concerning "hapless dumb animals" in London "*that daily and hourly are slowly cut up alive without even the pretence of anæsthetics.*" It is needless to say that any such proceeding is wholly illegal, and we are inclined to ask how it is that a society which has collected subscriptions from the public for many years past has not succeeded in convicting the criminals who are guilty of such atrocities. Mr. Coleridge is, we believe, a trained lawyer, and must know that "hearsay" is not evidence, and we hope that he would not venture to make such a statement to the Heir Apparent unless he believed he were prepared to justify not merely the general import but the letter of it. Mr. Coleridge appears to us to be on the horns of a dilemma. If he has knowledge of animals being "cut up alive without even the pretence of anæsthetics," he and his society are morally *particeps criminis* unless they make an attempt to obtain a conviction. If he has no such knowledge, he has attempted on inadequate ground to deprive the sick poor, whose welfare the Prince of Wales has so keenly at heart, of the stream of charity which is flowing towards them. But we take it that Mr. Coleridge has not succeeded in misleading anybody, and his amiable utterances will be regarded as merely due to poetic phrenzy gone sour. The anti-vivisection societies by their intemperate and exaggerated statements have gradually rendered the public immune to the poison which they are engaged in disseminating. They have never obtained a conviction for any offence against the Vivisection Act. They have not succeeded, happily, in arresting the legitimate pursuit of knowledge, and we venture to predict that this last utterance will have no influence whatever in lessening the contributions to the Prince of Wales's Fund. The Society for the Prevention of Cruelty to Animals can point with some pride to the successful crusade which it has forwarded. The anti-vivisection societies have had no solid success, and never can have any. One conviction would do more than millions of silly handbills and leaflets. The medical profession equally with the public would rejoice at the punishment of the perpetrators of the atrocities which Mr. Coleridge alleges take place daily and hourly. But until such conviction has been obtained we must continue in our belief that Mr. Coleridge's statement is absolutely devoid of any foundation whatever.

OPEN SPACES ABOUT BUILDINGS IN LONDON.

DR. J. F. J. SYKES, medical officer of health of St. Pancras parish, has presented to the vestry a valuable report on the powers and duties of the vestry in relation to the inspection of tenement houses, a term which, as defined in the existing by-laws of the vestry, denotes houses "let in lodgings or occupied by members of more than one family," and "'tenement' means any room or rooms in a tenement house let as a dwelling or lodging or for the use or occupation of a tenant." In commenting on the by-laws which direct that 400 cubic feet of air must be available for each person occupying a room "used both as a sleeping apartment and for some other purpose," while 300 cubic feet are deemed sufficient for each occupant of a room used exclusively as a sleeping apartment, Dr. Sykes recommends the adoption of a single minimum standard of cubic space, and suggests 400 cubic feet for all purposes, two children under ten years being reckoned as one adult. An addendum to this report deals with the subject of open spaces about buildings, and contains the disquieting statement "that there is a prospect that in course of time the whole of the open spaces about buildings may disappear." It seems that according to the London Building Act, 1894, in a new domestic building abutting upon an old street the open space to be provided to the building may be entirely covered in up to a level of sixteen feet above the adjoining pavement, and the consequence of this permission is that old houses possessing yards, areas, or open spaces in some form at the front or back, or both, are being rebuilt in such a manner that the whole of the previously vacant area is covered with a structure having a height of two or three storeys. The by-laws and regulations of the County Council and sanitary authorities are devised so as to cause drainage to be excluded from or placed outside of domestic buildings, but they seem to be rendered useless by a Building Act which enables a domestic building to embrace the whole of the drainage of the premises within its external walls.

TAKA-DIASTASE IN DYSPEPSIA AND GOUT.

TAKA-DIASTASE is an inodorous brown powder which acts energetically on starch, digesting it and converting it into sugar. Its discovery was the result of a lengthy investigation undertaken by a Japanese chemist named Takamine, who, while engaged in laboratory work in Glasgow under Professor Mills, F.R.S., was led to study the phenomena of malting, and subsequently continued his researches in Japan. In the result he found that a fungus, Eurotium oryzæ, of the Aspergillus family, when grown upon common bran, has a remarkable power of producing diastase, which can be separated from the bran by washing and percolation. A full account of the nature and properties of the new substance has already appeared in our columns.[1] Diastase

[1] THE LANCET, May 25th, 1895, p. 1332.

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exists in ordinary malt, and effects the transformation of the starch of the grain into sugar, which is the first stage in the production of alcohol. In the animal economy the digestion of starch is accomplished by means of a special principle contained in the saliva, and when the natural secretion is either insufficient in quantity or inactive, giving rise to certain forms of dyspepsia, the deficiency may to some extent be remedied by the use of one or other of the numerous preparations of malt. Malt, however, is too saccharine for some gouty and dyspeptic patients, and for them Mr. Armstrong of Buxton, writing in the *Liverpool Medico-Chirurgical Journal*, recommends taka-diastase in doses of from three to five grains, given in powder with or immediately after meals. He has used it with excellent results in a considerable number of cases, both of amylaceous dyspepsia and of the form of gout which seems to be associated with that condition. He finds that flatulency and acidity are greatly diminished, that there is less strain on the intestinal digestion, that the gouty symptoms are much relieved, and that not the slightest discomfort, loss of appetite, or digestive disturbance is ever produced in consequence of the treatment.

THE INSPECTION OF MEAT AND MILK IN CANADA AND THE UNITED STATES OF AMERICA.

THE Provincial Board of Health of Ontario has issued, through Messrs. Warwick Brothers and Rutter, of Front-street, Toronto, a pamphlet giving a variety of information useful to those who are interested in the quality of our meat-supply. The importance which the question has for this country sufficiently appears from the fact that during nine months of 1896 we imported 436,223 cattle, of which the United States sent 308,159, and Canada 71,670; while the bacon from the United States during the same nine months amounted to 207,000,000 pounds. In 1896 the Legislature of Ontario passed an "Act for the Inspection of Meat and Milk Supplies in Cities and Towns," empowering municipal councils to establish public slaughter-houses and authorising local boards of health to take measures for ascertaining the purity of public milk-supplies and the general health of the cows; local boards are further authorised to provide for the testing of every such cow with tuberculin by a veterinary surgeon. Councils or boards availing themselves of the powers conferred by the Act are required by it to conform to the regulations in that behalf from time to time adopted by the Provincial Board of Health, and with a view to encouraging the introduction of meat and milk inspection the Provincial Board has now published a description of a slaughter-house suitable for a town population of 5000 persons, together with a plan, an elevation, and an estimate of cost. In the testing of cows with tuberculin "a 10 per cent. solution of normal tuberculin is to be injected to the amount of from one to four cubic centimetres according to age of animal..... The temperature must thereafter be taken regularly every three hours for a period of from twelve to fifteen hours..... Any notable rise of temperature indicates the existence of tuberculosis." Cows that give the tuberculin reaction, if they are wasting and show clinical signs of lung disease, shall be destroyed and the carcasses safely disposed of; but if they are in fair condition they may be either fattened as speedily as possible for slaughter, or their milk, after boiling for half an hour, may be given to pigs or calves. The pamphlet concludes with a description of the inspection of meat at Buffalo in the United States, and is signed by Dr. P. H. Bryce, Secretary to the Provincial Board of Health of Ontario.

THE public meeting to promote the National Jenner Memorial is fixed for March 31st. The chair will be taken by the Duke of Westminster.

THE festival dinner of the Irish Schools' and Graduates' Association will take place at the Café Monico on Wednesday, March 17th, Dr. Alexander Macalister, F.R.S., occupying the chair. The guest of the evening will be Lord Lister, P.R.S., and amongst those present will be Sir John Gorst, Sir Algernon West, K.C.B., Professor Jebb, M.P., Mr. Marcus Stone, Sir Ambrose Shea, and Professor Clifford Allbutt.

WE regret to announce the death on the 10th inst. of Dr. George Bretherton Barron of Southport. Dr. Barron, who was a member of the Council of the British Medical Association, was an admirably typical example of the general practitioner of this country, and we hope to be able to publish a record of his life and work in a future issue.

THE Medico-Psychological Association have appointed May 3rd for the next examination for their certificate in nursing and attending on the insane. April 5th will be the last day upon which candidates can enter their names. Schedules may be obtained from the registrar, Dr. Spence, Burntwood Asylum, near Lichfield.

THE Festival Dinner of the National Hospital for the Paralysed and Epileptic (Albany Memorial) will be held in the Whitehall Rooms of the Hôtel Métropole on Friday, April 2nd, when H.R.H. the Duke of Connaught, K.G., will preside.

DR. G. H. DARWIN of West Didsbury, Manchester, has been selected for admission as a Knight of Grace of the Order of the Hospital of St. John of Jerusalem in England.

PROFESSOR CHARLES KELLY, M.D. Lond., has resigned the Chair of Hygiene in King's College, London, after a tenure of office of eighteen years.

LITERARY INTELLIGENCE.—The Rebman Publishing Company, Limited, announce that owing to a fire at their binders a large consignment of the "American Year-Book of Medicine and Surgery," issue of 1897, edited by Dr. George M. Gould, has been completely destroyed, in consequence of which they regret that they will be unable to deliver subscribers' copies for about three weeks.

PRESENTATIONS TO MEDICAL MEN.—Mr. Duncan Fletcher, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been presented by his friends, on leaving the Isle of Man, where for fifteen months he was a medical officer at the union Mills lunatic asylum, with a silver-mounted Tantalus, containing cut-glass spirit decanters. — Mr. A. McLeod Ross, M.B., C.M. Edin., F.R.C.S. Eng., of Aigburth-road, Liverpool, has been the recipient from members of the Brunswick Class, No. 3, of the St. John Ambulance Association, of a handsome double set of carvers in a case, in appreciation of his instructive lectures to the class. — The members of Court Prosperity, 1762, Ancient Order of Foresters, Nottingham, have presented Mr. Joseph Thompson, L.R.C.P. Lond., M.R.C.S. Eng., who has been associated with the court for upwards of twenty-five years as medical officer, and who is now relinquishing that post, with a valuable sterling silver salver, beautifully engraved, with an appropriate inscription of the presentation.—Dr. Alfred M. Saunders, on the eve of his leaving Downby, Orkney, was entertained at dinner on the 18th ult. by a number of friends at the Smithfield Inn and presented with a large marble clock and, for Mrs. Saunders, a silver cake-basket, as testimonials of their social gifts and the professional ability and courtesy shown by him during the seven years he had resided at Downby.—Mr. R. T. Cæsar, jun., L.R.C.P. Lond., M.R.C.S. Eng., of Maidstone, has been the recipient of a handsome oak stationery case from the boys attending the ambulance instruction in connexion with Sir Charles Booth's Trust continuation classes, as a token of appreciation of the course of ambulance lectures he had given them.

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The Lancet Special Commission ON THE METROPOLITAN WATER-SUPPLY.

IV.[1]

THE LAMBETH WATERWORKS COMPANY.

History.

THE early history of the Lambeth Waterworks Company shows how very rapidly an excellent business was built up by a number of men who gave their time and energy to a work which supplied a very obvious want.

The first meeting of the original founders of the Company was held in April, 1785. A list had been prepared of the owners of over 600 houses who wished to be immediately supplied with water. Another list was handed in of the occupiers of another 600 houses, who, it was believed, would be glad to have water as soon as they saw what a convenience it was to their neighbours. At the same meeting an estimate as to the probable cost of the undertaking was submitted, and it was calculated that a profit of 12 per cent. and upwards could easily be paid; but it was decided that the projectors should not flatter themselves with an immediate advantage from the work to the extent that their own calculations seemed to hold out. It was resolved that this was not a visionary scheme, but a "business suggested and taken into consideration on substantial grounds by men capable of judging both of the expense and effect." A subscription list was opened, and it was decided at once to apply for an Act of Parliament. Mr. White, a clerk to the House of Commons, seems to have been the Company's Parliamentary agent. Sir Joseph Mawbey, one of the members for Surrey, and the Rector of Lambeth helped to draw up the petition, which was signed by those of the inhabitants who wished to be supplied with water. An Act incorporating the Company was obtained and received the Royal Assent on July 9th, 1785, on which day the proprietors appointed to meet at 2 o'clock at the New Inn near Westminster Bridge, in accordance with the statutory directions of the Act of Parliament.

The work was rapidly taken in hand. Premises were obtained in Belvedere-road, near the site of the present Waterloo Bridge, which was not then built, and nearly opposite to Hungerford Market. A steam engine was put up, but it was not at first capable of supplying a higher service than 42 ft. above the Thames high-water mark. Wooden pipes were used for conveying the water. The proprietors showed great attention to the details of their business and printed and distributed handbills among the inhabitants of Lambeth to say that after the following Christmas they would be glad to supply anyone who lived within reasonable distance of their mains. Letters were also written to certain fire assurance companies asking them if they would like to take part in the expense necessary for keeping a fire engine ready to work. In this application the Company were not successful, but the request shows, it must be admitted, excellent business instincts.

At the end of the last century there is no doubt that a water-supply was urgently needed in Lambeth, and requests were sent to the Company asking them to extend their area of supply as quickly as possible. In 1790 some of the inhabitants of St. George's-fields wrote to say that unless they were speedily supplied with water they would have to leave their houses, as no lodgers would remain with them if they could not get a supply. The work of development proceeded so rapidly that in 1791 the clerk reported that they could not obtain small pipes as quickly as they wanted them. In 1800 some of Watts's improvements were adopted for working the engine which was then in use.

The early records of the Company contain instances of people who clandestinely laid on the water to their houses from the Company's mains. In such cases the Company acted with great vigour. Thus, in the case of one Mr. Green, who supplied his neighbours from his own tub, it was decided "that the ferril that serves the house be drawn, and that the water be not laid on again until the several houses reported to have been supplied laid down separate pipes." The Company's Act enabled them to impose a penalty of from £50 to £1 a day for stealing water. One man who was caught doing this was called to a meeting of the Board and informed of the penalty to which he had rendered himself liable. He pleaded that if it were imposed it would "materially injure his circumstances, and that he had a family of six children." The matter was settled by the culprit paying the arrears of water rent and giving £5 to a charity. In another case the directors agreed to give an informer half of any sum which might be obtained from an individual who had taken the water without paying for it.

The Company gradually extended their area, and in 1802 it was decided to go as far as The Horns, Kennington, that an ample supply might be given to "that respectable and populous neighbourhood." In the same year it was decided that a certain number of 10-in. iron pipes should be laid every year, provided that the outlay did not interfere with the dividends; and in 1816 it was decided to use only iron mains from that date. In the year 1805 a new 24-horse power engine was erected and a fixed instrument called a "dolphin" was put over the mouth of the suction pipe which conveyed water from the river. The dolphin took the place of a floating rhomboidal fender which had previously been used. The Company did not remain entirely without rivals. In 1805 the South London Waterworks were established. At first the relations between the Companies were friendly, and two years after their formation the Lambeth Company offered to supply some water which their rivals were unable to do in consequence of the destruction of their engine by fire. A few years later, however, there was a fierce competition between the Companies and this raged for some years.

After the building of Waterloo Bridge many new streets were made in a southerly direction, and the Company at once put an iron main in the direction of the Obelisk, St. George's-fields. From the first the financial arrangements of the Company seem to have been made with a view to the development of a big business, and money which might have been paid in dividends was used for paying the expenses incurred in extending the area of supply. In 1819 a resolution was passed by a committee of the proprietors that it would be disastrous if it should happen from the "impatience of some proprietors" that they should be induced to break through their rule of extending the business and draw money out of the concern; it would either "shackle" their proceedings or compel them to get into debt. In that case the committee thought that the sun of their prosperity would very soon set.

The proprietors took a keen interest in the reputation of the water they supplied, and in 1824 the solicitors of the Company threatened one Mr. Keys, a plumber, for his interfering with their customers "by defaming their commodity." On the other hand, Mr. Mathews, who wrote in praise of Thames water, was rewarded by receiving the sum of five guineas.

In the year 1831 it was decided to buy some land on high ground and to make a "filtering apparatus," and some land was bought on Streatham-hill—the site of the present reservoir. Two years later the ground on which the present Brixton pumping station is situated was bought, and it was decided to lay down an iron main from the works to the new reservoir which had been made at Brixton. An Act of Parliament was obtained in 1834 and the share capital of the Company was increased to £143,800. Up to that time the proprietors' capital had been limited to thirty-two shares of £150 each.

The outlying districts south of the Thames which were not supplied by the Company obtained their water with difficulty. The poorest people were supplied from water-carts and had to pay from ½*d*. to 2*d*. a pail for it. A great many petitions were sent to the Company to ask them to extend their supply. Complaints as to the insufficiency of the water-supply came from districts as far apart as Kingston and Beckenham, and the Company resolved to extend their business, to abandon their original works, and to remove their intake higher up the river. This decision was come to in 1847 and the Company were re-incorporated in 1848, and the Act authorised the construction of works at Seething Wells, Ditton, and gave them power to extend the area of their supply. The works at Ditton were opened in 1852, and the directors justly prided themselves on being the first company which resolved

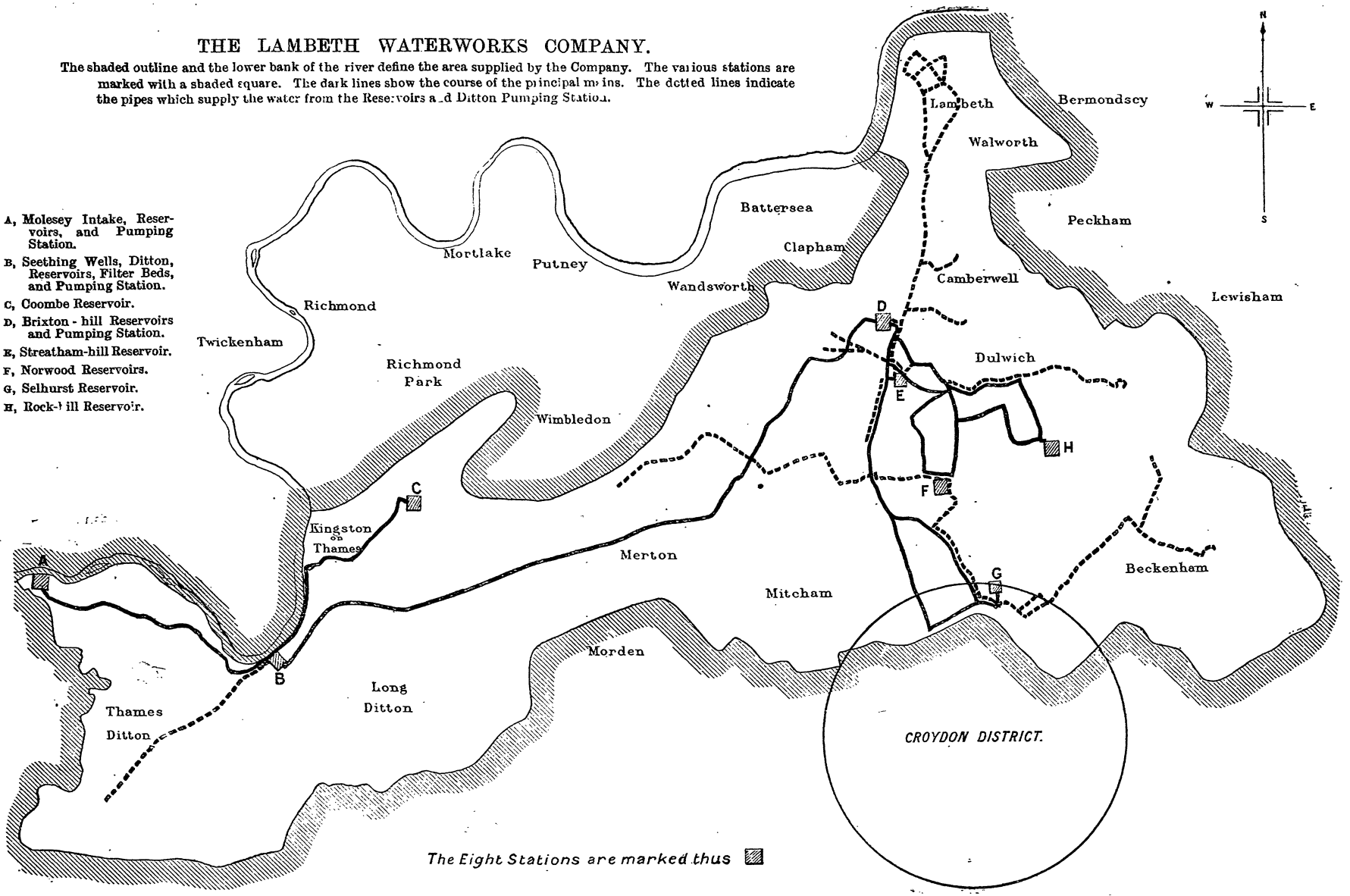
[1] Nos. I., II., and III. were published in THE LANCET of Feb. 20th and 27th, and March 6th, 1897, respectively.

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THE LAMBETH WATERWORKS COMPANY.

The shaded outline and the lower bank of the river define the area supplied by the Company. The various stations are marked with a shaded square. The dark lines show the course of the principal mains. The dotted lines indicate the pipes which supply the water from the Reservoirs and Ditton Pumping Station.

A, Molesey Intake, Reservoirs, and Pumping Station.
B, Seething Wells, Ditton, Reservoirs, Filter Beds, and Pumping Station.
C, Coombe Reservoir.
D, Brixton-hill Reservoirs and Pumping Station.
E, Streatham-hill Reservoir.
F, Norwood Reservoirs.
G, Selhurst Reservoir.
H, Rock-hill Reservoir.



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to obtain their supply from a less impure source by going higher up the river. In 1852 the other Metropolitan Water Companies which took their water from the Thames were compelled by an Act of Parliament to move their intakes to some point above the tidal portion of the Thames. At this time the Lambeth Company had already done this, a fact which must always be remembered to their credit.

In 1871 the Company decided to remove their intake from Seething Wells still higher, because the water at Seething Wells was discoloured and turbid whenever the rivers Mole and Emmett were in flood. An Act to enable the Company to move to West Molesey was obtained, and subsiding reservoirs and pumps were erected there and the works completed in 1874. During the progress of the excavations at West Molesey it was discovered that there was a quantity of water in the gravel, and this was used as an additional source of supply. The dates of the Lambeth Water Company's Acts, besides those above mentioned, are 1848, 1856, 1869, 1871, 1883, and 1886.

Present State: General Description.

The Lambeth Waterworks Company supply Molesey, Ditton, part of Wimbledon, Balham, Brixton, Streatham, Lambeth, Walworth, Dulwich, and Sydenham.

The sources of supply are: (1) the Thames at West Molesey; (2) gravel beds near the Thames at Molesey; and (3) the Thames at Ditton (in cases of emergency).

The stations of the Company indicated upon the map are eight in number: A, Molesey (intake, reservoirs, pumping station); B, Ditton (reservoirs, filter beds, pumping station); C, Coombe (reservoir); D, Brixton-hill (reservoirs, pumping station—see Fig. 1); E, Streatham (reservoir—see Fig. 2); F, Norwood (reservoir); G, Selhurst (reservoir—see Fig. 3); and H, Rock-hill, Sydenham (reservoir—see Fig. 4).

Molesey.—The chief intake of the Company is from the Thames at West Molesey, on the south bank of the river. The area of the property here is rather over thirty-six acres, and the works consist of the intake, a pumping-station, an arrangement for obtaining water from the gravel beds, two reservoirs, and three cottages, one containing a small board-room.

Intake.—There are five inlets from the Thames, and they are placed close together. They are guarded by an outside grating composed of bars an inch in width, with spaces of one inch between each bar. A screen with smaller meshes is situated inside. There are grooves for two sets of screens, but only one set is used at a time. The inner screens are of galvanised iron, with ⅜ in. meshes. The inlets allow the water to pass into a brick culvert, which passes under the towing-path to the engine-house well through a sluice-house.

Pumping arrangements.—The river water is pumped up a height of about 14 ft. to the reservoir. This is done by a pair of centrifugal pumps, worked by two horizontal engines, and capable of raising 25,000,000 gallons of water daily. There are also two vertical engines of 50 horse power each, which are capable of pumping 17,625,600 gallons of water daily. These engines are used for pumping into the subsiding reservoirs and culvert and for pumping water from the gravel beds. When visited on Jan. 6th some of this machinery was being overhauled and repaired.

Water from the gravel beds.—A considerable quantity of water is obtained from the gravel beds situated on the property at Molesey. This water is collected by perforated pipes, which are laid in the ballast above the clay at a level of about 7 ft. below the summer water level of the Thames. Perforated earthenware pipes are arranged in a double line all along the northern side of the property near the towing-path, parallel with the river, and for some little distance near the eastern boundary of the property, at right-angles to the line just described. The pipes vary in size from 12 to 24 inches. There is a line of 12 in. pipes 771 ft in length, a line the same length of 18-in. pipes, a line of 200 ft. of 24-in. pipes, and a line 459 ft. in length of 18-in. pipes. The water collected by these pipes passes into a tank 12 ft. in depth and 5 ft. in diameter; from this tank it flows into an engine-house well, from which it is pumped into the reservoirs. The amount of water which can be obtained from the gravel beds is rated to be 6,000,000 or 7,000,000 gallons daily.

Reservoirs.—There are two reservoirs situated on the side of the engine house remote from the Thames. The reservoirs occupy an area of thirty acres and are capable of storing 128,000,000 gallons of water. The lower part of the sides of the reservoirs is concreted and the upper part is paved with bricks. For the supply of Ditton the upper part of the water is drawn off. The arrangement for conveying water to the filtration works at Ditton is that the iron pipes which take the water to the culvert from the reservoirs are fixed to floating buoys, thus ensuring that the "top water" only is drawn off. No water is filtered at Molesey—it all flows by gravitation to the station at Ditton.

The water is conveyed to Ditton by two separate channels; (1) an iron main 36 in. in diameter; and (2) a culvert. For the greater part of the distance the water passes in an oval brick culvert of which the dimensions are 5 ft. 9 in. by 4 ft. 9 in. In two places the brick conduit is replaced by a 54-in. iron pipe. The two places in which iron pipes are used are (1) near and under the rivers Mole and Ember for a distance of 800 yards; (2) through the village of Thames Ditton for a distance of 550 yards. The culvert is of older date than the 36-in. iron main.

Seething Wells, Ditton.—At Seething Wells the whole of the water-supply of the Company was formerly taken from the Thames. Water can, in cases of emergency, be taken at this point, as the old intake arrangements remain. The engineer of the Company states that it has not been necessary to use them for two years, and that they have not been used during that time. The station consists of two parts, divided by the Portsmouth-road. The older part, that next the river, contains four filter beds and a small reservoir. The total area of these filter beds is between three and four acres. On Jan. 6th it chanced that one of the filter beds was being re-made. As the construction of this filter differs from that of those usually made at the present time it may be worth while to describe it briefly. The bed of the filter is formed by thick, open-jointed slates supported on brick walls. The chamber below the slates is about 4 ft. in depth. Above the slates a layer of large gravel is placed, then a layer of shells, and then, at the top, the usual layer of fine sand. The newer part of the station is situated to the south of the Portsmouth-road, and consists of the pumping station, reservoir, and filter beds. There are eight filter beds, and these are placed 30 ft. higher than the four older ones next the river. More than half the water, therefore, has to be pumped up to them, and this is done by means of two compound beam engines of 100-horse power each.

Filter beds.—The eight newer filter beds have a total area of about nine acres. The filtered water is collected into tanks. Each filter has a separate tank of its own, so that the water from any filter bed can be examined separately. All these tanks are connected with one main.

Engines.—From Seething Wells the filtered water is pumped to Coombe and Brixton. The engines used for pumping to Brixton are four compound beam engines of 180-horse power each, three compound beam engines of 150-horse power each, one compound beam engine of 150-horse power (all of the Woolf type), and one Worthington triple expansion engine of 420 horse power. For the supply of Coombe reservoir a compound beam engine of the Woolf type, 150-horse power is used to work a double-acting solid plunger pump. Steam for working the engines is generated by Cornish and Lancashire boilers, which supply two steam mains. All the boilers of 100 lb. pressure can thus be connected through one main, and those of 50 lb. pressure through the other. The coal-supply is landed from the Thames at the old part of the station and goes in trucks through a tunnel under the Portsmouth-road to the coal stores in the new part of the station.

Coombe reservoir.—The reservoir at Coombe Warren is built on land belonging to the Duke of Cambridge, 180 ft. above ordnance datum. It is situated not very far from the shooting-range just off the high road from Portsmouth to London. The reservoir is built on brick arches and is capable of holding 1,150 000 gallons of water. At Coombe there is a stand-pipe 50 ft. in height and 220 ft. above ordnance datum. The water for the supply of Surbiton, Kingston, Esher, Ditton, and East and West Molesey comes from this reservoir.

Brixton hill.—This station is situated at Brixton-hill (see Fig 1), just to the west of the thoroughfare of that name. The area of the works is about twelve acres, and the height above ordnance datum is 115 ft. The office of the Company, two reservoirs (Fig. 1, A A), a pumping station (Fig. 1, B), workshops (Fig. 1, C), and four cottages are situated here.

Reservoirs.—There are two reservoirs built on brick arches, and each is capable of holding 6,000,000 gallons of water.

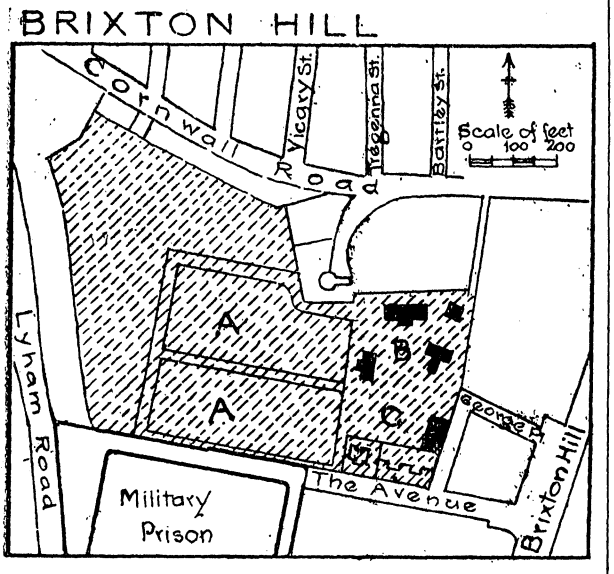
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The mains which bring the water from Ditton come up into the space between them.

Distribution of water.—From Brixton-hill the town district is supplied by gravitation, the water being distributed by four main trunks—24, 20, 18, and 12 in. in diameter respectively. For the supply of the country districts the water is pumped from Brixton to Streatham, Selhurst, Norwood, and Rock-hill reservoirs.

Engines.—There is a compound Worthington pump of 125-horse power which is used for pumping water to Streatham. This engine is worked by three Cornish boilers. A compound beam engine, 120-horse power, working two bucket and plunger pumps, is used for pumping to Rock-hill

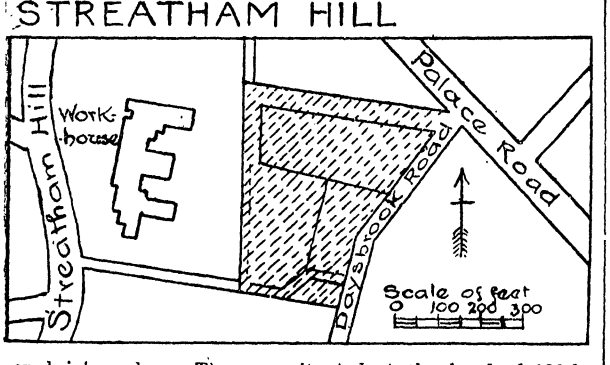
FIG. 1.



reservoir, and works under 320 ft. head of water. Three compound beam engines of the Wolff type, each 60-horse power, work bucket and plunger pumps and are used for pumping water to Streatham and Selhurst. The steam is generated by eight Cornish boilers. A compound beam engine of 130-horse power, working a bucket and plunger pump, and another engine of 160-horse power pump water to Norwood. There is a 120-horse power compound beam engine of the Macnaught type working a bucket and plunger pump and another of 140-horse power of the same type. The former of these is used when occasion requires for pumping to Rock-hill, Norwood, Selhurst, and Streatham. The latter is used for pumping to Norwood, Selhurst, and Streatham. There is also a small compound beam engine of 30-horse power which can be used for pumping to Rock-hill.

Streatham-hill.—Streatham-hill station (see Fig. 2) has an area of four acres. It contains two covered reservoirs built

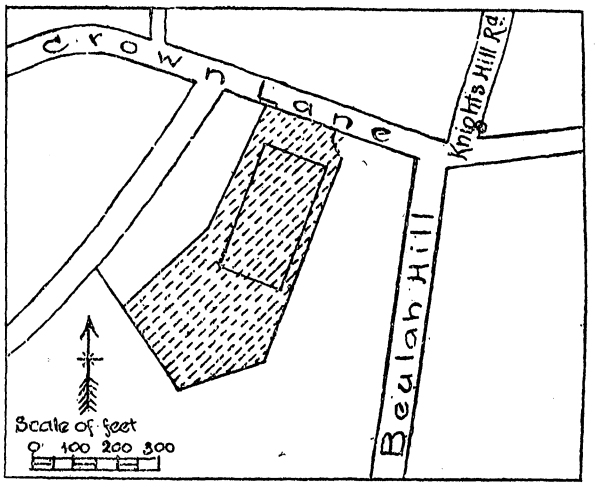
FIG. 2.



on brick arches. They are situated at the level of 198 ft. above ordnance datum. Each reservoir is capable of holding 3,750,000 gallons of water. The reservoirs are covered with earth and turfed at the top.

Norwood reservoir.—This station is situated in Crown-lane, Streatham. (See Fig. 3). The reservoir like all the others is built on brick arches and occupies an area of about one acre. It has a capacity of 5,000,000 gallons. The reservoir is

FIG. 3.



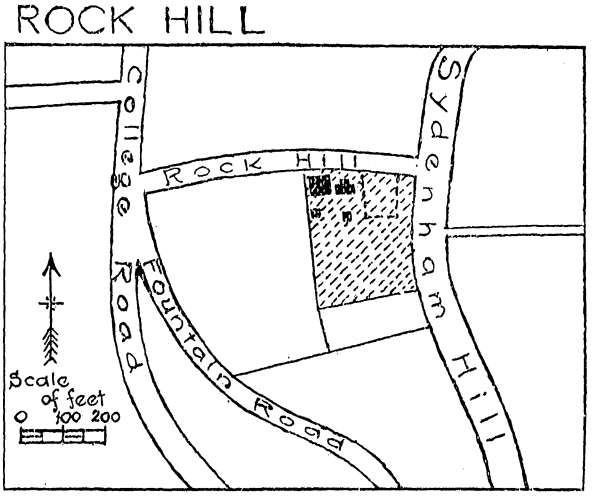
Norwood Reservoir.

covered with earth and turfed over. There is at this station sufficient area of spare ground to build another reservoir the same size. A caretaker's cottage is situated here.

Selhurst reservoir. — The Selhurst station is situated near Thornton Heath. The reservoir is 218 ft. above ordnance datum. It is built on brick arches and has a capacity of 2,500,000 gallons. The reservoir is covered by about 3 ft. of earth and turfed over. In the description of this station that was given to the last Royal Commission on the Metropolitan Water Supply it was said that there was a stand-pipe. Now, a stand-pipe is said to be "a curved vertical pipe arranged as a part of the main in waterworks to give the necessary head to supply elevated points," &c. There is no such "curved vertical pipe" at Selhurst, but there is an arrangement which acts as a stand-pipe. An 18-in. pipe is laid in the public road up the hill at a level of 42 ft. above that of the reservoir. When the water is pumped into this pipe an increased pressure is put on the district main. So the effect is the same as if there were a stand-pipe 42 ft. in height.

Rock-hill reservoir is on the brow of Sydenham-hill and is close to the Crystal Palace. (See Fig. 4.) The area here

FIG. 4.



occupied is one and a half acres. The reservoir is built of brick arches and is capable of holding 500,000 gallons of water, and is situated 372 ft. above ordnance datum. There is

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also a high service tank 387 ft. above ordnance datum and capable of holding 115,000 gallons of water, and a stand-pipe 60 ft. in height. The top of the stand-pipe is 412 ft. above ordnance datum. During the day the water is pumped over the stand-pipe for high service and distributed in the neighbourhood. At night the water is pumped to fill the reservoir. The main is charged from the high-service tank.

Area of Supply.

The Act of 1848 authorises the Lambeth Waterworks Company to supply the places given in the following lists. Of these places some are entirely supplied, some partly supplied, some not supplied.

Supplied: Beckenham (the part of the parish lying on the western side of the River Ravensbourne), Esher, Kingston-upon-Thames, Long Ditton, Malden, Merton, Mitcham, Streatham, Thames Ditton, and Tooting Graveney.

Partly supplied: Battersea, Bermondsey, Camberwell, Christchurch, Clapham, Croydon, Lambeth, Lewisham (the part of the parish lying on the western side of the River Ravensbourne), Morden, St. Mary Newington, Newington Butts, Putney, St. George the Martyr, St. Saviour, Wandsworth, Wimbledon, and the Clink Liberty.

Not supplied: Horselydown, Rotherhithe, St. Olave, and St. Thomas.

The Act of 1871 authorises the supply of East Molesey and West Molesey, and these places are supplied by the Company.

The Lambeth Company supply about 150 houses in the parishes of Ham and Hook and about 200 houses in the parishes of Cheam, Chessington, Cuddington, and Ewell, which are outside the limits of the special Acts of 1848 and 1871.

Table of Statistical Details given by the Lambeth Waterworks Company for the Year 1896.

SUPPLY.	Average daily supply in gallons	2,855,836
	Percentage delivered for other than domestic purposes, exclusive of waste	25%
	Number of houses supplied	105,448
	Number of houses on constant supply	67,215
	Estimated population supplied	738,136
RESERVOIRS.	Number	5
Subsiding and storage unfiltered water	Area in acres	31
	Available capacity in gallons	123,000,000
Storage filtered water reservoirs	Number	8
	Capacity in gallons	23,765,000
ENGINES.	Number	28
	Horse power	3,665
	Greatest lift	380 feet.
	Head of pressure in the district supplied	Greatest, 380 feet; least, 30 feet.
WATER-PIPES.	Total number of miles of water-pipes	738, of which 544 are constantly charged.
	Number of miles of water-pipes in the metropolis	442, of which 386 are constantly charged.
	Number of miles of streets with water-pipes constantly charged in the metropolis	242¾; many streets with two and three, and some with six, lines of pipes.
	Number of hydrants erected within the metropolis	3733 public hydrants, 471 hydrants for street watering, 182 private hydrants, and about 10,000 fire-plugs.
FILTERS.	Number of beds	12
	Area in acres	12½
	Depth of sand and other materials	7 feet.

THE King of Sweden has appointed Mr. P. Michelli, secretary of the Seamen's Hospital, Greenwich, to be a Knight (1st class) of the Order of the Wasa.

SANITATION AND THE PLAGUE PANIC AT MARSEILLES.

IF it were possible to establish a pillory where the names of the towns which have most sinned against the laws of public health might be exposed to public contumely, there can be little doubt that prominent among such offenders would stand the town of Marseilles. Blundering intrigue, deception, and ignorance seem to be the chief characteristics of the sanitary administration of that town. For instance, in 1884 there was a severe epidemic of cholera in the neighbouring town of Toulon. Marseilles was for taking all manner of measures against Toulon, but very great care was displayed to conceal the fact that the Toulon epidemic had in all probability come from Marseilles. While lengthy discussions were held as to the importation of cholera from the French colonies because there had been some cases on board a man-of-war which arrived at Toulon, the authorities at Marseilles carefully concealed the fact that there had been some months previously several deaths from cholera at one of their own hospitals. The sisters who had nursed the dying men were convoked and made to swear that they would keep the matter secret. Some years elapsed before the truth was generally known, and then, of course, this knowledge came too late to be of use. As for the filthy condition of Marseilles, this has been very fully described in these columns.[1] In a great number of houses there are overflow pipes from the cisterns which bring sewer air up to the surface of the drinking water supply. In many other houses there are no drains whatever. In 1893, during the cholera epidemic, there were some 14 000 houses at Marseilles that had no sanitary accommodation of any description and the inhabitants were obliged to throw out their night soil into the streets. The sea baths at Les Catalans were situated within a stone's throw of a large sewer outfall. Most of the other sewers fell into the old and tideless port, whence some 80,000 cubic metres of foul deposit are drenched out annually. The odour given off by the bubbles of gas that burst on the surface of the water in the port are extremely obnoxious; but it is not necessary to describe anew all these abominations. It was thought that Marseilles had recognised the error of its ways and had boldly entered upon an era of sanitary reform. In October, 1892, there was a slight epidemic of cholera, causing eighty-two deaths. The existence of this epidemic was officially recognised and all available measures were taken, apparently with success, to stamp out the disease. At the same time Marseilles won the honour of being the first town in France which obtained a special law, not only sanctioning a complete drainage scheme, but arming the authorities with extensive compulsory powers, so that the inhabitants should be forced to connect their houses with the new sewers and construct properly flushed and ventilated closets and drain pipes.[2] The scheme was exhibited by M. Cartier at the Universal Exhibition of 1889 and obtained the silver medal It formed the basis of a convention dated Aug. 21st, 1890, ratified by a vote of 29 out of 32 municipal councillors of Marseilles on the 4th of the following October. This scheme was sanctioned by a special law of Parliament, dated July 24th, 1891, and promulgated by the Presidential Decree of Aug. 27th, 1891.

The works were commenced on Oct. 8th, 1891. The sewers to be built were to measure in all 132,839 metres in length and the entire work was to be completed in five years—that is to say, on Oct. 8th, 1896. A penalty or fine of £20 for each day's delay was to be imposed if the contract was not executed at the appointed date; but hardly had the work begun then a systematic opposition was organised against its execution. As the law could not be altered attempts were made to create so many obstacles that the contractors themselves would be driven to demand the rescinding of their contract. As it was necessary to purchase land, notably for the installation of the pumping stations, it was easy to create delays by opposing legal quibbles to the compulsory expropriation of premises, &c. By taking special measures the contractors hoped to terminate the works in three instead of five years, which would have

[1] See THE LANCET, April 1st, 8th, 29th, and May 6th, 1893.

[2] For a full description of this scheme of drainage and map see THE LANCET, May 6th, 1893.

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been a great benefit to the town and have placed it to-day in a position to defy the invasion of the plague. But these good intentions were defeated by the stubborn opposition of the adversaries of the scheme. In the interval a new municipality had been elected, and the majority of its members was antagonistic to the scheme of drainage in course of execution. Nevertheless, in April, 1896, 80,680 metres of large sewers and 96,900 of small pipe sewers were laid; there only remained 8800 metres to finish the contract. Of 933 automatic flush tanks 880 were in their places, and 2140 manholes out of a total of 2175 were completed. Out of 30,000 metres of old sewers which had to be repaired and adapted to the new system 27,900 metres had been so treated. Pumping stations with a force of 480 horse power were in working order. But while the construction of the sewers was thus pushed forward the town was morally and materially pledged to increase its water-supply so that the sewers and the house drains should be properly flushed. Nothing of the sort has been done.

The sewers are built and are ready, but the town is not ready. The municipality even refuses to accept the sewers and will not allow the houses to be connected with them. There is a fierce conflict between the local authorities and the Prefecture, which represents the Central Government. The latter is seeking to compel the municipality to execute its side of the contract. The law says that houses must connect within two years of the completion of the sewers. This connexion will cost from £40 to £50 per house, and more for large houses where several closets are required. We foretold when describing this scheme that as soon as the people of Marseilles understood better what this contract meant they would rebel against it. Fortunately the matter is in the hands of the Government, and not of the municipality. As we said when criticising the scheme four years ago: "No municipality could drain the town of Marseilles. The population is far too ignorant, and any municipality that attempted to put syphon-traps, flush-tanks, and, in fact, proper closets into the houses would be very soon turned out of office. Yet all this will now have to be done; but it is the Prefect, it is the Central Government of France, that will have to enforce the due execution of the contract signed. The Prefect is quite independent of the Marseilles elector, and as for the municipality which signed the contract it has long ago ceased to exist. The Marseilles population will be appalled when they see what sanitation means and what it costs, for we must remember that the majority of houses have no waterclosets at all, and that there is hardly such a thing in the whole town as a proper watercloset. Probably 90 per cent. of the population of Marseilles have never even seen a sanitary closet with a two-gallon flush, trap, ventilated four-inch soil pipe, &c., yet these things are to be provided in all the houses, and this in the brief space of two years after the completion of the sewers." These words, published in THE LANCET of May 6th, 1893, are now fully borne out by the attitude of the population and municipality of Marseilles. Doubtless, the Government will, in the long run, overcome this local resistance; but in the meanwhile precious time is being lost, and by maintaining Marseilles in its filthy condition thousands of lives are wilfully and uselessly sacrificed. The death-rate of Marseilles for an average of twenty years was estimated by Dr. Proust, in 1889, at 32 per 1000. In the Hotel de Ville district it was equal to 47·4 per 1000. With proper sanitation this death-rate could, to judge by what has been done in many other towns, be reduced by one-third. One out of every three deaths that occur in Marseilles might be prevented. The greater part of the new sewers of Marseilles, if, instead of opposition, every facility had been afforded, could have been built two years ago. By this time most of the houses might have drained into these sewers; many thousands of lives would thus have been saved, and there would remain no excuse, no justification whatsoever, for the present ridiculous panic which the fear of the plague has occasioned. But in 1893 the reaction against sanitary reform was master of the situation.

In February of that year another cholera epidemic broke out. There were 102 deaths, but this epidemic was not officially recognised. Disinfection cannot be enforced unless an epidemic is officially declared. Consequently, several persons refused to have their premises disinfected. Under such circumstances it is not surprising that the epidemic broke out again in May and continued till the autumn, causing, as was stated at the time at the Ministry of the Interior, 767 deaths, making a total of 869 deaths from cholera during 1893. The local authorities officially acknowledged the existence of cholera in 1892, when there were 82 deaths; they officially denied the existence of cholera in 1893, when there were 869 deaths from this same disease. Thus Marseilles totally disregarded the Dresden International Sanitary Convention to which the French Government had subscribed; though in 1892, under circumstances far less serious, they had observed its stipulations. Of course, this inconsistent policy was due to the fear that by again officially recognising the existence of cholera at Marseilles the shipping interests of that port would be affected. But what shall we think of the present attitude of the local authorities? Cholera is far more dangerous to Western Europe than plague. Recent experience has proved that we are not yet free from the danger of cholera; but though ships and travellers have come from plague-infected countries over and over again they have not imported plague in this part of the world. For weeks ships had arrived at Marseilles from Bombay, where plague existed in a virulent form, and no one took the slightest notice nor was any mischief done. But one day the papers announced that a small boat which was making its way up the Seine to Paris with some carpets from Bombay on board had been stopped. Thereupon an indescribable and inexplicable panic set in at Marseilles. That town, which had been so anxious that nothing should be done likely to interfere with its commercial relations, suddenly declared itself in favour of applying quarantines in the strictest possible manner. The measures taken exceeded considerably what the law sanctioned, but the authorities at Marseilles declared that if merchandise from India was landed there would be riots and bloodshed. So great was the determination shown that the Government had to yield and strict quarantines were imposed. The population which had failed to take proper precautions against the real danger of cholera enforced illegal and exaggerated precautions against the very problematical danger of plague. The memory of the terrible plague epidemic which devastated Marseilles in 1720 has not been obliterated and accounts for the actual panic. This terror has caused the present inconsistent action. In 1893 Marseilles acted illegally to prevent interference with its commercial interests, and to-day Marseilles has again acted illegally, with the result that it has completely wrecked those self-same commercial interests. The Central Government, on its side, by tolerating this illegal action so as to prevent bloodshed, has produced a state of affairs which may well provoke the bloodshed it seeks to avoid.

The imposition of quarantines has thrown the dock labourers out of employment. Further, the oil and soap mills are at a standstill. Marseilles is renowned for its soap, which is supposed to be made with the oil from the olives of the neighbourhood; but what will become of French olive oil without Indian linseed? The demand for the renowned olive oil of Provence is far and away in excess of the supply. The deficiency is made up by adulteration with linseed and cottonseed oil; and now that the importation of linseed from India is checked the oil and soap factories are discharging their workpeople. The town of Marseilles, having broken the French law and brought about this calamity, thereupon coolly applies to the French Government to send subsidies out of the public treasury to relieve the distress caused by its own illegal action. On Feb. 17th last there were threatening demonstrations of the unemployed in the streets of Marseilles. The police had to turn out in force and some rioting ensued. The Prefect had to appeal to the employers and beg them to reinstate some of the men they had discharged. The mayor, on his side, opened relief works at the Cemetery of St. Charles, which is to be cleared. In the Catalan district a yard was opened where men were set to work at sawing wood, and many other efforts were made to relieve the distress of the unemployed. Nevertheless, the penury is so widespread that several deaths from starvation have been recorded. Such are the blessings of quarantine! On the other hand, has the danger of importing plague, if such danger exists, been avoided? Hardly had the quarantine been imposed than it was discovered that there was no proper means of disinfecting the suspected ships. Dr. Chantemesse, of the Pasteur Institute, was dispatched in hot haste to the quarantine station of Frioul, an island outside the port of Marseilles. He was accompanied by members of the Special Commission recently appointed by the Sanitary Council of Marseilles. These gentlemen discussed how a chamber could be installed for the fumigation of such merchandise, &c., as could not

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be placed within the disinfecting stoves and exposed to the action of steam under pressure. M. Guérard, engineer in chief of the *Ponts et Chaussées*, was instructed to draw up an estimate within the twenty-four hours. He reported that such an installation would cost £6000. Thereupon another conflict arose as to who should pay this sum. It was argued that as, even in normal times, the State receives £16,000 a year from the ships detained at Frioul, it was the Government and not the municipality that should pay.

While these matters are under discussion and the commerce of Marseilles is being very seriously injured it is evident that the quarantine has been broken through over and over again. If the plague can be imported by passengers and merchandise, any number of passengers and merchandise coming from Bombay were landed at Marseilles after the plague had begun and before the quarantine was imposed. Then during the two previous years plague might in a like manner have been imported from China, notably from Hong-Kong, for no one ever thought of taking any precautions. Now, again, that the quarantine has been imposed at Marseilles, what happens? Passengers to avoid this inconvenience change ships at Alexandria. There is no quarantine against Egypt, therefore passengers from Bombay by merely changing ships on their way homewards can land at Marseilles without let or hindrance. Others have landed at Brindisi and entered France *viâ* Modena. Indeed, it has been proved over and over again that, in face of modern facilities of communication, it is absolutely impossible to organise an effective quarantine. Sanitary improvements constitute the really effective check to the spread of epidemics. Such improvements have been attempted in Marseilles, but we have seen what obstacles are placed in the way of their realisation.

THE INTERNATIONAL SANITARY CONFERENCE.

FROM Venice under date March 6th our Special Correspondent writes:—

Its preparatory business concluded, the Conference nominated two sub-committees to formulate measures of defence against the invasion and spread of the pestis bubonica, one committee acting for Europe, the other for the non-European countries.

The European sub-committee proposed, with the approval of the Conference, that the countries in which a single case of the "pestis" had been certified should notify the same to the others, either through diplomatic or consular agencies, or, failing these, directly by telegraph. Thereafter detailed reports on the origin, course, and issue of the disease should be dispatched to the same countries at least once a week, the reports indicating specially the measures adopted to restrict as much as possible the spread of the "pestis."

For "infected arrivals by rail" or otherwise by land the sub-committee, again with the approval of the Conference, proposed to make disinfection severely obligatory. Land quarantine and sanitary cordons are to be suppressed, the delegates being unanimous in discrediting such measures and in replacing them by disinfection as practised by modern science. Each country, however, may reserve the right of barring its own frontiers, only, however, against *bonâ fide* cases or others warrantably suspected as such. When medical visits are established on a frontier these must, to save time, synchronise with the custom-house examinations. Passenger trains, with luggage or postal mails, shall not be detained at the frontier; but if a carriage be found to contain a real or suspected case of "pestis" it shall be unhooked from the train at the frontier or the nearest station, so as to be disinfected and shall join the train following, while the original train proceeds on its course.

Travellers coming from infected countries shall be subjected to a surveillance of eight days. Individual Governments may reserve the right of taking special measures of precaution against gipsies, vagrants, emigrants, or such persons as cross the frontier in companies.

For the disinfection of ships the following regulation was approved:—Patients suffering from the "pestis" to be immediately landed and isolated; the rest of those on shipboard to be subjected to surveillance not exceeding ten days, counting from the development of the last case; passengers' personal effects, luggage generally, and goods or cargo to be disinfected; the bilge water shall be removed before the general disinfection of the ship.

Suspected ships shall be subjected to a simple medical visit, but the passengers' personal effects and those of the crew will have in every case to be disinfected.

Special measures will be taken by each Government for the ships conveying emigrants or found to be in bad hygienic condition.

Ships declining to undergo such measures will have to land their passengers and goods. The former as well as the latter will have to undergo the regulation measures, after which the ships may resume their voyage.

Such are the prescriptions for European arrivals. Those for extra-European arrivals have next to be enumerated. Meanwhile the importance of both groups of measures lies in this, that after their adoption the diplomatic section of the Conference will digest them in a species of international code which will without question be accepted by all the States represented at the Conference, including those—viz., Turkey, Great Britain, and Sweden and Norway—which hitherto have not adhered to the Paris Convention. These Powers, in fact, have, through their delegates, given official adhesion to the aforesaid Convention at the Conference now sitting.

The measures of non-European application for the prevention of the "pestis" are the following. At the ports of departure there will be made an obligatory hygienic visit to every individual at the moment of embarkation, followed by a rigorous compulsory disinfection of all articles, whether infected or suspected. No one betraying symptoms of the "pestis" will be allowed to embark, and as for pilgrims, they will have to show that they have the means necessary for the voyage to the holy places, for their sojourn thereat, and for their return therefrom.

For the passage of ships through the Suez Canal, those ships which are "recognised" shall have free and immediate passage from the port of departure, but will not be able to pass at Suez unless they have for ten days at least been *en route* from the last port considered to be infected.

Those non-recognised or suspected, if they are provided with a physician and disinfecting apparatus, will be able to pass the canal in quarantine; others not so provided will have to proceed to the Sources of Mosé for disinfection and for sanitary overhauling. This regulation holds, also, in the case of postal or passenger vessels which have made a voyage of at least fourteen days.

Those, on the other hand, the voyages of which have been of less duration and which have passengers direct for Egypt, will disembark the same at the Sources of Mosé. They will be isolated for twenty-four hours, their effects will be disinfected, and then they will have free course like the vessels themselves.

The infected vessels will be detained at the Sources of Mosé. Patients suffering from the "pestis" will be disembarked and isolated in hospital; the other passengers also disembarked and isolated under surveillance for a period not exceeding ten days; all effects, goods, and the ship itself shall be disinfected. Greater consideration will be shown to passengers on ships having on board a physician and disinfecting apparatus.

The Conference proceeded to regulate in every detail the surveillance and disinfecting service at Suez and the Sources of Mosé. The visit will be by day. The medical service is entrusted to seven duly qualified officers—to wit, a physician-in-chief, with a salary of from 12,000 to 15,000 fr.; four subordinates, with salaries from 8000 to 12 000 fr.; and two auxiliaries, with a minimum salary of 6000 fr.

Similarly regulated was the passage of the Suez Canal in quarantine. When such passage is admitted notice thereof is telegraphed to the country interested, warning being given, under penalties, to those vessels which did not go to the port indicated by the port commandant, except in cases of *force majeure*.

Specially stringent measures are applied to pilgrim vessels so as to ensure their being in the best sanitary condition possible and to obviate in every way the risk of their diffusing the "pestis." The regulations are directed to the stage before departure and to that during the voyage in case of illness or death among the pilgrims, severe fines being imposed on the captains failing scrupulously to observe the regulations in question.

Regulations are also laid down for the hygienic surveillance applicable to pilgrim vessels in the sanitary station

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of Caraman, the improvements to be introduced into it, and those to be inaugurated at other Red Sea stations.

As well for European as for non-European arrivals the trade in personal effects, carpets, rags, skins, and such goods as may easily convey the "pestis" is strictly forbidden.

By such legislation as the above loyally enforced the Conference expresses the hope that all risk of invasion from the "pestis," or the diffusion of the same in non-infected countries, will be obviated.

BUBONIC PLAGUE IN INDIA.

WHILE the progress of the plague shows signs of abatement in Bombay city, it cannot be said that it has undergone much change for the better in some other places. Still, it is confidently believed that the disease is beginning to die out; it spreads very slowly and remains localised in the Bombay Presidency and Lower Sind, and shows no sign of extending as an epidemic over India generally. It seems to us that there is a good deal of point and pertinence in the remarks of the *Saturday Review* of the 6th inst. in regard to the anxiety that is being shown on the continent of Europe to keep out plague by quarantining ships, disinfecting baggage, and fumigating cargo that comes from the East. Hong-Kong may, says our contemporary, be taken, for purposes of illustration, as a centre of infection in 1894. It is in communication by steam and otherwise with a large number of other ports on the east coast of China and with Formosa and Japan, with the Philippines, Borneo, Java, Saigon and the Straits, as well as with India and Ceylon. The disease already existed at Canton, whence it probably came to Hong-Kong. Two years later it broke out suddenly at Bombay, although there is very little merchandise made or prepared for shipment in Hong-Kong that would be likely to go to Bombay. Is not the disease, asks the *Saturday Review*, more probably carried on the persons of those infected than on merchandise as a vehicle, and then when such infected persons reach a place reeking with filth it finds a suitable habitat and flourishes vigorously? Be this as it may, there is no doubt in our minds that local conditions are a most important factor, that filth is the great fertiliser and the ground the vitaliser of the plague bacillus. Calcutta, we are glad to say, remains absolutely free from the disease. Very elaborate and stringent arrangements have been made all over India under the Epidemic Diseases Act to prevent the malady from spreading.

Lord Sandhurst (the Governor) has issued a notification appointing a special committee of four members—General Gatacre, Mr. Snow (commissioner), Surgeon-Major Dimmock, and Mr. James (municipal engineer)—to carry out, under the orders of the Government, stringent measures to suppress and prevent the spread of the plague in Bombay. These measures, the Governor states, should comprise organisation—first, for the discovery of all cases; secondly, for the treatment of all cases in the hospitals; and thirdly, for the gradual segregation, so far as possible, of those persons who have been living in the same room with the plague-stricken or have been in close attendance upon them. The committee are given the fullest powers to enforce the measures.

Dr. Yersin has arrived in Bombay from Saigon bringing a quantity of anti-plague serum with him. Professor Koch is expected to proceed to India as soon as he has completed his work at the Cape in regard to the rinderpest; and in the meantime M. Haffkine and Professor Hankin are actively prosecuting their researches, the former in the experimental preparation and application of a prophylactic antitoxin serum.

The Secretary of State for India has received an official telegram from the Governor of Bombay in continuation of the previous telegram of March 1st. "For the week ending March 5th the deaths from all causes in Bombay city were 1870, reported plague deaths, 635. For the week ended March 4th: 397 dwellings condemned, 115 recommended for alterations, tiles removed from 931, floors dug up in 560, and 1727 limewashed, 210 vacated, and 46 have been destroyed by fire. Notification issued under Epidemic Diseases Act places carrying out of measures to suppress and prevent spread of plague in Bombay city in the hands of executive committee of four, who are rapidly organising improved and extended staff for house-to-house visitation and general health department; also organising large extension of hospitals with segregation camps attached for occupants of infected rooms and houses, and measures for removal thereto of sick and probably infected.

"In Poona plague still very prevalent, and no sign of diminution. For Poona municipal and cantonment areas executive committee arranged, who are organising complete scheme for house-to-house visitation, hospital, and segregation camps, and removal thereto of sick and probably infected.

"In worst affected places in Thana district—namely, Bandra, Coorla, and Bhiwandi—active measures under European supervision have been in force for more than a week. In Bandra the number of cases has decreased; in Coorla and Bhiwandi increased. Plague has newly appeared in five more villages in Thana district, but total number of reported cases in the district very slightly exceeds those of previous weeks.

"In Surat district the number of cases and of places affected both increased; elsewhere in the Presidency proper the only local cases for week ended March 5th were: In Satara district, 13 cases, 11 deaths; in Ratnagiri district, 3 cases, 2 deaths; in Kolaba district, 25 cases, 20 deaths; in Kathiawar district, 2 cases, 1 death; in Baroda district, 16 cases, 13 deaths. Railway inspection in force at Ahmedabad, Bhusawal, Dhond, Hotji, Londa, as well as Kalyan and Palghar.

"Karachi plague deaths for week, 200. Local cases have occurred at Sukkur; elsewhere in Sind no further indications of spread. In Karachi more patients are being taken to hospitals."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6412 births and 3822 deaths were registered during the week ending March 6th. The annual rate of mortality in these towns, which had been 18·8 and 19·4 per 1000 in the two preceding weeks, declined again last week to 18·1. In London the rate was 17·4 per 1000, while it averaged 18·6 in the thirty-two provincial towns. The lowest rates in these towns were 12·6 in Derby, 12·9 in Croydon, 13·6 in Birkenhead, and 13·9 in Huddersfield; the highest rates were 20·1 in Birmingham, 21·4 in Plymouth, 22·7 in Salford, and 23·0 in Manchester. The 3822 deaths included 331 which were referred to the principal zymotic diseases, against 316 and 379 in the two preceding weeks; of these, 103 resulted from whooping-cough, 67 from diphtheria, 59 from measles, 45 from diarrhœa, 26 from "fever" (principally enteric), 20 from scarlet fever, and 6 from small-pox. The lowest death-rates from these diseases were recorded in Croydon, Sunderland, Norwich, and Newcastle-upon-Tyne; while they caused the highest rates in Blackburn, Bolton, Salford, and Plymouth. The greatest mortality from measles occurred in Salford, Bolton, and Plymouth; and from whooping-cough in Birmingham, Bristol, Plymouth, Swansea, Blackburn, and Burnley. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 67 deaths from diphtheria included 43 in London, 4 in West Ham, and 3 in Birmingham. Six fatal cases of small-pox were registered in London, but not one in any other of the thirty-three large towns. There were 43 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 6th inst., against 38, 34, and 43 at the end of the three preceding weeks; 6 new cases were admitted during the week, against 20, 3, and 18 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2746, against 3050, 2901, and 2817 on the three preceding Saturdays; 211 new cases were admitted during the week, against 226, 227, and 237 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 335 and 368 in the two preceding weeks, declined again to 307 last week, and were 273 below the corrected average. The causes of 57, or 1·5 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were

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duly certified in West Ham, Portsmouth, Bristol, Manchester, Salford, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Halifax, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 28·8 to 25·3 per 1000, further fell to 24·9 during the week ending March 6th, but exceeded by 6·8 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18·0 in Leith and 18·8 in Aberdeen, to 27·2 in Glasgow and 32·4 in Perth. The 743 deaths in these towns included 36 which were referred to whooping-cough, 30 to measles, 16 to diarrhœa, 5 to "fever," 5 to scarlet fever, and 4 to diphtheria. In all, 96 deaths resulted from these principal zymotic diseases, against 119 and 86 in the two preceding weeks. These 96 deaths were equal to an annual rate of 3·2 per 1000, which was 1·6 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 45 and 32 in the two preceding weeks, rose again to 36 last week, and included 24 in Glasgow and 7 in Edinburgh. The deaths referred to measles, which had been 42 and 30 in the two preceding weeks, were again 30 last week, of which 18 occurred in Glasgow, and 10 in Edinburgh. The 5 fatal cases of scarlet fever corresponded with the number recorded in the preceding week, and included 2 in Glasgow. The 5 deaths referred to different forms of "fever" exceeded the number in any recent week, and included 3 in Glasgow, where 3 of the 4 fatal cases of diphtheria were also recorded. The deaths from diseases of the respiratory organs in these towns, which had been 218 and 231 in the two preceding weeks, declined again last week to 203, but exceeded by 92 the number in the corresponding period of last year. The causes of 47, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 43·4 and 37·6 per 1000 in the two preceding weeks, rose again to 45·2 during the week ending March 6th. During the past nine weeks of the current quarter the death-rate in the city has averaged 40·9 per 1000, the rate during the same period being 18·7 in London and 22·7 in Edinburgh. The 303 deaths registered in Dublin during the week under notice showed an increase of 51 upon the number in the preceding week, and included 79 which were referred to the principal zymotic diseases, against 72 and 55 in the two preceding weeks; of these, 44 resulted from measles, 21 from whooping-cough, 7 from "fever," 4 from scarlet fever, and 3 from diarrhœa. These 79 deaths were equal to an annual rate of 11·8 per 1000, the zymotic death-rate during the same period being 1·6 in London and 3·6 in Edinburgh. The fatal cases of measles, which had been 43 and 34 in the two preceding weeks, rose again to 44 last week. The deaths from whooping-cough, which had declined in the three preceding weeks from 25 to 12, rose again to 21 last week. The 7 deaths referred to different forms of "fever" exceeded the number in any week during the current year; and the mortality from scarlet fever also exceeded that recorded in the preceding week. The 303 deaths in Dublin last week included 50 of infants under one year of age, and 49 of persons aged upwards of sixty years; the deaths of infants showed a slight increase, while those of elderly persons were slightly below those recorded in the preceding week. Fourteen inquest cases and 5 deaths from violence were registered; and 70, or nearly a fourth, of the deaths occurred in public institutions. The causes of 22, or more than 7 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING FEBRUARY, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during February in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 8·7 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 12·6, 10·7, and 9·0 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Kensington, St. George Hanover-square, St. James Westminster, Marylebone, Hampstead, St. Martin-in-the-Fields, and City of London; while they showed the largest excess in St. Giles, Bethnal Green, Poplar, Battersea, Camberwell, Greenwich, and Lee. Forty-eight cases of small-pox were notified in London during February, against 3 and 8 in the two preceding months; of these, 29 belonged to Camberwell, 6 to Strand, 5 to the Port of London, 2 to Stoke Newington, and 2 to Lambeth sanitary areas. There were 43 cases of small-pox under treatment in the Metropolitan Asylum Hospitals at the end of February, against 1, 3, and 8 at the end of the three preceding months; 53 new cases were admitted during the month, against 7 in January. The prevalence of scarlet fever showed a further decline from that recorded in recent months; this disease was proportionally most prevalent in Hackney, St. Giles, St. Olave Southwark, Battersea, Wandsworth, Greenwich, and Lee sanitary areas. The Metropolitan Asylum Hospitals contained 2775 scarlet fever patients at the end of February, against 3932, 3601, and 3246 at the end of the three preceding months; the weekly admissions averaged 228, against 356, 355, and 245 in the three preceding months. The prevalence of diphtheria in London differed but slightly from that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in St. George-in-the-East, Mile End Old Town, Poplar, Camberwell, Greenwich, Lewisham, and Woolwich. There were 855 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of February, against 777, 829, and 897 at the end of the three preceding months; the weekly admissions averaged 101, against 110, 119, and 105 in the three preceding months. The prevalence of enteric fever in London showed a slight further decline from that recorded in recent months; this disease was proportionally most prevalent in Chelsea, Stoke Newington, St. Luke, and Bermondsey sanitary areas. Erysipelas showed the highest proportional prevalence in St. Pancras, St. Luke, Shoreditch, Bethnal Green, Poplar, and Lee sanitary areas. The twenty-six cases of puerperal fever notified during February included 7 in Lambeth and 5 in Islington sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, Feb. 27th, the deaths of 6344 persons belonging to London were registered, equal to an annual rate of 18·5 per 1000, against 19·2, 17·6, and 18·2 in the three preceding months. The lowest death-rates during February in the various sanitary areas were 12·8 in Hampstead, 13·4 in Stoke Newington, 14·1 in Plumstead, 14·4 in Paddington, 15·1 in Lewisham, 15·2 in Chelsea, and 15·3 in St. George Hanover-square; the highest rates were 24·2 in Clerkenwell, 24·3 in Limehouse, 24·6 in City of London, 24·8 in St. George Southwark, 25·0 in St. Olave Southwark, 26·2 in St. Saviour Southwark, and 27·2 in St. George-in-the-East. During the four weeks of February 556 deaths were referred to the principal zymotic diseases in London; of these, 181 resulted from diphtheria, 175 from whooping-cough, 58 from diarrhœa, 52 from scarlet fever, 44 from measles, 40 from enteric fever, 4 from small-pox, and 2 from ill-defined forms of continued fever. These 556 deaths were equal to an annual rate of 1·6 per 1000; no death from any of these diseases was recorded during the month under notice in St. Martin-in-the-Fields; among the other sanitary areas they caused the lowest death-rates in St. George Hanover-square, Westminster, Hampstead, St. Saviour Southwark, and St. George Southwark; and the highest rates in St. George-in-the-East, Limehouse, Camberwell, Greenwich, and Woolwich. Four fatal cases of small-pox were registered in London during February, of which 2 belonged to Camberwell, 1 to Greenwich, and 1 to St. Pancras sanitary areas. The 44 deaths referred to measles were less than a third of the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Clerkenwell, Bethnal Green, Limehouse, and

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—FEBRUARY, 1897.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1897.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.													
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.	Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
LONDON...	4,463,163	48	1289	967	1	198	1	26	447	—	2977	8·7	4	44	52	181	175	—	40	2	58	556	1·6	6344	18·5	126
West Districts.																										
Paddington	126,161	—	35	21	—	1	—	1	18	—	76	7·9	—	—	—	3	4	—	—	—	2	9	0·9	139	14·4	102
Kensington	171,427	—	29	16	—	3	1	—	21	—	70	5·3	—	—	2	3	4	—	1	—	1	11	0·8	211	16·0	139
Hammersmith	105,959	—	27	11	—	5	—	1	6	—	50	6·2	—	—	1	3	2	—	—	—	1	7	0·9	155	19·1	163
Fulham	120,040	—	28	19	—	1	—	—	8	—	56	6·1	—	—	3	2	4	—	—	—	1	10	1·1	149	16·2	114
Chelsea	96,692	—	27	26	—	9	—	—	9	—	71	9·6	—	1	1	3	3	—	2	—	2	12	1·6	113	15·2	117
St. George Hanover-square	80,330	—	12	2	—	—	—	1	2	—	17	2·8	—	1	—	1	—	—	—	—	—	2	0·3	94	15·3	120
Westminster	53,027	—	8	6	—	3	—	—	7	—	24	5·9	—	—	1	—	1	—	—	—	1	3	0·7	76	18·7	149
St. James Westminster	22,576	—	4	2	—	1	—	—	—	—	7	4·0	—	—	—	—	3	—	—	—	1	4	2·3	44	25·4	273
North Districts.																										
Marylebone	140,808	—	17	15	—	3	—	—	12	—	47	4·4	—	—	—	3	4	—	—	—	3	10	0·9	218	20·2	116
Hampstead	77,275	—	15	11	—	4	—	—	4	—	34	5·7	—	—	—	—	2	—	—	—	1	3	0·5	76	12·8	67
St. Pancras	242,255	1	49	35	—	10	—	1	41	—	137	7·4	1	3	3	7	7	—	3	—	3	27	1·6	336	18·1	95
Islington	341,134	—	91	54	—	19	—	5	27	—	196	7·5	—	3	4	14	13	—	4	—	1	39	1·5	454	17·4	104
Stoke Newington	34,136	2	7	2	—	4	—	1	2	—	18	6·9	—	—	—	1	1	—	—	—	—	2	0·8	35	13·4	93
Hackney	216,698	—	87	42	—	5	—	1	20	—	155	9·3	—	1	4	9	4	—	1	—	—	19	1·1	259	15·6	117
Central Districts.																										
St. Giles	37,840	1	17	3	—	3	—	1	6	—	31	10·7	—	—	1	1	2	—	—	—	—	4	1·4	66	22·7	197
St. Martin-in-the-Fields	12,711	—	1	1	—	1	—	—	1	—	4	4·1	—	—	—	—	—	—	—	—	—	—	—	17	17·4	—
Strand	23,552	6	3	3	—	1	—	—	1	—	14	7·7	—	—	—	—	2	—	—	—	1	3	1·7	41	22·7	80
Holborn	30 493	—	7	4	—	1	—	—	3	—	15	6·4	—	1	—	—	1	—	—	—	1	3	1·3	55	23·5	105
Clerkenwell	66,162	—	11	17	—	5	—	—	2	—	35	6·9	—	3	—	3	2	—	3	—	—	11	2·2	123	24·2	165
St. Luke	41,279	—	8	5	—	7	—	—	10	—	30	9·5	—	—	1	1	2	—	—	—	—	4	1·3	75	23·7	146
City of London	30,228	—	3	4	—	2	—	—	1	—	10	4·3	—	1	—	1	1	—	2	—	—	5	2·2	57	24·6	154
East Districts.																										
Shoreditch	121,883	—	33	37	—	3	—	—	23	—	96	10·3	—	1	2	11	2	—	2	—	1	19	2·0	195	20·9	107
Bethnal Green	129,098	—	36	37	—	7	—	—	26	—	106	10·7	—	7	2	8	1	—	2	1	2	23	2·3	189	19·1	115
Whitechapel	79,724	—	23	23	1	4	—	—	11	—	62	10·1	—	—	2	2	1	—	—	—	—	5	0·8	121	19·8	117
St. George-in-the-East	47,917	—	9	15	—	2	—	—	7	—	33	9·0	—	2	1	3	3	—	1	—	—	10	2·7	100	27·2	114
Limehouse	68,508	—	16	12	—	2	—	—	8	—	38	8·5	—	3	—	2	4	—	1	—	1	11	2·5	109	24·3	165
Mile End Old Town	111,883	—	28	42	—	1	—	1	6	—	78	9·1	—	4	1	8	5	—	1	—	1	20	2·3	152	17·7	94
Poplar	169,811	1	48	55	—	10	—	1	32	—	147	11·3	—	7	4	8	5	—	—	—	1	25	1·9	280	21·5	141
South Districts.																										
St. Saviour Southwark	24,919	—	3	7	—	1	—	—	4	—	15	7·8	—	—	—	—	—	—	—	—	1	1	0·5	50	26·2	152
St. George Southwark	60,388	—	18	4	—	4	—	—	6	—	32	6·9	—	—	—	1	1	—	—	—	—	2	0·4	115	24·8	167
Newington	122,191	—	43	23	—	4	—	1	13	—	84	9·0	—	1	—	3	14	—	1	—	3	22	2·3	214	22·8	144
St. Olave Southwark	11,480	—	5	2	—	—	—	1	—	—	8	9·1	—	—	—	—	—	—	—	—	1	1	1·1	22	25·0	189
Bermondsey	85,629	1	20	22	—	8	—	—	7	—	58	8·8	—	—	1	3	4	—	1	—	2	11	1·7	144	21·9	151
Rotherhithe	40,643	—	6	9	—	2	—	—	4	—	21	6·7	—	1	—	2	1	—	—	—	1	5	1·6	63	20·2	187
Lambeth	300.048	2	97	66	—	17	—	7	23	—	212	9·2	—	2	4	12	16	—	4	—	7	45	2·0	463	20·1	160
Battersea	168,877	—	93	31	—	6	—	—	14	—	144	11·1	—	—	3	7	7	—	2	—	1	20	1·5	199	15·4	118
Wandsworth	195,612	—	77	41	—	11	—	1	12	—	142	9·5	—	1	6	8	6	—	3	1	3	28	1·9	244	16·3	125
Camberwell	257,575	29	84	129	—	9	—	—	25	—	276	14·0	2	1	4	21	19	—	1	—	6	54	2·7	348	17·6	129
Greenwich	178,367	—	83	55	—	12	—	1	14	—	165	12·1	1	—	1	10	14	—	4	—	3	33	2·4	254	18·6	136
Lewisham (excluding Penge)	86,152	—	28	27	—	5	—	1	2	—	63	9·5	—	—	—	7	4	—	—	—	3	14	2·1	100	15·1	121
Woolwich...	41,409	—	10	17	—	—	—	—	1	—	28	8·8	—	—	—	6	2	—	—	—	1	9	2·8	62	19·5	73
Lee	39,215	—	19	9	—	1	—	—	7	—	36	12·0	—	—	—	3	—	—	1	—	—	4	1·3	61	20·3	174
Plumstead	61,057	—	22	5	—	1	—	—	1	—	29	6·2	—	—	—	1	4	—	—	—	1	6	1·3	66	14·1	105
Port of London	—	5	2	—	—	—	—	—	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 51 cases of membranous croup.

† Including deaths from membranous croup.

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Poplar sanitary areas. The 52 fatal cases of scarlet fever were 24 below the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 181 deaths from diphtheria were 36 above the corrected average number; this disease was proportionally most fatal in Shoreditch, Bethnal Green, Mile End Old Town, Rotherhithe, Camberwell, Lewisham, Woolwich, and Lee sanitary areas. The 175 fatal cases of whooping-cough were 102 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in St. James Westminster, Newington, Camberwell, Greenwich, and Plumstead. The 40 deaths referred to enteric fever slightly exceeded the corrected average number; this disease was proportionally most fatal in Clerkenwell and City of London sanitary areas. The 58 fatal cases of diarrhœa almost corresponded with the corrected average number. In conclusion, it may be stated that the mortality in London during February from these principal zymotic diseases was more than 26 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths under one year of age to births registered, was equal to 126 per 1000 during February, and was below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Hampstead, St. Pancras, Stoke Newington, St. Martin-in-the-Fields, Strand, Mile End Old Town, and Woolwich; and the highest rates in St. James Westminster, St. Giles, Clerkenwell, Limehouse, St. George Southwark, St. Olave Southwark, Rotherhithe, and Lee.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN A. W. BEWLEY and Surgeon-Major S. Westcott have arrived in Dublin for duty.

Surgeon-Lieutenant-Colonel J. Ring to be Brigade-Surgeon-Lieutenant-Colonel, vice E. Townsend, promoted. Surgeon-Captain James W. Jennings is seconded for service with the Egyptian Army.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Colonel W. P. Warburton, Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, is appointed to officiate as Director-General, Indian Medical Service, and Sanitary Commissioner with the Government of India, during the absence on deputation of Surgeon-Major-General J. Cleghorn, or until further orders. Brigade-Surgeon-Lieutenant-Colonel T. H. Hendley, C.I.E., Residency Surgeon, Jeypore, and Administrative Medical Officer, Rajputana, is appointed to officiate as Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, during the absence on deputation of Surgeon-Colonel W. P. Warburton, or until further orders. Surgeon-Captain W. H. Ogilvie, Bengal Establishment, whose services have been temporarily placed at the disposal of the Chief Commissioner of the Central Provinces, is posted to the Jubbulpore District, on special famine duty. Surgeon-Lieutenant R. F. Standage is appointed to be District Medical Officer, Sholapore. Surgeon-Lieutenant-Colonel J. McCloghry to be Civil Surgeon, Kurrachee. Surgeon-Major W. H. Burke to be Medical Officer to the Kathiawar Political Agency and in charge of the West Hospital, Rajkote. Surgeon-Captain J. B. Smith and Brigade-Surgeon-Lieutenant-Colonel C. T. Peters have respectively delivered over and received charge of the Bijapore Prison. Brigade-Surgeon-Lieutenant-Colonel C. T. Peters and Surgeon-Lieutenant-Colonel H. McCalman have respectively delivered over and received charge of the Dharwar Prison.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Staff Surgeon M. J. McCarthy, M.D., to the *Wildfire*, for Yarmouth Hospital. Surgeons: J. W. W. Stanton to the *Plassy*; R. S. Bernard to the *Pigeon*; H. A. Julius to the *Magdala*, additional for disposal; W. R. Center to the *Cambridge*; W. S. H. Sequeira to the *Seaflower*; J. C. G. Reed to the *Martin*; W. M. Keith to the *Nautilus*; W. E. Mathew to the *Pilot*; W. H. Thomson to the *Lion*; W. D. Adams to the *Sealark*; A. T. Wyzard to the *Wanderer*; and Cornelius Bradley to the *Melampus*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant F. J. L. Warwick to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 4th Lancashire: Surgeon-Captain T. B. Grimsdale, M.B., resigns his commission. *Rifle:* 2nd Volunteer Battalion the Royal Scots Fusiliers: Surgeon-Lieutenant J. Highet, M.D., resigns his commission. 1st Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant E. R. W. Spratly resigns his commission.

THE WRECK OF THE "WARREN HASTINGS."

The public generally, as well as the army particularly, will feel grateful to the Queen for the telegram expressive of Her Majesty's appreciative recognition of the admirable discipline and conduct of the troops belonging to the King's Royal Rifles and the York and Lancaster Regiment on the occasion of the wreck of the *Warren Hastings*. There is no need to enter into the details of the occurrence, for they are probably fresh in the recollection of most of us. It may suffice to say that nothing was wanting to make up a situation that would try the nerves of the strongest, and that any want of discipline would most probably have been attended with terrible results. There was a strong squall blowing with heavy rain when the ship struck. The soldiers in obedience to orders fell in on the main and troop decks, so as to leave the upper deck free and allow of preparations being made for disembarking; meanwhile, darkness came on and about a thousand men formed a gangway and passed the women and children along, and they were all safely landed on the rocks. The ship was at an angle of about 50°, and had there been any pushing or struggling a number of lives must inevitably have been lost, but there was none; the most perfect discipline was maintained. The position of the engineers in charge of the ship's engines on such occasions as these, or on board one of Her Majesty's ships during a naval action, is one of the most trying that can be conceived, and the "greasers," as such men are often chaffingly nicknamed, who do their duty in times of the gravest danger are among the grandest fellows in existence; they nobly stuck to their work on this occasion, and the coolness and conduct of all, especially of the captain of the ship, seem to have been admirable. On reading a description of an occurrence of this kind the destruction of the *Birkenhead* is called to mind. If we remember aright, the account of that disaster and of the bravery and grand discipline displayed by our troops on that occasion was, by order of the King of Prussia, read out to his troops on parade.

A NEW HOSPITAL FOR WOMEN AT ALDERSHOT.

The wooden hospital which for years has done duty at Aldershot camp for the benefit of the soldiers' wives and families is to be superseded by a new extension of the Cambridge Hospital. Her Royal Highness the Duchess of Connaught laid the foundation-stone of the new wing on March 1st, and when finished the new buildings will consist of two wings, or eleven wards, with a total accommodation of fifty-four beds, in addition to the quarters for nurses and staff. An advantage of the new arrangement is that the staff of the whole hospital will be consolidated and will work in touch with each other.

DEATHS IN THE SERVICES.

Surgeon Richard Henry Way, R.N., at Warrigi, on service with the Benin Expedition, on the 21st ult., aged twenty-nine years. He was appointed Surgeon in 1894.

Brigade-Surgeon-Lieutenant-Colonel D. A. Leslie, A.M.S., medical officer in charge of troops, Perth, on Friday morning, March 5th. He served in the Bhootan Expedition in 1865, including the re-capture of Dewangiri, and was awarded a medal, with clasp.

THE OPERATIONS IN MATABELELAND AND MASHONALAND.

The following members of the medical profession have been mentioned in despatches:—Surgeon-Lieutenant-Colonel J. A. Gormley, A.M.S., Surgeon-Captain Hale, A.M.S., Mr. Strong, Mr. Sutcliffe, and Mr. Redpath.

The *Bombay Gazette* says:—"Surgeon-Major Hatch, Principal of the Grant Medical College, with two of his servants, Surgeon-Captain Childe, Professor of Pathology in the same college, a Parsee medical man, a Parsee member of the corporation, a Mohammedan veterinary inspector in charge of the Lazaretto at Sewri, and a Maratha Hindu in municipal employ have been inoculated against the plague at the Petit Laboratory, Grant Medical College, Byculla, by

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Professor Haffkine. The learned professor, who has prepared the prophylactic lymph, was the first to set the example of making the experiment on the human subject by inoculating himself. It is satisfactory to know that representatives of the various races and creeds in Bombay have not hesitated to follow their example."

The Hants Company Militia Medical Staff Corps will assemble at Netley on May 1st for sixty-three days' preliminary drill, recruits' musketry to take place at Browndown Fort, Gomer. The annual training of twenty-seven days will be as follows: Assembly July 3rd, 1897; dismissal, July 29th, 1897; place of assembly and training Netley.

An obstinate outbreak of measles has taken place on the *Impregnable* training ship at Devonport. There were seven cases removed to hospital on one day last week, and there have been several cases since.

The s.s. *Britannia* has brought home 296 patients for the Royal Victoria Hospital.

Correspondence.

"Audi alteram partem."

"A QUESTION FOR ANÆSTHETISTS."

To the Editors of THE LANCET.

SIRS,—In my short article published in THE LANCET of Feb. 20th under the above heading I drew attention to the fact that the apparatuses used by anæsthetists were in hospital practice passed from patient to patient without being subjected to sterilisation, and that I believed the lung affections commonly attributed to the anæsthetic might very possibly be due in part to infected apparatus. I stated that, whereas in almost every other department rapid progress had been made of late in rendering the patient safer by thorough disinfection of his environment, the danger to the patient of directly applying over his nose and mouth an inhaler that had been used by others had not yet presented itself apparently to the workers in the special field of anæsthetics. To many with whom I have spoken my suggestion has presented itself with such force that they have expressed astonishment that the possibility of danger from this source had occurred to no one before. True, some of your correspondents may have adopted ordinary everyday sort of cleanliness, but sterilisation of apparatus seems never to have occurred to anyone. Now, as all sepsis treated by physicians (I use the term to include all bacterial infection—typhoid, tubercle, &c.) must enter by the respiratory or alimentary tract, the danger of half-stifling a person with an apparatus impregnated by some other person's excreta (breath, sputum, or vomit) should, one would hope, appeal to something more than the imagination of an individual. Take, for instance, the case I had on the operating table a few days ago—a man I have been protecting from tubercle for more than eight years. He came first with tuberculous disease of the tarsus, which, under rest and mercury, subsided, and he was well for two years. He got a situation, the disease returned, went on to suppuration, and involved his ankle. He now had distinct signs of phthisis, blood-spitting, and consolidation of one lung apex. I amputated the foot and the phthisis remained quiescent for four years, though he continued to cough and physical signs were distinctly evident, yet he made rather than lost flesh. A few months ago he accidentally hit the knuckle of his left forefinger with a mallet. An indolent pulpy swelling formed, tuberculous teno-synovitis around the extensor tendon ensued, and I advised the pulpy mass to be all dissected away. Chloroform was given to avoid irritating his tuberculous lungs. Junker's apparatus was used, consisting of a mask, with a somewhat complex top through which the vapour was forced, and whilst he was being put under the patient continually coughed, and on one occasion spat into the apparatus. Think of the next patient for whom this apparatus is used! Why, it is Villemin's original experiment over again without the record of the result, for this distinguished Frenchman first clearly showed the infectiveness of tubercle by tying masks infected with tuberculous sputum over dogs' noses. At the present time no one keeps the after-records of the innumerable experiments thus being daily made, and tubercle is too slow in its development to attract attention by immediate results.

The object of my article was not to impute blame, but to stimulate invention and to insist on greater cleanliness in the use of anæsthetic apparatus. I readily testify to the immense advance made in the more careful administration of anæsthetics during the last ten or fifteen years owing to the employment of gentlemen as special administrators and teachers in this branch. Many of these I count as personal friends, but I doubt if special anæsthetists have much opportunity of studying the after-results of their administrations or of distinguishing between the results of the operation and those of the anæsthetic. It is satisfactory to learn from your correspondence of last week that at one hospital the face-pieces and inhalers are cleansed every day after use, so that the first patient in the morning is lucky enough to have a clean apparatus. This is more than happens at many places, and in large hospitals, where there are often half a dozen operations going on at the same time, and each surgeon has two, three, or four cases in succession, the inhalers go from patient to patient without any attempt at sterilisation. It is agreeable also to note that a gentleman who scouts my suggestion of infection by inhaler as "not even a scientific possibility" goes on to say that "every inhaling bag, mask, and face-piece should be thoroughly washed, or scalded out if possible, between each case." A little more than this is just what I am contending for. I hold that every inhaler should be of such construction as to allow of complete sterilisation, and that this process should always be carried out before it is employed a second time.

It has been suggested to me that I ought not to criticise without being prepared with an alternative contrivance. My idea is that all masks should be made of toughened glass capable of being boiled, and that where a sponge or flannel receiver is employed an asbestos web which may be raised to white heat without injury should be substituted. Where respiratory bags are employed they should be made of red rubber or other material capable of being turned inside out and of resisting injury by boiling.

I am, Sirs, yours faithfully,

R. CLEMENT LUCAS, B.S. Lond., F.R.C.S. Eng.,
Surgeon to Guy's Hospital.

Wimpole-street, W., March 5th, 1897.

WATER-SUPPLIES AND MORTALITY FROM FEVER.

To the Editors of THE LANCET.

SIRS,—During the last two years it has been part of my official duty to investigate the variation and increase throughout Europe for the past half-century at certain periods of life of the rate of mortality among adult males. Incidentally I was led to examine into the relation between water-supplies and enteric fever. As Parliament will have in the coming session many projects for water-supply to large communities before them, I venture to ask that you will grant me a short space in your columns so that I may briefly place before your readers the rate of mortality in 1896 from fever obtained from various official Government statistics. For comparison and to avoid decimals I have computed the mortality from fever per 1,000,000 living from a few typical towns the water-supplies of which are drawn from widely different sources.

Rivers and Chalk.

London	137	Paris	110

Chalk.

Lemberg	288	Epsom (mean of last ten years)	190
Rouen (and wells; three-quarters of a year)	232	Portsmouth	153
Hull	280	Rheims	131
Norwich	193	Brighton	118
		Lille	70

Upland and Moorland.

Belfast	560	Birmingham (and wells in red sandstone)	214
Dublin	453	Leeds	213
Liverpool	322	Leicester	202
Sheffield	298	Brussels (and wells)	190
Manchester	229		
Glasgow	223		

Sand and Sand Lakes.

Copenhagen	74	Amsterdam	28
Berlin	65	Ghent	91
The Hague	38		

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Limestone Water.

Linz	277	Gratz	101
Prague (and River Moldene)	214	Pilsen	91
Liége	117		

Filtered River Waters.

Magdeburg	84	Dresden	42
Hamburg	58	Frankfort	42
Cologne	49	Altona	41

Snow Water Lakes.

Zürich	104	Geneva	51
Lausanne	82		

Mountain Water.

Nuremberg	42	Munich	32
Vienna	40		

Other Sources.

Malines (shallow surface wells)	993	Charlottenburg (ground water freed from its ferruginous matter by process of exposure to air)	87
Antwerp (river water treated by iron filtration and shallow wells)	154	Bristol (red sandstone)	79
		Dorking (greensand; mean of last ten yea s)	70

Unfortunately I have been limited in my selection of English towns, as accurate information is at present unattainable owing to the fact that the Registrar-General's mortality returns for the whole of England and Wales for 1896 will not be published until 1898. It will be observed that towns drawing their water-supply from sands, melted snow, and rivers have a lower rate of mortality from fever than those drawing their supply from either chalk, peat, or moorland gathering ground.

Dr. Seaton, the county medical officer for Surrey, has shown in his report on water-supplies that the mean death-rate from enteric fever for the last decade for Epsom and Sutton, which obtain their water-supply exclusively from the chalk, was at the rate of 190 per 1,000,000 living, and that this rate was an increase over the mean death-rate of the previous decade. The mortality from fever at Reigate, another chalk supply, was 160. On the other hand, Dorking, which formerly derived its water from the chalk, but now obtains its water from greensand, had a mean death-rate of 70 per 1,000,000, and shows a material diminution in the death-rate from this cause. In Chertsey, which derives its supply principally from the Thames, the mean death-rate from typhoid fever was 90 per 1,000,000 during the same period. The chalk in the neighbourhood of our large towns is being progressively contaminated by the establishment on its surface of sewage farms, cemeteries, and even by the drainage from isolation hospitals. The rainfall percolating through a soil thus polluted must pass in a contaminated condition through the joint planes and fissures down to the subterranean streams, the reservoirs of this water-bearing stratum. Surely the time has arrived for legislation for the protection against further injury to this important source of supply. A glance at the foregoing table suggests the probable existence of a law which further investigation will either confirm or refute.

In conclusion, I trust that I have made out a *primâ-facie* case for an exhaustive Government inquiry as to the cause of the susceptibility to and immunity from fever amongst populations deriving their water-supply from various sources. Moreover, it is at least open to discussion whether municipal bodies, who are empowered to levy rates for sanitary administration, are suitable authorities to act as amateur managers of trading monopolies.

I am, Sirs, yours faithfully,

A. H. SMEE, M.R.C.S. Eng., F.S.S.,
Deputy Chairman and Chief Medical Advisor, Gresham Life Office, St. Mildred's House, Poultry, E.C.

DR. CULLINGWORTH AND PUERPERAL FEVER: A REFUTATION.

To the Editors of THE LANCET.

SIRS,—Attention has been called to remarks made by Dr. Cullingworth published in your issue of March 6th. As these are so unjust and so calculated to reflect discredit upon practitioners in private practice, I challenge their accuracy.

Dr. Cullingworth states: "Although puerperal fever has practically become a thing of the past in our lying-in hospitals ..... it is impossible to ignore the fact that there has not been a corresponding diminution of mortality from puerperal fever *in ordinary private practice*.' He does not produce any statistics to prove his assertion. His address will have attained the expected results if it is circulated among ladies connected with lying-in hospitals and midwives and so used to blast the good name of practitioners in "ordinary private practice." If the order has gone forth that no such a thing as puerperal fever *must* be officially recognised *in lying-in hospitals*, then I can understand the statement that puerperal fever is "practically a thing of the past." If the diagnosis of puerperal fever is left chiefly to midwives in hospitals, will it be recognised? It is not. Medical Officers of Health have complained of the ignorance shown by medical practitioners diagnosing cases of infectious fevers. It follows if practitioners are so badly educated that they can not *diagnose* puerperal and other fevers, the midwife will be more ignorant. Dr. Cullingworth has failed to tell us how many women *suffered from* puerperal fever, reference being made only to the number who *died*. Let us have a little light upon the number *attacked* in hospital.

The statistics relating to lying-in hospitals are misleading. Unfortunately, I had, when giving evidence before the Select Committee of the House of Commons, to show how sadly unreliable and wide of the truth these hospital statistics are. I pointed out that in most lying-in hospitals (*a*) all unmarried women are rigidly excluded, thus keeping out the illegitimate class, who have an exceptionally high death-rate; (*b*) that in others, those women pregnant for the first time are excluded, thus shutting out those who give the highest death-rate of all—1 in 15; (*c*) that women who had no child living were refused help, thus excluding those malformed or who had some maternal disease which had caused the infant's death; (*d*) that a large number of women leave the lying-in hospital within from seven to ten days after confinement, and are afterwards lost reckoning of; (*e*) that confined women attacked with fever, &c., are removed from the lying-in to a medical or surgical ward or to a fever hospital and are thus lost sight of; (*f*) that the rule of the Registrar-General is frequently ignored which requires that when a woman dies within thirty days after her confinement this fact should be stated in the certificate of the cause of death: and (*g*) that when lying-in hospitals have a low death-rate this is due altogether to the fact that medical practitioners are called in to assist by operation, &c.

The Rule of the Registrar-General of Deaths is:—"Whenever childbirth has occurred within one month before death, the fact should *invariably* be certified, *even though* it may appear that the childbirth has no connexion with the cause of death." How can lying-in hospital statistics include all, up to one month, when many of the women leave within seven to fourteen days after childbirth? Practically all who have left, and who die within seven or fourteen days are omitted. Mr. E. Hart, in his book "Compulsory Notification in England and Wales," p. 45, states that puerperal fever is not even notified, and in this he is backed up by the opinion of health officers. Neither are the deaths from puerperal fever notified to the Registrar. Of what use therefore are such statistics of puerperal fever? None whatever, except to make our profession a laughing stock. Even Dr. Cullingworth does not understand these statistics, as he says: "Deaths occurring in childbed from pre-existing disease, or from causes not directly connected with childbirth, though taking place during labour, or during the lying-in period, are left out of account." The very opposite is the case, as will be seen from the above quoted Rule. If his lapse is used in connexion with lying-in hospital statistics it furnishes another instance of the unreliability of hospital statistics. With such a proviso all deaths could be evaded.

Dr. Cullingworth, although he speaks of "Puerperal fever," fails to tell us what is "puerperal fever"? I have asked for a definition, but the "learned body" of persons connected with the Obstetrical Society seem to be as shy of defining it, as they do of the term "natural labour"! Puerperal fever means—fever in a puerpera. In the 2nd Edition of "The Nomenclature of Disease" page 9 it is stated "the term puerperal fever should no longer be used." Yet we have Dr. Cullingworth using it, and using it so as to reflect discredit upon practitioners. In the 1893 Report of the Registrar General we have the statement that 20,856 infants died from "convulsions," and 4,057 from "teething." These words—"convulsions" and "teething" no more give the true and accurate causes of death than do the words "puerperal fever." As regards the prevention of puerperal fever Dr. Cullingworth has the great supposed panacea of

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the hour—antiseptics. Dr. Bantock has urged absolute cleanliness in our work. This is all that is required. However, as some clergy have entered in House of Lords floating in on "the odour of sanctity," and as some have become "Peers through Beer" so I suppose others hope to obtain popularity by wildly suggesting antiseptics for everything—lying-in cases included.

It is sad that Dr. Cullingworth's mind is so saturated with antiseptics. He says all the puerperal fever deaths are chiefly due to the want of antiseptics. I would, however, rather ask him and others to widen their range of observation and to consider whether the chief causes of puerperal fever and the deaths therefrom are not due to the lamentably poor training which Students now receive in Obstetrics. This is the pivot of the whole question. How many students ever see a case of puerperal fever? If Dr. Cullingworth's statement as to this fever being absolutely "unknown" in hospitals is accurate, it follows that it is an impossibility for them to see a single case! This, too, although from 1871 to 1893 no less than 48,375 mothers died from puerperal fever, and 50,211 from the accidents of childbed. Happy hospitals! When in 1889, I began to look into this sad question of puerperal mortality, I thought it better first to find out something as to how students were "educated"—if I may use that word. The following table shows how students were educated then:—

Name of Examining body.	Lectures in Midwifery, Diseases of Women and infants.	Clinical instruction at Maternity Hospital.	Number of confinements to be attended by each student.
Royal Colleges of Physicians and Surgeons, London	3 months and	3 months	and 20
Society of Apothecaries	" " "	" "	" "
University of London	1 course	—	20
University of Oxford	0	0	0
University of Cambridge	1 course	—	20
University of Durham	3 months and	3 months	and 20
Victoria University	6 " and	3 "	and 20
Royal College of Physicians and Surgeons and Faculty of Physicians and Surgeons, Glasgow	3 "	—	and 6
University of Edinburgh	6 " and	3 "	or 6
University of Glasgow	6 " and	3 "	or 6
University of Aberdeen	6 " and	3 "	or 6
University of St. Andrews	6 " and	3 "	or 6
Royal Colleges of Physicians and Surgeons, Ireland	6 " and	6 "	and 30
Royal College of Surgeons and Apothecaries' Hall	6 " and	6 "	and 30
Royal University ...	6 " and	6 "	and 20
University of Dublin	6 " and	6 "	Not stated

In November, 1890, I memorialised the Medical Council upon the death-dealing state of affairs as shown by the above table. As nothing was done the subject came up again before the Medical Council; and again in 1895. The recommendation of the Council and the Examining Bodies, as agreed upon in 1888, was, that any student was to be admitted to the "final" who showed he had conducted three labours! Three labours! Is it any wonder that at least sixteen women each day die in England from what we dishonestly term "accidents of childbirth"? Would not a little "more light," instead of the antiseptic craze, lessen this terrible death-rate? Fancy the University of Oxford up until 1895 granting its degree to men who had not to present any certificate of theoretical or practical instruction in midwifery! Fancy the Scottish Universities demanding attendance upon 6 labours only! The wonder is that the maternal death-rate is not treble what it now is. Fortunately the Medical Council has withdrawn its death-dealing Resolution, and it now Recommends that the student must have been present at not less than 20 labours (instead of 12) and must have conducted throughout at least 5 labours (instead of 3). This is a magnificent piece of herculean work for the Medical Council, and we must, at present, be content, that it has shown that after five years' pushing it can move! Did the public know the real reason of its not having moved, I think it would be hissed out of existence. The next method by which Dr. Cullingworth can lessen the puerperal mortality would be by increasing the stringency of the medical examinations. If fewer men were "qualified to kill," and more "qualified to cure," the death rate and sick rate would diminish. But what can we expect when we are told by men that the adding of a teaspoonful of carbolic acid to a pint of water is to abolish puerperal fever? It sounds rather like Count Mattei's "green electricitus."

Dr. Cullingworth thinks the great cause of puerperal fever is untrained midwives, and that if they were only licensed, fever would diminish. That is, the mere placing of the "10,000 to 15,000" of the present untrained midwives,—whom he says are doing such harm,—would stop the trouble! This is simple! It is almost as ghastly as the Rules of the Obstetrical Society—which provide that any woman may enter for the Diploma in Midwifery of the Obstetrical Society who can show that she has examined and attended 20 labours, under the care of another midwife, or matron of a hospital. Such, according to the President of the Obstetrical Society is the way in which the puerperal mortality is to almost disappear. Dr. Cullingworth refers to himself as—"a responsible teacher of midwifery." Also he says, "the Obstetrical Society has always been foremost in the effort to reduce the present terrible mortality from childbirth." This seems strange in face of the above fact, that any woman who has attended 20 confinements with a midwife—not having attended one solitary lecture—is qualified to practise midwifery. However, here is the test of this "foremost" policy. Clause 3 of the present Midwives Bill proposes to punish any person who unlawfully uses the term "midwife" with a fine not exceeding £5. Clause 13 of the Plumbers Registration Bill proposes to fine any person using unlawfully the title of plumber a sum not exceeding £20. This is a fair sample—the difference between £5 and £20—of the "foremost" anxiety of the Obstetrical Society to "diminish child-birth mortality." He also quotes Dr. Williams as stating that midwives "often spread puerperal fever broadcast and are often not interfered with." If this be true I think the medical officer for Glamorgan is hardly doing his duty; because such midwives can be brought before the coroner or magistrate and suspended from acting. Again, reference is made to certain districts in Wales in which the people have not the means of employing a practitioner. Need I repeat that each Board of Guardians in Wales has now power to pay a fee of from 20*s.* to 40*s.* to any practitioner they appoint to act in all poor confinements. If the practitioners and people of Wales fail to do so, then let them take the consequences. I am, Sirs, yours truly,

Liverpool, March 10th, 1897. ROBERT R. RENTOUL.

THE INCIDENCE OF PUERPERAL FEVER.

To the Editors of THE LANCET.

SIRS,—In reading Dr. Cullingworth's article on Puerperal Fever and after studying the accompanying map of London it has struck me that the position of the hospitals may have some effect on the incidence of this disease. If anyone will mark in his copy of the map the great teaching hospitals he will see that, with the exception of St. Mary's Hospital and the Royal Free Hospital, they are all situated in the lightly shaded districts—i.e., in those freest from this complaint. Is it not probable that the freedom from puerperal fever is due to the fact that the poorest and dirtiest persons around the hospitals are attended by the students, whilst in the outlying districts this class of individual is at the mercy of the untrained midwife?

I am, Sirs, yours faithfully,

H. BEALE COLLINS,
Medical Officer of Health, Kingston-upon-Thames.

Kingston-hill, March 5th, 1897.

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THE MEDICAL STAFFS OF HOSPITALS AND HOSPITAL ABUSE.

To the Editors of THE LANCET.

SIRS,—In the first leading article in THE LANCET of March 6th, in dealing with this important question you give special prominence to certain opinions which I am supposed to hold in regard to it, which, to be quite accurate, require elucidation. I hope, therefore, you may be willing to open your columns to a discussion on the points raised, and that you will permit me to set forth a few practical aspects of the problem which must be realised and understood if any attempt at reform is to be fruitful in results.

First of all, it is essential to recollect that at the present moment the metropolitan hospitals need, as Dr. Glover has often insisted, "less criticism and more cash." If the present efforts to place the metropolitan hospitals once and for all upon a sound financial basis are supported, as they ought to be supported, by every intelligent person who realises the necessity for the maintenance at their full capacity and high administrative excellence of our London hospitals to-day, then, but only then, will all the money that is required be forthcoming. Any person, therefore, who obtrusively endeavours to draw the herring of controversy across the path to assured financial safety for our hospitals must, to say the least, be suspect as to his motives, and cannot claim now, much less if and when the money is raised, that he is entitled to be heard as a critic who has the well-being of the hospitals really at heart. If once the financial security of our hospitals is assured, every needful alteration of system can rapidly be secured if the profession so wish.

What the friends, and also the critics of hospitals, can very usefully do at the moment is, whilst leaving the time between now and Accession Day free to those who are endeavouring to raise money for the hospitals, to occupy their energies in organising, as you suggest, a conference of the coolest heads of the profession for the purposes of discussion, so as to secure united action and agreement as to the best course to pursue in the interests of everybody. If this is done, the managers of the hospitals, as well as the managers of the various organisations which exist for raising money on behalf of hospitals, will be in a position to deal with any existing abuses that may call for reform. In such circumstances the whole of the questions raised could be treated on their merits, seeing that the attitude of the medical profession will then for the first time in the history of this question, be accurately ascertained and demonstrably provable.

The union of the profession on the subject, or at least the union of those members of the profession who hold office as honorary medical officers of the metropolitan hospitals, is the keystone of the arch of reform. The managers of hospitals, or the most capable and important of them, are as anxious as anyone to reduce the number of out-patients, but they feel that they are not in a position to do this because the means of reduction rests rather with the medical profession than with the lay managers of hospitals to which medical schools are attached. At the present time the medical profession render eleemosynary service to the hospitals, and the governing bodies feel that, so long as the medical profession attached to hospitals desire,—as the managers believe them to desire—to encourage an increase in the numbers of out-patients admitted he managers do not see how it is possible for them, in face of their honorary medical staff's attitude on the question, to reduce the number of out-patients. Experience seems to prove that the managers are justified in their view, for the report of the evidence given before the Lords' Committee on Metropolitan Hospitals, by those who were responsible for the medical teaching at the London hospitals, shows these witnesses to have expressed the opinion, that to reduce the number of the out-patients would be to curtail, not the abuses, but the use of the out-patient department for clinical purposes. This testimony is the more remarkable from the circumstance, that it is in distinct conflict with the findings of Sir William Fergusson's Commission on Out-patient Hospital Administration in the Metropolis in 1871. That Commission recommended, amongst other excellent things, the two following, the adoption of which, in my judgment and experience, are essential to the effectual removal of the abuses complained of:—

1. In order to improve the clinical teaching of the out-patient departments of the special and general hospitals, it is desirable to curtail the present unrestricted system of gratuitous relief, partly by the selection of cases possessing special clinical interest, and partly by the exclusion of those who, on social grounds, are not entitled to gratuitous medical advice. 2. The payment of the medical staff engaged in out-patient work.

It will be seen that the first of these recommendations, made in 1871 on the highest medical authority, embodies the opposite view to that held by several of those who were responsible for the medical teaching at the London hospitals twenty years later. The second recommendation is further wise, because it would afford an opportunity, to make the out-patient department available under proper regulations, not only for the training of students, but for the practical instruction of post-graduates, so that the general body of the profession might not only be helped directly by the facilities for instruction thus afforded to them, but indirectly by securing that none but suitable cases—that is, suitable from a medical and social aspect—were dealt with as out-patients. I do not think it is sufficiently recognised at present by the honorary medical staffs of the hospitals, that it is their duty to see that the mean of efficiency of the general medical service available for Londoners, in the poorer districts especially, shall attain a much higher standard than at present exists. None who have been attached to a large London hospital for a number of years can have failed to realise this fact, for they must have had many cases brought to their notice which were under treatment before coming to the hospitals, and the condition of which when they arrived at the hospital gates proved the soundness of the view so generally held by the poor, that if they have anything the matter with them the best thing they can do, if they want to get speedily well, is to go straight to the hospital. I have ventured to put this point forward because I occupy a somewhat neutral position in the matter, and it is essential that we should look facts in the face.

If we can once secure the union of the profession on the subject, or, as I have said, at least the union of those members of the profession who are attached to hospitals in London, the reduction of the number of out-patients and the removal of the real abuses of out-patient departments could then be enforced in a businesslike manner without difficulty or hardship. If the general body of medical practitioners whose practices have been injured by the present system of out-patient relief choose to coöperate together and to make adequate representations to the members of the honorary medical staff of each of the great hospitals, the attitude of members of those medical staffs which still hold to the opinion that a continuous increase of out-patients is essential for clinical purposes must alter. With such a change of opinion the managers would be able to secure that the out-patient departments should henceforth be conducted with some regard to the interests of the great body of the medical practitioners as well as of the public themselves. There are several out-patient departments where an attempt at a remedy has long been under trial, notably at St. Thomas's Hospital and elsewhere. A brief account of the system of out-patient relief at every London hospital to-day would prove valuable at the moment.

I am of opinion, as I have always been, that the kindest thing to the patients and the best thing for the hospitals and the profession would be to determine to close the whole of the London out-patient departments for six months, providing, but only providing, that each hospital made adequate arrangements by which they could guarantee that every urgent medical and accident case would be treated promptly throughout the period of experiment. I hold to this opinion because I find, from the visits I have paid to the out-patient departments during twenty years, (I am not speaking here of the casualty departments, which in certain parts of London are as essential to our social well-being as the very air we breathe, for reasons which I need not go into now), that a very large number of applicants who frequent them are not in urgent need of medical treatment. Hence, I believe, if we were to close the London out-patient departments, with the safeguards already referred to, and to watch the effect of this closure upon the people, we should find, that the majority of the patients would in a few weeks adapt themselves to the altered circumstances. They might even realise, as Sir William Gull once said, that there was a limit to the craze for physic, and that as far as physic was necessary it could be procured for a payment within their means without resorting to the hospitals at all.

I should like to formulate certain other proposals for with the out-patient question, but I have already occupied

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too much of your space. I will only, then, venture to say, that the statement you quote as mine, to the effect that the Council of the Hospital Sunday Fund is only a collecting body, requires modification. I find from the shorthand writer's notes of the speech to which you apparently refer (July, 1896) that the words used were as follows: "I think that the solution of the difficulty cannot be looked for from the council (of the Sunday Fund), which, after all, is a collecting body more than a criticising body. The solution must come from the leaders of the medical profession themselves and from the body of general practitioners who suffer from the growth of the out-patient department. ..... It is the duty of the medical profession to look this matter in the face and to deal with it on some principle which will reduce the evil and secure the proper interests of the medical men and the public. Until this has been done I hope the Council of the Hospital Sunday Fund will be content to do its work of collecting money without indulging in criticisms which must necessarily be directed to points which it could not follow up by enforcing reforms of a sufficiently drastic nature ..... The managers of hospitals themselves cannot effectually interfere, until they have a request put forward in a practical form by their medical staffs, who have it in their power to remedy the existing difficulties." You will see that so far from "belittling the Council of the Hospital Sunday Fund or the religious bodies which so generously contribute to it," my speech really added to their importance by insisting that before any action was taken care should be exercised to secure that the Council possessed sufficient authority to ensure success. This policy, which Sir Sydney Waterlow, like myself has done his best to enforce for many years in regard to the Metropolitan Hospital Sunday Fund, has resulted in a number of improvements in the administration of the London hospitals, which have gradually attained so great an increase in efficiency that they may now be regarded, and with justice, as amongst the best administered institutions in the world.

I am, Sirs, your obedient servant,

HENRY C. BURDETT.

The Lodge, Porchester-square, W., March 6th, 1897.

THE PHYSIOLOGY OF THE VESICULÆ SEMINALES.

To the Editors of THE LANCET.

SIRS,—In his Hunterian Oration, as reported in THE LANCET of Feb. 20th, Mr. Christopher Heath quotes the following from John Hunter: "It is a discharge of mucus by the urethra which generally comes away with the last drops of urine, especially if the bladder is irritable, and still more at the time of being at stool, particularly if the patient be costive, for under such circumstances the straining or action of the muscles of these parts is more violent. It has generally been supposed that this discharge is semen, and the disease is called a seminal weakness; but it appears from many experiments that the discharge is undoubtedly not semen." Mr. Heath, so highly does he appreciate "the good common-sense teaching" of Hunter on this point, while according to his own showing he questions his authority or accuracy on many other points, affirms his acquiescence in Hunter's views as to the vesiculæ seminales. I have been in the habit for a long period of years of making microscopical and chemical examinations of the urine, and I have no hesitation in affirming as the result of that experience that both Hunter and Heath are in error. I believe that 50 per cent. of urethral discharges at stool under these circumstances contain spermatozoa in more or less abundance; but as to the pathological significance of their presence this is a totally different question. Unfortunately, on this and some allied sexual questions a silly professional *mauvaise honte* has consigned multitudes of young men to quacks, both within and without the profession, and left this subject as a fertile hunting-ground for the unscrupulous. For my own part, I do not think that the discharge of spermatozoa from the urethra at stool can be considered normal, and whether it absolutely has an influence on the sexual functions or not I am certain that many patients believe that it has. Certainly I have never witnessed any markedly serious consequences from the condition. I agree with Mr. Heath that the word "spermatorrhœa" should be eliminated from medical literature, and some years ago I suggested as a substitute the word "spermatorrhagia," which expresses a pathological condition of undoubted existence and no less undoubted gravity. There can be an excessive discharge of semen and a seminal incontinence prejudicial to health just as there can be an excessive drain of menstrual fluid and a too frequent occurrence of it noxious to health in the female. I do not think that there is a better established fact in physiology than that the vesiculæ seminales act as reservoirs for the seminal fluid. Their function is, in this case, absolutely parallel with that of the gall-bladder for the bile. They receive the seminal fluid from the testes and elaborate and perfect it as a secretion by the addition of a special secretion from their own walls. In the vesiculæ seminales the semen remains until it is expelled in sexual intercourse, or involuntarily discharged under the influence of a psychical erethism, especially during sleep, a condition which, within certain limits, is nothing more than absolutely normal in the continent after puberty. Like all the other organs in the body engaged in secretion and excretion, the vesiculæ seminales are excited to action by their special stimulus, and are therefore in connexion with corresponding centres in the cerebrum. During sleep the organic functions — those regulated by the sympathetic system — obtain an ascendency over those controlled by the cerebro-spinal system. While not absolute the distinction between the sympathetic and cerebro-spinal system is still convenient. Dreams are of two kinds: those induced by nerve stimulation and those arising from association of ideas. In this case a nerve impulse is conveyed to the brain from the engorged vesiculæ seminales. "A memory picture arises, a perception results" (Moll), and reflex action takes place through the spinal cord. The theory of the resorption of semen is entirely groundless, and consequently the outrageous treatment based upon it—viz., that of the late Brown-Séquard and his followers. Still, the semen becomes inspissated in the vesiculæ seminales according to the length of time that it remains there, and this is due to the resorption of its more watery portion just as a certain amount of resorption takes place in the larger bowel.

I am, Sirs, yours faithfully,

D. CAMPBELL BLACK, M.D. Glasg., F.R.S.Edin.,
Professor of Physiology in Anderson's College Medical School.
Glasgow, Feb. 20th, 1897.

P.S.—I should have noted that Hunter says that it is mucus which "generally" comes away from the urethra with the urine and at stool, and then he says the discharge is not "semen." If it is not "semen," and if it is not always "mucus," what is it?

LIGATURE OF THE SUPERFICIAL FEMORAL ARTERY FOR POPLITEAL ANEURYSM.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 27th Mr. Frederick Page records a case of Popliteal Aneurysm successfully treated by Ligature of the Superficial Femoral Artery in Scarpa's Triangle and states his own favourable experience of the results of the operation. Before deciding, as some surgeons have suggested, to abandon this simple operation for the far more difficult alternatives of ligature of the popliteal artery close above the aneurysm or complete excision of the aneurysmal sac, it must be shown that the ordinary method of treatment is not attended with the measure of success with which it is usually credited. Gangrene of the limb and recurrence of pulsation in the aneurysm are the two very opposite accidents which may follow the operation. Regarding gangrene, it may at once be said that it rarely follows the application of a ligature to the femoral artery for the cure of a popliteal aneurysm, and that on this ground alone no one will be disposed to condemn the operation. When, however, we come to consider the question of recurrent pulsation the position of the operation is not quite so sure. From the reports of St. Bartholomew's, St. Thomas's, and University College Hospitals published since 1886 I have collected thirty-one cases in which the femoral artery was tied at the apex of Scarpa's triangle for popliteal aneurysm. In twenty-three cases the aneurysm was cured without the occurrence of any complication. In two cases gangrene followed the operation and necessitated amputation through the lower part of the thigh, both patients recovering. In a third case amputation was performed a month after the operation for ulceration and anæsthesia

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of the foot, probably caused largely by attempts to straighten the flexed knee. In the remaining five cases pulsation recurred in the aneurysm. In one of these the pulsation was slight, and was cured thirteen months after the operation by resting the limb in the flexed position for twenty-five days. In the second case the artery was tied without rupture of its coats; pulsation returned on the day after the operation and was successfully treated by exposing the artery, applying ligatures above and below the previous seat of ligation, and excising the intervening portion of the vessel. In the third case the recurrent pulsation was arrested by ligature of the popliteal artery above the sac, and in the fourth and fifth cases by excision of the aneurysm. We may, I think, fairly exclude the first two of these five cases, because in one so long an interval elapsed before pulsation returned, and in the other there is good reason for thinking that the lumen of the artery was only incompletely closed by the first ligature. This gives 3 cases of recurrent pulsation in a total series of 29 operations, or adding these cases to the twelve given by Mr. Page, 3 recurrences among 41 operations. Unless, therefore, the results in these two series of cases have been unusually satisfactory they certainly afford very favourable evidence on behalf of the treatment of popliteal aneurysm by ligature of the superficial femoral artery. Among 43 cases there was no death, although four patients were submitted to amputation for gangrene or ulceration. In 34 cases there was uncomplicated recovery, whilst in 5 subsequent treatment was required for recurrent pulsation, the operation in 3 of these having been preceded by a trial of digital compression. The evidence seems, therefore, to support the view that in the majority of cases of popliteal aneurysm it is wise to ligature the superficial femoral artery without resorting to digital compression before the operations. Further experience will probably show that the best available operative treatment for recurrent pulsation is excision of the sac. I may mention that in the published reports of the three hospitals mentioned above I can find only one case in which the popliteal artery was ligatured as a first means of treatment and that the result was successful.

I am, Sirs, yours faithfully,

Weymouth-street, March 4th, 1897. RAYMOND JOHNSON.

"LUXATION OF A SESAMOID BONE OF THE GREAT TOE."

To the Editors of THE LANCET.

SIRS,—Is it not possible that the displaced sesamoid bone referred to in your annotation on Mr. Thorburn's case [1] had nothing to do with the symptoms? In most skiagraphs of the foot that I have seen this bone is apparently luxated or subluxated outwards. Probably this is due to the average boot, which displaces the phalanx, which in its turn carries with it the flexor tendons and the sesamoid bones. The condition is, I suspect, an universal accompaniment of hallux valgus, and the displacement varies with the amount of the deformity. I enclose a print which well shows the shadow of the sesamoids, the outer one being almost clear of the outer margin of the metatarsal bone, and the inner one showing as an increased shadow under the head of that bone. The skiagraph in question was taken to locate a needle in the foot. The valgus deformity was not well marked. This patient suffered no inconvenience from the needle or the "luxation of the sesamoid bone." I may add that the Crookes's tube was placed over the middle of the foot, so that the shadow is rather displaced inwards than outwards. In another case where the tube was placed internally to the inner border of the foot the displaced bone also shows clearly. I am, Sirs, yours faithfully,

Seymour-street, W. E. MUIRHEAD LITTLE.

*** Mr. Little encloses a skiagraph which shows well the displacement referred to.

THE HEALTH OF THE ARMY IN INDIA.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 6th you give my name as a member of a committee, appointed by a meeting held at the United Service Institution on Feb. 27th, to obtain the protection of Her Majesty's forces in India from contagious diseases. Allow me to state that I was not at the meeting and have not joined the committee, of which, indeed, I know nothing except from this statement.

I am, Sirs, yours faithfully,

J. F. PAYNE, M.D. Oxon.

Wimpole-street, Cavendish-square, W., March 8th, 1897.

[1] THE LANCET, Feb. 6th, 1897.

"INSUSCEPTIBILITY TO VACCINATION."

To the Editors of THE LANCET.

SIRS,—In the supplement to the *Scientific American*, dated Dec. 26th, 1896, there is an article from THE LANCET on "Insusceptibility to Vaccination," which concludes with these words: "Although insusceptibility is admitted by law it really becomes doubtful whether it has more than a legalised existence." That insusceptibility exists I am convinced, for I have vaccinated one of my daughters with lymph from arm to arm at least fifty times, and brother practitioners have also vaccinated her as many times more (in most cases with perfectly fresh lymph from arm to arm) between the years 1873 and 1895, and always unsuccessfully. This, it is true, is but one case, but it is sufficient to prove that insusceptibility exists. I am, Sirs, yours truly,

Iquique, Chile, Jan. 22nd, 1897. J. W. MERRIAM, M.D.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

To the Editors of THE LANCET.

SIRS,—The next annual meeting of this association will be held in Newcastle, at the College of Medicine, in the latter part of July. Notice of the dates and other particulars will be issued in due course. A considerable part of the time of the meeting will be devoted to discussions, papers, and demonstrations on subjects connected with Insanity and the Structure and Functions of the Brain and Nervous System. It is hoped that a large gathering of members will be present to show their interest in the work of the association, to read papers, and take part in the discussions. It is desired to provide a programme worthy of the association and of the wide field of scientific and social subjects with which the association is concerned. We desire to incorporate as large a portion as possible of the programme in the next circular and shall be glad to receive at an early date the title of the paper which any member proposes to read at the meeting or subject he designs to bring before it.

We are, Sirs, faithfully yours,

T. W. MCDOWALL, M.D. Edin.,
President-elect,
Northumberland County Asylum, Morpeth;
R. PERCY SMITH, M.D. Lond.,
Hon. General Secretary.

11, Chandos-street, Cavendish-square, London, W.,
March 10th, 1897.

"CORONER AND MEDICAL MAN."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. Snell's question, a coroner can issue no *order for burial* unless he holds an inquest. It frequently happens that cases are submitted to the coroner by the registrar, medical men, and others for his judgment as to whether an inquest should be held or not, and in these cases, when he considers an inquest unnecessary, he fills up a form supplied by the registrar. This is not an *order* for burial, but merely a statement that the coroner does not intend to hold an inquest, and although the alleged cause of death may be entered the death is registered as uncertified. Supposing no certificate of the cause of death is obtained from a duly qualified medical practitioner, ignorant people often consider the form used by the coroner in declining an inquest to be a *burial order*, but it is not so.

I am, Sirs, yours faithfully,

March 6th, 1897. M.B.

THE CHOICE OF AN ANTISEPTIC IN MIDWIFERY.

To the Editors of THE LANCET.

SIRS,—Can you kindly, through the medium of your valuable journal, give me the following information, for which

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I shall feel greatly obliged to you:—1. Has perchloride of mercury been absolutely demonstrated beyond doubt a more reliable antiseptic than carbolic acid in confinements? 2. Is biniodide of mercury as powerful and reliable an antiseptic as the perchloride, and is it less liable to cause mercurialism?

I have always used carbolic (1 in 40 to start with) for uterine irrigation with the best results. On one occasion only I used perchloride (a case of puerperal septicæmia), but after two or three days, there being no improvement, I changed to carbolic, and the temperature dropped at once. I am loth to give up what I have learned to trust and what has never failed me, but carbolic has been discarded in so many quarters that I feel doubtful if I am doing right in not changing. As regards mercury biniodide, I have seen it stated that it is as powerful an antiseptic as the perchloride and much less poisonous. Is this a fact? If so, why is it not used in preference for midwifery practice?

I am, Sirs, yours faithfully,

Feb. 22nd, 1897. ANTISEPTIC.

Our correspondent is referred to an Annotation in our present issue.—ED. L.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Ophthalmic Diseases at the Kirkdale Industrial Schools.

THE report of the Local Government Board inspector to his department on the unhealthy condition of the children's eyes at the Kirkdale Industrial Schools appears to indicate an unsatisfactory state of things. Out of 136 girls at the schools he found 45 suffering from granular lids, and 8 out of this number presented a severe form of the disease. Of 335 boys, 91 suffered from granular lids. In the nursery there were 45 children, 28 of whom were in a similar condition in a more or less infective form. One of the attendants, aged twenty years, was also suffering. Of 54 children in the infirmary 19 had the disease. It would thus be seen that 33 per cent. of the girls, 27 per cent. of the boys, 62 per cent. of the nursery children, and 33 per cent. of the infirmary inmates were suffering from granular lids in a more or less infective form. In looking through the medical officer's (Dr. McMurray) report book he found the term "preventive" used in relation to the course of treatment. Dr. McMurray explained that he could not say the treatment was curative; his object was to pick out cases of granular lids that were, in his opinion, in an infective condition, isolate and treat them for a fortnight or three weeks, and return them to the schools if he thought all risk of infection had passed away for the time being. From what he (the medical inspector) could see of the cases there was no doubt that Dr. McMurray was to a certain extent successful in his endeavour, but it could be easily understood how, if sixty or eighty children, a certain proportion in a chronic quiescent state, were drafted from Kirkdale to a certified home such as Layfield, the children might become active sources of infection. Dr. McMurray quite concurred with this view, and said that if he had facilities for isolation for a large number of boys and girls he would be able to treat adequately all cases of granular lids at present in the schools, and in two or three years could stamp out the disease. It seemed to be necessary that, under existing circumstances at Kirkdale schools the medical officer should be requested to make weekly examinations of the eyes of all the children so as to detect the first onset of sub-acute symptoms and at once place the children under treatment. The chairman of the select vestry thought that matters should not be prejudged until their medical officer was first allowed an opportunity of explaining. Subsequently at a meeting of the committee of the industrial schools Dr. McMurray furnished a report in which he refuted the allegations made by the Local Government Board inspector, as to the alarming presence of eye diseases among the children in the schools. The committee resolved to forward Dr. McMurray's report to the Local Government Board. The chairman was of opinion that the inspector's report was exaggerated, which was endorsed by other members of the committee, who expressed confidence in their medical officer. The inspector had also reflected on the condition and the treatment of some children's eyes in the Liverpool Workhouse—charges which were repudiated in forcible language by Dr. Alexander, the visiting surgeon. An ophthalmic surgeon would be of service here to give his opinion on the whole matter.

The Head Constable's Annual Report.

The head constable, in his annual report for 1866 to the watch committee, says that a great and steady improvement in the condition of the city as regards crime and disorder is disclosed. The decrease in intemperance has continued, and it is stated that there is now considerably less than one-third of the drunkenness that there was eight years ago. Proceedings against keepers of disorderly houses were taken in 139 fewer cases than in 1895, in 299 fewer than in 1894, and 456 fewer than in 1893. The head constable adds that the number of women of bad character in the city has not decreased in like ratio, if at all, and the facts mentioned last year still hold good. The table relating to the number of accidents reported by the police includes 159 cases of attempted suicide, of which 41 proved fatal; 151 individuals were bitten by dogs; 60 people fell from buildings, 5 of whom were fatally injured; and 444 individuals were run over by carts, &c., 20 deaths resulting. Burns, of which 66 cases were reported, accounted for 17 deaths. The total number of accidents reported by the police amounted to 3479, of which 188 proved fatal. Assistance was rendered by the police in 2861 cases as follows: Applying bandages in 91 cases; stopping bleeding, 29; administering emetics, 16; other assistance, 401; taken to hospitals, &c., for treatment (no first aid being rendered), 2295. Of the total number of apprehensions of drunk and disorderly persons, which amounted to 6146, there were 11 representatives of the "law, medical, and other professions." Let us hope that there was only one medical man of this number.

Liverpool Medical Club.

At a meeting of the members of the Liverpool Medicae Club, held on Feb. 17th, Mr. E. W. Barnes introduced thd subject of the Abuse of Medical Charity. He mentioned the various medical charities which were chiefly affecteh and clearly pointed out the main causes and effect of suce abuse. He estimated that about half-a-dozen only of the public medical charities in Liverpool (not including the Poor-law, which he did not consider abused) supplied something like 400,000 attendances annually out of a population of 644,129. The remedies he advocated were: (1) the formation of local hospital boards; (2) catering for the intermediate class of patient; and (3) the formation of local committees under the auspices of the Hospital Reform Association. After an exhaustive discussion, a resolution was unanimously carried "that the directors of the club be empowered to form a local committee of inquiry to report upon the matter as the first step."

The Tuberculin Test at St. Helens.

Dr. Robertson, the medical officer of health of St. Helens, recently demonstrated to the farmers of the neighbourhood by means of the tuberculin test that a heifer to all appearances perfectly healthy and in good condition may nevertheless be the subject of tubercle. For some time past the majority of the butchers of St. Helens declined to attend the local stock sales unless the auctioneers were empowered to give a guarantee against the presence of tuberculosis in the beasts sold. Hitherto a guarantee to this effect had been refused by the farmers; however, one of their number said that he would guarantee a three-year-old Ayrshire heifer. This gentleman had previously submitted five of his beasts to the tuberculin test, and although the test showed the beast to be affected when slaughtered two of them proved to be healthy. Upon hearing this statement the farmers were naturally inclined to discredit the tuberculin test. Dr. Robertson, when communicated with upon the subject, said that he could not believe that the test had failed; whereupon the same farmer again submitted one of the five beasts to Dr. Robertson and Mr. Dixon, veterinary surgeon. The beast, which was apparently in first-class health, again "reacted" under the test, and was declared by Dr. Robertson to be suffering from tuberculosis. The farmer, still unconvinced, said he would guarantee the beast at the approaching sale on condition that it was taken straight to the abattoir and slaughtered, which was accordingly done. The carcase proved generally healthy, but upon the lungs being examined one of them was found to be affected with chronic, though dormant, tuberculosis, the glands being also enlarged; whereupon the butcher who bought the beast was at once absolved from his bargain

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under the terms of the guarantee. The farmers present were greatly surprised to find so healthy-looking a beast affected.
March 9th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Bristol General Hospital.

THE half-yearly general meeting of the governors of this institution was held on March 8th, under the presidency of the Mayor. The annual report which was read stated that the appeal made for the Nurses' Home had resulted in the sum of £3237 being raised; this had been sufficient to discharge all liabilities incurred for building and furniture, but £350 had still to be raised to cover the cost of the houses which were pulled down for the purpose of the enlargement. The home is now finished and proves of great utility to the hospital. Exclusive of the special fund for the Nurses' Home, the total ordinary receipts are £9600, or less by £562 than those of 1895. The total ordinary expenditure (£10,633) is somewhat less than in 1895 owing to the smaller amount spent in repairs. This amount is much beyond the ordinary income, and the committee do not see how it can be reduced without impairing the efficiency of the hospital. The committee thank the honorary staff and the resident medical officers for the admirable way the work of the hospital has been carried on during the year. The daily average number of in-patients has been 171·6. The in-patients treated during the year were 2333, and the out-patients numbered 30,166, the totals for the year of both having slightly increased. Since the hospital had been established in 1832 there had been admitted 71,721 in-patients and 682,499 out-patients.

The Bristol Medical School.

The following scholarships have been awarded:—The Clarke Surgical Scholarship of £15 was equally divided between Mr. E. V. Foss and Mr. R. F. Moorshead. The Sanders Scholarship of £22 10*s.* was awarded to Mr. F. P. Mackie, and the Lady Haberfield Prize of £29 9*s.* 8*d.* to Mr. A. G. Plumley. The Martyn Memorial Pathological Scholarships were divided as follows: Mr. F. P. Mackie, £10; Mr. W. M. Bergin, £5; and Mr. H. L. Norrington, £5. The committee gold medal was gained by Mr. W. M. Bergin, and the silver medal by Mr. F. Rose.

Dr. Nansen.

Dr. and Mrs. Nansen arrived at Cardiff on Feb. 28th, and were received by Mr. Drane (president of the Cardiff Naturalists' Society), Dr. Charles Vachell, and others. Dr. Nansen delivered his lecture in the Park Hall the same evening, the building being filled to its utmost capacity. On March 1st Dr. Nansen gave a lecture in Bristol on his Arctic exploration and received an enthusiastic welcome. Professor Lloyd Morgan introduced the lecturer. Dr. and Mrs. Nansen were the guests of Mr. W. Sturge while in Bristol.

Public Health Department for Cardiff.

At a meeting of committees of the Glamorganshire County Council, held on March 5th, the question of providing a public health department in connexion with the University College of South Wales and Monmouthshire, and the provision of a laboratory for the county medical officers, was discussed. It was decided to recommend the council to subscribe £2000 towards a private laboratory and a department for the county medical officers in connexion with the new college buildings. The details were left to be dealt with by the sanitary committee of the Glamorganshire County Council.

A New Hospital for Cardiff.

At a meeting held on Feb. 24th at Cardiff it was decided to raise a fund for the purpose of erecting, as a memento of Her Majesty's reign, a permanent seamen's hospital for the port of Cardiff in place of the *Hamadryad* hospital ship. The Marquis of Bute has offered to subscribe £5000 and present a suitable site, provided that at least £30,000 were raised by subscriptions. Mr. Cory will give £1000, and other donations are promised.

Rabies and Anthrax.

At the quarterly meeting of the sanitary committee of the Glamorganshire County Council, held last week, the chairman reported that an outbreak of rabies had occurred in Monmouthshire. The inspectors were instructed to secure all stray dogs and to kill them if they were not claimed. Dr. Williams, the medical officer for the county, reported that an outbreak of anthrax had occurred in several districts, and recommended that in future carcases should be cremated instead of buried.

Successful County Court Action by a Bath Surgeon.

At a special sitting of the Bath county court, held on March 1st, Mr. R. J. H. Scott, F.R.C.S. Edin., surgeon to the Royal United Hospital, brought an action against a firm of Bristol brewers for personal injuries and damage to a brougham alleged to have been caused through the negligent driving of a drayman in the employment of the defendants. The charge was fully borne out by plaintiff and a number of witnesses. Mr. Scott obtained a verdict for £14 18*s.*

Aberystwith University College.

The council of Aberystwith University College has decided to spend £15,000 in finishing the erection of a new wing to the college buildings.

The Bridgwater Infirmary.

The heavy gale experienced in the West of England on March 3rd injured the Bridgwater Infirmary. Two chimneys were blown down and the débris broke through the roof and ceiling of the male wards. Fortunately the patients were unhurt. The furniture of the wards was much injured. The patients were removed to another ward. The damage done to the infirmary premises is very considerable.

Neglect of Vaccination at Swindon.

At the last meeting of the Swindon Board of Guardians the vaccination officer reported that in 1895 there were 1352 births, and of these children 319 were successfully vaccinated, 104 died unvaccinated, 600 remained unvaccinated at the present time, and the others had removed to other districts. For the first six months of 1896 the number of births was 650, of which 139 were successfully vaccinated, 70 died, 300 were still unvaccinated, and others were removed to other districts or were postponed. No action was taken upon the report.

A New Technical Institute for Bradford-on-Avon.

On Feb. 24th a new technical institute, erected at a cost of £3600 at Bradford-on-Avon, was opened by Professor Michael Foster of Cambridge University. Very handsome contributions have been given, including £1000 from the Wilts County Council and £1000 from Lord E. Fitzmaurice.

The authorities of the Newport Metal Exchange have voted 50 guineas to the new infirmary at Newport (Mon.).
March 9th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Medico-Chirurgical Society.

AT a meeting of this society held on the 5th inst. Mr. R. H. Parry demonstrated a number of specimens of gynæcological interest. The specimens included several Fibroid Tumours of the Uterus removed by abdominal section, a number of the cases being complicated by pathological conditions of the ovaries and Fallopian tubes; the Uterus and Appendages removed *per vaginam* for an obstinate and long-continued chronic metritis; and a Tubal Pregnancy in the second month of gestation with the ovum *in situ* removed by abdominal section. There was in the last case a feature of special interest, inasmuch as the patient when seen by her medical attendant was regarded as suffering from retroversion of the uterus, and an attempt to forcibly replace the organ was followed by peritonitis. It was only on the subsidence of this condition that the tumour was discovered and a diagnosis of extra-uterine pregnancy made. Mr. Parry also showed a Segment of the Small Intestine resected for chronic obstruction due to stenosis of the gut, the result, it was suggested, of cicatrised tuberculous ulceration; and a Scapula with its Muscular Coverings removed in consequence of the growth of an adherent parosteal sarcoma. The demonstration was completed by the exhibition of a patient, a man who had been obliged to give up his work as a boiler-maker in consequence of the development of Spasmodic Torticollis. The head had been turned strongly to the left

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side and the chin markedly elevated. This condition persisted even after resection of the right spinal accessory nerve. The suggestion then arose that the muscles at fault were probably the post-occipital muscles on the left side, and it was determined to divide the posterior primary divisions of the upper cervical nerves. This operation was carried out and had proved quite successful, the patient having been for upwards of a year quite free from any distortion of the head. The President (Dr. W. L. Reid), on behalf of the members, thanked Mr. Parry for his interesting demonstration.

Glasgow Southern Medical Society.

Professor McCall Anderson received the members of this society in his wards in the Western Infirmary on the evening of the 4th inst., when he gave a most instructive clinical demonstration. The patients shown included cases of Cerebral Tumour, Disseminated Sclerosis, Progressive Muscular Atrophy, Exophthalmic Goitre, Thoracic Aneurysm, and Molluscum Contagiosum. In addition Professor Anderson demonstrated a case of word-blindness with right lateral homonymous hemianopia, and several patients who had been treated by injections of tuberculin, with others in whom anti-syphilitic serum had been used. Various photographs illustrating the value of the Roentgen rays were shown, and also a specimen of urine containing hæmato-porphyrin. The demonstration was a decided success and was highly appreciated by a large audience.

Lecture by Professor McKendrick.

The fifth lecture of the series of free Monday lectures by the professors of the University of Glasgow was delivered by Professor McKendrick on the 8th inst., the subject being Sound Waves as Revealed by the Phonograph. After reference to the physical causes of pitch, intensity, and quality of sound, Professor McKendrick described an instrument called the phonograph recorder, by which curves corresponding to the marks of the wax cylinder of the phonograph are written upon a piece of paper. In this way curves may be obtained and analysed and the various partial tones which exist in a compound tone can be distinguished and appreciated. Professor McKendrick also showed a method he has devised for communicating sound vibrations to the deaf and dumb, and demonstrated this on several deaf mutes, who by beating time with their hands showed they were sensible of the rhythm of a piece of music. The lecture commanded a large audience, which included Lord and Lady Kelvin.

March 9th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Health of Kingstown.

THE chairman of the Kingstown Commissioners, Mr. A. S. Findlater, J.P., at the monthly meeting of the Board of Commissioners on the 2nd inst. drew attention to the sanitary state of the township and read the report of the superintendent medical officer of health on the condition of Kingstown during the four weeks preceding the beginning of last month. The returns showed that the number of deaths represented an annual death-rate of only 20·3 per 1000. The rate in the twenty-three principal towns of Ireland for the same period was 32·5, 45·3 in Dublin, 20·9 in Rathmines, 23·6 in Blackrock, and 18·6 in London.

Ulster Medical Society.

The March monthly meeting of the Ulster Medical Society was held on the 4th ult. in the Pathological Laboratory of Queen's College, Belfast, when a series of most interesting demonstrations were given with microscopic and other preparations. The President (Professor Symington) and Dr. Smyth showed specimens of the Central Nervous System stained by Weigert's method; the President and Dr. R. J. Johnstone showed specimens illustrating Cranio-cerebral Topography; Dr. Tennent read a paper on the Structure of Uterine Fibroids, illustrated with a series of microscopic sections; Dr. Lynass gave an account of Unna's Classification of Epitheliomata of the Skin, with illustrative sections; Dr. Lynass, Surgeon-Major Bigger, Dr. Donnan, and Dr. Colville demonstrated Widal's Serum Method of Diagnosing Typhoid Fever; Surgeon-Major Pike read notes of (*a*) a case of Injury to the Neck of the Femur, with skiagraph; and (*b*) Severe Secondary Syphilis complicated with Diphtheria in the primary stage, with photograph; Dr. Cecil Shaw showed a New Bacillus isolated from a case of Tonsillitis; and Dr. Osborne showed a series of Physiological Microscopic Specimens. In the discussion which followed the papers Professor Byers, Dr. M'Keown, Dr. John Campbell, Dr. L. Smith, Dr. Walton Browne, Professor Thompson, and Dr. Fielden took part. Lord Lister was elected an honorary member of the society.

The Hospital for Infectious Diseases, Belfast.

At a meeting of the public health committee held on March 4th, the question of the plans for the new hospital for infectious disease was under consideration, when a motion to adjourn the subject until after the election of the new council in November was carried. The question of a new infectious diseases hospital is therefore postponed, and as a consequence it will not be possible to work properly the Infectious Diseases Notification Act, which has just come into operation.

The Union Workhouse, Belfast.

In his half-yearly report, just published, Mr. Agnew, Local Government Board inspector, says that the operating room was very unsuitable, and he thought the nurses' room could be easily utilised for that purpose. He thought the water-supply was neither sufficient nor wholesome. The wards of the workhouse and infirmary were not properly ventilated, and the lavatory and bathing accommodation on the healthy side of the house was unsuitable. Separate wards have not been provided for phthisical and erysipelas patients, as suggested in his last report, and there was no isolation ward for cancer cases. There were 1140 patients in the infirmary on the date of his visit under the charge of three resident and two visiting medical officers. The night nurses were insufficient, as several of them had 150 patients. There were on the day of his inspection in a separate and detached building, at a cost of £16,000, 418 classed as lunatics, 172 males and 246 females. The accommodation for these was, Mr. Agnew reports, ample and suitable and superior to any he had seen in Ireland. In the fever hospital the nursing staff was highly efficient and the medical staff admirably suited for the treatment of infectious diseases. The beds were comfortable, the clothing clean, and the patients well attended to.

Armagh Lunatic Asylum.

The urgent necessity of providing additional accommodation at the Armagh Asylum has been met by the erection, upon an elevated plateau within the asylum grounds, of a detached hospital (following the type found to be so successful in Scotland), planned to accommodate 150 patients under special treatment, together with the necessary attendants and staff. The building is almost complete, the only things to be done being the finishing of the electric installation and the furnishing of the wards. Indeed, owing to the overcrowding of the asylum, certain dormitories in the buildings have had to be occupied almost as soon as they were built. This detached hospital is the first of its kind in Ireland, and in its wards all the acute and recent cases requiring observation, as well as the bodily sick and other inmates who require specific medical care, will be brought together. The ventilation, building, and sanitary arrangements are all of the most recent and complete planning and construction; and this new detached hospital will be of the greatest utility as an addition to the Armagh Asylum.

The Battle of the Clubs at Cork.

Some few weeks ago Mr. Philip Lee received permission at a meeting of the profession to form a new club consisting of such members of the clubs he formerly held as may decide on joining together to form the club. Already fifty members have entered their names, and that is a large number considering the fact that none having incomes of £100 a year are eligible for membership. It is expected that others of the medical men who held clubs will seek for similar permission, and in that way there will be, it is hoped, several successful invasions of "Club-land."

Ladies as Poor-law Guardians.

At Tralee, Killarney, and Fermoy severally there are two ladies aspiring for the position of poor-law guardian. Opinion in the neighbourhoods is divided upon the advisability of employing the services of a lady, but it is generally felt that in workhouses and union hospitals there is a field for work that should properly fall to the gentler sex.

Hydrophobia.

A young girl died from hydrophobia in the Skibbereen

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Workhouse Hospital last week. The disease is stated to have developed only two days previously, and the bite had been inflicted six or seven weeks prior to her illness.

Appointments.

Mr. W. H. Langley has been appointed medical attendant to the Ordnance Survey Barrack, Phœnix Park, and to the Morgan School, Castleknock, in room of the late Mr. R. F. Maguire, deceased. Mr. Joseph J. Cullen of Dalkey has been elected to the office of dispensary medical officer for the Castleknock district.

March 10th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Academy of Medicine and the Manufacture of Matches.

AN important discussion has occupied the time of many sessions of the Academy as to the hygienic conditions which it is desirable to impose upon the manufacture of matches. In France the manufacture of matches is a State monopoly and under State control, and in view of the numerous cases of illness among the workers and the many complaints which have been made in the press the Minister in charge has asked the Academy of Medicine to draw up rules for the regulation of the Government factories. Current opinion in the Academy was divided. One party advised that white phosphorus should no longer be used in the manufacture of matches, saying, also, that this advice was what the Minister really needed to satisfy the press and that the opinion of the Academy had been asked for in order to use it as a lever to obtain from the Chamber the supplies necessary for the complete transformation of the match industry throughout France. In Belgium it was noted that when the same reform was demanded, the workmen and manufacturers alike asked that, if the use of white phosphorus was forbidden in Belgium, its use should at least be allowed in the manufacture of matches intended for foreign countries, as its suppression would ruin the factories possessing the necessary plant, and bring great poverty upon the workmen thrown out of work. Others in the Academy, however, thought with M. Magitot and M. Bouchardot that it would be quite sufficient from a sanitary point of view to alter the arrangement of the workshops so as to obtain thorough ventilation, while refusing work to all who had not good teeth. The workers must be under strict medical supervision, and as far as possible machinery should be constructed so as to allow the whole process of manufacture to go on under glass, the workmen being protected from the poisonous fumes. In two factories—namely, at Algiers and Aix—there has not been a single case of phosphorus poisoning for twelve years, owing to the strict hygienic rules which have been in force. The cases which have so excited public opinion occurred at Aubervilliers, a suburb of Paris, in a very old factory, which it is impossible to put into a sanitary condition and which ought to be pulled down, as to make it really healthy would cost more money than to build a new one. The real fact is that the workmen of Paris object to the introduction of machinery for the safe manufacture of matches with white phosphorus—that is to say, under glass—for in that case far fewer hands would be wanted, and they therefore demand the use of red phosphorus, to work in which necessitates a larger staff. This is the reason why in Belgium, where the manufacture of matches is free to anyone, the workmen object to red phosphorus, and why, in France, the State, which panders to the political influence of the workers, is ready to satisfy them on this question, despite the increased expense. Matches made with red phosphorus are not so good as the others, for they are more difficult to light, the wood is very brittle and often breaks, and the composition for tipping them demands the use of explosive materials which, like poisoning, constitute a serious source of danger. The Academy has agreed to the following answer being sent to the Minister:—1. It is necessary to put a stop to the unhealthy conditions which exist in many of the match factories in France. 2. The suppression of the use of white phosphorus is the only certain way of insuring health to the workers in this manufacture. 3. The employment of perfected automatic machinery is a costly matter and carries with it the condition that all dangerous operations should be done under glass. 4. Until these recommendations can be carried out as a whole the present unhealthiness can be diminished by thorough ventilation, short shifts for those men working in the dangerous shops, careful selection of healthy hands, and periodical medical inspection, with power to prohibit the labour, either for a time or altogether, of anyone with lesions of the mouth or whose general health is impaired. There should also be better provisions provided at the factories and more rigorous inspection of eating-rooms, lavatories, cloak-rooms, &c.

Medical Matters and the Army.

The scarcity of army surgeons continues to be the subject of discussion in the army and the press. Resignations become more and more frequent owing to the dissatisfaction of the military surgeons, who complain that promotion is too slow, that they are the object of less consideration than other officers, and that they have to submit to frequent injustice through being attacked in the press and not supported by the War Minister. A resignation which has created great excitement has just taken place—namely, that of M. Laveran, ex-professor of the School of Military Hygiene, a member of the Academy of Medicine, and well known for his discovery of the hæmatozoon of malaria. The professors are nominated for ten years only, and at the expiration of M. Laveran's term his post was changed and he was sent by the War Minister to a provincial garrison town as a simple army surgeon, no regard being paid to his position as a member of the Academy or to his great scientific reputation. He remained for some time at this station with a rank far below that to which his length of service entitled him, coming to Paris and continuing his researches at the Academy. In consequence of the delays and worries which the War Department made him undergo, putting actual obstacles in the way of his scientific work, he preferred to send in his resignation and to quit the Army Medical Department, of which he had been a prominent figure, at the age of fifty-six years. Everywhere an increase in the number of army medical men is demanded, and in certain army corps where the regiments have been increased by a battalion the number of medical officers remains the same. At Epinal there is a regiment of infantry in which the men of one battalion have to go five kilometres to see the surgeon of the regiment, who is in sole charge of two battalions. The War Minister has just authorised privates and officers to join the Temperance Society (Société contre l'Usage des Boissons Spiritueuses). This is a remarkable thing, for in France soldiers are not allowed to join any society, even a charitable one.

The Surgical Society.

La Société de Chirurgie is at present discussing the operative treatment of exophthalmic goitre, and the members are bringing forward their cases of operation, successful or otherwise. M. Lejars reported a case of sudden death on the day of operation not to be explained by hæmorrhage or any other lesion. M. Schwartz reported a case of complete cure of all the symptoms associated with Basedow's disease, the tumour removed being of small size. M. Tuffier had operated twice. In one case he had removed, only the right lobe and the cure was complete; in the other he had also performed a partial removal, and though there was great amelioration of the symptoms, yet the exophthalmos persisted. M. Poncet attributed the accidents which sometimes followed these operations to an intoxication owing to the thyroid secretion having poisoned the wound, giving rise to an acute attack of "Basedowism." M. Poncet considered that the greatest precaution should be used with regard to surgical interference in these cases, and advised division of the large sympathetic nerve on both sides with removal of the superior cervical ganglion in preference to interfering with the thyroid gland. By this method he considered relapses would be avoided such as often occur with thyroidectomy.

March 9th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Bacillus of Plague.

A PAPER on the bacillus of plague was recently read before the Berlin Medical Society by Dr. Kolle, assistant to Professor Koch, and the substance of it has been published in the *Deutsche Medicinische Wochenschrift*. The microscopical examination of pus obtained from typical cases of

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plague shows leucocytes, detritus, red corpuscles, and an enormous mass of bacilli, which are small, have spherical extremities, and are quite different from all the other pathogenic bacilli; when they are stained their extremities become intensely coloured, whilst the middle remains colourless. The only organism which can be confounded with the bacillus of plague is the bacillus of fowl cholera—a disease quite harmless to human beings; the bacillus of fowl cholera, however, is the larger of the two. The bacillus of plague is found in the glands, the spleen, and the blood. Plague must thus be regarded as a specific polyadenitis, which finally leads to specific septicæmia. In grave cases streptococci were, moreover, discovered by Dr. Aoyama. The presence of these streptococci is due to a secondary infection, just as in the case of scarlet fever, enteric fever, &c. They are found especially in the last stage of the disease and are easily distinguished by Gram's method, the plague bacillus remaining colourless whilst the streptococci become stained. The bacilli of plague can be cultivated by the usual methods. On agar the colonies begin to appear twenty-four hours after the inoculation; they at first look like small drops; after forty-eight hours they have the form of grey opalescent buttons. They do not liquefy gelatin. They can also be grown on potatoes and on blood serum, and in the cultures obtained in this way the morphology of the bacilli may be easily examined. They are usually short, not motile, and not provided with flagella; the presence of a capsule is still doubtful. The size is not very constant; sometimes they are very short, sometimes they are longer or have a diplococcus-like structure. A spheroidal form is a symptom of degeneration and is never found in fresh cultures, but only in old ones. Spores were never discovered. Kitasato and Yersin have stated that the cultures are destroyed in a few hours by a temperature of 58° C. and in a few minutes by a temperature of 100° C.; the usual chemical disinfectants destroy them very soon. Dr. Kolle employed four cultures for the purpose of his researches. The first was obtained from a case which occurred during the Hong-Kong epidemic in 1890, the second was placed at his disposal by Dr. Metchnikoff of Paris, the third by Dr. Macfadyen of the British Institute of Preventive Medicine, and the fourth by M. Haffkine of Bombay. In all these four cultures, coming from different sources, the bacilli proved to be identical; but there was, however, a great difference in their virulence. According to Kitasato and Yersin the virulence of the bacilli of plague may be easily studied in rats, mice, and guinea-pigs, which are very liable to be infected, and with this Dr. Kolle fully agrees. If only a small quantity of a fresh culture is inoculated through the skin of one of these animals it dies within a few days, and after death the bacilli are found in great quantity in the blood, the internal organs, and also in the neighbourhood of the wound. After an intra-peritoneal or intra-vascular injection death occurs much sooner—sometimes in a few hours. Injections of less virulent cultures give rise to symptoms very like those observed in the human subject. After four or five days the lymphatic glands gradually begin to swell, the animals lose their appetite, become very weak, and then die—as a rule within the second week. After death the glands are found to be inflamed and studded with hæmorrhages, while in the centre there is a deposit of pus. Rats and mice may also be infected either by mixing a culture of the bacilli with their food, in which case the mesenteric glands are the most swollen, or the disease may be communicated to the animals by inhalations. It is thus proved by these experiments that rats and mice may easily spread the disease, a fact in accordance with the observations of Yersin during the recent epidemic and also confirmatory of the historical accounts which state that during mediæval and subsequent epidemics these animals caught the disease prior to man. The infected rats and mice are a source of great danger to the public owing to their excrement being deposited in dwelling-houses. Experiments in laboratories must therefore be performed under every possible safeguard, and precautions must be taken to prevent infected animals escaping. With respect to the method of infection in man Yersin, Kitasato, and Aoyama have during the recent epidemic observed that the disease may originate from peripheral infection—namely, from inoculation of the bacilli through the skin. This may happen in different ways, as, for instance, through wounds, caused either by splinters or by bugs, fleas, or other insects. Yersin has discovered bacilli in the mud of houses where plague patients had lived. He has, also, made valuable experiments as to the possibility of immunisation. He injected horses with increasing doses of fresh agar cultures, and found that if 0·1 c.c. of their blood serum obtained three weeks after the last injection were injected into mice twelve hours before inoculation with a culture of the bacilli of plague the animals remained immune. By an injection of from 1 to 2 c.c. of this serum twelve hours after the administration of a virulent culture the life of the animals could be saved. The serum was used in Hong-Kong for twenty-six patients, of whom only two died; this is a mortality of no more than 7·6 per cent., whereas the ordinary mortality from plague is 90 per cent. Experiments on immunisation have also been made by Dr. Kolle, but he is not yet prepared to publish his results.

Sterilisation of Water by Bromine.

Dr. Schumburg, chemist to the Army Medical Academy, has published in the *Deutsche Medicinische Wochenschrift* a method of rendering unwholesome water fit for drinking by the use of certain chemical agents. He says that, whilst the methods of filtering river water employed by public bodies give as a rule very good results, the domestic filtration by means of portable filters, as used in country places, is far from being satisfactory. In the course of numerous experiments he has discovered that a solution of bromine destroys all the pathogenic germs in water. When a quantity of ammonia is then added the water becomes clear and palatable; 0·2 grammes of a solution of 20 grammes of bromine and 20 grammes of bromide of potassium in 100 grammes of water will sterilise a litre of water from the River Spree. To remove the bromine a definite quantity of a 9 per cent. solution of ammonia is added. This discovery was the outcome of 200 experiments performed by Dr. Schumburg with water to which there had been added bacilli of cholera and enteric fever as well as other dejecta and a great number of saprophytes of almost every kind. Dr. Schumburg appropriately points out that a simple method of sterilising water which has to be used for drinking purposes may be very important, either on a campaign or at sea, or during the prevalence of an epidemic.

March 4th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Autumn Manœuvres and the Red Cross.

THIS year, in the latter half of September, the "grandi manovre" will take place in the tract of country lying between the Adige and the Chiese, affluents of the Po—a tract in great part corresponding to the famous Quadrilateral, bounded by Peschiera on the north-west, by Verona on the north-east, by Legnago on the south-east, and by Mantua on the south-west. The Red Cross societies will, as usual, be represented at these manœuvres, not, however, in certain details which have been conspicuous of late years. In Piedmont, for instance, and Tuscany the mountain ambulance was a prominent feature in recent Red Cross intervention, but it will not be so certainly next September. An opportunity, on the other hand, is presented for mobilising that "Red Cross afloat," on which THE LANCET has from time to time commented. The scene of the coming manœuvres is, to say nothing of canals, rich in natural water-way—from the Lago di Garda on the north to the great artery of the Po to the south, with the intervening Chiese and Adige west and east. Italy is, I believe, unique in having a Red Cross service afloat, and her resources in this direction—if, as is more than probable, they are to be put *en évidence*—will add another to the attractions which the yearly manœuvres of her army possess for the military world.

The Government and the Appeal to the Country.

In view of the general elections, which will begin on the 21st inst., the Di Rudini Administration has issued a manifesto setting forth its political programme, domestic and foreign. It is an able document, and is already being eagerly analysed, combated, and defended by the various divisions of party. Surprise, however, is expressed, not by the Opposition only, that it ignores hygienic reform entirely. This is the more unaccountable as the Marchese di Rudini has shown a practical appreciation of Italy's backwardness in matters of public health. From his predecessors, moreover, notably from the Crispi Administration, he has

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inherited what may, politically speaking, be called a "life interest" in sanitation and State medicine generally. Schemes for the minimising of contagious disease, chiefly the so-called "malattie Celtiche" (venereal disorders); for cheapening and making accessible quinine of a superior quality in malarious districts unprovided with "farmacie"; for main drainage works and improved water-supply have, *inter alia*, been bequeathed by Baccelli among preceding Ministers, and the country should see to it, now that it is on the eve of choosing its legislators, that there is no receding from the reforms already initiated and urgently required. "Sanitas sanitatum, omnia sanitas," ought to be Italy's watchword for long years to come.

Re-opening of the Universities.

The 4th inst. witnessed the re-opening of those seats of learning in which, in the judgment of their governing bodies, the resumption of class-work would not be again interrupted by agitation, political or other, or in which guarantees were forthcoming that the regular curricula would pursue a normal and tranquil course. Catania, Messina, Naples, Palermo, Pisa, Rome, and Turin are now open, like the other royal universities of Bologna, Cagliari, Genoa, Macerata, Modena, Padua, Parma, Pavia, Sassari, and Siena. Of the free, as distinguished from the royal, universities, Ferrara, Perugia, and Urbino are also open; but Camerino remains closed. All the university institutes—those of Florence, Milan, Pisa, and Pavia—have likewise been opened. The above list is a formidable one and conveys some idea of the check given to the higher or professional education by their temporary closure due to the recent riots.

An Epidemic of Charbon.

From Sant' Angelo dei Lombardi, in the Abruzzi, is reported the outbreak of charbon on a considerable scale among the oxen and milch cows. It has now assumed an epidemic form and is steadily extending to the surrounding communes. The alarm is great, not only among the cattle dealers, but among the general public, as the authorities are found to be supine in presence of the visitation. For one thing, the period of incubation of charbon in the bovine breed is by no means ascertained, and vexatious questions have arisen, and may arise again, as to who should bear the loss incurred by the death of a cow when the animal, sold as sound, dies from charbon within a few days. Nor is the spread of the epidemic an Italian question only. There is the travelling world to be considered—not likely to be attracted when the possible sale of unsound meat or diseased milk is part of the programme!

March 6th.

Obituary.

OLIVER PEMBERTON, J.P., F.R.C.S. ENG. & EDIN.

BY the death of Mr. Oliver Pemberton, which took place on the 7th inst., Birmingham has lost one of her most noteworthy citizens and the surgical profession a sturdy link with the past. Two weeks ago Mr. Pemberton was present at the General Hospital; subsequently he took cold and was laid up with an attack of bronchitis. Apparently improving from this, he developed some symptoms of intestinal obstruction, which made his family very anxious without suspecting the real cause of the danger. These symptoms became more marked, and, in spite of the assiduous attention of Mr. Bennett May and Mr. Gilbert Barling, who sought to give him relief by opening the abdomen on Sunday morning, he gradually sank and expired the same evening. The operation revealed a condition of malignant disease which art was powerless to remove or to combat. Mr. Pemberton was born in 1825, and was consequently in his seventy-second year. His father was the principal of a well-known firm of brass founders in the town. He was educated at King Edward's School under two head masters who afterwards were raised to the episcopate—namely, Jeune, afterwards Bishop of Peterborough, and Prince Lee, afterwards Bishop of Manchester, the latter of whom declared him well fitted for a literary career. But his own wishes inclined towards medicine, and accordingly he entered as a student at the Birmingham School of Medicine, studying for four years at the General Hospital as apprentice to Mr. D. W. Crompton. He then entered at St. Bartholomew's Hospital, where his life-long friendship with Savory commenced and where he was brought into close connexion with Burrows, Stanley, and Paget. In 1847 he obtained the Membership of the Royal College of Surgeons of England, and returning to Birmingham was appointed physicians' assistant to the General Hospital, and the following year resident medical and surgical officer. In 1852 he was elected surgeon to the hospital, a post he held until 1891, when he resigned upon being elected coroner for the city. In 1878 he was elected an honorary Fellow of the Royal College of Surgeons of England, and in 1885 he obtained a seat on the council of that body. In 1886, after the death of Dr. Heslop, he was appointed one of the trustees of Mason College, and afterwards became President of the council of the college. In 1891 he was appointed by the town council to be Her Majesty's coroner for the City of Birmingham. He was consulting surgeon to several local hospitals in addition to the General Hospital, where he so long laboured and to which he was ever fondly attached. His public life was also one of constant activity and energy, and as a justice of the peace for the county of Warwick he was always to the front. As a teacher of surgery at Queen's College he commanded interest and attention from his strong common sense and aptness in imparting knowledge to others. Owing to these attributes he gained a large circle of friends, who looked upon him with more than ordinary affection. Mr. Pemberton contributed to the literature of his profession in a variety of essays, the principal ones being Clinical Illustrations of Cancer, 1867; the History, Pathology, and Treatment of Melanosis, 1858; the Ingleby Lectures on Cancer of the Female Breast, 1884; Excision of the Knee-joint; Papers on Aneurysm, &c.

During his career as surgeon he was much interested in medico-legal work, and was frequently called as an expert witness in criminal trials. One notable instance was the trial of Palmer the Rugeley murderer, when Pemberton gave evidence as to the state of the spinal cord of Cook as bearing upon the question of the poison used. Besides his medical work he took the greatest interest in the affairs of his native city. He was closely associated with the Town Library, was a member of the town council from 1879 until his election as coroner, and rendered valuable service on the health and water committees. He was an admirable coroner always sympathetic and kind to witnesses, yet never failing to draw out all important points of evidence, while his directions to the jury were always clear and judicious.

Mr. Pemberton's individuality was the marked feature of his character. He was well known by his stately demeanour, his deliberate stride, and his peculiarity of dress, a wide-brimmed hat with low crown being the prominent characteristic. His knowledge of the world, his good humour, genial expression, and kindliness of manner to all with whom he came into contact formed for him attachments of a lasting kind; while his conversational powers, general robustness of character, and his ardent love of out-door life and nature gained him many admirers. As an angler his reputation was a wide one. His methodical habits and regularity of life enabled him to get through, and be beforehand with, his daily and often arduous duties with exemplary cheerfulness. In 1851 Mr. Pemberton married the only child of Mr. Daniel Whittle Harvey, M.P. for Colchester and Chief Commissioner of Police for the City of London. He leaves a widow, three daughters, and two sons.

JAMES ARTHUR JONES, J.P., M.D., C.M. GLASG.

DR. J. A. JONES of Castle Hill, Llanelly, Carmarthenshire, died on March 1st. The deceased received his medical education at the Glasgow University, graduating M.B. and C.M. in 1876, and taking the M.D. degree in 1880. Dr. Jones went to Llanelly twenty years ago and soon became extremely popular. The deceased took a great interest in municipal matters, being a member of the local board until it was merged into the present borough council, of which he became chairman three years ago. It was through the efforts of Dr. Jones that the new town hall was erected, the opening ceremony of which was performed by his wife. He was surgeon to the South Wales, Barry, and Old Lodge Tinworks and also to several collieries. Dr. Jones had been in indifferent health for some time past, and was forty-six years of age at the time of his death. He leaves a widow and three children, for whom much sympathy is felt.

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Medical News.

INTER-HOSPITAL FOOTBALL.—In the final tie of the play for the Hospitals Cup (Rugby Union rules) St. Thomas's Hospital (the holders) beat Guy's Hospital by one try to nothing. The match was played at Richmond on Tuesday last, there being a large attendance of spectators, who were rewarded by witnessing an exciting game.

UNIVERSITY OF CAMBRIDGE.—Dr. S. H. Vines, F.R.S., has been appointed a governor of the Oxford High School for Boys.—A valuable collection of plants from the Pyrenees and the Alps, mounted on about 3700 sheets, made by the late Mr. Charles Packe, has been presented by his widow to the University Herbarium.—The degree of M.B. was on March 11th conferred by proxy on Mr. W. G. Richards, B.A., of Christ's College, who is now resident in India.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—The annual meeting of the Royal Hospital for Children and Women, Waterloo-bridge-road, was held in the institution on March 4th, the Lord Mayor presiding. The committee, in their report, gratefully acknowledged the liberality of several city companies, but expressed much concern at the inadequacy of the income, which had rendered it necessary to borrow £1000 from the bankers. A special Diamond Jubilee Fund had been opened in the hope of raising £10,000.

CHARING-CROSS HOSPITAL.—A meeting in aid of the special appeal for £100,000 for Charing-cross Hospital was held at the Mansion-house on March 5th. The Lord Mayor presided and the Lady Mayoress was also present. It was stated that of the sum which it is hoped to raise £50 000 will be required to discharge present liabilities and to meet the anticipated deficiency of income during the next five years, and the remaining £50,000 will be used for new buildings which are necessary for the efficiency of the hospital.

THE PROVIDENT SURGICAL APPLIANCE SOCIETY.—The annual meeting of the Provident Surgical Appliance Society was held on Feb. 25th, at the Great Eastern Hotel, Liverpool-street, the Rev. J. Greaves presiding. The report showed that the articles distributed included 3494 elastic stockings, knee-caps, and bandages, 2911 trusses and abdominal belts, 216 artificial legs and arms, and a large number of crutches, splints, spectacles, and artificial eyes. Many air-beds and water-beds had also been lent to poor patients. The income for the year amounted to £2511, and the accounts when closed showed a balance of £130 in hand.

THE ROYAL SOUTH HANTS INFIRMARY.—At the annual meeting of this institution on the 24th ult. it was reported that 1103 in-patients and 4240 out-patients had been treated last year; the receipts had been £4898, against £4631, and the expenses £5141, against £5070. There is an actual deficit of £243. Subscriptions, donations, and collections had all increased, the Hospital Sunday Fund alone being £6 less. With respect to the renovation scheme £9300 has been subscribed, including £25 from Her Majesty the Queen, and the Mayor of the county borough has expressed his willingness to place the completion of the scheme in the forefront in this year's memorials. For this £10,000 are needed. Authority was, however, given to sell out a sum of £395 to clear the balance-sheet.

LEGACIES TO MEDICAL CHARITIES, &c.—The late Mrs. Overend of Sheffield has left legacies to relatives, friends, servants, and others to the amount of £110,000, free of duty; £26,000 are left to Sheffield charities, and Church institutions receive £4000. Other institutions benefited are: Yorkshire Deaf and Dumb Institution, £2000; Birmingham Deaf and Dumb Institution, £2000; Association in Aid of Deaf and Dumb, Oxford-street, London, £1000; Children's Hospital, and Women's Hospital, Birmingham, £1000 each; St. Mary's Hospital, London, £1000; Worksop Dispensary, £1000; Cottage Hospital, Retford, £1000; Northern Counties Asylum for Idiots and Imbeciles, £1000; and National Hospital for Paralysed and Epileptic, £5000. To the following medical charities are left £1000 each: Cancer Hospital, Fulham-road, and Queen Charlotte's Lying-in Hospital; and to the Devonshire Hospital, Buxton, £500. Many other institutions have also benefited.

THE Worshipful Company of Clothworkers have sent a donation of £100 to the Royal Hospital for Diseases of the Chest, City-road, E.C.

ROYAL METEOROLOGICAL SOCIETY.—A special exhibition of Meteorological Instruments in use in 1837 and in 1897 has been arranged in commemoration of the Diamond Jubilee of Her Majesty the Queen, at the Institution of Civil Engineers, Great George-street, Westminster. The exhibition will be open from Tuesday, March 16th, to Friday, March 19th. On Wednesday, the 17th, at 7.30 P.M., an illustrated lecture will be given by Mr. G. J. Symons, F.R.S., on "Meteorological Observations in 1837 and 1897."

THE DIFFUSION OF SMALL-POX.—Since mid-February to Saturday last 10 deaths from small-pox had been registered in London, of which 6 were registered last week, 3 in vaccinated and 3 in unvaccinated persons. The 3 vaccinated individuals were all over five years of age, 2 of them being upwards of forty years of age; whilst of the 3 unvaccinated all were aged under twenty years, and 1 was a child under the age of five years. Of the 6 deaths, 3 patients belonged to Camberwell, 2 to the Strand, and 1 to St. Martin-in-the-Fields sanitary areas. Six new cases were last week admitted to the hospital ships on the Thames, as compared with 20, 3, and 18 in the preceding three weeks, and 43 cases remained under treatment last Saturday. Two cases of the disease which occurred at Devonport towards the close of last month, both in one household, were isolated in the infectious diseases hospital at Milehouse.

DIPHTHERIA IN LONDON.—Last week saw a fall in the number of deaths registered from diphtheria in London, the total of 43 being the third lowest for any week during the current year. It was, however, 9 in excess of the corrected average for the ninth week of the period 1887–96. All but one of the 43 deaths were in young persons aged under twenty years, and 25 were of children aged from one to five years. Wandsworth and Camberwell were each of them credited with 6 deaths, Greenwich with 5, and Islington with 4 deaths. The admissions to hospital in the week numbered 112, against 104, 104, and 102 in the preceding three weeks, and last Saturday found 846 patients who were suffering from diphtheria under isolation. In the outer ring there were 9 deaths registered from the disease, of which 5 were in the West Ham registration district and 3 in the Brentford district.

CARDIFF UNIVERSITY.—The Medical Students' Club of Cardiff University College entertained Professor Alfred William Hughes at dinner in the Queen's Hotel, Cardiff, on Monday evening, and presented that gentleman with a token of goodwill and esteem on his departure after having resigned the chair of anatomy. The toast of "The Health of Professor Hughes" was proposed by Dr. Donald Rose Paterson, the President of the College, who referred at length to the good influence Professor Hughes had exercised upon the success of the medical school during his four years' stay in Cardiff and emphasised the regret which all the teachers and students experienced in parting with him. Professor Hughes was then presented with a handsome spirit-stand and a silver salver, on which was inscribed a sentence conveying the regard of the students for him "as professor and friend." Professor Hughes, who had been forced to leave Cardiff on account of the health of his wife, acknowledged the compliments he had received in feeling terms.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Petroleum Lamp Accidents.

THE Select Committee of the House of Commons on this subject has appointed Mr. Mundella chairman, and has determined to take no more evidence from scientific experts as to the relative inflammability of different kinds of oil, but to push forward its inquiry as to lamps and their construction.

Proposed Conference on Insanity.

Mr. William Corbet has given the following notice of motion—viz.: To call attention to the annually increasing numbers of the insane not only in the United Kingdom, but in every civilised country of the world; and to move that it is desirable in the interests of humanity that steps shall be taken to convene an international conference to inquire

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into the cause of such increase and to report whether any and what measures can be adopted to arrest the spread of the disease.

Military Head-dress.

In the House of Lords on Monday, March 8th, the Earl of Strafford questioned the War Secretary with reference to the head-dress of the Army and the various proposals for changing it, and the Marquis of Lansdowne replied that he has thought it right to refer the whole question to a committee, and that until the report of this committee is received no decision will be arrived at by the War Office.

Infant Life Protection.

A Bill is now before the House of Lords to amend the law for the better protection of infant life. It was introduced by the Earl of Denbigh.

Working Men's Dwellings Bill.

The House of Lords has given a second reading to a Bill to provide facilities for the acquisition by working men of their own dwellings. The Bill enables local authorities to make advances up to £150, and requires that they shall be satisfied that the workman actually resides or *bonâ fide* intends to reside in the dwelling-house, that the title is good, the sale made in good faith, and the price reasonable, and that the dwelling-house is in a sanitary and tenantable condition. There are a great many provisions in the Bill designed evidently to secure the local authorities against loss and to prevent abuse.

HOUSE OF COMMONS.

THURSDAY, MARCH 4TH.

Metropolitan Pauper Children.

Mr. Cohen asked the President of the Local Government Board if he would lay upon the table of the House the answers he had received from the guardians of the various metropolitan parishes to the draft order prepared by the Local Government Board for placing certain classes of children under the care of a new central authority in London.—Mr. Chaplin replied that in a large proportion of the communications he had received he was asked to defer a decision until a conference was held on the subject. This conference was held on the 26th *ultimo*, and resolutions were passed by large majorities to the effect (1) that it was desirable that separate provision such as was indicated in the draft order should be made for certain classes of children, and (2) that it should be urged upon the Local Government Board before constituting a new board to consider whether the duties created by the new order might not with advantage be conferred on some existing authority or authorities. At the conference referred to every board of guardians and the managers of each district school in the metropolis were represented by delegates, and he had received no communication from any board of guardians on the subject since the conference took place.—Mr. Lough asked Mr. Chaplin whether he would consider favourably the recommendation to reconsider the decision to constitute a new authority rather than give the work over to one of the existing authorities.—Mr. Chaplin replied that the whole matter was under consideration.

Increase of Enteric Fever in India.

Lord George Hamilton, replying to a question addressed to him by General Russell, said he had noticed with regret the increase of enteric fever in India, the causes of which were still very obscure. The Government of India had adopted various measures for improving the sanitation and water-supply of cantonments, and the question as to the means of checking this disease was one which was constantly engaging their attention.

Rabies.

Mr. Walter Long, President of the Board of Agriculture, in answer to a question on this subject put to him by Mr. Stephens, said:—The new orders which I have it in contemplation to make with regard to rabies will be issued with the least possible delay, but I would point out that those orders are intended to give effect to the recommendation of the Departmental Committee that a determined and systematic attempt should be made to stamp out rabies, not only in the metropolitan area, but throughout the United Kingdom. The adoption of this policy involves the settlement of several difficult questions, which are now engaging my active consideration, but in any event adequate notice of the new requirements must be given to the public before they can take effect. In these circumstances I have suggested for the consideration of the Middlesex County Council whether the most convenient course to be taken by them during the interim would not be that their regulations should be brought into harmony with those now in force in the other districts comprised within the metropolitan area.

MONDAY, MARCH 8TH.

Private Asylums.

Mr. Field asked the Home Secretary whether the Government would consider the advisability of the suppression of private asylums, and make other and more suitable provision for paying patients.—Sir Matthew White Ridley replied that he was not aware of any sufficient reason for disturbing the arrangement made only six years ago by Parliament with regard to licensed houses.

Suicides.

Sir Matthew White Ridley, in reply to Mr. William Corbet, said he was not aware that any useful purpose would be served by continuing the return as to the insane who committed suicide which was granted last year, and as it proved a very troublesome one to prepare he was afraid he must decline to do it. The number of insane persons generally who committed suicide would, of course, appear in the judicial statistics in the ordinary way.

TUESDAY, MARCH 9TH.

Health of Cotton Cloth Workers.

Mr. Ascroft asked the Secretary of State for the Home Department if he would consider the advisability of introducing a Bill, at as early a date as possible, with a view to carrying out the recommendations made by the committee appointed to inquire into the working of the Cotton Cloth Factories Act, 1889, &c., for the preservation of the health of the workpeople employed in the textile industries, or whether the Government would be prepared to support such a Bill if introduced by a private Member.—Sir Matthew White Ridley replied that there had not been sufficient time as yet for the full and proper consideration of the committee's recommendations, but they were being carefully considered at the present moment, and of course he should be glad to consider at the same time any suggestions which Members might desire to make.

Work in Bakehouses.

At this sitting of the House Mr. Woods introduced a Bill to restrict the hours of labour in bakehouses to forty-eight per week.

Metropolitan Pauper Children.

Mr. Pickersgill asked the President of the Local Government Board to postpone the final issue of the order with reference to the metropolitan Poor-law schools until the House had been enabled to consider the matter either on the vote for the Local Government Board or on some other occasion.—Mr. T. W. Russell, on behalf of Mr. Chaplin, declined the proposal.—Mr. Pickersgill in this connexion has given notice of a motion deprecating the formation of the proposed Metropolitan Children's Asylum Board, on the ground mainly that it will add to the confusion of authorities and to the cost of administration.

WEDNESDAY, MARCH 10TH.

Private Lunatic Asylums in Ireland.

On the motion of Mr, Field, there was ordered a return of the number of cases treated in private lunatic asylums in Ireland, the number of cures effected, and the amount of revenue derived from patients during the years 1895, 1896, and 1897.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ASHDOWNE, W. C. G., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Anæsthetist to St. Mary's Hospital, London.

BARNES, GEORGE, M.R.C.S., L.R.C.P. Ed., has been re-appointed Medical Officer of Health for the Chard Urban District.

BARROW, GEO. A., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Out-patient Department of the Children's Hospital, Manchester.

BRISCOE, WILLIAM THOMAS, M.D., M.Ch. Dubl., has been re-appointed Medical Officer of Health by the Chippenham Urban District.

BROADBENT, J. F. H., M.D. Oxon., B.Ch., M.R.C.P. Lond., M.R.C.S., has been appointed Casualty Physician to St. Mary's Hospital, London.

BROWNE, CHAS. WM., M.R.C.S. Eng., L.S.A., has been appointed Additional District Surgeon of Aliwal North, resident at James Town, vice Kitching, resigned.

CHRISTOPHERSON, J. B., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Evelina Hospital for Children, London

COLLIER, H. S., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Surgeon in Charge of Out-patients to St. Mary's Hospital, London.

CONNELL, ARTHUR M., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the Sheffield General Infirmary, vice Rutherford, resigned.

DAWSON, W. J. O., L.D.S.R.C.S. Eng., has been appointed Dental Surgeon to the Incorporation of Southampton.

DUNN, L. A., F.R.C.S., M.S., Assistant Surgeon, Guy's Hospital; Surgeon, East London Children's Hospital, Shadwell, has been appointed a Consulting Surgeon to the St. Mary's Children's Hospital, Plaistow.

FAGGE, R. H., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Leicester Infirmary, vice M. B. Foster, resigned.

FARNFIELD, W. W., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to St. Mary's Children's Hospital, Plaistow.

FLOWER, FREDERICK I., M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for Warminster.

GANGE, F. A., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Faversham Rural District Council.

GARNER, W. L., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Children's Hospital, Nottingham.

HAINS, L. J. CARY, J.P., L.R.C.P. & S. Edin., has been re-appointed Medical Officer for the Harberton District of the Totnes Union.

HARRIS, W. J., M.B., B.C. Camb., M.R.C.P. Lond., has been appointed Junior Medical Tutor to St. Mary's Hospital Medical School, London.

HERBERT, B. H., M.R.C.S., has been re-appointed Medical Officer of Health by the Uttoxeter Urban and Rural District Councils.

HUGHES, T. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Connah's Quay Urban District Council.

HUNTER, W. L., M.D., B.Ch. Dubl., D.P.H. Eng., has been re-appointed Medical Officer of Health by the Pudley District Council.

ISACKE, M. W. S., L.R.C.P. Lond., M.R.C.S., has been appointed Third Assistant Medical Officer to the Wadsley Asylum by the West Riding County Council.

JONES, DAVID, M.R.C.S., L.R.C.P. Ed., has been re-appointed Medical Officer of Health for the Kidwelly (Carmarthenshire), Urban District.

LAWRENCE, A. E. AUST, M.D., C.M. Aberd., has been appointed Honorary Consulting Physician Accoucheur to the Bristol General Hospital.

LITTLETON, P. R., M.R.C.S., has been re-appointed Medical Officer of Health for the Ashbourne Urban District.

LOWE, P. R., L.S.A., has been appointed House Physician to the Leicester Infirmary, vice R. H. Fagge.

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MACAULEY, W. G. R., L.S.A., has been appointed Medical Officer for the Western Sanitary District of the Freebridge Lynn Union, vice F. A. Barrington.

MACKINTOSH, ANGUS, M.D. Glasg., L.F.P.S., has been re-appointed Medical Officer of Health by the Clay Cross Urban District Council.

MORRISON, JAS., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Physician to the Farringdon General Dispensary, London.

NEWNHAM, W. H. C., M.A., M.B. Cantab., M.R.C.S., has been appointed Physician Accoucheur to the Bristol General Hospital.

PIPER, F. P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Claybury Asylum.

POPE, G. STEVENS, L.R.C.P. & S. Edin., Assistant Medical Officer, Cane Hill Asylum, has been appointed Medical Superintendent of the New Middlesbrough Asylum, Marton, Yorkshire.

POYNDER, F. C., M.B., B.Ch. Oxon., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the West London Hospital.

POYNTON, F. J., M.B., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Registrar to St. Mary's Hospital, London.

PROSSER, THOMAS GILBERT, J.P., M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for the Monmouth Urban District.

RANDALL, ERNEST B., M.D. Lond., M.R.C.S. Eng., has been appointed Honorary Medical Officer to St. Mary's Children's Hospital, Plaistow.

RAYNER, D. C., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Physician Accoucheur to the Bristol General Hospital.

ROBINSON, H. B., F.R.C.S., M.D. Lond., M.S., Assistant Surgeon, St. Thomas's Hospital, and East London Children's Hospital, Shadwell, has been appointed a Consulting Surgeon to the St. Mary's Children's Hospital.

SCOTT, A. WM., M.D. Brux., M.R.C.S., has been re-appointed Medical Officer of Health for the Handsworth Urban District.

STEPHENS, J. W. W., M.B., B.C., D.P.H. Camb., has been appointed Assistant Bacteriologist to the Government in India.

TUXFORD, ARTHUR, M.D. Edin., Medical Officer of Health to the Boston Urban and Port Sanitary Authorities and Sibley Rural District Council, has been appointed Medical Officer of Health to the Rural District Council, Boston Union, vice J. Wilkinson, resigned; and also re-appointed Medical Officer by the same Council to the Fever Hospital, Boston.

VENIS, H. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed House Surgeon to the Brecknock County and Borough Infirmary.

VINTER, S. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Union House, and Medical Officer and Public Vaccinator for the No. 2 Sanitary District of the St. German's Union.

WARE, ERNEST E., M.D. Lond., B.S., M.R.C.S., has been appointed Honorary Medical Officer to St. Mary's Children's Hospital, Plaistow.

WELLS, R. STOTHART, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the Parish of Kilmuir, Skye.

WILLIAMS, C. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Smallburgh Sanitary District and the Workhouse of the Smallburgh Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOOTLE BOROUGH ASYLUM.—Junior House Surgeon. Salary £40 per annum, with board, lodging, washing, &c.

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £60 per annum, with board, lodging, and washing, but no wine, spirits, or beer.

BRACEBRIDGE PAUPER LUNATIC ASYLUM, Lincoln.—Junior Assistant Medical Officer, unmarried. Salary £125 a year with board, apartments, attendance, and washing. Also Assistant Medical Officer. Salary £150 per annum, with board, apartments, attendance, and washing.

BRADFORD INFIRMARY.—Dispensary Surgeon, unmarried. Salary £100 per annum, with board and residence.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Honorary Surgeon.

DUNDEE ROYAL INFIRMARY.—Resident Clinical Assistant. Board, lodging, and washing provided.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Junior Resident Medical Officer. Salary £50. Also four qualified Clinical Assistants and eight unqualified Clinical Clerks in the Out-patient Department.

GENERAL HOSPITAL, Birmingham.—Surgical Casualty Officer for one year. Salary £50 per annum, non-resident.

GENERAL HOSPITAL, Nottingham.—Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

GENERAL INFIRMARY AT LEEDS.—Qualified Casualty Officer. Salary £100 a year, with board, lodging, and washing.

GRAVESEND HOSPITAL.—House Surgeon. Salary £80 per annum, with board and residence.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Knowle, Fareham.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

KENSINGTON AND CHELSEA SCHOOL DISTRICT.—Medical Officer (non-resident) at the Cottage Home School at Banstead, near Epsom, Surrey. Salary £140, rising £10 every two years to a maximum of £180 per annum, subject to the statutory percentage deduction under the Poor-law Officers Superannuation Act, 1896. Applications to the Clerk to the Managers, Guardians' Offices, Marloes-road, Kensington, W.

LEICESTER INFIRMARY.—Assistant House Surgeon for twelve months. An honorarium of £42, and board, residence at the Infirmary, and washing provided.

LONDON LOCK HOSPITAL, 91, Dean-street, W.—House Surgeon to the Male Hospital. Salary £50 per annum, with board, lodging, and washing. Applications to the Secretary at Harrow-road.

LONDON SCHOOL OF MEDICINE FOR WOMEN, 30, Handel-street, Brunswick-square, W.C.—Demonstrator of Physiology. Salary £30 per annum.

MANCHESTER AND SOUTHERN MATERNITY HOSPITAL.—Resident House Surgeon. Honorarium at the rate of £50 per annum and board.

MANCHESTER ROYAL EYE HOSPITAL.—House Surgeon. Salary £70 per annum, with residence, board, and washing.

MONTROSE ROYAL LUNATIC ASYLUM.—Physician Superintendent for one year. Salary £700 per annum, with free house, fire, and light.

NEWPORT AND MONMOUTHSHIRE HOSPITAL, Newport, Mon.—House Surgeon. Salary £100 per annum, with board and residence (no stimulants provided).

POPLAR HOSPITAL FOR ACCIDENTS, East India-road, Poplar, E.—Salary £80 a year, with board and residence. Also second Assistant House Surgeon. Salary £50 a year, with board and residence.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board and residence.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road, Brighton.—House Surgeon. Salary £80 per annum, with board, lodging, and washing. No stimulants.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—House Physician. Salary £50, with board and lodging.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields.—Senior House Surgeon.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant Physician.

ST. LUKE'S HOSPITAL, LONDON, S.E.—Clinical Assistant for six months. Board and residence provided.

ST. SAVIOUR'S UNION, Surrey.—Medical Superintendent and Second Assistant Medical Officer at the Infirmary, East Dulwich-grove, S.E. The salary of the Medical Superintendent at the rate of £400 per annum, with unfurnished house, coals, gas, and water, and that of the Second Assistant Medical Officer at the rate of £80 per annum, with furnished apartments, board, and washing. Subject to an annual percentage deduction from the salaries in accordance with the provisions of the Poor-law Officers Superannuation Act. Applications to the Clerk, Union Offices, John-street, Blackfriars-road, S.E.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Honorarium £10, with board and residence.

SUSSEX COUNTY HOSPITAL, Brighton.—House Physician, unmarried. Salary commencing at £50 per annum, with board and residence and washing in the Hospital.

UNIVERSITY COLLEGE, BRISTOL, FACULTY OF MEDICINE.—Medical Tutor. Stipend £125 per annum

VICTORIA HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Edinburgh.—Resident Physician. Board and lodging are provided, and an allowance for conveyance at the rate of £24 per annum. Also non-resident Medical Officer for Out-patients. Salary at the rate of £60 per annum. The appointments for six months Applications to Messrs. Wallace and Guthrie, W.S., 1, North Charlotte-street, Edinburgh, Hon. Secs.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—House Surgeon, unmarried. Salary £60 a year, with board and residence.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for twelve months. Salary £60 per annum, with rooms, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On March 8th, at Newbury, the wife of Alfred Adams, M.B., B.Ch. Oxon., of a son.

BONAR.—On Feb. 28th, at Via del Babuino, Rome, the wife of Thomson Bonar, M.D., of a son.

FITZMAURICK.—On March 9th, at Lindfield, Hayward's-heath, Sussex, the wife of Richard Fitzmaurice, District Medical Officer, of a daughter.

LATIMER.—On Feb. 28th, at St. Helen's-road, Swansea, the wife of H. A. Latimer, M.D., of a son.

MCBRIDE.—On March 7th, at The White House, Great Berkhamsted, the wife of J. Best McBride, L.R.C.P., L.R.C.S.I., of a daughter.

NIAS.—On March 8th, at Rosary-gardens, South Kensington, the wife of J. B. Nias, M.D., of a daughter.

RICHARDS.—On Feb. 27th, at Aber Arran, Dolgelly, the wife of R. W. Richards, M.D., L.R.C.P., of a son.

TAYLOR.—On March 7th, at Seymour-street, Portman-square, W., the wife of Seymour Taylor, M.D., of a son.

MARRIAGE.

MORRIS—MONRO.—On March 1st., at St. George's Church, Ramsgate, E. H. Grant Morris, B.A., M.B. Cantab., eldest son of Christopher Morris, of Baron's Craig, Dalbeattie, N.B., to Catherine Mary, only daughter of the late C. E. Monro, L.R.C.P., M.R.C.S., of Ramsgate.

DEATHS.

BARRON.—On March 10th, at his residence, Summerseat, Southport, George Bretherton Barron, in his 76th year.

DICKINSON.—On March 3rd, at his residence, Denmark Villas, Hove, Thomas Dickinson, M.R.C.S. L.S.A., formerly of Sloane-street, Chelsea, aged 67.

PEMBERTON.—On March 7th, at his residence, the Quarry House, Over Whitacre, Warwickshire, Oliver Pemberton, F.R.C.S., J.P., Coroner for the City of Birmingham, in his 72nd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (17th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (18th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (20th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (16th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. S. G. Shattock: "Sable Intestinal."—Mr. A. A. Bowlby: Unusual Specimen of Gummatous Disease of the Kidney.—Mr. D'Arcy Power: Some Points in the Minute Anatomy of Intussusception.—Mr. J. H. Targett: Giant-celled Tumours of the Integuments.—Dr. Champneys and Mr. Power: Congenital Occlusion of the Duodenum by complete Transverse Septum.

WEDNESDAY (17th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Papers:—Mr. J. L. Williams: On the Formation and Structure of Dental Enamel.—Dr. A. E. Wright: On a New Method of Measuring and Counting Microscopic Objects.

THURSDAY (18th).—SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Casual Communication:—Prof. Holiday: An Anæsthetic Inhaler. Paper:—Dr. Silk: The Occurrence of Pneumonic Troubles after the Administration of Anæsthetics.

FRIDAY (19th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-st., Cavendish-sq.).—8 P.M. Dr. J. Niven: The Prevention of Tuberculosis.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (15th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. C. Stewart: Joints and Flexible Bonds of Union in Plants and Animals.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Dr. A. Hill: Diseases of Animals in Relation to Meat Supply; Characteristics of Vegetables, Fish, &c, unfit for food.
SOCIETY OF ARTS.—4.30 P.M. Prof. W. C. Roberts-Austen,: Alloys. (Cantor Lecture.)

TUESDAY (16th).—ROYAL COLLEGE OF PHYSICIANS—5 P.M. Dr. W. Collingridge: On Quarantine. (Milroy Lecture.)
LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Alcoholic Insanity, Insanity with Syphilis, Insanity with Organic Brain Disease.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Impetigo.
CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Diagnosis and Treatment of Visible Abnormalities in the Auricle and External Meatus.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Horsley: Lecture.
WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4 P.M. Dr. F. Beach: On Cases of Mental Deficiency in Children.
ROYAL INSTITUTION.—3 P.M. Prof. A. D. Waller: Animal Electricity.

WEDNESDAY (17th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. C. Stewart: Joints and Flexible Bonds of Union in Plants and Animals.
LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Sanitary Appliances
HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Maguire: The Cardiac Affections of Renal Disease.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Mr. F. Ruddle (conducted by): Inspection and Demonstration at L.C.C. Common Lodging House, Parker-street, Drury-lane (number limited).
WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Whitfield: Medical Cases.
NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Exhibition of Clinical Cases.

THURSDAY (18th).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. W. Collingridge: On Quarantine. (Milroy Lecture.)
THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. H. R. Kenwood: Infectious Diseases and Methods of Disinfection.
THE HOSPITAL FOR SICK CHILDREN (Medical School, Gt. Ormond-street, W.C.).—4 P.M. Mr. J. H. Morgan: Clinical Lecture (Surgical).

FRIDAY (19th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. C. Stewart: Joints and Flexible Bonds of Union in Plants and Animals.
LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Actinomycosis and Glanders.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Ballance: Lecture.
ROYAL INSTITUTION.—9 P.M. Sir E. M. Thompson: Greek and Latin Palæography.

SATURDAY (20th).—ROYAL INSTITUTION.—3 P.M. Right Hon. Lord Rayleigh: Electricity and Electrical Vibrations.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Mr. E. J. Reynolds: Inspection and Demonstration at Friern Barnet Sewage Works.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

THE COST OF A COTTAGE HOSPITAL.

To the Editors of THE LANCET.

SIRS,—Being anxious to start a cottage hospital I should be very grateful if you or any of your readers would kindly give me some idea as to the cost of furnishing one of, say, seven or eight beds, also the cost of maintenance per bed per annum (instruments and splints not to be included). Apologising for troubling you,

I am, Sirs, yours faithfully,

March 2nd, 1897. ONE WHO WANTS TO KNOW.

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THE DOSE OF IPECACUANHA.

To the Editors of THE LANCET.

SIRS,—One of the commonest diseases in this country is bronchitis. The disease by which more persons are killed than by any other disease is bronchitis. This is the time of the year when bronchitis is especially common, and when it kills an especial number of persons. The remedy par excellence for bronchitis is ipecacuanha. Other remedies there are, but the one in most frequent use is ipecacuanha. It may be an interesting inquiry to make at about this time whether patients affected with bronchitis are as a rule much benefited by having ipecacuanha prescribed for them. I venture to think that, as a rule, they are not much, if, indeed, at all, the better for it. Affected myself with bronchitis, and ipecacuanha wine being recommended for me, I ascertained the authoritative customary dose of this remedy from the pharmacopœias of some of the London hospitals. I find that the dose commonly administered is ten minims three times a day. Now, I have reason to suppose that in that dose ipecacuanha wine is of little, if any, use. I find that if I take half a drachm of it every two hours throughout the day it produces no apparent effect of any kind, no action of the skin, no nausea, no aperient result, no tangible expectorant effect. The wine was procured from Messrs. J. Bell and Co., and was therefore of the best quality. I have yesterday thus taken in all three drachms of ipecacuanha wine in place of the customary total of thirty minims, and this morning before noon I have taken one and a half drachms. The impression left on my mind is that I have taken far too little to produce any effect of any kind. I am therefore of opinion that the customary dose of this remedy ought to be largely increased and that such a step may be taken with perfect safety.

I am, Sirs, obediently yours,

Weymouth-street, W., Feb. 11th, 1897. BALMANNO SQUIRE.

Mr. H. G. Rogerson.—The advertisements are of the ordinary character, though perhaps more impudent than usual. We should have thought the schoolmaster might have been called to order by his employers.

Junior Practitioner.—There is no objection to such a course, provided there is no canvassing for patients.

VEGETABLE PILLS.

THE *Birmingham Mail* is responsible for the following excellent story of "the experience of a Birmingham man who purchased a box of pills from a local huckster's shop. He took some without effect. The rest were set aside in a cupboard which was very damp. After a few weeks he again sought his pills and to his astonishment each had developed a healthy green shoot, which was not rhubarb or aloes, but grew from what turned out to be a white pea covered with some white coating." We have no doubt that the Birmingham man was sore at being gulled. In our opinion he ought to be most devoutly thankful that nothing more than a harmless pea was foisted on him in exchange for his silver.

Dr. Albert Wilson of Leytonstone writes to us concerning a case of dual consciousness exhibited by him at the Clinical Society (THE LANCET, March 6th, 1897, p. 665). He writes to repudiate any connexion with the publicity given to the case and his name by a lay paper, and at the same time to invite any interested medical man to communicate with him if they should desire an interview with the patient.

"FALSE COLOURS."

To the Editors of THE LANCET.

A Disclaimer.

SIRS,—Your annotation on the *primâ facie* facts recited was intended to be just. You very fairly inferred an inconsistency between my letter and my appearance on a public platform with posters staring me in the face—M.D., &c. But this appearance is fallacious, for at the stated time and for many weeks, I was confined to a sick bed with an injured leg and neither supported the chairman (since I could not support myself) nor even knew or heard of the bills and posters which have elicited your correspondent's comment. Further (and how can I say what I wish without the appearance of arrogance or presumption?), while it may be right to show in some way that I have had a medical education, I am not desirous of appearing in any degree connected with the British medical school and Register. I say this without offence and without judging any other man's principle. But I stick to my own. I am myself convinced that the orthodox antagonistic principle of medication is a mistake, that vaccination is a blunder, and vivisection a crime. Therefore your correspondent will understand that I am sincere when I repudiate, as I have sometimes to do on the platform or elsewhere, the title of "doctor," indicating, as it is supposed to do, an orthodox, registered medical practitioner of Great Britain. These are my colours, and I am neither ashamed of them on the one hand nor flaunt them in anyone's face on the other. Another point, but one on which I shall not enlarge, is that all letters after one's name and all titles put before it should, I think, carry with them some definite idea of examinations passed and merit won, but not otherwise.

I am, Sirs, yours faithfully,

Temple, March 8th, 1897. H. S. SCHULTESS-YOUNG.

"ANTISEPTIC MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—I have, I am afraid, failed to make myself properly understood. What I meant to convey was that the experience of lying-in hospitals seems conclusively to point to the perchloride solution as the only reliable antiseptic for purifying the hands, &c., but that a strength of 1 in 2000, as quoted by Mr. Harding from an old edition of my book on midwifery, is not sufficiently strong, and that 1 in 1000 should be used. Every practical man knows that nurses will not use 1 in 50 carbolic solution effectively because of its roughening and irritating effect on the hands. The creoline solution I do not recommend as a means of disinfecting the hands—for which purpose the 1 in 1000 perchloride alone should be employed—but for addition to water used for douches or ablution after delivery. It is perfectly bland and unirritating. Sufficient creoline should be dropped into the water to be used to make it milky in appearance.

I am, Sirs, yours truly,

Grosvenor-street, W., March 5th, 1897. W. S. PLAYFAIR.

Partner.—A medical man cannot take as a partner anyone but a properly qualified person. Anyone finding capital for the purchase or conduct of a business is not a partner with the man who works the business. It is a mere matter of contract how such a capitalist should be repaid. He or she would have no control over the working of the practice, which must be left strictly to medical hands.

TREATMENT OF CORNS, &C.

A CORRESPONDENT writes:—"Can any of your readers suggest good treatment for corns and bunions? I have used salicylic preparations to corns which decrease them temporarily, but they return. As to bunions, I want a method of reducing pain, easily applicable and, if possible, to reduce size. I have had a run of patients who expect a medical practitioner to cure all minor ills."

D'Artagnan.—We have seen the article. No good would come of commenting upon it.

"LINCOLN MEDICAL PROTECTION FUND."

To the Editors of THE LANCET.

SIRS,—Will you kindly publish the accompanying statement of accounts of the above fund? Since the last published list I have received the following subscription—T. M. King, M.A., 4, Mortlake-road, Kew, £1.

I am, Sirs, yours truly,

Lincoln, March 8th, 1897. W. A. CARLINE.

LINCOLN MEDICAL PROTECTION FUND.

Receipts.	£	s.	d.
From 282 subscribers	381	17	0
Bank interest		16	0
	382	13	0

Payments.	£	s.	d.
Printing, addressing, and postage of appeals (8000) ...	35	14	0
Rent of house for Provident Medical Association ...	17	10	9
Printing rules and cards and cost of drugs for same	7	5	2
Rents and taxes for same	1	19	1
Sundry expenses	1	4	6
Rent of extra (furnished) house four weeks	7	0	0
Treasurer's postage, &c.	1	6	0
Medical officers, including payments for removal of their furniture—Mr. Johnston	122	0	7
Mr. Whitwell	99	3	3
Dr. McDade	89	9	8
	£382	13	0

(Signed) GEO. MITCHINSON, CHARLES BROOK, C. HARRISON, } Trustees.
W. A. CARLINE, Hon. Treasurer.

Alpha.—The answer to this question clearly depends upon our correspondent's business position towards A. If he is A's employé he must do as he is told or resign his position; if he is not an employé he can act on his own responsibility.

AN INSOLENT ADVERTISEMENT.

MR. FRANK HOWARD, who describes himself as a "consulting ophthalmic optician," has issued a circular in which he offers to medical men the use of a dark room and all necessary testing apparatus for examining a patient. We have no fault to find with this offer, which might be of service to some practitioners, but Mr. Howard then goes on to say, "If you kindly send to me any patient whose errors of refraction or accommodation require correction, I should be glad to diagnose the case and submit my prescription to you for verification and approval, free of charge." This last offer is simply a piece of impertinence, and we hope that any medical man who has received Mr. Howard's circular will write telling him to mind his own business—namely, that of supplying glasses ground to a certain curvature in accordance with the formula laid down by a medical man.

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SOLUTION OF CHLORINE AS A GERMICIDE.

To the Editors of THE LANCET.

SIRS,—In the early part of October of last year I thought of trying the result of the application of the old liquor chlori to some long-standing cases of varicose, indolent, and purulent ulcers, lupus, rodent and epithelial sores, and syphilis, and so happy is the result in many of these cases that I determined to investigate the matter further and had the liquor made purposely of different strengths of pure chlorine passed into sterilised water. I firmly believe we have in this liquor one of the most powerful germicides and antiseptics of the time. Towards the close of last year, through the kindness of Mr. George Stoker, I had the opportunity of seeing his interesting and successful cases under the oxygen treatment, and it confirmed my view that we wanted a more destructive germ-destroying element as well as a blood purifier and coagulator like oxygen. I have suggested the liquor to several surgical and medical friends at different hospitals as a general dressing, antiseptic and clean, immediately deodorising all foul wounds and ulcers. In cancer, syphilis, lupus, and rodent ulcer I have so far great hopes it may prove the most valuable antiseptic dressing we have; also as a spray in diphtheria, foul sore-throats, and in uterine medication. I hope soon to send a short account of cases that I have had under my observation since last October dressed with the chlorine liquor. It is especially destructive to the bacillus staphylococcus aureus, typhosus, diphtheriæ, anthracis, and coli. Probably, also, we may find it to be so with the cancer, syphilis, and leprosy bacillus; but of these I shall have more to say when my cultivations are further developed. I do not wish it to be thought that I put the view forward that "the use of liquor chlori is a new antiseptic dressing," but from all I can gather it has not been applied in this simple form, neither do I believe the valuable antiseptic germicidal character of chlorine in solution has been sufficiently estimated in surgical and medical practice.

I am, Sirs, yours truly,

Harley-street, W., Feb. 14th, 1897. JAMES STARTIN.

A. B. C.—There were two books—"Baby Buds" for very young children, and "The Human Flower" for older children. They were published by Mrs. Wolstenholme Elmy, Buxton House, Congleton. Our reviewers did not recommend these works to the favourable consideration of parents.

A. V. T. is requested to repeat the communication.

THE REVOLVER NUISANCE.

"As many as seven boys, at two London police-courts yesterday, were charged with disorderly conduct involving the use of revolvers," says the *Globe* of March 9th. "The eldest of the lot, who was said to be eighteen years, but looked younger, got a month's hard labour; the youngest, fifteen years, was let off with a fine, while the rest were remanded." Short terms of imprisonment will not stop this nuisance. Tradesmen should not be allowed to sell deadly weapons to lads in their teens, and legislation in the matter is urgently required. A bullet wound the result of an accident is far too frequent a case in the wards of our general hospitals, and although the Roentgen rays permit of the easy location of the foreign body, the scarce beds in these over-worked charities ought not to be regularly required to remedy the mischief done by a few careless young larrikins.

Douche writes: "Is there in London a well-appointed establishment where good-class patients (male and female) can be sent for cold and hot douches?"

M.D.—We shall be happy to receive the paper, but we cannot promise insertion until we have seen it.

MOTOR CARS.

To the Editors of THE LANCET.

SIRS,—Perhaps some of your readers may be interested in hearing some of my experience during the past six months with motor cars for practical work. I have been using one since the commencement of October and during all the bad weather; during this time I have found it very satisfactory. I have run one sixty miles a day for several consecutive days and in all sorts of weather and on all sorts of roads. The vibration when running is less than with a horse and trap and the speed averages ten to twelve miles on the level and five to six miles an hour up-hill. The cost of running is about ½*d.* per mile for a two-seated car. These have 1½-horse power motors on the gas-engine principle, using petrol vapour, and give off practically no smell. As such large numbers of persons are desirous of having information about them and as I am an enthusiast in regard to this new development, I have written a small book giving a short history of their development and present position, with descriptions of steam, oil, and electrical methods, and hints on management and working, illustrated. Shall be pleased to send copies of the same to any who are interested post free on receipt of six stamps.

I am, Sirs, yours faithfully,

Burleigh Villa, Harrogate, March 2nd, 1897. J. C. LUKE.

"PARKE MEMORIAL FUND."

To the Editors of THE LANCET.

SIRS,—I should be much obliged if you would publish the subjoine list of 10*s.* subscribers to the late Surgeon-Major Parke's memorial. My letter of appeal appeared in THE LANCET of Jan. 30th.

I am, Sirs, yours truly,

Canterbury, March 3rd, 1897. PUGIN THORNTON.

Yeomanry surgeons: H. P. Symonds, G. T. Phillips, C. Stonham, C. T. Street, G. W. Welchman, E. Kingscote, H. W. Kiallmark, W. J. Naismith, and J. S. Jones.—Mrs. W. Tattersall, B. Pollard, Sir H. B. Poland, C. Hazard, G. L. Hazard, Lord Harris, Sir Wm. Jenner (second subscription), the Misses E. and L. Wardes, H. T. Butlin, R. J. Godlee, A. Critchett, General Sir P. Fielding, J. H. Mummery, C. Awdry, and A. Clark.—Surgeon-Major S. Westcott, per Messrs. Holt and Co., £1.

Dr. D. H. Attfield desires us to contradict the assertion that he has been appointed to succeed Dr. Mackie as a member of the Quarantine Board at Alexandria.

A USEFUL INNOVATION.

THE Victory Cycle Syndicate, of 42, Old Broad-street, request us to state that their Red Cross Victory cycles can be hired by members of the medical profession at £6 10*s.* per annum—an arrangement which will doubtless be welcomed by those who would prefer to hire rather than purchase a machine. As this is the only firm, so far as we are aware, making an offer of this kind, the information may be useful to some of our readers.

Fibula will find what he requires in the *American Journal of Obstetrics.*

A ROENTGEN DIAGNOSIS OF GOUT.

A RECENT communication by MM. Potain and Serbanesco at the Académie des Sciences is of interest as suggesting a new means of differential diagnosis between the deposits of gout and rheumatism. According to these observers the former show when submitted to the x rays a translucent central part limited by a narrow dark border, which again is enclosed in a wider opaque area. This central clear portion is absent in the rheumatic thickening. It is attributed to the greater permeability to the rays of urate of soda as compared with rheumatic deposits and also with the normal bone salts, a conclusion which they have confirmed by further independent observations.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 11th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 5	29·27	S.W.	38	37	93	51	36	...	Cloudy
" 6	29·58	W.	41	40	61	47	38	0·18	Overcast
" 7	30·03	N.E.	39	38	71	45	36	...	Cloudy
" 8	30·12	N.E.	39	36	56	44	36	...	Hazy
" 9	29·98	E.	39	37	71	49	36	0·25	Hazy
" 10	29·94	S.W.	43	41	92	53	39	0·06	Fine
" 11	30·06	W.	40	39	76	50	37	...	Hazy

During the week marked copies of the following newspapers have been received:—*Scarborough Post, Chard and Ilminster News, Malvern Advertiser, Bromsgrove Messenger, Ilfracombe Gazette, Evesham Journal, Maidstone Journal, Times of India, Pioneer Mail, East Devon Advertiser, Western Morning News, Manchester Guardian, Birmingham Gazette, Leicester Post, Newcastle Chronicle, Times of Ceylon, Glasgow Herald, South Wales Echo, Bradford Observer, Liverpool Courier, Woking Mail, Architect, Worcestershire Herald, Sussex Daily News, Builder, Liverpool Daily Post, Rochester Journal, Chatham News, Cannock Chase News, Wolverhampton Chronicle, Leeds Mercury, Rugby Advertiser, Citizen, Halifax Guardian, Yorkshire Post, Newbury Weekly News, Hastings News, Bristol Mercury, Bath Journal, Kentish Express, Sheffield Telegraph, Birmingham Post, East Anglian Times, North-Eastern Gazette, Brighton Gazette, Sanitary Record, Citizen (Gloucester), City Press, Reading Mercury, Local Government Chronicle, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Glasgow Evening News, Church of England Pulpit and Ecclesiastical Review, Surrey Advertiser, Mining Journal, Local Government Journal, North British Daily Mail, Wilts City Mirror, Western Daily Press, Cambria Leader, East London Advertiser, Preston Guardian, West Middlesex Herald, Brighton Gazette, Whitby Times, Stowmarket Courier, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Dr. F. P. Atkinson, Surbiton; Messrs. Arnold and Sons, Lond.; Dr. J. L. Andrew, Stockport; A. B. C., Leicester; Mons. J. Astier, Paris; Dr. Anderson, St. Marys, Scilly Isles; Autotype Co., Lond.; Aberystwyth Corporation, Town Clerk of; Argor, Lond.; Messrs. Armour and Co., Lond.; Apollinaris Co., Lond.; A. B., Storrington; Mr. A. Adams, Lond.; Prof. Attfield, Lond.; Dr. J. Adams, Lond.; Alpha, Laggan, N B.

B.—Mr. H. C. Burdett, Lond.; Dr. P. M. Braidwood, Amersham; Messrs. Baillière, Tindall, and Cox, Lond.; Mr. F. Brooke, West Bridgford; Bristol Electric Safety Lamp Works, Lond.; British Empire Type-Setting Machine Co, Lond.; Dr. C. P. Bartley, Shell Knobb, Mo., U.S.A.; Bradford Infirmary, Sec. of; Messrs. Burroughs, Wellcome, and Co., Lond.; Dr. G. A. Broughton, Pomona, U.S.A.; Messrs. A. and C. Black, Lond.; Mr. H. G. Barron, Southport; Messrs. C. Barker and Sons, Lond.; Bootle Borough Hosp., Sec. of; Messrs. Blondeau et Cie, Lond.

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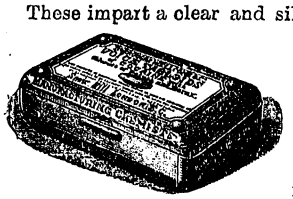
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ON

QUARANTINE.

Delivered at the Royal College of Physicians of London on March 11th, 16th, and 18th, 1897,

BY WILLIAM COLLINGRIDGE, M.A., LL.M., M.D., D.P.H. CANTAB.,

MEDICAL OFFICER OF HEALTH OF THE PORT OF LONDON.

LECTURE II.[1]

Delivered on March 16th.

MR. PRESIDENT AND GENTLEMEN,—In my first lecture the important report of the Social Science Quarantine Committee in 1861 was referred to and a summary of its conclusions quoted. The evidence that was then collected was not allowed to remain long unutilised. In 1868 a powerful deputation of the medical profession presented a memorial to the Privy Council in which they urged that the subject of quarantine had for the last twenty years been under the notice of the public, and that the present system had utterly failed during its trial in 1831–32, and had moreover been productive of serious inconvenience and distress, especially to the lower classes; that the General Board of Health had already recommended the substitution of sanitary precautions for quarantine; that the International Conference of 1851 had proved abortive in consequence of the serious difference of opinion among its members; that the experiment of superseding quarantine had already been tried in 1852, when mail steamers arriving which had had yellow fever on board during the voyage were admitted to pratique after removal of sick and disinfection of vessel; that again during the Crimean War quarantine had been almost everywhere superseded; that when in 1857 an outbreak of malignant fever occurred at Bengazi on the north coast of Africa, and freedom of intercourse was interrupted for two months by quarantine, the disease did not spread in that place and rapidly ceased upon the adoption of sanitary measures; that cholera in 1865 produced such an impression that the Conference of 1866 was initiated, and after a lengthy sitting resulted in a report condemning lengthy quarantine and recommending the substitution of a system of lazarets and health police at all ports; that at no period had the restrictive measures against cholera been so rigorously carried out as during the last two years and a half, and these having been recently applied to mail steamers it was desirable that the public should be informed as to the reason for such adoption; that quarantine had been stated in Parliament to be resorted to by this country not on medical or public health grounds, but solely for commercial purposes to meet the requirements of foreign Powers; that much of the uncertainty and obscurity surrounding the subject arose from want of evidence, no committee having considered the question since 1824; and that, inasmuch as no country was or could be so deeply interested as England on account of the magnitude of her commercial relations with all parts of the world, and as undoubtedly a well considered expression of opinion from this country after a searching investigation could not fail to have great weight with other States, and would eventually lead to the universal adoption of a more rational system, they urged that a thorough and exhaustive inquiry should be made by means of a Royal Commission.

The next International Conference, held in Constantinople in 1866, came to the conclusion that cholera always had its origin in India, and its extension simply followed the lines of human intercourse, being carried chiefly by means of the infected evacuations, and spread freely only in places where the sanitary condition was bad, but that it might also be conveyed by means of clothes, vessels, and houses. They were of opinion that a rational maritime quarantine was capable of arresting the disease. Such quarantine should be either quarantine of observation or quarantine of rigour.[2] Strict quarantine was to be applied to (1) all ships from an infected port with a foul bill of health; and (2) any vessel which had had cases on board during the voyage, although provided with a clean bill. The term of strict quarantine for persons was fixed at ten days to commence from the time of entering the lazaret, to recommence if any case occurred thereafter. It was further decided that any person suffering from diarrhœa should be detained at the end of the full period until the non-choleraic nature of the disease was proved by the medical officer. It was, however, agreed that in the case of vessels carrying surgeons and complying with certain formalities, which had had no cholera or choleraic diarrhœa on the voyage, the time spent on such voyage might be taken into account, and that twenty-four hours' surveillance might be deemed sufficient. Thus, if the voyage had occupied twenty-four hours nine days of observation were necessary, but if the voyage extended to nine days only twenty-four hours of observation were required. Merchant vessels not carrying surgeons, if they had been at sea fifteen days without any cases, were to be allowed pratique after five days of observation. In the case of emigrant ships with cholera on board the limit of quarantine might be extended to any time that the local authority deemed necessary.

In 1873, so far as cholera was concerned, quarantine was officially abandoned in this country, and medical inspection substituted by an Order of the Local Government Board. This Order required that every vessel found by Her Majesty's Customs to be infected[3] with or suspected of cholera on arrival should be detained and reported to the medical officer of health of the port. Such medical officer on visiting the vessel, if he found the vessel to be so infected, had authority to order her to moor or anchor at a specified spot. Every person on board was to be medically inspected; those found healthy were to be allowed to land, and the sick removed to hospital, or if too ill detained under treatment on board. The master, under the directions of the medical officer of health, was to disinfect the vessel and to disinfect or destroy as directed any articles of clothing. The penalty for refusing to obey or carry out any of the regulations rendered the offender liable to a penalty of £50.

In 1874 another International Conference was held at Vienna, the object being "to arrange among the Powers interested compulsory regulations having as their object to bring about a perfect uniformity in the measures to be adopted against the common danger," and also to consider as to the advisability of establishing a permanent or temporary International Sanitary Commission. Twenty European States were represented, also Persia and Egypt. This Conference re-affirmed the decisions arrived at in Constantinople that cholera originated in India, that it was transmissible by human agency, and that it might be conveyed from an infected place by means of clothing which had been worn, and especially by such as had belonged to persons suffering from cholera. They unanimously decided that the disease could be conveyed by fluids, especially by water. There was a want of unanimity on the question of danger of infection from merchandise. The incubation period of cholera was fixed at a few days—a week at the outside. As to quarantine a resolution of a committee (appointed to consider the question) to the effect that when cholera had broken through the chief points of interruption quarantines in the ports of continental Europe were useless, inasmuch as land communications deprived them of all their value, was carried by a majority of twelve to eight only. In the majority were Great Britain, Germany, Russia, Austria-Hungary, and Italy, France being the only Power of the first rank among the minority. The next resolution of the committee—"Under these circumstances it is necessary to establish in the ports of Europe, instead of quarantine, a rigorous sanitary inspection of every vessel coming from an infected port in accordance with the following regulation," was also adopted. This

[1] Lecture I. appeared in THE LANCET of March 13th, 1897.

[2] Quarantine of observation was to consist of keeping isolated and under observation for an indefinite period to be fixed by the local authority a vessel with crew and passengers, with free ventilation but no disinfection. Strict quarantine was defined as the isolation for a fixed time of a ship and persons on board, with disinfection of all that might contain the germs of the disease. The whole of the cargo was to be landed, and the passengers disembarked at a lazaret.

[3] A vessel shall be deemed to be infected with cholera in which there is or has been during the voyage or during the stay of such ship in a foreign port in the course of such voyage any case of cholera.

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regulation was to the effect that local sanitary authorities at every port were to be kept informed respecting cholera in other ports. Immediate free pratique was to be given to all vessels from non-infected ports which had had no communication with any infected ship or port and which had had no case of cholera on board. It also provided for the medical inspection of all vessels from infected or suspected ports and also of vessels which, though coming from non-infected ports, had communicated with infected ports or ships during the voyage or which had cases on board. Immediate pratique was to be given if there were no actual cholera on board, unless there had been cases, in which event the ship itself, the crew, passengers, their clothes and goods, were to undergo disinfection before pratique was granted. If any cases were found on board, they were to be removed to hospital, the crew and passengers (healthy) disinfected and also the vessel itself. Free pratique was to be given to all merchandise except rags and susceptible objects. As, however, some of the States (eight having voted against the abolition of quarantine) would not accept medical inspection, and as there was a possibility of improving the system without actually abolishing it, a *règlement quarantenaire* was adopted for the benefit of such Powers. Vessels arriving from infected ports were to submit to observation for a period varying from one to seven days, and in exceptional cases this might be extended to ten days. If the voyage had lasted seven days without any case on board, the detention was to be for twenty-four hours only, in other cases from three to seven days, according to circumstances, dating from time of medical inspection. In such cases, if the vessel were in good sanitary condition, the quarantine could be performed on board and the unloading of the ship was not compulsory. If there were or had been any cholera or suspected cholera on board, the term of quarantine for healthy persons was to last the full seven days, to date from time of admission into the lazaret, the sick to be landed and isolated from the healthy. The ship and all susceptible objects were to be submitted to rigorous disinfection, after which those persons who had remained on board were to undergo seven days' observation. For vessels arriving from suspected ports (which were defined as those adjacent to or having free intercourse with infected ports) the duration of quarantine was not to exceed five days. Vessels carrying emigrants or pilgrims were to be dealt with by special rules to be made by each port authority according to its own discretion. Thus for the first time was medical inspection formally adopted in the place of quarantine by a majority of European Powers, and in the case of those who still clung to the old system some important modifications were adopted. While, however, so large a minority refused to accept the decision of the majority it was obvious that but little could be accomplished.

In 1883 regulations were again issued by the Local Government Board for dealing with cholera, and these contained several new and important modifications from the Order of 1873. The duty in the first place of deciding as to the state of health of the vessel on arrival devolved, as heretofore, upon the officers of H.M. Customs, and the subsequent treatment of any vessel found to be infected upon the port sanitary authority. Independent authority was, however, given to the medical officer of health to visit and examine any vessel from an infected port whether she had previously been visited by the Customs or not, and a form of certificate was given by the medical officer to use in any case in which he had reason to believe a vessel was infected within the meaning of the Order. On the delivery of this certificate the vessel was entirely under the control of the medical officer of health.

In 1890 regulations were again issued and power given to the medical officer of health to require in the case of an infected vessel (defined in the Order as a vessel in which there is or has been during the voyage or during the stay of such ship in a port in the course of such voyage any case of cholera) the names and addresses of all passengers on board who were found on medical inspection to be healthy, before they were allowed to leave. By forwarding such names and addresses to the sanitary authority of the district to which they were about to proceed, it was placed in the power of each district by timely notice of such arrival to protect itself by keeping such persons under observation so long as deemed advisable.

In 1893 was held at Dresden the last International Sanitary Congress, at which were represented Germany, Austria-Hungary, Belgium, Denmark, Spain, France, Great Britain, Greece, Italy, Luxemburg, Montenegro, the Netherlands, Portugal, Roumania, Russia, Servia, Sweden and Norway, Switzerland, and Turkey. England was professionally represented by Dr. Thorne Thorne, the medical officer of the Local Government Board, to whose able advocacy of medical inspection as a substitute for quarantine the Conference in a great measure owes its successful results. Three committees were appointed, the first to deal with the duties of a Government when cholera appeared in a country, the second to deal with the measures necessary to prevent cholera entering a country or spreading from one part of a country to another, while the third devoted itself to the Danube traffic. The Convention was finally signed by the delegates of Germany, Austria-Hungary, Belgium, France, Great Britain, Russia, Switzerland, Luxemburg, Montenegro, and the Netherlands. This Convention was of such an important nature, and will of necessity exercise so powerful an influence upon all sanitary regulations of this country, that its chief provisions must be quoted. The Convention will last for five years from the date of ratification. It will be renewed every five years by tacit consent unless renounced by one of the high contracting parties six months before the expiration of this term. Such renunciation will affect only those countries which shall have notified. The Convention will remain in force for the other States. The high contracting parties also reserve the right to make, by means of diplomatic negotiations, such modifications as they may judge necessary to introduce into the Convention.

MEASURES INTENDED TO KEEP ALL THE GOVERNMENTS WHO HAVE SIGNED INFORMED AS TO THE PROGRESS OF AN EPIDEMIC OF CHOLERA; AND ALSO THE MEANS EMPLOYED TO PREVENT ITS PROPAGATION AND IMPORTATION INTO HEALTHY PLACES.

The Government of the infected country is to notify to other Governments the existence of a cholera centre (*foyer*). This measure is essential. This will have no real value unless the notifying Government is itself warned of actual and suspected cases of cholera occurring within its territory. It will not, therefore, be necessary to recommend to the various Governments the compulsory notification of cholera by medical men. The object of the notification will be the starting point of a cholera centre, the date of outbreak, the place where it has appeared, the number of cases reported, and the number of deaths. Isolated cases will not necessarily be notified. The notification will be made to the diplomatic or consular agencies in the capital of the infected country. For those countries which are not represented there the notification will be made by telegraph to their Governments. This first notification will be followed by later communications at regular intervals of not less than a week, so as to keep the Governments informed as to the progress of the epidemic. Information as to the appearance and progress of the epidemic will be as complete as possible, especially indicating the steps taken to prevent the spread. It will point out the prophylactic measures (1) for sanitary inspection or medical inspection; (2) for isolation; and (3) for disinfection and precautions taken with regard to ships and the exportation of goods liable to carry infection. It is understood that neighbouring countries reserve the right to make special arrangements for organising a system of direct communication between the administrative officers on their frontiers. The Government of each State shall at once publish the measures it finds necessary to prescribe with reference to goods coming from an infected country or district, and also the cessation of such.

Conditions under which a district is to be considered "infected."—Every district is to be considered as infected when an outbreak of cholera has been officially declared. It will cease to be considered as infected if there has been no death and no fresh case for five days, provided that the necessary system of disinfection shall have been carried out from the commencement of the outbreak. Isolated cases will not render a district infected.

Necessity for limiting to infected districts the measures intended to prevent the spread of the epidemic.—The Governments should apply restrictive measures only to goods coming from infected districts. But this limitation should only be accepted on the distinct understanding that the Government of the infected country takes steps to prevent the exportation of dangerous goods coming from the infected district. When a district is infected no restrictive measures shall be taken with respect to goods which shall have left it at least five days before the outbreak of the epidemic.

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MERCHANDISE, OR ARTICLES LIKELY TO CONVEY INFECTION, CONSIDERED FROM THE POINTS OF VIEW OF PROHIBITION OF TRANSIT AND DISINFECTION.

Importation and transit.—The only articles which can be prohibited are:—1. Body linen, clothes, and garments that have been worn (effects in use); beds which have been used. When these articles are carried as luggage or by reason of change of domicile they come under special regulations. 2. Rags and worn-out clothes. The following ought not to be prohibited: (*a*) rags compressed by hydraulic pressure, which are carried as merchandise in bulk in bales hooped with iron, and bearing marks and numbers of origin accepted by the authority of the country of destination; and (*b*) new pieces coming direct from cotton, woollen, clothing, or bleaching factories, artificial wools (Kunstwolle, shoddy), and cuttings of new paper. The transit of merchandise or susceptible articles packed in such a way that they cannot be handled *en route* should not be forbidden. When goods or susceptible articles are transported in such a way that while in transit they cannot come in contact with soiled articles their passage through an infected district should not be an obstacle to their entry into the country of destination. No goods will be prohibited from entry if it be proved that they were sent off five days before the outbreak. Goods must not be detained in quarantine on the frontier. Prohibition pure and simple or disinfection are the only measures that can be taken.

Disinfection.—Baggage: Disinfection will be compulsory for dirty linen, clothes, and garments which form part of baggage or furniture coming from a district declared infected. Merchandise: Disinfection will only be carried out for goods and articles which the local sanitary authority shall consider as infected or those the importation of which can be forbidden. The authority of the country of destination shall fix the method and place of disinfection. Disinfection shall be carried out so as to cause as little damage as possible. Letters and correspondence, printed matter, books, journals, and business documents (except parcel-post packages) will not be disinfected or restricted in any way.

MARITIME MEASURES.—PORTS.

A vessel which has cholera on board or has had a fresh case within seven days is to be considered as infected. A vessel which has had cholera on board on leaving or during the voyage, but no fresh case within seven days, will be considered suspected. A vessel coming from an infected port which has had no death or case of cholera on board before arrival, during the voyage, or on arrival, will be considered healthy.

Infected ships are treated as follows: (1) The sick are at once removed and isolated; (2) other persons are to be also landed, if possible, and submitted to observation, the duration of which shall vary according to the sanitary condition of the ship and length of the voyage, but will in no case exceed five days; and (3) dirty linen, effects in use, and articles belonging to the crew and passengers which in the opinion of the local sanitary authority are considered infected will be disinfected, as also the vessel or only that part infected.

Suspected ships are submitted to the following treatment: (1) Medical inspection; (2) disinfection—soiled linen, clothing in use, and articles belonging to the crew and passengers which in the opinion of the local sanitary authority are infected will be disinfected; and (3) bilge water will be pumped out after disinfection and good drinking-water substituted for that stored on board. It is advised to submit the crew and passengers to surveillance from a health point of view for five days from the date of arrival. It is also advised that the cargo be discharged quickly.

Healthy ships will be admitted to free pratique whatever the nature of their bill of health. The only measures which the local sanitary authority can apply to them are those applicable to suspected ships—viz., medical inspection, disinfection, emptying bilges, and substitution of water. It is advised to keep the crew and passengers under supervision for a period of five days, reckoned from the date of leaving an infected port. It is understood that the competent authority of the port of arrival can always demand a certificate stating that there has been no case of cholera on board the ship at the port of departure. The competent authority of the port will take into consideration in carrying out these measures the presence of a surgeon and disinfecting apparatus on board vessels of the three above named classes. Special measures may be taken in the case of crowded ships, especially ships carrying emigrants or any vessels in a bad sanitary condition. Goods coming by sea can only be treated as regards disinfection and prohibition in the same way as goods carried by land.

Any vessel which is unwilling to submit to the obligations imposed by the authority of the port will be at liberty to put out to sea. She will be allowed to discharge her cargo after the necessary precautions have been taken: (1) Isolation of the ship, crew, and passengers; (2) emptying of bilge water after disinfection; and (3) substitution of good drinking water for that stored on board. She will also be allowed to disembark those passengers who desire to go on shore, on condition that they submit to the measures prescribed by the local authority.

Every country shall provide at least one port on the shore of each of its seas with arrangements sufficient to receive a ship whatever its health condition may be. Coasting vessels will be the object of a special regulation to be established between the countries interested.

Although the agreement arrived at does not establish a perfect system, it marks a prodigious advance, and it must not be forgotten that there were great difficulties to be overcome and many prejudices to combat, which could only be met by concession whenever possible without sacrificing the broad general principles involved. The keeping under observation of healthy persons arriving in healthy ships was thus agreed to by Great Britain on the distinct understanding that this in her case would not involve any actual detention, but would be covered by the forwarding of the name and address to the sanitary authorities of the district to which they were about to proceed. Shortly after this Protocol had been signed a Bill was prepared to abolish quarantine in this country, but owing to the change of Government and various other difficulties it was not until September, 1896, that the Public Health Act became law.

By this Act the powers of the Privy Council to deal with cholera, yellow fever, and plague were transferred to the Local Government Board, who were thereby empowered to make regulations for the various sanitary authorities concerned. These regulations now in force practically extend the cholera regulations, with certain modifications, to these three diseases. If a vessel is found to be infected by the officer of Customs, she is reported to the medical officer of health, who detains her and deals with her at his discretion. He has, moreover, the power of boarding any vessel for the purpose of ascertaining whether she is so infected without the previous intervention of the Customs authorities.

Thus for Great Britain quarantine has been formally abolished, and our protection henceforth against the importation of infectious disease will be medical inspection, without any vexatious detention of a healthy vessel merely because she has arrived from an infected port. This, shortly, has been the history of quarantine in this country, and it now remains for time and experience to demonstrate to other countries the value of our system in order to induce them to accept the same conclusions. With many this will be readily brought about, while others will have more difficulty in arriving at the same opinions.

Having thus sketched the history of quarantine in this country and its final supersession by medical inspection it is necessary to inquire somewhat into the causes which have gradually led to its abandonment. The chief of these are: (1) That the system of quarantine was based upon a theory which is no longer tenable; (2) that when carried out as strictly as possible it has not had the effect of arresting the importation of disease; (3) that it has never been found possible to maintain quarantine absolutely, and that consequently a country practising it has been subjected to a barbarous, unnecessary, and costly system, without even the satisfaction of knowing that the experiment was complete; and (4) that sanitation and a rational system of medical inspection have proved more efficacious and at the same time less burdensome.

1. That the system of quarantine was based upon an untenable theory. In the early days of quarantine the idea of contagion was scarcely considered, inasmuch as diseases were looked upon as of Divine origin and represented the punishment by a higher authority for some special sin. The whole theory of modern quarantine, however, rests upon an assumption that certain diseases are conveyed by contact and by contact alone. Obviously if this assumption were capable of proof there would be a strong theoretical case for its adoption, though the practical test would still have to be rigidly

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applied. In the fifteenth century the idea of contagion was attracting much attention, and as the transmissibility of disease from one individual to another became more and more clearly proved it was not unnaturally assumed that this was the only manner in which such transmission could be effected. Medical science was then, however at a low standard, and the methods of inquiry into the nature and causes of disease were unscientific and uncertain. It undoubtedly was a great stride to have passed from the supernatural idea of epidemic diseases and to recognise in any degree the influence of human agency. Inasmuch as plague was the only disease against which quarantine was at first instituted (and was for a long time so limited) on account of its supposed spread by contact alone, as other diseases came to be considered as contagious the system was as a matter of course extended to them. There is a certain amount of reason in the principle underlying the whole question—viz., that persons suffering from certain diseases may under certain specified conditions be the means of communicating the disease to other individuals, but here the rationale stops. The medical profession[4] at that time taught that the method of propagation of disease was not only by inhalation of the breath or effluvia from a sick person, but by absorption of the virus into the system through the skin, consequent upon direct contact. Hence it was that we read of physicians having recourse to complete oilskin dresses during epidemics, with the object of protecting themselves from coming in contact with infected persons, and it was "on this hypothetical extravagance that quarantine legislation was based, to the no small discredit of medical science, the misleading of governments, and serious damage to private and public interests."

One of the striking characters of the plague has been its sudden origin and development in various places in the East quite independently of any apparent connexion with its previous appearance in the same or other localities. So firmly, however, was the theory of contagion implanted in men's minds that the most extravagant and fanciful causes for the origin of an outbreak were accepted rather than any admission should be made as to the possibility of its arising in any other way. Thus, Dr. Bowring mentions a case in Egypt where, a contagionist having shut himself up in his house for protection and having died from plague, the explanation given was that his son had flown a kite from his window and that the kite had come in contact with a bird flying from an infected part of the city. In another case the entrance of disease into a strictly quarantined house was stated to have been due to a cat which had been seen on a basket of clothes returning from the laundry, these clothes having probably belonged to some person who had had plague; while M. Lamont, a writer on plague at the beginning of the century, attributed its introduction into Leghorn to a mummy which after twenty centuries of interment was unrolled in that city. Thus, again, in Malta, in 1813,[5] the outbreak was very generally attributed to the theft by a smuggler of a bale of cotton from a vessel which had arrived from Alexandria, although there had been no sickness on board; while that of Corfu twenty years later was supposed to be traceable to contagion remaining latent in a hat belonging to an officer who had died at Malta, the hat having been sent to his friends at Corfu. It was assumed that because a disease is at times transmissible from one individual to another, therefore the property of contagion is an absolute and essential attribute. It is well known that the activity of contagion varies greatly, as is well seen in epidemic seasons by contrasting the different degrees of activity during the various stages of its existence. Thus, during the height of an outbreak the activity of contagion is far greater than during its decline, a fact which harmonises with our present knowledge of the theory of infective disease. Perhaps one of the strongest proofs of the belief in the theory of contagion exists in the practice of quarantine officers who invariably put their questions when inspecting ships from a boat alongside and never go on board the vessels themselves until they have been admitted to pratique. As to the different amount of risk between going alongside and actually going on board the evidence of Dr. Dickson, the medical officer of Her Majesty's Customs, is of great interest: "As these officers spend their lives on board vessels from abroad, all of which are for a longer or shorter time under their surveillance, their sanitary condition may be considered a fair criterion of that in the port in connexion with its foreign trade. Their almost entire exemption from zymotic diseases not only in this but in preceding years is very remarkable. Even in the great cholera visitation of 1866, when they were of necessity often living on ships from infected countries, no instance of the malady occurred among them. Dr. Russell of Gravesend, who has been in immediate charge of a section of this force for nearly half a century, has hardly known an instance of a Custom-house officer being infected from contagion on vessels where they have been boarded, and from my knowledge of the numerous London division, whose daily business is on ships in dock discharging cargo, I can fully corroborate his statements."

But plague was held to be conveyed not only by the direct contact of individuals, but also by other persons who have been in contact with them and the various articles of merchandise carried as cargoes. Hence arose the distinction in all quarantine regulations between "susceptible" goods—i.e., those that were capable of carrying the poison—and "non-susceptible"—those incapable of so carrying it. It is somewhat difficult to understand how this arbitrary distinction arose. It is sufficient to quote one or two instances to show how fanciful and absurd the distinction was. Thus in 1840 in Italy bars of iron were passed through the fire in order to destroy infection. In 1846 tallow and wax were classed as "non-susceptible," while candles were placed on the "susceptible" list. Old copper and metal were "susceptible," while wood was "non-susceptible." The plague of London in 1665 was stated by Hodges to have been imported by means of bales of cotton. But careful investigation showed that the registers furnished evidence of death from this disease for some years previously to the general outbreak, while the disease had existed in Europe for centuries. When epidemic plague raged in Alexandria and all the servants and employés of the Egyptian Government were daily handling bales of cotton which were afterwards exported, although no precautionary measures were taken, there would seem to have been no infection carried by such goods. At the lazarets of Marseilles it is stated that not one of the porters discharging cargoes from suspected vessels has ever been attacked. Sir Wm. Pym, the Superintendent of Quarantine, says: "I could not ascertain that any one case of plague had been introduced in any of the lazarets I visited in consequence of the importation of merchandise"; and, again: "From what I have stated as to the non-appearance of plague in any one instance from the manipulation of merchandise in the lazarets the present practice of exposing goods to the atmosphere for a certain period appears to have been attended with success." Dr. Milroy, in commenting upon this, wisely remarks that probably it had never occurred to him that they need not have been contagious at all, and that the process of airing was possibly an unnecessary farce. Dr. Patrick Russell, in his treatise on the plague in 1791, says: "One custom of the merchants is on very hot days to take their walks in lines and in the shades made by packs of flax, that is an infamous plague keeper, and is brought from Cairo, famed for being the fountain and granary of plagues, where they were supposed to be bred and from thence propagated to all other countries. Nay, a head of flax is hung out of every pack for a sample of the whole, which those merchants make no doubt to examine every bargain they make. So little do they know of a plague of pestilence being conveyed by these goods that they handle and examine them rapidly, even flax of the growth of Grand Cairo."

In his communications as to the mode of diffusion of the plague in the epidemic of Hillah and Bagdad in 1876–1877 Cabiadis[6] gives as his conclusions that mere contact with an infected person is without danger if not unduly prolonged, and that persons living in the same house, however carefully they may isolate themselves, are usually attacked. Again, recently, during the outbreak of plague in Hong-Kong, it has been shown by Dr. Lowson that the disease is not contagious, nor is it conveyed by the breath of a sick person. He quotes as proof the fact that none of the party told off to visit or remove those affected with plague were attacked, although they spent four hours daily in the most infected houses in the city, while none of the attendants on the *Hygeia* hospital ship suffered from the disease, although the patients were not only overcrowded, but on account of the difficulty of obtaining washermen were allowed to remain in a filthy state

[4] Dr. Proust: Sur la Peste et les Quarantines, 1846.
[5] Sir Sherston Baker: Nautical Magazine, November, 1896.
[6] Brit. Med. Jour., 1879.

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in their dirty clothes. At the Chinese hospital the state of things was even worse; but although the building was over full with dead and dying, the atmosphere being "indescribably bad," none of the attendants contracted the disease, though they often slept in the wards with their patients. Dr. Lowson concludes that the infection is conveyed much in the same way as phthisis is, by the sputum of the patient.[7] Staff Surgeon Wilm, R.N., invariably found the plague bacillus present in the fæces of the sufferers.

Yellow fever is no longer considered as a contagious disease, but it is undoubtedly transmissible by means of an infected ship. Professor Bailey of Louisville,[8] in 1879, speaks of the transmission of a section of the climate of a yellow-fever district, and states that the ships brought something from the climate and not from the sick. "For this something to be effective it was requisite that the locality into which it was imported should have for the time being a temperature equal to and approximate to that of a true yellow-fever district, and from this point of view a quarantine including persons was an elaborate folly." Yellow fever, perhaps, presents a stronger case against quarantine than any other disease. In addition to its uselessness, which will be dealt with later on, it is in this disease that the greatest danger arises from its exaction. The fact that the vessel itself is infected is an argument for treating her as rapidly as possible for the destruction of the infection, but certainly not for retaining healthy persons on board exposed to the danger, which is increased by the fact that, instead of being at sea and exposed to free air and ventilation, she is lying still in port or harbour. The longer such a vessel is detained in quarantine the greater the actual danger, assuming infection to exist. Dr. Vanderpoel[9] says: "The longer such a vessel is allowed to remain untouched—i.e., the longer a quarantine is enacted—the greater will be the virulence of the disease and the greater the danger of spreading the infection. The epidemic which appeared at Bay Ridge, Long Island, some years since was undoubtedly due to this cause; vessels were strung along the Long Island shore to ride out a specific detention until the whole fleet was thoroughly infected and the disease passed readily to the mainland. It is this practice of detention which in the past has contravened the interests of shipping and commercial men and has kept up a chronic warfare between merchants and quarantine." So far as the United Kingdom is concerned the uselessness of quarantine is obvious from the fact that yellow fever is purely a tropical disease and is found as a permanent disease—that is, lasting all the year through and becoming sometimes epidemic even during the cold season—only in those regions where the mean winter temperature amounts to at least from 68° to 72° F.[10] The fact, however, that a low temperature, while preventing the extension of the disease, does not destroy the germ, which may remain latent, developing again under suitable conditions, only emphasises the importance of dealing early with the seat of infection. Of this on board ship there exists many proofs. Yellow fever has practically always been carried by means of shipping, and this has been due to the actual infection of the vessel and not to the contagion from infected persons. As an instance of the slight amount of danger from the latter source Sir John Simon, in his eighth report to the Privy Council, mentions the fact that "during the epidemic at Lisbon in 1857 thousands of persons fled far and wide into surrounding districts; among those who thus fled numbers were already incubating the disease, and of course fell ill with it in their respective places of refuge more or less distant from Lisbon. In 182 cases of this description the Portuguese Government caused inquiry to be made whether persons about the sick fugitives had shown any signs of the infection, and the answers were that in no single case had this occurred."

With cholera, the only other disease against which quarantine is now directed, the case is quite as strong. It is quite unnecessary to adduce any proof of the non-contagious nature of the disease. In the fæces, and in the fæces alone, lies the infective germ, the comma vibrio, and this being capable of existing independently in water for a certain time is by means of this fluid conveyed freely wherever the sanitary conditions are such as to render possible the specific contamination of a supply common to a large number of persons. Wherever the water-supply is itself pure and protected from specific contamination an outbreak of cholera may be regarded with equanimity—it can be controlled and dealt with. The admission of cholera patients into general hospitals (while not advisable on account of the difficulty of dealing with the excreta) is a common practice, and there is no evidence of this having been productive of harm. There is, further, no authentic proof of the disease having been conveyed by merchandise or clothing, except where this has been actually soiled with the bowel discharges of infected persons. Dr. Alison mentions his experience as demonstrator of anatomy at Glasgow to prove that the disease cannot be communicated by means of the bodies of those who have died from the disease. He states that during the epidemic of cholera in 1848-49, when nearly all the subjects for dissection had died from cholera, not a single student suffered from the disease. In Paris during the outbreak of cholera in 1866 it was stated that not 1 of the 300 washerwomen employed by the Bureau de l'Assistance Publique was attacked, and that only 2 out of 911 men employed to conduct the funerals suffered.

Generally, then, of the three diseases—cholera, yellow fever, and plague—against which quarantine was directed not one can be considered as a contagious disease, although this was the main argument upon which the system was based. Much of the opposition to the abolition of quarantine has undoubtedly arisen from the fact that there was a strong interest for upholding the theory of contagion. The abolition of the system would have the immediate result of depriving a large number of persons of their means of obtaining a livelihood and of putting an end to the large revenue derived from fees and taxes. Hence, pressure was put upon quarantine medical officers to continue to advance views of pure contagion. M. Frank writes: "Let no one who declares the plague not to be contagious be allowed to exercise any public functions connected with this calamity; if there be such a functionary dismiss him."

2. That when carried out as strictly as possible quarantine had not had the effect of arresting the importation of disease.—The whole history of quarantine is a series of illustrations of its futility and proves it to be, as Sir John Simon so graphically described it, an elaborate system of leakiness. Theory must give way to practice, and the real test of quarantine as a system to be relied upon by the Government of a country for its protection must eventually be that of actual experience. As soon as investigation was made into the facts it was extraordinary how little evidence there was of the value of the system for the purpose which it was intended to serve. Dr. Colin[11] quotes the case of Civita Vecchia and says: "I could satisfy myself of the immunity of the port at a time when cholera prevailed at Leghorn, Naples, Ancona, and Sicily, everywhere imported by communication by sea; this immunity was entirely due to the rigorous and lengthy quarantine imposed upon all passengers from suspected vessels." Doubtless there was much force in this statement, inasmuch as the prospect of detention for a minimum of twenty-five days when a case of cholera had occurred on board had naturally the effect of putting a stop to all the Mediterranean trade. No one has ever attempted to prove that absolute cessation of intercourse with an infected place would not tend to arrest the disease. Putting all other considerations such as commerce and the interests of nations aside, it is obvious that total prohibition or an effective quarantine, though it might ruin a country, would doubtless prevent the importation of disease. "Compare with this the numerous visitations which Algeria has suffered (always imported from France) owing to the insufficient sanitary (quarantine) establishments along the coast. In marked contrast to the experience of this country was the immunity of the Balearic Isles in 1849, the immunity of Sicily in 1865-66 (until the arrival of the infected troops to put down the insurrection there), and the immunity at the same period of the islands of the Archipelago, and, lastly, the immunity in 1880 of the Turkish ports in the Black Sea in consequence of the quarantine restrictions against all arrivals from Russian ports."

But it must be borne in mind that the incidence of epidemic disease has always been most uncertain and in many cases inexplicable owing to the absence of exact information. In every epidemic it has been observed that certain localities and ports, though enjoying the freest communication with infected places, have remained exempt, so

[7] Dr. J. R. Lowson: THE LANCET, Feb. 13th, 1897.
[8] THE LANCET, vol. ii., 1879, p. 359.
[9] Quarantine Bucks, Hygiene, vol. ii.
[10] Hirsch, vol. i., p. 351.
[11] Quarantine, 1873.

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that the mere fact of the escape of any one place in any given epidemic cannot be accepted as proof of the efficiency of quarantine. To explain the position of this country with reference to quarantine Dr. Colin says: "There are countries in which, notwithstanding their freedom of international intercourse, cholera seems to be with difficulty imported. Such is England, which seems to enjoy to a certain extent the privilege of continuing in epidemic seasons its commercial relations with impunity. There is nothing extraordinary in this, and it would be dangerous to infer from partial immunities the inutility of quarantine measures against cholera in all places. England knows pretty well that she owes her preservation to her geographical position." Unfortunately, however, from some points of view—though, perhaps, in the main fortunately—the immunity of England from the importation of cholera is by no means a fact, as her repeated outbreaks in 1848-49, 1853, and 1866 clearly show. Quarantine as practised in this country was found useless in the epidemic of 1831-1848, and was therefore abandoned. Spain and Italy have never succeeded in escaping any cholera epidemics, although it is in these countries that quarantine has been most rigorously carried out. During the Crimean War, as previously mentioned, quarantine was practically in abeyance; and in 1854, when cholera was raging in England, there was free intercourse between Gibraltar and Malta and also between those places and the Mediterranean, Black Sea, and Bosphorus. During the whole of the war, although vessels were landing sick at Gibraltar and Malta with no other precautions than their immediate isolation in hospital on shore, no spread occurred at either of those places. At the same time strict quarantine was kept up in other countries and failed to protect them. To give another instance, in 1855 a steamer arrived at Constantinople from Marseilles with a soldier suffering from diarrhœa, from which he eventually died and was buried at sea. On arrival at Syra, although there was no sickness on board of any kind, the vessel was declared to be infected and placed in quarantine, the passengers being landed for a period of ten days. Nevertheless, in spite of this rigorous quarantine, Spain and Portugal both suffered very severely; Lisbon especially was heavily visited with cholera in 1856 and by yellow fever in 1857 and 1858. Dr. Choppin, the President of the Board of Health of Louisiana, says: "We in Louisiana, acting under a quarantine law not absolute in its restrictions, after an earnest effort in executing it, conducted with all the honesty and energy at our command, assisted by incorruptible officials, have utterly failed in preventing the importation of the pestilence, which has thrown gloom and sorrow over the whole of the south-western valley."

THE CARDIFF INFIRMARY.—The annual general meeting of the Governors of the Cardiff Infirmary was held on Feb. 26th. The number of in-patients admitted during 1896 was 1570, as against 1408 in 1895. The average number of beds occupied was 117·77, against 107 35 in 1895. The average cost of each bed was £50 1*s.*, the cost in 1895 being £54 8*s.* 11,908 out-patients had been attended, an increase of 285 over the previous year. The total receipts for the year had been £6596 and the expenditure £6843. The last year's deficit of £1200 had been reduced to £277.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—A reception was given by the President, Dr. Sims Woodhead, and the council on March 5th at the Temperance Hospital, Hampstead-road, N.W. There were exhibits of x rays, the phonograph, microscopes, &c., performances by the Enfield orchestral band, and part songs. Readings were given by Mr. Vezey Strong and Dr. Ridge. The President, in opening the proceedings, said that he felt how unworthily he should fill the place of the late Sir B. W. Richardson, under whose able leadership the association had attained such great success. Alcohol should only be given when nothing else would do as well and in the same way as any other drug. Experiments had lately been made in America which showed that animals to whom alcohol was given were more easily invaded by the organisms of pus and anthrax, and this agreed with the experience of cholera epidemics in which those who took much alcohol were more liable to be attacked and to succumb. A statement as to the continued progress of the association was made by the hon. secretary, and short addresses were given by Dr. Heywood Smith and Dr. Hingston Fox.

The Erasmus Wilson Lectures

ON

THE PATHOLOGY OF THE LYMPHADENOID STRUCTURES.[1]

Delivered at the Royal College of Surgeons of England on March 1st, 3rd, and 5th, 1897,

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LECTURE III.[2]

Delivered on March 5th.

ILLUSTRATIONS OF THE LOCAL COMMENCEMENT OF LYMPHADENOMA.

Conjunctiva.—Trachoma forms a common illustration of an infection producing lymphadenomatous nodules. Lymphadenoma may occur in the eyelids. A boy had growths of the orbit and of the parotid region with leucocythæmia (Fröhlich).[3]

Nose.—In the nose overgrowth of the mucous membrane covering the inferior turbinals is very common, the result of local irritation. Occasionally it forms the starting place of a lymphadenomatous growth—e.g., in a case described by Rosenberg,[4] which became generalised, and death occurred in two and a half years from the commencement.

Tonsil.—On account of local irritation this organ is constantly seen in a condition of overgrowth. It may assume a malignant form, projecting as a tumour, capable at first of being shelled out, or extension may take place to the deep glands of the neck[5] or by rapid infiltration into the surrounding tissues of the fauces and pharynx.[6] Lymphadenoma may start in the tonsil, and after involving the glands in the neck become generalised.[7]

Pharynx.—Adenoid vegetations, a local overgrowth, is the common result of irritation. Occasionally a case commencing in this way spreads so as to involve the pharynx and larynx, and then become generalised (Chiari).[8] General hypertrophy of the fauces and pharynx is not uncommon, consisting of a simple overgrowth; cases, however, like those of Störk[9] are of a more malignant type, rapidly infiltrating the whole wall, causing anæmia, hæmorrhages, &c.

Larynx.—Measles and other infectious diseases may leave behind a hypertrophic laryngitis due to overgrowth of lymphadenoid tissue. In a case described by Stieda[10] there was found post mortem a general swelling of the ventricular bands and epiglottis with lymphadenoid tissue, also a general enlargement of the lymphatic glands and follicles.

Stomach and intestine.—It is well known that certain infectious diseases markedly affect the lymphadenoid tissue of the alimentary canal, especially the solitary and agminated follicles such as typhoid fever, anthrax, and the enteritis of swine. Less well known are the inflammatory changes in the intestinal follicles and the mesenteric lymph glands in diphtheria. In children after death from typical laryngeal diphtheria requiring tracheotomy Colman[11] found marked hyperæmia and enlargement of all the solitary follicles and Peyer's patches and mesenteric glands, no diphtheritic

[1] These lectures were illustrated by specimens from the Anatomical and Pathological Museums of the Royal College of Surgeons of England and of the Westminster Hospital.

[2] Lectures I. and II. appeared in THE LANCET of March 6th and 13th, 1897, respectively.

[3] Fröhlich: Wiener Medicinische Wochenshrift, 1893, Band xliii., S. 285.

[4] Rosenberg: Verhandlungen der Berliner Medicinischen Gesellschaft, 1895, Band xxv., pt. ii., S. 341.

[5] Barker: Transactions of the Pathological Society, 1886, vol. xxxvii., p. 218.

[6] West: Ibid., 1882, vol. xxxiii., p. 331.

[7] Nash: Brit. Med. Jour., vol. ii., 1892, p. 1054.

[8] Chiari: Internationales Centralblatt für Laryngologie, 1895, S. 381.

[9] Störk: Wiener Medicinische Wochenschrift, 1894, Band xliv., S. 1697 et seq.

[10] Stieda: Archiv für Laryngologie, 1896, Band iv., S. 46.

[11] Colman: Transactions of the Pathological Society, 1888, vol. xxxix., p. 132.

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membrane or bacilli or ulcerations being present. The cases of lymphadenomatous disease of the stomach and intestine have been collected by Newton Pitt[12] as follows: (1) A local tumour; (2) congestion and ulceration from hæmorrhage with leucocythæmia; (3) a new growth arising in the mucous and sub-mucous tissue and projecting into the lumen, especially from the lymphadenoid follicles in the cæcum and appendix; and (4) a widespread overgrowth infiltrating the coats of the bowel and forming a kind of sheath, leading to constriction or paralytic dilatation. No doubt in a number of cases it is difficult to know when the disease commenced, and, on the other hand, owing to early obstruction or perforation or other complication, the disease may never have time to become widely generalised. (Moore,[13] Hadden).[14] Yet all kinds of extension to the glands spleen, &c., are met with. A frequent origin of the condition is the chronic intestinal catarrh of children, in which, however, tubercle and lymphadenoma are difficult to distinguish. In some cases there has been distinct evidences as to causation. In Taylor's[15] case lymphadenoma of the small intestine followed upon typhoid fever. Coupland's[16] case of malignant lymphadenoma of the stomach was preceded by dyspepsia and inflammation of the bowels. The disease extended to the retro-peritoneal glands, then to the kidneys, ovaries, thyroid, and intra-muscular tissue of the thigh.

Bronchial and posterior mediastinal glands.—In no place where it occurs is the local origin of lymphadenoma more clearly marked. The very fact that it is so frequently found along with some signs of tuberculosis in the lung shows that although not of tuberculous origin it is much of the same kind. Another sign of preliminary excitation is the black pigment contained in the growth. The over-growth not only includes the actual lymphatic glands, but also the lymphadenoid tissue around the bronchi. The growths may rapidly compress the air-tubes and prove fatal before such extension. Yet when it happens to compress the lungs rather than the bronchi much greater extension may occur. Thus in Chaplin's[17] case after influenza—and this has been a common cause—dyspnœa and anæmia followed, and there was found post mortem a mass of glands around the bronchi extending into and infiltrating the right lung, whilst in the left lung were some caseating tuberculous nodules. The cervical, axillary, inguinal, and lumbar glands were enlarged, but not caseating. The spleen was characteristically lymphadenomatous. If we take three of Turner and Sutton's cases[18] we have instances of different types, but all three affording indications as to their primary origin. In a boy aged ten years there were cheesy masses in the apices of the lungs, enlarged mediastinal axillary, submaxillary, and inguinal glands, some hard, others soft, and the kidneys were enlarged and infiltrated, but not the liver and spleen. The boy had suffered from purpuric eruption, ecchymosis, and anæmia, clear evidence that there had been also leucocythæmia. A man aged thirty-six years, who had suffered from syphilis and had been addicted to drink, had caseous and fibroid changes in the lungs, a mass of glands compressing the right bronchus. He had had leucocythæmia and showed thrombosis of the iliac veins, embolism of the middle cerebral artery, and the spleen was enlarged with firm masses in it. A woman aged twenty-four years commenced by suffering from pleurisy and pericarditis, which were followed by faintness after food, morning retching, stabbing pain in the chest, and dysentery. The pleura and pericardium were thickened and, together with the right lung, infiltrated by greyish nodules, the bronchial, cervical, and lumbar glands were enlarged and softened, and the spleen, liver, and kidneys infiltrated by semi-gelatinous nodules.

The thymus.—The thymus is also the subject of lymphadenomatous enlargement, and this is clearly distinguishable from the condition of cystic and hæmorrhagic enlargement at birth by the fact that other lymphadenoid tissues are involved. Thus in a woman aged twenty-nine years there was great enlargement of the thymus along with a similar condition of the supraclavicular and axillary lymphatic glands (Brigidi and Piccoli).[19] In a child, aged nine years, besides the thymus, which formed the greatest enlargement, there was also enlargement of the spleen and the intestinal follicles, together with nodules in the liver (Eberth).[20] In the case of a woman who died shortly after removal of a goitre the thymus was found enlarged as well as the tonsils, both palatal and lingual, and the intestinal follicles (Schnitzler).[21] Virchow[22] said that he had seen a number of cases occurring in young recruits which began in the thymus. Of course, it is possible for a malignant tumour to begin in the thymus and yet not be lymphadenoid in character, as in the case described by Rolleston of a hæmorrhagic adeno-chondro-sarcoma, the glandular portion having the appearance of being derived from mucous glands like the parotid; the tumour in this case clearly grew from remains of the primary thymus to which Hassall's corpuscles belong. The growths in the thymus and anterior mediastinum are usually fatal at an early period before much generalisation has occurred owing to tracheal and bronchial pressure.

The axilla.—Chronic enlargement of the lymph glands from irritation entering the lymphatics from the hand and also from the breast may be found tuberculous on exploration. In other cases it may be recognised as the starting-point of lymphadenoma. I have had two cases under my care lately in both of which the enlarged glands were certainly neither tuberculous nor malignant. They showed on section lymphadenoid fibrous tissue, and portions had so intimately ensheathed the bloodvessels as to be irremoveable.

Neck.—Lymphadenoma frequently commences in the neck. In some cases it is possible to assign a cause, such as a carious tooth, a purulent discharge from the ear, and repeated inflammations of the tonsils. It may start as an acute or sub-acute glandular inflammation, something like mumps,[23] which suggests a specific cause reaching the glands by the lymphatics. It is most difficult to distinguish from tubercle except by the tendency to caseation on the part of the latter. As I have before mentioned, this caseation is absent in the diffuse form. I have had lately a man under my care with enlargement of the glands on both sides of the neck of an indolent character. As arsenic was of no avail I removed some. There was no evidence of caseation, but from the microscopical structure the appearance was either that of diffuse tubercle or an endothelial new growth, but the latter was excluded by the time the disease had lasted. A case of lymphadenomatous glands in the neck which I have long had under view is interesting as standing intermediate between a local and generalised lymphadenoid. A middle-aged man was under my colleague Dr. de Havilland Hall with a lymphadenomatous mass in the neck. For some time arsenical treatment kept the growth in check. Later, enlargement continued in spite of the treatment, and I removed all that I could of the growth, leaving some masses about the large vessels in the root of the neck. After the operation he was again put on arsenic, and although the lymphadenoma has never quite gone it has for some years not advanced. Unfortunately, the man cannot continue a course of arsenic very long without sickening of the drug and then he has to rest awhile. The most malignant form of lymphadenoma may commence in the neck. A girl (under Durham[24]) first felt the neck stiff and tender after sleeping in a damp bed. The enlargement commenced below the jaw, soon ulcerated, and then formed a large oval ulcer, infiltrating the muscles of the neck. After death an enlarged mass was found surrounding the upper part of the abdominal aorta behind the stomach and pancreas, involving the mesenteric and lumbar glands.

The groin.—The groin is not uncommonly the starting place of lymphadenoma of various forms. Sometimes evidence of previous source of irritation is found, such as venereal disease, strain, or septic absorption from the leg. A chronic indolent enlargement is seen in hot climates, of obscure origin, sometimes called malarial. As compared with the gland in the neck the rarity of tubercle is remarkable, and on this account the diagnosis of lymphadenoma is made easier. I saw, however, not long ago a young man who had been put under an anæsthetic in order to remove a mass of glands supposed to be tuberculous. The operation was not begun owing to enlargement of iliac and lumbar glands being discovered. I suggested the administration of

[12] Newton Pitt: Ibid., 1889, vol. xl., p. 80.
[13] Norman Moore: Ibid., 1883, vol. xxxiv., p. 99.
[14] Hadden: Ibid., 1886, vol. xxxvii., p. 234.
[15] Taylor: Ibid., 1877, vol. xxviii., p. 135.
[16] Coupland: Ibid., 1877, vol. xxviii., p. 126.
[17] Chaplin: Ibid., 1893, vol. xliv., p. 13.
[18] Turner and Sutton: Ibid., 1878, vol. xxix., p. 343.
[19] Brigidi and Piccoli: Beiträge zur Pathologischen Anatomie und zur Allgemeinen Pathologie, 1894, Band xvi., S. 388.
[20] Eberth: Virchow's Archiv, 1870, Band xlix., S. 63.
[21] Schnitzler: Status Thymicus, Wiener Klinische Wochenschrift, 1894, No. 20.
[22] Virchow: Berliner Klinische Wochenschrift, 1891, S. 1185.
[23] Dawson Williams: THE LANCET, Jan. 16th, 1897, p. 160, and others in following numbers on A Glandular Fever of Childhood.
[24] Durham: Transactions of the Pathological Society, 1883, vol. xxxiv., p. 245.

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large doses of arsenic, and the glands both in the groin and in the lumbar region quickly subsided. Unfortunately, however, lymphadenoma of the groin has a very great tendency to become generalised and to show malignant characters. In Taylor's [25] case the lymphadenoma commenced as a lump in the groin, and this was followed by swelling of the leg, general enlargement of the lymphatic glands, especially those of the parotid and sub-maxillary regions, and was attended by fever but not by leucocythæmia. The liver was found at the post-mortem examination to be enlarged, but not the spleen. On the other hand, in Greenfield's [26] case, the spleen, lungs, and skin were affected from a growth in the groin, but not the other lymphatic glands. The lymphadenoma may remain local, but infiltrate most widely around after a malignant fashion. In Lediard's [27] case there had been a lump in the groin for three years, then it ulcerated and formed a bleeding mass, which caused extreme anæmia accompanied by fever and vomiting. No other growths were discovered post mortem. In Morton's [28] case the enlargement began symmetrically and simulated at first chronic recurrent inflammation. Later, the growth extended and infiltrated the muscles of the abdominal wall and surrounded the large vessels. The lungs were found studded with secondary growths. There are, however, many cases of lymphadenoma in the groin which are not malignant in the earlier stages, and which either yield to drugs or admit of removal. Even when the lumbar glands have been enlarged behind the peritoneum they have been successfully shelled out (Marconi).[29]

The spleen and bone marrow, especially the former, are involved when lymph-adenoma becomes generalised, and hence there are endless varieties of combinations with enlarged lymph glands and with leucocythæmia.

Spleen.—The commencement of lymphadenoma in the spleen is very questionable. The cases in which the spleen is the chief organ involved are mostly diseases which have in all probability entered through the alimentary canal, or are due to some other general infection through the circulation. Enlargement of the spleen is common in young children and sometimes seems due to nothing more than bad feeding. Upon suitable nourishment and arrest of intestinal catarrh the spleen subsides. However, if the case is not taken early generalised lymphadenoma soon sets in with anæmia, leucocythæmia, and enlargement of lymphatic glands and follicles. Malaria and malarial affections are another common source of lymphadenoma; the spleen remains enlarged after the malaria has subsided. Wilson [30] has recorded cases occurring in three generations of the same family in which there were enlargement of the spleen and anæmia, but without leucocytosis or enlarged lymph glands. There is considerable practical importance in the distinction because a spleen enlarged simply as the result of malaria has been frequently removed with success. On the other hand, all cases of splenectomy in generalised lymphadenoma with leucocythæmia have failed. The changes produced in lymphadenoma in the spleen are of two kinds. In one form the Malpighian bodies stand prominently out as white or yellowish masses, which are hard to distinguish from tubercle. In other cases the enlargement is of the diffused variety, soft when the overgrowth is mainly of lymphadenoid tissue, hard when mainly of connective tissue from the capsule and septa. This latter form also contains much pigment and is difficult to distinguish from a spleen the result of malaria. In cases of lymphadenoma accompanied by leucocythæmia the spleen, besides being much enlarged, is liable to wedge-shaped infarcts. The local enlargement of the spleen occurring by itself, having no obvious connexion with any affection of the other lymphadenoid tissue or with the blood, has been called primary splenomegaly. The growth is slow, and cases have been submitted to splenectomy successfully. It is not very clear, but apparently it is the cells of the splenic pulp which multiply and compose them. The interest lies, then, in the slow and local growth of the primary tumours. In this respect it may be compared to some of the tumours of bone.[31] The carcinomas and sarcomas of the spleen are secondary growths.

Bone marrow.—It is in generalised lymphadenoma that the bones are affected, but there is this marked distinction, that beyond the change to lymphoid marrow the bones show only tenderness, temporary swelling of the soft parts, and pain. There is no enlargement like the spleen. In such cases the spleen is always enlarged, very often all lymphadenoid structures, and there is leucocythæmia. I doubt very much the existence of the so-called "pure myelogenic leucocythæmia." Returning now to the new formations allied to lymphadenoma. A simple circumscribed tumour may commence and grow slowly, without at first causing any marked enlargement of the bone, but rather replacing the bone framework and the marrow cavity by a very delicate, moss-like bone. Owing to the absence of a distinct enlargement notice may first be drawn to the growth by the occurrence of a spontaneous fracture owing to the replacement of the bone by the tumour. In structure the growth consists of small, round cells with a variable amount of newly formed connective tissue into which hæmorrhages may occur. In other cases the tumours are multiple in one or many of the bones of the skeleton, appearing as discrete tumours through which the knife easily cuts, or undergoing secondary changes resulting in hæmorrhages or cyst formation, or pathological fractures (Herrick and Hektoen,[32] Kahler [33]). Generalisation takes place in some cases very early and in others only late. These generalised forms connected especially with bone marrow assume three types—one approaching cancerous osteomalacia, one approaching osteitis deformans, and one in which leucocythæmia is the prominent feature. But in all there is some enlargement of lymphadenoid tissue in the lymphatic glands, spleen, &c. Nothnagel's case [34] was of an osteomalacic type. Pain began in the sternum and was attended by wasting, sweating, and irregular fever. The pain spread to the bones of the trunk and extremities, besides which there was anæmia, swelling of the spleen, and enlargement of the lymphatic glands, but there was no leucocythæmia. The bones especially affected were the scapula, clavicle, ribs, vertebræ, sternum, pelvis, and the metatarsal and metacarpal bones. On post-mortem examination the fatty marrow was found to have been replaced by greyish-white material interspersed with long septa. The tissue consisted of small round cells and contained blood pigment. On maceration the bones appeared of a spongy material like moss which had filled the marrow cavity. Moore, Hammer, and Goodhart's cases are closely related or show intermediary stages with osteitis deformans. In Moore's [35] case the skull was infiltrated by small round cells and the cervical lymph glands were enlarged. In Hammer's [36] case the skull and vertebræ were much thickened and the spleen and lymphatic glands were enlarged. Goodhart [37] described a typical case of osteitis deformans with nodules of lymphadenoid material in the spleen, liver, pleura, and in the mediastinal and abdominal glands. Leucocythæmia was a prominent symptom in the following cases. A woman suffered from symptoms of anæmia, erythema nodosum, and rapid cachexia. At first she had amenorrhœa and then profuse uterine hæmorrhages. There was great tenderness of the sternum, the ribs were slightly tender, and the red corpuscles were to the white as 5 to 1. At the post-mortem examination there were many small hæmorrhages, but no enlarged lymphatic glands. The spleen weighed 10 oz. The skull cap was very heavy and dense and the cavity of the femur was full of red lymphoid marrow (Beatty).[38] Grawitz [39] described a similar case which he called malignant osteomyelitis attended by marked anæmia and metastasis. In Zahn's [40] case there were lymphatic tumours with softening of the bones, curvature

[25] Taylor: Clinical Journal, 1896, vol. viii., p. 33.
[26] Greenfield: Transactions of the Pathological Society, 1876, vol. xxvii., p. 275.
[27] Lediard: Ibid., 1886. vol. xxxvii., p. 472.
[28] Morton: Ibid., 1895, vol. xlvi., p. 162.
[29] Marconi: Successful Removal of a Lympho-sarcoma with Resection of 3 c.m. of the Inferior Vena Cava, Centralblatt für Chirurgie, 1894, p. 334.
[30] Wilson: Transactions of the Clinical Society, 1893, p. 163.
[31] See many of the cases of successful splenectomy—e.g., Knowsley Thornton: Multilocular Cystic Tumours of the Spleen, Transactions of the Pathological Society, 1884, vol. xxxv., p. 385; Bruhl: De la Splénomégalie primitive, Archives Générales de Médecine, 1891, tome 167, p. 673, and tome 168, p. 160; Picou et Ramond: Splénomégalie primitive, Archives de Médecine Expérimentale et d'Anatomie Pathologique, 1896, tome 8, p. 168. The enlarged spleen removed successfully by Mariott (Museum of the Royal College of Surgeons of England, No. 2866 A) was found to be tubercular in structure.
[32] Herrick and Hektoen: Medical News, Philadelphia, 1894, vol. ii., p. 239.
[33] Kahler: Prager Medicinische Wochenschrift, 1889, Nos. 4 and 5; also Centralblatt für Chirurgie, 1889, p. 451.
[34] Nothnagel: Lymphadenia Ossium, Virchow's Festschrift, 1891, Band ii., S. 155.
[35] Norman Moore: Transactions of the Pathological Society, vol. xxxvi., 1885, p. 393.
[36] Hammer: Primäre Sarcomatose Osteitis mit Chronischen Rückfallsfieber, Virchow's Archiv, 1894, Band cxxxvii., S. 280.
[37] Goodhart: Transactions of the Pathological Society, vol. xxxix., 1888, p. 262.
[38] Beatty: Academy of Medicine of Ireland, March 6th, 1891.
[39] Grawitz und Zahn: vide Markwald, Virchow's Archiv, 1895, Band cxli., S. 128.
[40] Ibid.

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of the vertebræ, and spontaneous fractures of the ribs. In Weber's[41] case, a man aged forty years, who had had syphilis, died exhausted after one and a half years' illness. The sternum was enlarged and bent with the ribs so as to compress the aorta, and these bones with the vertebræ contained reddish tissue. The cranium had many rounded spots the size of a threepenny-piece. There was amyloid degeneration in the kidneys and spleen. The new tissue consisted of small round cells. Comparable to the primary tumours of the spleen called splenomegaly, are the well known giant-celled myelomas or myeloid sarcomata, which grow from the marrow at the ends of the long bones and in the short and flat bones. But as distinguished from the small celled myelomas or lymphadenomas of the bone-marrow above noted they show no tendency to involve the other lymphadenoid tissues. A further resemblance between the spleen and marrow is to be found in the fact that carcinomas and sarcomas of the bone-marrow are likewise secondary growths.

THE COMPLICATIONS WHICH ATTEND LYMPHADENOMA.

Fever.—Any form of lymphadenoid enlargement may be attended by fever the result of cell destruction and of the absorption of the products. The characteristic fever of tonsillitis and other glandular affections, of typhoid fever, malaria, and relapsing fever are well known. In cases of generalised lymphadenoma a fever of the continuous or intermittent type, but generally irregular, occurs, and is accompanied by profuse sweating and general exhaustion.

Leucocythæmia and anæmia.—I have already referred to the fact that an excessive production of white cells provokes destruction of red cells and also intravascular coagulation. Infarcts occur especially in the spleen, the capillaries of mucous membranes and of the cerebral arteries, &c., become choked with white corpuscles, and ulceration and hæmorrhages ensue. The patient may die from recurrent epistaxis, cerebral hæmorrhage, perforation, &c. Fatal cerebral hæmorrhage may thus occur in young patients.

Fatal results of the pressure of lymphadenomatous masses.—Growths in the mediastinum press on the trachea and bronchi. The stomach or intestines may be compressed, intestinal obstruction ensue, or absorption by the lacteals be prevented. The heart and large bloodvessels may become surrounded by a solid mass which impedes the circulation. Compression upon the arteries, veins, and lymphatics affects important organs such as the liver and kidneys. Moreover, these organs may be infiltrated diffusely with small round cells which compress the actual gland cells and cause them to degenerate, so that the function of the gland may easily be much more impaired than the external appearance of the organ might lead one to suppose.

Lymphadenoma in animals.—The various forms of lymphadenoma are met with also in animals. I had a cat which suffered from marked anæmia and leucocythæmia; its spleen weighed one-tenth of the whole animal, whereas the spleen of a normal cat weighed on the same day was only $\frac{1}{170}$ part. A dog I examined had a lymphadenomatous mass which began in the posterior mediastinal glands and compressed the trachea and bronchi. A similar mass in another dog arose from the præ-vertebral abdominal glands and surrounded the lower end of the aorta and the iliacs. Reinländer[42] has noted lymphadenoma with leucocythæmia in the horse.

Lymphadenoma in relation to tubercle.—There must be some close connexion between lymphadenoma and tubercle, for in the majority of post-mortem examinations some distinct tuberculous lesion has been found and in many it has been impossible with the naked eye to distinguish what is lymphadenomatous from the tubercle. The absence of caseation is no disproof of tubercle, nor does the absence of giant cells on microscopical examination exclude the diffuse form of tubercle. The inoculation test is also liable to several fallacies—e.g., if both tubercle and lymphadenoma be present the tubercle bacilli may easily get into the blood or lymph passing through a lymphadenomatous mass. There appears also another similarity in these mixed cases of lymphadenoma and tubercle; both affections appear to start from the same place, whether this be through the throat, neck, lungs, or intestines. One of the first cases of lymphadenoma of which I have notes was that of a young man who came to St. Bartholomew's Hospital under Mr. Willett. I incised some tuberculous glands in the neck. He soon died with pulmonary œdema and bilateral hydrothorax. The heart and large vessels were enclosed in one mass of lymphadenoma and there were also masses in the abdomen. Besides the difficulty as to glands, it is easy to confuse lymphadenomatous masses in the lung with tubercle surrounded by hepatisation. The masses in the spleen, sometimes compared to suet in a pudding or to the almonds in toffee ("hardbake"), are due sometimes to lymphadenoma, sometimes to tubercle. Cases by Dietrich,[43] Fischer,[44] Cordua,[45] Ricker,[46] Brentano and Tangle,[47] Tooth,[48] Macnamara,[49] and Dickinson,[50] in addition to many writers already named, afford abundant evidence of the frequency with which these two effects occur together and of the difficulty in distinguishing them. The recent epidemics of influenza, besides causing tuberculosis, have in a number of cases started generalised lymphadenoma.

Lymphadenoma and syphilis.—The connexion is at any rate only an indirect one. Lymphadenoma has frequently started from a chronic, indolent, enlarged gland in the groin which may have been due to previous venereal infection. Again, where generalised lymphadenoma appears in a patient who has suffered from syphilis it may be thought that the latter has predisposed to the former (Guttman).[51] The success of the local application or internal administration of iodine or iodide of potassium cannot be held to indicate the syphilitic origin of the enlarged glands. Wunderlich saw masses of enlarged glands which he regarded as lymphadenoma disappear under iodide treatment in cases in which, he said, syphilis could be excluded. Hutchinson,[52] after describing the disappearance of large masses of glands, did not attribute the good effect of the iodide to the fact that syphilis was the cause of the enlargement, but says that it is interesting that any form of lymphadenoma should yield so readily to the iodide treatment. A woman still under my care had a characteristic mass of lymphadenoma on both sides of the neck which was extremely hard. The disease did not improve under arsenic alone; I then administered iodide internally and applied an iodide ointment externally, and this has been followed by a gradual disappearance of the glands. Before doing so I made an exploratory incision at one place which was exceedingly hard and painful; and in order to exclude tubercle I cut out a piece of tissue, which under the microscope was found to consist of sclerosed gland tissue with thick-walled vessels.

Lymphadenoma and its treatment by arsenic.—It is well known that arsenic is a most valuable drug in the treatment of lymphadenoid diseases, so that the benign and the malignant forms are often distinguished by the success or failure of the arsenical treatment. But the success or failure of the drug depends upon circumstances. The treatment must begin before complications have arisen; large doses are generally required. One preparation of arsenic will act better on, and be better borne by, one patient than another. Katzenstein[53] has described his success in "leukæmia lymphatica et splenica," accompanied by anæmia and cachexia, to the subcutaneous administration of arsenic. Liquor arsenicalis may be injected into the back or directly into the tumour. Touton[54] has described a case of general "sarcoma of the skin of leukæmic or pseudo-lukæmic origin" which was cured by arsenic. In Butlin's[55] case there was a bilateral affection of the testicle with nodules in the skin. The growths subsided under arsenical treatment. I saw a woman in St. Bartholomew's Hospital under Mr. Willett who had had both breasts removed in the country for malignant disease. The axillæ and infra-clavicular fossæ were one mass of enlarged glands. The whole subsided under arsenic, and presumably, therefore, the tumours of the breast would have done the same. I have already

[41] Parkes Weber: Transactions of the Pathological Society, 1896.
[42] Reinländer: Veterinary Journal, 1892, vol. xxxiv., p. 279.
[43] Dietrich: Beiträge zur Chirurgie von Bruns, 1896, Band xvi., 377.
[44] Fischer: Deutsche Zeitschrift für Chirurgie, 1893, Band xxxvi., 283.
[45] Cordua: Arbeiten an dem Pathologischen Institut zu Göttingen, 1893, S. 159.
[46] Ricker: Archiv für Klinische Chirurgie, 1895, Band l., 573.
[47] Brentano und Tangle: Deutsche Medicinische Wochenschrift, 1891, S. 588.
[48] Tooth: Transactions of the Pathological Society, 1885, vol. xxxvi., p. 236.
[49] Macnamara: Ibid., 1878, vol. xxix., p. 360.
[50] Dickinson: Ibid., 1878, vol. xxix., p. 373.
[51] Guttman: Centralblatt für die Medicinische Wissenschaften, 1895, S. 336.
[52] Hutchinson: Archives I., 72; II., 204.
[53] Katzenstein: Deutsches Archiv für Klinische Medicin, 1895, Band lvi., S. 121.
[54] Touton: Sitzungsberichte der Gesellschaft für Morphologie und Physiologie, München, 1893, Band viii., S. 86.
[55] Quoted by Shattock: Brit. Med. Jour., vol. i. 1896, p. 36.

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referred to a case in which arsenic was successfully administered after the growth had been partly removed. One should not adhere to the surgical rule which obtains in carcinoma and sarcoma, that removal is only permissible when all the disease can be taken away. Partial removal followed by drug treatment is attended by success and prevents the disease from becoming generalised.

CONCLUSION.

I have noted in the course of these lectures some of the chief features exhibited by diseases of lymphadenoid structures; we may with confidence look forward to an increase before long of our knowledge, especially in two directions. Besides the organisms to which I have already referred to as known causes of lymphadenoid disease many observers have found organisms in lymphadenomatous growths. The results are not yet sufficiently in agreement for any opinion to be formed at present; the organism most frequently seen has been the staphylococcus aureus. There are a number of clinical observations on the effect of administering materials obtained from the thymus, spleen, and bone marrow, and some have been successful. With a greater knowledge of the infection we shall be better able to estimate individual differences in resistance and so obtain more light on the varieties of generalised lymphadenoma. Meanwhile we must base our treatment on the closely allied conditions produced by tubercle and syphilis. Excision of the disease where the conditions are favourable, and the administration both locally and internally of arsenic and iodide in full doses, will be attended by success when undertaken at an early stage, except against the most malignant cases. The treatment of the anæmia is the other important point, and is worthy of more relative attention than the leucocythæmia. Thus an improvement has followed upon the administration of oxygen[56] in cases of lymphadenoma, the diminished number of red cells being assisted in exchanging carbonic acid for oxygen by the large supply of the latter.

ILLUSTRATIVE CASES OF APHASIA.

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CASE 1. *Clinical remarks on a case of complete agraphia and almost complete word-blindness, with right-sided bilateral temporal hemianopsia, due to a lesion (gumma) in the region of the left angular gyrus, in which rapid and complete disappearance of all the symptoms took place under the administration of large doses of iodide of potassium.*—The case to which I wish to direct attention is one of very great interest. When first seen the patient was suffering from complete agraphia and word-blindness, with right-sided homonymous hemianopsia and slight optic neuritis. The word-blindness, hemianopsia, and optic neuritis have now entirely passed away and she is able to write as well as she has ever been able to do. In short, under the administration of large doses of iodide of potassium an extraordinarily rapid and complete cure has taken place. I will in the first place give the full clinical history, and then discuss some of the more important points.

Clinical History.[1] — A. B., a widow, aged thirty-four years, was admitted to Ward 5A of the Edinburgh Royal Infirmary under my care on Nov. 14th, complaining of severe pain in the head, dimness of vision, and general stupidity. The patient stated that she had suffered from her head since the harvest time. The headache came on suddenly about the middle of September. She attributed it to stooping in the hot sun while working in the fields. The pain was not continuous; ever since its commencement it had been worse at night. Three weeks before admission her eyesight became affected; the dimness of vision was rapidly developed. The patient stated that since her illness commenced she had felt "stupefied"; she felt as if she "were in a mist," not knowing exactly where she was or what she was doing. She definitely stated that from the commencement of the attack she had no difficulty in understanding what was said to her, but that she had some difficulty (hesitation and slowness) in answering questions put to her by her friends. She further stated that since her illness came on she had lost the ability to read and write. Before the attack she was a good reader, but her writing was never good, for she had never been to school. Her memory was, she said, very defective; she expressed it as "almost gone." She stated that with the exception of exposure to the sun she knew of no cause for her illness; she had never received any head injury. The patient stated that she had always been a strong, healthy woman and that she had never had any serious illness until the present trouble commenced. Her husband died abroad about five years previously. She had had two children and two miscarriages. The first, a girl, born at the full time, was stillborn. The second, a girl, born at the seventh month, lived for about two hours after its birth. The third and fourth pregnancies ended in abortions. This history was, it will be observed, highly suggestive of syphilis. She had no living relatives. She did not know the cause of the death of her parents—in short, she could give no information regarding the family history.

She was a fairly well-nourished, dark-complexioned woman, with a dreamy look. *Nervous system.*—She was unable to give ready answers to many questions which she should have easily answered straight off. For example, in answer to the question "Where do you live?" she at first made no answer, but some minutes afterwards suddenly gave the address. The difficulty in answering questions was, she said, not due to any defect in speaking or to any defect in understanding what was said to her, but to want of memory. The headache, which was her chief complaint, was very severe, but not constant; it was, she said, of a boring and squeezing character and was most marked over the vertex and frontal bone. It was much more severe at night than during the day, and was sometimes aggravated, she said, during the day "by straining efforts to see with the right eye." She frequently clasped her head with her hands as if in pain, and when lying in bed burrowed her head in the pillows. There was no pain or tenderness on percussion over any part of the skull. There had been no vomiting, but the patient complained of giddiness. The pupils were equal in size, regular in shape and widely dilated; their reaction both to light and accommodation was distinctly sluggish. On ophthalmoscopic examination the edges of both discs were seen to be ill-defined and slightly swollen. These appearances were more marked in the left than in the right eye. There was, in short, a slight degree of optic neuritis. Perimeter measurements showed right-sided homonymous hemianopsia, with considerable constriction of the peripheral portions of the left side of the field in both eyes. (See Perimeter Chart 1, Fig. 1.) Central vision was unaffected and the patient could distinguish colours correctly. As regarded auditory speech, the patient could understand what was said to her perfectly well when she was first spoken to, but after a short time she became confused and stupid and her answers became hesitating or she failed to answer the questions which were put to her. The auditory-speech centre appeared, therefore, to be intact, but more easily exhausted than in health. Motor speech was normal, or practically so. At times she said she could not find the words she wished to use, but she never used wrong words except in naming objects. As regarded visual speech, she was quite unable to read anything except some individual letters and she was only able to recognise a few of these. After puzzling over single letters for a short time and naming some of them correctly she was unable to name any more. She had also difficulty in reading numbers. In short, there was a condition of almost complete word-blindness. She was unable to name many of the objects which were shown to her; she appeared to appreciate the fact that she was unable to name them and that she named them wrongly. (A more detailed report on this point will be given below.) There was complete agraphia. She could not write her own name; she could not write down any single letter; and she could not write to dictation any letter or word. With her right hand she could not copy letters or words; she made a very imperfect attempt to do so with the left hand. In short, the paths-

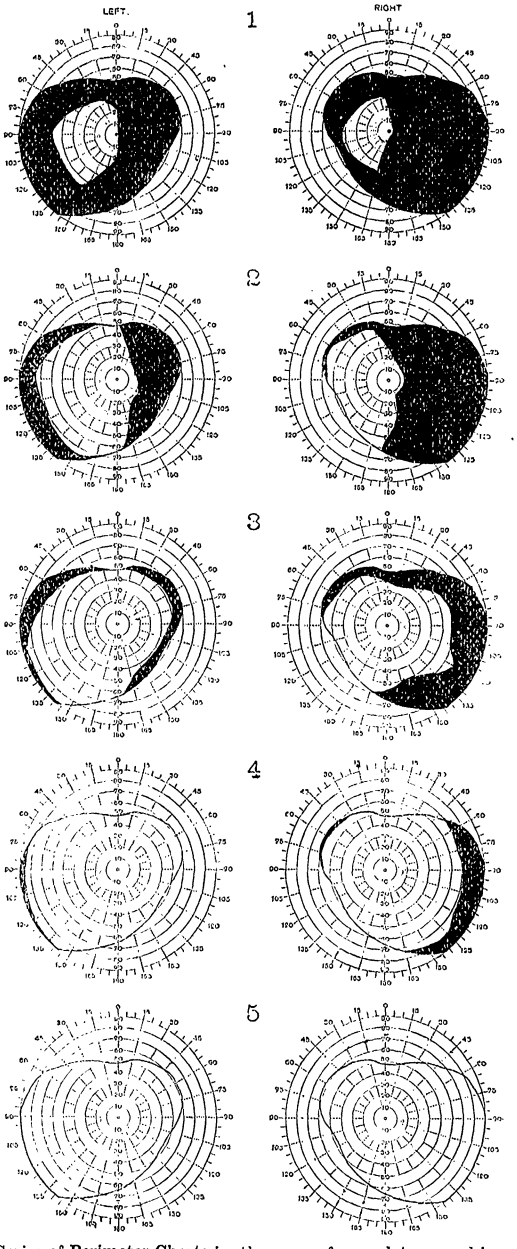
[56] Taylor: Transactions of the Clinical Society, 1895, vol. xxviii., p. 47.

[1] The detailed clinical history recorded in the text was elicited as the result of repeated short examinations. When the patient was first admitted to the hospital her brain power was so easily exhausted that it was only possible to elicit the facts gradually—a few at each examination.

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from the visual-word centre to the writing centre seemed to be completely blocked. The path from the higher visual centres to the auditory-speech centre seemed also to be in some degree interrupted, because of her inability to name many of the objects which she certainly saw and (?) apparently recognised. I will explain my reasons for this

FIG. 1.

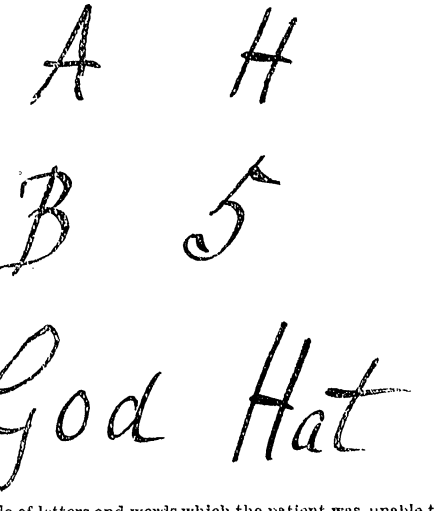


Series of Perimeter Charts in the case of complete agraphia and almost complete word-blindness, with right-sided bilateral temporal hemianopsia, described in the text. (The black area represents the blind parts of the fields.)
Chart 1 represents the fields of vision on Nov. 17th.
,, 2 represents the fields of vision on Nov. 24th.
,, 3 represents the fields of vision on Dec. 1st.
,, 4 represents the fields of vision on Dec. 8th.
,, 5 represents the fields of vision on Dec. 15th.

localisation later. I should here note that the patient was naturally right-handed. There was very decided difficulty in making movements with the right hand when the eyes were closed. For example, when told to touch the tip of the nose with the right fore-finger she more than once merely waved the hand in the air and never once succeeded in touching the tip of her nose without hesitation. She could, however, perform this movement, the eyes being closed, with the left hand. There was no paralysis of the right hand. The squeezing power, as tested by the dynamometer, was quite as good in the right as in the left hand. She was unable to appreciate slight differences in weights placed in the two hands. Unless the difference was very considerable, she always said that the weight which was placed in the left hand was the heavier. When there was a marked difference between the weights she recognised it correctly. Tactile sensibility was unimpaired. The patient complained of giddiness and walked in a hesitating, shaky manner, apparently the result of giddiness and defective vision. The motor and sensory functions were, except for the defects described above, quite normal. *Alimentary system.*—The tongue was pale, flabby, white, and moist. The bowels were constipated. *Circulatory system*—The first sound of the heart was very faint and weak, but there was no valvular disease. *Urinary system.*—The urine was pale amber-coloured and acid; its specific gravity was 1018, and it contained no abnormal constituents.

Treatment and its results.—On Nov. 14th (the date of her admission) ten grains of antipyrin were given when the headache was severe, together with a laxative each night. On the 15th, 16th, and 17th the patient's condition was unchanged. On the 18th the antipyrin was found to merely relieve the headache for the time, but produced no real benefit. She woke the previous night at twelve o'clock complaining of severe headache. During the greater part of the night she was tossing about in bed, holding her head with her hands, burying it in the pillows, and complaining of headache. Twenty grains of iodide of potassium three times daily were substituted for the antipyrin. The speech functions were carefully tested on this date with the following result. The patient understood everything that was said to her and answered questions with more facility (less hesitation) than she did on her admission. There seemed to be no defect either in the auditory-speech centre or in the motor-speech centre, but there was a decided want of sharpness and briskness in answering questions, apparently the result of the general mental dulness and slowness of cerebration which were present. There were marked word-blindness and complete agraphia. She was unable to name many of the objects which were shown to her. For example, when shown a knife she named it correctly; a pencil she termed a knife and fork; a bunch of keys she called knives; and a

FIG. 2.



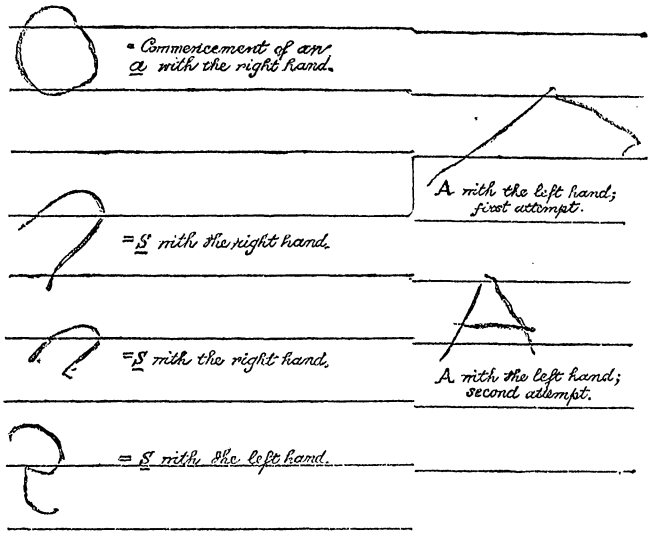
Facsimile of letters and words which the patient was unable to read on Nov. 18th.

tape measure she could not name. She recognised and was able to name a pencil after it had been named to her, but almost immediately afterwards was unable to name it. She instantly recognised and correctly named a penny, a halfpenny, a sixpence, a shilling, and half-sovereign. (The lightning-like rapidity with which she named pieces of money, when contrasted with her slowness in naming almost every other object which was shown to her, was very remarkable.) She was unable to name a door key; she said, "Oh! I ken what it is, if I could only keep it in

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mind." She called a book a knife, and a bottle of medicine a knife. She could not read (name) any of the following letters and figures: "a, o, b, h, e, 5, and 8"; and could not read any of the following words: "dog," "cat," "God," and "hat." (See Fig. 2.) She was unable to write any letter or word to dictation or to copy any of the letters or words which were used as test objects. On the 19th, when asked her name, she stated it correctly, but she could not write it. She was able to spell the word "dog," but could not write it. She correctly named (read) the letter "o," but could not write it; she could not write the letter "a." On this day she correctly read (named) the letters "b, a, h, o, s, and q"; but could not read the following words: "dog," "hat," "Edinburgh," and "Florence." When asked to read the word "dog" she said, "It has just went out of my head; I have forgot it, I think." On the 20th the patient named a pencil, bottle, book, watch, keys, knife, and wax vesta correctly. She said the letter "t" was "h." She named the letter "o" correctly, but could not copy it. When told to write the letter "o" she said, "Oh! I cannot mind." She put the pencil frequently up to her lips, moistened it, and then, after placing it on the paper, made an attempt to write, but could not write a single letter or word. When asked what the number 10 was she said it was "to"; when told it was a number she said, "Then if numbers it is one and nothing; that would be two." She said "r" was "q" and named the letters "m" and "s" and the numbers "20" and "17" correctly. She said "132" was "13," and "246" was "400," but read the word "cat" and her own Christian name, but not her surname, correctly. The patient slept well at night, and on the 21st she said "a" was "f" and "o" was "f"; named "f" and "m" correctly; said "i" was "o" and "s" was "t" or "i"; named a pencil correctly; said a knife was a pencil or a shooting-knife; and said a button-hook was a pencil. When asked if it was a button-hook, she immediately said, "Yes—a button-hook." She was unable to name a tuning-fork. When asked to name a bunch of keys she said, "I don't mind the name," and then said watch-key. She was unable to tell the time. When asked to write her name she spelt it correctly, but could not write it. She named the letter "a" correctly, but could not write it. Asked to copy the letter "a" with the right hand she could not do so. When a pencil was placed in her right hand and she was told to write one of her own names she made spaces on the paper corresponding to the letters, but was unable to write any single letter. She was able to trace the letter "o" correctly with her left hand; wrote the letter "A" with her left hand imperfectly, making a triangle, and after having written it said she thought it looked like "X"; succeeded in making an "A" with the left hand on a second attempt; and made an imperfect attempt to form the letters "B" and "S" with her left hand. When asked to make an "s" with the right hand she could not do so, and said she felt as if her "hand were going from her." She made an "o" with her right hand, but could not make "a" or "b" with her right hand. On being shown pictures she recognised and named correctly the following: pigs, sheep, cows, dog, child, pigeon, monkey, and kitten. She said a picture of hay and horses was a farmyard; geese were ducks; and a horse was a farmyard. She could not name a cart or trees. When shown the picture of a donkey she said it was an ass. Her ability to read music was not tested because she had never been trained to read it. On the 22nd the patient read better than she had done since her admission, but was totally unable to write spontaneously. She could copy many letters with her left hand, but was unable to do so with the right, and had the same difficulty in directing the movements of the right hand when the eyes were shut which has been already described. The dose of iodide was increased to thirty grains three times daily. She was given a light diet (milk, fish, &c.) and a nightly dose of cascara sufficient to produce a satisfactory movement of the bowels. On the 23rd the headache was better. Her mental condition was brighter. She named a knife, pencil, keys, and button-hook correctly. She called a tuning-fork "musical tongs." Her power of reading had greatly improved. She read correctly the following sentences: "In the animals' hospital"; "The invalids"; and "Page 88." When asked to spell her Christian name she did so correctly; but when told to write it she could not make a single letter. When asked to write the letter "a" she said: "That is an 'o' with a crook." She made an "o," but could not make the letter "A" with the right hand; she was also unable to write the letter "s" with the right hand. She wrote the letter "A" with the left hand after two attempts. It will be observed that at this stage of the case her mental conception of the form of letters seemed to be retained (or perhaps it would be more correct to say regained); for example, she said that the letter "a" was an "o" with a crook, but she was nevertheless unable to write the letter "a." In other words, she was able to recall the visual memory of the letter "a" (the memory of the visual picture of the letter "a" was

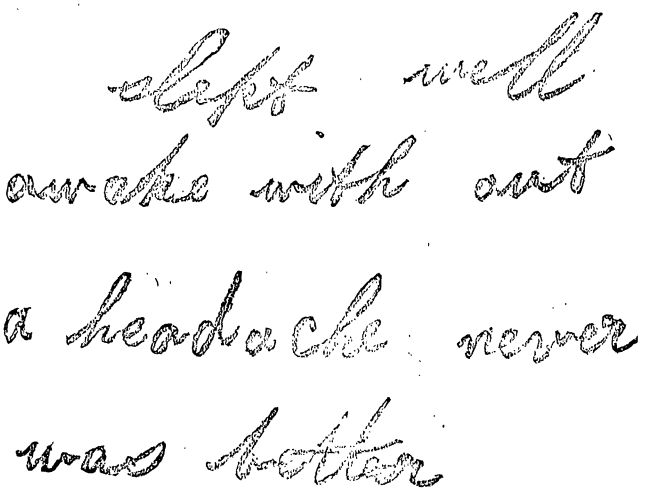
FIG. 3.



Facsimile of the patient's writing on Nov. 23rd.

retained in the visual-speech centre which was acting so far as the cell group which represents the letter "a," at all events, was concerned), but she could not reproduce (in the motor-writing centre) the discharge required to produce the muscular movements concerned in writing the letter "a" (because the connecting fibres between the visual-speech centre and the motor-writing centre were still blocked by the lesion). In Fig. 3 facsimile illustrations of her writing

FIG. 4.



Facsimile of the report which the patient wrote of her condition on Nov. 27th.

(written with the right hand) at this date are given. On the 24th she slept fairly well. She on this date described the pain in the head as neuralgic in character, and said that it was much less than it had been. The constriction of the fields of vision was then markedly less than it was a week previously. (See Fig. 1, Chart 2.) She named correctly every object which was shown to her this morning; she was

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also able to tell the time on a watch correctly (she had not been able to do so before); and she also wrote her own name and the word "cat" with the right hand. On the 27th she was very much better; she read to herself for the first time, and was able to write individual letters and short words with the right hand. She wrote the following report: "Slept well awoke with out a headache never was better." (See Fig. 4.) She had never been to school, and her writing and spelling were naturally very defective; she almost always spelt the word "slept" as "slepth," "slepteh," or "slepthe." When words were spelt to her she could write them down correctly. On the 29th the patient slept well and woke without a headache. She wrote the following report of the state of her health (the nurse telling her how to spell some of the words): "October 29th" (a mistake for Nov. 29th): "There is not much the matter with me when I am wishing it was dinner time before I had my breakfast a hour." On the 30th she was quite free from headache and very bright, and wrote the following report: "Had a good night; feeling fine this morning." After this date there was rapid and continuous improvement. She wrote a daily report of her state of health. The following are illustrations: "December 5th. Slepth well. No headache, but I am tired of lying in bed." "December 10th. Slepth well. No headache. I feel much stronger being up." On Dec. 15th she left the hospital. There had been no headache since Nov. 30th. At the time of her discharge her mental faculties were quite bright; her answers to questions were sharp and brisk, and she showed a good deal of mental quickness and intelligence. She could read and write as well as she had ever been able to do. The instantaneous rapidity with which she read such words as "dog," "Edinburgh," "How old are you?" "You are a good girl to-day," written on the blackboard before the students, was very remarkable when compared with her total inability to read any letters or words on the blackboard before the students three weeks previously. The fields of vision were quite normal (see Fig. 1, Chart 5); and the slight optic neuritis which was present at the time of her admission had completely cleared up. The temperature was normal. From the date of her admission until Nov. 21st the temperature had been subnormal (it averaged about 97° F.); after this it remained about normal, though slightly below it. The morning pulse at the date of her discharge averaged 58 and the evening pulse 64 per minute; this was at least ten beats per minute higher than at the time of her admission. The respirations throughout the course of the case were normal. The urine during the whole of the time that she was in hospital was perfectly normal. (The alterations in the fields of vision are shown in Fig. 1.)

Remarks.—I have now detailed the more important points connected with this case. As I have already said, it presents many features of great practical importance and scientific interest. The more important facts are that the patient at the time of her admission complained of severe headache, worse at night, mental stupidity and loss of memory (she stated that she felt as if she was in a mist), and dimness of vision, and that on examination slight optic neuritis, right-sided homonymous hemianopsia (with considerable constriction of the peripheral portions of the seeing halves of the fields), and a most marked defect in certain of the speech faculties were found to be present. The auditory-speech centre was practically normal. The motor-speech centre was practically normal. She was either unable to name many of the objects which were shown to her or gave them wrong names. When, however, an object was shown to her and a wrong name was given to it she would not accept it, but in almost all instances immediately recognised and accepted the right name of the object when it was stated to her. There was almost complete word-blindness. There was complete agraphia. She could neither write spontaneously nor to dictation any letter or word, and she could not copy any letter with the right hand. In addition there was marked inability to perform coördinate muscular movements with the right hand when the eyes were closed. She was unable, for example, to touch the tip of the nose with the right hand when the eyes were closed, but she could do so perfectly with the left hand. There was no defect of tactile sensibility, but there was some inability to distinguish the difference between weights. Almost immediately after the iodide of potassium was prescribed the headache was relieved, the mental condition cleared up, the word-blindness and agraphia disappeared, and the fields of vision gradually enlarged until at the date of her discharge they were perfectly normal. It is very interesting to note the order of recovery of the speech defects. She first regained the power of naming objects; she next regained the power of reading letters and words; but at this stage she was completely unable to write anything spontaneously, to copy letters, or to write to dictation. She was next able to read more words, and in the course of a few days to write a few individual letters. (It should be particularly noted that at a time when she was unable to write the letter "a" she appeared to have the mental picture of the letter correctly in her mind. She said that the letter "a" was an "o" with a crook.) Finally she completely regained the power of writing, and at the date of her discharge was able to write as well as she had ever been able to do. (As I have previously stated, she had never been to school and her writing is naturally very imperfect.)

The case is an illustration of almost complete word-blindness and of complete agraphia, the result apparently of a lesion involving the visual-speech centre and the connecting fibres which pass from the visual-speech centre to the motor-writing centre. It is probable, I think, that the lesion involved the connecting fibres which pass from the visual-speech centre to the motor-writing centre (at or about their point of emergence from the visual-speech centre) more markedly than the visual-speech centre itself; for the agraphia was more complete than the word-blindness, and when the word-blindness was recovered from—that is to say, at a time when the patient had regained the power of reading letters and words—she was still unable to write them. If I am correct in locating the lesion in the visual-word centre and the connecting fibres passing off from the visual-word centre to the writing centre, the case is a striking confirmation of the view which is now very generally held, that the action of the motor-writing centre is for the most part—Déjerine and Mirallié say entirely—regulated and governed by—in other words, under the direct control of—the associated sensory centre—i.e., the visual-speech centre. There can, I think, be little doubt as to the position of the lesion, and there certainly can be no doubt as to its pathological nature. The lesion was evidently a gumma. The history of the case (the stillbirth and miscarriages), the character of the symptoms (the headache, worse at night, and the slight optic neuritis), the superficial position of the lesion (if the localisation which I have suggested is correct), and the rapid disappearance of all the symptoms under large doses of iodide of potassium, conclusively proved the specific nature of the lesion. I see no reason for supposing that in this case a double lesion, involving the visual-speech centre and the motor-writing centre, was present. And if we grant that there was only one lesion, we must, I think, locate that lesion in the immediate neighbourhood of the visual-speech centre which is situated in the position of the left angular gyrus (and perhaps the left supra-marginal convolution). The combination of (1) word-blindness, (2) agraphia, and (3) hemianopsia (if we grant that there was only one lesion) showed that the lesion was situated in the region of the visual-speech centre, and not in the position of the motor-writing centre, which is by some authorities placed at the posterior end of the second left frontal convolution.[2] The lesion obviously did not entirely annul the function of the visual-speech centre, for the patient's mental image (memory) of letters and words was not altogether destroyed; but it is clear that the communication between the visual-speech centre and the writing centre was for the time totally interrupted. She was not only unable to write spontaneously, but she was unable to copy letters which were placed before her. When the agraphia was at its height this defect was much more marked in the right than in the left hand. Further, she was unable to write a single letter or word to dictation; and yet at this time she was able to understand everything that was said to her, to repeat anything which she was told to repeat, and to spontaneously make use of her motor-speech centre. In other words, while the auditory-speech centre,

[2] The existence of a separate writing-speech centre is a disputed point. Many authorities (such as the late Professor Charcot, Charlton Bastian, &c.) hold that such a centre exists and that lesions of that centre will produce agraphia without any other speech defects. Déjerine denies the existence of a separate writing-speech centre as distinct from the ordinary motor centres for the movements of the hand, &c., and in support of this view quotes the fact that no case has yet been recorded of pure agraphia without other speech defects, and no undoubted case has been placed on record in which a lesion of the second left frontal convolution (the supposed writing-speech centre) has produced agraphia alone.

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the motor-speech centre, and the connecting fibres between these two centres appeared to be intact she was unable to write to dictation, or, to put it another way, the communicating (commissural) fibres between the auditory-speech centre and the writing centre, which in persons who are accustomed to write little,[3] as was the case in this patient, seem to pass through the visual-speech centre in order to reach the associated motor (writing) centre, were interrupted. As I have already more than once stated, there was absolutely no difficulty in articulation and speaking. When the mental stupidity which was present at the commencement of the case passed off there was absolutely no difficulty in immediately understanding everything which was said to her. Her answers to spoken questions were sharply and quickly given. My reason for locating the lesion in the neighbourhood of the angular gyrus is the combination of word-blindness and agraphia with right-sided homonymous hemianopsia.

Right-sided homonymous hemianopsia may, of course, be due to a lesion in a variety of situations (left optic tract, radiating fibres of Gratiolet, half vision centre in the back part of the occipital lobe). A lesion of the optic tract which produces hemianopsia does not produce word-blindness or agraphia. A lesion in the half-vision centre in the back part of the occipital lobe produces hemianopsia, but does not produce word-blindness or agraphia. Amongst the cases which have been reported in support of this proposition there is none more striking and conclusive than one which I have already published.[4] The case was one of embolism of the posterior cerebral artery occurring in the course of mitral stenosis. The patient was a female aged forty-seven years. The onset of the cerebral attack was attended with sudden loss of consciousness, followed for a fortnight by a condition of mental stupor and apparent inability to realise the nature of her surroundings, and resulting in permanent right-sided homonymous hemianopsia. The diagnosis, made a fortnight after the onset of the attack (when the patient's mental condition allowed of complete and satisfactory examination, the mental stupor having passed off), was embolism of the left posterior cerebral artery and softening of the half-vision centre (left cuneus) in the tip of the left occipital lobe. There was no word-blindness and no agraphia; in short, no aphasia of any kind or form. The patient lived for two years, and then died from a second apoplectic seizure. On post-mortem examination the diagnosis originally made was fully confirmed. There was a localised softening of the left cuneus and tip of the left occipital lobe and secondary descending degeneration sharply confined to the optic radiations of Gratiolet on the left side. (Plates showing photographs of the brain and the hemianopsia are published with the clinical and post-mortem record.)[5]

The combination of word-blindness with hemianopsia points to a lesion above (i.e., on the higher—the cerebral rather than the ocular side, so to speak, of) the half-vision centre—to a lesion involving either (*a*) the fibres passing from *both* half-vision centres in the tips of the occipital lobes to the left angular gyrus (visual-speech centre), or (*b*) the left angular gyrus visual-speech centre) itself. In those cases in which the lesion involves the angular gyrus itself and in which there is hemianopsia the hemianopsia is due to implication of the radiating fibres of Gratiolet, which pass immediately subjacent to the angular gyrus in their course to the half-vision centre in the back part of the occipital lobe. This case, therefore, seems to support the generally accepted view that there is a higher visual centre above, so to speak, the half-vision centre, which is concerned with visual speech.

It will be observed that in this case, in addition to the right-sided hemianopsia, there was considerable constriction of the unaffected (left) halves of the fields of vision. Several years ago I suggested that lesions in the neighbourhood of the angular gyrus—i.e., lesions above the half-vision centre in the occipital lobe—are probably attended with such peripheral constriction, while lesions which involve the half-vision centre itself do not produce such peripheral constriction. This case seems to support this supposition. The question is, however, one of much difficulty and complexity. I have met with cases which seem to disprove it. See, for example, a case of sensory "Jacksonian" epilepsy, in which a discharging lesion of the half-vision centre in the occipital lobe (verified by post-mortem examination) produced flashes of light followed by hemianopsia.[6] But it must be remembered that word-blindness does not necessarily, in fact does not usually, entail agraphia. Cases are not very uncommon in which a patient who is able to write fluently is yet absolutely unable to read a single word which he has written. It is extremely difficult to explain these differences (e.g., the facts that (*a*) in some cases of word-blindness the patient is able to write fluently and well and yet unable to read what he has written; and (*b*) that in other cases of word-blindness there is complete agraphia) if it be granted (but, so far as I know, this has not yet been proved by post-mortem examination) that in both cases—i.e., (1) cases of word-blindness without agraphia, and (2) cases of word-blindness with agraphia—the lesion may be situated in the angular gyrus. An explanation which at one time suggested itself to me is that the writing centre in the left hemisphere of the brain (second right frontal convolution) is governed by (under the action of) the higher visual centre (situated in the region of the angular gyrus) in each hemisphere; but that the visual perception of written speech characters is located in one, the left, visual centre alone (the region of the left angular gyrus). But this theory is not a satisfactory one. It may, and probably does, afford one explanation of the fact that many word-blind patients who are unable to write spontaneously (from within) can mechanically copy letters and words; but it does not explain the fact that many patients who are word-blind (who are unable to read) can write fluently, for in such cases the visual memories of letters and words must be retained (unless the patient can write by the memories of the kinæsthetic impressions which are generated in the act of writing); and if the visual memories of letters and words (of written speech) were retained in either visual speech centre, and that centre wer still in active functional connexion with either half vision centre, the patient would be able to read.

Another view, which until recently was generally accepted and which is still thought by many authorities to be the correct one, in some cases at all events, supposes that in those cases of word-blindness in which there is no agraphia the motor act of writing has become so habitual, so automatic as it were, that the patient is able to write without the supervision of the visual speech centre, by means, perhaps, of the memories (revival) of the kinæsthetic impressions connected with the act of writing. While in those cases of word-blindness in which there is agraphia the supervision and stimulation, so to speak, of the motor-writing centre by the visual-speech centre is essential, without this supervision the act of writing in such cases cannot be performed. This theory would receive striking confirmation if it could be shown, firstly (as was notably the case in our patient), that in all cases of word-blindness in which there is agraphia the patient has been accustomed to write very little (i.e., is in the position of a child who is just learning to write and in whom the discharge of the motor-writing centre has to be constantly directed by the aid of vision—that is, of the visual-word centre); and, secondly, that in all cases of word-blindness without agraphia the patients have been in the habit of writing much and with facility.

Another theory is that in cases of word-blindness with agraphia the lesion is situated in the visual-speech centre, the left angular gyrus, and perhaps the left supra-marginal convolution; whereas in cases of word-blindness without agraphia the lesion does not involve the visual-speech centre itself, but involves the connecting fibres which pass to the visual-speech centre from *both* half-vision centres in the back part of the occipital lobes. This theory is supported by three cases which have been recorded by Déjerine, Redlich, and Wyllie, and seems to be accepted by Dr. Wyllie as conclusively proved. Dr. Wyllie says: "It has recently been shown quite conclusively that the visual images at C [visual-speech centre] are in all cases important, not only for the reception and interpretation of written and printed

[3] In some cases of word-blindness in which the patient is unable to write spontaneously (i.e., from within as the result of stimulation from the visual-speech centre) the power of writing to dictation is preserved. In such cases it is reasonable to suppose that there is a direct connexion between the auditory-speech centre and the motor-writing centre. In persons who are accustomed to write much, and especially in persons who are accustomed to write much to dictation, it is probable that the motor writing-speech centre may be thrown into action either by the visual-speech centre or by the auditory-speech centre.

[4] Bramwell: Atlas of Clinical Medicine, vol. ii., p. 40.

[5] Ibid., Plates xxxvi., xxxvii., xxxviii.

[6] Ibid., p. 42.

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speech, but also for the production of writing. It has been shown, in fact, that when the centre C [visual-speech centre] is destroyed the patient can neither read nor write. As to reading, he is word-blind; as to writing, he has amnesia literarum, and therefore cannot call up in his mind the visual images of letters and words required for purposes of writing. It is now considered to be improbable that the graphic-motor images at D [motor-writing centre] can in any single case be so strongly imprinted as to suffice for the act of writing independently of any guidance from the visual images at C [visual-speech centre]. How, then, are the cases of pure word-blindness without agraphia—in which the patient can write correctly, though he cannot read even that which he himself has written—to be accounted for? It is now believed that in these cases the visual-word centre C remains intact, and that so also do the pathways for the influences by which it is acted upon *from within* when words revived in the mind are being translated into writing; but that, on the other hand, the pathways along which, as we shall see presently, influences pass from the primary visual centres, in the two occipital lobes, to the visual-word centre C, in the angular and supra-marginal convolutions, are cut across, so that the word images in C, though they can still be revived *from within*, can no longer be reached and revived by impressions coming to them *from without*. Destruction of the visual-word centre C, therefore, causes both word-blindness and agraphia; but the cutting off of the visual-word centre C from the primary visual centres in the two occipital lobes causes simple word-blindness without agraphia."[7] The arguments which Déjerine and Mirallié advance against the existence of a separate writing-speech centre, lesions of which will cause pure agraphia, are undoubtedly very strong. Future observations will, no doubt, decide the point definitely one way or the other, and determine whether the memories of the muscular movements (kinæsthetic impressions generated during the production of the movements concerned in the act of writing) may not in some cases be alone sufficient to enable a patient who has been accustomed to write much to write at all events in some degree. But I will leave the discussion of this difficult and debateable point until I come to consider the subject of aphasia as a whole.

The point, then, of most importance which this case seems to illustrate is that a lesion involving the conducting fibres which pass from the visual-speech centre to the motor-writing centre, in a person who has been accustomed to write little, produces a condition of complete agraphia (inability to write spontaneously, to copy, or to write from dictation). In other words, this case seems to suggest that a lesion which completely interrupts the connecting fibres which pass from the visual-speech centre to the motor-writing centre (whether that centre is a separate writing-speech centre, as Charcot and Bastian suppose, or merely the ordinary motor centre for the movements of the right hand, as Déjerine thinks) will produce agraphia, leaving internal visual speech unaffected. If this is so, and if Déjerine's views are correct, we may therefore say that:—1. A lesion which interrupts the conducting fibres which pass from both half-vision centres to the visual-speech centre (left angular gyrus) will produce complete word-blindness, but no agraphia. In these cases the patient is unable to read printed or written characters; he can write spontaneously, but he is unable to read what he writes. 2. A lesion which completely destroys the visual-speech centre itself (left angular gyrus) will produce complete word-blindness and complete agraphia (unless, as Charcot and Charlton Bastian, &c., suppose, the kinæsthetic memories are alone sufficient to enable the patient to write; but this, as we have seen, is very doubtful). 3. A lesion which completely interrupts the fibres which pass from the visual-speech centre (angular gyrus) to the motor-writing centre will produce pure agraphia—agraphia without word-blindness. If such a lesion occurs, it must be very rare. Further (4), if a separate writing-*speech* centre exists (but, as I have already stated, its existence is stoutly denied by Déjerine) complete destruction of this centre and of this centre alone will produce pure agraphia—agraphia without word-blindness. Complete destruction of the visual-speech centre usually entails, as Déjerine and Mirallié have shown, other speech defects (in auditory and vocal speech); but I need not refer to them at present. I merely refer to the defects in visual speech and in writing.

It will be noted that in this case there was no disturbance of tactile sensibility, but there was distinct loss of the muscular sense and power of coördinating the movements in the right upper extremity when the eyes were closed, and yet there was absolutely no paralysis and the grasping power of the two hands was unimpaired. The patient had lost the mental idea of some of the movements of the right hand; when the eyes were open she could coördinate her movements correctly, but when the eyes were closed she was unable to touch the tip of the nose with the left fore-finger. It is difficult, perhaps, to give an explanation of these facts (granting that the lesion was confined to the position of the angular gyrus), unless it be supposed that the cortical grey matter in the neighbourhood of the higher centre for vision exercises an important influence upon the co-ordination of muscular movements of the right hand, not only in those movements concerned in the act of writing, but other movements, such as touching the tip of the nose. And in this connexion it is important to note that Nothnagel and others have suggested from the observation of clinical cases that "the parietal lobe in its inferior part contains a centre for the registration of motor residua (as Dr. E. C. Seguin terms the ingoing or kinæsthetic impressions which attend and result from muscular movements), and that the centres in the motor zone are really motor centres."[8] And here let me state that some word-blind patients are able to read by tracing the letters and words (which they cannot decipher, so to speak, by the sense of sight) with the fore-finger either on paper or in the air—in other words, by the revival in consciousness of the kinæsthetic impressions attending the act of writing. Déjerine and Mirallié state that this is only possible in cases of subcortical or pure word-blindness. This fact seems to me to suggest that the cortical centre in which the kinæsthetic impressions connected with the act of writing are stored is the angular gyrus or adjacent part of the supra-marginal convolution. And in support of this supposition, which, so far as I know, has not been advanced before, is the fact that in this case of word-blindness and agraphia, the result apparently of a lesion in the visual-speech centre and its immediate neighbourhood, there was definite incoördination of the movements of the right hand. According to this view, both the visual and kinæsthetic impressions concerned in the act of writing are stored up in the same or closely adjacent cortical centres. If future observations should show that this supposition is correct many of our present difficulties with regard to agraphia would be easily explained.

It is impossible, of course, to believe that in this case, in which such rapid improvement occurred under anti-syphilitic treatment, there was any "destroying" lesion. The only explanation of the rapid recovery from the complete condition of agraphia and almost complete visual word-blindness which were present is, I think, that there was a specific lesion on the surface of the brain in the region of the left angular gyrus which temporarily arrested or inhibited (either by pressure or by interfering with the blood-supply, or in both ways) the function of the angular gyrus, and more especially of the connecting fibres passing from it (the visual-speech centre) to the motor-writing centre. Further, the case is certainly one of the most remarkable illustrations which has come under my own personal observation of the extraordinary effect which large doses of iodide of potassium have on gummatous lesions.

The case shows the great importance of testing the fields of vision and the patient's power of reading and writing in all obscure cases of cerebral disease.[9] I have met with other cases which also strongly support the same proposition. I will take an early opportunity of detailing some of them and of discussing the whole subject of aphasia more fully.

(To be continued.)

[7] The Disorders of Speech, by Dr. John Wyllie, p. 333.

[8] See Abstract on Cerebral and Spinal Localisation, by Dr. E. C. Seguin, in Sajous' Annual of the Universal Medical Sciences, 1888, vol. i., p. 4.

[9] In some cases the mental condition of the patient unfortunately renders it impossible to get a perimeter chart or even to ascertain the condition of the fields of vision by the rough test.

HEALTH OF HORFIELD.—At the meeting of the Horfield Urban District Council, Horfield, Bristol, held on Feb. 23rd, Mr. J. H. Parry, L.R.C.P. and S. Edin., the medical officer of health, presented his annual report, which stated that 328 births had been registered during 1896, being at the rate of 28·5 per 1000. The deaths numbered 129, or at the rate of 11·2 per 1000; of these 35 were in infants under one year, and included 10 from premature birth.

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ON THE RADICAL CURE OF HYDROCELE BY EXCISION OF THE SAC, WITH NOTES OF TWENTY-TWO CASES.

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IN previous numbers of THE LANCET[1] I have recorded several instances of radical cure of hydrocele by excision of the sac, and called attention to the good results attending this mode of treatment, which I have now adopted in twenty-two cases, brief particulars of which will be found in the table given below. A consideration of these cases may perhaps be of interest, as they serve to illustrate the chief conditions which call for the performance of this operation.

TABLE OF CASES OF RADICAL CURE OF HYDROCELE BY EXCISION OF THE SAC.

No.	Age.	Date of operation.	Nature of hydrocele.	Previous treatment.	Remarks.
1.	47	June, 1886.	Vaginal.	Tapped four times.	—
2.	40	April, 1887.	,,	Tapped seven times; injected once with carbolic acid.	The sac wall was very thick.
3.	53	May, 1887.	,,	Tapped three times.	—
4.	38	July, 1887.	,,	Tapped three times.	—
5.	58	January, 1888.	,,	Tapped eight or nine times.	Suppuration in the tunica vaginalis after last tapping; sac wall thick and inflamed.
6.	44	July, 1888.	,,	Tapped several times; injected once with iodine.	Testis adherent to the anterior wall of the tunica vaginalis.
7.	55	February, 1889.	,,	Tapped three times.	Sac wall cartilaginous, from a quarter to half an inch in thickness.
8.	43	February, 1891.	,,	Tapped twice.	Multilocular hydrocele.
9.	25	March, 1891.	Encysted.	None.	Present for many years; size of orange; thick sac wall.
10.	62	April, 1891.	Vaginal.	Tapped twice quite recently.	Twenty years' duration; sac wall calcified; scrotum gangrenous; pus in the tunica vaginalis; radical cure of inguinal hernia on same side also performed.
11.	23	May, 1891.	,,	Tapped twice; injected once with iodine.	Hæmorrhage into the tunica vaginalis after last tapping; thick sac wall.
12.	31	December, 1891.	Encysted.	None.	Size of orange; radical cure of inguinal hernia on the same side also performed.
13.	45	May, 1894.	Vaginal.	Tapped three times.	—
14.	51	October, 1894.	,,	Tapped twice quite recently.	Bloody fluid drawn off at the second tapping, followed by suppuration in the sac and sloughing of the sac wall.
15.	31	February, 1895.	,,	None.	Present for several years; recently contracted gonorrhœa, followed by acute epididymitis and suppuration in the tunica vaginalis; the sac wall was thick and inflamed.
16.	54	February, 1895.	,,	Tapped twice recently.	Many years' duration; blood drawn off at the second tapping; re-filled rapidly. The tunica vaginalis contained blood-clot and fluid; the sac wall was very thick.
17.	18	August, 1895.	,,	Tapped several times; injected once with perchloride of mercury.	The sac wall was thickened.
18.	18	March, 1896.	Encysted.	None.	—
19.	22	June, 1896.	Vaginal.	,,	Bilocular hydrocele; radical cure of inguinal hernia on the opposite side also performed.
20.	7	July, 1896.	Encysted.	Tapped twice.	Present since infancy; size of small orange; thick sac wall.
21.	62	August, 1896.	Vaginal.	None.	Several years' duration.
22.	33	September, 1896.	,,	,,	Present since boyhood.

Briefly described, the operation is carried out in the following way. The cavity of the tunica vaginalis is laid open by a vertical incision, from two to three inches in length, made from the front through the tissues of the scrotum. The fluid contents of the hydrocele having escaped, the tunica vaginalis is dissected out on either side up to the point where it is reflected on the testis and lower part of the cord. The whole of the parietal layer is then removed by cutting through it close to its reflection upon the cord and testis with a pair of scissors. All bleeding having been arrested, the wound is then closed, no drainage having been employed in my recent cases, and if pressure is maintained by pads of wood-wool so as to keep the deep parts of the wound in apposition, and the scrotum is afterwards kept well elevated, healing quickly takes place, and at the end of ten days or a fortnight the patient is usually able to get about wearing a suspensory bandage. Though some thickening remains at the seat of operation for a time it gradually subsides, and in the course of a few months the scar will have almost disappeared, the scrotal tissues moving so freely over the surface of the testis that it is often difficult to detect that any operation has been performed. In cases of encysted hydrocele the operation differs only in the fact that the entire sac is removed. The chief conditions which call for the performance of this operation are as follows:—1. When a patient is anxious for a radical cure, but does not wish to run the risk of an unsuccessful attempt by injection. It was for this reason that excision of the sac was performed in many of the cases. 2. Old hydroceles, where the sac wall is thickened and rigid, and consequently incapable of completely collapsing after the fluid is drawn off by tapping. It is under these conditions that the treatment by injection is liable to fail. Considerable thickening of the sac wall was present in many of the cases, while in Cases 2 and 7 this condition was very marked, the tunica vaginalis being in places more than a quarter of an inch in thickness and of cartilaginous consistence. In Case 10, where the hydrocele had existed for a period of twenty years, the sac wall was in addition distinctly calcified. 3. When injection has been tried and failed. In Case 2 the hydrocele had been previously injected with carbolic acid; in Cases 6 and 11 iodine had been used, and in Case 17 perchloride of mercury, but in each instance without success. 4. When suppuration has taken place in the sac of a hydrocele after its contents have been removed by tapping. This complication, which is liable to occur after evacuation of the fluid in old hydroceles, was present in Cases 5, 10, and 14, and in each the tunica vaginalis was in an inflamed and unhealthy condition. In one instance, Case 10, the scrotal tissues over the front of the swelling were distinctly gangrenous. In Case 14 the sac was at first incised and drained, but as the discharge, which was mixed with broken-down blood clot, showed no signs of abatement

[1] THE LANCET, Sept. 10th, 1887; Oct. 26th, 1889; and July 25th, 1891.

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the tunica vaginalis was afterwards excised and the wound closed, with the result that healing took place without any further suppuration. In Case 15 suppuration had occurred in the sac of an old hydrocele as the result of an attack of gonorrhœal epididymitis. 5. When a hæmatocele follows the operation of tapping a hydrocele. This complication was present in two instances, Cases 11 and 16, the thickened condition of the sac wall, which was incapable of collapsing, doubtless accounting for the occurrence of the bleeding. 6. When a hydrocele is associated with an inguinal hernia upon which it is desirable to perform a radical cure. Both these conditions were present in Cases 10, 12, and 19. 7. Two rare conditions in which the operation proved extremely useful were those found in Cases 6 and 8—viz., (*a*) an adherent condition of the testis to the anterior wall of the scrotum, where it formed a distinct prominence, the result of previous tappings and an unsuccessful injection with iodine; and (*b*) a multilocular hydrocele, the cavity of the tunica vaginalis being divided by numerous septa into distinct compartments, a condition which could not be satisfactorily treated by any other measure than by excision of the sac. 8. In cases of encysted hydrocele the entire sac can be excised, and the whole of the secreting surface is therefore removed, as in Cases 9, 12, 18, and 20. A reference to the table will show that advanced age is no bar to the operation, five of the patients being over fifty and two over sixty years of age. As regards the result of the operation, I have not met with a single case where there has been a recurrence of the hydrocele; and provided it is carried out in the way described, care being taken to remove the whole of the parietal layer of the tunica vaginalis, I am of opinion that excision of the sac is the only certain method of radical cure.

Manchester.

FOREIGN BODY IN THE LENS FOR SIXTEEN YEARS, THE LENS REMAINING CLEAR.

BY T. BRITTIN ARCHER, M.R.C.S. ENG.,
SENIOR SURGEON, CENTRAL LONDON OPHTHALMIC HOSPITAL.

A MAN, aged thirty years, married, of healthy appearance, with good family history, and an intelligent person, came to the Central London Ophthalmic Hospital on Sept. 17th, 1896, complaining that when he was reading a paper four days previously he noticed that there appeared to be a cloud over the left eye, which somewhat obscured the print whilst reading, and the cloud had remained up to the date of coming to the hospital. Nothing peculiar was observable about the eyes by daylight. Tension was normal in both, the pupil reflexes were all present, both eyes were quiet, and there was no inflammation. He had had no blow on the eye or accident of any sort. Right vision = $\frac{6}{6}$ without glass, Jaeger No. 1 up to 14 centimetres; left + 1·75 = $\frac{6}{18}$, Jaeger No. 8 at 25 centimetres indistinctly without glass. He was positive he could see quite well with the left eye up to four days before. On examination in the dark room, the left lens was found to be cataractous, with many well-marked striæ, stellate, partially obscuring the fundus; at the posterior part of the lens was seen, indistinctly by reason of the striæ, what appeared to be a fine piece of glittering wire, with a small spot of opaque posterior capsule immediately behind, and forming a white background to the assumed foreign body. The object was, allowing for it being seen under a high lens, about three millimetres long and half a millimetre broad, lying nearly vertically as regards its length in the lens, inclined slightly towards the temporal side, and having the lower extremity slightly curved forwards. On the anterior surface of the iris (a blue-grey one), in the lower and nasal quarter segment of the iris circle, was a fine blue-black line about a millimetre long running parallel with the pupillary border of the iris, and half-way between that border and the ciliary border, but rather nearer the pupillary border. There was no opacity in the cornea. The right fundus was normal. The patient could not at first recollect any accident to the eye, but on pressure he suddenly remembered that sixteen years previously, when he was fourteen years of age, he filled a bit of old gas-pipe with gunpowder and it prematurely exploded by accident. This occurred to the right side of the face, on which are two powder marks, but he declared that neither of his eyes was in any way affected by the explosion. As it was doubtful at this first visit what the object was, atropine drops were ordered and he was told to come again in four days. On the 21st the left lens had become more opaque. Vision = $\frac{6}{9}$. The foreign body could not be seen so distinctly; the fundus was quite obscured. The specific gravity of the urine was 1024; it was acid, and there was no albumin or sugar. The eye was quiet. The patient was admitted to the hospital with a view to the extraction of the lens and the foreign body. On the 24th, on examining the lens, the opacity had entirely cleared up, save very small and short striæ at the periphery; the foreign body stood out clearly to the view in the lens; the fundus was easily seen and was normal; and the vision with + 1·75 was $\frac{6}{12}$ two letters. In face of this extraordinary condition the operation was postponed. On Oct. 1st the vision = $\frac{6}{9}$; the opacity of the lens returned and increased. The foreign body seemed to have shifted slightly with regard to the opaque spot in the capsule behind it. The eye was quiet and the lens seemed to be rapidly softening. On the 5th the lens (left) was removed by a semilunar incision at the sclero-corneal junction with an iridectomy. The lens was very fluid, slightly milky in colour, and easily delivered; one small drop of vitreous presented, which was incised. This was probably due to the posterior capsule being lacerated by the foreign body or from degenerative changes set up from the original impact; it tore on delivery of the lens. On examination of the débris of the lens, which had lost all its form, no foreign body was discovered, but on raising the upper lid it was found resting on the ocular conjunctiva just above the section, having been delivered with the lens. On the 6th the eye was quiet and remained so until the 15th, when the patient was discharged, the eye having made a rapid recovery from the operation. Vision + 10 D. = $\frac{6}{9}$. There was some small amount of soft lens matter remaining, but not sufficient to obscure the fundus. On the 29th the eye was quiet. Vision + 10 = $\frac{6}{12}$. On Nov. 23rd vision + 10 = $\frac{6}{9}$. There was a fine thread of capsule intersecting the pupil.

Dr. Norman Maclehose, pathologist to the hospital, reports on the foreign body: "There is no possible doubt as to the fragment being iron or steel; it is heavy, sinks rapidly in water, slowly in glycerine, is strongly attracted by the magnet. There are one or two fine filaments of wool or cotton adhering to it, but no evidence of incrustation with new cells or organic matter. The foreign body measures 2½ mm. long and ¼ mm. broad."

Remarks.—There seem to be many points of interest with regard to this case. First, as to how the foreign body got into the lens. It is assumed that the fragment was shot into the man's eye when he was aged fourteen years by the explosion of the loaded gas-pipe, and it seems difficult to refuse this explanation of its presence, backed up by the local evidence. This is the solitary accident in the man's life. There are powder marks on the right cheek and presumably a charred powder stain on the iris of the left eye, in a line with the direction the foreign body would take in travelling from right to left. That there is no corneal opacity is not important, as the original wound would be very small, and time (sixteen years) could well obliterate it. That the stain on the iris is not physiological may safely be accepted as its plane runs at right angles to the course it ought to pursue were it so, and also from its peculiar coal blackness. Presuming that the foreign body passed from right to left, pierced the cornea at its sclero-corneal junction, passed through the iris, and lodged in the posterior part of the left lens, and taking into account the position in which it lay, then there is local evidence all along the line of this theory of its presence. Secondly, it set up no irritation at the time. The size may account for it not setting up any change in the lens at first, and one can best realise what that size was by describing it, when viewed by the naked eye on a bit of white notepaper, as like half of a small eyelash. Its real measurement has been given. Thirdly, that for sixteen years the lens remained clear. Of course the man's statement has here to be believed, but he ought to be a good judge on this point, he being a carpenter, an occupation in which at times of taking measurements (antero-posterior) binocular vision is almost a necessity, and he would soon have found it out if one eye was failing. His statement of its discovery is very clear, and luckily when the lens changes did come they were watched by three skilled ophthalmoscopists and seen

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to be very rapid. Doubtless there were always the slight opacity in the posterior capsule and the opacity of the foreign body itself, but these were not sufficient to interfere with good vision. What did start the secondary softening is doubtful; probably some jar or contusion experienced in following out his trade of which he took no notice. Lastly, that the lens during its softening cleared temporarily after having become opaque is difficult to explain. That it did occur is beyond dispute, as the condition was corroborated by three observers, and though perhaps one could easily put forward several theories to account for it, still they would lack the evidence of absolute certainty.

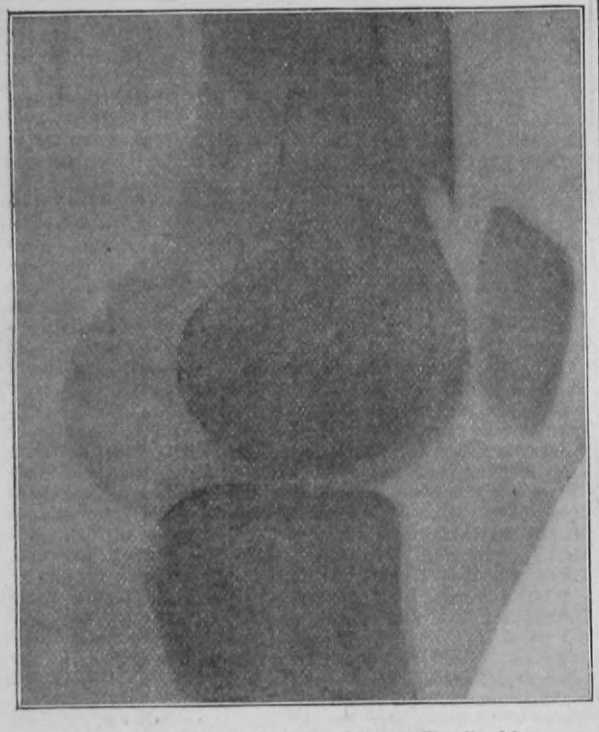
The lens on its delivery was placed inadvertently on a towel that covered the cushion on which the patient's head rested and, being entirely fluid, soaked immediately away. This is to be regretted, as no examination of it was made.

Nottingham-place, W.

NOTE ON A SKIAGRAPH OF A CASE OF FRACTURED FEMUR.

BY SURGEON-COLONEL W. F. STEVENSON,
PROFESSOR OF SURGERY,
AND
SURGEON-MAJOR WHITEHEAD,
LATE ASSISTANT PROFESSOR OF SURGERY, ARMY MEDICAL SCHOOL, NETLEY.

THIS skiagraph has, we consider, certain points of interest about it. At first sight it appears to be a picture of a recent fracture of the lower end of the femur in which a considerable amount of deformity and over-riding of the lower end of the upper fragment exists, whereas it really represents the present condition of the bones in a case of fracture close above the knee-joint which



Skiagraph of knee-joint and portion of femur. The site of fracture is clearly shown and the lower end of the upper fragment appears very sharp. For explanation of this see text.

occurred six months ago. The points worthy of attention connected with it are—(1) the end of the upper fragment appears jagged and sharply defined, as one might expect to see in a recent case—quite as much so as was depicted in a skiagraph of the same case taken by Mr. Sydney Rowland a few days after the accident happened; no attempt has apparently been made by nature to round off the end of the bone; (2) on examination of the limb no projection of the bone can be felt at the site of fracture; the union appears to be smooth and even; (3) the shortening amounts to barely half an inch; (4) the man walks without any sign of lameness; and (5) he feels no pain in the part. From the surgical point of view, the result is as good as could be expected under the circumstances of a fracture in the position indicated. That the bone is in fact as sharp as it appears in the skiagraph we do not believe; what probably has occurred is that the x rays have traversed the more recent callous material, which really does round off the end, without throwing a shadow on the plate, while the older bone is clearly defined.

Mr. Edmund Owen[1] suggests a misuse to which skiagraphy may be put in the future when he remarks, *apropos* to a similar case of his own: "What may a British jury think when a skiagraph of some case is being explained by the sharp advocate of a claimant for damages for malpraxis?" The x rays exhibited in Mr. Owen's case an apparent deformity which "really did not matter," as the result was otherwise as good as surgery could achieve, and the above would seem to be another case in point. The surgeon is, in fact, liable to find himself "given away," and imaginative patients to consider themselves badly treated, if they have their broken bones skiagraphed by Roentgen's method.

Netley.

"A QUESTION FOR ANÆSTHETISTS."

PNEUMONIA AFTER SURGICAL OPERATIONS: AN ANÆSTHETIST'S POINT OF VIEW.[2]

BY J. FREDERICK W. SILK, M.D. LOND.,
ANÆSTHETIST TO KING'S COLLEGE HOSPITAL AND TO GUY'S HOSPITAL DENTAL SCHOOL.

IN THE LANCET of Feb. 20th, 1897, under the heading "A Question for Anæsthetists," Mr. Clement Lucas states that in his experience, pneumonia after surgical operations is of too frequent occurrence to be explicable either upon the hypothesis of prior infection, or on that of simple exposure to cold; that pneumonia is as invariably the result of germ infection as is tubercle; and the question he raises, therefore, is—May not the masks and face-pieces used in the administration of the anæsthetic be a possible source of infection? Surgeons in general and anæsthetists in particular must, I am sure, feel indebted to Mr. Lucas for the candid manner in which he has brought the matter before them.

The frequency of pneumonia after operations.—As I read the paper, cases of transitory bronchial irritation are not referred to, but only those graver inflammatory conditions involving elevation of temperature and other definite signs of marked pneumonia. Is it a fact that such cases are really of frequent occurrence in modern non-septic surgery? In the days before anæsthetics and antiseptics pneumonia was a well-recognised and most frequent cause of death after surgical injury and operation, and the fact is constantly referred to by the medical writers and lecturers of the time. For instance, in the Guy's Hospital Reports for 1843 is a paper by Dr. Norman Chevers dealing with the different causes of death after operations; pneumonia is given a prominent place in the list, and some observations of Erichsen are quoted in which the latter states that of forty-one deaths after surgical injury no less than twenty-three exhibited signs of pneumonia. On the other hand, it is really remarkable how silent the statistics of modern surgery are upon the subject—in fact, it may be said that it is the legitimate boast of surgeons nowadays, founded upon well-authenticated published records, that elevation of temperature, from whatever cause, is distinctly exceptional after operations. In the St. Bartholomew's Hospital Reports for 1895 there are tabulated records of 1774 operations; in those of St. Thomas's Hospital for 1894 there are 1376; in those of King's College Hospital, vol. ii., 1895–96, there are 915; and in those of Middlesex Hospital, 1894, there are 912. Out of this total of nearly 5000 I have with some difficulty found references

[1] THE LANCET, Aug. 29th, 1896.

[2] A paper read before the Society of Anæsthetists on March 18th, 1897.

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to about thirteen cases of pneumonia; of these, no less than eight were jaw or tongue cases, two were in rectal operations, in one a foreign body was subsequently found in the bronchus, and one was a case in which cough and a slight rise in temperature were, apparently, the only signs of pneumonia. Practically, therefore, we have but one case in 5000 which is at all parallel to the case cited by Mr. Lucas as typical. Further, Prescott, in discussing this very subject in the *Boston Medical and Surgical Journal* for 1895, comes to the conclusion that in an estimated 40,000 cases of etherisation there were only three cases of acute lobar pneumonia. Judging from these sources of information, therefore, Mr. Lucas's experience seems to be very exceptional, and one is almost inclined to commiserate him; but possibly, now that attention has been directed to the matter, the records of future years will show a few more cases, so that after all there may be some justification for the view that cases of pneumonia (as distinguished from bronchial irritation) occur with undesirable frequency. At present, however, the belief in the occurrence of pneumonia after surgical operations appears to be a traditional survival of the pre-anæsthetic and pre-antiseptic days.

The bacillary origin of pneumonia.—If simple bronchial troubles as well as those of a pronounced pneumonic type are included, it must first be shown that there is a specific micro-organism which is the *causa causans* of such conditions. Whatever may be the theoretical probabilities of this, I hardly think that any bacteriologist is prepared as yet to proclaim the discovery of the bacillus of bronchitis. With regard to the bacillus of pneumonia it may be pointed out that Crookshank and Sternberg, in their respective text-books, enumerate no less than three micro-organisms which are said to produce, or are at any rate present in the sputum of, pneumonia—viz., the pneumococcus of Friedlander, an altogether different one of Sternberg, and a third of Klein; and not only so, but it seems to me that the inoculation experiments with any one of these are by no means conclusive, or even uniform. Add to this the fact that one or other of the specific forms referred to is often found in the normal buccal débris, and then I think that we can hardly come to any other conclusion than that, from the point of view of infective organisms, our knowledge of the subject is still very incomplete; it does not carry us much further than the stage of probabilities, or entitle us to say much more than that the pathological conditions and secretions of pneumonia furnish very suitable media for the growth of the organisms in question.

Masks and face pieces as a source of infection.—Assuming for the sake of argument that cases of pneumonia after operations are of tolerably frequent occurrence and that such cases are always due to infective organisms, I would submit that of all places such organisms are least likely to be found in the masks and face-pieces of the anæsthetist. Sternberg, in his "Text-book of Bacteriology," quotes some interesting experiments which tend to support this view. Prolonged exposure to nitrous oxide, though it did not absolutely destroy some organisms that were experimented upon, materially interfered with their development and restrained their growth. Anthrax spores, the most obstinate of known organisms, were not absolutely destroyed by immersion in chloroform, but the cholera bacillus, the typhoid bacillus, and the anthrax bacillus were killed in a very short time when placed in weak watery solutions of the drug (from ¼ to ½ per cent.). Ten minutes' exposure to ether destroyed tubercle bacilli. Then, again, it is very well known that absolute alcohol (a constituent of the A.C.E. mixture) is rapidly and permanently fatal to nearly all micro-organisms. I do not know of any experiments that have been made with the organisms contained in pneumonic sputum, but there is no reason to doubt that the result would be in accord with the above. It is not a little curious, too, that the least potent of the drugs referred to, both from the anæsthetist's and from the bacteriologist's point of view,—viz, nitrous oxide—is the one which is probably used more frequently than all the others put together, and under conditions which would be most likely to convey infection. Except when a foreign body has slipped into the trachea it has never, to my knowledge, been recorded, that the use of nitrous oxide has been followed by anything approaching pneumonia. On the other hand, chloroform, the most powerful of anæsthetics and a very strong antiseptic, which is used without a mask, is the anæsthetic most frequently employed in septic jaw and tongue cases, in which the mortality from pneumonia is exceptionally high

Although I cannot agree with Mr. Lucas in his deductions I should like very cordially to endorse his views as to the desirability, for several reasons, of scrupulous cleanliness whether in the matter of surgical instruments or inhalers. As he is not an anæsthetist it is of course excusable that he should have overlooked several improvements in apparatus, tending to facilitate cleaning, that have been introduced of late years. Among others I would mention the following—viz., as far back as 1887 Mr. Lloyd suggested a light, inexpensive, destroyable bag for use with the portable Clover's inhaler; Dr. Dudley Buxton has adopted an easily cleaned bag for the larger Clover's inhaler; and Mr. Davis has brought forward a metal inhaler of the Ormsby pattern. I venture to think, too, that the celluloid inhalers for the A.C.E. mixture, which I introduced some years ago, are steps in the same direction; and further, some two years or so ago I placed in the operating theatre of Guy's Hospital, and showed at a meeting of the Society of Anæsthetists, a form of metal inhaler, one of the advantages which I claimed for it being that it met the demand for an inhaler which could be subjected to the same aseptic treatment as the instruments employed in the operation.

8 Devonshire-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF IMPALEMENT.

BY JOHN JOSEPH STACK, L.R.C.P. EDIN., L.R.C.S. IREL.

ONE night at the end of last February I was called by a police officer to attend a man who was literally hooked on to an iron gate opening off a street in the neighbourhood of New Cross. The spike of the iron railing had entered beneath the chin, penetrated the floor of the mouth, issued through the mouth, and was jammed against the right cheek, the point reaching as far as the internal canthus of the eye. The man was making violent but unavailing efforts to disengage himself, and must have been in that position for a long time, as he seemed to be exhausted from his prolonged struggling. My first idea was to raise his head off the railings, but this was not easy, as the shoulders of the pike-shaped rail were locked in by the narrow horizontal rami of the lower jawbone, so that the head was held fast. I then turned the head in a line with the gate, aided by several constables who lifted the body from the ground. In this position the shoulders of the end of the rail were in the long axis of the "maxillary outlet," so that the man was easily released from his distressing position and was conveyed on an ambulance to the hospital. There was only very slight hæmorrhage; he was intoxicated and unable to give any account of himself. How he got on the gate, whether by deliberately thrusting himself on the spike or whether he was placed there by others, I am unable to say. I am indebted to Mr. M. K. Tebay, house surgeon of the Miller Hospital at Greenwich, for further particulars of the case. The man is now practically well; the wound in the floor of his mouth is granulating very favourably, and he will soon leave the hospital. I ought to add that all the front teeth in the upper jaw were broken off.

New Cross-road, S.E.

NOTES ON A CASE OF WOUND OF THE PALMAR ARCH NECESSITATING LIGATURE OF THE BRACHIAL ARTERY.

BY S. J. ROSS, M.B., CH.B. VICT.

IN May, 1896, I was called to see a boy who had run a spike into the palm of his right hand. I saw him almost immediately after the accident. He had lost a considerable amount of blood, and the hæmorrhage was still very free from the wound. A pad of cyanide gauze over the palmar wound was applied. The elbow joint was flexed over a roller bandage,

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and the patient was put to bed. Two days afterwards the hæmorrhage still persisted slightly, but gave no cause for alarm. On the third day, however, I was called to see the patient, as the hæmorrhage had recurred as profusely as before. He was becoming blanched, the pulse was frequent, and he was getting restless—indications for more active interference. I decided to ligature the brachial artery at the insertion of the coraco-brachialis muscle. This I did. The limb was then wrapped up in cotton-wool, and in three weeks both the palmar and brachial wounds were soundly healed.

My reason for deciding to ligature the brachial artery instead of the radial and ulnar was that the boy was practically in a state of collapse, and consequently I considered that if I ligatured the two vessels separately there would probably be a recurrence of hæmorrhage, due to the free anastomosis between the branches of these vessels; so that I thought it better to place the patient beyond even the possibility of such recurrence. I have carefully watched the subsequent history of the case, and know that the boy is in perfect health and has not been in the least inconvenienced by the operation.

Lancaster.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procœmium.

GUY'S HOSPITAL.

A CASE OF PNEUMO-BACILLARY CONJUNCTIVITIS.

(Under the care of Dr. BRAILEY.)

IN the following case of conjunctivitis the pneumo-bacillus of Friedländer, which was present in the conjunctival sac, appeared to have a causal, and not merely an accidental, relationship to the lesion. For the notes of this case we are indebted to Dr. J. Eyre.

The patient, a feeble old man, aged sixty years, presented himself at the out-patient department complaining of pain, constant watering of the eyes, and failing sight, the symptoms dating from six months previously, when the eyes were very "blood-shot" and a purulent discharge was present. On examination there was found to be considerable injection of the vessels of the palpebral conjunctiva and to a less extent of the bulbar conjunctiva; a certain amount of photophobia and very obvious lacrymation were also noted—in fact, all the appearances were those of a simple chronic conjunctivitis. When, however, the caruncle was examined its surface was found to be hidden by a thick, viscid, shining, white film, which could easily be removed piecemeal, having no very intimate attachment. The actual surface of the caruncle, when exposed, appeared to be somewhat hyperæmic, but not raw or bleeding; the follicles of this body were also found to contain a similar material, which could be expressed by squeezing the caruncle between the points of a pair of forceps. The affection was bilateral. Vision in each eye = $\frac{6}{9}$, with + 0·5 D. sph. = $\frac{6}{6}$, and with + 5 D. sph. the patient read J. 1 at a distance of eleven inches. Treatment appeared to have no effect upon this case, and although the patient was under observation for about two months the conjunctivitis showed no definite improvement. The "pseudo-membrane" invariably re-formed within twenty-four hours of removal. Lotions of boric acid were useless; those of perchloride of mercury, 1 in 5000, were not followed by any obvious benefit. The film was removed from the caruncle, and the surface of this latter painted with 1 per cent., and subsequently with 2 per cent., solutions of the perchloride of mercury, with the result that the formation of the viscid layer was delayed for forty-eight hours, whilst the effect of 1, 2, and 3 per cent. solutions of nitrate of silver was equally transient.

Remarks by Dr. EYRE.—As regards the bacteriological aspect of the case the microscopical examination of the "pseudo-membrane" removed from the caruncle showed that it was simply a mass of degenerated epithelial cells, desquamated from the surface of the conjunctiva, with a few granular leucocytes. In, upon, and between the squamous cells were seen large numbers of short, oval bacilli, either single or arranged in pairs as diplo-bacilli (in this latter case the individual bacilli were often so short that the organism simulated a diplococcus), which did not retain their stain when treated by Gram's method. No capsule could be demonstrated. Cover-slip smear preparations made direct from the conjunctival secretion showed a precisely similar bacillus in enormous numbers; no other micro-organisms could be detected. Cultivations were made from the secretion contained in the conjunctival sac and also from the material removed from the surface of the caruncle, on blood serum and on agar-agar. After twenty-four hours' incubation at 37·5° C. all the tubes were found to contain a growth which consisted of a pure culture of a non-motile, pleomorphic bacillus not staining by Gram's method. Sub-cultivations on various media demonstrated the following biological characters:—1. On agar (streak) at twenty-four hours a shining, opaque white, viscid layer formed, exhibiting a pearly lustre; the growth tended to spread from the needle track outwards to the edges of the nutrient surface. 2. On inspissated blood serum the growth was as on agar, but more luxuriant and rapid. 3. On gelatin (stab) a typical "nail" growth was produced; the head, elevated and spherical, soon became yellowish and porcelain-like in appearance, whilst the needle track in the depths of the gelatin was occupied by numerous small, spherical, discrete yellowish colonies. No liquefaction of the medium took place. 4. On gelatin (shake) an abundant evolution of gas took place. 5. In litmus milk a good growth took place, accompanied by the production of an acid reaction; coagulation of the casein was accomplished in from three to five days. 6. On potato a thick, yellowish-brown, viscid layer rapidly made its appearance, the colour deepening with age. Numerous bubbles of gas were seen to be entangled in the growth. From a consideration of these properties it seemed most probable that we were dealing with the pneumo-bacillus of Friedländer, and in order to confirm this opinion a small quantity of a twenty-four hours old agar culture was removed from the tube with a platinum spatula and introduced into the subcutaneous tissue at the root of the tail of a mouse weighing 20 grammes. Death ensued in forty-eight hours, and at the post-mortem examination the heart-blood was found to be crowded with the capsulated Friedländer's bacillus. On several subsequent occasions cultures were made from the conjunctival secretion and from the material on the caruncle, with precisely similar results. Some of the actual material removed from the caruncle was also inoculated into the subcutaneous tissues of another mouse. Death followed in three days, and the Friedländer's bacillus was recovered from the heart-blood.

I am indebted to Dr. Brailey for permission to publish the notes of the case.

LEICESTER GENERAL INFIRMARY.

A CASE OF PERFORATED GASTRIC ULCER; OPERATION; RECOVERY.

(Under the care of Dr. J. ST. THOMAS CLARKE.)

THE following case, though simple throughout, gives additional evidence of the extreme value of early accurate diagnosis and promptitude in action on the part of the general practitioner, supplemented by abdominal exploration almost immediately applied after admission of the patient into hospital. In the last edition of the work on "Abdominal Surgery" by Mr. Greig Smith[1] it is stated that altogether about 100 operations have been performed for perforating gastric ulcer, the death-rate, as near as can be judged, being for the acute cases about 70 per cent., and for the chronic cases about 55 per cent. This is high, but it is better than would be got by leaving the cases to nature, where the mortality is over 90 per cent. With its present mortality operation is already fully justified—indeed, operation immediately on the diagnosis of perforation is nothing less than imperative. The extensive

[1] Vol. i., p. 570.

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diffusion of the gastric contents only six hours after perforation is a noteworthy point in this case.

A domestic servant, aged nineteen years, was seized with severe epigastric pain and sickness two hours after her mid-day dinner of beef, potatoes, and rice pudding—namely, about 4 P.M. She had had some uneasiness about the stomach for two or three days previously, and two years ago she had suffered from hæmatemesis and since then had often felt pain after her food with occasional sickness. Dr. Davies of Aylestone Park, Leicester, on being called to see her at once suspected perforation of the stomach and promptly telephoned to the hospital to ensure immediate attention on arrival. On admission (Nov. 11th, 1896) at 8.30 P.M. the patient was collapsed, though not markedly so, but her symptoms were clearly abdominal, and her aspect, attitude, and pallor made it evident at once that abdominal exploration was urgently called for. The operation was commenced at 10 P.M. by a five-inch median incision from close to the xiphoid cartilage to near the umbilicus. The left rectus was not divided. The falciform ligament of the liver being in the way somewhat delayed the due opening of the peritoneum, but on getting through this membrane odourless gas and turbid fluid escaped, and bits of potato and rice were seen scattered about. There were no adhesions. On drawing down the stomach a perforated ulcer the size of a threepenny piece was found on the anterior surface near the cardiac end, through which some more rice and potato were found escaping. The edges of the ulcer were indurated and the base around for some distance was thickened. Considerable traction downwards was necessary to bring the ulcer within due reach. The fluid and bits of food were as far as possible at once removed, sponges were adjusted around, and the stomach was washed out with two syringefuls of fairly hot water. The edges were too deep to admit of being trimmed, so the opening was now closed by two rows of fine silk sutures by Lembert's method and fixed well beyond the ulcer both above and below. The abdominal opening was then covered temporarily with hot sponges and a second median incision was made a little above the pubes so as to explore Douglas's pouch. On passing a good-sized sponge deep into this it was found on withdrawal to be soaked with the same turbid fluid as noticed previously. The abdominal cavity was now freely irrigated with hot water at a temperature of 105° F., several pints being passed through it, and the various recesses especially were dealt with by means of the glass tube passed between the coils, above and under the liver, and in the different regions till all fluid returned clear. The surplus was then sponged away. A large drainage-tube was then inserted into Douglas's pouch and the lower wound was closed and a similar piece of tube was inserted through the upper opening and reaching to the site of the ulcer. The operation lasted one and three-quarter hours and was borne well by the patient. Three hours after the operation a hypodermic injection of morphia was given to relieve pain. Sickness occurred once in the night. Nutrient enemata were administered regularly. On the second day improvement was noticed. Thirst was relieved by a hot-water enema each day and the drainage-tubes were removed and replaced by plugs of iodoform gauze. On the sixth day a small discharge of pus occurred from the epigastric wound, which otherwise was doing well. Rectal feeding was continued till the eighth day, when the patient started with small sips of hot water and with half-teaspoonful doses of Brand's essence. The wounds gradually closed and convalescence was uninterrupted, and the patient was discharged well on Jan. 13th, 1897, weighing seven pounds more than on admission.

Remarks by Dr. CLARKE.—There seems to be no doubt that in this case, apart from early operation and efficient suturing, the free irrigation of the abdominal cavity must have been an essential factor in the success. Mere sponging alone, as practised by some, could not be relied upon to clear away all the traces of the fluid which had escaped from the stomach and which must have bathed more or less before the operation the whole peritoneum. Further, the second opening must have been a great contributory also to the well doing, as Douglas's pouch contained a quantity of the gastric fluid, and to have been content with irrigation and sponging out apart from a second opening would have left a quantity of this fluid unreached. Another point is, whether good is done by syringing out the stomach. If time admit this process would help to clear it and to dilute any contents likely to irritate a newly sewn wound. The heat of the irrigating fluid is apparently very beneficial if done at a temperature over 100°, and probably Greig Smith's suggestion of employing irrigation during the whole operation will often be of advantage to the patient, though not adopted in this case. I have to thank very greatly Mr. M. B. Foster, the house surgeon, for his assiduous attention throughout the case and for putting together the details for publication.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

"Sable Intestinal."—Gummatous Enlargement of the Kidney. — Minute Anatomy of Intussusception. — Giant-celled Tumours of the Skin.—Occlusion of the Duodenum.

A MEETING of this society was held on March 16th, Mr. A. E. BARKER, Vice-President, being in the chair.

Mr. S. G. SHATTOCK made a communication on "Sable Intestinal." He described the "sand" as consisting almost solely of spheroidal aggregations of vegetable sclerenchymatous cells, about half a millimetre in diameter, in all ways like those so well known to occur in the fruit of the pear. They were quite free from adventitious crystalline deposits. A closely similar case brought before the society in 1892 by Professor Delépine appeared to have been the first, and up to the present time the last, recorded in this country. Professor Delépine's case more closely corresponded with the original description of Laboulbène (1873) in that the cell islets were admixed with crystalline depositions of phosphate, oxalate, and carbonate of calcium. The patient from whom the specimen was obtained was a woman aged forty-five years, under the care of Mr. A. E. Hind of Jersey, who had suffered for about seven years with left hydro-nephrosis. She visited Vichy a few years ago, where the sandlike material passed by the bowel was thought to come from the kidney by some fistulous communication. After an aperient she frequently passed as much as two ounces of the "sand." The patient was fond of pears and these were the only articles in her dietary capable of furnishing it. The accumulation of orange pips and fruit stones, &c., above intestinal strictures was well known, but an explanation of the retention of such minute residua was not easy. In the case recorded the pressure of the hydro-nephrotic kidney may have led to obstruction sufficient to retard the progress of the indigestible materials. The term "sable intestinal" should not, Mr. Shattock remarked, be applied to biliary gravel, which is at times passed in considerable quantity by the intestine.—Mr. BARKER asked if the discharge of the vegetable débris was continuous and if the grains floated in water.—Mr. SHATTOCK, in reply, said that the discharge was intermittent, but that its appearance could always be brought about by giving an aperient. The grains sank in water.

Mr. A. A. BOWLBY exhibited a specimen of Gummatous Affection of the Kidney causing a large renal tumour. The patient was a stout, healthy woman, forty years of age, who had suffered from syphilis twenty-one years previously, but had had no syphilitic manifestations for nineteen years. She complained of a tender swelling in the right lumbar region, which steadily increased in size. There were no other symptoms, and except for an occasional trace of albumin the urine was normal in amount and composition. The swelling attained such a size that it simulated a large new growth of the kidney, and was removed by lumbar nephrectomy. It weighed over a pound, and was found to be a kidney so completely infiltrated with gummatous growth that it was almost impossible to find any trace of the renal tubules, and as its removal was not followed by any diminution of the quantity of urine it is almost certain that it was not functionally active. Two years after the operation the patient was in excellent health, and there was every reason to believe that the other kidney was sound. The condition did not appear to have been hitherto described. — Mr. BERTRAM ABRAHAMS referred to the case of a child, six months old, the subject of congenital syphilis, in which there were gummata causing nodular protrusions.

Mr. D'ARCY POWER brought forward a series of lantern slides to illustrate some points in the Minute Anatomy of

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Intussusception, saying that he did so partly to obtain the benefit of criticism and partly because some of the specimens from which the sections were taken had already been shown at previous meetings of the society. After drawing attention to the fact that adult intussusceptions were often associated with polypi, Mr. Power showed some sections taken from a case of intussusception exhibited by Mr. Lockwood in 1892. The specimen was obtained from a woman who died shortly after an abdominal section and enterectomy for the relief of intussusception of five days' duration. Microscopical examination showed that the intestine had undergone very chronic changes, for the villi had become converted into mere tags of connective tissue, whilst all the coats of the intestine had been chronically inflamed. Other sections were taken from a specimen brought before the society by Dr. Peacock in 1864. The case from which the specimen was obtained occurred in the practice of Mr. Hacon of Hackney, to whom Mr. Power expressed his gratitude for additional information. The original specimen consisted of a piece of intestine measuring forty inches in length, which had been passed by a woman aged thirty-two years. It was voided without any blood, but enveloped in fæcal matter on the eighteenth day after the onset of severe intestinal obstruction. The patient died unmarried on July 30th, 1889, from some lung trouble, but she never again had any acute intestinal symptoms, though she was subject to constipation. Microscopic examination showed that all the coats of the intestine had undergone sclerosis. The line of the mucous membrane was distinct, though none of the details of its structure could be seen; but the sub-mucous coat was indistinguishable from the muscular, and the muscular layers from each other and from the serous layer. The whole thickness of the section consisted of dense fibroid tissue, like that found in an old scar. Mr. Power then demonstrated, by means of sections taken from other cases in which pieces of intussuscepted bowel had been passed and the patient had recovered, that the intestine might undergo a process of tryptic digestion before it was extruded. He then showed sections from a case of double intussusception which he had exhibited before the society in 1886. One of the intussusceptions was of the ordinary ileo-colic type and presented the changes usually found in acute invagination; the other was retrograde and colo-colic. It had been formed much later than the ileo-colic invagination, and Mr. Power thought that it had been produced when the child was so exhausted that the wall of its alimentary canal hardly responded to the effects of pressure. The slight congestion of the bloodvessels in the sub-mucous tissue and the great enlargement of the vessels in the serous coat and in the mesentery showed that the patient was not absolutely moribund when the second intussusception was formed.—Mr. SHATTOCK suggested that some of the spaces shown in the microscopic specimens might be dilated lymphatics.—Mr. BARKER asked if in any of the severe cases there was total destruction of the mucous membrane. He thought that there was great variation in the amount of change in the gut in different cases, quite apart from the time that the intussusception had existed, just as was the case in strangulated hernia.—Dr. COUPLAND asked if Mr. Power could say how long the intussusception had been down before the tryptic digestion began.—Mr. TARGETT asked whether the detachment of an intussusception was due to sloughing or to digestion. Could this digestion be the cause of the passage of tubular casts of the intestinal mucosa?—Mr. BOWLBY remarked that the cases of recovery quoted after sloughing of the intussusception had been in adults. He thought that this was a much rarer accident than the text-book description would indicate, and that in children it was scarcely ever recovered from.—Mr. SPENCER asked whether in Mr. Power's experiments the digestion had been purely tryptic in an aseptic medium, or whether organisms had been present as well.—Mr. POWER, in reply, said that his specimens had not been taken from very severe cases. Tryptic digestion had been performed in the presence of organisms, just as in the normal intestine.

Mr. TARGETT read notes of four cases of Small Tumours removed from the Integuments. They were well-defined tumours situated beneath the skin, and in two instances definitely above the deep fascia. Microscopically they were characterised by possessing an abundance of polynuclear giant cells, the nuclei being crowded into the centre of the cell, and not arranged in a peripheral ring as in tuberculous giant cells. The questions of malignancy and their probable origin were discussed. In one of the cases recurrence had taken place; there was no history of syphilis to be obtained in any of the cases, and the microscopic appearances did not suggest it.—Dr. GALLOWAY said that he had recently seen a very similar tumour, which was in the precubital space, and was one of several subcutaneous tumours. It was removed for diagnostic purposes, and was found to contain many giant cells, but no tubercle bacilli. After a time an enlargement of one testicle occurred and iodide of potassium was administered. This not only led to the disappearance of the testicular enlargement, but also to that of the subcutaneous tumours, which he therefore thought must have been syphilitic. There was a history of syphilis in the case.

Dr. F. H. CHAMPNEYS and Mr. D'ARCY POWER exhibited a specimen showing Occlusion of the Duodenum by a complete Transverse Septum. It was taken from an infant who lived for five days and who had vomiting and jaundice from birth. The lumen of the intestine was found to be completely interrupted by a septum stretching across the second part of the duodenum, just before the entrance of the common bile-duct. A microscopic examination by Mr. Strangeways Pigg showed that it was a direct continuation of the mucous, sub-mucous, and circular coats of the intestine. It was suggested that it had been the result of some error in the developmental processes connected with the formation of the liver.—Mr. SHATTOCK agreed with this view of the pathology of the condition, and observed that a similar stenosis of the œsophagus had been known to occur at the point at which the outgrowth of the lung had originally occurred.—Mr. W. G. SPENCER objected that there was no abnormality in the liver or spleen in this case. He suggested that the abnormality might be due to some deformity taking place at the upper part of the neck of the umbilical vesicle.—Mr. RAYMOND JOHNSON thought that the cases were on a par with stenosis of the intestine at the level of Meckel's diverticulum, with stenosis of the aorta at the point of entrance of the ductus arteriosus, and possibly with imperforate anus.

OPHTHALMOLOGICAL SOCIETY.

Discussion on Retro-ocular Neuritis.

AN ordinary meeting of this society was held on March 11th, Mr. E. NETTLESHIP, President, being in the chair.

Mr. MARCUS GUNN, in opening the discussion on Retro-ocular Neuritis, referred the disorder to a group of diseases which, though not recognisable by objective features, had distinct clinical manifestations, and on account of its subjective aspect was liable to be confounded with hysterical amblyopia, particularly when one eye only was affected. An important distinction between the two conditions was furnished by the reaction of the pupil, which was active in the hysterical condition, but sluggish or absent in the nerve affection, there being sometimes failure in maintaining the contraction. Occasionally the papilla was affected and in some cases both eyes were involved, but the changes in the disc were never gross. In papillitis the fundus changes preceded the loss of vision, but in retro-ocular neuritis vision failed early and in the centre of the field, the disc changes occurring later. Vision improved with subsidence of the neuritis, which might be followed by some pallor of the outer half of the disc proportionate to the intensity of the inflammation. It appeared that the swelling in papillitis did not interfere immediately with the transmission of nerve impulses, whereas in deeper seated neuritis it did so immediately, owing to the pressure being exerted centripetally upon the nerve fibres. This he attributed to the resistance of the nerve sheath, pointing out that the effect was most marked when the portion of nerve affected lay within the optic foramen, which was quite unyielding. One of the most prominent features of the disease was the presence of a central scotoma, first for colour (green-red) and afterwards for light, showing that the macular fibres were earliest affected. This might be due to the following facts: 1. The macular fibres, though peripheral at the ocular end of the optic nerve, attain a central position in the optic foramen. 2. The macular fibres, being functionally the most active, are earliest affected by pressure. 3. The principal lymph current traverses the centre of the nerve. 4. The macular fibres

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occupy a relatively large area in the optic nerve. With regard to the symptoms of retro-ocular neuritis, in one case there was subjective sensation of colour of a violet or reddish pink tint, with slight peripheral contraction of the field and a diminution there of perception for green, which assumed a bronze appearance. The movement of the eyeball was painful in one or other direction corresponding with the portion of nerve affected. The degree of amblyopia varied greatly. Acuity of vision was diminished in a bright light or after prolonged use, general fatigue, or exhaustion from want of food. In some cases objects appeared as if seen through a moving haze. These phenomena might be explained by the breaking up of the nerve-sheath, leaving the axis cylinders incompletely insulated, or by the alternating activity of exhausted fibres. In support of this last suggestion it has been found that the colours red and blue are distasteful to the subjects of retro-ocular neuritis. The liability to injury appears to be more marked at the periphery and extreme centre of the nerve. The causation of the neuritis may be traced locally to the spread of the change to the nerve from neighbouring orbital cellulitis, due to erysipelas, cold, or septicæmia; or to periostitis extending to the optic foramen from the adjacent sphenoidal sinuses, in which case both nerves are affected; or the neuritis may be a local manifestation of a general disease, such as syphilis, gout, or rheumatism, the latter having a tendency to recurrence; and, finally, the optic tracts and nerves are liable to suffer as part of the central nervous system, as in insular sclerosis.

Dr. BUZZARD spoke on the medical group of cases exhibiting the features of retro-ocular neuritis. In insular sclerosis disorders of vision were frequently associated with atrophy of the optic disc, a condition referable to neuritis of the retro-ocular portion of the nerve; 50 per cent. of cases of this disease presented pallor of one or both discs, or in place of this a red-grey injection and amblyopia lasting for days or months. Post mortem there were found islets of gelatinous tissue of a warm grey colour, having a diameter of an inch or more in the brain, and varying greatly in number. Microscopically, they were found to exhibit naked axis cylinders, increase of the fibrous elements and a primary vascular change, but a certain proportion of the fibres were degenerated independently of the other changes. Dr. Buzzard attributed these appearances to interstitial inflammation occurring in local patches capable of resolution, but causing temporary paralysis, and he assumed the same condition to be present in the optic nerve. Secondary degeneration did not take place, the lesions were localised, and the pallor of the disc was due to interference with blood-supply, not to atrophy. The local diagnostic features were the pallor or greyish-white colour of the disc, chiefly in the temporal half, the edges being sharp, the physiological cup deep, and the lamina cribrosa distinct, these changes being bilateral and associated with preceding or immediate impairment of vision; whereas in the intra-ocular form of optic neuritis the changes were much more obvious and attended at first with little or no alteration in vision and no central scotoma, the loss of vision being slowly progressive. In the retro-ocular form the central scotoma was general and the peripheral amblyopia a characteristic feature, but both were transitory, and there was no progressive deterioration of vision. Concentric contraction of the visual fields sometimes occurred in diphtheria, and the speaker referred to an instance in a man, aged fifty-eight years, with paresis of arms, legs, and palate after sore throat, to whom the floor appeared concave at the point of sight. There was no scotoma, the fields of vision were small, and the left disc was pallid. The fields had since enlarged.

Dr. GOWERS drew attention to the modern established fact that an axis cylinder contained as many fibrils as there were fibres in a nerve, and the important bearing this had on the comprehension of pathological changes. In connexion with the rheumatic origin of neuritis he quoted an instance of a young man who, after a bath, suffered from paralysis of the ocular nerves with proptosis and tenderness of the left eye associated with convulsions, and followed by a similar condition on the right side. He attributed the symptoms to acute cellulitis of the orbit extending to the membranes of the brain. Referring to ten cases of insular sclerosis in which the optic nerve was affected there were none, he thought, in which the nature of the changes suggested an islet in the optic nerve. In many of the cases the state of the vision and appearance of the disc were identical with those occurring in tabes dorsalis, apparently a primary affection of the nerve fibres. The cases referred to by Dr. Buzzard he thought were of a similar nature. Retro-ocular neuritis was frequently a result of blood poison, especially gout. The symptoms might simulate those of an intracranial tumour affecting the chiasma.

Dr. BERRY thought the disease was a very obscure one, and that the diagnosis was made too frequently with little precision. The condition was distinct from papillitis of cerebro-pathological origin. Pallor and atrophy of the disc he considered were doubtful signs of retro-ocular neuritis. Symptoms very similar to those attributed to this disease occurred in connexion with irritation in the teeth and also in migraine where nothing could be found in the fundus. Toxin poisoning, he thought, was unlikely to produce changes in one eye only. He classified the forms of defective vision due to retro-ocular causes as (1) those connected with cerebral tumour; (2) those due to chill and for the most part unilateral; and (3) toxic amblyopia, which was bilateral and, he thought, not neuritis. Many cases diagnosed as hysteria were more serious cases of nerve or cerebral disease which manifested itself later.

Dr. HILL GRIFFITH said that, excluding tobacco amblyopia, he had met with twenty-seven of the cases under discussion, eight of which had been bilateral. The cases occurred between the ages of fourteen and fifty-seven years. There was a central scotoma in nearly all, and no contraction of the field of vision. A direct light reflex was present, though in three cases there was no perception of light. The vision and pupil reflex was ultimately restored in all the cases. Pain occurred early only, and was at its worst about the second day. The disc at this period was pale or unaltered. All the cases were treated with potassium iodide, salicylate of soda, and blisters, and recovery took place in all, though in some vision was not as good as before the attack. Dr. Griffith agreed with the suggestion of Thorburn, that the symptoms were due to rheumatic axial neuritis.

Mr. RICHARDSON CROSS, referring to the literature of the subject, said that central scotoma and slight pallor of the optic disc appeared to be the most widely observed features. Out of fifty-seven cases of retro-ocular neuritis he had selected from 154 instances of optic nerve disease the disorder was attributed to toxic causes in two-thirds, which was more common than in his own observations. Uhtoff in 400 alcoholic subjects observed pallor of the disc in seventy; half he attributed to alcohol and one-sixth to tobacco, the choice of these among the remaining third being uncertain. He considered alcohol was an important factor in the causation of the condition, though it was asserted by some that the occurrence of tobacco amblyopia was prevented by its use. In his own five cases there was slight papillitis in one eye with a central scotoma, but no affection of the periphery and no other ocular changes.

Mr. LITTLE, speaking of these cases apart from toxic causes, dwelt upon the occurrence of pain, central scotoma, and diminution of visual acuity as characteristic of the affection in the absence of definite fundus change. Though the scotoma was large and in one case there was absolute blindness, all the cases recovered rapidly.

The discussion was adjourned till Wednesday, March 24th.

EPIDEMIOLOGICAL SOCIETY.

Review of the Statement of the Dissentient Members of the Royal Commission on Vaccination

A MEETING of this society was held on Feb. 19th, Mr. SHIRLEY F. MURPHY being in the chair.

Dr. J. C. MCVAIL read portions of a paper (printed copies of a proof of which were supplied to all present) reviewing the Statement of the Dissentient Members of the Royal Commission on Vaccination. He inferred from their use of such expressions as "*more* effective, *more* practicable, and *less* objectionable modes of protecting the community from small-pox than by vaccination," "approaching the subject *too exclusively* from the standpoint of vaccination," and "according *too little* importance to other measures," that when they did not by their silence imply agreement they differed from the conclusions of their colleagues more in degree than in fact. Their treatment of the early history of small pox, their estimates of the extent and influence of the practice of inoculation, and their arbitrary choice of authorities, though not matters of much practical importance, were in the

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highest degree unsatisfactory from the bias they displayed. Mead, for example, was not, as they suggested, prepared to apply to what he expressly described as "the more common contagion of small-pox" the strict quarantine and isolation that he advised as precautions against future re-introduction of the plague, the two diseases being looked on in his days somewhat as cholera and measles are now; and (to say nothing of their protests against compulsion as applied to vaccination) it was unfair to italicise in a quotation from Haygarth his reference to the benefits "which might reasonably be expected from the united, systematic, and concerted regulations of the whole island, aided and strengthened by legal premiums and punishments," without a hint of his belief that the infection could not be conveyed by clothing or otherwise than by actual contact, on which the feasibility of his scheme depended. It was even more unfair to represent Sir James Simpson as a supporter of isolation as a substitute for vaccination on the strength of selected passages from an essay which contained a glowing eulogy of Jenner and vaccination. They seized every opportunity of emphasising the influence of sanitary improvements in reducing the mortality from "fevers," though the figures they quoted from Sir John Simon showed that between two periods 1746–55 and 1846–55 selected by them "fevers" had declined in the proportion of 100 to 71 only, but small-pox of 100 to 17, and that in recent years the reduction had been confined to typhus fever and typhoid fever, measles having been unaffected, and there was no falling off in scarlet fever until 1880. Their speculations as to the numbers of susceptible persons and the influence of inoculation and vaccination at different periods were based largely on conjecture and assumption. Their account of the labours of Jenner, of his controversy with Woodville and Pearson, of their conversion to his views as to the non-eruptive nature of cow-pox and of their employment of the "variolous test," was misleading. They seemed to desire to charge Jenner with deliberate fraud, as using for his tests clear variolous lymph instead of pus in order to court failure; when, in fact, with the instinct of a bacteriologist, he did so that he might have the virus free from extraneous contamination. When it suited their purpose they described as vaccinations operations which they had previously declared to be almost certainly variolations, and endeavoured to extricate themselves from the dilemma by saying that they employed the word vaccination in a colloquial sense. They took the statistics of the Highgate Hospital—which for many years had been a small-pox hospital in name only, admitting none but paying patients, and refusing all under seven years of age—as fairly representing the extent of vaccination and the prevalence and age incidence of small-pox in London generally, wholly ignoring the evidence before them derived from the free hospitals of the Asylums Board at Homerton and Fulham, where of 2540 children admitted under ten years of age 47 per cent. were unvaccinated, though the proportion of unvaccinated children in London must have been incomparably less. When they came to the question of the recent epidemics at Sheffield, Leicester, Dewsbury, Warrington, and Gloucester there was the same effort to explain away positive facts and figures by arbitrary conjectures, and they refused to recognise differences in the type and severity of the disease, although they had argued that when vaccination was unknown the fatality varied from 2·5 to 33 per cent. They compared the death-rate of 9·9 per cent. among the vaccinated at Gloucester with that of 12 per cent. among the unvaccinated at Leicester, ignoring the fact that at the former town the disease was of the severest and at the latter of the mildest type, the fatality among the vaccinated and unvaccinated respectively having maintained the same relative proportions—viz., at Leicester, 1 and 12; in London, 2·2 and 24·2; at Dewsbury, 2·6 and 25·1; at Sheffield, 4·8 and 49·6; at Warrington, 6·4 and 35·3; and at Gloucester, 9·9 and 40·9. In the whole of the six towns the fatality among the vaccinated under ten years was 2 7 per cent. and of those above about 5 per cent. Among the unvaccinated under ten it was 36 per cent. and over ten 34·3. As to severity of type of small-pox, they affected to discredit Dr. Barry's classification of the cases into varioloid, and discrete, coherent, and confluent variola, which gave attack percentages among the vaccinated of 35·5, 50·0, 13·0, and 1·5, and among the unvaccinated of 0 0, 17·9, 62·5, and 19·6, on the ground that no two observers would exactly agree; but ignored the simple grouping by different men into milder and severer, which alike at Sheffield, Dewsbury, Leicester, and Warrington showed an almost exactly inverse proportion among vaccinated and unvaccinated. They refused, too, to recognise degrees of efficiency in vaccination, and took susceptibility to re-vaccination as indicative of the same to small-pox infection, although they knew that inoculation could be repeated. They affected to ascribe much of the great mortality from small-pox, especially among children, in the last century to the practice of inoculation, ignoring the Geneva statistics of a still earlier period, which showed that of 25,349 deaths, 6792 occurred in the first, 5416 in the second, 4116 in the third, 2826 in the fourth, and 1928 in the fifth, or 21,078 = over 83 per cent. in the first five years of life, and manipulated Dr. Ogle's statistics to suit their own ends, so that, e.g., in the *Contemporary Review* Mr. Picton spoke of the difference between 46·7 per cent. and 30·3 per cent. as 16·4 per cent. when vaccination was involved, but in the Statement of Dissent he held that the difference between 6·4 per cent. and 3·4 per cent. was 46·9 per cent. (by taking the 6·4 as the centum) instead of 3 per cent. when the reduction could, they fancied, be ascribed to "sanitation." The influence of sanitation was, they maintained, most evident in the early years of childhood. Well, said Dr. McVail, what could we learn from the case of Scotland, where vaccination was since 1863 compulsory at the age of six months? In the nine years preceding the passing of the Act 139 of every 1000 deaths from small-pox occurred in the first six months of life, and in the twenty-four years following 138. In the next six months the deaths in the former period were 153 and in the latter 47 in the 1000. The saving of 106 was clearly due to vaccination, and that of 1 per 1000 in the first half-year of life might be to sanitation. In Germany, again, where vaccination was not required until some time in the second year, 410 deaths per 1000 at all ages occurred in the first two years of infancy, and yet opponents of vaccination alleged that it was sanitation, not vaccination, that had reduced German small-pox. At Sheffield, which, according to the dissentients, was an insanitary though fairly vaccinated town, 25·6 per cent. of the deaths from small-pox were those of children under ten years; while at Leicester, unvaccinated, but relying on its boasted sanitation, the children constituted 71·4 per cent. of the whole mortality. The like ratio between the practice or neglect of vaccination of late and the small-pox incidence on the child population might be traced in every town for which the data were available; and yet they could not, while justly insisting on the susceptibility of childhood to the influence of surroundings for good or ill, recognise another and dominating factor in the mortality from small-pox. As regards the relation between variola and vaccinia the dissentients were in hopeless confusion: they failed to distinguish between the attenuated variolous lymph of Walker and Thiele and the variola-vaccine of Ceely, Voigt, Haccius, and others who had completely refuted the doctrine of the Alfort school, and they invoked Creighton and Crookshank alike, regardless of the fact that these gentlemen were essentially opposed to each other in their views, Dr. Creighton denying the venereal origin of vaccinal syphilis and substituting for Dr. Crookshank's bacteria a transcendental hypothesis of "memory" in diseases. On the vexed question of diseases communicated by or consequent on vaccination the Commissioners, as the result of inquiries conducted by their request into every alleged case during the past seven years, came to the conclusion that the dangers, though real as regards erysipelas and wound infection, had been greatly exaggerated and were practically insignificant. Mr. Picton and Dr. Collins thought otherwise, though abandoning the position of Mr. Hopwood, who ascribed to vaccination diseases that seemed to be on the increase, revising his list from time to time on no other ground than that some which had been supposed to be increasing were really found to be decreasing. The dissentient Commissioners relied largely on syphilis and erysipelas, but here again Dr. McVail confronted them with statistics from Scotland and the town of Leicester. In the nine years preceding the enforcement of vaccination in Scotland children in the second half-year of life contributed 109 out of every 1000 deaths from syphilis, and in the subsequent periods 1864–75 and 1876–87 the proportions were 118 and 109, or about the same; whereas in the first or unvaccinated half-year of life the number had risen from 575 to 612 and 647, so that unvaccinated infants contributed two-thirds of the total deaths from syphilis at all ages. In Leicester the mortality from syphilis, of course mainly infantile, had in the past

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twenty years increased by 69·3 per cent., but in England and Wales generally by only 24·7 per cent., and from erysipelas by 41·5 per cent. in Leicester, as against a decrease of 16·7 per cent. elsewhere. The vagueness of the term "sanitation," under which they appeared to include progress in the comforts and decencies of life as well as all preventive measures—with the exception of the greatest of all, vaccination—enabled them to refer any improvement at any period back to the Middle Ages to this panacea, and by associating small-pox with typhus fever, "gaol fevers," and typhoid fever the strongly marked effects of vaccination on the small-pox mortality were merged in the more gradual improvement in the public health properly ascribed to the introduction of better habits and more wholesome surroundings; though why they should fix on the year 1800 as the era of "greater sanitary activity"—a period marked by no appreciable change in the law or the habits of the people, except the epoch-making introduction of vaccination—was by no means obvious. They quoted the belief or hope expressed by Sir E. Chadwick that improved sanitation would tend to the extinction of all preventable diseases, including small-pox, forgetting that, however deserving of our gratitude and respect he might be as a pioneer in sanitary reform, he was not a physician and had no right to pronounce on questions of a strictly medical character. Their treatment of Hirsch was peculiar, for they professed to agree with him that small-pox as well as typhus fever "took up its abode most readily in those places where the noxious influences due to neglected hygiene made themselves most felt," while making no reference to his declaration that "the achievement of Jenner was at once a turning point in the history of small-pox and a new era in the physical welfare of mankind," ..... and that "it could be only folly or stupidity that would seek nowadays to minimise or question the immortal merits of Jenner." Social position as well as sanitary environment had, they stated, a potent influence on the prevalence and fatality of small-pox; but that was mainly because the upper classes availed themselves of the protection afforded by vaccination, for, as Simon reminded us, several of the royal families of Europe, as the Stuarts, the House of Orange, and those of Austria and Germany, France and Russia, in the seventeenth and eighteenth centuries had many victims to this disease. The observation of Dr. Cross, that "the epidemic at Norwich in 1819 was almost exclusively confined to the very lowest orders of the people," was quoted as supporting their contention, but his explanation of this incidence—that "the indifference of the uneducated or badly educated was such that the number who availed themselves of the offer of vaccination was trifling"—was, as usual, ignored. With a strange confusion of cause and effect they ascribed to the increased facilities for isolation the decline of small-pox in London during the last five-and-twenty years, remarking that in 1871–2 only 31 per cent. of the deaths took place in hospitals, while in 1893 the proportion was 87 per cent. But they did not note that the total deaths were respectively 9657 and 206, and that the isolation of the 87 per cent., or 179, was far easier than that of the 31 per cent., or 2994. Dr. Russell of Glasgow had written to Dr. McVail complaining bitterly of the use made by Mr. Picton and Dr. Collins of the statistics of that city, in attributing the successful stamping-out of small-pox to isolation and sanitary reform; whereas he had distinctly maintained that, in his opinion, hospitals could not be looked on as more than auxiliary means, and were, perhaps, not without a certain amount of danger to the public, but that vaccination and re-vaccination had been carried out in Glasgow to an extent probably unparalleled elsewhere, so that the common lodging-houses and casual wards were for a time almost converted into vaccination stations. The dissentients formulated their scheme for the protection of a community, recommending early notification, ample hospital accommodation, vigilant house-to-house inspection, prompt removal of patients, supervision and quarantine for the most part in special stations, of persons exposed to infection, the disinfection or destruction of clothing, &c., closure of schools, inspection of tramps, and other precautions, as well as compensation to persons for damage sustained by quarantine, &c. Did they, he asked, realise the cost, the hostility that such interference with the liberty of the individual would evoke from the people who had conscientious objections to compulsion of any sort, and the risks of evasion, of concealment, and of failure in early diagnosis? Perhaps they did, for in recommending the retention, "in deference to popular belief," of the entire existing machinery for vaccination and the supply of lymph "they seemed to have more faith in vaccination and less faith in isolation than they were willing to admit even to themselves."

Brigade-Surgeon-Lieutenant-Colonel PRINGLE wished that the anti-vaccinationists could see what he had seen in India in epidemics of small-pox—the ground strewn with rotting corpses, incomparably more ghastly than in the case of cholera, when they lay calmly like Sennacherib's hosts; or districts where 90 per cent. of the population were hideously marked, while in others, where vaccination or the perfected system of attenuated inoculation had been long practised, the faces of the people were as unmarred as in this country.

Dr. ACLAND, in his inquiries into alleged injury from vaccination, had found none that would bear investigation. As to syphilis the disease had always been congenital, and erysipelas was invariably a post-vaccinal wound infection; there was no evidence of the transmission of tubercle, and in the very few alleged cases of leprosy and lupus the existence of the disease in the vaccinifer was a groundless assumption.

Dr. COUPLAND remarked on the difficulty of providing sufficient accommodation for isolation, and showed some instructive graphic representations of the age incidence and fatality of small-pox on the vaccinated and unvaccinated in Leicester, Dewsbury, and Gloucester.

Other speakers followed, and the discussion was continued until a late hour.

HUNTERIAN SOCIETY.

Exhibition of Specimens.

AN ordinary (pathological) meeting of this society was held at the London Institution on March 10th, Dr. G. E. HERMAN, President, being in the chair.

Dr. ARTHUR DAVIES showed a Heart taken from a girl eight years of age, which exhibited a marked condition of Malignant Endocarditis affecting the mitral valve and part of the left auricular wall. Infarcts were found in the spleen and kidneys.

Dr. SCHORSTEIN showed the Heart of a man, aged forty-one years, in which the mitral and posterior aortic valves were affected by Malignant Endocarditis. There were infarcts in the kidneys, but no albumin or blood at any time was found in the urine. Infarcts were found also in the left middle cerebral artery and the superior mesenteric artery, with an aneurysm which had burst into the peritoneal cavity.—Remarks were made by the PRESIDENT, Dr. SEQUIERA, Dr. ADAMS, and Dr. F. J. SMITH.

Dr. SCHORSTEIN also showed a specimen of Acute Colitis with Perforation in the Sigmoid Flexure. The patient had pneumonia, with an alcoholic history. The bacillus coli was not found in the colon, but was present in the lung.

Mr. TUBBY quoted a case of Rice-water Stools followed by a very foul empyema.

Dr. T. GLOVER LYON showed a Kidney affected with Miliary Tubercle taken from a patient with severe heart disease. There was no deposit in the lungs, but between the bladder and the rectum a deposit was present.—Remarks were made on the relation between heart disease and tuberculosis by Dr. HINGSTON FOX, Dr. SCHORSTEIN, Dr. A. DAVIES, and Dr. LYON.

Dr. PERKINS showed a Stomach with Ulceration Opening into the Splenic Artery, causing Fatal Hæmorrhage, in a woman aged sixty-six years.

Dr. F. J. SMITH showed a specimen of Tuberculous Meningitis taken from a girl, where there was entire absence of symptoms with the exception of rather severe headache at the onset, mental dulness passing into coma, and great activity of the knee-jerks. He also showed a specimen of Tumour of the Brain, situated at the base and involving the corona cerebri and the right optic tract. There was no observable symptom till within thirty-six hours of death.

SOUTH-WEST LONDON MEDICAL SOCIETY.

Acute Inflammation of Bone in Children and Young Persons.

A MEETING of this society was held in Wandsworth on March 10th, Dr. BENJAMIN DUKE being in the chair.

Mr. EDMUND OWEN gave an address on a Common and an Acute Inflammation of the Bones of Children

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and Young Persons which sometimes Escapes Recognition. He said that the disease he referred to was known as acute septic osteomyelitis, although it had been called by various other names. Everyone admitted the importance and danger of the affection. It was referred to by the late Dr. Bristowe in a paper written in 1862,[1] who pointed out its distinguishing features and stated that it was often mistaken for rheumatism. Chassaignac had also written about it in 1857, stating that its cause was obscure, but that it was possibly of a "scrofulous" nature. He had also said that it is essentially a disease of young people, and is "very rarely found over the age of seventeen." Mr. Owen next described the pathology of the disease. He showed how micro-organisms are especially prone to affect the junction of the diaphysis with the epiphysis in long bones, this being the point at which new and delicate tissue is formed and growth is most rapid. It is here that the disease in question almost always commences. The organisms may be introduced into the body by means of damaged food or impure air or water. They affect the tissue of the part described and there elaborate a poisonous ptomaine. Abscess rapidly follows, and the staphylococcus pyogenes aureus is always found. (Specimens were exhibited showing the morbid changes.) The disease is a common one; out of 165 cases collected by Mr. Owen 96 were in males and 69 in females, the figures working out at about five boys to three girls. In these 165 cases the femur was affected in 83, the tibia in 47, and the humerus in 20. Next in order came the fibula, and in still smaller proportions came the radius, ulna, clavicle, and os calcis. The chief predisposing causes are depression of the system, fatigue, and, above all, injury of the part. It is apt to come on in young recruits after a fatiguing march. The local symptoms are those of deep-seated acute inflammation, pain, great tenderness on pressure, early redness and heat of the surface, especially where the bone is thinly covered with muscle. The constitutional symptoms are those of fever due to absorption of ptomaines; there are headache, delirium, and high temperature, rigors in adolescents, and convulsions in children. Many of the subjects of the disease die quickly from pyæmia. The question of diagnosis is important, as the disease may be, and has been, very often mistaken for rheumatism and erysipelas. The characteristic points are (1) the part of the bone affected, and (2) the marked tenderness on pressure, even when there is no redness. In rheumatism the joint itself is affected, and not the parts above or below. In erysipelas all the local symptoms are superficial. In periostitis the same applies, and the shaft of the bone will probably be primarily affected rather than the end. The treatment is by early incision, and, whether pus be found or not, the bone should be drilled or gouged. In some cases (especially in infants) the adjacent joint is attacked, and it must then be laid open and irrigated. Occasionally amputation is necessary or the patient may die from acute septic poisoning. Other bones and joints are often secondarily affected, and Mr. Owen showed a case illustrating this in which the inferior diaphysis of the left femur was first attacked, then the right humerus, and subsequently the right knee-joint.

The PRESIDENT and Dr. GILBERT RICHARDSON having briefly thanked Mr. Owen for his address, the latter answered several questions put to him by members, and the meeting terminated.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Primary Tuberculous Tenosynovitis.—Pathology of Missed Abortion.—Sarcoma of the Forearm.—Exhibition of Specimens.

A MEETING of this society was held on March 10th, Dr. T. HARRIS, President, being in the chair.

Mr. THORBURN and Dr. MOORE showed specimens of a case of Primary Tuberculous Tenosynovitis removed by the former from the extensor aspect of the wrist. The disease had originated in the sheath of the extensor minimi digiti, which tendon was infiltrated and almost destroyed, while the sheath for the common extensor tendons was only secondarily invaded. Mr. Thorburn dwelt upon the importance of recognising "compound ganglion" as a tuberculous lesion and on the necessity for its careful excision, as well as upon the perfect functional result obtained in the hand thus treated. Although among children tuberculous tenosynovitis is more common in the ankle, in adults it generally involves the region of the wrist, the probable reason being that adults throw a far greater strain upon the latter joint than do children, hence also the comparative frequency of tuberculous disease of the wrist-joint itself in the adult as compared with the child. Macroscopically, the sheath presented a dark red, succulent appearance. It contained a small collection of fluid at its upper end and a single rice-body. The interior of the sheath was generally the seat of irregular fungosities and deposits of fibrin. Microscopically it corresponded closely with the descriptions of previous observers.

Dr. W. E. FOTHERGILL gave a demonstration on the Pathology of Missed Abortion. The changes which occur in ova retained in utero for several months after the death of the fœtus were demonstrated by means of drawings, photo-micrographs, and sections. When the fœtal circulation ceases the vessels of the placenta are rapidly obliterated, the fœtal epithelium degenerates, and the maternal blood between the villi forms clots which are altered later into dense laminated fibrin. The decidual cells then multiply and invade the fibrin, which they gradually replace, filling the intervillous space with layers and bands of decidual tissue. At the same time the decidual cells disintegrate the fœtal epithelium, covering the chorion and its villi. This comes to be represented by scattered heaps and rows of nuclei, and finally disappears. The amnion remains almost unaltered, but adheres closely to the chorion, and the united membranes are thrown into folds and convolutions covering the rounded lobes of altered placental tissue. The fœtal portion of the placenta does not grow after the death of the fœtus, though the maternal portion containing the decidual cells remains active. It is therefore improbable that malignant new growths can arise from fœtal placental elements.

Mr. C. E. RICHMOND described a case of Sarcoma of the Forearm with malignant family history occurring in a girl aged nineteen years. The father's aunt died from cancer of the breast, and the father's brother died at the age of thirty-four years from tumour of the thigh, which developed after injury. Of the mother's sisters, one died at the age of sixty years from cancer of the face, which developed after injury, and another died from tumour of the womb. In the present case there was a history of less than five months' duration, in which, from a slight enlargement, the left wrist had reached nineteen inches in circumference. The tumour was a periosteal sarcoma commencing at the lower end of the radius. Microscopically it consisted of large spindle and large round cells.

Mr. RICHMOND also showed a specimen of an Unusual Condition of the Spleen. In life it had occupied almost the entire left half of the abdomen, but did not enter the true pelvis. There were no marked symptoms of leucocythæmia, though the blood showed certain variations from the normal, and no history of ague or of syphilis. At the necropsy the spleen was found to be enormously enlarged and to be enclosed at its upper and back parts and sides by a thick layer of very dense fibrous tissue, which, though not very vascular, contained bloodvessels, some of them of the size of the radial artery. The spleen pulp was hardly anywhere normal, and on section showed strands and stellate masses of similar dense fibrous tissue. Microscopically the lobules of the spleen pulp were seen to be separated and compressed by fibrous bundles. The growth surrounding the spleen was outside the capsule and consisted of simple fibrous tissue. The view was advanced that it consisted simply of "organised inflammatory deposit."

The following card specimens were shown:—

Dr. BRINDLEY: (1) Adventitious Spleens; and (2) Aneurysms Bulging into the Right Auricle and Rupturing into the Pericardium.

Dr. HARRIS and Dr. RITCHIE: Lung affected with Chronic Pneumonia and Bronchial Dilatation.

Dr. HARRIS: Chronic Capsulitis of the Liver and Spleen.

Dr. RAY: Aortic Aneurysm with Secondary Aneurysms of the Carotid and Subclavian after Ligaturing.

[1] Transactions of the Pathological Society.

LIVERPOOL MEDICAL INSTITUTION.

Dacryocystitis.—Cases of Stone in the Bladder.—Hysteria in Gynæcology.—Folliculitis Decalvans.

A MEETING of this society was held on March 11th, Dr. A. C. E. HARRIS Vice-President, being in the chair.

Mr. EDGAR BROWNE opened the adjourned discussion on the Treatment of Dacryocystitis, the paper introducing the

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subject having been read by Mr. H. E. Jones at the last meeting. Mr. Browne said that treatment must be founded upon a knowledge of physiological and pathological conditions and should aim at restoring the organ as nearly as possible to its natural state, but many of the methods in vogue violated these conditions. The canaliculi were capillary tubes and had purposely been made small by nature. If nature had designed a drain-pipe she would have made it larger. The collecting sac and discharging duct were potential tubes, capable of dilatation, but not habitually dilated. The inferior opening was exceedingly small. The apparatus was of the nature of a syphon, acting by suction and capillary attraction, and not simply by gravitation. The necessity of preserving the capillary character of the canaliculi had led him many years ago to suggest partial slitting of the wall. It was essential to preserve a portion of the tube, and not convert it into a gaping groove. He therefore used small probes and endeavoured not to overdistend the nasal opening, or, indeed, any part of the passages. Stricture was not a primary cause of obstruction, but the result of inflammation of the duct. The primary cause was bacterial infection of the lining membrane of the duct and the vascular structure surrounding it. His treatment by irrigation had stood the test of years. He would reserve the style only for exceptional cases where the structures had become distorted by long-continued inflammation.—Mr. H. E. JONES, in reply, said that the controversy as to the relative importance of inflammatory swelling or true stricture of the duct as causes of mucocele had been going on for nearly two hundred years. He was convinced that the prolonged use of probes and styles often irreparably damaged the canaliculus and occasionally caused stricture of the duct.

Mr. RUSHTON PARKER related in outline the clinical features of ten cases of Stone in the Bladder occurring in nine male patients. Four were subjected to lithotomy and four to lithotrity, whilst on one both operations were performed. Of the five cases of lithotomy two were boys aged eleven years. In one the lateral perineal operation was performed, and in the other the suprapubic operation. Both calculi were oxalate of lime. Two of the cases were men aged sixty-six and sixty-nine years respectively; both these calculi were phosphatic, with cystitis and ammoniacal urine and previous retention, due in one case to stricture and in the other to enlarged prostate. In the fifth case—a man, aged forty years—the stone was also chiefly phosphatic, with a nucleus of uric acid. In this case a calculus was found in the roof of the bladder a month after lithotrity had been performed. Of the five cases of lithotrity one was a man aged sixty-two years; the stone weighed three-quarters of an ounce. The patient returned to his home in a week and is now well. The next patient was forty years of age; the stone weighed a quarter of an ounce. After the crushing operation his symptoms were improved, but a month later lateral lithotomy was performed as stated above. The next patient was a man seventy years of age, from whose bladder a phosphatic calculus and about four inches of indiarubber catheter were removed by the lithotrite. The next case had an oxalic calculus weighing a few grains, and the last of the series had a phosphatic calculus formed round a nucleus of "chewing gum," a stick of which he had passed into his urethra.

Dr. IMLACH read a paper on the Place of Hysteria in Gynæcology. Following popular usage, he claimed that the term hysteria should only be applied to a special disorder of mental and physical development in girls and young women, and should not be extended to the functional neuroses of men.

Dr. STOPFORD TAYLOR showed a case of Folliculitis Decalvans in a man aged thirty years. The inflamed follicles occupied the outer two-thirds of the right thigh, surrounding a small bald pitted area the size of the palm of the hand. The disease had previously affected the corresponding region on the other limb, and the skin there was also perfectly bald.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Tubal Abortion.—Broad Ligament Cysts.—Anti-streptococcic Serum in Puerperal Toxæmia.—Vesical Calculi deposited on Silk Sutures.

A MEETING of this society was held on Feb. 24th, Dr. MALCOLM BLACK, President, being in the chair.

The PRESIDENT referred to the death of Sir Spencer Wells, one of the society's honorary presidents, and it was resolved to send an excerpt from the minutes to his relatives expressive of sympathy in the loss that they and the profession had sustained.

Dr. JENKINS read notes of three gynæcological cases from the Victoria Infirmary, Glasgow. The first was a case of Puerperal Fever, interesting chiefly from the fact that the great omentum was adherent to the parietal peritoneum, projected into the pelvic cavity, and formed the greater part of pelvic swellings on both sides of the uterus, which at the first examination under chloroform were believed to be inflammatory and of tubal or ovarian origin. Puncture in such cases was in the highest degree dangerous, and he believed that the radical vaginal operation was the only one that need be considered. The second case was one of Tubal Abortion. At the abdominal section the appendix vermiformis was found to be thickened and adherent; the right ovary was as large as a hen's egg and contained dermoid material, but showed a fresh corpus luteum in the small part of normal ovarian tissue left. The right ovary and tube and the appendix vermiformis were removed. The patient made a good recovery. The third case was one of Congenital Absence of the Portis Vaginalis Uteri and Patency of Gärtner's Duct.

Dr. EDGAR described three cases of Broad Ligament Cysts, in two of which he had performed abdominal section—in the one for a small intra-ligamentous cyst on the right side and a hæmatoma of the left ovary, and in the other for a parovarian cyst of the right broad ligament with matting together of the left ovary and tube, which contained pus. In his third case, in which there was a tense elastic mass posterior to the uterus and reaching from side to side of the pelvis, he operated through the posterior vaginal fornix. After curetting the uterus and amputating a rather large cervix with stellate laceration, he opened into the pouch of Douglas, punctured the cyst, pulled it down, and removed it.

Dr. A. W. RUSSELL reported a case of Puerperal Toxæmia with symptoms of Mania in which the anti-streptococcic serum had been used and recovery had followed.

Dr. RUSSELL also showed Fragments of Vesical Calculi removed from a patient upon whom Cæsarean section had been performed five years ago. Several of the pieces had as their nucleus a bit of silk suture and in one the knot was seen. This was the second case that had come under his observation.—Professor MURDOCH CAMERON, who had performed both of these Cæsarean operations, gave some account of the cases.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Bubonic Plague.

A MEETING of the Section of Pathology was held on Feb. 26th, Mr. J. B. STORY being in the chair.

In the absence of Dr. JOSEPH REDMOND, the sectional secretary (Dr. MCWEENEY) demonstrated Microscopic Preparations by Dr. Yersin of the Plague Bacillus discovered by himself (Dr. Yersin) and (independently) by Dr. Kitasato. One of the slides was a gentian-violet stained smear preparation from the bubo of a Chinaman who died at Hong-Kong from the disease, and showed enormous numbers of short oval bacilli in pairs and single forms, with an unstained spot in the centre like the bacillus of chicken cholera, lying amongst the lymphoid elements and pus cells. The other was a preparation from the blood of a mouse which had succumbed to septicæmia consequent on the inoculation of a pure cultivation of the bacillus. Here the organism took the shape of a diplococcus or very short diplo-bacillus. The speaker then gave a *résumé* of present knowledge of this organism, including its *habitat* in the soil, its tendency to attack rats, &c., through which its virulence became so heightened that it could attack the healthy human system, and the successful results claimed by Yersin for sero-therapeusis. He concluded by quoting a specimen of the directions said to have been issued by the Royal College of Physicians of London for the cure of plague during the last great visitation in 1665: "Pull off the feathers from the tails of living cocks, hens, pigeons, or chickens; and holding their bills, hold them hard to the botch or swelling, and so keep them at that part till they die, and by this means draw out the poison. It is good to apply a cupping glass, or embers in a dish, with a handful of sorrel upon the embers."—The communication was discussed by Mr. STORY and Dr. PARSONS, and Dr. MCWEENEY replied.

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Reviews and Notices of Books.

Vita Medica; Chapters of Medical Life and Work. By Sir B. W. RICHARDSON, M.D., LL.D., F.R.S. London, New York, and Bombay: Longmans, Green, and Co. 1897. Pp. 496. Price 16*s*.

THERE is something very pathetic in the last chapter of this book taken in conjunction with the preliminary note prefixed by the author's son, which runs as follows: "These chapters of 'Vita Medica' were finished by my father on Wednesday, Nov. 18th, 1896, just before eight in the evening. At ten o'clock he was seized with the illness which ended fatally on Saturday morning, Nov. 21st." The last chapter commences: "But I must close somewhere, and it is at this point." Irresistibly on reading these passages the words of Thackeray rise to our minds: "Yet a few chapters more and then the last; after which, behold Finis itself come to an end, and the Infinite begun."

The book is in no sense an autobiography, but rather a collection of various reminiscences, set down just as they occurred to the writer, without any particular regard for order of time. In the first chapter Richardson relates how in his young days he met with a Dr. James Bird, and how the two attended a meeting at which sanitary questions were discussed. Richardson was "very plain in stating that we might by good management pull down our current death-rate to 15 in the 1000, perhaps to 12, and even to 10." Bird derided him and begged the audience to accept these ideas as from one who "was given to ideals—who let ideals take the place of data." Events have shown that Richardson was not so very far wrong in this particular instance; but in many cases we fancy that Bird's estimate of him was not undeserved. Richardson went to school in Leicestershire, and about that time lost his mother, to whose early training and care he owed a debt which he never forgot. She was a Calvinist, and was attended in her last illness by a medical man of the same persuasion. On Mrs. Richardson expressing her belief that she was one of the elect the physician remarked "that he had known many who had closed their eyes in sight, as they believed, of a glorious Heaven and had opened them, as he believed, to their amazement in a very different place." That medical man was asked not to call again. There is an interesting account of a meeting with Disraeli in a dress which recalls the description of Jingle. They met on the platform of Syston station, and the station master remarked prophetically: "He's a wonderful young man is that; gets into and out of debt, writes stories, and I shouldn't wonder if some of you live to see him a Minister of the Crown." Twenty years after they met again in the street, and Disraeli at once recognised his face. After serving his apprenticeship to Mr. Hudson of Somerby, Richardson entered at Anderson's College, Glasgow, where his principal teachers were Burns, Knox the anatomist, and William Thomson. Here he saw the first operation performed in Scotland under an anæsthetic—namely, ether—a sight wonderful enough even now, though so common that no one thinks anything of it, but that to one accustomed to the pre-anæsthetic operations must have seemed miraculous. Of such Richardson says, "I rarely knew any person who had positively made up his or her mind to undergo the operation, shrink from it at the last moment from fear of pain, and I rarely if ever saw one shed tears during the infliction of the pain"; but he also says that when the pain began patients would insist upon the operator stopping, and while he continued said nothing but "Make haste, make haste." While in Glasgow Richardson nearly died from a form of fever then prevalent, apparently relapsing fever, and on his recovery answered an advertisement in THE LANCET and became assistant to Mr. Thomas Browne of Saffron Walden in Essex. After this he went as assistant to the brother of the Mr. Hudson to whom he had been apprenticed, and from there went to Mortlake as partner with Dr. Willis. This period was really the starting point of his life's work. Here he met the lady who became his wife; here he collected materials for the Fothergillian Prize Essay and formulated the first idea of the lethal chamber. In 1853 he came to London and worked at the subject of the blood and its coagulation, coming to the conclusion that this depended upon the evolution of ammonia—a view he afterwards modified, although he maintained to the end the soundness of the principle that coagulation depends upon the evaporation of a volatile spirit. This theory led him to use ammonia as a solvent for thrombi and cardiac fibrinous exudations, sometimes with success, and once, as he honestly records, with fatal result from pulmonary embolism. Perhaps Richardson's greatest work lay in his efforts to promote sanitation, and the outcome of his work was the delivery of the paper on Hygeia, the City of Health, read at the 1875 meeting of the Social Science Association at Brighton. This address, if somewhat Utopian in its ideas, gave an enormous impetus to schemes of sanitary reform. It was widely noticed at home and abroad, and was even made the foundation of a novel by Jules Verne. We have not space here to notice the many other investigations in which Richardson took part, but must refer our readers to the book itself. All his theories—though it must be allowed that they are sometimes visionary—bore the stamp of earnestness and of a full consciousness like that of Newton that there were an infinity of things of which he was ignorant. He was deeply interested in the mystery of life and impressed with the expression, "God is light," as being some sort of explanation. "Truth," said Plato long ago, "is the body of God, and light is His shadow." "There are other powers," said Richardson (besides light and heat), "spiritual essences, according to our limited appreciation, but they are as mighty as subtle, and the breath of life is one of them."

We would suggest to the publishers that in the next edition an index might be supplied with advantage.

A Text-book of Comparative Anatomy. By ARNOLD LANG. Translated by HENRY M. BERNARD and MATILDA BERNARD. Part II. London: Macmillan & Co. Price 17*s*.

THE first part of this work appeared in 1891 and contained an account of the Protozoa, Cœlenterata, Platodes, Vermes, and Arthropoda. The present part deals with the Mollusca, Echinodermata, and Enteropneusta, and thus brings the description of the Invertebrata to an end. In its general plan the present part resembles in almost every respect that of its predecessor, and we are happy to be able to express as warm an appreciation of the labours of author and translators as we did on the last occasion. The work commences with a systematic review of the mollusca, followed by a hypothetical description of a primitive mollusc. Next, the outer organisation of typical forms of the chief groups are compared one with another and also with the above-mentioned primitive mollusc. The various systems are then considered in the following order: integument, shell, mantle cavity, respiratory organs, head, foot, musculature, and nervous system. Here there is a pause for a most interesting discussion on the causes of asymmetry in the gastropoda. Then the rest of the systems are dealt with, the sensory organs, alimentary canal, circulatory system, body cavity, nephridia and genital organs. After the devotion of a few pages to the subject of parasitic and attached gastropoda, the ontogeny of the mollusca is dealt with, Chiton, Dondersia, Paludina, Dentalium, Teredo, Cyclas, Anodonta, and Sepia being taken as types. The phylogeny of the molluscan phylum is next briefly considered, the author favouring a turbellarian ancestry for it, and the article is brought to a close by a review of the most

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important literature of the mollusca carefully arranged under various heads.

This review of the treatment of the mollusca will serve to show the reader the scope of the work, since the echinodermata and enteropneusta are handled in a similar manner. The illustrations are copious, well executed, and carefully chosen, but we regret to see in some places the false economy of numbering the different parts and then telling the reader that the numbers are the same as in some former picture. In this way two or three illustrations have sometimes to be searched before a difficulty is cleared up, and when this happens often the whole thread of the subject may be lost. In the present instance, however, the fault does not occur very often, and we are the less disposed to lay stress on it since the descriptions in the text are so clear that a glance at the illustrations usually suffices.

The Natural and Artificial Methods of Feeding Infants and Young Children. By EDMUND CAUTLEY, M.D. Cantab. London: J. and A. Churchill. 1897.

WE entirely agree with the remarks with which the author of this useful little work introduces the subject to notice. He rightly points to the regrettable infantile mortality from gastro-intestinal affections, and points out how largely preventable such mortality would be if only more intelligence were brought to bear on the conditions of healthy feeding. He is to be commended for his endeavour to place the subject on a rational and scientific basis, and it is to be hoped that he will not have written in vain, and that more attention will be paid in the training of medical men in the important principles which he here so amply illustrates. We do not think that Dr. Cautley needed to apologise for inflicting on the medical reader a book of this class, for we feel sure that if its contents are thoroughly mastered [the practitioner will be much assisted in his methods of treating the commonest and most troublesome of infantile derangements. The book is carefully planned, so as to take the reader step by step through the critical periods of infancy, when so much depends upon correct management of diet. The condition of the mother, the management of lactation, the composition and changes in human milk, the composition of cow's milk, its sterilisation, &c., are discussed with detail and an abundant use of the knowledge gained by physiological chemistry. A very useful chapter is that devoted to Proprietary Foods, the use of which is often so indiscriminate. The diet after weaning, with regard to which further advice is given, is of quite as much importance as that of an earlier period of life. Chapters are also assigned to the Feeding of Premature Infants and to the Growth of Infants and Children, whilst appendices contain instructions for the preparation of foods and directions suitable for mothers of hospital out-patients. There can be no question that a book of this class was needed, and we do not think that the subject could be more satisfactorily treated.

The Bacteria of the Sputa and Cryptogamic Flora of the Mouth. By FILANDRO VICENTINI, M.D. Translated by Rev. E. J. STUTTER and Professor SAIEGHI. London: Baillière, Tindall, and Cox. 1897. Pp. 239. Price 7*s.* 6*d.*

THESE memoirs are translated from the "Atti della R. Accademia Medico-Chirurgica" of Naples. Dr. Vicentini has bestowed a large amount of time and labour upon the microscopic observation of the micro-organisms of the mouth and sputa. His studies have resulted in views or suppositions which are more or less directly at variance with the accepted facts of bacteriology and with the opinions of competent observers all over the world. If he were able to adduce any satisfactory evidence in support of his contentions, and if the methods he seems to have employed in his studies were sufficient by themselves to form an adequate basis for generalisation, no complaint could be made; but this is far from being the case. Dr. Vicentini appears to regard the methods of cultivation and experiment with distrust and has confined his attention to morphological observation alone, using very high powers of the microscope. As a result he is disposed to regard the tubercle bacillus, the gonococcus, and the diplococcus pneumoniæ as varieties or phases in the life history of one single organism—leptothrix buccalis, or, as he prefers to term it, leptothrix racemosa. We should add that these suggestions are made with the greatest modesty and diffidence. There is much to be said in favour of the pleomorphism of many bacteria, but such sweeping views as those here suggested naturally demand proof of the most rigorous description, and this is, in our opinion, not forthcoming.

In the first memoir the author details his microscopic researches into the sputum of whooping-cough, describing the presence therein of large quantities of "myelin," amounting sometimes to several grammes in twenty-four hours, and this he conjectures to be derived from the medullated nerve fibres of the air passages. This view of the pathology of whooping-cough would stand a better chance of acceptance if it were shown that there were enough nerve fibres there to furnish this continuous excretion and if proof were brought forward that the substance in question was actually myelin. The bulk of the book is devoted to morphological observations on the flora of the mouth and sputa. The observations are minute and detailed and they are illustrated by excellent coloured plates. They would constitute a valuable addition to our knowledge of the life-history of leptothrix could we have any confidence that they all really referred to one species. The conclusions, however, to which Dr. Vicentini is ultimately led will, we fear, only impress upon the reader the fallibility of even the highest powers of the microscope uncontrolled by other methods of bacteriological research. Professor Miller of Berlin, who writes a preface to the present work, is careful to dissociate himself from any participation in the author's views. The translation, though readable, is often obscure, and it abounds in technical inaccuracies.

A Pictorial Atlas of Skin Diseases from Models in the Museum of the Saint Louis Hospital, Paris. London: The Rebman Publishing Company. Price 10*s.* 6*d.*

WE have before us Part VII. of this interesting publication. Plate 25 shows an ulcerating eruption on the back, which on Brocq's authority is labelled Bromide Eruption. The patient, however, was a syphilophobe and had been taking iodide as well as bromide of potassium, and the large pus-containing bullæ are rather more suggestive of iodide than bromide. Plate 26 is called Hypertrophic Papular Syphilide situated on the upper part of the chest. Jacquet calls them vegeto-papulo-erosive lesions identical with hypertrophic mucous patches, or condylomata of moist regions of the skin. He suggests that their presence in such an unusual position and of so large a size is due to the neglect and squalor of the patient. Plate 27 represents a lupoid syphilide and Plate 28 has two figures—a gangrenous tubercular syphilide and a gangrenous gumma. The various lesions are faithfully reproduced and continue an interesting series of representations.

Ligaments: their Nature and Morphology. By J. BLAND SUTTON, F.R.C.S. Eng. London: H. K. Lewis. 1897. Price 4*s.* 6*d.*

WE are pleased to welcome a revised edition of this admirable little work, which was first published ten years

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ago. It has undergone some slight re-arrangement and some alterations in the author's views have been made, but in the main it follows the lines of the former edition. The formation of ligaments by the metamorphosis, regression, and migration of muscles, and by the degeneration of bony and cartilaginous tissues, is most clearly and interestingly shown. The ligaments of the extremities, pectoral and elvic girdles, larynx, and vertebral column are considered in order with regard to their morphology, and the student will be surprised to find how interesting the author has made the subject. It is a very valuable contribution to philosophic anatomy and one of the best scientific works that has appeared in recent years.

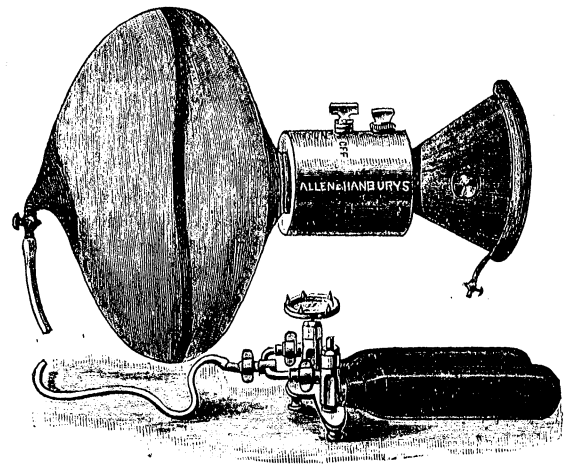
JOURNALS AND REVIEWS.

Zhurnal Meditzinskoi Chimii i Pharmatzii (Journal of Medical Chemistry and Pharmacy). December, 1896.—This Russian journal is published and edited by M. Poehl, a chemist of reputation in St. Petersburg. Much of the present number is taken up by articles by the editor and other observers on the nature and action of a proprietary preparation known as "Spermin-Poehl." As its name implies, this is an animal extract prepared much in the same way as that originally described by Brown-Séquard. "Opoovariinum-Poehl" is an analogous preparation of ovarian substance, which is said to be of use in relieving morbid symptoms appearing at the climacteric period. Articles on this use of ovarian extracts by Professor Landau and Dr. Mainzer of Berlin, which have appeared in the German journals, are here inserted in full. Over fifty pages of the present number are devoted to the answers received from various sources to a list of questions previously issued by the editor dealing with the clinical effects of his preparation of spermin. The questions and answers are printed in the four languages, Russian, French, German, and English. The individual replies, of which M. Poehl appears to have received a large number, are condensed into brief sentences, all of a highly laudatory character. The method savours too much of the advertising tactics pursued by the proprietors of quack medicines to be commended. It is probable, also, that some negative or even adverse replies were received, and these should have been published side by side with the favourable ones, if the preparation in question is to be regarded as other recognised therapeutic agents and not as a mere proprietary remedy.

New Inventions.

IMPROVED ETHER INHALER.

MANY of the ether inhalers in present use have a very constricted air-way, and, in fact, a feeling of oppression arises when breathing through them even before the ether is turned on. As a result of such mechanical obstruction cyanosis, a large pupil, and laboured breathing are witnessed during the subsequent anæsthesia. I have long been desirous of providing an ether inhaler with a really free breathing channel, because I believed that if this asphyxial factor were abolished the induction of anæsthesia would be more pleasant to the patient and the resulting condition during operation would also favour the diminution of after-effects. The accompanying illustration shows a metal expansion chamber which I have designed to meet the requirement. Its weight is the same as that of a small Clover's inhaler, but it contains six ounces of ether, and does not therefore require filling during an hour's operation. It requires no water-jacket, because the heat absorbed and rendered latent by the evaporation of ether is not removed from the liquid in the reservoir, but from the patient's breath alone. It consists of a cylindrical reservoir for ether which surrounds a breathing channel two inches in diameter; a small metal shaft runs vertically from the tap above, through the breathing channel, communicating below with the ether chamber; a hollow metal plug fits this shaft, and through a pinhole in the axis of the breathing channel a fine stream of ether is directed upon the sponge through which the patient breathes. The warmth supplied by the administrator's hand holding the cylinder is enough to cause a rise of temperature within it of from 10° to 15° C., which produces a force of expansion and vapour tension in the chamber equal to a pressure of 27·24 c m. of mercury, and this on the principle of Dalton's law, is sufficient to propel a stream of ether from the pinhole orifice until the cylinder is empty. The type of anæsthesia produced by the inhaler in more than seventy cases for which it has been used fulfils my expectations very perfectly. It presents a smaller pupil than usual and a very bright colour; the breathing, though deep, is remarkably free from stertor, and the induction even



with ether alone is quiet and smooth. The cylinder can be filled and carried about in that condition without any leakage; there is no smell of ether at all before beginning the inhalation, and as the patient's breath does not pass into the reservoir ether left in it is absolutely uncontaminated. The administration of gas and ether is thus conducted. 1. Fill the cylinder with six ounces of ether through the stoppered apperture and screw this down tightly. 2. Turn on the ether tap to see that it works; then pack the sponge loosely into the breathing channel around the little trumpet orifice and especially below it. 3. Attach the bag with tubing from the gas bottle; then, after emptying the bag of air, a little gas is allowed to run into it and the face-piece is accurately applied whilst (if lying recumbent) the patient's head is turned towards the side. 4. After five inspirations turn on the ether tap, then off again, and during succeeding breaths the tap is opened and closed until, the sponge being wet, signs of ether narcosis supervene.

Messrs. Allen and Hanburys, of Wigmore-street, are the makers. To them I am indebted for much personal courtesy and the sparing of no effort in the production of every detail with accuracy and excellent workmanship.

H. BELLAMY GARDNER, M.R.C.S. Eng., L.R.C.P. Lond.
Welbeck-street, Cavendish-square, W.

MERTHYR TYDVIL GENERAL HOSPITAL.—The new accident ward added to the western side of the Merthyr Tydvil General Hospital was formally opened by Sir W. T. Lewis on Feb. 24th. The high constable of Merthyr, at the ceremony, stated that the Queen had been pleased to allow the ward to be called the "Diamond Jubilee Ward." It was stated that Sir W. T. Lewis had been instrumental in getting two donations of £1000 each from the Marquis of Bute, and had himself contributed £750 towards the building of the hospital, besides giving £1000 towards this new ward. It was announced that £1170 had been subscribed at the luncheon that followed, which included £400 from Sir W. T. Lewis and members of his family and £100 from the medical staff of the hospital.

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THE LANCET.

LONDON: SATURDAY, MARCH 20, 1897.

THE success of the PRINCE OF WALES'S Hospital Fund for London in commemoration of HER MAJESTY'S long and beneficent reign is a matter of deep interest to ourselves and to the public. To ourselves we say, for it represents a scheme which we have long and specially advocated, and which we were fortunate enough to anticipate and urge as one particularly fit to be associated with an epoch in which medicine and surgery have advanced by strides and during which their methods have increased in gentleness as they have in efficiency. But the public is equally concerned in the success of the PRINCE'S Fund. English philanthropy is best illustrated in the voluntary hospitals. Englishmen do not like to be taxed; but they tax themselves for the support of these institutions, which will bear a favourable comparison with any hospitals of the world. It is true, as the PRINCE has well pointed out, that this self-taxation is a very limited matter. The hospitals and other charities are, or at any rate have been, supported by a mere handful of people. Whether we take London or the provinces, it is apparent that a large majority of the people, even well-to-do people, has been content to see the hospitals supported—or to see them starved—without dipping into its own pockets on their behalf. Not the least service done by His Royal Highness in this present year is to have brought out this fact. He has made it clear that, either from inadvertence or from want of sympathy—with characteristic good nature he adopts the former alternative—the ordinary well-to-do Englishman has acted as if the hospitals were fed from some secret or Divine source, and left somebody else to do the work of "the good Samaritan" while he "passed by on the other side." Henceforth there will be no excuse for this evasion of the plainest duty entailed upon comfortable and healthy people, to provide for those necessitous inmates of hospitals who are neither comfortable nor healthy. We heartily adopt the PRINCE'S theory, that the starvation of hospitals in the undoubtedly wealthy community of the metropolis has risen from "want of thought" and not "from want of heart," and henceforth we hope to see a rivalry in enlightened and self-denying liberality. The time is short. We do not believe in the indefinite prolongation of exceptional emotions. We are all enjoying the consciousness of the pleasure of living in the Victorian Era, in which the Throne has seemed to be the source and seat of every virtue that can sweeten and elevate the life of the nation. There is but one wish, and that is for its continuance. Let us none the less make much of it and of the thankfulness which it generates. It will be no slight monument of our gratitude if we can make our hospital treasurers take new heart of hope and fill their empty beds with sufferers that languish in ill-adapted rooms—of which, let it be remembered, there is a terrible tale in our very midst; for have we not been told of recent years of the disgraceful number of one- and two-roomed tenements, of people living within a stone's-throw of wealth and luxury under the vilest conditions, in numbers altogether equalling the population of a large provincial town?

We may be told that we are forgetting the abuse of hospitals, and the fact that institutions which were founded for, and have been hitherto placed at the service of, the poor "without money and without price" are now being used on commercial principles and bartered for petty sums that degrade charity and medical service at one stroke. We do not plead guilty to the charge of forgetfulness. Our columns from week to week show how (faithfully and vigilantly, we trust) we labour to bring back hospitals to their true use and to expose unflinchingly all abuses. Our readers will give us full credit for this. We shall not be content till we have eliminated from hospitals all those whose homes and whose circumstances admit of treatment and their recovery at home, and till we have reduced the out-patient department to proportions consistent with the advantage of patients on the one hand and the just interests of medical practitioners on the other. But there is a time for everything—a time for collecting money for an object, and a time for insisting on guarantees that the object shall be defined and distinct. We do not share Mr. BURDETT'S views, that the Hospital Sunday Fund and, by inference, the PRINCE'S Fund are collecting bodies, having at present but little responsibility for the use of what they collect. With every respect for Mr. BURDETT and his great interest in hospitals, we regard this as an ill-advised doctrine, which threatens seriously to injure such funds and the institutions the benefit of which they contemplate. We venture to believe that the council of the PRINCE'S Fund, not excluding His Royal Highness himself, hold no such narrow view of the duties incumbent on them; and in this belief we shall continue to wish them every success in their efforts. We are quite willing to assume their agreement with us that hospitals are for the poor, and that it is contrary to the interests of the poor, of the public, and of medical education to convert them into cheap dispensaries, alienating the working classes and classes better off from the private practitioners to whom they must always be most indebted for medical guidance throughout life.

The weak part of the voluntary hospital system is the uncertainty and precariousness of its income, and its reliance on small patrons, who are apt to think of personal advantage or the advantage of their dependents rather than of the true uses of hospitals and the superior claims of the poor. The best cure for this is the liberality of the liberal, of those who contribute to hospitals for the sake of the poor, and without the intention or the wish of personal advantage. For this reason, as well as for the honour of our illustrious QUEEN, we rejoice in the success of the PRINCE'S Fund. We should like to see every established hospital of repute made independent enough to lay down rules for its own administration and to adhere to them when laid down—a wish in no wise inconsistent with a Central Board so constituted as to

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command the respect of individual institutions and to facilitate their beneficial and harmonious coöperation.

THE latest reports from India show that very elaborate and stringent arrangements have been made throughout that country for the application of the powers conferred by the Epidemic Diseases Act for limiting or preventing the spread of bubonic plague. In addition to all that has been already done in Bombay, and to the large augmentation of the medical strength that has been made for duty under the Bombay authorities during the continuance of the epidemic, an Executive Committee has been organised and vested with power to enforce and carry out the measures that have been devised for combating the scourge. The disease seems to be mainly confined to the city and to Bombay Presidency and Sind; it has now been present for some months in the former place, to which it has manifested a chronic sort of adhesiveness which is suggestive of its dependence upon local conditions for its incidence and persistence. In the extent or rapidity of its spread in India the disease has not been at all comparable to what has occurred in these respects in epidemics of cholera in that country. But the alarm that has been created in Europe by the presence of plague in India has, as we know, been great, and has led to the imposition of restrictive measures with very seriously paralysing effect on the commerce of that country. The impression left upon the mind from a broad survey and study of the facts making up the recent medical history of plague in the East is that it is largely a preventable disease, and to a far greater extent capable of being controlled and treated than might be inferred from the alarming descriptions of it in past history.

We cannot be surprised that, with such additional experience as France and other Continental nations could adduce, the very name of the disease should give rise to grave alarm; but people are nowadays disposed to take calmer and more moderate views, and that this is so is attributable to the fact that we now know more about epidemic diseases and the way of combating them. Notwithstanding much that still remains to be cleared up in regard to plague, the fact remains that we have learned more about its nature, causes, and treatment within the last few years than we ever knew before. We have ascertained from a bacteriological study of it that it depends upon an inoculable micro-organism; that it not only affects man, but the lower animals (rodents especially), and probably some insects (flies, for example); that it is, on the whole, a less infectious disease than had been supposed; that local conditions and an insanitary environment are necessary factors in furnishing a fitting soil for its spread and development; that its progress as an epidemic—as compared with cholera, for example—is relatively slow; and that there is every reason to hope that, as a result of our experimental methods of research, a relative immunity from attack may be conferred by prophylactic inoculation, and, when actually attacked, that a curative remedy is not beyond our reach if we continue to prosecute our researches on the lines which Dr. YERSIN and Professor HAFFKINE have indicated. While Dr YERSIN has prepared a serum which he regards as a curative agent in cases of plague, Professor HAFFKINE has succeeded in manufacturing a vaccine or protective lymph which will, he thinks, to a certain extent fortify the system against an attack of bubonic fever. Both the alleged curative and preventive plans of treatment are founded upon the results of the experimental methods of inquiry, and are the outcome of the modern science of bacteriological investigation. Our readers are already acquainted with the work performed by Dr. YERSIN in China in this direction, and with the belief which he entertained that he had succeeded in preparing a curative agent for the treatment of plague. He has now returned to Bombay, and entered upon his work there on the 6th instant. The effect of his remedy on plague patients only ill for a day or two is reported to be, according to the reply of the Earl of ONSLOW in the House of Lords on the 11th inst. to a question by Lord REAY, "surprisingly good," while more advanced cases are not so much benefited. Professor HAFFKINE has communicated the results of the scientific experiments instituted by him to the Standing Committee in Bombay. By means of culture experiments in different media he has been enabled to cultivate the plague bacillus in abundant and concentrated quantities, and has tested their virulence on large rodents. From these experiments as a starting-point he subsequently prepared other cultures which were deprived of their fatal properties, until he reached a harmless culture which proved protective against a dose of the living virus that would be speedily fatal to non-protected animals. With this he inoculated himself and subsequently some members of the medical profession. Lord ONSLOW now tells us that up to and including March 7th 2341 persons have been inoculated, of whom only two (in addition to two previously mentioned) have been attacked by plague; both attacks occurred within five days of inoculation, and both sufferers are alive. People are coming forward more freely to be inoculated, and the practice is extending. The Government of Bombay are preparing an organisation for the extension of depôts for purposes of inoculation and for instructing medical officers in the process. Steps are also being taken by the Governor for popularising prophylactic inoculation and for increasing the amount of lymph that can be produced. The Secretary of State will receive information weekly of the extent to which the practice is resorted to, with reports as to its efficacy. The results of a more extended trial Lord ONSLOW has offered to communicate to the House of Lords.

It would be obviously premature to pronounce any opinion at present as to the final outcome of these methods of dealing with the disease. We can only await the results with extreme interest. About the zeal and self-sacrifice of those engaged in prosecuting these investigations there cannot, in the meantime, be two opinions; and we think that both the Government of India and the Secretary of State for India are also deserving of great praise for the way in which they have facilitated and seconded the efforts of scientific medicine in these directions. It has been said that the Bombay authorities were to blame for not having adopted from the first all the sanitary and precautionary measures that are now being carried out, but it is proverbially not easy to be

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wise in time, and it is a very serious thing for any Government to incur the responsibility of officially declaring the presence of plague in a city, with its attendant consequences to a community of mixed races and religions and to trade and commerce, until thoroughly assured of the fact. We are bound in fairness to recognise the difficulties of such a situation, and we may add that probably in no country in the world would the efforts to limit the spread of contagion and to combat and deal with difficulties have been more thoroughly undertaken and discharged than seems to have been the case in India, not only in regard to the pestilence of which we have been writing, but also in connexion with the great famine which is prevailing there at the present time.

PROFESSOR PAGLIANI of Turin, who holds the chair of Public Hygiene in the University (a department in which he has been one of the most trusted officers under Government), has just been allaying the panic of his compatriots in view of the plague in the Bombay Presidency—panic which, among other disastrous results, is hurting Italy on a side where she has every need of being spared—namely, her commerce. She has, he says, been following the example of Marseilles, which asked and obtained from the French Government the "boycotting" of every vessel hailing from the infected Indian ports. Palermo and Naples, in imitation of their French sister, have imposed on the Società di Navigazione the regulation that no ship of similar origin shall enter their harbours, thereby, he says, reviving the measures which proved so mischievous to commerce in the cholera epidemic of 1884-86 and also reviving the anarchical spirit of the communes in sanitary administration, when, as in those years, each commune acted for itself, to the prejudice of sound hygiene and to the damage of every interest, moral and material. In 1887 that spirit was, with infinite trouble, exorcised, but now it seems we are to have it rehabilitated. He hopes that other harbour towns—Genoa, for instance—will put their southern sisters to shame by ignoring such irrational means of defence. Meanwhile, he asks, "How is our commerce affected by the procedure of Palermo and Naples?" Italy's "movimento marittimo" (maritime intercourse) with the Indies constitutes more than three-fifths of such "movimento" as a whole, and her Government is in annual receipt of three and a half million lire collected as harbour dues from the Indian traffic alone, five million being the sum total of such receipts from all sea-faring traffic put together. From Palermo and Naples she is to forfeit these receipts, and from whatever other harbour towns follow suit! And what basis in science or in common sense exists for such panic? None whatever. Of course, he does not deny the danger of plague-stricken vessels with patients on board entering a largely frequented seaport. Ample means for obviating that risk are in working. But it is quite another matter in the case of vessels which, after a very long voyage, during which they are safeguarded in every way, approach the harbours. In such cases the period of incubation is long past; and as for soiled effects which these ships may carry there are means at every harbour of disinfecting them forthwith. It is therefore only from certain classes of goods that the suspicion of transmitted infection may arise. And here he gives the weight of his authority and experience to the declaration that "no proof exists of an epidemic of 'pestis bubonica' having been propagated by merchandise or by articles of private or domestic use."—except in the case of the latter when they have passed from the person of a patient without being disinfected. "Neither woollens," he proceeds, "nor skins, nor fleeces of any kind have ever transmitted an epidemic." Adducing epidemiological observations to prove this, he adds that from the bacteriological point of view the bacillus of plague has, so far as science is aware, such biological properties that even in the improbable case of a patient having directly or indirectly infected goods prepared for exportation it very quickly loses all infective activity in the transport of the goods themselves. A doubt has been raised as to whether the hides of animals which have died during the epidemic of plague may not convey the infection to a distance. But the apprehended risk vanishes with Dr. LOWSON'S demonstration, and still more after the investigations lately completed by Professor PAGLIANI himself and his colleague, Professor GIACOSA. Such hides in the dried state, even supposing that the "pestis bubonica" of man could declare itself in cattle, are, they showed, quite incapable of preserving alive the bacilli they, *ex hypothesi*, may have contained; the treatment they have undergone has made such life impossible. "Neither epidemiological reasons nor such as the laboratory can bring to the test can justify the prevailing dread of goods proceeding from plague-stricken localities—a dread fraught with damage to our commerce, to our national economy, and to our industrial classes.....It is difficult," he concludes, "to run counter to a popular current inspired by the gust of fear; it is far easier to win applause when one favours the prejudices of the crowd; but it is the duty of hygienist and philanthropist alike to defend in every case, not only the health of the masses, but also their sound judgment and the sources of their sustenance."

Annotations.

"Ne quid nimis."

THE TUNG WA HOSPITAL, HONG-KONG.

WE have received the blue-book dealing with the report of the Commission appointed by His Excellency Sir William Robinson to inquire into the working and organisation of the Tung Wa Hospital, Hong-Kong—a Commission which, to our minds, reveals the existence of a most serious state of matters in a British colony. We have read the report very carefully, and, although we may be thought presumptuous in differing upon the evidence therein set forth from those Commissioners who were on the spot and heard that evidence given, we cannot but think that the majority report, signed by three out of five Commissioners, is too optimistic. Even these gentlemen recommend a great many improvements as being desirable, among them the daily inspection of the hospital once, or more than once, by an officer of the sanitary board, the water carriage of excreta, regulations against overcrowding,

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regulations for the cleansing of bedding, and, finally, more stringent laws for the prevention of infection. The Hon. C. P. Chater, while agreeing with the majority report, wishes to add that as to the work of the hospital as an institution for healing the state of matters is far from satisfactory. "We find doctors who have never been to any medical college ..... whose only test of knowledge is to be able to write a thesis to be approved of by their colleagues in the hospital, who permit men to die because they cannot or will not perform a simple operation. ..... We find, too, the horrible custom of herding the most foully diseased with their less afflicted fellow patients with the natural results, and, in fact, almost every law of hygiene slighted." The Hon. T. H. Whitehead has a long memorandum of his own opinions on the management of the hospital and sundry recommendations, of which the most important are—(1) the appointment of a resident European sanitary inspector; and (2) the gradual appointment of Chinese medical officers *trained in Western methods of medicine*. (The italics are ours.) All the Commissioners acknowledge that the sanitary state of the hospital has improved since 1894, but very much remains to be done. Let us quote the evidence of the principal medical officer of the Army Medical Staff in the colony, Surgeon-Colonel Evatt, taken on July 2nd, 1896. The exact dates of his visits to the hospital are not given, but as he only arrived in the colony in May they must have been between that time and the date on which he gave his evidence. "The number of commodes was most marked. There was a perfect epidemic of commodes, and there were patients suffering from diarrhœa in the same wards with other patients suffering from open wounds. ..... That day we visited the hospital some of the commodes were in a most dreadful state. The stench was enough to make anybody ill who was well, and it must have been bad for the sick inmates." Now, we consider that, to quote the words of the Hon. C. P. Chater, "such a state of things should not exist in a British colony, and in an institution partly supported by the Government of that colony." The hospital, of course, was built for, and partly by, the Chinese, so it would be ridiculous to try to administer it in a purely Western fashion, for most Western ideas are entirely unfitted for Orientals; but with regard to sanitary matters they concern the health of the whole community and *must* be set right. As regards Chinese methods of treatment and nursing they will have at present to remain as they are until a supply of native medical men are trained in Western medicine, which Orientals can appreciate, as witness the Japanese and some of the races of India. Oriental filth is a matter which, to use a trite journalistic phrase, must be seen to be appreciated, and we can only hope, nay, more, we may say demand, in the name of the medical profession, that the Colonial Government will take steps—if, indeed, it has not already done so—to remedy the grosser evils pointed out in this report.

THE WORK OF THE HOSPITAL SATURDAY FUND.

THE annual meeting of this Fund was held on March 3rd, when the chairman, Mr. Reginald B. D. Acland, delivered an address dealing with the work of 1896. With reference to the question of new premises he pointed out how entirely unsuitable and cramped the present offices of the Fund were, and mentioned that it had been decided to purchase some new premises in the Gray's-inn-road much more convenient than those in Farringdon-road as regards space and less expensive as regards rent. Passing on to details the chairman said that during the year 28,708 letters had been received and dealt with almost without complaint. The actual receipts for the year were £21,614 odd, and the percentage of expenses to receipts was 11·81. The Ambulance Committee, which has only been in existence thirteen months, has done good work and is now working in complete harmony with the St. John Ambulance Association. The Surgical Appliance Committee supplied 2782 appliances, such as spectacles, artificial teeth, legs, and arms, and spinal machines. With regard to cases sent to hospital the Fund is making a praiseworthy effort to sift their applicants before sending them to chest hospitals at least. "In response to applications for such letters 1101 forms of medical certificates were issued ..... of these applications 556 were never heard of again, and of the remainder which were returned only 313 were found suitable for chest hospitals ..... 20 were sent to general hospitals, and 212 to the metropolitan dispensaries." From this it would appear that more than half the applicants refused to submit themselves to a medical examination previously to going to the hospital. The chairman referred to the articles which have recently appeared in our columns upon hospital abuse, and remarked that the writer "seems to mean that a hospital is abused if the result of the patients going to the hospital is that they do not go to the general practitioner." He did not think that as a class the patients who attend our hospitals do so with the idea of avoiding payment to a professional man, but because they think they get better treatment than at home. The question, however, was exceedingly difficult, for there was no body of men who lived more self-sacrificing lives than general practitioners among the poor. We can assure Mr. Acland that there is abuse, and that very real, of the charity dispensed by hospitals, and we are glad to see that he remarked, in the course of his address, that "the time has come when associations like ours should do something to try and stem this ever-increasing stream of out-patients."

MEDICAL STUDENTS AND VACCINATION.

THE anti-vaccinationists, whatever their demerits, are by no means wanting in energy, and to the vigorous manner in which they appeal to the ignorant electorate must be attributed in no small degree the existence of distorted notions and erroneous ideas. It is obvious that if the mistaken views which so largely prevail are to be replaced by views more in accordance with the truth there is much to be done. The arguments of the opponents of vaccination are not difficult of refutation, but it is nevertheless absolutely essential that they should be carefully studied in order that fallacies, suppressions, and distortions with which they so frequently abound may be laid bare. It is therefore necessary, not only that the public should be educated by means of attractively written pamphlets in forcible and easily understood English, as well as by lectures, but that the medical men of the future should also be put in possession of all the facts, fallacies, and arguments. In this direction Dr. Theodore Acland has done excellent service at St. Thomas's Hospital Medical School. Not only has he given a series of lectures on the alleged injuries from vaccination, on which subject his experience in connexion with the Royal Commission on Vaccination entitles his opinion to be received with great weight, but at a recent meeting of the Medical and Physical Society he delivered an excellent address upon the subject of Compulsory Vaccination, in which he put before the members an eminently unbiased statement of the case, which should serve them in excellent stead in the future combats which are sure to fall to their lot. Dr. Acland had little hesitation in urging that if we wish to reduce small-pox to the smallest limits there is required practically universal vaccination and re-vaccination. Obviously, as we have recently pointed out in our columns, this is the only logical conclusion to be deduced from the report of the Commissioners and that of the dissentients, and it is much to be hoped that the staff at other medical schools will be able to follow Dr. Acland's

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example and to put before the students the arguments for and against vaccination. The Epidemiological Society has recently done good work in answering, through the admirable paper of Dr. McVail, the report of the dissentients. It is, we believe, the intention of the society to publish this paper separately from the Transactions[1] and to send a copy of it to every Member of Parliament, together with the resolution recently passed by the society as to the necessity for vaccination and re-vaccination. We certainly trust this will be done, and that the House of Commons may at least have the opportunity of examining into some of the methods of attack and defence of the anti-vaccinationists.

THE HEALTH OF THE TSAR AND THE TSARITSA.

WE are informed upon excellent authority that there is no foundation for the alarming rumours regarding the health of the Emperor of Russia which have been industriously circulated during the last few months. His Majesty does not suffer from any cerebral symptoms, as has been alleged; he is out every morning as soon as it is light, and keeps himself in condition by running a verst (1160 yards, or about five furlongs), watch in hand, to see that he can do it in his average time. One of his amusements is said to be shooting from a bicycle, and he can bring down a crow even when he is going at a good speed. The recent illness of the Empress has also been exaggerated. It was not of the serious nature commonly supposed, but only an ailment incidental to pregnancy, and the accouchement is duly expected in April.

THE UNIVERSITY OF BORDEAUX.

THE inaugural ceremonies connected with the University of Bordeaux were this year celebrated with more than usual pomp and circumstance; but, unfortunately, the students were of opinion that as a body they had not been treated with due consideration in the matter of accommodation, and for a considerable time it seemed as though the orators would not be allowed to proceed with their discourses. At last, during a lull, the rector, M. Couat, began his speech, and being very popular soon commanded the attention of the unruly throng. In 1854 there were only five pupils in the faculties of science and letters, and the treasury of the institution was well-nigh empty; whereas at present, with a reserve of ten million francs, the number of students has risen to 2191, and there are no fewer than 101 professors to attend to their requirements. "As for the output of the University," exclaimed the orator, "I do not wish to weary you by a lengthy enumeration of titles, neither shall I wound individual modesty by quoting names. It is enough if I recall the fact that in all the domains of research, in the sciences both natural and moral, in pure mathematics as well as in philology, the professors of the various faculties of Bordeaux have by their numerous works contributed largely to the advancement of knowledge and to the glory of French literature." While the ceremony inside the building was in progress a very noisy demonstration took place in the street among the shut-out students, the disturbance being fomented by the mounted police, who sought to clear the ground by spurring their horses amidst the crowd. For some time a collision was imminent, but happily a commissary who was endowed with a modicum of sense appeared upon the scene and soon peace was restored. In order to manifest their approval of this gentleman's judicious action the merry students shouldered him in triumph and carried him off, but where they went to the reporter omits to state. So far the events occurred in the daytime, but the same night matters reached a crisis. At a gala performance in the Grand Theatre the students, to their disgust, found themselves "relegated to paradise," and having thus to "roost among the rafters" determined that the audience should be made aware of the fact. It was as though the barnyard denizens of the entire province had found their way into the building, so stupendous was the crowing and cackling. The demonstration, however, was not in reality a spiteful one, and eventually the entire theatrical programme was executed. Meanwhile, the young men who were unable to gain admission even to the "cock-loft" grew more and more excited, and ere long a veritable riot was in progress all round the theatre. The misguided youths strove to make their way in by force, only to be harshly repulsed by the police. Blows with the fist were freely interchanged, and in several instances sticks and bludgeons were used with effect. Eggs of an uncertain age and other similar missiles were not wanting, stones flew about, and the windows of neighbouring cafés were shattered. Finally, the mounted gendarmerie were ordered to charge, and after a brief struggle, during which wounds were liberally inflicted on both sides, the *émeute* ended at one o'clock in the morning. About a dozen of the riotous students spent the remainder of the night in the lock-up, where they were not allowed any food. This, however, was not considered a sufficient punishment, for several of them were condemned to eight days' imprisonment. It is to be hoped that this severe punishment will be a lesson to these Bordelais raiders and that in future if they think they have grievances that demand redress they will confine themselves to strictly constitutional methods.

"BLOOD ERYTHEMA."

MR. MARMADUKE SHEILD[1] proposes this name for a peculiar eruption, not previously described, produced by contact of arterial blood, of which he is himself the subject. On washing away the little crusts of dried blood which remain after operations a faint pink erythematous spot appears in the site of each, which darkens to a faint red, lasts about half an hour, and slowly disappears. The eruption is not attended with itching or inconvenience, and principally occurs on the backs of the forearms and on the forehead. He has also seen it upon the forearms of his assistants, though not so vividly, and twice on the skin round an amputation of the breast. It is remarkable that this peculiar phenomenon, of which surgeons themselves are the subjects, should not have attracted attention hitherto. Mr. Sheild has no doubt of its occurrence, as he has noticed it so frequently, and confirmation of his observations is forthcoming. At a recent meeting of the Dermatological Society of Great Britain and Ireland[2] Dr. Harrison of Clifton stated that having read Mr. Sheild's case he was led to inquire into that of a medical friend, who when sprinkled with arterial blood on any part of the body felt an irritation. After washing away the blood a pink stain remained, which lasted fifteen minutes or longer. Another speaker mentioned the case of a medical man who was neurotic and asthmatical, and to whom the smell of blood was loathsome. After attending a case of post-partum hæmorrhage an erythematous rash was to be seen on the arm, where the blood had been projected, some hours after careful washing. There was also some irritation of the skin. What is the explanation of this curiously produced erythema? Mr. Sheild thinks, as it is not constant, it must depend on some peculiarity of the patient's blood. We cannot agree with this. The peculiarity seems rather to be in the subject of the eruption. All the facts support this view. He does not associate it with any special condition of the patient; and the subject of Dr. Harrison's case distinctly states that any arterial blood would produce

[1] An abstract of Dr. McVail's paper will be found on page 809.

[1] British Journal of Dermatology, November, 1896.
[2] Ibid., January, 1897.

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the effect. We consider that it is an example of idiosyncrasy, which accounts for its great rarity. It is perfectly analogous to the eruptions and other symptoms produced in certain individuals by small doses of some common remedy or some ordinary article of diet. There is the difference that the eruption in question is produced by local irritation, and not by internal administration. This is no objection, however, to our view. If considered so it can be met by citing similar cases of eruptions so produced. An ordinary linseed-meal poultice or the application of yelk of egg (Ord) will cause urticaria in some persons. These agents would certainly produce as little effect on ordinary skins as the contact of blood. Again, asthma in some forms is an example of idiosyncrasy; for instance, that produced by the odour of one of the domestic animals. Now it is curious that the subjects of the two latter cases of blood erythema were very susceptible to the odour of blood, and one is described as neurotic and asthmatical. The fascinating and important subject of idiosyncrasy has received but little attention. There is little more than a scanty record of cases, and scarcely an attempt at investigation of the subject as a whole. The phenomena are regarded as inexplicable and as standing quite apart from all others. This attitude is not scientific. Cases of idiosyncrasy, like those of rare diseases, should be regarded, in accordance with Mr. Jonathan Hutchinson, as extreme examples of variations which are but ordinary. Thus the key to explain why that which is harmless to almost all should be toxic to a few is the admitted constant variation in the action of all drugs. We suggest that blood, owing perhaps to the volatile oil which gives the odour, is an irritant too weak to affect an ordinary person. In a small minority some erythema—so trivial and fugitive as to escape observation—may occur, which becomes distinct in a few extreme cases of special susceptibility. Thus far we may theorise on idiosyncrasy. To go further more facts in the form of carefully recorded cases are required. If this view is correct, it will be found that, as in the case of rare diseases, these cases are not so uncommon as we might suppose; and that, in addition to well-marked forms, there is a greater number ill defined which have escaped observation for want of the attention which only follows the discovery of the former.

TINNED SALMON.

OUR contemporary the *Globe* published a letter recently from a correspondent who signs his name and vouches for the following. Last summer he was at a "cannery" at Steveston, on the Frazer River, and "saw fish received from the fishermen, in large and small lots, varying generally from thirty to five fish, and kept piled upon one another just as thrown in from the boats for several days, until something like two or three thousand fish were on hand, before cleaning and canning, so as to save the expense of steam, &c. The thermometer is rarely below 70° and often 90° F. in the shade during the greater part of the canning season, so that you may imagine the condition of the fish first received, which would be underneath the later lots at the time of putting into the cans. The Chinamen who gut the fish use the keenest knives, constantly ground and sharpened, but are often unable to make a clean cut or to prevent the flesh tearing away, owing to its rotten state. But however bad the fish is, it is canned. This is the usual state of things, but I have seen at the busiest times so many as 15,000 or 16,000 fish piled up three or four feet high, and the stench arising abominable." He admits that the fish after being canned are exposed to a high temperature for two hours before the tins are finally sealed, but he also says that previously to being put in the tins they are "cleaned" by being washed in the river, which is a mass of filth from floating offal. Now we have no doubt that the heat of cooking destroys all bacilli, and perhaps also their spores, but putrid fish, even under these conditions, is not a fit food for any human being. Even if micro-organisms and their spores are destroyed there may very probably remain the putrefactive alkaloidal bodies, which act as poisons of the most virulent kind. The writer of the letter is prepared to give the name of the cannery in question, and advises that the output when it arrives, as it is expected to do, at Liverpool, should be seized and destroyed. He also mentions that there were several cases of enteric fever among the employés last summer with at least two deaths. If what the writer says is true steps should be taken to examine the consignment of the factory in question. In the meantime his statements have been categorically contradicted.

THE BENIN MASSACRE.

CAPTAIN BOISRAGON, one of the two white survivors of the Benin massacre, has returned to England, and in the course of a statement (published in the *Times* on the 17th inst.) which he made to Reuter's Liverpool agent thus bears testimony to the heroism of Dr. Elliott, who was killed in the attack: "While we were carrying Major Crawford, Dr. Elliott, who was bleeding from a wound in the head, kept on charging into the bush, trying to prevent the Benin men from shooting at us, for we could only go very slowly. He most undoubtedly kept them from coming close up to us and saved us from being hit several times." Captain Boisragon also acknowledges the services rendered to the survivors by Dr. D'Arcy Irvine when they reached New Benin. We also note in the *Times* of the 16th inst. a Reuter's telegram from Lagos stating that Mr. Allman, Principal Medical Officer H.M.S. Niger Coast Protectorate, is, with the Consul-General, actively engaged in improving the sanitation of Benin city.

A CASE OF EXTENSIVE SKIN-GRAFTING.

AT a recent meeting of the Philadelphia County Medical Society Dr. T. S. K. Morton showed a man, twenty-six years of age, whose left leg had been scalded with boiling water, the consequence being that the entire thickness of the skin sloughed from seven inches above the patella to the malleoli at the ankle, and only a few small islets of skin on the crest of the tibia were preserved. Some eight weeks after the accident Dr. Morton commenced the application of skin-grafts after the manner of Thiersch. The granulations were sterilised as much as possible by spraying with hydrogen dioxide diluted one-half with normal salt solution (0·6 per cent. common salt in water), and were subsequently enveloped in gutta-percha tissue. When suppuration had been largely controlled by this treatment a surface about ten inches long and two inches wide was scraped with a curette. Bleeding was free, but was easily controlled by the binding on of sponges whilst the grafts were being cut. The skin of the opposite thigh having been shaved, sterilised, and oiled, strips were cut from its surface with a razor ground flat on the under side and oiled, the integument being held tense and slightly pushed up by a hand above and one below the place from which the grafts were to be cut; the razor was not permitted to penetrate beneath the papillary layer of the skin. The strips were cut about an inch wide and as long as possible; they very much resembled wet tissue paper, and as they were cut heaped themselves up on the razor-blade. They were then transferred, right side down, directly upon the surface to be grafted, by seizing the end of the strip at the edge of the razor, bringing it to the edge of the wound, and then gently drawing the razor away from this point in the direction of the surface that the graft was meant to cover. No antiseptics were used during the entire process of grafting and dressing; salt solution alone

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was used as an irrigant. The grafts slightly overlapped each other in all directions and were covered with strips of Lister protective or gutta-percha tissue; a copious dressing of gauze wet with salt solution was placed outside, a sheet of gutta-percha tissue was wrapped over the whole, and finally a wet gauze bandage was applied with moderate firmness. Before applying the dressing all air-bubbles, blood-clots, or whatever might prevent contact of the grafts with the granulations were squeezed out. The dressing was kept wet with salt solution for forty-eight hours, and the dressing was then renewed, the surface being sprayed gently with hydrogen dioxide in salt solution (half and half), washed off with salt solution, and dressed as at first, save that it was not necessary that the gauze should be kept wet. By this process, repeated some dozen times in the course of a year, a true skin was made to cover the whole area that had sloughed away. It was even moveable freely over the underlying tissues at all points and much elastic tissue developed, so that upon the thigh and calf the skin could be drawn away from the subjacent structures for a distance of an inch. Sensation returned completely throughout the new skin, there was no contraction at the flexure of the knee-joint or elsewhere, and so far as appearances went the leg was in perfect condition. The grafts were taken from the opposite thigh, the thigh upon the injured side above the lesion, and both upper arms. These regions, which yielded successive crops of grafts at intervals of about six weeks, appeared to be in their normal condition save for slight discolourations. The hair was growing over them all as usual, proving that only superficial layers of skin were taken away. The surfaces healed over, as a rule, after taking grafts in about two weeks. These raw surfaces were covered by strips of protective and a dry gauze dressing and bandage. Simple dusting with formaldehyde-gelatin, without other dressing, had also proved satisfactory.

MEDICAL AFFAIRS IN MADAGASCAR.

GENERAL GALLIÉNI, Governor and Commander-in-Chief of the new French colony, has promulgated the following *arrêté*:—"1. No one shall be allowed to engage in the practice of medicine in Madagascar and its dependencies unless he is furnished with a diploma of doctor in medicine of a French faculty. 2. Only natives who have obtained their diplomas in one of the French schools of medicine established in the colony shall be considered as doctors in medicine of a French faculty and authorised to practise in Madagascar. 3. Physicians and surgeons possessing foreign diplomas, no matter what their nationality may be, can only exercise their profession in Madagascar and its dependencies on condition of having obtained, before a French faculty, the diploma of doctor in medicine in conformity with the dispositions specified in Article 5, Chapter iv., of the Law of 30th November, 1892, on the practice of medicine." As a transitory measure medical men possessing foreign qualifications who are at present in practice in Madagascar may obtain authorisation to continue the exercise of their profession provided they make application for it in proper form, and at the same time submit their credentials for examination and verification. In order to afford natives an opportunity of becoming qualified a school of medicine has been opened at Antananarivo under the direction of a military surgeon named Métayer. The selection of a military man for the post has been severely criticised in the Parisian medical press. It is not as though civilian professors were a rarity in France, exclaims one writer indignantly, seeing that they are so numerous they cannot all find employment. It is said to be the wish of the authorities to encourage emigration into Madagascar, but here is an opportunity of introducing emigrants of the very best quality, under whose skilled impulsion the nascent Malgash university could not but speedily attain to the desired standard of perfection. An army surgeon doubtless knows better than his civilian *confrère* how to manage the soldier and keep him up to the mark as a fighting machine, but the professional upbringing of embryonic medical practitioners is another affair altogether, and by no means a military speciality. The pupils being all destined for civil employment it certainly does seem reasonable that their instruction should be entrusted to civilians, but in the present case economy may possibly have something to do with the censured arrangement. The military surgeons must be on the spot in any case, and having as a rule a good deal of leisure the additional occupation thus offered them is no doubt welcome. From another French source we learn that ever since the English Isoavinandriana hospital was requisitioned for the sick and wounded of the army of occupation the want of an establishment where the indigent natives could obtain medical and surgical aid has been grievously felt. In order to fill the void a new hospital has been installed at the expense of the Malgash Prime Minister Rasanjy, who contributes, moreover, the annual sum of £480 towards its maintenance. The balance required, which is estimated at £400 per annum, is to be provided out of colonial resources.

FRESH-WATER BIOLOGY.

THE success and interesting results which have attended the establishment of fresh-water biological stations on the Continent and elsewhere have prompted the question as to why England is behind in this matter. Mr. Scourfield, in a recent number of *Natural Science*, pleads for that impetus to the study of the fauna and flora of English fresh waters which the establishment of stations would give in this country. In a later number of the same journal (March, 1897) Professor Anton Fritsch, Ph.D., of Prague, expresses his pleasure on learning of this proposal, and he records how interesting and various has proved the study of the life groups in more than thirty kinds of Bohemian fresh waters, each with its own special fauna and flora, and comprising springs, mountain brooks, mountain rivers, rivers of the plain, backwaters of large rivers, ponds, lakes, bogs, small pools with *Apus*, snowtarns with *Branchipus*, &c. Each of these kinds of water varies in its own fauna with the seasons of the year and also from year to year, according as rain and sunshine also vary. "Here," remarks Professor Fritsch, "is a work for a century," and we would add that to many it should prove a pleasant and recreative study. The movement is surely a worthy one, and in the interests of science and even national affairs should be supported.

REMUNERATIVE PHILANTHROPY.

WHEN in 1891 Lord Rowton and Mr. (now Sir) Richard Farrant started the common lodging-houses known as Rowton Houses, it was thought doubtful whether such superior accommodation at so low a price could be made to pay; but so successful was the first venture that a company which paid 4 per cent. was soon formed, and with the new capital two more houses were started. The first of these was opened in May of last year and the other is very near completion. The excellence of the accommodation provided has already been referred to in our columns,[1] and we have only to again congratulate Lord Rowton, Sir Richard Farrant, and the company upon the result of their praiseworthy enterprise. The third annual report states that the balance to the credit of the revenue account, after placing £800 to reserve for repairs and renewals, writing off the preliminary expenses amounting to £269 19*s.*, and paying the preference dividends to Dec. 31st, 1896, amounts to

[1] THE LANCET, April 25th, 1893, and March 28th, 1896.

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£5017 12*s*., out of which the directors recommend that a dividend at the rate of 5 per cent. per annum be paid on the ordinary shares for the year ending Dec. 31st, 1896. This will absorb £3625, leaving £1392 12*s*. to be carried forward. Rowton House, Vauxhall (484 cubicles), has been fully occupied throughout the year, and the receipts have been slightly in excess of those of the previous year. Rowton House, King's-cross (678 cubicles), continues to be fully occupied. Rowton House, Newington-butts (800 cubicles), is practically complete and is now being roofed. The operations of the company are, we are glad to hear, to be greatly extended and the capital of the company is to be increased by £100,000.

HORSELESS CARRIAGES IN AMERICA.

To a physician in Youngstown, Ohio, is due the distinction of being the first medical man in the United States to make use of a motor carriage for the purpose of working his practice. Dr. Carlos Booth terms his vehicle a motor cab, has used it for several months, finds it an excellent substitute for one drawn by a horse, and prefers it in most respects to that animal as a motive power. In this carriage Dr. Booth has attained a speed on the level of ten miles per hour, and climbed an incline of from 10 to 15 per cent. grade at the rate of five miles per hour. It seems that motor carriages should prove especially useful to the general practitioner, and particularly to the country one, on whose shoulders the burden of maintaining the two or three horses, with their attendant expenses, necessary for a large and scattered practice falls very heavily. At present the initial cost is large, but, on the other hand, the cost of working horseless carriages is small and the country roads of England, unlike those of America, are peculiarly well adapted to their use. Cripples, paralytics, and those who retain the use of their arms but have no control over their lower limbs should find these vehicles of the greatest service; they would not only be able to travel by means of them without assistance, but also be able to amuse themselves with corresponding benefit to their health.

CONGENITAL SPASTIC RIGIDITY.

CONGENITAL spastic paraplegia was first drawn attention to by von Keine as early as 1840, by Little in his work on "Deformities" in 1853, and by the same writer in the Obstetrical Transactions for 1862, and is sometimes known as "Little's disease," although this term is practically confined to a certain class of cases only—namely, those which occur in children born before full term or at term with the use of instruments. A more recent criticism occurs in an editorial article in the *Medical News* (New York) for Feb. 6th of this year. The symptoms are now generally recognised, the physical condition consisting of diplegia of a spasmodic type, most marked in the lower extremities, where it constitutes a condition of paraplegic contracture, whilst there is also a marked psychical defect, consisting of lack of proper and timely developments of the mental processes, which is very rarely of such a degree as to constitute a mild form of idiocy. Little's disease, however, although dating from birth, is not usually recognised until a number of months later. The pathology and morbid anatomy of the disease are still very obscure. In recent numbers of the *Journal de Neurologie* observations on this subject have been published by van Gehuchten. He points out that congenital spastic rigidity is most common in children born prematurely; it matters very little whether the birth be an easy or a difficult one. At this time of life the pyramidal tracts are almost wholly non-medullated, and therefore devoid of the ability to perform their function. The first tracts to become medullated are those constituting the indirect motor pathway—the pathway through the pons cerebellum; while the direct pathway—the cortical spinal fibres—are very much delayed in acquisition of myelin sheaths and perhaps may never develop them at all. In its downward growth during the later years of infancy the tract of the cortico-spinal fibres reaches first the upper and then the lower levels of the cord, those fibres destined for the lumbar and sacral portions requiring the longest time to reach their destination. The course of symptoms of this disease corresponds with these observations; the rigidity disappears first in the face and head, then in the upper extremities, and remains longest, and perhaps does not disappear at all, in the lower extremities. Van Gehuchten maintains, therefore, that the absence of the myelin sheaths of the cortico spinal fibres constituting the pyramidal tract is attended by the same symptoms as degeneration of these fibres. In both conditions there is an absence of inhibitory action of these fibres upon the motor ganglion cells of the anterior horns, and hence the spasticity. As the author of the article (Dr. Joseph Collins) suggests, these recent writings of van Gehuchten commend themselves to the reader because of the closeness of reasoning contained in them, especially reasoning from analogy on well-founded anatomical facts, and the attention of investigators will be called to the necessity of more accurate and trustworthy observations concerning the genesis and time of occurrence of the disease.

CORONER'S INQUESTS IN LIVERPOOL DURING 1896.

THE total number of cases of death reported to, and investigated by, the city coroner amounted to 1570. In 563 of these cases inquests were deemed unnecessary. Inquests were held in 1007 cases, including 583 males and 424 females. Of these, 106 were legitimate male infants and 101 legitimate female infants, all under one year. Of the illegitimate infants under one year there were 6 males and 11 females. Fifty inquests were held on male children of one year and under seven years. Of children of seven years and under sixteen years there were 28 males and 21 females. Of youths of sixteen years and under twenty-five years there were 24 males and 17 females. In adults of twenty-five years and under sixty years the figures are 306 males and 177 females. Above sixty years of age 63 males and 53 females are accounted for. Post-mortem examinations were made in 147 instances. 189 deaths were due to excessive drinking; of these, 118 were males and 71 females. Sad to say, 185 infants were suffocated whilst in bed with parents or otherwise. Verdicts of "murder," "manslaughter," and "justifiable homicide" were returned in 5, 12, and 1 cases respectively. Verdicts of "accidental death" were recorded in 363 cases; the number of inquests on the bodies of newly born infants was 18. No verdict of "felo de se" is recorded.

DIPHTHERIA AND SCHOOLS.

DR. MEREDITH RICHARDS, the medical officer of health of Chesterfield, furnishes in his annual report for 1896, instances of the manner in which schools may be instrumental in conveying diphtheria, even although the persons attacked may not be at school ages or attending a school which has been recognised as being infected. In the instances brought forward by Dr. Richards evidence is adduced tending to show that the notified cases which were not attending school contracted the disease from school children who apparently for some time past had suffered from slight sore-throat or enlarged cervical glands, and from the throats of whom the bacilli of diphtheria were procured. In the case of one of the schools in question it was ascertained that a teacher had some weeks previously suffered from diphtheria. It is quite clear that in discussing

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the effects of school influence in the spread of diphtheria, regard must be had to the indirect as well as to the direct mischief thus caused, and that to assume the absence of diphtheria from a school because no case of the disease has been notified therefrom is an assumption which is not likely to aid epidemiological research. Notification is obviously a most useful agency for the control of infectious disease, but it involves so many uncertain factors that it only furnishes partial information, and those who proceed to investigate outbreaks of disease having regard only to recognised and notified cases are liable to obtain fallacious results. No one would go so far as to assert or to assume as a basis for investigation that schools are always in actual operation for harm, but at the same time no epidemiologist would, it is to be hoped, deny that at times when diphtheria possesses a high degree of infectivity schools present favourable opportunities for the dissemination of the disease.

THE PREVENTION OF TUBERCULOSIS.

THE present time is eminently suitable for the discussion of this subject, inasmuch as the Royal Commission which is now sitting cannot but derive assistance from papers and debates calculated to thrash out the relative importance of the several preventive measures intended to diminish the prevalence of this disease, which enacts such a heavy death toll every year. Dr. Niven's name is intimately associated with this subject, and although the position which he has taken up is perhaps regarded by many as somewhat a counsel of perfection, nevertheless all students of public health have great respect for his opinions and will be very glad to hear the arguments which he will bring forward to-night (Friday) at the Epidemiological Society. The subject is one of great national, and even international importance, and it affects not only medical officers of health, but also every medical man throughout the country. If the notification of tuberculosis were made compulsory the relations of every medical practitioner with his patients would be affected; and it is to be hoped that the debate will be well attended by those who are familiar with the pathology of the disease as it manifests itself amongst our infantile population as well as in adults. We hear that Dr. Payne and Dr. Sidney Martin are expected to join in the discussion.

A DISTINCTIVE SIGN FOR RUSSIAN MEDICAL PRACTITIONERS.

THE Medical Council of the Ministry of Internal Affairs, the highest authority on all medical matters in Russia, has recently decided to introduce a small *znak*, or sign, to be worn on the breast by all medical men, as a sort of insignia of their profession. The idea is not a new one. For many years past all Russian medical men with the degree of Doctor of Medicine have worn, or at least had the right to wear, a little silver sign of this sort. It is of oval shape, about one and a half inches long and one inch broad, and bears a raised design of two intertwined serpents. Under the new regulation—which is not yet law, but will probably very soon become so—this same *znak* will be worn by all qualified practitioners, whether they have the higher degree of M.D. or only the lower qualification of *lékar*. The question was discussed whether some new decoration of special design should not be instituted for those who have taken their doctorate; but this was decided in the negative for the present, so that for the immediate future all Russian medical men, without distinction of degree, will wear the same sign. The object in introducing the sign appears to have been the hope that some distinction of this sort would increase the safety of the wearer in the less civilised parts of the country. Medical men, it was argued, in dealing with epidemics have frequently to take very decisive action on the frontiers and among the uneducated peasantry, and often run great personal risks if the opposition of the people is aroused. The cholera riots of a few years ago, in which many medical men lost their lives, were eloquent proofs of the dangers which medical men often have to face. The sign on the breast will, it is thought, be a certain protection, particularly for civilian practitioners, who have no uniform to show their official position. It will show that the wearer is a servant of the Tsar, and in this way will, it is hoped, command the respect of the people and enable medical men to carry out sanitary and hygienic measures without opposition.

THE CLINICAL RESEARCH ASSOCIATION.

WE have received an advance copy of the annual report of the Clinical Research Association, a body which has only been in existence for a little over two years and has a membership of more than 2400. During the last twelve months 7227 specimens were submitted for examination, of which 1710 were chemical, 3804 bacteriological, and 1532 histological. These figures represent an enormous amount of work, the value of which as a means of establishing diagnosis and so of facilitating treatment cannot be too highly estimated. A new department has been opened for medical photography, including x ray work, and a portable sterile swab for obtaining and transmitting material from the throats of patients suspected of suffering from diphtheria has been devised and is supplied gratuitously on application.

LUNACY IN SYRIA.

MR THEOPHILUS WALDMEIER, a veteran missionary in the East and formerly one of the Abyssinian captives under King Theodore, has taken up the cause of the insane in Syria and Palestine. At present there is no provision in these provinces of the Turkish Empire for the care of lunatics, beyond the convents, to which they are often taken in order that the monks may exorcise the evil spirits by which they are supposed to be possessed. Torture and even death result from the inhuman treatment practised, whilst demented persons often wander at large in the country, like the demoniac in the tombs, untended and ill-used. Mr. Waldmeier, after long study of their condition, has originated a proposal for an asylum to contain 80 or 100 lunatics, which is to be built on the most approved cottage system at the foot of Mount Lebanon, near to the large town of Beyrout. The leading practitioners at this town, American, British, and native Syrian, have given the scheme enthusiastic support and formed an executive committee to promote it. A committee has also been formed in London, consisting of Dr. Percy Smith of Bethlem Royal Hospital, Dr. R. Jones and Dr. F. R. P. Taylor of Claybury Asylum, and Dr. Whitcombe of Birmingham, besides others interested in missionary work abroad — Dr. Gilbart-Smith, Dr. John Dixon, and Dr. Hingston Fox—and several well-known lay members. A meeting was held at the Bethlem Royal Hospital on March 11th. Plans of the proposed buildings were produced, which had been approved by Dr. Clouston of Edinburgh, Dr. Yellowlees of Glasgow, and Dr. Bedford Pierce of York, all of whom have taken the warmest practical interest in the undertaking. Mr. and Mrs. Waldmeier have visited many of the best asylums in Great Britain as well as in Switzerland and Germany in order to become acquainted with the best methods, both of construction and organisation. They will take back with them a specially qualified British physician to have medical charge of the asylum. Sir Richard Tangye, who is treasurer to the fund, reported that nearly £3000 of the total of £10,000 required had

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been contributed or promised. The work will be a pioneer one in Syria, and the new asylum or home will form an object lesson to the country and a token of advancing civilisation, and will, it is hoped, lead to a kinder and more humane treatment of the sick in mind throughout the Orient.

HEALTH OF THE GOLD COAST.

AT a time when considerable public attention is being directed to the West Coast of Africa, owing to the return of punitive expeditions from the interior and the establishment of gold-mining companies on the coast, it is useful to acquire all available information dealing with the climatic conditions of the country. In the last Colonial Report from the Gold Coast it is stated that 'the general health of the colony was extremely bad, the endemic fever assuming a pseudo-epidemic form of a malignant type, closely approaching in its clinical manifestations the yellow fever of the West Indies. The death-rate among Europeans was very high, and the excitement induced thereby amounted at one time almost to a panic and served to intensify the fatal tendencies of the prevailing fever. To insanitary causes, aggravated by the excessive humidity of the atmosphere, high shade temperature and practically no rainfall intensifying the action of pathogenic organisms of every kind and especially the endemic malarial poison, must be attributed the malignant type of the fever."

CONGENITAL DEFECT IN THE PECTORAL MUSCLES WITH WEBBED FINGERS.

IN the last number of the *Neurologisches Centralblatt* a short abstract appears of a paper in Virchow's *Archiv* by Professor Hoffmann of Heidelberg concerning a very interesting condition of congenital defect. The patient was a man aged forty-seven years, in whom the sternal part of the right pectoralis major was entirely absent, the clavicular portion of the muscle as well as the pectoralis minor being well developed. The whole of the right upper extremity was shorter and of smaller diameter than the left. The fingers of the right hand had assumed the claw position and some of the joints were ankylosed. Between the right index and middle fingers, as well as between the latter and the ring finger, there was a web which reached to the middle of the first phalanx, while between the ring and the little fingers the web extended between even the first phalanges. There was no sensory impairment, and in spite of the atrophy the right arm was as strong as the left. Professor Hoffmann has collected from medical literature no less than ten cases of defect in the pectoral muscles with webbing of fingers on the same side. In the majority the defect was found in males and affected the right side. The deformity is no doubt the result of a defect in development.

THE ANTI-QUACKERY LEAGUE.

WE have received a circular issued by the above league, giving an account of its aims and objects, which are the "exposure and repression of quackery." The league intends to arrange for the "distribution of books to public libraries and of leaflets for general and local circulation, showing the gross imposture and the worthless composition of quack medicines, the folly and credulity of people who are duped by false assertions of curative power, and the physical injury and pecuniary loss resulting from the use of these nostrums." The league also intends to supply the book, "Exposures of Quackery," to free libraries throughout the kingdom. We welcome the foundation of this league most heartily, but the Augean stable of quackery needs a very Hercules for its cleansing. Perhaps the best way would be to petition the Legislature to absolutely prohibit the sale of proprietary medicines and make them all patent medicines, so that a description of them could be readily consulted by the public, or, still better, a full description of the composition should be printed in large letters upon every bottle or packet containing the nostrum. No one should be allowed to manufacture quack medicines of any description without paying a heavy licence, and the various scoundrels who batten on the public and masquerade under the title of "Reverend" should be imprisoned for fraud, especially that pestilent section of them which professes to cure "self abuse." Any newspaper which inserts advertisements of these remedies should be compelled to hand over any profits over and above expenses to an asylum for idiots, and anyone who sends filthy pamphlets through the post which are dropped into letter-boxes should upon conviction be imprisoned and his whole stock confiscated. Those desirous of joining the league are requested to apply to the Secretary, Anti-quackery League, Savoy House, Strand, London. The minimum subscription is 2*s.* 6*d.* a year.

THE IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION: THE FESTIVAL DINNER.

THE Festival dinner of this association was held at the Café Monico on the evening of St. Patrick's day, the 17th inst., when Professor Alexander Macalister, F.R.S., Professor of Anatomy at Cambridge University, presided over an enthusiastic gathering of upwards of 200, including several ladies. Among the guests were Lord Lister, Sir John Gorst, M.P., Professor Jebb, M.P., and Sir Ambrose Shea, K.C.M.G. The toast of "The Services" was proposed in eloquent terms by Mr. George Stoker, and replied to by Sir James Dick, K.C.B., and Surgeon-Major-General Taylor, C.B. Dr. Cagney proposed "The Guests," to which toast Lord Lister, Sir John Gorst, and Sir Ambrose Shea replied. Professor Clifford Allbutt proposed the toast of "Prosperity to the Irish Medical Schools and Graduates' Association," to which the chairman responded. The speeches were alternated by songs of a national character, and the vocalists were enthusiastically applauded. It was the opinion of all present that a very enjoyable evening had been spent and that hearty thanks were due to Mr. O'Callaghan and Dr. Cagney, the organisers of the meeting.

THE LOCAL OR GENERAL REJECTION OF DISEASED MEAT.

WE are glad to see that the Portsmouth magistrates by a decision given the other day in police-court proceedings do not intend to countenance the idea that if part of a beast is infected with, and rejected on account of, disease other parts may be freely sold and eaten for human food. A butcher was charged with exposing for sale a tongue, heart, two pieces of liver, half a head, and two pieces of suet, all of which were unfit for food. Further, it was alleged he had in preparation for sale two sides and three skirts of beef unfit for food. The inspector said that they were diseased with tuberculosis, and the whole was condemned and destroyed. All the glands were diseased and the deposits could be seen with the naked eye. The defence was based on some parts of the report of the recent Royal Commission, in which it was said to be stated that if meat in which tuberculosis was found was properly treated much of it would be fit for food. It was admitted that this cow was a little "grapy"—which, it was explained, was a butcher's term for this disease—but it was argued that if the "grapy" parts had been removed the flesh would be fit for food, and one witness said he would not be backward in eating it himself. This point the magistrates settled by fining defendant £11 and £1 2*s.* costs. Another point, that the law only allowed an urban sanitary authority to appoint

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one sanitary inspector and that the town council had no power to appoint assistants—the inspector in this case was one of the latter—the bench settled on the common-sense argument that with but one officer they did not see how large cities and towns could be adequately protected.

MRS. PEMBERTON, the widow of Mr. Oliver Pemberton, F.R.C.S., the coroner for Birmingham, did not long survive her husband. He died on Sunday, March 7th, and Mrs. Pemberton died on the following Saturday. She was seventy years of age, and the only daughter of Daniel Whittle Harvey, M.P., the first Chief Commissioner of the City of London Police, and a man of considerable political importance. We offer our sincere condolences to the family upon their double bereavement.

THE Queen has granted unto Mr. Harry Maule Crookshank, F.R.C.S. Edin., Her Majesty's Royal licence and authority to accept and wear the Insignia of the Imperial Order of the Osmanieh of the second class, in recognition of his services while actually and entirely employed beyond Her Majesty's Dominions in the Khedive's service as Inspector-General of Egyptian Prisons.

A PUBLIC meeting to promote the National Jenner Memorial will be held in the theatre of the University of London, Burlington House, on Wednesday, March 31st, at 4 P.M. His Grace the Duke of Westminster will preside. Among the speakers will be Lord Herschell, Lord Playfair, Lord Lister, and Professor Michael Foster.

THE Queen has been pleased, on the recommendation of the Secretary for Scotland, to appoint Sir Henry Duncan Littlejohn, LL.D., M.D. Edin., to the Chair of Forensic Medicine in the University of Edinburgh, in the room of Sir Douglas Maclagan, LL.D.Glasg., M.D. Edin., resigned.

THE discussion on Retro-ocular Neuritis begun at the meeting of the Ophthalmological Society on Thursday, the 11th inst., will be continued at an adjourned meeting of the society to be held on Wednesday, March 24th, at 8.30 P.M.

PROFESSOR E. VON BERGMANN, Berlin; Professor Felix Guyon, Paris; Sir W. Hales Hingston, Montreal; and Dr. T. G. Roddick, Montreal, have been elected Honorary Fellows of the Medical Society of London.

MR. WELLINGTON LAKE, medical officer of health of the Guildford and Woking districts of West Surrey, has been appointed deputy-coroner for West Surrey.

BIRMINGHAM GENERAL DISPENSARY.—The annual meeting of the Birmingham General Dispensary was held on Feb. 24th, Alderman G. J. Johnson presiding. The report showed that the total number of patients admitted during the year by ticket was 35,098, an increase of 2324 on the previous year. The total income for the year was £7662. A new branch was opened at Small Heath last year, making the fifth branch which had been added to the parent institution during its hundred years of existence.

ROYAL NATIONAL PENSION FUND FOR NURSES.—The annual meeting of the members of the Royal National Pension Fund for Nurses was held on March 11th at the offices, 28, Finsbury-pavement, E.C., Mr. W. H. Burns, the chairman, presiding. The report showed that over eight hundred nurses had joined the fund during 1896, and the invested funds had risen from £256,600 to £311,200. Sick pay amounting to £1158 had been distributed. The Junius S. Morgan Benevolent Fund had now been brought up to £16,000 by donations received partly from nurses and partly from members of Mr. Morgan's family.

The Lancet Special Commission ON THE METROPOLITAN WATER-SUPPLY.

V.[1]

THE SOUTHWARK AND VAUXHALL WATERWORK COMPANY.

History.

FOR a long time the supply of water to the district south of the Thames was even more unsatisfactory than that to the north of the river. The district is a low-lying one, with surface water which is not good, and the inhabitants were, comparatively speaking, poor. In the year 1767 a lease of the fifth arch (from the north and the second from the south) of London Bridge was granted by the Lord Mayor and Corporation of the City, that water-wheels might be put up for the supply of South London, and the work was carried out by the London Bridge Waterworks Company. Southwark was also partly supplied by works from a pond in St. Mary Overie. Neither of these businesses, however, was in a flourishing state at the time of the destruction of London Bridge. They were carried on in rivalry, and pipes from both supplied the same streets. A considerable outlay had been necessary to place the water-supply in an efficient state. A private individual named Edwards bought the Borough works at St. Mary Overie in 1820, and in 1822 he purchased the London Bridge works from the New River Company. He united them in one business, called the Southwark Waterworks, erected steam-engines, and gradually substituted iron pipes for the wooden ones that had been previously used. A change was also made in the method of taking water. Up to that time it had been obtained from a point near the shore; a large iron main was now carried to the middle of the river, and the mouth of the conduit which conveyed it to the wells was covered with a perforated semi-spherical iron cap. The intake was 8 ft. below low-water mark and an iron grating was put at the end of the conduit next the engine well. Before being distributed the water passed through another wire interceptor, but no other method of purification was adopted and there was no reservoir. To obtain the necessary pressure for the delivery of water it was pumped to a cistern which was raised about 60 ft. from the ground and was capable of holding 300 or 400 barrels of water. The engine power was sufficient to raise 4,000,000 gallons a day. The amount of water supplied was only about 1,500,000 gallons and the number of houses supplied was about 7000, and amongst the customers were the great hospitals of the Borough: Guy's and St. Thomas's. The mains extended for a distance of about two miles from the works.

Up to the year 1804 South London was supplied by the Southwark Company, of which an account has just been given, and the Lambeth Company, and the water was sent directly from the Thames to the houses without being kept in a reservoir or undergoing any purification except that of passing through a wire screen. In the year 1805 a number of persons united to form a new company, and an Act of Parliament was obtained in July that year. The amount of money originally raised was insufficient to carry out the work required, and another Act was obtained in 1813 to increase the capital, but the Company had to borrow exchequer bills in 1823. At the early part of its career the Company lost a good deal of money by adopting wooden pipes for the distribution of water, for it was soon found that it was necessary to substitute iron pipes for those which had been put down. The principal station of the Company was near Vauxhall at the south side of Kennington Common. The company was unfortunate also in the selection of their steam-engines. Those first supplied were too small. In 1822 one of 45-horse power was erected and this was capable of pumping the water to a height of 65 ft. above the level of the reservoirs. A little later another engine

[1] Nos. I., II., III., and IV. were published in THE LANCET of Feb. 20th, 27th, and March 6th and 13th, 1897, respectively.

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was put up at Cumberland-gardens, near Vauxhall Bridge, to pump the water to Kennington-lane. The water flowed from the river through an iron tunnel 42 in. in diameter. The intake was placed in the stream as far as the third arch of Vauxhall Bridge and at a level of 6 ft. below low water mark. The station at Kennington-common had an area of about five acres and two reservoirs were erected there. Both were lined with bricks and had sloping sides. During spring tides the water flowed from the Thames to the reservoirs and filled them to a level of 6 ft. but they could only be completely filled by pumping. When full one of the reservoirs was capable of holding 2,000,000 gallons of water and the other rather less. A few years later a third reservoir was erected to receive water from the Thames through an iron tunnel 4 ft. in diameter which had already been put down. From the new reservoir water percolated through a filtering bank made of gravel and sand and passed into another reservoir, where it remained for some time before going to the engine well. The second reservoir was several feet lower than the other and was used for keeping the mains full during the night in case of fires. The total capacity of the reservoirs in 1835 amounted to 6,000,000 gallons. The Company were able to supply water to a height of 70 feet above the level of their reservoirs. At this date they supplied about 10,000 houses, and their Act allowed them to supply parts of Lambeth, Newington, Bermondsey, Rotherhithe, Deptford, Camberwell, and Clapham. They were prevented from laying down pipes to any houses within one and a half miles of the Lambeth works. The Lambeth Company, however, were allowed to lay down pipes within 200 yards of the reservoirs of the South London Company. "Thus," as a contemporary writer points out, "restraints were imposed upon one concern and a privilege conferred upon another not in strict accordance with the primary object of legislation, which ought rather to aim at promotion to benefit the security of the community." The restraints to which reference has been made were done away with by an Act passed in 1834. The new Act made it necessary also for both Companies to supply filtered water.

In the year 1845 the Vauxhall Company united with the Southwark and became the Southwark and Vauxhall Water Company. Land was immediately bought at Battersea, so that all the work might be carried on from one station. Water was taken from the Thames at Battersea, subsiding reservoirs and filter beds were constructed, and pumping engines and a stand-pipe were erected. In 1851 it was decided to change the source of the supply from Battersea to Hampton, and an Act was obtained for this purpose in 1852. Reservoirs were made at Hampton, and the necessary plant was put up to pump the water to Battersea. The pumping arrangements at Battersea were altered and new filter beds constructed there. In 1856 additional pumping power was arranged for at Battersea, and in 1862 another engine was put up at Hampton. In 1866 additional works were made at Hampton—a river wall was built, a subsiding reservoir and three filter beds were constructed, and the pumping power was increased. A new main was made to Wandsworth. In 1871 four covered service reservoirs were commenced at Peckham. Of these reservoirs two were 168 feet and the other two 200 feet above ordnance datum. Engines were also erected at Peckham. In 1881 a deep well was commenced at Streatham. In 1884 an arrangement was made for obtaining water from the gravel beds at Hampton. In 1886 additional new engines were put up at Hampton, and an Act was passed to allow the Company to put up a high service reservoir at Forest-hill and for laying a new main between Hampton and Nunhead. In 1891 the pumping station at Wandsworth was erected for the supply of Forest-hill and that district.

Present State: General Description.

The Southwark and Vauxhall Company supplies Petersham and a district skirting the south bank of the Thames from Kew to Rotherhithe, including Mortlake, Barnes, Putney, Roehampton, part of Wimbledon, Wandsworth, Battersea, part of Clapham, Lambeth, Kennington, Newington, Walworth, Camberwell, Bermondsey, and part of Dulwich.

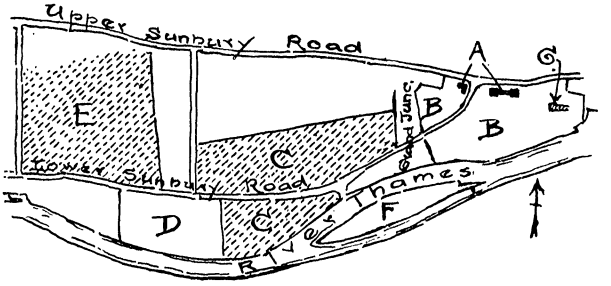
The sources of supply are: (1) the Thames at Hampton; (2) gravel beds near the Thames at Hampton and Platt's Eyot; and (3) a deep well at Streatham.

The stations of the Company, indicated upon the map, are six in number: A. Hampton and Sunbury, Middlesex, and Platt's Eyot, Surrey (Intake, gravel water collecting grounds, reservoir, filter-beds, and pumping station). B. Wandsworth (pumping station). C Battersea (reservoirs, filter-beds, pumping station. D. Streatham (deep well, pumping station). E. Forest-hill (reservoir). F. Nunhead (reservoir, pumping station).

A deep well is being sunk at Merton Abbey and trial boring operations are in progress at Raynes Park. The sites of these operations are marked on the Map G and H respectively.

Hampton.—The station at Hampton is situated between the Upper Sunbury-road and the River Thames, almost entirely in the parish of Hampton; there is, however, a small piece at the east end of the property in the parish of Sunbury, and an island called Platt's Eyot in the River Thames, and this belongs to the county of Surrey. Extensive changes are now being made at this station, and it may be best to give first a general description of what is going on, which will be realised most easily by referring to the accompanying plan (Fig. 1). The parts which are not

FIG. 1.

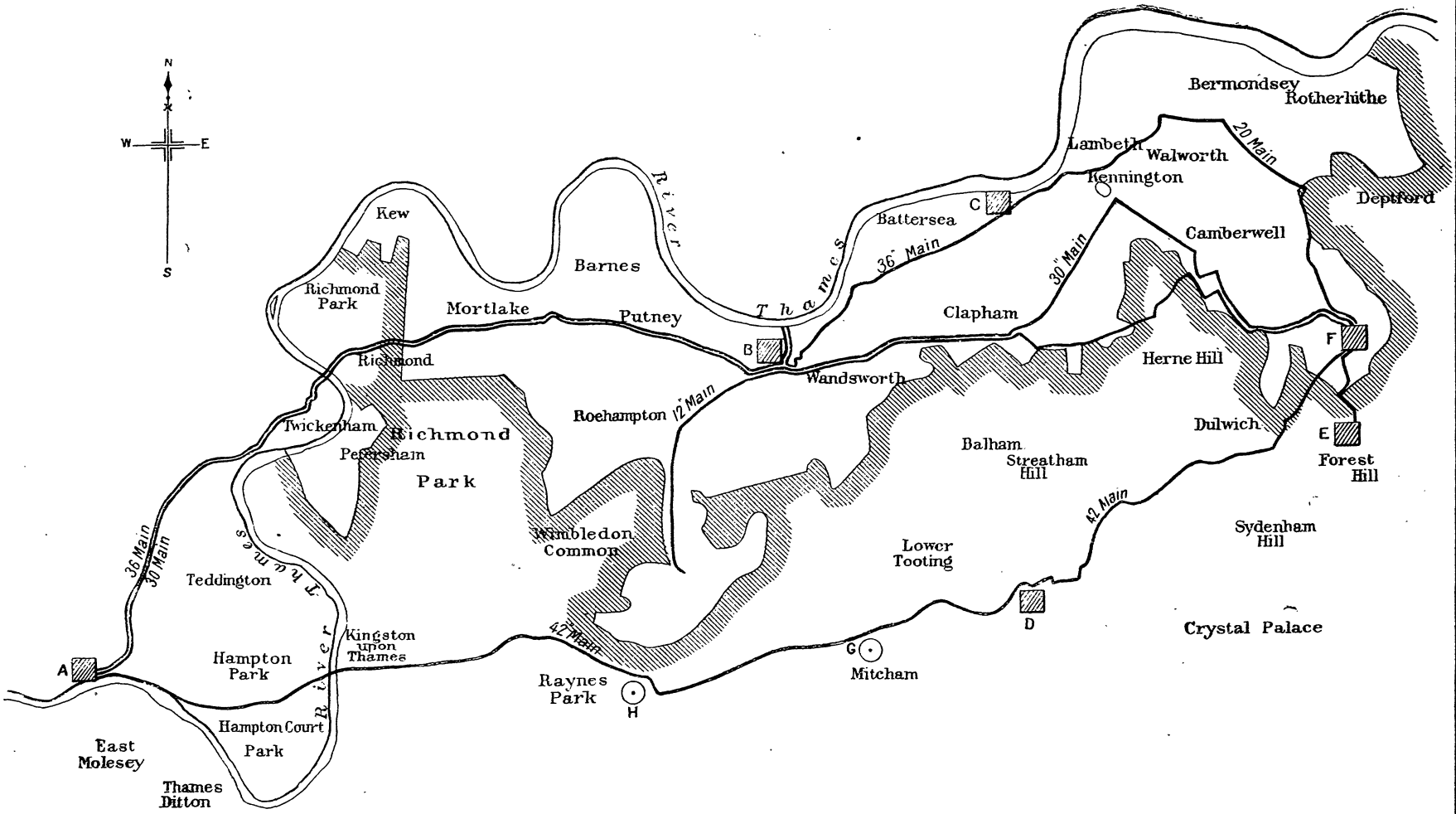


General plan of the Company's Station at Hampton, Middlesex. A, G, Engine houses. B, Filter beds. C, Land from which water is collected from the gravel beds. D, E, Reservoirs. F, Platt's Eyot.

undergoing any changes are the engine houses marked AA, and the filter beds marked BB, some of which are situated to the north and some to the south of the Lower Sunbury-road. The land immediately to the west of the existing filter beds belongs to the Grand Junction Company, and on going further in a westerly direction down the Lower Sunbury-road the next part belonging to the company, marked C C, is land from which water is collected from the gravel beds. The system adopted here will be described later. At present it is sufficient to point out that part of this collecting ground is situated to the north and part to the south of the Lower Sunbury-road, and that extensive changes are taking place in both these areas. The part to the north of the road is to be used for new filter beds and a reservoir, the part to the south of the road for filter beds. Going still to the west along the Lower Sunbury-road it is seen that the Company have a reservoir to the south of the road, marked D; and farther on to the north of the road two extensive reservoirs, marked E, are in course of construction. Platt's Eyot, marked F, from which water is collected from the ballast, will not be affected by the changes now in progress. At the extreme east of the Company's property a new engine house is in course of construction, and the site of this is marked G in the plan. The parts of the Hampton station in which work is now being carried on are marked with shading in the diagram, C, C, E, and this brief description and a glance at the map will show that active operations are being carried on at the present time.

Water from the gravel beds.—The part of the station at Hampton which is devoted to collecting water from the gravel beds occupies two fields, one to the north, and one to the south of the Lower Sunbury-road, and the greater part of Platt's Eyot, (see Fig. 2). The area of the two fields is about thirty-two acres, and that of the island rather over seven acres. Water was formerly admitted from the Thames to the fields through a vertical gravel filter, sections of which are shown in the diagram (see Figs. 3 and 4). The ballast was thus filled with water by means of earthenware pipes which are laid with open joints. The diagram (Fig. 2) shows the way in which these pipes are arranged. Water thus artificially introduced into the gravel bed from the Thames, after passing through about 50 ft. of gravel and sand, is collected by a system of 24-in. pipes, which are laid with open joints at a level of some feet lower than that of the distributing pipes and just on the surface of the

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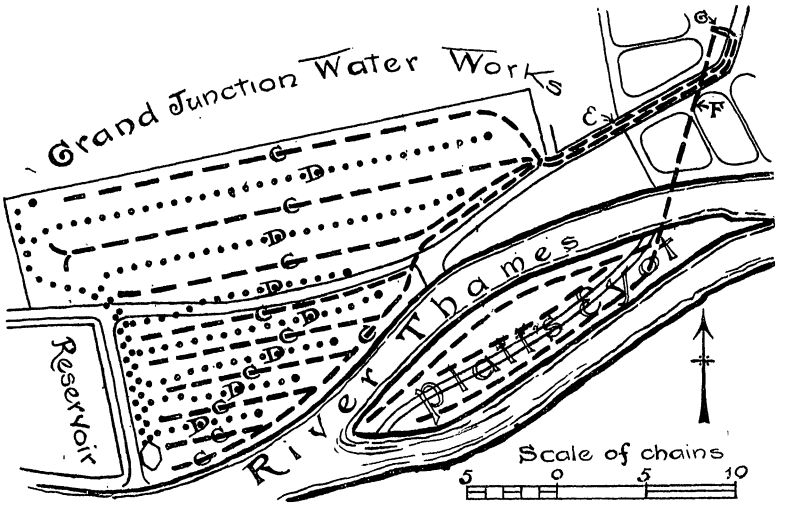


THE SOUTHWARK AND VAUXHALL WATERWORKS COMPANY.

The shaded outline with the lower bank of the river define the area supplied by the Company. The six stations are marked with a shaded square. The construction works for two wells are indicated by small circles drawn round a central dot. A, Hampton and Sunbury (Middlesex) and Platt's Eyot (Surrey) Intake, Reservoir, Filter Beds and Pumping Station. (For details see Figures.) B, Wandsworth Pumping Station. C, Battersea Reservoirs, Filter Beds, and Pumping Station. D, Streatham Deep Well and Pumping Station. E, Forest-hill Reservoir. F, Nunhead Reservoir and Pumping Station. G, Deep Well in course of construction at Merton Abbey. H, Site of Boring Operations at Raynes Park.

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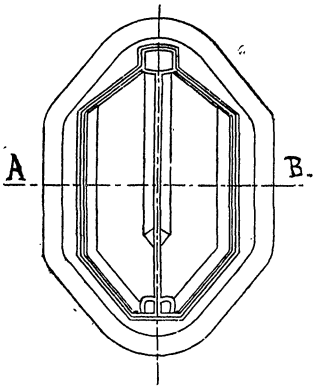
FIG. 2.



Plan showing arrangement of the collecting pipes (C) and the distributing pipes (D) on the Hampton gravel beds.

London clay. The distribution of the collecting pipes is shown in the map. It will be seen that they all converge to one point. Here there is a well. The water is conveyed thence through two 36-in. conduits to an engine house and then pumped up 14 ft. to the filter beds. The accompanying

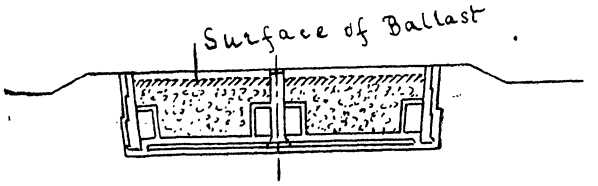
FIG. 3.



Horizontal section of the vertical gravel filter through which water was admitted to charge the ballast in the collecting ground.

diagram shows in vertical section the arrangement of the distributing and collecting pipes (see Fig. 5). The upper pipes, marked D in the drawing, are the distributing pipes; those marked C, which are on the surface of the clay, are the collecting pipes. The arrangements for flooding the ballast are now in course of removal.

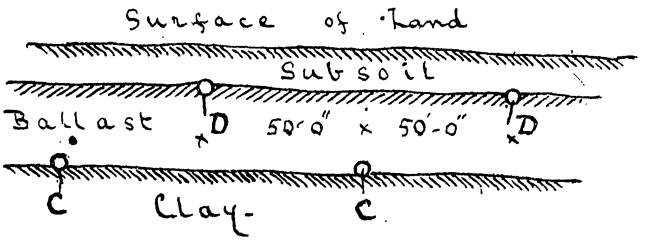
FIG. 4.



Vertical section of vertical gravel filter in the previous figure through A B.

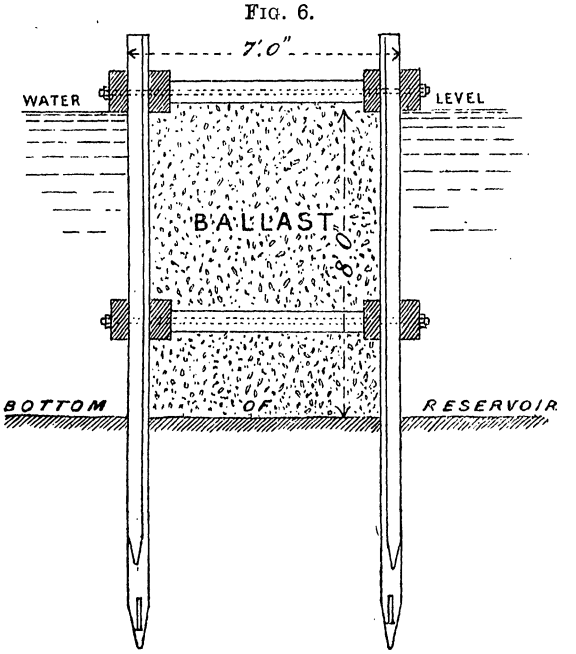
Platt's Eyot.—There is a cutting from near one end of the island to the other, and through this the water from the Thames flows. The flow of the water is regulated by gates situated at each end of the cutting. The island itself is formed chiefly of gravel, and in the gravel beds collecting pipes similar to those which are used on the mainland are placed. These collecting pipes are situated about 9 feet below the ordinary level of the Thames; the river water has therefore to pass through several feet of ballast before it gets

FIG. 5.



Vertical section showing arrangement of distributing pipes (D) and collecting pipes (C) on the Hampton gravel beds.

FIG. 6.



Vertical section of filtering screen formerly used at Hampton.

into the collecting pipe. From these pipes water is conducted through a tunnel 5 ft. in diameter which passes under the Thames to the engine well, from which it is pumped to

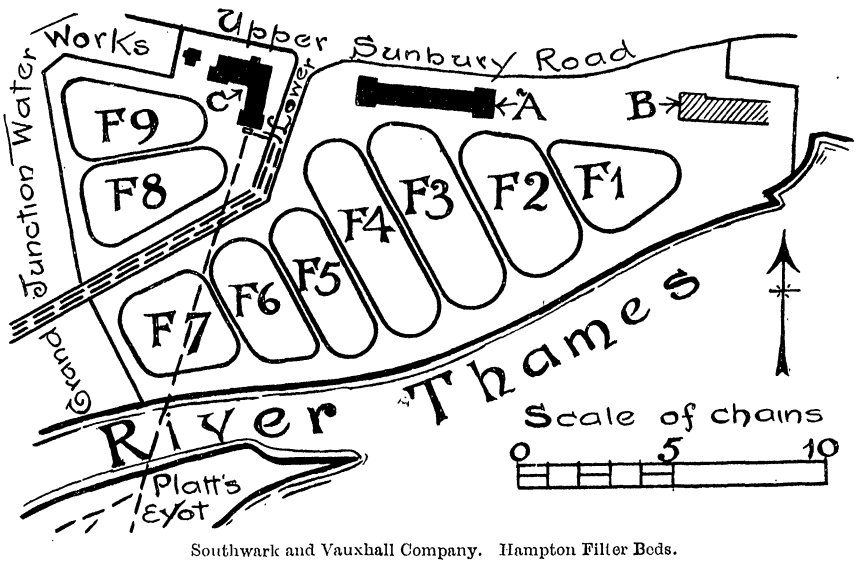
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the filter beds. When the Thames is in high flood, water is not pumped from the island.

Intakes from the Thames.—There are three intakes from the Thames: (1) the new intake, used for the first time last summer to fill the new reservoir; (2) the middle intake; and (3) the old intake, situated near the filter bed marked 7.

At the new intake there are three bays. The water passes through a screen which is formed of ¾ in. bars, and through three sluices into an irregular octagonal reservoir. When visited on Dec. 9th, work was in progress here. A new engine house was completed and one engine was erected, and a second was in process of being erected. The engine

FIG. 7.



Southwark and Vauxhall Company. Hampton Filter Beds.

in working order is a triple-expansion high-speed engine, driving centrifugal pumps, the indicated horse power being 160; the steam is generated by four water-tube high-pressure boilers. The new reservoir, which was first filled during the summer of 1896, has a capacity of 90,000,000 gallons. It is faced with bricks and concrete. When visited on Dec. 9th water from this reservoir was being drawn for the supply of the filters. The Thames was in flood and turbid.

From the second or middle intake the water is conveyed through a 36-in. conduit, and passes through a vertical iron screen similar to that at the new intake. The water is then admitted to the filter beds. At the old intake there are six bays, and the water passes through a screen which is formed of ¾-in. bars, and is then conducted through three 36-in. pipes to the filter beds. A vertical filtering screen (Fig. 6), of which a drawing is given, was formerly in use at Hampton. This system was found to be unsatisfactory, chiefly from the fact that the work of cleaning it involved much trouble, because it entailed moving and replacing the whole of the ballast.

Filter beds.—There are nine filter beds at Hampton. Of these two are to the north and the others to the south-west of the Lower Sunbury-road and close to the Thames. The total area occupied by the filter beds is nine acres. They were not all made at the same date and are not constructed in exactly the same way. Their general form will be seen by looking at the accompanying diagram (Fig. 7). The earliest filters are those numbered 2, 3, 4; these were made in the years 1868–9. The sides of these beds are not vertical, but are arranged at a slope of 1½ : 1. The newer filter beds have almost vertical sides. There is one other point of difference. In the older beds the filtered water channels have central upright ventilators, in the case of the newer beds the ventilation is carried out by means of shafts situated at the sides of the beds. All the filters have central channels for the collection of the filtered water, which passes into them through agricultural tiles. The sand is cleansed by washing under high pressure.

(To be continued.)

ANNUAL REPORT FOR 1895 OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

FIRST NOTICE.

MR. SHIRLEY MURPHY has recently issued his annual report as medical officer of health to the London County Council. The present volume, which relates to the year 1895, makes the fourth of the series that was commenced in 1892; it extends to 134 folio pages, and is arranged on the same general plan as were its three predecessors.

Having regard to the high degree of importance attaching to an authoritative treatise on the public health of the metropolis, we have devoted more than ordinary attention to the volume before us. The work is thoroughly well done and will fully sustain the high reputation of the author. Comparing the present report with the first of the series we are impressed with the amount and elaborateness of statistical detail with which its pages abound, not less than with the evidence it affords of steady improvement in the practical sanitary work achieved by the local boards since the establishment of a coördinating central authority. Like that of its predecessors, the subject matter of the present report is divided into two sections—the first dealing with statistics and the second with sanitary administration.

The London Census which was taken last March showed that the population of the administrative county has not been increasing since 1891 quite so rapidly as it had done between 1881 and 1890. Estimated on the assumption that the rate of increase has been constant since 1891 the population of the administrative county of London in the middle of 1895 is believed to have numbered 4,402,284, or 11,217 less than it would have been had the rate of increase obtaining between 1881 and 1890 prevailed since the latter date. In thirteen of the London sanitary districts there has been a decrease of population since 1891, whilst an increase has taken place in the remaining districts. In only twelve of the latter districts, however, was the increase greater than the excess of births over deaths in the five years 1891–95.

The London death-rate in 1895 is given as 19·9 per 1000, which becomes 21·2 on correction for age and sex constitution of the population. Applying the same principle of correction to the sanitary areas of London it is shown in a useful table that if the death-rate of London as a whole be taken as 1000 the rates of twenty-four of the sanitary districts exceeded that rate whilst the remainder were in defect of it. Comparing the London death-rate at all ages in the five years 1891–5 with that of the previous decade, there was a decrease equal to 3 per cent. among males and 2 per cent.

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among females. A table is given showing the fluctuations of mortality in these two periods at the several periods of life. Examination of this table shows that the fall in the death-rate at all ages is mainly due to a decrease at ages under forty-five years, for the death-rate of both males and females above that age has for some reason increased. Pursuing the subject further, Mr. Shirley Murphy shows by another table that within the last five years there has been a mean annual saving of 1304 lives, and that this represents 85,519 years of "life capital" annually saved to the community. The actual gain is therefore greater than would appear from the number of lives saved, and this is evident from the great saving of life at the earlier ages which is shown by the table

Turning now to that portion of the report which deals with the prevalence of common infectious diseases it is at once apparent that by the passing of the Diseases Notification Act the sanitary authorities of the metropolis have acquired more effective powers for grappling with these diseases, especially in relation to the attendance of children at school. Statistics are rapidly accumulating with respect, not to mortality alone, but what is infinitely more important, to sickness also, from these diseases in London, and Mr. Shirley Murphy is to be congratulated on the lucid manner in which he presents these statistics in his successive annual reports. The question of small-pox *mortality* in London during 1895 has been already noticed in connexion with the Registrar-General's annual summary; Mr. Shirley Murphy, however, furnishes particulars of the incidence of *attacks* by this disease in the course of the year. It appears that from the beginning of 1895 to its close not a single week passed in which one or more cases of small-pox did not occur. Towards the end of June the attacks rapidly increased in number, and from that period until the middle of October fears were entertained lest this disease should become epidemic in London. The eastern parts of the metropolis were specially affected, the disease being communicated by tramps, and spreading to neighbouring places from Whitechapel, which suffered more severely than other sanitary areas. In connexion with the subject of small-pox prevalence in London the Medical Officer of Health again draws attention to the large increase in the number of children appearing in the vaccination returns as "not finally accounted for" in recent years. In 1893, the latest year for which returns are available, the proportion so returned was equal to 18·2 per cent. of the total births. "The neglect of vaccination in London in recent years," says Mr. Shirley Murphy, "appears to be already manifesting itself by an increase in the proportion which deaths of children from small-pox bear to deaths from this disease at all ages."

The mortality from measles was rather below the decennial average in London as a whole. The eastern districts suffered more severely than the others from this disease, but the highest mortality occurred in St. Luke's sanitary area, the adjoining areas of Holborn and Clerkenwell also suffering severely.

Scarlet fever was somewhat more prevalent in 1895 than it had been in the previous year, although from the case fatality it may be gathered that the type of disease was milder In the present, as also in previous reports, a diagram has been inserted showing the relationship of school attendance to scarlet fever prevalence. The diagram for 1895 shows a marked diminution of scarlet fever incidence in the month of August, which corresponds with the summer holiday. The curve shows a fall in the week immediately following the commencement of the holidays and a rise in the week immediately succeeding their termination. In this respect the statistics of 1895 appear to confirm those of recent previous years as regards the County of London, at any rate. In proportion to population the eastern districts of London suffered more severely than other districts in 1895 in respect both of the number of attacks and of the number of deaths. The outbreak of scarlet fever in Islington in the course of the year was caused by an infected milk-supply, which gave rise to as many as 125 cases in that district alone.

The incidence of diphtheria sickness in the County of London during 1895 corresponded exactly with that of the previous year, but was less than that of 1893. Judged by the "case fatality," however, the type of the disease seems to have been milder in 1895 than in either of the two preceding years. The question of how far this reduction in case fatality may be related to the more frequent use of antitoxic serum in 1895 in the treatment of diphtheria is discussed by Mr. Shirley Murphy in the text, and interesting statistics are given bearing upon this relationship.

As in the case of scarlet fever, a diagram is inserted showing the distribution of diphtheria attacks in the several weeks of the year. From this diagram it appears that there was a considerable diminution in diphtheria prevalence in the holiday month of August corresponding exactly with the diminution in the attacks by scarlet fever. As in some previous years, the diminished prevalence among children under three years of age occurs somewhat later than among children of school age, suggesting, in Mr. Shirley Murphy's opinion, that the decrease among infants resulted from diminished opportunity of infection from older children. The heaviest incidence of this disease was upon the eastern districts of London generally, but the district of Greenwich had the highest case-rate during the year. In proportion to population the incidence of sickness from enteric fever in 1895 did not differ greatly from the average in the previous four years. In this year, as in the previous decade, the eastern group of districts had the highest death-rates from enteric fever and the western districts the lowest. An unusually heavy incidence of the disease was experienced at Plumstead, where as many as 215 cases were reported, giving an attack-rate of 3·7 per 1000.

The mortality from phthisis in the administrative county of London was heavier in 1895 than in the preceding year. The rates of mortality from this disease ranged from 1 55 in the western group of sanitary areas to 2 05 in the eastern group and 2 65 in the central. The lowest rates were 0 87 in Lewisham, and the highest 3·28 in St. Saviour's Southwark and 3 31 in St. Giles's.

THE INTERNATIONAL SANITARY CONFERENCE.

FROM Venice, under date March 13th, our Special Correspondent writes:—

The regulations of arrivals from ports on the Persian Gulf engaged the attention of the Conference for several sittings, and the following measures were discussed and approved:—

A ship arriving from one of these ports and certified as infected must immediately disembark its patients, who will at once be isolated. The other passengers will also have to land and subject themselves to surveillance for a period not exceeding ten days. Soiled linen and articles in personal use will be disinfected, as also the ship itself in that part or parts of it deemed necessary by the authorities.

Suspected ships—those, that is to say, which have had cases of the "pestis" on board, but have had no fresh case for twelve days—will undergo a medical visit. The linen, the wearing apparel, and such like which the authorities may pronounce contaminated will be disinfected. The passengers and the crew will be subjected to a ten days' surveillance. The bilge water will be emptied out, the hold and ballast disinfected, and good potable water supplied.

Immunised ships will have free course, provided always that they have completed ten whole days since their departure from the last infected port, otherwise they will have to remain under surveillance until the expiry of this period. All the same, the authorities at the port of arrival will have it in their power to prescribe and enforce the measures adopted for suspected ships. In applying these measures in circumstances as they arise the authorities, however, will have to make allowance for the presence on board of a medical man provided with disinfecting apparatus, since, as already stated, in such cases the measures taken will be less vigorous.

Special measures will be authorised for adoption in regard to certain ships, especially those conveying pilgrims, and, indeed, for all others found in bad hygienic condition. Ships declining to undergo the measures prescribed by the authorities will have it in their power to put back to sea. Their passengers, however, will have the right to demand disembarkation provided that they submit to the measures prescribed by the authorities of the port at which they want to land.

The Conference next resolved upon the construction of two hygienic establishments in the Persian Gulf—one in the district of Ormuz or in the Island of Ormuz, or in that of Kishm; and the other in the neighbourhood of Bassora, at a suitable point to be subsequently agreed upon. Each of these establishments will be fully equipped with a medical staff, with sanitary officers and warders, with disinfecting

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apparatus, and with hospitals on a small scale. They will further possess commodious "lazzaretti," while all the ships before entering the Persian Gulf will have to undergo the discipline of the establishment and submit to the regulations prescribed. Such ships, however, as have not been "cleared" from surveillance and which have to re-ascend the Chat-el-Arab, will be authorised to continue their voyage; but only on condition that they take on board the sanitary warders, who will hold them under surveillance as far as Bassora for the second medical visit and for the prescribed disinfections.

Those ships which have to disembark goods or passengers at the Persian ports will have to do so at Bender-Bushire, when there has been constructed there a suitable hygienic station. Pending this they will have to do it at Ormuz or at Bassora.

However, such ships as have been immunised for ten days will have in each case free course into all the ports of the Persian Gulf, after their state of immunisation has been officially confirmed.

A NEW AND MODEL CONVALESCENT HOME FOR WORKMEN.

THE Rustington Convalescent Home for Working Men will be inaugurated to-day (Saturday). This in many respects is a model institution. It is situated on the beach, close to Littlehampton, faces the sea, and is well exposed to the sea breezes. Built of red brick with a green slate roof and a copper-covered domed clock-tower, it stands out boldly and has a monumental aspect when viewed from the Littlehampton sea parade. No expense has been spared. The instructions to the architect and builder were to err on the side of extravagance rather than on the side of parsimony. The principle governing the plans executed is that in the long run money will be saved, because the solidity of the materials employed and the soundness of the workmanship will obviate the necessity of constant repairs. Though there are no elaborate art decorations, the excellence of the materials and their æsthetic colours rest and please the eye. For instance, glazed bricks are extensively utilised. These are cream white and olive-green, while the wood is so hard that no paint is required. There are no less than seventeen rooms which contain but one bed each. Ten rooms contain two beds each, and only two rooms hold four beds. This provision for forty-five patients could be raised to sixty if the rooms now allotted to the servants were utilised for the patients. Every effort will be made to make the patients feel thoroughly at home, instead of being treated as if they were paupers in receipt of charity who have to be kept well in hand by the enforcement of stern discipline. On the contrary, all the attendants have received instructions to treat the patients as if they were guests. The engine-house is to be thrown open to inspection, and every information given that may instruct or interest the inmates of the home. There is no knowing to what extent kindness of this description may awaken a dormant thirst for higher knowledge, and how far, by satisfying the mind and intelligence, a convalescence may be hastened to a happy issue. Thus on the ground-floor there is a large entertainment hall, where lectures and concerts can be given. Then there are a smoking-room and a reading-room, and bagatelle and other games. There is also a "quiet room," where patients may rest undisturbed on sofas, and need not when exhausted go to their bedrooms. The grounds comprise about nine acres, with a sea frontage of 575 feet, and at the back there is a small pinery, where in summer the shade of these fragrant trees can be fully enjoyed. Numerous seats, some in sheltered positions, and an outhouse for smokers afford the means of rest while taking gentle exercise, and this without quitting the premises. In one corner of the building, and communicating with the gardens, there are lavatories and a boot-room, where the patients can put on their slippers before entering the main building.

The home throughout is lighted by electricity and all the services are worked by electric power. A separate building contains the boiler, dynamo, and engines, and everything is in duplicate so that there shall be no breakdown. Above the engines there is a model power laundry with all the most recent machinery. Windows on both sides admit ample ventilation and light, while powerful Boyle extractors will draw the air and damp out through the roof. A screw propeller fan, worked by electricity, supplies hot air to the drying chamber. It is a pity that similar air propellers have not been placed within the home itself. The care taken to ensure ventilation is more elaborate than scientific. The corridors are warmed by hot-water coils, and apertures above the doors enable the warmed air from the corridors to enter the rooms. On the opposite side, by the outer wall, there is at least one Tobin tube and in the large rooms several such tubes. Every room also has an open-grate fireplace, and above the fireplace an opening, protected by mica valves, which serves to extract the foul air. Thus when both windows and doors are shut there still remains ample means of ventilation; but this ventilation must of necessity depend on the force and direction of the wind, on the difference of the in-door and out-door temperature—in a word, on varying climatic conditions. It will, therefore, be too violent at some moments and insufficient at others. This is inevitable in all buildings excepting those that are provided with motive power. With power, however, the supply of air can be regulated with mathematical precision. It then depends on the velocity of the revolving fans, and not on the force of the wind and the fluctuations of the temperature. At the home power is employed to pump the fresh and the salt water into the tanks, to raise the lifts, to work the machinery in the laundry, and even to pump hot air into the drying chamber; but, strange to say, it is not employed for ventilation.

Hot and cold and salt and fresh water baths are provided on every floor. The outer walls are of double thickness with a two-inch vacant space, or "air blanket" between each wall. The window frames have a weather dip of two and a half inches and an oak sill. The urinals have a curled lip all the way down both sides. This is Mr. Bostel's patent, and it prevents splashing and keeps the clothes away. Above there is an automatic flush tank, and below an automatic syphon. The soil pipes have inlet and outlet ventilators protected by charcoal, and there is a very elaborate flushing of the closet pans. The fresh-water supply is derived from an artesian well fifty-five feet deep. This water is softened by Maignen's process and then pumped to the top of the building, where the fresh-water tanks can hold 3000 gallons. Here there is a very ingenious apparatus for automatically setting the electric pump in motion. As the water level in the tanks falls the floater acts upon a brass tube balanced on the wall of the tank loft. When the tube is so pressed down as to reverse the level a steel ball, which is inside and at the other extremity of the tube, runs down, and its weight causes this tubular brass rod to fall with violence, so that it strikes the electric apparatus with sufficient and sudden force to establish the current and set the electric pump in motion. When the tanks are full pressure on the other side of the tube reverses the action, and the tube, swinging back to its original position, stops the pump. Thus, by the automatic see-saw of this brass rod the tanks are re-filled as soon as they become empty. This apparatus is known as Bostel's automatic lever switch, and we had the satisfaction of seeing it work very effectively.

Altogether we were most favourably impressed by our visit to this new convalescent home, and are convinced that its future inmates will greatly benefit from their sojourn in an institution which is so admirably built and situated. The scheme was originated by Mr. Thomas Noblett, who had recognised the great difficulty encountered by workmen and others in gaining admission to convalescent homes. A workman may be ordered to the seaside by his medical attendant, but often he has not the means to pay for lodgings, &c. He may then obtain a list of subscribers to existing homes, and apply vaguely to one and the other. No answers are received, and much time is lost. Mr. Noblett therefore helped to organise the North-West London Convalescent Home Fund and placed himself in communication with the clergy, the medical men, the missionaries, and the benefit sick clubs of his district, so that knowledge of deserving cases might be obtained and the patients sent to convalescent homes without any loss of time. From the very first Mr. Noblett obtained generous support from Mr. Henry Harben of Hampstead, and finally Mr. Harben decided to erect at his own expense the home we have just described. The cost has exceeded £50,000, and to this Mr. Harben will add an endowment of £20,000. This generous initiative will, it is to be hoped, be strengthened by public subscription, a guinea subscription entitling to one letter of recommendation.

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Patients, also, unless absolutely destitute, will be expected to pay at least 5*s*. a week.

MIDWIVES REGISTRATION BILL.

A MEETING in support of the Midwives Registration Bill was held at 73, Chester-square, on March 10th, Lady Balfour of Burleigh, president of the Central Association for Promoting Compulsory Registration of Midwives, being in the chair. Lady Balfour opened the proceedings with a few remarks, after which Mr. Heywood Johnstone, M.P., in the course of a speech said that a committee of the House of Commons took a considerable amount of evidence on this subject in 1892 and 1893, and presented an absolutely unanimous report in favour of a measure of this kind. The present Bill does not prevent anyone resorting to the assistance of a friendly neighbour, no matter how unqualified for the special purpose. What it says is that every person who calls in the aid of a midwife shall have some security, if she wishes, that she is employing one who is competent to undertake the case. It further provides for the creation of a board having a large preponderance of medical practitioners, which board is to draw up certain rules, and among them rules for assigning due limits to the practice of registered midwives; so there is no reason to fear that the practice of medical men will be encroached upon.

Dr. CULLINGWORTH then addressed the meeting, his remarks being substantially as follows:—"An appalling amount of illness is inflicted upon the women of the poorer classes in consequence of the attendance given them during their confinements by ill-trained and ignorant persons who assume the title of midwife. A few evenings ago, when delivering my inaugural address as President of the Obstetrical Society of London, I had occasion to state that although improvements in obstetric science have largely reduced the mortality among parturient women wherever they are applied, yet the general mortality from puerperal fever either remains where it was, as is the case in London, or is actually on the increase, as is the case in the provinces of England and Wales. It prevails most where there is a scattered and mining population, or where, as in the mountainous parts of Wales, the attendance of medical men is rendered extremely difficult, and the care of the mothers is in the hands of untrained midwives. In addition to this mortality there is also a very large amount of disease among women of the working classes wholly due to mismanagement during their confinements. Another very serious matter is that the most usual cause of blindness is infantile ophthalmia, a preventable disease which would not occur in the practice of a conscientious midwife possessed of the most elementary training. The Obstetrical Society of London has long been of opinion that women who call themselves midwives should be required to have some knowledge of the duties which they undertake, and also that a certain amount of supervision should be exercised over them. For many years the society urged upon the Legislature the need for dealing with this question, and in 1872 instituted their examination in midwifery as a temporary expedient until a satisfactory measure should be passed. I was examiner at the Obstetrical Society for some years, and can bear witness that women who have undergone even three months' training have been able to attain that kind of elementary practical knowledge which we consider essential. The clause regarding control is one of the most important in the Bill; it is suggested that in each sanitary district the medical officer of health is the proper person to undertake the duties of local supervision, and in the event of his being unwilling to act the county council may select some other practitioner for the work. I am extremely glad to be here to show that the medical profession is not, as a whole, opposed to this measure. In my opinion, objections to the Bill on the ground of interference with the medical profession are founded upon a fallacy. I have no desire to see my profession suffer, and I honestly believe that this measure will not have such an effect."

Mrs. HEYWOOD JOHNSTONE having read the rules of the West Sussex Association and said that the present meeting was intended to inauguarate that branch, made a short speech in favour of the Bill, after which the proceedings terminated.

THE MEDICAL DEFENCE UNION.

THE annual general meeting of the Medical Defence Union, Limited, was held on Feb. 25th, in the rooms of the Medical Society, 11, Chandos-street, Mr. Victor Horsley, F.R.S., the President, being in the chair.

The report of the council upon the work of the union during 1896 showed some excellent results; not only were the applications made by members for aid, advice, and assistance increased in number, but the value of the union is evidently becoming more understood by the profession generally and more appreciated by the members themselves. The legal work during the past year has been exceedingly heavy and the expenditure has been proportionally higher, notwithstanding the fact that the legal adviser of the union has in many cases succeeded in obtaining payment of the costs from his opponents. In addition to the gratifying amount of success in the law courts, there is good reason for believing that the mere fact of its being known that the union was about to take action greatly facilitated the obtaining of apologies for, and retractations of, various slanders made against individual members. The council is strongly of opinion that nothing short of an amendment to the Medical Act, 1858, making it penal for any person to practise any branch of medicine or surgery for gain without being registered, will succeed in effectually checking unqualified practitioners. When offenders are brought before the law courts it is found that decisions directly opposed to each other are given in cases which appear to be quite similar. In London the council obtained a conviction against an individual who practised under the name of John Ferdinand, M.D. U.S.A., but in another part of the country a prosecution of a like kind was unsuccessful, and on an appeal being made to the High Court the Judges of the appellate Court supported the magistrate who had refused to convict. The council of the union has under its consideration a draft Bill on the subject, and will probably, in conjunction with the British Medical Association, lay it before the Government next year in the hope that it may be adopted as a Government measure. The negotiations for amalgamation with the London and Counties Medical Protection Society were apparently on the point of being brought to a successful termination when they were broken off in consequence of a difference of opinion as to the title of the new association. It is stated that the Medical Defence Union desired to add to its title the words "with which is amalgamated the London and Counties Medical Protection Society, Limited," and that this arrangement was refused by the council of the latter society, who insisted that their proposed name should be adhered to and that the title should be registered.

The council publishes a list of ninety-seven cases, in which with very few exceptions the result of the action taken by the union was highly satisfactory. The solicitor also contributes a supplementary report, in which he mentions that during the year upwards of 150 separate cases had been legally advised upon and conducted by him upon the instructions of the union. On Dec. 31st the union had 3832 names of members on its register, 351 having been added during the year just closed. The offices are at 20, King William-street, Strand, W.C.

THE PLAGUE IN INDIA.

THE reports from India are, on the whole, more hopeful and promising, those from Bombay city showing a decided improvement. The Plague Committee are working systematically and well, and there is on all sides a good deal of energy displayed in dealing with the disease and in the hygienic improvement of matters generally. There is no concealment or official reticence about the work that is being done; on the contrary, everything is open to the inspection of foreign medical missions and visitors from foreign countries. The officials afford any information in their power, and their arrangements can be ascertained by anyone who cares to take the trouble. The total plague returns for Bombay city up to the 11th inst. (according to Reuter's telegraphic agency) amount to 9032 cases and 7546 deaths.

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The week's mortality from all causes in Bombay was 1326, as compared with 1484 in the previous week; and the returns for the whole Presidency since the outbreak of the plague up to the 6th inst. amount to 14,856 cases and 12,204 deaths.

The Secretary of State for India has received an official telegram from the Governor of Bombay of a decidedly satisfactory character. The Plague Committee in Bombay, says Lord Sandhurst, are working well and successfully. In spite of the opposition of the natives to the organisation of hospital work, the cases in Bandra, Coorla, and the Thana district have diminished in number. The number of persons who have been inoculated is not precisely known, but it is not less than 2790. The result of Dr. Yersin's treatment is not yet stated.

It will be remembered that many persons were disposed to think that there was some connexion between the outbreak of plague and the storage of grain, and Surgeon-Colonel Waters some time ago gave an interesting account of his researches into the origin of plague, in which he adverted to the rat murrain that had been noticed in several of the outbreaks of bubonic disease and to the plausible hypothesis that the disease might be connected with something affecting the granaries and the storage of the cheaper varieties of grain and millet. Mr. Hankin reports, however, that he has examined a large number of specimens of grain and flour under various conditions, but has been unable to detect the plague microbe in any of them, and that his examination of weevils and of other parasitic insects has also been with negative results. M. Haffkine has been busily occupied in developing a prophylactic and antitoxic serum. It is yet too early to pronounce any opinion on their efficacy, but the antitoxic curative serum has already been tried in many cases of plague in the Arthur-road Infectious Disease Hospital, Bombay, and in the Byculla gaol with, so far, promising results. Dr. Yersin, who was one of the first observers of the plague microbe in China in 1894, and who has worked on the subject in that country and subsequently at the Pasteur Institute in Paris, has prepared a stock of antitoxic serum, and we shall soon know whether the results obtained in India are confirmatory of those which Dr. Yersin and others obtained in China. Dr. Yersin's presence in Bombay is attributable to some extent to Lord Lister's influence and to the highly favourable opinion he had formed of the antitoxin treatment of plague.

CONVESAZIONE AT ST. GEORGE'S HOSPITAL.

A VERY largely attended conversazione organised by the staff of St. George's Hospital was held in the medical school on March 13th. The guests were received by the senior physician (Dr. Cavafy), the senior surgeon (Mr. Pick), and the dean (Dr. Isambard Owen). In the museum and the newly opened laboratories were a number of most interesting exhibits, and in the dean's room a collection of school records, including a number of relics of John Hunter, various letters from him, and his ticket of admission as a student. In the museum there were a number of recently added specimens prepared by the formalin method, described by Kanthack and Shaw at the Pathological Society on Nov. 3rd, 1896, which retained their colour, we had almost said, in a life-like fashion. These specimens were prepared and exhibited by Dr. Cyril Ogle. Dr. Patrick Manson showed a very complete series of slides illustrating the life-history of the malaria parasite, the same slides from which the drawings were taken to illustrate Dr. Manson's Goulstonian Lecture delivered before the Royal College of Physicians of London and published in THE LANCET of March 14th, 21st, and 28th, 1896.

Mr. Clinton Dent showed an interesting collection of skiagraphs in the small lecture theatre, and Mr. Adams Frost gave a lantern demonstration of ophthalmoscopic appearances, while in the large theatre Mr. Gardner gave a demonstration of liquid oxygen, and at another period of the evening, with the assistance of Mr. Cockburn, showed a number of experiments at low temperatures. In the new physiological laboratories Dr. Buckmaster and his assistants were in charge of various physiological and anatomical exhibits. Two specially noteworthy were the circulation of the blood in the yelk sac of the embryo trout, where, owing to the absence of any elastic tissue, the blood circulated in jerks corresponding to every beat of the heart, instead of, as in the frog's web, running regularly, and a micro-spectroscopic demonstration of the power of cilia to reduce hæmoglobin, thus illustrating cell respiration. Among the anatomical specimens were some most exquisite sections of the minute anatomy of the nervous system, especially some preparations of Purkinje's cells. In the bacteriological laboratories Dr. Slater and Dr. Fison showed various methods of bacteriological investigation, together with the methods of serum diagnosis employed by Widal and others. Excellent lantern demonstrations were provided, and the micro-photographic work of Mr. E. J. Spitta was much admired; while in the pathological laboratory Dr. Rolleston exhibited sundry rare pathological conditions illustrated by microscopic sections. Among them were an implantation cyst, sections of a sarcoma before and after the injection of Coley's fluid, and a series of adenomata from various parts of the body.

In the lower physiological laboratory Dr. Buckmaster showed a number of experiments illustrating the fatigue of muscle and nerve. This laboratory is fitted with all the newest appliances, and the recording drums, &c., are driven by a small water motor.

In the department of anatomy Mr. G. R. Turner showed a very beautiful series of specimens illustrating the development of the osseous system in the fœtus, the specimens of the vertebral column being most notable. The house physicians and surgeons were indefatigable in conducting numerous parties of visitors over the new operating theatres, built by Mr. Percy Adams upon the most modern principles, but they were so fully described in our issue of Jan. 23rd last that there is no need to say any more about them here. Along with all these intellectual delights the weaknesses of our nature were provided for by refreshments and tobacco, and entertainment on a higher plane was provided by the Hemming Quartet, who played in the corridor. Mr. Turner and the other demonstrators are entitled to our gratitude for their courtesy and kindness in showing everything there was to be seen and for the trouble they took in explaining the various exhibits.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on March 11th, the President, Sir WILLIAM MACCORMAC, being in the chair.

The Secretary reported the death of Mr. Oliver Pemberton, member of the Council, and a resolution was carried unanimously in which the Council recorded "their deep regret at the death of Mr. Oliver Pemberton, whom they highly esteemed as an able colleague, keenly interested in the welfare of the College and the advancement of surgical science, and in all the relations of life upright, honourable, and true," and expressed "their very sincere sympathy with Mrs. Pemberton and her family in their great affliction."[1]

Mr. William H. Bennett and Mr. W. Johnson Walsham were elected members of the Court of Examiners, and Mr. Davies-Colley was elected a member of the Board of Examiners in Dental Surgery.

The best thanks of the Council were given to Mr. Christopher Heath for his Hunterian Oration, and he was requested to publish it.

A letter was read from Mr. J. H. Targett resigning his appointment as pathological curator. The resignation was accepted, but Mr. Targett was requested to continue his services for the present. It was referred to the museum committee to take steps for the appointment of a successor to Mr. Targett.

A requisition was received, signed by thirty Members of the College, for a meeting of Members to discuss resolutions relating to the following points: (1) the result and validity of the recent poll of the Fellows; (2) a proposal urging the Council to take a similar poll of the Members on the question of the representation of the Members on the Council; (3) the validity of the present mode of appointment of the

[1] We note with very great regret that Mrs. Pemberton herself died two days subsequently.—ED. L.

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representative of the College on the General Medical Council; and (4) the refusal of the Council to carry out the by-laws in the case of Mr. R. B. Anderson. The Council resolved that the following reply should be sent: "The Council do not consider it desirable to summon a meeting of the Members for the objects specified in the requisition."

An address of condolence was received from the Obstetrical and Gynæcological Society of Berlin on the death of Sir T. Spencer Wells, Bart., past President of the College. It was resolved that the society should be informed that the Council gratefully appreciated their kind expression of sympathy.

A letter was read from the President of the Royal Society asking whether the College would support the following resolution adopted at a meeting of Presidents of scientific societies in London convened to consider whether any, and if so what, steps should be taken to commemorate the sixtieth year of Her Majesty's reign, viz.:—"That a fund to be called the Victoria Research Fund be established, to be administered by representatives of the various scientific societies, for the encouragement of research in all branches of science." The matter was referred to the President and the Vice-presidents to reply in sympathy with the objects proposed.

The President took the sense of the Council as to the propriety of the College taking some steps to celebrate the sixtieth year of Her Majesty's reign. It was resolved to send an address of congratulation, and it was referred to the President and Vice-presidents to consider and report as to a suitable method of celebrating the event.

A letter was read from Dr. R. R. Rentoul, calling attention to Clause 5 of the Midwives Registration Bill, and pointing out objections to it. A letter was also read from the Midwives Bill Committee, forwarding a copy of the Bill which has been introduced into the House of Commons, and expressing the hope that the Bill will meet with the approval of the College. These letters were acknowledged.

A report was read from Mr. Walter Rivington respecting his action as a representative of the College on the Civil Rights Defence Committee.

A letter was read from the Sanitary Institute inviting the College to send two delegates to the Congress of the Institute, which will be held at Leeds in September next. Mr. Jessop and Mr. Mayo Robson were appointed delegates.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Chesterfield Urban District.—This district possesses a temporary hospital for the isolation of small-pox, but it has as yet no accommodation for ordinary infectious diseases. A site, however, has been procured, and Dr. Meredith Richards advises that one of the hospital committees of the Derbyshire County Council be approached with the view to a sort of joint scheme whereby the interests of the borough and part of the county may be simultaneously served. The Chesterfield Council refuse to supply disinfectants to the public for the purpose of "propitiating the germs" by exposing small quantities about an infected house; this procedure Dr. Richards points out is not of sufficient importance to be carried out at the expense of the town. The infantile mortality of Chesterfield during 1896 was 167 per 1000 births, and with a view of reducing this heavy toll efforts are being made to procure the services of a skilled nurse, who shall visit houses in which births have taken place and offer hints as to the preparation of infant food, &c.

St. Neots Urban and Rural Districts.—Mr. Poyntz Wright is strongly in favour of notification of measles in order that scholars from invaded houses may be excluded from school and, if necessary, the schools closed. In this matter of school closure Mr. Wright observes that although the children cannot be prevented from mixing together out of doors there can be no comparison between the risk of infection out of doors and that incurred in the vitiated atmosphere of a school with infected children therein. Mr. Wright also draws attention to the serious risks which are run by young children who are compelled to attend school in inclement weather, more especially so in rural districts, where long distances have often to be traversed, and where consequently the opportunities of getting wet are very considerable. In the urban district the Notification Act has been adopted, but apparently the council have declined to fix a date when the provisions of the Act are to come into operation. Surely the council should extricate themselves from this ludicrous position. In the report upon the Caxton and Arrington rural district, which is bound up in the same volume as that relative to St. Neots, Mr. Wright records an instance in which six friends dined together at a restaurant in Oxford-street, eating, amongst other things, oysters. A few hours after dinner all six were seized with cramps, vomiting, and purging, and six days later one of the six was notified as suffering from enteric fever. It is stated that the evidence pointed to the oysters as the cause of the mischief, and there is no doubt that many cases of severe gastric disturbances have at times followed the consumption of oysters, especially when such oysters have been procured from sources liable to pollution. As to the source of the enteric fever in the case above referred to, it can only be stated that six days is a somewhat short period for the development, recognition, and notification of this disease.

West Hartlepool Urban District.—Dr. S. Gourley reports in reference to infantile mortality that in cases where the evidence points to improper feeding as the cause of illness much good may be effected by threatening to refuse a certificate if the case should end fatally. He also observes that in West Hartlepool there is a remarkable coincidence to be noted in the association of bad feeding and insured lives, more especially in connexion with such insurance societies as pay more than the amount of the funeral fees and expenses. We read with interest in connexion with the public abattoirs of this district that during 1896 twenty-one beasts were seized and condemned for extensive tuberculosis. Six pigs and two sheep were also condemned as unfit for food. No settlement has, it appears, yet been come to in the matter of compensation for condemned beasts purchased in good faith.

Poole Urban District.—The provisions of the Notification Act in respect to dual notification are still well carried out in Poole, and Dr. Herbert Lawton tells us that during 1896 there were but eight instances in which the householder or nearest relative failed to notify to the medical officer of health. In referring to small-pox and the measures taken to control the disease Dr. Lawton observes, "I at once gave instruction to the public vaccinator to re-vaccinate." Surely Dr. Lawton is here somewhat anticipating the control which sanitary authorities may soon have over the machinery of vaccination.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6679 births and 3919 deaths were registered during the week ending March 13th. The annual rate of mortality in these towns, which had been 19·4 and 18·1 per 1000 in the two preceding weeks, rose again last week to 18·6. In London the rate was 18·4 per 1000, while it averaged 18·8 in the thirty-two provincial towns. The lowest rates in these towns were 12·2 in Newcastle-upon-Tyne, 12·8 in Huddersfield, 13·8 in Burnley, and 15·1 in West Ham; the highest rates were 23·3 in Liverpool, 24·5 in Bristol, 25·2 in Salford, and 25·3 in Bolton. The 3919 deaths included 334 which were referred to the principal zymotic diseases, against 378 and 331 in the two preceding weeks; of these, 83 resulted from whooping-cough, 79 from measles, 72 from diphtheria, 39 from diarrhœa, 38 from scarlet fever, 22 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded in Norwich or in Newcastle-upon-Tyne; in the other towns they caused the lowest death-rates in Brighton, Burnley, and Hull, and the highest rates in Liverpool, Manchester, Salford, and Bolton. The greatest mortality from measles occurred in Cardiff, Manchester, Salford, and Bolton; and from whooping-cough in Swansea, Leicester, Sunderland, Manchester, and Nottingham. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 72 deaths from diphtheria included 53 in London, 4 in Liverpool, and 3 in Birmingham. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three towns. There were 30 small-pox patients under

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treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 13th inst., against 34, 43, and 43 at the end of the three preceding weeks; no new case was admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2685, against 2901, 2817, and 2746 on the three preceding Saturdays; 218 new cases were admitted during the week, against 227, 237, and 211 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 368 and 307 in the two preceding weeks, rose again to 344 last week, but were as many as 230 below the corrected average. The causes of 44, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Cardiff, Leicester, Salford, Leeds, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Swansea, Birmingham, Liverpool, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the four preceding weeks from 28·8 to 24·9 per 1000, further fell to 23·1 during the week ending March 13th, but exceeded by 4·5 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 17·8 in Greenock and 18·2 in Paisley, to 24·6 in Dundee and 25·7 in Glasgow. The 690 deaths in these towns included 29 which were referred to whooping-cough, 27 to measles, 14 to diarrhœa, 5 to scarlet fever, 4 to diphtheria, and 4 to "fever." In all, 83 deaths resulted from these principal zymotic diseases, against 86 and 96 in the two preceding weeks. These 83 deaths were equal to an annual rate of 2·8 per 1000, which was 1·2 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 32 and 36 in the two preceding weeks, declined again to 29 last week, of which 17 were recorded in Glasgow and 12 in Edinburgh. The deaths referred to measles, which had been 30 in each of the two preceding weeks, were 27 last week, of which 19 occurred in Glasgow and 7 in Edinburgh. The 5 fatal cases of scarlet fever corresponded with the number in the preceding week, and included 2 in Edinburgh. The 4 deaths from diphtheria also corresponded with the number in the preceding week, and included 2 in Glasgow, where 3 of the 4 fatal cases of "fever" were also registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 231 and 203 in the two preceding weeks, further declined to 152 last week, but were 46 above the number in the corresponding period of last year. The causes of 36, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 37·6 and 45·2 per 1000 in the two preceding weeks, declined again to 39·1 during the week ending March 13th. During the past ten weeks of the current quarter the death-rate in the city has averaged 40·7 per 1000, the rate during the same period being 18·6 in London and 22·4 in Edinburgh. The 262 deaths registered in Dublin during the week under notice showed a decline of 41 from the number in the preceding week, and included 61 which were referred to the principal zymotic diseases, against 55 and 79 in the two preceding weeks; of these, 43 resulted from measles, 9 from whooping-cough, 5 from diarrhœa, 2 from scarlet fever, 1 from diphtheria, and 1 from "fever." These 61 deaths were equal to an annual rate of 9·1 per 1000, the zymotic death-rate during the same period being 1·5 in London and 4·3 in Edinburgh. The fatal cases of measles, which had been 34 and 44 in the two preceding weeks, were 43 last week. The deaths referred to whooping-cough, which had been 12 and 21 in the two preceding weeks, declined again to 9 last week. The mortality from scarlet fever and from "fever" was below that recorded in the preceding week. The 262 deaths in Dublin last week included 43 of infants under one year of age, and 55 of persons aged upwards of sixty years; the deaths of infants were below those recorded in any recent week, while the deaths of elderly persons showed an increase. Five inquest cases and 5 deaths from violence were registered; and 70, or more than a fourth, of the deaths occurred in public institutions. The causes of 19, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR COATES embarks for Bombay, Surgeon-Major Boyd is to take Medical Charge of the troops at Armagh, and Surgeon-Major Carmichael proceeds to Cork for duty. Surgeon-Major Westcotte has been ordered to Dublin for duty. Surgeon-Major J. Tidbury has proceeded to the Southern District for duty, and Surgeon-Major Flood to the Belfast District.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain A. J. Heath (Bombay) are placed permanently at the disposal of the Government of Bombay. The services of the under-mentioned officers (Madras) are placed temporarily at the disposal of the Chief Commissioner of the Central Provinces for employment in famine and plague duty:—Surgeon-Lieutenants H. St. J. Fraser, M. Mathew, and F. L. Hammond. Surgeon-Colonel W. P. Warburton, Bengal Establishment, Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, is granted the temporary rank of Surgeon-Major-General whilst officiating as Director-General, Indian Medical Service, and Sanitary Commissioner with the Government of India, during the absence on deputation of Surgeon-Major-General J. Cleghorn. Brigade-Surgeon-Lieutenant-Colonel T. H. Hendley, C.I.E., Indian Medical Service, Bengal Establishment, Residency Surgeon, Jeypore, and Administrative Medical Officer, Rajputana, is granted the temporary rank of Surgeon-Colonel whilst officiating as Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, vice Surgeon-Colonel W. P. Warburton, appointed to officiate as Director-General, Indian Medical Service and Sanitary Commissioner with the Government of India. 2nd Bombay Lancers: Surgeon-Captain Jackson, officiating in Medical Charge, 5th Bombay Infantry, to the Medical Charge, vice Surgeon-Major Lyons, transferred permanently to the Civil Department. 5th Bombay Light Infantry: Surgeon-Lieutenant Kukday to the Officiating Medical Charge, vice Surgeon-Captain Jackson, appointed to the Medical Charge of the 2nd Bombay Lancers. Surgeon-Major Kirkpatrick, A.M.S., on arrival from England, has been posted to the Mhow District, and Surgeon-Major Culling, A.M.S., has been posted to the Bombay District. Brigade-Surgeon-Lieutenant-Colonel Salaman, Bombay Establishment, Superintendent Yerrowda Central Gaol, and Surgeon-Major Donald Frederick Dymott, Madras Establishment, 22nd Regiment of Madras Infantry, retire from the service.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Fleet-Surgeon M. F. Ryan to the *Howe*; Staff-Surgeon C. James to the *Eclipse*. Surgeons: Michael J. Smith to the *Jason*; A. X. Lavertine to the *Theseus*; R. Hardie to the *Eclipse*; C. G. Matthew to Chatham Hospital; and James P. Willis to the *Black Prince*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain A. A. Watson has been appointed Surgeon-Major.

VOLUNTEER CORPS.

Royal Engineers: 2nd Lancashire (The St. Helens): Surgeon-Lieutenant R. Jackson has been appointed Surgeon-Captain.

THE DONGOLA EXPEDITION.

We learn from Lord Cromer's report that the cost of Sir Herbert Kitchener's expedition to Dongola, including the money spent on railway and telegraph construction and on the purchase of gunboats, was £E715,066. His lordship gives a list of the details *seriatim*, but the only items which especially concern medical administration are "Medicines £E2498," and "Hospital rations £E797." The latter sum seems inadequate, but doubtless it was supplemented from other sources. Taking into consideration the magnitude of

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the operations, the cholera outbreak, and the unavoidably heavy outlay on transport (coal alone runs away with £E37,895), it is clear, as Lord Cromer says, that a very effective control must have been exercised over the expenditure, more particularly as "there is no reason whatever to suppose that efficiency was in any way sacrificed for the sake of economy." The re-occupation of the province of Dongola has rendered the following additions to the Egyptian Army necessary: Three battalions of infantry, two squadrons of cavalry, a battery of artillery, and two companies of camel corps. This will of course lead to a considerable strengthening of the medical staff under Director General Gallwey, for in addition to military requirements the medical needs of the civil population of the re-conquered territory have to be provided for. The total losses of all kinds incurred by the Egyptian Army during the recent campaign are thus stated by Lord Cromer: Killed in action, 47; wounded, 122; died from cholera, 235; died from other diseases, 126. These figures refer to all ranks. Exclusive of cholera the sick-rate among the Soudanese and Egyptian troops was 3 per cent. In conclusion his lordship observes: "These statistics speak well for the general health of the force during an exceptionally severe summer. There can be no doubt that the Egyptian troops possess great powers of endurance and a remarkable capacity for hard and continuous work."

HEALTH OF THE BRITISH TROOPS IN INDIA.

Writing to the *Times* under date March 16th Colonel W. T. Dooner, replying to Captain Pirie, who suggests that the minimum age at which British soldiers are allowed to be sent to India should be raised by one or two years, says it is an error to suppose that the step suggested could be adopted without great difficulty and expense. Even under existing regulations—the *minimum* official age, as it may be called, being twenty—considerable difficulties frequently arise in finding the men for the necessary drafts. Were Captain Pirie's proposal adopted and the *minimum* age raised to twenty-two almost all men embarking for India would do so with only three years' unexpired colour-service. Instead of having to send out some 13,000 or 14,000 men per annum, we should have to send abroad yearly some 24,000, of course bringing back about a similar number. This would involve largely augmenting our trooping service, and a considerably increased charge to Indian funds and to the Army Estimates would be the result. If, however, our soldiers were treated as reasonable beings, and allowed after three years' service to draw their so-called deferred pay with their ordinary pay, it is possible, and highly probable, that a sufficient number of them would extend their colour-service to nine or ten years. The proposal would then be practicable.

FRENCH NAVAL STATISTICS.

The medical statistics of the French Navy are in future to be furnished according to a new system, which is fully explained in an article occupying the greater part of the *Archives de Médecine Navale et Coloniale* for February. In December, 1894, a new nomenclature of diseases was promulgated by the authorities, in which the various affections and accidents to which seafaring mankind is liable are set forth in seventeen sections under 275 heads. This document is to be strictly adhered to, the results being incorporated annually on a series of forms of which reduced specimens are given by our contemporary. Broadly speaking, the statistics referring to sailors and marines are to be kept separate, and reservists are not to be mixed up with men who are in their first period of service. The medical officer in charge of each unit is to supply information on six different forms, and also to send in a report of medical transactions somewhat similar to that in vogue with us. The information from hospitals is to be conveyed on four forms only, including one devoted to operations. For troops stationed in France the statistics should as far as possible refer to regiments or groups of battalions, but in the colonies it is of more importance to ascertain facts regarding stations.

TREATMENT OF PHLEGMONS.

According to a Russian military surgeon, Dr. Gueorguievsky, it is possible to disperse phlegmons and dry up purulent accumulations by the application of compresses steeped in a 2 per cent. solution of chemically pure bicarbonate of soda. The compresses, covered by some impermeable material, should be retained *in situ* under moderate pressure. The writer maintains that his method is vastly superior to all others, acting both rapidly and unfailingly. It is certainly a simple method enough, and as it cannot well do any harm may perhaps be worth a trial.

The Queen has granted Surgeon-Major Frederick Samuel Heuston, Army Medical Staff, authority to wear the insignia of the Imperial Order of the Double Dragon of the Third Class (third rank) which the Emperor of China has conferred upon him in recognition of his services to the wounded during the late war between China and Japan.

Correspondence.

"Audi alteram partem."

HOSPITAL ABUSE: THE LEEDS WORKPEOPLE'S HOSPITAL FUND.

To the Editors of THE LANCET.

SIRS,—May I be allowed to enter an energetic and emphatic protest against the misinterpretation to which my report on hospital abuse at Leeds has been subjected. An attempt has been made to twist what I wrote so that it should appear as if I thought that the workmen who subscribe to the Leeds Workpeople's Hospital Fund acquired by virtue of these subscriptions a right to be treated at the Leeds Infirmary; and, further, that it would be a good thing if this hospital were converted into a huge provident club. I meant and said nothing of the sort. On the contrary, I said the proposal to convert the infirmary into a provident club would be met "by the immediate resignation of the entire medical staff." Further, I stated that "it is denied that the workmen subscribers to the Workpeople's Hospital Fund have acquired the right to be treated at the infirmary," and this same assertion I repeat on two other occasions but in different phraseology. I quite agree with Dr. Eddison's remark, made at the recent annual meeting of subscribers, &c., of the infirmary, that "working people subscribed for the same reason as other people did—out of the kindness of their hearts and because they wanted to help." Such was the original motive that led to the creation of this fund; such, I hope, is still the motive of the majority of the subscribers. But it was not my mission to advocate any particular course of action or set of principles. I had to collect information without regard as to whether such information was agreeable or disagreeable to any particular party. Now the principal feature that disguished Leeds from the other towns I had visited was the admirable organisation, the power, and wealth of the Workpeople's Hospital Fund, and the fact that dissatisfaction existed which might lead to very serious consequences. One of the principal organisers of this fund met me with the assertion that "we were on the eve of a revolution." Surely it was my duty to describe the causes that gave rise to the existence in high quarters of such apprehensions.

An attempt has been made to deny the accuracy of the description I thus gave, which, it seems to me, tends, on the contrary, to confirm what I wrote. At the annual meeting of the Leeds Infirmary Mr. R. Benson Jowitt, treasurer and chairman of the board, is reported by the *Yorkshire Post* to have said that "he denied entirely that the demands from the Workpeople's Hospital Fund for rights—for value for their payments, for admission into the out-patients' room by virtue of their subscriptions—he denied that such existed except to the most limited extent." I described these demands, and it is now admitted that they do exist, but only "to the most limited extent." It would seem, however, that Mr. Jowitt was not satisfied with this sentence, for he immediately went on to qualify it in such a manner as would convey the impression that the demand was not, after all, so very limited. He said: "It was a danger they had thought of, spoken against, and guarded against from the onset. The meetings in connexion with the fund had *up to the last four or five months* been loyal, generous, and satisfactory, but since then there had been unwise and unguarded statements which had *caused such an article* to be written in THE LANCET which had done an *immense amount of harm*, and had given him and everyone connected with the infirmary a great deal of trouble. None of them desired to have any difficulty or rupture with the Workpeople's Hospital Fund, and yet to some people the

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strain was becoming intolerable." The italics are mine; they serve to show that recently there have been difficulties of such a nature as to cause such an article as that which I had written and that the demands, far from being of "a most limited extent," had given rise to an immense amount of harm and produced a strain that was becoming intolerable. I fail to find anything in my report on the subject stronger or even as strong as this. The *Leeds Express* of March 11th, in a leader on Mr. Benson Jowitt's speech, confirms my view, for it holds that "there is no smoke without fire, and THE LANCET Commissioner did not evolve from his own imagination the complaints he set forth. Nor can it be overlooked that two of the Workpeople's Hospital Fund representatives on the infirmary board intimated, in speaking to resolutions adopted yesterday, that members of their fund had expressed dissatisfaction as to certain matters." The same paper adds: "It would be idle to deny, however, that the impression that people well able to pay for proper medical treatment have utilised the resources of the infirmary has caused considerable heartburnings among working-men subscribers. They do not begrudge the sums they contribute—sums which, though small, represent a certain amount of self-sacrifice; nor do they claim special and exceptional privileges. But they resent the idea that people far better able to contribute than themselves enjoy advantages of the institution without cost; while in some cases workmen who subscribe (even on a small scale) have not received quite the consideration or courtesy, as they think, that is desirable."

This is precisely one of the most important points I attempted to bring forward. I was dealing with hospital abuse. If there were no abuse the workmen subscribers would have no excuse for claiming rights. But it is natural that subscribers should complain if they are refused admission to the infirmary, when others who do not subscribe and are as well or better off than themselves are admitted. It is wrong of subscribers to claim the right of admission, but this wrong arises naturally out of another and greater wrong, the toleration of hospital abuse. Then it was also natural that, finding such abuse would not or could not be abolished, the suggestion should have gone forth of converting the infirmary into a provident club. I did not approve of this idea, but I recorded the fact that it existed. It would be a means of equalising conditions and of compelling those who do not subscribe to subscribe. Though there is a great deal to say against such a proposal it does seem to me quite natural that under actual circumstances it should have been made; but again I repeat that I did not mean to support in any way this solution of the difficulty. The *Yorkshire Post*, however, in its leader of March 11th, denies that help has been refused at the infirmary to those who pay in a regular and systematic manner, while it is freely given to those who do not pay at all, and declares that "such a state of affairs does not exist." I was told, on the contrary, that there had been a considerable amount of discussion concerning, for instance, the case of a very active committee-man of the Workpeople's Hospital Fund. In consequence of a fall this person suffered from some internal injury. His club doctor failed to effect a cure, and one day, when this committee-man brought to the hospital a sum of £7 odd which he had collected, he sought to obtain a second opinion from one of the surgeons on the infirmary staff. This advice was refused. Doubtless the refusal was, in one sense, quite justifiable; but the committee-man in question pointed out that many other patients were receiving advice who were in a better position than himself. Why, it was asked, should he pay and collect money for them when he could not get advice for himself. This is the sort of incident which occasions the present trouble, and that trouble is serious and may lead to very far-reaching consequences. Then, again, I am blamed for saying that the workmen "justly maintain that they do not receive from the infirmary anything like an equivalent for what they give to the infirmary." In the previous sentence I had mentioned that the cost of in-patients was £1 1*s.* 8½*d.*, and of out-patients 1*s.* 3¾*d.* per week. By this I did not mean that the workmen ought to receive an equivalent, but that their calculation was accurate when they said they said they did not receive an equivalent. Such a consideration is important, because if the present dissatisfaction were to greatly increase it might be financially possible for the workpeople to withdraw their subscriptions from the infirmary and establish a hospital of their own on provident lines. It is in view of this danger—doubtless very small at present, but which may grow—that the need of preventing the hospital abuse which engenders such ideas has become especially urgent. I endeavour to make my reports as free as possible from any sort of advocacy; but if I do advocate anything it is the prevention of hospital abuse. The virulent controversy that my remarks on the Leeds Workpeople's Fund has occasioned suggests that I succeeded in putting my finger on a sore place. The somewhat wild, impassioned, and contradictory manner in which attempts have been made to refute the description I gave of the grievance likewise suggests to my mind that that grievance is more serious and menacing than I had at first supposed.

I am, Sirs, yours faithfully,

March 16th, 1897. YOUR SPECIAL COMMISSIONER.

"THE MEDICAL STAFFS OF HOSPITALS AND HOSPITAL ABUSE."

To the Editors of THE LANCET.

SIRS,—Mr. Burdett's letter in THE LANCET of March 13th calls for a few remarks. First, with respect to a conference, Mr. Burdett is aware that my association proposed to hold one this summer, and that he wrote so strongly on the question that we thought it wise to postpone the question for a time. We are of opinion that the subject of hospital reform should be discussed not only from a *professional*, but from a *lay* point of view. It is perfectly true, as you have stated, that the medical and surgical staffs of hospitals are to a certain extent responsible for the present unsatisfactory condition of the out-patient department, but, on the other hand, the managing committees are surely the proper authorities to take the *initiative* in the work of reform. These committees must be aware of the crowds that attend the out-patient and casualty departments, and they must also be aware that their officials base their appeals to the public on the number of people who are thus attended. It is not improbable that representations on this subject have already been made by some of the staffs to the hospital authorities.

Mr. Burdett will, no doubt, be glad to hear that we are asking the Royal College of Physicians of London to make an investigation into the question. That College would be in a position to speak with *more* authority than any voluntary committee that might be formed in London. There appears to be one error in Mr. Burdett's letter. He states that Sir William Fergusson's committee recommended that medical officers attending the out-patients should be paid. I have carefully looked through the columns of THE LANCET, but I have failed to find this fact recorded. I believe some members of the committee did propose such a recommendation, but it was not agreed to. In conclusion, it will be gratifying to Mr. Burdett to know that we shall shortly publish the report of a sub-committee of our association which was asked to make an inquiry into the working of the special hospitals of the metropolis. As far as regards the general hospitals I believe I am not far wrong when I state that inquiries into the circumstances of patients are made at four only—viz., St. Bartholomew's Hospital, the London Hospital, the Great Northern Hospital, and the Royal Free Hospital, and that the number of *new* patients is limited at two only—viz., St. Thomas's Hospital and St. George's Hospital. St. Mary's Hospital has, as you probably are aware, recently appointed a special medical officer to sift the cases before they are seen by the assistant physicians and surgeons.

I am, Sirs, faithfully yours,
T. GARRETT HORDER,
Honorary Secretary to the Hospital Reform Association.

March 15th, 1897.

To the Editors of THE LANCET.

SIRS,—Mr. Burdett's letter is one of unusual importance to the profession. I venture, therefore, to suggest that every member of the profession should take an early opportunity of coming to your office to sign the petition to the Royal College of Physicians of London at present lying there. As we have no representative body who can undertake the consideration of the matter, the College of Physicians certainly appears to be the body who should undertake the duty of stating the case of the profession upon the matter of hospitals. Mr. Burdett is no doubt to some extent quite correct in attributing the present condition of affairs to the hospital staffs. The College of Physicians has the monopoly of hospital appointments in London upon the medical side,

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and it is therefore not unreasonable to expect of that body something in return for that monopoly.

I am, Sirs, your obedient servant,

Hatfield, March 15th, 1897. LOVELL DRAGE.

"THE UNDIMINISHED MORTALITY FROM PUERPERAL FEVER IN ENGLAND AND WALES."

To the Editors of THE LANCET.

SIRS,—Dr. Rentoul endeavours to throw discredit on my statistics. It is one thing, however, to "challenge" statements; it is quite another to disprove them. The only point in his letter which even appears to justify his indictment is where he accuses me of not understanding the figures I am dealing with. If that were so it would, of course, seriously affect the value of my conclusions. But in the instance given it is Dr. Rentoul who has fallen into error. For although it is quite true, as he says, that where the death, from whatever cause, has taken place within a month of delivery the Registrar-General directs that this fact be mentioned in the certificate, it is equally true that in his returns the deaths *directly* connected with childbirth are placed in a separate table. Hence my statement is quite correct—viz., that deaths occurring from causes not directly connected with childbirth are, in the statistics from which I quote, left out of account.

Dr. Rentoul asks for "light" on the number of women who are ill in the hospitals but who do not die. So far as the General Lying-in Hospital is concerned, this information has been furnished in the most ample manner in a paper read before the Obstetrical Society by Dr. Boxall. It is also readily available with regard to all the more important continental lying-in hospitals.

Dr. Rentoul speaks of the statistics of the lying-in hospitals as fallacious, and in support of this allegation he refers to and repeats the statements he made on the subject before the Select Committee on the Registration of Midwives. Those statements have been refuted over and over again. The impression produced by Dr. Rentoul's evidence on the members of the Select Committee can be easily ascertained on reference to the Blue-book. On page 41 of the minutes of evidence it will be seen that towards the close of his long hearing Dr. Rentoul gave an answer that elicited the following remark from his questioner: "This is one of the many statements that you have made in the course of your evidence of a very grave nature which have been entirely unsupported by anything I could call evidence." After this estimate of his statements before the Committee it is surprising that Dr. Rentoul should dare to refer to them again.

Dr. Rentoul scoffs at antiseptics. Any man who can do this (I do not say any man who disbelieves in them, but any man who can scoff at them) in the face of the mass of evidence now available is beyond the reach of argument. There is such a thing as what my friend Sir William Roberts calls reason-blindness. Persons who suffer from this not very uncommon affliction are inaccessible to argument and impervious to the plainest facts. It does not make the least difference to Dr. Rentoul that his statements have been repeatedly disproved. Witness his often refuted blunder about one person in every fifteen dying in their first confinement. Here in his letter of to-day it crops up again, as though the statement had never been denied or even called in question.

I have no hope of being able either to convince Dr. Rentoul or to silence him. The object of my letter is simply to warn such of your readers as are not acquainted with his methods not to be misled by the sophistries with which his letter abounds.

I am, Sirs, yours sincerely,

CHAS. J. CULLINGWORTH.

Manchester-square, W., March 13th, 1897.

"A QUESTION FOR ANÆSTHETISTS."

To the Editors of THE LANCET.

SIRS,—Mr. Clement Lucas's question is one of transparent importance and may present the novelty to some which it appears to do to him. As a matter of fact, the danger of infection, and the manifestly filthy practice of using a blood-stained or vomit-polluted inhaler has appealed to me and, I should say, to all thoughtful anæsthetists for many years. The inhalers in common use—Clover's for ether and various forms of Junker's for chloroform—have been made so as to admit of absolute sterilisation. In the first case the face-piece can be constructed of celluloid or metal, either substance being capable of being made clean, and the more common leather and rubber face-piece is equally cleansable by water and carbolic acid. Mr. Lucas's suggestion with regard to the employment of toughened glass has been anticipated. I recently described such a face-piece, suggested originally by Vajna of Budapest, in the Year-book of Treatment, p. 171,[1] and drew emphatic attention to its value from the point of view of the surgeon who practises aseptic operations. Previously to this Mr. Krohne had made metal frames covered with domett or flannel, which were used with Junker's bottle and bellows. This face-piece can be boiled or baked, and by having two or three a freshly sterilised one can be employed for each case. As, then, the inhaler for ether made at my suggestion by Messrs. Mayer and Meltzer and the chloroform inhalers described above admit of the most rigid sterilisation, it can only be hoped that those who have not already realised the importance of Mr. Lucas's warning will do so and adopt the means already at hand for obviating the dangers which must follow the use of dirty inhalers. I do not suggest that the inhalers I have specified are the only ones which are clean, probably many others exist, nor do I enter upon the question whether or no pulmonary infection can occur from inhaling an anæsthetic from a dirty inhaler. It is sufficient that common sense and accumulated knowledge combine to warn us that danger must follow the use of filthy instruments, whether they be human hands, scalpels, or inhalers for anæsthetics. I may add that the anæsthetist and his clothing are possible sources of infection which should not be overlooked. Those whose lines fall among infectious or septic cases are not ideal anæsthetists from this point of view. Students who anæsthetise under my supervision are compelled to wear a clean linen coat and wash their hands and their apparatus before each case is commenced.—I am, Sirs, your obedient servant,

DUDLEY BUXTON, M.D., B.S Lond., M.R.C.P.,
Anæsthetist, University College Hospital.

Mortimer-street, W., March 17th, 1897.

"THE PROPOSED LEGISLATION FOR HABITUAL DRUNKARDS."

To the Editors of THE LANCET.

SIRS,—The Bill introduced last year into the Reichstag authorising the seclusion of habitual drunkards in separate asylums for drunkards not having yet been passed into law, the Landtag (Provincial Parliament) of Lower Austria, in accordance with a detailed report of Director Tilkowsky setting forth that there were in the five lunatic asylums in Lower Austria 107 suitable patients who might be at once transferred to a separate asylum for drunkards, has resolved in the session just closed to form a department for drunkards in an unoccupied portion of the penitentiary at Kornenburg, this resolution to take effect during the current year. How great a number of habitual drunkards are accommodated in the five lunatic asylums and penitentiary of Lower Austria may be gathered from statistics, which show that during the past ten years 2389 alcoholists have been received into the above-mentioned five lunatic asylums, and that during the last six years 1200 individuals morally ruined by habitual abuse of spirituous liquors have been provided for in the penitentiary at Kornenburg. The Provincial Parliament of Lower Austria, in a note urging the Government to pass the above-mentioned Bill, specially refers to the circumstance that Great Britain is at present occupied with the question of secluding habitual drunkards, and that the English Government, acting on a report of the departmental committee, has decided to extend and amend materially the provisions of the Habitual Drunkards Act. May a satisfactory result soon be arrived at by the English Parliament!

I am, Sirs, yours faithfully,

DR. FR. SCHLANGENHAUSEN.

Villach, Carinthia, March 13th, 1897.

[1] Also see Brit. Med. Jour., October, 1895.

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"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—Professor Lankester is not satisfied with the instances I quote, thinking they depend on "the mere statements of patients." In Case No. 1 the son of the injured man was shown to me by the late Professor Rolleston, who had stated the case in his lectures on physiology. One eye was measured and found to be smaller than the other, and the sight of that eye was distinctly defective. As the father, in whom the corresponding eye had been injured, had been a friend of the Professor since childhood, when the injury took place, he had personally verified every particular. The facts are still clear in my memory, and are also fully stated in my notes of his lectures taken at the time. In the other cases I relied entirely on my own observation and the statements of medical men. Dr. Campbell explains such cases as instances of coincidence, and further suggests that the eyes may have been weak and the finger deformed before the accidents. Such, however, was not the case. I see no consistency in forcing the theory of coincidence to account for the inheritance of the results of lesions, while the entail of inherited deformities is admitted as "occurring in the usual way." It would take too much coincidence to explain away Dr. Brown-Séquard's guinea-pigs.

Dr. Campbell quotes the institutions for the blind where the inmates marry without fear. Would it not be more to the point if he produced the results of such marriages? My contention is still unanswered; I believe that there is evidence enough to prove that the results of lesions have been in many cases transmitted; that there is therefore in every case a considerable probability that such results will be transmitted; and further, that a large proportion of the accepted cases of heredity would, if it were possible to trace them, be found to have had their origin as the results of lesions. If that is not so, how does Dr. Campbell account for the origin of hereditary qualities?

In the matter of epilepsy, we find traumatism, syphilis, alcohol, and the thousand other causes producing the disease *de novo* daily. How can we avoid the conclusion that the hereditary cases arose in a similar manner? If they did not, then from what did they arise? Did the Creator plant a few original epileptics fully developed to disseminate the disease? It would be interesting to know if any observations have been made in the matter of the inequalities of limbs in subjects in the dissecting-room. Are these subjects, who come from a class eminently liable to accidents, more frequently asymmetrical than others, and, if so, to what extent? If my theory is correct I should expect a greater percentage of asymmetrical limbs in these subjects, and in any case I shall be glad to hear the evidence of those whose experience enables them to speak with authority. Meantime I submit that the science of heredity is not limited by "what is known and accepted" by Professor Lankester.

I am, Sirs, yours truly,

March 8th, 1897. W. G. THISTLE.

P.S.—The following is an extract from a letter just received from Mr. W. H. Jackson, M.A., F.R.S., Keble College, Oxford. "When Dr. Rolleston was at Pembroke he rowed in their eight. At a training breakfast one man threw half a loaf of bread at another crosswise along the table. The loaf took effect at the side of the temple, on which side I forget. The man who was struck slowly lost the sight of the eye on the side struck. In after life he was ordained and married. He had three or four sons, all of whom had the corresponding eye smaller than the other and with somewhat impaired sight. Rolleston said explicitly that from the inquiries he had made he did not believe there was any previous instance in either father's or mother's family of such a defect. Another of his stories was to the effect that an officer received a sabre wound across the forehead which healed leaving a very bad scar. Many years after he married: his firstborn, a son, showed a distinctly marked line across his forehead corresponding to his father's scar. There is not the least doubt that Rolleston was a firm believer that the effects of injuries are inheritable."

To the Editors of THE LANCET.

SIRS,—The correspondence on this subject which has been going on in the pages of THE LANCET since Jan. 23rd is of much interest to the profession and of importance to a not inconsiderable portion of the general public. I may therefore be permitted—without touching on the vexed question whether there is reason to believe that accidental lesions are transmissible from parent to offspring, and only as one who has had lengthened experience among the epileptic and the insane in some of our great metropolitan institutions—to add a few words to the discussion. It seems to me that in considering a question of the kind above noted an initial difficulty must always, more or less, present itself—that of determining with any degree of certainty from the history of the case and from the information vouchsafed by relatives or friends whether the epilepsy, be it "great" or "small," Jacksonian, or any other of the numerously described epileptic or epileptiform category, is solely and actually of lesion origin in any given case. It would, I think, be rash to accept such an assurance, not unfrequently made, without somewhat close investigation and examination. Every medical practitioner knows the difficulty there is in tracing heredity in disease accurately, even in the ordinary everyday maladies. There exists in the minds of patients and their friends the perhaps pardonable desire to attribute that which is due to undoubted heredity to some accidental cause. This difficulty is intensified a hundredfold when the malady happens to originate in the brain or nervous system. Hereditary tendency in such cases is not usually willingly acknowledged, endeavours to trace it are met by very circumstantial accounts of various injuries, and reasons are given, having the smallest foundation in fact, for the origin of mental defect and of maniacal or melancholic attacks; and perhaps in no form of cerebral disease is more ingenuity displayed than in accounting for the origin of epileptic fits. Injuries to the head or back, falls in infancy, gastric derangements, fear, sunstroke, *et sic de similibus*, play an important part when efforts are made to elucidate "causation" from the friends of the epileptic or insane.

Taking such circumstances into consideration, it would, I think, be unwise to counsel the confirmed epileptic, whatever the reported origin of the malady, to marry and to expect immunity in the offspring. Most of us who have been any length of time engaged among the insane know only too well how epilepsies and insanities are interchangeable and how one or the other may crop up, it may be quite unexpectedly, in different generations of the same family. These remarks apply, of course, only to true, well-recognised, and established epilepsy, with all its well-defined symptoms—a disease, however, which is perhaps more frequently simulated than any other. Some of apparently the most severe and violent cases of epilepsy which I have ever seen were undoubtedly due to hysteria. In one of them especially I remember the simulation was so perfect that I was for a moment deceived, the only fault in the performance being the issue of the scream at a period of the attack when there should have been, as was simulated, complete unconsciousness.

I am, Sirs, yours faithfully,

West Malling, March 6th, 1897. JAMES ADAM.

MECHANICAL IRRITATION OF SPECTACLES A POSSIBLE CAUSE OF FACIAL CONTORTIONS IN CHILDREN.

To the Editors of THE LANCET.

SIRS,—The origin of those facial contortions and spasms which are often seen persisting in some degree throughout life, and are singularly unpleasant to look upon, is often very obscure, and it seems, therefore, worth while to draw attention to anything that may throw light on it in some cases and lead to their being taken in hand before an incurable habit is established. About two years ago my attention was drawn to the spasmodic movements of the facial muscles in a small boy aged six and a half years who had been wearing spectacles for some time. The contortions had been noticed previously, but had got much worse lately, and involved nearly all the facial muscles. He had a marked rheumatic history and a mitral bruit, and at first I thought they were choreic, but a closer examination showed clearly that they were not and, further, that when slight they involved only the muscles at the root of the nose, the frontalis, corrugator supercilii, and pyramidalis nasi, radiating thence to the other muscles. It was also noticed that they were much worse when he wore his spectacles, which he had been ordered to do constantly for myopic astigmatism. No fault could be found with the glasses either optically or

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mechanically, but it struck me that possibly the mere mechanical irritation of the frame in a very neurotic child might suffice. I therefore reluctantly ordered the glasses to be given up for a time, as there seemed every chance of an irremediable habit being established. He accordingly dropped their use entirely for some months with the result that the facial contortions ceased entirely except when the spectacles were put on again experimentally. I have just heard that they still return when he wears his glasses (which he does for near work), though not so badly as before. I was able to watch the boy closely myself, and I think there can be no doubt about the sequence of cause and effect in this case; it makes a very awkward dilemma where the defect of vision is a serious one, but a good deal has to be sacrificed to prevent the establishment of a habit which in after years is probably incurable, is very unpleasant to the patient's friends, and annoying to himself.

I am, Sirs, yours faithfully,
E. HOBHOUSE, M.D. Oxon., M.R.C.P. Lond.

Brighton, March 14th.

THE CONSTITUTION OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editors of THE LANCET.

SIRS,—Some little time ago the Council of the Royal College of Surgeons of England framed a series of regulations under which meetings of Members might be held at the College. The chief of these regulations are: 1. These meetings will be for consultative purposes only, and can have no official or corporate character or efficacy. 2. Meetings shall be summoned by the Council at such times and for such objects as may by the Council be thought desirable either with or without a requisition from the Members. 3. Such requisition must be signed by at least thirty Members and contain a statement of the objects for which the meeting is requested.

No meeting has hitherto been called under these regulations, but the committee of the Society of Members, in view of the unfavourable circumstances surrounding the recent poll of the Fellows, decided to apply for such a meeting. Accordingly, the following requisition was drawn up and signed by thirty Members:—

"*To the President and Council of the Royal College of Surgeons of England.*

"GENTLEMEN,—We, the undersigned Members of the College, hereby very respectfully request you to call a meeting of Members at an early date, in accordance with your regulations, in order that the Members may have an opportunity of consulting together upon the following matters:—1. The results and validity of the recent poll of the Fellows. 2. A proposal urging the Council to take a similar poll of the Members on the question of representation. 3. The validity of the present mode of appointment of the representative of the College on the General Medical Council. 4. The refusal of the Council to carry out the by-laws of the College in the case of Mr. R. B. Anderson. Motions on these subjects will be submitted on receipt of information that the meeting will be held."

This requisition came before the Council on Thursday last and was refused, the secretary being instructed to state "that the Council does not think it desirable that such a meeting should be held."

Now, Sirs, while I fully admit that the refusal of a meeting is within the discretion of the Council under the above regulations, I venture to think that the Council has made a mistake in so acting on this occasion. If a temperately worded request stating objects which are recognised as reasonable and important by many Members of the College is to be refused simply because the majority of the Council does not agree with these objects, then I submit that the regulations are absurd and had better be rescinded in so far as they relate to meetings called by Members, since they will never be acted upon. Further, the result of this attempt to stifle discussion within the College must certainly be to drive the Members into acts of open hostility without its walls. There are frequent occasions when, in spite of its claim to be "a purely scientific body," the Council is brought into contact with "the State, the profession, and the public." One of these arose two years ago in connexion with the amended by-laws, when the result of the Members' interposition was that the Home Secretary refused to sanction the by-laws in the form desired by the Council. A conflict of opinion has now occurred between the Council and another department of the Government, and if the Members are again found in the enemy's camp is it to be wondered at since they are so persistently turned out of their own? The result in this case will be more serious to the College than in the last, and the Members, who have the welfare of the institution as much at heart as the Council, would be gladly spared any intervention. The obstinate refusal of the Council, backed up by a *minority* of the Fellows, to grant the Members a share in the management of what is by charter their own property leaves the latter, however, no alternative but opposition at any and every opportunity.

I am, Sirs, faithfully yours,
March 15th, 1897. W. G. DICKINSON.

EXCISION OF THE KNEE-JOINT.

To the Editors of THE LANCET.

SIRS,—I have been interested in reading Mr. C. B. Lockwood's paper entitled "A Review of the Operation for Excision of the Knee, together with an Account of a New Procedure—Osteoplastic Excision of the Knee." It is, I believe, quite twenty years since Dr. Fenwick of Montreal was in Liverpool and showed us photographs of a large number of cases in which he had excised the joint, using his curved section of the bone. The results were excellent, and I adopted his method as soon as I obtained a hospital appointment; but very shortly changed it for a wedge-shaped section, which I have carried out for at least fifteen years. The wedge is not cut in the same way or based on the same principles as those advocated by Mr. Lockwood, but attains, I think, at least equally good results. The femur is cut into a wedge by removing slices from the condyles anteriorly and posteriorly, which include the whole of the articular cartilage, but leave the epiphyseal cartilage intact. A corresponding notch in the head of the tibia also removes all the articular cartilage with a very small portion out of the centre of the epiphyseal cartilage. The nature of the wedge of course renders antero-posterior displacement and rotation out of the question, and usually so firmly locks the bones that a special splint is unnecessary. I fail to see the particular importance in retaining the ligaments when the operation temporarily fixes the parts and the subsequent ankylosis renders them unnecessary; but, of course, the retention of the muscular attachments is a different matter, and I agree with Mr. Lockwood that the continuity of the extensor tendon with its insertion through the ligamentum patellæ should be restored as perfectly as possible.

I am, Sirs, yours faithfully,
Liverpool, March 15th, 1897. F. T. PAUL.

"THE ETIOLOGY OF BERI-BERI."

To the Editors of THE LANCET.

SIRS,—I observe in THE LANCET of March 6th a letter from Mr. J. Tertius Clarke with reference to the epidemics of beri-beri in this asylum, suggesting that the outbreaks were due possibly to tin poisoning. I do not see how this could have been the case, as the water-pipes are of iron and the ordinary amalgam used for such purpose throughout the city. Cooking utensils are not tin-lined either, and, generally speaking, this metal is very little used in the institution. It would be of interest to know if Mr. Clarke's patients have been living in the neighbourhood of a tin-producing district.

I am, Sirs, yours truly,
J. O'CONOR DONELAN,
Acting Medical Superintendent, Richmond Asylum.
Dublin, March 11th, 1897.

"A SUCCESSFUL SOCIETY!!"

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET of March 13th dealing with my letter to the Prince of Wales on the subject of vivisection you say that to cut up animals alive without the pretence of anæsthetics in the laboratories attached to the London hospitals would be a wholly illegal proceeding, and you ask why we, who would protect animals from torture, do not attempt to get those who do these illegal acts convicted. My answer is that these acts, unfortunately, are not illegal. You must surely be perfectly well aware that attached to these laboratories are persons holding licences that exempt them from the necessity of using any anæsthetics whatever; and my legal training, to which you are good enough to

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allude, does not lead me to blame the anti-vivisection societies for not instituting prosecutions in these circumstances.

You seem to wish people to believe that animals are not cut up alive without anæsthetics in these laboratories, but before you can succeed in this it will be necessary for you to explain why all these vivisectors are at the pains to obtain licences year after year exempting them from the obligation to use anæsthetics. According to the last Home Office report no less than thirty persons on the staffs of the London hospitals held these licences. Perhaps if there were fewer such vivisectors connected with these hospitals there would be more subscribers.

I am, Sirs, your obedient servant,

STEPHEN COLERIDGE.

Egerton Mansions, South Kensington, March 14th, 1897.

*** It has been stated again and again, and is a fact within our own knowledge, that the only experiments performed without anæsthetics are inoculations and hypodermic injections. How can Mr. Coleridge justify the use of the words "cut up alive" as describing such proceedings?—ED. L.

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—As a practitioner of over twenty years' standing I should like to express my approval of Mr. Flemming's letter in THE LANCET of March 6th. Surely there is another view than the selfish dread of the imperilling of our own interests. I have seen a good deal of the work of the women who attend the labours of the poor, and their ignorance of the simplest matters has lost all novelty to me. I have seen a huge abscess produced in the breast of a newborn baby through the midwife's having conscientiously done her duty in "breaking the baby's breast-strings"—a process of kneading and pinching. I have been called to a woman to find that a blue hand had been protruding from her vulva for hours, while the midwife exhorted the bystanders to wait and give nature a chance, until they took matters into their own hands and sent for me. I have been called to find a woman lying dead with the funis pulled away and the placenta still in the uterus, and absolutely within a fortnight to another case where the same midwife had pulled away another funis, and the hæmorrhage was most alarming. In reference to these two cases I asked a magistrate if a warning could not be issued to the woman. His reply showed a callousness worthy of a Turk. "If they will employ such women they must take the consequences." I say they must employ these women, and they must *not* take the consequences. There must be no consequences. No woman should be allowed to attend a case who is capable of pulling away a funis and taking no steps to remedy the disaster. A few months ago I got an urgent message to see a woman. I galloped the three miles to her house and found her dead. The midwife explained that she had bled a good deal, but as she always bled a good deal it had occasioned no alarm. Think of it! The poor creature's life had not only been risked at every confinement, but her convalescence unduly prolonged owing to the exhaustive loss. It is easy to realise the suffering in the case of a labourer's wife, who has to attend soon to her household duties. It is useless to argue that these people should pay a medical man. They cannot do it, and they only deserve credit for not employing him and leaving him unpaid. In this case the midwife was known to me as a favourable specimen of her class—clean, kind, and attentive according to her lights. No inquest was held, as the police informed the coroner that she had done her best. Now, ought any midwife's best to be like that?

I am, Sirs, yours truly.

March 15th, 1897. FOR REGISTRATION.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Corporation Bill; Withdrawal of the Conduit Scheme.

IT is stated that the clause in the Corporation Bill being promoted this session, authorising the construction of a conduit about nine and a half miles in length, to carry the effluent from the sewage works at Davyhulme into the Mersey near Thelwall, has been withdrawn. Strong opposition was given to the scheme at a town's meeting held last week, and on the question being put there was a majority against the retention of the clause. Alderman J. Thompson, chairman of the rivers committee, formally demanded a poll; but at a meeting of the committee which has since been held it was decided to give up the poll and to abandon for the present the attempt to obtain power for the construction of the conduit, though the committee and the surveyor are still said to think that this scheme, estimated to cost over £200,000, will probably prove the best way out of the sewage difficulty. The subject is surrounded with difficulties. The Local Government Board gives no help in surmounting them. It is almost impossible to obtain land for filtration, and its cost is extravagant, while it is said that all chemical methods of dealing with the sewage have failed in producing an effluent satisfactory to the Mersey and Irwell Committee. But the resources of science ought not to be as yet considered exhausted.

Trafford Park.

Trafford Park, which for nearly 900 years has been in the continuous possession of the De Traffords, and has for ages been a health-giving open space, to the incalculable benefit of Manchester and Salford, while they have been growing century after century more dingy, more smoky, and more crowded, is now about to be "developed." In the words of an interviewer, this means "the conversion of the ancient and beautiful demesne of the De Traffords, with its pretty groves, its rich verdure, and its playful deer, into a hive of industry—a place of ironworks, cotton mills, malting houses, and the like. The old baronial hall is to become a grand hotel." Of the 1183 acres of which it consists about 100 acres, skirting the Ship Canal for something like two and a half miles as a strip from 100 to 120 yards wide, will be reserved for dock wharves and terminals for the lines to be connected with the Manchester dock railways. Mr. Marshall Stevens, who has transferred his energies from the Ship Canal to the syndicate and now acts as Mr. Hooley's right-hand man, says that for some "slices" no less than £5000 per acre have been recently bid. What this means from the hygienic standpoint is pretty clear. Much room for fresh air cannot be given at £5000 per acre. Mr. Stevens speaks cheerfully of works for the distillation of tar, for the preparation of a patent fuel (which is to be an important industry), saw mills, flour mills, cotton and seed-crushing mills, oil tanks, malting houses, a ship-building yard, and dry docks. About 750 acres are set apart for these purposes. A central space of about 200 acres is to be reserved as a race-course or public park. The hall and adjoining buildings are to be "converted into a first-class hotel, the gardens and a portion of the park being reserved for golf links and a recreation ground." Railway lines are to bring all the mills and manufactories built into connexion with the Dock Railway and the whole railway system of the country. Having thus provided a delightful fringe of nuisances—for it must be remembered that the Bridgewater Canal skirts a considerable extent of the park and will contribute its quota towards the creation of this earthly paradise—Mr. Stevens says with charming humour: "Doubtless villadom will seize upon certain sections of the estate, for portions of the park rise well above the level meadows; and here you will virtually be able to live in the country and yet be in closest touch with the city." And so the dream in which many indulged of a noble park to be held for ever in trust for the thousands of workers and their children who can rarely or never get beyond the sight of the city chimneys comes to an end. Surely the City Fathers must be conscious of the fatuity and ineptitude which allowed others to forestall them, while they were giving the question of purchase "their best consideration."

March 16th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

"Army Doctors."

PARAGRAPHS have recently appeared under this heading in the *Newcastle Daily Chronicle*, calling attention to the difficulty the authorities are experiencing in filling vacancies in the Army Medical Department, and stating that the difficulty is due to the circumstance that the medical officers

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do not enjoy military rank, and are not in the English, as in the Continental armies, addressed as major or colonel, &c., as the case may be, but as "doctor." Possibly this explanation represents the popular view, but surely the position held by Army medical officers ought to depend on the fact that their duties are essential to the welfare of the troops and not on any other consideration.

Death of Mr. W. Boyd, Surgeon, of Durham.

Mr. Boyd has just died at Durham, aged seventy-nine years. He had been elected Mayor of Durham on four occasions, and seven years ago the freedom of the city and his portrait, which now hangs in the town hall, were presented to him. He was the oldest medical practitioner in the city of Durham and was described as the father of the town council.

The Medical Officer of Health for Northumberland.

At the statutory March meeting of the Northumberland County Council it was resolved that Dr. Hembrough, whose term of office as medical officer of health for Northumberland would expire next May, should be appointed permanently.

Durham County Hospital.

By the death of Mrs. Elizabeth Snowball, which occurred last week, the funds of the Durham County Hospital will benefit to the extent of £6000.

March 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Chair of Medical Jurisprudence in the University of Edinburgh.

ON the recommendation of the Secretary for Scotland Sir Henry D. Littlejohn, M.D. Edin., has been appointed to this chair. It has been arranged that in the meanwhile, until time has been given for other arrangements to be made, he will also teach public health. Sir Henry Littlejohn graduated in medicine at the University of Edinburgh in 1847. He has for many years been a lecturer in the extra-mural school of medicine on the subjects he is now called upon to teach within the walls of the University. He is also well known in Scotland as an expert medical jurist. He is a man of much vigour and unusual activity for his years, and has been a popular teacher, a popularity he will doubtless retain in his new position.

Honorary Degrees at the University of Edinburgh.

It is intimated that the University has offered the degree of LL.D. to Professor Sir Douglas Maclagan and Dr. John Wyllie. The former has been referred to here at the time of his retirement from the chair of Medical Jurisprudence. It is generally felt that the tribute to Dr. Wyllie, on his retirement from the staff of the Royal Infirmary, is a very suitable one and fully deserved.

The Edinburgh Royal Medical Society.

The annual dinner of this society was held last week. Professor Burdon Sanderson was the guest of the evening, and in replying to the toast of his health spoke of the advances in medicine since he studied in Edinburgh.

Close of the Winter Session at the University of Edinburgh.

The winter session in the Faculty of Medicine terminates this week.

Glasgow Royal Infirmary.

It is now practically decided that the tribute Glasgow will offer in celebration of the Queen's long reign is to be the extension and improvement of the Royal Infirmary. At a meeting of the citizens on the 12th inst., after a loyal address of congratulation to Her Majesty had been adopted, Sir John Muir moved a resolution in favour of the proposal to raise a sum of money for the purpose of re-constructing the older portion of the Royal Infirmary. This was seconded by the Lord Dean of Guild and supported by the Rev. Dr. Marshall Lang. Thereafter, on the question being thrown open to discussion, though the general voice was in favour of the proposal as submitted, there were not wanting supporters of the alternative proposal put forward in THE LANCET—viz., that the infirmary be re-built on a new site. Mr. Quarrier and Dr. McGregor Robertson both urged the unsuitableness of the present situation and the difficulty or impossibility of so altering the present building as to produce a really satisfactory hospital. To all this, however, the Lord Provost turned a deaf ear. He evidently had made up his mind in favour of the scheme for altering the building on the present site, and would have no other. His position, he maintained, rested on the reports of medical, surgical, and sanitary experts, and he objected strongly to the removal of the infirmary on the ground that to do so would make it of less value in relieving men injured by accidents in the neighbouring works. Under these circumstances the critics of the official scheme did not see their way to submit an amendment, and the resolution was accordingly carried unanimously. The Lord Provost then intimated the following subscriptions: Sir John Muir, £5000; A Friend, who preferred to conceal his name, £5000; Sir James Bain, £1000; Sir James Tring, £1000; Mr. John S. Templeton, £1000; Mr. Hugh Brown, chairman of the infirmary, £500. Whatever differences of opinion may exist on points of detail there is a universal desire both for the sake of the hospital and in honour of the occasion to make the movement a magnificent success. The anxiety of at least a section of the public and the profession in reference to the present site and the reconstruction scheme has certainly some basis, and it is not unreasonable to ask that the names of the medical, surgical, and sanitary authorities upon whose advice the official scheme is based should be published. It is only right that the public who are asked to contribute the funds shall be placed in a position to determine whether the guarantee that the money will be rightly expended is or is not adequate. There is no word of controversy concerning the decision to help the Royal Infirmary. But there are in many quarters reasonable questionings as to whether the official proposal embodies the best possible plan, and it will be to the interest of the authorities to meet this position by a frank statement of the sources of the advice upon which their decision has been taken.

University of Glasgow.

The University Court have granted leave of absence to Dr. P. A. Simpson, Professor of Forensic Medicine, on the ground of ill-health. Mr. Hugh Galt, M.B., C.M. Glasg., D.P.H. Camb., has been appointed to act as Lecturer and Examiner in Professor Simpson's absence. The Court have agreed to recognise attendance at the wards and dispensary of the Glasgow Eye Infirmary for the purpose of graduation in medicine under the new ordinances. The classes in Forensic Medicine and Public Health and in Practical Pathology at St. Mary's Hospital Medical School, Paddington, have also been recognised by the Court. The Students' Medico-Chirurgical Society have elected Professor John Yule Mackay to the position of Honorary President, Mr. Wm. Duncan, M.A., being appointed President. The winter session in the Faculty of Medicine is to close on the 19th inst.; in the other faculties the classes are continued into the following week.

Proposed Memorial to William and John Hunter.

The Faculty of Physicians and Surgeons of Glasgow have brought their proposal to establish a local memorial in honour of William and John Hunter, the brothers being natives of Lanarkshire, before the town council, and a small committee of the council, including the Lord Provost, has been appointed to act with the Faculty.

University College, Dundee.

At a recent meeting of the council of the College Dr. John Yule Mackay, Professor of Anatomy, was unanimously appointed Principal of the College. The new Principal is a graduate in medicine at the University of Glasgow, where for twelve years he occupied the position of senior demonstrator in anatomy and was also lecturer on embryology. Some ten years ago he was appointed to the chair of anatomy in Dundee. He is joint author with Professor Cleland of a recently published work on human anatomy, and has conducted a number of original researches, the most important being those dealing with the development of the heart and blood vessels.

Deaf-Mutism and its Prevention.

Dr. James Kerr Love of Glasgow read a paper on this subject before the Royal Society of Edinburgh on the 15th inst. Amongst the propositions advanced were the following: (1) that congenital deafness is hereditary; (2) the tendency to have deaf progeny was the same whether one or both parents be congenitally deaf; (3) the hearing brothers and sisters of the congenital deaf-mute are as liable, if they marry, to have deaf progeny as the deaf themselves; and (4) consanguinity of the parents emphasises the

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hereditary tendency in the offspring, and in this way many cases of congenital deafness arise. In dealing with suggestions for prevention Dr. Love remarked that this aspect of the question was dominated by the fact that the tendency was a family one, and that nothing short of repressive measures was therefore likely to be successful. He advocated the appointment of a Commission to inquire into the whole subject.

March 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Accidental Poisoning by Arsenic.

ANOTHER case of accidental poisoning has just occurred in Dublin, in which some carelessness was fairly attributed by the verdict of the coroner's jury to the manufacturers of a special sort of rat poison. The facts were shortly as follows. A boy named Hardman obtained a package of cakes labeled "Hammond's Patent Rat Poison," and used some of them on three occasions for poisoning rats. One day he carelessly left a portion of a cake in his topcoat pocket before going to school. Some three of his schoolfellows subsequently obtained possession of it and ate it, with the result that all three suffered from symptoms of irritant poisoning, while the boy George Taaffe, aged ten years, died in about twelve hours. It appeared at the inquest on the 15th that the cakes resembled common meal cakes, and that there was nothing, in the absence of the special wrapper, to warn people that they were poisonous. The manufacturers of the patent poison were communicated with by telegraph and stated that its chief ingredient was arsenic. The jury found that the deceased died from accidentally eating Hammond's Rat-cake Poison, and they condemned the shape of the cakes as sold to the public, inasmuch as they resembled common brown cakes.

Death of Surgeon Thomas Gibbons, R.N.

Surgeon Thomas Gibbons, whose tragic death by drowning took place in Kingstown harbour on the 14th inst., was a graduate of Dublin University, where he obtained his medical degrees in 1892, and was only twenty-seven years of age. The deceased, accompanied by Lieutenant Ellison and two other officers of H.M.S. *Jason*, reached Kingstown from Dublin by the last train on Saturday night and hired a boat to put them on board their vessel. It was a perfectly calm night, but, as appeared at the inquest, the boat filled and foundered in mid-harbour, leaving its six occupants struggling in the water. Sad to say, Surgeon Gibbons and the two boatmen were drowned. An ominous circumstance overshadows this lamentable fatality in the fact that some years ago two brothers of the deceased boatmen lost their lives while rowing some bluejackets of H.M.S. *Belleisle* to their ship. Something happened to their boat, and they also were drowned in the harbour. It would seem time that some superintendence should be exercised by the proper authorities over boats which ply for hire at Kingstown, especially in reference to punts permitted to carry six men.

The Union Hospital, Belfast.

The following report has been made on the Belfast Union Hospital by Mr. Agnew, the Local Government Board inspector: "This hospital is in charge of a visiting and resident medical officer. There were ninety-one cases on the date of my inspection; the nursing staff consists of a superintendent, four day nurses, and three night nurses, all trained and efficient. This building, including about £4500 spent on it in recent years, has cost almost £30,000. This hospital, with its highly efficient nursing and medical staff, is admirably suited for the treatment of infectious cases. The wards are bright, cheery, clean, and well ventilated. The beds are comfortable, bedclothes clean and sufficient, dietary ample and suitable. The patients are well attended to. Most respectable people from Belfast and neighbourhood come to this hospital, as it is the only one in the city which possesses anything approaching the requirements of a fever hospital."

Sir W. Mac Cormac and Queen's College, Belfast.

On the afternoon of March 15th, in the presence of a large company, Sir W. Mac Cormac was paid a high compliment in the library of Queen's College, Belfast, his native city. When he was made President of the Royal College of Surgeons of England it was decided by his fellow graduates and friends that the time was come to do him some honour, and it was decided that the presentation of his picture should be made. This has been painted by Mr. Harris Brown, and has been handed over by the recipient to the authorities of Queen's College, Belfast. The President of Queen's College, who occupied the chair, having opened the proceedings, the Marquis of Dufferin and Ava, who was chairman of the Portrait Committee, in unveiling the picture, made one of those neat, diplomatic, and complimentary speeches for which he is so famous, and referred in very happy terms to Sir William Mac Cormac's distinguished career which had culminated in his election to the high office of President of the Royal College of Surgeons of England. Sir William Mac Cormac made a feeling reply, in which he briefly traced his career, and pointed out that he was, he believed, the only Irishman not educated at a London school who had ever attained to the position of President of the Royal College of Surgeons of England. The portrait represents the distinguished surgeon in his official robes. In the evening Sir William Mac Cormac was entertained to a banquet (held in Queen's College) by the members of the medical profession in Belfast. About seventy gentlemen sat down to dinner, among them being a considerable number of guests, the President of Queen's College, the Lord Mayor of Belfast, Sir W. Stokes (Dublin), Sir James Musgrave, B.Lit., D.L., Sir W. McCammond, and a number of the professors of the Arts Faculty. Professor Cuming occupied the chair; and the President proposed the following toasts: "The Queen," "The Prince of Wales and other Members of the Royal Family," and "The Lord-Lieutenant and Prosperity to Ireland" (to which the Lord Mayor of Belfast responded). In giving the toast of "Our Guest," Professor Cuming spoke in complimentary terms of Sir W. Mac Cormac's career from the time he was a student, an undergraduate of that College, until now. Sir William Mac Cormac very happily replied. The next toast, "Queen's College, Belfast," was proposed by Sir W. Stokes (Dublin), and to this the President of Queen's College replied. The last toast, "The Chairman," was proposed by Sir W. Mac Cormac, and Professor Cuming responded. Dr. McKisack and Dr. John Campbell were secretaries of the banquet and to them largely its success was due.

Sad Death of a Medical Man.

Some years ago Mrs. Riordan instituted proceedings against her husband, Mr. Riordan, medical officer of the Cloyne Dispensary District, for the purpose of procuring a judicial separation. He entered a counter-plea charging her with adultery. The jury exonerated Mrs. Riordan and the Court decided that her husband should provide her with separate maintenance. Lately, owing to some complaints as to the manner in which Mr. Riordan had discharged his duties, the Local Government Board called on him to resign his position as dispensary medical officer. This fact and the conviction that he had made an unfounded accusation against his wife preyed very much on his mind, and he endeavoured to make reparation to her by handing over the title deeds of some property he held to her solicitor for the purpose of having the property conveyed to her. He died very suddenly on the 16th ult., and as there were rumours in the locality that he had committed suicide by poisoning the coroner considered it prudent to hold an inquest last Wednesday. The evidence of his daughter was most pathetic. She stated that he was constantly expressing sorrow for the accusations he had made against her mother. Describing his final illness, which occurred at the breakfast-table, she said: "Whilst speaking to him I noticed that his eyes were getting dilated and he stared at me. After taking a mouthful of bread and tea, he looked at me again and said to me, 'Don't get excited.' He moved then towards the end of the table and came back again. I said, 'My God, you are dying. Tell me what is up with you, Father.' He said, 'There is nothing the matter with me.' I then put my arms around him, crying, when he said, 'Don't fret; it is apoplexy.'" The jury brought in a verdict of death the result of apoplexy, and expressed their most sincere condolence with the relatives of the deceased gentleman.

March 17th.

FOOTBALL CASUALTY.—During a match on the 10th inst. at Reading, between Woolwich Arsenal and Reading, the captain of the visitors' team fractured a bone of his left hand.

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PARIS.

(FROM OUR OWN CORRESPONDENT.)

A Libel on the Memory of the late Professor Dolbeau.

THE family of Dr. Dolbeau, Professor of Surgery at the Academy of Medicine, who died some years ago, has just been successfully engaged in a very curious lawsuit. The appellants were anxious to obtain an injunction against a book published by M. Lissagaray dealing with the Commune in 1871. In this book the writer, himself an old Communist, accused Professor Dolbeau of having committed a grave offence against professional honour. He alleged that in 1871, when Dr. Dolbeau was surgeon-in-chief to the hospital at Beaujon, some wounded Communists who were in his wards were handed over by him to the police and accordingly shot. This story, which was spread abroad during the life of Dr. Dolbeau, naturally gave rise to a grave feeling against him. The students who attended his lectures hissed him, and he died a short time afterwards through worry and mortification at the hostility shown towards him. The real truth of the matter, as has been shown in the recent suit, is that in exact opposition to the allegations Dr. Dolbeau did his best to save the wounded Communists, and when they were convalescent tried to send them out of hospital under false names. Unfortunately, Dr. Dolbeau forgot the names agreed upon (or, rather, never knew them), and when the discharge-sheets were presented for signature a policeman who was there saw through the unskilful ruse and arrested three men. They were not, however, shot. These facts were established some years ago, and the children of Dr. Dolbeau now sought an injunction against M. Lissagaray's book, so as to have an official denial of the accusation which weighed so heavily on their father's memory. The court granted the injunction applied for.

The Plague.

A recent enactment of the Minister of the Interior annuls the decree of Feb. 9th, which prohibited the entry of vessels coming from India into the port of Marseilles. The new order establishes one uniform regulation for all French ports, the organisation costing 247,000 francs. The Minister also asks the Chamber for an additional sum of 150,000 francs to complete a sanitary installation at Marseilles. The prohibitory measures in force at this town with regard to goods coming from Bombay have given rise to a lawsuit between two large firms, of which the import house was unable to meet its engagements for the delivery of some oil-bearing seeds. The commercial courts decided that the decrees of prohibition constituted a case of *force majeure*, an accidental circumstance quite independent of the wishes of the importers, who could not be held responsible, and that therefore the contract lapsed without any damages. The Correctional Court of St. Malo has just condemned a captain who had made a false sanitary declaration at St. Pierre and Miquelon to eight days' imprisonment and a fine of 16 francs.

The Sanitary Service for the Paris Exhibition of 1900.

The organisation of this service has just been arranged in a most precise fashion and the works have already begun. The plan for a hospital to be built in the centre of the exhibition has been rejected. This idea was the suggestion of M. Marcel Baudouin, who had seen a similar establishment working at the Chicago Exhibition. But at Chicago the exhibition buildings were outside the town, far away from the hospitals, and the transport of the wounded or sick for so long a distance would have been both difficult and dangerous. At Paris, although the exhibition buildings cover an immense area, they are close to the populous quarters where hospitals abound; in fact, there are five of which the most distant is not more than ten minutes away from the centre of the exhibition. The ambulance service for the transport of the sick and wounded can therefore meet every want without incurring the enormous expense of the construction of a temporary hospital. At the head of the new service is Dr. Gilles de la Tourette, who has appointed fifty assistant surgeons to aid him, who will be drafted to different relief stations, where one or two will be always on duty. To particularise some other measures, all workmen who have not been vaccinated or re-vaccinated within the last two years will be gratuitously vaccinated at any medical station; exhibitors, their employés, or workmen, and all visitors wounded or stricken with sickness inside the buildings will receive first aid at the medical stations on application, or, if necessary, will be conveyed thither by the administration. For every sick or wounded person thus treated the medical staff will take a ticket and issue a special bulletin. The expenses of drugs, dressings, &c., will be defrayed by a special fund supplied by a rate of 1 per cent. on any contracts which the administration makes with contractors or exhibitors. If at the close of the exhibition there be any money over from this fund it will be handed to the Assistance Publique; if, on the contrary, the fund is found to be in debt the general fund of the exhibition will pay. The surgeons employed by this service will receive ten francs for every time they attend at the buildings. Despite the smallness of the fees, the applications to take part in the work are innumerable and include the well-known names of several hospital surgeons.

The Pharmacopœia.

The Minister-in-Charge has appointed a Commission to revise the Pharmacopœia, the use of which is obligatory on all druggists, and a revision of which is made about every ten years.

Horses at the Pasteur Institute.

It is well known that for the preparation of the various serums at the Pasteur Institute, and for the preparation of anti-diphtheritic serum particularly, there is at Garches a large stable capable of accommodating eighty horses. At first it was impossible to pick these animals with much care for want of funds. At present, since it has been shown that the state of health of the horse exercises a great influence upon the value of the serum, and more especially upon the accidents which may arise from its use, the horses have been selected with the greatest care. A recent bequest of two million francs from Baron Hirsch to the Institute has been the means of allowing large sums to be expended on the purchase of horses and so of improving the quality of the serum. Among these horses are many with a notable past, and I may mention the charger of Marshal Canrobert and Saint Claude, formerly a steeplechaser belonging to Baron Finot, and the winner in 1890 of the great hurdle race at Auteuil.

Banquet to Madame Clémence Royer.

A great banquet has been held at the Grand Hotel in honour of Madame Clémence Royer, who translated Darwin's works, and has always been a great promoter of the evolutionary movement in science. She recently attained her seventieth birthday, and has devoted her whole life to metaphysical biology. Always struggling with undaunted energy, suspected on account both of her Chauvinist proclivities and her sex, and receiving neither encouragement nor reward, she has now reached old age, without fortune or honours, in the Hospice Galignani. The banquet was attended by the *élite* of the scientific world at Paris, and a number of delegates from abroad were present.

March 17th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Plague and the Imperial Commission.

THE Russian authorities continue to watch with the greatest interest the spread of the epidemic of plague in India and to take measures to prevent it crossing their own frontiers. The principal measures undertaken by the Imperial Commission recently formed to deal with the danger are the following:—1. To send a scientific expedition to India to study the disease on the spot. This expedition was to sail from Odessa on the 12th (24th) of February on board one of the large vessels of the Russian volunteer fleet, *en route* for Bombay. At the head of the expedition is Dr. Vuisokovitch, Professor of Pathological Anatomy in the University of St. Vladimir at Kief. He is accompanied by his assistant in the same chair, Dr. Zabolotnui, and one or two senior medical students. The expedition is prepared for a four months' tour, and is instructed to make particular observations on the mode of propagation of the plague in India and the results of inoculations of anti-plague serum both as a preventive and as a curative measure. 2. A second measure is the prohibition for the present year of pilgrimages of Mussulman subjects of the Tsar, whether to Mecca or to the holy places of the Shiite sect, of which Meshed in Persia is the

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most important. In the same spirit the *Government Messenger*, the official paper of the Government, recently published a proclamation from the Mufti of Orenburg, addressed to all the Imams and others in authority under him. In this proclamation the excellent advice is given to all good Mussulmans to abstain from going to Mecca or Medina this year, and to put off their Haj to a more favourable time, and the wise words of Mahomet are quoted, in which the faithful are told not to go to places where infectious diseases are prevailing, nor, when these diseases come to them, to run into foreign lands and so carry the infection with them. In Russia it is comparatively easy to put a stop to pilgrimages, by merely refusing to issue travelling passports or to give the police-permit to leave the country. The Russian Palestine Society has refused for the present to issue tickets to Christian pilgrims, of whom there is usually a more or less constant stream from Russia to the Holy Land and back. 3. The third measure of the Imperial Commission is to organise means for the preparation of Yersin's plague-serum on a large scale. 4. The fourth is to send small bodies of medical men and officials to the more vulnerable points on the frontiers to take local measures against the admission of the infection to the country. These points are situated along the Persian, Afghan, and Chinese frontiers. Special measures are also being taken along the shores of the Black and Caspian Seas, in the Caucasus, Transcaucasia, Transcaspia, and Central Asia generally. 5. The last measure of the Commission is the decision to publish in the Government gazette all the authentic information they receive about the spread of the plague and the measures that are being taken to guard against it.

The Russian Members of the International Sanitary Conference in Venice.

Russia's official representatives at the Sanitary Conference in Venice are M. Jonin, the Russian Minister in Switzerland, who took part in the similar Conferences in Venice and Dresden which met to deal with the subject of cholera in 1891 and 1892 respectively, and Professor Lukianof, the director of the Imperial (Oldenburg) Institute of Experimental Medicine in St. Petersburg, who has also gone to Venice as the representative of the Imperial Commission appointed to deal with the plague, whose activity has just been described.

Green Tea and the Plague.

Can green tea, imported from India, be a means of introducing the infection of plague? The authorities in the Caucasus appear to think that it may, and have put in action certain rather stringent measures to prevent the possibility of such an event. The importation of green tea is to be stopped at once and all trucks which have carried it are to be disinfected. Chests of tea already unpacked in Batoum are to be isolated and kept so by sentries; tea *en route* is to be stopped at Baku on the Caspian, and there quarantined in the same way. All persons who have been in contact with these goods are to undergo a six days' observation, and on the appearance of any suspicious symptoms are to be at once isolated. Without discussing the desirability of these measures, the question arises why green tea is selected for special treatment apart from other merchandise.

The English Colony in St. Petersburg and the Indian Famine.

A collection was recently made in the English church in St. Petersburg for the sufferers from the famine in India, and reached the large sum of £340. As the English colony numbers only some 3000 individuals (no exact figures are available), and many of these are Nonconformists, this sum must be regarded as a most liberal contribution to the relief of our Indian fellow-subjects.

PHILADELPHIA.

(FROM OUR OWN CORRESPONDENT.)

Cardiac Hydrothorax.

AT a recent meeting of the Pathological Society of this city Dr. J. Dutton Steele presented an interesting statistical paper from the Pepper Laboratory of Clinical Medicine upon the Distribution and Etiology of Cardiac Hydrothorax. An analysis of 2415 necropsies gave 173 cases of uncomplicated chronic heart disease in which there had been long-continued dilatation affecting particularly the right auricle. In the 75 cases of passive effusion into the pleura occurring in this series the effusion was unequal in distribution in 70 per cent., and of this number 77 per cent. were greater upon the right side. In 13 cases the effusion was entirely unilateral, and of these 10 were upon the right side. In equal bilateral hydrothorax the tendency to general anasarca was much increased, and in the unequal cases less than one-sixth showed œdema of any part. The writer reported 5 cases in which there was passive effusion much greater upon or entirely confined to the right side. In all there were undoubted signs of long-continued dilatation of the right auricle, and dropsy of the legs was either absent or followed the appearance of the hydrothorax. In none of the cases were there signs of aneurysm or tumour. The writer thought that the explanation for such effusions is that a dilated auricle by its pressure interferes with the venous and lymphatic circulation of the pleura of the same side, and the long-continued congestion causes the effusion. The right auricle is the most frequently dilated of any of the heart chambers in failing compensation, and hence the large percentage of right-sided effusions.

Infants' Feeding Bottles.

Buffalo, N.Y., has passed an ordinance making it "unlawful for any person or persons to use or to engage in the sale of any bottle, mechanism, or other device for the artificial feeding or nursing of infants or children under three years of age that has connected therewith a rubber tube, hose, or such contrivance." The Health Commissioner, Dr. Ernest Wende, stated that the infant mortality has fallen very materially since its adoption.

The Serum Diagnosis of Typhoid Fever.

In adopting the method of Wyatt Johnston for the diagnosis of typhoid fever, Dr. Gehrmann, of the Chicago Board of Health, has substituted pieces of sterilised mica for card, since the smooth, non-absorbent surface of the former renders it much more easy to effect a solution of the blood in water.

Medical Appointment.

Dr. A. C. Abbott, professor of hygiene in the University of Pennsylvania, has been appointed chief of the Department of Bacteriology of the Philadelphia Bureau of Health, vice Dr. B. Meade Bolton, who has accepted the chair of Pathology in the Missouri Medical College.

Competition among Hospitals.

Philadelphia is soon to have another hospital, to be known as the American Hospital for Diseases of the Stomach. Its scope will, however, be broader than the name implies, for, in addition to the treatment of gastric and intestinal disorders, the management intend to establish a laboratory for research work, giving particular attention to adulteration of food. Free lectures will also be given to the public upon this subject. It is to be hoped that the "charitable feature" of hospital work will be kept prominently in view, and that steps will be taken to prevent abuse as far as this is possible. Competition is so keen among the hospitals that special inducements are offered by some of them to the drivers of our police patrols, "and, of course, the case goes to the highest bidder." I believe the scheme was promulgated by the homœopaths; at all events, the Hahnemann Hospital has been the chief offender. A few of the institutions openly advertise for patients, while others are "written up" by the reporters. It seems that the staff are not averse to appearing in print; indeed, in many cases the technical description is highly suggestive of collusion. Since it is human nature to get as much as one can for nothing, the remedy lies not with the people but with the physicians, and while these latter actually bid for cases abuses of the most flagrant kind will exist.

Feb. 25th.

YORK COUNTY HOSPITAL.—The annual meeting of the York County Hospital was held in the building on March 9th, the Dean of York being in the chair. It was stated that an extension of the children's wards would soon have to be undertaken. The report also mentioned the necessity of taking some steps to improve the accommodation provided for the nurses, and suggested that the work might be carried out during the present year in commemoration of the prolonged reign of the Queen. The accounts showed that at the close of 1896 there was a balance of £141 in the hands of the treasurer.

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Obituary.

GEORGE BRETHERTON BARRON, J.P., M.D. ABERD., M.R.C.S. ENG., ETC.

A PRACTITIONER of a most worthy and excellent type has just passed away in the person of Dr. Barron of Southport. He was the son of Mr. William Barron, a medical practitioner of Tarleton, and was educated at King's College, London. He became a Member of the Royal College of Surgeons of England in 1847 and took the degree of M.D. Aberdeen in 1860. He settled down in the former year in Southport, in which town he has practised ever since. Besides his medical work he took a deep interest in all the affairs of the town, was one of the first improvement commissioners, and became a member of the town council in 1867, where his services were so valued that although a strong Conservative he was several times asked by the Liberals to allow himself to be nominated as mayor, but invariably declined the honour. He was a thoroughly earnest and enthusiastic Churchman and a prominent member of the Church Defence Association, while the cause of religious education found in him a most valuable supporter, and he was never tired of aiding national schools with both his time and his money. He was greatly interested in the Volunteer movement and was for a long time surgeon to the 13th Lancashire Rifle Volunteers. Dr. Barron was President of the Lancashire and Cheshire branch of the British Medical Association in 1885 and a representative of that branch on the Council of the Association from 1883 until the time of his death—a period of fourteen years. He was also for many years physician to the Southport Convalescent Hospital and the North Meols Dispensary, and frequently contributed papers on various medical subjects to the columns of THE LANCET. So recently as three or four weeks ago he was in full work, but his illness terminated fatally on March 10th, despite all that could be done for him. Dr. Barron, who was in his seventy-sixth year, leaves a widow and one son, Mr. Herbert G. Barron, who, like his grandfather and his father, is a member of the medical profession. The funeral took place on Saturday, March 13th, and was attended by a large number of every class and creed, all anxious to show respect to the memory of one who was universally loved and honoured as an honest and public-spirited citizen, an able, sympathetic, and kindly adviser in sickness, and a true and very real friend to all who knew him. The Conservative organisations in Southport, Birkdale, Formby, Great Crosby, and Waterloo were represented; also the 3rd V.B. K.L.R., the Church Missionary Society, and the Oddfellows' Society, with all of which bodies the deceased had been closely connected; and the Right Hon. G. N. Curzon, Under-Secretary of State for Foreign Affairs and member of Parliament for the Southport Division of Lancashire, attended specially from London to pay a last tribute of affection to his old friend's memory. Most of the medical practitioners of the town of Southport were also present, whilst the Lancashire and Cheshire Branch of the British Medical Association was represented by Mr. Mitchell Banks of Liverpool, ex-President of the branch; Dr. Samuel Woodcock of Manchester, president-elect; Dr. H. H. Vernon, medical officer of health of Southport and President of the Branch; Dr. R. Harris, a member of council of the Branch; and Dr. Davidson, physician to the Royal Infirmary, Liverpool. By the death of Dr. Barron the world is poorer by the loss of a good man, whilst our profession suffers by the falling out of its ranks of one who well and worthily maintained the dignity and credit of an English general practitioner.

THOMAS DICKINSON, M.R.C.S. ENG., L.S.A. LOND.

MR. THOMAS DICKINSON, late of Sloane-street, whose death occurred on March 3rd, was the son of William Dickinson, an esteemed practitioner of Chelsea. He was educated at King's College School, London, and in due course commenced and finished his medical studies at King's College Hospital under the auspices of Partridge, Daniell, Fergusson, Todd, and Budd. On the conclusion of his hospital career he travelled in Spain for a time in medical charge of a patient. On his return to Chelsea he was appointed medical officer to the district in which he lived, and held that appointment for years, being afterwards elected medical officer to the workhouse. This post he held until the requirements of the Poor-law necessitated the establishment of a new infirmary and the appointment of a resident medical officer. He then settled in Sloane-street, where for many years he conducted a large practice, being medical officer to the Brompton and Belgrave Dispensary and a highly popular practitioner in the neighbourhood. Soon after the establishment of the 1st Middlesex Royal Engineers (Volunteers) he accepted the post of assistant surgeon, as the medical officers were then designated, under the command of Colonel the MacLeod of MacLeod, and in due course was gazetted surgeon. During this time he performed all his military duties to the satisfaction of his commanding officer, taking considerable interest in the corps and being one of the first to pass the Army medical examination which was then required of all medical officers by the Volunteer regulations. Mr. Dickinson was well known among his professional brethren and patients as a cordial, upright, and conscientious man, and those who were acquainted with him socially have to lament in his death the loss of a friend endeared to them by a genial character in all bearings of life. Though busily occupied in professional work, he took an active part in all matters that concerned his fellow parishioners, being interested in and advancing the interests of many local charities and so earning the reputation of an enlightened and conscientious citizen. Mr. Dickinson was a Member of the Royal College of Surgeons of England and a Licentiate of the Society of Apothecaries of London. He was also for some years on the Council of the Medical College at Epsom, which post he held until a short time before his death. He leaves behind him a widow, a son, Dr. Thomas Vincent Dickinson, and a daughter, the wife of Mr. W. H. Bennett.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. L. von Halban, Professor of Forensic Medicine in the University of Cracow, and for many years editor of the well-known Polish journal, *Przeglad lekarski*. He was fifty-nine years of age.—Dr. T. G. Rowand, formerly Professor of Therapeutics and Materia Medica in the University of Pennsylvania.—Dr. B. Boyer, Professor of Therapeutics in the French School of Medicine, Beyrout.—Dr. Antonio Arantes Pedroso, Professor of Surgical Pathology in the Medical School of Lisbon.—Dr. Caussanel, Professor of the Diseases of Children in the Medical School of Algiers.—Dr. Hartshorne, formerly Professor of Medicine in the University of Pennsylvania.—Dr. Perry Millard, formerly Professor of Surgery in the University of Minnesota.

IN MEMORIAM.—At a meeting of the executive committee of the Merthyr Tydvil Hospital on the 9th inst. a letter was read from Mrs. Harrap and family of Gwaunfarren, Merthyr Tydvil, intimating that it was their wish to subscribe a sufficient sum, presumably from £1300 to £1400, to endow a bed in the accident ward of the hospital as a memorial of the late Mr. Richard Harrap. The offer was gratefully accepted.

THE DIFFUSION OF SMALL-POX.—The outbreak of small-pox which last month threatened the county of London has in a large measure died out. In the four weeks ended on Feb. 27th there were 48 notified cases of the disease in the metropolis, of which total 29 were from the Camberwell sanitary area, and 6 were from the Strand board of works district. In each of these areas, however, the outbreak was limited to a circumscribed locality; but the authorities are to be congratulated on having curtailed the spread of the disease to the small dimensions attained. The registered deaths from small-pox within this period were only 4 in London, but there were 6 additional deaths in the first week of March, whilst last week there was but 1 death, that of a female infant aged under one year, of whose vaccination no statement is forthcoming. There were no cases admitted to the hospital ships last week, and 30 cases remained on board at the close of the week.

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Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having previously passed the necessary examinations and having now attained the legal age of twenty-five years, have been admitted Fellows of the College:—

Linington, William West, L.R.C.P. Lond., St. Mary's Hospital (diploma of Member dates July 27th, 1893).
Sprawson, Frederick Charles, L.R.C.P. Lond., King's College Hospital (diploma of Member dates May 10th, 1894).

The following gentlemen, having passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Members of the College:—

Blieden, Max, M.D. Pa., University of Pennsylvania, U.S.A., and St. Bartholomew's Hospital.
Preston, Lionel Litchfield, M.B., B.S. Durh., L.S.A. Lond., University of Durham and Middlesex Hospital.

INTER-HOSPITAL FOOTBALL.—The final tie of the competition for the Hospitals Association Cup took place on Wednesday last at the Essex County Ground, Leyton, and was won after a good game by Guy's Hospital, who beat London Hospital by one goal to none.

UNIVERSITY OF CAMBRIDGE.—Professor Rucker, F.R.S., has been appointed Reade lecturer for the present year. Mr. F. F. Blackman, of St. John's College, has been appointed University Lecturer in Botany. Dr. Arthur Willey, whose recent discovery of the eggs of nautilus has excited much interest, has been elected to the Balfour Studentship in Animal Morphology for another year. The debate on the proposal to confer titular degrees on women has run to the unprecedented length of three days. Special numbers of the *Reporter* containing the report of the Syndicate and the speeches delivered will be published, and may be had (price 7*d*.) on application to the University Press. At the congregation on March 11th the following medical degrees were conferred:—M.D.: C. W. Windsor, M.A., non-collegiate. M.B.: W. G. Richards, B.A., Christ's. M.B. and B.C.: A. S. J. Pearse, M.A., Trinity; H. C. Haslam, B.A., Caius; F. G. Thomas, B.A., Caius; J. T. Wills, B.A., Caius; R. de S. Stawell, B.A., Trinity Hall; C. B. Stewart, M.A., Christ's. A welcome of extraordinary enthusiasm was given to Dr. Nansen by a crowded congregation on March 16th, when the honorary degree of Doctor in Science was conferred upon him.

DIPHTHERIA IN LONDON.—In the four weeks ended Feb. 27th the notified cases of diphtheria in London were 916 in number, every one of the sanitary areas of the county being invaded, though five of them had only 9 notified cases in all among them. But the other four districts had an aggregate number of 299 notifications, or nearly one-third of the total for the whole of London; and if the other four districts, each with 39 and more notifications, be taken, then we find that in eight of the sanitary areas there occurred more than one-half of the total notifications in the county, comprised of forty-three sanitary districts—excluding, that is, the Port of London. The weekly average of notified cases in the period under review was 229. The registered deaths, 185 in all, yielded a weekly average of 46. The case mortality per cent. of notifications was thus 20·2. Comparing the period with that preceding it, namely, the four weeks ended Jan. 30th, we find that the weekly average of notified cases in the earlier period was 239, though the per case mortality was as high as 26·1 per cent. Thus we find in the February period a distinctly favourable state of affairs, particularly when it is remembered that the January period compared favourably with its predecessors. In the two weeks of March ended the 13th the registered deaths in London were 43 and 53. The latter total was 21 in excess of the corrected decennial average for the tenth week of the period 1887–96. Two of the deaths were of infants under one year of age, and two of persons aged over twenty years. Wandsworth is credited with 8 of the deaths, Camberwell with 5, and Kensington, St. Pancras, Hackney, and Bethnal-green each with 4 deaths. The admissions to hospital in the week numbered 97, against 104, 102, and 112 in the preceding three weeks, and on Saturday last there were 834 cases still under treatment. In the "Outer Ring" 10 deaths from diphtheria were registered, of which 4 were in the Edmonton district.

THE JENNY LIND INFIRMARY, NORWICH.—In commemoration of the sixtieth year of the Queen's reign it has been decided to collect a sum of money to be called the Diamond Jubilee Fund, for the purpose of building at Norwich a new Jenny Lind Infirmary for Sick Children. A site for the building has been presented by Mr. J. J. Colman, and the Earl of Leicester (Lord-Lieutenant of the county) has given a donation of £2000. The present Jenny Lind Infirmary was established in 1853 and has twenty-six beds.

CIRENCESTER COTTAGE HOSPITAL.—The annual meeting of Cirencester Cottage Hospital was held on March 2nd, under the presidency of the Ven. Archdeacon Hayward. The twenty-second report of the committee showed that 101 new cases were admitted during the year, making 1993 during the twenty-two years the hospital had been opened. Structural additions and improvements had been made to the building at a cost of £420, which had been paid out of the reserve fund. The ordinary receipts had been £588 and the expenses £430.

PLURALISTS.—At the last meeting of the Kidwelly Town Council it was stated that only one application had been received for the amalgamated appointment of road surveyor, sanitary inspector, lamp-lighter, water inspector, building inspector, and quay caretaker and collector, for which a salary of a guinea a week had been offered. It was finally resolved to re-appoint the former road surveyor and to add to his office that of building inspector, and also to invite applications for the amalgamated offices of sanitary inspector, water inspector, lamp-lighter, and quay inspector at a salary of fifteen shillings a week.

GLOUCESTER DISTRICT NURSING SOCIETY.—The annual meeting of this society was held on March 4th, under the presidency of Dean Spence. The report showed that the receipts were £490, against £565 in the preceding year, and the expenditure was £630, against £550. It was decided to affiliate with the Victoria Jubilee Institute for Nurses. The £1461 balance from the small-pox nursing fund publicly subscribed had been invested in Consols, and it was thought that the donors would consider the erection of a permanent nurses' institute as a fitting application of the money.

SWANSEA NURSING INSTITUTE.—The annual meeting of the Swansea Nursing Institute was held on Feb. 22nd, under the presidency of the Mayor. The annual report stated that there were seventeen nurses on the staff. A district nurse who had been appointed was doing excellent work amongst the poor, and an anonymous donor had promised to defray the expense of another. The earnings of the nurses had exceeded those of the previous year by £61, the total being £822. Mrs. Llewelyn had given £500 towards the cost of the house, which had been £1172 This Nursing Institute is carrying on a most useful work at Swansea.

PROPOSED COTTAGE HOSPITAL FOR PENARTH.—At a meeting held at Penarth on March 3rd it was unanimously resolved to celebrate the Queen's Diamond Jubilee by the erection of a cottage hospital. The chairman said that to carry this out efficiently at least £2500 would be required. The structure would be intended to accommodate ten or twelve beds, at an estimated cost of £50 per bed. Mr. R. F. Nell, M.R.C.S.Eng., L.S.A., stated that the medical men of Penarth were desirous that such an institution should be established to save the necessity and expense of sending patients to Cardiff and to relieve their sufferings immediately on the spot.

THE DELAY IN ASSIZE TRIALS.—In the recently published Blue book on Judicial and Criminal Statistics for 1895, pages 33 to 35 and 175 to 178 deal specially with the detention of prisoners awaiting the assizes. This subject has not hitherto been given a place in the Blue-book; the fact that this information was to be published was made known in the House of Commons on Feb. 18th by the Home Secretary in the course of a reply to Mr. Henniker Heaton, who had called the attention of the Government to several instances in which hardships had been inflicted under the present system. Mr. Heaton gave details of eleven cases occurring during the last three years in which persons had been acquitted at Maidstone Assizes, six of them having been in prison awaiting trial for over three months, two for over four months, two for over five months, and one for over six months.

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H.R.H. PRINCESS CHRISTIAN has fixed May 6th for the St. John Ambulance *fête* and competition at the Crystal Palace in commemoration of the Queen's Diamond Jubilee.

METROPOLITAN CONVALESCENT INSTITUTION.—The annual meeting of the Metropolitan Convalescent Institution was held on Feb. 23rd at the office, 32, Sackville-street, Mr. Richard B. Wade presiding. It was stated in the report that during the past year 5064 men, women, and children were admitted to the homes.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST.—The annual meeting of the Royal Hospital for Diseases of the Chest, City-road, was held on March 15th, the Lord Mayor presiding. The report showed that 742 in-patients were under treatment during the year, and there were 9600 out-patients, who made upwards of 24,000 attendances. The total income, including £2800 received from legacies, was £10,108, and the total expenditure was £7459.

HASTINGS AND EAST SUSSEX HOSPITAL.—The annual meeting of the Hastings and East Sussex Hospital was held in the building on March 9th, the Mayor of Hastings being in the chair. At the beginning of the year forty-eight in-patients remained under treatment, and 634 were admitted in the course of the year; the average stay in the hospital was between nineteen and twenty days. The financial position of the charity was much better last year than during the previous year, the credit for this result being mainly due to a committee of ladies, who raised £1001.

MUNICIPAL HONOURS TO MEDICAL MEN.—A correspondent reminds us in a letter from Australia that Mr. Hall Owen, M.R.C.S.Eng., M.R.C.P.Irel., is the present Mayor of the city of South Melbourne, a city with 36,000 inhabitants and prior to the period of depression of 46,000 inhabitants; and that Dr. Cascaden is the present Mayor of the adjoining town of Port Melbourne, both gentlemen having been unanimously elected. Our correspondent considers, and so do we, that members of the profession at home like to learn of instances of honour done and trust confided to members of the profession abroad.

THE DENTAL HOSPITAL OF LONDON.—Lord Kinnaird presided over the thirty-ninth annual meeting of this institution, which was held on the 11th inst. at the hospital in Leicester-square. The report was one of a congratulatory kind, testifying again to the continued and increasing usefulness of this important charity. During the year 1896 no less than 57,654 cases had been attended to, many of them being treated for preservation of existing teeth rather than extraction. It was hoped soon to proceed with the building of the new hospital and school, the present premises being totally inadequate for the purpose and considerably hampering the extension of the good work now going on, both educational and charitable. The committee appeal for donations and subscriptions, which may be sent to the secretary, Mr. J. F. Pink, at the hospital, Leicester-square, W.C.

PRESENTATIONS TO MEDICAL MEN.—Dr. G. Burbidge White of South Richmond-street, Dublin, was presented at a recent meeting of the Committee of Inspection of the Masonic Grand Lodge of Ireland with a purse containing the fees for the M.D. degree of Dublin University. The presentation was made as a testimony of esteem and recognition of medical services rendered in the interests of the committee.—Mr. Norman G. Douglas, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., of Scarborough, was the recipient, on the 1st inst., at a meeting of the Central Evening Continuation Board Schools, on the close of the classes which he has held on "Ambulance Aid" and "Sick Nursing," with a silver cigar-case in appreciation of his services.—At a successful entertainment and concert, in the Lostock Hall Mission School, Preston, on the 1st inst., the proceeds of which were in aid of the local ambulance corps, Mr. Thomas Sharples, L.R.C.P., L.R.C.S. Edin., the instructor, was presented by the members of the classes with two volumes of Dr. Nansen's new work.—On the 2nd inst., in the Roman Catholic School, Brownedge, Bamber Bridge, on the distribution of certificates and medallions in connexion with the local branch of the St. John Ambulance Corps, Miss Whitehead, on behalf of the ladies' sick nursing and first-aid class, presented to Mr. C. J. Trimble, L.R.C.P. Edin., D.P.H., a silver cigarette case, as a token of gratitude for his ambulance instruction.—At the annual general meeting of the Governors of the Wolverhampton and Staffordshire General Hospital, held on the 9th inst. a portrait of himself, painted in oils, was presented to Dr. Totherick by Canon Davies, a member of the committee, and in the name of the subscribers, together with a facsimile in an oak cabinet, bearing the following inscription: "To James Yeomans Totherick, M.D., M.R.C.P.E. We, the undersigned, on behalf of a large number of friends and admirers, beg your acceptance of your portrait in oils, together with this memento of the occasion, as an expression of the high esteem in which you are held by all classes of society, and in recognition of your valuable and faithful services for the past twenty-five years as hon. physician to the Wolverhampton and Staffordshire General Hospital." As a memorial of Dr. Totherick's long connexion with the hospital it is intended to hang the portrait in the institution.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Metropolitan Poor-law Children.

SEVERAL Members of the House of Commons have been interesting themselves in the draft order of the Local Government Board on this subject, and if opportunity offers they will raise a general debate in the hope that the Local Government Board may be induced to re-consider their decision.

Midwifery Orders in Poor-law Unions.

It is the purpose of Mr. Heywood Johnstone to move next week for a return showing with regard to each Union in England and Wales the number of confinements in the workhouses during 1896 and the number of orders in respect thereof given to visiting medical officers under the general order of the Poor-law Commissioners, the total amount paid to the medical officers in respect of the orders, the number of orders given to district medical officers in respect of confinements other than in the workhouse and the amount paid in respect of them, and the number of district nurses appointed under the general order of the Local Government Board.

HOUSE OF COMMONS.

THURSDAY, MARCH 11TH.

Suppression of Rabies.

Mr. Walter Long, replying to Mr. Stephens, said he was aware that a dog was killed by the police at Hendon on March 4th, and that upon post-mortem examination by the county veterinary inspector rabies was found to be present. Every possible effort was being made to expedite the completion of the arrangements the Board of Agriculture proposed to make for the suppression of rabies.

The London Water Question.

At this sitting of the House there was a long debate on the London water question in connexion with a series of eight Bills for the purchase of the undertakings of a similar number of the water companies. Mr. Sydney Buxton introduced the subject by moving the second reading of the first of the Bills—that for the purchase of the undertaking of the Chelsea Company. He claimed for the London County Council that the time had come when the water companies should no longer be private concerns, but be in the possession and under the control of the ratepayers.—Sir F. Dixon-Hartland moved the rejection of the Bill, claiming that its terms were unfair both to the ratepayers of London and to the shareholders of the company. Mr. Chaplin intimated that the Government would oppose this and the other Bills, but would be willing to appoint another Royal Commission, and in the meantime introduce a measure to strengthen and improve the position of the water consumers in the metropolis by giving them easier redress when they were aggrieved by failure to fulfil obligations on the part of the water companies. The debate went on for five hours, the result being that the Chelsea Bill was rejected by 258 to 123 votes, and in consequence of this decision the other seven Bills were withdrawn.

FRIDAY, MARCH 12TH.

Experiments on Living Animals.

Mr. MacNeill asked the Secretary of State for the Home Department, in view of the fact that in the return showing the number of experiments performed in the year 1895 on the bodies of living animals in the United Kingdom, amounting in all to 4679, of which 3119 were performed under special certificates dispensing with anæsthetics, the term "experiment" meant the whole series of experiments carried out on a particular line of research, and that 200 or 300 animals were at times used in a single experiment, while 80 or 90 was a common number; whether there was any record kept of the number of animals used in the 4679 experiments of 1895; and whether he would, under the powers conferred upon him by 39 and 40 Vic., c. 77, s. 9, direct that the vivisectors in making reports for the vivisectors' return for 1896 should state the number of animals used in each experiment.—Sir Matthew White Ridley replied: The hon. Member is under an entire misapprehension. The number of animals used does not exceed the number of experiments given in the return. In fact, it is less.—Mr. MacNeill further asked the Home Secretary whether the inspectors appointed under 39 and 40 Vic., c. 77, for the purpose of securing a compliance with the provisions of that Act to visit places registered for

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vivisection, did in fact visit such places during the performance of experiments on the bodies of living animals; whether they inspected the bodies of the vivisected animals after the performance of these experiments, or were usually present at vivisections, and did they usually see the bodies of the vivisected animals; had the inspectors any power to mitigate or prevent the infliction of pain on animals by vivisectors who experimented under Special Certificate A, which permitted its holder to experiment without anæsthetics; and would he state in what degree or to what extent inspection operated as a prevention of unnecessary pain being inflicted on living animals.—Sir Matthew White Ridley replied; Yes sir, the inspectors both visit registered premises during the performance of these experiments and see the bodies of animals upon which experiments have been performed. Certificate A is never allowed except for inoculations and similar trivial operations, and in every case a condition is attached to prevent unnecessary pain. The safeguards against the infliction of unnecessary pain are the character of the persons to whom licences are given, the careful inquiry that is made by the Home Office beforehand, and, lastly, the stringent conditions under which licences are given and certificates allowed, and which it is the duty of the inspectors to see are properly observed.

Darenth Asylum.

Mr. Chaplin, replying to Mr. Pickersgill, said he was informed that there were no children at the Darenth Asylum who were feeble minded but not imbecile. The children at the asylum were legally paupers. It was not the intention to remove the children from the asylum.

The Health of the 2nd Essex Regiment.

Mr. Sinclair asked the Under Secretary of State for War whether fever had broken out in the 2nd Battalion of the Essex Regiment now stationed in India, and if so could he state to what extent; and whether, seeing that the 2nd Battalion of the Essex Regiment left England in 1882 for foreign service and had never returned to the United Kingdom since that time, the Secretary of State for War would recall that battalion home as soon as possible to allow it to be stationed in its own county for a time after such a lengthened period of foreign service.—Mr. Brodrick replied that in the return from the battalion dated Feb. 1st the health was described as "indifferent," but the numbers in hospital were about normal and the prevailing diseases appeared to be of a specific character. The average tour abroad of an infantry regiment was seventeen years. The 2nd Battalion of the Essex Regiment left England in 1882 and was ninth on the roster for return home.

New Regulations for Wool-sorting.

Sir Matthew White Ridley, in reply to Sir Charles Dilke, said that the special rules with regard to the wool-sorting industry were being served upon the occupiers of factories and workshops to which they applied.

The Unhealthiness of Sierra Leone.

Mr. Price asked the Secretary of State for the Colonies whether he had any confirmation of the report that during the first seven months of 1896 out of about twenty English officials in the colony of Sierra Leone there were three deaths and five cases in which the officials had to be invalided home; whether officials had to serve fifteen months at Sierra Leone before obtaining leave, whereas in the Gold Coast colony they had only to serve twelve months; and whether, seeing that Europeans were particularly subject to illness during the later months of their stay on the coast, the Colonial Office could see its way to making the rules as to leave in Sierra Leone the same as in the Gold Coast colony.—Mr. Chamberlain said, in reply: I regret to state that during the months in question, which were exceptionally unhealthy, no less than five deaths occurred among the English civil officials, of whom there were about thirty, and three were invalided home, besides two (including the Governor) who were invalided to the Canary Islands. The periods for which officials have to serve in Sierra Leone and the Gold Coast before obtaining ordinary leave are as stated, but in case of illness sick leave is granted sooner. It does not appear that Europeans are more subject to illness during the later months of their stay than during the earlier ones; and, while I am anxious that everything possible should be done to improve the conditions of life on the Coast, I do not think that a sufficient case has yet been made out for reducing the tour of service in Sierra Leone to twelve months and throwing a considerable burden on the finances of the colony. Sierra Leone, as far as statistics go, is more healthy than the Gold Coast.

MONDAY, MARCH 15TH.

Exercise for Prisoners.

Mr. Pickersgill asked the Secretary of State for the Home Department whether he was aware that a convict undergoing the preliminary stage of his term had for a period of nine months to work, eat, and sleep in one small cell, in which he was confined for twenty-three hours out of every twenty-four at all seasons of the year; whether he was aware that several principal officers of prisons had described this confinement as excessive and as producing injurious results, both moral and physical; and whether he would confer with the Prison Commissioners with a view to the granting to this class of prisoners more than one hour's exercise per diem. — Sir Matthew White Ridley said he was aware that a convict under a sentence of penal servitude, with the exception of his daily attendance at chapel and hour of exercise, passed the first nine months of his sentence in separate confinement. He believed the hon. member to be misinformed as to the opinions held by the principal officers of the prisons in which convicts were received with regard to the effects of this confinement. The amount of exercise necessary for the health of each prisoner was left by statute to be determined by the prison surgeon, and he was perfectly content that under that statute the surgeons should exercise a liberal discretion.—Mr. Pickersgill further asked the right hon. gentleman whether he was aware that the Governor of Dartmoor Prison had condemned the system of separate confinement for nine months before the departmental committee which inquired into the subject.—Sir Matthew White Ridley said he was not aware of it.

Reformatories for Inebriates.

Sir Matthew White Ridley, replying to a question addressed to him by Mr. Hobhouse, said he was afraid he could not say when the Bill for the establishment of reformatories for inebriates was likely to be introduced. The Bill had been for some time in a forward state of preparation, but there were still remaining some important points which required to be settled.

The Lunacy Question.

Sir Matthew White Ridley informed Mr. Hobhouse that the inquiry into the causes of the increase of lunacy in England and Wales had been made and the report laid on the table of the House. Copies of the report would be delivered to Members almost immediately.

Death in a Lunatic Asylum.

Mr. Murnaghan asked the Chief Secretary to the Lord Lieutenant of Ireland—(1) whether his attention had been called to the verdict of the coroner's jury recently given at Belfast at the inquest on the body of Mrs. Beggs, who died in the Belfast Lunatic Asylum; (2) whether he was aware that the eminent medical man who conducted the post-mortem examination found a number of her ribs and breast bone broken, and that the jury found that the bones were not broken at the time she was taken from her home to the asylum; (3) whether the medical officers of the asylum had at any time, and if so at what date, discovered that her bones were broken; and (4) whether, considering the facts disclosed at the inquest, the Government would, in the interests of inmates of lunatic asylums, have further inquiry made into the matter.—Mr. Gerald Balfour replied that the facts were as stated in the first and second paragraphs of the question. The verdict of the coroner's jury was that the injuries were not received at the patient's home, and that there was no evidence to show when and how they had been received. Deceased was admitted to the asylum on Jan. 5th, and on Jan. 21st the asylum medical officers discovered the injuries. An inquiry had been held into the matter by the inspectors of lunatic asylums, who would forward their report to the board of governors of the asylum.

TUESDAY, MARCH 16TH.

Metropolitan Pauper Children.

Mr. T. W. Russell, replying to a question on this subject, said that the President of the Local Government Board understood from the report of the proceedings at the Conference of Poor-law Guardians held to consider the draft order that the voting on the resolution to the effect that it was desirable that separate provision such as was indicated in the draft order should be made for special classes of children was 63 for and 15 against; and that the resolution to the effect that the Local Government Board, before constituting a new board, should consider whether the duties created by the order could not be carried out by some existing authority or authorities was carried by a majority of 42 votes—56 voting for and 14 against the resolution. The President had been informed of the resolution which had been passed by the London County Council to the effect that, while recognising the necessity for alteration in the present mode of dealing with the class of children referred to, the Council were of opinion that the establishment of a new and distinct metropolitan central authority for the care of a section of Poor-law children was undesirable and calculated to lead to needless expense. He had also received a copy of a report of the general purposes committee of the Metropolitan Asylums Board (which report was adopted by the managers on Saturday last) expressing their willingness to undertake the care of all or any of the classes of children referred to. The representations which had been made to the President in favour of the managers of the Asylums District undertaking the duty, in preference to the constitution of a new board of managers, would receive his careful consideration. He could not, however, give any undertaking to postpone the official promulgation of a permanent order until an opportunity had been given to the House to discuss the subject.

Medical Officers to Volunteer Corps.

Mr. Brodrick said, in reply to Colonel Dalbiac, that the question had been carefully considered by the War Office, and it had not been thought necessary to extend the joining allowance now given to combatant Volunteer officers to the medical officers.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ARBUCKLE, H. W., M.D. Aberd., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer for Stainforth.

ARKLE, C. J., M.D. Lond., M.R.C.P., has been appointed Assistant Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

BARLING, A. S., L.R.C.P. Lond., M.R.C.S., has been appointed an additional Honorary Surgeon to the Royal Lancaster Infirmary.

BLAKISTON, A. A., M.R.C.S., has been re-appointed Medical Officer by the Glastonbury Town Council.

BISDEE, A. J., M.R.C.S., has been re-appointed Medical Officer for the Stansted Sanitary District.

BOWER, W. G., L.R.C.P. Lond., M.R.C.S., has been appointed an Honorary Physician to the Sheffield Hospital for Ear, Throat, and Skin Diseases.

BRYANT, C. H., M.B., B.S. Durh., F.R.C.S. Eng., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the Sussex County Hospital, Brighton, vice A. H. Buck, resigned.

BURGESS, ARTHUR H., M.B. Vict., L.R.C.P. Lond., M.R.C.S., has been appointed a Junior Resident Medical Officer for the Manchester Children's Hospital.

CULLEN, JOSEPH J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Castlenock Dispensary District, vice R. F. Maguire.

FELLOWS, F. M., M.B., C M. Edin., has been appointed House Surgeon to the General Hospital, Great Yarmouth, vice R. W. Montserrat, resigned.

GANNER, JOSEPH, M.B. Lond., L.R.C.P., M.R.C.S., has been appointed a House Physician to the Birmingham General Hospital.

GAYLOR, EDWARD, L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer by the Alfreton Urban District Council.

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GIBSON, E. ARTHUR, M.B., C.M. Glasg., L.M. Rotunda, has been appointed Obstetric Physician to the Glasgow Training Homes for Nurses, vice A. W. Russell.

HAMILTON, JOHN, M.D. Durh., F.R.C.S., L.R.C.P. Edin., has been re-appointed Medical Officer of Health by the Swadlincote District Council.

HELME, W, C., M.B., C.M. Edin., has been appointed an additional Honorary Surgeon to the Royal Lancaster Infirmary.

HINDE, F. R. B., M.D. Edin., M.R.C.S., has been re-appointed Medical Officer for the Sawbridgeworth Sanitary District of the Bishop Stortford Union.

HUNT, A. H. W., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Gynæcologist to the Wolverhampton and Staffordshire Hospital.

JONES, S. LLOYD, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Junior Medical Officer to the London County Asylum, Colney Hatch, Middlesex.

JONES, T. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed an Honorary Physician to the Sheffield Hospital for Ear, Throat, and Skin Diseases.

JOSCELYNE, ARTHUR E., M.R.C.S., L.R.C.P., L.S.A., has been appointed Medical Officer with charge of Out-patients to the Miller Hospital, Greenwich, vice W. T. B. Donelly, deceased.

LAMPORT, H. C., M.B, C.M. Edin., has been appointed an additional Honorary Surgeon to the Royal Lancaster Infirmary.

LITTLEJOHN, HARVEY, M.A., M.B., B.Sc., F.R.C.S. Edin., has been appointed Lecturer on Medical Jurisprudence and Public Health at the School of Medicine, Surgeon's Hall, Edinburgh, vice Sir H. D. Littlejohn.

LOGAN, R. R. W., M.R.C.S., has been re-appointed Medical Officer of Health by the Hartshorne and Measham Rural District Council.

MARSH, F., F.R.C.S., L.R.C.P. Lond., has been appointed a Surgeon for the Birmingham and Midland Ear and Throat Hospital.

MORTON, W. BRITAIN, M D. Lond., L.R.C.P., M.R.C.S. Eng., has been appointed Resident Medical Officer at Brislington House, Bristol.

PHILPS, F. G. M., M.R.C.S., L R.C.P. Lond., has been appointed Clinical Assistant to Out-patients at the Chelsea Hospital for Women.

ROSS, D. M., M.D. Durh., F.R.C.S., M.R.C.P. Lond., has been appointed an Honorary Medical Officer for the Cottage Hospital, Boscombe, vice P. W. G. Nunn, resigned.

ROUSE, E., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Barnstaple Port Sanitary Authority.

SCOTT, H. AINSLIE, M.B., Ch.B. Vict., M.R.C.S., L.R.C.P. Lond., has been appointed a Junior House Surgeon to the Ancoats Hospital, Manchester.

SIMON, R. M., M.D. Camb., L R C.P. Lond., M.R.C.S., has been appointed to the Professorship of Forensic Medicine, Mason College, Birmingham, vice J. St. S. Wilders, resigned.

SOMERVILLE, GEO. L., M.B., C.M. Edin., has been appointed an Honorary Medical Officer for the Stockton Hospital.

STANLEY, DOUGLAS, M.D. Edin., M.R.C.P. Lond., has been appointed Extra Acting Physician to the Children's Hospital, Birmingham, vice G. W. Powell.

TORNEY, G. PARSONS, B.A., L.R.C.S. Irel., L.R.C.P. Irel., L.M., has been appointed Medical Superintendent of the Lincolnshire County Asylum.

TUCKETT, W. R., M.R.C.S., has been re-appointed Medical Officer to the Charnwood Forest Convalescent Home.

WILLIAMS, E. R., M.R.C.S., L.R.C.P. Lond., has been appointed Surgeon-Lieutenant to the 1st V.B. the Welsh Regiment.

WRIGHT, W. H., L.R.C.P. Irel., M.R.C.S., has been re-appointed Medical Officer of Health by the Alvaston and Boulton District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHLEM HOSPITAL.—Two Resident Clinical Assistants for six months Apartments, complete board, and washing provided.

BIRKENHEAD UNION.—Assistant Medical Officer for one year, for the Infirmary, Workhouse and Schools. Salary £80 per annum, with board, washing, and apartments. Applications to the Clerk to the Guardians, Clerk's Offices, 45, Hamilton-square, Birkenhead.

BOOTLE BOROUGH HOSPITAL.—Junior House Surgeon. Salary £40 per annum, with board, lodging, washing, &c.

COUNTY BOROUGH OF SOUTHAMPTON.—Assistant to the Medical Officer of Health. Salary £150 per annum. Applications to the Town Clerk, Municipal Offices, Southampton.

DENTAL HOSPITAL OF LONDON, Leicester-square.—Assistant Dental Surgeon.

DEVON AND EXETER HOSPITAL, Exeter.—Assistant House Surgeon. Salary £140 per annum, with board and lodging, not including alcoholic liquors and aerated waters.

DISTRICT INFIRMARY, Ashton-under-Lyne.—House Surgeon. Salary £100 a year with board and lodging.

GENERAL HOSPITAL, Birmingham.—Surgical Casualty Officer for one year. Salary £50 per annum, non-resident.

GENERAL HOSPITAL, Nottingham.—Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in hospital provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR DISEASES OF THE THROAT, Golden square, London, W.—Junior Resident Medical Officer for six months. Salary at the rate of £25 per annum, with board, lodging, and washing.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT, 26, Margaret-street, Cavendish-square, London, W.—Physician in Ordinary. Also Visiting Physician.

LONDON SCHOOL OF MEDICINE FOR WOMEN, 30, Handel-street, Brunswick-square, W.C.—Demonstrator of Physiology. Salary £30 per annum

MANCHESTER ROYAL EYE HOSPITAL.—House Surgeon. Salary £70 per annum, with residence, board, and washing.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury, London.—Senior House Physician. Salary £100, with board and apartments.

NEWPORT AND MONMOUTHSHIRE HOSPITAL, Newport, Mon.—House Surgeon. Salary £100 per annum, with board and residence (no stimulants provided).

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, London.—Assistant Resident Medical Officer for four months. Salary at the rate of £50 per annum, with board and residence.

ROXBURGH DISTRICT ASYLUM, Melrose.—Assistant Medical Officer. Salary £100 a year, with board, rooms, attendance, and washing.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, Dyke-road, Brighton.—House Surgeon. Salary £80 per annum, with board, lodging, and washing. No stimulants.

ROYAL FREE HOSPITAL, Gray's-inn-road, London.—Assistant Physician for Out-patients.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House Surgeon. Board, residence, and laundry provided.

ST. LUKE'S HOSPITAL, LONDON, S.E.—Clinical Assistant for six months. Board and residence provided.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—House Surgeon. Salary £50 per annum, with board and lodging.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington.—Curator of Museum and Demonstrator of Pathology.

ST. SAVIOUR'S UNION, Surrey.—Medical Superintendent and Second Assistant Medical Officer at the Infirmary, East Dulwich-grove, S.E. The salary of the Medical Superintendent at the rate of £400 per annum, with unfurnished house, coals, gas, and water, and that of the Second Assistant Medical Officer at the rate of £80 per annum, with furnished apartments, board, and washing. Subject to an annual percentage deduction from the salaries in accordance with the provisions of the Poor-law Officers Superannuation Act. Applications to the Clerk, Union Offices, John-street, Blackfriars-road, S.E.

UNIVERSITY COLLEGE, BRISTOL, FACULTY OF MEDICINE.—Medical Tutor, Stipend £125 per annum.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE, CARDIFF, MEDICAL SCHOOL.—Demonstrator in Physiology for the Summer Session.

VICTORIA HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Edinburgh.—Resident Physician. Board and lodging are provided, and an allowance for conveyance at the rate of £24 per annum. Also non-resident Medical Officer for Out-patients. Salary at the rate of £60 per annum. The appointments for six months Applications to Messrs. Wallace and Guthrie, W.S., 1, North Charlotte-street, Edinburgh, Hon. Secs.

WESTERN GENERAL DISPENSARY, Marylebone-road, London —House Surgeon, unmarried. Salary £60 a year, with board and residence.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £60 per annum, with board and residence in the hospital.

WEST SUSSEX COUNTY ASYLUM.—Assistant Medical Officer, unmarried. Salary £150 a year, with board, lodging, washing, and attendance. Applications to the Clerk to the Committee, West Pallant, Chichester.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for twelve months. Salary £60 per annum, with rooms, board, and washing.

WONFORD HOUSE HOSPITAL FOR THE INSANE, near Exeter.—Assistant Medical Officer. Salary £150 per annum, with furnished apartments, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ATKINSON.—On March 15th, at Whitefriars, Settle, Yorkshire, the wife of Francis Edward Atkinson, Medical Officer of Health, Craven Combined District, of a son.

DALDY.—On March 15th, at Springfield-road, Kingston-on-Thames, the wife of Arthur M. Daldy, M.D., F.R.C.S., of a daughter.

KENNEDY.—On March 14th, 1897, at 113, Balaam-street, Plaistow, E., the wife of Angus E. Kennedy, L.R.C.P., M.R.C.S., L.S.A., of a daughter.

NEWINGTON.—On March 9th, at The Grange, Edenbridge, Kent, the wife of Charles W. H. Newington, M.R.C.S., L.S.A., L.R.C.P., of a son.

O'BRIEN.—On Feb 25th, the wife of Jos. O'Brien, L.R.C.P., L.R.C.S. Edin., L F.P.S. Glasg., J.P., The Cottage, Barronstown, Dundalk, Ireland, of a daughter.

WHICHER.—On March 16th, at Inverness, N.B., the wife of J. C. F. Whicher, Staff Surgeon, Royal Navy, H.M.S. *Briton*, of a daughter, prematurely.

MARRIAGES.

HARRIS—WINCH.—On March 13th, at Holy Trinity, Lincoln's-inn-fields, W.C., John William Harris, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to Emily Edith, youngest daughter of the late William Haffenden Winch, of Cranbrook, Kent.

JEKYLL—LANGDON.—On March 11th, at Holy Trinity Church, Barnstaple, North Devon, Lewis Nugent Jekyll, M.R.C.S., L.R.C.P. Lond., of Leytonstone, Essex, to Agnes Maria, youngest daughter of the late William Langdon, of Northmolton, North Devon.

DEATH.

BRAID.—On the 10th inst., suddenly, at his residence, Ivydene, Dorking, Charles Braid, M.D., eldest son of the late James Braid, M.D., of Burgess-hill.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.). City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (27th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (22nd).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. H. Cripps: Three Cases of Intestinal Anastomosis, two of them involving Double Resection.—Dr. T. D. Savill: Senile Decay, its Pathology and Treatment (illustrated by cases and by the projection microscope.)

TUESDAY (23rd).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8 30 P.M. Surg.-Capt. C. W. Duggan (communicated by Dr. G. Thin): The Parasite of Malaria in the Fevers of Sierra Leone.—Dr. S. West: Pulsating Empyema (Empyema Pulsans).

WEDNESDAY (24th).—HUNTERIAN SOCIETY.—8 30 P.M. Mr. W. Rawes: Mental Disorders of the Climacteric Period.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—5 P.M. Cases will be shown by Mr. Jackson Clarke, Dr. Walsh, Dr. Savill, Dr. Abraham, and others.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.)—8 P.M. Adjourned Discussion on Retro-ocular Neuritis. Speakers—The President, Mr. Jessop, Dr. Silcock, Mr. Holmes Spicer, Dr. Macnaughton-Jones, Dr. R. Russell, and and Mr. A. Frost.

FRIDAY (26th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. W. Pasteur: An Epidemic of Infantile Paralysis among Children of the same Family.—Mr. C. B. Lockwood: Case of Malignant Stricture of the Œsophagus treated with Symond's Tube, Safety String Swallowed, Gastrostomy.—Dr. J. W. Washbourn and Mr. W. A. Lane: Case of Cerebral Tumour, Successful Removal.—Mr. R. Barwell: Remarkable Features in a Case of Extravasation of Urine.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (22nd).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. C. Stewart: Joints and Flexible Bonds of Union in Plants and Animals.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Prof. W. H. Corfield: Water Supply, Drinking Water, Pollution of Water.

TUESDAY (23rd).—ROYAL COLLEGE OF PHYSICIANS—5 P.M. Dr. A. P. Luff: The Chemistry and Pathology of Gout. (Goulstonian Lecture.)

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Diagnosis and Treatment of the dangerous Sequelæ of Suppurative Inflammation of the Middle Ear.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: General Paralysis.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Urticaria.

ROYAL INSTITUTION.—3 P.M. Prof. A. D. Waller: Animal Electricity.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4 P.M. Dr. H. Campbell: Domonstration of Cases.

WEDNESDAY (24th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. C. Stewart: Joints and Flexible Bonds of Union in Plants and Animals.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Inspection and Demonstration of Disinfecting and Filtering Appliances at J. Defries and Sons, Limited, 147, Houndsditch, E.C.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Air.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Acland: Empyema.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Mansell Moullin: The Use of Pessaries in Flexions and Prolapse.

THURSDAY (25th).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. A. P. Luff: The Chemistry and Pathology of Gout. (Goulstonian Lecture.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Inspection and Demonstration at the Metropolitan Cattle Market, York-road, N.—8 P.M. Dr. W. A. Bond: Demonstration of Diseased Meat at the Parkes Museum.

ROYAL INSTITUTION.—3 P.M. Prof. W. B. Dawkins: The Relation of Geology to History.

FRIDAY (26th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. C. Stewart: Joints and Flexible Bonds of Union in Plants and Animals.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Typhoid Fever and Diphtheria.

ROYAL INSTITUTION.—9 P.M. Sir W. Turner: Early Man in Scotland.

SATURDAY (27th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Inspection and Demonstration at Harrison and Barber's Knacker Yard, Whitechapel.

ROYAL INSTITUTION.—3 P.M. Right Hon. Lord Rayleigh: Electricity and Electrical Vibrations.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

CIRRHOSIS OF THE LIVER IN CHILDREN.

To the Editors of THE LANCET.

SIRS,—I should be glad if any of your readers could refer me to literature on the subject of cirrhosis of the liver in children. I have recently met with a typical case of "hob-nailed" liver in a negro child of seven years, and I am constantly seeing cases of ascites in young native children, most of which I am certain are associated with hepatic contraction.

I am, Sirs, yours truly,

W. M. ELLIOTT, M.D. R.U.I.

Salt Pond, Gold Coast, Feb. 9th, 1897.

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SUPERFŒTATION.

To the Editors of THE LANCET.

SIRS,—I am allowed by the kindness of Dr. J. Hutchinson Swanton to publish this case. I attended a woman in her confinement on Jan. 6th. Her abdominal tumour was abnormally large, the membranes were intact, and I could feel two well-developed feet through them. Pains being strong and the os uteri well open, I ruptured and much liquor amnii escaped. On a second examination I found another bag of membrane presenting. I ruptured this also and felt a soft mass which was speedily expelled, and proved to be the head of a fœtus apparently about three intra-uterine months of age. From its navel projected an exomphalos about as large as an orange containing intestine. The second child was then rapidly delivered, and proved a large, healthy, and lusty male of full term. There were then expelled two distinct and separate amnia and placentæ to which distinct funes were attached. The small fœtus had been dead apparently about three weeks, and I am surprised that labour did not set in earlier, but the mother stated that she had been in pain about three weeks. It appears to me probable that a second ovum was fertilised in utero after the first had been attached five months. The mother is very strong and the uterus and os uteri were exceptionally large. I cannot conceive the fœtus in question to have been dead six months in utero, as the skin was not macerated and the general appearance seemed to indicate that it had not long been dead. I am, Sirs, yours faithfully,

Edmonton, Middlesex, Feb. 10th, 1897. EDWARD C. B. IBOTSON.

*** The overwhelming probability is that the two ova were fertilised at the same time, and that the one died at the end of three months and was retained till term.—Ed. L.

Ethics.—Our attention has been called to the communication in question. We agree with our correspondent.

ALLEGED REDUCTION OF CONSULTANTS' FEES IN LONDON.

THE *Medical Record* of New York of Feb. 20th contains a paragraph to the effect that it is regarded as undignified for a consultant in the West-end of London to accept any less fee than two guineas, and that the result is that all the fees go to those of established reputation. Our contemporary adds that it is now proposed to recognise as strictly professional the acceptance of reduced fees even as low as 7*s.* We hope this statement will not be taken too seriously. Certainly we are not aware of any valid foundation for it. No doubt the *amour propre* of high consultants leads them occasionally to take patients who could pay a sufficient but modest fee into their hospital as charitable patients rather than hand them over to a younger colleague who would only be too thankful for such a fee. This is a sore evil which needs only to be exposed to be remedied. It is a part of the great question of abuse of hospitals. But the reduction of consultants' fees to 7*s.* is not to be thought of. It is of a piece with sixpenny dispensaries, and should be resisted by every practitioner who respects himself and his profession. The two guineas fee of the established consultant is right enough. It is even to be wished that the more leading consultants would place a higher value on their services and so lead to a better distribution of work. But to reduce the consultants' fee to less than the traditional guinea when the nation is many times wealthier than when such a fee was established is to be unfaithful to the profession and its enormous responsibilities.

M.O.H.—The best plan is simply to wash the floor and woodwork with a 1 in 1000 solution and then with soap and water. Where washable papers are in use such a proceeding would not injure them in the least. A steam spray, as, for instance, that of Siegels, is also useful for applying corrosive sublimate solution, in which case it should be of 1 in 500 strength. There should be no risk attending the use of weak solutions such as these, but of course the stock should be kept out of the way. The L.G.B. soloids of corrosive sublimate (Messrs. Burroughs, Wellcome, and Co.) are very convenient.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—I shall feel much obliged if any of your readers can inform me of an institute where a patient of mine can be placed as a permanent resident. He is about thirty years of age, and though not quite imbecile requires careful watching; he is dirty in his habits. His means are small and his friends do not wish to be subjected to a greater expense than about £50 annually. I am, Sirs, yours truly,

March 15th, 1897. C. E. F.

Medical Officer to Her Majesty's Prisons.—The opinion of the Secretary of State is undoubtedly correct. The Fifth Section of 6 and 7 Will. IV. states unconditionally that a medical officer is not entitled to a fee for making a post-mortem examination or for giving evidence at an inquest. The coroner has the power of deciding where the inquest shall be held. The fact that the inquiry takes place away from the public institution in which deceased died does not entitle a medica man to claim a fee. If he incurs travelling expenses no doubt he would be granted remuneration therefor.

"MATERNAL IMPRESSION ON THE FŒTUS."

To the Editors of THE LANCET.

SIRS,—Observing some discussion on this subject in THE LANCET of March 6th, I venture to give you, out of many such coincidences or impressions which I have seen, the following:—Ten years ago I was called to a baby of eighteen months, whose little finger had been accidentally cut off cleanly at its base with a hatchet by the next youngest brother. Their mother was then a few weeks pregnant, and in spite of my encouragement made up her mind that her future infant would "have something the matter with its hands." On attending her at this confinement I had quite forgotten her fears, thinking at the time that I had allayed them, but her first question immediately on delivery proved to the contrary, and to my chagrin the child had a supernumerary ulnar digit on each hand. There was no family history of such additional fingers, but the woman on a previous occasion had been equally confident beforehand of a "bunch of grapes" which duly appeared as a nævus on the breast. Whatever may be the rationale of these cases, their frequency should make us very careful in the lying-in room not to scout the possibility of such sequence. I am, Sirs, yours faithfully,

Royal Exchange, March 8th, 1897. ROBERT J. COLENSO.

Disgusted.—It would not be wise to publish such a communication. Our correspondent will understand that a medical man must do his duty whatever the consequence, and the letter contains almost a warning to young men to abstain from a proper course of treatment lest misunderstanding should follow.

AN AGREEMENT TO REFUSE PAYMENT BY CONTRACT.

THE Medical Union of Condroz, in Belgium, is apparently better agreed with regard to the interests of its members than is usually the case in less sparsely inhabited districts. A very elaborate tariff has been drawn up giving the extra fee or milage for all villages and hamlets, and no member is permitted to arrange regular hours for consultation anywhere except at his own residence, or to make any special terms with insurance companies or provident clubs. The only reduction permitted is for attendance on paupers, and for such attendance the authorities will have to pay by the visit, which will be charged 25 per cent. less than a visit to an ordinary person.

Q.—These questions can only be answered for certain when a legal decision has shown the reading that the law courts are prepared to put upon the Act. In our opinion B.'s notification would not carry the fee.

J. P.—The statements have been refuted over and over again. But they will continue to be made over and over again, for the holders of these tenets are particularly *Kwaaje* people.

THE PAYMENT OF FEES UNDER THE NOTIFICATION ACT.

To the Editors of THE LANCET.

DEAR SIRS,—Will you please notice enclosed in THE LANCET and give your opinion as to whether a practitioner must go down to the office. It is a loss of about two hours and a half to me going down for the notification fees due me. Surely the city M.O.H. could see that a cheque be sent me. And oblige Yours faithfully,

March 1st, 1897. R. R. RENTOUL.

*** We print Dr. Rentoul's enclosure below, and presume that the footnote authorising the payee to receive his money by deputy escaped Dr. Rentoul's observation.—ED. L.

[ENCLOSURE.]

CORPORATION OF LIVERPOOL.

Municipal Offices, Liverpool,
Treasurer's Office.

.....189

Sir,

You are requested to call at this Office to-morrow between 10-30 and 12 o'clock, to receive payment of your account.

Your obedient Servant,
J. E. A. ROGERS,
Treasurer.

M......

☞ This Circular to be produced at the time of payment, and if inconvenient for you to apply personally, you are requested to fill up and sign the following order:—

Please pay the Bearer, Mr......
.....*account, against the Corporation of Liverpool.*
.....

Sarum.—The terms of the agreement define, or should define, the position exactly. For a term of years a certain share was to accrue to the late owner's son. At the end of that period a new agreement must be made if the partnership is to continue, and the contracting parties must settle between them what the terms shall be for the future. Neither side can claim anything under the terms of an expired agreement, but if the agreement contains provisions for future arrangements, it has not expired. The point is obviously one for amicable arrangement.

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"ANTISEPTIC MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—I fear Dr. Playfair cannot have read my letter, as had he done so he would not for the second time misquote me. I never said one word about 1 in 2000 of the perchloride of mercury as a disinfectant for the "hands." What I did say was "as a vaginal injection in normal labours, and intra-uterine where the hand, forceps, &c., have entered the uterus." As a matter of fact, I use 1 in 1000 for the hands and 1 in 1000 dissolved in glycerine as a lubricant for both hands and forceps. I have used the latter for years, and beyond a slight staining they have suffered no injury. When Dr. Playfair challenged Dr. Godson's able advocacy for the perchloride treatment we certainly expected something more scientifically definite than his statement that "sufficient creolin should be dropped into the water to be used to make it milky in appearance." Why does he not give us the strength, and, as Mr. R. L. Wood very properly asks, its bactericidal and spore-killing properties? We could then judge for ourselves as to the relative merits of both.

I am, Sirs, yours truly,

Ballincollig, March 15th, 1897. JAMES J. HARDING.

Mr. H. Mynors.—The dissemination of such cards is, of course, most regrettable, but only the bodies from whom the offender holds his degrees or diplomas can interfere with any proper *locus standi*.

AN IMPROVED REEL FOR THREAD.

MR. G. GILMORE STEVENS, of 27, Lochaber-street, Roath Park, Cardiff, has forwarded to us a new form of reel which deserves the attention of all workers with the needle. When a length of thread is taken from a reel it is more often cut off with the teeth than with the scissors, an objectionable practice, which, though it may be excused on the ground of convenience, is injurious to the front teeth and encourages the dangerous habit of holding small objects in the mouth. Mr. Stevens's invention saves the trouble of looking for the scissors and removes any excuse for biting off thread. It is very simple, consisting merely of a single steel edge about a quarter of an inch long, sunk in a notch cut in one of the ends of the reel, and the piece of thread that has been unwound is at once cut off when pulled against it.

B. B. would like information as to the best books to read in preparation for the M.D. Durham examination for practitioners of fifteen years' standing.

"DR. RENTOUL'S EXPENSES FUND."—FOURTH LIST.

To the Editors of THE LANCET.

SIRS,—The total amount to date is £92 17*s.* I now ask with confidence that those supporters of Dr. Rentoul whose support is not limited to words (which are cheap) should at once forward their subscriptions. If this list were some testimonial to a rich and highly placed member of the profession who did not need it, I suppose we should have had to get clerical assistance in acknowledging all the donations. As it is, however, a question of repaying a hardworking practitioner money spent in furthering our interests, it takes nearly three months to raise a paltry sum of £92. This is indeed gratitude, and will doubtless act as an incentive to other men to spend time, money, and health in medico-political work.

I am, Sirs, yours faithfully,

Gateshead, March 16th, 1897. ALFRED COX, M.B. Durh., Hon. Sec.

	£	*s.*	*d.*
F. Bell, Preston...	0	5	0
J. Cleland Clarke, Farnworth	0	10	0
A. Cohen, Maida Vale, W.	0	5	0
Arthur Dowling, Haydock, St. Helens	0	5	0
Richard Ellis, Newcastle-on-Tyne	0	10	6
H. E. Fellowes, Heaton, Newcastle-on-Tyne ...	0	2	6
A. P. Fiddian, Cardiff ...	0	2	6
G. Fyfe, Middlesbrough...	0	2	6
G. Govan, Cockermouth	0	5	0
J. Hamilton, Chelsea, S.W.	0	2	6
A. Higginson, Bolton ...	0	10	6
John Humphreys, Trawsfynydd, Merioneth ...	0	10	0
D. Williams Jones, Inkberrow	0	2	6
C. G. B. Kapp, Gateshead	0	5	0
J. Law, Wrekenton, Gateshead	0	5	0
John H. Lightbody, Nantwich	1	1	0
A. Meeson, Liverpool ...	0	5	0
BrendonMacCarthy, Liverpool	0	10	0
Walter Maine, Clacton-on-Sea	0	3	6
Donald Morison, Beeford, Hull	0	5	6
Messrs. Ormrod and Dudgeon, Workington	1	1	0
Arthur H. Rideal, Brooks's Bar, Manchester (Midwives Opposition Expenses)	0	10	6
J. Robinson, Dunscar, Bolton	0	5	0
Rochdale and District Medical Society (per James Melvin)	5	0	0
W. R. Sergeant, Gateshead	0	2	6
Chearnley Smith, Great Harwood	0	5	0
Swansea Medical Society (per J. Kynaston Couch)	1	1	0
D. E. Thomas, Newport, Mon.	0	2	6
S. Walker, Middlesbrough	0	10	0

W. H.—The Local Government Board is not concerned with the qualifications further than that they must be such as entitle their Poor-law officers to be registered as qualified to practise both medicine and surgery. The scheme granting the conjoint diplomas of the Royal College of Surgeons in Ireland and the Apothecaries Hall of Ireland was not closed for new entries until June 30th, 1895, students entered before that date being allowed to complete their examinations.

"THE DOSE OF IPECACUANHA."

To the Editors of THE LANCET.

SIRS,—It may be of interest, in connection with Dr. Balmanno Squire's letter which appeared in THE LANCET of March 13th respecting ipecacuanha wine, to mention that the sample was made from Brazilian root in strict accordance with the pharmacopœial directions, and that the wine contained 0·085 per cent. of alkaloids.

We are, Sirs, yours truly,

Oxford-street, W., March 15th, 1897. JOHN BELL AND CO.

Mr. Robert Reynolds.—To notice these people is only to further advertise them. Those who are deceived by such trash do not read our columns.

MEDICAL FEES IN RURAL FRANCE IN THE LAST CENTURY.

ACCORDING to a paper in the *Journal des Sciences Médicales de Lille* some items are given of the fees obtained by a medical man at Elincourt in the time of Louis XVI. A visit near was 5 sous, but 10 sous if the patient lived in a village at some distance. Persons of distinction, too, had to pay more; thus the prior of a monastery was charged 30 sous every time his wound was dressed, and as this was done twice a day for some five weeks and once daily for fifteen weeks more his reverence must have proved a valuable patient as practice went then. Bleeding was charged 5 sous, but 10 if on the foot, extraction of a tooth was 5 sous, reduction of the clavicle 3 livres, and setting a broken arm 30 livres! *Le Scalpel* publishes some similar information obtained from a medical man whose great-grandparents took their child to a Lille physician, who, being the attendant of the prince bishop, had a very large practice. He stripped the child and examined him most carefully, but all he asked was 5 sous.

A Subscriber of Forty Years appears to us to make out a very good case for superannuation. His medical adviser clearly tells him not to do the work that his duties must entail upon him.

A KNOWLEDGE OF THE ODDS.

WE commend the following incident to the notice of Mr. Hawke as another instance of the evils of a knowledge of the "odds." Scene: the ward of a metropolitan hospital; in one bed is lying a member of the sporting fraternity; to him enter a surgeon, attended by fifteen eager and obsequious dressers. Surgeon, to the dresser of the case, after an able and exhaustive account of the symptoms: "Now, Mr. Smith, would you operate on this case?" Mr. Smith (dresser): "No, sir, I should not." "And you, and you, and you?" indicating the others. Unanimous negative. "Well, gentlemen, you are all quite wrong," says the surgeon, with conscious pride, "I intend to operate." Voice from the bed: "No you don't, gov'nor! Fifteen to one agin it—no chaunce. 'Ere, I say, m ss, give me my clothes; I'm orf."

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 18th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 12	29·58	S.W.	44	42	97	51	40	...	Hazy
,, 13	29·53	N.E.	41	39	68	49	38	0·01	Raining.
,, 14	29·51	N.E.	43	42	52	47	40	0·29	Cloudy
,, 15	29·31	S.W.	46	43	69	49	41	0·10	Cloudy
,, 16	29·42	S.W.	45	44	56	49	41	0·05	Raining
,, 17	29 50	S.W.	49	47	77	54	44	0·26	Cloudy
,, 18	29·47	S.W.	47	45	89	51	45	...	Stormy

During the week marked copies of the following newspapers have been received:—*Manchester Guardian, Umpire, Leicester Post, Temperance Chronicle, South Wales Daily News, Blackpool Gazette, Aldershot News, Times of India, Warwickshire Times, Exeter Flying Post, Scotsman, Pioneer Mail, Birmingham Post, Glasgow Herald, Leicester Advertiser, Buxton Advertiser, Manchester Courier, Sussex Daily News, Wolverhampton Chronicle, Blackburn Standard, Accrington Observer, Newcastle Leader, Rochdale Observer, Architect, Worcester Herald, Dundee Courier, Leighton Independent, Liverpool Daily Post, Builder, Windsor Chronicle, Kent Messenger, Portsmouth Times, Wigan Examiner, Midland Counties Express, Northampton Mercury, Hampshire Independent, Bury Guardian, Bristol Mercury, Sydney Morning Herald, Western Morning News, Yorkshire Post, Leeds Mercury, The Sun, Sanitary Record, Cork Examiner, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Redditch Indicator, City Press, Hertfordshire Mercury, Reading Mercury, Mining Journal, Surrey Advertiser, Local Government Journal, Derbyshire Courier, Brighton Herald, Madras Times, Auckland Chronicle, Southampton Observer, Manchester Weekly Times, West Middlesex Herald, Hornsea Gazette, Glamorgan Free Press, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Prof. C. Allbutt, Cambridge; Messrs. Armour and Co., Lond: Advocate, Lond.; Messrs. Arnold and Sons, Lond.; Abstainers' and General Insurance Co, Birmingham, Sec. of; A. Z., Lond.;

B.—Mr. T. T. Brammer, Sheffield; Miss F. N. Boyd, Lond.; Mr. R. Barwell, Lond.; Mr. W. K. Brewer, Lond.; Messrs. J. Bell and Co., Lond.; Dr. T. Lauder Brunton, Lond.; Messrs. P. B. Burgoyne and Co., Lond.; Mr. W. Bottomley, Ashton-under-Lyne; Messrs. Burroughs, Wellcome, and Co., Lond.; Dr. H. C. Bastian, Lond.; Bury Disp. Hosp., Sec. of; Birkenhead Union, Clerk of; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mrs. A. Broster, Weston-super-Mare; Mr. A. E. Broster, Wirksworth; Dr. J. B. Brierley, Old Trafford; Mr. A. W. Blyth, Lond.; Bradford Medical Society, Reporter of; Bristol Medico-Chirurgical Society, Hon. Sec. of; Mr. R. Boyd, Liverpool; Bethnal Green Free Library, Committee of; British-American Ball Nozzle Co., Lond.

C.—Mr. Colin G. Campbell, Saddleworth; Messrs. T. Christy and Co., Lond.; Mr. S. Coleridge, Lond.; Mr. J. Cockram, Richmond; Cornwall County Council, Truro, Chairman of; Dr. A. V. Clarke, Leicester; Mr. E. B. Chamberlain, Totnes; Cabinet Maker, Lond.; Messrs. Crossley, Moir, and Co., Lond.; Carlton, Lond.

D.—Mr. A. Duke, Cheltenham; Dr. L. Drage, Hatfield; Devon and Exeter Hosp., Exeter, Sec. of; Dr. D. Dummond, Newcastle-on-Tyne; Mr. J. Devine, Greenock; Dr. W. Lee Dickinson, Lond.

E.—Dr. L. Elkind, Lond.; Esmond Cycle Saddle Co., Lond., Sec. of; East Devon County School, Sampford Peverill, Headmaster of; Dr. E. Elsmere, Child Okeford.

F.—Dr. R. H. Fox, Lond.; Factory Girls' Country Holiday Fund, Lond., Hon. Sec. of.

G.—Dr. L. G. Guthrie, Lond.; Miss E. Gosham, Kelvedon; General Medical Council, Lond.; Dr. W. J. Gow, Lond.; Mr. H. B. Gardner, Lond.; Dr. A. Galt, Glasg.; Gamma, Lond.; Guest Hosp., Dudley, Sec. of.

H.—Mr. A. W. Hughes, Cardiff; Dr. V. D. Harris, Lond.; Surg.-Capt. M. P. Holt, Deolali, India; Mr. J. T. Hislop, Hampsthwaite; Dr. Hardwich, Charing; Hospital Reform Assn., Cardiff, Hon. Sec. of; Hort, Mickleton Campden; Heigham Hall, Norwich, Proprietor of; Mr. G. Hatton, Southport; Mr. C. Heneage, Eastbourne; Mr. H. Hillyer, Pen-y-cwm, R.S.O., South Wales; Mr. J. Heywood, Manchester,

I.—Messrs. Ingram and Royle, Lond.; *International Medical Magazine*, Philadelphia, U.S.A., Publisher of; Ickringill's Patent Hygienic and ElasticClothSyndicate, Keighley, Sec. of.

J.—Dr. S. Jex-Blake, Edin.; Mr. A. E. Joscelyne, Greenwich; Mr. W. T. Jones, Lond.

K.—Mr. E. Knight, Lond.; Mr. B. Kühn, Lond.; Dr. H. W. King, Chester; Messrs. J. B. Keene and Co., Bath.

L.—Mr. J. H. Lapthorn, Manchester; Dr. A. P. Luff, Lond.; Messrs. Longmans, Green, and Co., Lond.; Mr. E. J. Line, Isleworth; Dr. T. Laird, Heywood; Dr. J. A. Lindsay, Belfast; Dr. V. W. Low, Staines.

M.—Dr. Moore, Spondon; Messrs. Mullock and Sons, Newport, Mon.; Messrs. Maple and Co., Lond.; Mr. S. B. Mason, Pontypool; Messrs. Mulloch and Sons, Lond.; Maltine Manufacturing Co, Lond.; Midland Railway, Lond., Sec. of; Mr. H. Mynors, Lond.; Mr. W. F. MacDonogh, Twickenham; Medical Officer of Health, Greenock; Dr. J. Murphy, Sunderland; Minnesota State Board of Health, Minnesota, U.S.A., Sec. of; Mr. H. Milton, Venice.

N.—National Telephone Co, Lond.; National Typewriter Exchange Co., Lond., Manager of; Nursery Aid Society, Bristol; Dr. J. Niven, Manchester.

O.—Mr. F. A. Osborn, Dover; Mrs. M. Tufnell Oakes, Kilkee, co. Clare; Messrs. Oppenheimer, Son, and Co., Lond., Director of; Mr. W. H. Owen, Melbourne; Dr. T. Oliver, Newcastle-on-Tyne.

P.—Mr. Y. J. Pentland, Edin.; Mr. C. S. Prideaux, Dorchester; Pathological Society of Manchester, Secretary of; Mr. A. E. Palmer, Loughborough; Petroleum Lighting Syndicate, Lond.; Rev. R. Palmer, Ashford.

R.—Dr. J. D. Rawlings, Lond.; Dr. A. W. Russell, Glasg.; Dr. F. Rees, Wigan; Royal Aquarium, Lond., Sec. of; Messrs. Richardson Bros. and Co., Liverpool; Messrs. Roger and Chermoiz, Paris; Dr. H. D. Rolleston, Lond.; Royal National Pension Fund for Nurses, Lond., Sec. of; Dr. J. Ramage, Lond.; Royal Meteorological Society, Lond., Asst. Sec. of; Royal Hospital for Diseases of the Chest, Lond., Sec. of; Roxburgh District Asylum, House Steward.

S.—Mr. H. J. Stiles, Edin; Dr. R. H. Shaw, Brighton; St. John Ambulance Association, Lond., Chief Sec. of; Mr. H. Lionel Smith, Nondweni, N'Qutu, Zululand; Messrs. Street Bros, Lond.; *Science Progress*, Lond., Editor of; Messrs. Street and Co., Lond.; *St. James's Budget*, Lond., Editor of; Southampton County Borough, Town Clerk of; Security Co., Lond., General Manager of; *The Scientific American*, New York, U.S.A., Proprietors of; Società Medico-Chirurgica di Bologna, Sec. of; Mr. W. H. R. Stewart, Lond.; Mr. J. Startin, Lond.; Sarum, Salisbury; Dr. J. G. Smith, Bristol; Messrs. Stewart and Co., Lond.

T.—Rev. A. Tooth, Woodside; Mr. W. Thomas, Llanelly; Mr. W. P. Thornton, Canterbury; Dr. J. Teschner, New York City; Town Clerk's Office, Hastings, Clerk of; Mr. J. Tweedy, Lond.; Throat Hosp., Golden-square, Sec. of.

U.—University College, Dundee, Sec. of; University College of South Wales, Cardiff, Registrar of.

V.—Victoria Medical Society, Melbourne, Hon. Sec. of; Mr. A. B. Vise, Holbeach; Verax, Lond.

W.—Mr. W. F. Webster, Tunbridge Wells; West End Pathological Laboratory, Lond., Sec. of; Mr. C. Wilkes, Lond.; Mr. A. White, Wigan; *Westminster Review*, Editor of; West Sussex County Asylum, Chichester, Clerk of; Prof. A. E. Wright, Netley; Weston-super-Mare Hosp., Hon. Sec. of; W. G., Gt. Yarmouth; Women's Branch of the Horticultural College, Swanley, Kent; Dr. W. E. Wynter, Lond.; Miss Woodward, Folkestone; Woodside Court, Croydon, Principal of; Wonford House Hosp., Exeter, Sec. of; Brig.-Surg.-Lt.-Col. G. Waters, Bombay; Miss Wells, Nagpur, India; Mr. A. Watson, Edin.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. A. Anderson, Bradford; A. Z., Lond.; Messrs. Allen and Hanburys, Lond.; Acorington Cottage Hospital, Sec. of; Argor, Lond.; Alpha, Lond.; Messrs. Armbrecht and Co., Lond.; Dr. J. Althaus, Lond.; Apenta, Lond.

B.—Miss G. Breeze, Tangier; Beta, Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Borough of Burton-on-Trent, Collector of; Mr. C. Birchall, Liverpool; Mr. A. M. Browne, Lond.; Messrs. Battle and Co., Paris.

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The Goulstonian Lectures

ON

THE CHEMISTRY AND PATHOLOGY OF GOUT.

Delivered before the Royal College of Physicians of London,

BY ARTHUR P. LUFF, M.D., B.Sc., F.R.C.P. LOND.,

PHYSICIAN IN CHARGE OF OUT-PATIENTS IN ST. MARY'S HOSPITAL, AND LECTURER ON FORENSIC MEDICINE IN ST. MARY'S HOSPITAL MEDICAL SCHOOL.

LECTURE I.[1]

Delivered on March 23rd.

MR. PRESIDENT AND GENTLEMEN,—When I accepted the duty of delivering the Goulstonian Lectures for this year I was deeply sensible of the honour conferred upon me and of the serious responsibility that I incurred. As the youngest Fellow of this College I should, perhaps, not have ventured to discourse to you on the subject of gout—a subject which has been so enriched and so ably dealt with in the past by many distinguished Fellows of the College—were it not that I thought the occasion was a convenient one to briefly review the various opinions held as to the causation and nature of gout, and at the same time to place before you the results of some experimental work that I have been conducting on the chemistry and pathology of this disease. As I propose to continue and extend this line of work I can only in these lectures lay before you the results that I have so far obtained and the conclusions that I have arrived at from those results. I must therefore request your indulgence for the somewhat fragmentary nature of the experimental work.

Gout is the manifestation of a number of morbid tendencies, some of which may be inherited and some acquired, and which result in the different diseases associated with the arthritic diathesis. If the joints are affected articular or regular gout results; if other organs or tissues are affected then irregular gout is produced. Gout is associated with the presence of an excess of uric acid in the blood, and the questions that I propose to discuss in these lectures mainly resolve themselves into the mode or modes by which the uric acid is produced and introduced into the blood, the source or sources of its production, the relationship that it bears to the gouty paroxysm and to the other manifestations of gout, and the factors or conditions which influence its formation and its injurious action.

Of the various theories to account for the production of gout the humoral theories have been to the front for many centuries at various periods in the history of the disease. Galen was one of the first to teach that tophi arose from the desiccation of collected and pathologically altered humours. Cullen, who was the great opponent of the ancient humoral theory of gout in the latter half of the last century, admitted, however, that in some instances a peculiar matter appears in gouty patients, but he considered that it was the effect and not the cause of the malady. Uric acid was discovered in the urine by Scheele in 1775, and in 1787 Wollaston demonstrated its presence in gouty concretions. These discoveries did not, however, bring to light the important part played by uric acid in gout. It was in 1847—just half a century ago—that a distinguished Fellow of this College, Sir Alfred Garrod, first found uric acid in the blood of gouty subjects in the form of a sodium salt. The discovery of uric acid in the blood of gouty patients eventually led to the much discussed question as to whether it was the cause or the result of gout. Those who held the former view were in their turn divided as to whether the uric acid compound only exerted its baneful effects when it had crystallised out of the blood and had become deposited in the affected tissues, or whether while still circulating in the blood it exercised a true toxic influence. The various views held as to the primary cause of gout may be classified into the three following groups: (1) excess of uric acid regarded as the primary cause; (2) morbid changes in the structure of tissues regarded as the primary cause; and (3) nervous disturbance regarded as the primary cause. I propose to briefly pass in review the various opinions held as to the primary causation of gout, adopting the classification just given.

1. EXCESS OF URIC ACID REGARDED AS THE PRIMARY CAUSE OF GOUT.

This group may be divided into two sections accordingly as the uric acid compound is regarded as exerting its baneful effect in the crystalline state or in the dissolved state.

I. *The uric acid compound regarded as acting passively and physically while in the crystalline state.*—Sir Alfred Garrod and Sir William Roberts are the two principal exponents of this view, which regards gout—in so far as its phenomena depend on uric acid—as a disease the manifestations of which are proximately due to mechanical injury. Sir Alfred Garrod holds that every paroxysm of gout is attended by a crystalline deposit of sodium biurate and that this deposit exercises chiefly a mechanical effect. He explains, in connexion with articular gout, that when the blood for some reason or other is incapable of holding the uric acid compound in solution it is deposited in an articular cartilage which is specially predisposed for its reception. Such predisposition is generally caused by its being the seat of former injury or disease. The crystallisation of the biurate within the interstices of the cartilage then provokes the inflammatory changes, so that the deposition is the cause of the inflammation. Sir William Roberts is of opinion that uric acid probably does not possess any inherent poisonous quality and that as long as it remains in solution it produces no harmful results. The mischief that it is capable of producing only results from its precipitation or crystallisation as sodium biurate in the tissues or fluids of the body. He considers that the inflammation, pain, swelling, and the remoter secondary degenerative changes of regular gout are quite explicable by regarding the crystalline urates which are precipitated in the cartilaginous and fibrous structures of the joints as exerting a mechanical action as foreign bodies. He even considers that the manifestations of irregular gout may be due, like the arthritic manifestations, to uratic deposition: that is, to actual precipitation of crystals of sodium biurate into the connective and fibrous structures of the implicated organs, whether the liver, heart, lungs, or brain, or into the fibrous sheaths of the nerves controlling the functions of the affected viscera. Sir William Roberts is further of opinion that the presence in the blood of scattered needles of sodium biurate might constitute foci around which clotting might take place; and that the thromboses not unfrequently observed in gouty cases might thus be accounted for. I shall have occasion to refer later to the various localities in the body, apart from the joints, in which uratic deposits have been found; but as regards the possible deposition of sodium biurate in nervous structures constituting the exciting cause of some of the pains and affections of different viscera peculiar to irregular gout, it may be of interest to mention here the following facts. Crystals of sodium biurate have been found by Watson, Gairdner, and Dafour on the cerebral meninges; by Schröder van der Kolk in the neurilemma of peripheral nerves; and by Cornil in the cerebro-spinal fluid.

With regard to the manifestations of irregular gout being due to uratic deposits in the affected viscera, it is true that observations on the subject are very limited in number. But in the first place it should be remembered that such irregular uratic deposits are extremely likely to escape observation in the post-mortem room unless very carefully looked for by the aid of the microscope; and in the second place it is highly probable that such deposits would become dissolved during life, as the attack of irregular gout passes off. Cornil and Ranvier also favour the idea that the crystalline uratic deposit in cartilages produces inflammatory changes by its mechanical irritation.

The question might be raised that if the crystalline biurate always acts as an irritant, why should not the semi-solid urinary excrement of birds and serpents set up kidney mischief by acting as an irritant to the kidneys during its excretion. The reason is that the urinary excrement of birds and serpents is composed of an amorphous quadriurate, and that in the amorphous condition it is incapable of acting as an irritant. Moreover, it is possible, as Sir William

[1] Lecture II. was delivered on March 25th, and Lecture III. will be delivered on March 30th, 1897.

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Roberts has suggested, that the uratic excrement passes through the tubules of the kidneys of birds and reptiles in the gelatinous form, which could not produce the mechanical irritation that a crystalline deposit would be liable to cause.

II. *The uric acid compound regarded as acting as a poison or irritant while in the dissolved state.*—This view, while holding that the uric acid compound is the primary cause of gout, regards it as producing morbid changes in the structure of tissues while remaining in the dissolved state. Many writers and observers have supported the view that, apart from the local trouble in the joints caused by the deposited sodium biurate acting as an irritant, the soluble uric acid compound which is circulating in the fluids of the body acts as a poison, the toxic effects of which are responsible for a number of the symptoms associated with the gouty state. Pfeiffer holds the somewhat peculiar view that a compound of uric acid is deposited in both healthy and diseased portions of the body—apparently without producing any marked symptoms—and that an acute attack of gout is caused by the blood re-dissolving this deposited uric acid compound owing to a temporary increase in the alkalinity of the blood, and that dissolved in the blood in this concentrated form the uric acid compound acts as a chemical poison. That this view is untenable is evident when it is remembered that uric acid is deposited as the sodium biurate, and, as will be shown later, the solubility of this body in a fluid medium is not heightened by an increased alkalinity of that medium. Sir William Roberts[2] argues that the acceptance of the theory that uric acid possesses a toxic action is difficult for the following two reasons: (1) that there is no direct experimental proof that uric acid is a toxic agent; and (2) that although the fluids of the body of a gouty man on the eve of an outbreak of acute gout are impregnated with sodium biurate to saturation, yet such a person does not show any signs of poisoning, but enjoys complete immunity from toxic symptoms until the sudden advent of the arthritic attack. Another fact which is strongly opposed to the view that uric acid is a toxic agent is that in cases of leucocythæmia and severe anæmia the blood is frequently highly charged with uric acid without the production of any toxic symptoms that could be referred to the uric acid.

Kolisch[3] considers that some antecedents or allies of uric acid are responsible for the toxic effect which he believes constitutes the primary cause of gout. His view is that the graver manifestations of gout only make their appearance when the functions of the kidneys become impaired from any cause, and since he finds that in the urine of the gouty there is an increase of alloxuric substances, and also that alloxur bases cause changes in the kidneys resembling parenchymatous degeneration, he infers that these bases are concerned in the production of the kidney affection which precedes the development of gout. His theory is that during normal action of the kidneys the greater part of the alloxur bases is excreted as uric acid; but when the structures which form uric acid are enfeebled there is an increased excretion of alloxur bases with concomitant toxic effects. Kolisch's views have received some confirmation by Weintraud,[4] who has also found an excessive excretion of alloxuric substances in the urine of gouty patients. On the other hand, they are controverted by Schmoll,[5] who in one case of chronic gout did not find any increased excretion of alloxuric substances.

2. MORBID CHANGES IN THE STRUCTURE OF TISSUES REGARDED AS THE PRIMARY CAUSE OF GOUT.

This group may be divided into two sections accordingly as the morbid changes are produced by the presence of a soluble urate or not.

I. *Necrotic changes in the affected tissues regarded as the primary cause of gout, the necrosis being due to the presence of dissolved urates.*—Ebstein,[6] who has devoted a considerable amount of time to the experimental study of the causation of gout, is the great exponent of this view. His theory is that a destructive or, as he terms it, a necrotising process is produced in the cartilages or other implicated tissues by uric acid in one form of combination, and that following this the uric acid in another form of combination is deposited in the necrosed areas. In other words, that a destructive process always precedes the process of deposition, both processes being due to uric acid, but in different states of combination. Ebstein maintains that uratic crystals only form in necrotic tissues—never in healthy tissues. He regards the necrosis of tissue and the subsequent uratic deposits as together constituting the characteristic *ensemble* of the gouty process. His theory assumes that the irritant is the neutral sodium urate in the dissolved state, and that the first step in the gouty process consists in a stasis of the lymph stream, followed by the infiltration of the tissue in circumscribed areas by the lymph containing the dissolved neutral urate. The neutral urate, according to his view, acts as a chemical irritant, and sets up a necrotising process in the implicated tissues, and finally produces complete necrosis of the tissues in the affected areas. The necrotising and necrotic portions of the tissues provoke irritation of the surrounding parts and so produce the inflammatory phenomena of gout. Ebstein assumes that the process of necrosis generates a free acid, which converts the neutral urate present in the fluids of the body into the acid urate, which substance is then deposited in the crystalline form in the fully necrosed areas. No mention is made of the nature or name of this hypothetical acid. In support of this theory Ebstein depends upon two different classes of experiments that he performed. One class consisted of his examination of the organs and tissues of birds that he considered he had rendered gouty by preventing the elimination of their urinary secretion. The other class of experiments consisted of observations on the irritant effect of a solution of a sodium urate on the delicate corneal tissue of the eye. As I venture to differ from the deductions that Ebstein has drawn from his experiments and observations, I propose to describe his methods of experimentation and to briefly criticise his deductions therefrom.

Ebstein's first series of experiments consisted in an endeavour to induce in cocks a condition which, from the anatomical point of view, he considered was analogous to the gouty state in man. This he effected by preventing the elimination of their urinary uratic secretion in two ways—(*a*) by ligaturing the two ureters and so damming back upon the circulation the urates which would otherwise have passed away; and (*b*) by administering to the cocks small and repeated subcutaneous injections of the neutral potassium chromate, which Ebstein considers inhibits the passage of uric acid through the kidneys by its action on the renal parenchyma, and so causes a damming back upon the circulation of a portion of the urates which normally are excreted in their entirety by the kidneys. In the bodies of the birds experimented on uratic deposits were found in the articulations, in the tendon sheaths, in the liver, and in the muscular tissues. Ebstein found that the deposition of urates was much more copious and more widely spread in the cocks experimented on by injection of potassium chromate than in those whose ureters were ligatured. This difference he referred to the fact that he could keep the birds alive for a long time while subjecting them to the action of potassium chromate, whereas after ligaturing both ureters they as a rule only lived for about twenty-four hours. As the result of these experiments Ebstein came to the following conclusions: (1) that necrosing and necrotic processes are developed in various organs as the result of some irritant; (2) that uratic deposits form in the necrotic areas which in appearance resemble the gouty deposits of man; and (3) that a reactive inflammation, with infiltration of small cells, is set up in the neighbourhood of these necrotic areas. This class of experiments, therefore, consisted of observations of the uratic deposits formed in fowls when the elimination of their uric acid is prevented, either by ligaturing the ureters or by the progressive disablement of the kidneys by repeated subcutaneous injections of potassium chromate. I do not think that the morbid processes occurring under these conditions in fowls can be considered as in any sense comparable with those occurring in connexion with gout in man. Ebstein found uratic deposits in the liver and muscular tissues of the birds experimented on, localities where they are not found, at all events to any appreciable extent, in human gout. From this one may fairly conclude that the two processes cannot be considered as comparable. Moreover, since the fowl produces and eliminates by the kidneys so large a quantity of urates, the more or less sudden stoppage of kidney excretion must necessarily result in the damming back of it and its rapid accumulation in the blood and tissues, where, as Sir William Roberts[7] suggests, it would probably first collect in a state of solution as the quadriurate, which would then be precipitated in

[2] Croonian Lectures on Uric Acid, Gravel, and Gout, 1892.
[3] Wiener Klinische Wochenschrift, 1895, p. 787.
[4] Charité Annalen, 1895, xx., p. 215.
[5] Zeitschrift für Klinische Medicin, 1896, Band xxix., p. 510.
[6] Die Natur und Behandlung der Gicht, 1882.
[7] Loc. cit., p. 118.

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the tissues as the gelatinous biurate, and this in its turn would be changed into the crystalline biurate.

It is on the second class of experiments that Ebstein depends for his assumption that the neutral sodium urate is capable of acting as a chemical irritant to the tissues and of producing in them the necrotising changes which subsequently lead to complete necrosis of the affected areas of the implicated tissues. In order to show that a combination of uric acid with sodium acted as an irritant Ebstein took a saturated solution, prepared at 100° F., of uric acid in a 5 per cent. solution of sodium phosphate and injected it into the peritoneal cavity, into the kidney, into the anterior chamber of the eye, into the cartilage of the ear, and into the cornea of a rabbit. Powdered uric acid was also introduced by insufflation into the conjunctival fold of one eye. Very appreciable changes were produced in the cornea only, and it was in this structure that Ebstein studied what he considers were the irritant or toxic effects of uric acid. He found that these injections produced a modified form of inflammation in the tissues of the cornea. As a control experiment he injected into the cornea of the other eye a simple solution of sodium phosphate, or water containing calcined magnesia in suspension, neither of which produced any inflammatory changes. He therefore inferred that the inflammatory changes were set up in the cornea by the urate in solution acting as a chemical irritant.

The objection to this method of experimentation is that, in the first place, the solution of uric acid in sodium phosphate does not contain the neutral sodium urate, which is the body on which Ebstein relies for the production of the initial irritant effects leading on to the necrotising process. The solution would contain the sodium quadriurate or the biurate, or a mixture of the two. Moreover, as Sir William Roberts has pointed out, such a saturated solution would soon begin to deposit its urate in the form of the gelatinous biurate, which, infiltrating the affected area of the corneal tissue, would act as a mechanical irritant. It is therefore clear that all the corneal changes observed by Ebstein can be accounted for by the assumption that they are caused by a mechanical irritant. The experiments of Neubauer are opposed to the view that a soluble urate circulating in the blood can act as a poison or irritant and start necrosis. He found that the administration of large quantities of uric acid to rabbits (as much as twelve grammes in some cases) did not seem to cause any inconvenience. Moreover, is it likely that solutions of urates should act as irritants when their passage through the kidneys is part of the natural elimination of nitrogen in man? If solutions of the urates are to be regarded as irritants then the kidneys would never escape damage. Another important argument which militates against the acceptance of Ebstein's theory is that not only is there no proof that the neutral sodium urate, upon which he depends for the starting of the gouty changes, ever exists in the human body, but, on the other hand, there is strong evidence to show that it never can exist in the human body. The neutral sodium urate is an extremely caustic and unstable body, and is decomposed in the presence of carbonates, so that it is impossible for it to exist in the blood. The first factor upon which Ebstein relies for his theory of the causation of gout therefore disappears. Moreover, the responsibility for the assumed necrotic changes cannot be transferred from the neutral sodium urate to the biurate, since Pfeiffer has shown, by means of subcutaneous injections of a solution of a biurate, that although it can produce pain and irritation, yet it cannot cause necrosis, especially when in so weak a solution as must occur in the human body. The assumption by Ebstein, that the process of necrosis generates an acid, which is supposed by him to convert the neutral urate into the acid urate, is based on an imperfect acquaintance with the chemistry of the urates. Sir William Roberts has shown that uric acid is primarily taken up by the blood and lymph as a quadriurate, not as a neutral urate, and he has also proved that the formation and deposition of the crystalline biurate are not favoured by the intervention of an acid. Moreover, in connexion with leucocythæmia, severe anæmia, and other diseases to which reference will be made later, we know that a considerable quantity of uric acid may be present in the blood without giving rise to necrosis of tissues anywhere.

Ebstein considers that by dissolving out the crystalline urates from tissues in which they are deposited he is able to demonstrate the existence of necrosis in the sites previously occupied by the uratic deposit, and insists that the crystalline urates are only deposited in tissues that have undergone necrotising and necrotic changes. This, however, is opposed to the experience of such competent observers as Sir Alfred Garrod, Sir William Roberts, Sir Dyce Duckworth, and Cornil and Ranvier. I have also frequently examined sections of cartilages containing uratic deposits which have not shown any necrosis at the sites of the deposits and in which the cartilage appeared to be practically uninjured. The changes that may be seen in cartilages containing a dense deposit of sodium biurate are quite intelligible on the assumption that they are caused in part by the mechanical pressure of the crystals, and in part by the inflammation and subsequent degeneration set up by the presence of the crystalline deposit. If the sodium biurate is only formed and deposited in necrosed areas, how is it that crystals of sodium biurate are occasionally found free in the synovial fluid of a gouty joint? As Sir William Roberts[8] remarks: "It will scarcely be contended that necrotising and necrotic processes can take place in synovia!"

Sir Dyce Duckworth[9] in a modified sense believes that a soluble urate may act as an irritant. Although he considers that gout is primarily due to a disorder of the nervous system, he entertains the additional view that the urate in solution may set up degeneration and necrotic changes in tissues. This view is expressed as follows: "It can hardly be doubted that lesions result from the action of uric acid in solution in the tissues, and that thus both acute and chronic inflammatory changes may be set up without the direct influence of uratic deposit as an alleged irritant in joints and in certain viscera, notably in the kidneys. Degenerative changes and necrosis also appear to be thus induced."

II. *Inflammatory or degenerative changes in the affected tissues regarded as the primary cause of gout, such initial changes not being caused by urates.*—Dr. Ord in 1872 considered that gout was due to a special form of degeneration in some of the fibroid tissues, resulting in an excessive formation of sodium urate, which is then discharged into the blood, and is subsequently deposited in those parts least freely supplied with vascular and lymphatic structures. Dr. Ord, whose views in this particular have been supported by Dr. Norman Moore and Mr. Bowlby, also considers that uratic deposits only occur in tissues which have previously begun to degenerate. Dr. Berkart[10] considers that the severity of the local symptoms attending an attack of acute gout are inconsistent with the assumption that they are produced by a primary chondritis, due to irritation set up by the deposition of sodium biurate in the articular cartilages. He considers that the *rôle* of the uric acid is one of a humbler kind than that which has hitherto been attributed to it. In his opinion the uratic deposits are most frequently connected with a form of panarthritis which chiefly affects the smaller joints of the extremities. Without assuming any identity between arthritis deformans and gout, he considers that in both instances the disease probably originates in some kind of atrophy of the substance of the bone, that the degenerative process then attacks the cartilages and fibrous tissues of the joints, and that following on this there occurs a necrosis of the tissues close to or within the joint. This necrosis he considers is the primary cause of the pain, hyperæmia, collateral œdema, and desquamation of the skin of the affected joint. The degeneration and necrosis of the tissues are the result of a profound disturbance of nutrition. Dr. Berkart attributes the presence of the urates in the blood in part to leucocytosis and in part to the formation of uric acid from the disintegration of the tissues; so that he regards the uratic deposits as an epiphenomenon, and not as the cause of the gouty paroxysm.

3. Nervous Disturbance Regarded as the Primary Cause of Gout.

The view that gout is intimately connected with disturbances of the nervous system has many supporters. Cullen, the great opponent of the humoral theory in the latter half of the last century, considered that gout mainly depended on an affection of the nervous centres. Sir Dyce Duckworth,[11] while accepting the view, as previously mentioned, that uric acid has some connexion with gout, considers that gout is primarily dependent on a functional disorder of a definite tract of the nervous system, and that the part specially involved is possibly situated in the medulla oblongata, where it may be that there is a trophic centre for the joints. One reason that Sir Dyce Duckworth gives for considering this possible is the relationship of gout to diabetes,

[8] Loc. cit., p. 117. [9] A Treatise on Gout, 1889, p. 63.
[10] Brit. Med. Jour., 1895, vol. i. [11] Loc cit.

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the consideration of which has led him to the belief that the portions of the nervous system involved in the two diseases cannot be far apart from one another. In consequence of this disorder of the neuro-trophic system defects of nutrition arise, which not only cause undue formation of uric acid, but also inhibit the normal destruction of that body in the tissues; at the same time the renal excretory power for uric acid appears to be temporarily inhibited as part of the process of the gouty paroxysm. Sir Dyce Duckworth therefore regards gout as belonging to the class of neuro-humoral diseases, but he does not at present insist on the localisation of the primary disturbance in a limited portion of the cerebro-spinal axis. He draws the following distinction between inherited and acquired gout. In primary, or inherited, gout the toxæmia is dependent on the inherited gouty neurosis. In secondary, or acquired, gout the toxæmia arises from the digestive and excretory organs becoming overloaded, and then, if with this toxæmia there are depression and exhaustion of the nervous system the gouty neurosis may be established by the morbid blood condition affecting the nutrition of the nervous system. Sir Dyce Duckworth claims that the suddenness with which an acute attack of gout comes on, preceded as it usually is by a sense of well-being in the patient, is indicative of the nervous origin of the outbreak, and that it is to the instability and undue sensitiveness of the nervous system in the gouty that the manifestations of the paroxysm are due.

Dr. Edward Liveing[12] considers that there is much to be said in support of the view that gout is the manifestation of a disorder which has its primary seat in the nervous system. He remarks that the view that the uric acid exerts a toxic influence upon the nervous centres and that the particular character of the disorder is determined by the territory involved is one that presents real obstacles, on account of the limited operation attributed to a cause so general in its nature.

Dr. P. W. Latham[13] regards some change in the nervous system as the most important factor in the etiology of gout. He thinks that such change is localised in the medulla oblongata, or in the spinal cord, or in both, and that this nervous disorder may be either hereditary or acquired. He argues that if a portion of the medulla oblongata involving some of the roots of the vagus be the part affected, the metabolism of the liver may be interfered with, and so lead to the formation of uric acid. He also considers that if from any cause uric acid is circulating in the blood it would act as a poison upon any weak spot in the nervous system, and that it is intelligible that it might act upon portions of the spinal cord, which control the nutrition of the joints, and so cause nutritive changes or inflammation in the joints connected with that portion of the cord. In consequence of the inflammation or nutritive changes in the joints sodium biurate becomes deposited in them, or in the tissues around the affected joints. Dr. Latham explains the phenomena of a gouty paroxysm by direct stimulation of sensory nerves by uric acid. He considers that the gout associated with chronic lead-poisoning may be explained by the lead acting in such cases more particularly on those portions of the spinal cord which are concerned in gout.

Dr. Ralfe held the view that the accumulation of uric acid in the blood in gout was due to non-conversion into urea of the uric acid normally formed in the tissues, and he considered that the conditions which prevent the normal destruction of uric acid in the tissues depend probably on disturbance of innervation.

From a careful consideration of these various views as to the primary cause of gout I am of opinion that the greatest mass of evidence is in favour of the view that a compound of uric acid is the *materies morbi*.

The next question to consider is whether the excess of uric acid in the blood in gout is the result of deficient excretion, of over-production, or of deficient destruction. All observers are agreed that an abnormal quantity of uric acid is found in the blood in gout. This overcharging of the blood with uric acid must be due to one or more of the following causes: (1) normal production and deficient excretion of uric acid; (2) over-production and normal excretion of uric acid; and (3) diminished destruction of uric acid by imperfect oxidation or by some other means.

This last theory may be dismissed at once. There is no proof that the process of oxidation destroys uric acid; on the contrary, there is proof that uric acid is produced by a process of oxidation. Moreover, not only is there no proof that uric acid is produced during health in the organs and tissues of the body generally and that it subsequently undergoes more or less destruction, but there are good reasons for believing that uric acid is in health only formed in the kidneys and never appears in the general circulation except under pathological conditions.

With regard to the second theory—of over-production and normal excretion of uric acid—there is abundant experimental proof to show that an increased production of uric acid does not lead to gout so long as the kidneys remain in a normal condition. For instance, in connexion with diseases such as leucocythæmia and severe anæmia there is an over-production of uric acid, but no development of gout. In these diseases the excessive quantity of uric acid produced is readily excreted by the kidneys, as is shown by the large amounts of uric acid that may be found in the urine. In addition, gout is essentially a disease of middle age, and is only very exceptionally met with in childhood and in youth, although the formation of uric acid is greatest in early life, and apparently diminishes with the advance of age.

View that deficient excretion of uric acid is connected with gout.—There are many facts to support the view that gout is due to deficient elimination of the uric acid normally produced, and to subsequent absorption of this uric acid from the kidneys in consequence of that deficient excretion. That there is a deficient excretion of uric acid in gout is, I think, justified by the following facts. Judging as far as is possible by averages, recent accurate estimations of the excretion of uric acid show that in gouty subjects there is a decrease in its daily excretion as compared with healthy individuals. Pfeiffer[14] compares the quantities of uric acid contained in the urine of gouty patients at various ages and in whom the complaint had not yet become chronic with the quantities contained in the urine of healthy subjects at the same age. For purposes of comparison the quantities of uric acid found by him were calculated in grammes per 100 kilogrammes of the body weight. His results are given in the following table:—

Age.	Gouty subject.	Healthy subject.
30 to 40 years	0·885 grm.	0·965 grm.
40 to 50 ,, ...	0·818 ,,	0·882 ,,
50 to 60 ,, ...	0·701 ,,	—
60 to 70 ,, ...	0·661 ,,	0·752 ,,

This table indicates that the amounts of uric acid excreted by gouty subjects were always rather lower than the quantities excreted by healthy persons of the same age.

In the following table (Table I.) are the results of the daily determinations that I made for eight successive days respectively of the total uric acid excretion in the urine of three persons—viz.: (*a*) a male patient suffering from an attack of sub-acute gout supervening on chronic gout; (*b*) a male patient suffering from chronic gout and lead poisoning, with recent pain in the right metatarso-phalangeal joint and in both ankle-joints; (*c*) a healthy man. The quantities of uric acid in the three cases are given in grammes and are calculated per 100 kilogrammes of the body weight. All the individuals were between forty and fifty years of age.

TABLE I.—*Showing the Daily Elimination of Uric Acid in* (a) *a Case of Sub-acute Gout;* (b) *a Case of Chronic Gout and Plumbism;* (c) *a Healthy Person. Quantities of Uric Acid given in Grammes per 100 Kilogrammes of the Body Weight. All the individuals between Forty and Fifty Years of Age.*

Sub-acute Gout.	Chronic Gout.	Healthy Subject.
0·260 grm.	0 578 grm.	1·105 grms.
0·263 ,,	0·617 ,,	1·027 ,,
0·315 ,,	0·665 ,,	1·020 ,,
0·350 ,,	0 715 ,,	1·376 ,,
0 442 ,,	0·443 ,,	1·175 ,,
0·f56 ,,	0·372 ,,	1·030 ,,
0·506 ,,	0·593 ,,	1 252 ,,
0·494 ,,	0·694 ,,	1·203 ,,
0·398 ,, (average)	0·572 ,, (average)	1·148 ,, (average)

[12] On Megrim and Sick Headache, 1873, pp. 404-5.

[13] Croonian Lectures, THE LANCET, April 3rd, 10th, 17th, and 24th, and May 1st, 1886.

[14] Berliner Klinische Wochenschrift, 1892, p. 413.

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These results, I think, justify the view that deficient excretion of uric acid occurs in connection with gout. I shall have occasion in a subsequent lecture to discuss in detail the probable *rôle* taken by the kidneys in the production of uric acid, and in the development of gout.

Estimation of uric acid in urine.—One of the lines of investigation that I have pursued required that a very large number of estimations of the total amount of uric acid excreted in the urine per diem should be made. The process that I have employed throughout is the Gowland Hopkins method, which I consider is a very accurate and reliable process. I have had a very considerable practical experience of the various methods that have been employed for the estimation of uric acid in the urine, including Heintze's process, Haycraft's process, Fokker's process, Salkowski's process, and Ludwig's modification of Salkowski's process. In connexion with all these processes there are faults or objections from which the Gowland Hopkins process is free. As this method is not employed to the extent that, I believe, it deserves to be, I will briefly describe the process as given by Gowland Hopkins.[15] This process depends upon the fact that when urine is saturated with ammonium chloride all the uric acid is precipitated as an ammonium urate. From the ammonium urate the uric acid is set free and the amount of it is determined by titration with a standard solution of potassium permanganate. One great advantage of this process is that there is no danger of the reduction of the ammonium urate as there is of the silver urate produced in some of the other processes; moreover, the ammonium urate is easy to filter and permits of the liberation of its uric acid with great readiness. Another great advantage of the process is that although xanthin is at first precipitated along with the ammonium urate, yet the subsequent treatment with hydrochloric acid entirely removes it, so that finally it is not estimated along with the uric acid. The details of the process are as follows.

The Gowland Hopkins method for the estimation of uric acid in urine.—To 100 c.c. of the urine powdered ammonium chloride is added till practical saturation is obtained. About thirty grammes of ammonium chloride, as a rule, are required. When a small quantity remains undissolved after brisk stirring for a few minutes saturation is sufficiently complete. The urine is then allowed to stand for two hours, during which time, if possible, it is occasionally stirred to promote subsidence, and is then filtered through thin filter-paper and washed three or four times with a saturated solution of ammonium chloride. The filtrate should remain perfectly clear and bright. The precipitated ammonium urate is then washed off the filter into a small beaker with a jet of hot distilled water, and is heated just to boiling with an excess of hydrochloric acid. The beaker and its contents are allowed to stand in the cold for two hours, when the uric acid separates out completely, and is then collected on a filter and washed with cold distilled water. The filtrate should be measured before the washing is begun, and one milligramme added to the final result for each 15 c.c. of filtrate present—this need never be more than from 20 to 30 c.c. The uric acid is then washed off the filter with hot water, warmed with sodium carbonate till dissolved, and made up with water to 100 c.c. The liquid is then transferred to a flask, 20 c.c. of strong pure sulphuric acid are added, and the mixture is immediately and while warm titrated with one-twentieth normal potassium permanganate solution. The latter should be added slowly towards the end of the reaction, the close of which is marked by the first appearance of a pink colour, which is permanent for an appreciable interval. Previously the disappearance of the colour is instantaneous. The permanganate solution is made by dissolving 1·578 grammes of pure potassium permanganate in a litre of distilled water—1 c.c. = 0·00375 gramme of uric acid.

Estimation of uric acid in blood.—Another line of investigation that I have pursued has involved the examination of the blood of man and of several of the lower animals for the presence of uric acid. Quantitative determinations of uric acid in blood have been made within the last few years by Salkowski and Leube, von Jaksch, and Klemperer. Salkowski and Leube[16] slowly added the fluid blood to ten times its volume of boiling water, boiled for ten minutes, allowed to subside, filtered, and evaporated down to the volume of the original blood used. The uric acid was then determined in this liquid by the Salkowski method. Von Jaksch[17] diluted the blood (using from 100 to 300 c.c.) with from three to four times its volume of water on the water bath, and when coagulation commenced acetic acid was added so as to produce weak acidity; the mixture was then heated in the water bath for from 15 to 20 minutes till the albumin settled, and was then filtered and the sediment extracted and washed with hot water. The filtrate was further acidified with acetic acid, boiled, cooled, filtered, and sodium phosphate added. The Salkowski-Ludwig method for the estimation of uric acid was then employed. Klemperer[18] diluted the blood with from six to eight times its volume of water, removed the albumin by von Seegen's method, and then estimated the uric acid by the Salkowski-Ludwig process.

In order to test the accuracy of the different methods for the estimation of uric acid in blood a quantity of fresh bullock's blood—which I proved to be free from uric acid—was taken, and to it a known percentage of uric acid was added. I then experimentally tried on different batches of this blood the various methods that have just been described. I obtained, however, such very erroneous and discordant results that I was forced to the conclusion that no reliable process had as yet been devised for the estimation of uric acid in blood. I therefore endeavoured to devise a process that would yield reliable results. After performing a very large number of experiments, into the details of which it is unnecessary to go, I arrived at the following process, which constitutes the most reliable one for the estimation of uric acid in the blood with which I am acquainted.

Process for the estimation of uric acid in the blood.—The fresh blood is allowed to flow direct into its own volume of rectified spirit containing 2 per cent. of formalin, with which it is thoroughly agitated; the mixture is then evaporated on the water bath until the mass can be reduced to a coarse powder, which is dried in the water oven and afterwards finely powdered. The admixture of the blood with the spirit precipitates the albuminous matters in a granular form, so that when dried the blood can be reduced with ease to a fine powder; the presence of the formalin prevents any decomposition of the blood in the event of its not being convenient to work it at once to the solid state. For the experimental work one part of the dried blood was taken as being equal to five parts of liquid blood. For the extraction and estimation of uric acid in the blood from 50 to 100 grammes of the powdered blood should, if possible, be taken. In all my analyses of the blood of animals and birds I employed 100 grammes of the dried blood, and in my analyses of human blood I used 50 grammes of dried blood. The method that I employed was to mix 100 grammes of the powdered blood with a litre of boiling distilled water and to allow the mixture to boil for half an hour, during which time it was frequently agitated. It was then filtered, firstly through glass-wool and afterwards through filter-paper, and evaporated down to 50 c.c.; this liquid was filtered, allowed to cool, and then submitted to the Gowland Hopkins process for the estimation of uric acid. On adding known quantities of uric acid to different specimens of blood—which I had previously proved to be free from uric acid—and then submitting them to this process I was able to extract from 80 to 87 per cent. of the uric acid, but I could never get the whole of the uric acid out of the blood residue. I tried various solvents in place of the distilled water, such as dilute solutions of sodium acetate, potassium acetate, sodium phosphate, borax, sodium carbonate, &c., in the hope of being able to extract all the uric acid from the blood, but I was unable to find any solvent that acted better than the distilled water. This process that I have just described is the one that I have employed, in conjunction with the murexide test, in all the examinations of the various kinds of blood for uric acid to which I shall subsequently refer.

Admitting that an excess of uric acid in the blood and that its deposition therefrom in cartilages and other tissues is the direct exciting cause of a gouty paroxysm, the two questions that naturally arise in the mind are: (1) Where is the uric acid formed? and (2) How is the uric acid formed? I believe that uric acid is formed in connexion with some diseases—notably blood diseases accompanied by leucocytosis—in a different manner to that in which it is produced in health, and also in different organs. I also hold the opinion that the source of the uric acid contained in the blood in gout is the same as that from which the uric acid eliminated

[15] Proceedings of the Royal Society, 1892, vol. lii., p. 93; Journal of Pathology and Bacteriology, 1893, vol. i., p. 451.

[16] Die Lehre vom Harn, p. 94.

[17] Ueber die Klinische Bedeutung von Harnsäure und Xanthinbasen im Blut, 1891.

[18] Deutsche Medicinische Wochenschrift, 1895, xxi., p. 655.

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in the urine in health is derived. I propose, therefore, to first consider the various views as to the seat or seats of formation of uric acid in health and in gout.

SEAT OR SEATS OF FORMATION OF URIC ACID IN HEALTH AND IN GOUT.

View that the kidneys form as well as excrete uric acid.—Until 1847 it was supposed that uric acid was formed in the kidneys themselves, as up to that time none had ever been detected in the blood. In that year Sir Alfred Garrod showed the presence of uric acid in the blood of gouty subjects, which discovery led to the conclusion that uric acid was formed in certain other organs and tissues of the body, and was merely eliminated by the kidneys. The view that then arose was that the uric acid eliminated in the urine originated in the system by the metabolism of the nitrogenised tissues, and was then thrown out by the kidneys. Sir Alfred Garrod[19] originally held this view, but in later years he came to the conclusion that uric acid is produced by the direct action of the kidneys from urea and other nitrogenised bodies contained in the blood. From the experimental evidence that he has put forward Sir Alfred Garrod[20] concludes that the presence of uric acid in the blood, provided it is not introduced *viâ* the alimentary canal, must be accounted for by absorption into the blood from the kidneys after its formation in these organs, the salt being changed by the blood from ammonium urate to sodium urate. He therefore concludes that uric acid is normally formed in the kidneys, and that when present in the blood it is a result of its having been absorbed after formation in other organs. Kolisch[21] regards the kidneys as the most important of the uric acid forming organs. Dr. Latham considers that the final formation of uric acid takes place in the kidneys, where it is produced by the conjugation of substances manufactured in the liver and conveyed in the blood to the kidneys. The following experimental evidence has been put forward in support of the view that uric acid is formed in the kidneys. Zalesky experimented on serpents, who eliminate all their urinary nitrogen as uric acid. He found that after the removal of the kidneys of serpents they lived about as long a time as when the ureters were tied, and that after death no uratic deposits were found in any of the tissues. As he found after ligaturing the ureters of other serpents that uratic deposits were to be seen after death in most of the organs and tissues, he concluded that the kidneys were the producers as well as the eliminators of uric acid. The following experiments also are strongly opposed to the view that the kidneys, with regard to uric acid, merely act as filters which separate the uric acid brought to them in the blood. Sir Alfred Garrod[22] gave from fifteen to thirty grains of potassium urate daily and similar daily doses of sodium urate without producing any increase of uric acid in the urine. Wöhler and Frerichs found that the administration of potassium and sodium urates increased the amount of urea, but did not augment the quantity of uric acid in the urine. Neubauer found that the administration of large quantities of uric acid to rabbits, either by the stomach or by injection into the veins, was followed by a corresponding increase in the excretion of urea, but no uric acid was discovered in the urine.

View that the liver and spleen produce uric acid.—The view that the liver was the seat of the production of uric acid probably originated in the knowledge that the excretion of uric acid in the urine is most abundant during digestion, when the liver is most active. This view is, however, equally compatible with the idea that the liver merely produces the antecedents of uric acid, which subsequently become conjugated in the kidneys. The investigations of Schröder and Minkowski apparently were strongly in favour of the view that uric acid was formed in the liver. Schröder[23] states that the liver of birds contains a high percentage of uric acid, and that after removal of the kidneys uric acid continues to be formed and accumulates in the liver and blood. The last mentioned statement is utterly opposed to the results of Zalesky's experiments on the extirpation of the kidneys of serpents. Moreover, if the liver of birds contained uric acid, and if it passed thence to the kidneys, it must be present in the blood. As I shall shortly show, the blood of birds is quite free from uric acid. Minkowski[24] succeeded in keeping geese alive from six to twenty hours after extirpation of the liver. After the operation their urinary excrement contained only from 2 to 3 per cent. of uric acid, instead of the normal 60 or 70 per cent. These results are, however, equally compatible with the view that the liver is the seat of production of the antecedents of uric acid.

Dr. Murchison regarded the liver as the seat of production of uric acid, and the presence of the latter in the blood or tissues as the result of functional derangement of the liver, as the result of which the metabolism of some of the albumin is arrested at the stage of uric acid formation instead of going on to the complete stage of urea formation. Charcot regarded the liver as the principal seat of production of uric acid. He considered that a functional derangement of the liver caused the production of excessive quantities of uric acid and its consequent accumulation in the blood. Meissner regards the liver of fowls in the normal condition as the principal source of uric acid, but considers that the spleen and the nervous tissues share in the formation. Ranke was of opinion that his experiments led to the conclusion that the spleen was the principal organ concerned in the production of uric acid. It has, however, never been possible to show that the spleen takes any active part in developing gout. On the contrary, the large amount of uric acid found in the blood in cases of leucocythæmia and severe anæmia show that an exaggerated production of uric acid does not by itself exert any influence on the origin of gout.

Views that uric acid is produced in various tissues.—Ebstein, who attributes in cases of gout the main production of uric acid to the muscles and bone-marrow of the affected extremities, admits, however, that the kidneys may take a part not only in the secretion, but also in the manufacture of uric acid. Robins was the first to formulate the view that uric acid is formed in connective tissues generally, and that the pathological condition is merely an exaggeration of the physiological one. This view, therefore, regards normal fibrous tissue as the seat of production of uric acid, and considers that in gout this production is increased. Chrzonsczewsky also concludes that uric acid arises in connective tissue, and that it is conducted thence through the lymphatic vessels. Cantani considers that the connective tissues take an active part in the formation of uric acid, and that in cases of gout it is especially produced in the cartilages and peri-articular tissues (ligaments, tendons, &c.). Senator also inclines to the opinion that at least part of the uric acid is formed in cartilaginous tissue. Most writers and observers on the subject, however, consider that it is only certain that uric acid deposits in substances of the connective tissue class, and that there is no proof that uric acid is formed in connective tissue. Dr. Haig claims that, in addition to the formation of uric acid in the animal economy, the introduction of small quantities of uric acid in the food leads to its gradual accumulation, and that consequently very large amounts may be stored in the body without any excessive formation having taken place. Dr. Haig, however, does not produce any proof that uric acid is stored up in the system apart from gout. The contrary is proved by the fact that in diseases such as leucocythæmia, severe anæmia, &c., although large quantities of uric acid are formed, yet they are readily eliminated without being stored in the system.

It will be evident that if the various views as to the formation of uric acid in the liver, spleen, connective tissues, muscles, and bone-marrow be correct, then it must be conveyed in the blood in order to be excreted by the kidneys. We know that some 400 to 500 grains of urea are normally excreted in the urine, and that this urea is conveyed in the blood from various organs to the kidneys, where it is excreted; but in addition from eight to ten grains of uric acid are daily excreted in the urine of man. The question is, Does this uric acid come as such to the kidneys? In other words, Is it produced in any of the organs or tissues of the body generally and conveyed in the blood to the kidneys, to be by them excreted; or is it produced in the kidneys and then turned into the urine? The answers to these questions will depend very much upon our ascertaining whether uric acid exists in the blood of man in health, and whether it exists in the blood of those animals, such as birds, the whole of whose nitrogenous urinary excrement consists of a compound of uric acid.

[19] Transactions of the Royal Medical and Chirurgical Society, 1848, p. 93.
[20] Proceedings of the Royal Society, 1893, pp. 482-484.
[21] Wiener Klinische Wochenschrift, 1895, viii., p. 787.
[22] Lumleian Lectures: THE LANCET, March 24th, April 7th and 21st, 1883.
[23] Ludwig's Festschrift, 1887, p. 89.
[24] Archiv für Experimentelle Pathologie und Pharmakologie, Band xxi.

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Does uric acid exist in the blood of man in health?—Sir Alfred Garrod,[25] as the result of his investigations, declares that in absolute health the uric acid in the blood is inappreciable, that in gout the blood is very rich in it, and that uric acid is found in smaller but appreciable quantities in individuals who are developing a gouty condition, or who are under the poisonous influence of lead. Von Jaksch[26] examined the blood of several healthy individuals, but found no uric acid present. Klemperer[27] also was unable to find any uric acid in the blood of healthy persons. I have also carefully examined the blood of healthy subjects by the process previously described and have been unable to find any uric acid present.

Does uric acid exist in the blood of mammals other than man?—Sir Alfred Garrod[28] examined the blood of the ox, sheep, and pig by the uric acid thread test, but could never find a trace of uric acid present. I have also examined the blood of the ox and sheep, working on very large quantities of blood by the process I have described, but I have never found any uric acid present.

Does uric acid exist in the blood of birds and reptiles which eliminate all their urinary nitrogen as a compound of uric acid?—Sir Alfred Garrod[29] examined the blood of the turkey, fowl, pigeon, and duck by the uric acid thread test, but never found a trace of uric acid present. I considered that these observations of Sir Alfred Garrod as to the absence of uric acid from the blood of birds were of so great importance, in view of the opinion which I strongly entertain that uric acid in health is only formed in the kidneys, that I thought it desirable to repeat the experiments. I accordingly worked on very large quantities of the blood of the turkey, goose, duck, and fowl. After the most careful examination I have never been able to detect any uric acid in the blood of these birds, and I therefore confirm Sir A. Garrod's observations. I am also able to confirm his observations as to the presence of urea in the blood of birds. I found urea present in the blood of all the birds that I examined—viz., the turkey, goose, duck, and fowl. Dr. John Davy examined the blood of two snakes (*viper communis*) for uric acid, but failed to detect any.

This mass of experimental evidence, which shows that uric acid is never present in the blood of human beings in health, and also that it is never present in the blood of birds and serpents although their urinary excretion is almost entirely composed of a compound of uric acid, conclusively supports the view advanced by Sir Alfred Garrod and held by Dr. Latham, and in a modified sense by Kolisch, that uric acid is normally produced in the kidneys. How is it possible in all these cases that uric acid could be absent from the blood if the view be correct that uric acid is formed in the system generally and is conveyed in the blood to the kidneys, which play, as it were, merely the part of a filter in the removal of the uric acid from the blood? I consider that the evidence brought forward renders such a view impossible.

[25] Lumleian Lectures, 1883, loc. cit.
[26] Deutsche Medicinische Wochenschrift, 1890, xxxiii., p. 741.
[27] Loc. cit.
[28] Loc. cit.
[29] Lumleian Lectures, 1883, loc. cit.

SEAMEN'S HOSPITAL SOCIETY.—The annual court of the Seamen's Hospital Society was held on Feb. 25th at the Royal United Service Institution, Whitehall, Earl Spencer being in the chair. The report showed that the society had had under its care during the last twelve months 2616 in-patients and 16,906 out-patients, being in the aggregate the largest number ever treated by the society in one year. The year's income was £15,533 and the expenditure £16,315. The Queen had forwarded her annual subscription of 100 guineas as usual, which made a total of 6000 guineas since the beginning of Her Majesty's reign. The adoption of the report was moved by the Japanese Minister and seconded by Admiral Boys.

WESTERN DISPENSARY.—The report presented at the annual meeting of the Western Dispensary, Rochester-row, Westminster, showed that the gratuitous patients were somewhat fewer last year than during the previous year, which was perhaps partly accounted for by the continued demolition of houses occupied by the poorer classes. The provident branch of the dispensary, however, showed a considerable increase; in 1896 it had 4557 members, the number of visits paid was 14,359, and the payments amounted to £630. Dr. Allchin moved the adoption of the report of the Marie Celeste Convalescent Branch.

The Milroy Lectures

ON

QUARANTINE.

Delivered at the Royal College of Physicians of London on March 11th, 16th, and 18th, 1897,

BY WILLIAM COLLINGRIDGE, M.A., LL.M., M.D., D.P.H. CANTAB.,
MEDICAL OFFICER OF HEALTH OF THE PORT OF LONDON.

LECTURE III.[1]

Delivered on March 18th.

MR. PRESIDENT AND GENTLEMEN,—In my last lecture I endeavoured to show that the theory on which the system of modern quarantine was based was untenable, and that in practice it had failed to confer any real protection on those countries which practised it. I have now to deal with the practical objection—namely:—

3. *That an effective quarantine is practically impossible in a commercial country.*—In early days, when trade was relatively of small volume, this was apparent, and the enormous growth of commerce has simply emphasised the fact. The question could only be considered at the present day with reference to the period of incubation, and it would obviously be accepted that any vessel was safe if there had been no case of disease during a period at least equal to that of the possible latency of the disease. Sir John Simon, in his eighth report, says: "For the purpose of the argument we assume that an allowance of ten days will cover the time during which infection can be latent or designedly concealed, which, however, is less than the time on which quarantine Governments insist, and I believe only half the time of an average quarantine in Greece; and if we translate into practical language what this would mean if England had quarantine against the Continent it would be that ten days would be the minimum time in which any person, sick or healthy, could enter England from the Continent—that, for instance, our present ninety minutes between Calais Pier and the Dover railway-station would become an affair of at least ten days, and that no national advantage from quarantine could be promised if this rule were in any case relaxed or evaded."

Again, nearly thirty years later, when our shores were once more threatened with cholera and when various sanitary authorities and other bodies were urging the Government to abandon their traditional attitude and impose a period of detention upon all arrivals from infected countries, Dr. Thorne Thorne, in his Report of 1892-93, thus sums up the absurdity and impracticability of the suggestion: "'Put all ships from infected ports into quarantine' was one demand. Let us apply this to a few only of our ports. Between the end of September, 1892, and January, 1893, there occurred in Calais some seventy attacks of cholera, of which twenty-four terminated fatally. The port of Calais was thus an infected port. Between Sept. 24th and Dec. 14th, 1892, cholera was prevalent in Boulogne, causing thirty deaths. The port of Boulogne was thus an infected port. Now, in the six weeks ending Nov. 12th, 1892, the mean weekly number of passengers arriving at Dover from the port of Calais was 1800, and if a quarantine of five days had been imposed upon arrivals from this infected port the total number of persons who would have had to be detained, housed, fed, and otherwise cared for, either afloat or on shore, by the Dover Sanitary Authority would, apart from the crews of the vessels, have amounted to 10,894, the number under detention at any one time ranging from 1019 to 1723. Dealing with Folkestone in the same way, it appears that during the six weeks ending Nov. 12th, 1892, the total number of passengers arriving from the infected port of Boulogne was 3251, that the mean weekly number of persons who at one time would have had to be detained at Folkestone under a five days' quarantine would have ranged from 272 to 673; and, owing to cholera at other ports, such as Dieppe

[1] Lectures I. and II. appeared in THE LANCET of March 13th and 20th respectively.

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and Havre, similar measures would have had to be carried out at other English ports, notably at Newhaven and Southampton. Apart, indeed, from an almost complete cessation of traffic between the ports concerned, such as might have been brought about by any real attempt at quarantine restrictions, the result obtained would have been one which could only have brought ridicule upon our sanitary administration." Dr. Thorne Thorne further remarks: "Obviously such a system would break down at its first application, unless exemptions were made which would at once destroy the value of the attempt to impose a quarantine on arrival from any one port, such as were demanded in the case of Hamburg." He points out that "this would be absolutely futile and would merely involve vexatious expense and delay to passengers, who would travel by rail from the port in question and take ship at other places against which there were no restrictions." Indeed, as a matter of fact many persons at that time, fearing detention, did arrive in England from Hamburg, having embarked at Dutch, Belgian, and even French ports.

It is scarcely possible for those not personally interested in shipping to realise how serious a matter quarantine has been for shipowners, not only in the remote past, but even at a very recent date. Firstly in importance would come, without doubt, the loss occasioned by delay and uncertainty of detention, and even in some cases actual prohibition of intercourse with infected ports or ports supposed to be infected. Dr. Bowring, after extended travel and experience of quarantine, says that the "pecuniary loss inflicted by the system may be estimated by millions of pounds sterling in delays, demurrage, loss of interest, deterioration of merchandise, increased expenses, fluctuations of markets, and other calculable elements; but the sacrifice of happiness, the weariness, the wasted time, the annoyance, the sufferings inflicted by quarantine legislation—these admit of no calculations, they exceed all measure." It seems impossible that trade could ever have been carried on under the vexatious and harassing restrictions at one time in force; obviously trade as understood at the present day could not have existed. Thus, so recently as 1827 all vessels bound up the River Thames from ports east of Gibraltar were compelled to run into the Medway and perform quarantine in Stangate Creek. Such a waste of time and money would be utterly impossible at the present day.

Apart from the detention which was an essential part of the system there existed the greatest uncertainty at all times as to the existence of the disease which rendered such detention compulsory; the merest rumour or suspicion of disease was often held sufficient to justify imposition of the most rigorous quarantine, and this must of necessity have been the case. Even at the present time, with all the facilities that now exist of postal and telegraphic arrangements, it is always difficult to obtain accurate information as to the existence and nature of diseases prevailing in foreign countries. The policy of concealment is constantly adopted in order to avoid the actual or imaginary interference with trade which may follow the declaration of the presence of an epidemic, and the officially confirmed facts are obtainable only after the disease has spread to such an extent that its existence can no longer be denied. First cases of cholera are called "sporadic" or the term "cholerine" is used, with the hope that they may not become sufficiently numerous to call for investigation on the part of other countries. This is, indeed, a strong argument against such restrictive measures as interference with the carrying on of trade. It not only leads to concealment, in itself a great danger, but further, on account of the desire to keep the true facts secret, prevents the authorities from taking due measures to prevent the spread of infection. On account of the delay in obtaining accurate information action must be taken by other countries in self defence on mere rumour, otherwise sufficient time would elapse for vessels to reach a country before the port of departure was authoritatively known to be infected. And the same danger arises at the close of an epidemic, it being found necessary to continue restrictive precautions for a certain (or rather an uncertain) period after all danger is officially declared to be at an end. Egypt in 1865 had prepared an elaborate system of quarantine for all pilgrims returning from Mecca, but the disease was not recognised before many vessels had arrived and Alexandria had been infected by their means. "Next, before Alexandria confessed itself infected it had infected Marseilles and France generally. Then before Marseilles confessed itself infected Valencia had received a most disastrous infection from or through it; Odessa before it was recognised as itself having cases of cholera had let infection pass through it, first to start in Podolia an epidemic which diffused widely in South Russia, and secondly to start at Altenburg, in the middle of Germany, an epidemic which diffused widely in Central Europe. Italy received its infection through the quarantine establishment at Ancona, which both infected the town of Ancona by sending infected things to be washed there and also allowed an undiscovered case of cholera to pass on from its lazaret after six days' detention to infect the town of Pisa."[2]

Further instances of the futility of relying upon official reports of infection are given in Mr. Netten Radcliffe's Report on Cholera in Europe in 1873. The first intimation of the presence of cholera in St. Petersburg was received on Sept. 9th, the disease having appeared there on Aug. 9th. Cholera was officially recognised in Havre on Sept. 2nd, the disease having been present there since Aug. 9th, and after a formal contradiction of the presence of the disease on Aug. 29th. The first intimation of cholera in Hamburg was received on Aug. 5th, after inquiry made in this country in consequence of several cases of cholera having been landed at Blackwall from a ship which had sailed from Hamburg on July 26th. Cholera had been present in that port since June 21st. Information was received of cholera in Rotterdam on Oct. 18th, but its existence there was not officially declared by the local authorities till Oct. 27th. Information was received of the presence of cholera in Antwerp on Oct. 25th, and at that date clean bills of health were still being issued to ships leaving the port. Again, in 1892, at Hamburg, the first official intimation of the outbreak of cholera was received on Aug. 23rd, though it was subsequently ascertained that 447 cases had occurred, with 121 deaths, previously to that date, and the first cases from that port had arrived at Grangemouth on the 19th.

A somewhat similar danger still obtains with reference to cargoes such as rags, clothing, &c., considered as capable of conveying infection, and this danger appears to be fatal to the policy recently in vogue in this country of issuing Orders for limited periods prohibiting the importation of such goods unless previously disinfected. The immediate result of such Orders has been to seriously interfere with a special class of traffic for a certain period. Assuming that such materials do carry infection—and the evidence is by no means clear on this point—it must be remembered that although shipped at a certain port they are not necessarily produced or collected within the immediate neighbourhood. Thus rags might be introduced into this country from an infected district without any precautionary measures, because they were shipped from a country not declared infected; or, on the other hand, materials sent from an infected port might have been obtained from a district where no disease had appeared. Again, no Orders were issued until the disease was well established, and therefore these goods might be freely imported from an infected district up to the time of the promulgation of the Order. Further, one effect of such an Order is necessarily to increase the cost of the material owing to the compulsory disinfection. The traffic would, therefore, to a certain extent (varying according to the state of the market and the laws of supply and demand) be arrested, and stocks would be accumulated in the infected countries. As soon as the epidemic was at an end and the prohibitory Order revoked these stocks would be shipped, and thus the very goods collected in the infected country during the prevalence of disease, and detained for a certain time, would be once more freely admitted. If these goods were capable of conveying infection it would be far more reasonable to insist upon their disinfection at all times. If this were a settled principle arrangements would be made whereby they could be disinfected at small cost and the intermittent dislocation of trade avoided.

The impossibility of a strict quarantine in the present day, as well as its failure, are well shown by the history of the attempt to carry it out in the United States in 1892. A vessel coming from Hamburg, carrying immigrants, arrived at New York, having had twenty-two deaths from cholera during the voyage. A minimum quarantine of twenty days was thereupon imposed upon all vessels carrying immigrants. This soon led to a total cessation of the emigrant trade, but in the meantime a large number of persons (some thousands) were

[2] Mr. Simon: Report to Privy Council and Local Government Board, 1875.

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detained under conditions which were described in the daily press as "inhuman and revolting." The quarantine was only partly carried out, as it was soon found to be impracticable, while at the same time unhappily the disease found its way into the city, where sixteen persons were attacked, with twelve deaths.

As instances of the imposition of quarantine without due cause, Milroy quotes the case of vessels from Great Britain being quarantined at Messina in consequence of a report in a French newspaper of a case of typhus having occurred at Glasgow, while a cargo of cotton from New Orleans which had been landed and re-shipped at Liverpool had been declared infected after a subsequent voyage of more than fourteen days' duration. In 1858 a P. and O. steamer in Alexandria landed some passengers at Gibraltar, and before leaving it was necessary to obtain a bill of health. This was sent on board in a tarred box, fastened. The captain, not aware of any risk, opened the box, and in consequence on arrival at Malta had to undergo a quarantine for ten days for communicating with an infected port. At Alexandria a vessel arrived with pilgrims from Tunis; one died on the voyage, and after some controversy it was decided to consider the disease as plague. The pilgrims were landed in a lazaret, where another died. Again there was some conflict as to the nature of the disease, but the majority of the authorities considered it as plague One of the medical men had touched the corpse, and had gone home without undergoing the prescribed purification. This became known to the foreign consuls, who communicated the facts to their respective Governments, with the result that Alexandria was declared to be infected with plague. In the report of the proceedings of the Quarantine Committee of the Social Science Association it was shown that all arrivals from Egypt and Turkey, without exception, had been subjected at nearly every port in the Mediterranean to a more or less lengthy and strict quarantine, although it was well known that no plague had been seen in those countries for twenty years. Again, arrivals from the West Indies, Gulf of Mexico, and the West Coast of Africa are always quarantined in Spain and Portugal, whether or no yellow fever exists in those countries.

The records of quarantine in our own country reveal some extraordinary facts. In a Parliamentary return prepared in 1853 it is stated that in 1848 sixteen vessels were detained for periods varying from three to six days on arrival from Hamburg, although there had been no sickness on board during the voyage, on arrival, or while in quarantine. In 1754 the sloop *Fowey*, from Algiers, arrived at Gibraltar with a clean bill of health, having had no sickness on board during the voyage. Here she rode out six days' quarantine and left for Portland, and arrived after a month's voyage, during which all were well on board. The captain and crew all went on shore, and some persons from Weymouth went on board. She then sailed to Guernsey and received free pratique, but after twenty-four hours all the crew were ordered on board and the vessel was directed to perform quarantine at the Motherbank. There she remained with all her crew in perfect health for four months, when, without any reason being assigned, she was taken out to sea by one of Her Majesty's cruisers and sunk off Start Point. In 1731 two vessels from Cyprus, having cotton and other goods on board, were burned by order of the Privy Council at an expense of £29,935, although there had been no sickness on board. Cases have constantly occurred when a healthy vessel has been quarantined because she has come from an infected, and in some cases even from a non-infected, port, although the port of arrival was itself infected at the time. In 1838 the *Firefly*, from Beyrout, arrived at Alexandria with a bill of health stating that there had been no plague at the former place for a period of thirty-six days. She was nevertheless compelled to undergo a quarantine of twenty-two days, although the disease was prevailing at Alexandria at the time. In 1801 two vessels from Mogador, with cargoes of hides, suspected of carrying the infection of plague, were sunk at the Nore at a cost of £15,000, although all on board were known to be in good health. Indeed, so recently as 1846 Dr. A. White, Inspector of Military Hospitals and Superintendent of Plague District in Corfu, in "A Treatise on Plague, with Hints on Quarantine," says: "I am aware that the expurgation of a plague ship with a cargo of goods is a very difficult, tedious, and expensive operation, as well as one not free from danger. I am, nevertheless, of an opinion that, generally speaking, it will be the best, and perhaps the cheapest way in the end, to destroy ship and cargo at once and to place the people under strict quarantine until their state of health is proved to be free from all infection."

To keep up quarantine, with all its elaborate machinery of medical officers, lazarets, quarantine guards, &c., involved enormous expense. Even in this country, where no proper lazarets existed and where the system in its entirety was never thoroughly carried out, the cost was considerable. As I previously mentioned, the charges to the shipowners were very heavy, frequently amounting to 35 per cent. of the value of the cargo; while to the country during the years 1801–1823 inclusive the cost amounted to £641,000 (London £158,000 and the outports £483,000), or an average of £18,000 a year. In 1734 the total expenses were £17,849; in 1829, £23,000; and 1826, £26,000. During the years 1840–1850 they averaged £10,800 a year. All this vast machinery of defence had to be maintained in working order if it were to be suddenly brought into use. Lazarets, fully equipped with all the necessary officers, attendants, and guards, could not be provided suddenly, but were of necessity kept in readiness for an emergency which might rarely occur and only at long intervals of time. Hence the expense was continuous, though the actual need for the use was but occasional. For although all vessels from certain countries were detained, this was done with the object of arresting disease arising from those which were actually unhealthy, the quarantine being a probation to establish the fact of infection or otherwise. According to returns between the year 1720 and 1843 (123 years) only twenty-five vessels with plague actually on board arrived at all the ports of France and Italy—ten of these at Marseilles, five at Venice, nine at Leghorn, and one at Genoa. Those at Marseilles were in the years 1741, 1760, 1784, 1785, 1786 (two), 1796, 1819, 1825, and 1837. The total number of cases, including all doubtful ones, at this latter port was only thirty-two, with eighteen deaths. For these few cases the two countries were put to an enormous outlay, and the vessels arriving there subjected to serious and vexatious delay with its attendant heavy expense.

The most serious objection to quarantine, however, apart from its futility, is the actual danger to health which it involves from the detention of a large number of vessels under conditions in most cases insanitary, and in all more or less unfavourable to the preservation of health on board an infected vessel or in confined lazarets within range of the infection if such exist. For either there is no necessity for their quarantine or they are unreasonably kept more or less exposed to the risk of infection, which is unjustifiable. The case of H.M.S. *Eclair*, in 1845, affords an unfortunate example of the danger to the crew of an infected vessel from the imposition of quarantine. This vessel, on arrival, was first sent to the Motherbank, but on account of the difficulty of communication during bad weather she was sent to Stangate Creek, admittedly one of the most bleak and sickly places on the whole coast of Kent, and this in spite of the strongly worded advice of Sir John Richardson that the sick should be landed and conveyed to Haslar Hospital. In consequence of this action they were confined to the foul atmosphere of the vessel, with the result that over 200 of the crew who had hitherto escaped fell sick and died. This case attracted so much attention that the term of quarantine was considerably shortened. Dr. Gregson, in writing of quarantines, says: "From their oppressive and partial operations they have, instead of diminishing, propagated the disease. Hundreds have been sacrificed by being torn from their homes and thrust into crowded, overcharged, and tainted lazarettes. To sum up, in countries where quarantine has been strictly enforced disease has been imported; in others where quarantine has been loosely carried out disease, though it has appeared before, has been absent for long periods; while in some countries where there was no quarantine the disease has occasionally presented itself."

But, unfortunately, the maintenance of the system extended its pernicious influence much further. It engendered in the minds of the inhabitants of those countries which maintained it a false feeling of confidence for which there was no foundation, and which led them, believing themselves sufficiently protected against the importation of disease, to neglect those measures of sanitation which alone are of any avail against the spread of infection. It is a matter of history that in those countries where quarantine has been most rigorously carried out there common-sense precautions against disease have been most disregarded and the general principles of national hygiene

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most neglected. The reasons are not far to seek. They feel they have done what is necessary to protect themselves, and cannot therefore realise the value of sanitary measures of rational sanitation which are so essential for the health of the country. Dr. Farr, in his Report on the Cholera of 1866, says: "Quarantine absorbs all the attention of the authorities and serves as an excuse for the neglect of extensive hygienic measures of water-supply and purification." Dr. Thorne Thorne, C.B., in his presidential address to the Epidemiological Society in 1887, says: "The beneficial results which have ensued in regard to the saving of life from cholera have in no small measure been due to the fortunate abandonment by this country of all endeavours to keep cholera away from her shores by a system of quarantine. I recently brought under the notice of the Epidemiological Society the attitude that we have finally adopted in this matter. It is one of distinct opposition to the entanglement of this country by means of a delusive system offered anew, under the plea that another reduction should be effected in the duration of a detention which even under its most stringent forms had been mainly characterised by ever repeated failure. The system of quarantine has again and again shown itself powerless for good, and being so its vexatious and inhuman characteristics stand out the more prominently. Above all, it has a blighting effect upon sanitary progress. So long as Governments tell their peoples that a line shall be drawn around them across which disease shall not pass, so long will those peoples be reluctant to spend their money on the promotion of true measures of prevention. The quarantining countries are essentially those which cholera invades. Taken as a group they are those where the sanitary progress is at its lowest ebb; and with the experience we have before us I would, in conclusion, ask, Is it likely that this nation will sacrifice her well-tried system of prevention for a restriction of five days' quarantine?"

4. *Sanitation and a rational system of medical inspection have proved more efficacious and less burdensome.*—The large sums expended by this country in carrying out works of sewerage and water-supply and in public health administration have not been wasted. If quarantine had succeeded in preventing the entrance of those diseases against which it was directed, its beneficial results would have stopped there; whereas the expenditure on sanitary works has not only enabled us to cope with these same diseases in a more thorough and rational way, but has been instrumental at the same time in greatly improving the general state of health of the community. The public mind has been educated to the necessity for sanitary improvement and the important part which it must play in protecting the people from the ravages of disease. All attempts to conceal or minimise outbreaks of infectious disease have been avoided, and the means adopted for coping with them are as widely made known as possible. An attempt is made, and to a great extent happily successful, to intercept by means of medical inspection at the ports all cases of imported disease. Where this attempt fails reliance is placed upon the sanitary condition of the district to which the infection may be conveyed. If the sanitary condition of such district be good, its system of drainage and sewerage satisfactory, and its water-supply pure and abundant, then experience confirms the theory that there is but little to fear from a spread of the disease, and that it may reasonably be expected to be confined within narrow limits. At the present day it is not necessary to enlarge upon the importance of measures of sanitation, this being fully realised, though still but imperfectly carried out. As far back as 1821 Dr. Hancock, in his work, "Researches into the Laws and Phenomena of Pestilence," thus alluded to the subject:—"It must surely be manifest that foreign contagion, now actually considered the substantial germ without which the most fearful combination of indigenous causes—famine, filth, misery, corrupt food, vitiated air, and sickly seasons—can never produce a pestilence, dwindles in national importance almost to a shadow on comparison. And it can scarcely be doubted that the attempt to defend ourselves by quarantine regulations while such causes existed would be like binding in chains a ferocious animal at a distance when another ten times more fierce was fondled at our doors and suffered to roam about at pleasure." The Report of the General Board of Health in 1849, quoting Russel of Aleppo, who lived there while the plague raged for three years, says: "The city of Aleppo, though in unrestricted and constant communication with Egypt and other ports of the Turkish Empire where the plague appeared annually, used to be affected on an average only once in eighteen years." The unknown influence which they called an epidemic atmosphere was also reckoned by the ancients to be an inevitable forerunner or concomitant of spreading sickness. "In their judgment half the cause, at least one blade of the destroying shears, is forged at home, and without it the other cannot do the work of fate."

Unfortunately in most countries where quarantine is practised the restrictions have been so severe that the interests of commerce have trained for their own purpose a band of mercenary officials and an elaborate system of bribery and corruption. This has been encouraged by the fact that in several cases the formality has been found utterly impossible, as for instance on the visit of a sovereign or ambassador of a foreign Power. In such instances the detention was perforce dispensed with, and the rule once broken through it is not difficult to see how in other cases the desire to avoid delay and expense led to the purchase, direct or indirect, of a like privilege, until in some countries the system was eventually practically reduced to one of blackmail. Those who paid best received the most attention, and the supposed protection by probation became an absolute fiction. In the case of one European State the system had become so oppressive and withal so corrupt that it was fitly described as "a system of tyranny, tempered by 'baksheesh.'" Dr. Brown, of the United States Army—after showing that yellow fever does not originate in the States, but is brought by vessels from foreign ports, and giving the case of Natchez, which was not visited by yellow fever before steamboats began running on the Mississippi in 1819, but after that year was attacked whenever the disease prevailed in New Orleans, and never at any other time; also that of Vidalia, where yellow fever never appeared before 1843, when steamboats first called there; and again that of Sabine and Matagorda, which had coast-wise trade, and were never attacked until the severity of the blockade at Galveston and the possession of New Orleans by the Northern forces made them convenient for blockade runners—says: "New York established a rigid quarantine in 1882, and although it has been brought every year to the port it has only twice appeared within the quarantine lines, in each being plainly traced to evasion of the quarantine law." I should here point out that this example of the effect of quarantine in arresting yellow fever is in itself no argument in favour of quarantine simply, inasmuch as the American system involves the complete disinfection of the vessel itself, a measure which is indispensable in dealing with this disease. He further states that Philadelphia was exempt for fifty years, except in 1853, when the barque *Mandarin* was improperly allowed to pass. These were simply instances, then, of the impossibility of preserving an absolutely efficient system. Dr. Choppin of Louisiana[3] says: "No conditional quarantine can ever be made effective, because of the laxity with which laws are, unfortunately, executed in this country; and, secondly, because of the cupidity of commercial interests at stake, which will always move heaven and earth to evade successfully all quarantine laws and regulations." The latter statement will apply with equal force to any other country. While it is not right to condemn a system because of the abuses which have crept in, still these have been so constantly associated with quarantine that they have with a certain amount of reason at last come to be considered as an inseparable part of it. Before the Select Committee of the House of Commons which sat in 1824 evidence was given by merchants to the effect that foul bills of health were deliberately and without any justification issued so that a market could be made in Holland while British vessels would be delayed here, the issue of such bills being arranged by the Greek merchants at such times as the state of the markets rendered it desirable in their interests to forestall British vessels. Again, for political purposes quarantine had been made use of with effective results. At one time during an insurrection in Sicily it was stated on good authority that a quarantine of eighty days was imposed upon certain vessels bringing help to the rebels, during which interval the rising was successfully dealt with.

It is evident that some reasonable system of safeguarding a country from the importation of diseases is not only desirable, but even essential to its welfare; and that, apart from its fallacies, its dangers, and actual cruelties, quarantine at the present day is impossible—i.e., that no country can submit to a system which, while affording no real protection, would by its paralysis of trade lead to poverty and

[3] Medical Times and Gazette, 1873, vol. i.

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misery, which would in turn produce conditions favourable to diseases tenfold more terrible than those it was assumed to be a protection against. The true defence against epidemics is a healthy condition of the people, fostered by all the care and attention that can be given to it by our legislators and sanitary authorities, and it is upon this that England in the main relies. The Public Health Act, in addition to ordinary sanitary powers, provides for the isolation and treatment of infectious sick and the disinfection of houses and clothing; while the Notification Act compels the fact of such disease being reported to the sanitary authority whose duty it is to put these preventive provisions in force. As the ordinary zymotic diseases—such as diphtheria, enteric, typhus, and scarlet fevers, and small-pox—are always in our midst to a greater or less extent, and as the existing powers of sanitary authorities are deemed ample to cope with them here, it is clearly logical to believe that they would be sufficient to combat any cases of the same disease brought by vessels to our shores. But this is not at present the view taken by many authorities in this country. Because such cases happen to be on board a vessel, instead of arising within our own limits, it is suggested that such ship should be submitted to a course of detention and isolation which in the case of a house has scarcely ever been thought of. The compulsory notification, removal to hospital, and subsequent disinfection are ample to ensure safety; and there is no more justification for the detention of healthy persons on board a ship on which a case of small-pox has occurred than there is for the enforced isolation of the inmates of a house in which the same disease has appeared. Yet in the one instance the question has never been discussed, at least in this country, while the other has had many strong advocates.

With reference to those diseases which do not ordinarily, or but rarely, exist in this country, more stringent measures may justifiably be employed, though these must be of such a nature as not to interfere unnecessarily with the interests of intercourse. The term "medical inspection" as employed in this country means that in each port a medical officer of health is engaged, whose duty it is to visit each ship on which any case of cholera, yellow fever, or plague is suspected to exist, the suspicion or fact to be derived from the master of the vessel (except when a surgeon is carried) or a custom-house officer. This is surely a misuse of the term. If medical inspection means anything, it implies that a medical officer visits every vessel from "foreign" ports and examines every case of sickness whatever its nature, and every person on board if the vessel has arrived from a port which is known to be infected. This is a system which, while in no way interfering with trade, affords the utmost protection which is possible or even desirable. The isolation of the sick and the disinfection of the vessel follow exactly the same lines as those employed on shore, varying only as the nature of the infection requires this or that treatment for its destruction. This is not advocating any novel experiment or the use of untried measures. During the last twenty-five years there has been ample experience of what may fairly be called the English system, and its value has been sufficiently demonstrated to justify future reliance upon it. To deal only with the last outbreak of cholera on the Continent in 1892-93, during the months of August, September, and October, 1892, while the cholera was raging in the city of Hamburg free and unrestricted intercourse was carried on between that port and this country. Although no fewer than thirty-five cases of cholera were introduced into our ports during that period (eleven of which proved fatal), in no single instance was there any spread of the disease beyond the persons arriving infected. These thirty-five cases were brought by twenty vessels, from four different ports, fourteen coming from Hamburg. All but seven of the thirty-five cases were arrested on arrival by the sanitary authorities of the nine ports at which they arrived, while in three instances only was the disease not recognised until the patients had reached their destination inland. These seven patients were isolated in hospital, and the usual precautions taken.

Realising the fact that the trade interests, nay the very existence, of the Empire would be imperilled by any return to the absolute system which has failed whenever tried, the Government will still depend for safety upon a rational system of medical inspection at the ports as the first line of defence, and upon the maintenance at an increasingly high standard of sanitation throughout the length and breadth of the land for the second line of defence in the event of the first line being broken through. At the last International Conference many of the European Powers were inclined to follow the same lines, but unhappily this has not been a lasting Convention. While I write these lines a new Conference of the European States is meeting to discuss the measures to be taken to prevent the importation of plague, and it is generally believed, and not without some solid foundation for the belief, that some of those countries which have previously agreed to abandon quarantine will, under the influence of what is little else than panic, again revert to a system which has deluded them in the past, and will doubtless again fail them in the future. England is likely to be the only country there represented which will be found willing to continue her present system without modification or alteration. It is somewhat difficult to ascertain definitely the varying views of foreign countries on the question, or to estimate fully the effect upon their action of the Dresden Convention. This Convention was signed by Great Britain, Germany, Austria-Hungary, Belgium, France, Italy, Russia, Switzerland, Luxemburg, Montenegro, and the Netherlands. Some idea of the extent to which this Convention influences these and other Powers in dealing with plague may be gathered from the following notifications made officially through their Governments. On Oct. 13th, 1896, a quarantine of ten days was imposed by Turkey on all arrivals from Bombay. On the same date the Spanish Government notified the imposition of quarantine on all vessels which had left Bombay after Sept. 18th; Calcutta was added on Oct. 27th. On Oct. 29th the quarantine board at Cairo issued an order compelling disinfection of all vessels bound from Bombay to Suakim. On Nov. 3rd twenty-one days' quarantine from the date of starting was imposed upon all vessels arriving at Bussora or other Turkish ports from Bombay. On Nov. 13th Malta (a British possession) imposed a quarantine of twenty-one days upon all vessels on which cases of plague or suspected plague had occurred, and on the 19th another order was issued requiring all vessels from Bombay to proceed to the quarantine harbour and there land all luggage, clothing, and cargo for disinfection; while on Feb. 1st a quarantine of twenty-one days, with landing and disinfection, was ordered. On Dec. 4th Cyprus imposed a quarantine of ten days at Larnaca on all arrivals from Bombay. On Jan. 5th, 1897, Natal imposed a quarantine of twelve days after disinfection on arrivals from Bombay. On Jan. 5th Constantinople notified ten days' quarantine on arrivals from Kurrachee and rigorous disinfection. On Jan. 29th the sanitary board at Tangiers decided to refuse admission to arrivals from India with foul bills of health. On Feb. 1st Gibraltar announced that vessels from India would not be allowed pratique. On the same day Lisbon notified that all vessels from India would be subjected to rigorous disinfection, and passengers and crews placed in strict quarantine. Tunis refuses communication with all vessels from India for coaling or otherwise. On Feb. 4th Holland declared ten days' quarantine on arrivals from Bombay and Kurrachee; while on the same date all arrivals from India were refused admittance into Morocco. On Feb. 8th the port of Constanza was closed by Roumania to all vessels from Indian ports. On Feb. 12th the French Government decreed that passengers arriving from infected ports could only enter at Pauillac, St. Nazaire, Havre, or Dunkerque, and that before landing they should be subjected to an observation of eight days at Pauillac and St. Nazaire, and four days at the other ports, and that all their baggage should be disinfected.[4]

The sanitary condition of our vessels must always be a most important question, though unfortunately it has not hitherto received the attention that it deserves from a public health point of view. Ships travelling to all parts of the globe are obviously exposed to the danger of infection from the diseases of any port in which they may happen to lie. Sailors when in port, as a rule, frequent the

[4] The International Conference has decided that persons arriving on board ship with plague are to be immediately landed and isolated; the rest of those on board to be subjected to a surveillance not exceeding ten days, counting from the development of the last case; passengers' personal effects, luggage generally, and goods or cargo to be disinfected; the bilge water shall be removed before the general disinfection of the ship. Suspected vessels shall be subjected to a simple medical visit, but the passengers' personal effects and those of the crew will have in every case to be disinfected. Special measures will be taken by each Government for the ships conveying emigrants or found to be in bad hygienic condition. Ships declining to undergo such measures will have to land their passengers and goods. The former as well as the latter will have to undergo the regulation measures, after which the ships may continue their voyage.—THE LANCET, March 13th, 1897, p. 763.

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lower quarters of the town, and are therefore at each port exposed to a fresh risk of infection. Thus their chance of becoming infected is greater and more varied than that of the corresponding class on shore. In the case of merchant ships the majority of seamen are during the voyage beyond the reach of medical aid, and therefore, for the sake of humanity alone, their surroundings should be made as hygienic as possible under the circumstances. The calling of the seaman would appear at the first sight to be a healthy one, as he spends a large part of his time in the open air removed from the close and confined atmosphere of towns, and undoubtedly he has many advantages; on the other hand, he suffers from frequent exposure to wet and cold, and hence is unduly subject to various forms of rheumatism. From the limited air space and the fact that, owing to the system of watches, forecastles are always occupied, and therefore never thoroughly ventilated, all forms of lung disease are exceedingly common. These causes and the violent exertions that sailors are called upon at times suddenly to undergo fully account for their high mortality and sickness-rate. In the Royal Navy the death-rate in 1892 was 5 58 per 1000, while in 1886 in the merchant navy for sailing ships the rate was 21 and for steamships 9·6. Although during the last twenty-five years great improvements have taken place and much more attention has been paid to naval hygiene, it is still a fact that so far as sanitation is concerned the sailor is a long way behind his fellow worker on land. He is entirely dependent for food on the vessel in which he lives, and provided a scale which is given him on engagement is adhered to there is no law to require that such scale should be either reasonable or sufficient. As a matter of fact the majority of diet scales in use in our merchant service are not sufficiently nutritious or varied for men doing hard work, nor, indeed, are they by any means the best that can be provided for the money that is expended upon them. Better dietaries and better cooking are urgently needed. A larger amount of cubic space than that compelled by law (viz., 72 cubic feet per head) is absolutely required, and what, perhaps, is more necessary some guarantee that such space should be properly utilised and fitted for the purpose which it is intended to serve. At the present time there is a grave anomaly with reference to this question. Before a house can be erected a plan showing the drainage and sanitary arrangements must be submitted to the sanitary authority, with whom rests the responsibility of approving or otherwise; while in the case of a vessel no such provision obtains. As a general rule in designing a vessel a certain space is set aside for the crew, and when she is completed this space is utilised in the best way possible by an artisan without reference to a sanitary authority and without any control, except that exercised by the Board of Trade under the limited (from a sanitary point of view) powers of the Merchant Shipping Act. The arrangement and fitting of crews' quarters under the supervision of a sanitary authority, advised by an expert, would be a benefit both to owners and seamen, and would be of great value in preserving the health of those on board. The constant and close supervision of vessels while lying in the port, and the prompt abatement of all nuisances and conditions likely to prove injurious to health, is essential. Milroy, in his "Quarantine as it Ought to Be," specially lays down that vessels in a filthy and unwholesome state from foul bilges or otherwise should not be allowed (sickness or no) to enter a crowded port, or to lie alongside a wharf, or to land cargo till they have been cleaned out and ventilated. A foul ship is itself more to be dreaded than anything she may have on board. The United States Government has always laid great stress upon the sanitary condition of vessels leaving foreign ports for their shores. They require a bill of health with actual information as to the health of the vessel on leaving. Rohe quotes as an illustration of the value of this system, from a report by the medical officer of the Marine Hospital at Naples, that eight vessels left that port during the year 1893 when cholera was epidemic, these vessels being under similar conditions as to water-supply and food and carrying passengers of similar class and origin. In four leaving without any sanitary conditions there were 50, 90, 84, and 230 deaths respectively. In the four leaving for the United States on which sanitary precautions were carried out no sickness occurred.

From a public health point of view it is thus clear that the sanitary condition of our mercantile marine is a matter of the utmost importance, not only to ship-owners and masters, but to every inhabitant of this country. Upon it we have to rely as a definite part of our system of defence against the importation of epidemic disease, a part which is at least as essential as medical inspection or the maintenance of the sanitary condition of our population on shore. If this be once realised it will probably lead to increased attention being paid to the health and surroundings of our seamen, which is urgently needed if Great Britain is to continue to occupy her present proud position among the great commercial countries of the world.

ILLUSTRATIVE CASES OF APHASIA.

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(Continued from p. 801.)

CASE 2. *Complete word-blindness; right-sided homonymous lateral hemianopsia; no agraphia, but inability to read own writing; optical aphasia; temporary mind blindness; the ability to spell correctly completely retained.*—The next case, which came under my notice several years ago, is an excellent example of word-blindness without agraphia and of temporary mind-blindness. It was closely observed for four years and presents many points of interest and importance. Although there was no post-mortem examination, there can, I think, be little doubt that the lesion was either a hæmorrhage or softening situated in the back part of the left hemisphere, on what I may term the peripheral side of the visual speech centre (angular gyrus), that is to say, between the half-vision centre and the angular gyrus. The fact that the power of writing and perfect ability to spell were retained seems to show conclusively that the visual speech centre itself (the angular gyrus) was not implicated and destroyed by the lesion; while the complete word-blindness and the very remarkable condition of mind-blindness (which persisted for many months) probably show that the lesion was situated above (on the higher cerebral side, so to speak) of the half-vision centre. Occlusion of the *left posterior cerebral* artery, with softening of the left half-vision centre, will produce (as in the case to which I have already referred[1]) right-sided homonymous lateral hemianopsia, but does not produce word-blindness, and it is doubtful if a purely destructive lesion in this situation will produce mind-blindness, though an irritative lesion involving the half-vision centre might perhaps do so. For the production of word-blindness the lesion must interrupt or destroy the fibres which pass from both half-vision centres to the left angular gyrus (visual speech centre), or must involve the visual speech centre itself. In the latter case—i.e., when the visual speech centre itself is destroyed—there is always, according to Déjerine, agraphia as well as word-blindness. In this case there was no agraphia; the patient could write quite well, but was unable to read a word of what she had written. In short, the case was an example of cortical or, as Déjerine terms it, pure or isolated word-blindness. The hemianopsia, which was absolute from the date of the lesion up to the time of the patient's death, was no doubt due to destruction of the optic radiations of Gratiolet in the occipital lobe. The mind-blindness was probably an irritative phenomenon, due to the irritation produced around the softening, rather than a destructive or paralytic symptom. The date at which it occurred and the complete way in which it cleared up and passed off are, I think, in favour of this view. But I admit there may well be difference of opinion on this point, for the disappearance of this symptom (mind-blindness) might, if it were a paralytic symptom due to the destruction produced by the lesion, be explained by a process of compensation being established. I am, however, disposed to favour the irritative rather than the paralytic theory, and to think that irritation passing from the back part of the left hemisphere

[1] See THE LANCET, March 20th, 1897, p. 796; and Atlas of Clinical Medicine, vol. ii., p. 40.

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along fibres passing from the visual centres[2] in both hemispheres to associated cortical centres is the more likely explanation of the mind-blindness and mental alterations which were present in this case. While this condition of mind-blindness was at its height the patient was unable to recognise her surroundings, and she could not recognise by the sense of sight her own daughter, the nurse who attended on her, &c., though she was able to recognise them by the aid of other senses—e.g., the sense of hearing. But, further, the patient did not recognise her own identity—she thought she was a boy, a servant, &c. It is interesting, therefore, to note that a state of mental derangement which to the patient's friends appeared to be a condition of insanity was the result of a purely local brain lesion—i.e., hæmorrhage or softening. Such a condition of mental derangement seems to me to favour the irritative rather than the paralytic theory. In addition to the mind-blindness a condition of optical aphasia (*l'aphasie optique*, as the French writers term it) was present. The patient could not name objects which were shown to her. Another point of interest is the fact that although the patient was completely word-blind—unable to read the simplest words or letters—her ability to spell was so perfectly preserved that the members of her family were in the habit of referring to her on any doubtful point of spelling. In the observation of future cases of word-blindness the patient's ability to spell should, I think, be carefully tested. No doubt in most persons both the auditory word-centre and the visual word-centre are brought into action in the process of spelling, though in most persons the action of the auditory speech centre is in all probability by far the more important of the two. Whether some persons are able to spell by the aid of the visual speech centre alone is one of the disputed points connected with the subject of aphasia. According to Déjerine, the action of the three great speech centres (the auditory speech centre, the visual speech centre, and the motor vocal speech centre)—he does not admit the existence of a separate and independent writing speech centre—which comprise what he terms the "zone of language" are mutually dependent; derangement of one necessarily, he thinks, entails derangement of the others. In this he is opposed to the teaching of the late Professor Charcot and his pupils. The subject is exhaustively discussed by Dr. Charles Mirallié in the important work which he has recently published.[3]

It is probable, I think, that in most persons destruction of the visual speech centre will interfere in some degree (and probably in some persons in a very marked degree) with the power of spelling correctly. If this supposition be correct, it is reasonable to conclude that in most cases of word-blindness such as this, in which the power of spelling is perfectly retained, the visual speech centre (the angular gyrus) is not the seat of the lesion. And, *vice versâ*, that in most cases of word-blindness in which the angular gyrus is destroyed (i.e., is the seat of the lesion) the power of spelling is more or less profoundly deranged. Now, if this supposition be correct, it is obvious that in cases of word-blindness the patient's ability to spell correctly or the reverse is an important clinical means of differentiating the exact seat of the lesion, whether (*a*) it involves the visual speech centre, or (*b*) the tracts proceeding to the visual speech centre from both half-vision centres. And still more, of course, in cases of word-deafness, whether the lesion involves (*a*) the auditory speech centre, or (*b*) the tracts proceeding to the auditory speech centre, since the action of the auditory speech centre is for the purpose of spelling more important than the action of the visual speech centre.

From the report of the case it will be seen that a very slight amount of paraphasia was present. This is interesting, for Déjerine states that in cases of pure word-blindness (such as this case appears to be) there is no disturbance of the motor vocal speech centre—no paraphasia. Another point which should be noted is the decided condition of incoördination which was present in the movements of the right hand. I have noted the same symptom in several other cases of word-blindness with hemianopsia in which there was no paralysis (see Case 1). The notes of the case are as follows. The patient, who up to the time of her illness was in good health, was seized four days before I saw her with severe pain in the top of the head; it lasted for about an hour. After it had passed off her relatives noticed that she was unable to express herself correctly, that she used the wrong words, &c. Next morning the patient was in a dull, apathetic condition, but she talked quite sensibly and well, making no mistakes and using the words correctly; the pupils were rather sluggish, the tongue was furred, the intestinal evacuation was very offensive, and the pulse and temperature were normal. As there seemed to be no evidence of a localised cerebral lesion, the attack was attributed to biliousness. At the time of my first examination I found the patient in bed. The temperature and pulse were normal. The tongue was slightly furred. The heart sounds were feeble, but there was no valvular disease. The liver was of normal size. The urine contained neither albumin nor sugar. The patient stated that she had no giddiness, no sickness, and no headache. There was no paralysis; the grasping power of the right hand was fully equal to that of the left. There was no disturbance of tactile sensibility. The movements of the right hand appeared to be somewhat incoördinate; the patient's daughter stated that she fumbled with her right hand and that she had difficulty in taking hold of objects (her teacup, for example) when they were placed on her right side. The mental condition was dull and apathetic, but there was no obvious derangement either of the auditory speech centre or of the motor vocal speech centre. The patient seemed to understand everything which was said to her and answered every question which I put to her quite intelligently and correctly. There was absolutely no defect in articulation, and there was, so far as I could detect, no paraphasia.[4] Her relatives stated that since the attack her memory was decidedly impaired. It will be remarked that up to this point of the examination no aphasic defect had been discovered; in fact, with the exception of some mental dulness and some incoördination in the right hand, no definite symptoms of disease, nothing indicative of the well-marked localised brain lesion which was present, had been detected. It was only when the fields of vision and the patient's power of reading were examined that the true nature of the case became apparent. The case shows the importance of examining, as a matter of routine, the fields of vision and the patient's power of reading in all cases of obscure cerebral disturbance. The pupils were equal and moderately dilated; they contracted rather sluggishly to light. The patient complained that her sight was somewhat dim. On ophthalmoscopic examination the fundi were found to be normal. On testing the fields of vision right-sided homonymous lateral hemianopsia was found to be present (see Fig. 5). On testing the patient's power of reading it was found that she was unable to read a single letter or word, but she could sign her name and write words and sentences, though somewhat imperfectly. She was, however, absolutely unable to read a single word which she had written. She also had difficulty in naming objects—for example, she could not name either a tuning-fork or a knife. At this stage of the examination she broke down and began to cry, apparently because she was distressed that she could not name the objects that were shown to her. Her daughter said that she was not naturally emotional, but that she had broken down several times in the same way during her present illness.

Subsequent progress of the case.—When I next saw the patient, a week later, the general condition was improved: the tongue was cleaner, the appetite was good, the bowels were acting regularly without medicine; the pulse was of normal frequency, and the temperature 98·6° F. There was no headache, no vomiting, and no giddiness. The patient was sleeping well. The pupils were equal and of medium size; they contracted actively to the stimulus of light, and the contraction seemed as active when the ray of light was thrown on the left (non-seeing) half as on the right (seeing) half of the retina. The right-sided homonymous lateral hemianopsia was still present. The patient could understand everything that was said to her, and answered every question which was put to her correctly and in appropriate language. Her friends said that her memory was still much impaired. She herself said that she felt "in a fog" and that "everything is a blank." She was absolutely unable to read any word, letter, or figure. She could not name a knife when it was shown to her. She could not name her own fingers when she was

[2] I do not say merely the half-vision centres in the tips of the occipital lobes, but the adjacent areas of the cortex in which the primary visual impressions received by the half-vision centres are re-represented.

[3] De l'Aphasie Sensorielle.

[4] From the subsequent reports it will be seen that a slight degree of paraphasia was occasionally present.

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asked to do so. She seemed quite unable to appreciate her surroundings. Her friends stated that she did not know them and did not appear to know where she was. She signed her name when asked to do so and also wrote the numbers 2 and 8 correctly when asked to do so, but after having written her name and the figures 2 and 8 she was unable to read them. Her friends stated that she still fumbled with her right hand (had difficulty in raising a cup to her mouth with the right hand, &c.), but there was no obvious paralysis. The grasping power of the right hand was quite as good as that of the left. There was no anæsthesia in the right hand to objective tests, but the patient evidently felt that it was different in some way or other from the left. During my visit she frequently looked at the right hand, turned it about, and asked me more than once if I did not see a difference in it. Her friends stated that she would persist in saying that it was different from the left, that she was not sure that it was her own hand, that she thought it did not belong to her, &c. At this visit the patient was a little emotional both at the beginning and end of the examination, but she did not break down in the way she did at my first visit.

Condition two months after the onset of the attack. — During the last month the patient's condition had varied considerably from day to day. At times she had been very much depressed, at others bright and lively. Her appetite and general health had been good. As a rule she had slept well, but some nights she had been restless, others she had cried a good deal and been very much depressed. She was still quite unable to read. She was greatly distressed at this, and her friends said that her one desire was that she might regain the power of reading. She had been more intelligent and more sensible, but the mind-blindness still continued. She did not realise that she was in her own room or in her own house; she did not recognise her daughter who had for years been her constant companion, and who had nursed her during the whole illness. She thought the nurse was a boy; she thought she herself was a boy, a servant, &c. On one occasion she got up in the middle of the night, went out of her bedroom and wandered about the passage. When she was taken back to her bedroom (through another door) she thought she had been on a journey; she said she had gone away in the night and had come back in a boat. On another occasion, after a bad night, she said that she had been travelling—that she had been to India, to France, &c. She thought the nurse was a boy; said he was "an active little chap." On another occasion she thought her medical attendant was a visitor; she said: "He is a very big boy." After the practitioner left she was sorry and was afraid she had been rude to him. She still continued to think that her right hand did not belong to her. One morning she stated that she had lost two fingers, meaning her rings; she had placed them on her right instead of her left hand. When the rings were put on the left hand and she was asked if it was all right she said: "It is very much better now."

Three months after the onset it was noted that she had been decidedly better for the past week; she recognised her surroundings (home, &c.) for the first time a week previously. She was much more sensible and began to take interest in household affairs. She was much less emotional. She still made mistakes in naming people, but was now conscious that she made these mistakes. She told me so and said it annoyed her. On one occasion the patient told me that she failed to recognise her daughter, who had nursed her all through her illness, when she came into the room, but that she knew her by her voice immediately she began to speak; said that until she heard her voice she did not think she was one of her children. The acuity of vision after correction with suitable glasses was $\frac{20}{20}$. The hemianopsia still continued (see Fig. 5). It was absolute both for light, form, and colours; and I may take this opportunity of saying that it persisted without change until the patient's death. The word-blindness was still complete. She was unable to read a single word. The only letters of the alphabet which she recognised at this visit were "o" and "a." She said: "I see them" (the letters) "but do not seem to know what they are." She recognised pictures quite well, but could not tell the time on my watch. She said the word "of" was "ox"; read the numbers 102 and 60 correctly; said 420 was "420"; read "Edinburgh" as "400"; and could not read the word "powder," but said the individual letters were "g, c, m, n." She wrote her own name and the number 102 correctly when asked to do so. She could not name a knife when it was shown to her. When asked, "Is it a pen?" she replied "No." "Is it a knife?" "No." "Is it a button-hook?" "No" (with emphasis). "Is it a knife?" "Yes." Her condition became at this time

FIG. 5.

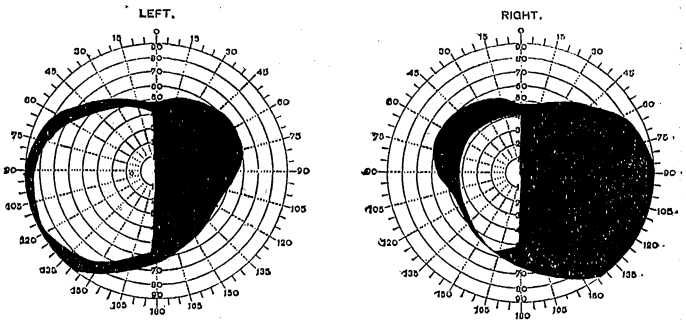


Chart of the fields of vision in this case (word-blindness and hemianopsia) taken three months after the onset of the attack.

distinctly better. She read the figures 8, 10, 50, and 54 correctly; said 102 (which she read correctly at the last visit) was "one hundred and—well, I cannot read the last." She read the words "cat" and "dog" correctly.

Four months after the onset of the attack she wrote me a letter. After writing the letter she was unable to read a word of it. Practically the only mistakes were in punctuation.

Condition a year after the attack.—The patient was at this time looking much brighter. Her friends said that she was quite clear mentally. Her daughter said that she had written several letters; they were well written, well expressed, and correct in every way, but she could not read them after she had written them. Her power of reading was, however, improving. She read the words "Her saints and kings" correctly, and named the letters in these words correctly; named all the letters in "royal" and "Edinburgh" correctly, with the exception of l and h; said l was n, but when told that she had made a mistake corrected herself. Read the number 1886 correctly. For some months after the last note the patient was in a very apathetic condition, apparently the result of an attack of influenza; on recovering from the influenza she was very much depressed, weak, and tottery; would sit for hours together with her head bent forward without speaking. Her medical attendant thought that she was going into deep dementia. The urine now contained a small quantity of pus, but was otherwise normal.

Condition eighteen months after the onset of the attack.—She was now looking very well and bright and for some time past had had no noise in the head; for some time previously she had complained much of this symptom. The urine still contained a small quantity of pus. She admitted that she felt better than she had done since her illness commenced. She answered questions sharply and brightly. Her memory was, however, still very defective for certain things; for example, she could not tell me what she had had for luncheon, or where she had been for a walk in the morning. The day before my visit, when asked what o'clock it was, she read the time on the clock without hesitation, and quite correctly. She had never been able to do so before since the onset of the attack.

Condition two years after the onset of the attack.—She remained very well all the summer. A fortnight ago she was suddenly seized, when out walking, with sickness; had to be carried home; vomited several times during the night and became very depressed, complaining bitterly of the "noise in the head," and saying more than once that there must be something in the room or house causing the noise.

Condition two and a half years after the onset of the attack.—After the last note the patient remained for several weeks in a dull, lethargic condition. She then gradually improved and for the past three months has been extremely

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well, better in every respect (except reading) than since her illness commenced. She knitted and worked incessantly, but did not make any attempt to read or write. Her idea of locality seemed particularly good. Her reading power remained much *in statu quo*. On examination she was able to spell out some words, but failed to recognise some of the letters. When a word, however long, was spelt out to her, she at once knew what it was. I remarked to her daughters that her spelling seemed very good, and they immediately said that it was quite unaffected and that they were in the habit of referring to her (as they had been in the habit of doing before she was taken ill) on any doubtful point of spelling. She used to be an excellent speller and still retained her spelling power perfectly, though quite unable to read. When I tested her to-day she failed to read "a" and "not." She said that she thought she could read, but she was lazy and did not care to do so. Her eyesight was very good and her inability to recognise letters and words was not due to defective eyesight. There was no change in other respects.

Condition three years after the onset of the attack.—The patient was well all the previous summer, but became duller mentally when the short evenings and cold weather set in. She looked much the same and had not written any letters or attempted to read since the last note.

The patient died four years after the onset of the attack from acute congestion of the lungs and heart failure. There had been no material change in her condition since the last note.

Corrigenda.—Case 1, description of Fig. 1: Instead of "right-sided bilateral temporal hemianopsia," read "right-sided lateral homonymous hemianopsia."—Page 801, left-hand column, thirty-second line from the top, instead of "'pure" agraphia, read "true" agraphia.

Edinburgh.

AN UNDESCRIBED SYMPTOM IN PERITONITIS.

BY WILLIAM HENRY BATTLE, F.R.C.S. ENG.,
ASSISTANT SURGEON TO ST. THOMAS'S HOSPITAL AND TO THE ROYAL FREE HOSPITAL, ETC.

So far as I know, the symptom to which I wish to call the attention of the profession has not been described in cases of peritonitis, and must accordingly be a very rare one. There is also a probability that this symptom appears in a late stage of the disease, and indicates a very intense inflammation of the peritoneum.

On the morning of Jan. 19th, 1897, I was requested to see a patient under the care of Dr. Seward in the Colney Hatch Asylum who had developed serious abdominal symptoms. The patient was a man, aged forty-seven years, who had been an inmate of the asylum for three and a half years, suffering from chronic melancholia with a previous history of alcoholic excess. He had had good bodily health until three months before the date on which I saw him; he had then suffered from an attack of hæmatemesis of short duration, the cause of which could not be discovered. He had resumed out-door work and appeared to have been in good health until Jan. 12th, when he had another short attack of hæmatemesis. Three days after this he vomited several times and complained of abdominal pain and constipation; his temperature was 101·6° F., and this was the highest registered during his illness. Vomiting continued at intervals, but no further blood was present in the vomit; the constipation was unrelieved by enemata, the abdomen became distended, and the pain increased. During the night of the 18th the symptoms had become much worse, the vomiting had become much more frequent, and the distension and tenderness had much increased. After the despatch of the message to me a condition of collapse set in, and on my arrival the patient was in a very low state not admitting of operative interference. His condition was as follows: He was lying on his back with his limbs flexed and his head bent forward; he had a sallow, smooth, expressionless face, the eyes and mouth being unduly opened as from muscular weakness; but he was able to understand and answer questions. He was unable to protrude his tongue, which was very dry, beyond the teeth. His extremities were bluish and cold; respiration was rapid and almost entirely thoracic; the pulse was quick, weak, and very compressible. There was frequent vomiting, which was not feculent, but no passage of fæces or flatus per anum. There was considerable distension of the abdomen, a general tympanitic note on percussion, with much tenderness all over it, but no complaint of pain. This tenderness was most marked in the lower epigastric region, so much so that it caused particular attention to be drawn to the part. It was then found that in both groins, extending outwards to the superior iliac spines, was a symmetrical puffy œdema of the sub-cutaneous tissue; that the œdema was limited as regards its downward extension into the thighs by the deep layer of the superficial fascia, the attachment of which was clearly outlined, and that it passed backwards to a slight extent into the flanks. The skin was somewhat flushed in the groins, and wherever the œdematous condition passed there was excessive tenderness; the scrotum was œdematous and very tender; there was no œdema of the legs. For the last two days he had had retention of urine which was relieved by catheter; but the urine was normal and the instrument had passed easily. The condition of the patient was becoming rapidly worse, and although it was highly probable that operative treatment was required to relieve his symptoms it was evident that nothing could be done to prevent a fatal termination which was only a question of a few hours. I expressed an opinion that although the symptoms, without the œdema of the groins, indicated peritonitis, the presence of the œdema made it certain that such an inflammation was there, whatever might have been the primary disease. At the post-mortem examination made by Dr. Bryan, to whom I am indebted for the following account, the diagnosis of acute peritonitis was fully confirmed.

Necropsy.—The post-mortem examination was made seventeen hours after death. The body was found to be well nourished. With regard to the head the calvaria was normal and the dura mater was normal; the pia mater was much thickened and stripped easily; the brain substance was somewhat soft, otherwise normal. The vessels at the base were healthy. There was slight hypostatic congestion of the lungs, otherwise they were normal. The heart was healthy; there was slight atheroma of the aorta. As to the abdomen there was an unusual amount of fat, the great omentum being very fatty and the sub-peritoneal fat generally was in great excess. The large intestine from the anus to the cæcum was much distended; there was a hard mass of fæces of the size of a small orange in the cæcum just at the valve, otherwise the large intestine was empty. The appendix was normal. The small intestines were normal throughout except where a small coil dipping down into the pelvic cavity was affected by the peritonitis described below. The mucous membrane of both the large and small intestines was healthy. There was a local acute peritonitis limited above by the cæcum and the lower part of the sigmoid flexure, affecting the whole of the pelvic cavity. There were recent adhesions between the rectum and bladder and much recent lymph in the neighbourhood of the cæcum. There was much œdema of the sub-peritoneal tissue, which extended along the inguinal canals on both sides into the scrotum. No cause for the peritonitis could be discovered after a very thorough search, which included an examination of the bones of the pelvis. The liver and stomach were healthy, as were all the other abdominal organs with the exception of the right kidney, which was somewhat pale and which had an appearance of some former inflammatory affection.

Remarks.—The post-mortem examination confirmed the opinion which had been given as to the causation of the unusual condition present during life and also demonstrated the correctness of the explanation which had been offered. Some ten years ago I was called upon to perform an operation about midnight for a patient suffering from acute abdominal symptoms which had commenced when he was straining at stool at six o'clock on the same morning. His condition was very bad and it was impossible to find out what had been the state of his urinary functions before the sudden attack of pain at the time mentioned, but he had been to his work on the previous day and was not known to have been ill. When the abdomen was opened in the middle line the sub-peritoneal tissue contained such an excessive amount of fluid that the possibility of a pathological extra-peritoneal rupture of the bladder suggested itself as the most likely cause for the presence of such an amount in that situation. A sponge saturated with this fluid

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was pronounced by those present to have a distinctly urinous odour. I myself was unable to express any opinion as a nasal catarrh had taken away my sense of smell. Accordingly the peritoneal cavity was not opened, but a puncture was made in the perinæum and a large catheter passed into the bladder to provide for drainage. The man lived but a few hours afterwards. At the post-mortem examination very acute purulent peritonitis, due to the giving way of a typhoid ulcer, was disclosed. It was not, therefore, a great stretch of the imagination to picture a similar inflammatory exudation as present in this patient, with an escape of some of the fluid along the inguinal canals into the groins, and to a less extent into the scrotum. The comparatively small amount of exudation into the scrotal tissues is probably accounted for by two circumstances—(1) the dorsal decubitus of the patient, and (2) the irritating effect of the fluid on the muscular tissue of the scrotum, which was wrinkled as from muscular action of the dartos, and formed a great contrast to the smoothly distended scrotum of the dropsical patient, or that of the sufferer from urinary extravasation. I have mentioned that the œdematous area was excessively tender, to touch it even lightly made the patient start far more than pressure over the abdomen above the level of the extravasation. It resembled in this respect the tenderness near the extreme edge of the advancing area in spreading gangrene.

It hardly appears necessary to point out the difference there is between this form of œdema and that due to cellulitis of the scrotum and groins having its origin in some external breach of surface; the limitation of the exudation by the deep layer of the superficial fascia will clearly differentiate the two, as it also excludes any form of dropsy. Its resemblance to extravasation of urine is much more near, but it does not pass into the perineum, and the scrotum in extravasation of urine, where the fluid is at first of a less irritating character, is very much more distended in proportion to the extent of groin extravasation; the penis is also much enlarged, and there is usually a well-marked history of stricture of the urethra, with proof of its presence, whilst there are no symptoms pointing to peritoneal inflammation. If the urethra had given way in front of or under the scrotum the swelling of the penis and scrotum would be in excess of the other portion of the swelling and the stricture signs would be evident, &c. It is very possible that this condition, although noted, has been ascribed to an exudation through the abdominal wall in consequence of the inflammation of the muscular tissue over a centre of inflammation within the abdomen. It is not unlikely that much of the œdema in cases of localised inflammation about the cæcum has followed the sub-peritoneal tissue in part, and that in an œdematous condition of the subcutaneous tissue of the groin the fluid, anticipating the closer approach to the surface of an inflammatory exudation, has really gravitated to that position after its escape from the inguinal canal in consequence of the position of the patient. To say that such a condition as that described does not occur because some observer of known skill has not noted it, recalls an observation to my mind which was made by the President of the Clinical Society at a recent meeting; this was to the effect that we could not say that a particular symptom was or was not present in any case, although we might think so, if we had not looked for it. I cannot say that this symptom was not present in the patient to whom I have alluded above, in whom the exudation of fluid into the sub-peritoneal tissue was so excessive, because my attention had not been drawn to the possibility of its occurrence and I did not look for it—indeed, the exudation of such an amount of fluid was a surprise to me, but I was informed that a similar exudation of fluid was not uncommonly found in the post-mortem room. If this is the experience of many pathologists, then it is exceedingly probable that the condition to which I have drawn attention is not so uncommon as would at first sight appear to be the case. We have not sufficient data to enable us to form an opinion as to the exact value of this sign, but it is not unlikely that it is one which indicates a more than usually bad prognosis.

Mansfield-street, W.

WILTSHIRE COUNTY COUNCIL.—The agricultural committee of the Wiltshire County Council have recommended the appointment of Mr. I. M. H. Munro, D.Sc., F.C.S., F.C.I., as district agricultural analyst for the administrative county of Wiltshire.

MEDIASTINAL SURGERY.

By H. MILTON, M.R.C.S. ENG.,
PRINCIPAL MEDICAL OFFICER, KASR EL AINI HOSPITAL, CAIRO.

THE abdominal and cerebro-spinal cavities and the organs they contain have been freely explored by the surgeon since he has adopted cleanliness with the most brilliant results. The thoracic cavity and its contents, although frequently the seat of surgical interference, have not received the same attention, and no definite lines of technique have so far been laid down. This is partly due to the fact that the thoracic walls present more mechanical difficulties to the surgeon than the abdominal, and partly to the dread with which interference with most of the thoracic organs still inspires him. Having lately met with a series of cases of intra-thoracic disease in which there arose an urgent demand for surgical interference I determined to try to ascertain whether the general cavity of the thorax must of necessity remain a *terra incognita* to the operating surgeon. Considering the subject in the post-mortem room, the advantages of the median incision—a prolongation, in fact, of the usual abdominal exploratory incision—could not but strike one. So easy is this incision of execution and so considerable is the power of exploration thereby obtained that one is almost induced to hope that future experience may justify the application to it of the term "normal thoracic incision." As a commencement of my experiments I opened some ten thoracic cavities of subjects dead from various diseases, employing, with slight variations, the following method:—1. A long skin incision from the thyroid cartilage to the ensiform cartilage. 2. Exposure by rapid dissection of the trachea down to the notch of the sternum and of the same bone in all its extent. 3. The separation of the fascia from the notch of the sternum as far outwards as the tendon of the sterno-mastoid on either side, keeping the point of the knife absolutely on the periosteum of the sternum so as to avoid injury to veins, &c. 4. The separation with the finger tip of the posterior surface of the sternum, just below the notch, from the tissues lying beneath it, these latter being displaced backwards. They consist principally of the innominate vein and artery, the trachea, and many nerve branches and plexuses. 5. An incision with the saw along the middle line of the sternum from notch to ensiform cartilage, not implicating the latter and not quite cutting through the whole thickness of the bone. It is to be noted here that the thickest and hardest portion of the bone is at its upper end. This must be thoroughly divided, the vein and other underlying structures being protected by a finger inserted behind the sternum. 6. The complete separation of the two halves of the sternum I have carried out in two ways. In some cases I have commenced at the sternal notch, in others just above the ensiform cartilage. The second method has the advantage that the first part of the separation, which has to be done with but a very obscured view of the deeper tissues, takes place at a situation where the mediastinum is wide. There is less danger consequently of wounding the pleura, and by inclining the incision to the left this danger is still more averted. In the operation on the living subject I followed this method, but still I cannot say that I found in my preliminary operations on the cadaver any great superiority of the one over the other method. Whichever method is followed great care is necessary in separating the two halves of the sternum to avoid injury of the deeper tissues. In beginning from the lower end of the sternum the ensiform cartilage must be separated first from the sternum. This in young subjects can be done with the knife; in older subjects I have used scissors or bone nippers. Strong, broad-hooked retractors are now inserted into the halves of the sternum along the line of incision and moderately firm traction outwards and slightly upwards applied to them. The ensiform cartilage is now thoroughly separated from the sternum. There is but very little possibility of opening the peritoneal cavity in doing this, and even should it occur it is of no importance. With a retractor the tissues lying under the line of separation of the ensiform cartilage and the sternum are now displaced backwards, great care being taken to work quite close up to the posterior surface of this bone. Either with knife or scissors the saw-cut is carried right through the bone, extending upwards to the limit of separation of the deep

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tissues. Firm retraction is made on either side and a further extent of tissues displaced backwards from the sternum, and the incisions through this latter completed to the same extent. This process is continued with due care until the whole bone is divided. In working from above the process is simple, but perhaps more risky. After thoroughly displacing backwards the deep tissues from behind the sternal notch the upper portion of the bone is completely sawn through so far as the action of the saw can be thoroughly guarded by the finger. The incision along the middle line of the sternum is then completed in the same cautious way as a trephine is usually applied to the cranial bones. A blunt chisel is inserted along this incision, and partly by the twisting of this and partly by the action of the retractors the two halves of the sternum are forced apart, any necessary assistance being given by careful incisions with the knife. This method I have not carried out on the living, but I believe it to be practicable. 7. Exposure of the mediastina. Firm traction on both halves of the sternum is now sufficient to separate them to the extent of one centimetre, enough to expose any tissues resisting separation to a greater extent. In the cadaver the principal resistance is caused by the ligamentous tissue at the back of the sternal notch. These fibres lie immediately above the innominate vein, but may easily be separated from it and be carefully divided. Another point of resistance is usually at the lower end of the sternum. This may be safely divided, and it will then be found that after dividing any other resisting fibres the two halves of the sternum may be separated to the extent of from five to six centimetres and the anterior mediastinum be thoroughly explored. Crossing the top of this space are seen the innominate vessels, behind them the trachea. The latter can be explored by the finger down to its bifurcation, and can be seen to the same extent if the vessels are thoroughly retracted. Below the vessels are seen the two pleuræ and the pericardium. The latter is a firm structure, and not likely to be injured during the exposure of the mediastinum; the former are very delicate in texture, but may with care be left uninjured. In only one of my experiments was the pleura opened, and that was due to carelessness in an emphysematous subject. Once the anterior mediastinum is exposed the exploration of the median and posterior mediastina is a simple matter, and is effected by separation with the fingers of the pericardium from the right pleura. The closure of the mediastinum after exploration is simplicity itself. Six strong silver wires passed first through the skin, then through holes bored at equal distances in both halves of the sternum, and then through the skin again, were sufficient to firmly re-unite the sternum, and in the living subject could be easily removed after cure. A gauze plug situated above the sternal notch and another, if necessary, at the lower end of the sternum would supply sufficient drainage, and a skin suture would complete the closure of the wound.

The results of my experiments on the cadaver sufficed to show the possibility of opening the mediastina through a median incision without injury to any vital structure. I have to thank Dr. Ruffer, the director of the Pathological Department of the Cairo Medical School, for much kindness and assistance. It was now necessary to ascertain what difficulties were to be met with in operating on the living subject. The important questions to be decided were what effect would the opening of the mediastina have on the respiration and circulation; and, further, would the necessary dissection be attended by any considerable or uncontrollable hæmorrhage. The division of the sternum could not fail to seriously affect, if not to arrest, costal respiratory action, but it was to be anticipated that the diaphragmatic action would continue and would suffice. It was, moreover, possible that atmospheric pressure acting on the outside of the pleura might detach it still further from the bony framework of the chest. Precautions were taken, however, to meet these complications should they arise, an apparatus for artificial respiration being prepared with an indiarubber covered glass tube to fit lightly into the trachea. Any considerable ill effect on the circulation from opening of the mediastinum was not anticipated, and the result of experiments justified this assumption. The animal chosen was a goat, as being the largest easily obtainable, and the operation was performed in the Physiological Laboratory of the Cairo School of Medicine. (I wish here to express my gratitude to Dr. Wilson, the Professor of Physiology, for great assistance and many useful suggestions.) The animal was chloroformed completely and the thorax shaved. The division of the sternum was a matter of some difficulty, as I did not know its exact shape or relative anatomy. It proved to be very narrow, much more solid than the human sternum, and curved at an acute angle. Moreover, after it had been cut through it became evident that in the goat there is practically no mediastinum, so that the incision in the sternum produced almost of necessity wounds of both pleuræ. An immediate collapse of both lungs was the result. Tracheotomy was performed at once, the glass tube inserted in the trachea and artificial respiration carried out with the bellows. During this process the heart's action became irregular and rapid, but directly respiration was re-established the circulation became normal and remained so during the whole operation. The artificial respiration rapidly produced apnœa, and all respiratory action on the part of the animal ceased, to recommence, however, whenever the artificial respiration stopped. The various mediastina could now be thoroughly explored, and it was found that the loss of blood both during the division of the sternum and the separation of the pleuræ was immaterial. The heart could be thoroughly explored—the pericardial sac was not opened—and it proved very refractory to any manipulation. A firm grasp on it produced only a temporary irregularity in its action, and immediately on release it resumed its usual rhythm. The condition of the animal remaining very good, I proceeded to close the wound. The pleuræ were closed as far as possible with a continuous silk suture, the sternum re-united with wire sutures, the skin with a continuous silk suture, a gauze plug was placed above the sternal notch, the tube was removed from the trachea as soon as normal respiration had established itself, and a tight dressing was applied round the animal's neck and chest. Half an hour later the goat was walking about the room; it ate and drank, and voided fæces and urine. A short time afterwards it was killed in order to avoid needless suffering.

Having convinced myself that the opening of the mediastina did not of necessity inflict such injury as to entail the death of the individual, I determined to attempt similar operative interference for the relief of human suffering. I have had lately under my care three cases in which the question of surgical interference arose. In the first two the conditions were so entirely against a successful issue that I decided not to make any attempt. The first was a case of mediastinal tumour pressing on the innominate vein, producing œdema of the face, neck, and arm, and on the trachea producing gradually increasing dyspnœa. On first seeing the patient it was evident that no hope was left of curative treatment, as there was certainly deposit in the liver and probably in the lungs, and the mediastinal tumour was probably glandular in nature and of secondary malignant growth. I could do nothing but await symptoms of urgent dyspnœa and attempt to relieve these by tracheotomy and the insertion of a long tube. The symptoms eventually arose; tracheotomy was attempted, and the patient died on the table. The second patient is still alive, and it was with a view to operative interference in his case that I first commenced my experiments. He was admitted to the hospital suffering from urgent dyspnœa of some days' standing, his condition being such that tracheotomy was performed at once by my Egyptian assistant, who was of opinion that the case was one of syphilitic laryngitis. Finding that tracheotomy gave no relief he sent for me. I could find no sign of any mediastinal tumour or other cause of pressure on the trachea, but the obstruction being evidently some distance below the tracheotomy wound I passed a six-inch flexible tracheotomy tube down the trachea, and passed an evident obstruction with immediate relief to the breathing. Careful examination a few days subsequently afforded no definite signs whatever as to the cause of the obstruction. In about fifteen days, however, infiltration began to appear above the sternal notch, and to-day, some two months from the date of tracheotomy, the whole base of the neck is one infiltrated sarcomatous mass. I may say that, in spite of an absence of any syphilitic history, iodide and mercury were thoroughly tried. In the earlier days after tracheotomy the case seemed eminently fitted for mediastinal exploration, but the appearance of infiltration at once set aside all possibility thereof.

My third case was a more favourable one, and after much consideration I operated on the patient on Jan. 25th, 1897, and to-day (Feb. 6th) he may be considered as practically cured. He was an Egyptian fellah aged about twenty-five years. No family history was obtainable. He had suffered for some months (according to his account) from pain and swelling in the sternal region, with increasing incapacity for

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work, and some cardiac palpitation, with pain and oppression in the epigastric region and shortness of breath on exertion. Examination disclosed a very prominent sternal region, the skin over it being infiltrated and tender to pressure. The sternum was the seat of a tumour which occupied nearly its whole length and which extended on either side into the rib area. The tumour was hard in the greater part of its area, softer and tender at others. On percussion the whole tumour area was dull and measured some twenty centimetres in length by seven in breadth. The tumour was elevated about three centimetres above the normal level of the sternum. The heart dulness could not be separated laterally from that of the sternum, but the apex beat was displaced outwards rather more than two and a half centimetres. The heart sounds were normal. The chest expanded well and the breath sounds were normal, except that behind the first part of the sternum the tracheal respiration was harsher than usual. There were no other signs of pressure on the trachea and no signs of pressure on the veins. There was no enlargement of the cervical glands; all the organs of the body were healthy. The pulse was 82 and the temperature was normal in the morning and 37·3° C. at night. Tuberculous caries and necrosis of the sternum being a common disease in Egypt, there being no signs of any sarcomatous growth, and syphilis being absent, a diagnosis was made of infiltrating tuberculosis of the cancellous tissue of the sternum and possibly of the mediastinal glands. The patient being incapacitated from gaining his living and his general condition being good, it was decided to attempt his relief by operation. He was chloroformed and an incision made from the cricoid cartilage to the ensiform cartilage, the skin being reflected on either side and the trachea and sternum exposed. The sternum was soft and friable all over, and larded, as it were, at various points with cheesy, tuberculous deposits. I have on several occasions seen a similar condition in the tibiæ of tuberculous children; the whole bone is greatly thickened and at the same time porous, and presents at various points deposits the size of a bean of tuberculous, caseating débris. The condition exactly resembles that often found in strumous glands. The sternum was next carefully divided from the ensiform cartilage and was found to be very porous and greatly thickened. This was really the most difficult part of the operation. It would have been easier to have split the ensiform cartilage, but I wished to spare as far as possible the insertion of the diaphragm. The mediastinal tissue underlying the end of the sternum was then depressed and the sternum split with saw and chisel, working little by little until the bone was divided in its whole length. It was found thickened to the extent of three centimetres in some parts and studded with caseous deposits. In dividing the sternum it was often necessary to remove large portions of infiltrated bone with the gouge. On carefully examining the two halves of the bone they were found to be so infiltrated with tubercle that the whole sternum had to be removed bit by bit with the exception of the upper portion—a centimetre and a half in length—which was simply divided. This division was necessary in order to remove two enlarged caseous glands situated behind it in the mediastinum. After the division of the sternum and separation of its two halves this removal was effected with the greatest ease, the glands peeling as readily off the innominate vein as they would have done off, say, the internal jugular vein. During the whole operation there was remarkably little hæmorrhage; half-a-dozen arteries were seized with pressure forceps and a few oozing points were touched with the cautery. At no moment was the heart's action troubled. The costal respiration ceased on the division of the sternum, but the abdominal respiration was maintained with complete regularity. The wound left by the operation was very large—larger, of course, than it need have been in most mediastinal incisions, in that nearly the whole of the sternum had been removed on account of tuberculous deposit. The sides of the cavity were formed by the ends of the costal cartilages and the tissues in between them, at the lower end of the wound was the ensiform cartilage, at the upper end the trachea (exposed in case tracheotomy became suddenly necessary) and the innominate vessels crossing it. The floor of the cavity was formed by the mediastinal tissue, on either side were the pleuræ and on the left side the pericardium. The pleuræ were not adherent to the lungs or the pericardium to the heart, the movements of all three organs being perfectly free. Although aseptic precautions had been taken, I did not dare, considering the tuberculous condition of the bone, and in spite of the total absence of pus, to attempt complete closure of the wound. I considered it safer to plug with sterile dermatol gauze, which remained unchanged for forty-eight hours. During the whole of this time the patient's condition was most excellent: he had but little shock, his temperature never exceeded 37·1° C., his respirations were from 24 to 26 and entirely abdominal, his pulse was from 80 to 90, and he slept without morphia. On the second day after operation chloroform was again administered and the plug removed. It was found that the ribs had come together to a very considerable extent, so that the pericardium and pleuræ, though still visible, were but little uncovered. The wound was quite clean, and it was decided to close it. A thin strip of gauze was laid along the bottom of the wound to serve as a drain, and the soft tissues were closely united from one end of the wound to the other with a continuous wire suture, a small opening being left for the gauze to protrude above the sternal notch and at the lower end of the wound. Two days later the temperature rose to 39 4° C., and the respirations to 36, and there was a slight attempt at coughing. This constituted the only real difficulty in the whole progress of the case. The endeavour to cough was very distressing to the patient, and was practically unavailing. The feeble movements necessary for respiration had been carried on without difficulty, but the violent expulsive action of coughing could not be carried out with a divided sternum. A purgative was given, and the dressing changed. On removing the gauze plug a slight retention of secretion, sero-purulent in nature, was discovered. The escape of this secretion was followed by a fall of temperature to normal, and a cessation of the desire to cough. Three days later there was a rise in temperature to 39·1°C.; a purgation was followed by immediate cessation of these symptoms. To-day the wound is completely dry, the gauze has been removed, and the patient is entirely convalescent. I shall keep him in bed, however, for another thirty days at least, in order to allow of thorough consolidation. His costal respiration is gradually re-establishing itself, but has not yet returned to the normal. I have to thank Dr. Sandwith, who saw all three cases with me, and who was present at the second operation, for much assistance and advice.

The practicability of mediastinal exploration has been, I think, established by the above case; experience only can show whether the risk thereby entailed is greater than the profit obtainable. In Cairo we have unfortunately but little literature available, and I cannot be sure whether a similar operation has ever been performed. Péan has, I know, removed a portion of the sternum to get at a mediastinal growth, operating in a diving-bell within which a pressure of two atmospheres was maintained. This information I owe to an assistant at the operation, and I believe that a description is to be found amongst Péan's Cliniques. The operation presented great difficulties and the patient, I believe, died on the second day. It is evident that in an operation on the mediastinum there must always be a danger of wounding the pleura; but such a wound, followed as it naturally would be by a collapse of the lung, need not of necessity entail a serious accident. Tuffier and Hallion have shown[1] that the dog's pleura can be freely opened without ill effect, and I have myself opened the pleural cavity with impunity on several occasions when operating on liver abscess or tumour. Should any difficulty be anticipated, it is a simple matter to carry out artificial respiration with the bellows through a tracheotomy tube. In my experiments I have found that for this a Trendelenburg's cannula is by no means necessary. A bent glass tube covered at its lower end with an indiarubber tube of a smaller diameter and projecting half an inch beyond the glass is quite as effectual and much simpler. Tubes of various diameters should be at hand, and the one inserted which just plugs the trachea. This is quite sufficient to prevent any escape of air at the slight pressure necessary for respiration. If it be established that median thoracic incision is a fairly safe procedure, I have no doubt that it will constitute the most generally useful route to the thoracic organs. And if once a safe route is established a great field for surgical interference lies open. That the lungs are amenable to surgical interference has been frequently proved, and many surgical procedures, from the removal of a foreign body from a bronchus to the extirpation

[1] Semaine Médicale, 1896, p. 480 et 503.

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of the whole lung, may some time or other be classed amongst established operations. Heart surgery is still quite in its infancy, but it requires no great stretch of fancy to imagine the possibility of plastic operations in some, at all events, of its valvular lesions. That the heart is tolerant of wounds and injuries has been proved over and over again, and I see no reason why it should not be equally tolerant of a deftly guided scalpel. Surgery of the large thoracic vessels is by no means modern, and an improved technique should render interference with them much easier and much surer. Not only will the anterior mediastinum with its not uncommon growths, innocent and malignant, lie open to us, but also the median and the posterior, and operations on the œsophagus, the thoracic duct, and the great nerve trunks of the pneumogastric and sympathetic may come within our range. Briefly stated, should median thoracic section establish itself as a safe operation the last great cavity of the body and its contents lie open to the surgeon's hand and knife.

Cairo.

REMARKS SUGGESTED BY DR. CLIFFORD ALLBUTT'S PAPER UPON ALBUMINURIA IN PREGNANCY.

BY LOVELL DRAGE, M.A., M.D. OXON.

To a working obstetrician like myself great pleasure was given by a perusal of this paper,[1] so full of thought and interest. In a paper upon Puerperal Fevers published in THE LANCET on Feb. 24th and March 3rd, 1894, the following sentence will be found: "The characteristically original and able work of the late Dr. L. G. Wooldridge is suggestive of the idea that the full elucidation of this subject will be derived from chemical investigations, and especially those in connexion with the various conditions of the blood." When I was writing these words I had not the knowledge of such work as I now have, but it was a matter of certainty in my mind that in the case of the puerperal fevers there was a great deal more to be taken into consideration than the simple dictum that puerperal fevers were the result of dirt and nothing else. This dictum, supported as it has been in public by gentlemen in the same position as its author with a view of promoting certain legislation, is one strenuously to be combated, and it was my endeavour in the paper which I wrote in 1893 and published in 1894 in THE LANCET to prove that there were conditions connected with the mother to be taken into account in considering the causation of all puerperal fevers. At that time I was very much taken up with the consideration of the causation of puerperal thromboses. Since then a large experience of such cases and a large experience of women who were likely to suffer from eclampsia have led me to think more and more in the same direction as that in which Dr. Allbutt points, though without the same exact knowledge of the chemistry involved.

What is the basis upon which my thoughts rest? To take the subject of Dr. Allbutt's paper first, and a case which recently gave me grave anxiety before delivery. The history of the patient: Five deliveries, one child stillborn; a great many miscarriages; puerperal sepsis twice, once leading on to parametric abscess; at the last delivery eclampsia. The patient was about thirty-five years of age, and at my first examination there was albumin in the urine. There was also general anasarca, well marked but not excessive. This history was sufficient in itself not only to arouse special interest, but special anxiety for the result. The patient was therefore placed upon a treatment of purgation accompanied by treatment by iron, and a diet in which milk was pushed. Two scruples of compound jalap powder and one of the acid tartrate of potassium were given in the first place without result. This was followed by an active purgative pill, which produced an evacuation. Subsequently the patient took, night and morning, a drachm of Epsom salts and fifteen drops of the liquid cascara extract with some ginger. The result was satisfactory, for two or three liquid actions of the bowels resulted every day. Besides this, a mixture containing the freshly precipitated oxide of iron was given thrice daily. The labour came on at the end of the eighth month, and was terminated so far as the child was concerned before my arrival. The albumin in the urine at once diminished, and the patient made an excellent recovery. The treatment, which is a time-honoured one in this practice, is one which I have carried out because it is based upon a working hypothesis. Purgatives which produce free watery evacuations have an action upon the blood. What that action is cannot be definitely stated, but Dr. Allbutt's paper indicates a possible, if not a probable, one, and the same remark applies to the action of iron salts.

Other conditions connected either directly or indirectly with pregnancy seem to me to support Dr. Allbutt. First, the œdematous condition not infrequently met with in pregnant women, with no albumin in the urine and with no eclampsia. These women, although often so swollen that they cannot wear their rings, do not suffer in health; but surely this is a condition which we can connect with the more serious one. Secondly, there is the condition which the late Dr. Matthews Duncan described in his lecture upon Hydroperitoneum—the collection of fluid in the abdominal cavities of elderly women who have borne children without any sign or symptom of disease of organs. Here, again, is a condition difficult of explanation no doubt, but eminently one to be considered in connexion with the subject. Thirdly, there are the various conditions connected with the vomiting of pregnancy. The late Dr. Matthews Duncan fully recognised the fact "that the condition of the blood is probably a chief part of the cause of the proneness of women to disease of the kidney and uræmia," the condition of the great glands being, in his opinion, "probably the cause of their proneness to further dangerous stages of parenchymatous degeneration, chiefly of the liver, but also of the kidneys and other organs." He looked upon the parenchymatous degeneration of the great glands as the first stage of the serious cases of vomiting in pregnancy, the degeneration present even in healthy pregnancies. It is not very difficult now to suggest the link in the causation of such troubles if Dr. Allbutt's theory is accepted. Dr. Duncan, with his great shrewdness and unrivalled experience, knew that the conditions connected with certain cases of the vomiting of pregnancy were not due to nervous causation, but he did not know what is now known of chemical conditions connected with the blood. He pointed to the liver as being the organ most at fault, and in this he was doubtless correct; the knowledge of his day showed that there were changes in the structure of that organ, but it did not show that there were chemical substances circulating in the blood of pregnant women which might account for the change in its structure as well as for that in other glands. His teaching on this subject is, however, only part of the debt which his pupils owe to him, and it is a matter of interest to read Dr. Allbutt's paper with that teaching present to the mind.

Now, to take the subject of thromboses. These have occurred in my practice at times varying between ten days and the fourth week after delivery, with no rise of temperature or any indication of sepsis before the date of the attack. It certainly appears unlikely that there is a connexion between these attacks and sepsis at the time of delivery, and an explanation based upon the theory propounded by Dr. Allbutt appears more reasonable and is certainly that to which I incline. The one predisposing factor at the time of delivery which has been brought forward as conducive to these cases is hæmorrhage, and in none of the three cases which have occurred in my practice has hæmorrhage been present of such a character as to call for remark. The late Dr. Wooldridge's paper on Auto-infection in the Causation of Cardiac Disease certainly leads me in the direction of belief that these thromboses are due to the presence in the blood of some chemical substance peculiar to the blood of puerperal women. It also lends support to Dr. Allbutt's paper.

Finally, what evidence will a study of puerperal fevers provide? Let us put aside once for all statistics, which can be of no possible utility in the consideration of causation. As every working obstetrician knows full well, it is impossible to forecast the progress of a patient during the lying-in period. The cases which have demanded great attention and caused anxiety during the actual labour are not those which, as a rule, give further anxiety, and I include the third stage of labour, which is the critical one so far as puerperal fevers are concerned. It is the critical one because, in the first place, of the difficulty of certainty as to complete removal of all decidual remnants,

[1] THE LANCET, Feb. 27th, 1897, p. 579.

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and, in the second place, of the chances of hæmorrhage. The latter is not a difficulty which has occurred during my presence at a case, although I have lost a patient some time after delivery at which I was not present and do not know the details of what actually occurred. Some patients habitually lose more blood than others, and others perhaps lose more than they can afford to lose, even when only what may be called an ordinary loss occurs; some begin to lose dangerous amounts of blood after the departure of the accoucheur. The chances of dangerous hæmorrhage, therefore, have always to be reckoned with.

Excluding the tears of maternal tissues, which may always occur whether the labour is naturally effected or not, there is no danger so great as the detention of decidual remnants. Here is a danger of no small kind to the patient, and one which presents itself in no small proportion of labours, however great the care of the accoucheur. I know few matters which give me greater anxiety than the consideration as to whether the uterus is completely evacuated. Even if a complete exploration of the uterine cavity is undertaken in case of serious doubt no certainty can be arrived at. It has frequently been a matter of great surprise to me that the subsequent progress of events has proved that my fears were without foundation. On the other hand, when I have felt satisfied in my own mind perhaps a piece of membrane has come away afterwards without the slightest sign of disturbance, or a rise of temperature has led me to douche the patient and wash the offending material away, and in a few cases to afterwards explore the uterine cavity, and to remove with finger-nail or curette what should have come away during the third stage of labour. Such experiences have led me more and more to think of the reason why in some patients even large pieces of placenta are sometimes left in the uterus for months, and no symptoms of sepsis appear, while in others the presence of even a small shred only of membrane will produce such symptoms—and I include symptoms which to some might appear too trivial to be thus dignified. I do so because it is by the careful watching of the lying-in patients that puerperal fevers, those which are capable of resulting in death, or at all events in crippling for months, can be nipped in the bud.

No doubt the present craze is to think that puerperal fevers are the result solely of dirty methods and direct infection. In a practice where labours are looked upon as surgical operations, and the same care is taken in the one case as in the other, it is possible to eliminate all cases due to such causation, but it is not possible to eliminate the others although it is possible to prevent any serious aspect appearing. Now some have invoked conditions of sanitation to account for puerperal troubles. In our practice here during the last eleven years nearly 1200 women have been attended under all sorts of conditions—the best and the worst possible. I have never yet been able to connect these conditions with symptoms of sepsis; indeed, if I were to hazard a rough opinion it would be to the effect that it is the women who come to their labour under the more favourable conditions who are most liable to sepsis. Dr. Allbutt's paper provides an explanation. The women of the richer classes are, I believe, in comparison worse fed and consequently worse nourished than their poorer sisters, although they have everything that money can command. Not only so; in many cases they are worse fed in the first few months of life, although this is not due to lack of food, but to imperfect method of feeding. The children of the poor die from inferiority in methods of feeding sometimes, from inferiority of quality frequently, and from both combined frequently. The children of the richer classes are more often brought up alive certainly, but crippled in health, from imperfection in the method of feeding.

I cannot estimate the amount of harm which is done by the imperfect methods adopted in the artificial feeding of the children of the richer members of the community, but I know that it is very considerable. The resisting power to disease in this class is lessened at the commencement of life, and is not increased as life goes on. It is a matter of no surprise to me, then, that at the time of labour amongst the richer classes the resisting power to sepsis is less than it is in some of their poorer sisters. However this may be, the fact remains that puerperal sepsis appears in one degree or another even in practices where every care is taken to prevent direct infection and to remove the nidus which may become the seat of infection, and it appears to me that Dr. Allbutt's paper is based upon scientific facts which help to explain many of the problems which present themselves to working accoucheurs, and not to explain them only, but to provide a working hypothesis for treatment. Infection to the superficial eye is a matter capable of easy explanation, but when any attempt is made to account either for the vagaries of epidemics or for sporadic outbreaks of infective diseases, or for the progress of epidemics, or for their origin, superficial theories are found curiously deficient. So far as puerperal fevers go, those caused by direct infection can now be separated from those which are not so caused, and Dr. Allbutt's paper is very useful in pointing to the conditions to be dealt with outside direct infection. The fact, however, remains, that lying-in women are from the conditions present with them, irrespective of the actual delivery and those the result of delivery, especially liable to infection. The mind of the accoucheur should not only therefore be employed in dealing with the latter, but should be alive to the various physiological conditions which are part of the problem. This fact is recognised in a half-hearted manner by some sanitarians—e.g., Dr. Williams, in his paper read before the Epidemiological Society upon Puerperal Mortality,[2] attributes the high mortality existing in Wales from puerperal troubles to the conditions under which the women live, though it is quite obvious that his enthusiasm for legislation causes him to put this factor on one side to a great extent when he comes to consider the causation of puerperal mortality generally. Dr. Williams, in dealing with one epidemic, states that a number of cases attended by infected midwives escaped entirely. Surely the women who thus escaped did not do so owing to the care of the midwife any more than the women who show signs of sepsis in the care of accoucheurs need necessarily be directly infected by the want of antiseptic precautions with which medical men at large are charged by the *élite* of the Obstetrical Society of London.

Hatfield.

SOME UNUSUAL AFTER-EFFECTS OF STRYCHNIA POISONING.

BY N. B. DARABSETH, M.B., C.M. ABERD., M.R.C.S. ENG.

SEVERAL features of interest are presented by the following case which occurred in my father's practice and which exemplifies some unusual after-effects of strychnia poisoning.

In June, 1895, a man consulted us on account of pain and spasms in his upper and lower extremities, accompanied by occasional twitchings of the muscles of the face. In October, 1892, he had been poisoned by strychnia, the dose taken having been about twenty grains. He was at once given a large quantity of snuff and water, which immediately caused free vomiting. My father saw him about half an hour after the poison had been taken. The man was then suffering from severe spasms of the whole body and opisthotonos, and was unable to swallow. Inhalations of chloroform were kept up from 10 P.M. until the following morning, being given whenever the spasms came on; subsequently, when he was able to swallow, a chloral and bromide mixture was given by the mouth. The patient recovered perfectly from the immediate effects of the poison and returned to his work in the ensuing week. In May, 1895, two and a half years after the poisoning with strychnia, my father was again sent for, and found the patient suffering from spasms in his limbs and back; the attack, however, was not very severe and passed off under the use of chloral and bromide. It was practically impossible to obtain a proper history of his condition during the period which had elapsed since the poisoning. He said that for the first six months he was fairly well, although weak and sore; then he once got wet by exposure to rain, and from that day he suffered in his limbs and back from pains which were supposed to be rheumatic both by himself and by several medical men who treated him. In June, 1895, according to my notes, his condition was as follows. He was twenty-eight years of age, had an anxious look, and of late had been slightly dull and forgetful and very languid. He complained of aching pains and formication in both the upper and lower extremities and of fatigue on the slightest exertion. He had peculiar sensations in his limbs

[2] THE LANCET, April 18th, 1896, p. 1067.

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sometimes as of burning, at other times as of sitting on an ice-cold seat. In the upper extremities he often felt as if an insect was running with great rapidity down his arm to the fingers; sometimes the sensation was as if the insect stopped half way. Some of the muscles, such as the deltoid and the deep muscles of the back of the neck, were in a constant state of contraction, so that they felt hard; his walk was erect, with the head slightly thrown back. He complained of pain in the shoulders and in the back of the neck and head. No actual spasms in the limbs were noticed during the daytime, but while walking he used to feel his legs start up quickly, which made locomotion easier for him, and the muscles of his face sometimes twitched whilst he was in the act of speaking, especially the orbiculares palpebrarum and the dilators of the nose; he always felt tired after even a short walk. The right arm was harder over the deltoid and also larger by half an inch than the corresponding portion of the left arm. At night he was generally restless and subject to sudden startings in the legs, hands, or back, which had the effect of waking him if he happened to be asleep. Chloral gave immediate relief, and he could not sleep without it. The spasms did not cause cramps, but came on in jerks like electric shocks, and generally occurred either when he was engaged in some work or else when he was asleep. When he was sitting quietly or talking his fingers would become abnormally extended. The patellar reflex was exaggerated. The pupils and optic disc were normal, and he had no nystagmus or headache, although he suffered from pain in the back of the neck due to the contraction of the muscles. His gait was quite normal; he could also stand with feet close together and eyes closed, and there never was any weakness in the legs, but only a feeling of fatigue as if from overwork. He was constantly under the impression that he would become paralysed, which made him very anxious and melancholy. The only drugs that gave him immediate relief were chloral and bromide, but the effect was only temporary and great depression ensued. Belladonna, gelsemium, physostigma, and ergot were successively tried, but they caused additional spasms or tremors, and after three or four days' trial of each the patient refused to continue the treatment. Tincture of belladonna was again tried in two-minim doses and gradually increased to fifteen minims three times a day, after five months of which treatment, combined with tonics such as iron and quinine, the patient gradually improved. The shocks and spasms became gradually less, and by the month of November the muscles of the arm and back of the neck were relaxed, there were only very slight and occasional attacks of spasm at night, and the patient was consequently able to sleep well. I last saw him in March, 1896, and found him comparatively well and cheerful. He said that he still felt shocks occasionally, but he was able to attend to his work and even to take long walks and play cricket.

I believe that the pain and spasms were due solely to the overdose of strychnia, that they must have commenced not long after the immediate effects of the poison were recovered from, and that they were the symptoms which were mistaken for rheumatism, not only by the patient, but by some of his medical advisers unaware of his previous history. I have, however, not read of a poisonous dose of strychnia causing such symptoms continued over so long a time, for, ordinarily, if the case does not prove fatal the patient recovers quickly without experiencing any after-effects. It is very difficult to understand why the symptoms should persist so long. I believe that the very large dose which was taken caused congestion of the spinal cord, and that this passing into a chronic stage gave rise to these reflex symptoms. Belladonna was the only drug which seemed to be useful; it probably acted as a spinal sedative. Ergot was given with the expectation that it would relieve congestion, but it caused more spasms and had to be stopped after three days. The patient is certain that no medical man gave him strychnia or nux vomica; he always read the prescriptions, and said that what was ordered was generally iodide of potassium.

Bombay.

PROPOSED COTTAGE HOSPITAL FOR WESTBURY (WILTSHIRE).—A committee has been appointed to formulate a scheme for the provision of a cottage hospital for Westbury and neighbourhood to commemorate the Queen's Diamond Jubilee, for which purpose Mr. W. H. Laverton has promised a site.

CASE OF CONGENITAL MALFORMATION OF THE NOSE.

BY W. R. H. STEWART, F.R.C.S. EDIN., M.R.C.S. ENG.,

SURGEON TO THE EAR AND THROAT DEPARTMENT, GREAT NORTHERN CENTRAL HOSPITAL.

A MAN, aged twenty-five years, was sent to the Great Northern Central Hospital by Dr. Buck. The patient stated that he had been in his present condition as long as he could remember, and had been told that a tumour had been removed from his nose when an infant. He applied for relief, being unable to obtain employment owing to his disfigurement. On admission a deep cleft was found situated in the middle line of the nose running down from the nasal bones to the upper lip and completely separating the nose into two halves, the tissue in the cleft being cicatricial. Under chloroform, the anterior nares having been plugged with blue wool, an incision was made down the middle line from the fronto-nasal junction to the upper lip. From this latter point branch incisions were carried to each tip, and the skin, which was very adherent, was dissected well back. The



halves of the septal cartilage were found to form two distinct septal cartilages, the right being the larger. The bottom of the cleft was filled with dense, very hard bone, and at the lower part greatly thickened cartilage. The bony portion was with some difficulty removed by gouge and bone forceps and the cartilaginous portion carefully pared down. The two cartilaginous halves of the septum were then released as much as possible from their bony attachments and brought together with deep silk sutures. Superabundant skin was then cut away and the flaps were carefully brought together with horsehair sutures. The patient made a good recovery and has now a very presentable nose.

This malformation is, in my experience, unique. The formation of the septal cartilage is due to the coalescence of the nasal laminæ of the lateral nasal processes. This coalescence was evidently prevented by the formation of what was no doubt a dermoid cyst. An excellent cast, taken by my colleague, Mr. Mower White, is in the museum of the hospital.

Devonshire-street, W.

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Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE ASSOCIATION OF SLOW PULSE AND SYNCOPAL ATTACKS.

BY W. ELLIOT RISDON, M.D., B.S. LOND.

IN this connexion the following brief notes of a case which presented some difficulty during life may possibly be of interest.

The patient, a professional man, aged thirty-eight years, of athletic habits and previous good record, was suddenly seized with faintness whilst quietly walking along the street. When first seen he appeared to be dying, but after an hour's treatment he rallied. His heart was then carefully examined. The cardiac impulse was in the normal situation and the sounds were free from murmur; the action was regular, with a pulse of 70 per minute. On inquiry he stated that this was his normal pulse-rate and that he had never previously had any indication of cardiac weakness. After resting for some hours in the recumbent posture his circulation appeared so satisfactorily re-established that it was thought possible to move him with safety. On sitting up, however, his heart again failed and his condition became critical. After remaining pulseless and deeply unconscious for two hours an improvement again took place and the pulse gradually became of good force, beating from 24 to 30 per minute. There were marked pallor and slight coldness of the extremities, but no pain. The respirations were 14 and the urine was normal. After remaining in this condition for some time the pulse was noticed to become intermittent. This was at first only occasional, but soon became more frequent until there were from ten to twelve dropped beats in succession, the heart resuming with normal force after an interval of twenty or thirty seconds. During this interval there was brief loss of consciousness with slight tonic spasm of the muscles of the face and limbs and dilated pupils, and no sound of ventricular contraction could be detected. The case terminated fatally three days later, but there was no material change in the character of the symptoms, the pulse remaining abnormally slow to the end.

Necropsy.—On post-mortem examination the left ventricle was found to be somewhat hypertrophied and streaked with fat at one spot near the apex; the valves were healthy. There was a small patch of atheroma in the first part of the aorta, but the coronary arteries were normal. The lungs were œdematous, but all the other organs were healthy.

The symptoms in this case appear a little difficult of explanation except upon the theory of disturbed cardiac innervation, for which, however, there was no apparent cause. The temporary lapses into unconsciousness and the attacks of tonic spasm appeared to be the result of cerebral anæmia.

Chancery-lane, W.C.

DYSTOCIA FROM RELATIVE SHORTNESS OF THE FUNIS.

BY JOHN A. LYCETT, M.D. ST. AND.,
SURGEON TO THE WOLVERAMPTON HOSPITAL FOR WOMEN.

A WOMAN, aged thirty-three years, the mother of two fine healthy girls, the younger three years old, was recently attended by me at full term. The labour was slower in progress compared with her previous confinements, the pains being of short duration and not strong. The presentation was first cranial or left occiput anterior. When the head was bearing upon the perineum evidence of the nature of the difficulty became manifest by great retraction between the pains, which were becoming shorter and less effectual, though not from exhaustion, as she continued cheerful with a good pulse. Pelvic examination showed no cause, there being ample space with yielding soft parts, and the nature of the presentation was further confirmed by feeling with ease the pinna of the left ear. Abdominal examination showed a single gestation with the placenta at the fundus, where the rotundity became much less defined during uterine action. Though during labour a firm bandage had been applied round the abdomen it became evident that nature, unaided, could not effect delivery, which had appeared so imminent for over an hour. Forceps were therefore used and the occiput carried round the symphysis without injury to the perineum; this was accompanied by hæmorrhage. The diagnosis was now verified by finding a strong, rather thick cord passing over the thorax round the back of the neck. The tension was so great that it was impossible to slip it either over the head or shoulders, so I divided it between forceps, as it was uncertain which was the fœtal end. The shoulders and arms were now freed, and a male child weighing over eleven pounds, and twenty inches in length, was delivered. As hæmorrhage continued rather free and the placenta could not be expelled by Crédé's method ergot was given, and the hand immediately introduced, when about a fifth part of the placenta was found attached at the fundus with a large clot. I regret that the length and strength of the cord were not ascertained, but it was about nineteen inches long, and as an average cord shown by the late Dr. Matthews Duncan[1] will bear a weight of eight pounds this evidently would not have broken under a weight of twelve pounds. Generally when the cord is too short the placenta under the tensile force of labour becomes detached from the uterus as in this case, but the cord has been known to tear from either the placental or umbilical site, and when weaker than normal snap through during labour, as related by Dr. Johnson.[2] It is not uncommon for the cord to encircle some part of the child, and less marked degrees of relative shortening may arise sufficient to retard delivery, even to partially detaching the placenta without being recognised. During an experience of nearly twenty-five years I have no note of labour being impeded from actual shortness, but have met with several where relative shortness has been a cause of dystocia. This, however, is the only occasion where the symptoms and physical conditions were sufficiently obvious to enable a diagnosis to be, with reason, inferred before delivery. The mother predicted a male child partly from the different character of the labour, and also from carrying it during the later months much higher than in the previous gestations.

Wolverhampton.

CASE OF TRANSPOSITION OF THE VISCERA, WITH A TRICŒLIAN HEART.

BY HENRY JELLETT, M.D., B.CH., B.A.O. DUB.,
ASSISTANT MASTER, ROTUNDA HOSPITAL, DUBLIN.

IN June, 1896, I was summoned to see a baby who had been just born in the Rotunda Hospital in an asphyxiated condition. When seen, the child was respiring feebly, the heart was weak and irregular, and the face and body were cyanosed. I commenced Schultze's method of artificial respiration, gave the child hot baths, and rubbed the lips and mouth with whisky. I felt for the heart in the usual manner—i.e., by pressing the fingers upwards under the ribs a little to the left of the middle line—but I was unable to feel its pulsations owing to the presence of what I at first took to be a greatly enlarged liver. I then palpated the abdomen on the right side to determine the size of the liver. Instead of finding it there as I expected, I was able to press my fingers upwards beneath the ribs, and to feel the pulsations of the heart to the right of the middle line. It was plain, then, that it was a case of transposition of at least the heart and liver. All attempts to revive the infant failed, and the child died in ten minutes. I made a post-mortem examination of the body the same day, and discovered that it was a case of complete transposition of the viscera. The normal position of the lungs, heart, liver, stomach, spleen, and intestines was reversed. The heart was almost twice the normal size, and when opened was found to have but three cavities—two auricles which opened into a common ventricle.

Many cases of partial transposition of the viscera have been recorded, but the number of cases in which complete transposition occurred is comparatively few. Two theories as to

[1] Transactions of the Obstetrical Society, vol. xxiii., 1881; Brit. Med. Jour., vol. ii., 1881, p. 857.
[2] Brit. Med. Jour., vol. ii., 1882, p. 132.

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its causation are suggested. Von Baer has found that in a few instances the embryo lies with its left side directed towards the yelk, whereas the right side is normally in this position. He considers this condition in all probability the cause of the transposition. Dr. Fraser, in a communication read before the Royal Academy of Medicine in Ireland (May 25th, 1894), thinks the transposition may be due to the subject having been one of twins which were developed from a single ovum and in which dichotomy was complete. He also exhibited a thoracopagus monster, in which the right-hand fœtus had complete transposition of the viscera.

Dublin.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF TUMOUR GROWING FROM THE BASILAR PROCESS OF THE OCCIPITAL BONE AND COMPRESSING THE MEDULLA AND PONS; NECROPSY; REMARKS.

(Under the care of Dr. H. D. ROLLESTON.)

THIS is a very interesting account of an unusual form of tumour of the base of the brain, which, growing from the bone, produced symptoms, which are carefully described, by pressure on the important parts at the base. "Tumours of the base of the brain[1] deserve special mention. They usually spring from the dura mater, sometimes from the bone. Sarcoma and carcinoma are most frequent; less common are psammoma, cholesteatoma, syphilitic gumma, enchondroma, fibroid growth, and hydatid cyst. The petrous portion of the temporal bone, or the dura mater over it, is the part from which growths most frequently spring. The neighbourhood of the sella Turcica is another common seat, and sometimes they originate in the posterior fossa, adjacent to the foramen magnum. They may spring from the bone in this part. They often attain a considerable size, even that of a hen's egg, and compress the superjacent brain." For the notes of this case we are indebted to Dr. W. Thomas, house physician.

A boy, aged seventeen years, was admitted into St. George's Hospital on Aug. 27th, 1896, complaining of seeing double when he looked to the left. He said that two months ago during very hot weather his speech became indistinct. He also suffered from severe pain in the top of his head. He was sick every morning, retching a good deal, but bringing up very little. This continued for three weeks. The sickness then ceased and his speech became clearer. The headache remained and he noticed that on looking to the left he saw double. He was a heavy-looking boy and took some little time to collect his thoughts on being asked questions. The right side of his face seemed to move less easily than the left, but as it never altered it may possibly have only been habitual and not connected with his disease. On asking him to put out his tongue it was noticed that it was pushed over to the left side. It was covered with a thick, creamy, yellow fur, and the left side felt flabby when pinched between the fingers. The movements of the eyes were perfect in all directions except the outward movement of the left eye. The left eye did not move outwards so quickly or so far as the right eye did inwards. There was some loss of power in the left external rectus. It was in performing this movement that diplopia resulted. The pupils were equal and reacted to light and accommodation. The fundi were normal. No evidence of paralysis of the sterno-mastoid or trapezius could be made out. The knee-jerks were normal, the left being slightly weaker than the right. Superficial reflexes were present, but sluggish. There was no ankle clonus. There was no loss of power in the arms and legs. The right grip was stronger than the left. He was able to walk perfectly and could turn round quickly without faltering. The heart and lungs were normal. The abdomen was slightly retracted, but otherwise normal. There was on marked wasting. The pulse was 110, regular, and fairly strong. The urine was clear, specific gravity 1020, no albumin or sugar. There was a deposit of phosphates on boiling. His bowels were most irregular, acting only with enemata. Eventually they were found to act better with German brandy and occasional enemata. The tongue did not clean after this, so its coat was thought to be due to imperfect mastication. On getting up in the morning he complained of giddiness and a feeling of nausea. After two or three days he became sick every morning and sometimes during the day. The headache continued, the pain being most intense in the occipital region. He was given quinine and iodide of potassium, but without any effect except slight coryza and an acne rash. On Sept. 25th he was given fifteen grains of sulphonal with ten grains of phenacetin twice a day. This relieved him completely of his headache, but kept him in a drowsy condition during the day in addition to making him sleep at night. It was found that giving him occasional doses at night kept him free from pain. This treatment was continued for seven weeks without producing any toxic effects. About a week after his admission it was noticed, after swallowing some milk, that he coughed and a portion of it regurgitated through his nose. At the same time his voice acquired a slight nasal intonation and his speech became somewhat thick. On examining the fauces the soft palate was seen to act sluggishly, the left side more so than the right. There was some response to a stroke with a pen-holder on the right side, but hardly any at all on the left. He, however, continued to take his food well for some time after this without any further regurgitation taking place. The giddiness and retching became more marked on rising. His gait became unsteady and he complained of great weakness in the legs. He was, therefore, kept entirely to his bed. After this (Sept. 14th) his condition gradually deteriorated. The paralysis of the left external rectus became more and more marked and finally complete. Slight swelling and haziness of the optic discs were noticed on Nov. 1st. The tongue was still protruded to the left. The paralysis of the soft palate gradually became complete, with constant regurgitation of liquids through the nose. On this account he was fed through a tube passed into the stomach, as it was thought food pneumonia would otherwise inevitably follow. After withdrawing the tube, however, he used to vomit and so he incurred the same risk as before. The nasal intonation increased, the speech became thick, and the words blurred so that it became impossible to understand him. The saliva ran from his mouth and soaked his pillow. He wasted considerably. The knee-jerks entirely disappeared, but the plantar reflexes remained. No anæsthesia on the left side of the face or deafness were ever noticed. The heart's action continued regular, but gradually quickened from 84 to 120 beats per minute, at which rate it remained for some time before his death. The lungs remained quite free till about a week before his death, when bubbling râles were heard at the bases. These increased in number, and were finally heard all over the chest. Cheyne Stokes breathing was never observed. The temperature throughout the course of the disease was inclined to be sub-normal, varying from 96° to 99°F. On Nov. 13th, in the afternoon, after being fed through the tube, he vomited a considerable quantity of fluid. Some of this got into the air-passages, for he became extremely cyanosed and short of breath. He was put on his side and given oxygen to inhale, when some slight improvement followed. He was then fed entirely with nutrient enemata. The improvement, however, was only temporary, for both the pulse and respiration quickened, the temperature rose to 102°, and at 1 A.M. on the 14th he died.

Necropsy.—At the post-mortem examination the bones of the cranial vault were found to be considerably thinned in places. The brain weighed 50 oz. and the convolutions on both sides were flattened; this was due to the distension of the ventricles with clear cerebro-spinal fluid. There was a lobulated tumour as large as a Tangerine orange growing from the anterior surface of the basilar process about the junction of the basi-occipital and basi-sphenoid bones. A longitudinal section of the bone showed that the tumour was sub-periosteal and that it did not expand the basilar process. The growth was covered over by the dura mater and had not perforated it in any place. The tumour was white on section and grated under the knife; it presented the appearance of a cartilaginous tumour undergoing calcification; microscopically it was a chondrifying and calcifying sarcoma.

[1] Gowers: Diseases of the Nervous System, second edition, p. 499.

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The pituitary body and fossa were quite natural. The basi-sphenoid and basi-occipital bones were firmly united by bone. The tumour indented the pons and the medulla and markedly flattened them on the left side. The fifth nerve on the left side was flattened; the left sixth nerve was pressed upon; while the seventh and eighth nerves on that side were in immediate contact with the tumour. The glosso-pharyngeal, vagus, spinal accessory, and hypoglossal on this side were surrounded by an extension of the growth, which passed down through the left jugular fossa to get behind the upper part of the pharynx. The growth did not press on the right side of the medulla or pons. There were retinal hæmorrhages on both fundi and obscuring of the disc. There was a persistent thymus, which, however, seemed to be atrophying, as shown by microscopic examination. The right lung showed broncho-pneumonia due to the entrance of food. The other organs were healthy.

Remarks by Dr. ROLLESTON.—The points of interest are in connexion with the diagnosis, treatment, and the origin of the tumour in this case. During life the diagnosis was a tumour *in* the upper part of the medulla, whereas the tumour, as has been seen, was *outside* the medulla. This error might have been obviated by bearing in mind Dr. Gowers's statement that in tumours arising from the posterior fossa of the skull the sixth nerve is paralysed without the conjugate internal rectus, which suffers with it in disease of the centre.[2] The nerves affected clinically were the sixth, tenth, eleventh, and twelfth, and the tumour was therefore thought to be in the upper part of the medulla, involving the fibres of the sixth at their exit and not affecting the nucleus of the nerve, for in that case the seventh nerve would have been affected as well. This diagnosis was made soon after admission, when there were two other factors which in my mind strengthened the localisation: they were (*a*) the absence of optic neuritis and (*b*) the sub-normal temperature. Optic neuritis may be absent in cases where the tumour is situated in the medulla. Dr. J. M. Martin has most kindly communicated to me the following figures bearing on this point. In 41 cases of tumour of the pons and medulla there was no optic neuritis in 14, or 34 per cent., while in 9 of these 41 cases in which the tumour was situated either low down in the pons or in the medulla, optic neuritis was absent in 5 A tumour irritating the meninges would be more likely to give rise to optic neuritis, and, as has been seen, papillitis did occur two weeks before death in this case. With regard to the sub-normal temperature, I had heard of two or three cases of tumour in the medulla in which this feature was noticed, and its presence in this case seemed to confirm the diagnosis.

With regard to other points the clinical symptoms were less widely spread than the lesions found post mortem rendered probable; thus there was no definite facial paralysis or deafness, and though there was headache it was not localised to the fifth nerve on the left side, and there was no anæsthesia on that side of the face. Pressure on the pons eventually gave rise to loss of power in the legs, but there were no convulsions; the loss of knee-jerk which developed was probably due to the cerebellum being compressed under the tentorium by the upward growth of the tumour. As regards treatment, iodide of potassium was tried on admission, but without any result, and as there was no evidence or history of any specific taint it was, after a fair trial, abandoned. A tumour that appeared to be in the medulla was in too dangerous propinquity to the vagus and the all-important vital centres to encourage any idea of operative interference, and we had therefore to be content with relieving pain and sleeplessness, which the combination of ten grains of phenacetin and fifteen grains of sulphonal very successfully achieved. The tumour during life was, from the absence of any sign of syphilis, the failure of iodide of potassium to relieve the symptoms, and from the age of the patient, thought to be either gliomatous or tuberculous. As shown at the post-mortem examination, it was a chondrifying and calcifying sarcoma growing from the surface of the junction of the basi-sphenoid and basi-occipital. These two bones normally join at about the age of twenty-one years; in this case they were firmly united by bone, no trace of the junction being visible. This premature union was perhaps associated with the riotous proliferation which gave rise to the sarcoma. It is possible that this growth arose from some relics of the primative parachordal cartilages, but as it did not expand the bone and was sub-periosteal and not endosteal there is not much to support this suggestion. There were no signs of cretinism, but it is interesting to note that together with this premature ossification between the basi-sphenoid and basi-occipital there was a persistent thymus, which, however, showed signs of atrophying. A persistent thymus is found, according to Marie,[3] almost constantly in cretinism (infantile myxœdema). Possibly this case was one in which cretinism remained entirely latent, although there were some anatomical evidences of it.

[2] Disease of Nervous System, 1888, vol. ii, p. 480.

[3] Bulletin et Mémoires de la Société Médicale des Hôpitaux, Paris, 1893, p. 136.

ENGLISH MISSION HOSPITAL, JERUSALEM.

A CASE OF LARGE CONGENITAL SCROTAL HERNIA; RADICAL CURE; RECOVERY.

(Under the care of Mr. ERNEST W. GURNEY MASTERMAN.)

CASES of radical cure of all kinds of hernia are now so common that only those of special interest claim notice in "the Mirror." The reason for recording the following case is the very large size of the hernia. Perhaps, also, the fact of its being of the congenital variety may add to its interest.

A Moslem boy, stated to be twelve years of age, but, if so, very ill developed, was admitted to the English Mission Hospital, Jerusalem, on April 20th, 1894, with a large right inguinal hernia, which his mother stated he had had all his life. It was quite irreducible and had lately increased in size. The great weight of the mass in the scrotum made the boy's life a burden, and both he and his mother were most anxious for any treatment which would end this misery. When admitted his general condition was fairly good for a native. There was no other sign of disease. The bowels acted fairly regularly and there was no vomiting. The note of the local condition, taken at the time, was as follows: "Passing down the right inguinal canal and distending the scrotum to the size of two fists, when held together, is a large hernia. It can on manipulation be very slightly reduced, and when the state of extreme distension is removed the contents appear to be partly omentum and partly intestine. A distinct circular hard band feels to be undoubtedly omentum." (At the operation it proved to be a loop of altered small intestine). On the 24th the patient was put under chloroform and an attempt at reduction was made without success. On May 1st, with the assistance of Dr. P. D'E. Wheeler, Mr. Masterman performed the following operation. The patient, having been previously prepared by a purge and enema, was put under chloroform. After thorough antiseptic cleansing of the parts an incision was made about four and a half inches long from about half an inch above the site of the external abdominal ring to nearly the bottom of the scrotum. The peritoneal sac was opened on a director and the contents were found to be six coils of small intestine, normal in appearance except one coil, which was much reduced in calibre, and was empty and hard. Behind these lay a large mass of large intestine, including the cæcum with the vermiform appendix, the ascending and the transverse colon. To this last was attached the great omentum, the whole of which was in the hernial sac. The small intestine was soon reduced, but the mass of large intestine was so matted together that its reduction was a matter of great difficulty. The appendices epiploicæ were large and contained much fat. As the omentum was normal and not abnormally drawn into bands it was not thought advisable to remove any of it. After twice carefully slightly enlarging the incision upwards the whole mass was at length reduced. During these manipulations the intestines were as far as possible kept warm by means of sponges wrung out in warm carbolic lotion. After the reduction, the neck of the sac (which was large enough to admit three fingers together) was closed in the following way: Three salmon-gut sutures were passed transfixing the sac, each one deeper—i.e., posterior to—the others, and all were knotted above one another above the neck. Then a stout silk ligature was passed still deeper than—i.e., posterior to—all these, and in its passage across the inside of the neck included part of the floor—i.e., posterior surface—of the neck. When this was tightened up it was found that there was a small space left large enough to admit the tip of the little finger. A further suture was

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then passed deeply completely round the sac outside its coats, and this being tightened the sac was closed. A special effort was made to avoid including the spermatic cord in these sutures, even although the testis on that side was very ill developed, being much smaller than the one on the other side. The sac being closed, a considerable portion of the tunica vaginalis was dissected away, but considering the state of the testis it did not seem to be worth while spending more time in suturing together a new tunica vaginalis testis. A large piece of the scrotum, 4½ in. by 2 in., was then removed. The long wound was then carefully sewed up with salmon-gut sutures and a small drainage-tube was inserted at its lowest point. On the 2nd the patient had had a fair night, there had been no vomiting after the chloroform, and the temperature at 6 A.M. was 100 3° F. and at 6 P.M. 103°. He was fed on nutrient enemata. Sips of hot water only were given by the mouth. On the 3rd he was doing well. Nourishment as above was given. A little hot milk by the mouth, a teaspoonful at a time, was added. The bowels acted naturally; there was no abdominal tenderness. The temperature at 6 A.M. was 102 4°, and at 6 P.M. 104°. The wound was dressed; two stitches were removed; there was slight suppuration at the upper end and a boracic fomentation was applied to that part. On the 4th there was free discharge, the remaining stitches were removed, and the temperature was 100·6°. After this the temperature became normal and ordinary feeding was resumed. There was a somewhat free discharge of pus from the whole length of the wound; but on July 10th the patient left the hospital with a very firm consolidated scar in the site of the wound and the scrotum only slightly larger than normal.

Remarks by Mr. MASTERMAN.—From the point of view of antiseptic surgery this free suppuration might be regarded as a failure, though, so far as I have seen, it is very common in all hernia operations of any size involving scrotal tissues; but practically it led to the formation of a very much more hopeful and satisfactory scar than could have occurred had all closed by "first intention." I have made every endeavour to see my patient again of late, but he cannot be traced; yet the fact that he has neither come to me nor to the English practitioner at Nablous, where he lives, makes it almost certain he is going on satisfactorily without recurrence.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Parasite of Malarial Fevers at Sierra Leone.—Pulsating Empyema.

A MEETING of this society was held on March 23rd, the President, Dr. HOWSHIP DICKINSON, being in the chair.

Surgeon-Captain C. W. DUGGAN read a paper on the Parasite of the Malarial Fevers at Sierra Leone. He described the symptoms of the severe malarial fevers which prevail at Sierra Leone, and gave the results of his observations on the parasite of malaria which is associated with these fevers, from which both Europeans and natives suffer. During two years' residence there he examined blood from the finger in nearly 400 cases and made special study of 50 cases. Eleven of these cases were given in some detail in the paper. His description of the symptoms which usher in and last during the attack did not differ materially from that given by previous observers. In all the cases he found parasites in the blood from the finger. The form in which they were seen was as a very minute ring-shaped body, which in a later stage slightly enlarged, and contained a few very minute grains of pigment. A more advanced stage than this was not observed in the freshly drawn peripheral blood, with one or two exceptions. In blood taken from the surface of the brain in a fatal case he found sporulating forms. The parasite is very small, and even in the sporulating stage only takes up about a third of the red corpuscles. He counted five spores in one parasite. In the majority of cases, after some days' fever, the crescent forms of the parasite were observed, and he described various stages in its development. In one case only did he observe appearances in the parasite which could be interpreted as being possibly due to spore formation. In all the cases observed by him the tertian parasite was observed once only. This occurred in a man who had suffered from malarial fever two years previously in the West Indies. The quartan parasite was never observed. All the appearances observed were analogous to similar appearances described by Marchiafava as being found in the summer-autumn fevers of Rome, and morphologically Surgeon-Captain Duggan was not able to detect any difference between Marchiafava's parasite and that of Sierra Leone. The crescent body in shape and size resembled that described by Laveran and the Italian authors. In dried and stained preparations of the small parasite in the finger blood a deeply stained nucleolar body could sometimes be observed at one point in the periphery; at other times in the centre of the parasite surrounded by an unstained zone, whilst the periphery stained; sometimes two such nucleolar bodies could be observed. In the stained preparations the very fine pigment was observed on the periphery of the parasite.—Dr. THIN remarked on the importance of a microscopic examination, and mentioned a case in which there was no fever, but in which by careful searching Surgeon-Captain Duggan established the diagnosis by demonstrating the malarial parasite. The fevers on the west coast of Africa were extremely fatal as compared with those in the south of Europe, and this appeared to be due to a plurality of parasites. As illustrating the danger to Europeans he mentioned an instance in which four out of five artisans died from fever almost immediately after arrival in the country. One of them was attacked on the second day, showing an unusually short period of incubation. Death occurred on the fourth day. The regular administration of quinine had a most remarkable protective effect.—Dr. MANSON drew attention to the previous work of Plehn in the Cameroons, which pointed in the same direction. Microscopic examination was of the utmost importance for purposes of diagnosis, as many of the cases now known to be instances of severe malaria would formerly have been returned as cases of sunstroke. He regarded the practice in the army of discharging men from hospital after three days' treatment as quite inadequate, as observations showed that the parasite recurred in the blood at the end of a week. Patients should be retained in hospital for two or three weeks until the parasite had entirely disappeared from the blood, and if the presence of the parasites was persistent the patient should be deported from the country. He was surprised that reference was only made to the crescentic forms, as the flagellated forms could easily be produced by placing the cover-glass with the film of blood in a damp cell made with a piece of wet blotting-paper. With reference to transmission of the parasites by means of mosquitoes, he pointed out that the transference was not direct, as the mosquito did not suck blood more than once. He believed that this insect was the host in which the parasite developed, and he had specimens demonstrating the presence of the flagellated form of the parasite in its stomach.—Surgeon-Captain DUGGAN, in reply, said that he had no doubt that flagellated forms would have been obtained in his cases by keeping, but he did not see any in freshly drawn specimens. He could hardly regard the mosquitoes as essential for the conveyance of the parasites, as they were not numerous in the fever-stricken districts on the west coast, and then only appeared for a short period in the year.

Dr. SAMUEL WEST read a paper on Pulsating Empyema. Distinct pulsation in empyema was of two kinds: (1) A general shock, usually communicated to a considerable area of the chest wall—intra-pleural pulsation, as it has been called; and (2) expansile pulsation localised in an external tumour—extra-pleural pulsation. In either case it is usually on the left side, synchronous with the heart, and almost invariably systolic in time. It is most frequent in males and in adult life, but may occur in either sex or at any age. Similar pulsation has been described with serous effusion and pyo-pneumothorax. Intra-pleural pulsation is usually palpable only—and rarely visible—over a considerable part of the side. When localised to the upper intercostal space it is probably like the fluctuation of ascites, and due to a surface wave, and is met with only where the effusion is large, the diagnosis presenting no difficulty. If felt near the sternum or near the heart the question of aneurysm might arise. Pulsating pneumonia and intra-thoracic growth have been mentioned as causing difficulty in diagnosis, but both these

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conditions are very rare. Extra-pleural pulsation is met with in empyema only when pointing. Its seat is usually near the heart. There may even be two or more external tumours, all of which pulsate. Such pulsating empyemata have been met with in strange places—e.g., the loin. The diagnosis is but rarely a matter of difficulty. It is with aneurysm that these cases are most likely to be confused. In one case the pulsating tumour was in the third left intercostal space, and after being regarded and treated as an aneurysm for three years burst and disappeared. Localised empyemata near the heart do not necessarily pulsate, however, nor need aneurysms do so. The difficulties of diagnosis are greater between a local abscess in the chest wall which pulsates and an aneurysm than between an aneurysm and a pulsating empyema. Puncture with a fine needle could do no harm even in an aneurysm and would at once settle the diagnosis. There are three different kinds of pulsation in empyema, and the same explanation will not fit all :—1. The general shock with large effusions, probably the same as that occasionally felt through a solid growth or even a massive pneumonia, and is a shock rather than a pulsation. 2. The wave-like pulsation, often limited to one or two of the upper intercostal spaces in front, probably a surface wave like the so-called fluctuation in ascites. 3. The distensile pulsation, like that obtained in a large abscess, and for this it is necessary that the fluid should be contained within more or less resistent walls and be under some tension, and usually thickening and rigidity of the lung and mediastinum are found post mortem in such cases. Pulsating empyemata are usually said to be fatal, and this statement is approximately true when the pulsation is distensile. The prognosis is so bad, not because the empyema pulsates, but because the peculiar conditions requisite for pulsation—viz., the fixation of the heart and the changes in the mediastinum and lungs—are such as prevent recovery. Of the other cases the majority recover when treated in the usual way.

MEDICAL SOCIETY OF LONDON.

Intestinal Anastomosis.—Senile Decay.

A MEETING of this society was held on March 22nd, the President, Mr. REGINALD HARRISON, being in the chair.

Mr. HARRISON CRIPPS read a paper on three cases of Intestinal Anastomosis. The first was one of end-to-end anastomosis of ileum to ileum in a young woman in whom obstruction followed abdominal section for hysterectomy. A temporary enterotomy was performed, and ten weeks later the bowel was divided just below the obstructed portion and again just above the enterotomy opening, the ends being carefully sutured. She recovered, and now, three years after the operation, was in excellent health and well nourished. The second case occurred in a man, fifty-five years of age, who was operated on at his urgent request for a tumour which was found to involve the transverse colon, the omentum, and a coil of the ileum. The growth was removed and the large and small intestines were sutured, but death occurred on the fifth day, probably from septic peritonitis. The third case was that of a woman, twenty-three years of age, suffering from intussusception. Her condition precluded any prolonged operation, and a temporary enterectomy was performed as low down in the ileum as possible. On the eighth day the opening was blocked by a foreign body, which proved to be the intussusceptum which had sloughed. After a time some of the motions passed by the rectum, but the bulk escaped through the artificial opening, and if this was closed by a plug the abdomen became distended and symptoms of obstruction recurred. The patient became greatly emaciated, and it was urgently necessary to establish free communication with the large intestine. A firm plug was therefore placed temporarily in the existing opening, in order that the skin might be thoroughly cleansed, and the abdomen was then re-opened nearer the middle line, without disturbing the adhesions of the existing opening, and a lateral anastomosis was made between the commencement of the ascending colon and the lowest part of the ileum available. The fact that the intestines were no longer distended greatly facilitated the operation. The patient was now in good health, but there was a small fistulous tract at the site of the original enterotomy wound. Mr. Cripps spoke strongly in favour of trusting to careful stitching, and said that he was more than ever disposed to regard bobbins and buttons as incomparably inferior and as the cause of otherwise avoidable deaths.—Mr. LOCKWOOD said that he had seen double enterectomy performed in one case, in which death occurred not from shock but from leakage at both lines of junction. The most favourable site for operation was the small intestine, because the contents there were fluid and the movements of the gut were less forcible. He questioned whether advantage was gained by removal of a wedge of mesentery. With regard to the method of uniting the bowel, he preferred end-to-end suture to lateral anastomosis. He agreed that it was advisable where possible to relieve the distension by a preliminary operation, but he quoted cases to show that distension need not prevent the surgeon from operating where the symptoms were urgent. The condition of the patient was of great importance, as he believed that intestinal paralysis was much less likely to occur in persons who were strong and vigorous.—Mr. MARMADUKE SHEILD asked for details of the method adopted by Mr. Cripps to obtain anastomosis by lateral approximation. He himself was in favour of dispensing with any apparatus and trusting to the fingers and silk sutures.—Mr. L. A. BIDWELL asked for details of the method of end-to-end anastomosis. In employing Maunsell's method he had found that supplementary Lembert's sutures were required. He had seen one of his cases of end-to-end anastomosis two and a half years after operation, and there was no sign of stenosis.—Mr. G. WALLIS remarked that if a large wedge of mesentery was removed there was apt to be gangrene of the gut.—Mr. CRIPPS, in reply, could not agree that there was any greater risk or difficulty in the long run in operating on the large as compared with the small intestine. He had long discarded Maunsell's method as tedious. For end-to-end suturing he employed Lembert's sutures, inserting the needle a quarter of an inch from the cut end, and taking in an eighth of an inch of peritoneum and muscular coat only, ten or twelve sutures being inserted to the inch. In performing lateral anastomosis he first passed sutures to unite the coils of intestine near their mesenteric attachments ; these sutures were then drawn tight to seal off the posterior line of attachment. Sutures were next drawn through the anterior line of attachment, but they were not tightened until a longitudinal incision had been made in both coils of intestine. He never used Murphy's buttons.

Dr. T. D. SAVILL read a paper on Senile Decay, its Causes and Treatment. The paper was based chiefly on 409 cases of death in persons of sixty years of age and upwards observed during the seven years that Dr. Savill was medical superintendent of the Paddington Infirmary, the inquiry having been begun in 1887. The first part of the paper dealt with the normal and abnormal symptoms of old age, among the former being weakness, nervous symptoms, the senile heart, the senile pulse, and various external signs, among the latter being "senile vertigo," "senile epilepsy," and, lastly, conditions attended with high arterial tension. These conditions he considered dependent upon certain changes occurring chiefly and uniformly in the muscular coats of the arteries, and he referred to communications already made by him on the subject showing this condition of "hypermyotrophy" to be independent of renal disease. Dr. Savill next considered the characteristics of disease as it occurred in aged persons. Pneumonia took the leading position as a cause of death, with 17 per cent. ; then cancer, 15 5 per cent. ; then bronchitis, 11 per cent. ; then "senile decay," 9 per cent. ; then contracted granular kidney, 6 per cent. ; and pulmonary tuberculosis, 5·5 per cent. The figures showed that tubercle was not so rare in the aged as was generally believed. He concluded by pointing out the importance of the early recognition of high arterial tension and of its treatment by appropriate remedies. Nitro-glycerine was of great value in the treatment of the pathological degree of the arterial change—a point supporting his contention that it was the muscular tissue which was at fault. A large number of photographs, pulse-tracings, and microscopic specimens were shown.—Dr. CLIFFORD ALLBUTT said that he was not prepared to admit that the changes described by Dr. Savill were physiological and incidental to old age. In many old people no change could be made out in the radial artery, and the blood-pressure was low. But he thought that there was a malady common in old age, of which some of Dr. Savill's cases were instances, in which the advance of years was accompanied by increase of blood-pressure. Some of the subjects were pale and sallow, others were florid. He had

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described these cases clinically under the title "senile plethora." There was usually a train of nervous symptoms, melancholia, insomnia, vertigo, bewilderment, syncope, and the like. The cause of this increase of tension was very difficult to determine. The urine showed no alteration, the urea and uric acid when estimated being found to be present in normal amount. There was usually some enlargement of the heart, so far as could be estimated by percussion. The ventricle was not emptied at each systole, and tended to become dilated and afterwards hypertrophied.

CLINICAL SOCIETY OF LONDON.

Thrombosis of the Veins of Galen after Scarlet Fever.—Sclerema Neonatorum. — Peripheral Hyperostosis. — Urobilinuria following the administration of Trional.

A MEETING of this society was held on March 12th, the President, Dr. BUZZARD, being in the chair.

Dr. E. W. GOODALL related a case of Scarlet Fever in which death was due to spontaneous thrombosis of the veins of Galen. The patient was a girl, eight years of age, who was admitted into the Eastern Fever Hospital with a moderately severe attack of scarlet fever. On the evening of the eleventh day, when apparently convalescent, she was seized with a succession of general convulsions, which after a few hours gave rise to more or less general rigidity and gradually deepening coma. There was pyrexia, the temperature rising shortly before death to 107·4° F. The pulse was very frequent. There was no optic neuritis and the urine was free from albumin during the whole of the illness. At the necropsy there was ante-mortem clot in the veins of Galen and in the straight sinus. The clot was hardly if at all adherent. Both choroid plexuses were covered with a thick layer of recent lymph. The optic thalami were in a condition of red softening, the left being almost diffluent. Beyond slight ulceration of the tonsils there was no other lesion. There was no middle-ear disease. The case was brought forward on account of its rarity, as when spontaneous thrombosis occurs after a specific fever it is usually located in the heart or one of the vessels of the lower extremities. A case similar to this was brought before the society in 1896 by Dr. Lee Dickinson, but in that case no cause for the thrombosis could be found.—Dr. COUPLAND related a case that he had seen with Dr. F. P. Wightwick, in which a young woman, who, when convalescent from an attack of measles seventeen days after the onset, became strange in her manner and passed urine and fæces under her. Next day she had intense headache and became semi-comatose, the left arm was flexed and a little rigid, but the other limbs were flaccid. The knee-jerks could not be obtained. There was albumin in the urine, and her temperature, which was 104° when first seen, rose to 108° before death. Thrombosis of the sinuses was diagnosed, and at the necropsy ante-mortem clot was found in the straight sinus. There was red softening of the optic thalami and a small area in the crus. There were no convulsions during the illness.—Dr. LEE DICKINSON said that in the majority of cases the patients were chlorotic. A few had occurred in association with pneumonia and with the puerperium. They are primarily dependent on the condition of the blood and not to phlebitis. The recent work of Wright and others led him to hope that they might ultimately be able not only to recognise undue coagulability of the blood, but to remedy it and prevent thrombosis.—Dr. GOODALL, in reply, said that his patient was not particularly anæmic. The case had run an ordinary course, and no examination of the blood had been made.

Dr. GARROD related a case of Sclerema Neonatorum in a male infant, the child of healthy parents, who were not in specially bad circumstances. Three or four days after birth patches of induration of a purple colour were noticed on the buttocks. When first seen, at the age of seven weeks, the child was well nourished and showed no constitutional symptoms, and there was no depression of temperature, which was taken on seventeen occasions, and varied from 100° F. to normal. Areas of sclerematous induration were situated over the buttocks, thighs, back, and deltoid regions, and there were a few outlying islets in other situations. The skin over the buttocks had a pink tint. The induration was massive, and the legs could not be extended at the hips. There was nowhere any pitting on pressure. The distribution of the sclerema was very symmetrical. The edges were map-like and well defined. The urine was pale, clear, and contained no albumin. The induration gradually cleared up, and recovery was complete in about five months. The treatment adopted was inunction with mercurial ointment, and later with cod-liver oil. In this case, as in one previously recorded by Dr. Garrod, the disease had evidently passed through its period of activity before the child was first seen, and this explained the absence of constitutional symptoms. In favourable cases the initial fall of temperature may be comparatively slight. The vigorous condition of the child, the absence of privations, and the fact that it was born in summer, were all factors tending to a favourable termination.

Mr. LOCKWOOD read a paper, and Dr. LEWIS JONES exhibited skiagrams, describing the case of a girl, ten years of age, suffering from Peripheral Hyperostosis, which was considered in connexion with pulmonary hypertrophic osteo-arthropathy. The hands and forearms, also the feet and legs, were much enlarged. The enlargement was mainly due to a thickening of the diaphysis of the bones of the leg. The soft parts may have been altered, the legs being œdematous. The girl had a sharp angular curvature of the spine in the dorsal region, but no abscess. The lungs were catarrhal at the base, and dulness at the apex indicated tubercle. Both the upper and lower extremities were enlarged. The fingers were clubbed with flat and spade-like ends. The phalanges and metacarpal bones were much thickened at the thin part of their shafts. The ends and joints seemed quite normal. The ulna and radius were also thickened. The legs were œdematous, but the lower end of the tibia and fibula and the bones of the foot and knee were much thicker than usual. The photographs showed an actual hyperostosis. The various bony thickenings seemed quite painless and without evidence of inflammation. There was impaired resonance and crepitations at the apices of the lungs. The absence of any joint affection seemed to separate this case from others of so-called pulmonary hypertrophic osteo-arthropathy. Thickening could hardly be due to periostitis. It was analogous, he thought, to the thickening on the concavity of the shaft of the bone sometimes seen in rickets.—Mr. MAKINS had seen a somewhat similar case in a girl aged twelve years, who had a dorsal curvature and big hands and feet resembling those in acromegaly. In his case, however, the skiagraphs did not show any change in the bones. He thought that the change in the phalanges resembled that in intra-uterine rickets.—The PRESIDENT asked if there had been any special treatment which accounted for the improvement. He thought that the case ought to be classed with hypertrophic pulmonary osteo-arthropathy rather than with acromegaly. Although the bones of the hand were thickened, the hand as a whole was not increased in width as in acromegaly, and the spinal curvature was lower than was usual in that complaint. There was hyperextension of the distal phalanges, as in Marie's description, but there did not appear to be the usual changes in the nails.—Dr. KINGSTON FOWLER drew attention to the clubbing of the fingers and asked if there were any signs of bronchiectasis. He referred to a case in which there were enlargements of the metacarpo-phalangeal joints and great clubbing of the fingers, in which at the necropsy the mischief proved to be extra-articular, and in which the clubbing entirely disappeared after death.—Mr. LOCKWOOD, in reply, said that there had been changes in the nails, but that they had disappeared as the child's health improved. He attributed the improvement to her removal from miserable surroundings and to good food and nursing. As the joints did not appear to be implicated in this case he preferred to call it "hyperostosis" rather than osteo-arthropathy.

Dr. ROLLESTON showed a case in which Excessive Urobilinuria followed and apparently depended on the Administration of Trional. The patient was a woman, aged fifty-seven years, who for two years had suffered from dropsy, "jaundice," and progressive shortness of breath. On admission she had a dilated heart, slight œdema, and a dirty yellow skin. There were purpuric patches on the thorax and abdomen. The urine was highly coloured, but contained no bile, nor was there any albumin. On the evenings of Nov. 2nd, 7th, and 9th twenty-grain doses of trional were given. On Nov. 9th the urine was of a deep orange colour, and as the possibility of hæmato-porphyrinuria due to trional suggested itself the administration of the drug was stopped. Dr. Buckmaster examined the urine spectroscopically, and found no trace of hæmato-porphyrin, while urobilin was present in excess, as shown by the

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fact that after dilution a well-marked band of urobilin was seen. The urine remained of this peculiar colour, though gradually diminishing in tint, until death on Nov. 17th. On Nov. 13th the temperature began to go up and delirium set in, which lasted until death from exhaustion. At the necropsy there was a localised empyema beween the lobes of the right lung, a dilated heart, and a "nutmeg" liver, which was not cirrhotic. It appeared probable that the patient had for some time been subject to urobilin jaundice, the source for excessive urobilin being the purpuric patches and the "nutmeg" liver, and that the trional brought about an increase in the urobilinuria. Urobilin and hæmato-porphyrin were closely allied, while sulphonal and trional resembled each other both chemically and physiologically. Sulphonal was known to give rise to hæmato-porphyrinuria. It seemed reasonable to believe that trional would give rise to excessive urobilinuria and that it would be specially liable to do so when there was excessive chronic venous congestion of the liver.—Dr. A. E. GARROD thought that hæmato-porphyrinuria did not necessarily imply excessive hæmolysis. In cases of profuse hæmato-porphyrinuria after sulphonal, examination of the blood did not show any active hæmolysis, but appeared to be due to an alteration of bilirubin by a special intestinal organism. Urobilin, on the other hand, was associated with increased hæmolysis and was hence increased in pernicious anæmia, in which hæmato-porphyrin was only present in the normal trace. It was also present in increased amount in cases of "nutmeg liver."

HARVEIAN SOCIETY OF LONDON.

Some Common Troubles following upon Childbirth.

A MEETING of this society was held on March 18th, Dr. MILSOM being in the chair.

Dr. BOXALL read a paper entitled Some Common Troubles following upon Childbirth. The chief facts relating to the mortality from puerperal fever were fully stated as statistics and illustrated by means of charts. Puerperal fever had not diminished in the past fifty years, but rather increased, especially in the provinces. In the practice of the General Lying-in Hospital during the "antiseptic period" (1879–1896) the mortality had been greatly diminished, and in all cases where the patient had been under hospital treatment throughout, not only had the mortality been diminished, but septicæmia had been eliminated and the death-rate had been lessened below that of private practice. Similarly satisfactory results had been obtained at other lying-in hospitals at home and abroad. Stress was laid on the superiority of perchloride of mercury solution as an antiseptic and on the details of its use. Dr. Boxall had found numerous cases of subinvolution, retroversion, laceration of the cervix, &c., in patients leaving the lying-in hospital, conditions requiring treatment being found in 56 out of 200 patients examined. He therefore recommended the routine examination of all patients before attendance ceased.

Dr. CULLINGWORTH bore testimony to the great value of the statistics collected by Dr. Boxall and also to the value of antiseptics, and dwelt on the results that had led to the discontinuance of "salufer" as an antiseptic.

Dr. MORTON called attention to the soloids of the biniodide introduced by Dr. Leith Napier. They were efficient, but more hygroscopic than the perchloride. He regretted that a longer trial had not been made of "salufer" in 1888.

Mr. HAZEL asked for particulars as to the technique of the process. Does the patient lie on her side or on her back? He mentioned the case of a patient under his care who was given the injection by the nurse whilst lying on her left side, and that she was caused so much local irritation and general disturbance thereby that she said she would rather die than have the injection again in this way. Did Dr. Boxall use a straight or curved tube; and did he prefer the tube to be of glass, gum-elastic, or celluloid?

The PRESIDENT observed that Dr. Boxall had made no reference to zymotic diseases in connexion with the subject. He would have liked to hear something about the effect of influenza, for he had seen two cases where the poison was very virulent, and in both instances proved fatal.

Dr. BOXALL, in reply, said that the douche was indicated before, during, and after labour. It was to be given into the vagina and not directly into the uterus, though some of the lotion entered the uterus, and should be squeezed out after douching. The dorsal position should be maintained throughout.

BRITISH GYNÆCOLOGICAL SOCIETY.

The Treatment of Inoperable Carcinoma.

A MEETING of this society was held on March 11th, Mr. MAYO ROBSON, President, being in the chair.

Mr. ARMSTRONG (Buxton) said that he had been asked to read a short paper on Dr. Beatson's Method of Treatment of Inoperable Carcinoma, but he was relieved of this duty by the presence among them of Dr. Beatson himself, who had come on the invitation of the council.

Dr. BEATSON (Glasgow), after acknowledging the invitation which he had received from the council through Mr. Armstrong, said that in his first case the mamma, axillary glands, and part of the pectoral muscle had been removed and found to be cancerous. Three months later the disease recurred, and further operation was impossible. Thyroid feeding was carried to the extent of producing a physiological effect, but in vain. The ovaries and tubes were then removed and the thyroid feeding again pushed. In little more than two months the patient had much improved; in five months the cancerous tissue had become yellow and fatty; and in six months it had gone. Now, at the end of twenty-one months, the tissues were sound and the woman was in good health. The case seemed to him to throw some light on the subject of carcinoma. He wished to specially consider three points—(*a*) the possible mode of origin of the cancer cells; (*b*) the relation of the cancer cells to surrounding tissues; and (*c*) the exciting cause of the cell-proliferation. (*a*) Did the cancer cells come from the normal epithelium of the part or had they an independent origin? The current view was that they arose from a transformation of the normal cells. But another idea was suggested by secondary growths. For instance, in the case of cancer of the liver secondary to a breast tumour they found that the breast-cells had become transplanted in the liver, whilst there was no proliferation of the liver cells themselves. Now if the liver growth had arisen from the proliferation of a cell implanted there, why might not such a process have been at work in the first place? (*b*) In a fast-growing carcinoma no bloodvessels were found; therefore, the growth must be nourished by surrounding lymph and neighbouring cells; from this he concluded that carcinoma cells must live on their neighbours. As some tissues formed better pabulum than others, the fact that some tissues were very resistant to cancer was thus explained. At the growing margin of a cancer the degenerate tissue cells testified to the parasitic action of the tumour. At the centre of the tumour, where no nourishing cells were present, the cancer cells tended to break down with a fatty, hyaline, or mucoid degeneration. (*c*). Three explanations had been given as to the exciting cause of the cell-proliferation. First, there was the recent parasite theory, which he regarded as not proven. Secondly, Cohnheim's theory was that it was due to the inclusion of epithelial cells. A third explanation was based on Goodsir's paper on Nutritive Centres, in which it was suggested that every organ had a nutritive centre in the shape of a few cells which normally disappear after they have done their work, and which if they persist may give rise to new growths. Dr. Beatson's theory was that the cancer growth was due to a return to activity of the germinal epithelium. In all cells there was a certain reproductive power which became lessened by the specialisation of the cells; but after this specialisation subsided the reproductive activity might re-awaken. It had seemed to him possible that in the case of the breast actual germinal cells might be present derived from the ovary. Further, the influence of removal of the ovaries on osteomalacia led him to think that it might be possible by the same means to influence the spread of cancer. He also employed the thyroid extract because of the well-known influence of this substance on lymph channels and spaces, by means of which the extension of cancer took place. His later cases included five cases of cancer of the breast and four of uterine cancer, but with these the results had not been satisfactory. His conclusions were, that early and wide removal of the growth was the proper treatment for cancer; if recurrence took place removal of the ovaries and tubes might be tried if the patient were young; if near the menopause he should in

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addition give thyroid extract, but if secondary deposits had occurred he regarded further treatment as useless.

The PRESIDENT thought that the plan of treatment they had just heard described might be well worth a trial in certain cases.

Mr. MARMADUKE SHEILD remarked that cancer generally occurred at or about the menopause, when the ovaries ceased to be active; but he thought it might be logical to remove the ovaries in the case of younger women, especially because cancer growth was always much more rapid in such cases. He had been asked to tell them something of the method of treating cancer by Coley's fluid. His own experience with it was limited to four cases, two of carcinoma and two of sarcoma; but he had closely observed cases treated by others. Coley's fluid was a preparation derived from a cultivation of the bacillus prodigiosus; the cultivation was filtered so as to give a sterile fluid. The idea was derived from an observation by Fehleisen, that certain growths disappeared under an attack of erysipelas, an observation confirmed by others. But sometimes the reverse might occur, and he had known two cases at St. George's Hospital where erysipelas attacked a carcinoma of the breast with a fatal result. His four cases with Coley's fluid were as follows:—1. Recurrent carcinoma of the breast. He injected with three minims of Coley's fluid on three occasions, but it made the patient very ill, and she would not go on with the treatment. 2. Tumour of the breast, with a clinical character of scirrhus. The patient would not consent to operation. Electricity had been tried. He gave injections four times, with the same result as in the first case. 3. Sarcoma of the thigh. The growth increased and broke down, and masses soon appeared in the abdomen. 4. This was also a case of sarcoma. The nodules disappeared under the injections, but, apparently from necrosis, they were not absorbed. The patient died from pyæmia, and general deposits were found in the body, the organism being the staphylococcus. He was inclined to agree with the opinion of Mr. Butlin, who had found the fluid of limited use in sarcoma, but of no use in carcinoma. In Dr. Coley's last letter he limited its application to cases of spindle-celled sarcoma, a variety which was apt to retrogress, especially when inflamed. Coley's fluid probably acted by setting up inflammation, and he believed that injection of tuberculous and similar substances might have the same effect.

The discussion was then adjourned.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

THE sixth meeting of the session was held on March 10th in the medical library of University College, Dr. AUST LAWRENCE being in the chair.

Dr. B. J. BARON showed a patient with Web in the Larynx due to thyrotomy for removal of growths on the vocal cords.—Dr. P. W. WILLIAMS made remarks on the case.

Mr. MORTON showed the following patients with: (*a*) Charcot's Disease of the Hip-joint, (*b*) Subclavian Aneurysm, (*c*) Hypospadias, (*d*) Large Fatty Growth in the Thigh, (*e*) Papilloma of the Tongue, and (*f*) several Nodules on the Dorsum of the Tongue associated with General Leucoplakia.

Dr. MICHELL CLARKE showed the following patients with: (*a*) Athetosis, and (*b*) Amyotrophic Lateral Sclerosis.—Dr. E. L. FOX remarked on the cases.

Mr. HARSANT showed a specimen of Stricture of the Œsophagus in which gastrostomy was successfully performed.—Mr. FIRTH, Dr. P. W. WILLIAMS, and Dr. AUST LAWRENCE spoke on the subject.

Professor FAWCETT showed the following anatomical specimens: (*a*) Skull with Complete Absence of the Left Lateral Sinus, (*b*) Michel's Diverticulum, (*c*) Five Months' Fœtus showing the Position in its Membranes, (*d*) Brain Convolutions, &c., (*e*) Coloured Dissections mounted in plaster-of-paris, (*f*) Model of Deep Abdominal Viscera, and (*g*) Dissection of an Anencephalous Monster.—Mr. HARSANT remarked on the specimens.

Dr. NEWNHAM showed a specimen of Ruptured Tubal Pregnancy successfully operated on.—Dr. AUST LAWRENCE, Dr. W. C. SWAYNE, and Dr. J. G. SWAYNE spoke on the subject.

Dr. AUST LAWRENCE showed a similar specimen.

Mr. C. W. J. BRASHER read a paper on Division and Ligature of the Vasa Deferentia for Prostatic Hypertrophy in a patient aged eighty-seven years.—Mr. PAUL BUSH related a similar case, and Mr. MORTON discussed the operation.

Mr. MUNRO SMITH read a paper on Dislocation of the Peroneus Longus treated by Operation.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Tubercle.

A SPECIAL meeting of this society was held on March 12th, the President, Dr. GODFREY CARTER, being in the chair.

The occasion of the meeting was an address by Mr. Watson Cheyne on Tubercle, with especial reference to tuberculous joints. The address was profusely illustrated by a series of very beautiful lantern slides, showing the histological character of the tuberculous change in the tissues and also a number of sections of tuberculous bones and joints bearing specially on their surgical treatment. The lecturer, having given a short account of the history of a tubercle and the changes which take place in the tissues surrounding it, showed that only a small proportion of the affected structures contained tuberculous material, and that when this small proportion had been dealt with the merely inflamed tissues would, under favourable circumstances, regain their normal condition. He pointed out the important bearing of this fact on the surgical treatment of tuberculous joints, and condemned strongly the formal excision of joints in young people, as opposed to the careful erasion of all tuberculous material from such joints, the likelihood being that by excision the epiphyseal line would be interfered with and subsequent growth of the bone rendered impossible. Mr. Watson Cheyne touched shortly on the treatment of tuberculous joints by extension, and said that the extension was not intended to drag the bones apart, but merely to tire out the muscles, whose contraction would tend to keep the diseased surfaces in contact. He also spoke favourably of the treatment by injection with iodoform emulsion. In conclusion he expressed the very decided opinion that the bacillus was the one cause of the tuberculous change and showed a representation of typical tuberculous disease in the limb of a goat in which a culture of the tubercle bacillus had been injected into the nutrient artery of the bone.

A discussion followed, in which Mr. PRIDGIN TEALE, Dr. JALLAND, Mr. LITTLEWOOD, Professor TREVELYAN, Dr. RABAGLIATI, Mr. HORROCKS, and others took part.

About fifty members and visitors dined together after the address.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Gastric Ulcer.—Fruit of Cream of Tartar Tree.—Exhibition of Cases and Specimens.

A MEETING of this society was held on March 5th, Mr. J. W. TEALE, President, being in the chair.

Dr. BARRS reported two cases of Gastric Ulcer in young women presenting points of special interest mainly in the methods of treatment adopted. The first case was admitted to the hospital for profuse and repeated hæmatemesis; at one time the profound anæmia placed life in the most obvious danger, but at the end of four days the patient was taking scraped beef, and at the end of six days later was eating ordinary diet without discomfort. In the beginning ordinary methods of treatment had been adopted, including the use of nutrient enemata and suppositories, but these had to be abandoned at the end of twenty-four hours on account of the great distress which their use entailed and the rectal discharge which they set up. Dr. Barrs expressed the opinion that the so-called nutrient suppositories and enemata had little or no nutritive value, and stated his entire disbelief in the existence of any digestive power in the rectal secretions or contents. The chief indication for treatment in such cases as that described

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consisted in the administration, either by the mouth or by the rectum or by both, of sufficient water to keep the patient free from thirst (usually a most urgent symptom in profuse hæmatemesis) and to abstain from all attempts at feeding until the patient is able to take solid food by the mouth without pain or vomiting, when well-cooked meat is probably the most valuable and most easily digested aliment. In the second case it was feared that perforation had taken place, and the abdomen was opened between the umbilicus and the ensiform cartilage, but no evidence of peritonitis could be found. The wound was closed, and the patient, surgically speaking, made an uninterrupted recovery; but she still suffered from a certain amount of pain after food and occasional vomiting, with slight hæmatemesis. The operation was justified by the signs that were present, but perhaps the occurrence of profuse hæmatemesis ought to be regarded as strongly negativing the likelihood of perforation at the same time.

Dr. SHARP showed a specimen of the Fruit of the Cream of Tartar Tree from the Transvaal, and said it was stated in text-books that the cream of tartar tree was Adansonia Gregorii, a native of Northern Australia, but it was not possible to say, in the absence of leaves, &c., whether his specimen belonged to this species or to Adansonia digitata, which is a native of Africa, and is called the baobab, monkey bread, or Ethiopian sour gourd. The fruits of both Adansonia digitata and Adansonia Gregorii have a very similar composition. The extract of the leaves of the former evidently contains an agent which checks excessive perspiration, the pulp of both species is employed as a remedy in dysentery, and the juice expressed from the pulp is used as a drink in the fevers which prevail in the districts. Two German observers found tartaric acid and cream of tartar in the pulp, but there seems some doubt as to the species, while an English observer, whose specimen was also doubtful as to species, found chiefly acid malate of potassium. Dr. Sharp said he owed the specimen to the kindness of Mr. Richard Reynolds.

Dr. HELLIER showed a case of Tetany in a woman, aged twenty-nine years. Five years ago, when near the end of her second pregnancy, labour was brought on by a fright. Since then she had suffered at frequent intervals from attacks of painful tonic contractions of the wrists and elbows, the fingers being extended and adducted. The attacks last eight or nine hours, and she is rarely free for two or three weeks. The flaccid muscles contract on percussing the facial nerve (Chovstek's symptom).

Dr. BRONNER showed a Knife in shape resembling a sharp-edged ophthalmic tenotomy hook with a probe point, which he used for slitting up tonsils, the probe end being inserted into the distended follicles.

Mr. LITTLEWOOD showed an old case of Trephining. The patient was a male, aged nineteen years. In June, 1893, he was trephined over the left Rolandic area a month after a fracture of the vertex. He made a good recovery, and did hard work until June, 1896. He then fell ill with vomiting, headache, nystagmus, and weakness on the right side, and was under medical treatment until January, 1897. As he made no improvement and appeared to vomit everything, an operation was decided on. Mr. Littlewood turned down the old flap and exposed the trephine opening; it was about two inches in its longest diameter, and was closed with firm fibrous tissue. This membrane was cut through near the bony margin except at the lower part, and separated from the brain, to which it was adherent over an area of about one and a half inches in diameter, and replaced without stitching, so as to allow the brain to bulge through the opening. The scalp flap was stitched over this. The patient made a good recovery, and has not vomited since the operation. Mr. Littlewood remarked that it was difficult to understand why the operation had succeeded in such a remarkable way.

The following cases and specimens were also shown:—

Dr. NUNNELEY: (1) Case of Optic Neuritis, and (2) case of Pulsating Exophthalmos.

Dr. TREVELYAN: (1) Tremor of the Right Arm, and (2) Sections of Cerebral Tumour.

Mr. LAWFORD KNAGGS: Cæcum and Appendix, the latter having sloughed.

Dr. CHURTON: (1) Case of Enlarged Spleen, and (2) case of Syphilitic Spinal Meningitis.

Dr. WHITEHEAD: Microscopical Preparations of (1) Sarcoma of the Choroid, and (2) Glio-sarcoma of the Retina.

MIDLAND MEDICAL SOCIETY.

Mediastinal Tumour.—Resection of Colon.—Spinal Caries.

A MEETING of this society was held on March 3rd, the President, Dr. A. H. CARTER, being in the chair.

The PRESIDENT showed a case of Mediastinal Tumour in a man aged fifty-five years. The sole pressure signs were intense venous hyperæmia of the head and face, coupled with prominence of the superficial veins of the neck and the arms, more particularly the right arm. The diagnosis lay between aneurysm and tumour; if the latter, probably lympho-sarcoma.

Mr. F. MARSH showed a woman, aged thirty-two years, who was admitted into the Queen's Hospital, Birmingham, on July 22nd, 1896, for Chronic Intestinal Obstruction of five months' duration, which, however, had been complete for ten days. The abdomen was tympanitic and very tender to manipulation. Nothing definite could be detected by external, rectal, or vaginal examination. Enemata having failed to give relief, an exploratory opening was made in the middle line of the abdomen on July 24th, and a constricting growth was felt in the upper part of the sigmoid colon. The median incision was therefore closed and a second was made in the usual site for iliac colotomy. With a little difficulty a loop of the sigmoid colon with the part involved was brought out through the wound, and fixed, after the manner first described by Mr. Marsh in 1890, by passing a glass rod through the meso-colon. The following day a small opening was made in the colon above the constrictions to permit the escape of flatus and liquid fæces, and on July 31st the whole of the protruding loop with the growth was removed with the thermo-cautery. Owing to the yielding of adhesions in the lower angle there was after the final severance smart hæmorrhage from a large mesenteric vessel, which was stopped by pressure forceps left on to prevent the lower segment of colon from slipping back into the abdomen. The patient made a rapid recovery and left the hospital eighteen days later with a very satisfactory artificial anus. The growth was a large annular adenoid carcinoma. As the patient was in a collapsed condition at the time of the operation, and the abdomen and intestines were greatly distended, Mr. Marsh thought it wise to wait for a few months before performing an intestinal anastomosis. On Nov. 10th the patient was re-admitted, and on the 20th an elliptical incision was made round the artificial anus, which had become much contracted and indurated, and the tissues with the ends of the colon were excised. The lumen of the lower segment had considerably diminished from disease, and there was little difficulty in inserting the largest size Murphy's button, which was used to approximate the two ends. There was no recurrence either locally or in the abdominal glands. The button was felt in the rectum and was extracted on the eleventh day. The patient steadily gained weight after the colectomy and had no difficulty with the action of the bowels since the anastomosis. She is now in robust health.

Mr. JORDAN LLOYD read a paper on Practical Observations on the Symptoms, Diagnosis, and Treatment of Spinal Caries. He referred to the variability of the cardinal symptoms and deformity, rigidity, and pain in the several regions of the spine, and described the best methods of examining the vertebral column in its different parts. He thought that Sayre's plaster-of-paris support gave the best results in the majority of cases, and insisted on the advantage of recumbency as far as was consistent with good general health in all cases. He thought chronic abscesses were best left alone until they came quite near to the surface, and referred to a series of cases of laminectomy for paraplegia attended with the best results.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on March 11th, the President, Mr. RECKLESS, being in the chair.

A letter from Lord Lister in acknowledgement of a resolution of the society congratulating him on his elevation to the Peerage was read and ordered to be entered on the minutes.

Dr. PORTER showed: (1) A case of Lead Poisoning with

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fine general tremor like that of disseminated sclerosis; and (2) a case of Lateral Sclerosis.

Dr. BURGESS showed: (1) A case of Syphilitic Laryngitis; and (2) two cases of Muscular Atrophy.

Dr. ANDERSON demonstrated the method of Serum Diagnosis of Typhoid Fever. He showed under microscopes (1) a hanging drop culture to which serum from a patient suffering from typhoid fever was added; and (2) a similar hanging drop culture to which serum from a healthy person was added. He referred to the researches of Pfeiffer, Gruber, and Durham, and pointed out the bearing of their observations on the later work of Widal and Grünbaum. He described the microscopic and macroscopic methods of observing the re-action, and showed capillary tubes illustrating the latter method. He insisted on the necessity of avoiding contamination in the collection and examination of the blood, and thought it was always better to obtain a clear serum, which was most easily done by collecting the blood in sterilised pipettes and blowing it into a sterilised test-tube, as Durham suggested. It was necessary to dilute the serum, but more extended observations were required to fix the limit of dilution and the time-limit of observation by the re-action. Bacilli from old agar cultures were very rapidly agglomerated by typhoid serum and even more powerfully affected by normal blood than young growths twenty-four hours old. With very virulent cultures the re-action is delayed. Dr. Anderson had examined thirty-five cases; twenty-nine were clinically typhoid fever, and of these twenty-seven gave the re-action within half an hour, but in two the re-action was incomplete after twenty-four hours. Three cases of acute lobar pneumonia, one of pleurisy, and two of gastritis gave no re-action.—The PRESIDENT, Dr. HARGREAVES, Dr. RICHARDS, and Dr. BURGESS made remarks.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases.

A MEETING of this society was held on March 11th, the President, Mr. WILLIAMSON, being in the chair.

Dr. MCDONALD showed a man whose abdomen had been opened in Hamburg for an Abscess following Dysentery, but there seemed to be no positive evidence of its hepatic origin. He went home apparently recovered, but a month later was attacked with a violent pain in his right side, when he developed a swelling in the hepatic region and a typical pus temperature. The abscess was opened in December and characteristic chocolate-coloured pus escaped. The patient had recovered, but at the site of the first incision a hernia formed into which the stomach had prolapsed. Troublesome gastric symptoms now existed for which a third operation was required.

Dr. MCDONALD next showed three children operated upon for Tuberculous Peritonitis. The fluid had been washed out, adhesions broken down, and the wound sutured without drainage. All had made good recoveries.

Dr. MCDONALD also showed a woman whose Breast and Axillary Contents were Excised in January, 1895. She was operated upon for recurrence three times subsequently, and was free from any local growth. She presented the swelling over the sternum characteristic of bone-marrow infection and had pain in her lumbar spine.

Professor GEORGE MURRAY showed typical examples of Exophthalmic Goitre and of Spleno-medullary Leukæmia.

Mr. PAGE showed a girl twelve years of age who when ve years old had suffered from Tabes Mesenterica. She recovered, and, though not robust, had not been ill since. Nine days before admission into the infirmary she was suddenly seized with abdominal pain and developed peritonitis. She was admitted with a large pericæcal abscess, which was incised and drained. For two days she was much relieved and promised well, but on the fourth day her condition again became critical. She was in great pain; her abdomen was much distended, neither flatus nor fæces had passed for two days, and she frequently vomited fluid with a distinct fæcal odour. A small opening was made in the middle line below the umbilicus; the first distended coil was drawn out and a Paul's tube was secured in it. The vomiting ceased at once, and for more than a month the evacuations all escaped by the fæcal fistula. This had closed up spontaneously. The bowels were now acting regularly by the natural channel and the patient was well.

Dr LIMONT showed several patients with skin disease, including cases of Rodent Ulcer, a case of the Band Form of Morphœa in a child causing great deformity and incapacity, and a case of Universal Seborrhœic Dermatitis of fourteen years' duration nearly well after a month of treatment.

Mr. RUTHERFORD MORISON showed a patient, together with a Skiagram of his Forearm, which had been recently Fractured between the Pronator and Supinator Muscles. The arm was much disabled, as the power of supination was markedly diminished. He also showed a dissected specimen of a similar fracture which illustrated the Pronation of the Lower Fragment of the Radius and the Supination of the Upper.

Dr. DRUMMOND showed a woman, fifty-four years of age, with Dulness and Pulsation under her Manubrium Sterni and a Pulsating Swelling extending into the Neck. The patient had no dyspnœa such as could scarcely fail to be produced by direct pressure on the trachea if a large aneurysm existed in this situation. The diagnosis was fusiform dilatation of the aortic arch and high origin of the innominate.

Dr. DRUMMOND also showed a man who had partaken freely of all kinds of liquor, and was admitted into the infirmary a month ago with Advanced Œdema affecting his whole body surface (alcoholic œdema). Everywhere his skin pitted deeply on pressure, and in addition he was in a dazed mental condition. There was no albumin in his urine, and beyond the cardiac feebleness and dilatation due to alcohol he had no heart affection. With rest, nourishment, and abstinence from alcohol he was now almost well mentally and bodily.

Mr. OUSTON showed a series of cases illustrating varieties of inflammatory diseases of the Maxillary Antrum. He advocated an opening above and behind the apex of the socket of the right canine tooth, the patency of which was to be maintained by a lead style worn as long as necessary.

Mr. OUSTON also showed a young woman whose symptoms had commenced after a serious illness, probably Typhoid Fever. Fourteen years before she had complained of gradually increasing dyspnœa and had paroxysms threatening life. Laryngeal examination showed complete abductor paralysis; tracheotomy had been performed, and she was now entirely relieved, but it seemed probable that she would be permanently dependent on the tube. No cause could be found or explanation given for her condition.

EDINBURGH OBSTETRICAL SOCIETY.

Extra-uterine Gestation.—Substitute for Forceps.—Electro-negative Puncture in the Treatment of Fibroids.—Fœtal Malformations.

A MEETING of this society was held on March 10th, Dr. ALEXANDER BALLANTYNE, President, being in the chair.

Dr. BERRY HART read a paper on the Extra-peritoneal Incision in Extra-uterine Gestation Intact and at Mid-term. While the conditions of an extra-uterine gestation may be very varied, there are practically three possibilities in intact forms. In the first two months the gestation is in the Fallopian tube, and intact or ruptured. At the third month it begins to develop between the layers of the broad ligament and lose its pediculated characteristic. At the fourth and fifth months it is usually embedded in the pelvic connective tissue and broad ligament, and may go on developing extra-peritoneally, but as a rule the fœtus escapes into the peritoneal cavity and the placenta remains extra-peritoneal or tubal. He specially referred to the second variety, having operated on five such cases. The first case had ruptured before operation and the patient died subsequently; the others recovered. The treatment should be wholly operative. In this class of case—mid-term and intact—the gestation is extra-peritoneal; the possibility of its being an ovarian pregnancy is most remote, and primary intra-peritoneal gestation is a myth. Dr. Hart advocates extra-peritoneal incision where possible, immediate removal of the fœtus, and, to avoid bleeding, the tamponade of the sac till the placenta is thrombosed if it cannot be easily separated. He thinks it better to open the abdomen in the middle line first, and thus to find the relations of the gestation and the reflection of the peritoneum. The vaginal route for operation is more difficult if the fœtus and placenta are present, and control of hæmorrhage is very difficult, as the tampon cannot be so effectively applied.

Dr. J. W. BALLANTYNE communicated a paper by Dr. C. F. Ponder (Kalimpong) on the Action of Midwifery Forceps. He believed that, apart from pelvic deformity,

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fœtal hydrocephalus, or similar conditions, the main cause of difficulty in labour was in the non-dilatability of the soft structures of the pelvis, and he advocated the use of an instrument which would dilate the soft parts and make way for the head; he would give it the name of "dilating sector."

Dr. F. W. N. HAULTAIN read a paper on Electro-negative Puncture in the Treatment of Fibroids, a record of three cases. The first patient was thirty-six years of age and had suffered for many years from a large uterine fibroid. The hæmorrhage had so reduced her that her appendages were removed. The operation did not arrest the hæmorrhage, the tumour continued to increase, and her condition went from bad to worse. Pressure symptoms were developed, with retention of urine and albuminuria, and pains in the back and cramp in the legs. She was not free from pain except under morphia; ergotin and other medicinal treatment were used. Hysterectomy had been recommended, but before this was resorted to it was determined to give a trial to electric treatment. Dr. Haultain adopted negative electro-puncture through the posterior vaginal wall, the tumour filling the true pelvis. A current of 150 milliampères was passed without great discomfort. In a week a second application was made, and two days afterwards she was entirely free from pain. Applications were made at first at weekly intervals, and afterwards twice a week. In all twenty applications were made. There was some relapse from fatigue, but another course of treatment was given, when the tumour was found to have passed into the abdominal cavity, and the cervix could be reached with ease. Intra-uterine positive electricity was then commenced. For many months she has been in good health, menstruating regularly, and the tumour was diminished and moveable. The second patient was unmarried, was thirty-eight years of age, and also suffered from retention of urine. A large solid mass was found in the pelvis and reached above the umbilicus. It could not be pushed above the brim, even with the patient anæsthetised. Electro-negative puncture was made and a current of 180 milliampères passed. Micturition was spontaneously accomplished the same day. Fifteen other applications were made, and the tumour had then so diminished in size that an intra-uterine treatment could be carried out; fifteen applications of the negative pole in this position were made. The patient was seen recently, after an interval of over three years, and was in perfect health, with the tumour of the size of a small cocoanut and freely moveable with the uterus. The third patient was forty-six years of age, and suffered from complete urinary retention. A large tumour was found impacted in the pelvic brim. After three electro-negative punctures the retention was cured. In carrying out this treatment the vagina is thoroughly disinfected and cocaine is applied to the seat of puncture. The puncture is made by means of a thin steel electrode, insulated to within three-eighths of an inch of its point. This is inserted by a rotatory movement through the vaginal wall for at least one and a half inches into the tumour. The current is completed by the usual abdominal pad, and a continuous current of from 120 to 200 milliampères passed for from five to ten minutes. After withdrawal the vagina is again syringed and a pledget of iodoform gauze applied for forty-eight hours. This form of needle and the antisepsis prevent the putrid sloughing of the tumour previously met with in this method of treatment. Electricity is a conservative measure, and with the means detailed in this paper has no mortality. It has a decided curative action in some cases. It in no way increases the danger of subsequent operation, and in the large proportion of cases it should be employed before resorting to serious surgical interference.

Dr. J. W. BALLANTYNE showed photographs sent by Dr. Michin of Charkow, Russia, illustrating two cases of Thoracopagous Double Monsters, one of a Fœtus Dicephalus Tribrachius Tripus, one of Pelvis Fissa and Ectopia Vesicæ, three of Hemicephalus, and one of Mikromelus. All these cases were from the Charkow clinic.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Nephro-lithotomy and Nephrectomy.

A MEETING of this section was held on March 5th, Mr. WILLIAM THOMSON, President, being in the chair.

Mr. MYLES read a paper on Nephro-lithotomy and Nephrectomy. Having given details of several cases of successful operations for removal of renal calculi, he drew attention to one case in which nephrectomy for renal abscess had been performed and the kidney explored with the finger, but no stone detected. Subsequently the kidney was removed and was found to contain a calculus about the size of a hazel-nut and to consist of a series of abscess cavities. One case mentioned was operated on from the loin for the purpose of fixing a floating kidney, but on exposure the kidney was found to be cystic and it was accordingly removed. The mobility probably caused the cysts by intermittent blocking of the channel through kinking of the ureter. Mr. Myles then discussed the advisability of needling the kidney for exploratory purposes from the loin, as a substitute for lumbar or abdominal exploration, and pointed out the difficulties and dangers of the operation. He next detailed his attempts to obtain Roentgen photographs of stone in the kidney, and showed the practicability of the idea by exhibiting a photograph of a cadaver in the kidney of which he had placed a large renal calculus.

The PRESIDENT said that with regard to the question of needling as an aid to diagnosis he did not believe in sticking a needle into the loin in the hope of finding the kidney or of hitting a stone.

Mr. BALL said that in experimenting with the x rays one ought to be cautious in drawing conclusions as to the presence of a stone. From the photographs which Mr. Myles exhibited it could be seen that some calculi gave photographs like those given by gall-stones, which are very transparent. The skiagraph was of no use, he said, in cases of cholesterine calculi. Calculi containing a large quantity of lime or phosphate gave a good skiagraph; but lithic acid was almost as transparent as cholesterine.

Mr. M'ARDLE thought the x rays of great value in the diagnosis of calculi. He had experimented with tubes somewhat different from the usual kind, and had found that cholesterine crystals were shown very clearly, so that the question of translucency was of no weight at all. With regard to needling, he had himself practised it as well as passing sutures through the kidney in his first operations on floating kidney, but he had now abandoned the practice as the results had been unfavourable.

Mr. R. LANE JOYNT said that from skiagraphy negative results were sometimes obtained. With reference to the case at present in hospital to which Mr. Myles had referred, the shadows on the first plate, though definite, could not be recognised as any known objects. A second photograph showed the ilium, but not the spine, and was therefore rejected. A third photograph revealed the spinal column distinctly, but no calculus was evident. He therefore concluded that, at all events, an opaque calculus was not present, but that a translucent calculus might be present.

SECTION OF OBSTETRICS.

The Anticipation of Post-partum Hæmorrhage.

A meeting of this section was held on Feb. 12th, Mr. HORNE being in the chair.

Dr. LOMBE ATTHILL read a paper on the Anticipation of Post-partum Hæmorrhage. He advocated the exhibition of ergot in combination with doses of from five to ten drops of liquor strychniæ for two or three weeks prior to the date at which labour was calculated to set in in the case of patients in whom a tendency to post-partum hæmorrhage was known to exist, and he gave the details of cases in which this treatment was followed by the most satisfactory results. He stated that the exhibition of ergot when hæmorrhage had set in was seldom of use, because ergot to produce any permanent effect on the uterus requires to be administered at least some hours previously and the dose must be repeated at intervals of about two hours. He had for many years carried out this treatment in all suitable cases; it had never failed to produce good results, and had never caused unpleasant symptoms or injured either mother or child. So far from inducing labour to set in prematurely, the exhibition of ergot and strychnine tended to retard its onset. Thus, in the case of one patient who on several occasions had nearly lost her life from post-partum hæmorrhage, not only was hæmorrhage averted, but the term of utero-gestation was prolonged to the 293rd day, calculated from the end of the last menstrual period; while on the three previous occasions labour with her had set in on about the 270th day; and in another case, while hæmorrhage was in like manner averted, labour did not set

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in till the 288th day—this patient's previous pregnancies having always terminated prematurely. Dr. Atthill also advocated the exhibition of ergot in cases of threatened abortion as being, coupled with absolute rest, the best method of preventing its occurrence.

Mr. HORNE said that he had had opportunities of seeing one of the patients to whom Dr. Atthill administered ergot for some weeks before her confinement, and he could bear out his statement that very little blood was lost. He thought that the administration of ergot before uterine action set in had very little effect. The great danger in using it was when the membranes had ruptured and the waters escaped. The tonic effect of the ergot was then likely to stop the circulation of the fœtus and cause its death.

Dr. ALFRED SMITH said that on the proper management of the third stage of labour depended the chief security against post-partum hæmorrhage. He had never had in private practice a case of post-partum hæmorrhage where the labour was otherwise normal. He had seen severe cases of it in the Rotunda Hospital when he was a student, but rarely where there was proper attendance in the third stage of labour. He frequently used Dr. Atthill's mixture of ergot and strychnine in cases of threatened abortion or miscarriage.

Dr. F. W. KIDD believed that some students acquired the habit of resorting too soon in the third stage of labour to Credé's method of expelling the placenta, and that that practice was a very prevalent cause of post-partum hæmorrhage.

Reviews and Notices of Books.

The Cell in Development and Inheritance. By EDMUND B. WILSON, Ph.D., Professor of Invertebrate Zoology, Columbia University. New York and London: Macmillan and Co. 1896. Pp. 371. Price 14*s*.

WE heartily recommend this book. There are many practitioners who have neither time nor disposition to read the larger treatises on botany or histology in which the modern views on the structure and functions of the cell are to be found in some detail, yet are desirous of following the progress of science so far as to be able to comprehend the new terms that are gradually making their way into common use in scientific treatises. In the present volume they will find an admirable exposition of the knowledge that has been acquired by the labours of a succession of keen observers during the last twenty years. In that space of time an immense mass of material has accumulated, needing much discriminative power and acumen to sift, compare, and appreciate, all which Dr. Wilson has accomplished in a very satisfactory manner. The improvement in the power of the microscope and the remarkable advances that have been made in staining the several tissues and even the several parts of a cell have led to the recognition of structure where but a few years ago none was supposed to exist. It is, indeed, highly interesting and instructive to contrast the account of the structure of a cell as given by Schleiden in 1849 with that which is taught by the modern histologist. For Schleiden the cell originated in a nucleus or cytoblast formed by the approximation of particles of mucus or cytoplasm, around which a gelatinous mass developed, the whole being enclosed in a cell wall. The only named parts were the nucleolus, nucleus, and nuclear membrane, protoplasm and cell contents such as chlorophyll, starch, oil, and crystals formed from protoplasm, and the cell membrane lined by a special layer of protoplasm named Mohl's primordial utricle. No structural features were observed by him in the nucleus. The only staining agents at his command were iodine and nitric and sulphuric acids. The structure of a cell as now given is a very different affair. The cell wall, though generally present in the cells of plants, is no longer regarded as an essential constituent, and when existent is usually almost inactive and lifeless. In many cases pores have been discovered through which bridges of protoplasm pass effecting a connexion between adjoining cells. The cell contents present a delicate reticulum or mitome composed of microsomes or granules, containing in their interspaces cytoplasm and in addition various lifeless bodies such as food granules, pigment bodies, drops of oil or water, excretory matters, and other particles, known as plastids or protoplasts, capable of growth and division. Finally, there are the curious bodies known as centrosomes, with their attraction spheres, the importance of which in the multiplication of the cell has only lately been recognised and which is still the subject of inquiry. Then in regard to the nucleus we have the plasmosome or nucleolus, the chromatin and linin network, with their karyosomes or net-knots. The reader will find a chapter devoted to the process of cell division, in which are brought together the results of all the recent researches of Reinke, Hortwig, Boveri, Erlanger, and Flemming, with a full account of the process of mitosis or indirect division, with its prophases, metaphases, anaphases, and telophases—information not hitherto readily accessible. The chemical composition of the nucleus seems to be almost as complex as its histological structure, for no less than five substances have been differentiated—viz, chromatin, composing the reticulum and net-knots; linin, including the achromatic network and the spindle fibres arising from it; paralinin, the ground substance; pyrenin or parachromatin, forming the inner mass of true nucleoli; and amphipyrenin, which is the substance of the nuclear membrane. Dr. Wilson gives a full account of the processes that have been observed in the fertilisation of the ovum, with those of oogenesis and spermatogenesis. A very interesting chapter is devoted to some problems of cell organisation in which the origin of the microsomes, the connexion between the nuclear and cytoplasmic fibres, and the nature of the chromosomes, centrosomes, and attraction spheres are discussed. He quotes and apparently coincides with Rabl in thinking that the chromosomes do not lose their individuality at the close of division, but persist in the chromatic reticulum of the resting nucleus, and that whatever be the number of chromosomes entering into the formation of a reticular nucleus the same number afterwards issue from it; whilst Boveri is of opinion that we may identify every chromatic element arising from a resting nucleus with a definite element that entered into the formation of that nucleus, from which the remarkable conclusion follows that in all cells derived in the regular course of division from the fertilised egg one half of the chromosomes are of strictly paternal origin, the other half of maternal, a view that has been supported recently by the observations of Rückert, Häcker, Herla, and Zoja. One of the chapters which will be read with much interest is that which deals with the theories of inheritance and development, and especially with those of Roux and Weismann and of Hortwig and de Vries, at the close of which the writer frankly admits that an explanation of development is at present beyond our reach when he observes: "After removing the lens of the eye in the larval salamander we see it restored in perfect and typical form by regeneration from the posterior layer of the iris, we behold an adaptive response to changed conditions of which the organism can have had no antecedent experience either ontogenetic or phylogenetic, and one of so marvellous a character that we are made to realise, as by a flash of light, how far we still are from a solution of this problem." The text is prodigally illustrated by well-executed woodcuts, which in themselves are sufficient evidence of the variety and interest of the phenomena exhibited by the cell, and only lead to the fear that in the next generation there will be a special department of cytology with its own methods of research and its own language, as it has rapidly developed its own history and bibliography, which, it may be added, the student will here find well worked up to date.

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Transactions of the Ophthalmological Society of the United Kingdom. Vol. XVI. Session 1895-96. London: J. & A. Churchill. 1896. Price 12*s.* 6*d.*

THE present volume of the Transactions of this active and vigorous society, edited by its able secretaries, Dr. Habershon and Mr. Lawford, is quite equal in the value of its contents to any of its predecessors. The introductory address was delivered by Mr. Nettleship, who dwelt on the many points that still require elucidation in ophthalmological work. The Bowman Lecture was given by Dr. H. Snellen, who gave as the modest title to his interesting paper "Notes on Vision and Retinal Perception," and dealt with the question of the accuracy of the ordinary methods of testing the acuteness of vision, both in regard to the form of the object employed as a test and the degree of illumination under which it is examined. The articles contained in the volume are arranged in topographical order and, commencing with the eyelids, successively give the diseases of the conjunctiva, cornea, iris, lens, choroid, retina, and optic nerve, and intra-ocular tumours, diseases of the orbit and congenital abnormalities, whilst a considerable section is devoted to miscellaneous contributions. Amongst the more important and interesting specimens and cases brought before the society may be mentioned an example of Alveolar Cancer of the Eyelid, by Mr. Simeon Snell, which is illustrated in a plate and appears to have originated in the acini of the Meibomian glands; several cases of Films of the Cornea, illustrated in a chromo-lithographic plate, by Mr. Frost and Mr. Poulett Wells; a Uveal Cyst of the Iris, by Mr. H. Eales and Mr. W. Sinclair; an article on the Treatment of Detached Retina, by Mr. Charles Wray, which led to a record of the experience of the President, of Mr. Tweedy, Mr. Snell, Mr. Eve, and others, none showing very favourable results; Mr. Lawford, Mr. W. G. Laws, and Mr. Hartridge give accounts and coloured illustrations of Retinitis Circinata; Dr. F. M. Ogilvie describes cases of Optic Atrophy in Three Brothers; and another case of Hereditary Optic Atrophy is brought forward by Dr. R. D. Batten; Mr. Spicer records a case of Chronic Retro-bulbar Optic Neuritis, with Permanent Change in the Nerve, set up by the use of Tobacco. Mr. Treacher Collins contributes an interesting paper on Intra-ocular Tumours, which he is well qualified to discuss. Mr. Jessop has collected many cases of Exophthalmic Goitre, showing the results in regard to vision that occur when the protrusion is considerable. Perhaps the best article in the volume is one by Dr. George Bull of Paris on the Visual Effects of Refractive Error, containing numerous illustrations of the appearances seen by astigmatic patients. Dr. George Dean and Mr. C. H. Usher of Aberdeen also contribute a valuable paper on the Course of the Fibres of the Optic Nerve, chiefly drawn from observations made on the rabbit. Mr. Simeon Snell gives the result of further inquiries he has made on Nystagmus, which he shows may be acquired in other occupations than coal mining.

A Manual of Obstetrics. By W. A. NEWMAN DORLAND, A.M., M.D., Assistant Demonstrator of Obstetrics, University of Pennsylvania, &c. With 163 Illustrations in the Text and six full-page Plates. London: Henry Kimpton. 1896. Price 12*s.*

THE author's chief object in preparing this manual has been to produce "a systematic and rational presentation of the subject of obstetrics as recognised by the leading teachers of the day." He divides his work into two parts, the first dealing with what he calls physiologic obstetrics, in which the course of events is followed in a natural sequence, starting from conception and ending with the time when the child is weaned. In the second part of the work the pathological deviations from the normal type are dealt with. We observe that the measurements in the text are given on the metric system and the equivalent measurements in inches are given in brackets afterwards. Thus, the external conjugate or diameter of Baudelocque is given as being normally 20½ cm. (7·9724 in.), and we are told that this is 9¼ cm. (3 6417 in.) more than the true conjugate. We should be inclined to think this method is not likely to make it easy for the student to remember the approximate measurement. An English teacher would say the external conjugate measures about 7⅞ in., and is therefore about 3½ in. greater than the conjugate of the pelvic brim. The same kind of criticism applies to the measurements given of the fœtal skull. We observe it stated among the symptoms given as indicating hydatidiform mole that there is "a discharge of a sero-sanguineous fluid containing the peculiar vesicular growths," whereas we believe it to be extremely unusual for these cysts to be found in the discharge, except, of course, when the mole is in process of being spontaneously expelled. There are several terms and expressions that would probably excite consternation if they appeared in the examination papers at the Hall on the Embankment. We can imagine the feelings of the average candidate if asked "What is the difference, if any, between the 'alligator boy' and the 'collodion fœtus'? State what you know of 'Ectromelus,' and describe Cooke's method of treating asphyxia neonatorum." This we find to be the rapid introduction of the lubricated finger into the rectum. It is only fair to add that the danger of causing permanent rectal incontinence is pointed out.

The book is of a convenient size, the illustrations are good, and the information given is generally reliable.

LIBRARY TABLE.

Dental Surgery for Medical Practitioners and Students of Medicine. By A. W. BARRETT. Third Edition with Illustrations. London: H. K. Lewis. 1897. Price 3*s.* 6*d.*—That this small volume should have reached a third edition is sufficient proof that it has been of some value to the medical student. A perusal of its pages shows that the information given is reliable, but we cannot help feeling that much more that is useful might be added, while perhaps the portions dealing with irregularities and caries of the teeth might be curtailed. It is, of course, necessary that the medical man should be able to recognise both irregularities and caries of the teeth, but the section dealing with the treatment of these hardly perhaps falls within the scope of this class of book. In future editions we would suggest that such subjects as "lancing the gum" should be more fully dealt with, as well as the reflex disturbance which can at times be traced to dentition. Some hints and directions, too, might with advantage be added for the treatment of cases where dentures have been swallowed, and the subject of Pyorrhœa Alveolaris might certainly be more fully dealt with, as well as many other subjects on the borderland between general and dental practice.

The Spas and Mineral Waters of Europe. By HERMANN WEBER, M.D. Bonn, F.R.C.P.Lond., and F. PARKES WEBER, M.D. Cantab., M.R.C.P. Lond. London: Smith, Elder, and Co. 1896.—Physicians will be grateful to the authors of this compendious manual for having afforded them the means of estimating the comparative value of British and Continental health resorts in respect to the character of the mineral spas and baths to be found therein. The details referring to each place are brief but sufficient, affording just that amount of information that is essential whilst more competent guides could not be found. The various "waters" are grouped into the following series, to each of which a separate chapter is devoted: (1) simple or indifferent thermal; (2) common salt or muriated; (3) simple alkaline; (4) muriated alkaline; (5) sulphated alkaline; (6) sulphated and muriated alkaline; (7) iron or

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chalybeate; (8) arsenical; (9) sulphur; and (10) earthy or calcareous. These descriptions are preceded by chapters in which the question of balneo-therapy is discussed from the general standpoint and the mode of life at a Continental spa is sketched. At the close of the volume, after sections dealing with table waters and marine spas, there comes a most valuable chapter in which the reader has the advantage of learning on the best authority the therapeutical indications for the prescription of a sojourn in these resorts. Needless to say that the advice is thoroughly sensible and practical. A copious bibliography is appended to the volume.

Septic Conditions of the Infantile Alimentary Canal and their Treatment. By F. W. FORBES ROSS, M.D. Edin. London: The Rebman Publishing Company. 1897. Price 7*s.* 6*d.*—The subject of this monograph is one of great interest and importance, thoroughly deserving of scientific investigation and elucidation. Yet we are constrained to admit that the author has not done justice to his theme or to himself in the manner in which he has dealt with it. His style is lacking in simplicity and it is often difficult to seize upon the precise meaning he attaches to phrases and terms, whilst the plan of the book strikes us as wanting in directness and system. Nevertheless, his aim is a commendable one, for if we understand it aright it is to impress on the profession the importance of regarding infantile intestinal derangements not so much from the anatomical side as from the etiological, and thus to emphasise the fact that most of these disorders are referable to changes of a fermentative (or, as the author prefers to term it, "septic") nature. The book, in spite of its blemishes, which may be largely rectified by careful revision in another edition, contains much that is of practical value, as, for instance, the directions for securing a pure milk-supply, the mode of feeding, and the treatment of infantile constipation and diarrhœa. Amongst intestinal antiseptics the author speaks most highly of salicylate of bismuth. The good effects of irrigation with solution of boracic acid in the treatment of ulcerative colitis are emphasised, and full directions are given for this rational plan of treatment.

Sell's Directory of Telegraphic Addresses has now become a bulky volume, and a very handy one to those who have need of the especial information which it conveys. The recent addition of the telephone numbers to the addresses still further enhances the value of the work. It is published by Mr. Sell at his offices in Fleet-street, at 18*s.* for subscribers, and 21*s.* for non-subscribers, including three additional quarterly supplements.

Australian Medical Directory and Handbook. By L. BRUCK. Sydney: L. Bruck, Castlereagh-street. London: Baillière, Tindall, and Cox. 1896. Pp. 196. Price 8*s.*—This work of reference, which made its first appearance in 1883, is indispensable for those in quest of information relative to the medical profession in our extensive Australasian possessions. It commences with an abstract of the Medical Acts in force in the five Australian colonies, Tasmania, and New Zealand, after which comes a list of public medical appointments, chiefly under the various Governments, together with the names of the holders. Next there is a series of notices of the medical and allied scientific societies and a scale of fees for medical attendance. The greater part of the book consists of the list of qualified practitioners in Australia, Tasmania, New Zealand, Fiji, Samoa, Tonga, New Hebrides, and New Guinea; it contains about 2613 names, and of these about twenty are names of ladies. The first edition of the Directory was published in 1883, the second in 1886, the third in 1892, and the present one, which is the fourth, is corrected up to September, 1896. Some reference to the colonial universities was made in the second edition, but has unfortunately been omitted in the later ones on account of the tendency of the volume to increase in bulk.

Kelly's London Medical Directory for 1897 (Kelly and Co., High Holborn) embraces the districts extending from Hounslow (west) to Barking (east), and from Croydon (south) to Barnet (north). The fulness of the entries will be appreciated by many. To those to whom a medical directory of London and the suburbs is a necessity this work will be serviceable.

The Charities Register and Digest for 1897 is to hand, and the publishers (Messrs. Longmans, Green, and Co.) announce that it will henceforward be issued annually, at the reduced price of 4*s.*, instead of at 10*s.* 6*d.* This well-known and handy volume will doubtless gain many additional friends under the new *régime*.

Herbert Fry's Royal Guide to the London Charities (33rd annual edition; Chatto and Windus) is also before us, and, being arranged on the alphabetical principle in concise form, is especially convenient for easy reference.

The Local Government Directory for 1897 is a useful storehouse of information upon many matters connected with its especial department, and in these days, when increased interest is taken in the question of local government, it may well find a place on the shelves of those who would be *au fait* with what is being done. Messrs. Knight and Co., of Fleet-street, are the publishers.

Whitaker's Directory of Titled Persons for 1897 is designed as a companion to the well-known "Whitaker's Almanack," with which it is uniform in size. The work embraces the usual contents of a peerage, baronetage, and knightage, including dowager ladies and titled issue, and is presented under a single alphabet, making it very handy for reference. An alphabetical list of country seats is also given and an extended list of the Royal Family. Published at the popular price of half-a-crown, it will undoubtedly attain a large measure of success.

JOURNALS, REVIEWS, &c.

Birmingham Medical Review.—In a paper on Some Clinical Aspects of Acute and Chronic Alcoholism Dr. T. Sydney Short gives several useful hints on such important practical subjects as the distinction between alcoholic coma and apoplexy, and the diagnosis of mental disorder brought on by over-indulgence in intoxicants; the descriptions of delirium tremens, acute traumatic delirium, and mania a potû are very graphic. Mr. J. Pietersen, medical superintendent of Ashwood House Asylum, writes on Auditory Hallucinations.

Scottish Medical and Surgical Journal.—In the opening article Dr. John Duncan (Edinburgh) describes a case in which a calculus weighing 2¾ ounces was removed from the kidney. The operation was performed on Dec. 2nd last, and the wound was quite healed on Feb. 15th. Dr. Joseph Bell (Edinburgh) writes on the relation of the trained nurse to the profession and the public. Dr. W. F. Somerville (Glasgow) discusses medical gymnastics in the treatment of disease.

Edinburgh Medical Journal.—Dr. W. Allan Jamieson contributes an article on Syphilis considered dermatologically. Several valuable papers are continued from preceding numbers of the journal, such as those by Mr. G. A. Berry on Strabismus, by Dr. R. A. Fleming on the Effect of Ascending Degeneration on the Nerve Cells of the Ganglia on the Posterior Nerve Roots, and the extracts from clinical lectures by Mr. Hutchinson. The illustrations include three full-page plates and a number of figures in the text.

Dublin Journal of Medical Science.—Dr. F. W. Kidd describes three cases of Ectopic Gestation which were under his care in 1895 and 1896; the first of the patients died on the second day after operation, but the other two recovered. Mr. Langford Symes writes on Splenic Anæmia in Children.

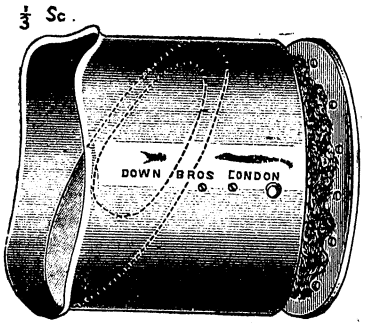
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New Inventions.

A METAL HOSPITAL INHALER.

IN connexion with the discussion which has recently taken place in the columns of THE LANCET on the occurrence of pneumonia after operations, and the possibility of infection from the inhalers used in the administration of anæsthetics, I send particulars of the metal inhalers to which I referred in my article of March 20th. If a little care is taken in using them, and if the ordinary instincts of cleanliness are followed, I have had nothing to complain of in respect to

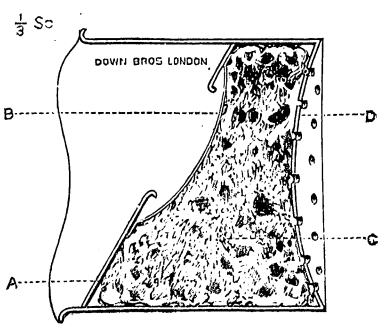
FIG. 1.



General view of inhaler.

the celluloid inhalers which I introduced some years ago; but when subjected to the rough usage of busy hospital work they are apt to get out of shape. It was chiefly to overcome this latter difficulty that these metal inhalers were designed, though it will also be found that they are more easily sterilised in accordance with the advanced theories of aseptic surgery. In general shape (Fig. 1) they resemble the Rendle's Mask, but the dome-shaped, perforated top of the latter is inverted so as to form a cup (Fig. 2, D) through which, if necessary, the sponge (Fig. 2, C) can be fed without

FIG. 2.



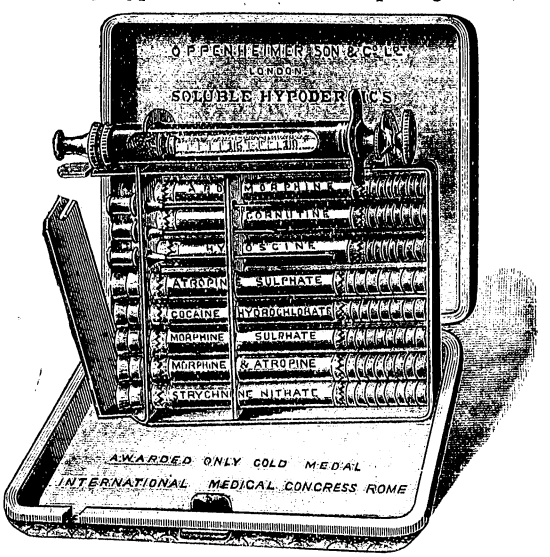
Sectional view. A. Drip-catcher or diaphragm. B. Wire sponge guard. C. Sponge. D. Perforated, concave, hinged lid.

removing the apparatus from the face. This cup is hinged to admit of the introduction of the sponge in the first instance. Another distinctive feature is the metal diaphragm (Fig. 2, A), set at an angle, and designed to prevent the superfluous liquid from running on to the face, a radical defect of many inhalers unless in skilled and careful hands. To further ensure that the sponge shall not slip on to the face a wire guard (Fig. 2, B) is fixed across the opening in the diaphragm. No flannel bag or rubber face-pad is necessary, or, in my opinion, desirable. Of course, pure chloroform ought not to be given in such an apparatus as this. It is intended, primarily, for the A.C.E. mixture, or it may be used to maintain the anæsthesia with ether. The method of using it is sufficiently obvious. I may, perhaps, add that I have had these masks in use for two or three years in hospital work, and believe that they fulfil the objects which I had in view when designing them. I am greatly indebted to Messrs. Down Bros. for their patience and skill in carrying out my wishes in the matter.

J. FREDK. W. SILK, M.D. Lond.,
Anæsthetist to King's College Hospital, &c.
Devonshire-street, Portland-place, W.

AN IMPROVED HYPODERMIC CASE.

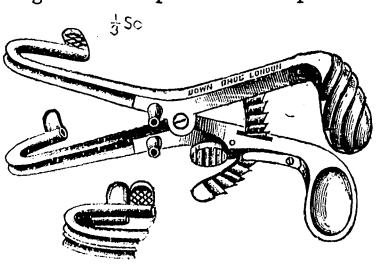
MESSRS OPPENHEIMER AND SON, 14, Worship-street, E.C., have recently brought out a new pattern of hypodermic case which presents some useful characteristics. It is made of aluminium, is shaped like a cigarette case, and contains a moveable frame which securely holds a hypodermic syringe, two ordinary hypodermic needles, one exploring needle, and



twelve assorted tubes of soluble hypodermic tablets. In designing the case special care was taken to prevent its contents shaking about when it is carried in the pocket. The tube of any drug which happens to be required can be found at a glance. The shape and materials of the case allow of its being thoroughly cleansed and rendered aseptic whenever required by washing with any of the ordinary solutions used for the purpose.

IMPROVED MOUTH-OPENER AND GAG.

I HAVE recently designed a form of mouth-opener and gag, which, proving satisfactory in practice, I venture to recommend to the consideration of the medical profession. By the illustration it will be seen that it has a rack catch action, which fixes automatically when opening the gag, while upon touching the trigger the stop rack action is thrown out of gear and the gag closed with the greatest facility, irrespective of the amount of pressure which is being exercised upon the tooth plates. In lieu of the metal vapour tubes, as suggested by Dr. F. Hewitt, I have had a gutter cut in each of the arms of the gag, over which pieces of rubber drainage-tube may be slipped to convert them into tubes; the advantages of this are that the vapour ways do not increase the bulk and are readily cleaned or cleared, and further, being made of solid steel, they are not liable to be damaged from an accidental fall, a somewhat frequent occurrence with the metal tubes originally designed for the purpose. I have also adopted in a modified form the suggestion of Mr. W. R. Ackland—namely, that of setting the tooth plates one behind the other to act as a wedge if required. The gag can be made with broad tooth plates for edentulous jaws, or those in whom the teeth or gums are tender, thus doing away with bruising and at the same time giving a wide basis of support. The instrument being entirely of metal is easily sterilised. I have to thank Messrs. Down Bros., of 21, St. Thomas's-street, London, S.E., the makers, for much time, trouble, and careful carrying out of my ideas.



The upper figure shows the gags open. The lower shows the blades closed and the position of the tooth plates one behind the other.

F. WILLIAM COCK, M.D. Durh.
Porchester Houses W.

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THE LANCET.

LONDON: SATURDAY, MARCH 27, 1897.

WE have now before us the report of the Earl of ONSLOW'S Departmental Committee and the Memorandum of the Army Sanitary Commission on the health of the Army in India. These documents deal with an unsavoury subject for public discussion, and the public press would, no doubt, have been glad on this account to have adopted a policy of silence in regard to it, but the appalling significance of the facts was too glaring and patent to be passed over. These have now been thoroughly sifted by impartial and independent inquirers and established upon unimpeachable authority, and it is certainly time that the public should be made acquainted with them. Recognising the extreme gravity of the situation that has been brought to light, the press of this country—for the alleged condition of things in this respect has long been a source of wonder and amazement to people abroad—at once realised their sense of responsibility in the matter, and with a courage and unanimity which does them great credit have deemed it an imperative duty that the facts should not be hidden.

The Departmental Committee's very able and exhaustive report deals with the nature, extent, and the present and prospective effects of the evil. It is no wonder that the term "appalling" has been so generally applied to the facts now authoritatively set forth in regard to the free and unrestricted trade in sexual vice followed in India at the present time. What are those facts?

"The present situation," says the report, "may be summed up as follows. In 1895 venereal disease attacked the British troops in India to an unprecedented extent. The amount of syphilis was disproportionately great, and it was of an increasingly virulent type. Of the enormous total of 522 venereal cases per 1000 troops, syphilis contributed very nearly one-half—i.e., 259 cases per 1000, a figure many times greater than the highest of which we can find any record in the statistics of Continental armies for recent years, either at home or abroad. Venereal disease directly caused more than one-third of the total amount of sickness; fifteen deaths in India; 348 invalidings, resulting in 130 cases in final discharge from the service; the constant and total disablement of 3200 men out of a force of 71,000 men; and a vast amount of partial disablement and unfitness for any but routine duties. Indirectly it increased the amount of sickness and invaliding under the head of many other complaints. The military efficiency of the Army was most seriously impaired, and the increasing prevalence and intensity of contagious and inheritable disease among a body of 71,000 men, of whom many thousands are annually coming home to mingle with the civil population, was a growing danger to the health of the community."

We can only repeat here what we have already said, and the report of the Departmental Committee in effect, but in other words, confirms the accuracy of the description. The main points lie in a nutshell. We have to deal with an army composed of young, inexperienced, and inflammable material, removed from home ties and restraints, living in a state of celibacy enforced on them for the good of the State. No efforts of a direct and really practical kind are made by the State, however, to protect them against the temptations to which they are exposed, with the result that the safety of the Empire is being threatened, the health of the young soldier is being cruelly sacrificed, and the well-being of the class of society from which he is drawn and to which he may be expected to return is gravely endangered. All attempts that are made to control this class of disease by physical methods have been characterised by theorists, faddists, and fanatics as the licensing of vice, regardless of the fact that the sexual appetite is an instinct implanted in a man from his birth, though latent for some years, and that it is, and has been in all past history, the strongest passion in human nature. To recognise this is to go to the root of the matter. That no moral means of dealing with it that can be suggested should be left untried everybody will admit, but these have been practically exhausted, so far as India is concerned, with the results which we have now seen. Matters cannot be allowed to remain as they are. The State owes it as a duty to the soldier to protect him against himself and against the conditions environing him. It is clear that we cannot by merely moral means—by advice, occupation, by reading-rooms, lectures, institutes, and by physical and mental amusements—fortify him against sexual temptations. Are we, then, simply to fold our hands and shrug our shoulders? To adopt this course would be a crime and a scandal. We must deal with syphilitic disease in India as we deal with other contagious diseases that are preventable, or, at any rate, capable of being limited, and adopt some practical form of disciplinary methods and hygienic regulations for limiting their spread and for protecting our young soldiers from the disastrous results of this terrible scourge. A woman in a diseased condition plying her calling in a cantonment is a terrible calamity. Nor must it be forgotten, although it commonly is, that restrictive measures for the protection of the soldier afford the most merciful course that can possibly be adopted for the unfortunate woman. How can she be cured or relieved without rest and medical treatment? The opponents of all restrictive measures have nothing to offer as a substitute. It is only necessary that statesmen with the courage of their opinions should get up in their places in Parliament and declare that the House of Commons' Resolution must, so far as India is concerned, be rescinded. The Army Sanitary Commission, while fully recognising, as everybody must, the appalling nature of the evil, has contended that the Lock Hospital system in India failed to accomplish anything like as much as was anticipated from it, but is compelled to admit that it nevertheless served to check the growth of the evil. Many people agree with the Commission that the system which was in force and as it was worked in India proved an unsatisfactory and inadequate one, but that is no reason why another and better system cannot be devised! The authorities in India should have a free hand in considering the restrictive measures they deem essential for dealing with the disease in question.

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Various suggestions and recommendations have already been put forward, and some of them are of such an obvious and common-sense character as to commend themselves to most unbiased people of ordinary intelligence; but we hope soon to have an opportunity of dealing with this side of the question. We understand that a deputation from the Royal College of Physicians of London paid a visit to Netley Hospital on Saturday last to see for themselves the cases of syphilitic disease at present under treatment there, and the results of their inspection and report upon the subject will be awaited with great interest. Meanwhile there can no longer be any doubt that it is one calling for the gravest consideration of the Government of this country with a view to prompt action being taken. We are glad to notice, too, that there seems to be a growing conviction, even on the part of those who were opposed to legislative action, that something must be done to check the evil in question, and that a disposition exists on the part of all sensible people to adopt any reasonable measures that can be applied.

THE International Sanitary Conference of Venice, after sitting for five weeks, closed its proceedings on the 19th instant, and some sixteen of the Powers represented signed the Convention which had been drawn up. Together with the three preceding Conferences—namely, those of Venice (1892), Dresden (1893), and Paris (1894)—the four Conventions which have resulted may be regarded as forming an International Code for the prevention of the dissemination of cholera and plague, both in and out of Europe, by land and by sea, and in connexion with both ordinary traffic and the pilgrimage to Mecca. The actual Convention which has been signed is not yet available, but we are informed that it will be issued from Rome after a short interval. But enough is known of it to prove that the gathering from which it has resulted has, so far as Great Britain is concerned, been a very distinct success; and when we remember that the attitude of this country has for some fifty years been one of maintained opposition to quarantine, the fact of such success means a good deal.

When the Conference was first mooted there seemed some objection on the part of Great Britain to entertain it. Plague was in a British possession, and a number of Mediterranean Powers, including, unfortunately, our own Mediterranean colonies, had set in motion the most antiquated forms of quarantine detentions, and had even resorted to absolute repulsion of every ship, person, or thing that hailed from British India. The preparation of a code for the prevention of the spread of plague under such circumstances seemed to be beset with difficulties, and on many sides nothing but failure was anticipated. But a correspondent who has had opportunities of conversing with the delegates of different nationalities during and since the sittings of the Conference has arrived at the conviction that the very eccentricities of sanitary administration which in a moment of panic were resorted to have had the effect of causing a marked change of opinion amongst some of the leading authorities of Europe in favour of the methods which have so long been adopted in England; some of these authorities have not failed to contrast the perfect quietude with which this country recently met not only an importation of a few cases of plague, but almost simultaneously the arrival of a batch of cholera cases at one of our southern ports, with the panic which was manifested in the Mediterranean—not because disease had been imported, but merely because it was thought such a thing might occur.

It is, perhaps, due to this more than anything else that sound progress has been made in Venice, and as typical of this progress we may mention the fact that shipping from British India will no longer be detained at Suez merely on the chance that someone on board may sicken of plague, but will be at once allowed to pass the canal under the care of guards, provided there is no plague on board. This in itself is a gain of the first magnitude, for the detention of ships at Suez, merely because that place is, as it has been termed, the neck of the bottle by which disease can be prevented from passing from the East into Europe, is a hindrance to British commerce and navigation of a very serious character, and one which long years of experience have shown to be quite useless. India has been styled "the home of cholera"; plague has, alas, been epidemic in Bombay for several months. But during all these years and months British shipping which passes from India to our ports in one unceasing line has always failed to convey disease to our populations, and this experience is at last telling on other nations besides ourselves. The protests which have been made by the leading medical advisers of the French Government, for example, against the attitude of Marseilles have been proved to be right. Marseilles is the main sufferer, for the shipping and merchandise which would otherwise have gone to that por have gone elsewhere, and some of the inhabitants are now crying out for Government support of those who have deprived themselves and their unhappy families of their means of existence.

Another point of importance that has been gained at Venice relates to merchandise. No country is required to prohibit the importation of any article of merchandise, and yet the failure to impose such prohibition is in no way to bring about restrictions against any such country by reason of its free admission of merchandise. Before the Conference met we heard that nearly every conceivable article might convey the infection of plague and was therefore to be avoided. Thus corn, rice, cotton, skins, Eastern carpets, and numberless other things were looked upon with suspicion and even with fear; but the Conference has not supported this view, and the result is that, whilst freedom of action within certain limits is allowed to each of the contracting Governments, every one of the articles which had been regarded as dangerous may, under the Convention, be admitted into any country at the will of the country concerned. The Governments which prefer to subject certain articles to disinfection before receiving them are, of course, free to do so; but in former Conventions there has always been a list of merchandise, produce, &c., which was either altogether prohibited of which could only be admitted after disinfection.

In short, there has been manifested a very distinct and general advance in the direction of English views. These views are that the proper way to prevent the importation and spread of disease conveyed from abroad is not to impose restrictions on ships, passengers, and merchandise, but to

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improve the sanitary conditions under which the people are living, and to maintain such a sanitary administration as shall prevent the spread of any such disease as may reach our ports or cities. But Great Britain can never make any boast as to her action in this direction so long as such places as Malta follow the traditions of past generations; and we have been informed that when the action of this colony was referred to in the Conference the English delegates, for the first time in its sittings, had practically to excuse themselves for advocating that which our own colonies not only fail to carry into effect, but discard with as much tenacity as the most backward of European and other nations. Dr. THORNE THORNE is said to have announced that he felt a sense of shame, after all that the Conference had done in advocating the supersession of quarantine, that he was absolutely without answer as to the reproaches against Maltese action. Surely in this matter some change of attitude ought to be brought about, so that England shall not constantly be subjected to the reproach of other nations.

THE Council of the Hospital Sunday Fund holds its annual collection in June, on a Sunday fixed chiefly by high clerical dignitaries and ministers, on whose eloquence and on the liberality of whose congregations the sum raised mainly depends. By a concurrence of days it so happens that the Sunday chosen this year for the hospital collection synchronises with the actual anniversary of HER MAJESTY'S accession to the throne. Whether this concurrence is altogether fortuitous we cannot quite say; but of one thing there is no doubt, that it is altogether happy and natural. An esteemed contemporary of great influence has suggested that the coincidence is not a happy one and that the arrangement should be abandoned. It is argued that the public prefers to take its emotions one by one, and that it will not be in a mood, after a sermon on the reign of VICTORIA, which fills all her subjects with gratitude, to subscribe liberally to the Hospital Sunday Fund. It is doubtless our fault, but we fail to follow this reasoning. Our contemporary does not suggest any other object or collection in the place of the Hospital Sunday Fund which would be more likely to meet the mood and sympathy of the religious bodies. The subject has been already under the consideration of the Council of the Hospital Sunday Fund, which almost unanimously came to the conclusion that the Council had no option but to proceed with a collection the taking of which once a year is the object of its existence, which is generally held in June, and the date of which on this occasion has been settled at a meeting of its own constituents so far back as December. Our contemporary will readily see that it is not easy to alter an arrangement so fixed. The dates of the principal collections are all arranged months before they take place, and any dislocation would disarrange the whole method of the year. The day could not be altered merely by a vote of the Council, although it would be right to call a meeting of the constituents who really supply the Fund, and who by the rules fix the day of collection at the annual meeting in December. It is true that this course could be taken, and there can be no doubt would be taken if any good reason existed or if it could be shown that there was any real incongruity between a collection for the most benevolent of all charitable objects and a day of religious recognition of the blessings of the sixty years of the Victorian reign. The duty of the Council of the Hospital Sunday Fund is the more clear as the PRINCE of WALES has no wish or intention to apply to the various religious bodies as such or to use them as instruments for promoting his fund. There is no doubt that it is the wish of His Royal Highness that the Commemoration Fund which he has so graciously organised for the good of hospitals should interfere as little as possible with the regular channels through which the ordinary incomes of these institutions flow. And it is obvious that this non-interference with other channels will be a main test by which the public will judge of the value of the Commemoration Fund. At any rate, this is the test which will infallibly be applied by those who are responsible for the finances of hospitals. What they hope for is to receive all the ordinary income and a handsome addition from the PRINCE'S Fund. We have heard of some subscribers lessening their other subscriptions because they were contributing to the Commemoration Fund. This clearly was never intended by the PRINCE of WALES or his colleagues, and we cannot believe that it will obtain to any great extent. We trust that these considerations will suffice to convince our contemporary that the coincidence of Hospital Sunday and what must be known as the QUEEN'S Sunday is altogether a happy one. No congregation would like to separate on such a day without an offertory expressive of deep gratitude for the progress of the nation in everything that constitutes civilisation and humanity. The preachers will have no more telling point to make than the sympathy of HER MAJESTY in all the sorrows and sicknesses of her people and her constant appreciation of the progress of the healing art in making life longer and happier.

Annotations.

"Ne quid nimis."

PAYMENT OF CORONERS' JURIES.

THE absence of any means of remunerating those who form coroners' juries has long been a pressing question; it now threatens to become a burning one. At the conclusion of an inquest recently held by Dr. Wynn Westcott, at the Hackney Coroner's Court, the foreman of the jury complained that he had lost 6s. by attending. On the coroner remarking that it was a good job they did not come often he received for reply, "We come quite often enough why can't you pay us?" The coroner replied that he would, but he could not, while the county council could, but would not. This is strictly correct. According to Jervis on Coroners, fifth edition, p. 15, "There is no express provision entitling the jurors to remuneration, but in many places the authorities have allowed a fee to be paid to them." It was so formerly in a large and important northern provincial town, and we are authentically informed that in the "fifties" a long single file of "gentlemen," not only willing, but anxious, to earn the coveted shilling could be seen waiting in all weathers outside the old coroner's court, although only twelve were wanted, and their selection involved the unpleasant duty of viewing several dead bodies and of listening for some hours to the evidence.

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Readers of the late Albert Smith's popular tale, "Christopher Tadpole," may remember how a medical man induced an unwilling innkeeper to receive the corpse of a man killed by an accident by reminding him of the probability that the twelve jurymen would spend twelve shillings in drinking. The incident at Hackney ought never to have occurred, and it certainly ought not to be repeated before Dr. Westcott or any other coroner. Although the coroner's court is one of first instance, and many cases begin and end there, the coroner is in the position of a judge, and to "heckle" him is as great an impropriety as to "heckle" a magistrate, a recorder, or a judge of assize. Moreover, coroners' jurors are by no means the only persons who have to suffer loss in performing a duty to their country. Medical and lay witnesses have incurred losses far exceeding the very modest sum of 6*s.* mentioned previously as incurred by the foreman, though unquestionably that was a very serious sum for a working man to lose. The debate was wound up by the coroner saying, "The matter lies in your own hands, and by combination you can get it." The matter, we fear, is not quite so simple as Dr. Westcott makes it. By the Act of 1887 a coroner's jury must comprise not less than twelve and not more than twenty-three men. Taking the very modest sum of 1*s.* per juror per inquest or even per diem, this would mean a large additional burden to the rates. Possibly the question would then arise, Why not dispense with coroners' juries altogether, as is done in many other countries, and place the coroner in the same position as the procurator-fiscal of Scotland or the *procureur* of France? The case of Matilda Clover is recent enough to remind us that our death certification is not perfect, and that a searching inquiry into all violent, unnatural, and sudden deaths the cause of which is unknown must always form an important part of our social system, and the memorable case just alluded to was a proof of the necessity of having no deaths medically certified which are not legally entitled to be so dealt with. It may appear to be a cumbrous and harsh proceeding to summon twelve men to inquire, without remuneration, into the cause of a death which after all turns out to have been a natural one; but it is not desirable that a death due to homicidal strychnine poisoning should be certified as due to alcoholism, as happened in the *cause célèbre* already mentioned. On the other hand, a coroner's jury, wisely guided by the evidence, sent to trial a wretched murderess whom a bench of magistrates had discharged on the grounds that no jury would convict. But the woman was convicted and executed.

VINOUS FERMENTATION WITHOUT YEAST CELLS.

THERE is no more interesting group of bodies in the organic world than that of the ferments. They are remarkably complex in chemical composition and possess properties of an extraordinarily energetic character. In their power to transform one substance into a new and quite different substance perhaps the action of the so-called unorganised ferments or enzymes, as, for instance, the diastase of malt or the pepsin and pancreatin of the alimentary tract, is more wonderful than when an organism is concerned. To the organised ferments belong the bacteria and germs of disease, and also yeast, the common torula. According, however, to an exceedingly interesting research carried out recently by Dr. E. Buchner, and published in a recent number of the *Berichte der Deutschen Chemischen Gesellschaft*, the transformation of sugar into carbonic acid and alcohol is not necessarily dependent upon the presence of the yeast cells themselves. Rather would the fermentation appear to be directly due to a substance contained in the cells of the nature of an unorganised ferment, an enzyme. Dr. Buchner showed that by crushing pure yeast with sand, with the addition of water, that a liquid could be expressed which, after careful filtering, was found to act on cane-sugar like yeast—that is to say, in exciting fermentation and producing carbonic acid and alcohol in the ordinary way. The addition of chloroform in small quantity does not appear to deter the action, although some precipitation of albuminous substances results. The fermentative property of this liquid is lost when it is heated to a temperature of 50° C., a point which is close to that at which the active properties of malt diastase are destroyed. The outcome of this very important investigation would seem to be that fermentation is not directly the action of a living cell, but rather the results of the action of a liquid excreted by the living organism. The precise nature of this action and the constitution of the enzyme concerned are alike far from being understood. Dr. Buchner believes the substance to be of a proteid nature, and he has proposed to call it "zymase." The importance of this discovery cannot be doubted when the application of yeast in the arts and industries is taken into consideration. It possesses, too, a very interesting bearing on the study of the vital processes. We do not doubt that before long a substance capable of exciting alcoholic fermentation will be prepared on a commercial scale, so that instead of depending upon the uncertain action of yeast cells we may have a reliable substance yielding definite products. "Zymase" should be applicable to the estimation of sugar in urine and make this method depending upon fermentation more exact, since it will exclude errors arising from the gas produced by the living cell itself or from other sources, while, still more important, the action would be due to the presence of sugar alone, and give an accurate estimate of this substance apart altogether from the presence of other reducing substances that might occur along with it.

THE BLACK WATCH.

LORD G. HAMILTON recently, in reply to a question by Sir H. Maxwell in the House of Commons, stated that the monthly returns from India showed that enteric fever had prevailed in this corps quartered at Subathu, a hill station in the Punjab on the road to Simla, during April, May, and June, increased in July, August, and September, but diminished greatly in October, and ceased in November. Lord G. Hamilton added that the report on the health of the British troops for 1896 had not yet reached him and that he would ask the Government of India to expedite it and to furnish information as to the water-supply of all the hill stations on that route—namely, Subathu, Dagshai, Kassauli, Solon, and Jutogh. The amount of enteric fever at the hill stations in India is considerable, and at several of them seems to have been increasing of late years. At Subathu there have been several outbreaks of the fever from time to time, and the medical history of the station in this respect would indicate that it is less healthy than other hill stations in the neighbourhood. The maximum prevalence of enteric fever corresponds greatly with the period of maximum heat; it rises in April and May, falls somewhat during the rainy season (monsoon), and again rises somewhat as that season ends. During the past year there has been a relative or complete absence of rain in India, with failure of the crops and famine as a consequence, and the cases have continued to occur during the whole of the hot season. There is, of course, something over and above the effects of climatic heat to account for the origin and prevalence of enteric fever; heat is only one of the factors. The greater liability of one station as compared with another to outbreaks of this fever points to the presence of some specific cause and local insanitary conditions. A water-supply derived from wells

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and springs is always liable to contamination; but it is a curious fact—and we understand that it is the fact—that the prevalence of the disease is commonly greatest in the hot season before the monsoon and directly after the monsoon. The cookhouse, filters, foulness of soil from continued occupation of a site, and the state of the native bazaars have all to be taken into account, as well as the water-supply of the station.

KISSING THE BOOK.

THE Mayor of Ripon recently announced that anyone giving evidence in the County-court might, if he wished, be sworn in the Scotch form. A new copy of the Gospels was also presented to the court, and it was suggested that a bacteriological examination should be made of the cover of the old one, which had been in use for sixty years. The examination was accordingly undertaken by Mr. F. W. Richardson, consulting chemist to the Bradford Corporation. The result showed that besides various moulds there were present the micrococcus pyogenes albus and aureus, but it is comforting to know that not one of the specific germs of the communicable diseases was found. Kissing the book is a filthy and useless custom, and the Scotch form of oath-taking is, as we have over and over again insisted, infinitely preferable from every point of view.

A NEW MEDICAL CORONER.

WE are glad to be able to congratulate Dr. Lovell Drage upon his election as coroner for the St. Albans division of Hertfordshire, in succession to Mr. Brabant, a solicitor. Dr. Drage was unanimously selected by the general purposes committee of the Herts County Council. We have invariably pleaded in these columns for the principle that a coronership should be held by a medical man, and therefore it is with pleasure that we record the result of the present election. Dr. Drage and his father are both well known and esteemed practitioners in the county, and especially at Hatfield, where Dr. Drage the elder has been established for nearly fifty years, and the new coroner for some thirteen years. In addition to his recently conferred office Dr. Lovell Drage has been re-elected for the eleventh time as medical officer of health of the Hatfield district, his salary being raised by £20 per annum.

THE SCLEROGENIC TREATMENT OF TUBERCULOUS AFFECTIONS.

WE are indebted to Dr. T. Sematzky [1] for taking up and fully discussing this subject. The method of treatment, which consists of deep injections of chloride of zinc around the diseased part, was first introduced by Professor Lannelongue of Paris in 1891. During the years 1893-96 thirty cases of every variety of tuberculous disease were thus treated by him. From these, however, ten, the observation of which could not sufficiently be carried out, must be deducted. Of the remaining twenty, in ten cases highly satisfactory results were obtained, in seven fairly good ones, and only in three no effect whatever resulted. It is noteworthy, that the presence of pulmonary tuberculosis greatly reduces the chance for this local treatment. The solution used by Dr. Sematzky for these injections was of 1 in 10 strength, and according to the age of the patient from seven to ten drops were injected in a number of places (from twelve to twenty) around the periphery of the affected area. As regards the form and technique of the operation he, on the whole, followed the rules laid down by Professor Lannelongue in his first detailed communication upon the subject to the Academy of Sciences (July 7th, 1891). In some respects, however, he was forced by experience to modify them. For instance: 1. As to the time of repeating the injections, he did not wait as long as three weeks, as was recommended by Professor Lannelongue, but performed a second injection as early as on the seventh or even third day after the first injection, being guided by the indication if the pains did not cease within that period. 2. The administration of anæsthetics he regards as quite unnecessary in adults, and even in children the operation can be easily done without them, since the pain is merely that associated with all subcutaneous injections; indeed, they were slight and fugitive in character in almost all cases of his observation. 3. By observing rigid aseptic precautions the appearance of swelling, redness, and signs of any inflammatory reaction, as described by Professor Lannelongue, taking place in the vicinity of the injected area are avoided. Dr. Sematzky was accordingly able to employ an immobile dressing immediately after the injection, which proved to be exceedingly useful. The skin was first covered with collodium elasticum or traumaticin, and a solution of silicate of potash served for the immobile bandage. Professor Lannelongue's statement that this mode of treatment has no effect, or little, on the general health we find so far fully confirmed by Dr. Sematzky's record, but in the matter of the action of chloride of zinc upon tuberculous tissues he greatly differs from the first-named observer's opinion. Of course, he acknowledges the fact that it gives rise to a condition of sclerosis, but what is fatal to the existence, or at any rate paralysing to the activity, of the bacillus is, according to the writer, the great antiseptic power of which that drug is possessed. At the conclusion he remarks that this method of treatment, on account of its being very simple and easily accessible to every practitioner, deserves far more attention than it has as yet received, and if employed at an early period, and especially while the formation of granulations sets in, good results will always follow.

[1] °Ljetopiss Russkoj Chirurgyi, vol. xii., part ii., 1896.

INFECTED WELLS AND TYPHOID FEVER.

THE corporation of Great Yarmouth has just escaped being mulcted in damages for having been the unwitting means of causing typhoid fever in the course of its prosecution of a very necessary sanitary improvement, which was intended to have a precisely contrary result. The Court of Queen's Bench was occupied for three days in hearing the evidence upon this point. It appears that in the first week of January, 1895, a new sewer was being laid down in Queen-street, and that shortly afterwards a resident in this street complained that the water in a well situated in the basement of his house was foul and that he and others had been made ill by its consumption. He attributed the contamination of the water to percolation of sewage which was alleged to have found its way into the trench dug for the reception of the new sewer. A month later the complainant, Mr. Durrant, sickened with typhoid fever, from which he died on March 1st, 1895. An action was brought by his executors claiming damages from the corporation for having through their negligence caused the pollution of the well and the death of Mr. Durrant. Without entering into the question as to whether the consumption of this water was the cause of his fatal illness or not, and even admitting this possibility, the defence went to show that the well could not have been contaminated by the temporary disturbance of the soil thirty-six feet distant, but that it was, and probably had been long, fouled by leakage from a privy situated at a higher level, only sixteen feet away. For after the well had been daily pumped out for a month the water remained still highly impure. As Mr. Justice Hawkins remarked, the poisonous contamination of the well was a singular coincidence at the time of the progress of the works, and the jury, taking a reasonable view of a question in which

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their sympathies must have tended to the other side, gave a verdict for the defendant corporation. We trust that this will encourage this sanitary authority to proceed vigorously with the work of closing these wells and privies, which have long been a standing reproach to Great Yarmouth, and the existence of which is a serious danger to health. It is only surprising that typhoid fever is not more prevalent than it is in a town where facilities for the contamination of drinking-water have so long existed.

STREET NOISES.

WE offer our sincere condolences to Mrs. Dickens of Egerton-place and Mr. Smith of Egerton-crescent. These householders, in common with a number of others in London, are much annoyed by organ-grinders. They recently endeavoured to get one of these pests to move on, and when, as is the custom of organ-grinders, he refused, they gave him into custody. Now, we have little sympathy with organ-grinders, but in this case the chief offender was not the organ-grinder, but the Honourable FitzRoy Stewart, who lives at 10, Egerton-gardens. This gentleman deposed that he "had a family of young children all fond of music and, like himself, pleased to hear the organ in the street, and he gave the man 6*d*. to come and play in front of his house, out of hearing of the residents in Egerton-place; but he did not know that anyone was ill. He wished to assert the right to have musicians in front of his own house." Mr. Sheil remarked that if Mr. Stewart was so fond of organs he should have them inside his house; he then fined the organ-grinder 40*s*., which Mr. Stewart rightly enough paid. Although there seems to be, we are sorry to say, great uncertainty as to the law with regard to street musicians, there is little doubt that if Mr. Stewart continues to pay fines for organ-grinders he will find it cheaper to indulge his taste for music at some of the excellent concerts which are given in the metropolis.

RADIOGRAPHIC DERMATITIS WITH OSTITIS.

NOT the least instructive among the results obtained by radiography are those which illustrate its direct action on living tissues. A sufficient number of cases of Roentgen dermatitis have now been recorded to enable us to form a fairly clear idea of the pathology, if not the etiology, of this peculiar lesion. It is clear that in it we must recognise a form of slowly destructive, recoverable, but not very tractable, inflammation of the skin in all its layers. In most cases it appears that this is all. Sometimes, however, a deeper effect is evident. A paper published by Mr. T. C. Gilchrist in the February number of the *Bulletin* of Johns Hopkins Hospital, Baltimore, is of particular interest in this connexion. In it a case of x ray dermatitis is very fully described and illustrated by excellent radiographs. The patient in this instance was a healthy-looking man, thirty-two years of age, who in using a radiographic apparatus had frequent occasion to expose his right hand and forearm to the x rays for varying periods, latterly for four hours daily. The result was an extensive, puffy, dry inflammation of the skin accompanied by deep brown pigmentation, exfoliation of the epidermis, and considerable pain. Tactile sensation was markedly diminished, voluntary movement was either abolished or where retained was difficult and painful, there was marked thickening of the first and second phalanges, and tenderness over the metacarpals and the wrist joint. A radiograph taken of this hand showed, as compared with one of the normal left hand, thickening of the bones of the phalanges and metacarpals themselves, with some irregularity of outline suggesting strongly the progress of a slow osteal or periosteal inflammation. These bones were also less diaphanous than those of the left hand. The intervening joints likewise appeared to be occupied by a relatively denser medium, evidently due to thickening of their bone-surfaces. Mr. Gilchrist, in discussing the probable causation of these phenomena, attributes considerable importance to the influence of idiosyncrasy, and suggests that the active irritant itself consists of metallic particles (platinum in this case) conveyed by the kathode rays piercing the bulb of the apparatus and impinging on the vital tissues. It is to be noted, however, that no platinum was found in pieces of epidermis taken from this patient and subjected to chemical analysis. It is difficult, moreover, to admit the penetrative power claimed by this theory for metallic particles and to reconcile it with the fact that x ray dermatitis has been produced even in skin protected by clothing. None of the various explanations put forward as accounting for the changes in the skin can, so far, be accepted as entirely satisfactory. Tesla's view, that they are due to ozone generated in contact with the skin, is, as the writer of this paper says, incompatible with the changes in the bones. Professor E. Thomson[1] argues with some reason that in his own case they could not be due to electrical brush discharges, as the potential was low and no sparks were perceptible. Such an explanation seems also to be hardly compatible with the delayed onset and gradual development which commonly characterise this form of lesion of the skin. It is probable that we come nearer to the truth in ascribing this change to the action of luminous rather than caloric rays. The analogy of sunburn which has been attributed to the action of violet rays affords a suggestive parallel. As mentioned by Mr. Rushton in THE LANCET of Aug. 15th, 1896, there is ground for the assertion that luminous solar rays have a considerable power of penetration and that they are capable of producing a form of dermatitis. Mr. Hutchinson's observations in the same field of study also tend to confirm this theory. Whether light thus acts by a process of ozonisation is still open to conjecture. If it does so we seem to be in contact with another secret of nature—namely, the antiseptic property of sunlight. The whole subject doubtless calls for fuller investigation, and we must be content for a time to speak respecting it with some uncertainty, but the facts we have referred to are at least suggestive of a course which such investigation may profitably follow.

ENGLISH-MADE THERMOMETERS.

IN these days of pessimism as to the future of British industries a letter published in the *Times* of Tuesday last on the manufacture of accurate thermometers, and the facts contained therein, will be welcome reading to not a few. In the letter referred to Mr. J. J. Hicks expresses surprise at the statement of Professor Rücker (who acted as spokesman of a deputation to Lord Salisbury to urge the need and importance of establishing a national physical laboratory in this country) that no high-class mercurial thermometers are now made in England and that they are made in Germany. We were under the impression that the very reverse was the case, and that reliably graduated instruments could be obtained only from an English maker. It is a fact worth noting, also, that a very great number of thermometers are sent to Kew to be verified, and that in a great many cases they are certified after very careful testing to be without a single error, while in the case of errors the average deviation is never more than one degree. It is satisfactory, moreover, to learn that in English glass tubes we have the best possible that can be obtained, so that, to quote one instance, a capillary tube fifty-four inches long may be obtained without the slightest variation in its tiny calibre. English glass is said also to be clearer in the bore, while Jena glass is more liable to

[1] Vide THE LANCET, Jan. 16th, 1897, p. 195.

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error due to contraction than English flint glass. It is quite true that if these statements, which an authority like Mr. Hicks very properly traverses, were correct some weight would be given to the argument for the establishment of a national physical laboratory in this country. Doubtless, however, Germany can produce a cheaper article, but is not that largely attributable to our apathy in nationalising scientific research and pursuits? And this, to our thinking, is a much more forcible argument.

FACTORY GIRLS' COUNTRY HOLIDAY FUND.

A WEEK'S residence in the country or at the seaside involves an outlay beyond the means of a considerable proportion of London working women, although it is unquestionable that hardly any section of the community is more in need of this kind of relaxation. A large field is therefore open to any philanthropic organisation willing to render assistance in enabling these poor people to benefit, even for a few days, by the wholesome influence of rural surroundings. The Factory Girls' Country Holiday Fund, which has now completed the ninth year of its existence and which during 1896 sent 1050 girls and women to the country or the seaside for an aggregate period of 1730 weeks, has undertaken a good work and thoroughly deserves support. The secretary is Miss Canney, St. Peter's Rectory, Saffron-hill, E.C. The income for the year was £1211 and the expenditure £1014.

THE BATHS OF LUCCA.

MR. HERBERT DANVERS sends us an account of the Baths of Lucca, which he says are much neglected. The thermal baths, which are within fifteen miles of Lucca, have been renowned from very early times, and their praise dates back to the year 983 A.D. There are two good hotels and a casino with a reading-room, and other attractions, and the springs are five in number, the temperature ranging from 98°F. to 129°F., and in constitution very much resembling those of Bath. They are fitted with every modern appliance for the treatment of disease by douches, electricity, &c., and vapour baths have been erected upon the system in use at Bath. The waters are strongly recommended in cases of renal calculus, gouty and rheumatic affections, and certain forms of skin diseases. Living is cheap, the leading hotel only charging from six to eight lire per diem for pension, and the climate and scenery are charming. The season is from May to September, and at present there is no railway within nine miles, but it is expected that by August the proposed extension will be completed. We only hope that this "development" will not, as is too often the case, spoil the place by converting it into a haunt of trippers and the *nouveaux riches* of all countries.

THE JENNER NATIONAL MEMORIAL.

THE meeting to be held on Wednesday next in the theatre of the London University, and presided over by the Duke of Westminster, ought to be one of considerable interest. The medical aspect and bearing of Jenner's momentous work will be powerfully expounded by such speakers as Lord Lister and Professor Michael Foster. And the public and State aspects of it will be dealt with by speakers of eminent authority in matters affecting public law and public health. Lord Herschell, the chairman of the recent Royal Commission on the Vaccination Acts, Sir Alfred Lyall, and Lord Playfair will speak to these points. The movement is a little belated. Not only is it a year beyond the centenary of Jenner's discovery, but it will have to encounter the competition of many forms of commemoration of the Queen's sixtieth year as a reigning Sovereign. But, even so, under the auspices of so enlightened and public-spirited a chairman and with such advocates, it is not yet too late to put the country right in regard to one of the greatest life-savers of the world. The following resolutions will be moved: (1) That the present is an appropriate time to inaugurate a work of national utility in honour of Edward Jenner; and (2) That a subscription be set on foot with the view of promoting, in connexion with the British Institute of Preventive Medicine, but in a manner distinguished by Jenner's name, researches on the lines which he initiated.

A RECURRENCE OF INFLUENZA.

THERE seems no doubt that influenza is amongst us again. Typical febriculous attacks, mostly of short duration and affecting more than one member of a family, are the indications. Generally there is some catarrh—nasal, pharyngeal, or bronchial—with more or less of the unpleasant pains of the disease. But often there is nothing but a quick sharp pyrexia occurring without rhyme or reason and leaving a weakness of the patient disproportionate to the duration of the acute stage. It is gratifying to know that the graver forms and sequelæ of the disease, as seen in former epidemics, do not often occur.

LIFE AND DEATH IN WEST LONDON.

A STRIKING comment on Mr. Sherwell's recently published book is supplied by the report of the medical officer of health for Kensington dealing with the four weeks Jan. 31st to Feb. 27th. The death-rate for the whole district is 15·9 per 1000; that for the North-West district 28·4 per 1000; and for the "special area" it reached the alarming figures of 56·2 per 1000. The causes of death in this area were mainly diseases of the respiratory organs. Kensington as a whole is admirably worked as regards its sanitary organisation; therefore, we suppose that some legal difficulties stand in the way of improving matters in this special area. The vestry are most energetic and by no means extravagant, for though the rates are high this is mainly owing to the enormous expenditure by the School Board and the County Council, as any ratepayer may see for himself by the statements on the demand notes.

THE HEALTH OF THE ARMY IN INDIA.

THE facts connected with the condition of our British Army in India presented in the vigorous and masterly report of the Departmental Committee of the House of Commons have, as may well be imagined, created a good deal of sensation. It is understood that next week Mr. Balfour will make a statement on the subject with regard to the steps which the Government intends to take, and there will be a meeting beforehand of the Service members of the House of Commons. Meanwhile, it is announced that there is to be a conference of the Liberal members to consider the action they will adopt in regard to the report. Although several Liberal members are believed to have been seriously impressed with the history of the facts that have been set forth in the papers presented to Parliament, it is understood that the Liberals intend to oppose the recommendations of the Army Sanitary Commission, taking thei stand upon the fact that the amount of venereal disease among the troops in the United Kingdom has been less, instead of greater, than it was when the Contagious Diseases Acts were in force in this country. But, even assuming—for the sake of argument—this to be the case, it is irrelevant to the question at issue, which is the increased and excessive amount of venereal disease among the European troops in India and the best way of dealing with it. That is the point, and not the state of the army at home in this respect, with which this country and the Government

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are concerned. It is needless to say that this is no party question, but one for the serious consideration of men of all parties, and we have reason to hope and believe that it will be approached in that spirit.

THE HEALTH OF LORD SALISBURY.

WITH reference to the recent indisposition of the Premier we are able to state that on Friday, March 19th, Lord Salisbury was taken ill after dinner with aching all over and a feeling of *malaise*. On Saturday there was moderate pyrexia, with loss of appetite and intestinal irritation. On Sunday the symptoms abated, and on Monday the temperature had become normal and he was able to be up and dressed. His lordship has previously suffered from influenza, and his recent attack was probably a slight recurrence of the disease.

THE "DEVELOPMENT" OF TRAFFORD PARK.

As will be seen from the letter of our Manchester correspondent in THE LANCET of March 20th (p. 843), Trafford Park is to be "developed." This is the modern euphemism for "spoiled." The estate consists of about 1200 acres with a magnificent old house, and the latter is to be converted into a hotel. The developments include the proposed erection of such health-giving objects of beauty as flour mills, oil tanks, seed-crushing mills, and works for the distillation of tar, also wharves and railways. Surely it is not too late for something to be done to prevent such an outrage, for an open space such as this is of absolutely incalculable value to the dwellers in the neighbourhood. It seems to us that a portion of the funds being collected for various objects in celebration of Her Majesty's reign might well be devoted to buying out the present owner or owners and setting this magnificent "lung" free to do its beneficent work for the benefit of both the present generation and those yet unborn.

THE REGISTRATION OF MIDWIVES.

A MEETING was recently held at London House in support of the Midwives Registration Bill. Mrs. Creighton presided, and is reported as saying that "what surprised her most was that there should be the least need for such a meeting." She then went on to explain the objects of the Bill, saying that what they wished to prevent was that a person should deceive the public by assuming a position she was not entitled to occupy. Dr. Champneys spoke of the necessity of some measure for the registration and supervision of midwives, and a resolution pledging the meeting to support the Bill now before Parliament was carried. We must say that Mrs. Creighton's naïve confession of ignorance as to why there is opposition to the Bill somewhat surprised us, for surely it is incumbent upon the supporter of a measure to make himself or herself acquainted with the point of view of the opposition. As we have many times previously said, training and supervision are necessities, but we do not think the present Bill is the best way to procure them.

A GOOD IDEA.

ACCORDING to a special correspondent of the daily press the English and American residents in Antwerp, backed, we are glad to say, by a section of the Belgian inhabitants, have been agitating for some time to get an abattoir for horses erected close to the docks, and, what is still more gratifying, the authorities have nearly decided to build one. This will not only spare the feelings of the inhabitants, now daily outraged by the mournful procession of wretched, broken-down horses to the present slaughter-house, but will also render the last moments of these poor animals' lives a little less miserable. They are generally in the worst possible condition, and the long, weary tramp to the abattoir after having undergone the sufferings of a sea voyage is by no means the least of the miseries they have to encounter. In our opinion we are by no means blameless on this side of the North Sea. We do not in the least object to people eating horseflesh, if they like it, and provided they do not get it when they ask for beef or mutton; but we do think that the export trade in live worn-out horses should be stopped. We make a virtuous protest about the treatment of horses in a Spanish bull ring, and it must be owned that it is not a pleasant spectacle, but any way there the agony is by comparison but short. If anyone is permitted to sell horseflesh to foreigners to eat, and it is supplied from this country, it should be killed upon this side.

THE METROPOLITAN ASYLUMS BOARD AND PAUPER CHILDREN.

THE Metropolitan Asylums Board has intimated its willingness to undertake the administration of the new order of the Local Government Board for the benefit of Poor-law children suffering from ophthalmia, diseases of the skin and scalp, defective intellectually or physically, ordered by justices to industrial schools, or otherwise requiring special treatment as convalescents. The Metropolitan Asylums Board accepts this extension of its duties professedly in the interest of economy. We are not aware that the Board has shown any special faculty of economy in its past history, but perhaps it may be so impressed with the costliness of its own past work as to avoid errors into which an inexperienced and brand-new body might fall. One effect of this new departure wil be to give a clearer Poor-law character to the work of the Metropolitan Asylums Board. We do not altogether object to this aspect of the new arrangement. Whatever the legal definition of pauperism, the practical conception of it must be the resort to institutions supported by rates and taxes, and such resort should be restricted to those who have no reasonable alternative. We do not doubt that under the Metropolitan Asylums Board the cases of disease will be much better cared for than at present. But that such huge groups of diseases should acquire such incurable intensity under the care of the guardians is a condemnation, concurring with others, of their failure from a medical and sanitary point of view.

THE NEW REGISTERS.

WE have received copies of the Medical Register for 1897, and the Dentists' Register for the same year. It is evident that—despite the cry about the overcrowding of the profession and the consequent lack of employment to be found, remunerative employment that is—there is no appearance of any falling off in the number of candidates for admission to the ranks of the profession. Thus in 1896, besides the 52 names restored to the register, there were 1385 new registrations. The removals from death and other causes numbered 560, making a total increase of 877 names, so that the number of practitioners in the United Kingdom is now 34,478 as against 33,601 in the previous year. We fancy, however, that the number of names removed by death is understated, and could point out more than one instance of a name being retained after death. With regard to the Dentists' Register, the number of names is less than it was in 1896 by seventy-five, and the total number on the register is now 4860, as against 4935 for last year. This diminution is accounted for by the fact that only those persons holding the qualification of Licentiate in Dental Surgery can be added to the register, while the erasures affect not only licentiates but all that large class who were in "practice" before 1878. The percentage of Licentiates in Dental Surgery to the whole number on the register is constantly

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increasing, being now 31·25, as compared with 28·88 in 1896 and 9·13 in the year the Dentists' Register was first published—namely, 1879.

THE following appointments have been made by H.R.H. the Duke of York: Mr. Frederick Treves, F.R.C.S. Eng., to be Surgeon-in-Ordinary to His Royal Highness; and Dr. Alan Reeve Manby to be Surgeon-Apothecary to His Royal Highness at Sandringham.

THE portrait of Lord Lister, P.R.S., by Mr. W. W. Ouless, R.A., is now finished. The presentation will take place in the lecture theatre of the Royal College of Surgeons of England, Lincoln's-inn-Fields, at 5 P.M. on Monday, March 29th.

MR. GILL, a foundationer of Epsom College, has been elected to a mathematical scholarship at Magdalene College, Cambridge.

THE Bill for the Registration of Midwives was set down for second reading on Thursday night.

The Lancet Special Commission
ON THE
METROPOLITAN WATER-SUPPLY.

VI.[1]

THE SOUTHWARK AND VAUXHALL WATERWORKS COMPANY—*continued.*

Pumping arrangements.—The work to be done is: (1) raising water derived from the natural filtration system and from the river to filters 8 and 9; (2) pumping unfiltered water to Battersea; and (3) pumping filtered water to Nunhead and to the districts supplied. The water is raised to the filter beds by a pair of inverted compound-geared engines and a set of tri-compound-geared engines. The head of water worked against is 16 ft. Three inverted direct-acting Cornish engines of the Bull type are used for pumping to Battersea. The head of water worked against is 135 ft. Two single-acting beam engines with double-acting pumps and two pairs of direct-acting compound inverted rotative engines are used for pumping to Nunhead.

Distribution of the water from Hampton.—From Hampton the water is distributed in two different directions.

The filtered water passes in a 42-in. main in an easterly direction along the high road which passes just to the north of Hampton Court Palace to Hampton Wick. At this point the main goes in a tunnel under the Thames to Kingston. The tunnel under the Thames is in the London clay. It can be inspected from either end, and ladders pass down to the bottom of the tunnel. The tunnel itself is kept dry by a small water-pressure engine worked by the pressure in the main. From Kingston the main passes in a direction nearly due west close to Coombe House and by Raynes Park to Merton and Streatham, then in a north-westerly direction to the north of Lower Norwood and Dulwich College to Nunhead.

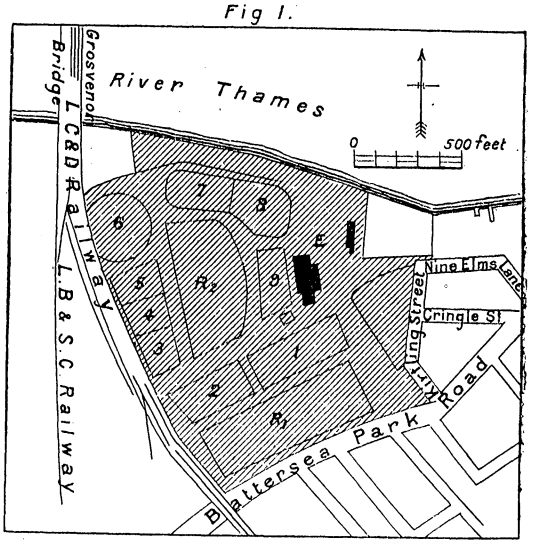
The unfiltered water passes from Hampton in a 36-in. main. There is another main, 30 in. in diameter, which conveys filtered water from Hampton for the supply of the western portion of the Company's district. This is laid parallel with the 36-in. main just mentioned. The two mains pass in a north-easterly direction to Twickenham, then under the Thames just below Richmond Bridge, and then in an easterly direction to Wandsworth. From Wandsworth the 30-in. main passes through Clapham, Kennington, and Camberwell to the service reservoirs at Nunhead. The 36-in. main from Wandsworth takes a more northerly course and conveys the water to Battersea, where it is filtered.

[1] Nos. I., II., III., IV., and V. were published in THE LANCET of Feb. 20th, 27th, and March 6th, 13th, and 20th, 1897, respectively.

Wandsworth.—The station at Wandsworth is situated on the banks of the Thames and of the Wandle where that stream joins the river. The water is brought from Hampton in the 30-in. main just described, and reaches Wandsworth at a pressure of about 100 ft. At Wandsworth the pressure is raised to 200 ft. or 220 ft., and the water goes to supply the higher parts of Wimbledon and the high service reservoir at Nunhead. The water is pumped by two direct-acting, inverted, quadruple expansion, rotative engines, for which the steam is generated by four Badcock and Wilcox tubular boilers, which are usually worked at a pressure of 120 lb. The engine house is built of white bricks with terra-cotta facings, and the inside is lined with shiny, white tiles and is very well lighted. There is at this station an engineer's work room, a blacksmith's shop, and a good lodge.

Battersea.—The water is delivered from Hampton by a 36-in. main and passes into three reservoirs, which have an area of twelve acres and are capable of containing 46,000,000 gallons of water (Fig. 1, R_1, R_2.) From the

Fig 1.



Battersea Station. R_1, R_2, Reservoirs. 1 to 9, Filter beds. E, Engine house and stand-pipe.

reservoir the top-water passes through pipes which are chained to floating buoys, into the filters (Fig. 1, 1 to 9), which have an area of eleven and a quarter acres. From Battersea the water to the district is supplied by one 27-in., one 24-in., three 15-in., and one 12-in. mains. These are not all shown in the map. For the supply of the high-level districts the head of water worked against is 330 ft. and the water is pumped by two beam engines, which have cylinders of 55 in. and work pumps of which the diameters are 15⅝ in. and 15 in. respectively and have a stroke length of 8 ft. Three other engines which supply the district work against a head of 170 ft., the water (or some of it) passing through a stand-pipe 170 ft. in height. The description of these engines may be summarised thus:—

—	Diameter of cylinder.	Diameter of pump.	Length of stroke.
No. 3	68 in.	33 in.	10 ft., 0 in.
No. 4	64 in.	33 in.	9 ft., 6 in.
No. 5	112 in.	50 in.	16 ft., 0 in.

The engine No. 5 is said to be the largest of this type in England and to be capable of raising 12,000,000 gallons of water daily, working against a head of 170 ft. There is also a direct acting engine of the Bull type capable of lifting 5,200,000 gallons of water, working against the same pressure. The Battersea station contains carpenters' and blacksmiths' shops, cottages, and a large yard which contains stores of pipes. The sanitary arrangements here are not strictly in accord with modern ideas. The station will not be used after the completion of the alterations which are now in progress at Hampton.

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Streatham.—The station is situated in a field not far from Streatham-common railway station on the London, Brighton, and South Coast Railway. The top of the well is 110 ft. above ordnance datum. The depth of the well shaft is 148 ft., and below this it is lined with cylinders to a depth of 242 ft. The water level is about 45 ft. from the surface. A careful record was made of the strata cut through. The results are given below.

	Thickness. Ft.	in.		Depth. Ft.	in.
Gravel and mud	10	0	.....	10	0
London clay (153 ft. ?):—					
Yellow clay	6	0	.....	16	0
Blue clay	62	0	.....	78	0
Blue clay and sand	25	0	.....	103	0
Claystone	1	0	.....	104	0
Blue clay	22	0	.....	126	0
Blue clay and sand	33	0	.....	159	0
Basement Bed (in part at least) :—					
Pebbles (water)	1	0	.....	160	0
Pebbles and shells	0	3?	.....	160	3
Conglomerate	0	6?	.....	160	9
Black clay and shells	0	9?	.....	161	6
Conglomerate	0	6?	.....	162	0
Hard conglomerate	1	0	.....	163	0
Woolwich and Reading Beds (43½ ft.?) :—					
Black clay and shells	1	0	.....	164	0
Black clay and sand	0	4?	.....	164	4
Black clay and shells	3?	0	.....	167	4
Hard shells	0	6?	.....	167	10
Black clay and shells	1	8?	.....	169	6
Hard layer of shells	0	3	.....	169	9
Oyster-shells	1	3	.....	171	0
Green sand	2	6?	.....	173	6
Mottled clay	2	6?	.....	176	0
Conglomerate, shells, and quartz	0	3?	.....	176	3
Clay, shells, and grey sand	5	6	.....	181	9
Sandy clay	1	3	.....	183	0
Black clay and shells	1	7?	.....	184	7
Mottled clay	19	5	.....	204	0
Hard, peaty clay, and pebbles	0	6	.....	204	6
Clay, stones, and green sand	2	0	.....	206	6
Thanet Beds (35 ft.):—					
Hard green sand	4	6	.....	211	0
Very hard sandstone	0	6	.....	211	6
Dark sand, tinged with grey (water) ...	0	6	.....	212	0
Grey sand...	12	9	.....	224	9
Black sand	2	8?	.....	227	5
Grey sand	13	1?	.....	240	6
Flints	1	0	.....	241	6
Upper Chalk (198½ ft.):—					
Flints, with little chalk (specimen, with one flint slightly green-coated). ? Some doubt about this part	8	6?	.....	250	0
Soft white chalk without flints	11	0	.....	261	0
Soft white chalk, with flints every 2 or 3 ft. (some specimens compact) ...	32	0	.....	293	0
Large flints, with but little chalk (white)	13	0	.....	306	0
Chalk (specimens white and some hard), with beds of flints every 2 or 3 ft. ...	32	0	.....	338	0
Very hard, grey chalk (specimens white) flints	8	0	.....	346	0
Very hard, grey chalk, with hard stone or boulders (specimens white, and some very hard)	23	0	.....	369	0
Very hard chalk, with stone like limestone (specimens white, one hard) ...	15	0	.....	384	0
Very hard, grey chalk, with dark, dirty (clayey in specimen) partings (specimens white, with flints)	25	0	.....	409	0
Very hard (firm), grey chalk, with stone or chert...	31	0	.....	440	0
Passage Beds and Chalk Rock. (Specimen of chalk and flints)	23	0	.....	463	0
Middle Chalk (219 ft.):—					
Hard, grey chalk, with dark (grey) partings, mixed with stone or chert (many specimens, one, from 525 ft., bedded) ...	69	0	.....	532	0
White chalk, much softer (specimens firm)	19	0	.....	551	0
Hard chalk	19	3	.....	570	3
Hard grey chalk with dark partings ...	48	9	.....	619	0
Hard chalk with dark partings and fossils	27	0	.....	646	0
Very hard, stony chalk	22	6	.....	668	6
Very hard, stony chalk, with fossils ...	2	0	.....	670	6
Hard and rather green chalk, with few fossils (specimens with irregular greenish clayey partings) ? Melbourn rock ...	11	6	.....	682	0
Lower Chalk (182½ ft.):—					
Very hard chalk, with green partings ...	10	6	.....	692	6
Chalk, softer, working up into pipeclay ...	35	9	.....	728	3
Hard grey chalk, working up into stiff pipeclay...	57	6	.....	785	9
Dark grey chalk, very hard, working up into pipeclay	21	3	.....	807	0
Dark, marly chalk, working into a stiff putty. (Specimens from 786 ft. to 840 ft. were greyish and some with curved, marly fracture)	3	0	.....	840	0
Chalk marl, or gault clay, with shells (specimens marly chalk or grey chalk marl)	14	0	.....	854	0
Very hard marl rock band (specimen hard grey chalk)	1	0	.....	855	0
Chalk marl or gault clay (specimen hard grey chalk marl, more sandy than that above)	9	6	.....	864	6
Upper Greensand (28½ ft.):—					
Specimens of light-grey (rather greenish) calcareous sandstone, with glauconite grains: sometimes grains of mica; varying slightly	24	6	.....	889	0
Specimens much the same as the above; grey calcareous sandstone, with small, blackish glauconite grains and small grains of mica...	4	0	.....	893	0
Gault (188½ ft.):—					
Clay; specimen from top, hard, with green grains and a phosphatic nodule...	8	0	.....	901	0
Greensand; probably only a thin layer, as specimen from 903 ft. is hard clay ...	6	6	.....	907	6
Hard clay (specimen firm)	29	9	.....	927	3
Clay (specimens at 940, 960, 980, 1000, 1020, 1040, and 1050 ft., and below, all firm; with phosphatic nodules at 1068 ft., a layer at 1070 ft., and at the base)... ...	154	3	.....	1081	6
Lower Jurassic Beds (? *forest marble*) *flat bedded* (38½ ft.):—					
Hard grey and cream-coloured limestone, mostly crowded with oolitic grains of fair size, with bits of shells. Signs of plant in a trace of clay. At 1083 ft. softer, with oolitic grains dissolved out. Ostrea acuminata? at 1086½ ft.	8	6?	.....	1090	0
Greenish-grey, sandy rock, softest at the base	1	0	.....	1091	0
Hard grey, calcareous sandstone	1	6	.....	1092	6
? Clayey layers lost. Limestone, with oyster-shells, at 1094 ft.	2	6	.....	1095	0
Greenish-grey, sandy clay, with Ostrea acuminata and a small Crustacean claw	2	0	.....	1097	0
Harder specimen at 1098 ft.; but apparently softer rocks missing. Clay at the bottom	10	0	.....	1107	0
Clay, with hard bands					
Clay, with oolitic grains; more numerous in the lower part					
More like limestone, less granular... ...	6	0	.....	1113	0
Impure limestone, with fragments of shells					
Clay, with oolitic grains					
Clay					
Clay, with astarte					
Clay, with fossils (two specimens)... ...					
Clay, with shells					
More sandy clay...					
Clay (two specimens)					
Sandy clay					
Clay, with small (phosphatic?) nodules (two specimens)	7	0	.....	1120	0
Clay, much harder; calcareous					
Clay, with hard beds; harder at the base					
Oolitic limestone					
Beds of doubtful age. Grey, reddish, and purplish beds, 100 ft.; mostly with a tendency to break along planes at 20° to 30° dip.					
Pale greenish-grey, compact, calcareous, sandstone; mottled reddish and purplish lower down; then with purplish bands, showing a dip of 20°. Probably about 8 ft. missing (? clays)	10	0	.....	1130	0
Greenish-grey sandstone, mottled purplish then reddish. Probably about 10 ft. missing	17	0	.....	1147	0
Dull, reddish-purple, hard, sandy clay ...					
Grey sandstone, mostly calcareous, with thin veins of calcite...					
Greenish-grey sandstone, with some purplish mottling and veins of calcite ...					
Greenish-grey and red-mottled sandstone	6	0	.....	1153	0
Greenish-grey, bedded sandstone, with iron-pyrites in the upper part and with purplish bands in the lower (dip 35°) ...					
All these more or less micaceous					
(?) 2 ft. missing					
Hard, purplish, clayey rock...					
Many feet missing	7	0	.....	1160	0
Greenish-grey, calcareous sandstone ...					
Greenish-grey sandstone, mostly calcareous, clayey at the base. Only 14 in. of core ?	15	0	.....	1175	0
Dark, dull, reddish, clayey and sandy rock. Then somewhat mottled with dark grey, and breaking unevenly ...					
A little pyrites. Small calcareous nodules at about 1180 ft. ?...					
Dull, reddish, fine-grained sandstone, mottled with pale grey. Then more of the grey. Small calcareous concretions. Then a reddish mass. Then grey, with reddish bands in bedding planes. About half missing	15	0	.....	1190	0

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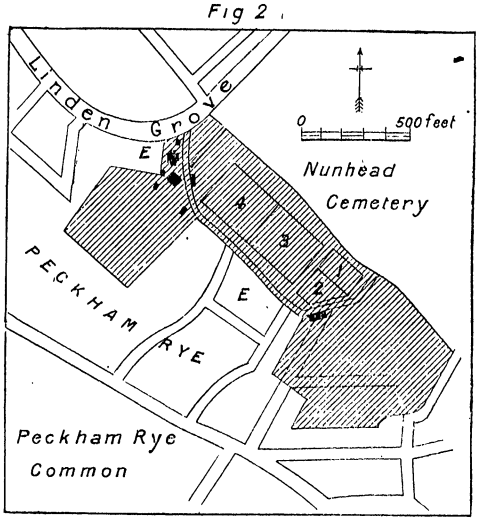
	Thickness. Ft.	in.		Depth. Ft.	in.
Reddish, clayey rock, with about 6 in. of a nodular character (?) at bottom, and greenish-grey rock. About 5 ft. of core	14	0	.....	1204	0
Hard, greenish-grey micaceous sandstone, partly calcareous, and reddish, clayey, micaceous rock. About 5 ft. of core ...	8	0	.....	1212	0
No specimens seen	12	0	.....	1224	0
Red, clayey rock, with greenish-grey in the midst, partly nodular below. 4 ft. of core	14	0	.....	1238	0
No specimens seen	12	0	.....	1250	0
Grey, micaceous sandstone, here and there with reddish bands					
About 1255 ft. with fish remains (?) ...					
Grey and red rock as above; a few inches	8	0	.....	1258	0
Light-grey, coarse, very micaceous sandstone, with black carbonaceous patches; about 20 in.					

The boring was continued to the depth of 1271 ft.; but the last 13 ft. of core were not brought up. The amount of water which it is estimated can be obtained from the well daily is 2,000,000 gallons. The water is bright and clear and has a slightly ferruginous taste. It is pumped by two double-acting lift pumps driven by two sets of triple-expansion engines, and the steam is generated by three Badcock and Wilcox boilers. In a building adjoining the engine and pump houses there is an arrangement for filtering the well water through calico, but this operation is not considered to be necessary by the Company.

Forest Hill.—This station is situated on the summit of Forest Hill, 345 ft. above ordnance datum. The reservoir is built with arches, completely covered in and turfed at the top. It is capable of storing 1,000,000 gallons of water. The reservoir was empty when visited on Dec. 10th. The residence of the assistant-engineer and a cottage for a caretaker are situated here.

Nunhead.—The station at Nunhead (see Fig. 2) contains

Fig 2.



Nunhead Station, Peckham. 1 and 2, High-service reservoirs. 3 and 4, Low-service reservoirs. E, E, Engine house and offices.

reservoirs, pumping arrangements, an office, a valve house, workshops, and the residence of the engineer. The high-service reservoirs (Fig. 2, 1 and 2) are situated at the top of the hill 200 feet above ordnance datum, and they are capable of storing 6,000,000 gallons of water. The low-service reservoirs (Fig. 2, 3 and 4) are situated on the slope of the hill 168 feet above ordnance datum, and have a capacity of 12,000,000 gallons. The reservoirs are arched over and covered with turf. The engine house contains two Bull engines, which are worked by four Cornish boilers. The engines are used to pump the water to the high-service reservoirs. A fire-engine is kept at this station. It is occasionally used to empty service pipes rapidly when a pipe has burst. In such a case the fire-engine is at once despatched to the place at which the accident has happened. The brasswork here, it may be noted, is kept in a way which would be no discredit to a smart man-of-war, and the engine house, like all the newer ones put up by the Company, is extremely well lighted and airy. The valve house, which is situated near the entrance gate, contains the arrangements for regulating the direction of the water-supply; the distributing mains all pass through the house. The office is in telephonic communication with the district inspectors, with the office in Southwark Bridge-road, Streatham, Wandsworth, Forest Hill, and the Metropolitan Fire Brigade at New Cross and at Kennington, and there is a private telegraph wire to Battersea and to Hampton.

Communications with other companies' mains.—There are two communications with other companies' unfiltered water mains: (1) with the Grand Junction Company at Hampton—a 15-in. connexion; and (2) with the West Middlesex Company at Marsh-gate near Richmond—a 36-in. connexion.

Length of new pipes.—The length of new pipes ranging from 3 in. to 20 in. laid in 1895 was ten miles, and during the year 1896 six miles.

Hydrants.—The number of hydrants erected during the year 1895 was 3829, and during the year 1896 it was 4137.

Houses under constant supply.—The number of houses under constant supply on Dec. 31st, 1894, was 106,604; on Dec. 31st, 1895, 109,670; and on Dec. 31st, 1896, 112,455.

Percentage of houses under constant supply.—On Dec. 31st, 1896, the percentage of houses under constant supply was 93·75.

Average daily supply per head.—The average daily supply per head for the year 1896 was 38·39. These figures are arrived at by the Company as follows. The number of supplies afforded is 119,948, and these figures are multiplied by 7·43, which is supposed to be the average population per house in the district supplied.

Dates of maximum and minimum supply.—The following table gives the date of the maximum and minimum supplies and the average daily quantities supplied.

	Year 1895.		Year 1896.	
—	Month.	Quantity in gallons.	Month.	Quantity in gallons.
Maximum ...	September	39,148,588	July	37,591,943
Minimum ...	February	26,630,684	November	31,657,101

Table of Statistical Details given by the Southwark and Vauxhall Waterworks Company for the year 1896.

SUPPLY.	Average daily supply in gallons	31,996,895
	Percentage delivered for other than domestic purposes, exclusive of waste	15 to 20
	Number of houses supplied	119,948
	Number of houses on constant supply	112,455
	Estimated population supplied	891,213
RESERVOIRS.	Number	4
Subsiding and storage unfiltered water	Area in acres...	26
	Available capacity in gallons	136,000,000
Storage filtered water reservoirs..	Number	4
	Capacity in gallons	18,000,000
ENGINES.	Number	16
	Horse power	3,200
	Greatest lift	360 ft.
	Head of pressure in the district supplied	Highest, 170 ft.; lowest, 20 ft.
WATER-PIPES.	Total number of miles of water-pipes	827
	Number of miles of water-pipes in the metropolis...	627
	Number of miles of streets with water-pipes constantly charged in the metropolis	160
	Number of hydrants erected within the metropolis	4137
FILTERS.	Number of beds	18
	Area in acres	20½
	Depth of sand and other materials	5 ft. 6 in.

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Area of Supply.

The Act of 1852 authorises the Southwark and Vauxhall Company to supply the following places, some of which are entirely supplied, some partly supplied, some not supplied:—

Supplied: St. Thomas, Southwark; St. John, Southwark; and St. Olave, Southwark.

Partly supplied: Battersea, Bermondsey, Brixton (Lambeth), Camberwell, Clapham, Christchurch (Surrey), Deptford (St. Paul), Dulwich, Kennington, Lambeth, Peckham and Peckham Rye, Newington (St. Mary), Rotherhithe (St. Mary), St. George the Martyr (Southwark), St. Saviour (Southwark), Stockwell, Walworth, and Wandsworth.

Not supplied: Deptford (St. Nicholas), and Streatham (St. Leonards).

The Act of 1884 authorises the Company to supply the following places, all of which are entirely supplied with the exception of one place which is partly supplied:—

Supplied: Barnes, East Sheen, Ham, Kew, Mortlake, Petersham, Roehampton, Sheen, and Wimbledon (parts above the 100 ft. ordnance contour line).

Partly supplied: Putney.

The Company also supplies water by bulk to the Corporation of Richmond.

New Works in Progress.

Hampton.—In the description of the present state of the Company's station at Hampton it was said that work was in active progress there and a plan was given showing the site of the operations (see THE LANCET, March 20th, 1897, p. 828, Fig. 1). The works are as follows: (1) two storage reservoirs, which will have a total capacity of 300,000,000 gallons; (2) a subsiding reservoir, which will have a capacity of 40,000,000 gallons; (3) seven new filters, which will have a total area of seven acres; and (4) a new engine and boiler house, which is to be supplied with engines of 1500 indicated horse power.

Merton Abbey.—A new well is being dug at Merton Abbey. The shaft is 12 ft. in diameter and the depth now reached is about 90 ft.

Raynes Park.—Boring operations are in progress at Raynes Park and the chalk has been reached.

It is proposed also to construct at Honor Oak a covered service reservoir capable of holding 60,000,000 gallons.

HISTORICAL NOTES ON MEDICINE, SURGERY, AND QUACKERY.

II.[1]

FOR a century and a half Liverpool can boast some "original" medical men, and in the present article it is proposed to give an account of some of them. In St. Nicholas's Churchyard there is or was to be seen near the gate at the middle of the south side an inscription to the memory of a medical practitioner of the seventeenth century: "Here lyeth the body of Alexander Norres of Leverpoole, professor of physick and chirurgery, who departed this life the 5th day of July, was buried the 8th, 1700." For the credit of "physick and chirurgery" it is to be hoped that this was not the Alexander Norris who was Mayor of Liverpool in 1694, and who had to beg pardon on his knees in the House of Commons for his misconduct in returning as M.P. one Mr. Thomas Brereton, who had but fifteen votes, instead of Mr. Jasper Mawdit, the recipient of 400 votes. His worship was discharged on paying fees, after being imprisoned for about seven weeks.

Two hundred years ago, when the burials in Liverpool were only 158, a popular medical man was Dr. Silvester Richmond, who, in 1692, gave £100 to erect almshouses on Shaw's-brow, the site of St. George's Hall. After his death his widow repaired them. By the way, in later days, when Liverpool was famous for its pottery, the bottom of Shaw's-brow, facing the Haymarket, was called St. John's Village. Up the south side of Shaw's-brow were the potters' dwellings. It is said that in the time of the resurrectionists these men were in the habit of handling "clay" of a sort not required in their daily work, and that they got over the churchyard wall and exhumed any newly interred bodies, taking them into their houses, and selling them to the medical students and others who purchased such "subjects." This Dr. Silvester Richmond incurred the displeasure of James II., for, at a Court held at Windsor on Aug. 14th, 1687, His Majesty, having received information of the "misbehaviour" of Oliver Lyme, deputy-mayor of Liverpool, and Silvester Richmond, a justice of the peace there, thought fit to order their removal from their offices in the town of Liverpool. Their "misbehaviour" was their opposition to the King's schemes, and both of them were restored to office after the Revolution. Dr. Silvester Richmond was a member of an old Liverpool family. He filled the civic chair in 1672, and his descendants have been connected with the town down to a recent period. On a brass-plate screwed to a seat in the chancel of St. Nicholas's Church is the following inscription: "Here lieth the body of Silvester Richmond, Professor of Physick and Chirurgery, who after near thirty years indefatigable care and successful practice in this town and country, at last exhausted that life which had been so carefully employed in the preservation of many others. He died the 16th and was interred the 19th April, 1692."

In the Norris Papers, published by the Chetham Society, it is stated that the surgeon received £8 12*s.* for "seering the body" of Mr. Thos. Norris, former Mayor and Member for Liverpool, and Sheriff of Lancashire, who died at Harrogate in June, 1700. At the time of his death two of his brothers were absent in India. One, Sir William Norris of Speke, had been selected by "The English Company trading to the East Indies" as its Ambassador to the Court of Aurungzebe, "the Great Mogul." The other brother, Edward, practising as a physician at Chester, was selected as secretary to the Ambassador. Edward Norris was of Brazennose; M.A., June 1st, 1689; B.M., Jan. 19th, 1691; and M.D., March 12th, 1695. In the procession of April 28th, 1701, with which the Ambassador entered the Mogul camp at Parnella, we find: "Edward Norris, Esq., Secretary to the Embassy, in a rich palanquin, bearing His Majesty's letters to the Emperor; on each side, Mr. Wingate and Mr. Shuttleworth, in rich laced coats, on horseback." The sword of state which was borne before the Ambassador in this splendid procession is now deposited amongst the regalia at the Liverpool town hall. Dr. Norris sailed, with fourteen of his brother's suite, in the *China Merchant*, a vessel bearing a rich cargo, of which 60,000 rupees in value belonged to the Company and 87,000 to Sir William Norris. The brothers again met at the Mauritius and sailed with a large fleet for England; but the *Scipio*, the Ambassador's vessel, parted company, and Dr. Norris saw his brother no more, Sir William Norris dying at sea. Although Dr. Norris returned to England, yet the calm which succeeded to perils and anxieties operated fearfully on his mind. On July 18th, 1703, his sister, Mrs. Hopwood, wrote as follows: "But the concern I am in for my poor dear mother on the account of my dear brother hath filled me with such apprehensions it is as much as I can do to bear up, though had it not been for that paper mother showed me after the unlucky thing of the banqueting house I should never have suspected anything of that kind; I hope it will wear quite off; his friends must not let him be too much alone, tho' I am in constant fear for him, God will be so merciful to him as perfectly to restore him."[2] Dr. Norris was perfectly restored. On his return the Speke estate was to the extent of two-thirds of its value pledged to the annuities of his mother and sister-in-law and the other third nearly taken up by debts. He resided for a while at Utkington, near Chester, and in 1705 married the daughter of William Cleiveland of Liverpool. This lady is marked in the pedigree as his second wife (we discover no mention of the first in the Norris Papers), and after his death she is stated to have married Dr. Tarleton. The death of this doctor's first wife took place Oct. 15th, 1702, and he married again a Mrs. Norris in the lifetime of Dr. Norris. The inscription on Dr. Norris's tomb in Garston Chapel goes far to convict the Norris pedigree (to which the name of that excellent herald Lodge is, we suspect, very improperly appended) of this mistake: "Under this tomb lies interred Edward Norris, M.D., of Speek, who departed this life the 22nd of July 1726, in the —— year of his age. Also Ann, his wife, died the 3 of Jany., 1729, aged 53." They had one son, born in 1712, who it may be conjectured survived his father, yet was dead before 1736, and with him the name of Norris of Speke ceased to exist. Mary Norris, the niece, became the heiress of the whole Speke property, and being

[1] No. . was published in THE LANCET of March 6th, 1897.

[2] Mr. Thos. Heywood, F.S.A.: Introduction to the Norris Papers.

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thirty-six years old married the worthless Sidney Beauclerc, fifth son of the first Duke of St. Albans, "a man of bad character." Dr. Edward Norris was returned for Liverpool to the Parliament of 1714, elected on the accession of George I., and continued to represent the town until 1722. Dr. Norris's granddaughter became the wife of Mr. Richard Pennant, M.P., of Penrhyn, near Bangor, who was afterwards created an Irish peer under the title of Baron Penrhyn. Lady Penrhyn was well known in Liverpool as an active electioneering agent, and died June 1st, 1816.

In the "Records of the Mock Corporation of Sephton" is the following entry: "Mr. Andrew Fillan (an ancient burgess), on the motion of Burgess Cobham, seconded by the Recorder, was unanimously admitted physician to the corporation, on which occasion he took the oath of office in such a manner as convinced the company present that he was fonder of the contents of the mace than any draught in the whole Materia Medica." Drinking on the mace was one of the customs connected with the admission of members. The aspiring candidate had to take "the oath" and then drain the mace, if possible, at a breath, at a wind, or at one "tip"—i.e., of the mace—as the records express it. Nearly every member of the "corporation" bore some whimsical title, often borrowed from the business or profession to which he belonged. Sometimes it was far from flattering. Out of more than 300 members constituting this Mock Corporation nearly 200 appear in Gore's Directory of 1791 as Liverpool gentlemen, merchants, and tradesmen. In 1787 a Mr. Zuill was sworn in physician to the corporation, and Mr. Moss of Liverpool, surgeon, having "refused the Honor of becoming a Member, and therefore he is deem'd disqualified from ever being a Member." Mr. Beckett was "druggist to the Corporation and apothecary, &c.," in 1788. On Sunday, Jan. 25th, 1789, Mr. James Brown of Liverpool, surgeon, dined with the "corporation" as a visitor. After dinner "the Recorder begged leave to recommend Mr. James Brown as a fit and proper person to be admitted to the Franchise of Burgess of this antient and Loyal Corporation, and the motion being Seconded by the Worshipful the Mayor, it was carried unanimously in the affirmative. Mr. Brown was accordingly admitted, took the usual oath, and drank his ale like a man." This was very different to the conduct of a Mr. Bevan, elected rather unwillingly to the position of "Groom of the Stole to the Corporation," who was "sworn in and drank his oath in ale, which he, however, did not do with such *gout* as it was at first imagined so honourable a Burgess recommended to so honourable a Dignity would have done; for Oh, strange to tell! he made Three pauses at Swigging one pitiful pint of ale."

At Bootle on Sunday, March 15th, 1789, several members of the corporation dined together, and were afterwards visited by Henry Stanistreet, M.D., and other gentlemen. Dr. Stanistreet and a Mr. James Bevan of Ashton were admitted "to the Franchise of Free Burgess, took the usual oath, and drunk their Liquor like men. N.B.—The former smiled and made 2 bites of a cherry; the Latter drank his ale gallantly indeed." Mr. James Bevan was proposed by Burgess Taylor, and seconded by the Mayor, to the office of Rough Rider to the corporation. This was carried *nem. con.* Dr. Stanistreet was proposed by Burgess George Bevan and seconded by Alderman Whaley to the office of physician; this was carried *nem. con.* In the following May Mr. John Zuill, junior, was admitted and took the usual oath, "which he drank in such stile as clearly evinced he was a chip of the Old Block." The name of Dr. Rutter also occurs among the members of the corporation. The corporation ordained "that a Common Hall be annually holden on every ffeast of Saint Luke and 1st day of April, and the reason why the Common Halls are proposed to be holden on those days are, with regard to the first, because Saint Luke was a very learned physician and well skilled in ye cure of lunatics, and with regard to the last, because on the 1st of April many Artificial Patients of that description are not infrequently exhibited." At Sefton, on Sunday, Sept. 19th, 1790, Dr. Fillan was proposed and duly admitted, taking the oath and drinking his ale "cheerfully." Among the titles of the office bearers in this very convivial corporation we find the following: Overseer of Bastard Children, Punch Maker, Brazier and Tinker General, Master of the Revels, Window Peeper, Hooper, Cooper and Powder Keg Maker, Chafe-Wax, Poet Laureate, Commissioner to the Hackney Coaches, African Committee-man, Attorney General, &c. At a Sunday meeting at Bootle it is recorded of them that "they dined like men of Gath and proved the strength of the human appetite *ad maximum*, and concluded their repast with a bottle of good old Sherry from the Vaults of Alderman Newsham, the Corporation Vintner." On Sunday, July 26th, 1789, fifteen of the members met at Sefton, where they had "excellent Westphalia ham & best London particular Madeira on the occasion in the Council Chamber." They occasionally drank port wine 130 years old. After careful examination of the printed records we find that, with the exception of the instances mentioned above, the relations of the medical men of Liverpool to the mock corporation were purely professional, or, in other words, it is highly probable that the excesses of the members made work for the medical men. Even the medical men whose names appear in the records as admitted members do not appear to have subsequently taken a conspicuous part in the meetings or been regular in their attendance. Notwithstanding their roystering and vagaries, it must be borne in mind that the members of the mock corporation were men of great influence in Liverpool.

In Union-street resided in the middle of the eighteenth century Dr. Samuel Angier, an eminent physician. He married Catherine, daughter of George Leigh of Oughtrington, and was connected with the old Liverpool family of Clayton. In a commodious house at the corner of St. Paul's-square and Virginia-street, about the year 1770, lived Dr. Henry Richmond. This physician was the father of the Rev. Legh Richmond, rector of Turvey, Bedfordshire, the distinguished author of "The Dairyman's Daughter." Dr. Richmond's father was one of the rectors of Liverpool. Mr. Matthew Turner, surgeon, of John-street, was an excellent chemist. He re-discovered the lost art of staining glass, and in conjunction with a clever artist of the name of Chubbard executed the south window of St. Anne's Church, Liverpool. Mr. Turner was also a wit, and was the cause of a good deal of merriment in advising His Majesty King George III. not to fret at the loss of his American colonies, for Herschel had made amends by discovering a world *in nubibus*, alluding, of course, to the planet Georgium Sidus. Mr. Turner was a member of the first society, formed in 1769, for the establishment of an academy of painting and sculpture in Liverpool, as was also Dr. Matthew Dobson. After a few months' trial the scheme was abandoned, but was revived in 1773. Courses of lectures were delivered, including lectures on anatomy by Mr. Turner and on chemistry by Dr. Renwick. The time, however, was unpropitious, and the society, which numbered William Roscoe among its promoters, was dissolved. Mr. Turner early in his professional career proposed the establishment of a lying-in hospital in Liverpool, as will be seen from the following advertisement, which appeared in the *Liverpool Chronicle and Marine Gazetteer* for May 6th, 1757. This was eighty-four years prior to the founding of the Institution for Married Lying-in Women in 1841, and forty years in advance of the Ladies' Charity, established in 1796.

"A lying-in hospital in this town being what many charitably disposed persons have desired and thought very necessary, and as such a design, if put into execution, must require a considerable time before it can be compleated, the following Proposal is made as an attempt to relieve the most pitiable part of the lying-in poor in the meantime.

"As many unfortunate poor women and their infants suffer greatly through the insufficiency of their Midwives in Difficult Cases; and as the expense of calling in a Man-Midwife at such times often prevents the indigent from having proper Assistance; and as there is a proper place of reception for all other sick poor already provided in town, free of charges, but none for this particular purpose, which deserves at least equal consideration; and as almost every person is engaged at this juncture in contributing, each according to his particular talent, towards relieving the distresses of the poor, —I judged my endeavours for this end might not be unacceptable; I do therefore hereby inform the public that I am ready to attend and assist to the best of my power Gratis, all such married women, living within the limits of this town, whose Cases in labour are Difficult or Dangerous, so that the midwife is at a loss, or unable alone to perform her Office, provided they are not able to pay.

"But, considering that some persons may, from the tenor of this Advertisement, insinuate that the design may not proceed from any motive of Compassion, but only for my own Improvement, to try experiments, or to practise upon the above-mentioned objects of pity, it may not be amiss to obviate these objections (as I have practised but a short time in this town) by further observing to the public that

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I have studied and practised Midwifry in two of the Chief Schools for that Art in Europe; of the truth of which any person may be satisfied, by only calling at my house, where they may see it certified under the hands of Doctor Smellie, teacher of Midwifry in London, and of Mons. Levret, Censor of the Academy of Surgery, and Professor of Midwifry in Paris. "M. TURNER.

"Atherton-street, Liverpool, May 2, 1757.

"N.B.—'Tis hoped that the Gentlewomen who practise Midwifry in town will not look upon anything here mention'd as designed to prejudice or undervalue them, the design being only to give them assistance when 'tis wanted, which I judge may be offered to them in the manner here proposed, without any Impeachment of their abilities, by those who may be allowed to have had better opportunities of acquiring skill in the profession than the Practitioners of their sex usually have."

Mr. Turner may have found "the Gentlewomen who practised Midwifry in town" too many for him in this benevolent project, for I cannot trace any further record of his labour in this direction. In the guarded phraseology of his footnote he appears prophetically to anticipate the delicate relationship of the "gentlewomen" in question towards the medical profession, as unpleasantly emphasised not long ago in the case of the Liverpool Lying-in Hospital.

The year 1745 is memorable in the annals of Liverpool, not only for the attachment of the inhabitants to the House of Hanover, but for the commencement of a great public charity which still flourishes. Several addresses had been published in the town from time to time previously to the year 1745 recommending the forming of a public infirmary. These induced the clergy, physicians, surgeons, merchants, and tradesmen, with some neighbouring gentlemen, to open a subscription for erecting a new building in the year 1745 upon a field, the site of the present St. George's Hall, given by the corporation for a term of 999 years. In July the work was begun and carried on with great vigour, but owing to the rebellion of 1745 the house was not finished till the latter end of 1748. Then the two upper wards were furnished with thirty beds, "which was judged nearly equivalent to the yearly subscription for the support of that number of persons." On March 25th, 1749, the house was opened for the admission of patients. The officers for the first year were the Right Honourable Edward Earl of Derby, President; Mr. Foster Cunliffe, treasurer; Mr. Chas. Goore and Mr. Edward Deane, deputy-treasurers; Mr. Samuel Ogden and Mr. Thomas Seel, auditors; Dr. Walter Greene, Dr. John Kenyon, and Dr. Thomas Robinson, physicians; Mr. James Bromfield, Mr. Thomas Antrobus, and Mr. William Pickering, surgeons; and the Rev. Matthew Lowe, chaplain. The subscriptions to the building fund amounted to £1809 13*s.* 5*d.* in Liverpool, and to £438 13*s.* 6*d.* in the country, making a total of £2248 6*s.* 11*d.* The yearly subscription list amounted to £486 14*s.* 6*d.* The cost of building the infirmary was £2648 7*s.* 11*d.*, of which sum about £400 was borrowed. The number of in-patients admitted in 1749 was 122, and out-patients 72. In glancing over the list of subscribers to the building and founding of the infirmary, which includes the names of the principal inhabitants of Liverpool in the year 1745, it is interesting to note the amount of support rendered to the good cause by the profession itself: Alderman John Bromfield, surgeon, subscribed £32 6*s.*; George Dickins, M.D., £5 5*s.*; Richard Gerard, apothecary, £21; Edward Livesey, surgeon, £10 10*s.*; and Samuel Nicholson, M.D., £5 5*s.* These subscribers and the physicians and surgeons of the charity make in all eight gentlemen practising in Liverpool in the year of the rebellion. Yet there must have been one more, for we know that in that very year of trouble there was born in Water-street a "man child" destined to be one of Liverpool's most distinguished surgeons, and to perform in the institution then being founded a triumphant operation in conservative surgery. We mean Henry Parke, whose father also was a surgeon, but whose name does not appear in the list from which we have quoted.

In Gore's Directory for 1781 the names of the following were given as "medical gentlemen who attend gratis" at the infirmary:—Physicians: Dr. Thomas Houlston, Dr. Joseph Brandreth, and Dr. Joseph Camplin. Surgeons: Dr. John Lyon, Mr. Henry Parke, and Mr. Edward Alanson. It is interesting to note that the gardens for the use of the convalescents extended to where are now the steps leading to the esplanade in front of St. George's Hall. Mr. F. W. Lowndes, in his pamphlet on Venereal Diseases and Prostitution in Liverpool, states that the late Mr. Minshull, surgeon, remembered the old infirmary and that cases of venereal disease were treated there. The wings of the old infirmary were occupied as the Seamen's Hospitals. They were receptacles for decayed seamen and their wives. The seamen sailing from Liverpool contributed sixpence per month by Act of Parliament for their support. They were erected in 1752. The lunatic asylum and infirmary on being closed were used as barracks. The lunatic asylum stood at the corner of St. John's Cemetery, where all sorts of people were interred, those who had "gone to their death" by mischance or committed suicide or died in prison. In 1806 a huge pit was dug in the cemetery, and covered by folding doors or flags. The dead were deposited in the pit, and the earth was thrown upon each layer of coffins as it was completed. In 1816 a writer in the *Mercury* complained of the frightful stench arising from the public grave in the Parish Cemetery, and suggested that a similar contrivance to that used in St. John's-yard should be constructed to cover it. In 1804 some limekilns which stood in Lime-street on the side of the railway station, near Lord Nelson-street, were suppressed, the proprietors being indicted for a nuisance by the authorities, the physicians attending the infirmary giving evidence of the injurious effects of the azotic gas on their patients suffering from pulmonary complaints. The house at the upper corner of Newington-street and Bold-street, now converted into shops, was erected in 1788 by Henry Parke, commonly called Harry Parke, surgeon, who resided there for thirty-two years. He was descended from an old Liverpool family. His father was a surgeon residing in Water-street, where Henry was born on March 2nd, 1745. He commenced practice in 1766 in Basnett-street. This was then considered such a distance from the centre of the town that his friends remonstrated with him for going so far out of the way of his patients. In 1788 he removed to Bold-street, and in 1820 he retired to a suburban retreat at Wavertree, and died on Jan. 28th, 1831, in the eighty-sixth year of his age, full of years and honours. Mr. Parke was not the least eminent of the many distinguished men who have raised the fame of the medical and surgical school of Liverpool. During a long professional life he did much to increase the reputation of the practice of surgery in his native town. His work on the "Excision of Carious Joints" passed through several editions. The following tribute to his merits appeared in an article on Surgical Science in the *Edinburgh Review*, October, 1872: "In the latter portion of the last century, when a vigorous flash of originality seemed to light up the annals of surgery, Parke, of the Liverpool Hospital, may be said to have accomplished the first act of conservative surgery. The fact of his patient being a sailor, to whom the loss of a foot and leg would have been tantamount to the loss of his means of getting bread, determined him to make the experiment of simply excising the diseased part, the knee-joint, and retaining the foot and leg. This he did so successfully that, to use his own words, the patient several years after the operation 'made several voyages to sea, in which he was able to go aloft with considerable agility, and to perform all the duties of a seaman, that he was twice shipwrecked, and suffered great hardship without feeling any further complaint in that limb.' This was a crucial test of success that should have stamped the operation as one of the greatest surgical triumphs of the time, but, like so many other great strides taken in that age of extreme vivification, it was in advance of its fellows and was destined to be arrested for the better part of another half-century." The name of Harry Parke is professionally connected with two celebrated duels which took place in Liverpool. One was the affair between Major Brooks and Colonel Bolton. The parties had been arrested and bound over to keep the peace on one occasion, and before the year elapsed the Major publicly insulted Colonel Bolton in open day in Castle-street, a challenge from Colonel Bolton being the result. The twelve months' bond expired on Dec. 20th, 1805, and on the evening of that day the meeting took place in a field near Fairclough-lane, then a quiet rural road leading from the top of Pembroke-place to Low-hill. The spot must have been very near the site of St. Jude's Church. Major Brooks was accompanied by Mr. Forbes, and Colonel Bolton had Mr. Harris for his second. Mr. Parke was taken up by Colonel Bolton in his carriage as he passed his door. When they arrived on the ground it was so dark that they could not see to load the pistols. Candles were therefore procured; and here in the dreary, cold December night the tragedy proceeded to its *dénouement*. What a scene for the pencil of a Salvator

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Rosa! The generous, public-spirited, kind-hearted British merchant, Colonel Bolton, who was actually the benefactor of the man who had insulted him, compelled by the "code of honour" of the day to imperil his life because the person whom he had fostered and cherished chose to treat him with base ingratitude. Nemesis, however, claimed her victim. The Major fired first without harming the Colonel, who returned the shot, hitting his opponent in the eye and killing him on the spot. The fatal report might have been heard at the Major's house, which stood at the corner of Daulby-street, not more than 200 yards distant. At the coroner's inquest a verdict of "wilful murder" was found; but no prosecution was ever instituted, public opinion being entirely in favour of Colonel Bolton. The other affair was of an earlier date. Lieutenant Sparling, of the 10th Regiment of Dragoons, was paying his addresses to Miss Anne Renshaw, daughter of Rector Renshaw, who resided in Bold-street. An anonymous letter was sent him reflecting on the character of the young lady's family. Although he stated on his trial that he discredited the greater part of the statements, yet enough remained to induce him to withdraw from his engagement, which he did by a letter to Mr. Renshaw. This led to a very bitter correspondence between the parties, and Lieutenant Sparling went abroad for some months. Whilst he was away rumour and gossip, of course, were rife. Mr. Grayson, the young lady's uncle, felt the insult very warmly. He was an entire stranger to Lieutenant Sparling, but did not hesitate to publicly brand him as a scoundrel and a villain, which ultimately led to a challenge from Sparling. The parties met about seven on Sunday morning, Feb. 26th, 1804, opposite the Old Chapel in Toxteth Park, and thence proceeded down the retired valley of the Dingle. Lieutenant Sparling's second was Captain Colquitt, R.N. (Glorious Sam, as he has been called), of the frigate *Princess;* Mr. Grayson's Dr. Macartney, a physician of eminence in the town. Harry Parke was also in attendance, but stated on the trial that he did not know for what purpose he was taken to the ground. At the first fire Grayson fell mortally wounded. Lieutenant Sparling and Colquitt were tried at Lancaster Assizes before Sir Alan Chambre, the result being an acquittal for both.

In the month of February, 1798, the people of Liverpool voluntarily subscribed £17,000 to enable the Government to meet the enormous expenses of the war. Among the subscribers were Henry Parke, who put down £100, James Gerard (probably the medical man), £50, and Dr. Worthington, £50.

BUBONIC PLAGUE IN BOMBAY.

THE Secretary of State for India has received the usual weekly telegram from the Governor of Bombay. It embraces the week ending March 19th. Summarily stated, it reports that the number of deaths from plague returned in that city amounted to 488; that less opposition was shown on the part of the natives in Poona and Karachi to the application of measures of prevention and disinfection; and that large numbers of people (3296) were being inoculated with Haffkine's lymph. The deaths from plague in Karachi during the week were 202. The disease has established itself at Haidarabad and Sukkur, and there are suspected cases at Shikarpur. The preventive measures generally adopted are essentially those which are enforced at Karachi. Inoculations for plague have begun in the last named place, and in Phana, Surat, Ahmedabad, and Poona. Great opposition is manifested at Bombay, in the native town, to the segregation of plague cases, and some rioting has taken place; and a strong deputation has also protested on the part of the Mohammedans against the enforcement of segregation orders. There cannot be any doubt, however, that the prompt segregation of infected cases is a most essential and urgent measure in dealing with the disease, and it is to be much regretted that it was not adopted at the earliest stage of the epidemic, when there would have been some chance of stamping out the outbreak whilst it was still circumscribed within very narrow limits. And this brings us to a matter about which strong opinions are held in Bombay—viz., as to the want of administrative management and organisation shown by the authorities at the beginning of the epidemic and to the extremely weak and ineffective way in which the municipal body in particular dealt with the matter. It was from no want of warning and early and accurate information as to the nature of the disease and the best and only way that it could be encountered. They had a medical committee to advise them, and the benefit of the best advice on the part of officers of the Indian Medical Service and other members of the medical profession to guide them. As it was the preventive measures that were recommended at an early stage of the disease, but not acted upon, had all to be adopted at a much later date when the plague had succeeded in getting a firm foothold in the city and created a panic, with the consequent exodus and risk of its spread to other places. Opposition arising from ignorance and caste prejudice was to be expected, and had in any case to be encountered sooner or later; but it made all the difference if it were encountered sooner rather than later. What is the line of action that has to be taken in all epidemic disease? It is twofold. To seek by hygienic measures to render a population as far as practicable immune in case of invasion of disease and to isolate at once those cases in which the disease declares itself. Of course, these principles of action are not always easily realised; but if we may judge from all we hear and read of local and municipal government in Indian cities, it is most feeble and ineffective and altogether unfitted for dealing with matters of this kind. Action requires to be based upon experience and clearly reasoned out principles, and adopted with more reasonable promptitude than was the case in India. Several excellent communications and articles have appeared from time to time in reference to this matter in the *Times of India*. Segregation, disinfection of vacated houses, measures for thinning an overcrowded population, the destruction by fire of miserably insanitary dwellings, and the creation of air spaces, wholesale cleansing, house-to-house visitation wholesale cleansing—all these things had to be adopted in the end. It is only right to add that these measures were, we understand, represented by the local medical authorities long before they were carried out. It may be urged that it is no good reverting to them now, but what happened in Bombay in regard to this epidemic is what has so often happened before, and probably will again, for people will have it so. We quite appreciate, however, the great difficulties and responsibilities of such a situation, especially in the case of a big Indian city with its different races, religions, and castes, and we gladly recognise that the Bombay Government when it grappled with the situation in earnest did all that it possibly could. The epidemic has been the cause of a large loss of life, and Europeans have not by any means been altogether spared; it has paralysed for a time the trade and caused a large financial loss, but it has not been without its compensations in that it has awakened the attention of all to the importance of public hygiene and given rise, let us hope, to the introduction of many salutary changes in other cities than Bombay.

The medical profession and the public will have learnt with regret that Professor Hankin is stated to have contracted the disease, but the attack proved to be a mild one, and he is fast recovering, if he be not already quite well.

We recommend to the notice of our readers an article from the pen of a particularly well-informed local correspondent on the sanitary condition of Bombay. It is printed on page 915 of this issue.

M. HAFFKINE AND HIS ANTITOXIN TREATMENT OF PLAGUE.

It is stated in the *Pioneer Mail* of the 4th inst. that M. Haffkine is now ready to administer his antitoxin, which has been under preparation at Sewree, in cases of plague of recent occurrence which may be reported to him by medical men in a position to ascertain that the patient has shown symptoms within a definite period not exceeding forty-eight hours. The antitoxin has been tested in very advanced cases at the Arthur-road Hospital and elsewhere, and also in a series of cases which permitted comparison between patients in a dangerous state subjected to antitoxin treatment with others of the same group in milder attacks and left to ordinary treatment, and the attempt, though not successful in every case, gave results undoubtedly favourable to the treatment.

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PASTEUR MEMORIAL LECTURE.

A SPECIAL meeting of the Chemical Society was held on Thursday evening, March 25th, when Professor Percy Frankland, F.R.S., delivered the Pasteur Memorial Lecture.

Professor Percy Frankland commenced his discourse by pointing out how the consideration of Pasteur's work was a subject specially befitting the Chemical Society, inasmuch as he owed the training which enabled him to master so many and such various problems to the rigorous discipline in early years which he underwent in the pursuit of chemistry. His first laurels were won in chemical science, and the epoch-making discoveries which he made as a student and assistant at the famous École Normale have stimulated researches in, and practically founded, that fascinating and important branch of investigation known as stereo-chemistry. Perhaps the most conclusive and eloquent testimony which we can have to the profound importance of Pasteur's researches in this direction is the tribute paid to them by his greatest follower, Emil Fischer, who acknowledged that, despite the immense amount of work which has since been carried out, "there is hardly a new fact of fundamental importance which has been added to his discoveries."

Removed to Lille, Pasteur entered upon those fermentation studies which he followed with such brilliant success over a period of twenty years. In this field of enquiry he had his first passage of arms with the great Liebig; it is needless to say that Pasteur emerged victorious, and the vital has replaced that chemical theory of fermentation processes which was advanced so eloquently by Liebig and other leading men of science of the day. The story of the famous spontaneous generation controversy was told, and it was pointed out how Pasteur was unconsciously preparing himself for the great work with which his name will always be associated—the inauguration of the modern system of preventive medicine. Already in his researches on diseases in silkworms he was attracted by the study of contagion, and the valuable experience he gained in this work may be gathered from the fact that in later years, when anyone presented himself and begged the privilege of working in his laboratory, he used to ask them if they had read his volume on silkworm diseases, and tell them that that was the best preparation they could have for the work which they would be likely to have to undertake. But besides Pasteur's growing interest in the bacteriological elucidation of diseases he was led to embark upon it himself from a growing conviction that the hands into which it had mainly fallen were more likely to damage than benefit the good cause, and Professor Frankland then went on to relate how Pasteur threw himself at the ripe age of fifty-five years with all the enthusiasm of youth into the subject of disease and its prevention, commencing with the study of anthrax. But even while carrying on elaborate experiments on this disease he was turning in all directions for material to extend his researches on pathological phenomena. He walked the hospitals armed with sterile vessels to collect morbid products, he cultivated the staphylococcus pyogenes from boils on the person of one of his assistants, he visited the Maternity Hospital and discovered the streptococcus pyogenes, asserting it to be the cause of puerperal fever. In this connexion an amusing incident was related by the lecturer, who described how Pasteur entered during a lively discussion which was being carried on at the Academy of Medicine as to the origin of puerperal fever, and after listening for some time, unable to restrain himself any longer, he rose and told the medical men present that what caused the disease was nothing to do with what they had been saying, that, on the contrary, it was the medical man himself who carried the microbe of the disease from one patient to another, and when the speaker replied that he was afraid they would never discover that microbe, Pasteur rushed to the blackboard and drew the streptococcus, saying, "Tenez, voici sa figure." The stupefaction and surprise of his audience is more easily imagined than described.

From the etiology of diseases such as anthrax, fowl cholera, swine fever, Pasteur passed on to the consideration of the means whereby they could be combated. The great achievement of Jenner—an achievement which, Professor Frankland reminded his audience, Herbert Spencer had pointed out was rewarded by a grateful country in the shape of a begrimed statue hidden away in an obscure corner of the Kensington-gardens frequented chiefly by nursemaids and perambulators,—had long been dwelt upon by Pasteur, and he cherished the ambition of securing an immunity for those diseases for which the nature of the viruses had now been made known similar to that which Jenner had secured in the case of small-pox. How he came upon his first "vaccine"—viz., that of fowl cholera—through his cultures of the microbe of this disease having suffered such degeneration during a vacation that they were found incapable of infecting fowls, and how Pasteur, who never neglected any fact, was led to re-inoculate the fowls which had resisted the infection with these weakened cultures to see if they could take the disease, and thus discovered to his intense satisfaction that they had been rendered immune, Professor Frankland described in detail. The magnificent triumph which followed the discovery of a "vaccine" for anthrax and other diseases was, however, if possible, eclipsed by the production of a cure for rabies.

The public expression of gratitude for this great discovery took the form of a public subscription, which rendered possible the foundation of the now famous Institut Pasteur. The creation of such an institute had long been cherished as a dream by its first director and great master, and its realisation was the delight of the few remaining years of his life; and here, under the auspices of Duclaux, Roux, Chamberland, and Metchnikoff, the sacred fire kindled by *le grand maître* is still burning, and long (concluded Professor Frankland) may this flame be fed within the temple where rests that hero of science whose great ambition was to be able in his last hour to pronounce the words, so simple in their form, so boundless in their aspiration, "*J'ai fait ce que j'ai pu.*"

THE APOTHECARIES' HALL OF IRELAND AND THE GENERAL MEDICAL COUNCIL.

ON Monday, Feb. 22nd, a Committee of the Privy Council, consisting of the Duke of Devonshire, Lord Rathmore, Lord Macnaghten, and Lord James of Hereford, heard the appeal of the Apothecaries' Hall of Ireland against the decision of the General Medical Council in refusing to appoint examiners to assist in the qualifying examinations held by the Hall.

Mr. Haldane, Q.C., and Mr. B. Stephen Foster appeared for the Apothecaries' Hall, and Sir Robert Reid, Q.C., M.P., and Mr. Muir Mackenzie appeared for the General Medical Council.

For the appellants it was urged that the decision of the General Medical Council would, unless over-ruled by the Privy Council, practically put an end to the existence of the Apothecaries' Hall.

Previously to 1886 the Apothecaries' Hall had the power of examining and registering candidates under the Medical Act. The Act of 1886 gave the General Medical Council power to see that a sufficient standard of efficiency was maintained at any qualifying examination. The General Medical Council had reported that they were dissatisfied with a certain part of the examination held by the Apothecaries' Hall on several occasions and refused to appoint examiners, which was also a part of the powers conferred upon the General Medical Council by the Act of 1886.

After considerable discussion, the Duke of Devonshire intimated that the decision of the Committee would be communicated to the parties in due course.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6381 births and 3936 deaths were registered during the week ending March 20th. The annual rate of mortality in these towns, which had been 18·1 and 18·6 per 1000 in the two preceding weeks, further rose last week to 18·7. In London the rate was 17·9 per 1000, while it averaged 19·2 in the thirty-two provincial towns. The lowest rates in these towns were 9·6 in Derby, 12·0 in Croydon, 12·3 in Norwich, and 12·9 in Brighton; the highest rates were 23·4 in Manchester, 24·5 in Wolverhampton, 25·4 in Preston, and 26·9 in Salford. The 3936 deaths included 344 which were referred to the principal zymotic diseases, against 331 and 334 in the two preceding weeks; of these,

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113 resulted from whooping-cough, 87 from measles, 61 from diphtheria, 32 from diarrhœa, 28 from scarlet fever, and 23 from "fever" (principally enteric). No death from any of these diseases was recorded last week either in Wolverhampton or in Leicester; in the other towns they caused the lowest death-rates in Croydon, Brighton, and Oldham, and the highest rates in Blackburn, Cardiff, Bolton, and Salford. The greatest mortality from measles occurred in Manchester, Cardiff, Gateshead, Bolton, and Salford; and from whooping-cough in Salford, Bristol, Swansea, Burnley, and Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 61 deaths from diphtheria included 37 in London, 4 in Birmingham, 4 in Liverpool, 3 in Huddersfield, and 3 in West Ham. No fatal case of small-pox was registered during the week under notice, either in London or in any other of the thirty-three large towns. There were 29 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, March 20th, against 43 and 30 at the end of the two preceding weeks; 2 new cases were admitted during the week, against 18, 6, and 0 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2622, against 2817, 2745, and 2685 on the three preceding Saturdays; 206 new cases were admitted during the week, against 237, 211, and 218 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 307 and 344 in the two preceding weeks, declined again to 317 last week, and were 206 below the corrected average. The causes of 56, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Cardiff, Nottingham, Leeds, Hull, and in sixteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, Blackburn, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the five preceding weeks from 28 8 to 23·1 per 1000, rose again to 23·3 during the week ending March 20th, and exceeded by 4·6 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 18·0 in Leith and 20·6 in Edinburgh to 24·5 in Paisley, and 32·4 in Perth The 693 deaths in these towns included 33 which were referred to measles, 33 to whooping-cough, 15 to diarrhœa, 11 to "fever" (principally enteric), 9 to scarlet fever, and 5 to diphtheria. In all, 106 deaths resulted from these principal zymotic diseases, against 96 and 83 in the two preceding weeks. These 106 deaths were equal to an annual rate of 3·6 per 1000, which was 2 0 per 1000 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 30 and 27 in the two preceding weeks, rose again to 33 last week, and included 21 in Glasgow and 12 in Edinburgh. The deaths from whooping-cough, which had been 36 and 29 in the two preceding weeks, rose to 33 last week, of which 24 occurred in Glasgow, 5 in Edinburgh, and 3 in Perth. The 11 deaths referred to different forms of "fever" considerably exceeded the number recorded in any recent week, and included 8 in Glasgow. The fatal cases of scarlet fever, which had been 5 in each of the two preceding weeks, rose to 9 last week, of which 2 occurred in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. Of the 5 deaths from diphtheria 3 were registered in Glasgow and 2 in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 203 and 152 in the two preceding weeks, were 155 last week, and exceeded by 39 the number in the corresponding period of last year. The causes of 38, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 45·2 and 39·1 per 1000 in the two preceding weeks, rose again to 40·4 during the week ending March 20th. During the past eleven weeks of the current quarter the death-rate in the city has averaged 40·7 per 1000, the rate during the same period being 18·6 in London and 22·3 in Edinburgh. The 271 deaths registered in Dublin during the week under notice exceeded by 9 the number in the preceding week, and included 74 which were referred to the principal zymotic diseases, against 59 and 61 in the two preceding weeks; of these, 46 resulted from measles, 20 from whooping-cough, 4 from diarrhœa, 2 from scarlet fever, 2 from "fever," and not one either from small-pox or diphtheria. These 74 deaths were equal to an annual rate of 11·0 per 1000, the zymotic death-rate during the same period being 1·5 in London and 3·6 in Edinburgh. The fatal cases of measles, which had been 44 and 43 in the two preceding weeks, rose again to 46 last week. The deaths referred to whooping-cough, which had been 21 and 9 in the two preceding weeks, rose again to 20 last week. The two fatal cases of scarlet fever corresponded with the number recorded in the preceding week. The 271 deaths registered in Dublin last week included 55 of infants under one year of age, and 49 of persons aged upwards of sixty years; the deaths of infants showed an increase, while those of elderly persons were below those recorded in the preceding week. Seven inquest cases and 6 deaths from violence were registered; and 65, or nearly a fourth, of the deaths occurred in public institutions. The causes of 16, or nearly 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL R EXHAM, Surgeon-Majors E. North, J. M. Jones, and H. L. Battersby, Surgeon-Captains C. W. Reilly, T. Birt, and H. E. Winter have arrived home from India in the transport *Victoria*.

Surgeon-Major J. J. C. Donnett has been appointed Special Sanitary Inspecting Officer, Poona Cantonment. Surgeon-Major N. G. Macpherson has been appointed to the Army Medical Department at the War Office. Surgeon-Major Tidbury has been transferred from Cork to Portsmouth.

Surgeon-Captain George M. Dobson, M.B., to be Surgeon-Major.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain J. J. Bourke and Surgeon-Lieutenant F. A. L. Hammond, whose services have been placed at the disposal of the Chief Commissioner, are appointed Inspecting Medical Officers under the rules made under the Epidemic Diseases Act, 1897, and are posted to the stations of Itarsi and Nagpur respectively. Surgeon-Lieutenant H. St. J. Fraser, whose services have been placed at the disposal of the Chief Commissioner, is posted to Hoshangabad for employment on famine duty. Surgeon-Lieutenant C. M. Mathew, whose services have been placed at the disposal of the Chief Commissioner, is posted to Raipur for employment on famine duty.

To be Surgeon-Colonel: Brigade-Surgeon-Lieutenant-Colonel George Bainbridge, M.D., Bombay Establishment (dated Oct. 4th, 1896). To be Brigade-Surgeon-Lieutenant-Colonel: Surgeon Lieutenant-Colonel Charles Henry Joubert, Bengal Establishment (dated Sept. 1st, 1896). To be Surgeon-Lieutenant-Colonel: Surgeon-Major Charles Henry Beatson, Bengal Establishment (dated Sept. 30th, 1896). Surgeon-Lieutenants to be Surgeon-Captains (dated Jan. 29th, 1897)—*Bengal Establishment:* George Lamb, Henry Burden, John Fisher, Edward Surman Peck, Charles Harford Evans, Stanley Arthur Harris, Ewan Cameron MacLeod, and Charles Thomson. *Madras Establishment:* Alfred Eugene Berry and Herbert St. John Fraser. *Bombay Establishment:* Bernard Henry Frederick Leumann and Hugh Bennett.—*London Gazette.*

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Staff Surgeons: A. G. P. Gibbs to the *Victory*, for the *Malacca*; W. G. K. Barnes to the *Undaunted*; J. J. Dinnis to the *Edgar*; and J. Sugrue to the *Australia*. Surgeons: C. H. Rock to the *Undaunted*; D. J. P. McNabb to the *Edgar*; E. G. E. O'Leary to the *Research*; John Grant to the *Pembroke*, and afterwards to the *Pelorus*; Sidney T. Reid to the *Hibernia*; and John W. Slaughter to the *Victory*, for the *Malacca*, on the voyage home.

HONOURABLE ARTILLERY COMPANY OF LONDON.

The under-mentioned officer resigns his commission:—Surgeon-Captain H. G. Read (dated March 24th, 1897).

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ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain H. W. Roberts to be Surgeon-Major.

MILITIA MEDICAL STAFF CORPS.

Surgeon-Lieutenant J. T. Simpson to be Surgeon-Captain on increase of establishment.

VOLUNTEER CORPS.

Artillery: 2nd Kent: Surgeon-Major F. Smith, M.D., to be Surgeon-Lieutenant-Colonel. 1st Dorsetshire (Southern Division, Royal Artillery): Surgeon-Lieutenant Hubert Houssemayne Du Boulay resigns his commission, and is appointed Lieutenant. 1st West Riding of Yorkshire (Western Division, Royal Artillery): Surgeon-Captain John Nightingale resigns his commission, and is appointed Second Lieutenant. *Rifle:* 3rd Volunteer Battalion the Queen's (Royal West Surrey Regiment): Surgeon-Lieutenant C. Boyd to be Surgeon-Captain. 5th Volunteer Battalion the Cheshire Regiment: Surgeon-Major W. R. Dambrill-Davies to be Surgeon-Lieutenant-Colonel. 14th Middlesex (Inns of Court): Surgeon-Lieutenant C. J. Arkle, M.D., to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: Surgeon-Captain J. E. Squire, M.D., to be Surgeon-Major on increase of establishment. Surgeon-Lieutenant H. D. Buss to be Surgeon-Captain.

THE HEALTH OF THE FRENCH ARMY IN 1896.

The medico-statistical report issued annually by the French War Minister has made its appearance, as usual, in the *Journal Officiel*, and, generally speaking, its contents may be said to show that the advance of the army towards sanitary perfection, which of late years has been very conspicuous, was adequately maintained during the past twelvemonth. In 1887, ten years ago, the total number of men with the colours was 480,672, and among them 3319 deaths took place, equal to 6·9 per 1000; but in 1896, although the average strength had risen to 546,500, the deaths only numbered 2900, or 5·3 per 1000. This happy result is chiefly due to the measures that have been adopted for purifying the water-supply. Formerly, many garrisons—notably those at Lure, Évreux, and Châteaudun—used to be well-nigh decimated by constantly recurring outbreaks of typhoid fever, but now they enjoy what the Minister describes as "absolute salubrity." The evidence thus afforded being conclusive, it has been decided to acquire six more sterilising apparatuses in order that they may be permanently installed wherever the drinking water is open to suspicion. According to this system of purification the water is rendered sterile by means of steam at high pressure, and the appliances are said to be at once simple in construction, durable, economical, and easily worked. Whilst thus eulogising the latest device for combating water-borne disease, General Billot by no means seeks to minimise the "incontestable advantages" of the Pasteur Chamberland filter. The efficacy of the latter admirable invention was placed beyond doubt by the unanimous chorus of approval from every garrison, large or small, where it was used; but the sanitary authorities nevertheless felt bound to take advantage of the new system which, after several years of experiment under their own close supervision, had gradually been brought to perfection. Turning from the prevention of disease to its incidence, the Minister is able to announce the steady decrease of small-pox amongst the troops. In 1876-77-78 the number of cases exceeded 1000 annually, and the deaths to be deplored were respectively 127, 92, and 98. In 1895 there were only 61 cases of small-pox in the whole army, with 6 deaths; while last year of 57 cases only 2 proved fatal. It is owing to re-vaccination that the soldiers were safeguarded while on service in Africa, Madagascar, and Tonkin, surrounded as they were by a native population, amongst whom the scourge is both endemic and deadly. As regards "croup," the fatal cases have been reduced by more than a half. All military hospitals, as well as every military centre, no matter how small, in France and Algeria is now daily furnished with the special instruments and appliances required for anti-diphtheritic inoculation, the serum being supplied and freely renewed whenever needed by the Pasteur Institute. The sequel to this enlightened procedure is plainly discernible. In 1893 the mortality from "croup" in the French army amounted to 64; by 1895 it had fallen to 24; and in 1896 the number of deaths was only 22. Unfortunately there are other diseases which continue to exact numerous victims. Scarlet fever, measles, and influenza are still extremely frequent; but mixing as the soldier does in civil life while on leave of absence it is difficult to contend against these products of insanitation. The reservists, too, are a fruitful source of infection; but in spite of all obstacles the struggle with preventable mortality is waged with unabated zeal. "It is impossible to conceal from oneself the fact," says the Minister in conclusion, "that every cause of insalubrity in barracks has its reflection in augmented bills of sickness and mortality. This was well exemplified at Dijon when influenza was prevalent, and also quite recently in the scarlet fever epidemic at Gerardmer. It is likewise impossible to conceal from oneself the fact that all amelioration in the installation of these same barracks has its reflection in very considerable expenditure, and that my department is constrained to keep within those limits of the budget that are laid down annually."

THE WRECK OF THE "WARREN HASTINGS."

We called attention some time ago to this subject and to the fact that it had most deservedly attracted the notice of the Queen. We may be excused for referring to it again, for it is one of which the nation and the Army may well feel proud. It has since been made the subject of a special Army order in which the Commander-in-Chief expresses his great gratification "in making known to the Army the substance of a report received from the General Officer commanding at the Mauritius recording the remarkable courage and exemplary discipline displayed by the troops, under the most trying circumstances, on board the Royal Indian Marine troopship *Warren Hastings*, when that ship, steaming full speed, struck the rocks during a pitch-dark night and was wrecked near the village of St. Philippe, in the Island of Réunion, at 2 20 A.M. on Jan. 14th last. The troops on board consisted of the headquarters and four companies of the 1st Battalion King's Royal Rifle Corps, four companies of the 2nd Battalion York and Lancaster Regiment, and a detachment of the Middlesex Regiment." Lord Wolseley, after quoting from the report of Commander Holland, the officer in command of the *Warren Hastings*, that the behaviour of the troops throughout was beyond all praise, concludes his order as follows: "The Commander-in-Chief is proud of the behaviour of the troops during this trying time; he regards it as a good example of the advantages of subordination and strict discipline, for it was by that alone, under God's providence, that heavy loss of life was prevented. The Commander-in-Chief cannot close this order without expressing his admiration of the coolness, courage, and resource shown by Commander Holland, and sympathy with him and his brave officers."

PLAGUE ON A TRANSPORT.

The announcement that the transport *Dilwara* is being detained at Suez, owing to the occurrence of a fatal case of plague on board the vessel after she left Bombay, will tend to accentuate the supposition that if this disease is introduced into England it is not at all unlikely that troops returning from India may be responsible for its introduction. It therefore behoves the naval and military authorities to take every possible precaution to ensure that all troopships coming from infected ports shall be carefully dealt with in accordance with modern notions, and in harmony with the proceedings adopted by our best-equipped and best administered port sanitary authorities. We are not aware that up to the present the military and naval authorities have made any arrangements independently of the port sanitary authorities, for dealing with cases of plague or suspicious "pestis minor"; but we have heard that they have approached the Southampton port sanitary authority with a view to the isolation of any cases of plague which may be brought to that port. As Southampton is at present the port at which the majority of our troopships arrive it is obviously important that adequate arrangements shall be made beforehand, and that there shall be a thorough understanding as to what steps are to be taken to deal without delay with an infected troopship. The Southampton port sanitary authority is, we believe, one of the best equipped in the kingdom and is well able to afford the necessary assistance. Quarantine is dead in so far as the national method of dealing with infected vessels is concerned, and all vessels must be dealt with on similar lines if England is to maintain a consistent attitude in the eyes of the world.

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A VOLUNTEER MEDICAL OFFICER WANTED.

On the occasion of the presentation of prizes to the 3rd Essex Volunteers on the 13th inst., at Portway, Lieutenant-Colonel Henry Palmer, 3rd Volunteer Battalion the Essex Regiment, took occasion to mention that no medical gentleman in West Ham had applied for a commission in the 3rd Essex. The 1st Essex had its medical officer, the 3rd Essex had none.

VOLUNTEER MEDICAL OFFICERS AND THE WAR OFFICE.

A correspondent writes to us under date March 22nd, a letter, in which he propounds the question: Is the Volunteer Medical Service either loyal to the medical profession itself or to the Army Medical Department in doing professional work for nothing? "I am inclined to think," he says, "that the medical officer is decidedly wrong in giving his services to either his country or to individuals for nothing. In the latter case it may be but right that he should retain his individual liberty, but in the former case he has given himself away, as in a number of corps he pays an annual subscription. Is the profession right in devoting a very considerable part of its time to the working up of bearer companies, each of which occupies the entire attention of at least one medical officer for probably four or five hours a week teaching both by drill and lectures. This year there has been a very important addition made to the duties of medical officers—i.e., the examination of recruits. This examination, though not intended to be anything like as thorough as for recruits for the regular forces, still takes some time, and also necessitates the attendance of a medical officer at headquarters weekly."

THE HEALTH OF THE ARMY IN INDIA.

Surgeon-Major Whitehead, in the report of the departmental committee on venereal disease, sums up his experience during the five years of his appointment as Assistant Professor of Military Surgery at Netley, during which he had unrivalled opportunities of studying the question of the prevalence of syphilitic disease among our troops, with the following conclusions: "(1) That the disease is more prevalent at present than formerly among foreign invalids; (2) that the type is more malignant; and (3) that the health and efficiency of the soldier are in many cases absolutely ruined by this disease, and even if he so far recover after a bad attack as to return to duty there is a great probability of his again breaking down." When we consider that this contagious and hereditary disease is largely preventable we may well urge the extreme importance of some measures being taken to put a stop to the present scandalous state of affairs.

REVISED SCALES OF PAY FOR THE ARMY MEDICAL STAFF IN INDIA.

The *Times of India* of the 6th inst. states that the revised scales of pay approved by the Secretary of State for the Army Medical Staff in India and certain grades of the Indian Medical Service will come into effect from April 1st. An Army circular will shortly be published showing the new rates.

The transport *Victoria* arrived on the 18th inst. She brought 320 patients for the Royal Victoria Hospital, Netley.

The transport *Dilwara* left Bombay on the 11th inst. with 293 invalids for Netley. Her arrival will probably be postponed in consequence of a case of bubonic plague having occurred on board.

Dr. S. Wilks, President of the Royal College of Physicians, Sir Dyce Duckworth, Sir Wm. Priestley, and Dr. John Anderson visited the Royal Victoria Hospital, Netley, on Saturday last, in connexion with the inquiry which has been instituted with regard to the prevention of contagious diseases among the men of the Army in India.

CARDIFF PORT SANITARY AUTHORITY. — The medical officer of health for the Cardiff port sanitary authority has just issued his report for 1896. Dr. Walford estimates the floating population of the port to be 7000, and states that during the year 6222 vessels were inspected; of these 5271 were in a good or fair condition and 951 in a more or less insanitary state. The systematic inspection of shipping in the Bute and Penarth Docks was efficiently performed by the chief inspector and his assistants. In only five cases was it necessary to take legal proceedings. Nine patients were admitted to the infectious diseases hospital, one of the cases terminating fatally.

Correspondence.

"Audi alteram partem."

"THE MEDICAL STAFFS OF HOSPITALS AND HOSPITAL ABUSE."

To the Editors of THE LANCET.

SIRS,—Mr. Horder assumes that I was in error in stating that Sir William Fergusson's committee recommended that medical officers attending the out-patients should be paid. I have before me as I write the report of the committee appointed to inquire into the subject of Out-patient Hospital Administration in the Metropolis in 1871, signed by Alfred Meadows, M.D., chairman, J. H. Stallard, M.B., and Heywood Smith, M.B., honorary secretaries. The report states: "The following resolutions embody in brief form the conclusions at which your committee have arrived and which they recommend for adoption." No. 6 of these resolutions runs as follows: "That the governors of hospitals ought in all cases to provide some honorarium for the staff of the out-patient department." You will see, therefore, that Mr. Horder, and not myself, is in error, and I am rather surprised to find that he has not procured a copy of the report in question, and that he is evidently not familiar with its terms.

On another point raised by Mr. Horder I desire to impress upon the medical profession that so long as we have honorary medical staffs attached to our great hospitals—that is, unpaid staffs—so long will the hands of the managing committees be tied, so far as initiative is concerned, in the work of reforming the out-patient departments unless the medical profession commence proceedings by making representations to the managers. This fact makes me strongly in favour of the abolition of all honorary medical service, at any rate so far as the great London hospitals are concerned. I am sure on the grounds of economy, although it might cost the hospitals £60,000 a year to pay for the necessary medical service, such a step would in the end tend to reduce rather than to increase the average cost per bed. The medical profession now have a unique opportunity, which may not recur, of conferring together and formulating a definite policy in regard to out-patient relief and other matters of pressing importance affecting the administration of our hospitals. I wrote my letter because I realised this position of affairs, and wished, if possible, to induce the medical profession in its own interests, and in the best interests of the hospitals and all connected with them, to take up a strong position after due deliberation and conference by formulating a policy in regard to these matters. The governors and committees would thus be placed in a position to institute every reform, which may be found desirable or necessary in the best interests of the patients, the profession, and the public. I desire to thank Mr. Horder, and through him the members of his committee, for their statesmanlike determination to postpone for a time the public conference which it was proposed to hold this summer.

The writer of the leading article in THE LANCET of March 20th, no doubt unintentionally, does me less than justice. I have never stated, nor do I hold the opinion, that "the Hospital Sunday Fund and the Prince's Fund have at present but little responsibility for the use of what they collect." On the contrary, it is because I am deeply impressed with the responsibility attaching to the distribution of these funds, and to the paramount necessity of providing that our voluntary charities shall be as free, as it is humanly possible to make them, from all preventable abuses, that I ventured to write you the letter which appeared in THE LANCET of March 13th, and to state the grounds upon which I gave my entire support to your proposal, that a conference should take place in the near future of the members of the honorary medical staff, attached to every hospital of repute in the metropolis. I joined issue with Dr. Glover on the out-patient question, so far as the Hospital Sunday Fund was concerned, because I realise, that without such a conference not only the Hospital Sunday Fund, but the hospital committees throughout London, must remain practically powerless to enforce the reforms in the out-patient departments, which he has so much at heart. Premature action and an attempt at interference without the necessary authority to enforce needful reforms, are calculated to prove

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more harmful than helpful. That is why I ventured to deprecate putting the cart before the horse, by moving the Hospital Sunday Fund to make representations, before we were clear that those representations could be accepted by the hospital committees with the support of their medical staffs; for with the medical staffs, as I have already stated, the chief responsibility for the present state of affairs in reality rests. I am, Sirs, your obedient servant,

HENRY C. BURDETT.

The Lodge, Porchester-square, W., March 22nd, 1897.

To the Editors of THE LANCET.

SIRS,—With reference to the letter of Mr. T. Garrett Horder in THE LANCET of March 20th I should be obliged if you would allow me to say that at this hospital we have for many years made inquiries into the circumstances of the out-patients. May I also add that a medical officer sifts the cases before they are seen by the assistant physician or assistant surgeon.

I am, Sirs, yours faithfully,

C. L. TODD, Secretary.

St. George's Hospital, S.W., March 24th, 1897.

"HOSPITAL ABUSE: THE LEEDS WORKPEOPLE'S HOSPITAL FUND."

To the Editors of THE LANCET.

SIRS,—As a general practitioner of medicine for seventeen years in Leeds, during which time I have seen a great deal of the working-man patient, also having as a student attended at the Leeds Infirmary, I have acquired some little experience in the subject discussed by THE LANCET Commissioner, which experience is directly opposed to that of Dr. Eddison and to that of Mr. Jowitt. The working man, I believe, subscribes to the infirmary 1*d.* a week, or something like 4*s.* per year. Now, very few lodges pay per head so much as that for medical and surgical attendance—the club patient can for the sum of 3*s.* 6*d.* per annum command attendance at his own home and medicine, &c. Naturally he supposes that the larger amount paid to the infirmary gives him equal rights at that institution, and I have heard this said not once but often, so often, indeed, that I was astonished that any one should make an assertion to the contrary. I have known the case of a woman possessed of independent means, able to pay 50 guineas for a surgical operation, become an in-patient of the Leeds Infirmary for the purpose of an operation; she was not a resident in Leeds, she had no claim upon Leeds, and the surgeon who performed the operation robbed himself of something like 50, or it may easily have been 100, guineas. Moreover, her friends considered her as a private patient and so termed her. In another town a lady of fortune, who spends large sums in charity, fell from a bicycle, costing probably £30, breaking her leg. She was treated in an infirmary, to which institution she presented £100 on leaving, which money I affirm was rightfully the fee of some practitioner, though perhaps no medical man would have had such a large amount of gratitude shown to him. I have known a man treated at the Leeds Infirmary for fractured arm throughout the entire course, which man lived in a good house in a good neighbourhood—such a district, in fact, where all consulting surgeons and physicians ask for fees on the higher scale. In my student days I actually extracted teeth from people I knew could afford a dentist's fees. Little, perhaps, they knew it was a 'prentice hand that held the forceps! I have known a woman in good circumstances leave her rings and jewellery at home, so advised to do by her friends, when it was necessary to consult a leading Leeds surgeon at his rooms—nay, more, she dispensed with her brougham, using the humble cab; and this course was adopted to save one guinea, the idea being that she would be charged two guineas if she appeared in her proper guise. The sufferers from trivial accidents requiring minor surgical operations are all urged to go to the infirmary. Persons even spend more in railway and cab fares than would be charged by ordinary medical men. It is obvious that those who will so spend from 2*s.* 6*d.* to 5*s.* are not those for whom a charitable institution is intended. I suppose all who subscribe—in the way of rates, at least—to the Leeds Workhouse have the right to claim a place there. Then why deny those who subscribe to the Leeds Infirmary the same rights? Both of these institutions are for the poor and sick. I do not wish my name and address to appear. I am, Sirs, yours truly,

LEEDS PRACTITIONER.

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—May I point out that your correspondent who writes anonymously in favour of registration in THE LANCET of March 20th is extremely wide of the mark. He thinks, like the promoters of the Bill, that the magic of registration will efface the horrors he describes and, like Dr. Cullingworth, that the maladies of childbirth will cease to be; in fact, that we are on the eve of a parturient millennium. One of the staple arguments of registrationists is that the educated midwife will *send* for medical aid on the first approach of danger. This is a mere supposition. The "follower" of one of these women in this parish was required in 23 per cent. of her cases in 1892, and in 8 2, 2·5, 2 7, and 2 8 per cent. in 1893, 1894, 1895, and 1896 respectively. One woman died in her confinement, there was a death from miscarriage, and an infant was sacrificed through delay in a shoulder and funis presentation. I need not add to the list of casualties; and will only say, in conclusion, that a Bill which proposes to register *bonâ fide* midwives of two years' standing, which will include most of the existing "Gamps" and which still recognises the friendly neighbour's assistance, stands self-condemned. There is no provision at all for the after-nursing, which is the most vital part of the parturient function, and as it is perfectly evident that the qualified midwife will not act as an obstetric nurse under medical supervision I utterly fail to see how the Bill will benefit "the poor" if it become law; and if I had not had the promise of Mr. Skewes-Cox to have it referred to a committee of the House so that "all parties" may be heard I would long ago have offered it a more vigorous opposition. Dr. Cullingworth is a special pleader, and his recent address on puerperal fever is largely discounted by his attitude in this question and his more recent address to the promoters of the measure.—I am, Sirs, yours faithfully,

East Sheen, March 22nd, 1897. ALEX. MCCOOK WEIR.

THE COLONY FOR EPILEPTICS.

To the Editors of THE LANCET.

SIRS,—Will you allow us to make an appeal through the columns of THE LANCET on behalf of the colony established at Chalfont St. Peters by the National Society for Employment of Epileptics. Amidst the earnest efforts for the succour of the sick and afflicted which have so distinguished this country during Her Majesty's reign, one form of infirmity is still almost overlooked, and in England there are probably not less than 40,000 epileptics who lack the care which is bestowed upon their fellow sufferers amongst other nations. For both in Europe and America many institutions or settlements have been established on the lines of the famous "Colony of Mercy" at Bielefeld, in Westphalia, which affords a home for nearly 1400 epileptics. Under ordinary circumstances epileptics of the poorer classes live under conditions so unsuitable that in many instances they sink into a state of insanity and at last find refuge in the asylums. The object of the colony is to save them from this fate by taking them in hand at an earlier stage and enabling them to lead lives of usefulness and activity. The care of the insane is a heavy burden on the country, and the preventive methods of the colony will, we believe, be found in the long run to be economic as well as humane.

Amongst the numerous candidates waiting for admission to the colony, about one in ten drops out of the list every year through insanity or death, whilst at the colony itself, since its establishment nearly three years ago, only one death has occurred and only one patient has had to be transferred to an asylum. The average number of epileptics in residence at the colony has been twenty-seven. Besides the two homes at present in occupation at the colony, two others, the funds for which have been specially given, are in course of erection, and additional funds have been offered by generous friends, notably by Mr. Passmore Edwards, for the erection of several other homes, which will be commenced shortly. Within a year there will therefore, it is hoped, be accommodation at the colony for about 160 epileptics, men, women, and children. Even then the provision will be small in comparison with the need. But while the funds for building the new homes are provided, these great extensions will involve considerable

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incidental outlay, for which as yet little provision has been made. A laundry will be needed for the female colonists and school accommodation for the children. The sewerage system will need extension, and the committee are of opinion that for the security of the colony when its numbers increase there must be a resident medical officer, for whom a house will have to be provided. It is estimated that on the most economical basis the outlay for absolutely necessary purposes will be £10,000, whilst for the extension of the colony on a scale really proportionate to the demand for admission a far larger sum would be needed.

Epileptics are received at the colony impartially from all parts of the kingdom, and we therefore appeal for help to the charitable public throughout the country, and we trust that during this memorable year the effort begun to help a suffering and hitherto almost neglected class of our afflicted brethren may be placed upon a footing sound, hopeful, and commensurate with their great necessities.

Contributions, which will be duly acknowledged, should be sent to the secretary, Mr. G. Penn Gaskell, at the society's offices, 12, Buckingham-street, Strand, London, W.C., or to the bankers, Messrs. Hoare and Co., 37, Fleet-street, London, E.C.—We are, Sirs, your obedient servants,

DEVONSHIRE.
HERSCHELL.
W. H. BROADBENT, M.D. Lond.
JAMES CRICHTON BROWNE, M.D Edin., F.R.S.
C. S. LOCH.

March 22nd, 1897.

THE RECENT DEBATE UPON VACCINATION AT THE EPIDEMIOLOGICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—As the brief report of my contribution to the discussion on vaccination at the Epidemiological Society which is given in THE LANCET of March 20th is calculated to convey an erroneous impression of my opinion on the subject of vaccinal injuries, I shall be obliged if you will allow me to make one or two corrections. 1. As regards vaccinal syphilis I stated that although every alleged case of invaccinated syphilis brought before the Commission which had occurred between the years 1889 and 1896 was subjected to a searching inquiry, not one stood the test of an investigation into all the circumstances. I did not state that all were cases of congenital syphilis. 2. It is not my opinion that all cases of vaccinal erysipelas result from post-vaccinal wound infection, although the majority are probably due to this cause; cases have occurred in which the evidence goes far to prove that the erysipelas has been invaccinated. I have discussed these questions (including the alleged transmission of tubercle, leprosy, lupus, &c., by vaccination) at length in the forthcoming volume of Allbutt's System of Medicine, to which I would refer those of your readers who may be interested in the subject.

I am, Sirs, yours faithfully,
THEODORE DYKE ACLAND.

March 22nd, 1897.

"THE COMPENSATORY MECHANISMS OF THE HEART."

To the Editors of THE LANCET.

SIRS,—Dr. Starling, in the first of the Arris and Gale Lectures, reported in THE LANCET of Feb. 27th, made the following statement, which seems to me incorrect in almost every particular: "If the aortic pressure is maintained at its normal height it is evident that in mitral stenosis the work done by the left ventricle must be increased above its ordinary amount, since a certain fraction of the work is wasted in driving blood back into the auricles. Hence, the result of mitral incompetence is, first, increased diastolic dilatation of the left auricle and left ventricle, which later becomes more or less permanent; and, secondly, hypertrophy of the muscular walls of both these cavities." All the books I have on the subject tell me that in typical mitral stenosis cases the left ventricle is *not* hypertrophied. Statistics I have published[1] indicate also that in these cases dilatation of the left auricle is *not* common, except towards the end, when compensation breaks down. Dilatation of the left ventricle is also rare. When mitral stenosis is well developed it is exceedingly improbable that the ventricle wastes its energies in driving back blood into the auricle. A systolic murmur is commonly absent, and I have indicated[2] why, even when the mitral valve is incompetent, regurgitation should not occur. It would contribute to clearness and accuracy if the word "incompetent" were not employed as synonymous with regurgitation, since a stenosed and incompetent mitral orifice is not an orifice at which regurgitation occurs to any appreciable extent. When, however, late in the history of the malady compensation breaks down and the auricle dilates, then regurgitation appears, a systolic murmur is introduced, and cardiac symptoms first become pressing. A second cause of confusion in discussing the physics and the pathology of mitral stenosis arises from not discriminating between slight and severe stenosis. Thus it is incorrect to say that hypertrophy of the left auricle is a characteristic change in mitral stenosis if the stenosis be slight, and correct if it be severe. It is surely important to take notice of such distinctions.

I am, Sirs, yours faithfully,
D. W. SAMWAYS.

Mentone, France, March 19th, 1897.

"A QUESTION FOR ANÆSTHETISTS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 20th Dr. Silk raises the question of the frequency of pneumonia in present-day aseptic surgery. I venture in this connexion to quote the following case which has occurred within the last few days at the New Hospital for Women.

The patient, aged twenty-five years, convalescent from syphilis of an aggravated form, was re-admitted on March 11th, after a fortnight's absence from hospital at a convalescent home, for operation the following day, with normal pulse, temperature, and respirations. On the 12th she was anæsthetised by Mrs. Keith, anæsthetist to the hospital, with gas and ether, for removal of hypertrophied labia. The operation was performed with the usual minute antiseptic precautions and lasted half an hour. The temperature rose the same evening to 103° F. and the urine was highly albuminous. By the 15th there was consolidation of the whole lower lobe of the right lung with rusty sputum, and two days later the left lung was attacked. *At the present time the patient is recovering.* She had undergone two previous operations for recto-vaginal fistula and had suffered in no way from the anæsthetic. The inhaler used at the New Hospital for Women has a celluloid facepiece, which is washed before use. It may be mentioned that two other patients had been anæsthetised before this one on the same morning, neither of whom showed any ill after effects. I would suggest that it is to the surgeons we must look for reports of these cases rather than to the anæsthetists, who seldom see the patient after the operation.

I am, Sirs, yours faithfully,
FLORENCE NIGHTINGALE BOYD,
Surgeon to the New Hospital for Women.

Harley-street, W., March 20th, 1897.

THE CELEBRATION OF THE LONGEST REIGN.

To the Editors of THE LANCET.

SIRS,—You published a note from me in THE LANCET of June 4th, 1887, making a suggestion that medical students in London should take part in the celebration of the Queen's Jubilee. Though the scheme was very favourably received by the students of that time, for many reasons the scheme was dropped. Now, although far away from the scene of action, I throw out the suggestion once more. I suggested a torch-light procession, but if any more suitable scheme was brought forward I have no doubt my idea would be passed over. But, Sirs, on this occasion there is much more to be said for the medical students to be represented in the demonstrations of loyalty to the Crown and admiration for Her Majesty. Throughout the British Empire, after the kindly expressions of the Queen and the Prince of Wales, it is extremely probable that medical interests—hospitals, nursing, &c.—will be furthered and established on a more secure and lasting basis; therefore it would be ungracious for the rising medical practitioners not to celebrate the event. Looking forward to the memorable occasion,

I remain, yours faithfully,
A. MARIUS WILSON, M.D. Durh.

Capetown, March 7th, 1897.

[1] Brit. Med. Jour., Nov. 28th, 1896, pp. 1667-8.

[2] Ibid., Jan. 23rd, 1897.

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"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—Mr. Thistle asks how hereditary character can originate except by the influence of the environment; he appears, in fact, to think that all new characters are necessarily acquisitions—that they are impressed upon the organism after it has started on its vital career. Mr. Thistle overlooks an important source of new characters—i.e., sexual reproduction. This necessitates a double parentage; and the two parents being unlike the offspring are not exactly like one or the other, there is a mixture of hereditary tendencies which results in the development in the offspring of new characters. The offspring of a single parent are said to be exactly alike—i.e., natural variations are not found among them. Hence Weismann believes that the great purpose of sexual reproduction is to afford variations on which "natural selection" may operate. Now, Sirs, special disease tendencies (the tendency to epilepsy and insanity, for instance) are natural variations, and I see no reason why they should not originate, as strictly physiological variations may do, in sexual reproduction.

In regard to the inheritability of mutilation, we shall be wise to accept the dictum of so eminent a biologist as Professor Ray Lankester—namely, that there is no evidence of it. All supposed instances to the contrary have, as he tells us, broken down upon careful examination. Circumcision carried on for many centuries among the Jews has produced no inherited effect, nor has the docking of horses. Hereditary baldness suggests the wearing of hats by successive generations as its cause. A man does not, however, become bald because his forefathers have worn hard-rimmed hats, but because he inherits a scalp which is very susceptible to the strangulating influence on the scalp-vessels of a hard rim. Men with fine hair go bald, those with coarse hair do not, and these peculiarities are manifestly independent of ancestral custom in the matter of headgear. It is not even certain that the proclivity to such a disease as gout is the result of ancestral indulgences. A man may be prone to gout even though none of his ancestors have led a gout-inducing life. The proclivity to this disease may result from a condition of tissue which is perfectly normal in itself, but one which renders the organism incapable of working healthily under a specific environment. Similarly the inherited incapacity to resist the tubercle bacillus may arise quite independently of any ancestor having been exposed to the conditions which induce tuberculosis. A negro whose ancestors for hundreds of generations may not have suffered from this disease shows a strong tendency to it when he comes to Europe. Here the inherited proneness (for in this case the proneness is inherited) is manifestly independent of a pathogenic ancestral environment, and it is possible that this line of argument applies to most, if not all, diseases which run in families. I quite agree with Dr. Adam's observations.

I am, Sirs, yours faithfully,

HARRY CAMPBELL.

Devonshire-street, W., March 21st, 1897.

"THE PHYSIOLOGY OF THE VESICULÆ SEMINALES."

To the Editors of THE LANCET.

SIRS,—If I read aright Professor Campbell Black's letter under the above title in THE LANCET of March 13th it would appear that his sole objection to accepting John Hunter's and Mr. Heath's views as to the prostatic origin of the urethral discharges voided at stool with the last drops of urine is that some examinations, microscopical and chemical, made by him of urine have enabled him to demonstrate the existence of a certain number of spermatozoa. In the hope that it may perhaps be of service in determining the exact pathological significance of the symptom under discussion, may I venture to suggest that when next a case of this nature presents itself less attention be directed to the clinical examination of the urine and more given to a physical examination of the patient, not omitting a *rectal* examination. Any such examination would have demonstrated to his own satisfaction that these discharges are prostatic in origin, as a little gentle pressure on the prostate with the examining digit will result in the ejectment of the fluid alluded to. It would also have satisfied him that the pathological condition present was an enlarged and irritable prostate. That the fluid so ejected does contain spermatozoa I am not prepared either to affirm or deny. It is not improbable that a few may be found in it, yet, if "a few swallows do not make a spring," it is equally as evident that the presence of a small number of spermatozoa does not *per se* constitute it seminal fluid, especially when we remember that spermatozoa are capable by their own inherent vitality of finding their way from the vagina through the uterus into the Fallopian tubes. I am afraid that I must agree to differ from him as to the existence of unscrupulous quacks within the profession and also that the bulk of patients with these symptoms are "multitudes of young men." For my own part I think that men well past the middle age constitute the great majority. The few young men who come complaining of these discharges are cases in which hypertrophic enlargement of the prostate has been brought about by excessive venery or self abuse. I do not consider that these cases come at all under the head of spermatorrhœa. I fail also to see any analogy between seminal discharges and menstruation, or between "spermatorrhœa" and "menorrhagia." Although the excessive discharge of semen in spermatorrhœa and of catamenial fluid in menorrhagia are both prejudicial to health and of undoubted gravity, yet here the analogy ceases. For in menorrhagia we have an increase in the amount lost at each menstrual epoch, but no increase in the frequency of such periods, while in spermatorrhœa the reverse is noticed. May I venture to question the association of ideas which leads Professor Campbell Black to postulate: "In this case a nerve impulse is conveyed to the brain from the engorged vesiculæ seminales"? I have yet to learn how distension of a hollow viscus *per se* can bring about an expulsion of its contents. I am afraid that any analogy instituted between the vesiculæ seminales and the gall-bladder or urinary bladder will not bear out his assertion. The presence of food in the duodenum originates the nerve impulses that influence the contraction of the gall-bladder on its contents. The irritation of the sensory nerve terminals around the neck of the urinary bladder starts the nerve impulses which lead on to micturition. I must confess my ignorance of the distribution of any sensory nerve fibres passing to the vesiculæ seminales, and trust Professor Campbell Black will demonstrate their existence. I believe the idea popularly accepted will bear me out when I place the centre for controlling the discharge of semen in the spinal cord close to the centres of defecation and micturition. Afferent nerve impulses are conveyed to this centre from the brain under the influence of mental emotions—as fright or lascivious ideas and sights; but the more general origin of seminal ejaculations arises from irritation in the neighbourhood of the glans penis, the urethra, or the prostate. Irritation of the glans penis takes place in coitus; by the retention of secretions under the prepuce, as in phimosis; in balanitis, and sometimes by thread-worms. Urethral irritation is due to the presence of acrid acid discharges, as in sufferers from gonorrhœa, gleet, lithuria, and diabetes, or due to urethral ulcers, polypi, or irritable strictures. The prostate is irritated by a loaded condition of the bowels, by thread-worms, by piles, by stones in the bladder. These are the usual afferent nerve impulses which lead to seminal discharges and serve to explain those cases of night losses where no mental picture arises and where perception of results is deferred till the morning. With apologies for the length of my letter,

I remain, Sirs, yours faithfully,

Rochester, March 15th, 1897. CLARENCE A. WRIGHT.

A MEDICAL SKIAGRAPH SOCIETY.

To the Editors of THE LANCET.

SIRS,—It has been decided to form a Skiagraphical Medical Society. A preliminary meeting with that purpose in view took place on Thursday last at 20, King William-street, London, when the chair was taken by Mr. Sydney Rowland. Among those who are actively supporting the movement are Dr. Macintyre (Glasgow), Mr. C. W. Mansell Moullin, Dr. Low, and Dr. Norris Wolfenden. Any gentlemen wishing to join will oblige by communicating with me.

I am, Sirs, yours truly,

DAVID WALSH, M.D. Edin., Hon. Sec.,

5, Pump-court, Temple, London, E.C., March 22nd, 1897.

P.S.—A meeting of the proposed society will take place at 5 P.M. on Friday next, April 2nd, at the offices of the Medical Defence Union, 20, King William-street, Strand, W.C.

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THE PLAGUE IN BOMBAY.

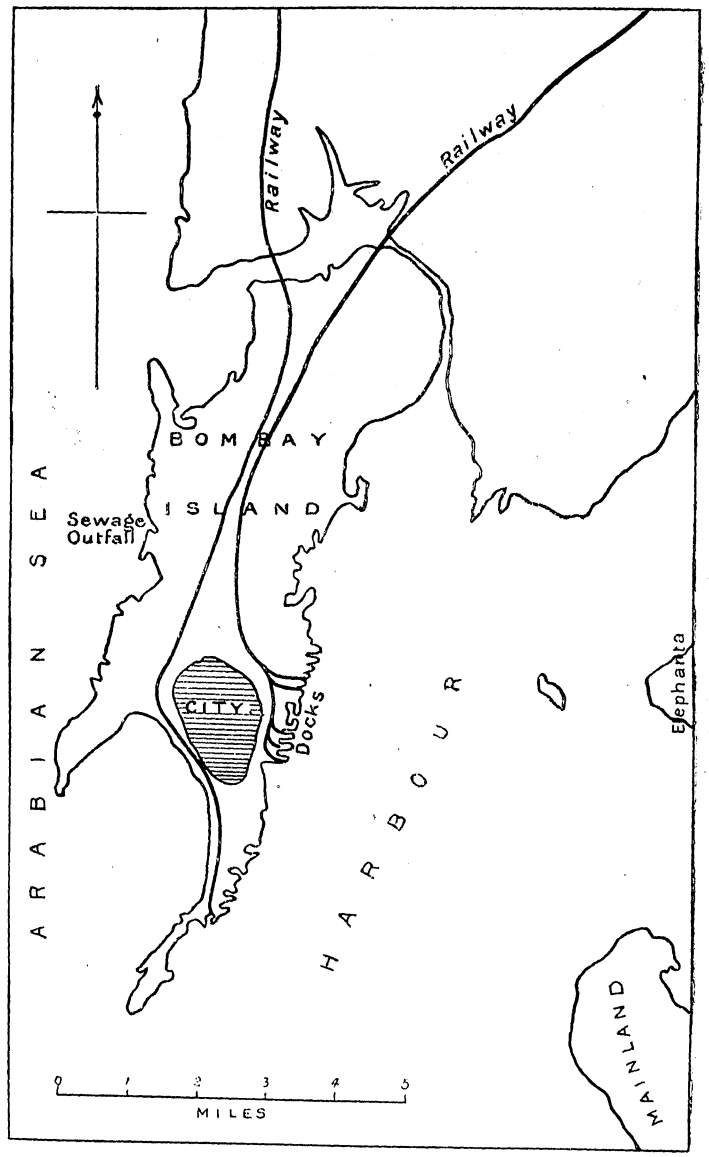
(FROM A CORRESPONDENT.)

THE Island of Bombay lies nearly north and south off the the west coast of India, in lat. 19·0° N. and long. 72 52° E. (See Fig. 1.) The situation and climate are tropical, and its peculiarities will probably be found to offer some special, if not novel, points for study in connexion with the present epidemic of bubonic plague or fever which has not yet been clearly associated with any special and prominent temporary phenomenon that might be regarded as a first cause. The city lies on the southern half of the island, the northern part being occupied by small villages, palm groves, marshes, and cultivated land. The cotton mills are mostly in this part. The southern extremity, Colaba, is a fortified military station. The population within municipal limits in 1891 consisted of 821,000 persons of mixed races, Hindus and Mohammedans predominating. The sewerage system was established some years ago, re-produced from English models at a time when the science of the subject was very little known in India. A considerable portion of the island is below high-water level, and the sewers had to be laid at such levels as necessitated a pumping station at the outfall discharging into the sea at Worlee, on the western side. Enormous deposits of silt accumulated in the sewers owing to an insufficient velocity of current, and the putrefying of this silt and of the sewage flowing over it has distinguished Bombay sewage throughout its course and at the outfall as the foulest in the world. The discharge of sulphuretted hydrogen at the outfall is very excessive and the mortar joints in the culvert are encrusted with decomposing sulphur compounds. The foulness of the sewers may be attributed in great measure to the temperature of the ground and the water of the district. The mean annual temperature of the air in Bombay is 79·13° F., or 30° above that of London, so decomposition of organic matter takes place with a rapidity quite unknown in temperate climates; and if waste matter were removed in Bombay with the same promptitude as is observed in London the smells would still be much more offensive there than here. Solid refuse, such as street sweepings, stable litter, and domestic refuse, are carted away, the sullage and nightsoil being consigned to the sewers—the latter in a manner peculiar to India.

The mean maximum monthly temperature of the ground at 11 ft. below the surface is 84·9°, and the mean minimum 80·9°. The monthly mean range is thus 4° at this depth. The lowest reading of temperature of sewage in the main sewer was 75·7° in the month of February. In England the temperature of sewage in the sewers is generally below 55°. This difference accounts to a great extent for the absence of offensive smells in English main sewers. The average velocity of the wind across Bombay is over twelve miles an hour. This average includes a considerable period of very light winds, but in frequency 72·78 per cent. of them have a westerly component. The island, which has an average width of only two miles, should be very well ventilated and healthy under the influence of the winds were it not that the city was built before the existence of municipal influences. Many of the streets are therefore very narrow and crooked, and houses in these quarters have been built up to six storeys in height. In these districts or wards the houses cover as much as 85 per cent. of the ground area, and the density of population reaches 760 per acre, a figure unequalled anywhere else in the world. Generally speaking, the greatest density of population in London is less than that of any out of twelve sections of Bombay, which average 458 persons per acre.

During the five months of rain the people have to sleep under shelter, but the temperature of this period is generally above 80°, with a diurnal range which at times does not exceed 2°. Very little covering is therefore needed at night. But as there is absolutely no control over the crowding in dwellings the limit of accommodation is fixed by the number that can get in. As many as eight coolies will sleep in a room ten feet square and eight feet high, with both door and window shutter closed. There is no chimney in such rooms, and the cubic space per man is just one hundred feet, or one-sixth of that prescribed by de Chaumont. During the present month the nights have been unusually cold, the temperature out of doors having fallen to 64°. This has driven people indoors, and has caused a rapid rise of mortality. Going out from the warm and very foul atmosphere of a room, where they have been huddled together during the night, the half clothed coolies fall easy victims to the raw air of the early morning which is still contaminated by the exhalations from the ground. It has, of course, been known for a long time that overcrowding is everywhere inimical to good health, but no active measures have been taken in India to prevent it, except in camps and barracks.

FIG. 1.



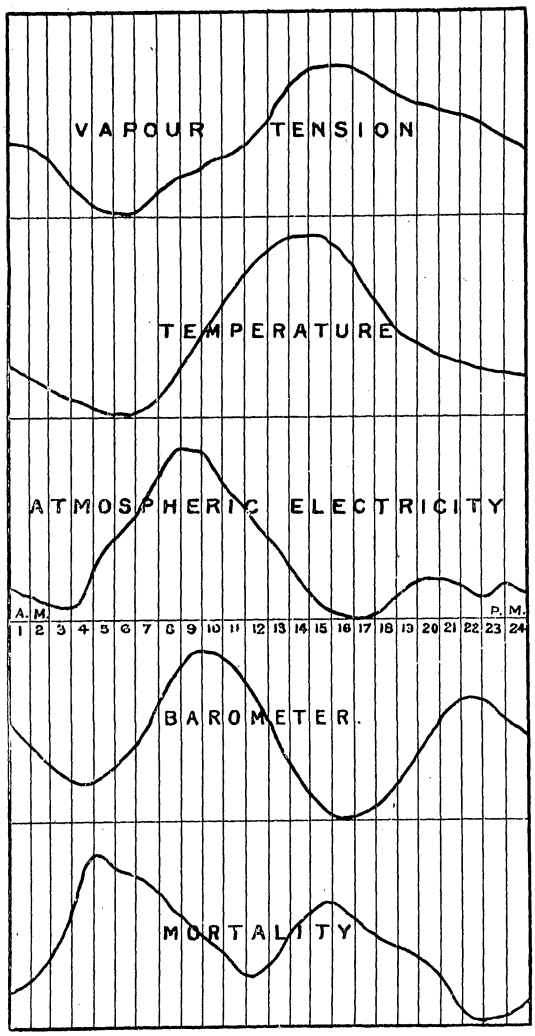
Corrected chart of the island.

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Any interference on the part of public bodies with the habits of the people would be taken, at least at first, in the worst spirit, and it is now evident that interference to a very important extent must take place in order to obtain a reasonable measure of security for public health. In addition to the fixed population of Bombay, there is a constant circulation of strangers of the labouring class who come for months or years from the mainland to enjoy the better pay and the excitements of a large city. These people supply much of the skilled and unskilled labour of Bombay, and they provide most of the domestic servants and office messengers. Their habits are of the most primitive kind, they ignore every sanitary precaution, the street is their latrine, and at night they will throw nightsoil out of the windows into streets and lanes if they cannot find within doors a sink to suit their purpose. They live in the offices in the Fort without any proper quarters, and Elphinstone Circle, the best business part of the Fort, has been rendered unwholesome by the filth, office sweepings, and other rubbish which they throw into neglected courtyards and alleys. All Indian domestic servants have the same habits, formed in the jungle and acquired or inherited by the poorer classes, and they rarely receive any training in sanitary habits from their employers. There is thus a large section of the population whose lives are a constant violation of all sanitary rules and whose habits render them a constant element of danger. Their filthy habits have greatly increased the cost of conservancy in Bombay. Every appliance devised for their convenience has been abused and damaged. Public and private latrines have been damaged or filled with stones and other solid matter, and the gratings of public urinals were promptly stolen and sold or used as fireplaces. Down-take sullage pipes with their syphons are constantly filled with sand, leaves, rags, and other refuse, so that a large staff of men are constantly employed in clearing them at the expense of the city.

During the seven months of interval between the monsoons the sullage and other refuse thrown out of doors gradually foul the surface of the ground for some distance downwards. This continues to increase until the next monsoon cleanses the ground. If the rains begin with showers alternating with sunshine the wet, impure ground is heated, and a prompt increase of mortality is observed. No systematic analysis of the air of Bombay has yet been made, although there is reason to believe that the health of the city is influenced to a considerable degree by its smell. Inspectors of the Health Department had observed that foul smells were most apparent about houses at 4 A.M. and 4 P.M. long before they knew that these were the daily periods of low barometric pressure. It occurred to the writer eight years ago to inquire into the correspondence between the mortality during the day and night, hour by hour, with the movement of the barometer. The result is shown in the accompanying table of daily phenomena (See Fig. 2.) The four upper curves are the means of at least twenty years' observations at the Observatory, Bombay, and the mortality curve was obtained from the registers of

FIG. 2.



Curves of natural phenomena showing the relation of the daily mortality to the meteorological changes.

FIG. 3.

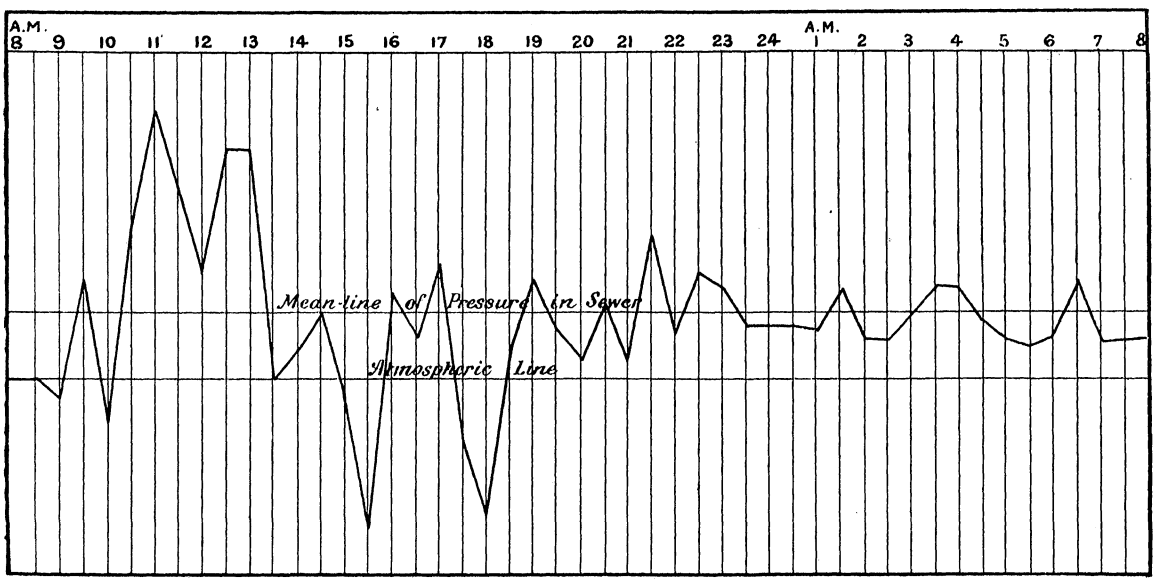


Diagram of changes of pressure in the sewer atmosphere in Bombay. This pressure was equal at 11.0 A.M. to a theoretical escaping velocity of six miles per hour.

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deaths at the Jamsetjee Jejeebhoy Hospital, Bombay, extending over four years. All violent deaths were eliminated before the certificates of death were classed, and all the curves were reduced to a uniform height in preparing the diagram, so that correspondence might be the more easily observed.

The low barometer at 4 A.M. is quickly followed by the highest mortality in the day. This mortality falls until noon, and rises until within half an hour of the afternoon low pressure. Ten at night is the period of least mortality. Although the afternoon pressure is lower than that of the morning, the influences of sunlight, convection from the warm ground, and of the sea breeze all tend to purify and dilute the escaping ground air, whereas in the morning the low vapour tension and steadily falling temperature keep the impure air as it issues from the earth near the surface until sunrise, when convection begins. The early morning is usually a period of calm, and as the impure ground air is at equal temperature heavier than pure air it tends to lie until the sun rises. The low mortality at 10 P.M. appears to be due to the combined action of sea breeze, sunlight, and the temperature of the ground aided by a rising barometer. It is to be regretted that no corresponding observations have been made in other large Indian hospitals. The strength and frequency of sewer smells in Bombay led the writer to make a twenty-fours hours' experiment on the main sewer to note the fluctuations of pressure in half-hourly observations. The gauge, reading accurately in thousandths of an inch of water, was placed in a closed building and coupled on to a recess in the sewer. There was only half an hour of normal pressure (from 8 to 8 30 A.M.). At 11 A.M. the pressure was equal to a theoretical escaping velocity of 6·07 miles per hour. At 3 30 P.M. there was a minus pressure equal to a velocity of 4 59 miles per hour, and the mean of the forty-eight readings represented a theoretical escaping velocity of 3·01 miles per hour. (See Fig. 3.) This experiment indicates very imperfect ventilation. The ventilators mostly in use consist of a double tube with the heads bent and pointing in opposite directions. It had been assumed that the wind acting on either mouth would displace a cubic foot of foul air from the leeward mouth for every cubic foot of pure air injected by the windward mouth. The application of the gauge showed that the direct current was much stronger than the induced one, and that the action of the wind on the ventilators, instead of relieving pressure in the sewer, actually increased it, and increased the escapes at the ground level.

This experiment seems to be the only one that has so far been made on pressure in the sewers, although extended observations are needed to give a true basis for adequate ventilation, but it has sufficed to show in a most emphatic manner the unsuitability of a system of drainage copied from a foreign model in which the element of underground temperature could with safety be ignored. The whole interior surface of the Bombay sewers is covered with putrid matter which acts as a ferment on all the sewage that enters. The change of pressure in the sewers does not correspond with the barometric curve, but varies with the volume of liquid passing through them. If the rate of current in all the Bombay sewers could be made self-cleansing there would be a great diminution of the gases of decomposition, arising principally from the mud which accumulates on the invert, and which is at present moved along by means of an appliance drawn by a crab winch and a chain which passes through manholes. The rate of movement of the silt by this means is only three and four-tenth miles a year, and the agitation of the process promotes an active discharge of gas of the foulest kind, which escapes through the open manholes. Adequate ventilation would disperse these gases above the roofs of the houses, but as they seem to be inseparable from the existing system of masonry sewers many sanitary engineers in India already believe that cast-iron pipes are the only suitable material in which sewage may be safely transported in the tropics, and that the velocity of the current should be so controlled by pumping that no deposit could lie in the pipes. This opinion gains weight when considered in connexion with sewage irrigation which is already in successful operation in Madras and Karachi. Sewage which is pumped to the outfall can be discharged within a fixed time from the period of entering the sewer, a most important consideration in the tropics.

The habits of the people at large render domestic privies attached to the sewers a practical impossibility. They will not flush them, and they persist in blocking them with solid matter. It is for this reason that in a city possessing sewers the greater part of the nightsoil is collected from house to house by men belonging to the lowest castes, and carried on their heads in waterproofed baskets to depôts where it is discharged into the sewers. Each load of about thirty-five pounds is carried an average of one and a half miles, making in all three miles of walking per load. The smell arising from these depôts is most offensive, and for this reason they can only be established in open spaces. Any attempt to multiply them would be met by the strongest opposition from the people. A small model depôt was tried, in which a basin about twenty-seven inches in diameter could receive the nightsoil of 6000 inhabitants. The baskets or pails were washed automatically in a few seconds by upward and downward jets of water; but the difficulty of locating them seems to have stood in the way of adopting a number of depôts of this kind. The *halalcores* who perform the work of removal appear to be proof against attacks of plague. Had they fled like the other Hindus the city would have been in a worse plight than in 1893, when on Friday, Aug. 11th, the Mohammedans attacked the Hindus on a question of religion and began to murder them promiscuously. On the following day, Saturday, the Hindus, recruited from the cotton mills, took the initiative to avenge their friends. Shops were closed, business was suspended, the sick were neglected and the dead unburied, while the thermometer ranged from 77° to 83° F. The *halalcores* dared not work, and filth of all kinds accumulated to a frightful extent before order was restored by the rifles of the garrison. The *halalcore* work had meanwhile been suspended in the native parts of the town, including the markets, for nearly eighty hours.

It will thus be evident that the sanitation and conservancy of a large and greatly over-populated oriental city present features and difficulties that are unknown in colder and more civilised countries.

It is doubtful if segregation could have been effectively applied by means of any cordon at Bombay to prevent the escape of the people inland. A city so densely overpopulated as Bombay is would require an enormous increase of house accommodation to lodge the people who from necessity or fear have left their dwellings and gone into the interior or to other coast towns. The huts that have been temporarily constructed in various parts of Bombay for public or for special use are avoided by the poorer classes, for whom they were made, for reasons which are now becoming apparent. As previously stated, the native in cold weather shuts himself up in his sleeping room, and obtains warmth not by extra coverings but by overcrowding. He has very little bedding, and if he has a bed raised from the floor his scanty coverings render him all the more sensitive to a fall of temperature. At this season dry, cool winds from the north-east prevail, alternating with the moist, warm sea breeze, and the land wind which now blows every night produces colds and fevers among those exposed to it. Bamboo and mat huts, although superior to tents in warm weather, are only comfortable at present in the night for those who are sufficiently protected with clothing or bedding. This is noticeable at the Arthur-road Fever Hospital provided by the Bombay Municipality for plague cases, and which has at present about ninety cases with accommodation for 100. The cool, dry air, acting on skins accustomed to a moist, warm atmosphere has had fatal effects on many of the patients. This hospital, which is in the charge of Dr. Choksey, one of the most capable and devoted of the Parsee medical practitioners, has suffered since it was opened from dearth of assistance. Nurses and ward boys have been lacking, to the prejudice of the work. This defect is now being remedied. Some of the other hospitals are having special fever wards attached. The Parsee community is the only one which has established a plague hospital of its own, which, at present, contains thirty cases, one half of which are convalescent. This hospital is due to the initiative of Dr. K. N. Bahadhurji, and is under his direction. A roomy and well ventilated bungalow was secured in a northern suburb with open space all round it, and nothing seems to have been forgotten that could conduce to the comfort of the patients or the good management of the hospital. Light screens separate the patients, giving them a sense of privacy without isolation, ample ventilation is ensured with protection from draughts, and the most scrupulous cleanliness is maintained throughout the premises. It is to be hoped that this hospital will do much in overcoming the prejudice against hospitals which is at present so common among all classes in India.

We seem to be still a long way from any reliable theory of

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the bubonic plague. It is still uncertain whether the bacillus associated with the malady is a cause or an accompaniment, and this disease, so popularly ascribed to filthy surroundings, has recently broken out severely in the Bombay House of Correction, which is generally regarded as a model of cleanliness and good management. M. Haffkine has inoculated those of the prisoners who responded to his invitation to submit to the operation, but no satisfactory explanation has so far been found for the outbreak. The research of Dr. Bitter will, no doubt, be as thorough as time and circumstance will permit; but the absence of systematic observation of the air and soil in the city will probably deprive him of data that should greatly assist his inquiry into bubonic plague.

Bombay, Feb. 5th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

THE 117th annual meeting of this hospital was held on March 17th under the presidency of the Lord Mayor (Mr. James Smith). The report stated that the income for the year was £14,198 3*s.* 3*d.*, the expenditure £17,884 5*s.*, this being £1223 8*s.* 4*d.* more than that of the previous year. The average cost of each in-patient was £2 16*s.* 6*d.*, against £2 11*s.* 1*d.* in 1895. The number of in-patients was 4486, of out-patients 52,203, being an increase of 25 in-patients and a decrease of 405 out-patients. Of the in-patients admitted 859 were children under twelve years of age. There was an increase in the number of serious operations during the year, there being 1090 against 1055 the preceding year. The Lord Mayor called attention to the fact that this annual meeting would be the last one in the present building: he alluded to the history of the building, and to the vast amount of good done since its foundation by Dr. Ash in 1766. During that time there had been on the staff twenty-four physicians and twenty surgeons. The adoption of the report was seconded by the chairman of the committee, who paid a fitting and graceful tribute to the memory of Mr. Oliver Pemberton.

The Ear and Throat Hospital.

The governors and subscribers held the fifty-second annual meeting on March 18th, the Lord Mayor presiding in the absence of Lord Leigh. The total number of out-patients registered for the year was shown to be 6059, being 352 more than the previous year. In-patients to the number of 373 were admitted. The registration fees paid by patients amounted to £431 18*s.* The expenditure has exceeded the income by £111 15*s.* Mr. Wilders, who had acted as surgeon to the institution for over thirty years, was elected upon the honorary staff, and Lord Leigh was re-elected as president.

The Dental Hospital.

The Lord Mayor also presided at the thirty-seventh annual meeting of this hospital on March 5th when the report was stated to be the most successful one the charity had yet presented. The total number of operations performed during the year was 22,596. The financial statement showed that the income from all sources amounted to £934 9*s.* 7*d.* and the expenditure to £705 1*s.*, leaving a favourable balance of £229 8*s.* 7*d.* Mr. Sims, dental surgeon, pointed out that the hospital was established for the benefit of the poor, but it was becoming more a dental school than a hospital. He protested against much of the gratuitous work done at the institution, and said that many went to the hospital who could afford to pay; only last week three patients who had gone to the hospital to have their teeth extracted had afterwards come to him as a qualified dental surgeon for artificial teeth. He added that one-third of the patients who attended the hospital ought not to go there at all. These statements, it is hoped, will receive the attention of the committee.

The Medical Institute.

The report of the Medical Institute for 1896 has just been issued. It states that after twenty years of existence the number of members is 196, the income is £440 2*s.* 8*d.*, and the number of books in the library 12,088. The number of members is less than it was ten years ago, and the financial position is unsatisfactory, the balance-sheet showing a deficit of £71 11*s.* 8*d.* The report further points out that a large number of practitioners in the district are not members and expresses regret that the many advantages of the institution do not seem to be sufficiently appreciated. At the annual meeting, held on the 18th inst., Dr. Saundby was re-elected president, and the debt was stated to have been wiped out by a few generous friends.

Funeral of Mr. Oliver Pemberton.

On March 11th in the quiet churchyard of Shustoke the remains of Mr. Pemberton were deposited with simple, but impressive, ceremony. A large number of representative citizens of Birmingham, including the Lord Mayor, attended by special train, together with many professional men, friends of the deceased. The service at the grave was conducted by the Rev. W. H. Poolton, Warden of Queen's College, one of the coroner's oldest friends. Many votes of condolence with the family have been passed by various public bodies with which Mr. Pemberton was connected, and on all sides much sympathy has been expressed, the depth of which has been emphasised by the death, a few days later, of Mrs. Pemberton, as noted in THE LANCET of March 20th.

The Jubilee Commemoration.

An influential public meeting was held on the 22nd inst. to establish a fund fort his purpose. The scheme includes especial attention to the wants of the sick and suffering poor, in accordance with the wishes expressed by Her Majesty the Queen. A sum will be provided for increasing the work of the District Nursing Society, to endow beds at the General Hospital, Queen's Hospital, and Children's Hospital, and in other ways to promote the permanent record of so auspicious an occasion.

March 24th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Royal Infirmary.

THE reports of the medical, surgical, and pathological registrars, just issued as a small octavo volume, neatly bound in cloth, are a new feature in the annals of the Royal Infirmary. Towards the end of the year 1895 a small committee was formed to superintend the issuing of a medical, surgical, and pathological report. The present report, although comparatively small, will, it is hoped, be found accurate and of use to the investigator and the student. The statistical tables have been drawn up with every care, and as many data as possible have been inserted to make them complete. The pathological report gives a short *résumé* of each necropsy, and brief commentaries are made upon the more important cases. The medical statistics include general diseases; effects of poisons; malingering; nervous system, comprising (*a*) nerves, (*b*) spinal cord and membranes, (*c*) brain and membranes, and (*d*) functional; diseases of the circulatory system; respiratory system; digestive; urinary; ductless glands; locomotory system; integumentary; diseases due to parasites; eyes; ears; nose and naso-pharynx; and diseases of the female generative organs. The total number of medical cases recorded amount to 1122, of which 631 were males and 491 were females, with ages varying from five to sixty years and upwards. The results of treatment represent 348 as cured, 488 relieved, 107 unrelieved, 27 transferred, and 152 died. The surgical statistics deal with every variety of lesion, immediate and remote; diseases of joints, injuries and diseases of the head, spine, and nerves engaging considerable attention. Of the major operations performed in the gynæcological wards, of which there were 113, there were four amputations of the cervix, 36 cases of perineorrhaphy, 13 posterior sections, 21 laparotomies for various affections (including double ovariotomy, ovarian cysts, hæmatosalpynx, fibro-cystic tumours, dermoid of ovary, epithelial tumour of broad ligament, and ascites), 8 of curetting, 9 of lacerated cervix-plastic operation, besides other operations, from all of which only two patients died, a footnote stating that the deaths were due to intestinal obstruction not connected with the operation. A couple of pages are also devoted to a classification of diseases of in- and out-patients in the gynæcological department. The post-mortem statistics, which include 110 examinations, are full of interest. The reports would be still more complete but for the accidental omission of the statistics of the lock wards, which, no doubt, will be inserted in the next issue.

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Pathological Department of University College, Liverpool.

In view of the increasing number of specimens of tumours, diphtheritic membranes, and specimens of blood (typhoid fever cases) which are sent to the pathological department for purposes of diagnosis, it is proposed to engage a skilled laboratory assistant who shall devote his whole time to section cutting and bacteriological examinations, under the direction of the Professor of Pathology. Members of the profession upon payment of a small annual subscription will be entitled to: (1) histological examination of all tumours; (2) examination of specimens of blood; (3) examination of urinary deposits; (4) examination of tuberculous and pneumonic sputa; (5) bacteriological examinations of, and supply of, test tubes for diphtheritic membranes, pus, and sputa; and (6) the examination of the blood of suspected cases of typhoid fever, and supply of capillary tubes for same. The Professor of Pathology, Dr. Rubert Boyce, hopes to commence the examinations in May next, if members of the profession will lend their support to the scheme by becoming subscribers.

Admissions of Lunatics to the Liverpool Workhouse.

The admissions to the lunatic wards of the Liverpool Workhouse for the last three months do not bear out the statements that lunacy is everywhere largely on the increase, inasmuch as fewer cases have been certified for removal to that institution than during the corresponding periods of the last seven years.

Health of Liverpool.

The medical officer (Dr. Hope) reports that the births registered in the city during the week numbered 474 and the deaths 285, a death-rate of 23 per 1000 per annum. Of the deaths 70 occurred in public hospitals, and 98 were those of children below five years of age. Lung diseases occasioned 71 deaths; tuberculosis, 35; brain diseases, 35; heart diseases, 24; and zymotic diseases, 34. 118 infectious cases were notified and 44 discovered by officers of the committee; 361 patients were in the city hospitals, against 349 the preceding week. The mean temperature for the week was 40·6° F.

March 23rd.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The University College of South Wales and Monmouthshire.

A MEETING of the council of this College was held in Cardiff on March 17th, under the presidency of Dr. Price. A letter was received from Messrs. Samuel Brothers of Cardiff enclosing a cheque for £500 for the founding of a medical scholarship at the College. The donors were desirous of making the gift as a recognition of the benefits enjoyed by the Jewish community during the sixty years of the Queen's reign. A cheque for £169 was received from the town and working men of Pontypridd as a further contribution towards the building fund of the College. The council then considered applications for the post of Professor of Anatomy, and resolved to invite Mr. Dickson of Trinity College, Dublin; Professor Fawcett of University College, Bristol; and Mr. Manners Smith of Mason College, Birmingham.

The Proposed Convalescent Home for Bristol.

The Mayor of Bristol issued last week an appeal to the citizens of Bristol for funds towards the proposed convalescent home. He states that the committees of the infirmary and hospital urge the need of the home, and it has been proposed that, without charge to them, sixty beds should be reserved for their patients, and that twenty beds should be retained for other cases that will be admitted on such terms as will be ultimately decided upon. Thus it is estimated that annually 1000 of the infirmary and hospital patients and about 350 others will materially benefit by such an establishment. For the building, equipment, and endowment of the home at least £50,000 will be required. Several subscriptions have been promised, and Mr. E. P. Wills has offered £10,000 on condition that a further £50,000 is raised, and an additional £3000 should the fund reach £97,000. Mr. H. O. Wills has given £10,000, and the total contributions by members of this family, assuming the scheme is completed, will be over £25,000.

The Notification of Infectious Diseases at Bristol.

At a meeting of the Bristol Town Council, held on March 9th, it was resolved that the port sanitary authority should adopt the Infectious Diseases Notification Act, to apply to yellow fever, plague, and measles, in addition to the diseases specifically mentioned in the Act.

The Literary and Philosophic Club, Clifton.

Last week, at Clifton, Professor Lloyd Morgan, the Principal of University College, Bristol, gave the second of his two lectures in connexion with the Literary and Philosophic Club, Clifton, entitled "Habit and Instinct." The lecture was most interesting and gave many details showing how far creatures act from instinct and how far from acquired knowledge and experience. Professor Morgan mentioned some of the things noticed when a number of young birds were hatched out in an incubator, and therefore kept entirely free from any parental teaching. He found that most of these young birds instinctively pecked, seized, and swallowed any small object which attracted their attention, but were not guided by instinct in selecting what was good or bad for them.

The Infectious Diseases Notification Act at Bath.

At a recent meeting of the Bath Sanitary Committee the medical officer of health (Dr. W. H. Symons) reported that during the last few months several instances of default under this Act had come to his knowledge. Twice recently he had had complaints from medical officers of health of persons being sent from Bath in an infectious condition, and more often he had found persons coming to Bath in a similar condition. On investigation he generally found ignorance or thoughtlessness to be the cause, and under such circumstances deemed a warning sufficient; but there was one case in which he thought there ought to be a prosecution, and consequently the sanitary committee decided to prosecute.

The Cardiff Guardians and Vaccination.

At the meeting of the Cardiff guardians, held on March 6th, it was decided, upon the recommendation of the vaccination committee, that it should be made a condition of the contracts for public vaccination that vaccinations should be with calf lymph, and that the fee for successful vaccination be increased by 2*d.* in each case to meet the extra cost, which it is estimated would amount to about £40 a year. The committee recommended that the fee should be increased by 3*d.* for each case, but one guardian objected "to the virtual increase of salary proposed, and moved that the fee be increased by 2*d.* only," and this amendment was adopted.

Reduction of a Medical Officer's Salary.

At the last meeting of the Carmarthen board of guardians a letter was read from Mr. W. Lewis Hughes, M.R.C.S. Eng., L.S.A., resigning his appointment as medical officer for the Carmarthen Urban Division owing to ill health. The resignation was accepted, and the board decided to advertise the vacancy and reduce the salary from £80 to £70 per annum.

A New Hospital for Poole.

At a meeting on March 9th, at Poole, the Mayor (Lord Wimborne) explained his recent offer to give, as a commemoration of the Queen's reign, to the borough of Poole a mansion and grounds now known as the Cornelia Hospital and £1000 towards the endowment fund of the hospital. It was resolved to accept Lord Wimborne's gift and to raise an endowment fund. Lady Wimborne has practically maintained the Cornelia Hospital, Poole, for the past eight years, and has just issued the report for 1896. The balance-sheet shows a deficiency of £592, but this has been made up by the generosity of Lady Wimborne.

March 22nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Medico-Chirurgical Society.

A SPECIAL meeting of this society was held last week, at which the plans of the new City Hospital were exhibited by means of limelight, and described by the city architect and the medical officer of health. The chairman of the public health committee of the town council explained at the outset the reasons for the selection of the site for the new hospital, and stated that it was the desire of the committee to

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carry with them the support of the medical profession. The site of the new hospital was approved of by the meeting, and it was agreed that the number of beds should not be less than 600. This is an interesting and important departure and should not pass without being emphasised. It is doubtful if a public health body has ever before brought its proposals and plans before a meeting of medical men for criticism. The step indicates an enlightenment and liberality which is greatly to the credit of the public health committee and its convener, Baillie Pollard; and it is an example which might be followed with great advantage by many other public health authorities.

Scottish Association for the Medical Education of Women.

The seventh annual meeting of this association and the prize distribution to the students attending its college in Minto House, Edinburgh, were held last week. Sir Alexander Christison presided, and Sir William Muir, Principal of the University, presented the prizes. In the report it was stated that there were now eighty students at the College and that they had begun with nine. Reference was made to the opening of the University degree to women and the recognition of the school by the University.

The Faculty of Advocates and Chalmers's Hospital, Edinburgh.

The Edinburgh Faculty of Advocates has determined to follow the Royal suggestion that Her Majesty's Diamond Jubilee should be characterised by works of beneficence. At a meeting last week it was decided to subscribe money for the extension of Chalmers's Hospital, a hospital of which the Faculty is the governing body.

Changes in the Royal Infirmary, Edinburgh.

Dr. Wyllie's term of office as a physician to the Edinburgh Royal Infirmary will expire at the end of this month. Dr. Bramwell, the senior assistant physician, will become a full physician, and there will be a general move among the assistant physicians. Dr. Gibson will go to the wards devoted to the instruction of women; Dr. Bruce will be attached to Sir T. Grainger Stewart; Dr. Philip to Professor Fraser; and Dr. Russell to Professor Greenfield; the others will retain their former places. Much regret is expressed at Dr. Wyllie's retirement, for he has long been regarded by his colleagues and by the students as one of the greatest personalities in the infirmary.

Glasgow Medical and Chirurgical Society.

This society met on the 19th inst., the President, Dr. W. L. Reid, being in the chair. Dr. D. J. Mackintosh gave a lantern demonstration to illustrate the value of the x rays in hospital practice, more especially as regards dislocations and fractures. The slides exhibited demonstrated: (1) the value of the rays for diagnostic purposes in cases where physical examination was not conclusive; (2) the actual displacements which occur in various classical fractures; a number of slides showing cases of Colles's fracture and Pott's fracture were very successful; and (3) the conditions which exist in ununited and in badly set fractures. Amongst the most striking of the photographs were those illustrating congenital dislocation of the head of the femur, the presence of a coin in the coils of the small intestine low down in the pelvis, and several dealing with various injuries in the region of the elbow-joint. Dr. Mackintosh also illustrated the use of the cinematograph for purposes of medical demonstration. He threw upon the screen a series of rapidly taken photographs of patients suffering from locomotor ataxia, diphtheritic paralysis, and hemiplegia, and as these walked round and round in a circle the peculiarities of the gait in each case were very manifest. Dr. Maitland Ramsay gave a lantern demonstration to illustrate the diseased conditions of the eye due to syphilis. The slides were of great beauty and formed a complete clinical picture of the diseases under consideration. They included chancre of the upper lid, chancre of the lower lid, specific tarsitis, disease of the cornea in acquired syphilis, gumma of the iris, gumma of the ciliary body, and specific choroiditis and retinitis. A number of slides illustrating changes in the eye and in the general physiognomy as a result of inherited syphilis were also exhibited.

Medical Lectures in Glasgow.

At the February meeting of the Microscopical Society Dr. L. R. Sutherland, assistant to the Professor of Pathology at the University, gave a demonstration of the effects of tuberculosis as seen in various parts of the body. The demonstration included a large number of preparations, microscopic slides, and diagrams. In his remarks Dr. Sutherland discussed the nature of tuberculosis, the modes of infection, and the conditions generally which influenced the incidence of the disease. On the motion of Mr. J. Rankin, B.Sc., he was awarded a cordial vote of thanks.—At a recent meeting of the Philosophical Society Dr. John Macintyre gave an account of the more recent advances made in connexion with the x rays. He claimed to have sent the rays sixteen feet across a room, through a partition, and then to have examined with them the contents of a box in the next room. The use of the rays for various purposes were illustrated, including their application as a test to distinguish genuine diamonds and pearls from false ones. Dr. Macintyre also showed the movements of the knee-joint by means of the cinematograph. He expected that before long all the movements of the body would be recorded by means of the photographic film.—The first of a series of lectures to ladies organised by the Total Abstinence Society was delivered in Glasgow by Dr. P. A. Young of Edinburgh on the 16th inst. Dr. Young argued that physiology, experience, and the statistics of life insurance societies were strongly in favour of total abstinence from alcohol in all forms.

Glasgow University.

The close of the session has been succeeded by the onset of the professional examinations, which are continued throughout the whole of the present week. The lists include a considerable number of women candidates.—At a meeting of the members of the Union on the 17th inst. Mr. J. C. Monteith was elected President; Professor Joseph Coats, Vice-president; Mr. F. A. Macquisten, B.L., treasurer; and Mr. Anderson McKendrick, secretary.—The last meeting of the Queen Margaret College Medical Club was occupied by a paper on Student Life in Vienna by Dr. Margaret Dewar.

St. Andrews and Dundee.

The wearisome quarrel between the academic authorities in these two cities appears to be entering on a more dramatic phase. There has always been a minority in the University Court at St. Andrews willing, if not anxious, to come to an arrangement with Dundee so as to secure for the University the advantages which Dundee is able to offer to students of medicine and science. The recent decision of the Privy Council practically upheld the contention of this minority to the effect that by the ordinances framed by the Universities Commissioners Dundee College is an integral part of the University of St. Andrews. But the majority of the Court appear to be resolved to pursue their course heedless of the Privy Council and its decisions. Accordingly the minority have declined to take part in the meetings of the Court, and at a meeting on the 19th inst. Principal Donaldson, on behalf of himself and five other members, including Principal Stewart and Principal Mackay, M.D. Glasg., of Dundee, lodged a written protest against the validity of the proceedings and then withdrew from the meeting. Thereafter the majority proceeded to transact the business of the Court, including the appointment of a Professor of English Literature. However interesting the moves in this academic struggle may be as mere exhibitions of diplomatic ingenuity, there are signs that the public is becoming somewhat disgusted with the performance. It is, indeed, nothing less than a scandal that the management of an important national institution should be conducted in such a way as to prejudice the educational and academic interests of two colleges, each of which in its own sphere is capable of contributing an element of value to the success of the University.

Medical Appointment.

Mr. J. D. Graham, M.B., C.M. Glasg., has been appointed House Surgeon to the Smithston Asylum, Greenock, *vice* Mr. W. S. Cook, B.Sc., M.B., C.M. Glasg., resigned.

March 24th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Illness of the Archbishop of Dublin

LORD PLUNKET, the Archbishop of Dublin, is seriously ill. He is attended by Sir Francis Cruise, of the Mater

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Misericordiæ Hospital, and Sir Philip Smyly, of the Meath Hospital.

The Health of Dublin.

The unfortunate coincidence in the city of three different epidemics—namely, scarlet fever, measles, and whooping-cough—has rather overstrained the resources of the public health officials and left them and their department open to much adverse criticism. At the annual meeting of the Dublin Sanitary Association the Registrar-General (Dr. Grimshaw) stated that according to the returns at that precise date "the only place that beat Dublin in the height of its death-rate was Bombay, which had a mortality of 102 per 1000." Mr. Roche also made a strong speech on that occasion, and has ever since been bombarding Sir Charles Cameron with questions. Why are not all the schools in the city closed? Why are not the contents of the pawnbrokers' shops disinfected? Why has not the state of the tenement houses been set right? Why are fifty-six slaughter-houses allowed to exist in the city in addition to the public abattoir belonging to the corporation? On the other hand, the Lord Mayor has recently said in public that the present mortality is largely owing, in his opinion, to poverty and wretchedness among the labouring class in Dublin, brought about by the prolonged building strike of last year. The Dublin Sanitary Association, moreover, should remember that while Sir Charles Cameron and Mr. Stafford, the medical inspector under the Local Government Board, proposed the establishment last year of a special hospital outside the city for the treatment of infectious disease, the project was strongly and effectively opposed by the association. The main drainage works are being pressed forward by the corporation with commendable energy and at an expenditure which will ultimately reach at least £200,000. An inspection has recently been made of all the tenement houses, while the 5000 dairy cows in the city have been examined. Circulars have been sent to all the city schools recommending that they should be closed, the corporation not having any power to close them compulsorily or to inflict the money loss on the teachers which such a measure would entail. Many of the schools have, however, been closed. The private slaughter-houses cannot be closed without a considerable expenditure in the shape of compensation. The whole problem is a difficult one, and at bottom to a large extent a question of money. The city rates have gone up by leaps and bounds and are now over 9*s.* in the pound, and the municipal accounts for 1896, which have just appeared, show that they are likely to become much higher. The cost of the sanitary department rose last year from £20,922 to £23,710; nearly £8000 were added to the cost of the cleansing department, which advanced from £40,000 to £48,000; and the sewer-rate expended in the North and South districts was increased by £5000. These items may be classed as sanitary, and they show in the gross an increase of £13,322, or nearly 20 per cent.

County Antrim Infirmary, Lisburn.

From the annual report I find that 325 patients were treated in hospital during the year ended Nov. 30th, 1896, and 604 in the extern department. There were 211 accidents attended to last year and 72 operations performed. The infirmary has been selected by the Lady Pembroke Committee of the Irish Workhouse Reform Association for the purpose of training nurses for union infirmaries, and a probationer has been sent to be trained at Lady Pembroke's expense. This will be a boon to boards of guardians in Ireland, who by Lady Pembroke's generosity will have trained and educated women of the middle-class as workhouse infirmary nurses.

Belfast Royal Hospital.

At a special meeting of the corporation of the Belfast Royal Hospital held on March 15th it was decided to raise a sum not exceeding £2500 out of the invested funds of the hospital to pay off the present debt. This has been done as it was thought unwise, by making any special effort to raise funds, to interfere with the present scheme for the erection of the new hospital in Belfast, the subscriptions to which amount now to £73,000, including the large sum of £5000 given by Mr. Gallaher.

The Proposed New Fever Hospital.

A memorial signed by over 100 members of the medical profession practising in Belfast objecting to the site at Purdysburn for the new Fever Hospital is about to be presented to the Lord Mayor and city council. In this memorial, which has been drawn up by a sub-committee appointed by the councils of the Ulster Medical Society and of the North of Ireland Branch of the British Medical Association, the objections which exist to the proposal to erect the new hospital for infectious diseases at Purdysburn are thus stated: (*a*) the distance is too great (two to eight miles) for the transference of fever patients; (*b*) the natural reluctance of parents and relatives to permit the removal of friends to hospital would be increased owing to the difficult access to the place, as daily inquiries could not be made, and if urgent danger arose the prompt summoning of friends would be more difficult and might entail on the working classes the expense of a vehicle; (*c*) the profession would have greater difficulty in insisting on the removal of infectious cases to a hospital where they would be out of reach of their relatives, and so difficulties might arise in the proper carrying out of the Notification of Infectious Diseases Act; (*d*) owing to its distance the medical service of the proposed hospital would probably be more expensive; and (*e*) a hospital at Purdysburn would be unsuitably placed for the purposes of the training of medical students, and while this deprivation would in the first place fall on the Belfast Medical School, its effects would ultimately re-act upon the entire community. On all these grounds the memorialists pray that the proposal to erect an infectious diseases hospital at Purdysburn should be re-considered, and some other more convenient and accessible site selected.

Proposed Collection for the Cork Hospitals during the Diamond Jubilee Year.

The Earl of Bandon, Lord Lieutenant of the county of Cork, and the Mayor of Cork last week addressed a letter to the newspapers suggesting that as large sums would probably be spent by residents of the city and county in celebration of Her Majesty's Diamond Jubilee year, an effort should be made to pay off the debts due by the various city hospitals. A meeting in furtherance of the project was held last Saturday, and steps were taken to form an influential and representative committee. It is expected that the revenue of the hospitals will be considerably augmented.

Presentation.

Mr. Allsom, L.R.C.P. Edin., &c., who for many years had acted as compounder at the Cork Union Hospital, recently resigned, when certain of his colleagues presented him with a handsome silver tea service.

March 22nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Buildings of the Faculty of Medicine.

THE new buildings of the Faculty of Medicine will be completed before very long—at least, the demolition of what remained of the old buildings has commenced. It is more than fifteen years since the re-building of the Faculty's premises began, and it has proceeded slowly, the pulling down going on bit by bit simultaneously in accordance with the plan of the architect, M. Ginain. The practical school with its laboratories and dissecting-rooms was built first upon the site of the old Clinical Hospital. With regard to the latter, the first portion built comprised the private rooms of the dean and an enormous building, of which the first floor serves as a library, while the ground floor has for ten years remained unused, its immense rooms being inconvenient for most practical purposes. At present the work of destruction is aimed at the final portions of the old buildings, where M. A. Gautier, the Professor of Chemistry, used to have his laboratories, and where the examination rooms formerly stood. A hundred years ago this building was a church, and one can still see the great lancets for the windows and the remains of the apsidal choir. There also used to be shops on the ground floor, and the names and callings of the shopkeepers can still be read over the façade. The pulling down of the walls exposed to view the examination rooms where so many medical men have undergone the agony of examination, and many students were spectators of the process of demolition.

Death from Hydrophobia.

Two months ago a rich country miller and five other persons who had been bitten by a mad dog came to Paris and underwent the antirabic treatment of the Pasteur Institute. At the end of a month they returned home. A

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few days ago the miller developed sundry disquieting nervous symptoms and hurried to Paris for treatment, but he died from hydrophobia the same night in the hotel where he had stayed, close to the Institute. The other five who were bitten are doing well.

Deaths of well-known Medical Men.

Dr. de Bossi, the oldest medical man in France, has just died at Havre, aged 104 years, in full possession of his faculties. Dr. Morvan has died at Lannilis, aged 73 years. In 1871 he was a member of the Legislative Assembly, but had for a long time given up politics for the sake of scientific work. He was the first to describe the group of clinical symptoms known as "Morvan's disease," which he considered to be a form of syringomyelia. Since then Dr. Zambaco Pacha of Constantinople, having travelled in Brittany, where Dr. Morvan studied the disease and where it is very common, came to the conclusion that it is an abortive form of leprosy. Dr. Morvan was a corresponding member of the Academy of Medicine.

Oysters and Infection.

The Academy of Medicine has been inquiring into the question of infection by oysters, especially with regard to enteric fever. M. J. Chatin has demonstrated that in natural sea-water the typhoid germ dies rapidly, and that as the oyster picks them up under these conditions they cannot do much harm. Unfortunately, many oyster breeders, with a view to the more rapid fattening of the oysters, lay them down at the mouths of rivers in a mixture of salt and fresh water, and it is this fresh water charged with all manner of germs collected in its course which infects the oyster beds and oysters. M. Chatin recommends that some steps should be taken to guarantee the purity of the fresh water. In the medical world it is suggested that this inquiry has been undertaken with a view to the nomination of an inspector of oyster culture and also to appoint a hygienist who is a *protégé* of the Academy.

The Medical Scandal.

The much-discussed abortion case of last November came on for trial at the assizes on Monday. The defendants are Dr. Boisleux, well known for his gynæcological work and particularly for his paper upon Inter-ligamentous Incision of the Vaginal Wall, and Dr. de la Jarrige, who is accused of having been an accessory. On Nov. 21st last Dr. de la Jarrige was consulted by a young woman named Thomson, an employée of M. Redfern the costumier. She was brought by her lover, M. Mansuy, a friend of Dr. de la Jarrige, and well known in sporting circles under the name of Musany. Miss Thomson complained of abdominal pains, but concealed the fact that she was really pregnant, and Dr. de la Jarrige thereupon sent her to Dr. Boisleux. She next went to a midwife to whom she made overtures to procure abortion, but the midwife refused. Then she returned to Dr. Boisleux, who proposed curetting the uterus, which operation was done at Dr. Boisleux's private house in the presence of Dr. de la Jarrige and M. Mansuy. The curette brought away some placental fragments, and in endeavouring to get these all away Dr. Boisleux perforated the uterus, pulled a knuckle of intestine into the perforation, and the head of the fœtus escaped into the peritoneal cavity. Dr. Boisleux then proposed a laparotomy, but M. Mansuy refused permission for this. During the night symptoms of peritonitis set in, and at 5 o'clock in the morning Dr. Boisleux performed laparotomy, and removed the uterus, but the patient died soon afterwards. The Medical Inspector of Deaths refused the order for burial and regarded the death as a non-natural one. Dr. Boisleux, Dr. de la Jarrige, and M. Mansuy were then all summoned to appear before the Commissioner of Police, and on learning this M. Mansuy blew out his brains. The two medical men attributed the death after operation the one to embolism and the other to peritonitis. A post-mortem examination was ordered, and made by Professor Brouardel, who sent in a report, upon which both medical men were arrested. Investigations were made at the "clinic" of Dr. Boisleux, which was found to be very badly arranged and dirty, and from the books which were seized it appeared that in six years he had had twenty-six deaths from operations. The two medical men declare that they are the victims of a mistake, and were deceived by the patient as to her state of pregnancy. Public opinion and the press are most hostile to both medical men and their "clinics." The accused have been four months in prison awaiting trial, as Professor Brouardel's time has been taken up with the Conference at Venice. The medical world is painfully impressed by this matter, and it is generally regretted that Professor Brouardel was so hasty in demanding the arrest. As a matter of fact, there are no direct proofs of guilt against the accused, and the post-mortem examination showed nothing contrary to their declaration that they had made a wrong diagnosis, as many other gynæcologists have done, especially when their patients were anxious to deceive them. Proof of guilt can only exist in the shape of letters or depositions, and it is uncertain whether any such exist. The case will probably last until Saturday, March 27th, as there are no less than 150 witnesses to be heard.

March 24th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Balneological Association.

THE meetings of the Balneological Association were held in the Pharmacological Institution from March 12th to March 14th. The President, Professor Liebreich, being ill, the chair was taken by Professor Winternitz of Vienna, who delivered an inaugural address in which he made special reference to the late Dr. Brand of Stettin, the advocate of hydrotherapeutics in enteric fever, and then read a paper on the Treatment of Graves's Disease. He first dealt with the etiology of this condition, mentioning cases in which the symptoms had developed after a severe nervous shock, and gave an account of the results obtained by the administration of the extract of the thyroid and the thymus glands. These results, he said, were far from being satisfactory. There was, moreover, no symptom in Graves's disease which could not be successfully treated by hydropathy or by dietetic and mechanical methods. The increase of the cardiac action and the characteristic tremor require the application of cold bandages on the neck and the back and massage. The diarrhœa is to be treated symptomatically. Milk and vegetable food are beneficial, but butcher's meat is injurious. Professor Winternitz then gave a detailed account of the daily life of the patients under treatment for Graves's disease in his asylum. Although he was, of course, not able to cure every patient, he had always succeeded in relieving the pains. In the discussion Professor Schott of Nauheim said that he was less confident than Professor Winternitz as to the curability of the disease, for patients who had apparently been curred often relapsed. He had never seen any good results from the administration of glandular preparations. He recommended the use of iodide of sodium. Dr. Lindemann of Heligoland then spoke on the action of sea bathing in diseases of the stomach. The majority of practitioners, he said, held it to be an established fact that sea bathing was not useful in such complaints, but this opinion was only correct to a certain extent. Many patients suffering from digestive troubles who had derived no benefit from the mineral springs recommended in these cases were finally cured in Heligoland. The bracing air of the sea acts as a powerful tonic, and the good appetite of patients at the seaside proved its salutary influence on the digestive organs. Irritable patients as a rule do not benefit from the sea air, but other neurasthenics feel very well. Gastric ulcers and carcinoma, of course, became worse, and these diseases are, indeed, rather frequent among the natives. In the discussion some members stated that the recommendations of medical men in matters of diet could not be carried out so satisfactorily in seaside hotels as in inland health resorts. The establishment of homes or special institutions for invalids at the seaside would be necessary if good results were to be generally obtained.—Dr. Lahnsen of Brunnthal read a paper on Agrypnia. After some general remarks on the physiology of sleep and dreams, he said that agrypnia was one of the first symptoms of neurasthenia. More than one-half of a given number of neurasthenic patients complain of sleeplessness. Three forms of agrypnia must be distinguished. The first is very often present in exceptionally active persons, who are able to work from morning till night and to get up very early after only a few hours of sleep; they do not require much sleep, and as a rule do not feel ill although they sleep less than they ought to do. The second form is met with in persons who, although they may be very tired, nevertheless

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do not fall asleep until several hours after they have gone to bed. This is the genuine form of neurasthenic agrypnia. In the third form the patients fall asleep at once, but awake again very soon. With respect to treatment, Dr. Lahnsen was of opinion that hypnotics should not be used, except in acute agrypnia. Chronic forms must be treated by dietetic and hygienic methods. A stay in a small, quiet country place is to be specially recommended to neurasthenic patients. In the discussion it was pointed out that nervous people are apt to exaggerate their sleeplessness, and that it is doubtful whether agrypnia is to be regarded as a symptom or as a cause of neurasthenia.—Professor Baginsky read a very interesting paper on the Bacteriological Examination of the Water in the "basin baths" of Berlin. He mentioned that he had met with several cases in which children were attacked with enteric fever after having made use of public baths. The chemical analysis of water from the baths did not show any remarkable alteration. He then made microscopical examinations of water taken from several well-known public baths both before and after use. In one of these establishments where the water-supply is derived from wells, and the bath is cleaned every day, the recently admitted water contained many bacteria. After twelve hours, when 200 persons had used the bath 90,000 germs were found per cubic centimetre of water; and after twenty-four hours, when 549 people had been in the bath, 270,000 germs per cubic centimetre were found. The bacteria observed in the water were the following: Bacterium coli commune, proteus vulgaris, bacillus subtilis, bacillus aquatilis fluorescens, staphylococci, and sarcina. In animals the first mentioned bacillus proved to be virulent. Professor Baginsky was of opinion that bathing establishments should be under a stricter control, that there should be a constant inflow of fresh water during the time of bathing, and that bathers ought to rub their skin with a brush both before and after being in the water. Dr. Kisch of Marienbad said that in watering-places the conditions were rendered worse by the fact that the bathers were sick people. The use of large baths ought to be restricted and single bathing ought to be the general rule. Some members doubted whether the germs present in ordinary water would also be found in mineral springs.—Dr. Mendelsohn of Berlin read a paper on the Treatment of Renal and Vesical Calculi by the Water of Mineral Springs. The chemical agents which dissolve calculi in test tubes are useless in the living organism. The good results obtained in lithiasis by the use of mineral waters do not depend on their solvent power, but on their diuretic action. To induce free diuresis must be the principal object of treatment. Calculi probably commence from crystals deposited from very concentrated urine; it is an error to suppose that they originate in uric acid crystals adhering to coagulated albumin. In the discussion Professor Winternitz remarked that alkalinity of the urine must be combated by vegetable food; according to him an infusion of birch-leaves is very efficient in the removal of calculi.—Dr. Ziegelroth then read a paper on the Relation between Scientific Hydrotherapy and the Antitoxin Treatment. His opinion that the antitoxins would soon be things of the past was strongly opposed, even the most fervent balneologists acknowledging that although the exact value of Behring's method may be a matter of controversy, yet they were not entitled to reject it.—The other papers were read by Dr. Hansemann, on Cures and Curability; by Professor Eulenburg, on the Mechanical Treatment of Cerebral and Spinal Diseases; by Dr. Wegele, on the Chemical Examination of the Gastric Juice; by Dr. Schubert, on the Influence of Venesection on Diseases of the Skin; and by Dr. Siebelt, on the Winter Climate of the Silesian Mountains.

March 23rd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Parliament and the Profession.

IN his delightful "Memoirs of an ex-Minister" the late Lord Malmesbury goes out of his way to compliment practitioners of medicine on their sagacity in politics, and cites an instance where he distinctly benefited by taking the opinion of a well-known metropolitan consultant on a question before Parliament. Continental experience goes far to confirm his lordship's judgment, and in no nationality more than the Italian. "Legion" is, in truth, the appropriate name for the far-seeing and patriotic publicists and statesmen who have contributed to the unity and independence of Italy. It was Giovanni Lanza, a general practitioner in Piedmont, who was Victor Emmanuel's trusted political adviser during a very critical time, and who, as Premier of the Right, conducted Italy to Rome in 1870. It was Agostino Bertani, the Genoese surgeon, who headed the medical department in Garibaldi's various expeditions and who, before he died, gave his country the "Codice Sanitario" which revolutionised and made uniform her whole system of State medicine. In a more recent decade it was Guido Baccelli who held the portfolio of Public Instruction with such advantage to the higher or professional education; and in the elections now going on throughout the kingdom the medical candidates (of whom there are forty) are conspicuous, so far as their printed addresses enable one to judge, for the enlightenment and public spirit which inspire their appeal to the constituencies. Some of their names are well known to readers of THE LANCET as contributors to its pages—for instance, Count Guido Tizzoni, Professor of Pathology in the University of Bologna and Director of the Pathological Institute attached to the same seat of learning, whose monograph on the Bacillus of Tetanus in your columns is still authoritative, and whose antitoxin (in the discovery and preparation of which he had for coadjutor Eugenio Centanni of Florence) is now well known to the profession. Count Tizzoni is contesting the Vico Pisano division of Pisa in the Liberal interest. Then there is Dr. Giovanni Battista Queirolo, who holds the chair of General Clinical Medicine in the Pisan University, whose intervention at the yearly professional congresses has often given THE LANCET occasion to notice his originality of view in *quæstiones vexatæ* of diagnosis and treatment and his power of criticising adverse positions or of vindicating his own. He, too, comes forward in the promotion of Liberal principles and for the constituency of Rapallo on the Riviera Ponente. Again, there is Dr. Antonio Celli, Professor of State Medicine in our University and Director of the Hygienic Institute, whom many of your readers must remember as one of Italy's ablest representatives at the International Congress of Hygiene and Demography held in London six years ago, and whose subsequent professional visits to our provincial schools have fructified in many practical reforms in his country's sanitation. He is the unopposed candidate, once more in the Liberal interest, for the electoral division of Cagli in the Marches. Milan, moreover, will in every probability return two medical candidates—Dr. Gnocchi-Viani and (all but certainly) Dr. Malachi De Cristoforis, whose efforts to rehabilitate the hygienic conditions of the Lombard capital have been so far successful as, for one thing, to have almost stamped out small-pox by rigorous vaccination and re-vaccination, and who, if adequately supported, would long ago have endowed it with the blessing it sorely needs—a pure and abundant water-supply. The former seeks election as a Socialist and the latter as an advanced Liberal. The University of Modena sends as Liberal candidate for the first electoral division of Pistoia its Professor of Balneology and Hydrology, Dr. Paolo Casciani, whose connexion with the thermal establishment of Monte Catini is widely known through treatises reviewed in THE LANCET, and whose efforts in Parliament to develop Italy's resources in such health resorts are among the grounds on which he appeals for the suffrages of the Pistoiesi. Medico-psychology contributes an able publicist in Professor Silvio Venturi; and criminal anthropology a redoubted advocate of root-and-branch educational reform in Professor Napoleone Colajanni, the former contesting Cologna Veneta, in the province of Verona, the latter Castrogiovanni in Sicily. Both these candidates, if returned, will have the coöperation in Parliament of Professor Enrico Ferri of the Roman school, who, by profession a jurist, is so far medically equipped as to make him Professor Lombroso's henchman at anthropological congresses and also at criminal trials, civil and military. He stands for several constituencies and is more than likely to be returned as many times over. Naples has at least one of its professional staff in the field—Dr. Francesco Fede, who holds the chair of Pathology and Clinical Medicine in the University, and who seeks re-election for Riccia (Campobasso). Rome, as might be expected, sends forth many candidates from its school—the Commendatore Gaetano Semeraro, its Rector Magnificus, who contests Castellaneta (province of Lecce);

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Dr. Felice Santini, of the Navy Medical Staff, and Dr. Guido Baccelli, Professor of Clinical Medicine in the University Institute and perpetual President of the Accademia di Medicina. He has a Socialist barrister as an opponent for the third electoral division; but all the omens point to his success. He was entertained at a banquet the other day by his committee, and as his speech on the occasion was one of the most memorable evoked by the electoral struggle now in progress I may refer to some of its more interesting passages. Dwelling on the *Esercito e Scuole* (army and schools) he showed how, under the Continental system, the army is efficient in proportion to the intelligence or education of its constituents, and echoed the saying of Mommsen that Germany won her triumphs in 1870–71 by her universities. "The army is the reflection of the people, and the people must be educated in a military sense from the schools upwards." For this end he always when in office worked hand-in-hand with the War Minister, while as to education itself, whether elementary or academic, his watchword was ever "Thorough." The attainment of this ideal he showed to be Italy's surest means of economy—of lightening those outlays which are her chief source of weakness. As to the universities, again, he has always striven for their absolute autonomy. *L'autonomia universitaria*, he repeated, is the one safeguard against the troubles so recently to be deplored. "Liberty of teaching, liberty of study and research, leading up to examinations conducted stringently and impartially by the State—by this means alone will the public be guaranteed a duly qualified medical man, lawyer, or engineer." Some of his professional illustrations were happy, as when he described the European Governments as agitated by "insomnia due to political hyperæsthesia," while that of Italy under the present control was "anæsthetised." His arguments in favour of decentralisation were felicitously drawn from the inter-dependence of stomach, liver, heart, and brain, and at one episode of his review of society he hit the blot and its sequelæ by a reference to "sloughing phagedæna." His audience, largely medical out of a total of 375, enjoyed the apt similitudes, as also the frequent citations, none of them hackneyed but all the more effective, from the Latin poets. The whole speech, from its intellectual breadth, its impartiality, its admirable good temper, and its literary polish, has been widely commented on by political organs of every shade and certainly bears out the remark I began by quoting from Lord Malmesbury that the medical contrasts not unfavourably with any sister profession for the sagacity and even-mindedness it brings to bear on the politics of the day.

March 21st.

Obituary.

WILLIAM BOYD, J.P., M.R.C.S. ENG., L.S.A.

MR WILLIAM BOYD, whose death at Durham on March 9th we have already recorded, was one of the best known and most highly respected inhabitants of the city. He was a native of Durham, having been born in the parish of St. Nicholas in 1817, a few years after his father had come from Merrington to fill an important position in a woollen factory. Mr. Boyd received a good education at two of the local schools, and having resolved to enter the medical profession he was taken as an apprentice by two surgeons practising in the city, Mr. William Clifton and Mr. George Shaw. Under these gentlemen he was well grounded in the details of a practitioner's daily routine, and he eventually proceeded to London, where he attended University College Hospital for a time, and took the qualifications of a Member of the Royal College of Surgeons of England and a Licentiate of the Society of Apothecaries in 1842. He then returned to Durham, occupying a house in Leazes-place, and soon acquired a large practice, to which he devoted his best energies for more than fifty years. Mr. Boyd also held numerous public appointments, the duties of which he discharged with exemplary assiduity. He was for a long time medical officer to the workhouse. He was, moreover, the public vaccinator; and on the death of Mr. Shaw in 1871 he was elected surgeon to Durham County Prison, a post which he retained until the management of all the prisons in the country was taken over by the Government. He was also medical officer of health for the parishes of St. Nicholas and St. Oswald. Mr. Boyd possessed considerable business capacity, extensive general information, and much intellectual power. He was a man of few words, and took little account of class distinctions in his demeanour towards his patients, displaying similar courtesy to rich and poor alike. In the municipal life of Durham Mr. Boyd played a large part, his connexion with it being of such duration that of late years he was the "father of the corporation," having outlived all those with whom he was associated on his first entering into public life. He was councillor for the North Ward from 1849 to 1859, when he retired on being elected alderman, to which more important office he was always re-elected without opposition until his resignation a few years ago on account of failing health. Mr. Boyd's high place in the estimation of his fellow townsmen is sufficiently shown by the fact that he was elected to the mayoralty on four occasions—namely, in the years 1857, 1860, 1865, and 1888. During his first term of office he had the duty of presenting an address to the Queen on the occasion of the marriage of the Princess Royal. In 1890 the corporation conferred on him the honorary freedom of the city, and requested his acceptance of the oil painting of himself which now hangs in the Town Hall. Mr. Boyd has left a widow and a son. The funeral took place on March 13th at St. Nicholas' Cemetery in presence of a large company of mourners.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in March in the under-mentioned subjects:—

Surgery—E. C. Bailey, King's College; G. E. Brooke, Cambridge and London; R. Holt, Royal College of Surgeons in Ireland; G. F. May, McGill University; J. Ponsonby, Guy's Hospital; L. W. Seymour, St. George's Hospital; and A. Stein, Middlesex Hospital.
Medicine. Forensic Medicine, and Midwifery.—H. M. Church, McGill University; J. F. Fox, Cork and Westminster Hospital; F. T. Knott, London Hospital; and W. L. G. Morgan, St. Thomas's Hospital.
Medicine and Forensic Medicine.—C. H. Church, McGill University; H. Lewkowitsch, Breslau; and M. S. Martin, Calcutta.
Medicine and Midwifery.—E. L. C. Muspratt, King's College.
Medicine.—J. Cater, King's College; A. J. Pedley, Birmingham; A. W. Robertson, St. Bartholomew's Hospital; and E. G. Smith, London Hospital.
Forensic Medicine and Midwifery.—W. Mawer, St. Bartholomew's Hospital; and A. R. O'Flahertie, London Hospital.
Forensic Medicine.—E. J. E. Coop, Birmingham and St. Bartholomew's Hospital; and A. M. Weir, Royal Free Hospital.
Midwifery.—C. I. Ellis, Aberdeen and St. Thomas's Hospital; A. Gandier, Toronto; C. G. Schultz, St. Mary's Hospital; and A. Stein, Middlesex Hospital.

The diploma of the society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:—Messrs. Brooke, Ellis, Gandier, Morgan, Pedley, Ponsonby, Robertson, Seymour, Smith, and Stein.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. T. Rosenheim, *privat-docent* of Internal Medicine, has been granted the title of Professor.—*Bonn:* Dr. H. Wendelstadt of Cologne has qualified as *privat-docent* of Pharmacology.—*Budapest:* Dr. Imrédy, Dr. Tanszk, and Dr. Fodor have qualified as *privat docenten* of Medicine, and Dr. Riegler as *privat-docent* of Hygiene.—*Freiburg:* Professor von Kries, who had been offered the chair of Physiology in Berlin in succession to Dr. du Bois Reymond, has decided to remain in Freiburg.—Dr. Ernst Gaupp has been appointed Extraordinary Professor of Embryology.—*Halle:* Dr. H. Reineboth has qualified as *privat-docent* of Internal Medicine.—*Heidelberg:* Dr. Kaiser has been appointed Extraordinary Professor of Physiology.—*Lemberg:* Dr. Ladislaus Szymonowicz of Cracow has been appointed Extraordinary Professor of Histology and Embryology.—*Marburg:* Dr. von Heusinger has been appointed Extraordinary Professor of Forensic Medicine and Dr. Wernicke has been appointed Extraordinary Professor of Hygiene.—*Moscow:* Dr. de Strauch has qualified as *privat-docent* of Gynæcology.—*Munich:* Dr. H. Gudden has qualified as *privat-docent* of Pharmacology.—*Turieff (Dorpat):* Dr. Chirvinski of Moscow has been appointed Professor of Pharmacology and Dietetics, in place of Professor Kobert, who has gone to Görbersdorf.—*Warsaw:* Dr. A. Shcherbak has been appointed Professor of Mental Diseases, and Dr. J. Federoff has been appointed Professor of Gynæcology.

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THE council of the Midland Branch of the British Dental Association met on March 20th in the Leeds Medical School. The members of the branch resident in that part of the county of Yorkshire also met in the same building, and the company were cordially welcomed by Mr. Scattergood, dean of the medical department of the Yorkshire College.

LINCOLN COUNTY HOSPITAL. — The report presented at the annual meeting of the Lincoln County Hospital showed that the total income during 1896 was £4933 and the expenditure £4814, and the balance due to the treasurer was reduced from £688 to £569. With the view of giving greater security against fire a Merryweather rotary pump was ordered to be provided, and the water service was increased.

BRISTOL EYE HOSPITAL.—The annual meeting of this institution was held, under the presidency of the Mayor, on Feb. 24th. During the past year 4637 new individual out-patients came for treatment, being 300 in excess of 1895, and 379 serious cases were admitted into the wards. The daily attendance of patients at the hospital is about 100. The statement of accounts showed that the income for the year was £1522 and the expenditure £1992, leaving an adverse balance of £470. Dr. Richardson Cross stated that there were 130 towns and villages outside Bristol from which patients had been received, and he hoped the residents of those places would think of the Bristol Eye Hospital when they were considering the claims of medical charities.

THE NEW WORKMEN'S CONVALESCENT HOME IN SUSSEX.—The model convalescent home at Rustington, near Littlehampton, which was fully described in THE LANCET of March 20th, was opened on that date by the Bishop of Chichester. A special train from Victoria brought over 300 guests interested in the scheme, and they were entertained most hospitably by Mr. and Mrs. Henry Harben, the former of whom erected the home and has liberally endowed it. The Bishop laid a memorial-stone and unlocked the door of the home, and after a short service in the hall he declared the institution open. Subsequently at luncheon the toast of Mr. Harben's health was heartily received, and then the company had an opportunity of inspecting the home and its pleasant surroundings. The home is to be conveyed to the Carpenters' Company of London.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting of the above society held on March 19th, Dr. R. Sydney Marsden, President, being in the chair, a discussion on Gastro-enteritis in Children was opened by Mr. G. S. Stansfield, who gave statistics drawn from the experience of Tranmere Workhouse as to the prevalence of this disease and the relative mortality. He also quoted statistics of the comparative mortality in various foundling hospitals with diverse methods of feeding. He pointed out the necessity of correct feeding with regard to material, quantity, and time, and expressed his appreciation of the rules for the feeding of infants drawn up and printed as a leaflet by the Liverpool Children's Infirmary. He entered at some length into the question of the contamination of milk, and concluded by giving an epitome of medicinal treatment. The President, Dr. Pinkerton, Dr. Brien, Mr. Wilkinson, and Dr. Harris took part in the discussion, and Mr. Stansfield replied.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY. — The annual meeting of the Chesterfield and North Derbyshire Hospital and Dispensary was held on March 11th in the Market Hall, Chesterfield, Mr. R. T. Gratton presiding. The report showed that during 1896 there were 312 in-patients admitted, of whom 19 died; there were also 2049 out-patients. The income for the year was £1889 and the expenditure (including £200 transferred to the endowment account) was £1885. None but surgical cases are received in this hospital; space does not permit of medical wards being opened, and it appears that the workhouse hospital is the only institution in the town available for the treatment of medical cases. After various speakers had expressed their views on the subject, it was eventually decided, on the motion of Dr. Rose, that five members of the board of management should meet a like number of representatives appointed by the town for the purpose of discussing the best means of providing for the treatment of medical cases.

NEWTON ABBOT COTTAGE HOSPITAL.—Mrs. Allaline Fisher of Abbotsbury, Newton Abbot, who recently died, has left £2000 for the furnishing of Newton Abbot Cottage Hospital. A little time ago Mrs. Fisher gave £5000 towards the building of this institution in memory of her husband.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—At an examination for the Diploma in State Medicine the following candidates have passed with honours: Fredk Alex. Craig, M.B.R.U.I., and John Edwin Hancock, M.R.C.S.Eng., L.R.C.P.Lond.

A HOME OF COMFORT FOR THE DYING.—A Home of Comfort for the Dying has been opened at "Dowran," Southsea, in charge of the Winchester Diocesan Deaconesses, for the reception of better-class patients, clergy, missionaries, church workers, nurses, governesses, &c., who are suffering from progressive and incurable disease. Patients, when possible, have to pay towards their support, but payment is not a *sine quâ non*. Application should be made to the Mother Superior, St. Andrew's Home, Portsmouth.

CHELTENHAM GENERAL HOSPITAL.—The annual meeting of this hospital was held on March 17th, under the presidency of Colonel Croker-King. The medical report showed that the number of in-patients was 920 and of out-patients 4844, the latter being an increase of 308 on the year. The average cost of each in-patient was £3 15*s.* 4*d.*, and of each out-patient 3*s.* 3*d.* The cases treated at the branch dispensary were 4033, at an average cost of 2*s.* 5½*d.* The private nursing cases were 263, and the amount received £1038. There was no falling off in the amount of the subscriptions to the hospital. The church collections showed a decrease of £44, and the Hospital Saturday Fund an increase of £17.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—A meeting thoroughly representative of town and county was held at Newport on March 17th to consider the best means of commemorating the Queen's Diamond Jubilee. Lord Tredegar presided, and among those present were the Duke of Beaufort, the Mayor of Newport, and Dr. Garrod Thomas. A resolution was adopted in favour of a joint town and county effort to erect a new hospital, to be located at Newport, the site for which has been given by Lord Tredegar, and towards which an offer of £5000 has been made by Dr. Garrod Thomas conditional on the public subscribing £15,000, or, as an alternative, £1000 for every £3000 subscribed by the public. The meeting was of a most unanimous character and promises of £1045 were given for additions to a fund which previously amounted to £4500.

THE DIFFUSION OF SMALL-POX.—There was no death from small-pox registered in the county of London last week, and the cases admitted to the hospital ships at Long Reach were only 2 in number, as against 18, 6, and none in the three preceding weeks. On Saturday last there were 29 patients on the ships, as compared with 43 a fortnight previously. Some concern has lately been felt by the Neath urban district council by reason of the fact that small-pox has appeared in a gipsy camp in the neighbourhood, the members of the camp persisting in roaming about. Small-pox has broken out in a Cardiff hotel, four cases having been removed to the borough sanatorium. Revaccination has been performed at the hotel among the servants and others, and all other precautionary measures have been adopted.

TORBAY HOSPITAL, TORQUAY.—The annual meeting of this hospital was held recently at Torquay under the presidency of Mr. W. Kitson, J.P. The report showed that 330 in-patients had been admitted in 1896, against 342 in 1895. 497 minor accidents and emergencies had been treated, 60 in-patients and 442 out-patients were treated by the honorary ophthalmic surgeon, and 509 dental cases were treated by the honorary dental surgeon. The provident dispensary, which has been placed upon an entirely fresh basis, had 1156 patients on Dec. 31st, 1896. The treasurer's statement showed the institution to be in debt on the revenue account to the extent of £135, although the year commenced with a favourable balance of £3, thus making the excess of expenditure over receipts for the year £138. This unfavourable balance has been fortunately removed by a ball recently given by the Mayor and Mayoress of Torquay.

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MR. T. W. MORGAN, D.Sc., of Messrs. W. E. Lowe and Co., chemists, 8, Stafford-street, Old Bond-street, W., asks us to intimate to the members of the medical profession that he is not the Dr. Morgan mentioned in the case of Bull v. Morgan.

MEDICAL MAGISTRATES.—The Lord Chancellor, on the recommendation of the Lord-Lieutenant, has placed the name of James Grey Glover, M.D. Edin., of Highbury-place, on the Commission of the Peace for the County of London.—Mr. Thomas Moreton, M.R.C.S. Eng., of Hartford, Northwich, has been placed on the Commission of the Peace for Cheshire.

GENEROSITY.—A letter has been received at the Nottingham General Hospital from Mr. Ernest T. Hooley in which he offers that whatever the Hospital Saturday Committee between now and "Queen's Commemoration Day" (June 22nd next) collect throughout the district participating in the benefits of the hospital, up to 200,000 shillings, he will supplement by an equal amount, the whole to be applied to the fund for the much-needed extension of the hospital, and to be styled "The Hospital Saturday Victoria Fund."

FOOTBALL CASUALTIES.—In a match played at Bedminster, Bristol, between Bedminster and Trowbridge Town, on the 17th inst., a member of the latter team sustained a fracture of his clavicle.—On the same day, during a match at Brighton, a player, the centre half, dislocated his left humerus.—On Saturday last, in a match, Shipley against Luddendenfoot, at Shipley, the Shipley centre three-quarter received a serious injury to one of his eyes, and was at once taken to the Bradford Eye and Ear Hospital, and remained a patient.

DIPHTHERIA IN LONDON.—The fatal cases of diphtheria in London during last week amounted to a total of 37, these deaths being only 1 in advance of the corrected decennial average of deaths from diphtheria in London in the eleventh week of the period 1887–96. This total showed a decided fall from the numbers of the preceding three weeks, which had been 62, 43, and 53 respectively. Only 2 of the deaths were of persons aged upwards of twenty years, whilst 2 were of infants under one year of age. Lambeth and Wandsworth were each credited with 5 of the deaths, and Hackney and Bethnal Green each with 4 deaths; these four sanitary areas therefore accounted for almost one-half of the deaths in the week in the whole county of London. The admissions to hospital during the week numbered 113, as compared with 102. 112, and 97 in the three weeks immediately preceding, 829 patients suffering from the disease remaining under treatment on Saturday last. In the Outer Ring of the metropolis there were as many as 17 deaths registered from diphtheria last week, 3 being in the Edmonton registration district and 5 in the West Ham registration district.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Public Health (Scotland) Bill.

ON Monday, March 22nd, a further attempt was made to get the Public Health (Scotland) Bill through the second reading stage, but, like previous attempts, this one failed. Several Scotch Members made speeches criticising the measure.

General Medical Council Accounts.

The accounts of the General Medical Council and the branch councils for the year ending Dec. 31st last were laid before the two Houses of Parliament this week.

HOUSE OF COMMONS.

THURSDAY, MARCH 18TH.

Beri-Beri in an Irish Asylum.

Mr. Carew asked the Chief Secretary to the Lord Lieutenant of Ireland whether his attention had been called to the present alarming condition of the Richmond Lunatic Asylum in Dublin; whether he was aware that, with accommodation available for only 1000 patients, 1714 were housed there in October last, and that in consequence of this overcrowding beri-beri, a loathsome disease hitherto confined to the densely populated and filthy quarters of Chinese and other Eastern cities, has appeared, and of 113 patients attacked last year seven died up to December last; would he explain why, notwithstanding the repeated protests of two of the members of the Board of Control against overcrowding, no practical steps had been taken by that body to stamp out the disease; and whether, in the circumstances, the Government would see that immediate precautions were taken to prevent its spreading.—Mr. Gerald Balfour replied that the Irish Government had been giving close and constant attention to the accommodation at the Richmond District Asylum and to the outbreak of beri-beri there. The number of patients on the asylum register at the end of 1896 was 1728, of whom 59 were at Portrane. The present accommodation of the Richmond Asylum was for 1393 patients, in addition to which provision had been made for 80 patients at Portrane and for 40 in the residence of the resident medical superintendent (surrendered for that purpose), thus bringing up the present accommodation to 1518. Further temporary accommodation for 220 patients was now being provided at Portrane. The number of deaths from beri-beri at Richmond during 1896 was 8, as against 123 deaths from various other causes. He might observe that the general death-rates in this asylum for 1895 and 1896 were the lowest recorded since the opening of the asylum. In 1895 the percentage of deaths from all causes was only 7·1 and in 1896 7·8, and comparing these rates with the death-rates in the principal English asylums during 1896 he found that, with two exceptions, the rates in the English asylums were much higher than at Richmond. Every effort had been, and was being, made by the Board of Control to stamp out the disease known as beri-beri and to provide adequate accommodation for the patients.

Meat-supply for the Army.

Mr. Powell Williams, answering a question put to him by Mr. Flavin, said that two officers of the War Department, one of them belonging to the Army Service Corps, had visited Ireland in reference to the question of the meat supply to the troops and they were now pursuing their inquiries in other parts of the kingdom.

MONDAY, MARCH 22ND.

Poor-law Officers' Superannuation.

Mr. Ashton asked the President of the Local Government Board whether the information in the possession of the Local Government Board showed that the contributions from salaries of Poor-law officers under the Poor-law Officers' Superannuation Act, 1896, would suffice, or almost suffice, to pay the pensions under the Act; whether his attention had been called to the calculations made by Mr. Thomas Fatkin, an expert, at the request of the Leeds Board of Guardians, and adopted by them on Jan. 13th last, which calculations showed that the contributions of the officers would barely suffice to pay one-third of the cost of the pensions under the Act; and whether, having regard to the fact that a Bill was before the House to extend the provisions of the Act to the officers and servants of other local authorities, he would consider the advisability of having actuarial calculations made out to determine what proportion of the cost of the pensions was likely to fall on the ratepayers in the event of the Bill becoming law.—Mr. T. W. Russell replied to the question, saying that the Local Government Board had no definite information as to how far the contributions from salaries of Poor-law officers under the Poor-law Officers' Superannuation Act would suffice to pay the allowances under the Act; but it had to be borne in mind that in the great majority of cases of officers to which the Act referred the guardians prior to the passing of the Act were empowered to award superannuations without any contributions from the officers. The Act had conferred upon the officers the right to a superannuation—instead of its being optional with the guardians to grant superannuation, as was previously the case—as regards all officers who devoted their whole time to their duties, it being at the same time made obligatory on the officers to whom the Act applied to contribute a percentage of their salaries towards the cost of superannuation. The Local Government Board had seen the communication which Mr. Fatkin had addressed to the Leeds board of guardians, but they could not undertake to have made the actuarial calculations suggested in the last question, and looking to the thousands of authorities to which the Bill referred the Local Government Board did not think there were any data on which any actuarial calculations which could be relied upon could be made.

The London Water Question.

Sir Frederick Dixon-Hartland asked the President of the Local Government Board whether he had seen that since the decision of the House was given against the London County Council acquiring the control of the water supply of London the council had instructed its engineer to proceed with the plans and sections of the Wye portion of the Welsh scheme, at a cost of £1,500; and whether any and what steps could be taken to prevent this expenditure of the ratepayers' money, and if the parties promoting the scheme could be surcharged by the Government or other auditor.—Mr. Chaplin said he had ascertained that the London County Council had, subject to the passing of the annual maintenance vote, assented to the expenditure referred to in the question, and that the expenditure was considered to be authorised by Section 3 of the London Water Act, 1892. The Local Government Board had no authority to intervene to prevent the expenditure; it would, of course, devolve on the district auditor in the case of the payments referred to, as in the case of any other payments by the County Council, to consider whether the expenditure had been legally incurred.

Dangerous Performances.

At this sitting Mr. Jesse Collings introduced a Bill to extend the age under which the employment of young persons in dangerous performances is prohibited. The Bill raises the age of prohibition from fourteen to eighteen years.

TUESDAY, MARCH 23RD.

Experiments on Living Animals.

Mr. MacNeill asked the Secretary of State for the Home Department whether the inspectors appointed for the purpose of securing a compliance with the provisions of 39 and 40 Vict., c. 97, to visit places licensed for the practice of vivisection, had hitherto been persons who either had practised vivisection in the past, or shown the strongest sympathy with the practice of vivisection; were there any of those inspectors who were opposed to the practice of vivisection; and whether he would consider the advisability of not confining the inspection of licensed places for vivisection to inspectors who were advocates of the system?—Sir Matthew White Ridley replied that the inspectors had been appointed by his predecessors without regard to their advocacy of or opposition to the

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system established by statute under which experiments might be performed on living animals. If occasion arose he should pursue the same policy. The scientific knowledge required in an inspector implied a knowledge of experiments on animals, and he was satisfied that the inspection was carried out with the strictest regard to the law and to considerations of humanity.—Mr. MacNeill asked the right hon. gentleman to say whether all these inspectors were advocates of vivisection, because he was told they were.—Sir Matthew White Ridley said he had told the hon. member that they were all acquainted with the most humane method of conducting these experiments. He was not able to say whether they were advocates of the law as it stood or whether they desired any change in it, but he was persuaded that they could not see whether operations were conducted according to law unless they employed professional gentlemen who knew something about the matter.—Mr. MacNeill then asked the right hon. gentleman whether his attention had been directed to the account in the press of a soirée to which 400 guests were invited in honour of the completion of the new laboratories in connexion with St. George's Hospital Medical School, the report stating that in the physiological laboratory were displayed illustrations of new methods employed in the serum diagnosis of cholera and diphtheria; and whether St. George's Hospital had a licensed laboratory for the performance of experiments on the bodies of living animals; and, if so, why had not this hospital been included in the last return of places licensed for vivisection.—Sir Matthew White Ridley replied that he had seen a newspaper account of the reception referred to, but he did not gather from it that anything illegal took place. There was no licensed laboratory at St. George's Hospital.

Metropolitan Poor-law Children.

Mr. Bemrose asked the President of the Local Government Board, with reference to the proposed order for a new sick children's board, how many replies had been received from boards of guardians and managers, and how many of these expressed approval of the order as it stood.—Mr. Chaplin replied that since the date of the Conference he had received communications from seven boards of guardians out of thirty and two school districts out of six. Three out of the seven boards of guardians either approved the draft order or suggested as an alternative that the Metropolitan Asylums Board should take charge of the cases; one board preferred the Metropolitan Asylums Board if there was to be any change at all to which it was opposed; another suggested that the classes referred to should be assigned to some school or group of schools, and the remaining two objected. Of the two school districts, one approved and the other objected.

BOOKS, ETC., RECEIVED.

ABBOTT, JONES, AND CO., Adam-street, Strand, London.
The Narrative of my Experience as a Volunteer Nurse in the Franco-German War of 1870-71. By Anne Thacker. With a Sketch of her Life by James M. Menzies, M.A. 1897. Price 3*s.* 6*d.*

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
Physiology: Students' Note-book for the Laboratory. Part I., Physiological Chemistry. By A. J. Hall, B.A., M.B. Cantab., M.R.C.P. Lond. 1897. Price 2*s.* 6*d.* net.

BARNTRAEGER, G., Berlin.
Allgemeine Dermatologie. Von Dr. Ernst Kromayer. 1896.

BAUERMEISTER, M., West Nile-street, Glasgow.
Die Epithelfrage bei Cestoden und Trematoden. Von F. Blochmann. Mit 2 Tafeln. 1896.

BERGMANN, J. F., Wiesbaden.
Die Meningitis Serosa Acuta. Von Dr. G. Baenninghaus. 1897.
Ergebnisse der Allgemeinen Pathologie und Pathologischen Anatomie des Menschen und der Tiere. Von O. Lubarsch und R. Ostertag. Zweiter Jahrgang, 1895-1897.
Handbuch der Gynäkologie. Von J. Veit. 1897.
Winke zur Diagnose der Peripheren und Centralen Nervenkrankheiten mit Hülfe der wichtigsten Ophtnalmologischen Untersuchungsmethoden. Von C. A. Oliver, A.M., M.D., und Dr. J. Wolff 1897.

CHURCHILL, J. AND A., Great Marlborough-street, London.
A Manual of Chemistry, Theoretical and Practical. By W. A. Tilden, D.Sc., F.R.S. 1897. Price 10*s.*

CONSTABLE, T. AND A., Edinburgh.
Atlas of Clinical Medicine. By Byrom Bramwell, M.D, F.R.C.P., F.R.S. Edin. Vol. III. Part 3. 1897.

DORNAN, W. J., Philadelphia.
Transactions of the American Surgical Association. Vol. XIV. 1893.

FANNIN AND CO., Grafton-street, Dublin.
Transactions of the Royal Academy of Medicine in Ireland. Vol. XIV. 1896.

FERET ET FILS, Bordeaux.
Chirurgie des Voies Urinaires. Études Cliniques. Par le Dr. E. Loumeau. Vol. II. 1897.

IDEAL PUBLISHING UNION, 112, Fleet-street, London, E.C.
The Ethics of Diet. By H. Williams, M.A. Revised and Enlarged Edition. 1896.

LEWIS, H. K., Gower-street, London, W.C.
Medical Nursing. By the late Jas. Anderson, M.D, F.R.C.P. Edited by E. F. Lamport, with a Biographical Notice by Sir Andrew Clark, Bart. Third Edition. 1897. Price 2*s.* 6*d.*

LONGMANS, GREEN, AND CO., Paternoster-row, London.
Vita Medica: Chapters of Medical Life and Work. By Sir B. Ward Richardson, M.D, LL.D., F.R.S. 1897. Price 16*s.*
The Annual Charities Register and Digest. By C. S. Lock. 1897. Price 4*s.* net.

MASSON ET CIE, Paris.
Revue de Gynécologie. Tome 1, No. 1, Janvier-Février, 1897. Par S. Pozzi.

PENTLAND, Y. J., Edinburgh and London.
A Treatise on Obstetrics. By Edward P. Davis, A.M., M.D. Illustrated. 1897.
A Treatise on Surgery by American Authors. Edited by R. Park, A.M., M.D. Vol. I., General Surgery. Vol. II., Special or Regional Surgery. Illustrated. 1897.

PESTI KÖNYVNYOMDA-RÉSZVÉNYTARSASAG, Budapest.
Huitième Congrès International d'Hygiène et de Démographie tenu à Budapest du 1 au 9 Septembre, 1894. Vols. I. to VII. With Appendix. 1896.

PUBLISHED BY THE ASSOCIATION, Philadelphia.
Transactions of the American Orthopædic Association. Tenth Session, held at Buffalo, N.Y., May, 1896. Vol. IX. 1896.

REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.
A Pictorial Atlas of Skin Diseases. Edited by J. J. Pringle, M.B., F.R.C.S. Part 8. 1897. Price 10*s.* 6*d.*
A Text-book of Materia Medica, Therapeutics, and Pharmacology. By G. F. Butler, Ph.G., M.D. 1897. Price 22*s.* 6*d.*

SAMPSON LOW, MARSTON, AND COMPANY, Fetter-lane, Fleet-street, London.
Twentieth Century Practice. Edited by T. L. Stedman, M.D. In twenty volumes. Vol. VIII., Diseases of the Digestive Organs. 1897.

SAUNDERS, W. B, Walnut-street, Philadelphia.
The Pathology and Surgical Treatment of Tumours. By A. Senn, M.D., Ph.D., LL.D. Illustrated. 1895.

SCIENTIFIC PRESS, Southampton-street, Strand, London, W.C.
Practical Hints on District Nursing. By Amy Hughes. 1897. Price 1*s.*

SCOTT, WALTER, Paternoster-square, London.
Hypnotism. By Albert Moll. Fourth Edition. 1897. Price 3*s.* 6*d.*

STENHOUSE, A., Hillhead, Glasgow.
Forensic Medicine and Toxicology: a Manual for Students. By C. O. Hawthorne, M.B. Second Edition. 1897. Price 4*s.* 6*d.* net.

UNIVERSITY PRESS, John-street, Bedford-row, London, W.C.
Pseudo-philosophy at the End of the Nineteenth Century. By H. M. Cecil. I., An Irrationalist Trio—Kidd, Drummond, Balfour. 1897. Price 10*s.*

Sight-testing for the G.P., a Manual for the General Practitioner: by F. Davidson, Optician (A. La Riviere, Clifton-street, Finsbury, London, E.C.); price 2*s.* 6*d.*—A Collection of Ballads: edited by Andrew Lang; illustrated (Chapman and Hall, 11, Henrietta-street, Covent-garden, London, W.C, 1897); cloth, price 2*s.*—Liverpool Royal Infirmary Medical Report, 1896.—Epidemiologia, el Cólera en la República Argentina: por el Dr. José Penna (Jacobo Penser, Buenos Aires, 1897).—Przeglad Chirurgiczny: von Dr. W. H. Krajewski; tom. III.; zeszyt 3 (Druk. K. Kowalewskiego, Warszawa, 1897). — Magazines, &c., for April: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, and English Illustrated Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, JOSEPH, M.B., C.M., Edin., has been re-appointed Medical Officer of Health by the Runcorn Rural District Council.

BERRY, FREDERICK CHARLES, B.A., M.D., B.Ch. Dubl., has been re-appointed Medical Officer of Health for Burnham, Somerset.

BEVAN, R., L.R.C.P. Lond., M.R.C.S., D.P.H., has been re-appointed Medical Officer of Health for the Ashford Urban Sanitary District.

COLLINS, H. A., M.R.C.S., has been appointed Medical Officer for the Saxmundham Sanitary District of the Plomesgate Union.

CONOLLY, C. H., M.R.C.S., has been re-appointed Medical Officer of Health for the Urban District of Wood-green, N.

CORBEN, CHAS, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Caldecott Sanitary District of the Chepstow Union.

CROOKS, JAMES, M.D. & C.M. Trin. Toronto, L.R.C.S. Edin., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Eighth District of the Lexden and Winstree Union and the Seventh District of the Sudbury Union, vice H. D. Palmer, resigned.

DAVEY, E. L., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Dover Union.

DAY, T. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Harlow Sanitary District of the Epping Union.

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FLOYD, STEPHEN, M.D., B.S. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer of Health for the Llandrindod Wells Urban District Council, vice F. H. Roberts.

GRAHAM, J. G., M.B., C.M. Edin., has been appointed Assistant Medical Officer for the Smithson Poorhouse and Asylum by the Greenock Parish Council.

HARPER, J. R., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the Second Sanitary District of the Barnstaple Union.

HARRIS, L. H. L., M.B., Ch.M. Syd., has been appointed a Resident Medical Officer to the Sydney Hospital, New South Wales.

HAWORTH, F. G., M.B., C.M. Glasg., L.R.C.S. Edin., D.P.H. Camb., has been re-appointed Medical Officer of Health for the Urban Sanitary District of Darwen.

HITCHINS, CHARLES VERNON, M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for the Weston-super-Mare Urban District.

IREDALE, J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Mablethorpe Urban District Council.

JEFFREY, C., M.B., C.M. Aberd., has been appointed Medical Officer for the Altofts Sanitary District of the Wakefield Union.

JOHNSTONE, JOHN PIERCE, L.R.C.P., L.R.C.S., L.M. Edin., has been appointed Medical Officer for the First Sanitary District of the Langport Union.

LANGDON, T. C., F.R.C.S. Eng., has been re-appointed Medical Officer of Health by the Winchester Town Council.

LANGLEY, W. H., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Attendant to the Ordnance Survey Barrack, Phœnix Park, Dublin, and to the Morgan School, Castleknock.

LORIMER, J. A., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the Rural Sanitary District of Farnham.

MACKINNON, CHARLES, M.A., M.B., C.M. Glasg., has been re-appointed Medical Officer of the Southern District of the Cirencester Union.

MANBY, E. P., B.A., M.D., D.P.H. Camb., has been appointed Assistant Lecturer on Public Health in University College, Liverpool.

MASON, WM., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer of Health by the St. Austell Urban District Council.

NEECH, JAMES T., L.R.C.P. Edin., D.S.Sc. Vict., has been re-appointed Medical Officer of Health by the Atherton Urban District Council.

O'CONNER, G. P., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fourth Sanitary District of the North Witchford Union.

PARTRIDGE, T., M.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer of Health by the Nailsworth Urban District Council.

PICKEN, JAS., M.B., C.M. Glasg., has been re-appointed Medical Officer of Health for the Rawmarsh Urban Sanitary District.

PICKERING, HAROLD J., L.D.S. R.C.S. Eng., has been appointed Dental Surgeon to the Feistead School, Essex.

POLLARD, J. E. L., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Fourth Sanitary District of the Dover Union.

PRICE, G. BASIL, M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the London Temperance Hospital, Hampstead-road, N.W.

RICHARDS, JOHN, M.B. Edin., has been appointed Assistant Medical Officer to the Derby Borough Asylum.

SHARP, EDWARD, J.P., M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for the Truro Urban District.

STOBO, ROBERT, M.B., C.M. Glasg., has been appointed Medical Officer of Health by the Sunderland Rural District Council.

SUTTIE, D., M.D., C.M. Edin., has been appointed Medical Officer for the Birsay, Harray, and Sandwick Sanitary District.

SWENDEN, B. W., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon to the Boscombe Hospital and Provident Dispensary.

THEOBALD, A. J. A., M.B., B.Ch. Edin., has been appointed Medical Officer for the Reading and Wokingham District School.

THOMAS, JOS. T., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer by the Camborne Urban District Council.

VOELCHER, AUGUSTUS, has been re-appointed a District Analyst under the Fertilisers and Feeding-stuffs Act, 1893, by the Berkshire County Council.

WALLACE, J. J., M.B., B.Ch. Irel., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Workhouse and the Weobley Sanitary District of the Weobley Union.

WEIR, A. M., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Malvern Link District Council.

WILLIAMS, C. R., M.B., C.M. Edin., has been appointed Medical Officer by the Ashby-de-la-Zouch District Council.

WOOD, JOHN, M.B. Oxon., L.R.C.S. Edin., has been re-appointed Medical Officer for the Walsall Rural Sanitary District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHLEM HOSPITAL.—Two Resident Clinical Assistants for six months. Apartments, complete board, and washing provided.

BIRKENHEAD UNION.—Assistant Medical Officer for one year, for the Infirmary, Workhouse and Schools. Salary £80 per annum, with board, washing, and apartments. Applications to the Clerk to the Guardians, Clerk's Offices, 45, Hamilton-square, Birkenhead.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon Salary £100 per annum, with rooms and attendance (not board).

DISTRICT INFIRMARY, Ashton-under-Lyne.—House Surgeon. Salary £100 a year with board and lodging.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in hospital provided.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Junior Resident Medical Officer for six months. Salary at the rate of £25 per annum, with board, lodging, and washing.

LONDON COUNTY ASYLUM, Hanwell.—Fifth Assistant Medical Officer. Salary £120 per annum, rising by £5 a year to £150, with board, furnished apartments, and washing. Applications to the Clerk of the Asylums Committee, Office, 21, Whitehall-place, London, S.W.

MANCHESTER ROYAL EYE HOSPITAL.—House Surgeon. Salary £70 per annum, with residence, board, and washing.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Dental Surgeon.

MONTROSE ROYAL LUNATIC ASYLUM.—Medical Superintendent. Salary £700 per annum, with free house, fire, and light. The appointment is an annual one.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury, London.—Senior House Physician. Salary £100, with board and apartments.

ROXBURGH DISTRICT ASYLUM, Melrose.—Assistant Medical Officer. Salary £100 a year, with board, rooms, attendance, and washing.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—House Surgeon. Salary £50 per annum, with board and lodging.

SWANSEA GENERAL HOSPITAL.—House Physician for one year. Salary £50 per annum, with board, apartments, laundress, and attendance.

UNIVERSITY COLLEGE, London.—Assistant Ophthalmic Surgeon.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE, CARDIFF, MEDICAL SCHOOL.—Demonstrator in Physiology for the Summer Session.

VICTORIA HOSPITAL, Folkestone.—House Surgeon and Dispenser. Salary £80 per annum, rising to £100.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Medical Officer to the Provident Dispensary attached to the hospital. Salary £80 per annum, with board, lodging, and washing.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for six months. Salary at the rate of £70 per annum, with rooms, board, and washing.

WONFORD HOUSE HOSPITAL FOR THE INSANE, near Exeter.—Assistant Medical Officer. Salary £150 per annum, with furnished apartments, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

EVANS.—On March 17th, at Kirkley Rise, Lowestoft, the wife of H. Muir Evans, M.D., of a daughter.

GERVIS.—On March 20th, at Bishop's Stortford, the wife of Henry Gervis, M.B., of a son.

MARRIAGES.

GASTER—MOCATTA.—On March 23rd, at the Spanish and Portuguese Synagogue, Lauderdale-road, Maida-vale, Leah, youngest daughter of Abraham Mocatta, of Inverness-terrace, W., to Anghel Gaster, M.D., M.R.C.P., son of Chevalier A. E. Gaster, of Bucharest.

HARVEY—STURDY.—On March 20th, at Christ Church, St. Leonards-on-Sea, Frederic Harvey, L.S.A., eldest son of Major Harvey, late of H.M.'s 90th Light Infantry, Bexhill, Sussex, to Grace Madoline, third daughter of Mr. Sturdy, of Warrior-gardens, St. Leonards-on-Sea.

RAY—WYCKOFF.—On March 18th, at St. Stephen's, South Kensington, Walter John Orbell, M.R.C.S., L.R.C.P. Lond., elder son of the late Walter Ray, of Tostock, Suffolk, and Ventnor, I. of W., to Marie Estelle (Stella), elder daughter of W. S. Wyckoff, of New York.

DEATHS.

DYER.—On March 14th, at the Hotel Victoria, Pisa, John Edward Dyer, Sen., M.R.C.S., L.R.C.P., of South Africa.

HAMMOND.—On March 22nd, at 54, Folkestone-road, Dover, George Hammond, M.R.C.S., L.S.A., formerly of Irthlingborough, Northamptonshire, aged 76.

HENNING.—On March 16th, at Tunbridge Wells, Richard Skinner Henning, M.R.C.S., in his 84th year.

KEIR.—On March 24th, at Glen Lynn, West Norwood, Adam Keir, M.D., late of H.E.I.C.S., Bengal Army, aged 88 years, eight months.

MACCLINTON.—On March 22nd, at Lansdowne-road, W., William Forrest MacClinton, B.A., M.B., Deputy-Inspector-General, R.N., in his 74th year.

PARSONS.—On March 17th, at Paddock House, Wimbledon, Thomas Edward Parsons, Surgeon, aged 52.

VINE.—On March 20th, at Henrietta-street, Covent-garden, George John Vine, M.D., F.R.C.S., aged 79.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 25th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 19	29·79	N.W.	52	48	98	59	45	...	Fine
,, 20	30·10	N.W.	49	45	78	59	45	...	Cloudy
,, 21	30·11	W.	54	52	79	61	49	0·11	Cloudy
,, 22	30·04	S.W.	53	52	80	59	51	...	Raining
,, 23	29·96	WNW	50	48	112	64	47	...	Cloudy
,, 24	29 77	W.	54	50	95	61	49	...	Cloudy
,, 25	30·01	S.W.	51	48	101	60	47	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (31st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.). Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (1st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (3rd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

THURSDAY (1st).—HARVEIAN SOCIETY.—Mr. G. B. Browne: Is it ever impossible to pass a Catheter through the Urethra into the Bladder?

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (29th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Dr. J. Priestley: Ventilation, Warming, and Lighting.

TUESDAY (30th).—ROYAL COLLEGE OF PHYSICIANS—5 P.M. Dr. A. P. Luff: The Chemistry and Pathology of Gout. (Goulstonian Lecture.)

LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Puerperal, Lactational, and Climacteric Insanities.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Erythema.

ROYAL INSTITUTION.—3 P.M. Prof. A. D. Waller: Animal Electricity.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4 P.M. Dr. D. Grant: Cases of Affections of the Throat and Ear associated with Diseases of the Nervous System.

WEDNESDAY (31st).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—2 P.M. Mr. A. Taylor (conducted by): Inspection and Demonstration in the Parish of St. George's, Hanover-square (number limited).

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Infectious Diseases.

THURSDAY (1st).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. H. C. Bastian: Some Problems in Connexion with Aphasia and other Speech Defects. (Lumleian Lecture.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. J. W. Peggs: Principles of Calculating Areas, Cubic Space, &c.; Interpretation of Plans and Sections to Scale.

ROYAL INSTITUTION.—3 P.M. Prof. W. B. Dawkins: The Relation of Geology to History.

FRIDAY (2nd).—ROYAL INSTITUTION.—9 P.M. Mr. C. T. Heycock: Metallic Alloys and the Theory of Solution.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Erysipelas and Suppuration.

SATURDAY (3rd).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Inspection and Demonstration at Aylesbury Dairy Co.'s Premises, Bayswater (number limited).

ROYAL INSTITUTION.—3 P.M. Right Hon. Lord Rayleigh: Electricity and Electrical Vibrations.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

THE YARROW CONVALESCENT HOME FOR CHILDREN.

OUR readers will remember the munificence with which Mr. Yarrow founded and endowed a delightful convalescent home at Broadstairs for children in 1895. The report for seventeen months of work done is before us and is highly satisfactory. The home is founded for the benefit of children of respectable parents with limited means and confronted with exceptional circumstances of sickness, implying the need of change and sea air for convalescence. Such circumstances often greatly embarrass those who under all ordinary circumstances live quite independently. A table is given of the position or occupation of the parents. The predominant numbers are those of clerks in banking, insurance, and commercial houses, but nearly all classes are included in Mr. Yarrow's beneficence. He does the duty of entertaining convalescents in a complete sort of way, heading his report with an unwonted line in such documents, "No subscriptions are required for this institution, which is fully endowed." All he asks from the profession and the public is to send him fit cases of the class whose benefit he contemplates. We congratulate Mr. Yarrow on having relieved in seventeen months 661 children, 114 of whom were children of widows, or orphans. His action, like that of Sir Blundell Maple, shows that when "wealth accumulates" men do not necessarily "decay."

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"A SUCCESSFUL SOCIETY!!"

MRS. THEODORE MONRO, the hon. secretary of the London Anti-Vivisection Society, writes to us under date March 18th, and asks us to inform her how her society is to proceed so as to obtain a conviction of "vivisectors" for "cutting up animals alive" without anæsthetics, and maintaining that it is legal to cut up animals alive under these circumstances. She also says that in the return printed on August 6th last some 3000 experiments were down as having been made without anæsthetics. No doubt there were, but the animals were not "cut up alive" any more than babies who are vaccinated are cut up alive. If Mrs. Monro will look at the *Times* of March 14th and study the Home Secretary's reply to Mr. MacNeill on that occasion and on March 23rd also, she will learn the nature of the experiments carried out without anæsthetics. We might further remark that anti-vivisection societies might do some good to themselves and gain some respect if they would only take the trouble to verify their references and not make mis-statements, to call them by no stronger name.

A Locum-tenent puts a hard case to us. We think on the whole that he is entitled to be refunded the money he has spent, but he will remember that it is usually as much annoyance to a principal as to a locum-tenent to be disappointed in such engagements. Therefore, before claiming anything he must make it clear that the conveyance in question was one of which a man of his build, weight, and age ought not to have been asked to make use.

Viator should write to the sanitary authority and complain. By so doing he will be putting the neighbourhood under an obligation.

"ANTISEPTIC MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—The best antiseptic I know of for vaginal and uterine irrigation is a solution of silico-fluoride of potassium. This can be used in stronger solution than was advised by the introducers of salufer, and I have never seen any bad effects from the use of the saturated solution. But I reserve the strong solution for the treatment of cases already infected, as on a raw surface it causes smarting. I am of opinion that corrosive sublimate often does harm by lowering tissue vitality just when it is most required. I have had better results with salufer in the treatment of bad compound fractures, foul and extensive wounds, and the like, than I have observed under any other treatment. It is the only chance in puerperal fever of a severe type, and should be persevered with, but in such cases the practitioner who is content with one irrigation in the twenty-four hours gives neither the patient nor the drug a chance. In conclusion I can honestly say that I do not remember a case in which I have found reason to question the efficacy of the silico-fluoride. I am, Sirs, yours, &c.,

Coventry, March 14th, 1897. F. FAULDER WHITE, F.R.C.S. Eng.

To the Editors of THE LANCET.

SIRS,—I should like to add a word or two to the interesting discussion which is now taking place in connexion with the above subject. Corrosive sublimate, biniodide of mercury, and carbolic acid, especially for external antiseptis or asepsis—i.e., of the hands, instruments, &c.—are, of course, most excellent, but I think for vaginal and intra-uterine douching permanganate of potash should have the preference. Given a really severe case of puerperal fever or of sapræmia, call it which you will, frequent douching—i.e., every three or four hours—with a hot solution of permanganate of potash is most important. Apart from the danger from absorption of carbolic or mercury in using, say, a 1 in 2000 solution of the biniodide so frequently, I have certainly noticed in two or three cases, notably in one in which the temperature rose to 106° F. during a relapse, that the temperature was more favourably modified by a fairly strong permanganate intra-vaginal douche than by the biniodide. Very generally it is necessary to use an intra-uterine douche twice daily, and a vaginal douche in between times every three or four hours. This douching should be performed by the doctor himself; it should not be left to a nurse, however skilful she may be, until the patient is practically out of danger. As an adjunct to the above quinine should almost always be given—three grains with ten minims of dilute nitric acid in half an ounce of chloroform water every three hours is a good formula. Five to ten grains of quinine in a cachet may be also given if necessary. Too large an exhibition of quinine given early in the case is liable to produce vomiting and diarrhœa—a most serious contingency. By close personal attention early in the case its duration may be very considerably limited. It has been my habit at the conclusion of a specially difficult case to advise a permanganate douche before leaving; many cases, however, never require douching at all. I am, Sirs, yours obediently,

Chester, March 17th, 1897. HENRY W. KING, M.D. Edin.

A Colleague.—We do not know the terms of our correspondent's agreement. If his employer promised to treat him as a partner, waiving the usual introduction of capital in his favour, then we can understand that he ought to have a voice in the conduct of the practice. But if "A Colleague" was engaged to assist in the work under his principal's direction, it seems to us that it is his duty to perform the share allotted to him, whatever that share may be.

A NEW UNIVERSAL PROVIDER.

THE Universal Information Office is a sanguine body. According to its prospectus, "it will be perceived that information on any subject under the sun can be obtained through this office." We fancy that we could, all the same, pose this office, for to say nothing of the stock puzzle, "What was the name of Moses' mother-in-law?" there are many other insoluble problems. We notice that the office undertakes to give medical information, and that inquiries from ladies may be addressed to "Lady Medico, care of Universal Information Office, when they will be attended to by a fully qualified lady doctor." Diagnosis and treatment by correspondence are, to say the least of it, risky when the information is supplied only by the patient.

Steps is strongly advised not to advertise in the local papers. Notice of change of address should for obvious reasons be sent only to a practitioner's own patients.

"AN INSOLENT ADVERTISEMENT."

To the Editors of THE LANCET.

SIRS,—My attention has been called to a paragraph in THE LANCET of March 13th concerning myself and my manner of conducting my business. Your mode of expression would make it patent to any unprejudiced person that the article was actuated by other motives than those which are supposed to influence a responsible paper. I am at liberty, I assume, to pursue my calling in my own manner, provided I use [only legitimate and honourable means; and far from my circular having given offence to the medical profession, allow me to assure you that I have been most agreeably surprised at the results. I presume that you will have the justice to insert this protest against such an abominable misuse of your columns as the article referred to. I am glad to find that instead of adopting the advice tendered to them in the paragraph referred to—i.e., to write me a rude letter telling me to mind my own business—many members of the faculty still continue to send me their patients for me to correct their errors of refraction and accommodation and supply suitable lenses, and some of them even go so far in supporting what you are pleased to refer to as my insolence and impertinence by coming to me for spectacles (made up to my own prescription after examining their eyes) for their own use. The use of the words "*insolent*" and "*impertinence*" *in your paragraph is calculated* to hold me up to contempt and ridicule, and I regard them as distinctly libellous; and as my circular in no way justifies such language being used I must ask you to withdraw that portion of your criticism. I in no way do, nor could, object to a fair comment, but I contend you have far over-stepped the fair line. I await the issue of your next number and the manner in which you deal with this matter. Unless you dispose of it to my satisfaction I reserve to myself every right I may possess. Yours, &c.,

FRANK HOWARD.

83, Great Portland-st., London, W., March 22nd, 1897.

*** We subjoin Mr. Frank Howard's circular.—ED. L.

SIGHT SCIENTIFICALLY TESTED FREE OF CHARGE.

Patronised by the Central London Ophthalmic Hospital; the Miller Hospital, Greenwich; the St. Saviour's Union, Walworth; the Uxbridge Union; the St. Marylebone Infirmary; the Metropolitan Hospital Sunday Fund; and the Leading Members of the Medical Profession.

FRANK HOWARD,
LATE MANAGER TO E. S. PICKARD AND CO.,
Consulting Ophthalmic Optician.

83, Great Portland-street, London, W., Jan. 1st, 1897.

DEAR SIR,—I have much pleasure in informing you that I have recently added very considerably to my plant and staff, and in future shall be able to execute all orders for spectacles, or any optical instruments, with greater promptitude than, and the same accuracy as, heretofore.

I have a consulting room and dark room fitted with electric light and all the latest improvements, together with all necessary lenses, frames, types, and instruments, which I shall be happy to place at your disposal any time you wish to examine a patient here; or if you kindly send to me any patient whose errors of refraction or accommodation require correction I should be glad to diagnose the case, and submit my prescription to you for verification and approval free of charge. Should you entertain my offer I would like to forward you for perusal copies of a few of the many testimonials and recommendations I hold from medical men (mainly in practice in the West-end of London), who are good enough to entrust me with their eye work.

I need hardly say the testimonials, &c., referred to are not for general publication, but were given to me upon the distinct understanding that they were only shown to members of the medical profession.

In all cases of patients introduced to me by the faculty I make the examinations and take all measurements personally.

Hoping to be favoured with a share of your patronage.

I remain,
Faithfully yours,
FRANK HOWARD.

W. H.—The qualifications would come up to the Board's requirements.

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THE PRUDENTIAL ASSURANCE COMPANY, LIMITED.

THE vast extent of the business transacted by the Prudential Assurance Company proves that the duty of providing for the future is being more and more realised by the public. The report and accounts for 1896 have now been circulated, and show a very considerable increase in the operations of the company over those for 1895. The number of policies issued in the ordinary branch during the year was 64,241, assuring the sum of £6,507,820 and producing a new annual premium income of £354,526; the premiums received during the year were £2,543,262, being an increase of £239,249 over the year 1895; the claims of the year amounted to £588,874; the number of deaths was 4598, and 365 endowment assurances matured; the number of policies in force at the end of the year was 455 795. In the industrial branch the premiums received during the year were £4,578,793, being an increase of £226,168; the claims of the year amounted to £1,706,481; the number of deaths was 183,959, and 1630 endowment assurances matured. The total number of policies in force at the end of the year was 12,130,542; their average duration is almost exactly eight years The assets of the company in both branches are £27,059,111, being an increase of £3,143,221 over those of 1895. Of this sum £5 950,000 are invested in loans on the security of county council, municipal, and other rates. The company's endowment assurances and other forms of making provision for old age are largely taken advantage of by the public, the number of policies securing benefits at the age of sixty years and upwards being over 550,000, and securing capital sums exceeding £23,000,000. The jubilee of the company will be reached in the year 1898, and the directors recommend £50,000 to be set aside out of the surplus shown for 1896 to be applied for the benefit of the in-door and out-door staffs. The affluent circumstances of the company are no doubt in a great measure due to the skill and care of the medical referees, whose services, all things considered, seem to deserve some pecuniary recognition out of the surplus mentioned.

M.B.—It would have been more in accordance with professional etiquette if B. had ascertained A.'s position before accepting the invitation of the club.

THE EXTRACTION OF WANDERING NEEDLES.

To the Editors of THE LANCET.

SIRS,—*A propos* of the extraction of needles from the human body under anæsthesia and with a cutting operation—the terrors of a nervous subject—will you permit me to mention a simpler and more expeditious method, applicable wherever the tissues are lax and yielding, and when the needle is obviously a "traveller," and therefore *must* have a point. Provide two firm corks of moderate size and a pair of small pointed scissors, if forceps are not at hand. Apply the corks to each extremity of the foreign body, make a quick, decided thrust of approximation in the direction of its length, and the needle will be found to have perforated the skin and embedded its point more or less deeply within one of them. The grasp of the scissors upon its shaft will ordinarily suffice for an immediate extraction.

My only apprehension would be that in the present attitude of the public towards the profession the patient might not deem a fee necessary for so apparently trivial a service.

I am, Sirs, yours very truly,

Munich, March 16th, 1897. H. WEBSTER-JONES.

Mr. Stephen Coleridge.—If our correspondent knows that being licensed to do some things certain investigators have done other things, he is clearly remiss in not bringing them to account. We do not believe his statements. His letter practically reasserts what we have already contradicted, and our readers are in a position to judge between our correspondent's accuracy and our own.

Mr. W. A. Moynan.—We have made enquiries.

AN ACCOUCHEMENT SET.

WE have received from Messrs. S. Maw, Son, and Thompson, Aldersgate-street, E.C., a specimen of "Maw's Accouchement Set," which that firm have endeavoured to make as complete as possible from the point of view of utility, while supplying every article of the best quality. The price of the set is 25*s*. The articles include waterproof-sheets, towels, binders, napkins, and other things necessary for accouchement under aseptic conditions, together with tabloids of perchloride of mercury, carbolic soap, and carbolised petroleum jelly, &c. With regard to the latter, we are of opinion that glycerine of perchloride (1 in 1000) is best for the fingers. But why is it necessary to supply such a dangerous poison as perchloride of mercury in such a set? The antiseptics to be used should be matters for the practitioner's consideration.

A. M. B. asks if any of our readers can inform him where he can obtain the smallest and lightest one-horse landau or opening brougham, fitted with break for a hilly district in Wales, to hold three inside. The price must be moderate and, if possible, on hire purchase system.

THE DETERMINATION OF THE SEXES.

WE have received a copy of a circular disseminated by a Mr. John Campbell, of the neighbourhood of Penybont, in which he offers to reveal the secret of procuring male or female offspring at will in return for the fee of a guinea. Mr. Campbell is trying to obtain money under false pretences. Possibly he believes in his method, and possibly some lucky guessing has confirmed him in the belief, but the fact remains that he cannot give any reliable assistance to the persons who pay his fee.

Torquay.—Both methods of treatment have their uses in legitimate therapeutics, and as such belong to the practice of the profession at large. It must be left to our correspondent's medical attendant to decide which method, if either, is required in the case in which he is interested, and also to suggest what special medical advice, if any, should be sought.

"MATERNAL IMPRESSION ON THE FŒTUS."

To the Editors of THE LANCET.

SIRS,—With your permission I also would like to record a curious instance of maternal impression on the fœtus which occurred within my own knowledge. The daughter of a medical practitioner whose "studie was (not) but litel on the Bible," and she herself well posted up in Genesis, chap. xxx., ver. 37 *et seq.*, was alone in her house, sitting in a back room, intently preparing her expected baby's wardrobe (expectation six months hence). Her uncle called with the present of a hare, and, after knocking, ringing, and failing to attract attention, walked in, opened the room door where she was sitting, threw in the hare, but "spake not a word." From that moment of fright she "vowed and declared" her belief that some "untoward event" would happen to her baby; and sure enough the unfortunate baby (a girl) was born with the so-called hare-lip. I am, Sirs, yours faithfully,

March 19th, 1897. M.R.C.S., L.S.A.

Inquirer.—We do not know what proof our correspondent has that the gentleman in question is not sincere in his devotional exercises. But we think it a great pity that handbills should be disseminated announcing the appearance of the medical preacher and singer to the public. This proceeding certainly savours to us of improper advertisement, particularly as the medical man is described as Dr. —— and does not appear to possess the degree of a university.

"THE PANCREAS AS AN ARTICLE OF DIET."

To the Editors of THE LANCET.

SIRS,—In reference to the letter of Dr. T. Wilson Parry on this subject in THE LANCET of Dec. 19th, 1896, I may say his experience coincides with mine. Desiring to give a patient, the subject of exophthalmic goitre, thymus gland, I went to a slaughter-house in order to assure myself that I would get exactly what I ordered. When I mentioned sweetbread the butcher said there were three in the calf—the throat, heart, and stomach sweetbread—being the thyroid, thymus, and pancreas respectively, and that the heart sweetbread was very small in the bullock. I am informed, too, that the testicles make a particularly tasty dish and are served under the fanciful name of "mountain oysters."

I am, Sirs, yours truly,

Philadelphia, Feb. 25th, 1897. W. E. ROBERTSON.

Dr L. Kiad.—A table giving the percentage composition of various beef products appeared in an article in THE LANCET of March 7th, 1896.

R. A.—There is no such place.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Birmingham Post, Western Morning News, Bradford Argus, Scotsman, Newcastle Journal, Bolton Chronicle, Blackburn Standard, Times of India, Pioneer Mail, Leyton Independent, Walthamstow Guardian, Manchester Guardian, Huddersfield Examiner, Liverpool Courier, Daily Mail, Builder, Preston Herald, Yorkshire Post, Glasgow Herald, Montreal Star, Brisbane Courier, Architect, Sussex Daily News, Leicester Post, Hereford Times, Leeds Mercury, Bridgwater Independent, Liverpool Daily Post, Oxford Journal, Newbury Weekly News, Monmouth Beacon, Wolverhampton Chronicle, Ceylon Observer, East Essex Advertiser, Woodford Times, The Sun, Cheltenham Mercury, Bath Journal, Llandudno Directory, Bristol Mercury, Southampton Observer, Salisbury Journal, Beverley Guardian, Royal Cornwall Gazette, Dover Express, Doncaster Chronicle, Lincolnshire Echo, Dundee Advertiser, Sanitary Record, Local Government Chronicle, Reading Mercury, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Lancaster Observer, Cornish and Devon Post, Mining Journal, Surrey Advertiser, Stratford Express, Local Government Chronicle, Surrey Comet, Galignani's Messenger, Glasgow Evening News, Le XIXe Siècle (Paris), West Middlesex Herald, Staffordshire Weekly Post, Midland Times and Rugby Gazette, Ely Guardian, &c., &c.*

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The Lumleian Lectures

ON

SOME PROBLEMS IN CONNEXION WITH APHASIA AND OTHER SPEECH DEFECTS.

Delivered before the Royal College of Physicians of London,

BY H. CHARLTON BASTIAN, M.A., M.D. LOND., F.R.S.,

CENSOR OF THE COLLEGE; PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

LECTURE I.[1]

Delivered on April 1st, 1897.

MR. PRESIDENT AND GENTLEMEN,—The modern interest in, and development of knowledge concerning, aphasia and other speech defects dates from the publication of certain memoirs by Broca, some six and thirty years since, when he attempted to localise what he termed the "faculty of articulate language" in a limited convolutional region of the left cerebral hemisphere. The publication of his cases and conclusions formed the starting point for a whole new series of investigations, whose result has been a remarkable development in our knowledge of the localisation of functions in the cerebral cortex, while the discussions to which these investigations have given rise have materially helped to lead to a better understanding of the working of the complex cerebral mechanisms needed for the carrying on of speech and thought. We are thus at the present day capable of dealing with the subject of speech defects from a much broader basis of discovered facts, as well as with a greater critical insight than was at all possible at, or even long after, the time when Broca wrote his famous memoir. Very much, however, remains to be discovered before the many differences of opinion that exist concerning obscure and complicated points in connexion with the nature and exact mode of production of speech defects are likely to be set at rest.

The special tendency of aphasia and other forms of speech defect to be associated with disease of the left rather than of the right hemisphere is now a well recognised fact. This holds good for right-handed but not as a rule for left-handed persons. In these latter aphasic defects are produced by disease in similar parts of the right cerebral hemisphere. It is believed, therefore, that motor incitations for acts of speech are accustomed to pass off in the main from one cerebral hemisphere, and that whether this shall be from the left or from the right hemisphere becomes determined principally by the increased dominance, or slightly earlier development, of one of them, brought about more or less remotely in association with right- or with left-handedness.

Although we shall here deal with what are known as "acquired defects of speech"—that is, such defects as may have supervened after the power of speaking has been attained—still, it seems desirable that a very brief reference should be made as a preliminary to defects of speech resulting either from congenital disease or from diseases occurring at some date prior to the manifestation of articulate speech. The most important of these congenital defects is deafness, which of itself entails mutism, the individuals thus afflicted being known as "deaf mutes." It must be borne in mind, however, that this mutism or dumbness may also be brought about by absolute deafness occurring from any cause after birth, but before the child has begun to talk, or even after it has learned to talk, up to the fifth or the seventh year. In cases of the latter type the child soon (when left without the customary guidance in articulatory acts derived through the sense of hearing) forgets how to speak and becomes dumb. In addition to this class of cases there are also those of congenital idiotcy without deafness, in which the child never learns to talk. There are also other cases, allied to the last, in which, owing to some intracranial lesion occurring either before, during, or soon after birth, the brain becomes so damaged as to arrest the development of the child's mental as well as of its motor powers. In some of the less severe examples of this type (now commonly spoken of as "birth palsies") that have come under my observation speech has been merely deferred—perhaps till the fourth, fifth, or even the sixth year—and then after a time has become established in a natural manner. In other cases the occurrence of epileptic fits seems to be the retarding cause.

One of the most remarkable cases known to me of deferred speech in connexion with the occurrence of epileptic attacks happened in one of my own patients. In the year 1877 I was consulted concerning the health of a boy who was then twelve years old, and had been subject to epileptic fits at intervals. The first of these fits occurred in infancy, when the patient was about nine months old. Towards the end of the second year the fits seemed to have ceased, the hearing was (as it had been) good, and the child appeared to be of average intelligence—to be well, in fact, in all respects except that he did not talk. When nearly five years old the little fellow still had not spoken a single word, and about this time two eminent physicians were consulted in regard to his "dumbness." But before the expiration of another twelve months, as both his mother and father assured me, on the occasion of an accident happening to one of his favourite toys, he suddenly exclaimed, "What a pity!" though he had never previously spoken a single word. The same words could not be repeated, nor were others spoken, notwithstanding all entreaties, for a period of two weeks. Thereafter the boy progressed rapidly, and speedily became most talkative. When seen by me he spoke in an ordinary manner without the least sign of impediment or defect.

Such a sudden beginning to speak for the first time without previous prolonged trials and failures is a matter vastly transcending in importance the sudden resumption of speech when it has been for a time suspended in consequence of brain disease. No explanation of such a fact seems possible except on the supposition that speech has now become a truly automatic act for human beings, and that if children do not speak at birth this is in the main due to the circumstance that their nervous systems are still too immature. No such untaught acts of speech would, however, be possible unless development had been taking place in a normal manner and unless the auditory sense and intelligence had been unaffected. The occurrence of some emotion may in such a case afford a stronger stimulus, under the influence of which the duly organised speech mechanisms become called into action.

Some curious cases of congenital speech defect were described by Hadden to which the term "idioglossia" has been applied. These children have to a certain extent a language of their own, so that when asked to repeat phrases they make use of definite sounds of their own instead of those proper to the words that should be employed. The sounds which they substitute are said to be always the same for the same words. Some of these patients seem to have been capable of writing correctly from dictation, and they have also shown a fair amount of general intelligence.

THE VARIOUS KINDS OF WORD MEMORY.

According to Sir William Hamilton, "Memory strictly so denominated is the power of retaining knowledge in the mind, but out of consciousness. I say, retaining knowledge in the mind but out of consciousness, for to bring the *retentum* out of memory into consciousness is the function of a totally different faculty (recollection). . . . It is not enough that we possess the faculty of acquiring knowledge and of retaining it in the mind but out of consciousness; we must further be endowed with a power of recalling it out of consciousness into consciousness—in short, a reproductive power (recollection). This reproductive power is governed by the laws which govern the succession of our thoughts—the laws, as they are called, of mental association." This definition of memory implies the notion of an organic change taking place in definite nerve elements on the occurrence of each sensory or intellectual process—that is, the notion of a permanent nervous modification of some kind, plus the possibility of its renewal in more complete form from time to time. We may therefore suppose that on fitting occasions, by the intervention of associational activity, there will be revival in more complete form of something like the original molecular

[1] Lectures II. and III. will be delivered on April 6th and 8th respectively.

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activity in the nervous elements concerned with the primary perceptional or intellectual process of this or that kind. It is not essential that the memorial revival of the sensory impression or of the intellectual process should after multitudinous repetitions be associated with any distinct conscious phasis. What Sir William Hamilton termed the *retentum* may, indeed, be revived as a mere unconscious nerve action—a link in a perceptive process or in a chain of thought represented merely (as John Stuart Mill put it) by "certain organic states of the nerves." This latter consideration is especially worthy of note from the point of view of the importance of revived kinæsthetic impressions for the guidance of movements, seeing that their revival may be unattended by any distinct conscious phasis; and much the same thing may often be said concerning that memorial recall of words in the auditory centre which immediately precedes speech.

From what has already been said it is evident that "loss of recollection" by no means implies nor is it to be taken as synonymous with "loss of memory." For instance, a patient may be unable to recollect words—that is, spontaneously revive them—for ordinary speech when his memory for such words, nevertheless, exists unimpaired, as may be shown by the fact that the patient is able at once to repeat the words in question when he hears them pronounced or sees them written. His defect, therefore, may consist in a mere lowered activity of the auditory word-centre, in which words are primarily revived during thought. "Loss of recollection" may, in fact, depend upon one or other of two causes: either (*a*) upon some diminished functional activity—that is, diminished readiness to be roused—in the central nerve mechanisms in which the *retentum* is, so to speak, stored or rendered possible of revival; or else (*b*) upon some defect in this or that set of commissural fibres (associational channels). "Loss of memory," however, in the strict sense of the term implies disease of, or serious damage to, the central nerve units in which the particular *retentum* is stored up or registered.

Although it is important from a scientific point of view to make such a distinction as has been above pointed out, it will be found both convenient and practical to let the term "amnesia" stand for loss of recollection as well as loss of memory of this or that kind.

From what has been said it follows, that all cases of amnesia (in the broad sense of the term) ought, from an anatomical or localising point of view, to be divided into two generic groups: (*a*) cases in which there is centric defect (either structural or of marked functional type), with which there will often be loss of memory of words as well as loss of recollection; and (*b*) cases in which there is merely commissural defect (mostly structural), with which there may be loss of recollection of words, but no necessary loss of word-memory. It will be one of my objects in the present lectures to dwell upon the fact (which I pointed out some ten years ago) that it is often in the case of speech defects extremely difficult, if not impossible, from clinical evidence alone to decide whether the underlying lesion or default leading to a particular kind of amnesia be centric or commissural in seat. And yet from the point of view of the localisation of the lesion such a decision may be a matter of much importance, seeing that if the lesion were centric we should look for it in one part of the brain, while if it were commissural it might be found in a region comparatively remote therefrom.

In the case of words there are three distinct kinds or physiological types of memory to be considered—one of them existing in two forms, so as to make four varieties in all. These varieties of verbal memory are as follows:—1. Auditory memory: the memory of the sounds of words—that is, of the auditory impressions representative of different words. 2. Visual memory: the memory of the visual appearances (printed or written) of words—that is, of the visual impressions corresponding with different words. 3. Kinæsthetic memory.[2]—(*a*) the memory of the different groups of sensory impressions resulting from the mere movements of the vocal organs during the utterance of words (impressions from muscles, mucous membranes, and skin)—that is, of the kinæsthetic impressions corresponding with the articulation of different words, which for the sake of brevity I have proposed to speak of as "glosso-kinæsthetic" impressions; and (*b*) the memory of the different groups of sensory impressions emanating from muscles, joints, and skin, during the act of writing individual letters and words—that is of the kinæsthetic impressions corresponding with the writing of different letters and words, which I have for similar reasons proposed to speak of as "cheiro-kinæsthetic" impressions.[3]

The organic seat of each of these four different kinds of word-memory is in relation with its own set of afferent fibres; and the several centres must also be closely connected with one another by commissural or associational fibres, so that the memory of a word or the recollection of a word in one or other of these modes doubtless involves some amount of simultaneously revived activity in one or two of the other word-centres.

The relative intensity or importance (in the process of recollection of words for ordinary speech) of the memorial revival in each of these centres is probably subject to more or less marked variations in different individuals. In the majority of persons, as I pointed out in 1869, the revival of words in the auditory centre is the most potential process, and that which occurs first in order of time. This seems to be now very generally admitted.

THE LOCALISATION OF THE DIFFERENT WORD-CENTRES.

Although I am not a believer in the complete topographical distinctness of the several sensory centres in the cerebral hemisphere, I consider it clear that there must be certain sets of structurally related cell and fibre mechanisms in the cortex, whose activity is associated with one or with another of the several kinds of sensory endowment. Such diffuse but functionally unified nervous networks may differ altogether from the common conception of a neatly defined "centre," and yet for the sake of brevity it is convenient to retain this word and refer to such networks as so many "centres."

Looking to the extremely important part that words, either spoken or written, play in our intellectual life and to the manner in which they are interwoven with all our thought-processes, it becomes highly probable that most important sections of the auditory and the visual sensory centres are devoted to the reception, and consequently to the revival in thought, of impressions of words: and for convenience of reference it is permissible to speak of these portions as auditory and visual "word-centres" respectively. Similarly, there must be what I have termed kinæsthetic word-centres of two kinds (the one in relation with speech-movements, and the other with writing movements) holding a like all-important relation to the expression of our thought by speech and writing. It is possible that the particular parts of the general auditory and visual centres which are in relation with word-impressions may be more or less distinctly defined, like the analogous parts of the general kinæsthetic centre that are in relation with speech or with writing movements. Certain it is that there are some varieties of amnesia in which the part of the visual centre in relation with words seems to be specially at fault (as in "word-blindness"), just as there are other cases in which the part of the auditory centre in relation with words is either wholly or partially inactive (as where we have to do with different degrees of "word-deafness")—in each case without defect in other parts of the general visual or auditory centres, as evidenced by the fact that the persons so affected can still quite well see and recognise ordinary objects, or hear and recognise the nature of ordinary sounds.

In regard to the visual centre as a whole, it seems now to be established that it is more or less diffused through the convolutions on the inner aspect of the occipital lobe and probably even more widely throughout this lobe. The particular part of the visual centre that is most concerned with the appreciation and memorial recall of words—or, in other words, the destruction of which most certainly gives rise to word-blindness—is now fairly well settled. There is much evidence to show that this region corresponds with the

[2] These forms of word-memory were first definitely stated by me to be purely sensory in papers on the Physiology of Thinking (Fortnightly Review, 1869) and on the Muscular Sense (Brit. Med. Jour., April, 1869); and the name "kinæsthetic" was subsequently (The Brain as an Organ of Mind, 1880, p. 543) applied to the complex groups of impressions resulting from movements of this or that part of the body.

[3] Other French writers, as well as Ballet, attribute to Charcot the doctrine that "le mot n'est pas une unité, mais un complexus" (Le Langage Intérieur, 1886, p. 13) because he also dwelt upon these four different kinds of word-memory. Charcot's lectures on Aphasia were delivered in 1883, but M. Ballet will find a full description of these four different kinds of word-memory in my book The Brain as an Organ of Mind, 1880, p. 696, or in the French translation (Le Cerveau et la Pensée, tome ii., p. 222), published in 1882.

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angular gyrus either alone or in association with part of the supra-marginal lobule—and therefore that it is situated just beyond the confines of the occipital lobe, and in the region originally assigned by Ferrier, upon the basis of his experiments with monkeys, as the centre for vision as a whole.

In regard to the localisation of the general auditory centre considerable doubt now exists, since the researches of Schäfer and Sanger-Brown do not support Ferrier's allotment of this endowment to the upper temporal convolution. Curiously enough, however, it again happens that the localisation of the part of the general auditory centre most concerned with the appreciation of words (as based upon clinico-pathological evidence in man) must be regarded as being in the posterior half or two-thirds of the upper temporal convolution. The above-mentioned results of Schäfer and Sanger-Brown as to the localisation in monkeys of the general sense of hearing were of a negative character, and cannot be said to afford any definite evidence against this presumption as to the site of the auditory word-centre in man.

The situation of one of the two kinæsthetic word-centres can be rather more certainly localised. Having elsewhere stated very fully my reasons for believing that the so-called "motor centres" of Ferrier and others are really sensory centres of kinæsthetic type by means of which movements are guided,[4] I shall not now attempt to set forth the evidence in favour of this opinion, but shall merely state my belief that Broca's region—namely, the posterior part or foot of the third frontal and the inferior part of the ascending frontal convolutions—is in reality the part of the brain to which I have been alluding as the "glosso-kinæsthetic" centre. The situation of the "cheiro-kinæsthetic" centre cannot be localised with nearly as much confidence. The tendency for some years has been to follow Exner, who believes it to be situated in the posterior part of the second frontal gyrus, though, as we shall see later, the evidence in favour of this localisation is at present extremely scanty. All that can be said on this point, therefore, is that we know approximately where to look for the cheiro-kinæsthetic centre.

For the purpose of our discussion, then, it may for the present be assumed that the two kinæsthetic word-centres are situated as above stated: that the auditory word-centre is situated in the posterior half or two-thirds of the upper temporal convolution; and the visual word-centre in the angular and part of the supra-marginal convolutions. It must also be assumed, upon grounds subsequently to be set forth, that these last-named word-centres are connected together by a double set of commissural fibres. We must likewise suppose that two other important sets of commissural fibres exist between the different word-centres—namely, one set through which the auditory word-centre acts upon the glosso-kinæsthetic centre for the production of speech movements, and another by means of which the visual word-centre acts upon

FIG. 1.

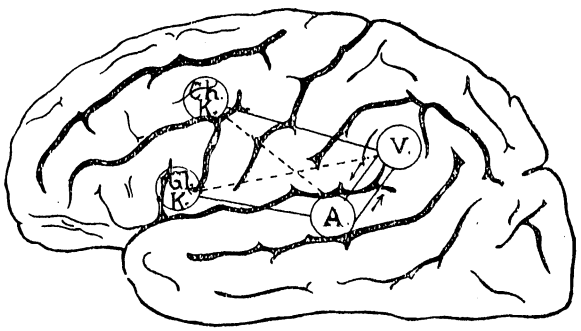


Diagram showing the approximate sites of the four word-centres and their commissures.

the cheiro-kinæsthetic centre for the production of writing movements.

In the study of speech defects it is therefore necessary to consider the effects of lesions in the following situations; (*a*) in the different kinds of word-centres; (*b*) in the different commissures by means of which these centres are connected with one another; (*c*) in the internuncial fibres connecting the two kinæsthetic word-centres with their related motor-centres, in the bulb and in the cervical region of the spinal cord; and (*d*) in these motor-centres themselves which are concerned with the actual production of speech and writing. But before dealing with any of these problems in detail a few other aspects of the questions relating to word-memory, as well as the modes of activity of the brain in perceptive and speech processes require to be considered.

THE PRIMARY SITE OF REVIVAL OF WORDS IN SILENT THOUGHT.

It seems clear that words are the symbols with which our thoughts are inextricably interwoven, and that the revived feelings, ideas, or "images" of words may enter into thought processes by a more or less simultaneous renewal of activity in different regions of the cerebral cortex. There may be a revival of sounds of words as we hear them in ordinary speech; there may be a revival of visual impressions of words as we have seen them in written or printed characters; and, lastly, there may be a revival of the feelings of muscular contractions concerned in the pronunciation of words. Of these modes of "ideal" recall of words the two former are distinct and easily recoverable, while the latter is vague and difficult of conscious realisation. Let anyone contrast his idea of the sound of the word "London," or his idea of the appearance of the word when printed or written, with his idea of the muscular and other feelings associated with the articulation of the same word, and the inferiority in definiteness and recoverability of the latter will at once become obvious.

It is, however, a matter of extreme importance for the due understanding of the different kinds of speech defect and for the success of our endeavours to refer them to defective activity in this or that physiological region of the hemispheres that we should definitely know in what sensory region of the cortex words are principally recalled to mind during ordinary thought-processes. Two distinct views radically opposed to one another have been advocated on this subject.

There is the view (1) that words are revived as "motor processes"—that is, as faint excitations of the processes occurring in motor centres during the articulation of words; and (2) there is the view that words are revived in ordinary thought in the main as auditory ideas or images. The former view has for a long period been promulgated by Hughlings Jackson, and has more recently received the strong support of Stricker, both of them regarding Broca's region as a motor rather than as a sensory centre. The latter view is that which the writer has now for many years advocated. The fundamental nature of my opposition to the former view may be gathered from the fact that I have for many years expressed the opinion that motor centres, wherever they may be situated, are parts whose activity appears to be wholly free from subjective concomitants. No "ideal" reproductions seem ever to take place in such centres; they are roused into activity by outgoing currents, and, so far as we have any evidence, the induction in them of molecular movements which immediately afterwards issue through cranial and spinal motor nerves to muscles are, like those which they engender, simply physical phenomena.[5] It is true that the altered condition of the muscles and of contiguous parts induced by these outgoing stimuli together engender a body of ingoing impressions, the terminus for which is the kinæsthetic centre. This latter is therefore a true sensory centre, and in it images of movements or "ideal movements" may be revived in a more or less vague manner as already indicated.

But, even if we adopt what appears to me to be the more legitimate view that articulatory movements as well as movements in general are represented in the cerebral cortex only by sensory centres, there are still, I think, good reasons for rejecting the notion that the "material of our recollection" in the use of words during silent thought is primarily revived as glosso-kinæsthetic impressions in Broca's centre. The principal reasons opposed to this view seem to me to be as follows. In the first place it must be evident from the mode in which speech is acquired by the child that during the few months in which words enter into the simple trains of thought, before he has acquired the power of articulating them for himself, they must be revived as

[4] "The Muscular Sense: its Nature and Cortical Localisation," Brain, April, 1887, and "On the Neutral Processes Underlying Attention and Volition," Brain, April, 1892.

[5] The Brain as an Organ of Mind, 1880, p. 599.

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auditory impressions. Secondly, there is, as we have seen, a much greater definiteness of impression and readiness of recall for auditory than for articulatory feelings; and so far, therefore, there is a greater fitness in the former for serving as the "material of our recollection" of words in ordinary thought processes. Thirdly, there is reason to believe that revived auditory feelings continue after the acquirement of speech by the child to have the same relation to his thought-processes as they must have had before his acquirement of the power of speaking. If this were not so it would be impossible to understand why total deafness supervening in a child in full possession of speech as late as the fifth, sixth, or even the seventh year, will certainly entail dumbness unless the child be drilled in lip-reading, that is, unless the primary incitation to acts of speech be gradually transferred from the auditory to the visual centres. Fourthly, because, as we shall subsequently find, there is much evidence against this view to be derived from the study of speech defects, and none that I am aware of telling unmistakeably in its favour.

It seems to me to be an error to attempt to settle such a question by endeavouring to ascertain which form of word-memory reveals itself most in consciousness; and I venture to think that the recent principal advocate of the view that words are primarily revived during silent thought as "motor processes," relies too much upon what is in reality an untrustworthy method—that of introspection. By concentrating his attention upon the genesis of his own speech, Professor Stricker inevitably brings its expressive side into undue prominence. As Taine says[6]: "Plus on imagine nettement et fortement une action, plus on est sur le point de la faire... quand l'image devient très lumineuse elle se change en impulsion motrice."[7]

The primary revival of words during thought takes place, I submit, in the great majority of persons by a subconscious process in the auditory centre, and tends to be immediately followed by correlated revivals in the glosso-kinæsthetic centre, and these again by incipient or complete activities in the bulbar motor centres. It may be perfectly true that kinæsthetic memories vary in intensity in different individuals, as do auditory and visual memories; and it might have been thought that Stricker and also Ballet (who adopts his view in a more discriminating manner) were to be counted as persons in whom the former kind of memory is highly developed, but for the fact that Ballet expressly states[8] his inability voluntarily to recall cheiro-kinæsthetic impressions. He believes, moreover, for reasons given, that the same holds good for Stricker. Thus they cannot voluntarily recall the kinæsthetic impressions associated with the act of writing a word, but they say they can recall the kinæsthetic impressions associated with the articulation of the same word, even although the movements in the latter case are much more of an automatic type. These apparently contradictory results are easily explicable in accordance with my views, when one considers how the thought of a word naturally runs on to an incipient articulation[9]; while, on the other hand, the mere thought of the same word has no appreciable tendency to evoke writing movements. The negative results of Ballet and Stricker with cheiro-kinæsthetic revivals of words would seem, therefore, to have all the force of a crucial experiment and to throw great doubt upon their supposed ability primarily to revive words in the glosso-kinæsthetic centre.

It seems pretty certain, therefore, that the real linguistic counters for thought are the auditory and visual memories of words. And in regard to these two I believe that in the very large majority of persons it is the auditory word-memory which is first revived in silent thought. This view is now very generally adopted, as may be seen by reference to the works of Ross[10] and Bernard.[11] It appears also to be the view of Herbert Spencer, since he says[12]: "Our intellectual operations are, indeed, mostly confined to the auditory feelings (as integrated into words) and the visual feelings (as integrated into ideas of objects, their relations and their motions)." Although the first stage in the revival of words seems to occur, however, in the auditory centre, the molecular disturbance thus initiated is immediately transmitted to a varying extent in two directions. It is transmitted to the visual word-centre on the one side and to the glosso-kinæsthetic centre on the other—to the latter strongly where the thought is to issue in speech, and to the former strongly where it is to issue in writing.

There can be no doubt that in some persons the visual centres as a whole are more highly developed and organised than the auditory centres, and *vice versâ*. The existence of such differences has been thoroughly shown by Francis Galton.[13] Thus he took steps to test the power of what he calls "visualising"—that is, the ability of persons to see with the mind's eye distinct images of objects in their natural grouping and colouring. The one hundred answers that he received as to the power possessed by the persons selected of visualising the breakfast table to which they had sat down in the morning disclosed an extraordinary range of variation in this respect. One of those who had the highest power of visual recall answers: "Thinking of the breakfast table this morning, all the objects in my mental picture are as bright as in the actual scene." One of those who had the lowest power answers: "No individual objects, only a general idea of a very uncertain kind." Galton adds: "There are a few persons in whom the visualising faculty is so low that they can mentally see neither numerals nor anything else; and again there are a few in whom it is so high as to give rise to hallucinations." In this general sense persons may well be classed as "visuals" and "auditives" respectively; and we may thus indicate for this or that person which is the more potent sensory endowment.[14]

Supposing, however, that a person is a "visual" in this general sense, it should not, in my opinion, be taken as necessarily implying that visual memories of words are for him the first to be revived in silent thought. If it were so we should expect to find speech greatly interfered with in many cases of simple word-blindness; but this seems comparatively rarely to be met with, the contrast in this respect being most striking between destruction of the visual and destruction of the auditory word-centres respectively. The primary revival of words may, perhaps, still occur in a visual in the auditory centre, only in such a person these primary revivals may be strongly backed up and reinforced by visual images. So that where the auditory word-centre is damaged in such a person its action, as a leader in the memorial recall of words, might to a certain extent be taken on by the visual word-centre; while in a person who is not a "visual" but little compensation of this kind could occur for the loss of the auditory word-centre. Thus the clinical effects in the form of speech disturbance would be different and altogether more marked in the latter case. It will be found that many recorded cases of speech defect lend support to these views, and that this, in fact, is the real practical outcome of all that has been said by Charcot and his followers as to the division of persons (in reference to the interpretation of speech defects) into four categories—"auditives," "visuals," "motors," and "indifferents"; a doctrine which has been fully set forth by Ballet.

I contend that this doctrine must not be taken to mean anything more than that the different kinds of word-memory referred to in the first three types may be met with in different degrees of excellence, and that in the fourth type there is no one kind of memory which is developed to a preponderating extent. In the latter class there would be no ground for supposing that the ordinary rule as to the primary revival of words taking place in the auditory centre is ever altered. As to the existence of persons representative of the third class I have already expressed my doubts—that is to say, I can find no good reasons or evidence to show that words ever arise in silent thought primarily in the kinæsthetic centres. I doubt whether these memories are capable of separate voluntary recall, and do not believe there is any evidence to show, as Bernard says,[15] that "the motor centre for speech may become independent of the sensorial centre which had presided over its education."

The case is altogether different in regard to individuals of the second class—the "visuals"—because not only does the power of memorial recall in the visual centre vary immensely

[6] De l'Intelligence, troisième édition, tome i., p. 482.
[7] See his work, Le Langage et la Musique, Paris, 1884.
[8] Le Langage Intérieur, 1886, p. 55.
[9] Ballet, in fact, says, loc. cit., p. 52:—"Chez moi, comme chez la plupart des moteurs je pense, la parole intérieure devient souvent assez vive pour que j'arrive à prononcer à voix basse les mots que dit mon langage intérieur." What he says on the next page shows that he is not a strong "visual," but does not tell against his being a strong "auditive." His better memory of a lecture after delivering it might be explained by the help derived from auditory or kinæsthetic impressions of the words, or from the two in combination.
[10] On Aphasia, 1887, p. 114.
[11] De l'Aphasie, 1885, p. 49.
[12] Principles of Psychology, vol i., 1870, p. 187.
[13] Inquiries into Human Faculty, 1883, p. 83.
[14] On this subject many interesting details have been given by Ballet, loc. cit., pp. 17-45.
[15] Loc. cit., p. 48.

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in different persons, as we have seen, but there is also good reason to believe that in a small minority of persons the primary revival of words during a process of silent thought may take place therein, just as it does in the act of reading. Thus Galton says[16]: "Some few persons see mentally in print every word that is uttered; they attend to the visual equivalent and not to the sound of the words, and they read them off usually as from a long imaginary strip of paper." It is possible, of course, that a person possessed of this high visualising power, whilst he may be thus aided in the delivery of a speech previously written, may nevertheless, in a process of silent thought, conform to the ordinary rule and revive words voluntarily in his auditory centre. But it may be otherwise with some few persons, so that, as Ribot supposes, they may habitually think and represent objects "by visual typographic images." Something of this kind we are bound to suppose must occur in a word-deaf person whose auditory word-centre is destroyed and who is yet able to speak—a rare conjunction that has occasionally been met with; just as we are bound to suppose that when a congenitally deaf and dumb child is taught to speak by the lip-reading process he brings this about by means of a primary revival of visual images, which act directly upon the glosso-kinæsthetic centre and thence upon the motor centres in the bulb.[17]

Bernard has cited[18] a remarkable instance of a patient who possessed a visual memory exceptionally strong, whilst his auditory memory was proportionally weak. In this patient the visual images of words and figures were evidently predominant during thought processes. "If he recited a lesson whilst at college, or an extract from a favourite author later on, two or three readings were sufficient to fix in his memory the page with its lines and its letters, and he recited by mentally reading the desired passage, which, at the first summons, presented itself with the greatest distinctness." Ballet[19] also quotes a letter from a librarian at Geneva which is extremely interesting. He writes: "When I think of a word or a phrase I see very distinctly this word or this phrase printed in ordinary characters, or written in my own writing or that of another person; the letters of a word are distinct from one another, and the intervals between each word written in black appear to me also. I see them in white. All my reproductions of words are visual." The same author mentions an orator, Hérault de Séchelles, who was accustomed, as it were, to read his speeches; and cites an epigram of Charma, also a "visual," who, speaking of the class to which he belongs, said, "Nous pensons notre écriture, comme nous écrivons notre pensée."

Undoubtedly, then, it would seem that there are certain exceptional persons who, as it were, read rather than hear their thoughts; and in whom, as Ballet says, the visual images of words acquire such an importance that they alone constitute the medium of their internal speech. Still, in spite of these exceptions, the general rule is that auditory images constitute the most potent representations of words, whilst visual images form the most potent representations of ordinary external objects.

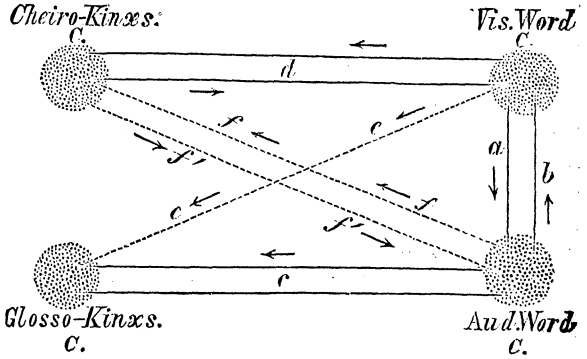
THE REVIVAL OF WORDS FOR SPEECH IS A COMPLEX PROCESS

The views just expressed refer, as I have said, to the seat of the primary revival of words in memory, because there is strong reason for believing that the activity when once initiated does not limit itself to a single centre. It must be borne in mind that the structural relations existing between the different seats of word-memory and the modes in which these are functionally related is in accordance with what occurs in ordinary processes of perception. In regard to such a process I have elsewhere said[20]: "When any one constituent of a natural cluster of sensations comes within the range of the corresponding sense organs of an animal the other possible impressions composing the cluster (and representing the organism's knowledge of the external object) become simultaneously nascent in memory, so that the object is perceived or recognised. If in a dark room my hand comes upon an orange or a book, either of these sensations of touch will immediately fuse with nascent ideas of other possible sensations from the same object (whichever it may be), so that this object is perceived as a present external reality. ..... Thus it happens that an object is recognised immediately or intuitively, not so much by the mere single or double impression present, as by the blending of this with more or less fully revived memories of other impressions which have at various times been associated with the same object. Truly enough, as Bain says, 'When we see, hear, touch, or move, what comes before us is really more contributed by the mind itself than by the present object.' ..... It is therefore by the simultaneous consciousness and fusion, as it were, of the subjective side of various new and old impressions that a present object is perceived and recognised. It could only be by the previous establishment of structural communications between the severally related sensory cells (in different centres) that the excitation of those of any one order would suffice to revive more or less strongly in other groups just such molecular changes as like objects had on previous occasions excited. And it may be easily understood that the molecular movements initiated by any one or two sense impressions may start from such groups of cells and thence flow over into all communicating channels between them and the cells of other related groups."

In a similar manner it may be supposed that the revival of activity in the auditory centre during the voluntary recall of words does not remain limited to that centre, but gives rise, as I have already said, to molecular movements in two directions—that is, forwards to related portions of the kinæsthetic centre and backwards and upwards to related portions of the visual centre—though with different degrees of intensity in different persons.

It is of importance to remember that for ordinary persons (that is, for those who are neither congenitally blind nor congenitally deaf) the four memories of words seem to be mainly called into play in definite couples—namely, the auditory and the glosso-kinæsthetic revivals taking place during articulate speech, and the visual and cheiro-kinæsthetic revivals taking place during ordinary writing. By this I mean that in expressing one's self in spoken words memories of such words are first principally revived in the auditory centre, and that the nerve units thus called into activity immediately rouse through commissural fibres (see Fig. 2, *c*) the corresponding glosso-kinæsthetic elements before the pronunciation of the word can be effected through the aid of the motor centres in the bulb. Probably in a healthy brain there is some amount of concurrent activity during speech in related portions of the visual word centre.

FIG. 2.



A diagram illustrating the relative positions of the different word-centres and the mode in which they are connected by commissures. The connexions indicated by dotted lines indicate possible but less habitual routes for the passage of stimuli.

Again, when we are expressing our thoughts by writing, though the memories of the words are probably first revived in the auditory word-centre, corresponding memories are almost simultaneously revived (through the intervention of the audito-visual commissure, *b*) in related parts

[16] Loc. cit., p. 96.

[17] In the case of a deaf and dumb child taught to speak and understand others by means of hand and finger movements their thought-counters would be combined visual and kinæsthetic impressions, or in the case of one who had been taught to read much from early life they might be "visual typographic images." On the other hand, in the case of a congenitally blind person who has been taught to read aloud by means of raised letters and words excitation of the centres for touch and kinæsthesis would constitute the initial processes in the act of reading aloud, although revived auditory impressions might constitute, as in ordinary persons, the habitual thought-counters. A patient of the former class whose history has been reported by E. Fournier (Essai de Psychologie, Part II., chap. v.) says: "Je sens quand je pense que mes doigts agissent, bien qu'ils soient immobiles. Je vois intérieurement l'image que produit le mouvement de mes doigts."

[18] Le Progrès Médical, July 21st, 1883.

[19] Loc. cit., p. 44.

[20] The Brain as an Organ of Mind, p. 176.

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of the visual word-centre, and from this region stimuli pass by another commissure (*d*) to corresponding cheiro-kinæsthetic elements before the actual writing of the words can be effected through the instrumentality of motor centres in the cervical and upper dorsal regions of the spinal cord.

There can be no doubt, in fact, that the functional association existing between the auditory and the glosso-kinæsthetic centres, as well as that between the visual and the cheiro-kinæsthetic centres, is of the closest kind. No less intimate, however, is the bond of association between the activity of the auditory and the visual word-centres themselves. These latter centres are often necessarily called into associated activity in immediately successive units of time. This happens, for instance, in two such common processes as reading aloud and writing from dictation.

In reading aloud the primarily excited visual word-centre must arouse, through (*a*) the visuo-auditory commissure, related parts of the auditory word-centre, since this is the part which ordinarily calls the glosso-kinæsthetic centre into activity, whence properly coördinated incitations issue from the cortex, in order to call into play the motor centres in the bulb.

Again, in writing from dictation the sounds of the words reach the auditory word-centre, and the activity thus aroused becomes transmitted through (*b*) the audito-visual commissure to related parts of the visual word-centre, this being the part that usually rouses the cheiro-kinæsthetic centre into activity, whence properly coördinated incitations issue from the cortex in order to call into play the motor centres in the cord concerned with the act of writing.

In exceptional cases it seems that the ordinary functional coupling of the auditory with the glosso-kinæsthetic and of the visual with the cheiro-kinæsthetic word-centres is not adhered to. Thus the deaf-mute thinks in the main with revived visual symbols (either of hand or of lip movements) and it is from the organic seats of these that incitations pass to related parts of the glosso-kinæsthetic centre (*e*, *e*). A similar stimulation of these centres direct from the visual word-centre seems occasionally to obtain in persons who are not deaf-mutes. We have already assumed it to be possible for some few "visuals," and subsequently for the interpretation of certain cases of disease in which the auditory word-centre has been damaged we shall find ourselves obliged to have resort to such a supposition.

Again, in those children who have been born blind, but have nevertheless ultimately learned to write, a direct association must become established between the auditory and the cheiro-kinæsthetic word-centres (*f*, *f*). The same kind of associated activity between these two centres must exist in certain other persons not born blind, seeing that some patients suffering from word-blindness owing to destruction of the visual word-centre are able, nevertheless, to write, either spontaneously or from dictation.

This functional unification of the word-centres of which I have been speaking does not, however, remain in a state of isolation. Words that are heard are first of all associated in the mind of the child with external objects, so that such auditory impressions become linked, by means of associational fibres, with the organic seats of the several sensory impressions—also freely connected with one another—that the child has been able to derive from this or that object. Thus the name subsequently becomes revived as part of the perceptive process whenever the object is again presented. The sight of the mother recalls the name "Mamma," just as the sound of this word would revive the corresponding visual, tactile, and other images. After a time the auditory representative of the name becomes reinforced by glosso-kinæsthetic impressions as soon as the child learns to utter the word; later by visual impressions, when it learns to read, and by cheiro-kinæsthetic impressions when it has learned to write.

The several components of word-percepts are thus brought, not only into relation with one another, but become no less intimately associated with the several sensory components of object-percepts. The result is that the hearing or the sight of the name of any object immediately calls up in the older child or in the adult an idea of the object, just as its presentation to sight or other sense produces a nascent activity in the several centres in which its name is registered, though mainly in the auditory and the visual centres.

Words soon become to a very large extent the symbols whereby we carry on our thoughts, and this thinking by means of words becomes all the more thorough as though's become more complex. We can think of a particular person or of a particular plant as well by recalling the visual image as by recalling the name. But when in thinking we have to recall general names, such as "animal" or "tree," or still more abstract names such as "virtue" or "vice," it becomes certain that in silent thought we use the words as symbols for the more or less complex ideas which they represent. And if we bear in mind that the seats in which these words are registered (our word-centres) are in organic and functional relation with the seats of registration of the corresponding percepts, concepts, &c., we are enabled in a measure to understand how the revival of the word in the mind (as the thought-counter) is associated with an almost simultaneous activity in the seats of registration of the corresponding percepts and concepts.

We may thus recognise how it happens that in simple acts of perception, and still more in simple thought processes, we have no limitation of cerebral activity to narrowly localised centres, but rather widespread processes of activity in very varied regions of the cortex, and that, too, in both hemispheres of the brain. In our talk about individual centres and their functions we are apt to forget how much the brain acts as a whole even in operations that seem comparatively simple, and many of those who have written on aphasia have, as I venture to think, not sufficiently taken into account the fact that the name constitutes an integral element of the percept or of the concept.

On the Different Modes of Excitation of the Word-centres, and on the Reason of their Functional Predominance in the Left Hemisphere.

It is important to recollect that word-centres are naturally called into activity in states of health in three modes, but that failure in the possibility of their excitation by one or other of these modes occurs in various morbid conditions, leading to this or that kind of speech defect. The three modes of excitation are these: (1) By means of "sensory" impressions coming from without; (2) by "association"—that is, by impulses communicated from another centre during some act of perception or thought process; and (3) by "voluntary" recall of past impressions, as in an act of recollection. It is convenient for practical purposes to separate these second and third modes of calling into activity the perceptive centres; still they are probably closely related to one another and scarcely separable in nature, although the associational processes in the case of "volitional" excitation may be so difficult to trace that the recall assumes a quasi-spontaneous character.

The excitability of the centres—that is, the molecular mobility of their nervous elements—may vary with age, state of health, or the existence of different morbid conditions. Their excitability may be so much lowered that they are only capable of responding to powerful stimuli; so that while volitional recall (or "recollection") may be impossible within their province, such centres may still be capable of acting in "association" with others—that is, in an automatic manner during an ordinary process of thought—or at least under the "sensory" stimulus which initiates a perceptive process. At other times the excitability of the perceptive centres may be unduly exalted, so as to lead to hallucinations, illusions, and a wholly different class of defects such as are often met with among the insane.

From what has been said in a previous section it will be seen that I entertain doubts whether kinæsthetic word-memories of either kind are capable of being revived alone in a voluntary manner.

As to the causes which have determined the greater or almost exclusive influence of the left hemisphere in inciting speech movements, and therefore in acting upon the bulbar motor centres for words, only conjectures can be offered. It is, however, now pretty generally agreed that the immediate or proximate cause is to be found in the fact of the predominant use of the right hand, which entails a greater functional activity upon the left cerebral hemisphere. This view rests principally upon the now ascertained fact that in the great majority of cases in which aphasia has occurred as a result of brain lesions in the right hemisphere (with or without the association of left hemiplegia) those so affected have been left-handed persons.[21] It would thus seem to

[21] According to Seguin, out of 266 cases of aphasia he found 243 with right and 17 with left hemiplegia; that is, somewhere about 6 per cent. W. Ogle, on the other hand, from inquiries among 2000 hospital patients, found that 85 of them were left-handed; that is, about 4¼ per cent.

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follow that the predominant use of the right hand or of the left hand carries with it, as one of its associated effects, the leading activity in the production of speech by the left or the right hemisphere respectively; and that we must consequently push our question further back, and inquire as to the causes that have led to this predominant use of the right hand.

This problem has been considered by Pye-Smith,[22] and also in a more exhaustive manner by William Ogle,[23] but can only be briefly alluded to here. It has been thought to depend largely upon tribal or social customs and early tuition of young children by their mothers, though doubt has been thrown upon these views as giving any adequate explanation of the problem. William Ogle looks rather to certain peculiarities in the mode of origin of the left and right carotids respectively as calculated to favour a slightly freer blood supply to the left cerebral hemisphere. If this were really so, it is conceivable that it might after a time have led to a slightly earlier development of the convolutions on the left side of the brain (which has been affirmed to occur by Gratiolet, though denied by Carl Vogt and Ecker), and thus perhaps have led to a preferential use of the right hand in the early and more definite movements of the child. Such preferential use being once started and maintained through several generations, it is only to be expected that it would continue; for if the effects of use and disuse are inherited as, with Herbert Spencer, I believe to be the case (in spite of all that Weismann says to the contrary) heredity would coöperate with the original cause in confirming and making general this preferential use of the right hand.

But whatever may have been the original cause of this now very general attribute of right-handedness—and the chief difficulties of the problem with which we are concerned lie here—it would easily follow that with its continuance in process of time the left hemisphere should become (as it has been found to be) slightly heavier than the right, and that the left carotid might become (as it is said to be) very slightly larger than the right carotid. It is practically certain that the great preponderance of right-hand movements in ordinary individuals must tend to produce a more complex organisation of the left than of the right hemisphere. We may confidently look for the existence in it of the organic basis of a vastly greater and more complex tactile experience; and as movements of the right hand and arm are more frequent, both as associated factors of this experience and in other ways, we have also a right to suppose that the kinæsthetic centres will be similarly developed to a notably greater degree in the left hemisphere.

Many years ago I ascertained a fact which then seemed very difficult to understand—namely, that the specific gravity of the cortical grey matter of the brain in the left frontal, parietal, and occipital regions is often distinctly, though slightly, higher than that from corresponding regions of the right hemisphere. Full details as to this will be found in a paper "On the Specific Gravity of the Human Brain," published in 1866.[24] Now such an increase in specific gravity might easily be produced by the greater number of cells and associational fibres which the extra sensory and derivative functions above referred to would necessarily entail.

Thus it may, in brief, be said that this preponderating activity of the left hemisphere in regard to tactile and kinæsthetic impressions (about which there is no room for doubt) may have much to do with the fact that the left hemisphere is the more potent and seems to take the lead in some thought processes, as well as in giving rise to the voluntary excitations which determine the muscular acts involved in articulate speech. A greater convolutional complexity of the lower part of the left frontal lobe as compared with the right, which has been found to exist, is thought to be a result of this preponderant activity of the left hemisphere in the production of articulate speech. Some evidence in favour of this view is to be found in the fact that Broadbent, in his examination of two brains taken from left-handed persons that were submitted to him by William Ogle, found in them the reverse condition—that is, that the greater convolutional complexity was on the right rather than on the left anterior lobe.[25]

There still remains the question why one cerebral hemisphere only should be efficiently educated for the perception of speech and for the production of speech movements, when, seeing that the bulbar motor centres are bilateral, it might seem that such centres would be likely to receive their stimuli from both hemispheres. In partial reply to this question Moxon, in a very able paper,[26] long ago suggested that the call upon attention was so great for the production of the extremely elaborate movements concerned in speech that the necessary concentration of attention would be much facilitated if this process of education were limited to one hemisphere. Whatever may be thought of this ingenious suggestion, nothing better has hitherto been forthcoming.[27]

What has just been said as to the action of the left hemisphere rather than the right in the production of speech must be understood with certain reservations. It must not be supposed that the right hemisphere remains entirely uneducated, either in regard to the comprehension or to the production of speech. Little is said by writers generally on this subject, and what has been said has reference principally to the third frontal convolution. A hypothesis as to the functions of this part of the brain has been enunciated by Hughlings Jackson,[28] and another view, as to what is figuratively termed the "overflow of education into the opposite hemisphere," has been expressed by Wyllie.[29] But neither of these hypotheses appears to me to be in accord with existing knowledge.

The most important points to be borne in mind in reference to this subject would seem to be these. All the movements concerned in speech are movements produced by symmetrically placed muscles on the two sides of the body; there is just as much reason, therefore, for the registration of kinæsthetic impressions resulting from speech movements in the right as in the left third frontal convolution. Again, it cannot be supposed that auditory impressions from spoken words do not pass from each ear to similar regions in the opposite cerebral hemisphere; and our present knowledge makes it equally improbable that the visual impressions of words are not registered in a visual word-centre in each hemisphere. For each of these three sets of afferent impressions, therefore, there is, as I believe, no question of an "overflow" from one to the opposite hemisphere; on the contrary, each hemisphere receives its own proper share of ingoing impressions, and doubtless registers them in a more or less similar fashion. That this should be so seems an obvious truth, though it is one that hitherto appears to have been very imperfectly realised. Again, it may be taken as established, for reasons which will subsequently appear, that the separate centres composing each of these pairs are brought into functional union by means of commissural fibres forming part of the corpus callosum. So far, therefore, we seem bound to admit that each hemisphere has the chance of being equally educated, so far as the mere *reception* of speech impressions is concerned.

It is, however, when we come to the executive side of speech functions that the great difference begins to appear between the relative activity of the two hemishperes of the brain. For reasons which we have previously been dimly endeavouring to indicate, the executive speech functions become relegated to one hemisphere, and this leading hemisphere, generally the left, becomes for this and for the other reasons which we have adduced more highly organised. The fact that the volitional impulses for the incitation of speech pass off from this hemisphere leads of necessity to the gradual perfecting of the associational channels between the auditory and the glosso-kinæsthetic centres, as well as between the auditory and the visual word-centres of the left hemisphere, and also to the perfecting of

Left-handedness, curiously enough, was found to be "twice as common in men as in women." Ogle shows, too, how very frequently there is hereditary transmission of this peculiarity.

[22] Guy's Hospital Reports, vol. xvi., 1871.

[23] Transactions of the Royal Medical and Chirurgical Society, 1871.

[24] Journal of Mental Science, pp. 28, 32.

[25] Transactions of the Royal Medical and Chirurgical Society, 1871, p. 294.

[26] British and Foreign Medico-Chirurgical Review, 1866, p. 481.

[27] Moxon's paper is, indeed, in other respects remarkable, looking to the date at which it was written. Thus he speaks of spoken words as represented in Broca's region by "educated associations of movements"; and the meaning that he attaches to this phrase is rendered evident further on when he dwells upon the "inconceivable pitch of education which is given to these supra-motory departments, if I may so call them, of the brain, which hold ready for use the memorial forms of outgoing words," or still better where he says, "The situation of the ideas of *associated motions* which form the faculty of speech is supra-motory, whilst the situation of the ideas of *associated sensations* which form the faculty of language comprehension is supra-sensory."

[28] Brain, vol. ii., 1879, p. 327.

[29] The Disorders of Speech, 1895, p. 262.

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the outgoing channels of communication between these sensory centres and the true motor centres in the bulb. The corresponding associational and outgoing channels in the opposite hemisphere, however, being but little used, may remain comparatively undeveloped.

This difference in the degree of activity of the two cerebral hemispheres during speech would tend to become more and more accentuated in future years, and would in all probability lead to a much higher grade of functional activity, even on the receptive side, in the three kinds of word-centres pertaining to the leading hemisphere.

Views of this kind as to the partial education of the word-centres of the opposite hemisphere will be found to be of considerable importance when we come to speak of the modes in which destruction of one or other of the word-centres in the leading hemisphere may be compensated—or, in other words, of the way in which a cure may be brought about in this or that form of speech defect.

DOES CONCEPTION TAKE PLACE IN A CENTRE ALTOGETHER APART FROM PERCEPTION?

The first authoritative writer on defects of speech who started the notion of the existence of an altogether separate centre for conception or ideation was Broadbent. This he did in a very important memoir, "On the Cerebral Mechanism of Speech and Thought," published in 1872.[30] Whilst there adopting some views which I had previously published on the subject of the cerebral processes that occur in perception,[31] he made a departure from them in the direction above indicated. The functions that I spoke of as being carried on in the perceptive centres he divided into two stages. He said: "There is a primary or rudimentary perceptive act in which the external cause of a given set of sensations is recognised as such, and in which the simple attributes, as of form, colour, hardness, &c., are perceived. And there is a higher degree of elaboration in which, by the combination or fusion of perceptions derived from the various organs of sense, a conception or idea of an object as a whole is obtained. This is a new and distinct process, and is usually accompanied by the affixing of a name to the object. To the 'perceptive centres' I relegate simply the translation of sensations into rudimentary or primary perceptions, and these centres must lie somewhere in the marginal convolutions which receive radiating fibres from the crus and central ganglia, upon which therefore impressions will first impinge, and which are symmetrically combined by the fibres of the corpus callosum. The higher elaboration, the fusion of various perceptions together, and the evolution of an idea out of them, will be accomplished not by radiation from one perceptive centre to all the others, but by convergence of impressions from the various perceptive centres upon a common intermediate cell area, in which a process analogous to the translation of an impression into a sensation and of a sensation into a primary perception will take place. This intermediate cell area will form a part of the supreme centre, and will be situated in the superadded convolutions which receive no radiating fibres."

In a subsequent communication some years later these views were still further developed by Broadbent.[32] The centre for concepts was then termed the "naming centre," whilst a related higher motor centre was postulated as a "propositionising centre," in which words other than nouns were supposed to be registered, and where sentences were formulated preparatory to their utterance through the instrumentality of Broca's centre.

This supposed convergence of impressions from the various perceptive centres into a new region in which "conception" and "naming" take place is a view totally different from my own, which nearly thirty years ago was thus expressed:[33] "In the perceptive centres the primary impressions made upon the organs of sense are converted into 'perceptions proper'—that is to say, they receive their intellectual elaboration, and this elaboration implies an intimate cell and fibre communication between each perceptive centre and every other perceptive centre, since one of the principal features of a perceptive act is that it tends to associate, as it were, into one state of consciousness much of the knowledge which has been derived at different times and in different ways concerning any particular object of perception. An impression of an object, therefore, made on any single sense centre on reaching the cerebral hemispheres, though it strikes first upon the perceptive centre corresponding, immediately radiates to other perceptive centres, there to strike upon functionally related cells, all this taking place with such rapidity that the several excitations are practically simultaneous so that the combined effects are fused into one single perceptive act."[34] Thus the work which Broadbent supposes to be done in his "naming" or "concept" centre is according to my view carried out by the simultaneous activity of the different perceptive centres, and certain annexes which are derivative developments therefrom, of which I shall subsequently speak. And, again, I have postulated, instead of a single separate "naming centre," the existence of four "word-centres" as important and intimately correlated parts of the more general auditory, visual, and kinæsthetic centres.

Consequently I never seek to explain certain cases of speech defect, as he and others whom I am about to mention not unfrequently do, by supposing the existence of lesions in a localised centre for "concepts," or of lesions involving the commissural fibres proceeding to or issuing from such a centre.

With variations in detail, views similar to those of Broadbent as to the existence of a special centre for concepts were subsequently published by Kussmaul[35] and Charcot,[36] whilst the views of the latter were adopted and further promulgated by Bernard[37] and Ballet.[38] The existence of a separate centre for concepts is also postulated by Grasset.[39]

The views of Kussmaul were embodied in an elaborate and complicated diagram which it is unnecessary to describe. A more simple and easily to be comprehended diagram was also produced by Charcot (and is to be found in the work of Bernard), which is based upon the same principles as the scheme issued by Broadbent, with the exception that he omits the "propositionising centre" and also adopts my view as to the existence of separate word-centres. He, however, makes the several sensory impressions converge to an "ideational centre" in order that their meaning should be realised, and indicates that the speech centre (that of Broca) and the centre for writing movements (both of them as "motor" centres) are called into activity directly from this ideational centre, as well as from the auditory and the visual centres respectively.

Some diagrams that have attracted much attention were also published by Lichtheim in illustration of his well-known paper on aphasia.[40] They likewise show a centre for concepts altogether apart from the sensory centres, and in his endeavours to explain the different kinds of speech defect he refers two of his types to a destruction of supposed afferent and efferent fibres proceeding to and from this conceptual centre. While, therefore, his diagrams and his language in many parts of his paper would make one think that he adopted in full the view as to the existence of a wholly separate centre for concepts, he says towards the end of his paper[41] "this has been done for simplicity's sake," and that he does not "consider the function to be localised in one spot of the brain, but rather to result from the combined action of the whole sensory sphere." This statement, though it is quite in accordance with my own view, seems to me to invalidate much of his exposition and to make it almost impossible for him legitimately to suppose, as he does, that two of his types of speech defect are to be explained by the supposition of the existence of a lesion involving either the afferent or the efferent fibres pertaining to such a widely diffused centre. In addition there is the serious defect that his diagrams are at variance with his views on this important subject.[42]

My dissent from these particular views of Broadbent

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[30] Transactions of the Royal Medical and Chirurgical Society, 1872, pp. 180, 181, and 191.

[31] On the Muscular Sense and the Physiology of Thinking, Brit. Med. Jour., May, 1869.

[32] Brain, vol. i., 1878.

[33] Brit. Med. Jour., May, 1869.

[34] From this it is evident that there can in reality be only one perceptive centre, although its different component parts were formerly by myself (as well as by Broadbent) spoken of as "perceptive centres" because their functional activities were integral components of a perceptive act. I recognise now that it would have been better not to have used this term as a name for these centres—that they are, in fact, more appropriately spoken of as sensory centres.

[35] Ziemssen's Cyclopædia, vol. xiv., p. 779.

[36] Le Progrès Médical, 1883.

[37] De l'Aphasie, 1885, p. 45.

[38] Le Langage Intérieur, 1885.

[39] Leçons de Clinique Médicale, 1896 (Montpellier).

[40] Brain, 1885. The reader will find several of the diagrams previously referred to in an article on "The Sensory Side of Aphasia," by E. A. Shaw, in Brain, 1893, p. 492.

[41] Loc. cit., p. 477.

[42] I shall later state what I believe to be the interpretation of his seven types of speech defect, when it will be seen that they may be explained without any necessity for supposing the existence of lesions in any such parts.

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was expressed in 1880,[43] and again more strongly against them as well as against the allied views of Kussmaul, Charcot, and Lichtheim, in 1887.[44] I am glad to say that this dissent from these doctrines has been followed by that of A. de Watteville,[45] Ross,[46] Allen Starr,[47] and Wyllie,[48] all of whom have likewise decided against the propriety of postulating the existence of a separate centre for ideas or concepts.

My opposition to this postulation of a separate "centre for concepts" was based originally upon psychological considerations. It seemed to me wholly unnecessary and at variance with what appeared to be the real nature of the process of perception.

Then, again, I am unable to find any clear evidence from clinical data tending to prove the existence of a separate "centre for concepts"—or, in other words, any existing forms of speech defect that can only be explained by supposing the existence of a lesion in such a centre or in the course of its afferent or efferent fibres. I am convinced that the supposed necessity for assuming the existence of a "centre for concepts," when seeking to interpret different forms of speech defect, may in many cases be obviated by a fuller recognition of the different degrees of functional excitability that may obtain in the auditory and the visual word-centres respectively. We shall see that their molecular mobility may be so much lowered that they are only capable of responding to powerful stimuli. Thus, whilst volitional recall or recollection may be impossible within their province, they may still be capable of acting in association with other centres—as when reading may be fluent though voluntary speech is greatly impaired; and still more easily under a direct sensory stimulus—as when a word is repeated which the patient has just heard pronounced.[49]

Another cause that has led to this postulation of a "centre for concepts" is traceable, I think, to an inadequate realisation of the nature of a perceptive process and of the fact that a name may and does constitute an integral part of the complexus of revived sensory impressions which go to constitute such a process.

Again, as it would be quite easy to show, perceptive processes vary greatly in complexity and merge by insensible gradations into processes of conception. It seems thoroughly legitimate, therefore, to suppose that these latter more specialised modes of mental activity, whilst having their roots in perceptive centres, must be completed in outgrowths therefrom—that is, in parts of the brain which are in close relation structurally and functionally with the several sensory centres. I have commonly spoken of such regions as "annexes" of the perceptive centres.

Of late Flechsig has called special attention to four areas of the cortex that differ from the sensory areas, since they are neither in relation with afferent nor with efferent fibres. He assumes[50] that these regions subserve higher mental functions than those carried on in the sensory centres, and terms such regions "association areas." These regions seem, therefore, to correspond with what I have referred to above as "annexes of the perceptive centres." They occupy a large proportion of the cerebral cortex, and are thus located by Flechsig: (1) in parts of the pre-frontal lobes; (2) a large portion of the temporal lobes; (3) a considerable area in the posterior parietal region; and (4) the island of Reil. These four fairly well-defined areas are, as above stated, not directly connected with afferent or with efferent fibres, and in addition to this two other reasons are given for supposing them to be concerned with the carrying on of higher functions. Flechsig points out, in the first place, that these regions remain immature and completely devoid of myeline for several months after birth, though the sensorial centres have arrived at comparative maturity; and, secondly, that these association centres are the parts which are especially developed in the brain of man as compared with that of the lower animals.[51]

It is only fair to Broadbent to point out that more than twenty years previously he had cited almost exactly these regions of the cerebral cortex as parts that were neither in direct relation with peduncular fibres nor with those of the corpus callosum, and that he had attributed to these regions just the same functions as those now assigned to them by Flechsig.[52] He adds: "Now the convolutions which I have enumerated as having no direct communication with the crus, central ganglia, or corpus callosum are, in the first place, those which are latest in order of development, and on this ground alone might be supposed to be concerned in the more strictly mental faculties which are latest in their manifestations. They are those which constitute the difference between the human cerebrum and the cerebrum of the quadrumana; and it would, moreover, seem to accord with the general plan of construction of the nervous system and with what we know of the mental operations that these convolutions, which are withdrawn, so to speak, from direct relation with the outer world, should be the seat of the more purely intellectual operations."

It is, I think, perfectly legitimate to suppose that the annexes of the sensory centres, to which I have previously referred, tend to be developed in the directions above indicated by Broadbent and Flechsig, though how much of these territories they occupy must remain altogether uncertain. It seems also probable that there is no sharp line of demarcation between these annexes and the several sensory areas, and that *the combined sensory areas together with the annexes are accustomed to be thrown into functional activity more or less simultaneously*. Thus the processes of perception and conception, together with revival of linguistic symbols, are probably almost as inseparable in their localisation as they are in their nature and modes of occurrence, and their anatomical substrata must be supposed to occupy a very considerable extent of the cortex of both hemispheres.

A final question now remains for consideration related to this other which we have just been considering. It is this—Where are we to look for the registration and revival of words in the cerebral cortex? It may be said that this question has been already answered. And so it has tentatively and in a general sense. We have laid stress upon the existence of four different kinds of memorial registration of words and the probable sites of such word-centres in the hemispheres. We have indicated also that the glosso- and the cheiro-kinæsthetic centres constitute definite parts of the general kinæsthetic centres, and that the auditory and the visual word-centres probably also constitute more or less separate parts of the general auditory and visual centres.

Something additional, however, may now be said concerning the sites of these word-centres which could not well have been said at an earlier period, and that is that each of them is probably to be found partly on the confines of its percept centre and partly on that of its related annexe. This supposition is made because some words (especially names of things, persons, and places) are in closest relation with sensory centres; whilst others, such as verbs, adjectives, prepositions, and other parts of speech constituting the framework of language, are in closer relation with conceptual processes. These two modes of functional activity are, as I have said, absolutely inseparable from one another, and therefore the several word-centres must be in most intimate relation both with the sensory centres and with their annexes.

If the views above expressed be anything like an approximation to the truth, it may be judged how vain it would be to attempt to base our explanation of any of the different kinds of speech defect upon the supposed existence of some one separate centre for "ideation," "conception," or "naming" which is connected by means of commissures (long enough and separate enough to permit of isolated damage) with sensory centres on the one side and with motor centres on the other. I am pleased to find that the views at which I have arrived on this important subject—while they differ so much from those held by some of the most authoritative writers on speech defects—are nevertheless in very close accord with those formed by one very distinguished writer and thinker on these subjects—viz., the

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[43] The Brain as an Organ of Mind, p. 636.

[44] Brit. Med. Jour., Nov., 1887.

[45] Le Progrès Médical, March 21st, 1885.

[46] On Aphasia, 1887, p. 123.

[47] Brain, 1889, p. 97, where Starr says: "The results of pathological observation fail to give any support to the hypothesis of an 'ideational centre' which Broadbent and Kussmaul have introduced into their diagrams."

[48] The Disorders of Speech, 1894, pp. 230 and 235. Wyllie, however, I think, tends to convey an erroneous impression by representing in a diagram on p. 276 of his work the seats of word revival in a lower plane and of percept revival in a higher plane, and assuming that the stimulation of Broca's centre takes place from the seat of percept revival rather than from the auditory word-centre. This seems to be also the position of Lichtheim, judging from his Fig. 7 and what he says in reference thereto, loc. cit., p. 477.

[49] Examples will be given later when speaking of the defects due to disabilities in the auditory word-centre.

[50] Neurologisches Centralblatt, 1894, pp. 674 and 809; and Gehirn und Seele, Leipzig, 1895.

[51] Since the above was written I have received from Déjerine the reprint of a communication made by him to the Société de Biologie, on Feb. 20th, 1897, in which he contests these views of Flechsig.

[52] Transactions of the Royal Medical and Chirurgical Society, 1872, p. 178.

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late Dr. James Ross. Thus, in his work "On Aphasia," he gave expression to the following views (page 125) :—"And on passing from thinking by percepts to thinking by concepts, and from that to thinking by abstracts, there are no new centres introduced, but only a complication upon complication of the one perceptive centre. All that can be said is that the correlative of perceptive thinking is excitation of that portion of the cortex of the brain which is directly connected with the sensory inlets; of conceptive thinking, excitation of portions of the cortex which are indirectly connected with them; and of abstract thinking, excitation of portions which are still more remotely connected with them. It must, however, be remembered that the effective working of the portions of the cortex which are remotely connected with the sensory inlets will in a great measure depend upon the integrity of those that are in direct relation with them. ..... Let us now attend to the effects of dissolution of this structure. A destructive lesion of the portions of the cortex which are most remotely connected with the sensory inlets would destroy the capacity of the patient for highly abstract reasoning, and would no doubt inflict considerable damage on the language in which abstract thought is embodied, but this condition would not be recognised as an aphasia; and even the intermediate portions of the cortex in which conceptive thought is carried on might be seriously damaged without giving rise to a special speech disorder, inasmuch as any impairment of speech which might be present would only be regarded as a part of a general decay of the reasoning faculties. When, however, the lesion is situated in or near to the sensory inlets a disorder of language results which is out of all proportion to the general impairment of the reasoning faculties." All that has been set forth above is thoroughly in harmony with the dictum of Max Müller, who says: "Though sensations, percepts, and concepts may be distinguished, they are within our mind one and indivisible. We can never know sensations except as percepts, we can never know of percepts except as incipient concepts."

The Goulstonian Lectures

ON

THE CHEMISTRY AND PATHOLOGY OF GOUT.

Delivered before the Royal College of Physicians of London,

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LECTURE II.[1]

Delivered on March 25th.

THE SOURCES AND FORMATION OF URIC ACID IN PATHOLOGICAL CONDITIONS OTHER THAN GOUT IN WHICH IT APPEARS IN THE BLOOD.

MR. PRESIDENT AND GENTLEMEN,—Although I hold the opinion that in health uric acid is only formed in the kidneys, and that the uric acid found in the blood in gout is absorbed from the kidneys after formation in those organs, yet it must be borne in mind that there are other diseases besides gout in which uric acid appears in the blood, and in connexion with which it has most probably *not* been absorbed from the kidneys, but has been formed elsewhere in the system. I will therefore briefly consider what these pathological conditions are and what are the probable sources of the uric acid in such conditions. The investigations of von Jaksch, Klemperer, and others have conclusively established that the presence of uric acid in the blood is not a pathognomonic sign of gout, and also that uric acid may appear in quantities in the blood and be eliminated without causing gout.

Blood disorders accompanied by the presence of uric acid in the blood.—Von Jaksch[2] found uric acid in the blood in cases of both primary and secondary anæmia, pernicious anæmia, and splenic tumour. He also found it in the blood in conditions inducing dyspnœa—notably in heart disease, pleurisy with effusion, pulmonary catarrh, pneumonia, and emphysema. Klemperer[3] has recently confirmed the results of von Jaksch and others as to the presence of uric acid in the blood in leucocythæmia, and many observations have been made of the increased excretion of uric acid that accompanies this disease. Laache[4] found a daily excretion of 3·7 grammes (nearly six times the average normal amount) in a patient suffering from this disease. Bartels[5] observed a daily excretion of 4 grammes (more than six times the average normal amount). Stadthagen[6] found a daily excretion of 2 grammes (three times the average normal amount). Bohland and Scherz[7] found a daily excretion of 1·4 grammes (twice the average normal amount). Von Jaksch[8] concluded that the occurrence of uric acid in the blood was due to diminution of the oxidising activity of the red corpuscles and to consequent storing up in the blood of the uric acid formed in the body, which, according to his view, is normally oxidised and destroyed. Horbaczewski's view, which will be considered later, that the formation of uric acid is due to the disintegration of leucocytes, would equally apply, since in all the diseases in which von Jaksch found uric acid in the blood leucocytosis was present. Moreover, there is no experimental proof to support the view that uric acid is oxidised and destroyed by oxygenated blood; on the contrary, there is experimental proof that the process of oxygenation can, in the presence of nuclein, produce uric acid instead of destroying it.

Renal diseases accompanied by the presence of uric acid in the blood.—Von Jaksch[9] found uric acid in the blood in all the cases of renal disease that he examined, the proportions being especially large in cases of granular kidney disease and uræmia. Von Jaksch's results were confirmed by Klemperer,[10] who examined the blood in cases of contracted kidney and found uric acid always present.

Lead poisoning accompanied by the presence of uric acid in the blood.—Sir Alfred Garrod[11] examined the blood of nine patients suffering from plumbism and who had never suffered from gout, and found appreciable quantities of uric acid in the blood of seven out of the nine. Dr. Oliver[12] refers to the early stage at which anæmia becomes a prominent symptom of lead poisoning. Although no doubt the kidney mischief which occurs in connexion with plumbism is responsible for the appearance of most of the uric acid in the blood by interfering with its excretion by the kidney cells, yet it is possible that a small amount of the uric acid may result from the slight leucocytosis accompanying the anæmia of plumbism.

Fevers and absence of uric acid in the blood.—Von Jaksch found no uric acid in the blood of patients suffering from typhoid fever, intermittent fever, and acute rheumatism, nor in connexion with diseases of the liver, stomach, and intestines, when unaccompanied by anæmia. His observations seem undoubtedly to prove that the presence of uric acid in the blood is not a factor in the production of the so-called uric acid intoxication of fever. Fever, indeed, appears to influence unfavourably the production of uric acid. It is evident that in connexion with certain diseases, especially those in which leucocytosis occurs, uric acid may be present in quantities in the blood and yet not give rise to gout. The reason, in my opinion, is that in such diseases the kidneys being in a sound condition can readily eliminate the uric acid. A proposition that I wish to put forward is that the seat or site of formation of uric acid is a different one in gout to what it is in those blood diseases and disorders in which uric acid occurs in the blood without the development of gout. In gout I believe that all the uric acid present in the blood is absorbed from the kidneys owing to some affection of those organs—functional or organic—which interferes with the proper excretion of the uric acid manufactured in the kidneys. In cases of contracted granular kidney disease and in cases of plumbism the uric acid present in the blood is, I believe, derived from

[1] Lecture I. was published in THE LANCET of March 27th, 1897.
[2] Deutsche Medicinische Wochenschrift, 1890, xxxiii., p. 741.
[3] Ibid., 1895, xxi., p. 655.
[4] Klinische Urinanalyse, 1892, p. 31.
[5] Deutsches Archiv für Klinische Medicin, Band i., p. 13.
[6] Virchow's Archiv, Band cix., p. 390.
[7] Pflüger's Archiv, Band xlvii., p. 13.
[8] Ueber die Klinische Bedeutung von Harnsäure und Xanthinbasen im Blut, 1890.
[9] Loc. cit.
[10] Loc. cit.
[11] A Treatise on Gout, 1876, p. 241.
[12] Goulstonian Lectures on Lead Poisoning, THE LANCET, March 7th, 14th, and 21st, 1891.

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the same source—viz., from the damaged kidneys. In blood diseases and disorders the uric acid present in the blood is probably derived from the nuclein of the leucocytes, and as the kidneys are in a sound condition it is readily excreted by them.

An interesting question that I will now consider is whether gout ever occurs without preceding kidney mischief of some kind or other; that is, whether if the kidneys remain sound it is possible for such an accumulation of uric acid to occur in the system as to produce an attack of gout. We will first ascertain whether there is any evidence that an affection of the kidneys (functional or organic) is associated with or precedes gout.

ASSOCIATION OF KIDNEY AFFECTIONS WITH GOUT.

In the first place I think that the old idea must be abandoned that the kidneys can only eliminate a certain amount of uric acid. That the healthy kidneys are capable of separating from the blood and excreting large quantities of uric acid is shown by the observations, previously referred to, of Laache, Bartels, Stadthagen, and Bohland and Scherz on the excretion of uric acid in cases of leucocythæmia. In this disease the blood is laden with uric acid, and all these observers found a greatly increased daily excretion of uric acid, varying from twice to over six times the normal amount. This large excretion of uric acid by the kidneys shows that urates do not themselves cause damage to the uric acid secreting cells of the kidneys.

Views as to the association of gout and kidney disease.—Sir Alfred Garrod, Sir William Roberts, and Levison all attribute the accumulation of uric acid in the blood of gouty persons to deficient excretion rather than to increased production. Sir Alfred Garrod holds the view that among the causes exciting a gouty fit is a functional failure of eliminating power for uric acid on the part of the kidneys. He also considers that this early functional failure is followed in cases of chronic gout by structural kidney disease. His view is that the uric acid present in the blood in gout is formed in the kidneys and is absorbed from them into the blood. This view is quite compatible with the theory that a defective capacity of the kidneys for the excretion of uric acid is the primary pathological cause of gout. Levison [13] states that gout is not accompanied by leucocytosis, and therefore the nuclein of leucocytes is not available for the production of uric acid. He considers that gout cannot be developed unless a primary renal lesion is present, and that this is almost invariably of the nature of an interstitial change. Vogel [14] estimated, in three cases of chronic gout, the intake of nitrogen by analysis of the food and the output of nitrogen in the urine and the fæces. He found that there was a nitrogen retention greatly in excess of what could be attributed to a retention of uric acid. Vogel states that his patients behaved in this respect like sufferers from renal disease, although the clinical signs of granular kidney mischief were wanting in all the cases. It must be borne in mind that the absence of the clinical signs of kidney disease does not necessarily imply integrity of those organs.

Association of renal disease with the presence of uric acid in the blood, and with uratic deposits in the joints.—As previously mentioned, von Jaksch found considerable quantities of uric acid in the blood in all the cases of diseases of the kidneys that he examined, and his results were confirmed by Klemperer. It is well known that uratic incrustation of articular cartilages is not uncommonly found at the post-mortem examinations of subjects who have never been known to suffer from ostensible gout during life. Dr. Ord and Dr. Greenfield [15] examined a number of bodies in the post-mortem room for the existence of uratic deposits in the joints and the presence of kidney disease. Among ninety-six cases presenting lesions of the kidneys uratic deposits were found in the joints of eighteen. Dr. Norman Moore, [16] who bases his observations on the results of a large number of post-mortem examinations, states that chronic interstitial nephritis is found in a large proportion of those bodies in which sodium urate is to be seen in the joints. He found that chronic interstitial nephritis is not invariably accompanied by the presence of sodium urate in the articular cartilages, though it is usually accompanied by some traces of degeneration in some of the articular cartilages. He examined the following number of cases, in all of which, as far as could be ascertained, the patients had never suffered from ostensible gout.

Kidney disease.	No. of cases.	Uratic deposit in joint or joints.
Chronic interstitial nephritis...	53	25
Chronic parenchymatous nephritis	11	2

Levison [17] is a strong supporter of the view that there is always some degree of antecedent renal disease connected with gout. In reply to criticisms of this view he points out that the post-mortem examinations of gouty patients have generally shown renal lesions, and that the few exceptional cases are open to criticism. He states that all the post-mortem examinations of patients dying from granular kidney disease at the Communal Hospital, Copenhagen, during a period of fourteen months showed uratic deposits in one or other of the joints, although most of the patients were not known to have had any definite gouty attack. I thought that it would be a matter of interest to ascertain the proportion of cases of uratic deposition in the joints occurring in subjects in whom granular disease of the kidneys was found at the post-mortem examination, and in connection with whom the previous history as to the occurrence or not of gout was known. For this purpose I have obtained the help of some of the pathologists at the London hospitals, who have kindly examined the joints in such cases whenever they were able to do so. I have collected altogether the results of seventy-seven such examinations, for which I am indebted to the kindness of Dr. Cyril Ogle, Dr. F. J. Smith, Dr. Hebb, and Mr. Jackson Clarke. These seventy-seven cases were all cases of granular kidney disease, and in forty-one cases uratic deposits were found in one or more of the joints. The distribution of uratic deposits among the gouty and non-gouty cases is shown in the following table.

TABLE II.—*Showing the Results of the Examinations of the Joints of Seventy-seven Cases of Granular Kidney Disease.*

——	No. of cases.	Uratic deposit in joint or joints.
Known to have had gout... ...	10	10
Never known to have had gout	67	31
Totals	77	41

In the ten patients known to have had gout uratic deposits were found in one or more of the joints of all, and the kidney conditon was in every case described as "markedly granular" or "fairly granular." Amongst the sixty-seven cases of granular kidney disease in patients not known to have suffered from previous gouty attacks uratic deposits were found in one or more of the joints of thirty-one—that is, in 46 per cent. of the cases, which closely agrees with the 47 per cent. found under similar conditions by Dr. Norman Moore. In these sixty-seven cases are included all cases which showed the existence of any granular kidney disease, but several of the cases in which no uratic deposits were found were described as only "slightly granular" or "faintly granular." If from the sixty-seven cases a selection is made of those described as "markedly granular," or as "typical granular" kidneys, then the proportion of cases in which uratic deposits were found in the joints appears as follows.

——	No. of cases.	Uratic deposit in joint or joints.
Marked granular kidney disease	26	20

Thus it is seen that among the cases of marked granular disease of the kidneys occurring in persons who were never known to have suffered from ostensible gout during life uratic deposits were found in the joints of 77 per cent. of

[13] The Uric Acid Diathesis, 1894.
[14] Zeitschrift für Klinische Medicin, Band xxiv., p. 512.
[15] Transactions of the International Medical Congress at London, 1881, vol. ii., p. 101.
[16] St. Bartholomew's Hospital Reports, vol. xxiii., 1887.
[17] Zeitschrift für Klinische Medicin, 1894, xxvi., p. 293.

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the cases. These results, taken in conjunction with those of Dr. Norman Moore and of Levison, show that kidney disease exercises a powerful influence in causing an accumulation of uric acid in the blood and consequently in producing uratic deposits in the joints.

It has been urged that if kidney disease, with the consequent diminished excretion of uric acid, be the primary factor in the causation of gout, signs of kidney mischief would always manifest themselves prior to an attack of gout, and that very few such cases have ever been recorded. But, in the first place, it must be remembered that such signs are not usually looked for, and, in the second place, they need not necessarily reveal themselves clinically. It is well known that contracted granular kidney is not always evidenced either by the occurrence of albuminuria or of dropsy. The contention that if organic renal failure existed the urea excretion would probably be equally affected together with that of uric acid does not hold good, if the view is adopted that uric acid is produced in the kidneys while urea is only eliminated by them. It is well known that in gouty subjects the kidneys have been found at the post-mortem examinations in a diseased condition when there have been no external manifestations during life of the existence of such renal mischief. That uratic deposits are frequently found in the kidneys of gouty subjects is a matter of common experience, but in the absence of such deposits the kidney may still be affected. Sir Dyce Duckworth believes that changes occur in the kidneys of gouty subjects quite independently of uratic deposits in these organs. It has been urged that the renal theory is difficult to harmonise with the hereditary character of gout. It is quite possible, however, that there may be in gouty subjects a hereditary tendency to the renal affection, since both Dr. Dickinson and Eichorst have shown that there is an hereditary tendency to granular kidney.

Kidney disease and gout alike caused by certain toxic agents.—Certain toxic agents which predispose to, or which excite, kidney disease are also known to produce gout. Lead gives rise to both chronic kidney disease and gout. In chronic lead poisoning proliferation of the epithelium of the urinary tubules first occurs, followed by granular atrophy and excessive formation of interstitial tissue. In numerous cases of chronic lead poisoning gout has developed. Very similar changes occur in the gouty kidney, and it seems reasonable to assume that the changes in that organ in both chronic lead poisoning and in gout so affect the excreting apparatus of the kidneys as to seriously diminish their power of eliminating uric acid. That lead poisoning gives rise to the accumulation of uric acid in the blood has been shown by Sir Alfred Garrod. Gout subsequently developed in two cases of plumbism in which the blood was found by him to be rich in uric acid. He also determined the excretion of uric acid in the urine of two patients to whom acetate of lead was medicinally administered. In both patients a well-marked diminution of uric acid in the urine occurred. It was also noticed that after the lead had been given for a day or two the excretion of the uric acid in the urine was suddenly diminished to a very small amount—a condition which usually lasted for a day or two. This points to the fact that lead exercises a marked inhibitory effect on the cells of the kidneys concerned in the excretion of uric acid. The action of the lead is not due to inhibition of the formation of uric acid, since in cases of plumbism the blood becomes charged with uric acid. Alcohol is another body which in excessive quantities gives rise to kidney mischief and which may also give rise to gout.

I think there is abundant evidence to show the connexion between kidney mischief and gout for the following reasons: (1) uric acid has always been found in the blood in cases of renal disease; (2) uratic deposits are fairly frequently found in the joints of persons who have suffered from renal disease, but who have never been known to have had ostensible gout; (3) kidney mischief is frequently met with at the post-mortem examinations of gouty subjects; and (4) certain toxic agents predispose to both kidney disease and gout.

Probable anatomical seat of the kidney affection causing gout.—The anatomical seat of the presumed kidney affection giving rise to the development of gout is probably in the epithelium of the convoluted tubes, as that has been shown by Levison[18] to be the primary seat of disease in granular kidney, and by Oliver[19] to be the seat of the kidney affection associated with lead poisoning. The increase of interstitial tissue is probably a secondary change. My own belief is that a functional affection of the kidneys always precedes any gouty manifestations, and that this functional affection may subside if the exciting cause of it be removed, or it may pass on to a structural lesion. It is the liability to this functional affection of the kidneys which, in my opinion, constitutes the hereditary factor of gout. Such functional affection may, however, be started by various agents and causes, among which are excessive indulgence in nitrogenous foods, wines, and beers, the toxic effect of lead, and the influence of nervous impulses, such as mental shocks, severe accidents, &c. If this view be correct, it is obvious that the kidney condition must always be considered in the treatment of gout, and that, given diseased organs incapable of eliminating the normal amount of uric acid, either some other channel for its elimination must be secured or its formation must be limited to the diminished output, so that absorption of it into the general circulation may be avoided. The retention of uric acid in certain cells of the kidney and its subsequent absorption into the blood is analogous, as Sir Alfred Garrod has pointed out, to an attack of jaundice. When no obstruction exists to the exit of bile from the biliary passages no appreciable amount of its colouring matter is found in the blood, but when its free elimination is checked then absorption of it into the blood speedily takes place.

ORIGIN OF URIC ACID.

I now propose to discuss the various views as to the origin of uric acid, and to consider what its antecedents are and by what chemical processes or by what conjugations it results. A commonly received notion as to the origin of uric acid is that it results from a less perfect oxidation of the nitrogenous constituents of the tissues than occurs when urea is formed. According to this view urea is the ultimate product of the metabolism of nitrogenised tissues in mammals, the formation of uric acid being an intermediate stage of the metabolism. In birds and serpents it has been supposed that the nitrogen is eliminated in the form of ammonium urate without having undergone the further change into urea. This notion is mainly based on the observation of these two facts: (1) that uric acid by means of oxidising agents can be split up into urea and other substances; and (2) that in certain reptiles whose respiration is languid and whose temperature is low the kidneys excrete uric acid to the entire exclusion of urea. The inference that the production of the uric acid in such reptiles is the result of imperfect oxidation is, however, disproved by the well-known fact that birds, whose respiration is rapid and whose temperature is higher than that of mammals, also, like reptiles, excrete uric acid to the exclusion of urea. So that, although uric acid is a less highly oxidised product than urea, it is very doubtful whether it can be considered as an antecedent in the formation of urea.

Another commonly received notion is that gout is accompanied by an excessive formation of uric acid, which is usually attributed to the ingestion of a too highly nitrogenised diet, and especially to an animal one. Virchow,[20] however, considers that a too highly nitrogenised diet is not necessarily the cause of gout, because he has often observed gout in poorly fed convicts. Gout is certainly not incompatible with a vegetable diet, as amongst certain birds kept in captivity and living exclusively on grain uratic deposits have been observed around the joints. On the other hand, animal food does not necessarily produce uric acid in a healthy system, as is shown by its absence from the urine of some of the carnivora. It is true that the ingestion of very large quantities of proteid matter is followed by an increased production of uric acid, and *vice versâ*, but apparently it makes little, if any, difference whether the proteid matter is of animal or of vegetable origin. The only reason that a vegetable diet is less productive of uric acid than an animal diet is in the fact that the former is poorer in proteid material, and therefore to consume in the vegetable diet as much proteid matter as is ordinarily consumed in an animal diet would require the ingestion of a very large bulk of vegetable food. Therefore, the assumption is not altogether correct that the total daily excretion of uric acid is greater on an animal than on a vegetable diet. With the same intake of nitrogen in the two diets there is practically no difference in the uric acid output. This is shown by the experiments of Bleibtreu,[21] who examined his urine after

[18] Loc. cit.

[19] Loc. cit.

[20] Berliner Klinische Wochenschrift, 1884.

[21] Pflüger's Archiv, Band xlv., p. 401.

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three days' flesh diet and after three days' vegetable diet. Although after the flesh diet there was a considerable rise in the amount of urea excreted, there was very little difference in the uric acid excretion. After the three days' flesh diet the uric acid excreted in twenty-four hours was 0·859 grm., while after the three days' vegetable diet it was 0·791 grm. Similar results were obtained by Hirschfeld,[22] who found that on a diet very poor in nitrogen he excreted daily 0·417 grm. of uric acid, on one rich in albumin 0·386 grm., and in a highly albuminous diet 0·492 grm. That the production of uric acid is not dependent, at all events, to any great extent, on diet is also shown by the fact that the same diet which in one class of animals will produce uric acid will in another class produce urea. Thus in the urine of the carnivorous lion and tiger there is a quantity of urea and but very little uric acid; on the other hand, the carnivorous python and boa excrete uric acid and no urea. Graminivorous birds excrete uric acid and no urea, whilst herbivorous mammals excrete quantities of urea and but little or no uric acid.

Sir William Roberts,[23] comparing the functions of the kidneys of birds and serpents with those of mammals, considers that an immense functional evolution has taken place in the mammalian kidney—that the evolution of mammalian urine has probably turned mainly on the point that the mammalian plan required that the renal excretion should be voided not in the solid or semi-solid form, but as a watery solution. This modification would require the discarding of the sparingly soluble uric acid as a medium for the elimination of nitrogen and the substitution of a nitrogenous substance readily soluble in water, such as urea. He considers it possible that the reason why this substitution has not been completely effected is that in that particular the mammalian type has not yet reached its ideal perfection and that the residuum of uric acid in mammalian urine may be something in the nature of a vestigial feature.

View that uric acid is formed from urea in the kidneys.—In mammalia, including man, and in birds uric acid is absent from the blood in health, while urea is always present in the blood. The blood of the renal artery is much richer in urea than the blood of the renal vein—according to Picard in the proportion of about two to one, according to Sir Alfred Garrod in the proportion of about three to one. From his most recent observations Sir Alfred Garrod[24] concludes that in birds and other uric acid excreting animals the metabolism of the nitrogenised tissues is exactly the same as in mammals. He believes that urea is the ultimate product of this metabolism, and that the uric acid is a subsequent product of the union of urea with some other principle or principles, glycocine probably being one of them. He regards the kidney as the organ whose function it is to manufacture uric acid from the nitrogenised matters brought in the blood, and considers it possible that the kidney contains different cells—some for the formation of urea and some for the formation of uric acid—and that the ratio between the two may vary in different classes of animals. One very strong argument against the formation of uric acid in the liver, spleen, connective tissues, &c., is that it is never present in the blood of mammals (including man) and of birds in health. If it were formed in such organs or tissues it must be conveyed in the blood to the kidneys. Since, according to Sir Alfred Garrod's and my own investigations, urea, and not uric acid, is found in the blood of birds, and since uric acid, and not urea, is found in the urinary excrement of birds, it seems highly probable that urea is at least one of the sources of formation of uric acid and that the change is effected in the kidneys. Dr. P. W. Latham's[25] explanation of the formation of uric acid in the animal economy is that the amido bodies, glycocine, taurine, leucine, and tyrosine, are normally converted in the liver into urea; but if from any cause the metabolism of glycocine be interrupted there would then be present in the liver glycocine and urea, which would produce hydantoic acid and then hydantoin, and the latter, which is freely soluble, would then pass on in the circulation to unite in the kidneys with urea or with biuret to form an ammonium salt of uric acid. Therefore according to this view the imperfect metabolism of glycocine is the primary and essential defect in connexion with the abnormal formation of uric acid in the human system.

[22] Virchow's Archiv, Band cxvii., p. 301.

[23] Croonian Lectures on Uric Acid, Gravel, and Gout, 1892, p. 33. See also THE LANCET, June 18th and 25th, and July 9th and 16th, 1892.

[24] Proceedings of the Royal Society, 1893.

[25] Croonian Lectures, THE LANCET, April 3rd, 10th, 17th, and 24th, and May 1st, 1886.

According to Dr. Latham, the synthesis of uric acid from urea and glycocine takes place in the following steps:—

I. The urea and glycocine produce hydantoic acid:

$$\underset{\text{Urea.}}{CH_4N_2O} + \underset{\text{Glycocine.}}{C_2H_2(NH_2)O.OH} = \underset{\text{Hydantoic acid.}}{C_3H_6N_2O_3} + NH_3.$$

II. The hydantoic acid becomes dehydrated and forms hydantoin:

$$\underset{\text{Hydantoic acid.}}{C_3H_6N_2O_3} = \underset{\text{Hydantoin.}}{C_3H_4N_2O_2} + H_2O.$$

III. From more of the urea biuret is produced:

$$2\,\underset{\text{Urea.}}{CH_4N_2O} = \underset{\text{Biuret.}}{C_2H_5N_3O_2} + NH_3.$$

IV. By combination of hydantoin and biuret uric acid is produced:

$$\underset{\text{Hydantoin.}}{C_3H_4N_2O_2} + \underset{\text{Biuret.}}{C_2H_5N_3O_2} = \underset{\text{Uric acid.}}{C_5H_4N_4O_3} + NH_3 + H_2O.$$

The production of uric acid from urea and glycociine may be shown in a single equation as follows:—

$$3\,\underset{\text{Urea.}}{CH_4N_2O} + \underset{\text{Glycocine.}}{C_2H_2(NH_2)O.OH} = \underset{\text{Uric acid.}}{C_5H_4N_4O_3} + 3NH_3 + 2H_2O.$$

There are several reasons for believing that uric acid may be formed from urea and glycocine in the living organism. Horbaczewski produced uric acid by the interaction of urea and glycocine, and this result was confirmed by Dr. Latham. Glycocine is certainly formed in the human body, and probably is one of the antecedents of urea, for in man glycocholic acid, a compound of glycocine and cholic acid, passes in the bile into the intestine, and having served its purpose, and its constituents having been set free, the glycocine together with the other amido bodies, taurine, leucine, and tyrosine, pass in the portal blood to the liver, and probably in the hepatic cells are converted into urea. That glycocine is concerned in the production of uric acid is somewhat probable from the fact that in the carnivora, whose urine contains little or no uric acid, the bile contains no glycocholic but only taurocholic acid, and therefore yields no glycocine. The experiments of Hahn, Massen, Nencki, and Pawlow also support the view that glycocine is concerned in the formation of uric acid. They shut the livers of dogs almost completely off from the general circulation by diverting the portal circulation into the inferior vena cava, and found that, although the dogs passed less urea (the nitrogen being mainly eliminated as ammonium carbonate), the uric acid voided was considerably increased. Dr. Latham[26] believes that if an excessive amount of nitrogenous material is introduced into the portal circulation the portion which is least readily acted upon is the glycocine, the presence of which promoted the formation of uric acid. He considers that the primary defect in gout consists in the imperfect metabolism of glycocine.

It is quite possible that there is another means by which uric acid may be formed from urea. Gérard[27] has succeeded in converting uric acid into urea by the agency of micro-organisms derived from the air, and Magnier de la Source has effected a similar conversion by purely chemical agencies. The reaction is one of hydration, the uric acid uniting with the elements of water and yielding urea and tartronic acid, as shown in the following equation:

$$\underset{\text{Uric acid.}}{C_5H_4N_4O_3} + 4\,H_2O = 2\,\underset{\text{Urea.}}{CH_4N_2O} + \underset{\text{Tartronic acid.}}{C_3H_4O_5}.$$

One may therefore conjecture that the formation of uric acid from urea by the reversed action is at least possible. Though tartronic acid is not known to exist in the human body, it can be derived from lactic, malic, succinic, or tartaric acids. We may therefore conclude that the conversion of urea into uric acid by the agency of certain of the kidney cells is at least possible either by the conjugation of urea and glycocine or by the interaction of urea and tartronic acid, the last mentioned body being possibly derived from lactic acid.

Uric acid formation and liver disease.—If uric acid be formed in the kidneys from urea and glycocine brought from the liver, it can be readily understood that alterations in the metabolism of the liver must necessarily affect the formation and excretion of uric acid. This would explain why liver trouble of some kind or another is so commonly associated with gouty dyspepsia and also renders intelligible the fact that several observers have been unable to dissociate the

[26] Loc. cit.

[27] Comptes Rendus, 1896, 123, pp. 185-187.

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connexion between liver troubles and gout, and have therefore attributed the formation of uric acid to the liver. For instance, Dr. Murchison considered that gout is an hereditary disease by virtue of the transmission by parents to their offspring of a defective power of the liver, in virtue of which its functions are deranged with unusual facility; as a result of this derangement of the liver the metabolism of the albumin is to a great extent arrested at the stage of uric acid formation, instead of going on to the final stage of urea formation. Dr. George Harley considered that a strong relationship existed between gout and hepatic derangements. Sir Dyce Duckworth[28] is of opinion that "the liver is the organ in which in health uric acid is chiefly formed, and it is probably to derangement of function in this gland that we must look for over-production of this substance."

View that uric acid is formed from nuclein.—Horbaczewski[29] has shown that uric acid, as well as xanthin and hypoxanthin, can be prepared from spleen pulp. By digesting fresh spleen pulp with hot water till changes set up by bacterial agency are started he found that the fluid when freed from albuminous bodies contained xanthin and hypoxanthin, but no uric acid. By treating this fluid with arterial blood and keeping the mixture at from 40° to 50° C. uric acid forms in it after several hours. A similar result is produced by using as the oxidising agent either a dilute solution of hydrogen peroxide or an abundant supply of atmospheric air. Horbaczewski found that the nitrogen contained in the uric acid so formed was about equal in amount to the nitrogen contained in the xanthin and hypoxanthin (xanthin bases). So that there exists in the spleen nitrogenous substances which can be transformed, at all events in part, into xanthin bases or into uric acid. The xanthin bases when once formed cannot be further oxidised into uric acid. Horbaczewski brings forward proof that the substance which yields xanthin bases and uric acid is the nuclein of the spleen cells. It was found that when pure nuclein prepared from spleen pulp was dissolved in very weak alkali and digested with blood at 40° C. uric acid was formed. Sadowenj and Formanck have shown that uric acid can be prepared in a similar manner from almost all the tissues and organs of the body, and conclude that the nuclein contained in the cells is the mother substance.

It having thus been shown that uric acid can be prepared from nuclein outside the system, the next problem to solve was whether a similar decomposition also occurred in living human beings. Horbaczewski found that the excretion of uric acid can be increased either by the administration of nuclein with food or by the subcutaneous injection of a solution of it. Umber[30] found that the administration of a large amount (500 grammes per diem) of food like thymus, which contains a considerable quantity of nuclein, increases the excretion of uric acid as compared with its excretion when a similar amount of flesh is given. The same amount of liver given to one person caused an effect similar to that caused by thymus, but in others its action was less marked. Kidney and brain administered as food yielded nearly the same amount of uric acid as flesh.

From his experiments Horbaczewski concludes that uric acid is formed in health by the disintegration of nuclein, and that sudden variations in uric acid production may be due to the breaking up of leucocytes and conversion of their nuclein into uric acid or xanthin bases within the system. It has been shown by many observers that a temporary or permanent leucocytosis is always accompanied by an increased excretion of uric acid. A relationship between the number of leucocytes in the blood and the excretion of uric acid is observable in human beings during fasting and after taking food. During fasting the number of leucocytes diminishes and the amount of uric acid excreted falls; after taking food the number of leucocytes increases and the amount of uric acid excreted rises. The increase in the number of leucocytes in the blood after a meal appears to be due, at all events in part, according to Hofmeister,[31] to the rapid increase of lymph cells in the adenoid tissue of the stomach and intestines during digestion, whence they are discharged into the lymph stream and finally into the blood. Gamprecht,[32] who uses the term "alloxur bodies" in Kossel and Krüger's sense, as meaning those bodies which have an alloxan and urea nucleus, and therefore as including, besides uric acid, xanthin, guanin, hypoxanthin, adenin, and their derivatives, found that in the exceptional cases of leucocythæmia in which the uric acid excretion is normal or diminished the alloxur bases are increased and that their amount varies directly with the amount of leucocytosis. He gives one case of his own in which this is shown very clearly, and points out that it forms an additional support to Horbaczewski's view that uric acid comes from degeneration of leucocytes and is formed from their nuclein.

From a consideration of all the work that has been done in connexion with leucocytosis and the excretion of uric acid it is clear that there is no constant ratio between the number of leucocytes and the amount of uric acid excreted, for there may be leucocytosis without increase of uric acid, as there may be an increase of uric acid without leucocytosis. I think that in cases of leucocythæmia, severe anæmia, &c., where uric acid is present in the blood, it is probably derived from the nuclein of leucocytes or other cells. It is, however, in my opinion, wrong to draw the further inference that the source of the uric acid excreted in health is the nuclein derived from leucocytes throughout the body. If such were the case, uric acid would be found in the blood in health, but, as previously shown, it is not. Moreover, in birds there is no special leucocytosis to account for the large formation and excretion of uric acid that occurs.

View that part of the uric acid is introduced ready formed in food.—Dr. Haig, who, in my opinion, wrongly ascribes to uric acid an almost universal *rôle* in the causation of disease, claims that the uric acid excreted in the urine comes from two sources—(1) the uric acid which is formed in the body out of nitrogenous food; and (2) the uric acid introduced into the body ready formed in certain articles of diet, such as meat, meat extracts, soup, tea, coffee, &c. He considers that flesh diet increases both the introduction and the formation of uric acid, a view which is opposed to the previously quoted experimental results obtained by Bleibtreu and by Hirschfield. Dr. Haig[33] gives the quantities of uric acid which a man may introduce into his system with an ordinary dinner as follows:—

					Grain.
8 ounces	soup,	containing 0·02	per cent.	uric acid =	0·70
2 ,,	fish,	,, 0·03	,,	,, =	0·26
3 ,,	meat,	,, 0·04	,,	,, =	0·52
½ drachm	meat extract,	,, 0·80	,,	,, =	0·24
					1·72

As far as I can ascertain from Dr. Haig's writings he has never identified by the murexide test this uric acid reported to be present in these various articles of diet. Apparently, these estimations depend solely on the application of Haycraft's process to the articles of diet, and the subsequent calculation of the silver precipitate so obtained in terms of uric acid. Dr. Haig[34] writes: "I have all along felt that in applying Haycraft's process to extracts of tissues I was walking on dangerous ground as regards theoretical chemistry, and I have therefore been careful to point out that, while I gave figures of the amount of uric acid found in various animal foods by this process, the only satisfactory test of the amounts of these compounds contained is the physiological one of eating a known quantity of the substance in question, and watching the effects on excretion in the urine." That Dr. Haig's peculiar view as to the direct introduction of uric acid in articles of diet is an erroneous one is shown by the absence of uric acid from the blood of man and animals in health. Dr. Haig has also advanced the theory that normally there is a constant ratio of 1 to 35 between the uric acid and urea formation, and that if the uric acid excretion falls below this ratio it is due to the retention and storage of uric acid in the liver, spleen, kidneys, joints, and fibrous tissues, whereas an increase in the proportion of uric acid to urea is due to the washing out from its storage places of the deposited uric acid. According to this view the amount of uric acid produced in each individual is a constant factor, the variations in the amounts eliminated being due, on the one hand, to excessive storage, and on the other to the discharge of the stored up supply. This theory of the existence of a normal ratio of uric acid to urea, and of every departure from it being due to a pathological cause, is disproved by the following experiments. Bleibtreu and Schultze,[35] experimenting on themselves,

[28] A Treatise on Gout, 1889.
[29] Beiträge zur Kentnisse der Bildung der Harnsäure und der Xanthinbasen. Sitzungsberichte der Königlichen Akademie der Wissenschaften in Wien, C. iii., 1891.
[30] Zeitschrift für Klinische Medicin, 1896, 29, pp. 174-189.
[31] Archiv für Experimentelle Pathologie und Pharmakologie, Band xxii., p. 306.
[32] Centralblatt für allgemeine Pathologie und Pathologische Anatomie, 1896, vol. vii., p. 820.
[33] Brit. Med. Jour., 1894, vol. ii., p. 1299.
[34] Uric Acid as a Factor in the Causation of Disease, 1896, p. 9.
[35] Pflüger's Archiv, Band xlv., p. 401.

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showed that the ratio between uric acid and urea can be considerably altered by means of the diet without the general health being influenced. 2. Dr. Herringham and Mr. Groves,[36] as the result of a series of experiments that they made, entirely fail to corroborate Dr. Haig's observations and think that either what was true for his system was not true for theirs, or that Dr. Haig's results were, to quote their own words, "inaccurate and deceptive owing to his having employed a very uncertain and inaccurate method for the estimation of uric acid." 3. The following results of the determinations that I have made of the total daily eliminations of uric acid and urea in the urine of a healthy adult man, and which consist of observations extending over a period of fifty days, show that the ratio of uric acid to urea varied from 1:28 to 1:55 (the average being 1:42), although throughout the entire period the individual remained in good health.

TABLE III.—*Fifty Daily Eliminations of Uric Acid and Urea of a Healthy Adult Man on a Mixed Diet.*

No. of ounces of urine per diem.	Uric acid excreted per diem (grammes).	Urea excreted per diem (grammes).	Ratio of uric acid to urea.
63	0·654	28·34	1:43
68	0·714	31·62	1:44
72	0 626	29·82	1:47
42	0·532	29 39	1:55
61	0·819	30·19	1:37
56	0·663	25 22	1:38
65	0·616	27·67	1:45
59	0 612	24·44	1:40
41	0 826	30 32	1:37
57	0·705	21·91	1:31
49	0·618	31·27	1:50
63	0·751	27·57	1:37
48	0·722	28 89	1:40
64	0·569	23·44	1:41
51	0·652	29 89	1:46
60	0·608	27·00	1:44
56	0·591	27·71	1:47
50	0·561	27·54	1:49
60	0·630	27 91	1:44
45	0·742	26·56	1:36
45	0·550	23·60	1:40
60	0·640	31·34	1:49
61	0·581	28·34	1:49
61	0·537	22·35	1:41
64	0·572	26·49	1:46
53	0 595	21·24	1:36
55	0 764	24·73	1:32
69	0·637	28·58	1:45
63	0·526	23·13	1:44
72	0·583	28·88	1:49
45	0·620	24·26	1:39
45	0·693	28 01	1:40
52	0·680	30 04	1:44
69	0·705	33·16	1:47
40	0·837	25·62	1:31
42	0·728	30·54	1:42
67	0·665	30·11	1:45
44	0 550	29 50	1:53
54	0·554	29·88	1:54
62	0 582	26·13	1:45
55	0 515	22·15	1:43
55	0 632	27·14	1:43
54	0·585	28·34	1:48
66	0 776	28 05	1:36
49	0·536	25·20	1:47
67	0·660	23·56	1:42
45	0 550	21·63	1:39
35	0·660	23 10	1:35
55	0 624	23·09	1:37
57	0·691	19·76	1:28

[36] Journal of Physiology, 1891.

TABLE IV.

—	Excretion of uric acid.	Excretion of urea.	Ratio of uric acid to urea.
Daily average in grammes	0·639	26·89	1:42
Daily average in grains	9·8	415·0	1:42
Average in twenty-four hours for each pound of body-weight (in grains)	0·07	3·19	—

It is evident from the above results that no constant ratio exists in a given individual between the excretion of uric acid and urea. Variations in the daily elimination of uric acid in healthy individuals are not due to the sweeping out of uric acid from the different organs and tissues into the blood, for uric acid is never found in the blood of healthy persons. Differences from day to day in the uric acid excretion probably depend upon the amount of glycocine leaving the liver and passing on to the kidneys; this factor would be affected by variations in the metabolism of the liver, which may be induced by changes in the quality or quantity of the diet, by the amount of exercise, and by various nervous influences. Dr. Latham[37] has suggested a possible reason why those persons who have a tendency to gout and who take little exercise tend to develop the disease. It is that insufficient muscular exercise tends to the formation of glycocine. This is seen in the case of horses, which when put to hard work eliminate benzoic acid in the urine, but if kept in the stable for some time benzoic acid appears in the urine in combination with glycocine as hippuric acid, which is benzoyl-glycocine.

Different modes of formation of uric acid in health and in blood disorders.—From a consideration of the various views as to the origin of uric acid I think it is evident that there are two distinct and different ways in which it may originate. 1. In health I believe that it is only formed in the kidneys, probably from urea and glycocine, and that it is at once eliminated in the urine. If from any functional or organic affection of the uric acid eliminating cells of the kidneys its proper excretion is inhibited, then it is absorbed into the general circulation and constitutes the store from which the uratic deposits of gout are formed. 2. In diseases which are accompanied by leucocytosis I believe that uric acid may be formed from the nuclein of leucocytes in the spleen and possibly throughout the system generally, but that such uric acid is readily eliminated by the kidneys which remain sound as regards their uric acid secreting structures; consequently gouty deposits never occur in connexion with such diseases. The two different modes of formation of uric acid might be distinguished as the urea formation and the nuclein-formation of uric acid.

CAUSES OF URATIC DEPOSITION IN GOUT.

As I take the view that the uratic deposits of gout are derived from uric acid absorbed into the blood from the kidneys, I propose to consider now the various causes for its crystallisation from the blood and the reasons why it selects certain tissues as seats for its deposition. It is necessary to briefly consider (*a*) the form in which uric acid is absorbed into and circulates in the blood, and (*b*) the form in which it is deposited from the blood or fluids of the body.

Form in which uric acid exists in the circulation.—Sir William Roberts[38] has shown that the amorphous urate deposit of human urine is of the same composition as the solid or semi-solid urinary excrement of birds and serpents, the only difference being one of physical form. The deposit from human urine is amorphous, whilst the urinary excrement of birds and serpents consists of minute crystalline spheres. Sir William Roberts shows that this difference in physical form is a mere accident of molecular aggregation, since under certain conditions the amorphous urate deposit can be transformed into crystalline spheres, whilst the crystalline urinary substance of birds and serpents can be converted into amorphous deposit. Dr. Bence Jones[39] was the first to show that the amorphous urate deposit yielded to water a soluble moiety

[37] On the Formation of Uric Acid in Animals, 1884, p. 42.
[38] Loc. cit.
[39] Journal of the Clinical Society, 1862, vol. xv., p. 201.

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consisting of true biurate and left a sediment consisting of pure uric acid, and from the results of his analyses he inferred that the amorphous urate deposit consisted of, or at least often contained, a molecule of biurate in loose combination with a further molecule of uric acid. Sir William Roberts took up and continued the investigation dropped by Dr. Bence Jones thirty years before, and has conclusively shown that a third order of uric acid salts—the quadriurates—exists and that the amorphous urate deposit of human urine and the urinary excretion of birds and serpents belong to this order, and consist of a true and definite compound of biurate and uric acid in the proportion of one molecule of each. Sir William Roberts concludes that the quadriurates are the physiological combinations of uric acid. They exist normally in the urine and constitute the only form in which uric acid exists in normal urine. All the morbid phenomena due to uric acid probably arise from secondary changes in the quadriurates. The amorphous urate or quadriurate deposit of urine is generally referred to as consisting of a mixture of the potassium, sodium, ammonium, and calcium urates. As far as I can ascertain, however, no quantitative determination of the bases in the deposit has yet been made. The nearest approach to it is an analysis made by Sir William Roberts[40] of a sample of amorphous urate deposit prepared by an artificial process with potassium carbonate, and which would therefore most probably contain more potassium than the natural deposit. I therefore considered it advisable to determine the actual bases present in the amorphous urate deposit and their relative proportions. The deposit was obtained from several gallons of acid urine passed by patients suffering from febrile diseases, and was collected in a filter and allowed to drain. It was decomposed by boiling with distilled water and excess of hydrochloric acid, allowed to cool, filtered from the deposited uric acid, and the filtrate, which then contained the bases in the form of chlorides, was evaporated to dryness. The residue was taken up with distilled water, filtered from the minute amount of uric acid left in solution after the precipitation of the bulk of the acid, and evaporated to dryness. Part of the residue was submitted to qualitative analysis and found to consist of ammonium, sodium, and potassium, with very small traces of calcium and magnesium. The amounts of ammonium, sodium, and potassium were then estimated in the usual manner in the other portion, when their relative quantities were found to be as follows:—

	Parts per 100.
Ammonium	46
Sodium	40
Potassium	14

These amounts calculated as the respective quadriurates would approximately give the following composition for the amorphous uratic deposit that naturally forms in acid febrile urines: 7 molecules $NH_4HC_5H_2N_4O_3$, $H_2C_5H_2N_4O_3$ (ammonium quadriurate); 5 molecules $NaHC_5H_2N_4O_3$, $H_2C_5H_2N_4O_3$ (sodium quadriurate); 1 molecule $KHC_5H_2N_4O_3$, $H_2C_5H_2N_4O_3$ (potassium quadriurate). The uric acid which is formed in the kidneys is probably at once converted into the mixture of these three quadriurates, which in the normal state are then excreted dissolved in the urine. If, however, any absorption of them takes place into the blood, as probably occurs in the gouty state, the ammonium and potassium quadriurates would be converted by the sodium carbonate of the blood into sodium quadriurate, which would constitute the sole compound of uric acid circulating in the blood. It is from this body that the sodium biurate, of which the gouty deposits consist, is formed.

Formation of the sodium biurate from the quadriurate.—Sir William Roberts investigated the behaviour of free uric acid with blood serum and kindred media with the object of endeavouring to throw light on the mode in which sodium biurate originates in the body and on the conditions which control the precipitation of sodium biurate in the gouty system. He worked with solutions of uric acid in blood serum and in a standard solvent which was prepared as follows.

Composition of Sir William Roberts's standard solvent.—Sodium chloride, 0·5 gramme; sodium bicarbonate, 0·2 gramme; and distilled water, 100 c.c. This solution represents the blood serum, in so far as its saline ingredients are concerned. Sir William Roberts found that it reacted with uric acid and the urates in the same manner as blood serum itself, and in the same manner as a solution comprising all the salts of the serum in their proper proportions. He found that blood serum and the standard at the temperature of the human body both dissolved uric acid to the extent of about one part in 500, thus exhibiting about twenty times the solvent power that the same media exercise on sodium biurate. The chemical and solvent power is dependent on the sodium carbonate contained in them, and is due to that body converting the uric acid into sodium quadriurate. This sodium quadriurate which remains in solution is gradually converted by the excess of sodium carbonate into sodium biurate, and this on account of its lesser solubility is eventually precipitated in the crystalline form. Sir William Roberts infers from these results that in the normal state uric acid is primarily taken up in the system as quadriurate, and that as such it circulates in the blood. The detained quadriurate, circulating in a medium rich in sodium carbonate, is gradually transformed by the latter into sodium biurate, which is less soluble and is probably less easily excreted by the kidneys than the quadriurate. This biurate is probably not precipitated at once, since it would most probably pass at first into the hydrated or gelatinous condition, which is a much more soluble modification of sodium biurate than the crystalline form; but with due lapse of time and increasing accumulation it passes into the anhydrous or crystalline condition, and as this form is almost insoluble precipitation of it occurs or is likely to occur. The reason that in leucocythæmia and other blood diseases no uratic deposits occur is that the uric acid produced in the various organs or tissues is discharged into the blood as a quadriurate, and as this requires some hours for its maturation before it is possible for it to deposit sodium biurate there is abundant time for the kidneys to eliminate it, provided these organs are sound. In connexion with gout, if the view be correct that defective elimination of uric acid by the kidneys always occurs, the conditions are quite different. In gout uric acid is absorbed from the kidneys into the general circulation owing to the partial failure of the uric acid excreting function of the kidneys. The uric acid is absorbed as the sodium quadriurate, which, dissolved in the blood, gradually passes through the maturation process and forms sodium biurate. When the amount of the biurate in the blood is more than that fluid can retain in solution then deposits of it occur in those tissues which, either on account of having received previous slight injuries or because of their poor vascular supply, specially favour its deposition.

SEATS OF URATIC DEPOSITS IN GOUT.

Uratic deposits are found almost exclusively in structures belonging to the connective tissue class—in cartilages, ligaments, tendons, and in the cutaneous and subcutaneous connective tissue. They are conspicuously absent from the muscular tissue, and from the substance of the liver, spleen, brain, and lungs. Uratic deposits have been very occasionally found in the following places: In the mitral and aortic cardiac valves, in atheromatous patches in the aorta, in the walls of veins, in the crico-arytenoid ligaments, in the vocal cords, in the walls of bronchial tubes, in the mucous follicles of the pharynx, upon the meninges of the brain and spinal cord, upon the spinal nerve sheaths, in the sclerotic coat of the eye, and the fibrous envelope of the retina. It is always in the fibrous tissue which participates in the formation of the nervous envelopes that the deposit is found. Uratic crystals have also on two occasions been detected in the sputa of gouty patients. Sir William Roberts considers that the visceral neuroses and the thrombosis and embolism met with in gout are not the result of the dissolved uric acid in the blood, but are due to precipitation of minute crystals of sodium biurate either in the substance of the organs or in the blood itself.

Anatomical seat of the deposit in cartilages.—The uratic deposit first occurs in the central portion of articular cartilage—a point farthest from the network of nutrient capillaries and a point whose nutrition is more easily retarded. It is also probably the point of greatest pressure; hence a long walk, a dance, or similar violent exercise may precipitate an attack of gout. Uratic deposits occur in cartilages, ligaments, synovial membranes, and their fringe-like processes. In synovial membranes the deposit is not on the surface, but in the subserous tissue. Ebstein states, as the result of the examinatiom of a typical gouty knee-joint,

[40] Loc. cit., p. 20.

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that directly under the surface of the cartilage a very shallow tissue layer exists in which crystals are wanting, and in the layer immediately beneath this the crystals are most plentiful. He agrees with Sir Alfred Garrod that only two-thirds of the thickness of the cartilage is usually infiltrated, although exceptionally—as shown by Cornil and Ranvier—the whole cartilage may be infiltrated. With regard to the exact relation of the uratic deposit to the various elements of articular cartilage the cartilage cells are held to be the centres of primary deposit by Cornil and Ranvier, Charcot, Rindfleisch, Budd, and Garrod. Cornil and Ranvier consider that nutritive disturbances in the cartilage cells precede the deposition of sodium urate. Rindfleisch and Budd, however, consider that the cartilage cells do not take any active part. Some observers, including Sir Dyce Duckworth, consider that the deposition occurs quite indiscriminately, not selecting for its original site any particular element of the cartilage. Others, as Bramson, Rokitansky, and Auguste Foerster, think that urates deposit in the intercellular cartilaginous substance.

THE ADMINISTRATIVE TREATMENT OF UNDEFINED CASES CERTIFIED AS SCARLET FEVER.

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IN this communication we intend giving an account of the management of the undefined cases admitted to the City of Glasgow Fever Hospital, Kennedy-street, from November, 1895, to November, 1896. Prior to the former date there was no arrangement for the special observation of cases of this nature. The hospital, which is exclusively employed for the treatment of scarlet fever, consists of fourteen wards built on the pavilion system, and has accommodation for about 320 patients. The pavilion chosen for the purpose of isolation consists of three divisions separated one from another by brick partitions which extend from floor to ceiling, while each division has a separate communication with the outside. Two of them have a capacity of 16,500 cubic feet each, and the third of 8000 cubic feet. The last has also separate latrine accommodation and bathroom.

The patients sent to the pavilion were of three classes: (1) cases in which the appearances on admission did not justify a positive diagnosis of scarlet fever; (2) cases where the symptoms and appearances suggested some other disease—e.g., tonsillitis or non-specific erythema; and (3) cases of undoubted illness where the symptoms were obscure, but suggestive of some other infectious disease—e.g., enteric fever. Cases in which some other infectious disease was frankly present were immediately transferred to the Belvidere Fever Hospital without admission to the wards.

The two larger divisions were used for the first two classes, and the smallest division for the third class of cases. The whole pavilion was under the supervision of a very careful and experienced charge nurse whose powers of observation could be relied on, while each division had its special staff of day and night nurses. During their residence in the ward the patients were carefully observed for signs of scarlet fever, the urine being examined twice daily for albumin and evidence of desquamation carefully looked for. As soon as desquamation became definite or scarlet fever complications showed themselves the patient was transferred to a scarlet fever ward, where he completed the statutory period of eight weeks in hospital. Cases which did not turn out to be scarlet fever were kept in the isolation ward for a period varying with the nature of the case, but as a rule were not dismissed under four weeks, which we considered long enough for any such definite evidence as desquamation or nephritis to develop. None of the cases dismissed from the isolation ward were sent back to hospital with evidences of scarlet fever. The main objection which we have heard raised against the kind of arrangement adopted by us is that now and again patients who ultimately prove to have scarlet fever are mixed with those who do not, and thus may infect the others. Our experience seems to show that this fear is more or less baseless, as no case of scarlet fever occurred in the isolation ward.[1] We tried to minimise the risk of infection by putting the patients at as great a distance from one another as possible and allowing at least 4000 cubic feet of air space to each. We also cautioned the nurses to take special care when attending a patient the subject of any inflammatory secretion by which infection might be carried.

The number of cases observed by us amounted in all to 45, and they fall into the following groups, of the more important of which we give typical examples. Of the 45 cases observed, 11 (24·4 per cent.) ultimately proved to be cases of scarlet fever, 6 (13 3 per cent.) belonged to the class of doubtful scarlet fever, and 28 (62·2 per cent.) were not scarlet fever. The last class was made up as follows: tonsillitis, 11 cases; non-specific eruptions, 4 cases; dermatitis, 2 cases; cellulitis, 2 cases; measles (?), 2 cases; rotheln (?), 1 case; broncho-pneumonia (one complicated with marasmus), 2 cases; gangrenous ulceration of throat, 1 case; general tuberculosis (?), 1 case; and not classed, 2 cases.

CASES 1 AND 2. *Examples of cases ultimately classed as scarlet fever.*—A girl, aged thirteen years, was admitted to hospital on Jan. 31st, 1896, with a history of illness beginning two days previously with sore-throat, sickness, and vomiting. A rash was said to have been seen on the hands. On admission there was no evidence of a scarlet fever rash and the temperature was 100°F. The faucial pillars and soft palate were injected, and there were specks of creamy exudation in the follicles of the tonsils. The glands at the angle of the jaw were slightly enlarged. On Feb. 6th characteristic desquamation was observed, beginning on the neck; slight albuminuria had been observed for a few days prior to this. The patient, who had been sent to the isolation ward on admission, was transferred to a scarlet fever ward, from which she was dismissed on April 4th.

A girl, aged six years, was admitted to hospital on Sept. 5th, 1896, with a history of illness beginning three days before with sore-throat. A faint rash was said to have been observed on the second day on the limbs. On admission there was no evidence of a scarlet fever rash; the temperature was 100·2°F.; the pulse was 100; the tongue was slightly furred; the fauces and tonsils were acutely congested and there was exudation in the follicles of the tonsils; and the cervical glands were slightly enlarged. No definite desquamation was observed in this case. The patient suffered from enlarged cervical glands, rheumatic pains in the joints, and (in the third week) albuminuria. On Oct. 4th she was transferred to a scarlet fever ward, from which she was dismissed well on Nov. 4th.

CASE 3. *Example of cases classed as doubtful scarlet fever.*—A girl, aged five years, was admitted to hospital on July 13th, 1896, with a history of illness beginning five days previously with sore-throat, sickness, and vomiting. No rash had been observed. On admission there was no evidence of scarlet fever rash. The temperature was 101·2°F. and the pulse was 120. Conjunctivitis and coryza were present; the lips were excoriated; there was herpes on the left cheek; the throat was congested generally, and the tongue slightly furred. A trace of albuminuria was observed for a day or two after admission, but not afterwards. Later a few pinholes were observed on the pads of the distal phalanges of the fingers, but there was no distinct desquamation. She was dismissed well on Oct. 21st, having been kept in on account of an accident.

CASE 4. *Example of cases classed as tonsillitis.*—A boy, aged nine years, was admitted to hospital on Nov. 22nd, 1895, with a history of illness beginning two days previously with headache and sore-throat. There was no history of rash. Two other members of the family, suffering from undoubted scarlet fever, were admitted to the hospital a few days before. On admission there was no evidence of a rash; the

[1] It happened during a press of work that one division of the isolation ward was used for a short time for cases of acute scarlet fever which had been sent in suffering from a concurrent attack of measles. The division was fumigated with sulphur and the windows were left open for two months before it was again used for isolation purposes. A case of simple tonsillitis was then placed there alone, with special nurses, and three weeks after admission the patient developed scarlet fever. The only source of infection at the time seemed to be the dust of the ward, and it has little bearing on our general contention.

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temperature was 99·4° F. The throat was mildly, if at all, injected; the tonsils were chronically enlarged, and the tongue was covered with a thin white fur through which the papillæ appeared prominent. No desquamation or scarlatinal complication supervened, and the patient was transferred to the isolation ward on Dec 7th, from which he was dismissed on Jan. 1st, 1896, nothing having occurred to warrant the diagnosis of scarlet fever.

CASE 5. *Example of cases classed as dermatitis.*—A man, aged twenty-one years, was admitted to hospital on April 8th, 1896, with a history of illness beginning two days before with sickness and headache. A rash was seen on the second day. The patient said that he had had a similar condition before. On admission there was a general erythema of the forearms and of the legs below the knees. The tongue was furred and the throat generally was somewhat congested. The temperature was 100 4° F. A desquamation followed over the parts affected with the erythema. He was dismissed on May 5th.

CASE 6. *Example of cases classed as cellulitis.*—A boy, aged two and a half years, was admitted to hospital on July 15th, 1896. No history accompanied the patient. The child had been dismissed from the Belvidere Fever Hospital after an attack of measles on July 6th. On admission to the City of Glasgow Fever Hospital, Kennedy-street, a dark patchy rash was present on the chest, limbs, and ears; the lips were dry, cracked, and covered with crusts; the dorsum of the tongue was covered with white patches; the left cheek was swollen and glazed; but the mucous membrane of the mouth looked natural. The left forearm and hand were swollen, and the tissues of the upper arm and axilla were swollen and red and pitted on pressure. There was no albuminuria. The temperature was 103° F., the pulse was 160, and the respirations were 60. Free incisions were made in the arm, but the cellulitis spread, and death occurred on July 17th.

CASE 7. *Case of ulcerative inflammation of the throat (non-scarlatinal).*—A boy, aged three years, was admitted to hospital on Feb. 1st, 1896, with a history of illness beginning two days previously with sore-throat. There was no history of rash, and on admission there was no evidence of a rash. The temperature was 101° F. The fauces were injected, and the tonsils were large, the glands in the neck being slightly enlarged. The tongue was furred, but the papillæ were not injected. Coryza and conjunctivitis were present. Nothing suggestive of a scarlet fever or measles rash was observed. The local condition in the throat became worse with rapidly advancing ulceration and necrosis, resulting in death on Feb. 10th. A post-mortem examination was not allowed.

CASE 8. *Case of non-specific eruption.*—A woman, aged twenty-seven years, was admitted to hospital on Dec. 19th, 1895. The patient stated that an eruption had been observed two days before, unaccompanied by malaise or sore-throat. She had been eating some patent sweetmeat for some days before. On admission the temperature was 98·4° F. The throat and tongue were natural. There was a general erythema over the upper extremities; over the forearms, in addition, were numerous, slightly raised erythematous spots, fading on pressure. Over the legs below the knees and on the dorsa of the feet there was a general erythema, fading on pressure. On the extensor aspect of the thighs there was a distinctly punctiform mottling, while over the adductor aspect the mottling was retiform. It did not fade on pressure. The trunk was quite free from any erythema or mottling. In the course of four days the eruption had completely faded, and the patient was dismissed on Dec. 25th.

The cases which proved to be scarlet fever may be dismissed with the remark that the certifying practitioner having seen the case earlier had probably more definite and specific signs on which to found his diagnosis, Case 1 affording an example of this. We would call attention to Case 2; in this patient no desquamation was observed, though the child suffered from well-marked scarlatinal sequelæ—viz., enlarged cervical glands, rheumatic pains in the joints, and albuminuria.

Of the cases of doubtful scarlet fever we give Case 3 as a fairly typical example. A brother admitted at the same time probably had scarlet fever. He also was considered doubtful at first, but was after a time transferred to a scarlet fever ward on account of desquamation on the legs. He was dismissed from the latter after five weeks' residence without having contracted scarlet fever.

As regards cases of tonsillitis no great difficulty is experienced when they occur singly in a family none of the other members of which are suffering from scarlet fever; but when they arise in a family in which one or more of the members are suffering from scarlet fever they are a cause of great anxiety to the physician in attendance. Attacks of this nature are considered by many authorities to be specific and infectious, and yet they do not seem to confer immunity on the person attacked. We have a good example of this in the family the case of one member of which is reported *in extenso* (Case 4). On the same day as Case 4 a younger brother was admitted. A day or two later an elder brother and a sister were also sent to the hospital. The history in each case was similar to that of Case 4, and on admission there was nothing observed but a tonsillitis. The sister and two younger brothers were transferred to the isolation ward on Dec. 7th, 1895, and were dismissed well on Jan. 1st, 1896, nothing having occurred to warrant the diagnosis of scarlet fever. The third brother was left in a scarlet fever ward, and after twenty-six days developed a typical attack of scarlet fever. Similar cases with a like sequel have been observed by ourselves and are doubtless familiar to anyone who has had charge of scarlet fever wards for some time. We have classified such cases under the heading of tonsillitis, though one might be justified in considering them as cases of aborted scarlet fever. The class of non-specific eruption includes, besides the case of which a synopsis is given above, one case of urticaria and two where an erythema of an indefinite character was present, but where neither the history nor the course of the case led to any reasonable suspicion of scarlet fever.

Of the unclassified cases, one patient was hysterical and the other was sent in from a public institution along with another child who was suffering from scarlet fever. She, however, neither had that disease on admission nor did she contract it.

Glasgow.

ILLUSTRATIVE CASES OF APHASIA.

BY BYROM BRAMWELL, M.D., F.R.C.P. EDIN., F.R.S. EDIN.,

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(Continued from p. 871.)

CASE 3.—*Complete word-blindness and marked agraphia; no hemianopsia; partial recovery; second cerebral attack followed by complete word-blindness, marked agraphia, and right sided homonymous lateral hemianopsia; post-mortem examination; large lesion (softening) in the white matter of the left occipital and parietal lobes; the left angular gyrus intact; softenings in the right hemisphere, cerebellum, &c.*—In the following case the patient was suddenly seized with giddiness and mental confusion, but no loss of consciousness. In this state of mental confusion he mistook lead pencils and spectacles for money. This condition was followed by paraphasia, word-blindness and agraphia, and some loss of power in the right hand. When I first saw him, some eight months after the original seizure, he was almost completely word-blind and almost totally unable to write; his memory was defective, but he could understand everything which was said to him and could speak perfectly. From this condition he slowly recovered. Three months afterwards he had a second cerebral attack. The word-blindness and agraphia again became almost complete, and right-sided homonymous hemianopsia was now developed. I am consequently disposed to think that the lesion, which in the first instance had, I supposed, involved the left angular gyrus (visual speech centre), had extended more deeply into the white matter and invaded the optic radiations of Gratiolet. In this localisation I was mistaken, for the post-mortem examination showed that the cortical grey matter (angular gyrus) was unaffected, the lesion being situated in the white matter of the occipital and parietal lobes. During the time which elapsed between the patient's first coming under my notice and his death there were several additional seizures, and the lesions found at the post-mortem examination were multiple. It is difficult in such circumstances to draw accurate conclusions, but the point of interest is that the visual speech centre itself did not seem to be directly involved, while the power of writing was markedly impaired. Other points of interest in the case are:—1. That

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the patient, who was unable to read the words "hat," "dog," and "cat" written on the blackboard, did manage to read them (by the aid of muscular sense impressions) when he traced them over with chalk.[1] 2. That the patient could not name the letter "G," but when asked to name it said "George"—his own name. In other words, in this patient, as in some other cases of sensory aphasia which I have met with, the individual letters had in some degree lost their original significance and had (no doubt in consequence of frequent association and repetition) come to be associated with the names of things or with words. The condition is somewhat similar to that which was present in the next case, in which the patient could read words (combinations of letters), but was nevertheless unable to read the individual letters of which those words were composed. 3. That at my last visit the patient (who was not blind it must be remembered) was unable to name objects (a knife, pencil, and key) when they were shown to him—i.e., through the sense of sight—but was able to name them correctly (through the sense of touch and the muscular sense) when they were placed in his hand;[2] in short, a condition of optical aphasia, as French writers term it, was present.

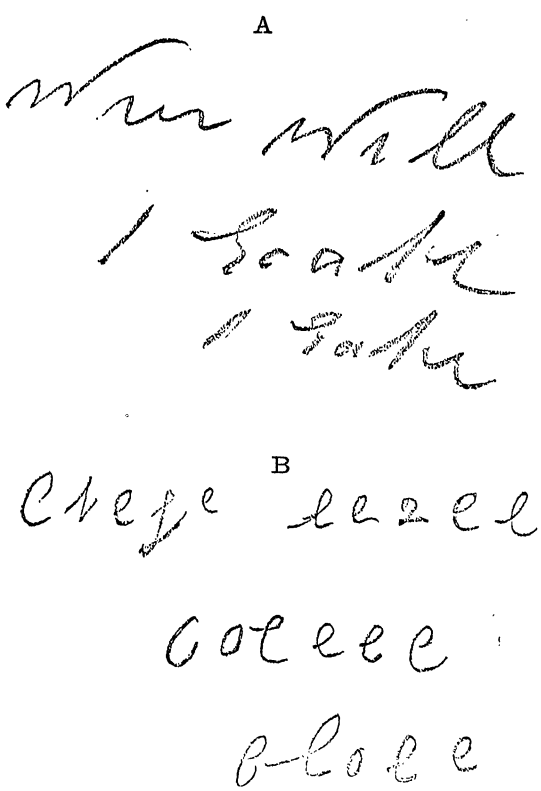
The notes of the case are as follows:—A man, aged fifty-eight years, came to the out-patient department of the Edinburgh Royal Infirmary on Oct. 17th, 1891, complaining of inability to read and write.

Previous history.—His wife, who accompanied him to the hospital, stated that he had a "stroke" on Feb. 16th, 1891, and that he had been unable to read or write since. The late Dr. T. G. Balfour subsequently sent me the following interesting account of the manner in which the attack developed.

"I attended George —— about three years ago for an attack of articular rheumatism, but so far as I can remember there was no cardiac affection. I was again called to see him on Feb. 17th, 1891. For about a year previously he suffered from indigestion and occasionally from headache. For three or four days before the onset of the cerebral attack he had slight attacks of giddiness which, however, passed away in a few minutes. On Feb. 16th he felt pretty well and went out to pay his gas account. He accomplished this satisfactorily, but on the way back to his place of business he was seized with a peculiar sensation (which he could not fully describe), he was somewhat giddy but did not lose consciousness; he walked to his place of business in the Royal Exchange. He was a billiard marker, and when he entered the billiard-room and the intending players came to pay him fourpence each for a game he was aware that it was a sixpence or a shilling (as the case might be) which they had given him, but he could not give them proper change in return. He was so confused that he gave them lead pencils and even his spectacles, and when he gave money he gave more in exchange than was due, and the men returned him what he had given in excess. The men immediately saw that something was wrong, and he was told by his master to go home, which was only a short distance away. He scarcely knows how he reached home, but he knows that he staggered on the road, and his wife says that he was found climbing up the stair to his house on his hands and knees. When he came into his house he exclaimed, 'I am blind,' and fell down at the back of the door and vomited a good deal. After this he felt a little lighter and easier, and went to bed, but with his clothes on. His speech was then much affected; he had difficulty in getting the right word—e.g, he asked his wife to 'shut the gas' instead of 'door,' and so on, always substituting a wrong word for the proper one. I saw him the next day (Feb. 17th) and found him lying in bed, with a look of ordinary intelligence; he noticed me and recognised who I was, but was unable to articulate any word. On my asking if he had pain in his head he put his finger to the top of his forehead and rubbed it; he also indicated that he felt pain over his stomach. Mustard blisters were applied to the nape of the neck and over the stomach; aperient medicine was also administered, and the feet were ordered to be put into a mustard bath twice a day. The only other important symptom besides the aphasia which was present was an inability to grasp with his right hand. The sensation in the right hand was, however, intact. He had no prickling sensations or feeling of numbness in hands or feet or anywhere about his body. Notwithstanding his exclamation about blindness on reaching home, I could not detect any trace of loss of vision. His sight seemed normal, and his hearing also appeared to be natural. He continued for some days in very much the same condition. In the course of a week the power of the right hand returned and he very gradually regained the power of expressing himself, though he still continued to use wrong words. On testing his writing it was found that he could not form a single letter, he could only make marks. In about three weeks his speech was considerably improved, and he was able to sit up in bed and felt stronger. On the evening of March 7th, at midnight, he became excited and seemed very much confused. He called (as well as he could) for his clothes, put them on, and then immediately afterwards took them off, declaring that that was not what he wanted, calling for other portions of clothing, which he treated in like manner. This excitement went on from 12 till 4 A.M. (March 8th), and even at 8 A.M. he was still confused, thinking it was Tuesday when it was Sabbath. He gradually settled down again, and from that time progressed steadily, gaining more power of speech. I may mention that since the cerebral attack he has never suffered from dyspepsia in any form. My last visit was paid to him on March 24th."

Present condition.—His general appearance was that of good health. There was no paralysis. The auditory and motor speech centres and the connecting fibres between these centres seemed to be unaffected. The patient seemed to understand everything that was said to him. His articulation was unaffected. He seemed to be able to say anything that he wished to say. He could repeat everything that he was told to repeat. But his memory was very defective; he often required to be prompted by his wife, but he then answered sharply enough. (If this patient had never learned to read and write there would have been nothing, with the exception of some slight loss of memory, to show at this date that he had sustained any severe cerebral lesion.) The patient was almost completely word-blind. The acuity of vision (after correction with glasses) was normal. There was no hemianopsia. He was unable to read the following word and sentence:—"dog," "Are you a fool?" He recognised some of the individual letters, but not all. He also made mistakes with regard to numbers and figures. He read the numbers 100 and 73 correctly; he said 54 was "45," reversing the figures; he was unable to read 85 and 62. There was no paralysis of the right hand; he could button his clothes and make fine movements with the fingers and thumb of the right hand quite well. The grasping power, as measured by the dynamometer, of the right hand was 95, and of the left 85. He wrote with great difficulty. He was asked to write his name and age. He stated his age wrongly, putting it down as "45" instead of 58. He was told to ask a question in writing. He wrote the following (see Fig. 6);

FIG. 6.



Spontaneous question written by G. —— (facsimile reproduction). A ("When will I get better?") was written on Oct 17th, 1891. B ("George ——, George, George") was written on Dec. 2nd, 1893.

I could not make out what he meant until I asked him to read it. He then said, "When will I get better?" His wife stated that he was a good speller and writer before the attack. The heart's action was quick, but there was no valvular lesion; the radial and temporal arteries were atheromatous. The urine was normal; it contained no albumin. A tonic was prescribed.

Subsequent progress of the case.—On Oct. 24th the patient

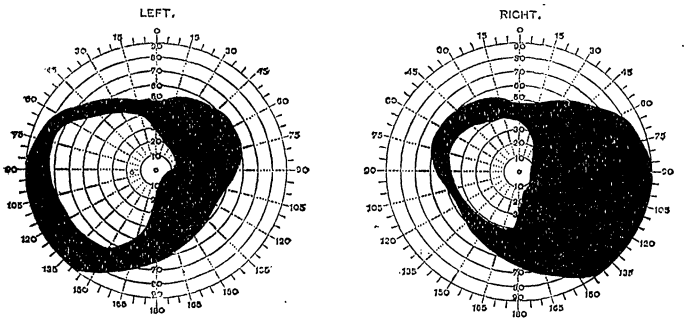
[1] Déjerine and Mirallié state that this is only possible when the lesion is outside the "zone of language"; in other words, in those cases of word-blindness in which the patient can write spontaneously, in which the lesion involves the tracts proceeding to the visual speech-centre and not the visual speech-centre itself.

[2] In other cases the patient is able to name the object (which he cannot name by the sense of sight) by the sense of smell or taste.

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was again seen at the infirmary. He read better on that day than at the previous visit, and was less nervous. His wife said that he was distinctly better in other respects. He read the words "cat," "man," and his own name correctly. He also read correctly every number which he was asked to read. On Jan. 23rd, 1892, he was seen again at the infirmary. He was decidedly worse. He had had another cerebral attack a month previously. He complained of pain in the head, and vomited. Since that attack he had been much more confused, had been speaking much worse, and his reading and writing, which had improved somewhat before this last attack, had been much worse. There was very marked right-sided homonymous lateral hemianopsia, the fixing point being spared, with decided constriction of the peripheral portions of the fields (see Fig. 7). He was unable to read the words "dog" and "hat,"

FIG. 7.



Fields of vision in the case of G. —— on Jan. 23rd, 1892, showing right-sided homonymous lateral hemianopsia with considerable constriction of the sound (left) halves. The fixing point is spared.

but read the number 100 correctly. He said 49 was "29." He read the letters "a" and "h" correctly, but said "c" was "s." When asked to write "cat" he wrote "sot." He wrote "dod" for "God," and the letter "a" for "o." He wrote his name, but very indistinctly. When asked to write 50 he wrote first "too"; on a second attempt, "so"; on a third, "20"; and on a fourth, "50." When asked to write the word "Edinburgh" he wrote a scrawl which could not be read. On Feb. 12th in the sentence "The year-book of treatment for 1892" he read "The," "book," and "1892" correctly. The number 1892 was read without any hesitation as "one thousand eight hundred and ninety-two." He could not make out the word "year." "Of," he said, was "to," and "for" was "from." He said "treatment" was "arithmetic." When told this was wrong he made a second attempt, and said "remoted"; on a third attempt he said it was "touriments." When asked to read the individual letters composing the word "treatment," he read "t, o, c, n, o, r," but after going over the letters a second time he managed to read some of them. He was asked to write the following words and figures: "Edinburgh" (he took much time to do this), "Monday," "hat," "dog," "100," and "41." The result in each case was very unsatisfactory. On Feb. 27th the patient read a little better. He said: "I can see the letters better and can work it better in the mind too." He was unable to read the words "hat," dog," and "cat." When his hand was helped to trace these words with chalk on the blackboard he managed to read them, though he could not do so before. (This interesting fact was demonstrated before the students). He read his own name sharply, but was unable to read "Edinburgh," saying it was "g, o." He read the number 60 after long consideration, and read the number 9 all right; 57 he said was "79"; 34 was "39"; but he read 79 correctly. He wrote down correctly the following numbers to dictation: 101, 61, and 52. He wrote "1011" for 1000, "11" for 7, "10" for 9. On Dec. 2nd, 1893, the patient's reading and writing were decidedly worse. He read the letter "d" correctly, but this was almost the only letter which he could make out. He said "o" was *nothing*, and did not recognise the letter "o" even when it was named to him. He could not name the letter "G." He said it was "George." He could not read the words "dog" and "cat"—could not read them even when his hand was made to trace them on paper. He was unable to write his own name, but made an attempt. On Nov. 22nd, 1894, the patient was seen at his own house. He had not been able to come to the infirmary for several months. Soon after I last saw him he had had another comatose attack and was insensible for five or six hours. Since recovering from this his mental condition had been much worse. When I went into the room he looked quite bright, said he knew me, but had forgotten my name. At the end of the interview he said "Dr. Bramley." When asked where I had seen him before he said, "At the infirmary." His mental condition was evidently very much impaired and his gait was feeble. He had difficulty in coördinating the movements of the right hand. He was unable to take hold of a pencil held in front of him with the right hand, but could readily catch it with the left. The inability was not so much a want of power as a want of coördination. The right leg was very weak; there was distinct loss of power in the right leg as well as want of coördination. His hearing was unimpaired, and he seemed to understand almost everything that was said to him. He answered short questions correctly, and seemed to have no difficulty in articulation. He repeated short sentences quite correctly. He was totally unable either to read or write. He was unable to name a knife, pencil, and key when they were held up before him, but when he took them in his hand, and after he had felt them, he told me what they were—i.e., named them correctly. I heard nothing more of him for some months. His wife then came to the infirmary to tell me that he had died in the asylum at Morningside. It seems that a few days after my last visit he had had another and more severe cerebral attack. After this he became so much worse that it was decided to remove him to Morningside Asylum. Dr. Bruce kindly sent me the following account of the patient's condition at the time of his admission to the asylum, and of the lesions which were found in the brain after death.

Condition on admission to the asylum.—"George ——, aged sixty-two years, was admitted on Dec. 6th, 1894. Mentally he was unable to speak in reply to questions and did not appear to understand what was said to him. Physically he presented symptoms of gross brain disease. All the muscles of the body were more or less wasted, probably from disuse. The motor power in the arms was equal and of average strength. The left leg was much weaker than the right; the patient was unable to stand, always falling backward and to the left. The knee-jerks were both greatly exaggerated. The pupils were equal and reacted slowly to light. Swallowing was much affected. From the date of admission to April 17th he lay like a log, passing urine and fæces as he lay. He died on April 17th, 1895, apparently from exhaustion. I noticed that during the last week of his life he was at times quite blind or appeared to be so, but this condition was not permanent. I give these details as the case was under my care. The post-mortem examination was an interesting one, as the lesion appeared to be confined to the white matter, the grey matter externally being quite firm and apparently healthy. I enclose copy of the post-mortem notes."

Notes of the post-mortem examination.—"The necropsy was made on April 19th, 1895. The head only was examined. The brain weighed 46½ oz. The scalp was slightly adherent. The skull cap was somewhat thickened and greatly condensed, the diploe being absent. The dura mater was firmly adherent to the calvarium and slightly adherent by delicate fibrous bands to the pia mater at the tip of both temporo-sphenoidal lobes. The pia mater and arachnoid presented considerable general milkiness over the upper surface and sides of the brain. There was a small osteoid formation in the arachnoid near the surface over the left Sylvian fissure. There were some delicate fibrous adhesions to the dura mater over the tip of each temporo-sphenoidal lobe. Almost all the arteries were very atheromatous. In the cerebrum there was a large depression extending over the whole of the posterior half of the upper surface of the left hemisphere. There was some general atrophy of the cerebral convolutions. The external configuration of the brain as a whole, as regards complexity of convolutions, shape, &c., presented no marked change. The grey matter in the first section made above the lateral ventricles was slightly pigmented, of a faint yellow colour, and somewhat

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soft; it was perhaps somewhat atrophied and its layers perhaps blended. Scattered through the white matter at this level were numerous, somewhat soft, slightly yellow nodules with ill-defined outlines, mostly about the size of a pin's head, though some were somewhat larger, others smaller. There was a large area of old softening in the left hemisphere; it involved the white matter only of the occipital lobe and the posterior half of the parietal lobe. It was situated above the level of the ventricle, the roof of the posterior horn of which formed its floor. The surrounding grey cortex was practically intact, the softened white matter, however, extending almost close up to it. The softened tissue had a gelatinous appearance and was of a bright yellowish-brown colour. In the centre there was an irregular cavity containing fluid. There was a similar softening containing fluid in the external capsule on the right side. Scattered throughout the brain there were some small rounded deep red points which were probably miliary aneurysms. In the right hemisphere, in the corresponding position to the large softening described above, there was a diffuse area of softened tissue which, however, presented the normal colour. There was also much general softening of the ventricular walls, especially posteriorly. In the grey cortex of the right hemisphere in the parietal and occipital lobes some small areas of atrophic softening were found. The lateral ventricles were much dilated; the internal lining membrane of the ventricles was not thickened, and there were no granulations. In the white matter of the right lobe of the cerebellum there was a softening, similar to that in the external capsule, about the size of a hazel nut. In the convolutions of the left lobe on its superior aspect there was an area about the size of a horse bean, which, while preserving the normal markings, was firmer and darker than the surrounding tissue. On cutting across the pituitary body fluid spouted out of the ventricles. The medulla oblongata appeared to be normal."

Corrigendum.—Case 2, page 868, eighteenth line from the foot, instead of "was an example of cortical," read "was an example of subcortical."

(To be continued.)

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

DIPHTHERIA OF THE UMBILICUS.

BY BERNARD PITTS, F.R.C.S. ENG.,
SURGEON TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET, W.C.

ON Feb. 20th a child, aged fourteen days, was admitted into the Hospital for Sick Children, Great Ormond-street, under my care for inflammation of the umbilicus. The cord had separated on the eighth day and the resulting wound had continued to discharge extremely offensive pus. When seen on the 20th there was a brawny-red indurated area round the umbilicus of about the size of a five-shilling piece, from which the epidermis had peeled. The umbilicus itself was the seat of a dirty coloured wash-leather slough, discharging extremely offensive pus from an opening into which a probe could be passed for about an inch. The child's condition was otherwise good, the only other point of interest being an occasional inspiratory crow and with this some slight cyanosis. No definite history was obtained till the next day, when it was ascertained that a brother of the patient had been removed to a fever hospital for diphtheria during the previous week and had died on the same morning as that on which the history was taken (Feb. 21st), and that the mother was then an inmate of University College Hospital, where, on inquiry, it was found that she was suffering from diphtheria. A culture was then made of the pus escaping from the umbilicus and examined on the 22nd, when the bacillus of diphtheria was isolated. In the meanwhile the child, who had suffered from several attacks of vomiting, had become considerably weaker and died on the evening of the 22nd. After death nothing abnormal was found in the larynx or pharynx, nor was the condition at the umbilicus found to extend to any of the deeper structures.

Harley-street, W.

EXTENSIVE SUBCUTANEOUS EMPHYSEMA COMPLICATING DIPHTHERIA.

BY J. SCHUTZ SHARMAN, M.R.C.S. ENG., L.R.C.P. LOND.,
AND
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WE report the following case believing it to be both rare and interesting.

A boy, aged six years, was on Feb. 17th, 1897, taken ill with a sore throat and slight difficulty in breathing. The following day he had an attack of epistaxis, and on examining the throat the tonsils were observed to be the seat of patches of exudation. There was a slight rise in temperature and pulse-rate, the dyspnœa being now characterised by noisy inspiration, the patient in general condition getting worse. The glands under the jaw were slightly enlarged, and the urine contained a considerable amount of albumin. Some of the exudation obtained from the tonsils was sent to the School of Preventive Medicine for bacteriological examination and the diphtheria bacillus was isolated. On Feb. 22nd subcutaneous emphysema appeared at the root of the neck, giving rise to the characteristic fine crackling feeling, and forming tumours above the sternal end of each clavicle. During the next day the emphysema spread upwards to the submaxillary regions and downwards over the chest, and in a few days air could be felt under the skin all over the trunk, but more marked on the right of the middle line. The right half of the scrotum was much inflated with air and was quite transparent. Subsequently the emphysema reached as far as the zygomatic regions above, while below the affected area was limited by Poupart's ligaments and the scrotum in front and by the margins of the coccyx and sacrum and the iliac crests. The child's temperature rose to 100° F., the pulse to 144 per minute, the dyspnœa became more urgent, and there was moderate cyanosis of the face. Coughing occurred frequently with semi-purulent expectoration, and rhonchi were heard scattered throughout the lungs. Shortly before death the thermometer registered 101·6°, the pulse reached 180 per minute, and the urine contained one-third albumin. The treatment consisted mainly of stimulants, iron, antiseptics, and the use of the steam kettle and tent. The dyspnœa did not seem at any time sufficiently urgent to necessitate tracheotomy. A post-mortem examination limited to the neck was all that could be obtained, and this was just sufficient to eliminate the possibility of ulceration or perforation of the trachea as a cause of the emphysema. The trachea and larynx were found to be lined with false membrane.

Remarks.—We regret that owing to the difficulty in obtaining permission to perform a complete necropsy the cause of the emphysema could not be ascertained. Such a condition of almost universal emphysema complicating diphtheria is seldom met with, we think, though we are aware of a limited emphysema occurring in the neck after tracheotomy and in some cases of pulmonary disease where it has been traced to the rupture of an air vesicle. We think in this case the probability is that the emphysema occurred through the rupture of an air vesicle and the escape of air into the adjacent tissue of the mediastinum and thence to the neck and trunk.

Avenue-gate, Norwood, S.E.

EXPERIMENTAL DISTORTION.

BY W. S. HEDLEY, M.D. EDIN., M.R.C.S. ENG.

THOSE who use the x ray paper or other flexible sensitised surface in radiography for surgical purposes must beware of producing artificial deformities. Shadows must be thrown upon a flat surface, not upon a curving one. The latter kind of distortion is easily realised by anyone who watches his own shadow lengthening and shortening as he walks across the "ridge and furrow." It is obvious that the sensitised

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paper should not be adapted to the contours of the body. This would make the radiograph hopelessly misleading to the surgeon who works by it. It is true that the latter, in "locating" by means of a radiograph a foreign substance in the thicker parts of the body, does so by inference, and this is difficult enough; but inference carried to the extent



Distorted image of a normal leg.

in question would be simply bewildering. Imagine the surgeon confronted with the above example of experimental distortion produced by the simple but very misleading process of adapting a sensitised surface to half the circumference of a normal leg!

Mansfield-street, W.

PERMISSIVE VERSUS COMPULSORY PURCHASE.—For some time the Southampton Corporation has been promoting a scheme for the purchase of the property of the South Hants Waterworks Company. The corporation already possesses works supplying the old borough, but wished to acquire this company's business, apparently with a view to lessening the rate in portions which have recently been added to the borough and making one uniform charge for water for the whole area. The Bill, however, has been wrecked in Committee of the House of Lords. The ratepayers were given to understand that if, after the promotion of the Bill, satisfactory terms could not be arranged with the vendor company, the corporation would be at liberty to withdraw. This line has been taken all along, and special care was taken to insert a clause in the Bill giving the corporation power to withdraw in case their overtures were not accepted. It was intended by the authorities immediately after the Bill had passed to treat with the company, and if without favourable result, they would not give the statutory notice to purchase which, having been given, would have bound them to buy out the company. It was apparently the difference between permissive and *bonâ-fide* compulsory purchase which led the House of Lords to throw out the Bill.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

(1) CASE OF MULTIPLE OSTEOMATA UNDERGOING SARCOMATOUS CHANGES; AND (2) CASE OF FRACTURE OF THE ANTERIOR FOSSA FOLLOWED BY HEMIANOPSIA.

(Under the care of Mr. JOHN H. MORGAN.)

THE first case illustrates the change which sometimes takes place in a tumour of the bone which is of innocent nature at its commencement. It also shows the extremely painful progress of such a case when the surgeon considers that other complications forbid removal of the changed growth. The relief which would have been afforded to the sufferer by an amputation, could the surgeon have seen his way to its performance, and had the patient consented to it, would evidently have been very great. The second case is an example of a rare complication after fracture of the base in the anterior fossa. Many cases have been published showing the results of injury to the anterior part of the skull in the production of loss of vision, usually in the eye on the same side. There has been, however, far too great a tendency to ascribe the optic atrophy and blindness which follow such an injury to the extension of a fracture through the optic foramen and compression of the nerve by fragments of bone. Fracture through the optic foramen has been met with by Dr. Berlin[1] and others, but it is extremely rare. The degeneration of nerve is probably far more commonly the result of hæmorrhage or inflammation, or both combined, than of fracture and actual compression by bone. In fifty-four cases of fracture of the base[2] in no single instance was fracture revealed in the neighbourhood of the optic foramen; but in eight, where the fracture of the base was severe, blood was found extravasated in the sheaths of the nerves, and in one (at the end of eight days) there was slight neuritis. In one case also, where fracture of the optic foramen had been suspected when first under observation, examination of the case after death three years later showed that there had been considerable inflammation about the optic nerves affected, but no fracture near the foramen. We do not know of any specimen showing the fracture in our museums.

CASE 1. *Multiple osteomata undergoing sarcomatous changes.*—A man, aged fifty-five years, sought admission to Charing-cross Hospital in October, 1896, on account of pains in the right leg and thigh. He had observed varicosity of the veins of both legs for over ten years, but had never been inconvenienced by this till June, 1895, when an ulcer appeared on the lower half of the right leg, which lasted until the following September. Eczema followed, for which he was treated at St. Bartholomew's Hospital and which continued until November. The pains of which he complained then commenced. They were shooting in character, and started from the dorsum of the great toe and passed up the anterior and outer side of the limb as far as the region of the anterior superior spine. On admission the pigmented cicatrix of an old ulcer measuring about four inches by four and a half inches was observed on the antero-external and internal surfaces of the leg, and several irregularly tortuous superficial veins. In the region of Scarpa's triangle was a fairly firm ovoid swelling, slightly painful, not fluctuating or attached to the skin, which was not reddened. This gave no impulse on coughing, and was said to have first appeared about ten days previously to his admission. The patient stated that as long as he could remember there had existed several large bony tumours in each leg, which had never given him pain or inconvenience. These were situated (1) on the antero-external surface of the right femur; (2) in a similar position on the left femur;

[1] Transactions of the International Medical Congress, vol. iii., p. 115.
[2] Battle: Lectures on Injuries to the Head, THE LANCET, July 12th, 1890, p. 63.

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(3) on the internal aspect of the head of the right tibia; and (4) on the posterior surface of the middle of the left tibia, causing a large prominence in the calf. All these were firm, hard, immoveable masses, possessing no thrill, not attached to the skin, and with no eggshell crackling. The patient left the hospital at his own request, but was re-admitted on Nov. 15th, 1896, on account of increasing pain in the thigh and leg. On examining the patient in bed it was found that the veins which had a few days previously been prominent and varicose in the lower part of the legs, particularly the right, were no longer so, and the skin which had been slightly œdematous was normal, with the exception of the cicatrix above mentioned. A large irregular hard mass projected in the upper third of the tibial and fibular region, which was not attached to the skin but firmly fixed to the deeper structures and apparently connected with both bones. Over this region the skin was œdematous, and in the centre there was some area of fluctuation. Pain was constant and was aggravated by handling. The knee-joint appeared to be unaffected, but movement was limited on account of the bony swelling. The swelling in Scarpa's triangle did not appear to have changed. The lower part of the right thigh was two and a half inches larger in circumference than the left, and the upper part of the right leg measured two and three-quarter inches more than its fellow. The temperature varied between 98° and 101° F., and there was excessive pain in the swelling at the upper part of the right leg, aggravated at night. On Dec. 4th an incision was made over the swelling about three inches below the patella, and on introducing a finger a large bony cavity was found filled with soft granular débris. A second incision two inches behind the former and immediately in front of the fibula entered a similar bony capsule, from which masses of broken-down bone and large quantities of very soft gelatinous material, having the appearance of the degenerated contents of an enchondroma, were scooped out. The cavity was well washed out with perchloride of mercury lotion, a drainage tube was inserted, and a dressing of cyanide gauze was applied. The pain did not diminish after the operation and the temperature continued to vary as before, but it was soon apparent that the growth was spreading. The microscopical examination of the material removed showed it to consist of mixed spindle and round cells in a fibrillar matrix. The symptoms continued the same until Dec. 21st, when it was noted that the wounds were completely blocked with large fungating masses which confined the discharges, consisting of pus and altered blood-clots. These, when evacuated, gave off a very foul odour, which was diminished by the free use of Sanitas and iodoform. The growth spread rapidly downwards upon the fibular aspect, and the stench from the discharges was most offensive and could not be effectually lessened by disinfectants and charcoal poultices. The pain was excessive and emaciation advanced rapidly. On Dec. 29th it appeared that the growth had invaded the kneejoint, as it became terribly swollen and large purple veins stood out prominently in the superjacent skin. Huge bullæ formed on the peroneal aspect of the skin, which in some places commenced to slough, and the same condition was seen in the great toe. The pulsation in the posterior tibial could not be detected, and œdema was spreading upwards into the thigh. The situation of the pain did not alter, but it became more excessive. The patient grew rapidly weaker, but lingered until Jan. 3rd, 1897, when he died. Unfortunately, permission for a necropsy was refused.

CASE 2. *Fracture of the anterior fossa followed by hemianopsia.*—A man, aged twenty-six years, was admitted on Oct. 22nd, 1896, after falling from a ladder whilst cleaning windows. He was found to be suffering from severe concussion. The eyes were closed, the breathing was rapid, the respirations were shallow, the pulse was 120, feeble and frequent. On recovering from the acute shock he vomited about one pint or more of blood. He was then able to give his name and address and state where the accident occurred, but he remembered nothing about it. On examination there was great ecchymosis and swelling of the eyelids on both sides; there was no bleeding from the ears, but there was coagulated blood in the nostrils and a transverse fracture of the left patella. Two days later it became possible to examine the eye, and it was then seen that a subconjunctival hæmorrhage occupied the whole of the temporal side of the right globe, passing to the back. Both pupils were equal and reacted to light. On Oct. 31st the patient showed all the symptoms of cerebral irritation. There were marked subsultus, some pain in the right eye, and incontinence of urine. He wandered slightly, with intervals of consciousness, and the fingers constantly plucked at the bedclothes. The temperature varied between 99·4 and 101·6° F. On Nov. 3rd the temperature rose to 103·2°; he was very drowsy, but answered questions when roused. The tongue was very loaded and the breath extremely foul. The bowels were opened by purgatives and enemata. On the 6th the temperature was still high (101·6°), the tongue was still coated, and the breath very foul. He was very drowsy, but answered questions quite rationally. When dozing off his breathing became irregular and stertorous. There was some twitching of the muscles of the right angle of the mouth, but no movement of the left; the left nasal fold was less marked than the right, and he could not close his left eye. Subconjuctival hæmorrhage was still present, the pupils were equal and reacted to light, and there was slight conjugate deviation to the left side. The tongue was brown and dry, there were sordes on the teeth, and the breath was excessively offensive. The pulse was very irregular—one minute numbering 70 and the next 100, full and fairly strong. On the 9th the patient was better, the signs of facial paralysis had almost passed away, but when asleep there was still some slight twitching of the facial muscles of the right side. The deviation of the eyes had passed off. On the following day, the 10th, the temperature rose to 101·8° and the pulse to 120, small, weak, and irregular; the breath was still extremely foul, and the respirations were quiet. During the next four days the patient continued in much the same condition, wandering slightly in his talk, but answering questions. All facial paralysis had disappeared, but his speech was indistinct and guttural. On the 17th the temperature suddenly rose to 102·4° and the pulse to 140, small and weak. Swelling and œdema appeared over both eyelids and spread down to the cheeks, and a limited area of erysipelas attacked these parts, which lasted for eighteen days, during which time he was isolated. On returning to the ward when convalescent from this attack it was observed that a small fluctuating swelling existed over the orbital arch and just to the right of the metopic suture. This swelling was bounded by hard, elevated edges of bone, and in the centre was a fluctuating area, emphysematous, but showing slight pulsation synchronous with that of the temporal artery. The tongue remained very loaded and the breath continued to be very foul. At times the urine and fæces were passed unconsciously. On ophthalmoscopic examination of the eyes on Dec. 8th the discs were found to be very white, with very sharply defined edges, but no white streaks were noticed around the vessels, which exhibited no pulsation. The emphysematous crackling in the small swelling lasted from the 8th to the 14th, when it disappeared, leaving a small hard bony elevation, and there also appeared another small boss of callus under the inner third of the right orbital arch. On the 14th further examination of the fundus revealed that there were loss of vision in both temporal fields, paralysis of the nasal halves of both retinæ, and temporal hemianopsia. Dr. Mott, who kindly examined the patient, observed that he had seen the same condition in a case of acromegaly with enlargement of the pituitary body. This observation was of extreme interest when the probable line of fracture came to be considered. Dr. Mott found that the patient could not read even three large letters in succession easily and that he had considerable loss of memory. He found the discs very white and the vessels normal in size but rather curved, but he could observe no retinal changes. Very probably there was early optic atrophy. Dr. Mott added: "No doubt the morbid process is situated at the chiasma, damaging chiefly its central portion and affecting thus the decussating fibres from the nasal half of each retina. I should think, however, it has involved other fibres from the central portion as well." These conditions remained the same until Jan. 22nd, 1897, when the patient was sent to the Limpsfield Convalescent Home, his general health having much improved.

Remarks by Mr. MORGAN.—The history of Case 1 offers a fair presumption as to its nature. The bony tumours were without doubt of congenital origin, and the rapid sarcomatous change in that on the right tibia is certainly an unusual pathological development. The question of amputation of the thigh was considered, and would have been proposed but for the large mass of growth in the upper part of the groin, which, although bearing some resemblance to an omental hernia, was almost certainly a mass of secondary growths in the glands, which became affected before the

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evidence of malignancy became apparent in the original growth. The line of the fracture in Case 2 can only be indefinitely surmised by the course of subsequent events. That the base of the skull was fractured in the anterior fossa was indicated by the ecchymosis of the eyelids with the subconjunctival hæmorrhage; and that there was rupture of the mucous membrane, either in the nose or in the upper part of the pharynx, was proved by the large amount of blood which was vomited soon after the patient's admission. It was probably through this lesion that the septic material spread which gave rise to the subsequent erysipelas, and the inflammatory products may have been the causes of morbid effects upon the chiasma and even the pituitary body. The emphysema noticed in the swelling over the frontal sinus was probably the result of decomposition, since the patient was unable by any effort to force air into this swelling. Subsequent inquiry elicited the fact that the patient had as a child been subject to fits, but had not suffered from any attacks since early infancy; his memory had never been good, and on account of the fits he had never learned to read or write. His eyesight seems to have been defective previously to the accident, but it has been very much worse since, and his memory is now so feeble that he cannot remember a name for two minutes together. The patient has been placed under the observation of Dr. Mott, who will watch and report any further developments.

HEREFORD GENERAL INFIRMARY.

A CASE OF PARTIAL RUPTURE OF THE SPINAL CORD WITHOUT FRACTURE OF THE SPINE; NECROPSY.

(Under the care of Mr. R. THOMASON.)

THIS case is a most unusual one and may prove of considerable importance from a medico-legal point of view, as it establishes the possibility of rupture of the spinal cord without any fracture of the bones containing it. The points of chief interest are indicated in the remarks appended to the case. For the notes of the case we are indebted to Mr. A. M. Watts, house surgeon.

A man, aged sixty-five years, while driving from Hereford to his home on Jan. 2nd, 1897, fell out of his cart. He was partly under the influence of drink at the time, but picked himself up and walked as far as his residence, a distance of a mile, put his horse away, and then sat down in a chair by the fire. Some time afterwards (three hours from the time of the accident) he noticed that he had no power in his right hand, then that his left hand was paralysed, and then that he could not move his legs; the paralysis came on so rapidly that it seemed to affect all his limbs almost simultaneously. On arriving home his neck felt a little stiff, but he had no pain in it. He had always been a healthy man and was not in the habit of drinking to excess. The patient was admitted to the infirmary on Jan. 4th. He lay in bed on his back and his respiration was entirely diaphragmatic. He answered questions rationally and had no cerebral symptoms. Movement of his neck caused pain. There was no bruising of the skin and no irregularity of the spinous processes. When he was lying still he had no pain in his neck or any pain in the course of the nerves. He could raise his arms from his sides to a horizontal position and could move them inwards across his chest; he could flex but could not extend his forearms; he had no movements of the hands or fingers. The knee-jerks and the plantar reflexes were absent. There was loss of all sensation of the trunk and the lower limbs below the level of the third costal cartilage; no hyperæsthesia was present above that level. There was also loss of sensation on the anterior and posterior surfaces of the forearms on the inner halves, on the whole of the dorsum of the hands, and on the inner part of the palms and on the palmar aspects of the little fingers. The patient had retention of urine and constipation. The chest was normal. The pulse was full and regular, being 56, and the temperature was sub-normal. The urine was acid, of specific gravity 1025, and contained a trace of albumin. No alteration in the amount of paralysis or anæsthesia was noticed and the patient's mind remained clear until his death, which was due to œdema of the lungs, and took place twelve days after the accident. The reflexes remained absent and the pulse slow. From the absence of any signs of fracture of the spine, and also from the absence of pain in the course of the nerves and hyperæsthesia, the injury was thought to be probably limited to the spinal cord. As the patient had absolute loss of the reflexes up to the time of his death a total transverse lesion was diagnosed, the seat of it being just between the origin of the sixth and seventh cervical nerves as the musculo-cutaneous and external anterior thoracic nerves escaped, while the musculo-spirals, medians (with the exception of their cutaneous branches) and ulnars were paralysed. The circumflex nerves were not paralysed, and although they come off with the musculo-spirals from the posterior cord of the brachial plexus, their fibres seem to be derived and also the cutaneous fibres of the musculo-spirals and medians from the sixth cervical nerves. As regards treatment, there was little to be done except to keep the patient's spinal column at rest, to prevent bed-sores, and to relieve the retention of urine by the passage of a soft catheter.

Necropsy.—The spine was exposed by a vertical incision over the spinous processes. No irregularity or signs of fracture could be detected, so the spinal canal was opened by removing the spinous processes and laminæ, but no hæmorrhage was found in it. The spinal dura mater was seen to be torn transversely across in its left half, so it was, together with the spinal cord, removed. On dividing the dura mater longitudinally on its posterior aspect the cord was exposed and the left half found to be torn across in the line of the wound in the dura mater, which extended round to the middle line anteriorly. An antero-posterior longitudinal section was then made of the spinal cord; at the seat of the rupture, and for a distance of half an inch above it, the cord was found to be very soft in consistence and greyish in colour, the limits of the grey area above being distinctly defined by a somewhat irregular transverse line; this condition of the cord apparently existed through its whole transverse section. On comparing the cord with the bodies of the vertebræ on its removal the rupture was seen to be exactly opposite the articulation between the sixth and seventh cervical vertebræ. A little movement could be obtained in this articulation, but the posterior common ligament was intact.

Remarks by Mr. WATTS.—As a rupture of the spinal cord is a somewhat uncommon accident, I think that it is worth while putting this case on record, especially as there was apparently no fracture of the spine, and although a little mobility between the sixth and seventh cervical vertebræ was found the posterior common ligament was not ruptured. The case is also interesting for the following reasons:—(1) After the accident the patient walked a mile and the paralysis did not come on until three hours afterwards; (2) because the paralysis on the one side of the body was exactly similar to that on the other; and (3) although there was absolute loss of reflexes, still the cord was not entirely divided. My thanks are due to Mr. Thomason, under whose care the patient was admitted, for permission to publish the notes.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Epidemic of Infantile Paralysis.—Gastrostomy for Swallowed Œsophageal Tube.—Removal of Cerebral Tumour.—Extravasation of Urine.

A MEETING of this society was held on March 26th, the President, Dr. BUZZARD, being in the chair.

Dr. PASTEUR read a paper on an Epidemic of Infantile Paralysis occurring among children of the same family. The epidemic was limited to this household. Every one of the seven children in the family was attacked in rapid succession within the space of three weeks with fever of moderate severity, accompanied by severe headache. In three of the children—aged eleven, nine, and five years respectively—paralytic symptoms supervened within seven days of the commencement of illness. The type of paralysis varied in the different cases. In one there was flaccid paralysis of the left arm; in another right hemiplegia with marked and persistent muscular rigidity of the arm and the leg, with more transient paralysis of the face and soft palate on the same side; whilst in the third case there was paralysis with rigidity limited to the left lower limb. In two more the primary fever

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was followed by tremors lasting a few days, whilst in the remaining two the primary fever was not followed by any nervous disturbance. As regards the cause of the outbreak, it was possible to exclude the acute exanthemata, diphtheria and influenza. The points of resemblance to infantile paralysis were held to justify the diagnosis in spite of the remarkable characters of the paralysis. The cases prove that a poison giving rise in one instance to a paralysis indistinguishable from the acute atrophic paralysis of childhood is also able to determine lesions in other parts of the nervous system. They further strongly confirm the growing impression that infantile paralysis is an acute infective disease.—Dr. ORMEROD remarked on the difficulty of reconciling the symptoms with simple anterior polio-myelitis. It was true that the account of the febrile stage did not correspond with that usually seen in epidemic cerebro-spinal meningitis, but it was worth considering whether something of this nature would not account for the associated rigidity and pain left in the third case brought forward by Dr. Pasteur.—Dr. BEEVOR said that he had seen the cases when they were in hospital, and, though the first was clearly one of anterior polio-myelitis, the second was undoubtedly of cerebral type, and the amount and duration of the rigidity were in favour of the meningitis theory, but there was no pain. Except for the amount of rigidity the third case was like an ordinary one of infantile paralysis.—Dr. CAYLEY said that the cases were clearly instances of an acute specific fever. The term "infantile paralysis" was not always appropriate, and these cases showed that anterior polio-myelitis was inadequate, since there might be other lesions besides those in the anterior horns. If a satisfactory name could be devised it would greatly stimulate clinical work on the subject.—The PRESIDENT said that, so far as he knew, this was the first time that the infective character of infantile paralysis had been brought before the society. The cases showed that the toxic effects might not be confined to the spinal grey matter, but might affect the intracranial centres. He thought that the rigidity in these cases might possibly be due to the poison affecting the lateral columns. In his inaugural address last year he had drawn attention to the remarkable epidemics of infantile paralysis recorded by Medin, Bergenholtz, Colmer, and Cordier. He had himself seen a little boy affected with infantile paralysis whose sister a day or two previously to his attack had sickened with precisely similar symptoms, which, however, in her case cleared off without leaving her paralysed. Possibly if the disease could be recognised in the pre-paralytic stage it might be possible to cut the attack short by some mode of treatment allied to the antitoxin treatment.

Mr. C. B. LOCKWOOD read notes of a case of Malignant Stricture of the Œsophagus treated with Symonds's Tubes; Safety String Swallowed; Gastrostomy. The patient was a man, aged sixty-five years, who, whilst wearing a Symonds's tube for a malignant ulcer of the œsophagus, swallowed the string. Every effort to extract the tube failed. Inasmuch as only liquids could be swallowed in small quantities, and he was rapidly becoming thinner and weaker, the question of œsophagotomy or gastrostomy was debated. It was determined not to perform œsophagotomy because it was uncertain whether the tube was still in the œsophagus, and also whether the stricture was still safely permeable. Gastrostomy was performed and gave much relief. Three weeks afterwards the malignant growth perforated the trachea, and the man died from broncho-pneumonia. Afterwards the tube was found in the stomach, but had probably only escaped into it a few days before death.—Mr. CLUTTON thought that Symonds's tubes were a great advance on previous instruments at the time they were invented; but at the present day, when the mortality of gastrostomy had been so greatly reduced, he thought that it was the most useful form of treatment for malignant stricture of the œsophagus. The presence of a tube was apt to increase the amount of ulceration, and many patients could not tolerate its presence.—Mr. MAKINS asked if any attempt had been made to push the tube down by inserting a new and therefore stiffer tube. He could not speak with the same amount of enthusiasm with regard to gastrostomy in these cases as Mr. Clutton had done.—Mr. LOCKWOOD, in reply, said that no attempt had been made to push the tube down because it was such a large one. Patients were not always comfortable after gastrostomy, owing to leakage of gastric juice or to pain, one patient having so much discomfort that she insisted on the operation wound being allowed to close.

Dr. WASHBOURN and Mr. ARBUTHNOT LANE described a case of Tumour of the Brain which had been Successfully Removed. The patient, a woman, aged forty-six years, was seized with a fit on May 4th, 1896. It commenced as a convulsive twitching of the thumb of the right hand. This extended to the forearm and to the upper arm, the elbow being forcibly flexed. The leg on the same side was then similarly affected, the knee being bent. She did not lose consciousness. After the fit she noticed that her right arm and leg were weak and that the right side of her lips and tongue were numb. During the interval that preceded her admission into Guy's Hospital on Aug. 27th, 1896, she had a similar fit about every fortnight, the date of the fit corresponding to her menstrual periods, which were very frequent. She gave no history of headache or of vomiting. On admission her right side was found to be distinctly weaker than the left. During the time she was under observation she had fits similar in character to those already described. As she did not improve under anti-syphilitic remedies it was decided to explore the motor area of the brain on the left side. On Sept. 18th a large area of bone was removed and the dura mater, which was healthy, exposed. On the following day she had two fits. On the 21st the dura mater and arachnoid were divided, when a tumour was exposed. It grew from the pia mater and deeply indented the brain immediately in front of the upper limit of the fissure of Rolando. The tumour was sharply defined and shelled out readily. Though not invading the brain substance, a minute portion of grey matter was found adhering to its under surface. The longest diameter of the growth was from before backwards, where it measured about two inches, while its transverse measurement was about one and a half inches. Its depth appeared to equal its breadth. The convolutions depressed by it comprised the upper portion of the precentral gyrus, the adjacent area of the first frontal gyrus, with part of the second frontal gyrus, the marginal gyrus, and probably to some extent the gyrus fornicatus. Aphasia with paralysis of the right arm and of the right side of the face followed the operation. The aphasia soon disappeared. When she left the hospital, on Jan. 24th, 1897, she had complete motor paralysis of the right hand and forearm, with impaired sensation in the fingers. She had lost the pain in her arm which existed previously to the operation and which was temporarily increased by it. The facial paralysis had also disappeared. She had no recurrence of the fits after the removal of the tumour. At the present date (March 26th, 1897) movement is returning in the fingers, but the rest of the arm is still paralysed.—Dr. JAMES TAYLOR said that it was very curious that there was no affection of the leg with a lesion in this position. He thought that the loss of sensation confined to the forearm indicated a lesion of the cortex rather than of the internal capsule.

Mr. RICHARD BARWELL related a remarkable case of Extravasation of Urine in a man, aged thirty-six years, who previously to Nov. 24th, 1896, was perfectly healthy. On that night after coitus, in which nothing unusual occurred, he went to sleep, and on waking next morning found the scrotum much swollen; during the next few days the swelling increased, and, although feeling perfectly well, he sent for Dr. Nix on the 27th. On the 29th Mr. Barwell saw the patient in consultation. He had a subnormal temperature and a rather feeble, quick pulse, 108; the tongue was slightly furred, and the constitutional symptoms were slight, and he said he felt quite well up to four hours ago, and even now only "a little down." The scrotum was greatly distended, boggy to the touch, red, and studded with blotches here and there of dark-brown discolouration; the penis was but slightly swollen or reddened and free from sloughy spots; the perineum was much distended to within a very short distance of the anus, and exhibited two sphacelated spots. He asserted that he never had any difficulty in passing urine, which flowed in a full-size stream. With Dr. Nix's sanction Mr. Barwell made deep incisions in the perineum and scrotum, exposing the superficial muscles of the urethra and the testicles. The sodden tissues were full of urine with the usual ammoniacal, sloughy odour. One bleeding vessel, being too rotten to bear either torsion or ligature, was secured by leaving on it a pair of forceps; the very soft state of all tissues rendered interference with the urethra unadvisable. Five days after the incisions were made the patient lost about four ounces of blood by the rupture of a vessel in or close to the right testicle. This depressed his health considerably, but freer stimulation overcame the condition in

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about eight hours. The rare and interesting features of this case lie in the local condition. Rupture of the urethra as an immediate result of coitus has once or twice been reported, but invariably in the penile portion of the tube, never, so far as Mr. Barwell was aware, in the membranous part. A No. 12 catheter passed into the bladder without encountering the slightest obstacle, and the treatment for stricture of the urethra was therefore unnecessary. The man lost by sphacelus about four-fifths of the scrotum, but the parts healed, and the whole was quite sound exactly six weeks after, the testicles being enclosed in a new bag, which, though it looked tight, interfered neither with comfort nor function.—Mr. MAKINS thought that extravasation of urine without discoverable lesion was not so very infrequent. He questioned if coitus could possibly have produced it in this case, as there was no stricture.

EPIDEMIOLOGICAL SOCIETY.

The Prevention of Tuberculosis.

A MEETING of this society was held on March 19th, Mr. SHIRLEY F. MURPHY, Vice-President, being in the chair.

Dr. JAMES NIVEN (Manchester) read a paper on the Prevention of Tuberculosis. In reviewing the history of the subject he said that in 1865 Villemin not only proved by experiments the inoculability of tubercle, but showed a clear apprehension of the etiology of the disease in man and animals, especially its dependence on overcrowding and deficient ventilation. But Koch, by his demonstration of the bacillus and by his discovery in tuberculin, not, indeed, of a cure, but of an almost unerring means of diagnosis, at once perfected our knowledge of the pathology and etiology of the disease. G. Cornet showed the absence of infectivity in the dust of rooms and hospital wards where precautions were taken against the drying of the sputa and also proved the rapidly fatal action of light on the bacilli; on the other hand, he demonstrated the insignificance of so-called predisposition compared with the influence of overcrowding, dirt, darkness, and damp, and he demonstrated the necessity of prolonged and close association with tuberculous patients for the direct infection of healthy persons. The Registrar-General's statistics showed an enormous diminution in the mortality from phthisis and tuberculous diseases since 1850, but Dr. Niven feared that the improvement must be to a great extent more apparent than real, and explicable rather by changes in nomenclature and by errors of diagnosis than by sanitary progress. Recoveries from the earlier stages of tuberculosis were more frequent than was commonly supposed, the records of necropsies in hospitals at home and abroad showing traces of healed lesions in from 20 to 50 per cent. of persons dying from other diseases. Tuberculosis was very rarely, if ever, congenital. Boltz in 2576 necropsies of children failed to find the smallest evidence of tuberculosis in any under one month, but from the third to the sixth month 8·6 per cent., from this to the twelfth month 18·3 per cent, and in the following years about 30 per cent. were more or less tuberculous. The observations of Koch on rabbits and guinea-pigs, and of Bang and Sidaingrotzky on cattle, have established the fact that the young of tuberculous animals were always born healthy and that they remained so if removed from their parents immediately after birth. The early diagnosis of the disease was of the utmost importance in man and domestic animals alike, especially in the cow, whose milk was a potent factor in the spread of tuberculosis among children. The sputa of all patients with chronic coughs ought, therefore, to be examined; and tuberculin, one small injection of which can do no harm, is a still more certain test applicable in every form of the disease. Examinations of cows and of milk in Germany, Denmark, America, and in this country have revealed an alarming prevalence of tuberculosis, especially in town cowsheds and in large herds; but, as Bang had conclusively shown, the disease might be extinguished with no loss to the owner if all the herd were tested with tuberculin and if those that re-acted were entirely separated from the rest and either fattened for the butcher or kept for a time for breeding, their calves being promptly removed to the healthy stalls. The test should be repeated twice a year till no more reactions take place, and all new purchases should be treated in a like manner. It would be well if the managers of public institutions would require a certificate of the freedom of milk from disease, and if dairymen were encouraged to provide such milk especially for infants. Men suffering from tuberculous phthisis should not be employed among cows, for the danger of infection was mutual. The milk of tuberculous cows should not be given even to pigs unboiled, for they and horses were liable to the disease. Unless the disease were far advanced there was little risk in the use of the flesh as food if all the affected organs were rejected. The sputa of phthisical persons were the great vehicles of infection. They should always be expectorated into spittoons, the use of handkerchiefs should be forbidden, and workmen in factories and workshops should be provided with Dettweiler's pocket spittoon. Railway companies should prohibit spitting in carriages, and should supply the proper vessels for the purpose; similar rules should be enforced in lodging-houses, &c. Heredity in the strict sense was as improbable as it would be in the case of small-pox; it meant only a susceptibility to infection in persons who had narrow chests and feeble constitutions, or were prone to catarrhal affections, leading to abrasions of the mucous membranes, and favouring inoculation with the spores which in a sound lung would be quickly destroyed by the leucocytes and cells of the epithelium. The rooms and houses of phthisical patients should be frequently cleaned without the raising of dust, and should be periodically disinfected; this was especially necessary in so-called health resorts, which were often foci of infection, as statistics and clinical observation amply proved. Dr. Niven advocated notification, while admitting the difficulties consequent on the long duration of the disease and the failure of the scheme which had been tried for a time in Manchester. He concluded by describing the methods for safeguarding cows and the regulations for dairy farms and cowsheds prescribed by the sanitary authorities in Manchester, as well as suggesting a system of veterinary inspection and control which might be undertaken by the county councils.

Dr. RANSOME said that he would not treat the patient as a leper, but would rather improve his surroundings. He had shown that in a dark, close atmosphere the bacilli could be cultivated for a long time in the condensed moisture of a room, but that in clean, dry, sunny apartments they soon died out. He believed that the reduction in the death-rate was real, and that it was due to sanitary improvement.

Dr. HERON maintained that prolonged and intimate association was necessary for personal communication of the disease, as had been experimentally proved by Koch, and remarked that Kitasato had shown that guinea-pigs might often be infected by bacilli too enfeebled to attack man.

Dr. PAYNE, Surgeon-General MCLEOD, Dr. WILLOUGHBY, Dr. SEATON BUCHANAN, Dr. BULSTRODE, and Dr. GOODALL also spoke.

OPHTHALMOLOGICAL SOCIETY.

Adjourned Discussion on Retro-ocular Neuritis.

A SPECIAL meeting of this society was held on Feb. 24th to continue the adjourned discussion on Retro-ocular Neuritis, Mr. E. NETTLESHIP, President, being in the chair.

Mr. W. H. JESSOP referred to cases illustrating the origin of the disease in question in tooth irritation and in fractures of the orbit, where atrophy of the nerve followed in about a month. The forms of neuritis associated with disseminated sclerosis and locomotor ataxy differed from the foregoing in the peculiar bluish-white appearance of the papilla, but were indistinguishable in aspect from one another. Though the visual fields and appearance of the nerve remained unaltered in the latter, in about four years there was usually complete loss of light perception. Hysterical and diphtheritic cases recovered completely.

Mr QUARRY SILCOCK, referring to the frequency with which the axial fibres of the optic nerve were affected, added another possible explanation to the suggestions already made by Mr. Marcus Gunn. This was that near the optic foramen the axial fibres were furthest removed from the vasa vasorum, so that any interference with the blood current might be expected to affect this tract first. He demurred to the greater functional activity of the fibres or of the lymph-flow in this region predisposing to degeneration under the influence of pressure. He referred to cases of irregular diabetes in which the defect of vision was more marked than the colour scotoma, where the symptoms were referred by Sir W. Broadbent to high arterial tension, and in which with

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lowered blood pressure the scotoma disappeared and the vision became normal. Subsequently indiscretion in diet led to the re-appearance of glycosuria, and it was a question whether the ocular symptoms were due to the direct action of a poison or of altered blood pressure on the nerve. Alcohol led to arterial sclerosis, and this to exudation from the vessels, producing transient œdema, which might account for the transitory character of the manifestations in the eye. He thought that, except in direct orbital inflammation and injury, the cause of the disease must be sought in general diseases like syphilis, gout, and rheumatism, and this would accord with the benefit derived from salicylate of soda and blisters in the cases alluded to by Dr. Hill Griffith.

Mr. HOLMES SPICER spoke of cases which did not improve, but in which the scotoma remained. They occurred in males beyond middle life, who were the subjects of sudden failure of vision, unaccompanied by pain and independent of assignable cause. There was some swelling in the disc, which was best observed by the parallactic movement and apparent constriction of vessels. The use of tobacco had been quite moderate in these cases. Usually, failing to improve, they ceased to attend until the other eye began to fail. There were commonly general symptoms, such as paralysis or mental hebetude, which came on later, indicating progressive degeneration of the nervous system.

Dr. RISIEN RUSSELL described the changes he had met with in the nervous system in a fatal case of disseminated sclerosis, which were identical in their naked eye and microscopic appearances in all parts, including the optic nerve and tract, though it was not possible to say whether they originated in the nerve elements or the interstitial tissue. The changes in the optic nerves were advanced, both being completely destroyed in front of the chiasma, and there were extensive areas of degeneration in the optic tracts, but strangely enough there were districts of undestroyed fibres between. Optic nerve changes were more common in disseminated sclerosis than Dr. Gowers seemed to allow, but the visual defect was often transitory at first, whereas in tabes it was permanent. The patient in question had come under notice twenty-five years before with paralysis of both legs, when there occurred sudden complete blindness with inability to move the head, recovery occurring in two days from all the symptoms except the loss of vision in the right eye, which was permanent. On admission to the hospital there were symptoms indicating postero-lateral sclerosis. In the right eye there was bare perception of light with faint reaction of the pupil. The vessels appeared to be normal, but there was atrophy of the disc. He died from what appeared to be a sudden myelitis of the upper part of the cord, though there was no evidence of this at the necropsy. There was postero-lateral sclerosis, and in the cranium the dura mater was adherent behind the foramen opticum, binding down the nerve, which was consequently torn in removing the brain. This right optic nerve was destroyed from the eyeball to the chiasma and flattened.

Dr. MACNAUGHTON JONES said that these cases might be regarded either from a clinical or pathological standpoint. He had never seen a permanent scotoma result from frequent attacks of migraine, as had been mentioned by Mr. Cross. The cases he had met with were characterised by aberrations in the colour field with variable changes in the disc, these being sometimes absent, the symptoms being limited to one eye. Complications were rare and recovery was general He attributed the condition to poisons such as alcohol, tobacco, syphilis, gout, or to grief, mental worry, or eye strain, but he had not encountered it after febrile diseases. Cases dependent on functional changes were probably temporary and those due to organic lesions permanent.

Mr. ADAMS FROST quoted thirteen cases of acute retro-ocular neuritis in which the loss of vision occurred in from one to three days and amounted in some to loss of perception of light. Three only were bilateral. There was hyperæmia of the disc and in some papillitis two days later. The prognosis was good, all the cases recovering, seven completely.

Mr DOYNE, after eliminating instances which might be due to tobacco and other assignable causes, selected eighteen cases, which he divided into binocular and monocular varieties. Of these, the former included eleven patients in whom there was but slight sign of inflammation in the fundus, and of whom only two fully recovered. Of the seven monocular instances five were in women. There was more evidence of optic neuritis, and all recovered.

The PRESIDENT said the term retro-ocular neuritis no doubt covered many clinical conditions, and it was evident that in the present discussion cases of widely different nature had been described. He selected 120 cases which he divided according to their clinical aspect into several groups. 1. Monocular and idiopathic included the smaller number, which all recovered. 2. Cases ranging in age from sixteen to forty years, probably syphilitic, of which thirty-eight were females and sixteen males, all of whom recovered and exhibited no general nervous symptoms. (The symptoms in some of these cases were probably due to gummata of the nerve.) 3. Nineteen cases, including eight men and eleven women, thirteen of whom were aged over forty years, who did not recover and in whom the pain at the onset was more intense and lasted more than four days. 4. Five cases, three men and two women, in whom vision failed in both eyes at short intervals, one attack overlapping the other, followed by slight pallor of the discs and complete recovery, the ages ranging from twenty-three to thirty-five years. 5. Cases of disease of the general nervous system, chiefly disseminated sclerosis and locomotor ataxy, in which both eyes failed at longer intervals, the disc ultimately becoming sclerosed. Other cases were probably connected with disease of the teeth or of the sphenoidal sinus.

The discussion terminated with the replies of Mr. MARCUS GUNN and Dr. BUZZARD, who had introduced the subject.

HUNTERIAN SOCIETY.

Cerebellar Tumour.—Mental Disorders of the Climacteric Period.

AN ordinary meeting of the society was held at the London Institution on March 24th, the President, Dr. G. E. HERMAN, being in the chair.

Dr. HINGSTON FOX showed a case of Cerebellar Tumour (?). The patient was a woman, aged thirty-four years. She had a staggering gait, weakness of the right-hand grasp, and double optic neuritis. There was no spasm of the muscles of the back or conjugate deviation of the eyes. Weakness and pains in the legs, with vertigo and headache, began a year ago. Phthisis was present in the family.—Remarks were made by Dr. F. J. SMITH.

Dr. WILLIAM RAWES read a paper on Mental Disorders of the Climacteric Period. He first pointed out that medical men are frequently consulted at this period about symptoms which are the precursors of mental disease, and that the climacteric period is liable to considerable variation as to the age at which it appears and also as to its duration. In 56 cases the average was just under forty-seven years. Most women suffer from some form of neurosis at the climacteric, and any physical malady is liable to be aggravated, whilst many women are brought dangerously near the brink of mental disease; still, it is doubtful if the menopause is sufficient to determine an attack. Heredity is a potent factor in the production of insanity; it was traceable in 48 per cent. of the cases. The prospect of recovery is not so gloomy as supposed. Previous attacks from whatever cause render the menopause a source of great risk. Alcoholism is another factor. The prognosis is much more favourable when the alcoholism has been a phase in the insanity and not a habit indulged in for years. Grief and mental anxiety are the most common causes which produce a rapid onset of insanity at this period, whilst remorse is a frequent cause of the restless cases of melancholia. Worry caused by pecuniary losses is a contributing factor, but the most important, on account of its bearing upon treatment, is a combination of circumstances which may be termed "isolation with introspection"; its influence was traceable in 80 per cent. of the cases. This occurs especially in women who, having led active lives, have then little to do They examine themselves and their feelings as it were with a microscope, so that there is scarcely any limit to the number and variety of delusions produced in this way, which in the religious type tend nearly always to become suicidal. In some cases there has been found a history of irregularity and excess in menstruation. Melancholia is by far the most common character of mental disease at the climacteric—it occurred in 60 per cent. of the cases; 25 per cent. had mania, 15 per cent. delusional insanity, 46 per cent. showed a suicidal tendency; there were hallucinations of hearing in

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50 per cent., of taste in 13 per cent., of vision in 26 per cent., and of smell in 10 per cent. About 50 per cent. of the patients recovered. Treatment consists in change of environment, open-air exercise, diet, electricity or massage, and tonics. The patient should also take up some form of congenial occupation. If delusions lead to attempted suicide the patient should be certified; but when this is necessary she should be told in a perfectly candid manner why it has been done. Deception practised on patients is harmful and wrong from every point of view.—Dr. SAVAGE agreed as to there being no special form of climacteric insanity, but rather a distinct grouping of symptoms which may precede, accompany, or follow the menopause. Symptoms following surgical removal of the ovaries are often only exaggerations of ordinary climacteric symptoms. There is a deadness or visceral anæsthesia in these cases, and where there has been puerperal insanity the menopause is a source of great danger. The symptoms associated with the climacteric are often hysterical and chiefly show the form of "rages," such as swearing. The symptoms of isolation and introspection may be termed "widow's disease." Travelling is not suitable in many cases.—Dr. J. F. WOODS stated that the most important agent in treatment is sleep, and that hypnotism is useful in melancholia.—Remarks were made by Dr. ROBERT JONES.—Dr. RAWES replied.

LIVERPOOL MEDICAL INSTITUTION.

Calculus in the Ureter.—Plastic Operation for Lupus.—Malaria in Central Africa.—Excision of the Rectum.

A MEETING of this society was held on March 25th, Dr. RICHARD CATON, President, being in the chair.

Mr. LARKIN read a note on Calculus in the Ureter. In cases in which operation was performed for stone in the kidney, and where no stone was to be found in the kidney, he was in the habit of turning the kidney out upon the loin and examining the whole length of the ureter by passing a probe along it into the bladder. On three occasions he had by this means detected a stone in the ureter.

Mr. ROBERT JONES showed a case in which a Plastic Operation for Lupus had been performed. The patient had been subjected to twenty-five operations without permanent benefit. Mr. Jones excised the lupus, carefully avoiding the facial nerve and Stensen's duct, and reflected a large flap from the front of the neck. This was adapted to the raw surface occasioned by the removal of the lupus. The edges of the skin incisions in the neck were then brought together. The result was very satisfactory.—Mr. PAUL mentioned that he had successfully covered the back of the hand, from which he had removed a large patch of lupus, with a Tagliocotian flap from the abdomen.

Mr. STANLEY KELLETT SMITH read notes of certain clinical points in Malarial Fever which presented themselves during an exploration of the country west of Lake Nyassa. There were under observation ten white men and about 700 blacks. It was found that among men on the march there was a close connexion between fairly rapid alterations of level and the occurrence of malarial manifestations. Whenever the route lay across level or gently sloping country fever was rare, but quick change from high veldt to low veldt and *vice versâ* was always marked by a great increase in the number of attacks. This point was illustrated by fever maps of white members of the expedition and by a sectional survey of the main line of march. Mr. Smith supported the probability of gradually acquired immunity, and drew attention to the prophylactic value of small daily doses of quinine in the form of the neutral sulphate sufficient to cause slight aural disturbance.—Dr. BUCHANAN, Dr. CARTER, Dr. A. DAVIDSON, Dr. ARCHER, and Dr. G. JOHNSTON took part in the discussion.

Mr. PAUL read a paper on a Second Series of Fourteen Cases of Excision of the Rectum. Two were for syphilitic stricture two for villous tumour, and ten for cancer. Short lengths of bowel were excised by the perineal and vagino-perineal incisions when the disease was situated in the lower third, and by a posterior median proctotomy when in the middle third. For extreme excisions a sacral flap was employed. The best results were obtained after removal of a short length of bowel by suture of the upper to the lower end. Approximation after extensive excision was considered bad practice, being more dangerous, and little, if any, better in result than when the stump was brought out and attached to a glass tube. The four non-malignant cases were cured. Of the malignant cases two died from the operation, two since from recurrence, and the remaining six were under observation. Of the previous series of fourteen cases, all malignant, three were cured (one of these having been watched for ten years and the other two for four years). A fourth was probably well, but could not now be found. Two died from the operation, and the remaining eight all died from recurrence after an average period of two years.

MIDLAND MEDICAL SOCIETY.

Election of Officers.—Paræsthesia.—Exhibition of Cases and Specimens.

A MEETING of this society was held on March 17th, the President, Dr. A. H. CARTER, being in the chair.

Mr. J. W. Taylor was elected President for the ensuing session, Mr. Garner was re-elected treasurer, and Dr. Kauffmann and Mr. Christopher Martin were elected secretaries.

Dr. SHORT read a paper on an Unusual Form of Paræsthesia, marked by Feeling of Coldness and Numbness in the Legs. The peculiar alteration in sensation dealt with in the paper was entirely subjective and not associated in any of the cases with objective alteration in sensation, motion, or nutrition. Nine cases of this condition were cited. The patients were all men of ages varying from nineteen to forty-nine years. Complaint was chiefly made of a cold feeling, generally associated with numbness, over the front of the thigh, round the knee-joint, and down the back of the leg in the calf and heel. One or two of the patients also experienced the feeling down the back of the thigh and down the shin. The sensation was comparable to that produced by cold wet clothes placed next to the skin. In addition there was an irritable condition of the mind due to the presence of the abnormal sensation, and absent when the latter was in abeyance. The symptom was periodic, resembling in this respect neuralgia, and at certain times might be entirely absent. In all other respects the patients were apparently quite well. The faradaic brush applied to the legs gave immediate, though only temporary, relief. Antipyrin and gelsemium also gave some relief in one or two of the cases, but of the many other drugs that were tried none had any appreciable effect. The condition was considered to be one of neuralgia, with possibly slight neuritis in several of the most severe cases.

Mr. F. MARSH showed a girl, ten years of age, whose left upper extremity he had removed for a Sarcoma of the Head of the Humerus by inter-scapular thoracic amputation after Berger's method, the only departure being the division and forci-pressure of the supra-scapular artery prior to the formation of the flaps, leaving only the posterior scapular artery to be secured subsequently. Extremely little blood was lost, but there was considerable post-operative shock and restlessness. A rapid recovery was made, the wound healed by primary union, and the patient was up on the sixth day. The growth was an endosteal mixed-celled (spindle and myeloid) sarcoma.

Mr. MARSH also showed a man, sixty-three years of age, from whom a Papilloma of the Larynx had been removed by Thyrotomy. The epiglottis concealed the greater part of the larynx. An incision was made in the middle line of sufficient length to expose the thyroid cartilage above and the upper four rings of the trachea below. The crico-thyroid membrane and the thyroid cartilage were then divided, and a papilloma attached to the under surface of the cords at the anterior commissure was removed with forceps and scissors. There was but little hæmorrhage. The thyroid cartilage and the openings in the trachea and crico-thyroid membrane were closed with catgut sutures. There was no subsequent dyspnœa or other troublesome symptom. The greater part of the wound healed by primary union. The man could now speak without difficulty and his voice was fairly clear.

Dr. THOMAS WILSON showed: (1) A Fibro-myomatous Uterus, with the Ovaries and Tubes; and (2) a Fibroid, the

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size of a Fœtal Head, removed through the vagina together with the uterus.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Porro's Operation.—Kolpo-panhysterectomy for Cancer.—Twisting of the Pedicle in Ovarian Tumours.—Exhibition of Specimens.

A MEETING of this society was held on March 19th at the Medical School, Sheffield, Mr. H. BRIGGS (Liverpool), the President, being in the chair.

Dr. KEELING (Sheffield) related a successful case of Porro's Operation. The patient was thirty-five years of age and had had two children. The first labour had been normal; there was no pelvic deformity. After symptoms of eclampsia this her second labour set it, and on examination no trace of the os or cervix uteri could be found; but later under an anæsthetic a dimple was made out representing the cervix. This was gradually dilated, when it was found that an opening had been thus made into the peritoneal cavity behind the cervix. Cæsarean section was at once decided upon, and eventually Porro's operation was performed on account of atony of the uterus and great oozing of blood. The stump was fixed in the lower angle of the wound. The operation was successful, the mother and child being exhibited.

Dr. RABAGLIATI (Bradford) related three successful cases of Kolpo-panhysterectomy for Cancer. The first patient was forty-one years of age, and had had fourteen pregnancies and fifteen children in twenty-three years. The os uteri was covered by a large patch of foul-smelling ulceration, the uterus being partly fixed; operation was only undertaken at the earnest wish of the patient and relatives. There was severe shock, but an uneventful recovery. Eight and a half months later there was a recurrence in the posterior part of the cicatrix. The second patient was twenty-eight years of age and had had three children. There was a history of syphilis. She had a cauliflower excrescence involving the whole of the cervix and encroaching upon the vaginal mucous membrane and fornices; the operation was successful, but recurrence was found in the posterior part of the cervix in the course of the tenth week afterwards. The third patient was thirty-nine years of age and had had three children. She had suffered for two years from pain and for eighteen months from watery, blood-stained, offensive discharges. There was a large patch of ulceration on the inner surface of the cervical canal occupying five-sixths of the circumference, and also on the outer aspect of the cervix. The uterus was moveable, but high up and difficult to reach. The bladder was accidentally opened by the anterior incision, although a male sound was in it as a guide, and was sutured. The patient did well until the eighth day after the operation, when she had a rigor; her temperature was 103·2° F., her pulse 160, and phlebitis of the leg supervened, with herpes about the lips and mouth. Ultimately she recovered, and so far has had no recurrence (ten weeks after the operation). All three cases were operated upon by Martin's method, and in all the microscopic report was epithelioma. Dr. Rabagliati gave an account of the anatomical considerations which make the prospect of non-recurrence of uterine cancer more favourable than in other cases of cancer.

Dr. SINCLAIR (Manchester) read a paper on Twisting of the Pedicle in Ovarian Tumours. The cases on which the remarks were based were four consecutive ovariotomies, and the object of the paper was chiefly to call attention (1) to the severity of the symptoms occasionally produced by torsion; (2) to some difficulties in the diagnosis; and (3) to the question of immediate operation. In all these four cases ovariotomy was performed without delay, and the result in each case was satisfactory.

Dr. HELLIER (Leeds) showed a Placenta from a patient who had suffered from hæmorrhages during the period of gestation. Premature labour was induced at the sixth month.

Dr. LLOYD ROBERTS (Manchester) showed a Cystic Tumour, the cavity of which consisted of the calyces of a cystic kidney.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

Dilatation of the Stomach.—Relapse in Scarlet Fever.—Celandine in Cancer.

A MEETING of this Section was held on March 12th, Dr. G. F. DUFFEY, the President, being in the chair.

Dr. BOYD read a paper on the Significance of Dilatation in Functional and Organic Diseases of the Stomach.—Dr. DOYLE said that lung troubles, such as chronic bronchitis, were causes of partial dilatation of the stomach, on account of the passive congestion interfering with the nutrition of the organ. Another cause was the badly kept condition of the teeth of the poorer classes, and the short time given by them to the proper mastication of their food, which was usually of a starchy nature.—Dr. POTTER said that he had frequently found a large teaspoonful of vegetable charcoal taken an hour or two after meals very beneficial in the treatment of dilated stomach.—Dr. TWEEDY referred to a case which he had formerly shown where the stomach filled almost the entire abdominal cavity, this condition being due to the habitual eating of large quantities of potatoes. The pressure of the stomach filled with a large quantity of food of this nature, which cannot be got rid of as quickly as it ought to be, was one cause of constipation, and, moreover, a dilated stomach filled with starchy food could, by drawing down the pylorus and the first part of the duodenum, produce a kink at the junction of the first and second parts of the duodenum sufficient to obstruct the free passage of food.—The PRESIDENT believed that muscular wasting was really at the bottom of many forms of dilatation. The extent of the dilatation could be determined by giving the patient effervescent powder or by filling the stomach with large quantities of fluid.

Dr. E. MACDOWEL COSGRAVE read a paper on two cases of Relapse in Scarlet Fever. One was a girl, nine years of age, who was admitted into Cork-street Fever Hospital on Nov. 12th, 1896, suffering from a severe attack of scarlatina anginosa, the temperature falling to normal on the ninth day. On the twenty-eighth day, whilst desquamation was occurring in large flakes on the feet, the child had an attack of vomiting, the temperature ran up to 105·8° F., and a punctiform rash appeared, the tongue and pharynx being also typically affected, and albumin appearing in the urine. On the eighth day of the relapse secondary desquamation commenced and gradually spread over the body. The second case, also a girl aged nine years, was admitted to Cork-street Fever Hospital on Nov. 27th, 1896, suffering from well-marked scarlet fever. Eighteen days after admission, whilst free desquamation was going on, the child complained of headache and sore-throat, the temperature rose to 105·8° F., and a punctiform rash appeared; desquamation where occurring was increased, and where finished was repeated.—Dr. J. W. MOORE agreed that true relapses had occurred in Dr. Cosgrave's cases, and said that by means of isolation hospitals it was possible to produce many cases of relapse in scarlet fever, provided that the patients were kept in the wards long enough.

Dr. JOSEPH REDMOND read a paper on the Treatment of Cancer with Celandine (chelidonium majus). He exhibited patients suffering from epithelioma of the tongue and of the lip, and read notes of two cases—one of cancer of the œsophagus and the other of cancer of the liver. All the cases were improving under treatment with celandine.—The PRESIDENT said that it was remarkable that so little pain had been caused by the use of the drug, seeing that it was an irritant and an active narcotic poison.—Dr. J. W. MOORE said that some of the cases brought forward by Dr. Redmond were a little open to doubt as being cases of cancer, and that the symptoms were much more like acute dyspepsia.—Dr. REDMOND, in reply, said that he had never noticed any intense diarrhœa after administration of the drug.

MERTHYR TYDVIL HOSPITAL.—A meeting was held at Merthyr Tydvil on March 15th, under the presidency of the high constable, for the purpose of raising a fund in support of the endowment of the Diamond Jubilee Ward of the Merthyr Tydvil Hospital. The chairman announced that excellent progress had been made towards raising the sum of £7000, which it had been suggested would be sufficient to endow the five beds which the ward would accommodate.

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Reviews and Notices of Books.

Royal Infirmary Clinique. By ALEXANDER JAMES, M.D., F.R.C.P. Edin., Physician to the Royal Infirmary, Edinburgh. Edinburgh: Oliver and Boyd. 1896. Pp. 166. Price 5*s.*

THIS small volume contains sixteen lectures delivered by Dr. James in the wards of the Royal Infirmary, Edinburgh. They are excellent reading and amply confirm the reputation of the author as a clinical teacher. A case of pulsating Tuberculous Empyema is well described, and the conditions leading to pulsation in pleural effusions are fully discussed. Two of the most interesting chapters are those on a case of Renal and Cardiac Disease, with special reference to the Diurnal and Nocturnal Excretion of Urine and a case of Primary Contracting Kidney. The latter lecture is so good as to be well worthy of comparison with Trousseau's work. Dr. James brings out very clearly the importance of regular testing of the relative amounts of day and night urine as a valuable indication of organic renal disease (p. 39): "In health the proportion of urine passed during the day hours is very much greater than that passed during the night. Roberts, for example, with a total daily quantity of 30 oz. 6 dr. of urine, gives for the sixteen hours of waking 30 oz. 2 dr., and for the eight hours of sleep only 4 dr. This gives as the amount of the secretion per hour for the day a little less than 2 oz., and for the night about ½ dr.; or, splitting the total quantity into two, one representing the amount passed between 8 A.M. and 8 P.M. and the other the amount passed between 8 P.M. and 8 A.M., this would give for the day quantity about 27 oz., and for the night about 3½ oz." He quotes Dr. Claude Wilson's observations: "That in debility, however produced, the diurnal and nocturnal rates approximate to each other, that this is specially marked in cases of cardiac disease, and more so still in organic disease of the kidney. One case is especially interesting, in which the approximation between the day and night rates of excretion was sufficient to make me strongly suspect organic (waxy) disease of the kidney, though there was no noticeable polyuria nor any albumin. This patient died two months later, when he was found to have extensive waxy disease of both kidneys as well as of other organs, though no albumin had been detected in his urine until a week before his death, and then only a trace." Dr. James sums up: "Of course alterations can occur in other morbid conditions and even occasionally in health, but when it occurs habitually and cannot be explained as due to other morbid causes it may enable you earlier than any other symptom to contemplate the onset of organic renal disease." The point is one which deserves much further precise investigation. In passing we would protest against the use of the word "cirrhotic" (p. 35) to describe the small granular kidney; it has become more customary to do so of late, but it is undesirable. The two cases of cirrhosis of the liver in children are of great interest clinically from the fact that Dr. James lays stress on the relationship which seems to exist between tuberculous infection and cirrhosis of the liver. Both in children and in adults the connexion appears often to be definitely more than a mere coincidence. The lectures on Friedreich's Ataxy and Addison's Disease are very good.

A Book for Every Woman. Part I.: The Management of Children in Health and out of Health; 1895. Part II.: Woman in Health and out of Health; 1897. By JANE H. WALKER, L.R.C.P. Irel., L.R.C.S. Edin., M.D. Brux., Physician to the New Hospital for Women, &c. London: Longmans, Green, and Co. 1897. Price 2*s.* 6*d.* each part.

THE first part of this book, as indicated in the title, is concerned with the management of children in health and out of health. In the introduction the author defines a healthy child as "one who is free from self-consciousness, whether in mind or body." The object of the volume is "to give plain and simple directions which, if carried out, will tend to keep healthy children well and help delicate children to become stronger." The author is strongly opposed to the practice of giving children any alcoholic beverages whatever. As she says, they are never necessary for a healthy child, and no doubt, besides being unnecessary, they may easily be mischievous. A diet table is given for children of various ages, which may be useful to the inexperienced matron and others. In the second part of the work, devoted more especially to the adult woman, there is a great deal of good advice of a necessarily more or less general character. As regards cycling, we observe that, according to the author, "it exercises the legs and lower part of the body and increases lung power. Like everything else, it is best done by one in good muscular training, and a girl, who perhaps has never done any other active thing, who compresses her ribs with stays and her feet with shoes, such being the fashion, who buys a bicycle and learns to sit it, such also being the fashion, is very likely to 'override' herself and find that it does not agree with her." No doubt, as the author says, "the extraordinary benefit derived from it by so many young women proves only how little exercise they were in the habit of taking. A daily gentle run of a couple of miles would be much cheaper and far better training. Cycling is useful and it is delightful and it is fashionable, but it is not magical." She has also something to say about most other forms of muscular exercise, from gardening to billiards. There are several useful dietaries, such as a diet for fat people, a diet for thin people, and a diet for gouty and rheumatic people, which may be of use to those who like to get the advice they require out of books. We should say that the two volumes will probably prove useful to those for whom they are intended.

LIBRARY TABLE.

Transactions of the American Dermatological Association at its Twentieth Meeting, in 1896.—The meeting last year was at Hotsprings, Virginia, under the presidency of Dr. A. R. Robinson of New York. The Transactions are reprinted from the November and December numbers of the *Journal of Cutaneous and Genito-Urinary Diseases*, but without the plates or cuts. The report is much shorter than usual or else there was less work done. We miss the list of members, with their addresses, which was very useful for foreign workers in dermatology. Among the most interesting papers was A Case of Symmetrical Morphœa attended with the Formation of Bullæ and Extensive Ulceration by Dr. Morrow, and A Milium-like Condition of the Lips by Dr. Fordyce, of which there is a coloured illustration in the November number of the journal already mentioned. A Favus-like Eruption of the Oral Mucous Membrane is published by Dr. Winfield. Dr. Bowen's two cases of Mycosis Fungoides and Sarcomatosis gave rise to an interesting discussion, as did also Dr. White's paper on the Effect of Diet and Alcohol upon the Causation and Course of the Eczematous Affections and Psoriasis. A Pathological and Clinical Classification of the Diseases of the Skin by Dr. Duhring did not elicit much approval from his auditors. Some Glycosuric Dermatoses by Dr. C. W. Allen and Xanthoma Diabeticorum by Dr. Robinson excited interest. This case does not appear to be a typical one. There had never been any glycosuria or jaundice, although the patient had suffered from gall-stones. A large proportion of the lesions had disappeared for a time, but had recurred. The lesions were the size of a pin's point to that of a pin's head, yellowish, with a tinge of red. The urine contained 20 per cent. by

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bulk of albumin, but no sugar. Impetigo Contagiosa Universalis was the title of a paper by Dr. C. W. Allen. Some doubt was thrown upon the diagnosis by some of the speakers, and as staphylococcus aureus had not been searched for the true nature could not be proved. Dr. White of Boston was elected president for the ensuing year.

Cerebral Herniæ (Cephaloceles) and their Treatment. By Dr. N. K. LUISENKOF. Moscow: The Yakovlef Press. 1896. Price 2½ roubles.—This excellent monograph of 232 pages is a valuable contribution to the literature of the subject with which it deals. It presents an exhaustive discussion of the various forms of this not very uncommon lesion both from their anatomical and clinical aspects. The author is of opinion that the large majority of so-called congenital cerebral herniæ are not true herniæ or protrusions of brain substance, but are teratoid formations, resulting from imperfect separation of the neural canal in the process of development, and sometimes containing no nerve substance at all. All forms of hernia, encephalocele, hydrencephalocele, and meningocele are but different degrees of the same embryonic lesion. They should be treated as other new formations by complete excision of the tumour and, if possible, closure of the opening in the skull by an osteoplastic operation. Only large exencephala, or true herniæ of the brain with much protrusion of brain substance and great deficiency of the skull, are unsuitable for operation. If a fatal result follows the operation it is almost invariably the result of some complication, more particularly of a septic character, and not of the operation itself. The monograph, which was presented by Dr. Luisenkof as the thesis for his doctor's degree, is illustrated with plates showing the aspect of patients suffering from cephalocele, both before and after treatment, and the macroscopic and microscopic appearances of the bones of the skull in typical cases.

Premature Burial, and how it may be Prevented. By WILLIAM TEBB, F.R.G.S., and Colonel EDWARD PERRY VOLLUM, M.D., late Medical Inspector, U.S. Army; Corresponding Member of the New York Academy of Sciences. London: Swan Sonnenschein and Co. 1896. Pp. 400.—It is seldom our ill fortune to come across such a compilation as this volume. That states of trance may resemble death is a commonplace known to every medical man of any experience. In this country at any rate, where a comparatively long period elapses between certification of death and burial, there is no real danger of practical confusion between the two. The tests are ample, and if a shadow of a doubt exists a short delay till putrefaction definitely sets in can in the future be insisted on, as it so often has been in the past; and yet the authors have had the temerity to produce this book, which must needlessly excite the fears of any unfortunate individual who is unlucky enough to read it. Newspaper cuttings, second-hand information, and unverified statements form the chief basis on which the writers build.

The Nurses' Dictionary of Medical Terms and Nursing Treatment. Compiled by HONNOR MORTEN. Third and Revised Edition. London: The Scientific Press.—This manual may have been revised, but if so it has been very carelessly done. For instance, ægobronchophony is defined as "a bleating sound heard on auscultation—a symptom of pleuro-pneumonia." Collodion is said to be gun-cotton dissolved in alcohol. In the preface we are told that "ectomy" means cutting. The purely nursing directions in the book, however, are apparently correct. We might remark that Epsom salts are not the "sulphite" of magnesia.

The Horse: His Life, His Usage, and His End. By Colonel W. LISLE B. COULSON. London: William Reeves. 1896. Price 2*d.*—An earnest and well-written plea for the better treatment of horses. The remarks about the use of pearing-reins, or rather their abuse, are worthy of everyone's attention.

An Autumn Singer. By GEORGE M. GOULD, M.D. Philadelphia: J. P. Lippincott Co. 1897.—This is a small collection of poems, sonnets, and *vers de société*. The sonnet entitled "Unrest" is to our mind the best.

Current from the Main. By W. S. HEDLEY, M.D. Edin. London: H. K. Lewis. 1896. Price 2*s.* 6*d.*—This publication is mainly a reprint of articles which have already appeared in our columns in 1892, 1895, and 1896. Electricity is so much used now as a therapeutic agent, the current being in many instances supplied from the main, that Dr. Hedley's cautions as to the dangers of leakage currents in an electric bath will be found of great value.

Elementary Bandaging and Surgical Dressing. By WALTER PYE. Revised and partly Re-written by G. BELLINGHAM SMITH. Seventh Edition. Bristol: John Wright and Co. London: Kegan Paul and Co. 1896. Price 2*s.*—This little book is mainly a re-issue of portions of the late Mr. Pye's "Surgical Handicraft." The portions on the dressing of wounds have been brought up to date by Mr. Bellingham Smith, and the book will be found very useful for dressers and, up to a certain point, for travellers in wild countries.

A Collection of Ballads. Edited by ANDREW LANG. London: Chapman and Hall. 1897. Price 2*s.*—The old ballad is not only to be valued for its subject, or in many instances its music and pathos, but also for being a mine of old beliefs. The idea of paying tithes to the devil is illustrated in the present collection by the ballad of Tamlane. We might remark that the late Sir James Simpson's grandfather buried a cow alive as a sacrifice to the devil, and also reserved a corner of his farm, albeit the most unproductive portion, for the exclusive use of the same personage.

Physical Exercises in Gymnastics for Girls and Women. By F. J. HARVEY. London: Longmans, Green, and Co. 1896. Price 3*s.* 6*d.*—This is a well thought out little book for the use of teachers in high schools, &c., giving simple and clear directions for organised physical exercises. It is copiously illustrated with photographic plates, and the little essay on the necessity of physical training and exercise contains plenty of common sense.

What to Do in Cases of Poisoning. By WILLIAM MURRELL, M.D. Brux., F.R.C.P. Lond. Eighth Edition. London: H. K. Lewis. 1897.—This well-known and useful little book has been revised and brought up to date by the addition of much new information, and also what the book greatly lacked before—an index. It is an excellent work for the country practitioner, who is often far removed from the help of his professional colleagues.

Our Weights and Measures. By H. J. CHANEY. London: Eyre and Spottiswoode. 1897. Price 7*s.* 6*d.*—Nothing could be more perplexing than our present system—if we may call it a system—of weights and measures, and this is largely to be attributed to the peculiar origin of our standards. Uniformity is hardly to be expected when we remember that the original weight of an English penny called the "sterling" was defined to be that of "thirty-two grains of wheat, well dried, and gathered out of the middle of the ear"; or that "three barleycorns laid end to end" was to be regarded as an inch," subsequently modified by providing that the barleycorns should be "round and dry." The work before us is a practical treatise on the standard weights and measures in use in the British Empire, and the writer is the superintendent of the Board of Trade Standards Department, so that every reliance may be placed upon the information and data it contains. The history of the evolution of our systems of weights and measures from almost prehistoric times is exceedingly interesting, while the account of the present standards and methods of standardisation will be

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very valuable to many, and the work is made more instructive by the fact that the standard instruments described are admirably illustrated. It is an indispensable book of reference to scientific men as well as to those engaged in commercial life.

Medical Report of the Royal Infirmary, Liverpool.—This report, the first one issued, contains medical, surgical, and pathological statistics drawn up by the registrars of these subjects respectively—namely, Dr. E. A. Smith, Dr. H. T. Nixon, and Dr. R. Boyce. They are apparently very full and carefully done, but we should suggest in subsequent volumes the addition of a table of all operations performed (and not only gynæcological ones) and some figures as to the administration of anæsthetics; moreover, we do not think that the names of patients should be given in full. The notes upon post-mortem examinations should prove of great value. One case is specially interesting—that of a girl, aged fourteen years, who had died from cirrhosis of the liver. There is a misprint in this table, p. 86, the column which should be headed "age" being headed "No."

The Law of Wills ("Wilson's Legal Handy Books" Series), by C. E. STEWART, M.A., Barrister-at-law, and published by Mr. Effingham Wilson of the Royal Exchange, price 1*s.* 6*d.*, has reached another edition, to which has been added a new chapter dealing with the Finance Act of 1894 so far as it affects the rate of the death duties. Mr. Wilson's series of legal handy books are well known and have deservedly become popular.

JOURNALS AND REVIEWS.

The Phonographic Record.—Mr. Lamming Burton, in the March issue, gives much information for those about to "take a ship." Though the ship may be small it matters not if the captain be a sailor and a gentleman; and before accepting a ship it is well, if possible, to see "the old man." The next thing is to see the cabin and overhaul the medical stores a few days before sailing. Shelves are to be preferred to medicine chests; and, whatever else is carried, chloroform, solution of cocaine, hypodermic outfit, and surgical dressing-case are essential. Refreshing his memory in the pages of a good materia medica, the ship surgeon writes out his order for the drugs to be sent on board without delay. All drugs and instruments in stock are to be examined and held guiltless of activity until they are found to possess it. Ammonia may be scentless, chloral hydrate gone to liquid, pills mouldy or their freshness external, and "the heat of a voyage down South has fused the set of catheters into one solid mass." Bandages and no splints will not do much good, and new enema syringes, fresh catheters, and a couple of trusses should be taken. On the voyage the surgeon's position may be made or marred by his mode of dealing with his first patient. The first case may be a genuine one, but, adds Mr. Burton, "be sure of it." Firemen most often need the medical officer, and we are told their work is "the hardest and worst to be found below heaven"; but a drunken spree before sailing has often to answer for the fireman's illness, and the men are ever ready to be off work and malinger. Mr. Burton says that among the crew of a steamship cases of constipation, diarrhœa, gonorrhœa, cramps, pediculi, debility, syphilis, cuts, burns, hernia, and fractures are commonest, and their frequency in the order given. In noting that the surgeon must remember and be prepared to treat the diseases of the country to which he is bound, Mr. Burton says that ague, dysentery, black-water fever, and malarial boils will be encountered in Equatorial Africa, yellow fever in South America, cholera in India, and sunstroke in all hot countries.

In the *Veterinarian* for March E. W. Carlier's paper on the Pancreas of the Hedgehog during Hibernation is concluded. Dr. Carlier notes that during secretion the cells become smaller, and the lumen of the acinus larger, the nucleus becomes enlarged and clear, and the chromatin is more widely distributed. The ducts have the usual structure. He can find no muscular sheath around the larger ducts, whose walls, however, are surrounded by connective tissue and are pierced by mucous glands. The central acinal cells, which have been described by some as epithelial in character and by others as multipolar nerve cells, are not numerous, but can usually be seen near the mouths of the acini. The amount of connective tissue in the pancreas of the hedgehog is very small; the lymphatics are numerous, as are also the ganglion cells situated in the fibrous tissues surrounding the larger vessels. The Pacinian corpuscles described by Harris are fairly numerous in the hedgehog near the head of the pancreas, as are also the islands of Langerhans; these latter are small, and contain many large cells filled with fine eosinophilous granules. Veterinary-Major F. Smith concludes his observations on the Symptoms and Lesions of Anthrax in the Horse, in which he gives a very full account of the post-mortem appearances of the thoracic and abdominal organs in this disease. He points out that although the whole of the symptoms are found in very few cases, and that it is quite likely that only the bowels and spleen may be affected, or the throat and lungs, or only the throat, and so on, that the lesions described are so typical of equine anthrax in India that there is no other disease of the horse for which they could be mistaken. A note on Filaria Oculi of the Horse by Professor Neumann of Toulouse, and Notes on the Presence of Ganglia in the Lung by A. E. Mettam, and on the Terminal Portions of the Abdominal Aorta and Immediate Collateral Branches by H. V. Mossmann are followed by a series of Clinical Cases by E. Wallis Hoare, by Archibald Hodder, by the Editor, and by W. Murgatroyd; and accounts of the month's progress and reports of the meetings of societies.

In the March number of the *Veterinary Journal and Annals of Comparative Pathology* "Borth" continues his Essay on Diseases of Animals Transmissible to Man, completing his remarks on the tape worms and round worms, and taking up the specific infective diseases, mentioning anthrax, diphtheria, and tetanus. These accounts are somewhat sketchy, but they contain the ordinary information. The Principal of Bombay Veterinary College, Veterinary-Major J. B. Mills, gives a short account of a Mysterious Disease among Horses in Mombasa, Africa. This disease appears to be some form of the Nagana disease, which is supposed to be spread by the tsetse fly, on which Surgeon-Major Bruce is at present making a series of investigations. In this number there are some excellent photographs given to illustrate sprain of the suspensory ligament and flexor tendons in over-reaching in the horse. This application of photography should be of very great value. A good case of recovery of a horse from tetanus after the injection of antitetanin is described, and it appears that the value of antitetanin is greater in connexion with the treatment of tetanus in the horse than it is likely to be in the human subject. In an editorial article dealing with the new Public Health Bill for Scotland the editor complains of the attempt that is being made to give the medical officer of health the power to deal with animals and animal diseases which he maintains should certainly be in the hands of well qualified veterinary surgeons. Reports and proceedings of societies, an account of an experimental study of the aspergillus fumigatus, and an account of the regulations for admission to the Army Veterinary Department, 1897, with an abstract of a paper on the Relationship of the Liver to Fats by D. Noel Paton, legal news, abstracts from foreign journals, and notes and news and reviews make up a very readable number.

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Liétopis Russkoi Chirurgii (*Chronicle of Russian Surgery*). Thirteenth year. Part II.—The present number of this excellent Russian journal opens with an illustrated article by Dr. Serapin on the Treatment of Goitre by various thyroid preparations. Of thirty cases under the writer's own observation two were "completely cured"; in nine the result was "good," only a trace of enlargement being left; in ten the success was "moderate"; and in nine the result was negative or the improvement was very slight. Success was therefore met with in 70 per cent. of the cases. Dr. Sapiejko records six cases of the Operative Treatment of Lupus. He is averse to any attempt to treat the disease by medication or by palliative surgical measures. Radical excision, removing the whole affected skin and subcutaneous tissue and not less than one centimetre of the healthy skin around, is advocated as the only measure offering the hope of cure. Subsequent plastic operations are, of course, necessary. A rare case of Supernumerary Nipple is described by Dr. Kumberg. The patient was a male Uzbek Tartar, and the extra nipple was in an unusual position, lying over the eleventh dorsal vertebra and almost in the middle line. Two successful osteoplastic operations for the radical cure of Spina Bifida are recorded respectively by Dr. Gorski of Odessa and Dr. Orlovski. The first patient was aged one year and eight months, and the second only five months; in both cases the treatment was completely successful. Among the reports of Russian surgical societies will be found a discussion on Professor Ratimof's case of Actinomycosis of the Cæcum; more than one of those who took part in the discussion had seen similar cases, and had found large doses of iodide of potassium the most satisfactory form of treatment.

The Middlesex Hospital Journal, No. 2, Vol. I.—The issue of this journal for March only strengthens the favourable impressions conveyed by the first number. A short description of the Davy-Faraday Laboratory is well illustrated, and there is some interesting clinical matter. An article on "The Synthesis of Proteid Matter" is commenced by Mr. C. Reissmann, F.C.S.

St. Thomas's Hospital Gazette for March opens with a portrait and obituary notice of the late Sir Thomas Spencer Wells, "this great and epoch-making surgeon, whom St. Thomas's Hospital is proud to claim as one of her oldest and most distinguished students." Mr. W. G. Sutcliffe continues his recollections of the second Matabele war. Under the heading "A New Remedy" is published the following letter. Possibly it is as well to point out that the "very tall built gentleman" is the present President of the Royal College of Surgeons of England.

"To A Medical
"gentleman at
"Saint Tomies
"Horspitel
"West Minester
"Bridge Road
"London

"Dir Sir

"Just a few lines letting you now my bisness i was in this Horse pitle About 16 years ago and Recive greate atention i Sufered with Stone in the blader i had to go under a operation Mr Mack comic was my Medicle gentleman a very tall built gentleman i am glad to say i am Still all Rite but my Hargument is i am more a Hurbless And under stand a little bit about the umon body i have got a Remedy Which as never been Expose to the public Only to Working man i New which had the same complaint as i had and that was a stone in the Blader i gave him some powders to last him About 3 Weeks he use one Every Morning in his tea and the same at tea time and the same with the Other man and i can safley say that thease powders did Resolve or Melt the stone in the Blader and am happy to say that they are all Rite and as happy as a sand boy wonce they were dull and low spirited Now Sir i am asking you kindley a little bit advice about this i am Only a por man i am willing to do every working man or gentleman every good but Not harm this Remedy i do not think it ought to be covered Over and the World not to know every think About it it is worth some think it is Only hurbes but not Murkley i should like to have a Ancer i can Not menchin Aney medical gentleman because i do not now one only Mr. Mack comic so i Now close, &c."

St. Mary's Hospital Gazette publishes a list of sixteen cases of death under chloroform administration which have occurred since the commencement of this year. "This high mortality," it says, "must in large part be due to careless administration of the anæsthetic, either sudden overdose, or from inattention to the respiration, rather than to any unavoidable toxic effect of the drug. Since the list was compiled four more deaths under chloroform have been reported, making twenty cases in England alone in two and a half months."

Analytical Records
FROM
THE LANCET LABORATORY.

AUSTRIAN PINE PRODUCTS (JOSEPH MACK).

(THE REICHENHALL SYNDICATE, LIMITED, 60, QUEEN VICTORIA-STREET, E.C.)

THE basis of all these good preparations is the essence obtained by distillation from the *pinus pumilio*, which is found in the highest regions of the Austro-Bavarian Alps, the tree selected for the special purpose occurring at an altitude of not less than 6000 feet above the level of the sea. The essence is a fragrant, clear, mobile, and colourless oil, which we find has a constant boiling-point of 78·5° C. It is therefore readily volatilised. Probably the beneficial action which it undoubtedly has when employed as an inhalant, and also when taken internally, is due to its inherent antiseptic properties, and also to the fact that it readily develops peroxide of hydrogen on contact with moisture. A simple experiment illustrates this. On shaking the oil with water the liquid will be found to contain peroxide of hydrogen by the usual tests. It may thus serve as an oxygenator and purifier of air. The Austrian pine products include the following preparations: Pectoral Syrup, for use in pulmonary disorders; Pectoral Paste, used for a similar purpose as a lozenge; Capsules of Pine Essence for administration in bronchitic and allied affections; Bouquet des Alpes, a refreshing and fragrant application for the handkerchief; Anti-rheumatic Bath, a more or less crude preparation containing the entire pine principles, and evolving when placed in hot water an agreeably aromatic smell; Sanitary and Toilet Soap, a soap, as our tests proved, of excellent quality. Not the least favourable feature of these preparations is the fact that while beneficial in certain lines of treatment they are very agreeable to use, the basis being characterised by an especial fragrance.

HAY'S FOODS.

(WILLIAM HAY, GROSVENOR-STREET, HULL.)

An examination, both chemical and microscopic, indicates at once that these preparations possess a high degree of nutritive power and digestibility. The infants' food, for example, contains the constituents of wheat flour of a superior quality, carefully modified by cooking so as to present no obstacle to assimilation, while it contains about 15 per cent. of germ with 15 per cent. of active malt. It possesses a pleasant, distinctly sweet, and malty flavour, and, as might be expected, is very soluble. The appearance under the microscope confirms this statement in regard to its composition, as well as in regard to its method of preparation, which enhances the nutritive value of the constituents. It follows that the proportion of proteids is admirable, while the yield of indispensable mineral nutrients is found to be satisfactory. In a word, the food contains a maximum proportion of all the elements necessary for the sustenance and growth of the infant. "Frumentine" is a pleasant wheaten food, containing a satisfactory proportion of wheat germ. From the character of the preparation made from it in the form, for example, of porridge, the cereal selected is clearly of a superior kind, the flavour being

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pronouncedly wheaten and acceptable. It affords, therefore, not only a highly nutritious but a palatable food.

NEW PALATINOIDS.
(OPPENHEIMER, SON, AND CO., 14, WORSHIP-STREET, E.C.)

The palatinoid, consisting of a gelatin case in shape like two tiny watch-glasses cemented edge to edge, is well adapted for the administration of creasote and guaiacol. The nauseous character of both drugs is thus avoided in the mouth. The creasote employed in the present instance is said to be specially pure, and therefore non-corrosive and free from any bleaching effects upon the mucous membrane. We have also recently received palatinoids containing a definite quantity of amyl nitrite. They possess the advantage that they may be crushed within the folds of a handkerchief and administered in that way as an inhalation without any of the risk which arises from crushing containers made of glass.

(1) WHOLE MEAL BREAD AND (2) SELF-RAISING FLOUR.
(E. MOGG, ST. MARY-STREET, BRIDGWATER.)

The specimen of whole meal bread was characterised by the entire absence of irritating particles of bran, although the proportion of mineral matters, phosphates, &c., which occur abundantly in bran was high. The bread was evidently malted, and possessed a good wheaten as well as malty flavour. Despite the rich proportion of soluble carbo-hydrates resulting from the introduction of malt, the loaf presented a good light and spongy texture. The self-raising flour acts well, as we found on preparing a specimen of bread in the way directed. The resulting loaf is free from objectionable saline taste, which is always apparent when ordinary baking powder has been used. Judging from the excellent taste and texture of the resulting loaf the flour selected is evidently of superior quality.

"AMBROSIA."
(EVANS, GADD, AND CO., FORE-STREET, EXETER.)

The formula of this preparation, which is a combination of Devonshire cream with an active extract of malt, is an excellent notion. Under the microscope it is not possible to distinguish particles of fat in a separate condition, but on adding water myriads of oily globules are seen to dissociate. The preparation should afford a valuable substitute for cod-liver oil, especially as the fat of cream, as is well known, is more easily assimilated than many other fats, while the co-existence of an active malt essence is calculated to make appropriation still more secure. Moreover, the flavour is attractive. We are not certain that this preparation will keep well.

CALLARD'S NON-FARINACEOUS INFANTS' FOOD.
(CALLARD AND CO., 65, REGENT-STREET, W.)

The microscope showed the complete absence of insoluble starchy matters in this food. It contains rather the digestion products of starch—namely, dextrine and sugar. The preparation is therefore almost completely soluble in excess of cold water. It possesses a sweet and marked dextrine like taste. The soluble carbo-hydrates are judiciously balanced by an excellent proportion—amounting to nearly a seventh part—of proteids. Nor is it destitute of those mineral constituents which are none the less important factors in the infant's diet. The food is evidently prepared with a correct knowledge of the special requirements indicated.

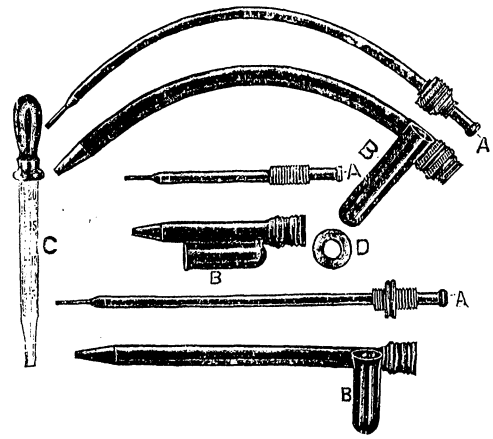
KYDDE'S FOOD.
(KYDDE AND CO., 10, SOUTHWARK-BRIDGE-ROAD, S.E.)

This is a food prepared in accordance with the requirements of infants and invalids when used with milk as a necessary adjunct. It is a white powder containing wheat starch, and is sweet and malty to the taste. It is made digestible by having been malted, the presence of a good proportion of soluble carbo-hydrates being due to this method. When prepared in the way prescribed it is both nutritious and palatable.

New Inventions.

A CELLULOID SPRAY PRODUCER.

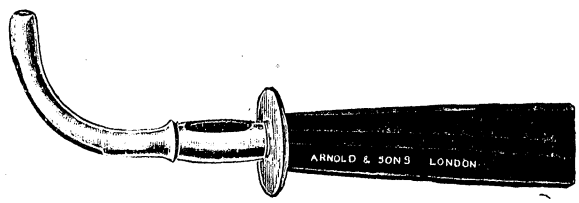
MR. THOMAS WOODRUFF, of 43, Cavendish-road, Withington, Manchester, has brought out a new spray producer, specially adapted for the accurate administration of medicated solutions or liquids in minute quantities. It is made in three forms so as to allow of the direct action of the spray on the larynx, pharynx, or nasal cavity. In the engraving B represents the outer tube, about three-eighths of an inch in external diameter, with a short wide tube to hold the solution attached at the end furthest from the tapering nozzle. A is the air-tube which passes inside the other one, and is fixed in its place by means of a screw thread cut in the wide portion and also by the lock-nut D. Each pair of tubes, as well as the lock-nut, is made of transparent celluloid. C is a graduated glass pipette with a compressible



indiarubber cap for taking up measured quantities of solution. Air is driven into the tube A by an indiarubber bellows ball worked by hand in the ordinary manner. The lengths of the two straight outer tubes are five and a half inches and three inches respectively. The instrument produces a copious jet of fine spray, well adapted for the purpose for which it is designed. It can be readily taken to pieces for the purpose of being cleansed. Each of the three forms may be obtained separately.

TRACHEOTOMY PILOT.

THE accompanying illustration represents a modification of the usual tracheotomy pilot which I have devised, and which is designed to do away with the dyspnœa and struggling that are so often seen when the inner tube is being inserted after being cleansed. It consists of a hollow silver tube with



an aperture allowing the free entrance of air at its upper end. The tube is fixed into the handle by a screw, this enables the metal portion of the instrument to be thoroughly cleansed; the handle is provided with a shoulder, which assists in keeping the fingers of the operator away from the aperture at the upper end of the tube without interfering with the outer tube. Messrs. Arnold and Sons, London, are the makers.

District Nurses' Home, Plaistow, E. M. D. HARMER.

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THE LANCET.

LONDON: SATURDAY, APRIL 3, 1897.

THE public meeting for promoting a national memorial to EDWARD JENNER, held in the theatre of the University of London on Wednesday, March 31st, was an event of great importance. Lord LISTER, who is at the head of the movement, hopes for such success as will place the name of JENNER in this country on the same footing as that of PASTEUR in France, and to raise such a sum as will enable the authorities of the British Institute of Preventive Medicine, henceforth to be associated with the name of JENNER, to pay their devoted and brilliant servants somewhat more adequately than they do at present. The chief interest of the movement is in the attempt to link the names of JENNER and PASTEUR and the other members of the great army of research whose work has sensibly reduced the terror with which we regard such diseases as diphtheria, tetanus, anthrax, and even plague. The justice of this association was fully recognised, not only by such men of science as Lord LISTER and Professor MICHAEL FOSTER, but by representative laymen like the Duke of WESTMINSTER, Lord HERSCHELL, Lord DAVEY, and Sir ALFRED LYALL. As Professor MICHAEL FOSTER said, the doctrine of attenuation was started by JENNER, and those who have developed it so splendidly in recent years have been foremost in their admission of the fact. No monument to JENNER could take a form more honourable to him than one which connects him with workers who lived a hundred years later in point of time, and whose work gives lustre to the end of this century and promises still greater results in the next. We most heartily wish the greatest success to this movement. It will be a national discredit hereafter if the noisiness of a group of faddists is allowed to overpower the still small voice of science and of common sense in such matters. What is the use of a nation claiming a JENNER and a LISTER if their work is to be constantly disparaged? Other nations will not be slow to benefit by our stupidity and to do that honour to our great men which is denied to them in their own country.

Whether the hopes of Lord LISTER and his colleagues are realised or not the importance of the meeting of Wednesday remains. The speech of Lord HERSCHELL, who spoke as President of the Royal Commission on Vaccination, must set for ever at rest the question of the efficacy of public vaccination. His was emphatically the speech of the occasion, and was delivered with so much clearness of language and so much force of conviction as to leave all gainsayers without any possible credit. He explained with what entire want of prejudice he went into the inquiry, with the determination to accept whatever results the evidence yielded. In the end, to use his own language, he "was surprised at the force of the evidence in favour of vaccination." The force of this evidence has been felt by medical men for generations, during which time they have ministered with practically absolute immunity in successive epidemics of small-pox. But it is something new to have it expressed so forcibly by an ex-Lord Chancellor, who, as Professor MICHAEL FOSTER said, has heard more of the evidence against vaccination than any living man, and who is exceptionally capable of weighing the value of it. Lord HERSCHELL gave a few illustrations of the sort of evidence that had so surprised him, showing the consistent and uniform relation between the prevalence of effective vaccination in a community and its protection from small-pox and the unerring punishment of those communities that neglect it. There was evidently only one thing that impressed him as much as the evidence in favour of vaccination, and that was the mental condition of those who resist it. It was a veritable wonder to him, hardly to be explained even by the hardening effect of prejudice on a certain class of minds.

Lord HERSCHELL not only lifted vaccination above all question and quarrel, but he defended the methods of JENNER as scientific above the measure of his time, in which view he was supported by both Lord LISTER and Professor MICHAEL FOSTER. One of the most effective parts of Lord LISTER'S speech was his tribute to workers like M. HAFFKINE in plague-stricken communities, who, at the risk of their lives, are developing antitoxins which are found to confer a measure of security upon those exposed or already affected. After such an exposition of the achievements of JENNER and his successors it is high time for their detractors to be silent, and for statesmen, municipal and Imperial, to ignore such detraction; and it is for the public to do high honour to the heroes who wage battle with an enemy more terrible and more destructive than war.

THE interesting account which we published last week as to the sanitary conditions under which the city of Bombay has now acquired a reputation for plague, in addition to that which has so long attached to it in so far as cholera is concerned, raises certain questions which are of very grave importance. In England we can at least claim that, even if infectious disease in our midst should constitute a danger to other countries as well as to ourselves, we have during a considerable number of years done our best towards the removal from the midst of our populations of those conditions which are now universally recognised as tending to the increase and spread of dangerous infectious disorders. As regards British India, we have often been told that, scattered as so much of the population is in villages over an immense area, there are difficulties to contend with which we in this country cannot appreciate. We have also been told that the tank system of water-supply and the conditions surrounding the native hut were of a sort that made reform almost impossible, and that questions of religious observances also stood in the way of the changes that were needed in the interests of public health. But we must confess that we were not prepared to learn the extent of utter neglect of the elements of sanitary

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administration which prevails in some of the great cities of British India, even if the remark does not apply to all. The story of the conditions under which plague has made its home—for a time at least—in Bombay comes to us from two sources, both trustworthy, and both resembling each other in the dark picture which they draw. We have already referred to the special article from a correspondent in Bombay. He tells us that in this great centre of commerce and business many of the streets are very narrow and crooked; that in these quarters the houses have been built six storeys high; that the density of population per acre reaches a figure unequalled anywhere in the world; that overcrowding abounds, and that no active measures have been taken to prevent it; that even domestic servants rarely receive any training in sanitary habits from their employers; that well-nigh every sanitary precaution is neglected; that at night the people throw every form of filth into the narrow streets; and that, in short, a large portion of the population constitutes, by reason of habits which are not only tolerated but apparently assented to by those in authority, a constant and standing element of danger.

The confirmation of this accusation against those in authority in the city comes from the highest possible source. As is well known, our correspondent who was in Venice during the sittings of the International Sanitary Conference sent us from time to time an account of its proceedings. One point was, however, not referred to—namely, the statement made by Surgeon-Major-General CLEGHORN to the delegates assembled there on his arrival from India. We shall have opportunities hereafter of reverting to much in that statement of which we may feel proud as to the preventive action taken when it was clearly seen that no half-measures were of any use. But for the moment we would recall the fact that when the Director-General of the Indian Medical Department gave a description of those parts of the city of Bombay in which plague was then and still is epidemic his statement fairly astounded a number of delegates, who were under the mistaken impression that under British rule there was always sanitary progress. Our correspondent was informed that a special debate on this statement as to Bombay would take place, and hence we awaited the debate before entering into the subject. For some reason or other the debate did not take place, or, if it did, no intimation as to it was allowed to leave the precincts of the Venetian Royal Palace. But we feel bound now to state that Surgeon-Major-General CLEGHORN'S description of the conditions of life in the native quarter of Bombay surpassed anything which our correspondent has embodied in his report; indeed, anything more appalling than the story of vast aggregations of human life in six- and seven-storeyed buildings run up in narrow streets, made foul with ordure and every conceivable filth, is only to be surpassed by the description given of the interior of these vast dwellings, where narrow passages, into which filth is also cast, are apparently at times lined on either side with living rooms without so much as a window. Indeed, as some delegates remarked when the facts were first announced, it would seem as if Bombay had done its best to secure for cholera a permanent tenancy, and also to prepare the way for plague or any other filth disease that it could manage to attract.

The circumstance, too, which causes most astonishment is that we are not here dealing with huts erected by natives or by a bygone generation, but with the arrangements inaugurated by a system of modern "civilisation," if we may so far prostitute the word, in connexion with a modern system of factories and cotton mills, the labourers in which have been housed in these dreadful rookeries. "The city," writes our correspondent, "was built before the existence of municipal influences." We do not understand how far this mends matters, for we have heard complaint that the grant of local self-government under municipalities was a great mistake in India. Whether this be so or not, the subject is one which it is not our province to discuss; but it is certain that some modern authority was responsible for allowing the present state of affairs to grow up in the native quarters of Bombay, and that some existing authority is responsible for allowing things to remain in the condition in which they now are. Our object is to urge that the responsible authority—be it central, provincial, or municipal—should not be any longer allowed either to permit streets to be laid out and tenement houses to be built as they have been in Bombay, or to allow conditions to remain which are a standing menace, not only to the city of Bombay, but to British India, and, through her ports, to the civilised world, and especially to Europe. Plague tends to die out in summer and to recrudesce in the following winter. If Bombay wants to prevent its recrudescence within the municipal boundary next winter, much more will have to be done than merely to control the disease in its existing haunts; those localities which time and neglect have allowed to grow up in such a way as to form a soil favourable to the disease will have to be dealt with in an energetic manner both in Bombay and elsewhere in India.

IN view of the steady increase in the number of insane persons coming under official cognisance, and the consequent feeling of alarm arising in the public mind, the Commissioners in Lunacy have deemed it judicious to issue a special report dealing with the subject. In 1859 the number of lunatics, idiots, and persons of unsound mind in England and Wales reported to the Lunacy Department was 36,762; in 1896 the number had risen to 94,446, showing a ratio to every 10,000 of the population of 31·38, as compared with 18·67 at the previous period. Both from a fiscal and social point of view these figures cannot but excite a feeling of apprehension, and the question naturally arises, To what is this enormous increase to be attributed? Is it due to a mere multiplication of numbers, or is it owing to a true increase of the disease itself? There is a prevalent idea, which has found frequent expression, that the apparent growth of mental instability in our midst is more or less connected with the conditions of modern life, its hurry and restless movement, its keen competition and struggle, its excitement and strain; and the Commissioners in the pursuit of their inquiries felt impelled to keep this argument steadily in view, although they state that previous

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similar investigations did not afford confirmatory evidence on the point.

In order to make their inquiry as comprehensive as possible the Commissioners at the outset addressed a circular letter to the superintendents of all the county and borough asylums of England and Wales, asking their views in regard to the alleged increase of insanity, and requesting those of them who were of opinion that such an increase had taken place to specify the facts and figures on which their opinion was based and the apparent causes of the tendency. Of sixty-two superintendents and others from whom replies were received, ten were of opinion that occurring insanity had increased to a greater or less degree (one superintendent attributes the increase in his district during recent years largely to the after effects of influenza, and it is important to note that in the last report of the Edinburgh Asylum Dr. CLOUSTON laid much stress on this disease as a factor in the production of mental illness). On the other hand, thirty superintendents stated that there was no increase, whilst twenty-two were unable to arrive at any definite conclusion upon the subject. In some instances no very clear distinction was drawn between the increase of insane persons, as to which there can be no dispute, and an actual increase of insanity disproportionate to that of the population, respecting which there is a wide difference of opinion. The Commissioners have, however, drawn their own deductions from the information supplied to them and at their command. The statistical tables appended to the report clearly demonstrate that the increase of insanity has been almost wholly confined to the pauper class, the ratio having risen from 15·95 in 1859 to 28·44 in 1896 per 10,000 of the population. The ratio of private patients during the same period has only risen from 2·38 to 2·69. From this latter fact the Commissioners assume that the insanity-producing causes already referred to are not so potent as is generally supposed, because the private patients, upon whom those causes would have been most likely to operate severely, have scarcely suffered in any degree. It is open to doubt whether this conclusion is entirely justified, for it must be remembered that the assumption is based solely on the official figures, and no cognisance is taken of the reserve of this class of cases, which must necessarily be large, and is probably not so likely to be absorbed as the pauper class. The statistics indicate that the ratio of pauper lunatics to the total population is steadily increasing; but this method of calculation is not altogether reliable, for it has been shown by the Commissioners themselves, in their last annual report, that the ratio of pauper insane to the total pauper opulation has remained almost stationary during the last five years. The ratio of pauper insane to paupers of all classes gives the fairest estimate of the fluctuations of insanity in the country, and the latest returns show that the increase has been but slight during recent years. There can be no doubt that the increase of the pauper population in lunatic asylums has been due to causes foreign to an actual increase of the disease itself. The working classes are showing an enhanced appreciation of the benefits to be derived from the treatment of nervous ailments in these establishments, and they are more ready than formerly to send their relatives who have broken down from old age or other causes. The reports of the various superintendents are almost unanimous on this point.

The four-shilling grant now made towards the maintenance of pauper lunatics in asylums, and its loss on their removal to the workhouse, has no doubt largely influenced the action of boards of guardians; consequently there has been a steady diminution in the ratio of lunatics in workhouses or resident with relatives or others. Other causes at work are the re-distribution of cases already registered, but not yet classed as cases of first or occurring insanity, and the influx of cases that follows the provision of extended asylum accommodation everywhere. There is in the community a reserve of cases of insanity from which may be drawn a constant supply of new cases to be registered as suffering from first attacks on admission; a proportion of these find their way into prison for petty crime and are there certified. The difference between the Census returns and those of the Lunacy Commissioners was in 1871 equal to 17·7 per cent.; in 1881 it had fallen to 13·5 per cent.; and in 1891 it had sunk to 10·8 per cent. It is therefore obvious that a process of steady absorption of the unregistered reserve of lunatics in the country is going on, which will in a measure account for the ever increasing numbers coming under the official cognisance of the central department. The Commissioners also point out that while in the general population there has been a considerable increase in the number of persons at those ages when the greatest liability to attacks of insanity is known to prevail—viz., from twenty to forty-five—there has been a marked diminution in the ratios among the insane at those ages. This also goes to prove that accumulation, especially of old cases, and not fresh production, has been the most influential factor. In addition to the causes already mentioned, the Commissioners in their general conclusions enumerate greater accuracy of registration; extended views as to what constitutes insanity requiring confinement; the greater density of population in the large towns and the decrease of home industries, making it less and less possible to retain at home persons suffering from even the less severe forms of insanity; and the increased treatment in asylums of temporary attacks of alcoholic insanity. The report, on the whole, is distinctly re-assuring, and the Commissioners are to be congratulated on an effective piece of work. With the gradual absorption of the unregistered reserve within the official fold it is to be hoped that there will be a diminution in the yearly increase of numbers chronicled in each successive Blue-book. Such a result is devoutly to be wished for, not only to allay the natural anxiety in the public mind, but to reduce the growing burden which bears heavily on the public purse.

THERE is a very excellent publication commonly called the "Royal Red Book," issued by Messrs. WEBSTER of Piccadilly, and according to a circular recently sent out it has been suggested to that firm that a list of physicians and surgeons practising specially should be published in their "Royal Red Book," as such a list is in no

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other work of reference and is greatly required by the public. Messrs. WEBSTER cannot, however, undertake to publish this list unless the additional matter is likely to pay for itself. So far, then, we have a purely commercial statement to which no objection can be taken. Messrs. WEBSTER may think that an addition of this kind will enhance the attractions of the "Royal Red Book." It may be a challenge to the new publication, "Who's Who?" and we cannot be surprised that they count the cost before entering upon this departure. But Messrs. WEBSTER'S circular continues: "We therefore propose to offer the publication of this information against the names in the Street List, the Alphabetical List, and the Special List (under the names of the diseases) of such as may desire it and are willing to subscribe to the book in accordance with the enclosed order. The sum mentioned will cover the insertion in both the editions of the year and a copy of one edition only." The sum mentioned is a guinea, and for this the name of the physician or surgeon practising specially can be inserted.

We do not fancy, judging by the numerous letters we have received from various members of the profession to whom the circular has been sent, that Messrs. WEBSTER will get many, or, indeed, any, favourable answers; nor can we understand how they could have even thought that the members of the medical profession would assist in the compilation of such a list. At all events, we have received copies of the circulars accompanied by damnatory letters from the leading members of every branch of the profession. After all, the fault lies with the public, who seem to think that the science of medicine nowadays is as it used to be in ancient Egypt, where, according to HERODOTUS, as rendered by an old translator, "Physicke is so studyed and practised with them that euery disease hath his seuerall phisition, who stryueth to excell in healing that one disease, and not to be expert in curing many: where of it commeth that euery corner is full of Physitions. Some for the eyes, other for the head, many for the teeth, not a few for the stomacke and belly. Finally, such as are of knowledge to deale with secret and priuy infirmities." No doubt the average patient would like to have a list carefully drawn up of "throat doctors" and "liver specialists" as he calls them, but the public ought to know better. It is perhaps to be regretted from one point of view that Messrs. WEBSTER'S proposition cannot be accepted, not only by the medical profession, but also by the sister callings of divinity and law, for the "Royal Red Book" would then become as interesting a work as a modern romance. We should then have as typical entries:—"The Rev. ——, specialist in domestic troubles; advice given as to the best way of getting on with a large family of unmarried daughters"; or "Mr. ——, specialist in criminal trials; special attention given to burglars and highway robbers, with or without violence." But, seriously, the descent to Avernus is all too easy, and the transition from the heights of the "Royal Red Book" to the depths of the gilded car and brass band might come about, if a protest were not entered against the possibilities of such methods of advertisement as Messrs. WEBSTER have—we feel sure unwittingly—offered to the profession. Human nature is weak.

Annotations.

"Ne quid nimis."

AN INTERESTING CEREMONY.

ON Monday afternoon last, at the Royal College of Surgeons of England, a portrait of Lord Lister from Mr. Ouless's brush was formally presented to the College on behalf of the subscribers. Mr. Davies-Colley, in making the presentation, drew an eloquent picture of the effects of the use of antiseptics upon hospital practice, upon the mortality after severe wounds, and upon surgical science and procedure generally, and congratulated Lord Lister upon the double recognition of the value of his work shown by his election to the Presidency of the Royal Society and his elevation to the House of Lords. The picture having been unveiled, Sir William MacCormac, the President of the College, accepted the gift on behalf of that body, expressing the great satisfaction that it was to the Fellows and Members to hang within their walls this portrait of one who had done so much to advance scientific surgery. Lord Lister expressed his sense of the honour that the College had done him in accepting his portrait in terms of equal modesty and felicity. In reference to his peerage he said that, while he was duly sensible of the distinction that Her Majesty had been graciously pleased to confer upon him, he was glad to remember that the movement which had resulted in Mr. Ouless's picture had been set going before that distinction had been thought of, so that the portrait must be regarded as a tribute to the truth and importance of antiseptic principles. Lord Lister then quoted from a pamphlet which had been sent him by Dr. Coley of New York, in which it was stated that in 360 operations for the radical cure of hernia undertaken with antiseptic precautions only one death had occurred, that death apparently not being due to the operation. Such results, he considered, "must cause gladness in the heart of any man who loves his fellow men."

MEDICAL MEN AS EXPERT WITNESSES.

THE Society of Medical Jurisprudence in America has taken into consideration the existing methods with regard to medical expert testimony, and the New York Academy of Medicine has passed a resolution empowering the president to appoint a committee to investigate the subject of medical expert testimony as now given in courts of justice and to make such recommendations as might seem appropriate. This matter of medical evidence is exciting much interest amongst professional circles in the States at the present time and is arousing much partisan feeling. Some of the opponents of the system go so far as to say that under the existing *régime* trials both criminal and otherwise are rapidly becoming mere farces in which the lawyer, his hired expert, and the criminal or plaintiff play the leading parts. In America the medical man is much more frequently called as a witness than in England both in criminal trials and civil actions, and many practitioners regard this giving evidence as one of the most lucrative branches of their calling. The reasons for this condition of affairs are, so far as civil actions are concerned, that railway and street-car accidents are appallingly common. The railway accidents are chiefly owing to the fact that level crossings, where insufficient precautions are taken to prevent mishaps, are in existence in very many of the large towns. The street-car accidents are due to the rate of speed at which these cars travel through crowded streets (this remark applies particularly to New York). When an

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individual is maimed by one of these means an action for damages is invariably brought against the company controlling the line, unless the injuries were incurred too clearly through the sufferer's own fault. If the injured person be in poor circumstances a medical man is first consulted, who, if he considers that there will be a good chance of mulcting the company in substantial damages, recommends the patient to apply to a lawyer. An action for damages to a large amount is brought against the company, the lawyer stipulating that if the case be brought to a successful issue he shall receive half the amount, the medical man taking a proportionately large fee. In criminal cases the lawyer and medical man work together in a similar way. It is contended by the opponents of the system that under such circumstances the evidence of the medical expert is too often biased, and that he is inclined naturally to conceal that part of the truth which might bear unfavourably upon his side of the case. This state of things, for obvious reasons, is impossible in England; but on one point perhaps a salutary lesson as regards the giving of medical evidence might be learned from America. Conflicting evidence is almost unknown in the States, and medical men work together for the most part harmoniously.

"BUBONIC PLAGUE IN BOMBAY."

UNDER this title a paper was read by Dr. A. G. Viegas at the meeting of the Grant College Medical Society on Nov. 24th, 1896. After referring to some points of resemblance and of difference between the disease as observed in Bombay and other places, the writer considered very fully the means by which the disease may have been imported from other districts. Sugar and dates have been blamed as a means by which the plague was imported, but if this had been the case it is strange that the infection had never come from Bagdad and Bassora before and also that several districts in which the inhabitants had consumed these articles of diet remained perfectly free. Again, it is said that possibly the clothes of the sick or the dead from the plague in China might have been brought over to Bombay tied up in a bundle, but Dr. Viegas had not been able to elicit anything that might lend any support to this supposition. It has also been said that rats sick from the plague came by steamers from Hong-Kong, that the Hong-Kong rats gave the plague to the rats in and about the docks in Bombay, and that the fouling of the grain by the plague-stricken rats communicated the disease to the people who had the handling of the grain. Here, again, other facts, such as the time of the year, did not lend support to this theory. Then it is said that the disease was due more to poisoned grain than anything else; but even those who were biased in favour of this theory on repeated inspections of the grain "go-downs" failed to find any poisoned or unwholesome grain that might support this theory. Another widely spread supposition was that the grain storage in the Port Trust Estate was chiefly responsible for the outbreak. Dr. Viegas's own views on the subject are that the disease was due to the accumulated filth in the sewers of the Port Trust Estate—accumulation of putrefying matters in these drains. These drains are choked with dirt, especially organic dirt, such as fæcal matter, decomposing urine, &c., in large quantities—the untouched accumulations of nearly a quarter of a century. Dr. Viegas adds, however, that the most patient and persevering inquiries have not resulted in enabling him to make the remotest or vaguest guess as to the importation of the plague. He believes that if the Port Trust Estate had been sanitary it could never have got a foothold there, and he believes that the plague bacillus, if it had not been existing latent there, must have been brought more than once to Bombay, but could not flourish for want of suitable soil. Last year the insanitary condition of the Port Trust Estate drains reached, so to say, a climax, and afforded a suitable nidus for the growth of the plague bacillus. The meteorological conditions are then fully considered; the social position, sex, and age of those attacked; then the channels of entrance of the bacillus into the human system, its contagion and incubation. Next a full account of the symptoms is given, all forming extremely interesting and instructive reading, but we have not space to enter more fully on these points here. The mortality was very high. During the first four weeks of the outbreak it ranged between 95 and 99 per cent., but later it was between 85 and 90 per cent. Ordinary treatment was unsatisfactory; but should it prove a fact that Dr. Yersin's plague serum is an effective antidote to the poison a much more hopeful view may be taken. Prophylactic treatment by isolation, disinfection of excreta and clothing, and suitable disposal of the dead is, of course, of the utmost importance.

A DIAMOND JUBILEE STAMP.

MUCH consideration has been given to the problem of how to place it within the means of everybody in London to contribute to the form of commemoration for London approved by the Queen as embodied in the Prince of Wales's Hospital Fund. As the easiest and readiest way of enabling people of all classes with the minimum of trouble to subscribe to the Hospital Fund the Prince of Wales has approved a design for two stamps of the face value of 1*s.* and 2*s.* 6*d.* respectively, which has been prepared by the Government contractors, Messrs. De la Rue and Co., who have kindly given the blocks and drawings free of charge. The wholesale distribution of these stamps has been undertaken by Messrs. Simpkin, Marshall, Hamilton, Kent, and Co., Limited, of Stationers' Hall-court, E.C. The stamps will be ready after Easter, when full particulars will be published. The issue will be strictly limited in number and no re-issue will be made. The stamps may be procured through any bookseller, newsagent, stationer, or stamp-seller. The design of the stamps is artistic and beautiful, and, apart from their popularity with the smaller subscribers to the Prince of Wales's Hospital Fund, they are calculated to excite great interest amongst philatelists, of whose society H.R.H. the Duke of York is the President.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE HEALTH OF THE ARMY.

WE would call attention to the report of the Committee of the Royal College of Physicians on this subject (vide page 980). Any representaation from so important and independent a body on such a question cannot fail to carry weight with the public and the Government, and it will be seen that the College speaks with no uncertain sound. Not only have the members of the Committee made themselves acquainted with the subject by a reference to a number of official and other reports and publications, but the President of the College and some of their number proceeded to Netley and personally inspected the sufferers now under treatment for syphilitic disease in that institution and ascertained for themselves the nature and type of their maladies. Almost every variety of constitutional syphilitic disease was, we are told, represented, those of a virulent form being very numerous and the results in many cases deplorable. The large majority of these patients had come from India; and it is difficult, the report says, to describe the painful impression made by the inspection of these sick soldiers. The College is emphatically of opinion that the amount of syphilis among the European troops serving in India has enormously increased of late years, that it is a matter of serious moment calling for the gravest consideration, and that some efficient means of dealing

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with it should, if possible, be devised and applied. The report is a very weighty and well considered one, and the recommendations and suggestions contained in it will, we believe, commend themselves to all who approach and consider the subject impartially. It is, as we have said, no party question, but concerns men of all parties on the grounds alike of humanity to the sufferers of both sexes, State policy, and the well-being of society. The present state of things in India is, it must be admitted, very lamentable, and we trust that the action of the College will serve to strengthen the hands of the Government in any steps they may propose to take in regard to it. The recommendations of the College have the merit of being reasonable, practical, and moderate, and such as most people will regard as indispensable precautionary measures, if we are to make any successful attempt to cope with the evil in question. We entirely concur in the opinion of the College that power should be given to the Government of India to take such steps for its mitigation as they may be advised by those best acquainted with all the social and local conditions of that country.

"NATURE POETRY."

MR. W. J. C. MILLER, the Registrar of the General Medical Council, has reprinted a delightful little essay, originally contributed to *Nature Notes*, on "Nature Poetry." At this time of the year, when fickle Spring displays her caprice, it is pleasant to read such extracts from our sweet singers as the inimitable couplet of Tennyson, describing the song of the thrush:—

> "Summer is coming, summer is coming, I know it, I know it, I know it;
> Light again, leaf again, life again, love again, yes, my wild little poet."

But the essay is more than a series of extracts, it is a masterly appreciation of the spirit in which the poets of Nature have sat at the feet of "the dear old nurse" to turn over the pages of her story-book and listen to the tales she had to tell them. Although we may not know the exact *modus operandi*, it is quite certain that the mind plays an important *rôle* in the conservation of the body, and when the latter threatens to be overwrought by care and worry, and it is impossible or inconvenient from

> "Smoke and turmoil fly
> To seek a purer air and brighter sky,"

the mere reading about the pleasant sights and sounds of the country cannot but have a beneficial influence.

TREATMENT OF ECTOPIC PREGNANCY BY VAGINAL PUNCTURE.

DR. KELLY has recently brought this method before the Johns Hopkins Hospital Medical Society.[1] His practice had always been whenever extra-uterine pregnancy was recognised, whether ruptured or unruptured, to perform laparotomy at once. Having a patient who was too weak for this treatment, he punctured the vaginal vault with scissors and cleaned out the clots. Recovery followed. In another case, having performed laparotomy, he found the intestinal adhesions so intimate with the sac and so well walled off that he determined to make a vaginal puncture. Having introduced his finger within the abdominal incision to guard against encroachment on the abdominal cavity, he made a free opening into the vaginal vault, through which the wound was drained. This patient also recovered. He has now records of ten cases, in all of which convalescence was rapid and smooth and without marked suppuration. He regards the operation as especially satisfactory in that the patient has simply been relieved of the abnormal products without losing any normal pelvic structures. He now operates as follows. After an accurate diagnosis, outlining the sac and its relations by abdominal and rectal palpation, and after careful vaginal palpation to determine the proximity of the sac to the upper vaginal wall, a point is located behind the cervix in the vaginal fornix close to the sac and a pair of sharp scissors are plunged upwards in the direction of the pelvic axis. The scissors are then opened, and some of the fluid blood usually trickles out at once. Larger scissors are then introduced if necessary and the opening widened by withdrawing them with the blades open. It is important to have a large opening both for the purpose of getting two fingers in to clean out the sac and for good drainage afterwards. The sac must be delicately cleaned out and everything brought away down to the shell of the sac and surrounding adhesions. In one case he brought out a well-defined Fallopian tube cast. Irrigation follows, after which the sac is plugged with gauze, which is left in for several days or longer, and then the wound is washed out daily until it closes. There is one danger to which the patients are liable—hæmorrhage from the degenerated villi. His practical experience has shown that this is not imminent. In nine cases there was no hæmorrhage of any moment after cleaning out the sac. In one, however, it was so active that he had to open the abdomen and extirpate the sac. Anyone, therefore, who undertakes vaginal puncture must be prepared to perform laparotomy. Another danger is that the sac may rupture into the abdominal cavity, as the walls are quite thin in some cases. This has not occurred in any of his cases, but in one the douche nozzle was thrust through the sac into the abdominal cavity and a couple of quarts of boric solution introduced. He had to open the abdomen and wash out the solution. The patient made an excellent recovery. He regards his plan as not only an important departure in the treatment of ectopic pregnancy, but also as an index of the line of progress in the general domain of gynæcology. He uniformly treats all pelvic suppurations in the same way where he thinks he can get at the pus and establish good drainage. The present method is, he says, to remove the uterus by the vagina. He always insisted that he could get as good drainage without doing this.

[1] Bulletin, November and December, 1896.

PARISH MORTUARIES.

ON March 25th Dr. Thomas E. Hughes introduced at a meeting of the Wandsworth Vestry an admirable motion, which, we are glad to say, was carried unanimously—namely, that the vestry should advocate the desirability of there being a suitable mortuary and coroner's court erected and maintained in and for the parish of Wandsworth. Dr. Hughes made a powerful and earnest speech in support of his motion, laying special stress upon the need for reverence. "Among the problems of mankind," he said, "not one stands out more prominently than this—how, in a nation, parish, or family, to inculcate the virtues of reverence and self-respect among its different members." The present mortuary of Wandsworth is a miserable hovel about eight feet square; and, putting aside for the present any question of reverence or decency, we must ask, How is it possible to conduct a post-mortem examination either in safety or so as to afford any information in a place of this kind? Reverence is a quality sadly to seek in these democratic days, it went out with the spread of modern education and the baleful doctrine of "I'm as good as you and better." Let anyone notice a funeral passing along the street; not one person in a hundred will take off his hat or show any signs of reverence at all. A mortuary should not be a mere shed; it should be a home for the dead and should be divided into two portions—the mortuary proper, with decent fittings, and a room for post-mortem

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examinations. With regard to the second part of Dr. Hughes's motion, a proper coroner's court is a necessity. It is most unseemly that a judge should have to inquire into what is and ought to be considered a most solemn matter—namely, how someone came by his death—in a public-house. The questions coroners have to decide are surely more important than a question involving £100 in money, and yet the latter is adjudicated upon with an amount of legal ceremony quite out of proportion to the matter at issue. We hope Wandsworth will act promptly upon the resolution of its vestry.

INDIAN MEDICAL SERVICE DINNER.

THE officers of H.M.'s Indian Medical Service have resolved to hold an annual departmental dinner in London. We understand that there will be a large gathering of the service at the first dinner, which will be held this year on May 20th at the Café Monico. The chair will be taken by Surgeon-General Sir Joseph Fayrer, Bart., K.C.S.I., F.R.S., and amongst those officers on leave and on the retired list who have intimated their intention of being present are Surgeon-General Sir A. Christison, Bart., Surgeon-General J. M. Cuningham, C.S.I., Q.H.S., Surgeon-Major-General W. R. Rice, C.S.I., Q.H.P., Surgeon-Major-General W. R. Hooper, Sir Guyer Hunter, K.C.M.G., Q.H.S., Deputy Surgeon-General Sir Joseph Ewart, Sir Trevor Lawrence, Bart., Surgeon-Major Sir George Robertson, K.C.S.I., Surgeon-Colonel Roberts, Surgeon-Colonel Costello, and Brigade-Surgeon-Lieutenant-Colonel Keegan. Officers who have not already intimated their intention of joining should do so without delay to the hon. secretary, Mr. P. J. Freyer, 46, Harley-street, W.

THE GREAT LESSONS TAUGHT BY BACTERIOLOGY.

THOSE great processes in nature in which, as modern investigation has shown, bacteria play so important a part were the subject of a very instructive lecture delivered by Dr. Sims Woodhead at the Institution of Civil Engineers on March 18th, when Mr. Wolfe Barry, C.B., F.R.S., occupied the chair. The occasion was an extra meeting of the institution devoted to the hearing of the James Forrest Lecture. Dr. Woodhead began by observing that people are prone to take a somewhat one-sided view of the great facts which investigation brings to light, and that this has never been more forcibly illustrated than in the general way of regarding the work done by bacteria. The tendency is to accept them as the ultimate causes of certain forms of deadly disease and as promoting the evolution of putrefactive products; whereas, as a matter of fact, they are instrumental in keeping the world sweet and clean for its inhabitants and in maintaining a constant circulation of organic matter from the dead condition to the living and from the living to the dead. It is interesting to reflect that without the aid of bacteria the human race would be unable to continue its existence—the animal and vegetable world would long since have perished from sheer inanition or starvation, and the work of the world as a great laboratory would have come to a standstill. Bacteria, as is being found out every day, may be engineered for man's good, so long as they are kept under intelligent control, and once their habits are understood they prove to be the most perfect servants that can be obtained. The lecturer proceeded to trace the history of bacteria and their discovery, and the developments up to the present time which have followed upon a close and exact study of their behaviour. The functions of bacteria in the great natural processes in their bearing upon sanitation were then dwelt upon; and, finally, the recent developments in regard to the wonderful ability of certain species of bacteria to appropriate the nitrogen in the air, through the medium of the soil, for the maintenance and sustenance of leguminous plants formed not the least interesting section of the lecture. It was remarked that so well defined were the results of the researches in this direction that cultivations of these organisms are now made for sale and kept in closed bottles for distribution to all parts of the world. There, when mixed with water and thrown over the soil, they immediately begin to do their work, and taking nitrogen from the air, which lends valuable assistance to that from the soil, they enable the plants, and especially those requiring large quantities of nitrogen for their full growth and development, to grow both more rapidly and more luxuriantly than they could do if unaided by this supplementary store. The relation of bacteria to disease was next touched upon, and the beneficial effects of fresh air and light accounted for by observations on the inhibitory action of these agencies upon such organisms. Dr. Woodhead concluded his lecture with the following words "As yet no one can say that we have reached eve a resting stage, and it behoves all those who desire to see advances made in the treatment and prevention of disease—whether in the department of protection and cure, with which medicine is specially concerned, or in the preventive department, with which civil engineers have to deal—to continue to follow closely every new fact and every fresh theory arising out of new observations in order that bacteria and the forces with which they are endowed may be made our well-disciplined servants, instead of being allowed to waste their energies as our uncontrolled and uncontrollable masters."

THE TREATMENT OF SUNSTROKE BY ICE.

IT is a fact now generally admitted that there comes a stage in the treatment of many diseases when the reduction of temperature in itself is a curative measure of great value. This is more or less true of pyrexia in general, but it is most vitally true of hyperpyrexia. The means employed for this purpose may differ, but the principle which they obey remains unaltered. A series of cases of insolation published in the *New York Medical Journal* of March 6th, by Dr. N. R. Norton, are of value as teaching not only the utility of external cold when applied for this purpose, but also the success which may be expected from energetic treatment even in apparently hopeless cases. It may be remembered that the heat of last summer in New York was for a time such as has hardly ever been equalled. During the six days from Aug. 8th to 13th inclusive 110 cases of heat stroke were in hospital under Dr. Norton's care. Fifty of these patients had high fever, with, in the great majority of cases, severe brain symptoms, seven only being recorded as conscious and two as semiconscious on admission. The average rectal temperature in these was 104·5° F. The remaining forty-one were either delirious or comatose, with an average rectal temperature of 108·5°. The pulse, as usual, was of low tension in all. The treatment consisted in sponging and rubbing with iced water, an iced bath being also used as a rule and continued for periods varying from a few minutes to an hour, till the temperature had fallen several degrees. A further fall, sometimes with general depression, occurred after this, and was followed in most cases, after a varying interval, by a second rise. This was ushered in by fibrillar twitching, becoming convulsive, and was also reduced by the ice treatment. Cold thus applied and aided by friction appeared to act at the outset as a rapid and powerful stimulant. Recovery, when it occurred, was rapid, the patients leaving hospital after an average detention of thirty hours. The total result attained was most favourable in comparison with the high mortality associated with sunstroke, the number of deaths in these

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fifty severe cases being only six, or 12 per cent. Necropsies in five fatal cases showed more or less congestion of the lungs, and, as a rule, of the pia mater, sometimes with ecchymosis and softening of the brain or spinal cord. It is noteworthy that the use of alcohol seemed to have exerted a direct and unfavourable influence in predisposing to sunstroke.

THE PROFESSOR OF ANATOMY AT KING'S COLLEGE.

PROFESSOR ALFRED W. HUGHES, of University College, Cardiff, has been appointed Professor of Anatomy in King's College. His four years' occupancy of the anatomical chair at Cardiff, during which time he had the arduous task of organising the anatomical department of the new medical school, and his previous appointment (also held for about four years) as lecturer on anatomy in Edinburgh, have supplied an excellent practical training for the more important position of a metropolitan teacher. His published works afford evidence that he possesses both literary ability and a capacity for original research.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

THE directors of the Caucasian lines of railway have made arrangements for a short tour in the Caucasus for members of the Congress, of which the following are the details. A special train, with accommodation for 100 passengers, will leave Moscow at the close of the Congress for Kislovodsk, in the northern Caucasus, where a stay of two days will be made to enable members to visit the group of mineral watering-places of which this is the centre. From Kislovodsk the train will go to Vladikavkaz, the terminus of this railway. Here there will be a choice of two routes. One party will proceed to Tiflis by the Georgian military road, which passes through some of the most beautiful scenery in the Caucasus. The other party will proceed to Petrofsk, a port on the Caspian Sea. Thence a special steamer will convey them to Baku, where a stay of a day will be made; and they will then proceed by train to Tiflis, where they will rejoin the first party. From Tiflis all will proceed by train to Batoum on the Black Sea, where one day will be allowed to see the town and neighbouring tea and cotton plantations; and from Batoum by steamer to Sukham, New Athos, and Novorossüsk, whence they will return by special train to Moscow. The cost of this circular tour will be only 150 francs (£6). There will be no hotel expenses, as arrangements have been made to enable the travellers to sleep each night either in the train or on board a steamer. The only extra expense will be for meals, which are not included in the fare. The round tour will take just a fortnight. If more than one hundred members of the Congress wish to make the tour a second train will be run.

THROMBOSIS OF THE LEFT VERTEBRAL ARTERY.

IN the *Rivista Clinica* Dr. Giuffré of Palermo has published an interesting case, of which an abstract appears in the last number of the *Neurologisches Centralblatt*. The onset was marked by sudden weakness of all the extremities, especially on the left side, slight left-sided ptosis, paresis of the left frontalis muscle, paralysis of the orbicularis oris on the two sides, slight fibrillary twitching of the tongue, and disturbance of swallowing and phonation. There was interference with the sensibility for pain and for cold on the right half of the body except on the face, and some impairment of taste. Respiration was interfered with and afterwards became of the Cheyne-Stokes variety. Death took place four and a half months after the onset, and at the necropsy there was found thrombosis of the left vertebral artery extending forward into the basilar and backward into the anterior spinal artery and the inferior cerebellar artery. The softening embraced the region of the ninth to the eleventh cranial nerves, including the nucleus ambiguus, a part of the ascending root of the fifth nerve, part of the olive and of the cerebellar tract. There was also a small patch of softening in the region of the auditory nucleus and another in the cerebellar hemisphere. The case is a very interesting one, especially in reference to the sensory condition which was present, a condition similar to that which has been observed in other cases of the same character.

A FRENCH MEDICAL SOCIETY ON CERTAIN ETHICAL QUESTIONS.

DIFFICULT problems in medical ethics are constantly coming before many busy practitioners—questions, too, which often have to be answered categorically on the spur of the moment without any opportunity of consulting a brother practitioner or a legal adviser. It is therefore interesting to see what view others take of their duty in difficult cases. The following questions were propounded recently to a French medical society:—1. A young woman put her illegitimate child out to nurse, and after a time, thinking that it did not thrive as it ought, took it away and gave it into the charge to a second wet nurse, whom it infected with syphilis. The medical man attending the woman informed the mother of this, and she undertook to be responsible for his fees, which she paid for a time—that is to say, until she took the child away; but although the woman required further treatment she refused to pay any further fees for her. The woman consequently asked her medical man (who, it should be stated, had also attended the child) to give her a certificate that she had been infected by the child. The question asked the society was, Should this certificate be refused? The reply was in the negative. 2. A lady sent her maid-servant to a doctor, who found she was suffering from tuberculosis. The question asked was: Should the medical man reveal his diagnosis to the lady when consulted by her as to the possibility of retaining the servant? The majority of the society replied in the negative. It is possible that if this second question had been propounded at a meeting of an English medical society a different answer would have been given, but it must be remembered that in France violation of professional secrecy is a crime, not merely a ground for a civil action as with us.

SELF-GOVERNMENT AND THE PLAGUE.

FREEDOM is said, and rightly so, to be a priceless boon. But we can have too much of any good thing, and never has this somewhat trite saying had more justification than in recent events in Bombay. As early as September last the existence of plague was well known. A system of rigid segregation was drawn up by the Government and the municipality on the advice of a committee of medical men. As a matter of course, however, this pressed hardly upon certain members of the community, and the municipality, in the true spirit of Little Pedlington, withdrew the restrictions. Nor were the Government blameless. Instead of quashing the municipality, they, to quote a writer in the *Times of India*, sat with folded hands. The result was a great increase in the tale of mortality and a distribution of infection far and wide. We are not among those who write and talk about India as if it were England. We are well aware of the many difficulties which beset the government of an Eastern city. Oriental customs, habits, and religions are every one and all opposed to Western ideas, and it is not only a bad policy, but an almost hopeless one, to fight against them in ordinary matters.

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But in a matter of life and death, a matter involving the lives and prosperity of thousands, it is the duty of a Government to govern. Supposing there had been a riot, as was feared by the authorities, are what an eminent statesman called the resources of civilisation extinct? Far fewer lives and property would have been lost if segregation had been ruthlessly carried out than has been the case under the system of *laisser faire* which has been adopted. The arrangements for nursing and the hospital accommodation seem to have been grossly inadequate; but recent advices show that the authorities have, if tardily, entered upon a course of energetic measures. They seem now to have remembered what they must have known—that Orientals respect a real Government, and that a little wholesome despotism is sometimes worth pounds of so-called freedom.

THE HEALTH OF THE ARMY.

THE EARL OF ONSLOW, in a communication to the *Times*, has directed attention to a matter to which we have more than once adverted. In spite of the clear and precise statement of Lord George Hamilton, there still exists apparently some misapprehension and confusion in regard to the term "admissions" employed in Army statistical returns. As Lord Onslow explains, the numbers of *admissions* are not identical with the numbers of *men* admitted, because some men are admitted more than once in the year; and he calls attention to the footnote to paragraph 11 of the report of the Departmental Committee in evidence of the fact that this difference has not been overlooked, but expressly referred to. In the case of venereal disease it appears from figures supplied by the principal medical officer in India that the number of men admitted in 1895 was rather more than three-fourths of the number of cases—i.e., admissions. If therefore, adds Lord Onslow, the ratio of admissions to hospital in 1895 be 522 per mille, the total number of men admitted would be about 391 per mille. The report of the Departmental Committee states that in 1895 an average of 45 men per 1000, or 3200 in a force of 71,031 British soldiers in India, were constantly in hospital for venereal disease.

BERI-BERI IN AFRICA.

DR. LASNET, of the French Colonial Service, who acquired his experience while on duty at the Dakar prison in Senegal, Western Africa, has written an interesting report on beri-beri.[1] The total number of prisoners under his observation during the year 1895 was 647, of whom 52 were Europeans, the remainder being natives of the region. The two classes are said to have lived under identical conditions with regard to both food and lodging; but whereas no European or mulatto contracted beri-beri there were 45 cases among the aboriginals, the men in the military division being three times more liable to the disease than their civilian congeners; 149 military prisoners caused 24 admissions during the twelvemonth, but out of 446 civilians only 21 were attacked. Length of residence in the gaol and want of occupation, together with overcrowding, defective ventilation, and utterly inadequate provisions for cleanliness and the removal of filth and ordure were the chief determining causes. Of thirty-two soldiers who had been confined upwards of five months two thirds became affected. The civilian prisoners used to be sent out to work in the vicinity, but the enlisted men claimed exemption from the *corvée* and lay idle all day long wrapped up in their blankets. The affection generally commenced towards the third month of incarceration with malleolar œdema and constipation, attended by depression of spirits, varying from listlessness to profound apathy. When fully established the usual symptoms of the disorder were well marked; non-pitting dropsy, paresis of the lower limbs mainly implicating the extensor muscles, diminished reflex excitability, partial cutaneous anæsthesia, and the characteristic dragging gait. Towards the end unquenchable thirst was a most distressing concomitant, the unfortunate sufferers complaining of a feeling as though fire were consuming their vitals. At no stage, however, were febrile phenomena to be detected, the writer's words on this head being most precise—"not the slightest reaction manifesting itself in fever or by inflammatory developments; in all cases the most complete apyrexia." The only treatment of any permanent efficacy was an entire change of scene. When the disease made its appearance for the first time compulsory exercise was invariably followed by an amelioration of symptoms, but if the patient remained in prison a relapse ending fatally was sooner or later certain to supervene. Taking advantage of an article in the prison regulations, th principal medical officer, Dr. Clarac, recommended the discharge of twelve prisoners suffering from beri-beri in order that their lives might be saved. The proposal, which required Ministerial approval, was duly sanctioned; but before the official intimation reached Dakar three months had elapsed and five out of the twelve patients were dead. The seven survivors were at once set at liberty, and eventually all of them recovered. Dr. Lasnet is of opinion that telluric and meteorological influences have not much to do with the production of beri-beri. The buildings constituting the prison are well exposed to the prevailing winds and stand on ferruginous volcanic soil from two to three metres in depth, beneath which an argillaceous stratum slopes downwards towards the sea, thus rendering all water-logging impossible. He attributes the blame solely to the unhygienic conditions under which the prisoners at Dakar are allowed to live, but the chief determinator of the disease is the lack of suitable employment.

[1] Published in Archives de Médecine Navale et Coloniale, February, 1897.

THE QUEEN'S HOSPITAL, BIRMINGHAM.

THE *Birmingham Gazette* of March 25th contains a notice of the fifty-sixth annual report of the committee of the Queen's Hospital, in which the governors are congratulated on an increase of 120 in the in-patients treated and of 312 in the out-patients. The whole number of in-patients was 2109, that of out-patients 28,120 We cannot join in the congratulations to the governors on the increase of out-patients. One of the best proofs of a well administered hospital must be acknowledged to be a steady and decided annual decrease in the number of out-patients, for two reasons—first, that the treatment of such promiscuous crowds of out-patients is demoralising to all but the poor among them and unjust to subscribers, who do not give their money for such purposes; and secondly, because it hampers and limits the accommodation of the hospital for really urgent cases. A striking and painful illustration of this is given in a leading article in the same number of our contemporary. It refers to an inquest at which the following facts were stated to have been brought out, though we hope there is some mistake or explanation. A cyclist with a fractured skull was taken to the Queen's Hospital, and the house surgeon, acting on a rule, declined the treatment of the case as a bed was not available. This in a hospital with accommodation for treating 28,000 out-patients in a year! We gather that the unfortunate man was sent away to the General Hospital, which, as our contemporary suggests, might have acted in the same way to the dying man. No wonder that our contemporary threatens to reconsider its attitude towards hospitals where such helplessness is possible towards the most urgent cases. The whole system is being jeopardised

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apparently in order that committees may boast of ever increasing numbers in their annual report.

A DANGEROUS OCCUPATION AT HOME.

A SHOCKING accident occurred in Halifax last week in connexion with the compounding of varnish with naphtha. It appears that the wife of a boiler "coverer," who for the purposes of his business used a varnish which was prepared at his home, proceeded to get the naphtha from a four-gallon bottle, and after using half a gallon of it she placed the bottle on the floor, when before she could insert the cork the contents of the bottle ignited, and "the flames seemed to go towards the fireplace." She shouted to her children to come out of the house, and then herself ran into the street. Directly afterwards there was a loud explosion, and the room was soon ablaze and the house well in the grip of the flames. Two children, aged respectively six and fifteen years, perished, and the body of one poor boy was found burnt almost to a cinder. The naphtha found in the cellar was examined, and the analyst reported that in applying the flash-point test the thermometer of the official testing apparatus did not reach a low enough temperature to record the point of inflammability. It was proved afterwards that the naphtha actually gave off an inflammable vapour at the freezing point of water. In view of this evidence the explanation of the disaster is simple. At the ordinary temperature of the room in the house the naphtha must have been literally distilling out of the bottle when the cork was removed, and the direction of a draught of air being naturally towards the fireplace the vapour was carried in a stream thither and ignited. Whilst entirely agreeing with the opinion of the jury, that "the manufacture, containing a dangerous compound, ought not to be carried on in a dwelling house," we would add that it is highly desirable that wheresoever such manufacture is carried on it should be done in apartments heated by steam or by hot water apparatus, and not, under any circumstances, in the vicinage of an open fire.

ACCORDING to a telegram which we have received from Bombay the Yersin serum treatment of plague has practically failed. So far the mortality has been 50 per cent. in the selected cases within forty-eight hours of the attack. The hospital mortality is stated to be 60 per cent. in all cases.

A SESSIONAL MEETING of the Sanitary Institute will be held at the Parkes Museum on Wednesday, April 7th, at 8 P.M., when a discussion will be opened by Dr. Henry R. Kenwood, medical officer of health of Stoke Newington, on 'Notification of Measles."

DR. LAUDER BRUNTON, F.R.S., has accepted an invitation from the Executive Committee of the International Medical Congress to give one of the general addresses at the forthcoming Congress in Moscow.

A NEW HOSPITAL IN OXFORD-STREET.—A new hospital, which is practically an extension of the Ings House Nurses' Coöperation and Nursing Institution, New Bond-street, was opened on March 22nd by Lady Harris at 180, Oxford-street. Lady Harris, who was accompanied by Lord Harris, Lady Bayley, Mrs. W. B. Gladstone, and others, said that much good work had been done at the Bond-street institution, which has six beds for paying patients; the new premises will accommodate nineteen patients, and will supply a want which is often felt by persons of moderate incomes when overtaken by sickness. At present there is a debt of £300, but it was hoped that in two years the hospital would be self-supporting

The Lancet Special Commission
ON THE
METROPOLITAN WATER-SUPPLY.

VII.[1]

KENT WATERWORKS COMPANY.

History.

THE Kent Waterworks Company possesses the rights of an old-established institution which dates back to the reign of William III. The present Company has also absorbed quite a number of small undertakings which have been started at different times since (Fig. 1). In 1701 letters patent were granted at the request of the inhabitants of Sayes Court[2] and East Greenwich giving to the patentees liberty to break up streets and grounds in those places for the purpose of laying pipes to convey water, and a monopoly was granted for this work, all other persons being prohibited under pains and penalties for a period of 500 years from interfering with the water-supply in these parishes. The result of this privilege was that waterworks were made at Ravensbourne, and these continued to be worked till the year 1808. In the following year an Act was passed incorporating the proprietors of the waterworks, and it was provided that the Company should buy the letters patent which had been granted by William III. and the rights and privileges which belonged to them and the works which were already in existence. The Act of 1809 prohibited the Company from supplying water in such a way as to directly or indirectly affect those rights without the consent in writing of the people concerned or till the old waterworks were bought. Ultimately the patent was bought and "The Company of Proprietors of Kent Waterworks" became under the provision of the Act possessed of all the privileges, authorities, duties, and offices given by the letters patent. The manors of Sayes Court and East Greenwich included the towns of Greenwich, Deptford, and the adjoining districts, and under the Act of 1809 the authorised limits of supply were the two parishes of Deptford and the parishes of Greenwich, Lee, Lewisham, and Rotherhithe. A year before this Act of Incorporation was passed the Town Commissioners of Woolwich had obtained Parliamentary powers to supply the town of Woolwich with water, and in 1810 the commissioners came to an arrangement by which this work should be taken over by the Kent Company should the necessary sanction of Parliament be granted. The Act passed in 1811 authorised this transfer. The area of supply was thus increased to include Woolwich, Plumstead, Charlton, Bermondsey, Peckham, and Peckham-rye, and arrangements were made about the same time that the Company should supply various Government establishments. The Ordnance Department at Woolwich and the Artillery Barracks of the garrison were first supplied, and later contracts were made for the supply of the Royal Arsenal, the Admiralty establishments, the Dockyard at Woolwich, the Royal Observatory, the Royal Naval Hospital, and His Majesty's Dockyard and Victualling Yard at Deptford. As in the case of some other companies, the profits made were for a time chiefly used in the outlay necessarily involved in extending the area of supply.[3]

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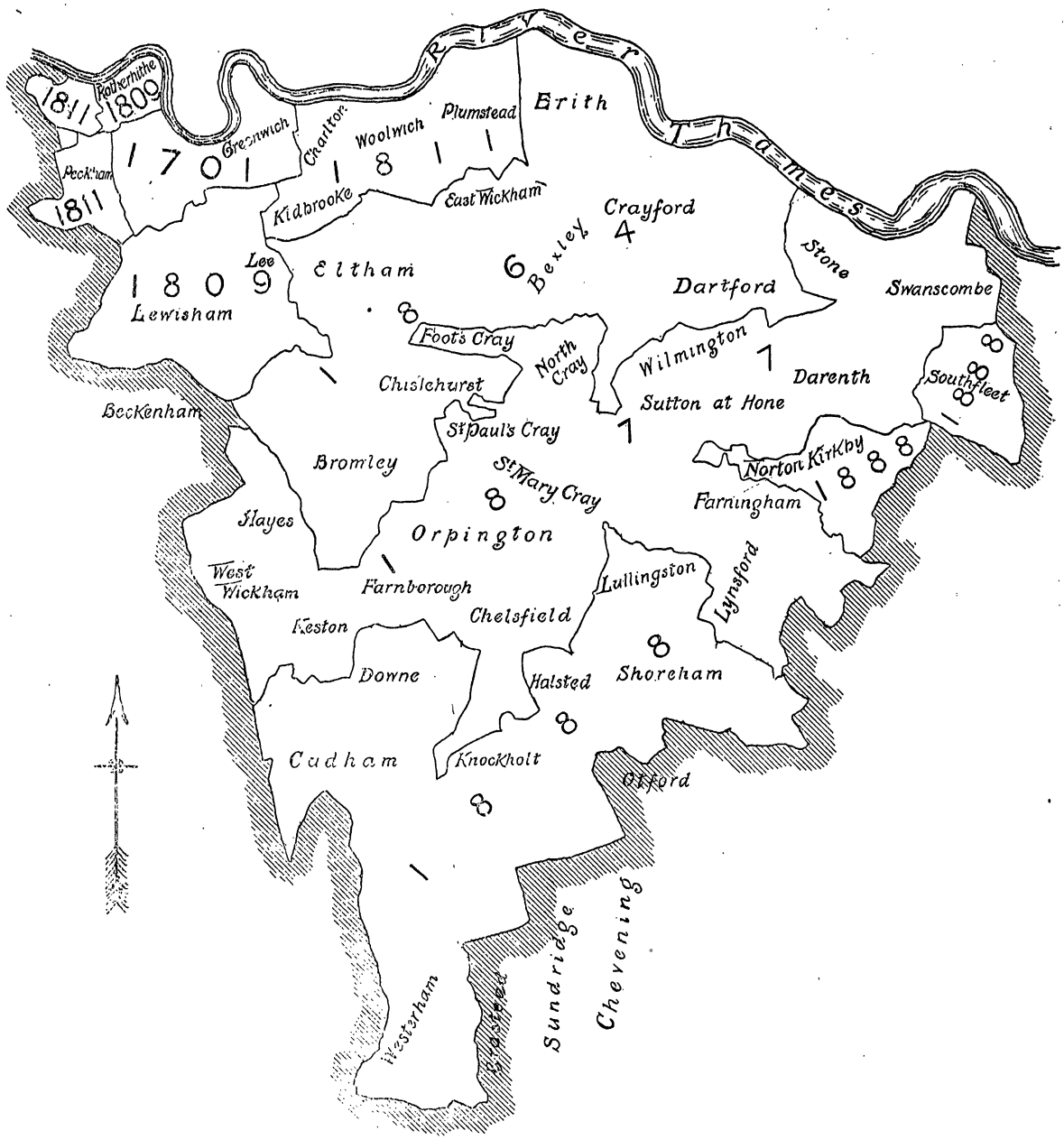
[1] Nos. I., II., III., IV., V., and VI. were published in THE LANCET of Feb. 20th, 27th, and March 6th, 13th, 20th, and 27th, 1897, respectively.

[2] It may, perhaps, be permissible to leave dull details for a moment to recall the fact that the Royal Manor of Sayes Court is a place of considerable historic interest. It was granted by Charles II. under his great seal to John Evelyn, a second son of the then head of that family—a family which Surrey has, as in the case of the Onslows, attracted from Shropshire. Mr. John Evelyn, "a most ingenious and polite gentleman, well versed in useful learning," is best remembered by the world at large by the diary he left and by his book on trees. The family seat at Wotton, to which he afterwards succeeded, still shows the results of his love of practical gardening. At Sayes Court lived for a time Peter, Czar of Muscovy, generally known as Peter the Great.

[3] The early struggles of the Company are rather plaintively but hopefully referred to in a will of one of the proprietors dated 1815: "I am possessed of ..... shares in the Kent Waterworks. They originally cost £100 each. God knows how they will go on; at all events they will want time to grow. I therefore leave them to ....." The testator left the shares to his "opposite neighbour's" daughters.

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FIG. 1.



Map showing the areas supplied by the Company at different dates.

FIG. 2.

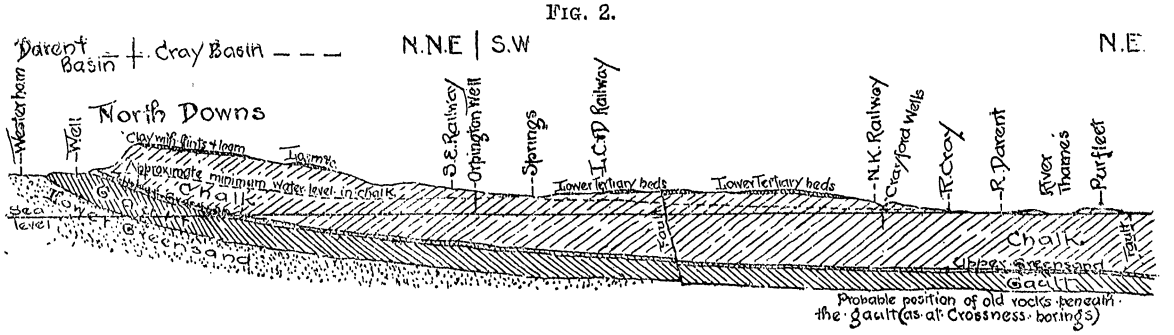


Diagram showing section of geological strata from the North Downs, near Westerham, across the River Thames to Purfleet.

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In 1850 and 1852 Acts were passed enabling the Company to increase their capital. About the middle of the present century an establishment called the Plumstead, Woolwich, and Charlton Consumers Pure Water Company was started. A well was constructed, and the necessary plant was put up by the Company, which, however, afterwards became bankrupt, when the plant was bought by the Kent Waterworks Company. In 1860 the North Kent Company was started with an idea of supplying Dartford, Crayford, Bexley, Wickham, Erith, Eltham, Chislehurst, and Bromley. The business of this undertaking was taken over by the Kent Company in 1864, and at the same time fresh capital was raised, and a schedule of water-rates was prescribed. The Company's area now included the places just mentioned. In 1867 the Local Board of Dartford sold their waterworks, which were acquired by the Kent Company, and the Company's area was thus extended to a district having a total area of about sixty-eight square miles. In 1877 the Bromley Rural Sanitary Authority requested the Kent Company to supply their district, and the Dartford Rural Sanitary Authority made a similar request. The result was that the Kent Waterworks Act of 1877 was passed and extended the limit of supply to the following places—viz., Swanscombe, Stone, Darenth, Wilmington, Sutton-at-Hone, Farningham, Eynsford, Foots Cray, North Cray, St. Paul's Cray, St. Mary Cray, Orpington, Farnborough, Chelsfield, Keston, West Wickham and Hayes, and the portion of Beckenham known as Shortlands. The Company's district of supply was thus extended to an area of 120 square miles. In 1885 the Bromley and the Sevenoaks Rural Sanitary Authorities requested the Kent Waterworks Company to supply parts of their districts. The necessary Act of Parliament was obtained in 1888, and the Company's limits of supply were thus extended to an area of about one hundred and seventy-eight square miles, of which about thirty only are within the County of London, the remainder being in the County of Kent. When the Company as at present constituted began their business by taking over the Ravensbourne Waterworks the undertaking was a comparatively small affair.

The works were situated on the banks of the river and consisted of a pump which was worked by a water-wheel. The machinery was designed by Smeaton. The water was distributed through wooden pipes A few years later a pair of steam-engines were put up by Boulton and Watt, and these engines are still working. Unfiltered water was used till the year 1844, when the first filter bed was made, and in 1850 a subsidence reservoir was constructed, and more filter beds were constructed. The reservoir is still in existence; it is situated to the west of the river, but it has for years been disused as a source of water-supply, and remains as a piece of ornamental water in the garden of the engineer. The water of the Ravensbourne was insufficient to afford a supply, and in 1857 a deep well was sunk in the chalk. An abundant quantity of pure water was found, and from the year 1862 the entire district of the Company has been supplied by well-water. New wells have been sunk as occasion required. All of them are in the chalk, except the one at Westerham, which is in the lower greensand.

Geology of the District.

In the case of the metropolitan water companies of which an account has hitherto been given it will be remembered that, with one exception, the water used by the companies comes either from the River Thames or from the gravel beds near the Thames. The only well which has been referred to is the one at Streatham, which belongs to the Southwark and Vauxhall Waterworks Company. A full description of the strata cut through in making this well has been given in THE LANCET (March 27th, pp 902-3).

The Kent Waterworks Company derives all the water supplied from deep wells; it is therefore of interest to note the geological character of the district. The company's area is bounded on the north by the River Thames, and to the south it extends beyond the North Downs. A diagram (Fig. 2) shows the arrangement of the geological strata.

At the extreme south Westerham is on the lower greensand, a formation which contains extremely good water, much less hard than the water found in chalk formation. Passing northwards there is next a narrow layer of gault, an almost impervious clay formation; then farther northwards there is a narrow band of upper green sand. Still farther northwards is the range of the North Downs, which run in a direction nearly due east and west, the eastern end running to the sea just south of Deal. In a westerly direction the downs run just to the north of Reigate and Dorking to Guildford, and from the west of Guildford towards Farnham. Near Westerham the crest of the chalk escarpment is generally over 600 ft. above the sea level. The ground falls from the crest sharply to the south; towards the north and the north-east the slope is more gentle. The diagram (Fig. 2) shows the position of two of the chalk wells, at Orpington and Crayford, and the position of the river beds of the Cray, the Darent, and the Thames.

On the North Downs there are patches of clay with flints and loam. These patches are irregularly distributed. From Westerham to Orpington the section shown in the diagram runs in a north-north-easterly direction; from Orpington to Purfleet the section runs in a north-easterly direction. Between Orpington and the line of the London, Chatham, and Dover Railway there are springs. There are patches of lower tertiary beds between this point and Crayford, which is on the chalk.

The depth of the level of water in the chalk varies. For example, at the present time the level of the well at Orpington is about 60 ft. below the surface of the ground. In a dry summer the level has been as low as 90 ft. below the surface. In estimating the water-bearing capacity of a district like that described it is necessary to know not only the area but the amount of rainfall, and it must be borne in mind that to be on the safe side it is necessary to reckon only the percolation which would take place during a dry year. Through a chalk district water finds its way to the sea in different ways. Some of the water rises in springs which break out at the foot of the chalk escarpment; some of it in wet seasons breaks out in streams in the higher levels, but during dry periods these streams do not run at all. Some, again, breaks out in springs in the lower ground. Much water, however, passes in underground channels; through chalk its passage is slow. Some of this underground water passes through fissures and in the lines in which flints occur. It passes also in large amount through faults in the chalk, which are water-bearing channels. It may be remarked in passing that a well which happens to be sunk in the course of one of these faults will afford a bountiful supply; and headings which are made in connexion with the deep wells in the chalk are made more or less in the hope of coming across one of these channels.

The average of the rainfall over the district is estimated to be about 26 in. It is less than this over the lower ground, and at Greenwich is about 24 in., but on the higher levels it rises to 30 in. It is a difficult or impossible matter to determine how much of the rainfall is available for the supply of wells which are constantly pumped. At one time 6 in. a year of the total rainfall was supposed to be the amount which it was likely could be used. Later the estimate was considerably raised, when it was thought that as much as 12 in. might be available. The present amount of water used daily by the Kent Company is estimated at about 16,000,000 gallons. According to some evidence that was given before the last Royal Commission on the Metropolitan Water Supply it was stated that the Company's Parliamentary area would be likely to afford a supply of 30,000,000 to 40,000,000 gallons daily.

(To be continued.)

ANNUAL REPORT FOR 1895 OF THE MEDICAL OFFICER OF HEALTH OF THE ADMINISTRATIVE COUNTY OF LONDON.

SECOND NOTICE.[1]

HAVING dealt with the statistical portion of Mr. Shirley Murphy's report, we have now to consider the remaining portion, which relates mainly to the administrative action of the Central Medical Staff for the Improvement of the Public Health. There is no department of sanitary work in which the London County Council can more usefully engage than in that of directing, and in some cases stimulating, the sanitary operations of the forty-three local authorities which come under its jurisdiction. And there

[1] The first notice appeared in THE LANCET of March 20th, 1897.

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is certainly no criterion by which the ability and tact of their medical adviser can be more justly estimated than by the degree of success which from time to time marks his attempts to encourage and develop local sanitary effort. Nor is this part of the county medical officer's duty by any means easy of fulfilment. For, in the first place, the fact must be considered that for a long period the numerous self-governing bodies of the metropolis have, under the title of "vestries," enjoyed practical independence in the execution of their sanitary functions. These bodies are therefore peculiarly averse to what they are prone to regard as outside interference, albeit this may be exercised by a statutory tribunal on which they themselves are duly represented. Again, it must be remembered that for many years past the forty-three vestries have been advised by as many separate medical officers of health, most of whom are men of high professional standing and long experience, who possess the confidence of their respective authorities. For the above-mentioned reasons the necessity will be apparent that the inter-relations of these local officers and the medical staff at Spring-gardens should be maintained on both sides with uniform consideration, patience, and good-will, if existing arrangements are to yield the best results. We notice with satisfaction the evidence afforded by Mr. Shirley Murphy's successive reports of the fact that in his own dealings with his numerous colleagues in the sanitary areas of London he has invariably been actuated by this sound principle. In the earlier years of his appointment Mr. Shirley Murphy had to depend on his own exertions exclusively. He possessed neither professional assistants nor staff, and, in fact, was compelled to make a position for himself and to organise a department which should eventually be competent to direct and control the vast sanitary machinery of the metropolis. It was not, therefore, until the year 1892, by which date the nucleus of a preventive department and staff had been provided, that Mr. Shirley Murphy felt justified in publishing his first annual report. Since that period, however, the administrative sanitary work of the council has progressed apace, and each successive report has borne additional evidence of the beneficial influence which the central office has exercised on the local authorities in the direction of sanitary progress.

By the Public Health (London) Act, 1891, it is provided that the London County Council shall pay a moiety of the salary of every metropolitan medical officer of health and sanitary inspector appointed or re-appointed after the passing of that Act. Up to the end of the year 1895 39 medical officers of health and 153 sanitary inspectors had been thus appointed or re-appointed. As the county council is bound to contribute to the remuneration of these officers, it of course follows that, in the first place, that authority and its medical department will possess, under legal sanction, the right of co-ordinating and controlling local sanitary operations; and, in the second place, that the local sanitary officers will be protected from capricious dismissal for fearless discharge of duty. It is greatly to be desired that this wholesome reform should ere long be extended to the large body of urban health officers acting outside the metropolis, many of whom are devoted entirely to the practice of preventive medicine, and perform functions even more onerous than those of any metropolitan officer of health, with the exception of the chief medical officer himself.

In the report before us is given an instructive example of the means by which a well-regulated central department can bring about desirable reforms in local sanitary administration. In the course of the year 1895 communications were addressed by the London County Council to seven metropolitan sanitary authorities calling attention in each case to the inadequacy of the local inspecting staff. One of the districts referred to having demurred to this charge of "making default," an assistant medical officer of the central department was instructed to make an inspection of the district and to report on its sanitary condition and administration. Dr. Hamer, who was selected for this duty, found that the inspecting staff of the district in question was as a matter of fact insufficient, and reported accordingly. This statement having been challenged by the vestry, who urged that the report had been made after insufficient inquiry, Mr. Shirley Murphy made a special communication to the county council on the merits of the case and on Dr. Hamer's local investigation. This communication was eventually forwarded to the Local Government Board. As a result we are informed that the vestry have already increased their staff of inspectors by the appointment of four additional officers. It is worth notice that although, as in the present instance, the action of the county council is wisely limited in the first instance to friendly representations to defaulting sanitary authorities, the council has abundant statutory authority under the Equalisation of Rates Act, 1894, to require compliance with its demands. The Act provides that "if the Local Government Board, under Section 101 of the Public Health (London) Act, are satisfied that the sanitary authority have been guilty of such default as is mentioned in such section, and have made an order limiting a time for the performance of the duty of the authority, the London County Council shall, if directed by the Local Government Board, withhold the whole or any part of the payment of the sum due to such authority" for the equalisation of rates.

Having thus obtained statutory control over the local distribution of funds, the London County Council will for the future have little difficulty in procuring the execution of all necessary works for the protection of the public health. After the manner of its predecessors, Mr. Shirley Murphy's report for 1895 treats in sufficient detail of the progress of local sanitary operations in aid of public health. It deals at length with such important topics as the prevention of trade and other nuisances, the housing of the working classes, the provision of workmen's trains, the regulation of houses let in lodgings, the supervision of the food and water-supply, and the maintenance of hospital and asylum accommodation for the treatment of the infectious sick and of the insane poor. All these subjects are dealt with so as to present under the respective headings a complete summary of existing sanitary conditions in the several sanitary areas. Opportunity is also taken to point out the general lines on which improvements can best be carried out, and copious extracts are appended from the reports of local medical officers of health, showing how far the suggestions of the central department have been attended to.

THE INTERNATIONAL SANITARY CONFERENCE.

OUR special correspondent writes:—The officially authorised report of the proceedings of the Conference will in due course be ready for distribution. It will be issued from Rome. In anticipation I may remark that its most outstanding feature will be the evidence it affords, as compared with its predecessors, of the steady progress made by British views of sanitation in Continental and even Eastern opinion. Difficulties as to their adoption may survive the recognition of their soundness, particularly with Powers like the Sublime Porte, which draws considerable revenue from "pilgrim dues" and other imposts of little or no real hygienic value. But as to the substantial victory scored by British prophylactic medicine, that may be regarded as *un fait accompli* on which civilisation may well congratulate itself.

With the signature of the "International Sanitary Convention" the Conference immediately rose.

Signor Bonin, the President, recapitulating its results, dwelt on the importance of the measures agreed upon as to the chief questions submitted to the Conference.

Thereafter the delegates of Austria-Hungary and France congratulated the Conference on its president, whose sympathetic tact had smoothed the many difficulties inherent in the discussions, and they concluded by begging him to convey to the Venetian public the gratitude of the delegates as a whole for the hospitality vouchsafed to them. The President, after returning thanks, declared the Conference closed.

Those who signed the Convention without reservations were the representatives of Austria-Hungary, Belgium, France, Great Britain, Italy, Luxemburg, Montenegro, the Netherlands, and Rumania.

The "Referendum" was signed by the representatives of Spain, Greece, Persia, Portugal, Servia, and Turkey.

The German representatives signed with reservations certain provisions to be adopted in Europe, as did also the representatives of Switzerland.

The representatives of Denmark, Sweden and Norway, and the United States accepted the Convention *ad*

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referendum. They made a formal declaration, inserted in the *procès-verbal*, that their Governments, as far as possible, would apply the provisions established in the Convention before the term fixed for its ratification.

Germany, Austria-Hungary, France, Great Britain, Italy, Luxemburg, Montenegro, the Netherlands, Portugal, Russia, Roumania, and Switzerland, through the representatives of their respective Governments and administrations interested, will have yet to consider and decide upon the following arguments, viz. :—

1. Communication of the Sanitary Convention of Venice to the Sanitary Council of Tangiers in order that there may be taken at Morocco provisions conforming to the rules established by the Convention against the invasion of the pestis bubonica, especially with regard to the temporary inhibition or restriction of pilgrimages.

2. Unification of the prophylactic measures on the part of the authorities at Malta and Gibraltar conformably to the rules of the Venice Convention.

3. Coördination and codification within an approximate time of all the dispositions entered in the Conferences of Venice in 1892, of Dresden in 1893, of Paris in 1894, and of Venice in 1897 against cholera and the pestis bubonica.

To the Convention is appended a general sanitary regulation to prevent the invasion and the diffusion of the pestis. This consists of five clauses.

The regulation starts from the basis that the period of incubation of the disease is at the present stage of science ten days.

The first clause, besides general prescriptions as to the notification of cases of pestis and of the provisions taken, contains :—

1. Rules to be followed in infected ports regarding outgoing vessels and those to be observed during the voyage and at the ports of arrival. Special and most severe regulations are laid down for pilgrim ships, and pecuniary fines are imposed on captains contravening such regulations.

2. Rules to be followed with regard to the place of departure by land or sea from the infected countries and particularly by the Red Sea (Wells of Moses, Suez, passage of the Canal), with special consideration for the Mussulman pilgrims and in view of the sanitary reforms to be effected in the halting places where they are kept under surveillance (Camaran, Abousaad, Vasta, Abouali Gebel, Tor) and by way of the Persian Gulf.

The second clause contains rules to be observed in Europe and to establish reciprocal and continuous information between the Governments as to eventual cases of pestis, the provisions adopted to combat transmission, and the conditions under which the territorial circumscription ought to be considered sound or contaminated. It also determines the necessity of limiting the circumscriptions (province and department) contaminated, and the provisions for combating the invasion of the disease; it enumerates the goods and effects which may convey the germs of the pestis; it establishes provisions to be taken on the terrestrial frontiers, condemning once more the system of quarantine, and admitting as an exception the barring of frontiers. It determines, finally, the provisions to be taken in the zones of frontiers along river sides, canals, and at harbours.

The third clause contains, as a recommendation, instructions as to the method of disinfecting in presence or anticipation of the pestis.

The fourth clause indicates the provisions to be recommended on board ships at the moment of departure, during the voyage, and at the port of arrival.

The fifth clause determines the mode in which surveillance is to be exercised in terms of the rules and provisions proposed by the Sanitary Council of Constantinople, with regard to the Red Sea, the Persian Gulf, at the Turko-Russian and Turko-Persian frontiers, and by the Sanitary Council of Egypt for maritime quarantine.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary Comitia of the Royal College of Physicians was held on March 29th, the President, Dr. WILKS, being in the chair. Communications were read from (1) the Secretary of the Royal College of Surgeons of England reporting the proceedings of the Council; (2) the General Medical Council forwarding a report from the Medical Department of the Navy pointing out that three Licentiates of the College at a recent competition showed deficiency in preliminary education; (3) Dr. H. G. Adamson, resigning his membership and returning his diploma; and (4) the Sanitary Institute, inviting the College to send two delegates to the annual congress to be held in Leeds in September next. It was resolved that Dr. Barrs and Dr. Chadwick be invited to act in that capacity.

A communication was read from the Medico-Chirurgical Society of Norwich enclosing a resolution of the society with reference to the medical officers of medical institutes. This was in the form of a memorial to the College, pointing out the urgent necessity of steps being taken in this matter, and stating that the members of the society have declined professional intercourse with those who by accepting offices in such associations had taken on duties derogatory to the profession.—The Beckenham Medical Society also forwarded a resolution declaring the holding of such appointments to be inimical to the best interests of the profession.

The PRESIDENT then submitted to the College the report of the committee appointed on February 23rd of this year to advise the Royal College of Physicians of London on the desirability of making a formal declaration of opinion to the Government in favour of the re-enactment of the Contagious Diseases Acts, or some such modifications of them as may prevent the spread of these contagious diseases.

After referring to the lamentable increase in recent years in the number of soldiers invalided home from India suffering from syphilis, and to the statistical aspect of the matter as revealed in the recent report of the Departmental Committee of the India Office, the committee of the College went on to say that whether syphilis be regarded in relation to the large amount of inefficiency it causes in the British Army and consequent weakening of the military power at the disposal of the Government of India, to its present, and often life-long, effect on the health and constitutions of the individual sufferers and their future wives and children, or in relation to its remoter consequences on the well-being of future generations, it appeared to them to be a matter of serious moment and to call for the gravest consideration. From this last fact it followed that if all reasonable measures to limit the spread of infection were justifiably taken in the case of other contagious or infectious diseases, they were far more necessary in the case of syphilis. About 13,000 soldiers return to England from India every year, and of these in 1894 over 60 per cent. had suffered from some form of venereal disease. These figures were quoted as showing more forcibly than words the risk of contamination to the present population and to future generations.

The report concluded as follows :—

"The far-reaching effects of syphilis are so serious that it is of the first importance that the earliest indications of the disease should be medically treated without any loss of time; neglect of this measure tends to increase its virulence in all its stages.

"As regards the unfortunate women who pursue their calling in a diseased condition, it is simply a matter of humanity to them that they should have the benefit of medical treatment, with rest and care in hospital, until they are cured.

"In view of this lamentable prevalence of disease your committee makes the following

Recommendations and Suggestions :—

That as the civil, military, and medical officers in India are best acquainted with the local conditions now existing, and affecting this prevalence of venereal disease, so they are the best judges of the most efficient means of dealing with it. Your committee therefore suggests that power be given to the Government of India to take such steps for the mitigation of this evil as these officers may advise.

That, for the protection of the healthy population, venereal diseases in both sexes, in the soldiers as well as the women, be subjected to the same restrictions as are other contagious diseases, such restrictions having for their object the detection and prevention of such diseases.

With regard to the unfortunate women, such measures necessarily include examination as well as treatment; and it may be desirable in India that the examination should be performed by persons of their own sex, who have been sufficiently trained and educated for the efficient discharge of this duty.

Syphilis requires prolonged constitutional treatment, during which the sufferers should be under frequent medical supervision, although not necessarily hospital *in*-patients.

Your committee also suggests that no women should be employed as coolies in, or in the immediate vicinity of, the barracks, as there is evidence that such women are frequently the source of aggravated forms of venereal disease.

"In making these recommendations your committee considers that they should apply not only to the women, but also to the men with whom they consort; and is of opinion that it would be highly advantageous if medical officers in the army found some means, by elementary reading-room lectures or otherwise, of acquainting young

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and inexperienced soldiers with the grave and far-reaching consequences that are likely to result from immoral conduct, as well as from the concealment of the primary symptoms of the disease, the early treatment of which is of the utmost importance."

Dr. CHURCH (Senior Censor) moved the adoption of the report, and Sir DYCE DUCKWORTH seconded the motion, remarking that it was the business of the medical profession to lead in this matter.—Sir JOSEPH FAYRER urged the necessity of the authorities taking disciplinary measures as well as medical and sanitary precautions, for there was absolutely no reason why these diseases should be so rife in India if proper control were exercised.—Sir W. PRIESTLEY, Dr. PLAYFAIR, and Dr. CHURCH also spoke, the latter mentioning the fact that the trained medical women in India consisted of three classes—the lady doctors, the assistant surgeons, and the hospital assistants, and there was reason to believe that these were sufficiently numerous to undertake the duties suggested to be imposed on them, of course under supervision. The report was adopted by the unanimous vote of the College.

A report from the Council dealing with the memorial addressed to the College at its last meeting by medical practitioners of Norwich was, after some debate, referred back for further consideration.

A report from the Midwives Registration Bill Committee was received and adopted.

Reports were received and adopted from the Committee of Management and the Laboratories Committee.

BUBONIC PLAGUE IN BOMBAY.

IT is reassuring to learn from the Anglo-Indian papers received by the last mail, although the news has been anticipated by telegraphic intelligence, that things have taken a favourable turn and are progressing more satisfactorily. The *Times of India* of March 13th, which publishes full accounts of all the proceedings that are taking place in Bombay in reference to the epidemic, states that there was a considerable diminution in the Bombay mortality returns during the past as compared with the preceding week, the numbers being 1326 and 1484 respectively, and the number of deaths registered from plague had fallen to 590. The health of the city was, in fact, showing considerable signs of improvement and business was beginning to revive.

At Karachi and Poona, on the other hand, where the epidemic was still spreading, drastic measures were being adopted for its suppression. The powers conferred by the Epidemic Diseases Act of 1897 are very considerable and go straight to the point, and the Executive Committee are energetically carrying out, under the orders of Government, measures for the suppression or limitation of the spread of the disease. It has been notified in the *Bombay Gazette Extraordinary* that the Municipal Corporation of the City of Bombay, its officers and servants, and all public servants are to give effect without delay to any measures that may be ordered by the committee, who have also power to requisition the Commissioner of Police to afford such aid as may be necessary to enforce them. Provision is likewise made for the expenses incurred in carrying out these measures. Dr. Yersin, accompanied by M. Pilinsky, the Consul, and Comte de Potier, the Vice-Consul, for France, arrived at Bombay from Poona on the 5th ult., the former bringing with him a large supply (700 tubes) of anti-plague serum, prepared in his laboratory at Nha-Trang, in Annam. Dr. Yersin has set to work very energetically, but it will be seen from the substance of a telegram which we publish in another column that his results in India do not appear to be so successful as those he obtained in China. Meanwhile we glean from the *Times of India* some particulars which may prove of interest to our readers. The Executive Committee in Bombay, under the presidency of General Gatacre, have circulated a note to district medical officers briefly setting forth that Dr. Yersin has been sent by the Institut Pasteur at Paris to repeat on a larger scale the successful experiments previously carried out by him in China; that the inoculations will be conducted free of charge; and that Dr. Yersin puts himself at the disposal of the municipality of Bombay and the public in order that those who desire to do so may try his treatment.

Reference is made to the volumes of the *Annales de l'Institut Pasteur*, which deal with Dr. Yersin's researches regarding plague and the technical preparation of the serum employed by him. The circular note goes on to state that Dr. Yersin has for his aim: 1. To treat with his serum declared cases of plague in order to demonstrate the efficiency of the new medicine. It is necessary for the success of the treatment that the disease should be treated at its commencement. The longer the disease has lasted the more difficult it is to deal with. However, in any case the treatment is innocuous. 2. In houses where plague exists Dr. Yersin can inoculate those who are inclined to try the influence of the preventive serum; he will also inoculate native practitioners and their staffs or any European medical practitioners who apply to him. The injection of the serum is not more painful than a subcutaneous injection of pure water; it causes no uneasiness, fever, or abscess. The patients have not to follow any special treatment or diet. The length of the immunisation acquired by the injection of serum is about a month; after the lapse of this time a fresh injection should be applied for, with the object of renewing the period of immunisation. The serum prepared by Dr. Yersin does not contain any microbe or any poisonous substance; it is therefore absolutely harmless.

M. Haffkine's scientific labours in the same or a similar direction are well known, and he has been indefatigable in his efforts. The work of inspection, systematic and effective segregation, and sanitation is being pushed on steadily in all directions, not only in Bombay, but in Poona, Karachi, and other places. While the more intelligent and educated classes in India — whether Hindus, Mohammedans, or Parsees—have most creditably been doing their best to aid in the good work, it cannot be expected that the natives generally would overcome their fears and caste prejudices and not seek to escape from or evade the regulations by the concealment of their disease; that is quite natural, and such as we know takes place in other countries than India. Still, it is surprising how the natives, of that country are becoming amenable to reason in these respects and conforming to regulations the benefit of which they are gradually recognising. The *Times* correspondent says: "The ignorance and superstition of the lower class of travellers makes the work of the medical officers difficult. One belief is that persons removed to the segregation sheds are given medicines which put an end to them quietly. Hence there are attempts to evade inspection, passengers alighting at roadside stations and journeying on foot past the junctions where the examination is made. The outbreak, which occurred at a village in the Gwalior territory, only ten miles from Jhansi, may be traced to this practice. For six weeks the villagers maintained secrecy about the disease, losing over 50 persons out of a population below 300. When the outbreak was discovered the Gwalior Durbar sent Dr. Crofts, who placed a cordon round the village, removed the inhabitants to a camp, and burnt all the houses there. These measures proved most effectual, only six patients now remaining. A careful examination of the neighbouring villages shows that no single case of plague has occurred there. The epidemic is practically stamped out. The Bengal Government has issued a notification containing rules for dealing with the plague on its first outbreak. In country towns and villages the main principle is the prompt segregation of patients and destruction of infected material. Similar measures are being taken in other provinces. There is no plague in the Bengal Presidency, but these precautionary measures are deemed advisable."

The report that plague had attacked the British troops at Colaba is officially contradicted.

THE BATTLE OF THE CLUBS.

ACCRINGTON.

THERE is—or perhaps we ought to say was, for apparently it has ceased to exist—a "club" at Accrington called the Accrington Medical Dispensary. The club employed a medical officer and seems to have been conducted in a very remarkable and high-handed manner. As far as we can judge from the report of a meeting published in the *Accrington Observer* of March 6th—a very undignified and quarrelsome meeting apparently—the committee or trustees, or, at any rate, the governing body of the club, discharged the medical officer, handed over the care of the members

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to the Accrington Medical Society, and sold up the fittings of the surgery and the drugs. We are not surprised; but as we gather from a remark of one of the speakers at the meeting that an action is pending between the medical man and the trustees of the dispensary we shall offer no comments at present. Meanwhile, the Registrar of Friendly Societies has been called in to inquire into the whole matter.

THE WIGAN AND DISTRICT MEDICAL GUILD.

The first annual general meeting of this guild was held on March 11th, Mr. J. B. Stuart being in the chair. The honorary secretary in explaining the movement said that their motto was at present "Defence, not defiance." Such an organisation was absolutely necessary in the interests of the profession. It was practically trades unionism applied to the medical profession. What was now wanted was organisation, not fighting. The reassuring effect of a powerful organisation was needed. He strongly disapproved of little individual fights being waged up and down the country, which by their want of success were apt to frighten the medical men in other districts. It might be magnificent but it was not scientific, warfare. It would be an extraordinary thing if a learned profession could not apply to its own necessity the old fable of the bundle of sticks. It would be observed that the rules adopted were practically the same as those of the Manchester Medical Guild. The cause of this was a strong desire that the two guilds should keep closely in touch. He hoped to shortly see similar guilds springing up in all the chief centres of Lancashire, so that a county federation might be formed. He would be only too happy to give all information to those desirous of helping forward the movement.

We are glad to see that Lancashire is aiming at the ideal of coöperation in medical defence. It was undoubtedly much more pleasant for everyone when the personal element could enter into the relations between employer and employed, as in the old days when apprentices lived in their master's house and the employer himself lived over his shop and was not ashamed to call it a shop. Nowadays he calls it an emporium and as a rule knows nothing of his "hands," though to this rule there are noble exceptions. So it is with medical practice. The modern club medical officer is ground down to give his services for a starvation wage, and has no Factory Acts or "unions" to defend him against what is sometimes the very real tyranny of his employers. So he is learning by bitter experience, and he is adopting the methods of his employers—i.e., patients—and, though we fear he will never get an eight hours' day, he will at least attain to "a fair day's wage for a fair day's work." The rules of the Manchester Guild referred to by the secretary of the Wigan society are mainly as follows:—

That the rate of payment should never be less than 4*s.* per member per annum; that the duties of medical officers should be clearly defined and uniform; that a rate of 2*s.* 6*d.* should be charged for the medical examination of every candidate; that a club medical officer should not be debarred from obtaining the usual fees under the Employers' Liability Act and the Lunacy Act; and that women should pay 6*s* a year. The Council of the Guild also consider that the profession should only recognise those provident associations which enforce a wage limit and which allow no laymen to make profits or accumulate reserve funds out of medical work, or medical men to be controlled by other than medical committees; and, also, that no medical officer should undertake to attend and dispense medicine for more than 1500 patients living within a radius of two miles.

We earnestly hope that the suggestion of the Wigan secretary will be acted upon and a county federation formed, for such an association would be of incalculable value to practitioners of all grades.

After the meeting the following officers were elected:—Chairman: Mr. W. Mitchell Roocroft. Vice-chairman: Mr. C. R. Graham. Honorary secretary: Dr. F. Rees. Honorary treasurer: Dr. M. Benson. Council: Mr. Cooke, Mr. Parker, Dr. Wilson, Mr. Cbronnell, Dr. Wolstenholme, Mr. Berry, Mr. Monks, Mr. Brady, Mr. Angior, Mr. Cowan, Dr. Blair, and Dr. J. King.

MEDICAL MEN AND FRIENDLY SOCIETIES.

On March 19th the annual Conference of the Affiliated Friendly Societies of the United Kingdom was held in London, when the question of "medical boycotting," as the determination of medical men not to be robbed was gracefully termed, was discussed. Mr. Lister Stead, of the Ancient Order of Foresters, proposed the following resolution, we learn from the *Sheffield Independent* of March 20th:—

"That this Conference of Friendly Societies records its strong protest against the organised attempts made by medical men to impair the usefulness of the medical aid section of the work of friendly societies, especially to the boycotting directed against medical men in the service of Friendly Societies' Medical Institutes or Associations, and in regard to the restrictions sought to be imposed by medical men as to the class of persons eligible to receive medical benefits through friendly societies; and this Conference instructs its committee to take steps to protect the interests of the societies concerned, and to uphold the right of the societies to admit members free from any restrictions on the part of the medical profession. That copies of this resolution be forwarded to the Medical Council and the editors of THE LANCET and *British Medical Journal*."

According to the *Sheffield Independent* Mr. Stead went on to say that those interested in these matters were beginning to recognise that throughout the United Kingdom efforts were being made to hamper the work of the societies as regarded their medical aid branches. The medical men were now combining to make it as hot as possible for the gentlemen who acted for the Medical Aid Association. His society thought that if the Conference expressed an opinion upon this practice of boycotting it might have the effect of putting a stop to this practice, or, at all events, of mitigating the evils under which they were labouring to-day. As to the attempt of the medical profession to impose a wage limit for members, they would not allow the medical profession to lay down rules under which they should admit members.

We believe that Mr. Stead's resolution was adopted, though it has not been forwarded to us in accordance with its wording. We are glad to learn that Mr. Stead's friends are beginning to find out that the medical profession does not intend to be exploited, and we assure him that no resolutions that he can frame will "have the effect of putting a stop" to action on the part of medical men against organised robbery. We beg again to repeat to the medical profession that on no account should they accept office in clubs where there is no wage limit and where the patients of other medical men are touted for by canvassing.

BECKENHAM AND PENGE MEDICAL SOCIETY AND THE CLUB QUESTION.

At a meeting of the above society, held on March 12th, the following resolution was proposed and unanimously carried:—

"That it is detrimental to the honour of the medical profession that a member should hold any appointment under medical aid societies, because they are speculating companies, increasing their profits by imposing on the medical profession, to whom their success is largely due. This society therefore protests, and pledges itself not to take any such appointment, and it is their earnest hope that their professional brethren will do likewise and so suppress these impositions, which, if encouraged and allowed to continue, must seriously injure the *bonâ-fide* work of the general practitioner amongst the middle and lower classes."

THE RECORDS OF FATALITIES UNDER ANÆSTHETICS.

AMONG the sad deaths under anæsthetics, which nowadays seem so frequent, many are placed to the account of anæsthetic agents without any justice. In pre-anæsthetic days it was no uncommon occurrence for death to take place before the surgeon's knife had commenced its work, nor was it rare for a fatal swoon to terminate abruptly the performance of an operation. The enormous increase in the actual number of times an anæsthetic is given now as compared with ten years ago involves a far larger number of actual deaths, although the same low average of mortality is maintained or even lessened. It is certainly true that there is much to be learned from fatalities; and, although always sad reading, we must submit that no death which occurs under an anæsthetic should be passed over, but carefully noted and published, that it may prove a beacon which may perhaps save others from some unappreciated shoal or rock in the troubled waters of anæsthesia. And in this connexion we would remark that when details are sought for the narratives sometimes fall short. We are told that chloroform was given "in the usual way," regardless of the fact that the usual way for A. is not the method adopted by B. A brief newspaper cutting is sent with the remark "correct as far as it goes." The *petitio principii* is here evident, for what we

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need is not the *parvum in multo* but the *multum in parvo*. If our correspondents would critically examine whatever account they send us and give all information in their power about the patient, the anæsthetic, the method of anæsthetising, and the phenomena of anæsthesia, they would do much to assist others—and perhaps render a service to themselves—by a searching examination of the side lights thus thrown upon the occurrence.

DEATHS UNDER CHLOROFORM IN DENTAL OPERATIONS.

We have received from the chloroformist the particulars of the following death under chloroform. The patient, a woman, aged twenty-five years, was in good health and of spare habit. The clothes were loosened, while the patient reclined upon a couch with a view to having several teeth extracted under chloroform. The anæsthetic was administered from a felt cone, a drop-bottle being used. In about five minutes the conjunctival reflex had disappeared. After most of the teeth had been removed the dentist changed the gag to the other side of the mouth. At this time the patient appeared to be doing well. The pupils were moderately contracted. More teeth were removed, with, as we gathered, occasional re-applications of the cone. When this was lifted off the face for the last time the colour appeared to be natural, but the chloroformist says that he could not see the chest. When the last tooth was removed the lips were seen to be pallid and respiratory movements had ceased. Careful measures to effect resuscitation failed. The necropsy revealed that the right heart was empty, and the left full; all other organs were normal. Two drachms of chloroform were used. That anæsthetic was only selected in place of ether at the last moment, but why this change was made we are not informed.

A similar occurrence is reported. In this case the patient (again a female) was aged thirty-two years; the administrator was a surgeon and the family attendant of the patient. Chloroform was given from lint. The patient succumbed as the operation was finished; respiration was observed to fail. The necropsy showed a distended stomach and "weak heart"—whatever that may signify. It would be interesting to know why chloroform was employed in these cases, as experience has shown that fatalities are peculiarly liable to follow the use of chloroform in dental operations. That shock is peculiarly prone to take effect in such cases is generally believed, but it is more likely that in the chloroformist's desire to ensure a prolonged and complete anæsthesia the anæsthetic is usually pushed to a dangerous degree. Commonly the very act of removing teeth causes obstruction to respiration, either from pushing back of the tongue or pressure upon the mandible. Whether death results from an excessive or an insufficient quantity of chloroform really matters very little, but what is of the last importance is that death be avoided by giving the patient nitrous oxide gas on several occasions or, if this is impossible, by having recourse to a full anæsthesia by means of nitrous oxide and ether. It should be noted that in the cases given above in one instance a closed cone and in the other lint was used. A death under nitrous oxide and ether has been recently reported, but at present we have not received sufficient information to enable us to do more than notice this unusual and deplorable mishap.

DEATHS UNDER ANÆSTHETICS IN OTHER OPERATIONS.

A death occurred in Liverpool under chloroform. The patient, aged twenty-two years, an inmate of the workhouse infirmary, was placed under chloroform, and before the operation was commenced his condition became so grave that the administration was stopped and artificial respiration commenced. This brought him round. The anæsthetic was again given, and this time the patient died. The necropsy seems to have shown old pericardial adhesions. It would be interesting to know why the administrator did not change the anæsthetic if the urgency of the case was such as to render it desirable to complete the operation on the day.

Through the courtesy of the house surgeon, Mr. S. T. Rowling, M.B., Ch.B. Viet., we have before us the particulars of a death under A.C.E. mixture which took place at the Leeds Infirmary. The patient suffered from right-sided empyema and had been an in-patient for a month, having been twice aspirated without anæsthetics being employed. On the day of his death A.C.E. mixture was given him, how we are not informed, and after six and a half drachms had been used he died "from syncope." The breathing stopped quite suddenly before the operation was commenced.

Another case of death during the performance of an operation for empyema is reported by Mr. W. J. Scott, to whom we are indebted for careful notes. The patient, an alcoholic man, aged forty-five years, came under treatment for left-sided empyema. Large quantities of fœtid sputa were being expectorated. He was unable to lie in the dorsal decubitus owing to dyspnœa. The administration of the anæsthetic was was commenced by giving A.C.E. mixture from a Skinner's mask held at a little distance from the patient's face. In about one and a half minutes this was replaced by ether given with extreme caution from a sponge in an open celluloid cone with abundance of air. After four minutes slight rigidity was present, but the conjunctival reflex and cough persisted. The pulse and colour were both good, and when some slight stertor was heard it was decided to commence the operation, although the conjunctival reflex was not abolished. The patient was turned on his sound side, and before the parietes could be incised down to the bone the patient grew cyanosed and breathing was embarrassed. The anæsthetic was stopped as soon as the change in posture was effected. Upon the onset of these grave symptoms the patient was turned on his back, the jaw held forward, and slight pressure made upon the ribs of the sound side, the shoulder and arms being extended in inspiration. The breathing then grew regular and the pulse became fairly good. The patient was then placed at the edge of the table and turned slightly on his sound side. The cyanosis at once re-appeared and quantities of fœtid pus poured from the mouth. Artificial respiration only appeared to increase this condition, and the patient died. We can only deplore with Mr. Scott the result of the case. The notes show that everything which human foresight could indicate was done, and that the unhappy patient's condition rendered it practically a foregone conclusion that even the greatest skill and care must fail to obviate a fatal issue.

In the next case the patient seems to have been in a grave condition due to peritonitis following intestinal obstruction, and upon being taken to the infirmary at Stafford, where he was given chloroform, it was found that his condition grew worse under this anæsthetic, so that a mixture of it with ether was substituted. Under this, however, he sank and died. It is probable that here the anæsthetic only accelerated the death, and we may perhaps assume that the most depressing form of anæsthetic was at first used for reasons which do not appear in the account of the fatality which lies before us. In many such cases a very small amount of an anæsthetic—ether for choice, as it stimulates—suffices for incision of the abdominal parietes, and the subsequent procedure can be carried through with practically no further anæsthetic. A whiff at the close of the operation when skin sutures are being applied will render the procedure painless.

THE HEALTH OF THE EUROPEAN ARMY IN INDIA.

THE Army Health Protection Association, India, has issued a memorandum setting forth the history of the political and other changes affecting the health conditions of the troops composing the European force in India, and the causes which in their opinion have given rise to the great prevalence of contagious diseases existing at the present time. A letter, signed by Colonel F. C. Keyser, the honorary secretary of the association, accompanies the memorandum, in which the increase of disease is attributed to the partial, and at last complete, abandonment of measures of control and protection in cantonments. After succinctly referring to the successive steps taken in this policy of abandonment forced upon the Government of India, the letter goes on to state that the objects of the association are twofold—to furnish the public with a correct account of the facts of the case and clear away the ignorance and misunderstanding which at present beset the subject; and to bring to bear on the Government the force of a combined, rational, and well informed public opinion. The memorandum discusses the subject more in detail, and should be studied by all who are interested in the question. There is no need for us to express our concurrence in the objects of the association, for readers of THE LANCET must be thoroughly aware of the views entertained by us in regard to the subject in question.

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A NATIONAL MEMORIAL TO JENNER.

A MEETING was held on Wednesday last, March 31st, in the theatre of the University of London, with the object of establishing a national memorial to Edward Jenner. The Duke of Westminster, K.G., presided. Among those present were the Duchess of Westminster, Lord Herschell, G.C.B. (chairman of the Royal Commission on Vaccination), Lord Lister (President of the Royal Society), the Earl of Cork and Orrery, K.P., Professor Michael Foster (Secretary of the Royal Society), Sir Alfred Lyall, K.C.B., Lord Davey, Mr. Brudenell Carter, the Earl of Ducie, Viscount Clifden, Dr. S. M. Copeman, Sir H. Cunningham, Sir John Evans, Dr. W. Ewart, Sir Joseph Fayrer, Sir W. H. Flower, Dr. Glover, Dr. John W. Ogle, Sir H. Roscoe, and Colonel Keyser, C.B.

In opening the proceedings the DUKE of WESTMINSTER said he was the nephew of one who at the commencement of the century contracted the disease of small-pox ten years after he had been vaccinated by Jenner himself—quoted as a proof of the failure of the system—but who, if a failure, was none the worse for the attack, and lived without spot or blemish through the greater part of this century, leaving us only a few years ago at the good old age of ninety-two. The present meeting was the outcome of a preliminary gathering held in December of last year, on which occasion, while there was a remarkable unanimity on the part of gentlemen of eminence and authority attending it, some little doubt was expressed by one or two who were present as to whether it would be advisable or prudent to attempt to connect the memorial with any particular institution. That doubt was, however, not crystallised into any shape or form of opposition and he took it that an overwhelming conviction obtained in the minds of all sensible people that the world owed a deep debt of gratitude to Jenner for saving its inhabitants from a foul disease if only they would adopt his treatment carefully and periodically. He referred to the false and misleading statements that were circulated among the ignorant, prejudicing their minds against vaccination, which had told so disastrously in Jenner's own county at Gloucester, where it required a severe epidemic of small-pox to convert the anti-vaccinationists there into fervent admirers and adopters of vaccination. It was surely high time that this, the native land of Jenner, should rise to the occasion and, after 100 years after the first successful vaccination, take active and effective steps to carefully preserve his great legacy to the world, and to do more, to give every facility for the promotion of science in the direction of the prevention of diseases. It had been suggested that the statue of Jenner now in Kensington-gardens, a site hardly worthy of him, might be removed and placed opposite St. George's Hospital, but he ventured to think that his native village of Berkeley might perhaps more fittingly receive it.

Lord HERSCHELL, in moving the first resolution, "That the present is an appropriate time to inaugurate a work of national utility in honour of Edward Jenner," said a hundred years ago small-pox was committing ravages which we could now hardly realise. Jenner introduced to the world his discovery that inoculation of cow-pox would prevent attacks of the disease, and at the end of the first quarter of the century a marked change was seen not only in this country, but in many of the countries of Europe. From the outset there had been those who doubted the efficacy of vaccination, and the Commission on the subject, over which he presided for many years, had just issued its report. A vast amount of material was considered, and it fell to his lot to have to digest that material, analyse it, and submit a report for the consideration of his colleagues. When he approached that task he approached it with a determination to follow the results to which the facts led whatever they might be, and he was surprised at the force of the evidence in favour of vaccination. From the Blue-book he quoted figures in favour of vaccination which, he said, it was difficult for human reason to resist. Jenner's character and veracity had been attacked by some peopul who pointed out that he asserted or expected that vaccination would be permanent in its effects, while everybody now admitted that absolute permanency did not exist. The only way to tell whether it would be permanent or not was by experience, and those who availed themselves of the experience of a century of vaccination to assail Jenner, who necessarily did not possess that experience, were the same persons who very often refused to yield to the teachings of experience when they inquired now what had been the effects of vaccination. Jenner was the first to illustrate a principle which seemed destined to play an important part in the history of preventive medicine. Surely this alone was a high tribute to Jenner and the value of his discovery. His name was held in reverence by the highest men of science and the most civilised countries in the world. Some of those countries had commemorated his centenary. Jenner was an Englishman, and were Englishmen to be behindhand in testifying their admiration of the man and their sense of the benefits he had conferred on humanity?

Professor MICHAEL FOSTER, who seconded the resolution, said he would like to re-echo the words of Lord Herschell and claim for Jenner's work scientific merit. Except, perhaps, for the fact that the labours of Dr. Monckton Copeman and others tended to minimise the dangers of vaccination, relatively little progress had been made in the principles laid down by Jenner till the time of Pasteur. Jenner was governed by the idea we now call the doctrine of attenuation, a doctrine revived by Pasteur, and which had become the basis of our great progress at the present time.

Sir ALFRED LYALL supported the resolution, which was carried unanimously.

Lord LISTER moved: "That a subscription be set on foot with a view of promoting, in connexion with the British Institute of Preventive Medicine, but in a manner distinguished by Jenner's name, researches on the lines which he initiated." In proposing the resolution Lord Lister took occasion to correct a mistake which he made in his presidential address to the British Association at Liverpool. The mistake, he said, had been made a very great deal of in the newspapers and had been taken advantage of by the anti-vaccination party in distributing a leaflet to that meeting. The statement was to the effect that small-pox was absolutely unknown in the German army as a result of the re-vaccination of all recruits. He had quoted from memory after reading an authority on the subject, and if he had stated that "fatal" small-pox was absolutely unknown in the German army he should have been speaking the literal truth. Such being the case, he did not think it necessary to rectify in a public manner the mistake he had made when a letter appeared in the *Times* of Sept. 23rd of last year calling attention to this mistake. He had since obtained the official documents from which the writer of this letter had taken the facts to convict him. Now he asserted that from 1874–75 to 1886–87 the only death from small-pox that occurred in the German army was that of a man who was proved not to have been properly vaccinated. If, instead of deaths, he took the cases, in 1886–87 there were seven out of 344,000 men, in 1885–86 there were six, in 1884–85 there were seven, and so on. He thought, therefore, he had not made any very serious blunder after all. The writer of the letter had also contended that vaccination had had no influence whatever in diminishing the death-rate from small-pox in the German army. He (the speaker) had examined the official statistics, and found that from 1874–75, when the Compulsory Re-vaccination Law was passed, the mortality from that cause in the army had become absolutely *nil*. Not only so, but, as a German authority himself had been lately saying, Germany might now be said to be practically free from small-pox. He was glad to take this opportunity of correcting his mistake, because it enabled him to support the principle of vaccination from German statistics He pointed out the value of research on the lines laid down by Jenner, giving as examples Dr. Koch's treatment of rinderpest in South Africa, M. Haffkine's inoculations in connexion with the bubonic plague, the experiments of Dr. Yersin, and the results obtained by the use of anti-diphtheric serum in this country, which had saved a multitude of young lives, and which was due to the Institute of Preventive Medicine. He suggested that this name might possibly be altered to that of the Jenner Institute.

Lord DAVEY seconded, and Mr. BRUDENELL CARTER supported, the resolution, which was carried unanimously.

A vote of thanks to the chairman, proposed by the Earl of DUCIE and seconded by Dr. GLOVER, terminated the proceedings.

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VENEREAL DISEASE AMONG THE INDIAN TROOPS: THE ACTION OF THE GOVERNMENT.

A MILITARY despatch from Lord George Hamilton to the Government of India, dated March 26th, 1897, was presented to the House of Commons on Thursday, April 1st. After recapitulating the facts and figures proving the terrible increase in venereal ravages among the Indian troops Lord George Hamilton goes on to say:—

"Your Excellency will, I am confident, concur with Her Majesty's Government that in any measures which may be adopted there must be nothing that can be represented as an encouragement of vice. There must be no provision of women for the use of soldiers by any authority, civil or military. There must be no registration of prostitutes other than that which is, or should be, enforced for all inhabitants of cantonments, and no granting of licences to practise prostitution. There must be no compulsory and periodical examination of women. Prostitutes must not be allowed to reside in regimental bazaars or to accompany regiments on the march. Subject to these restrictions, Her Majesty's Government consider that Rules 5, 6, and 7 of the Cantonment Rules[1] made in 1895, under Sections 26 and 27 of the Cantonment Act of 1889, should be made applicable not merely to 'cholera, small-pox, diphtheria, or typhoid fever,' as specified in the rules, but to all contagious and infectious diseases, including venereal disease. They consider it imperatively necessary that this disease should not be exempted from the measures adopted to prevent the spread of other contagious diseases. It may be argued that the examination of women which may, but need not necessarily, be held under these rules is in effect compulsory. Her Majesty's Government do not share this view. But if there be any compulsion it is precisely of the same kind as that which has been accepted as necessary and enforced without any objection in the case of diphtheria or typhoid fever. There will be no obligation on women to attend hospital, but as an alternative to doing so they will be required to leave the cantonment, and rightly so, as an almost certain cause of disease to others. Her Majesty's Government also approve of the suggestion made by the Army Sanitary Committee as to the employment of female hospital assistants under the direction of the medical officer in the examination and treatment of women."

It is to be hoped that these measures will mitigate the terrible scourge, but we await, before expressing any opinion on the point, the draft rules that the Indian Government will now issue to give effect to the despatch. On these everything will turn.

[1] The following are the clauses from the Cantonment Rules:—"5. If the medical officer for the time being in charge of any such hospital is informed upon testimony which he believes to be credible that any person living in the cantonment is suffering from cholera, small-pox, diphtheria, or typhoid fever, he may by notice require such person to attend at the hospital at a time to be mentioned in such notice; and if upon the attendance of such person in pursuance of such notice or otherwise he shall ascertain that such person is in fact suffering from any of the above-mentioned disorders, he may require such person to remain in the hospital until he shall have been pronounced free from such disorder, or may give such other direction in the matter as may seem to him most expedient for the purpose of preventing the spread of such disorder. 6. If any person upon whom any such notice as is mentioned in the last preceding rule shall have been served shall refuse or neglect to attend at the hospital in pursuance of such notice, he shall be deemed to be suffering from such disorder as aforesaid and to have refused to go to the hospital. 7. If the medical officer for the time being in charge of any such hospital certifies in writing to the commanding officer of the cantonment that any person living in the cantonment is or is deemed to be suffering from any of the disorders mentioned in Rule 5, and that such person has refused or is deemed to have refused to go to the hospital, or that he, having gone to the hospital, has left it while still under the influence of such disorder, and that the continuance of such person in the cantonment is likely to be attended with danger to the health of the other inhabitants of the cantonment or some of them, the cantonment magistrate may, on the application of such medical officer, order such person to remove from the cantonment within twenty-four hours, and prohibit such person from remaining in or re-entering it without the written permission of such meaical officer."

A COMMISSION has been signed by the Lord-Lieutenant of the County of London appointing as a Deputy-Lieutenant of the County Mr. Frederic Hetley, M.D. St. And., F.R.C.S. Eng., of Norbury Lodge, S.E.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6697 births and 3939 deaths were registered during the week ending March 27th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 18·1 to 18·7 per 1000, was again 18·7 last week. In London the rate was 17·9 per 1000, while it averaged 19·2 in the thirty-two provincial towns. The lowest death-rates in these towns were 12·9 in Croydon, 13·2 in Bristol 13·6 in Derby, and 13·7 in Brighton; the highest rates were 22·3 in Bolton, 23·2 in Norwich, 24·0 in Nottingham and in Manchester, and 24·2 in Salford. The 3939 deaths in these towns included 360 which were referred to the principal zymotic diseases, against 335 and 344 in the two preceding weeks; of these, 98 resulted from whooping-cough, 88 from measles, 64 from diphtheria, 43 from diarrhœa, 37 from scarlet fever, and 30 from "fever" (principally enteric). No fatal case of any of these diseases was recorded last week either in Wolverhampton, Derby, Birkenhead, or Halifax; among the other towns they caused the highest death-rates in Birmingham, Blackburn, Burnley, Salford, and Bolton. The greatest mortality from measles occurred in Cardiff, Bolton, Salford, and Burnley; and from whooping-cough in Swansea, Burnley, and Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 64 deaths from diphtheria included 43 in London and 3 in Birmingham. No fatal case of small-pox was registered last week in any of the thirty-three large towns. There were 21 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, March 27th, against 30, 29, and 21 at the end of the three preceding weeks; 2 new cases were admitted during the week, against 6, 0, and 2 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2585, against 2745, 2685, and 2622 on the three preceding Saturdays; 224 new cases were admitted during the week, against 211, 218, and 206 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 344 and 317 in the two preceding weeks, further declined to 313 last week, and were 164 below the average. The causes of 51, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Cardiff, Bradford, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Preston, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·1 and 23·3 per 1000 in the two preceding weeks, declined again to 22·6 during the week ending March 27th, but exceeded by 3·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·1 in Greenock, and 16·8 in Paisley, to 26·3 in Aberdeen, and 30·7 in Perth. The 673 deaths in these towns included 36 which were referred to measles, 33 to whooping-cough, 16 to diarrhœa, 4 to scarlet fever, 4 to "fever" and 3 to diphtheria. In all, 96 deaths resulted from these principal zymotic diseases, against 83 and 106 in the two preceding weeks. These 96 deaths were equal to an annual rate of 3·2 per 1000, which was 1·5 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 27 and 33 in the two preceding weeks, further rose to 36 last week, of which 19 occurred in Glasgow and 16 in Edinburgh. The 33 deaths referred to whooping-cough corresponded with the number recorded in the preceding week, and included 22 in Glasgow and 9 in Edinburgh. The fatal cases of scarlet fever, which had been 5 and 9 in the two preceding weeks, declined again to 4 last week, of which 3 occurred in Glasgow. The deaths referred to different forms of "fever," which had been 4 and 11 in the two preceding weeks, fell to 4 last week, and included 2 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 152 and 155 in the two

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preceding weeks, further rose to 159 last week, and exceeded by 44 the number in the corresponding period of last year. The causes of 49, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 39·1 and 40·4 per 1000 in the two preceding weeks, declined again to 36·1 during the week ending March 27th. During the past twelve weeks of the current quarter the death-rate in the city has averaged 40·3 per 1000, the rate during the same period being 18·5 in London and 22·3 in Edinburgh. The 242 deaths registered in Dublin during the week under notice showed a decline of 29 from the number in the preceding week, and included 67 which were referred to the principal zymotic diseases, against 61 and 74 in the two preceding weeks; of these, 37 resulted from measles, 19 from whooping-cough, 7 from diarrhœa, 1 from small-pox, 1 from scarlet fever, 1 from diphtheria, and 1 from "fever." These 67 deaths were equal to an annual rate of 10·0 per 1000, the zymotic death-rate during the same period being 1·6 in London and 5·2 in Edinburgh. The fatal cases of measles, which had been 43 and 46 in the two preceding weeks, declined to 37 last week. The deaths referred to whooping-cough, which had been 9 and 20 in the two preceding weeks, were 19 last week. The mortality from scarlet fever and from "fever" showed a decline from that recorded in the preceding week. The 242 deaths in Dublin last week included 49 of infants under one year of age and 38 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons were below those recorded in the preceding week. Six inquest cases and 5 deaths from violence were registered; and 66, or more than a fourth, of the deaths occurred in public institutions. The causes of 18 or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL J. J. MORRIS has assumed Medical Charge at Citadel Barracks, Dover. Surgeon-Major North has joined at Woolwich for duty, and Surgeon-Captain C. W. Reilly will join at Woolwich during the month of April. Surgeon-Major W. D. A. Cowen proceeds from Cork to Portsmouth, for duty. Surgeon-Major R. L. Love has been ordered to proceed to Dublin for duty. Surgeon-Lieutenant-Colonel Townsend will shortly embark for India.

INDIA AND THE INDIAN MEDICAL SERVICES.

The under-mentioned officers of the Army Medical Staff on arrival from England have been posted as follows:—Surgeon-Major Heffernan, Poona District; Surgeon-Major Jencken, Poona District; Surgeon-Major Drury, Bombay District; Surgeon-Major Hewett, posted to the Nagpore District; and Surgeon-Captain Taylor has been transferred to the Mhow District from the Aden District.

The following retirement is notified subject to Her Majesty's approval:—Surgeon-Lieutenant-Colonel Alexander Kenneth Stewart, Bombay Establishment, the 4th (Prince Albert Victor's Own) Regiment of Bombay Cavalry (Poona Horse).

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Staff Surgeon John P. J. Coolican to the *Wildfire*, additional for the *Sans Pareil* Surgeons: C. H. Rock to the *Undaunted*, Daniel J. P. M'Nabb to the *Edgar*; and Robert Hickson to the *Philomel*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major W. R. Dambrill-Davies to be Surgeon-Lieutenant-Colonel.

ARMY MEDICAL SCHOOL, NETLEY.

The seventy-fourth session of the Army Medical School, Netley, commences to-day, Friday, April 2nd. The session will be attended by twenty-one Surgeons on probation, fourteen for the Army Medical Staff and seven for the Indian Medical Service. The following are the names of the Surgeons on probation in the order of merit as settled at the London examination:—

ARMY MEDICAL STAFF.

1. S. L. Cummins.
2. C. H. Hopkins.
3. J. McArdle.
4. P. Mackessack.
5. L. J. C. Hearn.
6. J. McD. McCarthy.
7. E. Brodribb.
8. J. G. Walker.
9. H. G. P. Stallard.
10. R. D. Jephson.
11. H. L. W. Norrington.
12. J. Poe.
13. J. Crean.
14. A. W. N. Bowen.

INDIAN MEDICAL SERVICE.

1. J. G. P. Murray.
2. S. Anderson.
3. F. H. G. Hutchinson.
4. J. L. Marjoribanks.
5. J. A. Dredge.
6. R. W. Knox.
7. A. Fenton.

THE TURKISH ARMY ON THE FRONTIER.

That the Turkish soldier is a formidable fighter has been long known, but it will be a matter of surprise to most people to learn from the military correspondent of the *Times* that Turkish organisation has made rapid strides during the last few years, especially in the matter of military railways and hospitals. Writing from Salonika with Edhem Pasha's force the correspondent refers to the creditable state of the Medical Service. He says: "The main hospital here is as good as many in Europe and has a large reserve supply of beds and medicines; the doctors are properly trained, and the ambulances well equipped and officered. A very reasonable order has just relegated all the Christian military surgeons to the depôts, while the fighting line is to be supplied with Mahommedans only. A little dysentery is the only disease from which the entire army of occupation, more than half of which has been brought from the distant provinces of Anatolia, has suffered."

THE HEALTH OF THE ARMY IN INDIA.

The *Spectator* of the 27th ult., in one of its editorial notes on current events, in referring to this subject makes some very pertinent remarks. After alluding to the lamentable prevalence of venereal disease among the European troops serving in India it says that, under these circumstances, it is the imperative duty of the Government to retrace its steps and allow the medical profession to suggest indispensable legislative precautions, which it by no means follows should be of the old kind. Our contemporary adds: "We have never been able to understand why on this subject the right of India to legislate for herself should be overridden. If legislative action with regard to sexual morality is independent of race, climate, and circumstances, how do we justify ourselves when all over India we legalise polygamy?"

The *Broad Arrow* says: "In order to meet the strain on the Indian Medical Service caused by officers being required for famine and plague duty the Government of India have sanctioned the employment in that service of Volunteers from the Army Medical Staff, on a special allowance of 300 rupees a month, in addition to their Indian pay and allowances."

The Duke of York went to Portsmouth on March 31st and visited the sick and wounded from the Benin expedition who are now at the Royal Naval Hospital at Haslar. His Royal Highness afterwards lunched with the Inspector-General and the medical officers at their mess.

It is notified in the *London Gazette*, under date March 25th, 1897, that the Queen's Birthday will be celebrated in London alone on Wednesday, May 26th next, and at all other stations, Naval and Military, on Monday, May 24th next.

Notification has been received intimating the departure from Egypt in the s.s. *Menes* of twenty-seven invalids, to arrive at Netley about March 30th.

INFANT MORTALITY IN CARMARTHEN.—The fifth annual report of Mr. L. Bowen-Jones, medical officer of health, on the sanitary condition of the Carmarthen Union has just been issued. The area of the parish is 157,495 acres and the population 24,732. The birth-rate during 1896 was 28·30 and the death-rate 15·97 per 1000. There were 77 deaths of infants under one year, indicating an infantile mortality of 110 per 1000 births. Mr. Bowen-Jones adds that no proper system of drainage existed anywhere in the district, and that, with a few exceptions, no practical steps have been taken towards improving the water supplies of the locality, notwithstanding the numerous complaints of scarcity of water which have been sent to the council.

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Correspondence.

"Audi alteram partem."

FASCINATION OF SERPENTS.

To the Editors of THE LANCET.

SIRS,—Any popular so-called prejudice, if long continued, probably is founded upon some matter of fact, although this may not have been demonstrated. This was the opinion of Sir Benjamin Brodie. That some animals have the power of paralysing others which they prey upon is a matter of direct observation. A rabbit will remain perfectly motionless in the presence of a stoat, and without moving will allow a hole to be made through the skull at the back of the head. We may suppose that the power of feeling, as of motion, is for the time gone. Dr. Livingstone felt no pain when seized by a tiger. I have seen a mouse remain perfectly motionless under the gaze of a cat. When excited the cat's pupil becomes dilated. On one occasion in the evening I saw a cat in an excited state retire to a shady place where it could no longer be seen, but presently I saw two small red globes fixed upon me. I once saw the same less defined in the eyes of a kitten, but it is very difficult to get their eyes fixed when near. A general officer who has seen long service in India informed me that on one occasion a large serpent had got into a house and taken refuge in a cellar. Being a soldier, it was suggested that he was the proper person to dislodge the intruder. He took a spear and looked through a hole in the wall of the cellar, but saw no serpent. Presently two small red globes were fixed upon him. These he supposed to be the serpent's eyes and thrust his spear, as he thought, between them. The spear caught the serpent just behind the head and killed it. My principal object in writing is to ascertain from our friends in India, if possible, through the columns of THE LANCET, the information which I have in vain sought for here—viz: (1) whether serpents have a tapetum lucidum; and, if so (2), whether it is supposed to be erectile; and (3) whether it can have anything to do with the fascination which they are supposed to exercise over their prey. The reflection from the *convex* cornea in front of an eye must, of course, not be confounded with that from the *concave* tapetum at the back. In one case the reflected light is dispersed, and in the other it is concentrated and brought to a focus to suit the wants of different animals. Hitherto the functions of the tapetum lucidum have scarcely been recognised. In the preparations intended to illustrate these in the museum of the Royal College of Surgeons of England they are placed upside down. Had this been their natural position the tapetum would have been useless for the purposes for which it is intended.

I am, Sirs, your obedient servant,

HENRY LEE.

Queensborough-terrace, Hyde-park, W., March 17th, 1897.

THE STRUCTURE AND FUNCTION OF THE AURICULO-VENTRICULAR ORIFICES.

To the Editors of THE LANCET.

SIRS,—In the last paragraph of his first lecture on Some Points in the Pathology of Heart Disease, published in THE LANCET of Feb. 27th last, Dr. Starling states that "owing to the arrangement of the muscular fibres of the heart there is a strong circular band of fibres round each of the auriculo-ventricular orifices." In a paper published in the St. Bartholomew's Hospital Reports, vol. xxiii., 1887, I showed from the masterly dissections of Pettigrew[1] and those of Savory[2] and Quain,[3] and also from my own dissections, that no such sphincter arrangement of muscle exists either around the auriculo-ventricular orifices or enclosing the heart in the plane of these orifices. Indeed, it is easy to see in a heart which has been boiled that the arrangement of the muscular fibres is such as to keep these orifices open in systole. The figures in my paper show that if transverse sections are made through the ventricular walls, beginning just below the plane of these orifices, while in the orifices themselves only the vertical fibres of the first and seventh layers are found, as the sections advance towards the middle of the ventricular wall, all the seven muscular layers are found to be present, and it is at the middle third of the ventricle that fibres are seen having a transverse arrangement. Further, the simple experiment of boiling the heart destroys the fibrous tissue surrounding the auriculo-ventricular orifices, and in the case of the left auriculo-ventricular and aortic orifices causes these apertures to run into one and form a figure of 8, thus showing the entire absence of any circular band of muscular fibres. Some years ago M. Onimus[4] attempted to show that the auriculo-ventricular openings are completely closed in systole by muscular (sphincter) action; but even with regard to one of these openings he himself says: "Si, pour l'orifice auriculo-ventriculaire, on peut admettre des fibres circulaires formant des sphincters, pour l'orifice gauche cette expression n'est pas très-juste, car cette dénomination suppose un muscle annulaire, et nous avons vu qu'une partie de cet orifice était complètement fibreux." This is still further proved by making a vertical section through the junction of the posterior wall of the aorta and the anterior portion of the left auriculo-ventricular ring. At this point the densest fibrous tissue is found, which represents the so-called "heart bones" in some animals. If we assume, for the sake of argument, that a circular band of muscular fibres does exist, which surrounds the auriculo-ventricular orifices and thus encloses rings formed of dense, strong, pliable, fibrous tissue—for all the anatomists I have quoted agree in thus describing them,—when this hypothetical muscular band contracts it may possibly alter the shape of the orifice in one direction or another, but by so doing it in no way causes any diminution in the area. If a ring of whalebone—which, being formed of dense, tough, pliable material, very fairly resembles the fibrous ring of an auriculo-ventricular orifice—be encircled by an elastic band or by the fingers it will be found impossible to alter the area, the only effect produced being an alteration in the shape. I have dwelt almost entirely on the anatomical side of the question, but the mathematical and physiological arguments against the existence of a sphincter arrangement of muscular fibres surrounding the auriculo-ventricular orifices have been fully discussed by the late Dr. Herbert Davies in his papers[5] "On the Law which Regulates the Relative Magnitude of the Areas of the Four Orifices of the Heart," and on "The Four Orifices of the Heart."[6]

I am, Sirs, yours faithfully,

Finsbury-square, March 27th, 1897. ARTHUR DAVIES.

[1] J. Pettigrew: Transactions of the Royal Society, 1861.
[2] Proceedings of the Royal Society, 1851.
[3] Quain's: Anatomy, vol. ii., p. 494.
[4] Journal de l'Anatomie, 1865.
[5] Proceedings of the Royal Society, No. 118, 1870.
[6] THE LANCET, July 27th, 1872.

"A QUESTION FOR ANÆSTHETISTS."

To the Editors of THE LANCET.

SIRS,—I was very glad to receive Dr. Dudley Buxton's support in my endeavour to bring about a general improvement in the apparatus used for the administration of anæsthetics, and to learn that the advisability of sterilising inhalers has received his attention. Correspondence has reached me both from the United States and Canada showing that danger from inhalers had been observed by others in the Western Hemisphere, and that attention had been directed to it before my communication to THE LANCET of Feb. 20th. A leaflet from the *Montreal Medical Journal* of May, 1895, has been sent me by Dr. James Bell, who, in recommending a simple form of ether inhaler, uses the following vigorous language in condemnation of one formerly much in use: "The Clover inhaler, which is now so much in vogue, possesses all the disadvantages which it is possible for an ether inhaler to possess. It is impossible to cleanse it. Patients go on, one after the other, respiring through the same filthy mask and the same rubber bag, each one adding his quota of mouth secretions, perhaps syphilitic, cancerous, or tubercular. Tubercle bacilli must frequently be deposited on its walls and vomited matter saturates it from time to time, not to speak of the absolute impossibility of sterilising the mouthpiece to correspond with the precautions which we take with all the other substances coming into close contact with the field of operation. It seems strange that with the knowledge of bacteria which has been accumulating for years, and our very strict precautions, based upon this knowledge, to avoid wound infection in

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surgical operations, that there has not long ago been devised some means to provide an aseptic inhaler, and one which could be cleansed of the secretions and exhalations of one patient before applying it to the face of another. It is simply horrible to contemplate the use of a Clover inhaler and bag which has already been used on the face of hundreds of other patients, and without any possibility of properly cleansing it, either by heat or chemical sterilisation." Thus, whilst I, in this centre of civilisation, have been mildly urging reform and gently suggesting a change in anæsthetic apparatus, my colonial friend has forestalled me by nearly two years in an onslaught which for dash and courage reminds one of the long lost "Rupert of debate."

My colleague Dr. Silk has done me the honour of discussing my paper in THE LANCET of March 20th from an "anæsthetist's point of view" in a very temperate article, though he must be regarded as holding a brief for the defence. What he says is perfectly true, that pneumonia from septic wound infection is practically removed from surgical practice; but surely this is all the more reason that direct lung infection, such as the case I quoted, rare though it may be, should be more strictly guarded against than at present. His argument against the bacillary origin of pneumonia would not, I am afraid, be accepted by any modern physicians, who are now beginning to classify pleurisies according to the particular organism exciting the effusion. It is sad to think anyone could now be satisfied with the view that the only relation of germ-infection to pneumonia is that the "conditions and secretions of pneumonia furnish very suitable media for the growth of the organisms in question." I will only state with regard to this remark that this was precisely the argument used by the older surgeons when antiseptic surgery was first introduced. They tried to teach us that the bacteria of suppuration were the result, not the cause, of the process. His third argument, that because in their concentrated form chloroform, ether, and alcohol are fatal to bacilli, therefore the masks which are subjected to a dilute vapour would be free from living organisms, is not one that would hold, seeing how difficult it is to destroy these organisms. Surely physicians would long ago have cured all cases of phthisis by the aid of their friends among the anæsthetists if the vapour of any of the drugs used for producing anæsthesia could be trusted to destroy tubercle in the lung. In the end, however, Dr. Silk and I are in perfect agreement that there is still room for improvement in inhalers, and he has long been at work to produce an instrument capable of being sterilised, though perfectly conscious that he could never have done any harm by one that was not capable of being absolutely cleansed. His inventive genius has broken loose in spite of his arguments, and he has been impelled to produce an instrument his reasoning shows is quite unnecessary. He has travelled from a leather mask, through a celluloid inhaler, up to a metal face-piece, and he ends by saying of this: "One of the advantages which I claimed for it being that it met with the demand for an inhaler which could be subjected to the same aseptic treatment as the instruments employed in the operation." Could any two persons be in more absolute harmony? Unfortunately, the ladder by which Dr. Silk ascended still stands against the wall, and the celluloid masks with their septic flannel linings and sponges are still in common use. Some time ago I proposed an Instrument Destruction Committee, to have power to destroy all instruments out of date, and so relieve hospital surgeons of having to operate with instruments invented several generations before. I think the Society of Anæsthetists would do good work by appointing a committee to report on inhalers meeting the requirements of modern surgery, and at the same time empower it to do what is possible to stamp out those belonging to the septic era. My own suggestion, that toughened glass would be the best material for a mask, has, according to Dr. Buxton, been anticipated by Vajna of Budapest, and since this invention has been so highly spoken of I hope we may soon see specimens in use in London.

I am, Sirs, yours faithfully,
R. CLEMENT LUCAS, B.S. Lond., F.R.C.S. Eng.,
Surgeon to Guy's Hospital.
Wimpole-street, W., March 29th.

To the Editors of THE LANCET.

SIRS,—The question indistinctly asked by Dr. Florence Nightingale Boyd in your last issue arises only from the strange tendency there seems to be to forget or ignore in one generation the facts established in that preceding it. It cannot be more than fifteen years since the following facts concerning ether as an anæsthetic were proved beyond dispute: 1. That during its administration the secretion of urine is suppressed. 2. That in damaged kidneys this temporary suppression sometimes becomes permanent. 3. That in certain diseases where structural alteration of the kidneys becomes almost a matter of course, as in large tumours of the uterus and chronic syphilis, rapid and fatal pneumonia or suffocative pulmonary œdema, resulting from the use of ether, adds greatly and unnecessarily to the mortality of operations. 4. That ether is a far more fatal anæsthetic than chloroform, only its victims die some days after the administration, and there are no inquests.

I am, Sirs, yours faithfully,
Birmingham, March 29th, 1897. LAWSON TAIT.

THE RETURN OF MIDWIFERY CASES IN POOR-LAW UNIONS.

To the Editors of THE LANCET.

SIRS,—As many persons seem to be interested in a return of midwifery cases in Poor-law unions for which I have given notice, I shall be obliged if you will allow me to inform them through the columns of THE LANCET that I have received information from the Local Government Board that they cannot at present grant the return owing to the pressure in the statistical branch of the Board, where the work is considerably in arrear and many returns are wanted, particularly in connexion with the Local Taxation Commission. There is no prospect of obtaining the return except as an unopposed one, and as no useful purpose would be served by keeping my notice on the paper I have no alternative but to withdraw it. I am, Sirs, yours faithfully,
House of Commons, March 25th, 1897. J. H. JOHNSTONE.

"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—The question raised by Mr. W. G. Thistle as to whether acquired characters are or are not transmissible is one of immense importance to medical men, but it is one which has not received the attention it deserves from them. Rightly or wrongly, very many—I believe the vast majority—hold the opinion that acquired characters—e.g., the effects of injury or disease—are transmissible, and in medical literature one constantly meets statements implying this belief. For instance, not long ago an ophthalmic surgeon advised his students to pay increased attention to the eyes of children, for, argued he, these young people have yet to bear offspring, who will suffer from the transmitted effects of parental disease; whereas the effects of disease in the aged will not afflict an unborn generation. Again, "M.R.C.S., L.S.A.," writing in THE LANCET of March 27th (p. 931), tells us of a hare-lip which resulted, as he supposes, from the circumstance that the pregnant mother was frightened by a hare. In the words of Mr. Herbert Spencer, "Clearer conceptions of these matters would be reached if, instead of thinking in abstract terms, the physiological processes concerned were brought into the foreground." It is constantly forgotten that an animal (a man, for instance) is not the offspring of the whole of his parent's body. He develops out of a very minute portion of it only—the germ cell. His eyes are not the offspring of his parent's eyes, his legs have not origin in his parent's legs, and his brain is not descended from his parent's brain; but every portion of him arises solely from the germ cell, which, so far as we know, is indebted to the other cells only for shelter and nutrition. This consideration renders unbelievable the hypothesis that acquired traits are transmissible. Suppose, for instance, a man injures his eye or receives such injury to his brain that epilepsy supervenes; then, if his acquired character is to be transmitted, his spermatozoon, situated far distant, must be so structurally altered, so profoundly modified in a particular direction, that long after separation from the parent organism it will proliferate into an organism which has, inborn, the peculiarity which the parent acquired. By what machinery is this modification of the germ cell brought about? The case for the transmission of such maternal impressions as "M.R.C.S., L.S.A.," chronicles is even harder. What magical influence, does he suppose, emanated from the brain

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cells of the mother and so affected her embryo, situated on the other side of the placenta and at the end of the long umbilical cord, that a hare-lip resulted? It must be remembered that it is not maintained by those who deny the transmissibility of acquired characters that changes acquired by the parent are incapable of influencing the germ cells; but it is strenuously maintained that they do not influence the germs in such a manner that *particular* changes in the parent are reproduced in the child. It is true that at first sight it seems only reasonable to suppose (for instance) that if a man strengthen his muscles by exercise his children will be the stronger, or if he be weakened by disease his children will be the weaker; but, as a matter of fact, though a fierce controversy on the subject has long raged, and though the phenomena of nature have been ransacked, no clear and indubitable example of the transmission of an acquired character has yet been recorded. Syphilis and phthisis, which are instanced by Mr. Thistle, do not touch the point at issue. Similar effects arise in both the child and the parent merely because they are both infected with the same species of pathogenic micro-organism.

I am, Sirs, yours faithfully,

Southsea, March 29th, 1897. G. ARCHDALL REID, M.B. Edin.

*** Dr. T. Frederick Pearse writes recommending to our readers in connexion with this subject a perusal of Dr. Archdall Reid's recent work on "The Present Evolution of Man," and adds, "I think Mr. Thistle, if he reads this, will see reason to conclude that acquired lesions cannot be transmitted."—ED. L.

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—The letter of "For Registration" emphasises only too horribly the intolerable evil of existing conditions, about which there is, however, no difference of opinion. The only question is, Does registration provide a rational and effective remedy? If we opponents of the Bill were imbecile enough to argue, as "For Registration" assumes, "that the poor should pay a medical man," or if it were true that unless they pay for medical attendance they must go without it and be content to fall into the hands of midwives, we should welcome this Bill as offering at least a decided improvement, however inadequate to the needs of the case. For those, however, who have no eye to moneyed interests of profession, obstetrical society, or incorporated midwives' institute (whatever under heaven that may be), but who have at their hearts only compassion for the multitude—a single-minded anxiety for the safety and health of their sisters among the poor—it seems to me that the whole matter turns on the one point of the pretended total impossibility of securing in any conceivably practical manner the same quality of aid in the perils of childbed for the poor citizen as wealthy citizens are careful to engage for themselves. If, on the contrary, such an aim can be shown to be attainable and without the creation of any new agencies, then I contend earnestly that any scheme falling short of this is no better than an unworthy tinkering with the mischief, a penalising of mere poverty as such with avoidable risks to health and life—by the very State, too, that poses with its Poor-law as the great "guardian of the poor"; and, finally, a meanly ungenerous proffer on the part of property-owning legislators—moved mainly by others we wot of with axes to grind—a proffer of a "cheap and nasty" article, whose sole recommendation is its cheapness, and which they would disdain to use for themselves. In this view of the situation I crave permission to formulate more fully a constructive policy that I submit would abundantly meet every requirement, and would effect generally, as it has done where it is in even partial operation locally, the total extinction of the midwife as the "unfit."

First, then, let certain permissive powers—already possessed by boards of guardians and enumerated shortly in my letter in THE LANCET of Feb. 27th—be made general and obligatory. Let it then be proclaimed by the fullest public advertisement throughout the land that every woman in circumstances requiring such medical relief can be supplied with an order for medical attendance in confinement, which she may present to the medical man of her choice and which will be honoured by the guardians; that in case of sudden emergency the same liability of the guardians will hold good without any order; that this, as being the statutory right of every impoverished citizen, involves no disqualification, social or political; that in case of anyone temporarily embarrassed—e.g., by loss of employment—and too proud or too honest to accept such gratuitous service, it will be provided by the guardians on loan, to be refunded as soon as times become good enough. Thus by a mere stroke of the pen we provide at once for all the poorest. The fees for these State patients would be fixed, as now, by the State. The medical profession is a monopoly created by the State in the interests of the public. There could be, to my thinking, no just ground of grievance to those enjoying all the benefits such monopoly and State recognition confer if it were made a condition that its members should act upon these calls of the State and accept the fees regulated by the State.

For those of the people less sunk in poverty and requiring only to be helped to help themselves the Government should immediately create machinery for extending throughout the kingdom correlating and organising dispensaries, maternity hospitals, and maternity clubs, either voluntary or subsidised, or purely municipal. To all of these the beneficiaries would be required to contribute by fixed payments, in anticipation of the event, a certain part of the cost of attendance. The choice of her attendant would rest with the patient, who would be supplied with an order from the institution. If voluntary support were insufficient, State aid from rates or taxes would be needed, with concurrent public control by parish council or otherwise. With regard to the floating part of our population, under a proper organisation of these institutions, whenever a family moved into another district payments made to the club or dispensary of the previous locality could be transferred to the newcomer's credit with the analogous institution at her fresh quarters.

It will be seen that this extension of the sphere and operation of State medicine would be much on all fours with our system of State elementary education, the clubs, &c., in the one case corresponding to the schools in the other; and just as before the days of free education guardians paid school fees for children (without pauperisation) of parents too poor to afford them, so it might be found advisable to relate the Poor-law unions to the local machinery for medical aid to the poor, so that guardians should pay into these agencies for confinements of women too poor to raise the regulation contributions.

Until some serious attempt to tackle the problem in a bold and statesmanlike way has been made and has failed I confess I cannot understand any one lending himself—and still less herself—to such a half-hearted measure, a piece of quasi-benevolent but essentially contemptuous and degrading class legislation for which the utmost that can be said is that it proposes to substitute for a very glaring evil another just as real, but not so bad.

I am, Sirs, yours truly,

Streatham, March 23rd, 1897. THOS. M. WATT.

"A SUCCESSFUL SOCIETY!!"

To the Editors of THE LANCET.

SIRS,—You have paid the highest compliment in your power to the arguments in my letter of March 23rd, for in your issue of to-day you suppress the letter and then misrepresent its contents. I never said that anybody had done things they were not licensed to do. I said that being licensed to do them they did do them. "Words mean what they do mean, and not other things," and my words were clear. Those who support vivisection are wise to avoid legitimate controversy, for if they venture into that arena they are lost. They cry aloud and call their adversary names, which is easier than answering him, but it does not advance truth and is not a very scientific method. Hysteria is not argument. Should you, however, at any time take heart to argue the question with fairness and courtesy I shall be ready to meet you in a like spirit.

I remain, Sirs, your obedient servant,

STEPHEN COLERIDGE.

Egerton Mansions, South Kensington, March 27th, 1897.

*** Mr. Coleridge has stated in a letter to H.R.H. the Prince of Wales, with regard to the Prince's Hospital Fund, that animals "are slowly cut up alive without even the pretence of anæsthetics in many of the laboratories attached to

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those hospitals." The Home Secretary has stated in the House of Commons that the certificate allowing experiments upon animals without the use of anæsthetics is only granted for inoculations and similar trivial operations. "Words mean what they do mean, and not other things." How does Mr. Coleridge reconcile his words with truth? Hysteria is not argument.—ED. L.

THE GENERAL PRACTITIONER IN THE UNITED STATES.

To the Editors of THE LANCET.

SIRS,—To the average general practitioner in Great Britain the prospects of success in medical practice may seem at times somewhat gloomy; it may therefore perhaps be some slight consolation to him if he will contrast with his own hardships a picture of those which have to be endured by his professional brethren in this land of liberty, where the distinction between a profession and a trade seems oftentimes to have totally disappeared.

To begin with the licence to practise. The obtaining of a degree has until quite lately been a matter of such ease, owing to the competition of so many schools and colleges, that those who append M.D. to their names are in a greater proportion than 1 to every 500 of the population. There is but one medical diploma—that of M.D.—and each medical school has the power of granting this degree to its own students after a course of study which is regulated solely by the ideas of its own particular staff. The length of this course until recently has not exceeded three years, and frequently only seven months of each year. Within the last few years many of the best colleges have adopted with pride—which is perhaps justifiable—a four years' course, although there are quite a number, including Yale University in New Haven, Connecticut, which still require only three years; in many cases, also, only one year's actual attendance at the school was necessary, experience under a reputable physician being accepted as sufficient. The holding of the posts of clinical clerk and surgical dresser are nowhere considered necessary, so that practical experience is undoubtedly wanting. In addition to the first-class medical colleges, there are and have been a vast number of institutions of very small reputation whose existence has often been quite ephemeral and whose degrees were conferred after courses of study from two years downwards, so that the most unambitious individual could gratify his wish for a diploma without even abandoning any occupation or business in which he might be employed. Consequently only the initiated can tell whether a certain degree is worth anything or not, as in order to ascertain the school of graduation one must consult a work known as Palk's Medical Directory, which is simply a catalogue of all who profess the healing art, including irregulars of every description. This work usually appends to each man's name his place of graduation if he be willing to give the information; it then remains to look up the status of the particular school. This work, of course, is not reliable, as the compilers invariably take a man's word about himself and do not profess to give any further guarantee of his genuineness. In consequence of this past general laxity in medical education the ranks of the profession have become overcrowded and the status of many of its members very low.

Within the last ten years, however, there has begun an energetic movement of reform, and many States have adopted laws for the regulation of medical practice, insisting that for the future a medical man wishing to practise within a particular State must satisfy the medical board of that State that he possesses a diploma from a reputable college within its boundaries, or in default thereof must pass the examination set forth by the board. Here we come to a peculiar feature which makes it appear as if the profession of each State was more jealous of outsiders, however eminent, than of irregulars within its borders, for nearly all the laws agree in one respect—instead of admitting any medical man whose diploma is of unquestionable merit, they require everyone alike to pass their own particular examination, whether the applicant be a graduate of the highest school in the land or an itinerant herbalist, so that the graduate of Belle Vue Hospital Medical College, New York, or Harvard University, Boston, if he wishes to practise in Baltimore or Philadelphia must spend several months working for his examination in subjects like botany, chemistry, &c., and must also pay a fee more or less heavy. In Pennsylvania this absurdity is extreme, as the State board apparently has no confidence in any of its own schools, some of which are undoubtedly in the front rank. Accordingly it requires its own graduates, as well as all outsiders, to pass the examination alike, even if they have only just taken their degree in the same subjects and were examined by many of the same professors who sit on the board. The regular practitioners may join the State medical society, which, if it happens to have stringent rules as to admission, will confer on him its hallmark of respectability, but as there are usually in addition a homœopathic medical society and an eclectic medical society in the same State the advantage is not perhaps so great as it appears, particularly as the ordinary layman does not know anything about such matters.

The prescribing chemist, who advertises a proprietary remedy for every ailment or symptom, flourishes here even more than in Great Britain, and if he cannot persuade the sufferer to patronise secret formulas will not hesitate to offer him the modern compressed preparation which was intended for a more orthodox prescription. On the other hand, we do not have much of the "provident dispensary" which is usually run for the profit of one man; and there is not the enormous waste of misapplied medical charity which every city in England tolerates.

It speaks well for American "grit" that things are not even worse than they are, and one can therefore have good hopes for the future; but at present to the English medical man who has ideas of starting for this field there is only one good piece of advice—"Don't."

I am, Sirs, yours faithfully,

March 22nd, 1897. A BRITISH EXILE.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Trafford Park and Heaton Park.

THE "outrage" you deplore in THE LANCET of March 27th will, it is pretty certain, be perpetrated, and Manchester, with the neighbouring borough of Salford, will have to bear as they best may the loss of their largest and most valuable "lung." It may be doubted whether those members of the Corporation who voted against acquiring an open space "of absolutely incalculable value," as you justly say, have had even yet the wit to discover the blunder they committed. This will appear when their tactics with regard to Heaton Park are considered. It is still in the market, and although perhaps less favourably situated than Trafford Park it would confer great benefit to the community of Manchester if it were preserved from the inroads of the builder. Time will show whether the City Council intend to allow this the last opportunity of acquiring a park worthy of the name to fall through (for the supply of open spaces is exhausted), or whether they will rise to their duty and secure it for the benefit of this generation and of those that will follow us.

Manchester Adult Deaf and Dumb Institution.

Something has been done by lip-reading and other methods to make communication of the deaf and dumb with their fellows less difficult and so to alleviate a little their life of solitude, while the education of deaf and dumb children up to the age of sixteen years is now compulsory. After this period such societies as the Manchester Adult Deaf and Dumb Institution, which held its annual meeting on March 26th, are specially useful by providing for the deaf and dumb—in the words of the report—"religious services, visiting them in sickness, assisting them to obtain employment to earn their livelihood, and by occsionally granting temporary relief." At the Institute in Grosvenor-street lectures and other meetings are held in the reading-room, where papers, books, and periodicals are kept. The Lord Mayor, Alderman J. F. Roberts, who was in the chair, asked, "What would such afflicted individuals as the deaf and dumb do without such an institute, which was a church, a school, and a club combined?" There is no question as to its work being useful, but it has not gained the support of the benevolent as it should have done. The committee say

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they need an annual income from subscriptions and donations of £500 to carry out the work efficiently, while in 1896 they received only £278; but there still remained a balance in hand on the fund of the Lady Mayoress's garden party which took place in the summer.

Ancoats Healthy Homes Society.

It is a wholesome sign that in one of the poorest and most crowded of the industrial districts of Manchester a large audience of the residents should have met together on Wednesday, March 24th, to hear from our *confrère* Dr. J. M. Rhodes, the chairman of the Chorlton Board of Guardians, an address on "Pauperism, Past and Present." The Ancoats Healthy Homes Society is an association of working men trying to brighten their own homes and those of their neighbours by entertainments and addresses which those more fortunate than themselves are always ready to give on various subjects. It is one of the offshoots of the Sanitary Association. Dr. Rhodes drew a graphic picture of the condition of the poor in the past, and showed that "the present condition of the workers of to-day was vastly superior to that of former times." By the help of coloured charts he explained the incidence of pauperism and Poor-law taxation, and he pointed out that the ratio of pauperism was greater in the agricultural districts of the East and South than in the mining and manufacturing districts of the North and West. He named over population and drink as the chief causes of pauperism, and urged his hearers to work out their own salvation—to use too common a phrase—by cultivating the old-fashioned, and among a large number almost forgotten, virtues of industry and perseverance, sobriety and thrift.

The Sanitary Committee and Cleared Areas.

At the last meeting of the City Council the consideration of the report of the sanitary committee, dated Feb. 8th, 1897, was resumed. Some members objected strongly to the proposal to build a large lodging-house in Ancoats, which seems unreasonable in face of the fact that twenty-nine registered lodging-houses, with accommodation for between 450 and 500 people, were taken down in connexion with the opening out of Whitworth-street. These people must have some provision made for them. In a large population there will always be single men and women, who are all the more likely to remain or to become decent and respectable if proper provision is made for their lodging and if they are not treated as outcasts and pariahs. But among a section of the City Council there is a strong and unreasonable prejudice against any such provision being made. The present lodging-houses, which are under the control of the watch committee, do not seem to be quite the models they ought to be, for Dr. Dearden said that many of them were veritable death-traps from the "respiratory impurity" of the air in the bedrooms at night. Dr. Daly thought that if Mr. Boyle—the principal objector—and his supporters had seen the London lodging-houses visited by the committee they would not allow sentimental objections to weigh with them; but this gentleman—who is a member of the watch committee and perhaps objects to the sanitary committee touching the lodging-house question—retorted, "It was all very well for the medical members of the council to air their fads." In this case the fads are decency and sufficient ventilation. Alderman McDougall very properly insisted on the importance of securing the thorough sanitation of houses where large numbers of people are wont to congregate. In the end the report of the committee and the recommendations it contained were adopted.

March 31st.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Durham University.

Of the thirty candidates who entered for the Extra Arts Examination at Durham University a few days ago only eleven succeeded in satisfying the examiners. All students not graduates in arts who intend to graduate either in medicine or in science at this University are required to pass this examination, and it is somewhat astonishing how high the percentage of failures continues to be. Of the eleven men who passed on this occasion nine were prepared by the same tutor, indicating apparently that failure is due more to a want of knowledge as to the nature of the test than to a deficiency of education.

Dr. Arnison's Last Clinical Lecture.

The theatre of the Royal Infirmary, Newcastle-upon-Tyne, was well filled on March 24th by Dr. Arnison's colleagues and students to hear his last lecture. He chose for his subject what he called "some of his fads," and showed a large number of most interesting cases, including many in which aggravated club-foot had been treated by Phelps's operation, and the results were certainly most excellent. Dr. Arnison also showed a number of patients who had been treated with the actual cautery for ulceration of the cartilages of the knee-joint—some of them a good many years ago. Not only had the joints been cured, but the movements of them in many cases were perfect. Dr. Arnison has been connected with the infirmary for upwards of thirty years, and in retiring carries with him the regard and respect of his colleagues and the affection of his students.

Death of Mr. Beatty of Seaham Harbour.

On March 26th this much respected member of the medical profession died at the age of eighty-three years. Mr. Beatty during his long career at Seaham Harbour identified himself with nearly all the institutions of the town. He was surgeon to the hospital established by Lord Londonderry for the use of sailors, surgeon to the Seaham Harbour Volunteer Artillery, a permanent member of the committee of the Londonderry Literary Institution, &c. For some time Mr. Beatty had been ailing, but it was only a very few days before his death that his friends became seriously alarmed.

The Ingham Infirmary, South Shields.

Of the sum of £10,000 which it is proposed to raise for the enlargement of the Ingham Infirmary at South Shields, in commemoration of the Queen's long reign, upwards of £8000 has already been subscribed, and Mr. H. Griers, the architect, has been instructed to advertise for tenders for the erection of a new wing.

March 30th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Chair of Public Health for Edinburgh.

THE Scottish Universities Commission have issued amongst other draft ordinances one for the establishment of a separate chair of public health in the Edinburgh University. The chair is to be called the Bruce and John Usher Chair of Public Health, in recognition of the fact that its establishment has been made possible by the munificence of the two gentlemen whose names it bears. It is ordained that the occupant of the chair shall receive the annual income derived from the endowment, together with such sum out of the central fund of the University as may be necessary to bring the salary up to £600. The Court is given permission to increase the sum to be taken from the general fund. The fees of the students are, as in the other classes, to be paid into the general fund. The patronage of the chair is vested in the University Court.

The Edinburgh Royal College Golf Match.

The annual golf match between the Royal College of Physicians and the Royal College of Surgeons of Edinburgh, was played last week at Gullane in a hurricane of wind. The surgeons won by seven holes. The match always gives rise to considerable interest.

University of Aberdeen.

This is the first year in which the arts bursary competition and the medical, arts, and science preliminary examinations have taken place in the spring. The examinations opened on Saturday, March 27th. There were thirty-five entrants for the medical preliminary, five for the science, and 126 for the arts examinations. For the bursaries there were 166 competitors. The north tower at Marischal College extension has been completed, but to prevent petty depredations during the construction of the other buildings it has been found necessary to erect a paling, with a temporary gateway leading into the quadrangle. An association is being formed under the auspices of the General Council to raise funds for the further extension and better endowment of the University.

Day Nursery in Aberdeen.

A new institution in Aberdeen—a day nursery for children of working women—has been started in Princes-street, with accommodation for twenty or thirty children.

March 30th.

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IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Patients from Ireland at the Pasteur Institute.

THERE are just now three patients from Ireland being treated in Paris with the famous prophylactic for hydrophobia. The Athlone Board of Guardians, far from sending their patients to the local quack McGovern, have forwarded a recent case of dogbite to the Pasteur Institute under the personal charge of Mr. Shanley, their medical officer. The Local Government Board have written to know why the patient was sent in charge of the medical officer at a cost of £40, in addition to the three guineas per week paid to his substitute, instead of being given in charge to some subordinate official. The guardians have replied that their reason for sending their medical officer was the fact that the patient suffered from occasional epileptic fits. The Board have significantly remarked that the cost incurred in this case will come before the auditor for revision.

Trinity College, Dublin.

Dr. A. F. Dixon, Senior Demonstrator of Anatomy at the School of Medicine of Dublin University, has been appointed Professor of Anatomy at the University College of South Wales and Monmouthshire, Cardiff.

Belfast District Lunatic Asylum.

The medical superintendent of the Belfast Asylum, Dr. Merrick, has just issued his annual report for 1896. The daily average number of patients resident during the year has been 834, an increase of 52 over that of the preceding year; 273 cases were admitted during the year, 33 more than in 1895, and this is the largest number of admissions since the opening of the asylum. During the five years from 1892 to 1896 inclusive 1154 cases were admitted into this asylum, while for the five previous years, 1887 to 1891 inclusive, there were 997 taken in. There were 179 discharges during the year, and 44 deaths (all from natural causes), exactly the same number as in 1895. The general health of the inmates, notwithstanding the overcrowded state of the asylum, was satisfactory, and there were no cases of contagious or infectious disease. The gross expenditure for the year was £21,089 6*s.* 2*d.* The net cost per head for the year was £23 18*s.* 8*d.*

Queen's College, Belfast.

The chair of Natural Philosophy in Queen's College, Belfast, vacant by the resignation of Dr. J. D. Everett, has just been filled by the appointment of Mr. W. B. Morton, M.A. Professor Morton is an old Queen's College student, where he had a most distinguished career. He afterwards went to St. John's College, Cambridge, where he held a very high position, and graduated in the Mathematical Tripos of 1892; at the examinations for the B.A. and M.A. of the Royal University he was first of the first class, and in 1894 he gained the Junior Fellowship in Mathematical Science. Professor Morton's appointment is most popular at Queen's College, where for some time he has lectured as assistant to Dr. Everett.

The New President of Queen's College, Cork.

It is officially announced that Sir Rowland Blennerhasset has been appointed President of the Cork Queen's College. Sir Rowland Blennerhasset is well known in the political world, and some years ago he contested Galway in the Unionist interest. In medical and educational circles generally it was hoped that Professor Corby would have been the successful candidate, as he was regarded as possessing special qualifications which would have peculiarly fitted him for the position. The new President has entered on the discharge of his duties, but has not yet gone into residence, as it is understood that the late President is in such a critical state of health as to preclude his removal.

March 30th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A Debate upon Appendicitis.

A LONG discussion, lasting over two meetings, upon the subject of appendicitis has been going on at the Society of Medical Officers of Hospitals as well as at the Surgical Society. The question for consideration was: How is it possible to know when to operate upon *appendicite à froid*—that is to say, during the period when there are no active symptoms and where the operation would be undertaken only with a view to the prevention of a relapse? M. Merklen narrated three cases of the disease which had occurred in the children of a family most of the members of which had already been the subjects of appendicitis. All the cases had occurred during an epidemic of influenza and were accompanied by a train of symptoms closely resembling those of influenza. He gave it as his opinion that in an attack of appendicitis no one could foresee the chances of relapse or its probable gravity. M. Bissaud reported a curious case, which he called "*appendicite-fantome.*" In this case the patient presented all the classical symptoms of appendicitis, viz., a well-defined tumour in the right iliac fossa, constipation, and uncontrollable vomiting. Operation was deferred for some cause or other, and the patient suddenly developed an attack of left hemianæsthesia, which showed that the "appendicitis" was purely hysterical and the peritonitis spurious. She was cured by a psycho-therapeutic treatment. Later, however, a new attack of pseudo-appendicitis developed and the patient consulted another medical man, who upon operating found the appendix slightly congested. A patient of M. Rendu suffered from similar hysterical crises, with hiccough and profuse hæmatemesis. The appendix was removed and all the symptoms disappeared immediately, indicating that they had been reflex and dependent upon appendicular colic. M. Talamon had seen three similar cases. M. Le Gendre brought forward a table of twenty-five cases from which he drew conclusions favourable to surgical interference. M. Hayem related a case of uncontrollable vomiting, which for a long time he considered as a typical case of nervous vomiting following a febrile attack. He removed the appendix, which was thickened and bound down by adhesions, when the nervous vomiting which had hitherto resisted all treatment disappeared at once. M. Achard and M. Broca communicated the results of a bacteriological examination of the peritoneal effusion in twenty cases of appendicitis, in which suppuration had occurred and in which they had operated. In seventeen cases the bacillus coli communis was found—alone in seven cases, and associated with other pyogenic microbes in ten. For the most part these latter were streptococci; in one case the pneumococcus was present, and in the remaining three cases the bacillus coli was absent. M. Letulle described the lesions of appendicitis, and attributed them to a phlegmonous or gangrenous lymphatic infection secondary to a more or less chronic inflammation of the follicles. He distinguished two types—tuberculous appendicitis, and the appendicitis of Eberth or the typhoid variety. Both kinds were equally likely to end in perforation. In all cases of chronic appendicitis tuberculosis, he thought, should be suspected. The result of this long discussion appears to be that the prognosis in a case of appendicitis is very uncertain and that no one can foresee what may be the result of a first attack. The rules would seem to be: (1) Do not operate for one attack, but watch the patient; and (2) in case of a second attack operate even if the attack subsides favourably, and do not hesitate to remove the appendix *à froid.*

The Microbe of Baldness.

Great prominence has been given in the daily press to a discovery stated to have been made by M. Sabouraud, author of a well-known work on the biology of tinea, and superintendent of one of the laboratories at the Clinic of Dermatology. M. Sabouraud has succeeded in cultivating a microbe which he considers to be the cause of baldness, and which he has found to exist in great abundance in bald people. It invades the periphery of the hair follicles and brings about an influx of leucocytes, which choke the bulb and arrest its development. This is due to a special toxin which it secretes and which, according to M. Sabouraud, has a selective action on the hair follicle. A filtered culture injected into a rabbit is reported to have made all its hair come off.

The Abortion Case: the Sentence.

The interest of the week has centred in the trial of Dr. Boisleux and Dr. de la Jarrige for procuring abortion, the commencement of which I described in my letter of last week. The whole trial has been made the subject of sharp controversy. There were no convincing proofs that abortion

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had been procured—in fact, the only evidence was that of the midwife, who said that Miss Thomson had come to her for that purpose, saying that medical men had told her that she was pregnant. The opinion of many is that had Dr. Boisleux been anxious to bring on abortion he would have used a simpler method than curetting and would not have operated in the presence of five witnesses, among whom were a servant and a cabman. The Court went into the question of all the deaths which had occurred after operation in Dr. Boisleux's practice for the last five years, although there was no question of abortion in any one of them. A number of witnesses who had been cured by him gave evidence in support of his skill, and everyone looked for an acquittal on the charge of abortion, although it was thought a conviction for involuntary homicide might have been secured. The jury, however, found the two defendants guilty of having procured abortion, and, although they recognised "extenuating circumstances," the defendants were condemned to five years' imprisonment. While sentence was being pronounced Dr. de la Jarrige was seized with a violent attack of angina, and for the space of an hour his life was in danger. The spectators in court burst out into cries of protestation at the verdict and hissed the jury. All the papers consider the sentence much too severe having regard to the weakness of some of the evidence and the irregularities in the indictment, and it is possible that the judgement will be reversed.

The late Dr. de St. Germain.

The death of Dr. de St. Germain is announced. The deceased was surgeon to the Hospital for Sick Children, and was well known for his works upon orthopædics and as the supporter of a method of rapid tracheotomy in which the operation was done in one stage. The method is known as that of St. Germain.

March 30th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Prevention of Cruelty to Children.

THE "Comitato Romano della Società pro Infantiâ" is one of our best institutions, and has this week begun its beneficent career with the rescue of the little waifs and strays of the city abandoned or neglected by their unnatural parents. The first "shoal" of these opportunely "enmeshed" little martyrs drifting down the side-currents of Roman life, to "sink or swim," was pitiable in the extreme—starvation, nakedness, and positive disease appealing to their deliverers with an eloquence beyond words. Most of them had in the first instance to be sent to hospital to recover from the lesions inflicted by hands in no sense parental—hands of the itinerant *impresario* or *exploiteur* disappointed at the proceeds of the day's begging. Many of them, indeed, will require years of careful tendance and rehabilitation to acquire normal development, physical and mental. The Ospedale del Bambino Gesù, the Ospedale di S. Spirito, the Asilo Torlonia, and other well-known institutions have generously allowed their resources to be strained by the "Comitato," but substantial support is required from the well-to-do citizen if the work of rescue is to keep pace with the claims upon it. Above all—and here every sensible Italian is at one with the "Comitato"—let nothing be given to the little mendicant, especially in money. Rather let the sum, however infinitesimal, be sent to the seat of the "Comitato" in the Via Tritone, where it will be duly acknowledged and properly applied. Our compatriots—so many philanthropic Italians assure me—are from their reckless freehandedness the unwitting mainstay of mendicancy in Italy and, *ipso facto*, the most formidable enemy of her societies for its suppression. Indolent almsgiving—the charity, that is to say, that takes no trouble to ascertain deserving cases or (the next best thing) to support the organisations that do—is, indeed, the besetting sin of the Briton abroad, creating far more mendicants than it ever relieves, making the beggar's business a paying one and (of course, unconsciously) becoming responsible for much of that "exploitation of infancy" whose tragic results the "Comitato Romano" and other *comitati* throughout the kingdom are doing their best to mitigate, if not to annul.

The Bacillus of Yellow Fever.

As stated in THE LANCET,[1] Professor Giuseppe Sanarelli of the University of Siena, who now directs at Montevideo the Istituto d'Igiene Sperimentale, of which he was the founder, had, as the result of a year's special study, satisfied himself that he had discovered the bacillus of yellow fever. His researches he embodied in a monograph which has for some time been in the possession of the Accademia Medica di Roma, that body being thus empowered to protect his claim to priority should that claim in the interval have been challenged. The supplementary studies by which he has sought to check the laboratory and clinical work leading up to his discovery are now completed, and the whole series—including the substance of the provisional monograph aforesaid—will be published in three successive *fascicoli* of the Annali dell' Istituto Pasteur. Coincidently with the appearance of the first of these *fascicoli* (that is, within a few weeks' time) he will deliver before the Montevidean Society of Medicine a lecture, accompanied by illustrative preparations, in which the nature of his discovery and the successive stages by which it was arrived at will be fully set forth.

Criminal Anthropology: its Fifth International Congress.

Preparations are already on foot to make the Italian intervention at this Congress as effective as possible. It will be held in 1901 at Amsterdam—not, as announced in some quarters, at The Hague—and on certain days, yet to be fixed, in the month of August. Italy, who justly claims the "science" (so-called) as her own, will be represented by *savants* who, besides holding university chairs specially devoted to it, have the further advantage of ventilating their views in Parliament in the discussions evoked by the estimates of the Ministers of Education and of Grace and Justice. Such are, for instance, Professor Napoleone Colajanni of the University of Naples and Professor Enrico Ferri of the University of Rome, both of whom have been elected to the new Chamber of Deputies—the former for his old seat of Castrogiovanni, and the latter for Gonzaga.

March 27th.

[1] THE LANCET, Jan. 9th, 1897, p. 142.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Antitoxin in Diphtheria.

DR. ZUPPINGER has published a highly interesting report on the antitoxin treatment of diphtheria in the Crown Prince Rudolf Hospital for Children during 1896. In the course of the year there were in all 168 children under treatment for diphtheria, two of whom remained in hospital at the close of the year. Of these patients 136 (i.e., 82 per cent.) recovered, and 30 (i.e., 18 per cent.) died. Eight of the children were admitted in a hopeless condition and died within twenty-four hours, one suffered also from tuberculous cachexia, and one died from pneumonia after scarlet fever; if these cases were deducted from the preceding figures the general mortality would be only 12 per cent. From 1894 to 1895 the death-rate for diphtheria in this hospital fell 16 per cent., and from 1895 to 1896 it fell a further amount of 7 per cent. In slight cases quantities of serum containing 1000 antitoxin units were at once injected; in severe cases the amount was raised to 2000 units, and the injections were repeated within twenty-four hours if no mitigation of the diphtheritic symptoms occurred. As a rule, from 1000 to 5000 units were injected in the course of the first day. Dr. Zuppinger divided the patients into four groups: (1) diphtheria of the pharynx, of which there were 91 cases with 5 deaths, or a mortality of 5·5 per cent.; (2) diphtheria of the nose and pharynx, of which there were 24 cases with 9 deaths, or a mortality of 37 per cent.; (3) diphtheria of the pharynx and larynx, of which there were 48 cases with 16 deaths, or a mortality of 33 per cent.; and (4) primary diphtheria of the nose, of which there were 3 cases. The first group included 83 patients—i.e., one-half of the general total—who suffered from diphtheria of the pharynx in the fibrinous form; all of them recovered, 7 of them being children who were not treated with antitoxin. The remaining 8 children of this group suffered from the phlegmonous form of the disease, one of them also from the septic form. The phlegmonous cases were characterised by glandular swelling, diffuse œdema of the neck, inflammation of the pharyngeal structures, and extensive dense exudation on the tonsils and uvula. Within the first twenty-four hours from 3000 to 4000 antitoxin units were injected, after which the symptoms of incipient degeneration of the cardiac tissues disappeared, even in two

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instances where death seemed to be inevitable. The great value of antitoxin in these cases might be inferred from the fact that none of these patients developed affections of the larynx, and Dr. Zuppinger was of opinion that antitoxin is by far the most efficacious remedy against diphtheria. Of the children who recovered two-thirds showed no rise of temperature after the injections. In 47 cases Löffler's bacilli were found, in 32 cases they were mixed with streptococci and staphylococci, and in 12 cases no bacilli could be discovered, notwithstanding the existence of clinical symptoms of diphtheria. The 24 cases comprised in the second group included 9 patients suffering from the phlegmonous form of the disease and 2 suffering from the septic form. The latter when admitted showed symptoms of the hæmorrhagic diathesis as well as of cardiac degeneration, and they died on the first day; 5 of the phlegmonous cases recovered. The remainder of this group suffered from the fibrinous form of diphtheria of the pharynx and nose; 2 of them died from pulmonary complications, and 1 from parenchymatous degeneration of the myocardium. In the third group, consisting of 48 cases of diphtheria of the pharynx and larynx, the therapeutic value of the antitoxin treatment was strikingly manifested. On admission 16 of these children suffered from stenosis of the larynx, which disappeared after the injections; 14 of them recovered and 2 died from broncho-pneumonia. Among the remaining 32 children of this group primary tracheotomy was performed in 2 cases, secondary tracheotomy in 4 cases, and intubation in 26 cases; 14 of them died. Primary tracheotomy was performed because intubation was impossible on account of the swollen state of the larynx; both these children died from pneumonia. Of the 3 cases of primary diphtheria of the nose constituting the fourth group 1 occurred after measles; antitoxin was injected and the symptoms disappeared. During the first year the general death-rate was 54 per cent., from the first to the second year it was 47 per cent., from the second to the third year 25 per cent., from the third to the fifth year 13 per cent., from the fifth to the seventh year 6 per cent, and from the seventh to the twelfth year 3 per cent. As a prophylactic measure 54 children were injected with from 300 to 1000 units.

Carcinoma of the Rectum.

Dr. Funke, assistant to Professor Gussenbauer, has published an account of 266 cases of carcinoma of the rectum, of which 156 were operated on and 40 died, the mortality being therefore 24·4 per cent. The patients included 181 males and 85 females. In a great many cases the disease followed habitual constipation; in two cases it seemed to have grown on the base of syphilitic scars. It occurred most frequently between the fiftieth and sixtieth years of life; but there were also patients at the age of fifteen and over eighty years. Colloid carcinoma—the most malignant form—occurred before the age of thirty years, and the medullary and fibrous forms prevailed between the fortieth and sixtieth years of life. Among the 266 cases of carcinoma there were 12 epithelial, 162 adenoid, 64 annular, 7 carcinomata of the sigmoid flexure, and 21 colloid carcinomata. In annular carcinomata resection is to be performed only if there are no enlarged lymphatic glands. Temporary resection of the os sacrum gives very easy access to tumours situated high up in the rectum and never causes necrosis of the bone.

Lepra Tuberosa.

A case of lepra tuberosa maculosa et anæsthetica was exhibited by Professor Kaposi at the last meeting of the Vienna Medical Society. The disease commenced some nine months ago with nodules on the left carpal articulation; the nodules were of the size of a pea, they were reddish-brown in colour, and resembled the so-called cutaneous papules in syphilis, for they had a central atrophic depression and crusts. There was hyperæsthesia round the areas of cutaneous anæsthesia, a circumstance which showed that there was an affection of only the extreme peripheral nerve ends. No bacilli have hitherto been found.

Medical Fees.

At the last meeting of the Medical Chamber the following scale of fees was agreed to: A day visit, 3 gulden (about 5*s.*); an evening visit, 4 gulden (6*s.* 8*d.*); a night visit (without carriage), 6 gulden (10*s.*); a consultation, 10 gulden (16*s.* 8*d.*); one hour, 5 gulden (8*s.* 4*d.*); a visit at a time fixed by the patient, 5 gulden (8*s.* 4*d.*); for each additional patient seen in a house, 1 gulden (1*s.* 8*d.*). The visits are to be paid for at once; in cases of very poor people the medical man may make a lower charge at his discretion.

March 21st.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Medical Chambers in Hungary.

THE question whether medical chambers should be created in Hungary is just now greatly agitating the minds of the medical men of this country. The Home Office had prepared a scheme with this object, but before bringing it as a Government proposal before Parliament Minister Perczel very wisely decided to ascertain the views of the Hungarian medical profession. He therefore sent a draft of the scheme to all the medical societies of the country, requesting them to give it their consideration and subsequently to transmit their opinions to the Home Office. Some extracts from the proposed measure will best give an idea of the manner in which it may be expected to work. "Section 1. The medical chambers are established for the purpose of promoting public health and protecting the interests of the medical profession. Section 2. The number, distribution, and locality of the chambers are to be settled by the Home Office. Section 3. Every medical practitioner, active members of the military service excepted, is required to join the medical chamber of his district. ..... Section 15. The President and the other office-bearers of the chamber are elected by secret voting at the general meeting and are appointed for a period of three years. ..... Section 19. The council of honour has to decide disputes occurring between medical men and complaints raised against practitioners, and has to settle questions of medical ethics. Section 20. This council of honour is empowered to sentence the members of the chamber: (1) to be admonished, (2) to be censured, (3) to be fined a sum not exceeding 500 crowns (£20), and (4) to be restrained from exercising their rights in the chamber for a period not exceeding two years." This question of medical chambers is being much discussed not only in the medical but even in the lay press. The profession is divided into two parties, one of which is in favour of rejecting the scheme of the Home Office and is altogether opposed to the creation of medical chambers, but recommends a union of the profession on a system similar to that of the British Medical Association, whilst the other party looks upon the establishment of medical chambers as the one possible and effective safeguard against the further lowering of the social status of the profession. The opponents of the measure point to the fact that most countries of Europe can do without medical chambers, and that even Great Britain, the country which accords a better social standing to its medical men than any other country in the world, has no institution of the kind. On the other hand, those who are in favour of the chambers are of opinion that only such institutions as are founded on a legal basis can have power to proceed against a man guilty of infamous conduct in a professional respect, and they remind their opponents that medical offenders in Great Britain cannot be adequately dealt with by the British Medical Association, but have to be brought before the General Medical Council, on which the requisite powers have been conferred by Act of Parliament.

March 27th.

"A VERY GRAVE SCANDAL."—For a long time the propriety of lodging imbeciles of a certain class in workhouses rather than asylums has been debated. The Eastbourne magistrates had to deal with a more difficult contingency. A prisoner before them would, it was feared, become a dangerous lunatic. The superintendent of the East Sussex Asylum telegraphed that they had no room for the case. Matters were very grave, and on the man's remand an urgent note was sent to the asylum pointing out the gravity of the case. The reply was, "No vacancy; shall decline to admit." So the man was sent to the workhouse, where there were no means of proper restraint. Since then drafts have been made from the East Sussex to other asylums, the accommodation having only just become available. Without endorsing the remark with which this note is headed we may be permitted to inquire—In case the man ran amok at the workhouse and killed someone, who would be responsible?

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Obituary.

CHARLES ELLIOTT LEOPOLD BARTON HUDSON,

F.R.C.S. ENG., L.R.C.P. LOND., ETC.,

ASSISTANT SURGEON TO THE MIDDLESEX HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

THE abrupt termination by death of a promising career is at all times pathetic and saddening, for that which comes as the natural and well-earned rest to the veteran seems to our limited vision hard and harsh in the case of those who are called away in the plenitude of vigour and who have barely crossed the threshold of the portal of fame. Thus has it been with the young surgeon whose death we chronicle to-day, with feelings rendered more poignant by the fact that for several years past he has been a valued coadjutor in the work of THE LANCET, and if therefore we dwell rather fully upon the comparatively uneventful details of his life we think that the account will enable our readers to understand how full and varied such a life may be, although, perchance, he who lived it may not have become known to the larger world outside.

Leopold Hudson came of a family whose genealogy could be traced to Saxon times, and of whom many generations had resided in Ireland. Thus his great-grandfather, Dr. Jonathan Hudson, of Cork, was a physician of some repute and author of two works on the "Philosophy of Medicine," and his eldest son, James Elliott Hudson, also intended for the medical profession, abandoned this pursuit in his student days for that of the Army, serving in the Peninsular and other campaigns. Captain Hudson retired from the Army at the close of the war, and shortly afterwards married, his fourth son, born in 1818, having as one of his sponsors Leopold I., the King of the Belgians, and receiving the names of James Elliott Leopold. This son, together with an elder brother, was rescued from the wreck of the *Colborne* off the coast of New Brunswick, at the mouth of the St. Lawrence, in October, 1838. Besides these youths, only ten were saved out of fifty-four persons on board, the victims including Captain and Mrs. Hudson, with nine of their children, Captain Hudson having embarked for Canada to assume the military governorship of a district in New Brunswick. James Elliott Leopold, who narrowly escaped with his life from the privations and injuries received at this shipwreck, returned to England in 1842, and eventually settled at Bungay, Suffolk, where he lived until his death in 1890. His second son, Charles Elliott Leopold Barton, was born on Dec. 27th, 1862. Educated at home, and intended for the medical profession, he was articled to Dr. Adams of Bungay, and in his eighteenth year entered in October, 1880, as a student of the Middlesex Hospital, with which his whole subsequent career came to be identified.

The exceptional brilliancy of his career as a student speaks well for the soundness of his home training, but he had also great natural gifts, being quick to learn, and endowed with a good memory as well as with much facility and accuracy of expression. He soon distanced most of his compeers, carrying off prizes in nearly every one of the classes he attended from his first to his final year, and also the Governors' prize in 1882–3, and the first Broderip Scholarship in 1883–4. When still a student he was selected in 1882 to be Demonstrator of Physiology, and thus early showed that he had as much aptitude in imparting knowledge as he had in acquiring it. Indeed, he excelled as a teacher, and in the years of struggle for existence which confront most young men who elect to pursue the career of London consultants he gained many pupils who are unanimous as to his teaching gifts. In the medical school he taught pathological histology for some years, whilst during the past two years he had been holding the office of surgical tutor. When the Residential College was founded in 1887 he was selected as its first Warden, and his position here enabled him to hold special tutorial classes for the students under his charge. His attachment to his hospital was heart-whole and never relaxed, and the keenness with which he threw himself into any project on behalf of the students was marked throughout. During his studentship he was a constant attendant at the Students' Medical Society, reading papers and sharing in debates, for he was a ready and fluent speaker, and it was owing mainly to his initiative that the several clubs and societies in the school were amalgamated in 1891–92. He was chosen as honorary secretary of the Amalgamated Clubs, and it was in great measure due to him (aided by Dr. H. C. Thomson and Mr. C. Reissmann) that the *Middlesex Hospital Journal* was started this session. There had been a proposal that the Medical Society (of which he was then President) should take some steps to publish its proceedings, and from this came the idea of founding a hospital journal. During his long illness he often discussed the affairs of this journal and made suggestions for its conduct which were of much practical value.

As regards his hospital appointments, Leopold Hudson in 1884–85 held the offices of house physician to Dr. Cayley and of house surgeon to the late Mr. Hulke. After this he went to Paris for a short time to study there, and then was appointed surgical registrar to the London Temperance Hospital. In 1887 he succeeded Dr. Kingston Fowler as pathologist and curator at the Middlesex Hospital, and for three years did good work in this department. Meanwhile (in 1880) he had obtained the Fellowship of the Royal College of Surgeons of England, and when a vacancy occurred in the office of surgical registrar he naturally was selected to fill it. This appointment he held for four years (from 1890 to 1893), his annual reports being evidence of his industry in this post. In 1893 he became a candidate for the office of surgeon to the Throat and Ear Department, which had become vacant by the death of Mr. A. Hensman, and his appointment to this office secured for him the position on the staff of his hospital for which he had legitimately aspired. In 1895 he was also elected assistant surgeon. He had, moreover, shortly before his staff appointments at the Middlesex Hospital been elected assistant surgeon to the Hospital for Sick Children, Great Ormond-street. His time and energies were thus fully occupied in hospital duties and in teaching; but nevertheless he undertook other duties, the most important being that of secretary to the Royal Commission on Tuberculosis, which held sittings from 1890 to 1895, and for which he worked *con amore*. We have already mentioned his connexion with THE LANCET, which commenced nearly ten years ago, one important part of his work consisting in reporting the debates of the various medical societies, where his habitual attendance made him familiar to many.

Apart from such purely professional work Leopold Hudson had many other interests. He was a keen politician, and even in his student days his ready speech was of no small assistance in election contests, when he worked hard for his "party." He also held the commission of Surgeon-Captain in the Middlesex Yeomanry Cavalry, and had been teacher of volunteer ambulance instruction. He was, moreover, a zealous Freemason. At the beginning of the year 1895 he married Miss Ethel Vaughan Morgan, daughter of Mr. Septimus Vaughan Morgan, and established himself in Harley-street, having fairly embarked on a career which promised to be full of happiness and prosperity. He leaves two children—both sons—the younger born on Feb. 6th of this year. The particulars of the illness which has unhappily brought so promising a career to a close must be briefly told. It commenced in September, 1896, with some obscure symptoms of sensory and motor disturbance in the lower extremities following on chill and fatigue. But he was enabled to resume his hospital duties in October, only, however, to be attacked in a few weeks' time more acutely with paraplegia, which at one time caused great anxiety. From that time till his death he never left his bed, yet throughout retained his habitual cheerfulness and sanguine disposition, looking forward to the time when he would once more be enabled to resume that activity in which his soul delighted. Nor was this hope without some justification, for he was gradually regaining power in his limbs when, on March 24th, a severe attack of abdominal pain, followed by headache, made him feel and express the thought that his days were numbered. But he met this blow with admirable fortitude and composure, in the same spirit as he had borne the long and weary illness through which he had been passing. Hemiplegia and coma supervened, and he died on the morning of the 29th, in the thirty-fifth year of his age. Throughout the whole of his illness he was devotedly attended by his friend Dr. Edward Semple and by Dr. Cayley, as well as by Dr. Hughlings Jackson, Dr. W. S. Colman, and Dr. James Taylor. The post-mortem examination showed that the immediate cause of death was cerebral hæmorrhage, but that the spinal cord had so far recovered as

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to present no obvious morbid change. It was difficult to account for the hæmorrhage, as the cerebral vessels were perfectly normal. There were numerous calculi in the renal pelves, both kidneys being much congested and the right showing evidence of previous suppurative nephritis.

Leopold Hudson, whose overflowing energy, together with his ability and industry, are exemplified in the bare record of his life, was one of those whose nature might perhaps be best expressed by the old-fashioned term "winsome." It was impossible for those who knew him to refrain from liking him, and no one could feel surprised at the affection he gained wherever he went. He was always genial and buoyant, retaining the fresh qualities of youth in his years of maturity. It is no wonder that he was popular with students, for he seemed always to thoroughly identify himself with their modes of thought and feeling. Doubtless those who thus came under his influence will remember him as much for the interest he took in their pursuits and pleasures as for the assistance he rendered them in their work. Amongst his other characteristics may be mentioned his optimistic view of life and his versatility in his own spheres of activity. For he had in him something of that enthusiastic spirit, rare enough in this sober-minded world, which carries its possessor through many a difficulty and enables him to undertake with cheerful confidence and zeal many a new duty for the mere pleasure of its opening up fresh avenues and interests. His, too, was a generous nature. The writer of these lines has known him first as a pupil, then as a friend and colleague, and cannot recall his ever saying an unkind word, nor did he seem ever to harbour an unkind thought of anyone. His path through life was therefore freed by his very nature from obstacles that to many seem insurmountable. He had, too, the satisfaction of securing a position which he had thoroughly earned—a position that would, had he lived, have been doubtless justified by the production of original work. The time and opportunity had arrived when this might soon have been expected of him; but he has died like one in view of a land he was not permitted to enter. But if therefore his name had not become as widely known as it surely would have been had life been spared him, yet with those who did know him there will rest no memories but those which are pleasant impressions of a bright, happy, and enthusiastic nature.

A portion of the Burial Office was said in the Church of St. Paul, Great Portland-street, on Thursday, April 1st. The coffin, covered with a purple pall, was placed in the middle of the nave, and the office was said by the Rev. F. J. Brindley, a former chaplain to the Middlesex Hospital, while a body of nurses took the place of a choir. A large number of colleagues and friends of the deceased were present, including (amongst others, for the list is necessarily imperfect) Sir Ralph Thompson (chairman of the Middlesex Hospital), Dr. Cayley, Dr. Colman, Dr. Coupland, Mr. A. Clark, Dr. W. Duncan, Mr. Pearce Gould, Dr. F. J. Hawkins, Mr. Henry Morris, Mr. Edmund Owen, Dr. W. Pasteur, Dr. E. Semple, Mr. W. G. Spencer, Mr. Stonham, Dr. A. Voelcker, Dr. Wethered, Dr. Essex Wynter, and Mr. Thomas Wakley, jun., representing the Editors, and Dr. Cholmeley the staff, of THE LANCET. There were also present many members of the Middlesex Yeomanry and a large contingent of students. At the conclusion of the service the body was removed to Woking for cremation.

EDWARD BOWLES CROWFOOT, M.B. LOND., M.R.C.S. ENG., L.S.A.

A PRACTITIONER of a most worthy type has passed away in the person of Edward B. Crowfoot, of Beccles, Suffolk, youngest son of the late W. E. Crowfoot, F.R.C.P., of Beccles. He was born on Oct. 21st, 1845, and was educated at Fauconberge School, Beccles, and afterwards at Uppingham. He received his medical education at St. Bartholomew's Hospital, of which he was house surgeon in 1869. He obtained the diplomas of M.R.C.S. Eng. and L.S.A. in 1867, and the M.B. degree at the London University in 1868. He joined his father and brother in practice at Beccles in 1870, and was at once appointed medical officer to the Beccles district of the Wangford Union, a post which he held until his death on Feb. 13th, 1897. He was also medical officer of health of the borough of Beccles and surgeon to the Beccles Hospital. He was a hard-working, conscientious man, ever ready to give his services to rich and poor alike, deeply interested in his profession, and of a quiet and retiring manner. The funeral took place on Feb. 17th, and was largely attended by all classes anxious to show respect to one whom they loved and honoured, a true and real friend to all who knew him.

Medical News.

THE VICTORIA UNIVERSITY: FACULTY OF MEDICINE.—At examinations in March the following candidates were successful in the subjects indicated:—

FINAL EXAMINATION.

Part I.—E. L. Anderson, University College; W. J. S. Bythell H. M. Cockcroft, Herbert Davies, J. E. Healey, and W. A. Helm, Owens College; R. B. Jones, University College; Robert Kelsall and James Kemp, Owens College; F. T. A. Lovegrove and H. A. Mawdsley, University College; John Milne, Thomas O'Neill, William Sankey, J. H. Sheldon, and A. T. Sissons, Owens College; Harry Stansfield and Joshua Williamson, Yorkshire College; and D. S. Wylie, Owens College.

Part II.—H. S. H. Callum, Yorkshire College; †Harold Coates, *J. S. Dockray, O. B. Goldschmidt, †Harry Hamer, W. F. Jackson, and †K. H. Jones, Owens College; G. G. Lawson, University College; Henry Mackennal, Owens College; F. E. Marshall, University College; †A. B. Smallman, Owens College; †J. E. Smith, University College; †F. E. Taylor, Yorkshire College; and H. C. Woodhouse and William Wright, Owens College.

* Awarded First-class Honours.
† Awarded Second-class Honours.

SECOND EXAMINATION.

Anatomy and Physiology.—G. P. Alderson, University College; T. P. Allen, Owens College; W. J. W. Anderson and J. D. Andrews, Yorkshire College; W. E. Bamber and H. N. Bridge, Owens College; W. H. Broad and P. A. Browne, University College; A. H. Capamagian, Owens College; Godfrey Carter, Yorkshire College; *Walter Crabtree and C. H. Dawson, Owens College; S. S. Depree and R. J. Ewart, University College; T. L. Fennell, Owens College; C. H. Ferguson, University College; A. E. Finney, Charles Garner, and Archer Greenwood, Owens College; C. H. Greenwood, Yorkshire College; I. W. Hall and E. F. Hill, Owens College; H. C. R. Hime, A. E. Horsfall, and C. E. Horsfall, Yorkshire College; S. K. Hutton, Owens College; W. A. Illingworth and F. W. Johnson, Yorkshire College; L. R. Lempriere, Owens College; Hugh Lett, Yorkshire College; S. F. Linton, University College; C. J. N. Longridge, Owen's College; J. W. Miller, University College; W. H. Morrison and Armitage Morton, Yorkshire College; R. A. Needham, Owens College; A. S. Parkinson, Yorkshire College; A. E. Rayner, C. E. Silvester, Harry Slater, and Herbert Terry, Owens College; T. J. Thomas, University College; A. R. Thompson, Yorkshire College; Harry West, University College; and J. D. Windle and P. R. Wrigley, Owens College.

Materia Medica and Pharmacy.—J. W. Aldred, Owens College; H. M. Birkett, Yorkshire College; *Walter Crabtree, Owens College; S. S. Depree, University College; T. L. Fennell, R. F. Ferris, F. H. Flack, J. P. Good, E. F. Hill, H. S. McLellan, B. C. Middleton, and R. F. Moore, Owens College; W. H. Morrison, Yorkshire College; William Parker, J. H. Stephens, and J. W. Watson, Owens College; Harry West, University College; S. C. Wilkinson, Yorkshire College; and Ernest Young, Owens College.

* Awarded the University Scholarship in Medicine.

UNIVERSITY OF ST. ANDREWS.—The following registered medical practitioners, having passed the required examinations, had the degree of Doctor of Medicine conferred upon them on March 26th, 1897:—

Bunn, Charles Grinling, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A Lond., London.
Buxton, Edward, M.R.C.S. Eng., F.R.C.S. Edin., M.R.C.P. Edin., D.P.H., Liverpool.
Dixon, Thomas Arthur, M.R.C.S. Eng., L.R.C.P. Edin., Surgeon-Major Army Medical Department.
Garstang, Edward Morton, M.R.C.S. Eng., L.R.C.P. Edin., Bolton.
Hadwen, Walter Robert, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A. Lond., Gloucester.
Hoffman, Arthur Herbert, L.R.C.P. Edin., L.R.C.S. Edin., L.F.P.S Glasg., London.
Jackson, Thomas William, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A. Lond., Chorley.
Mallagh, Alexander, L.R.C.P. Edin., L.R.C.S. Edin., Barrow-in-Furness.
Williams, Howell, M.R.C.S. Eng., L.R.C.P. Edin., Richmond, Yorks.
Williams, Roland Philip, L.R.C.P. Edin., L.R.C.S. Edin., D.P.H., Holyhead.

AT the annual meeting of the Sanitary Institute, held on March 24th, H.R.H. the Duke of Cambridge, K.G., was re-elected President. Professor W. H. Corfield, M.A., M.D. Oxon., F.R.C.P. Lond., and Mr. Thomas Salt were elected Vice-Presidents to fill the vacancies caused by the deaths of Sir George M. Humphry of Cambridge and Sir J. Russell Reynolds, late President of the Royal College of Physicians of London. The report of the Council on the year's work was read.

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BATH RURAL DISTRICT.—Mr. Charles Harper, medical officer of health for Bath Rural District, has just issued his annual report for 1896. The population of the nineteen parishes of the union, estimated to the middle of 1896, was 24,652. There were 304 deaths during the year, equal to a death-rate of 12·33 per 1000, which was the lowest death-rate recorded for the last five years. The births during the year were 750, giving a birth-rate of 30·42 per 1000.

THE INSPECTION OF MEAT AT CARDIFF.—At their meeting on March 8th the Cardiff Town Council, acting upon the report of the health and port sanitary committee, appointed Mr. Charles Moir, veterinary surgeon, to be meat inspector at a salary of £300 per annum. It was stated that it was the intention of the Bute Company to provide abattoirs together with refrigerators for the carcases. Mr. Moir will devote the whole of his time to the duties of the office.

LUNATIC ASYLUMS IN DORSETSHIRE.—At the March quarterly meeting of the Dorsetshire County Council the chairman of the asylums committee announced that there had been a profit of £580 on the working of the new lunatic asylums for the quarter, and it was hoped that a profit of more than £1200 would be handed over to the finance committee at the end of the six months. There were 710 patients in the asylum, and the maintenance rate was 8*s*. 9*d*. per week.

EMPLOYERS' LIABILITY IN SEWERAGE WORK.—At the Aldershot county court on March 17th his honour Judge Lushington, Q.C., gave a verdict for a widow and her two children for £178 15*s*. in a claim arising out of an accident which occurred on some sewerage work. It appeared that a firm of contractors had to remove a drain near the Royal Artillery Barracks. This drain lay at a depth of 15 ft., and one of the labourers working at that depth was buried alive. The trench was only shored for 5 ft., and that, it was alleged, imperfectly; the remaining 10 ft., in sandy and "made" soil, was said to be quite unprotected.

MEATH HOME FOR EPILEPTICS.—The fourth annual report of the Meath Home of Comfort for Epileptic Women and Girls at Godalming states that the work of the institution was carried on quite satisfactorily during 1896. There were fifteen new admissions and twelve of the inmates left. The committee deplore the loss which the home sustained by the death of Sir J. Russell Reynolds, who was one of its firmest friends, and they make an urgent appeal for increased support, as the subscriptions and donations during the year only amounted to £161 4*s*. The Countess of Meath, who founded the home, has transferred the ownership to four trustees, she herself being one of them.

BRISTOL NURSES' TRAINING INSTITUTION.—The annual meeting of the Bristol Nurses' Training Institution was held on March 16th. The report stated that there were forty nurses on the staff during the past year, and that they did 1188 weeks' work on 451 cases, of which 257 were in Bristol, Clifton, and the immediate neighbourhood. Nine pupils were in training, six of them on a three years' course. The nurses' earnings amounted to £2204. Financially the institution was prosperous, notwithstanding the heavy outlay necessary to start so many pupils on a three years' course; in fact, there was a favourable balance of £82. During 1896 the subscriptions amounted to only £16, so that the institution was practically self-supporting.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—The annual meeting of the Bristol Hospital for Sick Children and Women was held on March 20th, under the presidency of the Duke of Beaufort. The report stated that 786 children had been treated as in-patients; of these, 74 were in the hospital on Jan. 1st, and 712 new cases have been admitted during the year; the number of women in-patients has been 33, whilst 1135 women and 2937 children have been treated as out-patients. The expenditure exceeded the income by £478, and the accumulated deficit of successive years amounted to £668, of which a sum of £260 was in the balance of the Convalescent Home expenses. At the end of the meeting the President of the hospital presented Miss Combe with a silver teapot and a purse of fifty guineas subscribed by the committee, and a leather bag from the nursing staff. He referred to the fifteen years' faithful service Miss Combe had rendered in the position of matron, and regretted her retirement.

MR. A. A. C. SWINTON will read a paper on Recent Investigations Relating to x Ray Work at the Camera Club on the evening of April 12th. In addition to numerous experimental tubes, some of which will be shown in action, Mr. Swinton will exhibit a new and improved form of Crookes's tube that he has designed, which has an adjustment whereby, without altering the vacuum, the penetrative value of the x rays can be varied at will.

BRISTOL ROYAL INFIRMARY.—The annual meeting of the Bristol Royal Infirmary was held on March 23rd, under the presidency of Sir Charles Cave. The report showed that in 1896, as compared with 1895, there was an increase of 107 in-patients, 678 out-patients, and of 10,026 out-patients' attendances, the totals for 1896 being as follows: In-patients, 3210; out-patients, 34,107; and out-patients' attendances, 65,771. The ordinary income had fallen short of the expenditure, the debt was now increased to £9651, and the chairman stated that unless the subscriptions were increased the committee would have to consider the desirability of either closing two or three of the wards or selling some of their investments. He also remarked that the establishment of a convalescent home in connexion with the hospital and infirmary had the committee's hearty approval, but he hoped that it would not interfere with the subscriptions of the older charitable institutions. In the course of his address the chairman said: "There was no doubt that during the past few years there had been a tendency amongst those who subscribed to look upon their subscriptions as a sort of insurance rather than as an absolute free gift to the charity, and the consequence was that in some cases the infirmary and its benefits had been claimed by those who could not be called poor or destitute individuals. This was to the manifest disadvantage of the infirmary, for they were often pressed for room, especially in the out-patient department, and if those who could afford to pay for their medicines and medical help at home came there and crowded out those who were really poor and destitute the infirmary was not doing the work it was intended to do."

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.—The annual general meeting was held at the Inns of Court Hotel on March 27th. Mr. W. E. Boulter (Woolwich) was elected President for the ensuing year, Dr. M. M. Bowlan (St. George-in-the-East) secretary, and Dr. F. S. Toogood (Lewisham) treasurer. Mr. H. C. Harris was elected an honorary member. At the dinner which followed Mr. Walter Burney proposed "The Medical Superintendents' Society," and referred to its formation in 1887 and the great work it had performed in binding the members together for their mutual good. Mr. D. M. Forbes (Shoreditch) responded, and said that in his thirty years of experience as a medical superintendent there had been a gradual improvement in the administration of infirmaries, until at the present time they were patterns of good management and economy, and served as examples of what well ordered hospitals should be. These good results had been effected by having medical men as the responsible heads of these institutions, whose special knowledge in hospital construction and management had been of the greatest possible assistance to the designers of the hospitals. Mr. Forbes maintained that it was to the infirmaries that science was indebted for the great advance in hospital construction, while general hospitals being under lay control were very far behind the times. The toast of the retiring officers was responded to by Dr. Toogood, who spoke of the attempts which were being made by a well-known section of noisy female agitators to capture the management of their institutions. The noise appeared to have frightened, or the sex to have captivated, some of the higher local government officials. THE LANCET, he was proud to say, had always supported the supremacy of the medical superintendents.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Midwives Registration Bill.

THE order for the second reading of the Midwives Registration Bill was reached after midnight on the Thursday, March 25th, sitting of the House of Commons, but objection was taken to it, and in accordance with the rules of procedure the order was postponed.

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Infant Life Protection Bill.

The House of Lords on Monday, March 29th, gave a second reading to the Bill for the better protection of infant life, introduced by the Earl of Denbigh at the instance of the London County Council Speaking generally, the Bill follows the recommendations of the Committee of last session; but in the course of debate Lord Denbigh made it known that he will be ready to accept any amendments calculated to make the measure more workable.

Metropolitan Poor-law Children.

When, on Friday, March 26th, the Government asked for a vote on account for the Civil Services, there was a long debate on the proposal of the Local Government Board to set up a new authority for the care of certain classes of pauper children in London.—Sir Albert Rollit, who introduced the subject, argued that this scheme for taking care of the sick, feeble, and imbecile children would mean the creation of a new central board, the building of new institutions, special hospitals, seaside convalescent homes, and the enlistment of an army of new inspectors, all of which must be very costly; and he asked why should not the work be allowed to proceed on the old lines, with the coöperation of the guardians and under the supervision of the Local Government Board.—Sir Walter Foster took the view that as boards of guardians had improved very much in recent years they should, instead of having responsibilities withdrawn from them, be encouraged to go on with their improvements. He suggested that there should be a sub-department of the Local Government Board charged with the care of children, sick as well as healthy, which would be able to do a great deal not only for the education of the children, but also in the way of stamping out those diseases which had been a scandal to Poor-law administration.—Mr. T. W. Russell, Parliamentary Secretary to the Local Government Board, pointed out that a departmental committee was now inquiring into the re-organisation of the Local Government Board, and said he was certain that valuable results would follow its report.—Mr. Samuel Smith spoke in praise of the boarding-out system in vogue in Scotland.—Mr. Chaplin, President of the Local Government Board, replying to these and other speeches, said he had elected to proceed by order instead of by legislation for the reason that he was afraid that, in the present condition of public business in the House of Commons, if he relied upon legislation in all probability he would never have had an opportunity this session of dealing effectively with the question at all. He admitted that this method of procedure had its disadvantages. In the absence of opportunities to receive Parliamentary criticism he thought it right to issue this order in a tentative form and send it to all the boards of guardians and managers of districts chiefly concerned to give them an opportunity of making any criticisms they pleased. He believed it had been done with good results. The order had been carefully considered by the local authorities at a conference attended by delegates from every board of guardians concerned, and he had received more than one deputation on the subject. He had now little doubt that, in the final form in which he proposed that the order should be issued, it would command the support of the large majority of the local authorities concerned. He would point out that the great distinction between the recommendations of the report of the committee and the order of the Local Government Board consisted in this, that the committee recommended that a central body should be appointed to take over the charge and control of all the Poor-law children in all the Poor-law institutions in the metropolis, while the order contemplated the appointment of a central authority which was to take over the control of certain classes only of these children. The classes which they proposed should be handed over to the new authority were children suffering from ophthalmia and diseases of the eyes, from skin and scalp diseases, or from mental or physical infirmity, and children requiring the benefits of sea air and in homes for convalescents. His sympathies were entirely with those who disliked the barrack schools, and the policy of the Local Government Board had been for a long time to reduce them wherever possible. The transfer under the order of the classes of children he had named to the new authority was the first step towards facilitating changes in the size, and to some extent the very construction, of those great schools to which so much objection was taken. Very shortly after this report was published the Local Government Board instituted an inquiry by a very able expert (Professor Shaw) into the cubic space and ventilation in these barrack schools. He understood that this gentleman's investigations had been most careful and elaborate, and if the report which he was preparing was to the effect that the cubic space and the ventilation were inadequate, that would at once necessitate the reduction, and probably the very large reduction, of the number of inmates of these schools, and this would afford opportunities for possible alterations in their construction. He had been blamed because his proposals were opposed to the recommendations of the departmental committee; but he could not find in the report of the committee the slightest guidance as to what form the authority was to take, and he was therefore thrown entirely upon his own resources in devising the authority. However, in deference to the views of the committee, he had thought it right in the first instance to propose an entirely new authority instead of the present body, and so he issued an order in that form; but it was evident from the great number of objections the order evoked that there was a large preponderance of opinion in favour of the Metropolitan Asylums Board being made the authority, as against the creation of a new authority. He therefore willingly reconsidered the position. He thought the suggestion that the Metropolitan Asylums Board should be the authority was the best—first, because it avoided the difficulties and expense of creating a new authority; and, secondly, because the Metropolitan Asylums Board afforded in the Exmouth training ship, which was under its charge, the one conspicuous instance of success in the management of Poor-law children. He owned that at first he had some doubts as to whether the Metropolitan Asylums Board, with its numerous duties, would be able to undertake additional responsibilities; but after a series of communications with that body and interviews with its chairman it appeared to him that with some addition to its members it would be perfectly within its scope and capacity to undertake these new duties, and if it appeared to him that it was desired that that should be the final form the order should take, he would not hesitate to adopt a recommendation which had been made to him from many quarters.—Mr. Mundella, who was the next speaker, congratulated Mr. Chaplin on his decision, and after one or two more speeches the debate was brought to a close.

HOUSE OF COMMONS.

THURSDAY, MARCH 25TH.

Rabies in London.

Dr. Farquharson asked the President of the Board of Agriculture on what evidence the cases of canine hydrophobia recently reported in the metropolitan district were diagnosed; how often was the certifying surgeon able to base his conclusions on (1) symptoms observed during life, and (2) an examination of the nervous centres of the suspected dog by the scientific methods practised at the Brown Institute; and whether the department would in future require precise scientific detail before a dog is pronounced to be mad.—Mr. Walter Long replied that ten cases of rabies were reported in the metropolitan district during the first two months of the present year. In every case a post-mortem examination was conducted by the veterinary inspector of the local authority, whilst in two of the cases the dogs were seen alive by veterinary surgeons, and in two others inoculation experiments were made at the Brown Institute. It was essential that the declaration of disease should continue to be made by the veterinary inspector of the local authority as contemplated by the Act, but it was proposed that in each case a full report should be made by that officer for the information of the veterinary advisers of the Board of Agriculture.

The Medical Staff in Scotch Prisons.

Mr. Orr-Ewing asked the Chancellor of the Exchequer whether, in view of the fact that the salaries of Prison Commissioners and prison warders in Scotland and England had been conformed to the same rate of pay, he could state the reason why those of the chaplains and medical officers were not so conformed, the fact of a discrepancy unfavourable to Scotland having been pointed out by them to the Commissioners and the Secretary for Scotland.—Mr. Hanbury, Secretary to the Treasury, replied to the question, saying that the hon. member was wrong in his premiss; the salaries of the Prison Commissioners were not the same, nor were those of the prison warders. Without admitting that the pay should be the same when the circumstances were different, the Treasury had expressed its readiness to consider a redistribution of emoluments in the case of medical officers.—Mr. Orr-Ewing asked the hon. member whether, in view of the fact that the Estimates for the year contained no proposal to increase the salary of any superior officer in the Scottish prison service, he would explain to the House why the recommendations of the Secretary for Scotland on this subject had not received favourable consideration at the hands of the Treasury.—Mr. Hanbury said he did not know how the hon. member became aware of the confidential communications between the Scotch Office and the Treasury referred to in this question. The Secretary for Scotland made six proposals. Four of these were approved in full. One was approved in part; the Treasury gave the two extra medical men he asked for and made a suggestion as to re-arranging the salaries of the medical staff generally, instead of increasing the salaries of two in particular. The sixth request, that for increased pay to chaplains, was refused on the ground that it was not necessary.

Food Products Adulteration.

Mr. Jeffreys asked the First Lord of the Treasury whether his attention had been called to the evidence given by the influential deputation from the Central and Associated Chambers of Agriculture and other representative bodies, received by the President of the Board of Agriculture on March 2nd, that a Bill to give effect to the recommendations of the Select Committee on Food Products Adulteration would receive general support from all quarters of the House; and whether, under these circumstances, the Government would introduce and press forward such a measure in the present session.—Sir John Leng asked the right hon. gentleman whether he was aware that in large cities like London, Manchester, Birmingham, and Glasgow much objection was taken to a recommendation of the Committee on Food Products Adulteration directed against the free sale of a wholesome and nutritious article of food much used by the working classes; and whether, seeing that this recommendation was carried by a majority against the chairman of the Committee, who had described it in the House as of a highly contentious character, and in view of the numerous measures promised in Her Majesty's gracious Speech, he would defer the introduction of another Bill which would be keenly contested both in and out of Parliament.—Mr. Channing asked the right hon. gentleman whether he was aware that the deputation had the warmest support of members on both sides of the House.—Mr. Balfour said, in reply, that it was evident that the support which would be given to a measure of this kind would not at all events be universal. He could not at this moment make any promise as to the introduction or passage of such a Bill, but he would consult with the President of the Board of Agriculture as to whether in any case it might not be

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desirable to bring in a Bill and read it for the first time, in order that the public might be able to judge of the character of the provisions which in the opinion of the Board of Agriculture it was desirable to introduce.

Clothing for the Army.

Mr. Powell Williams, Financial Secretary to the War Office, stated, in reply to a question by Captain Norton, that after March 31st the practice of giving out work to be executed in the workers' homes would be discontinued. This practice had been found to be very objectionable. The work was often done under conditions which were insanitary and which involved a liability to infection on the part both of the troops and of the workpeople at the clothing factory, while strong suspicion existed of sub-letting on terms which amounted to sweating. The number of people affected was forty-four women and three men. Some of the women were widows of soldiers. None of the work taken from these people would be given to sweating contractors, nor were any sweating contractors allowed to take War Office contracts. The work hitherto given out would be done in the factory, and all the workers in question who were under sixty-five years of age—(viz., thirty-six women and two men) would have the option of coming into the factory. Those who did not avail themselves of the option, or were over sixty-five, would receive a gratuity.

FRIDAY, MARCH 26TH.

The Death of Captain Byrne.

Sir John Colomb asked the First Lord of the Admiralty whether Captain Byrne, Royal Marine Light Infantry (since dead), was brought from Portsmouth to be treated at St. Thomas's Hospital for gunshot wounds received in action at Benin, because the Royal Naval Hospital, Haslar, was not supplied with the necessary apparatus for examination by the Roentgen rays; and if he would take the necessary steps to cause the chief naval hospitals to be furnished with the necessary appliances for the examination of wounds and for the scientific education of the surgeons of the Royal Navy.—Mr. Goschen replied that Captain Byrne, a most able officer, whose death was deeply to be deplored, went to St. Thomas's Hospital for treatment for a gunshot wound at his own request, expressed almost immediately after his arrival on board the hospital ship *Malacca* on Feb. 26th. This wish he reiterated most strongly on his arrival at Portsmouth. It had, so he was informed, no connexion with the question of the examination of his wound by Roentgen ray apparatus. The development of this new science was being closely followed by the naval medical authorities, and care would be taken as assured data were obtained to supply the naval hospitals with all necessary appliances. The naval hospitals were now authorised to have x ray radiographs taken when necessary.

Infectious Disease in Schools.

Lord Hugh Cecil asked the Vice-President of the Committee of Council on Education whether he was aware that the school of St. Stephen's, Lewisham, had suffered a serious temporary diminution of attendance owing to the fear of infectious disease; whether the managers of the school acted in accordance with the regulations of the Department in keeping it open in spite of what was an unreasonable panic; whether, seeing that the school would suffer severely in its grant in consequence, and that, under Article 101 of the Code, had it been closed the period in which it was so closed would not have been reckoned in calculating the attendance, the Education Department could discriminate in favour of a school in this position and allow it the full grant; and whether, if the Department had no such power, they would consider the propriety of applying to Parliament to extend their discretion in the matter.—Sir John Gorst said the facts were as stated, but the Committee of Council had no power to exercise the discretion suggested. The case was very exceptional, and the matter would be considered in connexion with next year's Code.

MONDAY, MARCH 29TH.

Swine Fever.

Admiral Field asked the President of the Board of Agriculture whether his attention had been called to a serious case of swine fever at Bishop's Waltham, on the estate of General Elrington, in November last, where sixty-six pigs of considerable value were ordered to be slaughtered by the local committee in the presence of an inspector acting under the Contagious Diseases (Animals) Act; whether he was aware that fifteen of the carcases were subsequently dressed with a view to being consigned to the Central Meat Market for sale in London, that five of the number were found to be affected with the fever spots and were subsequently buried, and that the remaining ten were nevertheless sent off to London for sale, although they came from the very same pen or stye as those diseased; and whether such action by inspectors was in accordance with the regulations of the Department after the owner had received an official notice that all the pigs in the styes affected were to be slaughtered and buried.—Mr. Walter Long replied that he was aware of the case to which his hon. friend referred, and he had caused full inquiry to be made respecting it. The sixty-seven pigs which were slaughtered by order of one of the Board's inspectors were killed, not because they were diseased, but because they had been exposed to infection, and as a matter of fact, none of them showed any signs of illness. Fifteen of the pigs were found to be fit for the butcher and were dressed accordingly, but on a further examination prior to the consignment of the carcases for sale six of them were found to be somewhat discoloured, and these were accordingly withdrawn and subsequently buried. Discolouration frequently arose from ordinary causes, and there was no evidence whatever that in this case it was due to the presence of swine fever. Under the Board's regulations the most stringent precautions were taken with a view to prevent meat unfit for human food from being consigned for sale, and in the case in question the carcasses sold were examined by a butcher on two successive days and were subsequently passed as sound by the sanitary inspector and the meat salesman on arrival at their destination.

Army Medical Staff.

Captain Norton asked the Under Secretary of State for War what steps he proposed to take in order to fill up the vacancies in, and complete the establishment of, the Army Medical Staff; and whether, in case of mobilisation, the Army Medical Staff was now sufficient for the medical needs of Army corps.—Mr. Brodrick said, in reply, that it was intended to give an increase of pay in India and a shorter tour of service there; assistance in forming medical messes at large stations; quarters in barracks where possible; and better opportunities for study on return from foreign service. One or two other matters affecting the Service were still under consideration. It was hoped that these additional advantages would increase the number of candidates for the Service. His answer to the second part of the question was in the affirmative.

Pleuro-Pneumonia in London.

Mr. Field asked the President of the Board of Agriculture whether another outbreak of pleuro-pneumonia contagiosa had occurred recently in London; whether this further outbreak and the result of investigations had satisfied the authorities that the disease was local and not imported; and whether Ireland had had a clean bill of health for live stock (excepting swine fever) for a much longer period than Great Britain.—Mr. Walter Long replied that it was the case that another outbreak of pleuro-pneumonia had occurred in London. So far as the inquiries of the Board had yet proceeded they had no reason to think that the disease was imported. It was the case that no outbreak of pleuro-pneumonia had been reported in Ireland for a much longer period than in Great Britain.

Disease among the Troops in India.

Lord George Hamilton, replying to a question by Sir James Fergusson, said that for some time past he had been in communication with the Viceroy on this subject, and he proposed to lay on the table of the House a despatch addressed to the Government of India, in which the views of Her Majesty's Government were stated at length.—Major Rasch asked the First Lord of the Treasury whether, in order to dispel misconception on this subject, he would give facilities for its discussion.—Mr. Balfour said he hoped and believed the despatch was of such a character as not to call for any debate in the House.

TUESDAY, MARCH 30TH.

The London Water Question.

Mr. Chaplin announced that the terms of reference to the Royal Commission on the London Water Question are as follows: 1. To inquire and report whether, having regard to financial considerations and to present and prospective requirements as regards water-supply in the districts within the limits of supply of the metropolitan water companies, it is desirable, in the interests of the ratepayers and water consumers in those districts, that the undertakings of the water companies should be acquired and managed either (*a*) by one authority, or (*b*) by several authorities, and, if so, what should be such authority or authorities. To what extent physical severance of the works and other property and sources of supply of the several companies, and the division thereof between different local authorities within the limits of supply, are practicable and desirable, and what are the legal powers necessary to give effect to any such arrangements. 2. If the undertakings are not so acquired, whether additional powers of control should be exercised by local or other authorities, and if so what those powers should be. 3. Whether it is practicable to connect any two or more of the different systems of supply now administered by the eight metropolitan companies, and, if so, by whom and in what proportions should the cost of connecting them be borne, and what are the legal powers necessary to give effect to any such arrangement.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ARNOLD, E. G. EMERSON, M.B., B.S., has been appointed a Clinical Assistant to the Chelsea Hospital for Women.

BAILEY, T. R., M.D., C.M. Edin., has been appointed Medical Officer for the Fourth Sanitary District of the Wolverhampton Union.

BARNES, E. H., M.B. Syd., has been appointed a Resident Medical Officer to the Sydney Hospital, New South Wales.

BOYAN, JOHN, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior House Surgeon to the Western General Dispensary, Marylebone-road, London.

BRIGHT, R. S., M.R.C.S. Eng., has been appointed a Member of the Central Board of Health, Hobart, Tasmania.

BURKITT, G. O. E., L.R.C.P., L.R.C.S. Irel., D P.H., has been appointed Health Officer at Leaderville, Western Australia.

BURNIE, W. GILCHRIST, M.R.C.S. Eng., L.S.A. Lond., has been appointed Honorary Consulting Medical Officer to the Bradford Children's Hospital.

COLE, F. H., M.B., Ch.B. Melb., has been re-appointed Lecturer on Pharmacy to the Medical Students of the Melbourne University, Victoria, Australia.

DODS, JAS., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Brisbane United Friendly Societies, Queensland.

FOX, J. R., M.B. Melb., has been appointed Officer of Health for Leigh Shire, Victoria, Australia.

GARDINER, JOHN, B.A. Oxon, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Western General Dispensary, Marylebone-road, London.

GRANT, A. S., M.R.C.S., L.R.C.P., has been appointed a Clinical Assistant to the Chelsea Hospital for Women.

HARRIS, DAVID, M.B., M.S. Glasg., has been appointed Medical Officer to the Carmarthen Union and District No. 1.

HARRIS, W. H., M.B. Syd., has been appointed a Resident Medical Officer to the Sydney Hospital, New South Wales.

HARVEY, L. W., L.R.C.P., L.R.C.S. Edin. L.F.P.S. Glasg., has been appointed a Medical Officer to the Grenfell Hospital, New South Wales.

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HERRIOT, S., L.R.C.P., L.R.C.S. Edin., has been appointed a Surgeon to the Bulong Hospital, Western Australia.
HONNYWILL, ALFRED ORAM, L.R.C.S., L.R.C.P., L.M. Edin., has been appointed Medical Officer to the Sutton District of the London, Brighton, and South Coast Railway Provident Society. Also Medical Referee to the Prudential Assurance Company.
HOPKINS, G. H., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed an Honorary Medical Officer to the Lady Bowen Hospital, Brisbane, Queensland.
ISBESTER, T., M.B. Adel., has been appointed a Resident Medical Officer to the Sydney Hospital, New South Wales.
JOHNSTON, A. A., L.K.Q.C.P. Irel., L.R.C.S. Edin., has been appointed a Public Vaccinator at Clifton Hill, Victoria, Australia.
KRUGER, C. H., M.B., C.M., has been appointed a Clinical Assistant to the Chelsea Hospital for Women.
LEY, G. J., M.B. Melb., has been appointed a Public Vaccinator at Chiltern, Victoria, Australia.
LININGTON, W. W., F.R.C.S. Eng., has been appointed Resident Casualty Officer to the General Infirmary, Leeds.
LYSTER, A. E., M.R.C.S. Eng., L.S.A., has been appointed Medical Officer and Public Vaccinator for the Fourth District of the Chelmsford Union, vice W. Hart, resigned.
MCCALLUM GAVIN, M.B., C.M. Glasg., has been appointed a Resident Surgeon to the Geelong Infirmary and Benevolent Asylum, Victoria, Australia.
MOIR, WM., M.B., Ch. M. Aberd., has been appointed Officer of Health for Mirboo Shire, Victoria, Australia.
PADBURY, G. J., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Hawkchurch Sanitary District of the Axminster Union.
PLOWMAN, S., F.R.C.S. Eng., L.R.C.P. Lond., has been re-appointed a Lecturer on Materia Medica to the College of Pharmacy, Victoria, Australia.
RIMELL, A. T., M.R.C.S. Eng., L.R.C.P. Edin., has been appointed Medical Officer and Public Vaccinator for the Tydd, Sutton St. James, and Long Sutton Districts of the Holbeach Union.
RUDALL, J. F., M.B., Ch.B. Melb., M.R.C.S. Eng., has been appointed Officer of Health for South Gippsland Shire, Victoria, Australia.
SCOTT, C. H., M.B., Ch. M. Syd., has been re-appointed Medical Officer for the Bourke Hospital, New South Wales.
SEED, WM. P., L.R.C.P. Lond., M.R.C.S., has been appointed a Resident Physician to the Coolgardie Hospital, Western Australia.
SMITH, J. W., M.B. Edin., F.R.C.S. Eng., has been appointed Honorary Anæsthetist to the Victoria Dental Hospital, Manchester.
TAYLOR, E. CLAUDE, M.D., B.S. Lond., F.R.C.S. Eng., has been appointed Deputy Assistant Surgeon to the London Temperance Hospital.
TERRY, H., M.B. Syd., has been appointed a Resident Medical Officer to the Sydney Hospital, New South Wales.
THOMPSON, W. H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Honorary Medical Officer to the Bradford Children's Hospital.
TIDSWELL, F., M.B., Ch.M Syd., D.P.H. Cantab., has been appointed a Demonstrator of Physiology to the Sydney University, New South Wales.
TILLEY, HERBERT, M.D., B.S. Lond., has been appointed Surgeon to the London Throat Hospital, Great Portland-street, for Diseases of the Ear, Throat and Nose.
TOTHILL, F. C., M.B., C.M. Edin., has been appointed Medical Officer for the Ashford Sanitary District of the Staines Union.
WARD, HOWARD P., M.B. Lond., M.R.C.S. Eng., L.S.A., has been appointed Assistant Physician to the Royal South Hants Infirmary, Southampton.
WATT, GEO., M.B., Ch.M. Aberd., has been appointed a Medical Officer for the Narrandera Hospital, New South Wales.
WATSON, A. E. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Destitute Poor and Aborigines in the District of Port Germein, South Australia.
WESTMACOTT, F. H., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Honorary Anæsthetist to the Victoria Dental Hospital, Manchester.
WILLIAMSON, OLIVER K., M.B., has been appointed Junior Resident Medical Officer and Registrar to the Evelina Hospital for Sick Children, Southwark Bridge-road, London, S.E.
WILLMOT, ROBT., F.R.C.S. Edin., M.R.C.S. Eng., has been appointed an Official Visitor to the Hospital for the Insane, New Norfolk, Australia.
WRIGHT, THOS. N., L.R.C.P. Lond., M.R.C.S., has been appointed a Government Medical Officer and Vaccinator for the Police District of Port Stephens, New South Wales.
WRIGLEY, F. H., L.R.C.S. Edin., has been re-appointed a Medical Officer to the Glen Innes Hospital, New South Wales.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon Salary £100 per annum, with rooms and attendance (not board).
COTFORD ASYLUM, near Taunton, Somerset.—Assistant Medical Officer, unmarried. Salary £120, with annual rise of £10 to £150, furnished apartments, board, attendance, and washing.
GENERAL INFIRMARY, Leeds.—Resident Surgical Officer. Salary £100 per annum, with board, residence, and washing.
GERMAN HOSPITAL, Dalston, N.E.—Honorary Ophthalmic Surgeon.
GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in hospital provided.
HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Knowle, Fareham.
HOSPITAL FOR WOMEN AND CHILDREN, Leeds.—House Surgeon for twelve months. Salary £90 per annum.
LIVERPOOL HOSPITAL FOR CANCER AND SKIN DISEASES.—Honorary Assistant Surgeon.
METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Dental Surgeon.
MIDDLESEX HOSPITAL, W.—Assistant Surgeon. Also Aural Surgeon.
NEW SOUTH WALES.—Bacteriologist and Assistant to the President of the Board of Health of the Colony. Salary £600 per annum. Applications to Agent-General for New South Wales, 9, Victoria-street, London, S.W.
ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Board, lodging, and washing provided.
ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Pathological Curator of the Museum.
ST. SAVIOUR'S UNION, Surrey.—Medical Superintendent at the Infirmary, East Dulwich-grove, S.E. Salary at the rate of £400 per annum, with unfurnished house, coals, gas, and water. An annual percentage deduction from the salary and emoluments will be made according to the Poor-law Officers Superannuation Act, 1896. Applications to the Clerk, Union Offices John-street, West, Blackfriars-road, S.E.
SHEFFIELD UNION WORKHOUSE INFIRMARY.—Junior Assistant Medical Officer, unmarried, at the Workhouse Infirmary, Fir Vale, Sheffield, for six months. An honorarium of £12 will be granted, and furnished apartments, board, and washing provided. Applications to Clerk to the Guardians, Union Offices, West Bar, Sheffield.
SWANSEA GENERAL HOSPITAL.—House Physician for one year. Salary £50 per annum, with board, apartments, laundress, and attendance.
VICTORIA HOSPITAL, Folkestone.—House Surgeon. Salary £80 per annum, rising to £100, with board, residence, and washing.
WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Medical Officer to the Provident Dispensary attached to the hospital. Salary £80 per annum, with board, lodging, and washing.
WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for six months. Salary at the rate of £70 per annum, with rooms, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ARCHER.—On March 26th, at Hillfield-road, West Hampstead, the wife of Stafford L. Archer, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.
BREESE.—On March 24th, at Kennington-park-road, the wife of F. Breese, L.D.S., of a son.
CARLIER.—On March 26th, at Morningside-drive, Edinburgh, the wife of E. Wace Carlier, M.D., B.Sc., &c., of a daughter.
ECCLES.—On March 25th, at Harley-street, W., the wife of W. McAdam Eccles, M.S., F.R.C.S., of a son.
FORD.—On March 25th, at Kent-road, Southsea, the wife of Vernon Ford, Surgeon, of a daughter, stillborn.
OVEREND.—On March 19th, at Montgomery-terrace-road, Sheffield, the wife of Wilkinson Overend, B.A., M.B. Oxon., of a daughter.
RUSSELL.—On March 24th, at Plas tan Altran, Holyhead, the wife of William Fox Russell, M.B., of a son.
WILSON.—On March 25th, at Sydney House, Blackrock, County Dublin, the wife of S. Wesley Wilson, Physician and Surgeon, of a son.

MARRIAGES.

CRAWFORD—CAMPBELL.—On March 25th, at the Catholic Apostolic Church, Dundee, Douglas Crawford, M.B., F.R.C.S., of Liverpool, to Edith Violet, youngest daughter of Walter Campbell, South Tay-street, Dundee.
FORRESTER—HENDERSON.—On March 25th, at Mayfield Free Church, Edinburgh, Harvie Anderson Forrester, M.B., C.M., third son of the late William Forrester, of Arngibbon, Perthshire, to Helen Isabella Rhind, second daughter of the late Frank Henderson, M.P., Dundee.
FULLERTON—WISE.—On March 25th, at St. Peter's, Bournemouth, Robert Fullerton, M.D., of Glasgow, to Lucy Kate Lloyd, elder daughter of William Lloyd Wise, J.P., of Wimbledon and Southend-on-Sea.
ROBINSON—HOPE.—On March 27th, at St. Martin's Church, Guernsey, Clement Sumner Robinson, Surgeon-Captain, A.M.S., h.p., youngest son of the late Rev. C. D. P. Robinson, to Gertrude, fourth daughter of S. T. Hope, of Les Douvres, St. Martin's, Guernsey.

DEATHS.

GUINNESS.—On March 9th, at Selkirk-parade, Cheltenham, Arthur Guinness, M.D., aged 84.
HARRIS.—On March 18th, at Dover, Florence, the beloved wife of Surgeon-Major F. A. Harris, Army Medical Staff.
HICKMAN.—On March 27th, at Harley-street, W., William Hickman, D.L., J.P., F.R.C.S., Surgeon-in-Ordinary to H.R.H. the Duke of Saxe-Coburg-Gotha, in his 61st year.
HOWITT.—On March 29th, Francis Howitt, M.D., of Nottingham, in his 61st year.
HUDSON.—On March 29th, at his residence, Harley-street, W., Charles Elliot Leopold Barton Hudson, F.R.C.S., in his 35th year.
KENT.—On March 26th, at Cardigan-road, Richmond-hill, Thomas John Kent, M.R.C.S., of Piccadilly, in his 74th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 1st, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Mar. 26	29·83	S.W.	51	50	73	57	50	0·09	Overcast
" 27	29·61	W.	52	48	85	59	50	0·05	Overcast
" 28	29·59	S.W.	52	49	69	56	48	0·13	Cloudy
" 29	29·39	N.W.	43	40	87	51	40	...	Cloudy
" 30	29·62	SSW	37	35	79	54	36	...	Foggy
" 31	29·37	S.W.	47	45	77	53	37	0·52	Cloudy
April 1	28·98	N.E.	36	35	61	39	35	...	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (7th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (8th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (10th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (5th).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Paper:—Mr. A. H. Smith: The Microscopical Aspect of certain Lesions induced by Dental Caries. A Demonstration of the Use of Choquet's newly-invented Microtome will be given by the reader of the paper.

WEDNESDAY (7th).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Mr. Targett, Dr. D. Robinson and others. Papers:—Dr. G. F. Blacker: The Treatment of Placenta Prævia by Champetier de Ribes' Bag.—Dr. T. Wilson: Chronic Axial Rotation of an Ovarian Cyst giving rise to Extreme Twisting of the Elongated Uterus.

THURSDAY (8th).—SOCIETY FOR THE STUDY OF INEBRIETY (11, Chandos-street, Cavendish-square, W.)—3 45 P.M. Papers: Dr. C. R. Drysdale: Alcohol in Therapeutics *vs* Inebriety.—Rev. A. K. Cherril: Are Acquired Characters Transmissible?

FRIDAY (9th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Mr. H. Marsh: A Case of Sarcoma of the Prostate Gland.—Mr. R. Johnson: Multilocular Ovarian Cyst in a Child of five years, Axial Rotation, Ovariotomy.—Mr. W. G. Spencer: Hydatid Cysts removed from the Left Pleura, from behind the Mesentery, and from the Right Lobe of the Liver.—Mr. C. B. Lockwood: A Case of Wound of the Mesentery with subsequent Gangrene of the Intestine.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (5th). — THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Prof. T. R. Smith: Sanitary Building Construction.

TUESDAY (6th).—ROYAL COLLEGE OF PHYSICIANS—5 P.M. Dr. H. C. Bastian: Some Problems in Connexion with Aphasia and other Speech Defects. (Lumleian Lecture.)

LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Moral and Impulsive Insanities, and Lunacy Law.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Lupus Erythematosus.

WEDNESDAY (7th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Dr. Louis Parkes (conducted by): Inspection and Demonstration at the Disinfecting Station, Chelsea. 4 P.M. Inspection of the West London Paper Mill Company's Works, Fallopian Wharf, Lot's-road, Chelsea. 8 P.M. Discussion, opened by Mr. H. R. Kenwood, on Notification of Measles.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Disinfection and Disinfectants.

THURSDAY (8th). — ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. H. C. Bastian: Some Problems in Connexion with Aphasia and other Speech Defects. (Lumleian Lecture.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. J. W. Clarke: Details of Plumbers' Work.

FRIDAY (9th). — LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Tetanus, Rabies, and Cholera.

SATURDAY (10th). — THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—2.30 P.M. Mr. C. Jones (conducted by): Inspection and Demonstration at the Sewage and Destructor Works, Ealing.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

LIFE ASSURANCE AND PROVISION FOR OLD AGE.

WE have received the prospectus issued by the Acme Insurance Company for "Health, Endowment, and Life Assurance," the life part of which novel combination is to be carried out by the English and Scottish Law Life Association. From the nature of the risks and contingencies which it provides against the company appears to meet the requirements of professional men. Its scheme of operations seems to include some new features devised for the purpose of arriving at an economical method of securing the protection of income during incapacity, a provision for advanced life, and, thirdly, in the event of premature decease, the return of outlay made to secure the first two objects. Table III. provides what really amounts to endowment assurance payable at the age of sixty-five years, the added cost for which shows the rate for this important part of the contract to be far below those usually current. This means of making provision for advanced life at a relatively small outlay will no doubt attract much attention, and the company in its exposition of the details of the scheme claims that it is quite an innovation in assurances of this description. Among the tables is one affording those whose income is not immediately affected by incapacity deferred benefits at reduced rates. It has hitherto been a condition in all benefit societies to insist on rigid confinement to the house as the only evidence of incapacity that would be admitted, and full benefits could be obtained only on these terms, but the Acme Company is willing, on application being made, to relax this regulation so far as to allow a health resort to be visited during convalescence. The company proposes to pay adequate fees for the requisite medical examinations, and stipulates that the admission of any claim shall be conditional on the production of proper certificates from duly qualified medical practitioners. The offices of the Company are at 14, Norfolk-street, Strand, W.C.

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THE HOSPITAL OF ST. FRANCIS OF ASSISI.

ST. FRANCIS was undoubtedly one of the world's heroes, but we do not quite see what the proposed hospital to be founded in his name is going to do. According to the prospectus it is to be "A protest of the world against inhumanity. A revolt of the awakening soul against the crushing horrors of vivisection. An aspiration after the Divine gentleness." This is all very well but are the authorities going to eliminate from their methods of treatment all matters that have been discovered by experiments on animals? To be consistent they should do so, and in that case the action of the heart, the circulation of the blood, and many other physiological truths will be still unknown to them. The language of the prospectus is marvellous—thus we are told that the new hospital shall rise "a pure and peaceful temple, with its base amid the sorrows of creation and its lofty minarets within the eternal sympathy of the Creator." Why "minarets"?

H. S.—It is important that the profession should approach the solution of these questions which concern them as a whole in a spirit of conciliation.

THE VALUE OF CREOLIN INHALATION.

To the Editors of THE LANCET.

SIRS,—Inhalations of the vapour given off from boiling creolin have in my hands proved beneficial in bronchial asthma. I use a large test tube about five-eighths of an inch in diameter, and boil some three drachms of creolin in it over an ordinary spirit lamp. The patient sits with his mouth wide open a foot or eighteen inches from the tube and inhales the vapour which comes off, mixed, of course, with air. The inhalation is kept up for from one to ten or fifteen minutes, according to circumstances. I repeat this inhalation daily for a month or six weeks. Obviously the greatest care is required, for it would, I suppose, be possible to suffocate a person if sufficient air were not inspired with the vapour; but I have only once seen any ill effect (and that only temporary) from this treatment. In that case—one of chronic laryngeal catarrh—the patient, who had never before taken the inhalation, almost collapsed after some five minutes of the treatment, but he was quickly restored on removal to the fresh air. In this case, too, the inhalation was repeated daily without any tendency to collapse, and the complaint was completely cured by this treatment. I have found it necessary to observe the following precautions:—(1) The inhalation should *not* be given during a paroxysm of asthma (its effect is on the condition of the lung itself, not, so far as I know, on the paroxysm, just, I imagine, as that of creolin is on the skin in certain cutaneous eruptions); (2) the temperature of the patient should not be above normal; (3) the inhalation should not be administered by an irresponsible person; (4) during the first week of treatment the inhalation should be given for one minute only on each day; (5) should the patient become faint or complain of giddiness the inhalation must be discontinued at once, and the patient removed into the fresh air; and (6) care must be taken that the vapour (which is very inflammable) does not catch fire, and that the liquid does not boil over. In November, 1894, to ascertain if this treatment could be safely adopted, I tried the effect of an inhalation on myself. I have since then treated various affections of the air passages in this way, and have obtained the best results in bronchial asthma.

I am, Sirs, yours faithfully,
Burton-on-Trent. DIGBY F. B. COTES, M.R.C.S.Eng., L.S.A.Lond.

Hypatia.—(1) Messrs. Baird and Tatlock, Cross-street, Hatton-garden; (2) Woodhead's Bacteriology and the handbooks of Kanthack and Drysdale; and (3) Leitz or Zeiss with an oil immersion.

THE CORSET QUESTION.

MADAME GACHES-SARRAUTE, M.D., the deviser of the rational corset, is indefatigable. In THE LANCET, Dec. 5th, 1896, at page 1655, we gave a brief description of the appliance which this lady is endeavouring to render equally acceptable to dressmakers and hygienists, and now we learn that in order to be thoroughly up to date she has enlisted the x rays on behalf of her invention. At a recent meeting of the Académie de Médecine Dr. Laborde exhibited a series of three radiographs, one taken from the nude, another representing a woman wearing a Gaches-Sarraute bodice, and the third the same person constricted by a corset of the ordinary kind. The effect on the learned academicians is said to have been altogether conclusive, but it remains to be seen whether the ladies themselves will be as easily convinced. The desire for a taper waist is so deeply implanted in the female mind that even the startling testimony to the evil consequences of tight lacing thus unexpectedly afforded may prove of little avail.

DUPLICATE MEDICAL PERIODICALS.

To the Editors of THE LANCET.

SIRS,—The Bristol Medical Library has a large number of duplicate periodicals which it will have much pleasure in giving to any library that needs them for completing sets. I am, Sirs, yours truly,

L. M. GRIFFITHS, Hon. Librarian.
Bristol Medical Library, University College, Bristol, March 27th, 1897.

PITY THE POOR MEDICAL OFFICER OF HEALTH.

OUR contemporary, the *Pall Mall Gazette*, in its issue of March 24th, has an amusing article called "The Situation at Sureton-in-the-Mud." Sureton was a little village recently dowered with a parish council and other democratic blessings. The village also rejoiced in the possession of two medical men, of whom the senior was elected "Medical Officer of Health for the Sureton-in-the-Mud division of the Wyck-on-the-Wold Rural District Council." This office though imposing enough in name carried with it duties which, as a rule, do not generally fall to the lot of a medical officer of health, for "the Doctor was at the beck and call, at any hour of the day or night, of any free and independent elector or of any member of the family who might happen to feel indisposed." Not to make too long a story of it, the medical officer began to make rude and officious inquiries into the water-supply, and the authorities of Sureton, though ready enough to root up well-tried and beneficent institutions, naturally objected, and when, after eight years' persistent agitation, the Red Tape Offices exhorted the Sureton authorities to amend their water-supply the said authorities were scandalised. Thereupon a councillor, remembering that the appointment of medical officer of health was an annual one, proposed to oust the holder at the forthcoming election and to elect the other medical man, a new comer, who also chanced to be a friend of his (the councillor). The article proceeds:—

> "The situation was explained to me by an eminent councillor whom I found hanging over the railings on the bridge spanning the Sure, expectorating meditatively into the water. This pursuit seemed to be his chief occupation.
>
> "'No, my young sir, I don't say but what the Doctor 'asn't performed 'is dooties satisfact'ry; I don't say but what 'e is hequal to 'is job (he had been a gold medallist or something of the kind of his University) but what I do say is, that being medical horficer 'e 'as no call to go a-snuffling about the drains for to raise the rates of the parish.'
>
> "'But the outbreak of typhoid?'
>
> "'That's what 'e's there for. If there wasn't no typhoid we shouldn't want no medical horficer, should us? It stands to reason.'
>
> "'I remember his driving over to Wyck, which is beyond his ten-mile radius, and sitting up through that bitter night with Sally Lane. I remember him sending port wine to ——'
>
> "'Now you are trying to come it with the gratitoode game. Why, bless us! You might as well talk about gratitoode to the parson. What is the likes of them paid for?'
>
> "'But if the County Council and the Board in London insist on a water-supply, whether you kick the Doctor out or not it will have to come."
>
> "'I don't say but what that is likely enough. But we can take the title—the happellation—away from the Doctor, and Lawyer Timmins says as 'ow that will play 'ole 'Arry with 'is privit practice. We'll learn him 'ow to come interfering with our water and sending up the rates. Jones 'll know better, however.'"

Mr. J. E. Tuke is thanked for his reply.

"ANTISEPTIC MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—I have followed the correspondence on this subject in the columns of THE LANCET with deep interest. The principal question your writers ask is which is the best antiseptic. I think the first thing to be decided is, should we in general practice go in for so-called antiseptic midwifery at all? By which I mean the use of the uterine and vaginal douche. For my part, I have attended over 1000 cases in London and only used the douche three times, and have not yet had a fatal case or one of puerperal fever. I never use mercury in any form and only take the precaution of putting my hands and instruments into a hot solution of permanganate of potash before introducing them into the womb. It would be interesting to compare results in general practice of so-called "antiseptic midwifery" with that in which antiseptics take a minor place. I am, Sirs, yours truly,

Tufnell-park-road, N., March 26th, 1897. CHAS. DISNEY ROE.

Mrs. Charlotte E. Field.—The circumstances should be brought to our attention by the consultant.

THE PROTECTION OF BIRDS.

THE Society for the Protection of Birds is a most praiseworthy one; it not only strives to prevent the destruction of birds for the ornamentation of human beings, but also any wanton destruction. There is nothing so annoying as to read in the paper, as we only too often do, "A fine specimen of the now rare bird —— has been shot by ——"—some "sportsman" who ought to know better. Many a bird formerly common in England might be so again if it were not for this insensate custom. The bearded tit is almost extinct, the bustard quite so, and the bittern, the ruff, the rose-coloured pastor, and the golden eagle are hardly ever seen, though the last is not so uncommon as the others. The secretary of the society is Mrs. F. E. Lemon, Hilcrest Redhill, Surrey.

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AMERICAN VIEWS OF HOSPITAL AND DISPENSARY ABUSE.

THE abuse of medical charities is becoming as burning a question in New York as it is in London. The *New York Medical Record* of March 6th contains two articles on the subject, one a paper on the Dispensaries of New York, their Use and Abuse, by Walter Brooks Bronner, A.B., M.D., New York. In this paper Dr. Bronner shows that at these institutions 707,058 patients were treated, who made in all 2,026,360 visits, and 1,039,632 prescriptions were filled, for which a fee ranging from ten to twenty-five cents was charged in the vast majority of cases in all the forty-four institutions, excepting those under the Department of Charities and the North-west Dispensary. On a conservative estimate 40 per cent. were able to pay a doctor. Dr. Bronner absolves the people from blame and blames the profession. The subject was also discussed at a special meeting of the New York County Medical Association, where the same views prevailed as to the culpability of the profession, including its heads. One speaker quoted the case of a woman who was advised to give her child fresh air by riding in a ferry boat, and replied that she intended to make a voyage to Europe, which she thought would be better. We hope most of the other statements at this meeting are more reliable than that of Dr. Freudenthal, who said that in London everybody applying at a clinic had to bring a certificate of poverty from his landlord! Our contemporary in a leading article says the situation is a serious one, and that the number of patients treated who are undeserving of charity is simply appalling. What is wanted is organisation and discipline in the profession.

Mr. W. J. Dixon is advised to consult his regular medical attendant.

"BLOOD ERYTHEMA."

To the Editors of THE LANCET.

SIRS,—I notice that the eruption so-named is mentioned and discussed in THE LANCET of March 20th, and the view is there expressed that it is in all probability due to idiosyncrasy on the part of the subject. I have, however, twice noticed this eruption on the back of my own hand and wrist after having washed off dried arterial blood after operations. There are two points which I should like to mention here regarding the etiology of this condition. 1. The fact of its having occurred only on two occasions in my case in the course of about 100 operations seems to favour the view that there must be some peculiarity in the patient's blood, unless the operator is immune at times and not at other times. 2. May not the application of turpentine, corrosive sublimate solution, and other antiseptics possibly act as remote causes of this peculiar condition? I am, Sirs, yours truly,

VINCENT BURROW, M.B., B.S.Durh.

Lancaster-road, W., March 25th, 1897.

Dr. S.—The details which our correspondent gives certainly indicate unprofessional conduct, but we could not comment upon such matters until we knew that no explanation was forthcoming from the other side. Dr. S. may have been misinformed.

A NEW METHOD OF HYSTERECTOMY.

MR. R. HUGH HODGSON suggests a new mode of procedure in cases of hysterectomy in which it is deemed desirable to retain the cervix. His recommendation is based upon experiments performed on the dead body. After having tied the ovarian and uterine arteries and divided the broad ligaments close to the uterus, the peritoneum being saved as much as is deemed necessary for the subsequent stages of the operation, the cervix is cut through about the level of the internal os and ligatures passed through the cut edges of the broad ligaments and peritoneum and left in long loops. Then the cervical canal having been dilated per vaginam, the end of a pair of long forceps is passed up through it into the abdominal cavity, and the loops of the ligatures seized and drawn upon until the edges of the broad ligaments and peritoneum are within the vagina, where they are then packed with iodoform gauze, as is the practice followed by Mr. Bowreman Jessett in his pan-hysterectomies. The advantage of this disposal of the stumps over the usual methods of either sewing the peritoneum together over it, submitting it to the serre-nœud, or stitching it to the abdominal wound, is claimed to be that there is absolutely no raw surface left in the floor of the pelvis, no loop formed between the abdominal wall and the stump, and no abnormal traction on the abdominal wall.

Mr. V. C. Mallard.—The idea is a kindly one.

THE MATERNITY CHARITY AND DISTRICT NURSES' HOME, PLAISTOW, E.

THIS institution does excellent work among the poor of Plaistow and West Ham. The district is on the outskirts of East London, and the population consists almost entirely of the labouring class. The committee of the charity makes an urgent appeal for subscriptions and donations, which may be sent either to the treasurer, Mr. Robert Williams, Howard's-road, Plaistow, E., or to the bankers, Messrs. Williams, Deacon, and Co., 20, Birchin-lane, E.C.

MALE NURSES' (TEMPERANCE) ASSOCIATION.

WE have on various occasions referred to the desirability of employing male nurses in certain cases both of bodily and mental disorder. It is satisfactory to find that this view is extensively adopted, one proof of which is that the Male Nurses' (Temperance) Association is at present finding constant work for nearly 100 men, and that last year each man's average earnings were £101 18s. after paying all expenses. A large number of the nurses and travelling attendants are fulfilling engagements on the Continent, and in America, India, the Colonies, Egypt, and South Africa. The offices of the association are at 10, Thayer-street, Manchester-square, W.

Mr. Clement H. Sers.—We regret that pressure on our space makes it absolutely impossible for us to publish so long a communication.

"THE DOSE OF IPECACUANHA."

To the Editors of THE LANCET.

SIRS,—Referring to my letter published in THE LANCET of March 13th, wherein I stated that I had steadily taken six times the customary dose of ipecacuanha wine without perceptible effect of any kind, I have since been informed by more than one leading pharmacist that it has for long been known to pharmacists that the process now directed in the British Pharmacopœia for preparing ipecacuanha wine is bad. They say that the alkaloids extracted by an acetic menstruum are destroyed by being heated with that menstruum on evaporation. This, they say, is the cause of the inactivity of the present official preparation. The result I obtained clinically has therefore for long been ascertained pharmaceutically.

It seems that the favourite remedy for the most widely fatal disease in this country is practically inert. In the dose in which it is commonly prescribed it is absolutely inert, provided it be prepared in the only manner in which the Medical Council permits it to be prepared.

I am, Sirs, obediently yours,

BALMANNO SQUIRE.

Weymouth-street, Portland-place, W., March 22nd, 1897.

To the Editors of THE LANCET.

SIRS,—Dr. Balmanno Squire's letter on the above subject in THE LANCET of March 13th brings forward in medical literature a point which has been the subject of no little investigation in pharmacy. In a paper (*Pharmaceutical Journal*, 3, xx., p. 254) it was shown that following the process of the British Pharmacopœia, 1885, a considerable proportion (nearly a quarter) of alkaloids present in the root, though completely extracted by the acetic solvent, was destroyed by subsequent treatment—viz., evaporation to dryness before solution in sherry. It was shown that the process of the British Pharmacopœia, 1867, from the point of view of alkaloidal content and medicinal activity, was superior to that of the 1885 edition. In the paper referred to a process was detailed for the preparation of a standardised liquid extract of ipecacuanha, from which, by simple dilution with sherry, a wine of constant alkaloidal content could be obtained, and it is found that a dose of five minims of this wine has marked expectorant effect. The advantages of this standardised liquid extract and wine have been so widely recognised and its use so generally adopted that it must unquestionably have come under the notice of those who have charge of the compilation of the new British Pharmacopœia.

I am, Sirs, yours truly,

March 23rd, 1897. JOHN C. UMNEY.

Dr. John Love's communication will receive attention.

THE MILK STERILISING APPARATUS OF DR. POPP AND DR. BECKER.

A CORRESPONDENT writes:—"I shall be glad if any of your readers can inform me where I might get some independent opinion with regard to the apparatus invented by Dr. Popp and Dr. Becker for sterilising milk."

During the week marked copies of the following newspapers have been received:—*Essex County Standard, Hull News, Norfolk Chronicle, Wolverhampton Chronicle, Wigan Observer, Southampton Times, Lowestoft Standard, Times of India, Kidderminster Shuttle, Pioneer Mail, Manchester Guardian, Folkestone Express, Rochester Journal, South Wales Daily News, Bradford Observer, Builder, Sussex Daily News, Walsall Advertiser, Hastings News, Liverpool Daily Post, Newcastle Chronicle, Derbyshire Times, Bedford Standard, Lichfield Mercury, Worcestershire Chronicle, Oban Times, Western Morning News, Architect, Rochdale Observer, Middlesex Courier, Birmingham Post, Leeds Mercury, Keene's Bath Journal, Leicester Post, Hereford Times, South Eastern Gazette, Windsor Chronicle, Yorkshire Post, East Anglian Times, Glasgow Evening News, Midland Counties Express, Sheffield Independent, Bristol Mercury, Chatham News, Bexhill-on-Sea Observer, Bury Guardian, Scotsman, Local Government Chronicle, Reading Mercury, City Press, Mining Journal, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Surrey Advertiser, Local Government Journal, Australian Medical Gazette, Sheffield Daily Telegraph, Western Mail, Sevenoaks Chronicle, West Middlesex Herald, Burton Chronicle, Aberdare Times, Jersey Weekly Press, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Prof. J. G. Adami, Montreal; Messrs. Armbrecht, Nelson, and Co., Lond.; Anglo-Swiss Condensed Milk Co. Lond.; Apothecaries' Hall, Dublin, Sec. of; A. F., Lond.; Mons. J. Astier, Paris.; Another M.R.C.S., L.S.A., Bournemouth.

B.—Dr. V. Burrow, Lond.; Dr. Palemon Best, Louth; Mr. W. H. Bennett, Lond.; Buxton Urban District Council, Clerk of; Beta, Grimsby; Messrs. Burgoyne, Burbidges, & Co., Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Dr. H. C. Bastian, Lond.; Dr. Buchanan, Lond.; Bristol Hosp. for Sick Children, Sec. of; Sir Wm. Broadbent, Lond.; T. B. Browne, Ltd., Lond.; Beck Brewing Co., Liverpool, Sec. of; Bristol Medical Library, Hon. Librarian of; Mr. C. Birchall, Liverpool; Messrs. W. F. Brown and Co., Montreal; Bradford Infirmary, Sec. of.

C.—Dr. J. R. T. Conner, Lond.; Dr. F. H. Champneys, Lond.; Hon. S. Coleridge, Lond.; Dr. F. E. Carey, Guernsey; Prof. M. Charteris, Glasg.; Dr. J. Clarke, Glasg.; W. F. Collings, Sark; Mr. J. T. Clarke, Negri, Sembilan; Chemists' Cycle Supply Co., Coventry; Messrs. Crossley, Moir, and Co., Lond.; Messrs. Cassell and Co., Lond.; Cortland Wagon Co., Lond.; Messrs. Childs and Co., Lond.; Chelsea Hosp., for Women, Lond.; Mr. J. Cox, Montreal; Sir Savile Crossley, Lond.; Dr. E. Casey, Windsor; *Le Courrier de la Presse*, Paris; Church Army, Lond., Central Committee of; *Canada Lancet*, Toronto, Manager of; Messrs. T. Christy and Co., Lond.; Chamberlain Medicine Co., Des Moines, Iowa, U.S.A.; Mrs. A. M. Campbell, Lond.; Dr. R. Craik, Montreal.

D.—Dr. T. V. Dickinson, Lond.; Dr. D. d'Esterre, Lond.; Mr. Dixon, Barnes; Dalu-Kola Tea Co., Lond.; D., Birmingham; Mr. J. Davis, Pontypridd; Dr. F. Dittmar, Glasg.; Mr. A. C. Dowell, Lond.; Derby Royal Infirmary, Derby, Sec. of; Mr. W. T. Deeks, Shanklin; Messrs. Down Bros, Lond.; Mr. T. Dixon, Lond.; D. P. H., Lond.; Dr. A. T. Davies, Lond.

E.—Mr. J. W. Eastment, Surbiton; Examination Hall, Lond., Sec. of; Dr. C. J. Edgar, North Hatley, Province of Quebec; Dr. L. Edmonds, Harwich, Mass., U.S.A.

F.—Dr. A. Mearns Fraser, Portsmouth; Mr. C. E. Field, Lyme Regis; Dr. D. Forbes, Bootle; Mr. P. J. Freyer, Lond.; Dr A. Foxwell, Birmingham; Facilis, Lond.; Dr. F. G. Finley, Montreal; Messrs. Ferris and Co., Lond.

G.—Dr. A. R. Galloway, Aberdeen; Mr. F. Gahne, Belize, British Honduras; Dr. A. E. Giles, Lond.; Mrs. H. Graves, Derby; Guest Hosp, Dudley, Sec. of; Messrs. Giles, Schacht, and Co., Clifton.

H.—Mr. M. D. Harmer, Lond.; Dr. S. Hamilton, Newport, Mon.; Dr. W. S. Hedley, Lond.; Messrs. Horlick and Co., Lond.; Messrs. J. Haddon and Co., Lond.; Hull Borough Asylum, Steward of; Messrs. C. J. Hewlett and Son, Lond.; Dr. E. W. Hamilton, Lond.; Mr. T. Holland, Lond.; Mr. F. W. E. Hutchison, Finching field; Messrs. Hockin, Wilson, and Co., Lond.; Mr. F. Howard, Lond.; Hypatia, Guernsey; Mr. J. Heywood, Manchester. Hants County Asylum, Fareham, Clerk of.

J.—Mr. W. H. Jones, Wichita, Kan., U.S.A.; Dr. Wyatt Johnston, Montreal; Mr. W. H. Jamieson, Montreal; Dr. T. Jameson, Rochester, N.Y.

K.—Mr. E. Knight, Lond.; Dr. J. S. Keser, Lond.; Dr. O. J. Kauffmann, Birmingham; Dr. H. Kenwood, Lond.; Messrs. R. A. Knight and Co., Lond.; Messrs. Knight, Franks, and Rutley, Lond.; Mr. B. Kühn, Lond.; Dr. R. C. Kirkpatrick, Montreal.

L.—Mr. A. E. Lyster, Chelmsford; Dr. J. A. Lycett, Wolverhampton; L.R.C.P., Lond.; Messrs. Lee and Nightingale, Liverpool; Messrs. Longmans, Green, & Co., Lond.; Liquor Carnis Co., Aston Clinton; Lawrence Patent Water Softener and Sterilizer, Lond.; Leeds Infirmary, Manager of; Leeds Hosp. for Women and Children; Dr. T. Laird, Heywood; Dr. J. F. Little, Lond.

M.—Mr. J. H. Morgan, Lond.; Mr. T. Moring, Lond.; Maternity Charity and District Nurses' Home, Plaistow, Sec. of; Dr. L. S. Mackenzie, Bradford; Mr. C. F. Marshall, Lond.; Mr. J. MacDonald, Edin.; Mr. C. K. Morris, Lond.; The Merck Pharmacy, New York; Messrs. May and Rowthen, Lond.; Messrs. Michell, Goodman, Young, and Co., Lond.; Messrs. Macniven and Cameron, Edin.; Maltine Manufacturing Co., Lond.; M. J., Edin.; Medicus, Hove; Mr. G. H. Makins, Lond.; Dr. T. E. F. MacGeagh, Lond.; Metropolitan Provident Medical Assn., Thames Ditton, Council of; Medical Faculty, McGill University, Montreal, Librarian of; Messrs. Masson et Cie, Paris; Messrs. Mather and Crowther, Lond.; Midlands, Lond.; Dr. Martin, Leeds.

N.—Mrs. M. North, Dudley; Messrs. J. Norrenberg and Co., Lond.

O.—Messrs. Oppenheimer, Son, and Co., Lond.

P.—Dr. F. W. Pavy, Lond.; Mr. F. T. Paul, Liverpool; Mr. W. Poppelreuter, Manchester; Price's Patent Candle Co., Lond.; Messrs. Piggott Bros. and Co., Lond.; Dr. T. F. Pearse, Southsea.

R.—Dr. G. A. Reid, Southsea; Mr. F. J. Reilly, Lond.; Registered Nurses' Society, Lond.; Rotherham Hosp., House Surg. of; Messrs. Robertson and Scott, Edin.; Messrs. Reynolds and Branson, Leeds.

S.—Dr. S. F. Shamoun, Alexandria; Mr. J. S. Sharman, Lond.; Dr. D. W. Samways, Mentone; The Sanitary Institute, Lond., Sec. of; Mr. P. J. A. Seccombe, Lond.; Dr. T. D. Savill, Lond.; St. George's Hospital Medical School, Lond., Hon. Sec. of; S. E., Lond.; St. Andrew's Hosp., Northampton; Messrs. Street and Co., Lond.; Mr. H. G. Saward, Lond.; Mr. A. Stenhouse, Glasg.; Messrs. Savory and Moore, Lond.; Messrs. Sly Bros., Oxford; Dr. S. J. Sharkey, Lond.; Mr. G. Slater, Sheffield; Salutaris Water Co., Lond.; Sanitary Wood Wool Co., Lond.; Southall Bros. and Barclay, Birmingham; St. Bartholomew's Hosp., Lond., Sec. of; Messrs. R. Sumner and Co., Liverpool; Shanghai and Foochow Tea Assn., Lond., Sec. of; Shrewsbury, Borough of, Town Clerk of; Messrs. W. H. Smith and Son, Manchester.

T.—Dr. F. S. Toogood, Lewisham; Mr. W. G. Thistle, Lond.; Dr. G. Thin, Lond.; Dr. H. Thompson, Cheltenham; Mr. L. D. Tyers, Harrow.

U.—University College of South Wales, Cardiff, Sec. of; University College, Bristol; Unitas, Lond.

V.—Victoria Hosp., Folkestone, Sec. of; Messrs. Violet Frères, Lond.

W.—Mr. A. Wright, Romford; Mr. W. M. Wills, Lond.; Mr. A. H. Ward, Lond.; Earl of Winchilsea, Lond.; Mr. S. Wand, Leicester; Mr. W. F. Webster, Tunbridge Wells; Mr. M. Wallis, Tottenham; Weston-super-Mare Hosp., Hon. Sec. of; Dr. A. McC. Weir, East Sheen; Messrs. G. C. Wyman and Co., Lond.

Y.—Dr. J. M. Young, Hamilton; The Yarrow Home, Lond., Sec. of; Yorkshire College, Leeds, Registrar of.

Letters, each with enclosure, are also acknowledged from—

A.—Prof. Allbutt, Cambridge; A. B. C., Lond.; Ajax, Lond.; A. K., Lond.; Aurum, Lond.; Mr. W. F. Abbott, Addlestone; Apex, Lond.

B.—Mr. J. L. Bragg, Lond.; B. P., Lond.; Mr. P. Boyd, St. Leonards-on-Sea; Barney, Lond.; Mr. G. Buxey, Southampton; Mr. W. Bates, Lond.; Mr. Baxter, Mannington; B. A., Lond.; Messrs. Benger and Co., Manchester; Mr. J. P. Brookes, Wolverhampton; Boscombe, Lond.; Messrs. W. H. Bailey and Son, Lond.; Bromidia, Lond.; Mr. A. Burns, Sheffield; Mr. J. P. Bourne, Liverpool; Mr. G. A. Brown, Tredegar; Brevis, Lond.

C.—Mr. S. L. Cocks, Diss; Cosmopolitan, Lond.; Cellular Clothing Co., Lond.; Dr. R. Cox, Theale; Mr. J. J. Culmer, Nassau, Bahama.

D.—Mr. M. Dobbs, Folkestone; Delta, Liverpool; Dr. C. R. Drysdale, Lond.; Mr. A. B. Du Prey, Port of Spain, Trinidad.

E.—Mr. W. McA. Eccles, Lond.; Etablissement Thermal d'Uriage, France; Epsilon, Lond.

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The Lumleian Lectures

ON

SOME PROBLEMS IN CONNEXION WITH APHASIA AND OTHER SPEECH DEFECTS.

Delivered before the Royal College of Physicians of London, on April 1st, 6th, and 8th, 1897,

BY H. CHARLTON BASTIAN, M.A., M.D. LOND., F.R.S.,

CENSOR OF THE COLLEGE; PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

LECTURE II.[1]

Delivered on April 6th, 1897.

MR. PRESIDENT AND GENTLEMEN,—After the full discussion of physiological first principles in the last lecture, I now propose to limit myself to a consideration of certain parts only of the very extensive subject of speech defects, and I have selected those parts which are of most general interest and that have hitherto given rise to most discussion. I shall not deal at all with defects dependent upon lesions beneath the cortex—that is, neither with anarthria nor with aphemia; nor shall I consider, except incidentally, the effects of lesions of the commissures between the different word-centres. I shall confine my attention to the effects of lesions of the four word-centres themselves, both separately and in combination. And when I say lesions I mean for the most part gross lesions, for time would not permit of my dealing with the many varieties of aphasia due to transitory lesions or functional disabilities in Broca's region. And even when thus narrowing the subjects to be dealt with in this and the next lecture, I find myself over-burdened with matter—partly because of discordant views that must be discussed, and partly because in the present state of knowledge and opinion concerning these speech defects it would be impossible for me to attempt to substantiate my own opinions without quoting a number of cases the full details of which the time at my disposal will not permit me to read.

STRUCTURAL DEFECTS IN THE GLOSSO-KINÆSTHETIC AND CHEIRO-KINÆSTHETIC CENTRES.

These kinæsthetic centres are, as I have already observed, concerned more with the expression of thought than with the thinking process. Their activity is in the main roused as thought is about to translate itself into action. These centres form the last outposts on the side of ingoing currents, and constitute at the same time the starting points for outgoing currents. They are situated at what psychologists have spoken of as "the head of the stream." Although with lesions limited to these regions the power of thinking may not be very greatly interfered with, still it is nearly always interfered with to some extent, so that patients having such lesions do not usually exhibit anything like the same amount of mental clearness as that shown by patients suffering from aphemia. It is true that the latter very frequently preserve their power of communicating their thoughts by writing, whilst aphasic patients do so only rarely. Any mental disability in the latter would therefore tend to appear greater than it really is. But this only very partially explains the apparent difference in mental power that is commonly met with. The fact that speech and writing are so frequently involved together in typical cases of aphasia is due partly to the proximity of the glosso- and the cheiro-kinæsthetic centres, and, as we shall subsequently see, perhaps not less to the proximity of the two sets of commissural fibres connecting these centres with the auditory and the visual word-centres respectively. Damage to these commissures may, in fact, be a cause of typical cases of aphasia and of agraphia, as I shall subsequently endeavour to show.

These modes of accounting for the co-existence of agraphia with aphasia undoubtedly hold good for certain cases, and especially for those in which, while there is no paralysis of the right hand and arm, the agraphia is complete—copying (except laboriously and slowly) being no more possible than writing spontaneously or from dictation. The destruction either of the cheiro-kinæsthetic centre or of the commissure connecting it with the visual word-centre ought to produce such decided results as this. On the other hand, if no other disturbing cause were in operation, there is no reason why such a patient should not be able to write well with separate wooden letters (*écriture typographique*) either spontaneously or from dictation. And in cases where such a patient is paralysed in the right hand there would be no reason why he should not, with practice, become able to write in all modes with his left hand.

Whether the combination of aphasia and agraphia is mostly due as I think, to this simultaneous implication or functional derangement of the cheiro-kinæsthetic centre and the commissure uniting it with the visual word-centre or to some other cause must for the present be regarded as a moot point. Formerly a different view was taken. Thus some of the earlier observers of aphasic cases, such as Trousseau, Hughlings Jackson, and Gairdner, seemed to consider that the inability to write was as much a result of a lesion in Broca's centre as inability to speak, and contended, indeed, that there was almost always a parity between these defects. Trousseau,[2] for instance, says: "The inability to write is proportionate to the inability to speak"; and again: "Aphasics write as badly as they speak, and those who do not speak at all are absolutely incapable of writing." Gairdner expresses himself in almost similar terms. Hughlings Jackson is even more decided in his opinion. Thus he says[3]: "If a patient does not talk because his brain is diseased, he cannot write (express himself in writing). ..... I submit that the facts that the patients do not talk, and do write and do swallow, are enough to show that there is no disease at all."

One of the first to dwell upon the marked inequality that may be met with between these two disabilities was W. Ogle,[4] to whom we owe the introduction of the term "agraphia." More than ten years previously, however, Marcé[5] had insisted upon the independence of these two defects. Thus, speaking of inability to write, he said: "It is independent of the faculty of expression [by speech], since twice the patients could write freely when they were quite unable to speak. It is independent of the motility of the hand, since even when the hand has preserved all its power writing has been found to be impossible."

The dependence of ability to write upon the integrity of a cortical centre altogether distinct from that by which articulate speech is effected is, I think, practically certain, but this is but another aspect of the question previously put, and will have to be considered more fully a little later. For the present it is assumed that there are two such separate but contiguous centres; and if this be true, that they are frequently affected simultaneously (either structurally or functionally) in cases of aphasia may be fully recognised. Still in some cases either the glosso-kinæsthetic or the cheiro-kinæsthetic centre seems to be in the main involved, so that in one case speech may be principally interfered with, while in another it is more especially writing that is made difficult or impossible. This latter kind of defect is much less frequent, and usually less noticeable, than the former, because the patient is also often more or less paralysed in the right hand and arm. In such cases attempts at writing would only be possible, if at all, where the left hand and the right side of the brain have been more or less educated, and frequently no serious attempts have been made in this direction.

Though aphasic patients are unable to give voluntary and preconsidered expression to their thoughts; words, or even short phrases and oaths, may occasionally be uttered under the influence of strong emotion. We often find these patients able to make use of short familiar words like "yes" or "no" in response to questions addressed to them, though they may be often inappropriately employed. The articulation of such words, or "recurring utterances" as they are now commonly termed, is generally supposed to be brought about through the intervention of the comparatively uneducated right third frontal convolution, and this subject will be referred to more fully later. As Hughlings Jackson originally pointed out, such a patient is quite unable to repeat one of these words which he is continually bringing out, or, indeed, any other simple vowel sound, when he is asked to do so. He cannot utter it, that is, in a purely voluntary manner, in response to a request or command. Another interesting

[1] Lecture I. was published in THE LANCET of April 3rd, 1897.

[2] Lectures (Translation by Bazire), 1866, p. 261.

[3] Brain, vol. i., 1878, pp. 320 and 329.

[4] St. George's Hospital Reports, vol. ii., 1867.

[5] Mémoires de la Société de Biologie, 1856.

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peculiarity is also often seen when resident foreigners become aphasic. During recovery it is found that they are at first only able to express themselves in that language in which they are most thoroughly versed—namely, in their own native tongue. I have seen this in several patients. Two were Germans who had been long resident in this country; yet after an attack of right hemiplegia and aphasia each of them was for a long time unable to utter a word of English. When they began to speak they used German words only; and after they had further recovered, if occasionally in want of a word while speaking English, it was always a German equivalent that first presented itself.

There are many instances on record in which, though the aphasic condition itself has been complete and associated with more or less agraphia, the mental powers of the patients have been fairly well preserved. Many of such individuals have been able to read intelligently to themselves, and play games, like draughts or cribbage, perhaps better than their neighbours.

The powers of articulation and of speech remaining to aphasic patients are very various, but may generally be ranged under one or other of the following heads: (*a*) Cannot utter a sound, or only mutters inarticulately; (*b*) constantly repeats some meaningless sound or sounds such as "tan-tan" or "cousisi"; (*c*) uses some one or two single words such as "yes" and "no,"; and also mere sounds such as "ba-ba" or "poi-boi-ba"; (*d*) uses some short phrase habitually, such as "list complete," or "I want protection"; and (*e*) uses three or four words or expressions, though in themselves meaningless or irrelevant, in a constant and definite manner, as in Broca's case (Lelong), in which the words "oui," "non," "trois," and "toujours" were so employed.

An examination of the recorded cases in which aphasia has been produced by lesions more or less completely localised to Broca's region, or to it and the foot of the second frontal convolution (the supposed seat of the centre for writing), by no means suffices, as some suppose, to establish the view that agraphia is to be regarded as one of the effects of a lesion in the foot of the left third frontal gyrus. It will rather be seen, on the whole, to lend considerable support to the opposite notion that co-existing agraphia in such cases is to be regarded as a result of a coincident damage to, or functional perturbation in, the foot of the contiguous second frontal convolution. The evidence afforded by such cases, however, is much less conclusive than it should be, owing to the fact that in so few of them have careful observations been made as to the ability of the patient to write some days after the occurrence of the lesion, when the mere perturbation of brain functions that it may have caused has had time to subside.

Of the first two cases of aphasia that were recorded by Broca,[6] in one the lesion was old and widespread, though the left third frontal convolution was one of the parts that were destroyed; in the other the lesion was limited to the posterior parts of the left third and second frontal convolutions, and there was as a consequence loss of speech and writing, without any paralysis of limbs. This was, therefore, altogether the most memorable case, since by means of it more especially the first attempt was made to limit the situation of the region in the left frontal lobe damage to which gave rise to aphasia. The following is an abstract of this classical case:—

CASE 1.—Lelong, aged eighty-four years, was admitted into the surgical ward of the Bicêtre, Oct. 27, 1861, under the care of Broca. In the month of April, 1830, he had had a slight apoplectic attack, from which in a few days he was convalescent, no paralysis of limbs having been observed, though his speech was lost except for four or five words. His intelligence seemed unimpaired. He understood all that was said to him; and apart from his very scanty vocabulary he made use of expressive gestures. He remained in much the same condition for eighteen months, that is up to the time of his coming under Broca's care. To his questions he only replied by signs, accompanied by one or two syllables pronounced hastily and with visible effort. Broca says:—"These syllables had a meaning. They were French words, viz., *oui*, *non*, *lois* (for *trois*), and *toujours*. He had a fifth word, which he pronounced when one asked his name. He then replied, 'Lelo' for Lelong, his real name. . . . The first three words of his vocabulary corresponded each to a definite idea. In affirming or approving he said 'oui.' In expressing the opposite idea he said 'non.' The word 'tois' expressed all numbers, all numerical ideas. And lastly, whenever these three words were not applicable Lelong helped himself with the word 'toujours,' which in consequence had no definite meaning. I asked him if he knew how to write 'oui'; if he could do it. 'Non.' 'Try.' He tried, but he could not succeed in directing the pen." Broca gives details of his conversations with Lelong in illustration of these points. His sight and hearing were good. The tongue was protruded straight and was moveable in all directions. There was no paralysis of the limbs. This patient died twelve days after his admission, and at the necropsy the remains of an old hæmorrhage was found in the form of a small cavity filled with serum, and having its walls infiltrated with altered blood pigment, occupying the posterior third of the second and third frontal convolutions. This was evidently the lesion which occurred when he suddenly lost his speech about twelve months previously, as other parts of the brain showed no focal lesion of any kind.

[6] Bulletin de la Société Anatomique, 1861.

Tamburini and Marchi[7] have also recorded a case of destruction of the second and third left frontal convolutions which was associated during life with aphasia and agraphia.

Another case has been recorded by Simon[8] in which there was a traumatism affecting these same convolutions.

CASE 2.—A perfectly healthy man fell from his horse. He got up at once, took hold of the bridle, and was about to vault into the saddle, when a physician, who by chance accompanied him, approached and examined him. He was unable to speak, but made himself understood by signs. No paralysis whatever was present. On the head there was a small wound with depression of the bone. Later, when death ensued from meningitis purulenta and inflammatory softening of the brain, a bit of bone that had been broken off was found in the left third frontal convolution which, together with the second and the island, was softened. In the skull there was only a perfectly round hole, no crack or fracture in any part.

Nothing is said here as to the presence of agraphia, but it would probably have manifested itself as soon as the inflammatory softening caused by the original traumatism had extended so as to involve the posterior part of the second frontal convolution. Probably the condition of the patient, however, was too serious to permit of this being tested.

A case has been recorded by Rosenstein[9] in which it is said that a hæmorrhagic softening involving the third frontal convolution only gave rise to both aphasia and agraphia.

CASE 3.—A woman, aged twenty-two years, was admitted into hospital suffering from a fever of intermittent type, and from nephritis. She was ill for several months, and whilst recovering from this affection she was suddenly seized with severe cerebral symptoms. The countenance was pale, the expression staring, the pupils dilated. She understood what was said to her, and put out the tongue when asked. She took a drinking-glass when it was offered to her. She tried to answer, but in reply to questions could only say "Ja, Ja." She nodded approvingly when one guessed what her wishes were. She had formerly been able to write well, but now when requested to do so she only made all sorts of scrawls, but no letters. She lived sixteen days longer without the aphasia disappearing, and then died from a thoracic complication. At the necropsy a clot the size of a hazel-nut was found in the third frontal convolution, surrounded by a limited area of secondary softening. The precise site of the clot in the third frontal convolution is not stated.

In regard to this case it may be fairly said that the sudden irruption of a clot of blood of the size of a hazel-nut into the third frontal convolution may well have inhibited for a time the functions of the immediately adjacent portion of the second frontal convolution, and it is also by no means clear that the secondary softening may not have slightly extended into this part.[10] It will be of interest here, also, to quote a case of combined aphasia and agraphia in association with right hemiplegia, and therefore presumably the result of a much larger lesion. It is one of the cases recorded by Trousseau,[11] but in which there was no necropsy. The patient was, as is very often the case in true agraphia, able to write his own name, though nothing else. Trousseau says:—

CASE 4.—"In August, 1863, a lady came to consult me with her son, aged twenty-five years. Four years previously this young man had for several days complained of headache, when he suddenly called out to his mother one morning, 'Oh! I feel something extraordinary inside me.' These were the last words he spoke. His right arm and leg became numb, and after a few hours the hemiplegia was complete. After a short period he regained some power of moving first his leg and then his arm; but when he came to me he still walked with difficulty, and could only use his hand for very rough purposes. The aphasia, however, which had from the first day been complete, had not diminished. He could articulate two words only—'No' and 'Mamma.' 'What's your name?' 'Mamma.' 'What's your age?' 'Mamma, No.' He yet knew that he did not answer as he ought. He had taught himself to write with the left hand, but had not got beyond signing his own name, Henri Guénier. He wrote it very legibly on a piece of paper which I gave him. 'Since you write your name,' I then told him, 'say Guénier.' He made an effort, and said 'Mamma.' 'Say Henri.' He replied, 'No, Mamma.' 'Well, write Mamma.' He wrote 'Guénier.' 'Write No.' He wrote again 'Guénier.' However much I pressed him I could obtain nothing more. His mother informed me that he could play a pretty good game of cards or dominoes."

[7] Rivista Sperimentale di Freniatria et di Medicina Legale, 1883, anno ix., p. 282.

[8] Quoted by Kussmaul, Ziemssen's Cyclopædia, vol. xiv., p. 735.

[9] Berliner Klinische Wochenschrift, 1868, p. 182.

[10] A case of aphasia in a boy five years old, resulting from a traumatic lesion limited to the third frontal convolution, has been recorded by Duval, and is cited by Bateman (On Aphasia, second edition, 1890, p. 196).

[11] Loc. cit., p. 237.

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Here we do not know the extent of the lesion. In such a case, however, it would have been immaterial whether the second frontal was involved in the lesion or not, because, as I shall subsequently show, destruction of this centre together with Broca's centre would not prevent a patient learning to write with his left hand, provided the left auditory and visual word-centres were not damaged at the same time. No sufficient details are given by Trousseau to enable us to decide whether the visual word-centre was or was not affected. It certainly may have been, judging from the fact that this young man had been unable to do more than learn to write his own name during the four years that had elapsed since the commencement of his illness—this being generally the extent of the achievement in this direction of patients who are agraphic by reason of a defect in the visual word-centre. Although this case, therefore, may have influenced the opinion of Trousseau, the modern development of knowledge enables us to say that it furnishes no evidence in elucidation of the question whether or not agraphia as well as aphasia is a necessary result of a lesion limited to the left third frontal convolution. I say this with all the more confidence because W. Ogle has recorded a case in which there was right hemiplegia and aphasia, though the patient could write with the left hand, and at his death the second left frontal convolution was found to be intact.[12] The essential details in this case are these :—

CASE 5.—A man, who had suffered from rheumatism and was the subject of aortic and mitral disease, had three days before admission to hospital fallen down, without loss of consciousness, and had found himself hemiplegic and aphasic. On examination, his speech was found to be limited to the two words "yes" and "no." At first he had difficulty in deglutition and in putting out his tongue, but these symptoms passed away in a few days. He understood all that was said to him, and expressed himself well by pantomime. In regard to his writing W. Ogle gives us the following information: "He could write with his left hand with sufficient distinctness words which he could not pronounce when asked to do so. In his writing there was often a tendency to reduplication of letters. For instance, he wrote 'Testatament' for Testament. But I cannot say whether this was more than the result of defective education." The necropsy showed the brain to be healthy, except at two limited spots, of which the chief was the posterior part of the third frontal convolution on the left side. Here was a softened and almost diffluent patch, about three-quarters of an inch in breadth, reaching from the highest part of the third convolution backwards and downwards to the fissure of Sylvius. The softened part was not actually the most posterior part of the convolution, for there was a narrow unsoftened strip between it and the transverse (ascending) frontal convolution. On cutting into the brain a second small patch of softening was seen in the centre of the left hemisphere, external to and rather above the corpus striatum, and extending towards the posterior extremity of the fissure of Sylvius.

Here, then, where we have the third left frontal affected whilst the second frontal convolution was proved to be healthy, there was aphasia, but no agraphia; and we may, perhaps, assume that a similar exemption from disease of the second frontal convolution existed in a case of my own in which there was a similar combination of symptoms.

CASE 6.—An active and intelligent man, a builder by trade, had an apoplectic attack associated with convulsions, which left him paralysed on the right side and quite speechless at first. His mind was also much confused for a time, but after two or three weeks he became able to understand what was said to him. The only articulate sounds he was able to utter for the first nine or ten months were "bi-bi-bi," "poy-boy-ba," and "no." After fifteen months he became able to say both "yes" and "no" appropriately; though whilst he continued under my care I never heard him utter any other articulate sounds than those above cited, and according to the statements of his wife this was the extent of his vocabulary. He had regained almost the complete use of his right leg, though the hand and arm still continued very powerless. He had practised writing with his left hand, and wrote fairly well with it. He was asked to write a letter to me, and the next time I saw him he gave me a note of which the following is a literal copy:—

"Jany. 5, 1869.

"Sir,—I am extremely obliged to you for the trouble you have taken about my affairs. You did not say thether *(sic)* you hav recovered from the severe cold and cough that you told me you were suffering from. I sincerely hope that you have quite recovered your health and strength.

"I am,

"_____."

This note was written, his wife informed me, in less than half an hour, and without any assistance. Yet since his attack this same patient had only been able to utter the two or three words and sounds above mentioned. He seemed to understand everything that was said to him, and appeared also to understand the newspaper equally well when he read it, which he did habitually. When told to count twenty by tapping on the table with the forefinger of the left hand, he did it rapidly and always correctly. . . He could add quite correctly columns containing five figures when the numbers were low, but often got puzzled and made mistakes when the numbers were higher. According to his wife's statement he had been much more irritable than he was before his illness. He had several epileptiform attacks after the one with which his illness commenced, and on each occasion the convulsions were almost limited to the right side of the body.

In each of these cases, even where there has been no agraphia, there has been a more or less distinct lowering of mental power, as compared with that which occurs in the class of cases due to subcortical lesions which I include under the term "complete aphemia." For this there are two causes. First, there is the fact that in these cases of aphasia the brain may have been more considerably and widely damaged by the various structural lesions that have occurred than has been the case in the aphemic group of cases. Secondly, there is the fact that in the cases of aphasia one kind of word-memory is blotted out, whilst in aphemia none of the forms of word-memory are interfered with. Although the kinæsthetic memory of words is, as I have previously said, much less important for the carrying on of thought processes than the revivals which occur in the auditory and in the visual word-centres, still the destruction of the glosso-kinæsthetic centre may interfere with the functional activity of the other two centres. And this interference with the customary completeness of the processes of association concerned with thought and speech might be expected to lead to more or less of mental deterioration.

The degree to which this interference with thought occurs may, however, in an uncomplicated case of disease limited to Broca's region be extremely slight—almost inappreciable in fact—and moreover associated with no impairment in the power of writing. A very remarkable case of this type has been recorded by Guido Banti[13] which will well repay the most careful attention, because it speaks most authoritatively against the views of Trousseau and the other writers already referred to who have taught that agraphia, as much as aphasia, is a result to be expected from an isolated destruction of Broca's region.

CASE 7.—A right-handed man, aged thirty-six years, who was able to read and write correctly, had a sudden apoplectic attack in 1877. Recovering consciousness in a few minutes he was found to be suffering from right hemiplegia and loss of speech. The paralysis of the limbs disappeared almost completely during the following night, though the inability to speak persisted. The next day he was admitted into hospital, and on most careful examination his condition was found by Guido Banti to be as follows:—"The motility of the limbs on the right side had returned to their normal condition. There was no trace of paralysis of the face or of the tongue. The patient made ineffectual attempts to speak; *he could not articulate a single word*, not even isolated syllables. He was much affected by this mutism, and sought to make himself understood by gestures. I asked him if he knew how to write, and after he had made a gesture in the affirmative I gave him what was necessary and told him to write his name, which he did immediately. I put various other questions to him, to which he replied similarly by writing. I told him to give me a description of his illness, and *he wrote without hesitation* the details above reported. I showed him various objects, pieces of money, &c., telling him to write their names, and he did so without making any mistakes. Then instead of giving him these directions by word of mouth, I wrote them for him in order to thoroughly convince myself that he was able to understand writing. He replied to these questions with perfect correctness. He always wrote very rapidly and did not seem to hesitate to choose his words. He made no mistakes in syntax or orthography. He could understand equally well ordinary writing and print, and when one spoke to him he grasped at once the meaning of the questions, and never wished to have them repeated. I next wrote some most simple words, such as 'pain,' 'vin,' &c., and urged him ineffectually to read them aloud. I then pronounced myself some of the words, directing him to repeat them. He appeared to watch with great attention the movements of my lips whilst I spoke; he made some ineffectual efforts to obey, but he never succeeded in pronouncing a single word." This patient died in February, 1882, from an aneurysm of the aorta; and a patch of yellow softening was found situated in the posterior third of the third left frontal convolution, and extending for some millimetres only into the white substance.

Here, then, we have a patient with a lesion destroying, but limited to, Broca's region, in whom there was loss of speech but no trace of agraphia, the patient being able to write well with his right hand. It is also of importance to note that there was here no more mental impairment than is found to exist where speechlessness is due to a sub-cortical or a bulbar lesion—that is, in a case of aphemia or of anarthria. But for the result of the necropsy I should have regarded this case as one of complete aphemia. It shows, therefore, that there may be no clinical differences present to enable us to make this differential diagnosis, even though in the one case we have destruction of Broca's region, and consequently no kinæsthetic revivals of words possible, while in the other this kind of word memory is in no way interfered with, and there is also less chance that the lesion would lead to any interference with the functions of the auditory and the visual word-centres. For another very interesting case of aphasia in some respects similar to the last I am indebted to the kindness of Dr. Dickinson.

[12] Loc. cit., p. 105.

[13] Afasia e sue Forme, Lo Sperimentale, 1886, lvii., Obs. II., p. 270, and quoted by Prévost in the Revue Médicale de la Suisse Romande, June 30, 1895.

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CASE 8.—A sailor, aged forty-nine years, was admitted to St. George's Hospital under Dr. Dickinson's care, having had a fit in a neighbouring public-house. He had landed a few days before, and had been robbed in some place of resort for sailors, and had been much disturbed in mind in consequence. One and a half hours after admission he had recovered consciousness and intelligence, but not his speech. He could not say anything intelligibly except the word "no," but the remarkable fact about his case was that he could express himself perfectly in writing, which he did with his left hand. He was hemiplegic on the right side, the right arm being completely powerless, the right leg partially so; there was also slight loss of sensibility over the whole of the right side of the body. For three weeks his speech was limited to the use of the word "no," a sound like "yong" which stood for "wrong," and the frequent repetition of the syllables "yah yah," which stood for everything. Told to repeat a sentence or phrase, "Great Britain and Ireland" or any other, he uttered the same "yah yah yah" for either. But he could express himself in writing as fluently and correctly as if his faculty of spoken language were uninjured. He wrote daily reports and an autobiography during the time that he was unable to speak. He understood perfectly all that was said to him. He retained his sense of music, and could whistle "God Save the Queen." On the twenty-fourth day after the seizure it was evident that his speech was improved; he could say "doctor" and "better." In the evening his full power of speech was rather suddenly restored. The limbs recovered more gradually, the leg sooner than the arm. He left the hospital six weeks after admission, able to walk, but not to lift his right arm. Dr. Dickinson adds:—"The perfect ease and fluency with which the man wrote with his left hand showed that he had been in the habit of doing so. He was in common phrase left-handed, though he said he was not to be called so, since he used both hands equally."

Though in many respects different from the case previously recorded, this resembles it in the fact that we have to do with what certainly seems to be a simple case of aphasia without appreciable mental degradation and with the power of writing unimpaired. The case is also interesting since it constitutes an exception to the very general rule that left-handedness suffices to transfer the leading speech activity to the right side of the brain, and because of the further exceptional circumstance that being left-handed the patient had not been taught to write with his right hand. Another case that was recorded many years ago by Wadham[14] is in some respects even more remarkable, and all the more convincing because it was followed by a necropsy. It will be observed also that before death the patient had regained his power of speaking. The essential details are as follows:—

CASE 9.—A youth, aged eighteen, left-handed and ambi-dextrous, became partly hemiplegic on the left side and completely speechless after long exposure to cold, and was admitted to St. George's Hospital under the care of Dr. Wadham. Twelve days later, on being given a slate and pencil, he wrote readily the word "orange," and when asked his name also wrote that correctly with his right hand, although his mother asserted that she had never previously seen him do so. He and four of his brothers were left-handed. About a week after this, being still absolutely speechless, when asked whether he tried to speak and was unable he wrote "Yes." Asked if when well he wrote with his right or with his left hand, he wrote "Both," and then added, "Fight with left." In six weeks' time the left hemiplegia had much diminished, but he had still never spoken a word and continued to write all his wishes on a slate. His manner gave the impression of his "being very intelligent and rather facetious." At the expiration of three months he left the hospital, and when seen at his own home two weeks later Dr. Wadham says: "I found that at his mother's dictation he repeated after her various words and sentences with the intonation employed by one who endeavoured to speak without moving his tongue." This power was gradually increased until at last he was able to talk with sufficient distinctness to be perfectly understood by those accustomed to him. He subsequently suffered from necrosis of the jaw, and three months after his discharge was re-admitted to the hospital. After an operation on the jaw he became able to move his tongue naturally. His articulation subsequently was indistinct, but he "had no difficulty in producing words, and always used the right ones." He died twelve months after the onset of his illness. At the necropsy a large area of softening was found in the right hemisphere, involving part of the white substance beneath the Rolandic area, and completely destroying the island of Reil. The left hemisphere was found to be perfectly healthy.

It may be thought by some that these two cases have little bearing upon the question we have been considering. But this would be an erroneous impression. Certain authorities maintain, as I have said, that destruction of the third frontal convolution alone in the leading hemisphere for speech gives rise to agraphia as well as aphasia. They believe, for reasons that will be more fully specified presently, that destruction of Broca's centre hinders the revival of words also in the other word-centres, and thus prevents writing by stopping the process at its source. But in the cases of Ogle, of Guido Banti, and of Wadham—and possibly in that of Dickinson—we see that the ability to think and write was not interfered with by such a lesion in the leading hemisphere for speech, and therefore that the activity of the corresponding auditory and visual word-centres was neither suppressed nor gravely interfered with.[15]

The case reported by Wadham is further of special importance because it has been contended by Déjerine and also by Mirallié,[16] upon the basis of four cases (without necropsies) of aphasia with left hemiplegia occurring in left-handed persons, in whom the power of writing was lost simultaneously, that this loss is the rule and only what might be expected. The cases I have cited show, however, that it is not the rule, and leave us free to suppose that those of Bernheim, Parisot, Magnan, and Déjerine (where the power of writing was lost) were not cases of simple aphasia due to lesions in Broca's region only. The lesions in them may also have involved the visual word-centre in one or other hemisphere, or the commissure between them, and in either of these eventualities we might find an explanation of the co-existing agraphia.

In all the cases of left-handed persons in which the right hemisphere takes the lead in speech, whilst the left hemisphere executes the writing movements, it must be supposed that the right auditory word-centre is the initial centre for the revival of words either for silent thought or for speech, and therefore also for spontaneous writing. Thus in such a person we must assume that the left visual word-centre becomes educated concurrently during the process of learning to write (through the commissural fibres in the corpus callosum), and that the writing process is executed by this left side of the brain in the ordinary way by the passage of stimuli from the visual word-centre on to the corresponding che'ro-kinæsthetic centre.[17]

There is, therefore, no reason whatever why some, and perhaps the majority of, left-handed persons when they become the subjects of left hemiplegia and aphasia should not, after the shock attendant upon the brain lesion has passed, either be able to write at once, as was the case with Dickinson's patient and with the ambi-dextrous patient of Wadham, or else speedily learn to do so. Where there is not this ability after a time, as in the case of Trousseau and one subsequently to be referred to which has been recorded by Déjerine, there would, as I have said, be fair ground for suspecting that the lesion was not confined to Broca's convolution, but was also associated with some damage to the visual word-centre either on the same or on the opposite side of the brain.

Returning from this partial digression concerning the mode in which writing is performed in some aphasic persons, it will be seen that the case of Guido Banti, as well as that of Dickinson and of Wadham, is absolutely opposed to the views of Stricker and Hughlings Jackson. They show that for mere thought, apart from its oral expression, the memorial recall of kinæsthetic impressions may be even less necessary than might have been supposed by those who do not share their views. These cases are equally opposed to the views of Déjerine, Wyllie, Mirallié, and others, who, without looking upon this form of word-memory as the most important of all, nevertheless think that glosso-kinæsthetic revivals are necessary for silent thought, and that without such a process as an initiative there is an inability to recollect words (amnesia verbalis), together with an inability to read and write.[18]

Déjerine seems to have been led to these views in the first place by adopting as does Wernicke, the opinion expressed by Trousseau, Jackson, and Gairdner, that a lesion limited to Broca's region carries with it agraphia as well as aphasia, and that the two defects are almost always proportional to one another. The frequent co-existence and parity of the two defects cannot be denied, but this, as we have seen, may be due to the common simultaneous damage to the glosso- and the cheiro-kinæsthetic centres, or to the commissures connecting these centres respectively with the auditory and the visual word-centres.

[14] St. George's Hospital Reports, vol. iv., 1868, p. 245.

[15] Dally (Ann. Med. Psychol., 1882, p. 252) mentions the case of another left-handed man who had an apoplectic attack resulting in left hemiplegia and aphasia, who was not agraphic, though he wrote in a paragraphic fashion. Two years afterwards he had almost recovered from his hemiplegia, and he could write, speak, and read, though he was unable to spell properly. M. Mesnet mentioned also that he had formerly presented to the society a patient suffering from left hemiplegia and aphasia with preservation of ability to write.

[16] Loc. cit., p. 85.

[17] The process of learning to write here would, in fact, be the converse of what occurs when an ordinary right-handed person suffering from right hemiplegia and aphasia learns to write with the left hand. The only other possibility would seem to be that the incitation for writing should pass direct from the visual word-centre in the leading speech hemisphere (though in a diagonal direction) to the centre for writing in the opposite hemisphere, which seems to me much less probable.

[18] Thus Wyllie, who follows Déjerine, goes so far as to say (loc. cit., p. 314): "There is reason to believe that in every case of severe motor aphasia that is due to destruction of the motor images amnesia verbalis is extremely well marked—even more so, perhaps, than it is in severe cases of auditory aphasia."

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A careful examination of the cases capable of throwing light upon these two interpretations, to some of the best of which I have above referred, tells distinctly against the view, which has been adopted by Déjerine and others, that agraphia is to be regarded as one of the consequences of an isolated destruction of Broca's centre. The fact, however, of Déjerine adopting this view has led, I venture to think, to his attaching an altogether undue importance to destruction of Broca's region, since he not only believes that it interferes with silent thought by hindering the revival of auditory word images, but that it leads to some amount of alexia, and is likewise a cause of agraphia. It has also induced him to bring forth a variety of arguments tending, as he thinks, to disprove the existence of any cortical centre having the same relation to writing movements that Broca's centre has to speech movements. All these positions have, moreover, been recently maintained by his pupil Mirallié in a valuable and interesting work entitled "De l'Aphasie Sensorielle." It will be necessary, therefore, to look at these various opinions in succession, in order to see how far they are warranted by existing knowledge.

1. Does destruction of Broca's region alone entail amnesia verbalis?—To this question I am disposed to give a negative answer. I rely upon the reasons previously adduced to show that words are primarily revived in the auditory word-centre rather than in the glosso-kinæsthetic centre. I can also refer to the case of Guido Banti, as well as to those of Dickinson, Wadham, and others, seeing that the ability of these individuals to write clearly showed that they could recall words and were not suffering from amnesia verbalis. It is true that Lichtheim also agrees with Déjerine and Wyllie in regard to this question. Thus he says[19]: "I think that in most motor aphasics—in those, among others, of the true Broca's type—the patient has lost the auditory word-representations—that is to say, cannot awake them voluntarily by an action of their higher centres." The only safe criterion, he thinks, of the preservation of the auditory symbols in these cases would be obtained by the existence of an ability to write, or, in default of that, the ability to realise the correct number of syllables in any word that cannot be uttered, and to signify this number by giving so many hand-pressures. Both these powers are, he thinks, usually lost in patients suffering from motor aphasia. It has been shown, however, that this is not so in uncomplicated cases of destruction of Broca's region, since, as we have seen, the power of writing persists, and so doubtless would the other test of minor significance to which he refers. I am quite prepared to admit, however, that exceptions to this rule may be occasionally met with. The functional relations of the auditory word-centre with Broca's region on the one side and the visual word-centre on the other are so close that the destruction of either of these centres may be easily conceived to derange the functional activity of the others for a longer or a shorter time. The degree of this derangement may be considered to vary in different persons, perhaps in accordance with the relative potency, original or acquired, of the several centres. Thus in some persons an isolated destruction of Broca's region may disturb to a very slight extent the functional activity of the auditory and the visual word-centres, whilst in others it is quite possible that the severance of this centre from the other two may greatly alter their functional readiness, so that the spontaneous revival of the auditory and visual images of words may in such persons be more or less hindered, and as a consequence the power of thinking and of writing proportionately lowered.

2. Does destruction of Broca's region entail alexia?—I believe that, as a rule, in reading a proper comprehension of the meaning of the text requires a conjoint revival of the words in the visual and the auditory word-centres, but that for this mere comprehension it is not necessary for the stimulus to pass on also to the glosso-kinæsthetic centre, as it must do in reading aloud. It may, however, be freely admitted that if the way is open, and this latter centre is in a healthy condition, it does commonly receive in reading to one's self a slight stimulus from the auditory word-centre, a fact which is often enough shown by the occurrence of involuntary half-whispered mutterings when reading. It may also be admitted that the rousing of all three centres does give assistance in the comprehension of anything difficult, as is shown by the common practice of reading aloud any passage the meaning of which may be at all obscure. By this proceeding aid is obtained, however, not alone by the full rousing of the glosso-kinæsthetic centre, as there is also the full activity of the auditory word-centre following upon the spoken words. This kind of aid is, indeed, commonly needed, as Wernicke pointed out, by an uneducated person for the full comprehension of almost all that he reads. Therefore it may easily happen when such a person becomes aphasic from destruction of Broca's region that alexia may go with the aphasia.[20] Similar aid may be necessary in cases in which there is functional weakness of the visual word-centre. Thus there is now under my care in the National Hospital for the Paralysed and Epileptic a woman, apparently suffering from a tumour in the left hemisphere, who is hemiplegic on the right side and understands readily all that is said to her, but who does not seem to gather the meaning of the simplest written or printed request unless she reads it aloud, which she is able to do without hesitation. She is quite unable to write spontaneously or to copy with the left hand, but then she has made very few attempts in this direction since her right hand became paralysed.[21] It would seem, however, that in some persons the comprehension of writing or printing does not even require the associated activity of the auditory word-centre, so long as the visual word-centre is in a healthy condition and its other associational fibres are intact. This is proved by the fact that in a case recorded by Wernicke and Friedländer,[22] in which there was aphasia associated with word-deafness (due to a lesion in Broca's region and also in the upper temporal convolution), the patient was able to read well and even to write; there is also a valuable case of word-deafness (with lesions in both upper temporal convolutions) recorded by Mills, and to be quoted further on (Case 26), in which the patient was able to understand what she read; and a still more remarkable case recorded by Pick, with very similar lesions (Case 30), in which, although the patient was word-deaf, he could write and comprehend perfectly what he read.

Long before I was aware of the crucial evidence afforded by these cases and that of Guido Banti I did not believe that the comprehension of writing or of print was appreciably interfered with by an isolated destruction of Broca's region—that such a lesion, in fact, did not lead to alexia. For independently of the general views discountenancing such a notion there were Case 6 and two recorded cases by Broadbent, as well as others, pointing in the opposite direction. Some particulars concerning one of these cases recorded by Broadbent may well be reproduced here.[23]

CASE 10.—A man, aged twenty-nine years, was admitted to St. Mary's Hospital on April 3rd, 1870. He had had fits when a child, the last at the age of seven years; and rheumatic fever twelve months previously to his admission. He had not been well, and had left off work for two days. During these two days he talked incessantly all sorts of nonsense. In the night his brother awoke and found him in violent convulsions, mostly of the legs, not more on one side than on the other. The attack lasted two hours; when it was over right hemiplegia with loss of speech was established. On admission the paralysis was complete, the loss of speech absolute, and he could not protrude his tongue. He gradually gained some power in the leg so as to be able to walk about, but the arm remained motionless and flaccid. He could now also say "yes" and "no," but was not always right in his use of these words. On one occasion he twice said "Here" to his sister, when impatient that she had not complied with his wish for her to come to him. He could write his name, but nothing else; and wrote it when asked to write an answer to a simple question. Broadbent adds: "The case presented no unusual features, and is here recorded partly as an example of a rather unusual type of attack in embolism; partly for the purpose of noting that the patient while in the condition described read the newspapers much with apparent interest, and at my request he pointed out a Crystal Palace advertisement of fireworks and an account of pigeon shooting at Hurlingham, the latter very promptly and with a pleased expression, as if he had already read and enjoyed it."

Many of the cases in which there has been alexia co-existing with aphasia are I think clearly cases in which there have been rather wide lesions extending far beyond the third frontal convolution and involving also the visual word-centre. This is the interpretation that I attach to a celebrated case recorded by Trousseau, which evidently influenced his opinion very much. I allude to the wealthy patient whom he saw in consultation in the department of Landes.[24] On this point Trousseau says: "As he always answered 'Yes,'

[19] Loc. cit., p. 471.

[20] Kussmaul, loc. cit., p. 775.

[21] This patient died within a fortnight, when a tumour about two inches in diameter was found in the midst of the left centrum ovale, not extending into the cortex, but which may have caused some slight but undue pressure upon the left visual word-centre.

[22] Fortschritte der Medicin, No. 6, 1883.

[23] The other is recorded further on (Case 13) under the head of Agraphia.

[24] Lectures, Translation by Bazire, pp. 229-232.

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I asked him whether he knew how that word was spelt, and on his nodding assent I took up a large quarto volume with the following title on its back, 'History of the Two Americas,' and requested him to point out the letters in those words which formed the word 'yes.' Although the letters were more than one-third of an inch in size, he could not succeed in doing as I wished. By telling him to seek for each letter in turn, and by calling out its name, he managed, after some hesitation, to point out the first two, and was very long in finding the third. I then asked him to point out the same letters again, without my calling them out first; but after looking at the book attentively for some time, he threw it away, with a look of annoyance which showed that he felt his inability to do as I wished him." Few, I think, would now suppose that we had to do here with a case in which there was no lesion about the posterior extremity of the Sylvian fissure as well as of the third frontal convolution.

Lichtheim is inclined to give much the same kind of interpretation to this class of cases. He points out that the examination of an old case is apt to be confusing in regard to its correct pathogenesis, owing to the fact that some of the defects originally existing have cleared up and disappeared. In this relation he calls attention [25] to the "usually rapid disappearance of word-deafness, and the greater persistence of the troubles connected with written language." He adds: "This fact appears to me to throw light upon a not unfrequent type which does not readily fall in with our classification; I mean that of motor aphasia in which alexia co-exists."

It is, of course, possible that this explanation by Lichtheim may hold good for certain cases, but that it is not necessary to have recourse to it in order to explain those cases of apparently simple aphasia with which alexia co-exists I have become convinced by two cases that have recently come under my observation. What we have to ask ourselves when in the presence of such cases is whether there is any evidence to show that the case is not one of simple aphasia, and whether a lesion exists also in the region of the posterior extremity of the Sylvian fissure. We may inquire, therefore, for the previous existence of word-deafness as Lichtheim suggests, and also examine the patient carefully for the present existence of some amount of hemianæsthesia. The finding of this latter would show two things: first, that the lesion was not limited to the third frontal convolution; and, secondly, that either it or a second lesion also existed not far away from the visual word-centre, which consequently may have been also involved. Since I resolved to apply this test two cases of aphasia combined with alexia have come under my care, and in both of them there was the co-existence of a more or less complete hemianæsthesia, as may be seen from the abstracts of these cases which I now give.

CASE 11.—A woman aged thirty-two years, was admitted into the National Hospital for the Paralysed and Epileptic under my care on May 19th, 1896. She had been married fifteen years, and had eight children. She had a loud, mitral regurgitant bruit; the pulse was small, and irregular in force and frequency. She had been in good health till Oct. 25th, 1895, when she had a fit with loss of consciousness lasting three hours. For two or three days afterwards she seemed quite dazed and did not know anyone. The fit was followed by loss of power in the right arm and leg and loss of sight in the left eye. She has regained some power in the right arm and leg, but is still blind in the left eye. Ophthalmoscopic examination shows simple white atrophy of the left optic disc with evidences of past embolism of some branches of the central artery of the retina. She is naturally right-handed. There is distinct, though slight, right hemiplegia, including the face, arm, and leg. She can walk with dragging of the right foot and perform all movements with the right leg and arm, though much less forcibly than with the left limbs. The tongue is protruded straightly. There is incomplete right hemianæsthesia; sensation is dulled to touch and pain to the mid-line of the face, head, and trunk (back and front), also over the arm, hand, and upper two-thirds of the thigh. She is almost completely speechless. She can answer "Yes," "No," and say "Yes, I know" in answer to questions. Once she said "Good night." Her articulation of these few words is good. She cannot speak voluntarily, and cannot repeat the simplest word when bidden. The patient understands more or less complex matters spoken to her, and performs some spoken commands, but is slow at it, and often makes mistakes. When told to show her tongue she generally shows her teeth. There is almost complete alexia. She cannot recognise words or letters as a rule, except short names of external objects, such as "pen," "lamp," "cat," "dog." She will, when shown the name, point to such objects in the ward or in pictures. She does not recognise the word "man," and she cannot understand simple written commands. When shown four or five capital letters she can very rarely point correctly to one that may be named. She does, however, recognise and point out numerals; she can add two numbers together, but cannot subtract or multiply. She can also pick out objects named; she cannot name them, but shows by her expression that she recognises their names when she hears them. She cannot write letters with either hand spontaneously or from dictation, but she can copy single letters printed or written—the former better than the latter. She cannot do transfer copying.

[25] Loc. cit., p. 467.

This case, though interesting, is perfectly simple and needs no comment. The next, though equally cogent, is a little more complex.

CASE 12.—A young woman, aged seventeen years, was admitted into University College Hospital under my care on June 20th, 1896. She had had rheumatic fever when a child, since which she had been always ailing, principally by reason of a heart affection. She had a loud presystolic bruit and some hypertrophy of the left ventricle. On June 8th, 1896, on awaking she found herself paralysed on the right side of the body. During the following day, without the occurrence of any fit, she lost her speech. During the first week of her illness she was very dull mentally, and there was incontinence of urine and of fæces. She also suffered from pains in the left side of the head. When admitted, on June 20th, the paralysis of the right arm and leg was complete, together with slight paralysis of the lower half of the face. There was well-marked right hemianæsthesia, but no hemianopia. There was ankle clonus, with increased knee, wrist, and elbow jerks on the right side. The limbs were flaccid. She was almost speechless. She understood all that was said to her, looked intelligent, and often attempted to speak, but then and since her illness the only words she had uttered had been "yes," "no," and "oh, dear!" She often said "Yes" inappropriately when asked a question, and then immediately shook her head in correction. She could not repeat a single word when bidden. She recognised objects such as pencils, paper, and pens, but could not name them. There was complete alexia; she did not understand written or printed words or short sentences; nor could she point correctly to individual letters. On June 22nd she could repeat short words uttered before her in a slow, hesitating manner, and with indistinct utterance. On June 27th she was much better; she could count up to ten, and say the days of the week when started; she could also name most common objects which she was shown. She could also read aloud short words in print or writing, and understand their meaning. On July 2nd she talked a little in short sentences, though her pronunciation of words was still indistinct, and she had difficulty in recalling the words she wanted. On July 8th she was still improving. She could then move her right leg a little. She talked slowly and indistinctly, but still had difficulty in recalling words, though she did not utter wrong words. She read aloud a few lines of short words from a book slowly, passing over some and miscalling other words. She seemed to understand what she read. Some right hemianæsthesia still existed.

When first admitted this patient seemed to present a typical case of aphasia, but for the existence of the alexia. The fact of the presence of hemianæsthesia showed, however, that the lesion extended back to the posterior third of the hinder segment of the internal capsule, or else that another lesion existed there—that is, in a region very close to the visual word-centre. This, of course, carried with it the possibility that the visual word-centre itself might have been temporarily disabled. The subsequent progress of the case—the speedy clearing up of the aphasia, owing probably to a restoration of the circulation through the first cortical branch of the left-middle cerebral, which may have been temporarily blocked, and the revelation then of some amount of amnesia verbalis—made it all the more likely that the alexia was to be explained by some temporary disablement of the visual centre. That the auditory centre was only slightly (though more durably) affected was shown by the fact that there was never word-deafness and by the patient's subsequent ability to read even better than she could speak spontaneously.

The probability is, therefore, that in the cases of associated aphasia and alexia recorded by Trousseau and others the latter defect is not to be regarded as a consequence of the lesion in Broca's region, but rather as a result of some co-existing damage to the visual word-centre.

3. Does destruction of Broca's region entail agraphia?—The writers whom I have previously named say yes, that agraphia as well as aphasia is entailed by an uncomplicated lesion in the posterior part of the third frontal convolution. But with this doctrine, as already stated, I cannot agree. In writing spontaneously or from dictation there is, I believe, needed for most people a primary revival in the auditory word-centre and secondarily in the visual word-centre, whence combined stimuli pass to the cheiro-kinæsthetic centre, and thence well over in coördinated form to the motor centres in the cord by which the actual writing movements are effected. The evidence that I have already recorded is quite in harmony with this view, whilst it is entirely opposed to the doctrines on this subject formerly enunciated by Trousseau, Hughlings Jackson, and Gairdner, and which have been recently advocated by Déjerine, Wyllie, Mirallié, and others.

4. Is it right to deny the existence of a special centre for the registration and regulation of writing movements?—We are now brought to the consideration of Déjerine's objection to the very existence of a special centre for writing movements—a "cheiro-kinæsthetic centre" as I name it. His reasoning here seems to me rather surprising, and is of such a nature as to make it necessary to premise that the case of writing is almost exactly comparable with that of speaking—and, indeed, of all other habitual voluntary movements, whether

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complicated or simple. Each set of movements must be associated with a set of ingoing impressions (kinæsthetic), which are registered in different portions of the Rolandic area of the cortex. This must be as inevitably true for writing movements as for speech movements; and, just as re-excitation of Broca's region under stimulation from the auditory word-centre is necessary for speech, so a re-excitation of the centre in which the impressions generated by writing movements are registered is, under stimulation from the visual word-centre, needful for the production of writing movements.

Yet both Wernicke and Déjerine say that the intervention of a special centre for writing movements is not necessary, on the ground that writing consists in a simple copying of the visual images stored up in the visual word-centres. This, however, is extremely vague. It must be asked, How is the copying achieved? That is, By what cerebral mechanism is it brought about? I maintain that the visual word-centre cannot act directly upon the motor centres in the cord, and that the conjoint activity (for coördinating purposes) of a kinæsthetic centre is quite as essential in the case of writing movements as is the activity of Broca's region for the production of speech movements. By parity of reasoning Wernicke and Déjerine might just as well say that Broca's centre is not needed, on the ground that speech consists in a simple copying of the auditory images stored up in the auditory word-centre, and hold that the auditory word-centre can act directly upon the motor centres in the bulb for the production of speech. But I contend that in each case another regulating centre must intervene, and that such a centre is just as essential for the translation of visual images into writing movements as it is for the translation of auditory images into speech movements.

Again, How can it possibly be alleged as a valid argument against the existence of a cheiro-kinæsthetic centre in a man accustomed to write with his hand that the same man is able to write on sand rudely with his foot, or that he can after a fashion write with his elbow, or with a pencil placed between his teeth? Clearly in these other crude modes of writing he would simply be dependent upon the activity of other parts of the general kinæsthetic centre. Such objections—for they are scarcely worthy of the name of arguments—are therefore altogether futile. The question that has to be considered is whether a man who has learned to write with his right hand, and who habitually writes in this fashion, calls into play a cortical centre the activity of which in the production of those movements is comparable with the activity of Broca's centre in the production of speech movements. To this question there can be but one answer. And the fact that in those cases of word-blindness in which the patient is able to write spontaneously he can subsequently succeed in reading what he has written, by tracing the outlines of the letters with his finger must also be taken as direct evidence of the existence of a cheiro-kinæsthetic centre, as I pointed out many years ago.[26] The impressions produced by the writing movements thus occasioned pass from their centre of registration back to the visual and auditory word-centres, and thus enable the writing to be read. Of course, a patient would not be able to read in this way if his visual and auditory word-centres were destroyed; therefore the objection of Déjerine and Mirallié to this evidence falls to the ground.[27]

Another argument adduced by Déjerine against the existence of a special centre for writing has been based upon an interesting case which he cites very briefly[28] of a patient, left-handed for all acts save those of writing, who became hemiplegic on the left side and aphasic, and at the same time lost the power of writing with his right hand. The patient continued in this condition for four years, and judging from the symptoms (there being no necropsy) Déjerine regarded it as a simple case of "motor aphasia." He thinks that the foot of the right third frontal was destroyed, and that this patient was as incapable of writing as of speaking because he had no longer a "notion of the word," owing to his supposed inability to revive verbal images. The fallacy of this inference has already been shown in part by the cases of Dickinson, Wadham, and others previously recorded; and in part by the evidence I have brought forward as to the non-occurrence of alexia as a consequence of destruction of Broca's region. This latter evidence goes to show that in many cases of what at first sight appear to be cases of simple "motor aphasia" with alexia there is reason for believing that a lesion exists in the hinder part of the hemisphere which may have damaged the visual word-centre. A lesion in this situation may therefore have existed in the case under the care of Déjerine, and thus have accounted for his patient's inability to write as he had been accustomed to do with his right hand. For if his previous power of thinking in words had depended upon the activity of the word-centres in the right hemisphere, then spontaneous writing would have required the activity of the auditory and visual word-centres of this side as a first stage in the process, and secondly that they should be in relation (through the corpus callosum) with the similar centres in the left hemisphere, so that the proper stimuli might be passed on to the left cheiro-kinæsthetic centre for the bringing about of writing movements by the right hand. A damage to the visual word-centre of the right side would therefore have caused this patient to lose his previous power of writing with the right hand. The case under the care of Déjerine therefore admits of an explanation quite different from what he has given to it, and which is also much more in accordance with existing knowledge. Clearly it cannot be deemed to support his notion that the kinæsthetic impressions of writing movements are not registered in a definite part of the cerebral cortex, and that this cortical region is not called into activity during the act of writing. That such impressions must be definitely registered in the cerebral cortex seems to me a self-evident truth.

It is, however, altogether another question, and one which does seem open to discussion, whether the cortical centre in which the sensory impressions produced by writing movements are registered exists altogether apart, or whether its structural elements are inextricably mixed up with others pertaining to less special movements of the hand and arm. If there is a completely separate seat of registration, destruction of such a centre should produce loss of the power of writing, independently of paralysis of other less special movements of the limb. If otherwise, the loss of power of writing from damage to the cortical region in which its kinæsthetic impressions are registered would never be able to occur alone, but would always be merged in a more general paralysis of the limb. In other words, no agraphia of this type would be recognisable as such; it would not be looked for, because the co-existing paralysis of the hand and arm would naturally be supposed to be, and would in fact be, a sufficient cause of the inability to write. On the whole it must, I think, be said that no actual proof has yet been given that the centre for writing movements is topographically distinct—in other words, that Exner's or any other separate localisation of such a centre has yet to be definitely proved. The evidence that I have previously cited, though it has been sufficient to discountenance the idea that destruction of Broca's centre of itself gives rise to agraphia, has no pretence to be adequate for the localisation of a separate centre, and the cases that have hitherto been cited in support of Exner's localisation are all of them open to very legitimate objections. There is, for instance, a case recorded by Bar[29] in which an isolated lesion existed in the foot of the second frontal convolution, but, instead of giving rise to agraphia only, there were aphasia and agraphia, and the agraphia was not total (as it should have been if a topographically separate centre for writing had been destroyed, since the patient's penmanship was good); and, though he could not express his ideas either in writing or in speech, he wrote over and over again a certain phrase or word. This case, therefore, though cited by Exner in favour of his localisation, seems to mededicedly opposed to it. Another case, recorded by Henschen,[30] has been cited as favouring Exner's localisation, which has, however, no real value. Here the patient suffered from word-blindness and agraphia, and after death there was found not only a destruction of the foot of the second frontal, but also a softening which destroyed the angular gyrus.

A third case has been recorded by J. B. Charcot and A. Dutil,[31] and is thought by Pitres to favour Exner's localisation. Here the patient was a woman sixty-four years of age, who twenty-nine years before her death had a slight cerebral attack which left her completely agraphic. Subsequently she had three other attacks, which led

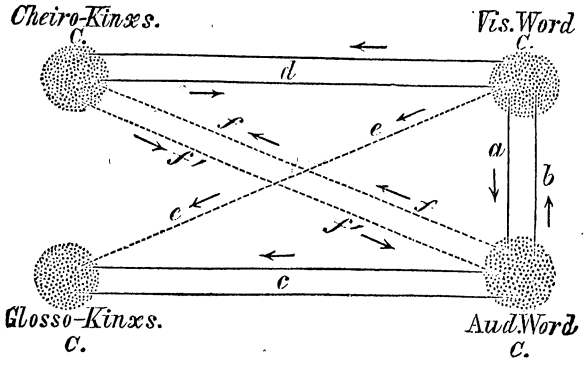
[26] The Brain as an Organ of Mind, 1880, p. 646, note.
[27] Mirallié, loc. cit., p. 75.
[28] Mémoires de la Société de Biologie, 1891, p. 97.
[29] La France Médicale, 1878, p. 609.
[30] Klinische und Anatomische Beiträge zur Pathologie des Gehirns, Upsala, 1890, p. 273.
[31] Mémoires de la Société de Biologie, 1893, p. 129.

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successively to embarrassment of speech, left hemiplegia, and finally to pseudo-bulbar paralysis. The agraphia persisted throughout her life without appreciable diminution. She could copy letters and figures after a fashion, but was absolutely unable to write spontaneously. There was no word-blindness or word-deafness. At the necropsy five small foci of softening were found in the right hemisphere and two in the left hemisphere, one of the latter being situated exactly in the foot of the second frontal convolution.[32]

Then, again, one of the causes which led Déjerine to deny the very existence of a centre for writing movements seems to have been based upon the characteristics of two cases that were brought forward by Pitres, and which, upon the basis of his authority, have been commonly cited by others as affording evidence of the correctness of Exner's localisation. They were cases in which the patients were unable to write spontaneously or from dictation, and yet were able to copy writing. If the centre is destroyed, says Déjerine, the possibility of executing any kind of writing should be abolished. That at first sight seems perfectly true; and it may be a valid criticism against Pitres for quoting any such cases as instances of "motor agraphia."[33] But Déjerine and his followers have overlooked the possibility that Pitres may not have been quite correct in his interpretation of these cases—in which there was no necropsy. They have not recognised the fact that this particular combination of symptoms may be present without the existence of what is called "sensory aphasia" in any of its forms. It can be shown, however, that such a combination of symptoms may be easily explained by a cutting across of the audito-visual commissure that transmits impressions from the auditory to the visual word-centre (Fig. 3, *b*). This I believe, after careful

FIG. 3.



study of his memoir, to be the explanation of the partial agraphic defects in the two well-known cases cited by Pitres as examples of the effects produced by damage to the cortical centre for writing movements.[34] It is obvious that damage to the commissure above mentioned would be capable of preventing the passage of stimuli from the auditory to the visual word-centre such as would be necessary in writing spontaneously or from dictation, whilst it would leave the power of copying writing intact so long as the visual word-centre, the commissure connecting it with the writing centre, and this centre itself remained undamaged.

At present, then, it would seem that there are no uncomplicated cases of agraphia upon record produced by a small lesion in the cheiro-kinæsthetic centre, or of agraphia as an isolated symptom certainly resulting from damage to some part of the visuo-kinæsthetic commissure. It seems clear, however, that if the centre for writing is topographically distinct, complete agraphia—that is, an inability to write spontaneously from dictation or to copy with anything like facility—should be producible in either of these ways, and that in each case the disability would be uncomplicated with word-blindness, whilst there would be nothing to prevent the patient learning to write with his left hand.

The reason for this extreme rarity of agraphia as an isolated symptom doubtless is that often in what might otherwise have been a simple case of inability to write this very special disability becomes hidden and unrecognisable, owing to the lesion being large enough to cause paralysis of many other movements in the hand and arm. Thus the mere inability to write is hidden by the production of a partial brachial monoplegia. No similar causes intervene to obscure the recognition of simple, uncomplicated aphasia, and yet it must be borne in mind that even this is decidedly rare.

If, then, there are no simple, uncomplicated cases of agraphia that can be quoted, either from disease of the cheiro-kinæsthetic centre or from damage to the commissure between it and the visual word-centre, all that can be done is to cite some of the best instances available in which agraphia has been associated with aphasia, but where the former defect has been more marked than the latter. This was, in fact, the class of cases originally described by William Ogle in his paper on "Aphasia and Agraphia." One of his examples (in which there was no necropsy), where right hemiplegia with aphasia was succeeded by a condition in which amnesia and agraphia were marked, still remains one of the most typical of this kind that can be cited. But two simpler and more typical cases have been recorded by Broadbent[35] to which I would first direct attention. One of them is notable also on account of the remarkable amount of intelligence and energy displayed by the patient, notwithstanding her very defective speech and inability to write. The following is an abstract of this important case.

CASE 13.—A lady, aged about seventy years, had an apoplectic attack on July 26th, 1867. She remained unconscious for nearly twenty-four hours, and was then found to be hemiplegic on the right side and quite speechless. After two or three months she had "quite recovered the use of her limbs and regained a few words." Her relatives treated her as if she were utterly incapable of looking after her own affairs, and especially of taking charge of her own money. This was a great grievance, and when her husband's relatives visited her she tried to make it known by showing her purse and repeating excitedly, "Oh, shameful! shameful!" She had an intense dislike to her attendant, and when she left the room would often look in the direction in which she had gone, shaking her head and exclaiming with great energy, "Oh! nasty! nasty!" following it up by a long story in which there was not a single word intelligible. At length she went to live near her husband's relatives. "A house was now taken and furnished for her, and she showed herself quite competent in making all arrangements about it, and when settled in it with a new housekeeper she seemed quite contented. Her principal topic of attempted conversation for several months was her niece's and brother's bad behaviour to her. She laboured hard to make the friends among whom she now was understand her grievances. She would point out her relatives' names or refer to their letters, or in some other way show to whom she referred, and then in great excitement would exclaim, 'Oh, shameful! shameful!'; then she would turn over letters and newspapers, and when she had tried in vain for hours to convey what she wished she would shed tears and say, 'Oh, pity! pity!' At length her banker's pass-book was obtained from her niece, and she scarcely knew how to express her joy. 'I tried, and I tried,' she said over and over again. But there was still something she wished to explain, and one day, while trying very hard as usual, she made the figures 40 quite distinctly, and it was understood at last that it was something about £40; but it was not till a friend came to see her and this happened to be mentioned that it was discovered she had put £40 into a bank before her attack, and believed her niece had the acknowledgement of it, and some promissory notes with other papers. These she wished to be sent for, and eventually they were obtained. This was nearly a year after her removal, and all the time she had persevered in her attempts at an explanation. During the same time she had been making a new will, and week after week would have her sister-in-law to write out the different clauses. It often took a long time to do it to her satisfaction, but she never rested till every particular was exactly as she wished it; when the right guess was made she showed her satisfaction quite unmistakeably by her gestures, and by saying, 'Yes, yes, that's it.' . . . . That she knew what word she wanted was shown by her resorting to letters and sometimes to a dictionary; and in one of my visits, wishing to recommend a linseed-meal poultice and failing to convey her meaning, she went for the housekeeping book and found an old entry of linseed-meal. She also pointed out to me newspaper paragraphs which interested her. She frequently read, but preferred being read to. . . . . She was quite unable to write or even to sign her name. She once wrote down the figures 40, as related, and sometimes wishing to divide money would make the proper number of marks to indicate the amount of a share." On Aug. 7th, 1871, she had another apoplectic attack, after which she was

[32] Two other cases which have been cited as favouring this localisation, namely—one by Balzer (Gazette de Médecine de Paris, 1884, p. 97) and another by Shaw (Brit. Med. Jour., February, 1892)—have in my opinion no value in this connexion.

[33] Pitres attempts to get over the difficulty standing in the way of his interpretation arising from the fact that the patients were able to copy writing in the following manner. He says (Congrès Francais de Médecine Interne, 1894, Rapport sur la Question des Aphasies, p. 10): "Copier, en effet, est toute autre chose qu'écrire couramment. C'est un acte de motilité générale qui n'a pas de centre d'exécution spécialisé, pas plus d'ailleurs que l'acte de tracer sur le sol avec le bout de sa canne, ou avec le pied, des traits ayant la forme de lettres. Ces actes là impliquent une attention soutenue, une surveillance constante de l'esprit, qui manque absolument dans l'écriture courante. C'est pourquoi l'agraphique dont les membres supérieurs ne sont pas paralysés, peut encore copier, bien qu'il ne soit plus capable d'écrire spontanément."

[34] Revue de Médecine, 1884, p. 864. These cases are also quoted more briefly by Wyllie (loc. cit., p. 357), though in the first of the two cases he omits the very important detail that the patient was able to copy writing easily.

[35] Transactions of the Royal Medical and Chirurgical Society, 1872, pp. 146 and 160.

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found to be paralysed on the left side. She died on Aug. 12th, and at the necropsy no cause for the last apoplectic seizure was found, but two old apoplectic cysts were discovered in the upper border of the fissure of Sylvius. One "which might hold a nut" was in the situation at the lower end of the ascending frontal gyrus, "and a very small part of the adjacent posterior end of the third or inferior frontal gyrus." "Again, in the supra-marginal lobule over the posterior end of the fissure of Sylvius was another hollow filled with connective tissue, and when the fissure itself was opened out it was found to contain at this part a super-abundance of connective tissue, and the convolutions of the posterior end of the island of Reil were completely atrophied." There was some atrophy also of the tail of the intra-ventricular portion of the corpus striatum.

In addition to the evidences of intelligence and energy displayed by this patient, there is also the fact that there was no alexia associated with the aphasia and agraphia. The latter defect was much more marked than the former; and the fact that the patient could use more words and sentences than are customary may perhaps be explained by the small extent of the lesion in the left third frontal gyrus. Although the paralysis of the right upper extremity had been quite recovered from, the agraphia was absolute. The posterior extremity of the second frontal gyrus was uninjured, but the posterior of the two old focal lesions discovered would probably have destroyed the commissural fibres between the visual word-centre and the cheiro-kinæsthetic centre not far from the former of these centres. In the next case there was a very similar inequality between the ability to speak and the ability to write.

CASE 14.—A German, aged thirty-four years, was admitted into St. Mary's Hospital in February, 1870. He had suffered from rheumatic fever in 1885. On the 4th he fell off his stool whilst at work. Two days after he was found to have lost the use of his right hand and arm and to be unable to speak. On the evening of the 8th he was brought to the hospital, and was then found to be partially hemiplegic on the right side and unable to answer questions intelligibly. He soon began to improve, and Broadbent's notes on the 14th are as follows: "All his answers in a low, smooth tone, without modulation of voice; he could not be induced to utter loudly even a word he could say. Answered 'Yes' and 'No'; told me his age correctly and his name, but indistinctly. Asked how he is replies, 'Better' or 'Quite well,' rather indistinctly. If he had pain in the head since the attack? 'No.' Before? 'Yes, wonderful.' If he slept well? 'Nicht'. . . . (something or other which could not be made out). If appetite good? 'No' . . . It was impossible to understand him when he attempted a phrase or when he tried to say anything to which I had no clue." A strong German accent was distinguishable in all he said, whereas before the attack he spoke English particularly well. "A peculiarity of his attempts to read or speak was his persevering effort to master a word, syllable by syllable, by trying on and on again. For example, when asked to read the words 'diet-card' his attempt was something like this, 'Diget, dicht, dite, dite, dite car.' The next moment he pointed to his name, saying, though not very distinctly, 'Dat my name.' Up to this time and a week later, Feb. 21st, he could not sign his name or write the simplest word, such as 'yes' or 'no,' when asked to do so, or copy a word pointed out to him." He remained in the hospital some weeks longer, improving very slowly, and before he left he could "with great effort write his name."

Nothing can be said as to the situation of the lesion here or in the next case, which is the best of those which William Ogle was able to bring forward in his paper. We must be guided only by the clinical facts recorded.

CASE 15.—James Simmonds, aged fifty-four years, after a heavy blow on the left side of the head, seven years ago was obliged to give up his work. He spoke without difficulty or hesitation, but miscalled things strangely. He then had a fit one morning whilst dressing, which left him speechless and hemiplegic on the right side. For a fortnight he could not speak at all, though he was quite sensible. He could not say so much as "Yes" and "No." From this he gradually recovered, but always, as before, miscalled things. . . . A month ago he had a second fit, which left him with less power than before in his right side, but made little or no change in his speech. There is now partial paralysis of the right side, which does not prevent his walking. The facial muscles on that side are slightly affected as well as the limbs. His speech is very hesitating and imperfect. He often stops suddenly at a loss for a word and then frequently uses a wrong one, as, for example, he substituted "barber" for "doctor," "two-shilling piece" for "spectacles," "winkles" for "watercress." He can, however, pronounce any word perfectly when prompted. He says that he generally knows when he has used a wrong word, but not always. Before his illness he wrote a good hand and was above his lot as regards education. Now he cannot form a single letter. Even with a copy before him he makes only uncertain up-and-down strokes. I gave him some printed letters and asked him to pick out his name. After a long time he arranged JIOMNOS. Clearly he had some slight notion of the letters which composed his name. According to his wife, before his illness he spelt well, and was very particular about the spelling of his own name, which is one admitting of many variations. When a copy was before him he quickly picked out and arranged his name correctly. He can read; but he says that reading makes him very giddy and causes great pain in the head. His general understanding seems good and up to the average of men in his class.

The conditions here recorded represent the remainders of an attack of aphasia, as it would seem that the amnesia was perhaps not much more than had previously existed. We may conclude that in this case also the most severe or durable lesion was in the track of the commissural fibres between the left visual word-centre and the cheiro-kinæsthetic centre (Fig. 3, *d*), but that in all probability there was also some damage to the former word-centre itself. This latter defect is indicated from the difficulty he had in spelling his name with separate printed letters placed before him; for inability to spell—that is, inability spontaneously to recall the letters composing a word—probably depends in the main upon some defect in the visual word-centre, and although he could read, what is said seems to imply that his powers were perhaps not great in this direction. It is therefore by no means a clear case, but one in which the defects were somewhat mixed.

Although we are unable as yet to cite any simple uncomplicated case of agraphia due to disease in the posterior part of the second left frontal convolution, yet, according to Binet and Fere,[36] it is easy to produce agraphia by suggestion in hypnotised persons. Speaking of their experiments Ballet[37] says: "They show that the loss of the motor memory for writing is of the same order as the abolition of other motor [kinæsthetic] memories, such as those which preside over the ability to smoke, to sew, or to embroider. For each of these acts which we are accustomed to perform there exists, in fact, a motor memory, so much the more easily disturbed, in all probability, as the acts themselves are more complicated and require more delicate muscular combinations. As an example of motor amnesia connected with special movement associations I may recall a curious case related by M. Charcot in one of his lectures: it was the case of a player on the trombone who had lost the memory of the associated movements of the mouth and of the hand necessary for playing on the instrument. All the motor memories in this patient were intact save this one. This musician had forgotten how to handle the trombone, as others had forgotten how to handle the pen." If we substitute in the above-quoted passage for "motor memory" the term "kinæsthetic memory" we may believe the loss of the different kinds of kinæsthetic memory referred to, which can be brought about in hypnotised persons, must be due to a temporary functional inertia produced under the influence of suggestion in the several parts of the general kinæsthetic centre in relation with this or that movement.

It seems best now, at the close of our discussion concerning aphasia and agraphia as combined and separate symptoms, to enumerate in tabular form the different modes in which complete or partial agraphia may be produced. Although I shall thus be anticipating results subsequently to be developed, it will be advantageous to show now how other different forms of agraphia are to be distinguished from those we have been considering and from one another.

AGRAPHIA.

Complete.	Uncomplicated.	1. Destruction of the cheiro-kinæsthetic centre.
		2. Destruction of the visuo-kinæsthetic commissure.
	Complicated with word-blindness.	3. Destruction of the visual word-centre.
Partial.	No spontaneous writing or from dictation, but can copy; no word-deafness.	4. Destruction of the audito-visual commissure.
	No spontaneous writing, or from dictation, but can copy; word-deafness present	5. Destruction of the auditory word-centre.
	Can write spontaneously or from dictation, but cannot copy; word-blindness present.	6. Destruction of the visual word-centre (in some educated auditives).
		7. Isolation of the visual word-centre from all afferent fibres.

The supposition is that in the large majority of cases the various lesions that have been above referred to as causes of complete or partial agraphia will be in the left hemisphere in right-handed and in the right hemisphere in left-handed persons. Of these various forms Nos. 1, 2, and 7 should occur in all individuals alike, in association with the lesions named; but Nos. 3 and 6 are two degrees of agraphia that may be met with in association with word-blindness according as the individuals in whom the lesions specified occur are "visuals" or strong "auditives" much accustomed to write. On the other hand, Nos. 4 and 5 are two cases in which the same degree of agraphia may be met with, but differing by the absence of word-deafness in the one case and its presence in the other. I say *may* be, because such symptoms might not occur in a strong "visual." It will be observed also that each of the partial forms of agraphia

[36] Les Paralysies par Suggestion, Revue Scientifique, 12 Juillet, 1884.
[37] Le Langage Intérieur, p. 134.

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except the first is associated either with word-deafness or with word-blindness.

DEFECTS IN THE AUDITORY AND IN THE VISUAL WORD-CENTRES.

Since the publication in the year 1874 of an important memoir by Wernicke entitled "Der Aphasische Symptomen-complex," it has been the fashion to speak of the defects of speech due to lesions in the auditory and the visual word-centres as "sensory aphasia," in contra-distinction to that produced by damage to Broca's region, which, in accordance with then prevalent notions, was and has since been very commonly spoken of as "motor aphasia." This mode of distinguishing these defects, though it has a certain convenience and has been widely adopted, is not in accordance with my views, as I hold the latter to be as much a sensory region of the brain as the former. It would, I believe, be much better if the term "aphasia" were restricted to the defects of speech produced by lesions in Broca's region, and the term "aphemia" to those dependent upon sub-cortical lesions in the course of the pyramidal fibres, leaving the speech defects produced by lesions of the convolutions around the posterior extremity of the Sylvian fissure to be grouped as so many varieties of "amnesia." Under this latter generic name would be included many forms of speech defect due to defective recall of the auditory and the visual images of words, and produced either by lesions of the auditory and the visual word-centres themselves or of the commissures by which they are united to one another and to corresponding centres in the opposite hemisphere. In all these cases there would be more or less interference with the recall of auditory and visual images of words. And whether we call the case one of sensory aphasia or of amnesia, in each instance alike the precise degree and nature of the defect or defects would have to be settled by a systematic examination, so as to determine whether we had to do with mere diminished recollection of words, with complete loss of their auditory or visual images, or with other combinations of symptoms pointing either to partial isolation of these centres from one another or to isolation from the general auditory or visual word-centres of which they form part. It is true that such a nomenclature involves a slight inconsistency, seeing that aphasia and agraphia are also, in accordance with my views, forms of amnesia due to the non-revival of glosso-kinæsthetic and cheiro-kinæsthetic images respectively. But these kinæsthetic images, as I maintain, play only a small part in thinking processes, and neither of them is subject to independent conscious recall like the auditory and visual images of words which constitute our habitual thought counters. The inconsistency is, moreover, much less than that which is entailed by speaking of "motor aphasia" and "sensory aphasia," as though the former belonged to a radically different category and really depended upon the lesion of a motor centre. The advantage would be great of confining the term "aphasia" to its original signification, and not including under it various types of speech defects which are radically different in nature and produced by lesions in totally different cerebral regions; this is especially desirable when the objectionable generic term "sensory aphasia" can be replaced by another having a very similar general connotation.

It has been commonly supposed, and repeated over and over again by workers in Germany and France, as well as by those writing in our own language both here and in America, that Wernicke was the first to call attention to and explain that form of speech defect that is now known as "word-deafness," this particular name having been given to the condition shortly afterwards by Kussmaul. It is admitted that the companion defect of the visual centre now known as "word-blindness" had been previously recognised by several writers, though it had not been clearly explained; but "word-deafness" was supposed to have escaped observation by writers on speech defects, the individuals suffering from it having been previously thought to be insane, or at least demented.[38]

The merit, however, of having determined the region of the brain at fault in cases of word-deafness (viz., the hinder half of the upper temporal convolution, with perhaps a portion of the hinder extremity of the middle temporal convolution) clearly belongs to Wernicke; though, as I shall subsequently endeavour to show, he was far from correct in saying that the complex of symptoms resulting from such a lesion was word-deafness, paraphasia, alexia, and agraphia. This view as to the symptomatology of the lesion was founded upon too narrow a basis of observed cases with necropsies. A wider experience and knowledge now necessitates its complete revision.

That it is not correct, however, to say that word-deafness and word-blindness were not well understood till Wernicke defined their nature may be shown by the following quotation from my paper "On the Various Forms of Loss of Speech in Cerebral Diseases," published in 1869:—[39]

"Most aphasic patients can *understand perfectly what is said* to them and can follow and feel interested when they hear others read aloud. In these cases we may presume that the afferent fibres connecting the auditory centres of the medulla with the auditory perceptive centres of the cerebral hemispheres, and also these latter centres themselves, are intact, so that the spoken sounds revive their accustomed impressions in the hemispheres, these being perceived as words symbolic of things or ideas, which, being duly appreciated by the individual as they are conjured up, suggest to him the thoughts which they are intended to convey. In certain of the severe cases of aphasia, however, as in that noted by Dr. Bazire, recorded at p. 16, and in Dr. Gairdner's case (Glasgow Medical Journal, May, 1866, p. 13, and Transactions of the Philosophical Society of Glasgow, 1866), it is distinctly stated that the patient either did not gather at all, or with difficulty and imperfectly, the import of words when he was spoken to, though he could be made to understand with the utmost readiness, by means of signs and gestures. Must we not suppose in such a condition either the communication of the afferent fibres with the auditory perceptive centres is cut off, or that this centre itself, in which the sounds of words are habitually discriminated and associated with the things to which they refer, is more or less injured? In either of these cases, though the sound is not appreciated as a *word* having its definite meaning, we must not expect that there would be deafness; the sound would be still heard as a *mere sound*, only it does not call up that superadded intellectual discrimination by the ingrafting of which upon it it can alone be made to serve as a symbol of thought. Hence the individual does not adequately comprehend when spoken to, though he may be quite capable of receiving and appreciating fully the import of signs and gestures which make their impression upon his visual perceptive centres. . . . . And where the individual *cannot read* I am inclined to think this must be owing either to some lesion of the afferent fibres to the visual perceptive centre, of the visual perceptive centre itself, or of the communications between the cells of this centre and those of the auditory perceptive centre. If lesions existed in either of the first two situations the visual impression could not receive its intellectual elaboration, and consequently it could not call up its associated sound (word) in the auditory centres, and hence no meaning would be conveyed by the hieroglyphic marks of the printed or written pages. They would be to the person mere meaningless strokes, just as we have assumed that if similar defects existed in the auditory perceptive centres, or in the afferent fibres with which they were connected, the individual could not appreciate the meaning of spoken words—these would be to him mere sounds."

At the date when this paper was written I knew nothing about what I now term "kinæsthetic centres" and had not fully realised the importance of kinæsthetic functions. At this period, moreover, the notion that definite "motor centres" exist in the cerebral cortex had not been mooted. This explains the reason of the absence of any reference to the needed activity of kinæsthetic centres in the above quotation.

Turning now to the question of the symptomatology of the condition named "sensory aphasia" by Wernicke, and referred by him to a lesion of the posterior extremities of the upper and middle temporal convolutions, it should be observed that Kussmaul shortly afterwards broke up into two sets of symptoms what were originally described as a single group by Wernicke. According to Kussmaul, what he first termed "word-deafness" is the primary and essential result of destruction of the hinder extremities of the upper temporal convolutions; while what he termed "word-blindness" holds a similar essential relationship to destruction of the angular and parts of the supra-marginal gyri. This is the view now commonly held, and both varieties are spoken of as forms of "sensory aphasia," though Wernicke's original doctrine as to the very complex results of a lesion in the auditory word-centre is held at the present day by Dójerine as well as by Mirallié. They both speak of word-deafness, paraphasia, alexia, and agraphia as the results of such a lesion.

It must be admitted that the functional relations of the auditory and the visual word-centres are so intimate, and their sites so close to one another, that a lesion occupying the one is apt more or less to interfere with the functions of the other for a longer or shorter period, which may vary with the nature and abruptness of the lesion, as well as with the different endowments of individuals. Disturbance to a very marked extent of the functions of the visual word-centre as a result of a lesion in the upper temporal convolutions is,

[38] This statement has been repeated by Wyllie in his recently published work on the Disorders of Speech (p. 295), although de Watteville had previously pointed out in Brain (1885, p. 267) that I had five years before the appearance of Wernicke's memoir fully appreciated the nature of the defect as well as that of "word-blindness."

[39] British and Foreign Medico-Chirurgical Review, 1869, pp. 40 and 42.

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however, by no means so universal as Wernicke's and Déjerine's statements as to the symptomatology of this lesion would imply. Thus, out of sixteen recorded cases of "sensory aphasia" in which the lesion was pretty closely limited to the hinder part of the first and more or less of the second temporal convolutions, in only five of them is there any mention of the existence of some amount of word-blindness. Doubtless had the patients been studied more minutely (after the manner practised by Thomas and Roux[10])

FIG. 4.

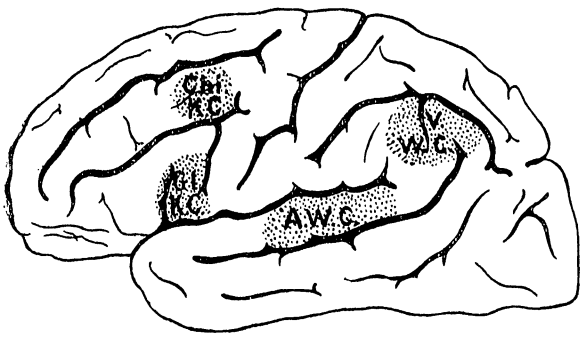


Diagram showing the approximate sites of the four word-centres in the left cerebral hemisphere.

some minor amounts of word-blindness might have been found in others; but that is not what Wernicke meant, and is not other than what might be expected if we look to the close functional and topographical relations of the two word-centres.[11]

It will subsequently be shown, moreover, that paraphasia is met with in only a little more than one-third of these cases, so that Wernicke's "symptomencomplex" does not prove to be at all in accordance with the data at present available, although his views are still adhered to by Déjerine and Mirallié.

It must, indeed, be admitted that the defects in the auditory and the visual word-centres giving rise to word-deafness and word-blindness respectively may occur separately or together, and in the latter case the defective action in the two centres may be unequally developed. Hence the very marked clinical variations that are met with as a result of lesions in the convolutions surrounding the posterior extremity of the Sylvian fissure. Another cause of clinical variations, even with similar lesions, is perhaps to be found in the different degrees of education of the persons attacked, and their consequent greater or less facility in reading and writing. Still another cause of variability is to be found in the varying individual endowments of patients in regard to the relative activity of their different word-centres—in other words, according as the patients are marked "auditives" or "visuals" respectively. Connate individual variations of this kind may give rise to notable clinical differences, even as results of similar lesions.

All that can be done here, therefore, is to point out the most common combination of symptoms, dealing with the various parts of the subject in the following order: (1) defects resulting from abnormal conditions of the left auditory word-centre; (2) defects resulting from destruction of the auditory word-centres in each hemisphere; (3) defects resulting from destruction of the auditory and the visual word-centres of each hemisphere; (4) defects resulting from isolation of the left auditory word-centre; (5) defects resulting from abnormal conditions of the left visual word-centre; (6) defects resulting from isolation of the left visual word-centre; and (7) defects resulting from combined lesions of the left auditory and visual word-centres, together with some remarks on the condition which has been named "psychical blindness" or "object blindness."

1. DEFECTS RESULTING FROM ABNORMAL CONDITIONS OF THE LEFT AUDITORY WORD-CENTRE.

Of all the word-centres the integrity of the auditory is of the most importance, and the defects due to different degrees of functional disability therein are the most varied, because this is the centre in which in the great majority of individuals words are first revived during thought, whether this be silent or whether it constitute the first stage in the processes of speaking or of writing. The effects of functional degradation or of partial damage to this centre may be considered first, and afterwards those resulting from its complete destruction.

(*a*) *Effects produced by functional degradation or partial damage of the left auditory word-centre.*—In the slighter degrees of damage and functional degradation we have to do with the most typical forms of verbal amnesia, in which various words fail to be recalled as they are needed in ordinary speech. The term "amnesia verbalis" applies especially to this defect, and the objections that have been raised to it on the ground that loss of auditory images constitutes only one kind of verbal amnesia are of no practical value because the two kinds of kinæsthetic images are, as I maintain, not spontaneously revivable as primary thought counters, and because it is only in rare cases that visual images of words are primarily revived. The term "amnesia verbalis" is therefore especially applicable to this particular functional disability of the auditory word-centre.

This failure to recall words is always most marked with the names of persons, places, and things, these being the most specialised units of speech. The most familiar type of this defect is that which occurs as a result of defective nutrition, either with advancing years or during convalescence from prostrating diseases. Such persons are often noticed to halt in their speech, owing to their inability to recall some such words. Occasionally, however, a similar or more marked defect of the same order occurs as a result of some more or less distinct lesion of the brain. A good example of amnesia of this type, where the "volitional" recall of names was impossible though their "sensory" recall was preserved, is thus referred to by Trousseau in his "Lectures."[12]

CASE 16.—"The patient does not speak because he does not remember the words which express ideas. You recollect the experiment that I often repeated at Marcou's bedside. I placed his nightcap on his bed and asked him what it was. After looking at it attentively he could not say what it was called, and exclaimed, 'And yet I know well what it is, but I cannot recollect.' When told that it was a nightcap he replied, 'Oh! yes, it is a nightcap.' The same scene was repeated when various other objects were shown to him. Some things, however, he named well, such as his pipe. He was, as you know, a navvy, and therefore worked chiefly with the shovel and the pickaxe, so that these are objects the names of which a navvy should not forget. But Marcou could never tell us what tools he worked with, and after he had been vainly trying to remember, when I told him it was with the shovel and the pickaxe, 'Oh! yes, it is,' he would reply, and two minutes afterwards he was as incapable of naming them as before."

As Lichtheim points out,[13] evidences of amnesia are "more easy to demonstrate when the patient is made to name objects than when he is engaged in ordinary talk; names which occur without effort in fluent speaking arrest him when he has to find them for objects or persons shown to him." There is general agreement as to the fact that in amnesia words are lost in a tolerably definite order. First there are failures in the recall of proper names, then of other nouns; and only much more rarely of verbs, adjectives, and pronouns. Of this fact different explanations have been given. I will quote two of the best. Kussmaul says:—[14]

"The more concrete the idea the more readily is the word to designate it forgotten when the memory fails. Probably the only reason for this is that the conceptions of persons and things are more loosely connected with their names than the abstraction of their circumstances, relations, and properties are. We easily represent persons and things to ourselves without names; the image of sense is here more important than the symbol—i.e., the name—which conduces but little to our comprehension of personages or objects. More abstract conceptions, on the contrary, are attained only with the aid of words, which alone give them their exact shape. Hence verbs, adjectives, pronouns, and, still more, adverbs, prepositions, and conjunctions, possess a much more intimate relation to thought than nouns. We can conceive that the processes of

[10] Bulletin de la Société de Biologie, 22 Février, 1896.

[11] The cases to which I refer where the lesion has appeared to be pretty completely limited to the hinder part of the first or of the first and second temporal convolutions are those which in Mirallié's list (De l'Aphasie Sensorielle, 1896, p. 135) are numbered, 1, 3, 4, 6, 7, 10, 12, 14, 19, 21, 25, and 32; together with those in Amidon's list (New York Medical Journal, 1885, pp. 113 and 181) numbered 7, 14, 17 and 18. Of these, the five cases in which some amount of word-blindness co-existed are those which in Mirallié's list are numbered 12, 14, 19, 21, and 25. In Amidon's No. 11, moreover, there was the co-existence of aphasia and word-deafness, owing to simultaneous lesions in Broca's region and in the upper temporal convolutions; nevertheless the patient showed neither alexia nor agraphia. I have purposely alluded to these two lists, which include, I believe, almost all the complete cases with necropsies of "sensory aphasia" hitherto published (many of them being included in both lists), because they are both fairly accessible, and a reference to them will thus enable anyone interested in the matter to verify the correctness of my statements and criticisms with comparative facility.

[12] Translation by Bazire, 1866, Part I., p. 267.

[13] Brain, January, 1885, p. 473.

[14] Ziemssen's Cyclopædia, vol. xiv., p. 759.

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excitation and the combinations in the cellular network of the cerebral cortex must be much more numerous for the creation of an abstract than of a concrete conception, and that the organic tracts which connect the former with its name must be correspondingly much more numerous than those of the concrete."

The other explanation, which may be considered as supplementary to, and not incompatible with, Kussmaul's, is that which was given by Ross. He said:—[45]

"The science of language teaches unmistakeably that the language of aboriginal man consisted almost entirely of verbs, demonstrative pronouns, and a few adverbs of time and place, and that the names of even common objects are always derivative, and consequently of much later growth than the roots themselves, and it is only what might have been expected that in the dissolution of language caused by disease nouns should disappear from the vocabulary of the patient before the parts of speech which have been first developed, and therefore most deeply organised."

In the slighter forms of amnesia the efforts at recollection of a person who is "at a loss for a word" tend also to call the visual word-centres into an incipient activity. Graves[46] placed on record an excellent illustration of this fact, though he quotes the case merely as "a remarkably exaggerated degree of the common defect of memory observed in the diseases of old age, in which the names of persons and things are frequently forgotten, although their initials are recollected."

CASE 17.—"The man was a farmer, fifty years of age, who had suffered from a paralytic attack, from which he had not recovered at the time of observation. The attack was succeeded by a painful hesitation of speech. His memory was good for all parts of speech except noun-substantives and proper names; the latter he could not at all retain. This defect was accompanied by the following singular peculiarity: he perfectly recollected the initial letter of every substantive or proper name for which he had occasion in conversation, though he could not recall to his memory the word itself. Experience had taught him the utility of having written on manuscript a list of the things he was in the habit of calling for or speaking about, including the proper names of his children, servants, and acquaintances; all these he arranged alphabetically in a little pocket dictionary, which he used as follows: if he wished to ask anything about a cow, before he commenced the sentence he turned to the letter C, and looked out the word 'cow,' and kept his finger and eye fixed on the word until he had finished the sentence. He could pronounce the word 'cow' in its proper place so long as he had his eyes fixed upon the written letters; but the moment he shut his book it passed out of his memory and could not be recalled, although he recollected its initial and could refer to it when necessary. He could not even recollect his own name unless he looked out for it, nor the name of any person of his acquaintance; but he never was at a loss for the initial of the word he wished to employ."

The fact, moreover, that in those cases where we cannot "get out" a particular word we often seem to know something of its length, and can say that it consists of about so many letters, also seems to testify to an abortive revival of the word in the visual centre. But the fact that this partial revival is not associated with full consciousness of the word and does not enable it to be written is one of considerable significance, because it seems to show how all-important in the majority of cases is the primary revival in the auditory centre, not only for the accomplishment of speech, but also for that of writing, the visual word-centre being probably called into play in writing spontaneously as well as in writing from dictation through the intermediation of the auditory word-centre.

It seems reasonably certain that in the great majority of cases in reading aloud there is first the excitation of the visual word-centre, then the passage through commissural fibres of stimuli to related portions of the auditory word-centre before the stimulus passes on to the glosso-kinæsthetic centre.[47] This affords the explanation of another peculiarity in the class of cases of which we have been speaking, as well as of others in which the amnesia has been even more profound. Many cases have, in fact, been recorded in which the patients' speech has been so disordered that they could scarcely say more than three or four consecutive words, and could perhaps utter no nouns; yet when a book is placed before them they are capable of reading aloud correctly and with ordinary facility. I have seen three such cases. One of them was a typical instance, and the following are some details concerning it.

CASE 18.—A lady, aged eighty-one years, had a slight stomach derangement, followed by diarrhœa, in the spring of 1885. She had been rather deaf for many years, but after this slight illness an amnesic difficulty in speech very gradually became more and more pronounced, and after about eighteen months became associated with marked paragraphia. Two years after the commencement of this speech trouble I found this patient capable of understanding all that was said to her in a sufficiently loud and distinct voice. She was thoroughly capable, also, of superintending her household affairs, correct in her accounts, and always knew exactly what change she ought to receive after having given money for the purchase of food or other necessaries. She made use of brief sentences, generally stopping short when she came to a noun, or she would then substitute the word "things" for any such part of speech. Thus, she said, "I will go up and see what we can," meaning that she would go upstairs and see what she could find; or "Will you have the things?" meaning some refreshments for a journey. At this time she was accustomed to read novels with large print for several hours daily. I found that she could read aloud as well as ever, and she did actually read to me, with only two or three slight mistakes in pronunciation, nearly half of a column of a newspaper. I was able to satisfy myself, also, that she understood the meaning of what she was reading; her laughter when I gravely gave her a short amusing paragraph to read left no doubt as to this point. During the next six months her condition became steadily but markedly worse. Here is a letter written to her son about the end of June, in which for the first time she omitted to put the name of the month and his Christian name at the commencement of the letter. "29, -87.—MY DEAR PAPA.—I hope you are well, and think you are well for something for the Queen, and too things for the Queen [evidently referring to two papers which had been sent to her with details of Jubilee proceedings.] Pills for the father [an intimation that she wished some pills to be sent to her.] I hope you are well.—Yours affectitory." [The surname was spelt wrongly; she had previously always signed with the Christian name alone.]

Here are a few details concerning another of these cases, in which, however, the amnesia was much less severe.

CASE 19.—A lady, aged sixty-five years, was sent to me on Feb. 18th, 1893. She had had no fit of any kind, and no pains in the head—only a feeling of "confusion in the occiput" for several years. She had suffered much from throat affections in early life, and there had been some deafness for nearly thirty years, which had slowly increased. She did not hear the ticking of a watch on either side even with contact. She heard a tuning fork on both sides with contact, and also for about two inches away from the ear on each side. Her husband died four years previously; she then became weak and suffered from dyspeptic symptoms for several weeks. There was no illness after this, but eighteen months ago she began to suffer from difficulty in expressing herself. There was no defect of articulation, but a difficulty in finding words, and this trouble had become much more marked for the last five months. There had been no unilateral weakness and there is no trace of any now. She speaks in broken sentences, omitting smaller words, and is often at a loss for a noun. Articulation is distinct. She reads from a book fluently, correctly, and with no appreciable hesitation.

A good instance of this degree of lowered excitability of the auditory word-centre was also reported by Ross.[48]

Lichtheim has likewise recorded an extremely interesting case of this type. It occurred in the person of a busy medical practitioner who met with a carriage accident and was carried home unconscious. There was paresis of the right arm and leg, and he was confined to his bed for about a week. The following are some of the particulars given by Lichtheim as to the patient's condition.

CASE 20.—Speech was much affected; the first day the patient only said "Yes" or "No," but quite appositely. Gradually more and more words returned, at first imperfectly. Whilst his vocabulary was still very meagre, it was observed that he could repeat everything perfectly. Soon after the accident he began to read with perfect understanding. It was established beyond doubt that he could read aloud perfectly at a time when he could scarcely speak at all. The statements of his wife are most positive and trustworthy upon this point, though he himself does not recollect what took place just after the accident. She states that after much difficulty in making himself understood by gestures he obtained a newspaper, and to the great astonishment of all present he began to read fluently. She herself thought it most strange and inexplicable. . . . . He could not write voluntarily at all; but this faculty returned slowly and imperfectly, as did speech. On the other hand, he could, soon after he left his bed, copy and write from dictation.

The meaning of this ability to read aloud in such a case is that though the auditory word-centre is so much damaged as to be unable to act spontaneously (that is, under volitional stimuli), it is still capable of responding to the associational stimuli coming to it as a result of strong excitation of the visual centre.[49] Persons so affected are also quite capable of responding to sensory stimuli passing direct to the auditory centre itself—that is, they can at once repeat words uttered before them.

Another very interesting but more complicated case

[45] Loc. cit., p. 112.

[46] Dublin Quarterly Journal, 1851.

[47] Several of the writers on aphasia, however, in their diagrams assume that the stimulus passes direct from the visual word-centre to Broca's region (See Ballet, loc. cit., p. 164).

[48] On Aphasia, 1887, p. 40, Case 8. I am a little puzzled, however, in view of the simple explanation that can be given of this patient's defect, to find that in different parts of his work Ross describes cases essentially similar under different names—see the case of a boy referred to on p. 68 as an example of what he terms the "second degree of aphemia," and also his reference to another example (on p. 72), which he terms, after Kussmaul, "aphasia of recollection."

[49] Lichtheim's interpretation of this case (Brain, 1885, p. 447) is wholly different from mine. He accounts for it by supposing a damage of commissural fibres to exist, which pass between his postulated "centre for concepts" and Broca's convolution, which for him also is a motor region rather than one of sensory type. These are the cases which Lichtheim includes in his Type IV. A defect closely allied to this which I have just been considering has been described by Broadbent in a paper "On a Particular Form of Amnesia; Loss of Nouns" (Transactions of the Medico-Chirurgical Society, vol. lxvii., 1884, p. 249). His explanation is also more in accordance with that of Lichtheim than with mine.

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illustrating the same degree of amnesia has been recorded by Dr. P. J. Cremen,[50] the essential details of which are as follows.

CASE 21.—The patient, a man of intemperate habits, was admitted to the Cork North Infirmary on April 10th, 1885. He was the subject of aortic and mitral disease, fully compensated, which had followed an attack of rheumatic fever in childhood. About October, 1883, he suddenly became giddy, with loss of speech, but no paralysis of limbs. He continued to work during the same day, and during five months his speech slowly improved very much. "He now commenced to do some light work, being able to make himself understood fairly well, occasionally using one word for another." About Christmas, 1884 on awaking one morning, he was surprised to find that he had lost the sight of his left eye. (This was subsequently found to be due to embolism of the central artery of the retina.) "He continued otherwise the same as regards speech, until about four weeks before admission, when, after a hard day's work, whilst in the act of holding a candle, he suddenly allowed it to drop and commenced to cry. His speech again became very imperfect and his face was slightly drawn, but there was no appreciable paralysis of limbs." Since then no change had taken place in his symptoms. On admission volitional speech was much affected. When asked of what he complained he pointed to his left temple and said he had a pain there, and on being asked if it was constant he said not. He also pointed to the left eye, and indicated that he could not see with it. His memory of names, places, and things was very defective. He did not recollect the names of his father, mother, or other near relatives. When asked to try, he made an effort to do so, sometimes repeating his own name instead, evidently knowing that he was wrong. When corrected, he repeated the name distinctly, having no difficulty whatever in articulation, the latter being very distinct. When asked to name the organs of sense he called the ear a "hair-pin," and named correctly the nose and tongue; he did not recollect the name of the eye, and called this also the "tongue"; but when corrected said, "Yes, eye; that's right." When further questioned he became confused, calling nearly everything that was shown to him "tongue." His vocabulary was, however, liable to variation from day to day. When asked to repeat the Lord's Prayer he failed to do so, but repeated another prayer instead; however, when given the first sentence he repeated it through correctly. His understanding of spoken and written language was perfect. He could repeat accurately and quickly words spoken before him. Notwithstanding this great defect of memory of words, he could read aloud clearly and distinctly, without hesitation, a page of a book from beginning to end. The following composition, in which it is impossible to discover any meaning, was written by him at my request as the history of his case: "Cork Molens.—I noscent nountg ani ammbys gosisbyoyey imitwats yab I bet yas you me sent sml me good me much cocleped." He wrote his own name and residence accurately, and could write numerals to any extent without dictation. The following will exemplify defects in writing from dictation. When asked to write the word "just" he wrote "fugl," for "subject" "supfect," for "speak" "sery," for "found" "spunt." Strange to say, when told to spell those words he did so accurately in every instance, and when asked why he did not write them he explained that he had forgotten how to make the letters. He remained in hospital for about three months, and left much improved in his speech, being able to carry on a conversation fairly well, though occasionally using one word for another. He could name objects better. Volitional writing was not improved; writing from dictation was slightly better.

Apart from the marked amnesia with preservation of ability to read aloud, this case is remarkable for the gibberish character of the patient's writing, combined with an ability to spell correctly—two characters that do not often go together. In this relation it may be mentioned that it sometimes happens that the speech of patients is entirely limited to a mere imitative repetition of words spoken in their hearing, while they are without the power of volunteering any statement—that is, their auditory word-centres respond only to direct sensory incitations, and not at all to those of an associational or volitional order. In these cases (usually included under the term "echolalia") a marked general mental impairment almost invariably co-exists.

A defect of this kind (occurring in a woman who was hemiplegic from cerebral hæmorrhage) has been recorded by Professor Bêhier.[51] She was born in Italy, and had resided both in Spain and France; of the three languages she had thus acquired she had completely forgotten the Italian and Spanish, and had only retained a most limited use of French. In this latter language *she only repeated like an echo* the words pronounced in her presence, without, however, attaching any meaning to them. But in the case of a woman seen at the Salpêtrière by Bateman the mimetic tendency was much stronger. She even reproduced foreign words with which she had never been familiar. It is clear that in such a case as this there must have been a mental degradation of a much wider kind than that which occurs when the auditory word-centre alone is reduced to its lowest grade of functional activity.

[50] Brit. Med. Jour., Jan. 2nd, 1886, p. 14.
[51] Gazette des Hôpitaux, May 16th, 1867.

THE Farnham Rural District Council on April 1st granted an extra donation of £20 to the medical officer for his special services during the recent outbreak of diphtheria.

ON FUNCTIONAL MURMURS: A FURTHER CONTRIBUTION IN ILLUSTRATION OF THE MIMICRY OF ORGANIC HEART DISEASE.

BY DAVID DRUMMOND, M.A., M.D. DUB., D.C.L. DURH.,
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SINCE my paper on Functional Heart Murmur appeared in THE LANCET of July 27th, 1895, I have met with a number of additional cases illustrating the difficulties attending the diagnosis of heart disease. A few of these I have selected in order to call attention once more to the frequency with which functional disturbance simulates organic mischief. The subject is of great importance, and I am the more disposed to pursue it because of the interest shown by a number of thoughtful clinical observers who noticed the paper. I ventured to refer to three varieties of functional murmur—namely, the cardio-hæmic or anæmic, the cardio-muscular or neuro-typtic (so-called), and the cardio-respiratory. To this nomenclature I am disposed to adhere, though I am quite free to admit that the explanation offered of the murmurs may not be entirely correct. In some respects the appended cases resemble closely those alluded to in my first paper; in others they differ, and chiefly in point of time that the murmurs occupy in the cardiac cycle.

CASE 1.—A man, aged fifty-two years, a life-long neurotic, who lived in dread of the development of organic disease, complained of dyspepsia, pain after food, flatulency, loss of appetite, some reduction in weight, palpitation, and a sense of general weakness. The heart rate averaged 85; the apex beat was in the fifth interspace, about half an inch to the left of the usual position. On auscultation at the apex the first sound was reduplicated; the second part of the double sound was little more than an echo, and was followed immediately by a well-marked blowing murmur, which ran up to the second sound. This post-systolic murmur was audible from the apex to the sternum and up to the lower border of the third rib, was lost over the aortic valves, and was scarcely, if at all, conducted beyond the apex towards the left. It disappeared when the patient held a deep inspiration, was intensified when he was lying on the left side, and materially diminished when on the right side. It was also diminished on resting, but did not entirely cease.

CASE 2.—A young man, aged twenty-one years, was examined by a medical man and passed for an office under a public body in June, 1996, when no murmur was detected. He was examined by another practitioner within the next few weeks, and a murmur found, and again with the same result six weeks later. He was advised to consult his own medical man, who at the first examination detected the murmur; but on seeing the patient a few days later when at rest failed to do so, and sent him to me. The patient was thin and pale, and was not conscious of palpitation or shortness of breath. He had never had rheumatism, and was able to lie on either side at night. When sitting the pulse was 126, small, regular, and compressible. When lying on the back a voluminous pulsation in the precordium was visible, with apparent displacement of the apex-beat downwards and outwards. This was, however, more apparent than real, as the nipple was three-quarters of an inch above its natural point. The apex was in the fifth interspace two and a half inches from the border of the sternum. On auscultation, when standing or sitting, a short, loud, blowing, systolic murmur could be heard at the apex and half an inch to the left of that point. This was conducted along the fifth rib to the centre of the sternum. The murmur was intensified during inspiration and was at a minimum at the end of expiration. On drawing a long breath as the end of inspiration was approached it became very high in pitch and resembled the sound caused by squeezing air through a hole in an india-rubber ball. When he held his breath at the end of a deep inspiration the heart became suddenly slower and two or three deliberate beats occurred which were unaccompanied by murmur. Fifteen minutes' rest in the recumbent position brought the heart down to 110, when the murmur could no longer be heard so long as he held his breath at the end of a deep inspiration, and the area over which the murmur was heard under other conditions was much reduced—that is to say, it was only to be detected over the immediate apex after rest.

CASE 3.—A woman, aged about twenty-eight years, was seen for headaches and nervous depression about four months

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after her first confinement. The patient was somewhat anæmic, but otherwise looked well. She was able to move about briskly and was free from breathlessness. On examination of the heart the apex beat was found to be somewhat prominent, but in its normal position. The heart sounds were clear and rather accentuated, about eighty-five in the minute. A well-marked blowing murmur was heard in the fourth interspace about one inch from the left border of the sternum. It distinctly followed the first sound, and appeared to run up to the second sound, an interval occurring between the first sound and the murmur. The point of maximum intensity of this post-systolic bruit was at the place indicated, and it was well heard beside the sternum, but not at the base, and was scarcely audible at the extreme apex and not at all outside of it. At the end of a deep inspiration the murmur was absent. It disappeared after treatment by rest and arsenic.

CASE 4.—This patient, a married woman aged forty-one years, had been an invalid for some years. Fifteen years before she came under observation the ovaries were removed for tubal disease. She had not menstruated since the operation. She suffered much from palpitation and nervousness. The pulse was regular, jerky, 100, even when lying in bed. The area of the cardiac impulse was increased, and the whole of the precordial region heaved more or less with the systole. The extreme apex was behind the fifth rib three inches from the left border of the sternum. Notwithstanding the excessive impulse the cardiac dulness was slightly, if at all, increased. On auscultation at the extreme apex the sounds were very loud and "membranous," and a short blowing murmur accompanied the first sound. This was best marked towards the termination of the sound and increased in intensity as the sternum was approached, where it became musical. It was audible as high as the third interspace as a musical sound, but was merged in the second interspace in a soft blowing murmur (hæmic) At the end of a full breath it was much diminished, and it was greatly exaggerated when the patient lay on her right side. It was not audible to the left of the apex. At times when the patient was free from excitement the murmur was entirely absent.

CASE 5.—A boy, aged twelve years, with a nervous history, often had attacks of the nature of hysteria. He complained of giddiness and some shortness of breath on exertion. He had never had rheumatism. On examination of the heart there was a tumultuous heaving impulse. The apex was a little below the normal position; there was no thrill. A loud, short, systolic murmur could be heard to the left of the sternum. It was best marked about the fifth rib and was not audible at the immediate apex. There were no basic murmurs. The heart beat was 120, jerky and regular. The murmur became much more localised after resting, even though the number of heart beats was not reduced to any extent. On drawing a deep breath the murmur was absent at the end of inspiration. On lying on the right side the murmur was first intensified by the movement, but after a few minutes disappeared altogether.

CASE 6 —A man, aged twenty-nine years, had suffered from cough, night-sweats, and some emaciation for three or four months. He was highly nervous and somewhat short of breath. The right chest was flat beneath the clavicle, where the note was relatively dull. When standing, a loud, short, diastolic murmur could be heard to the right of the sternum. The point of maximum intensity was just above the right nipple, but it was audible from the clavicle to the fifth rib. The heart beat was jerky and nervous (120 in the minute), but after ten minutes' rest came down to 90 and the murmur disappeared. It also disappeared on the patient drawing a long breath and holding it. Over the same area a well-marked systolic cardio-respiratory murmur was heard during a quiet deep inspiration, but this was quite distinct from the sound already referred to. The pulse was small and rapid, but not suggestive of Corrigan's.

CASE 7.—Another case, closely resembling the above, was that of a man, aged thirty-eight years, who was admitted into the Royal Infirmary, Newcastle, in December, 1896, for cough and hæmoptysis. There was some retraction of the right lung and evidence of early phthisis. There was a short, whiffing, early diastolic murmur which terminated abruptly in the second sound. It was best heard between the apex and the sternum along the fifth interspace. It was loud on excitement, but disappeared on resting or on holding the breath.

CASE 8.—A man, aged twenty-nine years, of habitually nervous tendency, had complained for upwards of three years of a pain about the left nipple, which he ascribed to his heart. He had frequent attacks of palpitation with a feeling of intense apprehension of approaching danger, when he trembled all over. The pain was worse at night. The heart was rapid, 100 in a minute when standing. The left apex beat was in the nipple line between the fifth and sixth ribs. In the erect posture a loud, systolic, blowing murmur was heard at the apex, beyond which it was not conducted, being limited to within a narrow circle at this point. This murmur was intensified on drawing a long breath, and was increased in loudness as the inspiration reached its termination, but on holding a very long breath it disappeared. After lying down for a few minutes it was no longer audible.

A few points stand out prominently in connexion with these mimetic murmurs: firstly, they occur in highly neurotic people; secondly, they are frequently associated with violently acting ventricles independent of lung conditions; thirdly, they may be intimately connected with respiration and structural alterations in the lungs; fourthly, they are not limited to any cardiac area; fifthly, they may be systolic, post systolic, or early diastolic; and sixthly, they can be diagnosed by an appeal to certain tests, chiefly rest, position, and respiratory movements. (See table at end of first paper, THE LANCET, July 27th, 1895, p. 196).

Newcastle-on-Tyne.

A CASE OF PHTHISIS COMMUNICATED FROM HUSBAND TO WIFE.

BY WILLIAM MURRELL, M.D., F.R.C.P.,
LECTURER ON PHARMACOLOGY AT THE WESTMINSTER HOSPITAL.

A WOMAN, aged thirty-six years, was admitted into the Westminster Hospital suffering from phthisis. Both her father and mother were alive and well, and she had three sisters and one brother all grown up and in good health. There was no history of phthisis in her family on either side. Her husband was apparently healthy when she married him, but his father and one sister died from phthisis. After a time he developed a cough, spat blood, and ultimately died, it being stated on the certificate that the cause of death was phthisis. During the last seven months of his life he was too weak to go out, and his wife nursed him incessantly. They had only one small room, and the fire was kept burning day and night. He expectorated a great deal, and no directions were given her as to the use of antiseptics. Soon after his death she noticed that she had a bad cough, and when she came under observation it was found that she had cavernous breathing with whispering pectoriloquy at the right apex and dulness and crepitation at the left. She stated that she was no worse off in consequence of her husband's death, but that, on the contrary, her means had improved, as during her husband's illness she had to keep him.

Remarks.—This case is of no particular interest in itself, but it is so when taken in conjunction with similar cases recorded in THE LANCET of May 22nd, 1880, and a similar series of cases published by Dr. Reginald Thompson in THE LANCET of Nov. 6th of the same year, as marking the change of opinion respecting the contagiousness of phthisis which has taken place since that time. Sixteen years ago such cases were regarded with suspicion and their publication excited hostile criticism; now they are so common that they excite but little comment. Dr. Hermann Weber[1] gave details of thirty-nine wives who became infected from marrying phthisical husbands, and in several cases the husband infected more than one wife. The reason the husband infects the wife more frequently than the wife the husband is explained by the fact that when the husband is ill the wife nurses him, but when the wife is ill the husband from the increased demands on his resources has to pay closer attention to business and is less at home than usual. In connexion with the subject of the contagiousness of phthisis it is difficult to avoid reference to the risk which is run by healthy people on long sea voyages if compelled to occupy the same cabin with patients suffering from advanced phthisis. The sleeping cars which convey large numbers of phthisical patients to the Riviera and other popular health resorts at certain periods of the year are not above suspicion, and much greater care should be taken in having them aired and disinfected than is at present the case.

Welbeck-street, W.

[1] Transactions of the Clinical Society, vol. vii.

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ILLUSTRATIVE CASES OF APHASIA.

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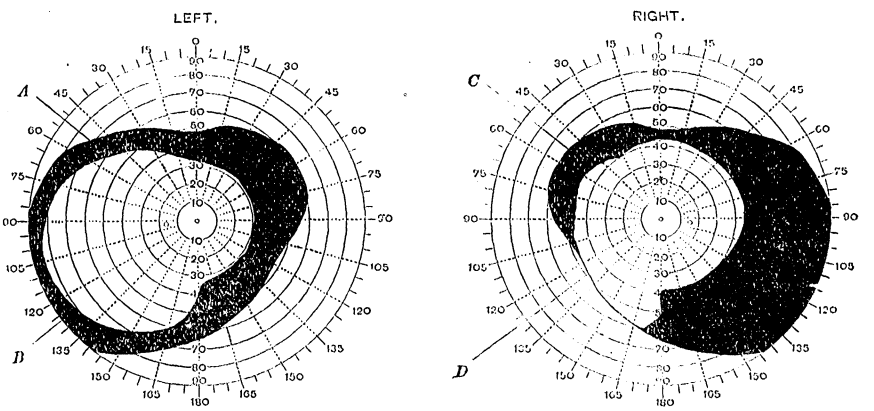
(*Continued from* p. 953)

CASE 4. *Paralysis of the right hand and arm; aphasia; very marked word-blindness presenting the peculiarity that the patient could read many words (combinations of letters) while he was absolutely unable to recognise the individual letters of which they were composed, with some impairment of the motor side of the speech mechanism; partial right-sided homonymous hemianopsia, with some peripheral constriction of the sound half of each field.*—This case was brought before the Edinburgh Medico-Chirurgical Society, and published in the *Edinburgh Medical Journal*, September, 1887, p. 241. It is of great importance, for, so far as I know, attention had not been previously directed to the interesting fact that some word-blind patients can read words (combinations of letters), and yet are unable to read the individual letters of which those words are composed. It is curious that the case seems to have been almost entirely overlooked, not only abroad, but in this country. I re-publish it exactly as it was originally printed, and without any addition to the comments which I then made, further than to say that some similar cases have since been recorded and that the same explanation of the facts which I originally advanced has also been suggested by other and independent observers. The following is the original record.

"The point of greatest interest in this well-marked case of word-blindness is the fact that the patient, who was absolutely ignorant of the individual letters and did not even recognise them when they were named to him, was nevertheless able to read many words—i.e., letters when taken in combination. I am not aware that such a condition has been previously described. It is usually supposed that the highest degree of word-blindness is manifested by inability to read individual letters rather than individual words—that, in short, individual letters, which are generally considered to be the most elementary parts (least highly specialised) of written speech, as they undoubtedly are the first to be acquired, are the last to be lost and destroyed. It might therefore at first sight be argued that the fact that a word-blind patient who was utterly ignorant of the individual letters, as letters, was nevertheless able to read combinations of letters or words was opposed to the great doctrines of evolution and dissolution which Herbert Spencer, Hughlings Jackson, and others have so satisfactorily applied to the elucidation of the pathology of the nervous system, and which so greatly aid the intelligent comprehension of the derangements of the functions of the brain. When, however, the matter is looked at more closely this apparent exception will, I think, be found to conform to the general rule, for after the preliminary difficulties of learning to read have been overcome, and the act of reading has become facile and has been frequently repeated, the individual letters are, by some persons at all events, ignored, and it is the combination of letters—syllables and individual words—to which attention is chiefly directed. In short, it may be supposed that in some persons the syllable and individual word become after a time less highly specialised (i.e., more elementary) parts of written speech (when read) than the individual letters. If this be so we should expect the form of word blindness which I am now describing to be more frequent in well educated and intelligent people, to whom the act of reading has, as it were, become automatic, than in uneducated persons and those who before their illness could only read with difficulty and by spelling out (by the help of individual letters) the separate syllables and words. The notes of the case are as follows.

"A very intelligent man, aged sixty years, who had for many years occupied a responsible position as clerk of works, was sent to me on March 9th, 1887, by the late Dr. T. G. Balfour, suffering from paralysis of the right arm and aphasia. He stated that he had enjoyed excellent health until April 15th, 1886, when he lost the power of moving the thumb and forefinger of the right hand. The paralysis was only slight, and passed off in the course of a few days. Speech was not affected on that occasion. He remained well until Oct. 7th, 1886, when he had a second attack. On this occasion all the fingers of the right hand were powerless, but the movements of the elbow and shoulder were not affected, nor was speech implicated. He slowly and gradually recovered from this, as he did from the first attack, and continued to follow his employment as clerk of works until Dec. 22nd, 1886, when the present attack came on. On the morning of Dec 22nd he felt sick when he got out of bed; loss of power in the right hand and arm and inability to speak then developed, and were complete in the course of a few hours. Neither on this nor on either of the two previous occasions was the onset of the paralysis attended with coma. At first the loss of power was almost complete in the upper arm and forearm as well as in the hand, but in the course of a few weeks he began to move the arm at the shoulder and elbow. There has been no perceptible improvement in the paralysis of the hand nor in the power of speaking. The leg and face were in no way affected. On March 9th, 1887, when the patient first came under my observation, there was absolute inability to move the fingers and thumb of the right hand; the patient could pronate, but was unable to supinate, flex, or extend the hand on the wrist; all the movements of the elbow and shoulder could be performed. The muscles acting upon the elbow and shoulder were, however, still markedly paralysed, the movements which resulted from their contraction being very feeble and unsteady. The fingers and thumb of the right hand were rigid and bent into the palm. The right hand and forearm were swollen, and the skin felt sodden and was more moist than that on the opposite side. No distinct increase of the tendon reactions, as compared with those in the left arm and forearm, could be detected. There was absolutely no loss of power in the right leg, and the reflexes, both superficial and deep, seemed quite natural and equal in both lower extremities. There was no perceptible right-sided facial paralysis, but the patient, who had lost all his upper teeth, seemed to have some difficulty (probably not paralytic) in moving the upper lip on both sides. The skin sensibility was markedly impaired in the right forearm and hand, more especially over the fingers and on the outer (extensor) aspect of the forearm.

FIG. 8.

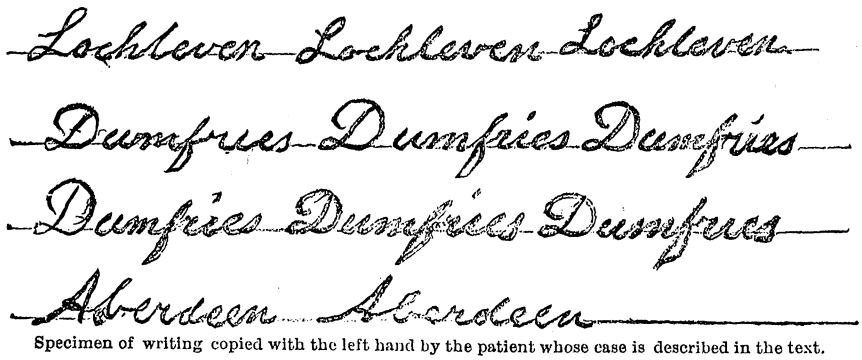


Perimeter chart of the fields of vision for white in Case 4, showing partial right-sided lateral homonymous hemianopsia, peripheral constriction of the whole of the left half of the field in the left eye (the parts to which the letters A and B point), and constriction of the upper part of the left half of the field in the right eye (the part to which the letter C points).

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In the upper arm there also appeared to be some loss of tactile sensibility, but there was apparently no anæsthesia in the right leg. The exact testing of the skin sensibility was, however, difficult because of the inability which the patient had in expressing himself. The visual acuity seemed equal and normal in the two eyes. The pupils were equal and contracted both to light and to accommodation. No abnormal ophthalmoscopic appearances were observed. Perimeter measurements, made on March 11th and 12th, showed partial right homonymous hemianopsia, with some concentric limitation of the field in the left (seeing) half of each field (see Fig. 8). The hemianopsia was probably more marked than is shown in the figure, for the patient, who was very definite and certain in his answers when the left side of the field was being taken, was uncertain and hesitating when the right side of the field was being examined. The parts of the fields coloured black in the charts were absolutely lost. Hearing, taste, and smell, so far as they could be tested, owing to the aphasic condition of the patient, seemed equal and natural on the two sides. The heart seemed normal. The urine was very pale, and its specific gravity 1010; it was acid, not too copious, and contained no albumin. A high degree of aphasia was present. On analysis it was found to consist of very marked word-blindness, with apparently some degree of motor aphasia (amnesia) in addition. When the patient first came under observation I was doubtful if there were not some 'word-deafness' or lack of comprehensive (intellectual) power. When asked, for instance, on March 14th, whether he was a hundred years old he at once expressed emphatic dissent both by gesture, expression, and verbally, saying, 'Oh, no.' But when asked immediately afterwards if he was thirty he hesitated for some time and finally answered 'Yes.' Immediately after this he at once and emphatically said, in answer to questions, he was not forty and not fifty. This defect, if any, of intelligence in comprehending spoken language was, however, only temporary. Since March 21st I have not observed any mistakes of this kind. A more careful analysis of the speech condition at the time when the patient first came under observation showed the following facts.

FIG. 9.



Specimen of writing copied with the left hand by the patient whose case is described in the text.

"*Motor functions of speech; motor aphemia.*—The patient had lost the power of spontaneously speaking in sentences. He was also unable to name most common objects (such as a knife, pen, key, or pencil) which were shown to him, but he always knew what they were, and was at once able to repeat their names when they were mentioned in his hearing. He was able to make a few intelligent replies to questions in single words, and to use the words 'Yes,' 'No,' and 'Oh, no,' in an intelligent and propositional sense.

"*Agraphia.*—He had lost the power of spontaneously writing in sentences. He had also lost the power of writing from dictation. He was unable to write any letter of the alphabet when told to do so. He could, however, copy both printed and written characters with his left (non-paralysed) hand quite as well as most right-handed persons (see Fig. 9). He could also draw with his left hand at least as well as most right-handed persons (see Figs. 10 and 11). He knew the different parts of the house which he drew; and, although he could not himself name them, he at once pointed correctly to the different parts when they were named to him.

"*Sensory functions of speech.*—With the qualification mentioned above there seems to be no word-deafness. There is, however, very marked word-blindness. The patient is, as has been already mentioned, well acquainted with

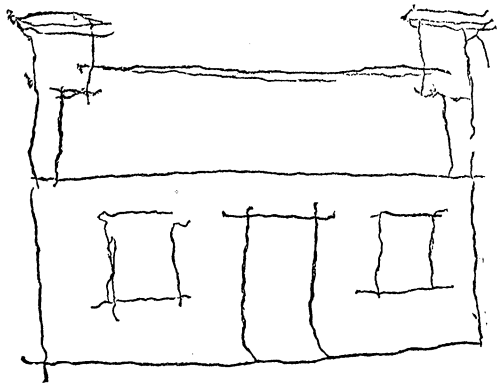
FIG. 10.



Facsimile of drawing of a man's head made with the left hand by the patient whose case is described in the text.

ordinary objects (such as a knife, pen, pencil, &c.), which are shown to him, although he cannot name them spontaneously. He also at once recognises pictures and portraits (the Queen, Prince of Wales, Edinburgh Castle, the Scott Monument, &c.). He is, however, unable to recognise a single letter of the alphabet; he can neither spontaneously name the letter when it is shown to him, nor can he, when the names of different letters are repeated aloud to him, indicate when the particular letter which he is asked to recognise is named. He is also unable to recognise figures, either spontaneously or when they are named to him. On March 11th he was asked to name the letters and figures on a calendar for the month which was standing on my table. The result was as seen in Fig. 12. The letter O is the only one which was correctly named; the T (in THR.)

FIG. 11.



Drawing of a house made with the left hand by the patient whose case is described in the text. Drawing reduced from 4 to 2½ inches.

was correctly named, but in SAT. was named 'N'; the N in both SUN. and MON. was named 'T.' Numbers were on this occasion named as letters; 2 was called 'R,' 9 'N,'

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and so on. At the same visit he copied the letters TUE correctly, but named them, after he had copied them, 'STH.' He also wrote from dictation, on the same occasion, 'T' for A, 'S' for B, 'R' for C, and when told to write D, E, F, said 'I cannot' or 'I do not know.' Efforts of this kind, and, indeed, any sustained attempt to speak, read, &c., were attended with marked flushing of the face, perspiration of the head, and appearance of great effort. The patient was advised to diligently practise his writing, and to try and read and learn the alphabet.

FIG. 12.

MARCH	NETOS			
SUN.	CST			
MON.	NOT			
TUE.	QSW			
WED.	TRN	2 R	9 N	16 EU
THR.	TRN			
FRI.	WXR			
SAT.	XRN	5 T	12 NX	19 ON

Copy of a portion of a calendar for March, 1887, showing the mistakes made by the patient (Case 4). The letters in the word March were read as "Netos," &c. (Same size.)

"*Subsequent progress of the case.*—His general condition and loss of speech slowly and gradually improved. Motor power was, to a considerable extent, regained in the muscles of the upper arm and forearm; the muscles acting upon the wrist and fingers have, however, remained until the present date, June 20th, absolutely paralysed. The swelling and moisture of the paralysed hand have almost disappeared. On May 18th spontaneous speaking in sentences was still lost; the patient could now name many more objects than when he first came under observation; and in replying to questions a few more words were made use of. He was still quite unable to write spontaneously or from dictation. He could not even write his own name, though he made, on this and several other previous occasions, more or less satisfactory attempts to do so. He was still, as a rule, unable to write any letter of the alphabet when told to do so. On June 1st, when he was shown to the Medico-Chirurgical Society of Edinburgh, he could not write or recognise the letters 'o,' 'a,' or 's,' which I wrote on the blackboard, nor did he know these letters when they were named to him. He had recognised these letters on a previous occasion; and I had more than once found that he could write and recognise some letters which, perhaps, at the next visit, or if he was tired or agitated, he seemed to be quite unacquainted with. He was now able to write some of the individual letters, such as 'a,' 'o,' or 's' when told to do so; and if he made a correct start, and wrote the letter 'a' from dictation, he was sometimes able to go on and to write many letters correctly and in their right order. On one occasion he got up to the letter 'p' in this way (see Fig. 13). He was, however, quite unable to read any letter after he had written it. He could not point out the letters 'a,' 'c,' 'o,' for instance, in the line of letters which he had written; and even when the letter to which his attention was being directed was correctly named to him he did not recognise that it had been named. In this respect (the power of spontaneously writing some letters which he was quite unable to read after he had written them) the case seems to resemble in an early stage the case of word-blindness described by Westphal, 'in which the patient, at first unable to read his own writing, acquired the power of deciphering it by passing the tip of his index finger over each letter as if he were writing the word a second time.'[1]

"Soon after the patient first came under my observation his wife, who always accompanied him when he came to see me, stated that he was able to read and make out some things which interested him in the newspapers. I paid very little attention to this statement, for it is well known that aphasic patients who are utterly unable to read a single word not unfrequently occupy themselves with a book, newspaper, or a paper, and appear to their friends to be intelligently interested. Knowing, then, that this patient was unable to read a single letter of the alphabet, I paid no attention to this statement. When, however, his wife stated on a subsequent occasion that he had, when walking in the cemetery, read to her the names (with which, be it observed, he had not been previously acquainted) on some of the tombstones quite correctly, and also that he had, on another occasion, turned up and pointed out in a guide-book the name of a

FIG. 13.



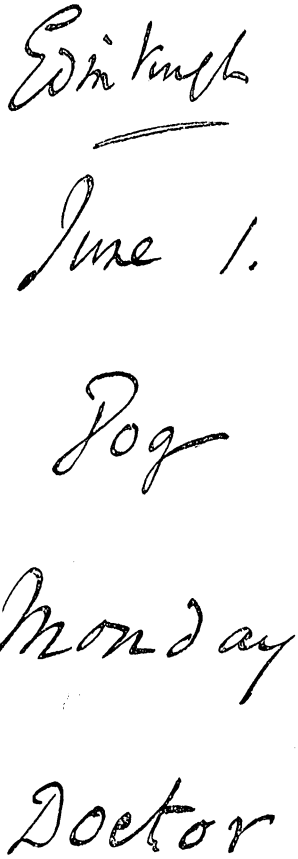
Facsimile of alphabet written by the patient (Case 4) on May 21st. The alphabet was correctly written up to the letter P. The patient was unable to read any of the letters after he had written them, and did not even recognise them when named to him.

[1] Quoted by Ross, Aphasia, p. 75.

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landlord about whose property they were talking, my attention was aroused, and I found on investigation that the patient could read many words the individual letters of which he was totally ignorant of, even when they were named to him. Thus, on June 1st he read correctly the words which I had written on a piece of paper (see Fig. 14); also the

FIG. 14.



Facsimile copy of words read by the patient (Case 4) on June 1st. He was unable to recognise any of the individual letters contained in these words, even when they were named to him.

words 'house' and 'cat' written in the same way; 'book,' he said, was 'boot,' and 'something' he read as 'someone'; the words 'hand,' 'right,' 'left' he was unable to read. He was totally ignorant of the individual letters composing the words which he was able to read, and did not even know them when they were named to him. Thus he was asked with regard to the first letter in the word doctor, which he had read correctly, Is it 'a'? Is it 'b'? Is it 'c'? Is it 'd'? and he failed to give any sign that he connected the sound 'd' with the written symbol. And so on with all the other letters. His knowledge of figures was now better than it used to be, but still very imperfect.

"At the end of June, 1887, the patient's condition was essentially unchanged. I have had no opportunity of examining him since that time."

Corrigenda.—Case 3, page 950, seventeenth line from the foot, instead of "I am consequently" read "I was consequently."—Page 951, second column, seventh line from the foot, instead of "read it" read "tell me what he had written."

(To be continued.)

MEDICAL MAYORS.—Mr. William F. Prichard Bassett, M.D. Edin., M.R.C.S. Eng., has been re-elected mayor for the city of Bathurst, New South Wales.—Mr. A. Clarke Robinson, M.D. R.U.I., L.R.C.S. Edin., has been elected mayor of Jerilderie, New South Wales.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF MULTIPLE DUODENAL ULCER.

BY F. J. DE COVERLY VEALE, M.B., CH.B. VICT.,
LATE ASSISTANT MEDICAL OFFICER, COUNTY ASYLUM, LANCASTER.

THE following is a brief account of a case I had under my care in the early part of 1896.

A man, aged sixty-eight years, of temperate habits, was admitted to the County Asylum, Lancaster, on Dec. 19th, 1895. Mentally he was advanced in senile dementia, wet and dirty in his habits, and he required a single room at night. He rapidly became feebler, and was transferred to hospital, but not put to bed. He at no time made any complaint of physical trouble, though his mental condition may account for this. He refused his food from about Feb. 10th, 1896, and had to be fed with a spoon. He was taking only soft foods, and was losing weight. On the 17th, about one and a half hours after breakfast, he vomited. This was thought to have been due to constipation, and a dose of salts was ordered. The vomited matter was said to be "bilious," but I did not see it. No further change was noticed until March 3rd. On this date the night attendant found that he had been vomiting "coffee-grounds." This was at 6 A.M. He was put to bed in hospital, and I was subsequently called to see him. He was very feeble and *in extremis* Nothing could be made out by examination. I inspected the vomited matter and suspected gastric ulcer, and treated him accordingly. During the day he became still feebler. He had two attacks of hæmatemesis during the night. He was also reported to have had two convulsive seizures, but not at the same time as the vomiting. He died at 5.15 A.M. on March 4th.

Necropsy.—In the first part of the duodenum there were four ulcers, all within two inches of the pyloric valve. The largest ulcer was of the size of a split pea, its edges showed considerable induration, and it involved all the coats of the bowel, the peritoneal covering being much thickened locally. The second ulcer was similar in size, but its edges were less indurated and it was more superficial. The remaining two ulcers were quite small, and merely involved the mucous membrane and submucosa. All these ulcers were deeply coloured by the deposition in them of disorganised blood products. The œsophagus and stomach showed similar deposits on their walls, whilst the fæces in both small and large bowels were almost black in colour from the same cause.

For the notes of the necropsy I am indebted to Dr. Goodliffe.

Lancaster.

NOTE ON A CASE OF SUPPOSED POISONING BY PENNYROYAL.

BY W. T. ALLEN, M.B., B.CH. R.U.I.,
RESIDENT MEDICAL OFFICER, PARISH INFIRMARY, LIVERPOOL.

A WOMAN, aged twenty-three years, was admitted to the parish infirmary, Liverpool, on March 15th, in an almost collapsed condition, suffering from symptoms of acute gastritis. She stated that vomiting began four days previously after she had taken a tab'espoonful of pennyroyal. She had taken this drug to bring on menstruation, which had been in abeyance for six months. The excessive vomiting continued despite the usual remedies, but ultimately ceased under the influence of morphia and rectal alimentation. The patient, however, gradually sank, and died on March 19th. She had been an inmate of the infirmary for a week at the beginning of the month, and was then suffering from slight anæmia and dyspepsia, but had not vomited during that period.

A post-mortem examination was made at the direction of the coroner, and I found the stomach extremely congested, especially towards the cardiac end, the small intestines also showing thickening of their coat and intense congestion,

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most marked in the lower part of the ileum. The large intestines were also congested even down to the rectum, but not to the same degree as the stomach or ileum. The uterus was normal in size, and there was nothing noticeable in the other organs except some congestion of the brain. At the inquest evidence corroborative of the woman's statement was given; but as the druggist who had sold the pennyroyal said that in thirty years' experience he had never heard of a case of poisoning by this drug, the jury returned a verdict that "death was due to gastro-enteritis set up by some irritant poison" but did not decide what the poison was. It is in deference to their verdict that I have put the word "supposed" in the heading to this note. On looking up the literature of the subject I have only been able to find one case of poisoning by pennyroyal, which is recorded in Dixon Mann's "Forensic Medicine." In that case a pregnant woman who was seen immediately after taking a one-drachm dose of the drug had vomiting, delirium, and opisthotonos, but subsequently recovered.

Liverpool.

A NOTE ON A FATALITY OCCURRING UNDER ANÆSTHETICS.

BY HUGHES REID DAVIES, M.R.C.S. ENG., L.R.C.P. LOND.

A CASE of left pleural effusion of many years' standing came under my care in 1889. From that date up to about the early part of 1896, except for occasional attacks of general debility, dyspnœa, and bronchitis, the patient managed to tide over year after year and follow his daily avocations without warranting surgical interference. However, a severe attack of broncho-pneumonia converted the fairly quiescent left thorax into an empyema. Bronchiectasis was also diagnosed; and, finally, when the pus found its way into the dilated tubes, the fœtor of the expectoration rendered life a burden, not only to himself, but to those around him. The misery of his life induced him to accept the offer of surgical aid. Every precaution to ensure success was taken. A well-known and skilful hospital surgeon was present, a physician, myself, and another surgeon. Chloroform was administered, the patient being gently lowered into as recumbent a position as his breathing allowed. The anæsthetic was taken well, the radial pulse being carefully felt by me, and the temporal by the anæsthetist. Neither pulse nor respiration were such as to warrant alarm. Stertor commenced, and the patient was announced by the anæsthetist as "ready." Then came our error of judgment, an error which THE LANCET, in the article entitled "The Records of Fatalities under Anæsthetics," published last week, shows to be common to others. Dorsal decubitus was exchanged for the right side position. In an instant a marked change occurred; a gurgling, bubbling effort of respiration was followed by complete cyanosis and cessation of respiration and heart's action. With the utmost rapidity the patient was turned upon his back, untouched by the surgeon's scalpel, and artificial respiration and subcutaneous injections of ether and brandy at once commenced, but though persisted in for some considerable time they were useless. Effect and cause seem plain. Up to the moment of turning the patient for operation anæsthesia was going fairly well. Simultaneously with the change from dorsal decubitus to right side position the empyema emptied itself rapidly into and through the dilated bronchi, filling the trachea, right bronchus, and even the mouth, as the "bubbling" in my case and the pouring of fœtid pus from the mouth in Mr. Scott's case testified. The change to the original dorsal position, artificial respiration, &c., quick as they were, were futile. The sound lung was choked, the embarrassed heart-action impeded beyond recovery, the respiratory centres responded no longer, and death from asphyxia resulted.

Surely, no one will say that the anæsthetic was to blame? and yet the case must be quoted as "death under anæsthetics." Had we but tried, before anæsthesia dulled the respiratory centres, the position required for operation, reflex coughing would at once have warned the patient and us of the impossibility of that position; or had we before anæsthesia withdrawn with a large trocar and cannula all the fluid possible from the pleural cavity we might, perhaps, have been spared our painful and much-regretted experience.

Bow, E.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

A CASE OF NEGLECTED TYPHOID FEVER; PERFORATION AND EXTRAVASATION OF FÆCES INTO THE SAC OF A LEFT INGUINAL HERNIA; DEATH AFTER RAPID EMACIATION.

(Under the care of Mr. W. G. SPENCER.)

THE following case is noteworthy on account of the exceeding difficulty in diagnosis and the great rarity of an intestinal ulceration due to typhoid fever perforating into a hernial sac. Extensive adhesions must have localised the peritoneal inflammation resulting from the perforation, or the patient could not have survived so long as a month after the perforation occurred, for perforation took place probably on Jan. 21st. The rapid wasting is remarkable considering that the site of the fæcal fistula was so close to the ileo-cæcal valve.

A man, aged thirty-eight years, last went to work on Dec. 22nd, 1896. He then stayed at home, complaining of pains all over him, and had shivering, sweating, and diarrhœa. He did not take to his bed, however, until Jan. 21st, 1897—i.e., a little more than four weeks after leaving work; he was then obliged to do so on account of great pain in the lower part of the abdomen. During three or four days he vomited several times yellow or brown matter; he wandered at night, and on two or three occasions had difficulty in passing urine. He had had a rupture on the left side for nine years, which used to come down when he was at work and go back on lying down; but after the attack of pain and vomiting it could not be returned, but, on the other hand, became more tense and caused much pain. He was admitted to hospital on Jan. 31st—i.e., about six weeks after leaving work—and his medical attendant is reported to have sent word that he was suffering from phthisis after influenza. A large swelling filled the left half of the scrotum and extended to the inguinal region, the skin over it being dusky red and œdematous. The swelling was tympanitic to percussion, yielded evident fluctuation, and was opaque to light, and a firm mass filled the inguinal ring and gave an impulse on coughing. The penis, the right side of the scrotum, and the perineum were normal. The temperature was 102·6° F. and the pulse was 130. The bowels were opened soon after admission. No vomiting had taken place for several days, nor did it occur before the operation. Mr. Spencer formed the diagnosis of a ruptured hernia and made an incision the whole length of the scrotum. Pus, fæces, and flatus escaped, and a mass of sloughing omentum was cut away without disturbing the adhesions shutting off the abdominal cavity. There was no bowel in the sac, but fæces welled up under the omental stump from a cavity just inside the ring. The sloughing hernial sac was treated antiseptically and frequently irrigated, and the sloughs, which included the testicle and cord, were later cut away piecemeal, so that before the patient's death a clean granulating surface had formed. For a few days the patient seemed to improve, but he soon rapidly wasted and was reduced to a skeleton before death. This wasting occurred in spite of the patient taking abundant food by the mouth and extras such as cream, alcohol, and cod-liver oil, which was also rubbed in. He was intolerant of enemata. The patient had regular motions per anum, and there were frequent discharges of fæces by the wound, sometimes yellow and sometimes green. Throughout the case there was an absence of odour in the fæces; the ward sister made the remark that the stools had the colour but not the consistency of typhoid stools. The abdomen was not palpated much for fear of breaking down adhesions; it was, if anything, rather retracted, always soft, and not tender, except one day when

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there was some retention of pus. The patient's only complaint was of griping abdominal pains. The tongue throughout was moist and clean. The temperature fell after the operation and was subnormal for a week before death; the pulse was always from 100 to 120 or more. The patient died seventeen days after admission, about two months after leaving work.

Necropsy.—At the post-mortem examination, which was performed by Dr. Hebb, the omentum was found stretching from the colon to the left inguinal ring, thus forming an apron covering the lower half of the abdomen. Beneath it, in the pelvis, the lower portion of the small intestines had become matted together, mixed up with pus and fæces, with the gut so rotten that it tore in all directions when drawn upon. The oldest and largest perforation was situated just above the ileo-cæcal valve, but for four feet above the valve all the Peyer's patches were ulcerated down to the peritoneal coat or had actually perforated. The mesenteric glands were enlarged and the spleen was soft. Indeed, there is no doubt that the patient's illness was the result of typhoid fever.

SUSSEX COUNTY HOSPITAL.

A CASE OF TETANUS FOLLOWING PUNCTURED WOUND OF THE HAND TREATED BY BINIODIDE OF MERCURY BATH AND ANTITOXIN; RECOVERY.

(Under the care of Mr. N. P. BLAKER.)

THE interest in this case chiefly lies in the fact that the patient was treated by biniodide of mercury baths locally. When mixed treatment, however, is tried it is difficult to learn much for future guidance, and here the patient was given chloral and other drugs, besides having anti-tetanic serum injected. How far the use of the serum was of benefit we cannot judge; there is one thing established about its administration, and that is that the immunity which it confers is greatly superior to its curative qualities, and when the disease is once developed far greater quantities must be used than are necessary to induce immunity. "In summing up it seems to the author[1] that the serum treatment has not actually changed the prognosis in acute and serious cases. In the milder cases it seems to lessen the spasms, the pain, and the distress, and, fortunately, it has reduced the mortality, but to what extent cannot be told until we are certain that all cases are published." Kanthack[2] has pointed out that the severity of tetanus and the seriousness of its prognosis depend, among other things, upon the rapidity of the onset, the acuteness of the case, and the period of incubation—i.e., the shorter the incubation the more serious the outlook. For the notes of this case we are indebted to Mr. A. H. Buck, house surgeon.

A boy, aged fifteen years, was admitted into the Sussex County Hospital on June 12th, 1896, under the care of Mr. Blaker, on account of secondary hæmorrhage from a punctured wound of the palm of the hand. The wound was caused by a fall on broken glass in the road on June 8th, and was followed by free hæmorrhage, which was stopped by pressure. Hæmorrhage recurred on the 11th. At the time of admission there was in the middle of the palm of the left hand over the superficial palmar arch a clean deep cut half an inch long. There were then neither signs of inflammation about the wound nor yet signs of healing. No injury to tendons or nerves was discovered, and after washing with carbolic lotion a pad of cyanide gauze was applied. On the 13th the temperature was 100° F., and the hæmorrhage again recurred and was stopped by pressure. The temperature did not rise again above 99°, but on dressing the wound two days later there was a little pus present, after which it was dressed daily. On the afternoon of the 20th the patient complained of a stiff neck, and on examining him the house surgeon found he could not open his mouth or sit up in bed on account of rigidity in the muscles of the back. He was moved at once to a separate ward, which was darkened and kept quite quiet, and under chloroform the wound was opened up freely with a pair of dressing forceps. The hand and forearm were then put into a bath of biniodide of mercury of the strength of 1 in 500. Internally fifteen grains of chloral hydrate were given every four hours. On the 21st, at 8 A.M., the patient had a severe attack of opisthotonos and was sick. Swallowing became so difficult that nasal feeding was resorted to. The chloral was discontinued, and ten minims of tincture of opium were administered every four hours. Some improvement took place during the day, but at any stimulus, such as noise or draught, the spasms recurred. Twitchings of the face were also troublesome. Towards night the patient could swallow more easily and was fed with a spoon, the teeth not admitting of separation for more than a quarter of an inch. In the evening the temperature was 101° F., the pulse was 120, and the respirations were 20. On the afternoon of June 20th a telegram was sent to the British Institute of Preventive Medicine for tetanus antitoxin, but late at night an answer was received saying that there was none in the institution. On the 21st (Sunday) telegrams were despatched to two firms of druggists, both of whom sent off antitoxin on the 22nd (Monday) as soon as their premises were open. The use of antitoxin was, however, delayed for nearly forty-eight hours, at which time, as it happened, the symptoms were already showing signs of abating. On the 22nd the patient was better, after a fairly good night. The rigidity of the muscles of the back was well marked and there were also trismus and risus sardonicus. There were no acute spasms. There was slight nausea, but no vomiting. The patient was quieter and in less pain. The left hand had been in a bath of biniodide continuously since the symptoms were first noticed, and the palm and dorsum presented large blebs. Considerable absorption must have been taking place. At 12 midday a dose of antitoxin was injected subcutaneously in accordance with directions sent with the bottle. At the time of injection the temperature was 100°, and during the following twenty-four hours it did not rise above 100·8°, nor did the pulse exceed 122. On the 23rd the spasms were few in number, but the back was still very rigid. The trismus and risus sardonicus were well marked. The patient could swallow better. A second dose of antitoxin was administered at 11 A.M; the temperature rose to 101·4° twelve hours later; otherwise it remained between 100° and 101°. He slept fairly and had taken food well—three pints of milk, three ounces of brandy, and six eggs during the last twenty-four hours. The strength of the bath of biniodide was now changed to 1 in 2000. During the afternoon the opisthotonos and twitchings were more severe. The strength of the bath was again changed in the evening to 1 in 500. On the 24th the patient was better as to pain and spasms. The bowels were opened after an enema. Slight salivation appeared towards the evening, and the biniodide bath was changed for boracic fomentations. Some of the blebs had broken and others were still of large size. On the 26th there were considerable pain and twitching of the face and muscles of the back. The hand was put in the biniodide bath (1 in 500) for half an hour. The temperature remained at from 100·6 to 101·6°. After this the symptoms slowly and gradually improved and the bath was given for from one to two hours a day. On the 30th the tincture of opium was diminished to four minims every four hours, and on July 9th to three minims, and on the 12th to two minims, being discontinued altogether on the 15th. On the 18th the bath was discontinued, and the patient could then turn about easily in bed and sit up. On August 1st the curve in the upper dorsal region was somewhat exaggerated, and there was still slight rigidity of the muscles of the back. The intercostals did not act well and the breathing was mainly diaphragmatic; the patient was, however, looking very much better and was getting out of doors. The trismus had disappeared. On the 15th the above condition had very much improved, and the patient left the hospital practically well eight weeks after the appearance of the first symptoms.

Remarks by Mr. BUCK.—The following points seem to me to be of special interest in connexion with the above case, and have induced me to place it on record:—1. There is, so far as I know, no recorded case of the treatment by a bath of biniodide of mercury having been tried. An acute case of tetanus successfully treated by subcutaneous injections of corrosive sublimate has been reported by Celli.[3] Biniodide was used in preference to sublimate on account of its non-precipitation with albumin, which rendered its absorption more easy and certain and ensured the cessation of such absorption as soon as desirable; whilst the sublimate forms a store of more insoluble albuminate of mercury

[1] Sajous: Annual of the Universal Medical Sciences, vol. iii., 1896, M. 7.
[2] Medical Chronicle, 1895.
[3] Archivio Italiano di Pediatrica, 1894, Medical Annual, 1896.

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in and about the wound, which might continue to enter the system after symptoms of mercurialism had appeared. The strength of the solution used (1 in 500) was such as to produce blebs of considerable size in thirty-six hours, but no signs of salivation or soreness of the gums were observed for four days. These symptoms speedily disappeared with the cessation of the bath for thirty-six hours. After this the hand was immersed for from one to two hours daily for three weeks, and there were no further signs of mercurialism. 2. The administration of the bath was quickly followed after the first twenty hours by great amelioration of the symptoms, and if afterwards these at any time became more severe the use of the bath was noticeably followed by relief. The fact that the absorption of the biniodide took place by the same paths as the absorption of the poison may have had something to do with this, and in cases where the infected wound is in such a part of the body that it cannot be treated by a continuous bath subcutaneous injections of a solution of biniodide might be tried in the neighbourhood of the wound or even into the wound itself. 3. Owing to the delay in obtaining the antitoxin the first injection did not take place till forty-eight hours after the appearance of the symptoms, by which time the boy had considerably improved. There was no apparent reaction after either injection. 4 The period of incubation, twelve days, was of average duration and might precede an acute or chronic attack; the symptoms were, however, alarming within twelve hours of their onset. It was remarkable how little inflammation was present about the wound during the first twelve days. The case was throughout treated under the supervision of Mr. Blaker, and I am indebted to his kindness for permitting me to publish it.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Actinomycosis of the Pleura and Chest Wall.—Cyst of Omentum.—Concretions of the Rectum.—Traumatic Hydrocephalus.—Infective Venereal Tumours in Dogs.—Tuberculous Peritonitis associated with an Inguinal Pouch of the Peritoneum.—Healthy Œsophagus Ruptured by Vomiting.

A MEETING of this society was held on April 6th, Mr. EVE, Vice-President, being in the chair.

Dr. SAMUEL WEST showed a case of Actinomycosis of the Pleura and Chest Wall. The specimen was removed from a boy, aged six years, who was admitted as a case of empyema. He had been ill for nine weeks with pain in the chest and shortness of breath, and a few days before admission a fluctuating swelling had formed in the fifth left intercostal space. This was incised, and a small quantity of thick pus escaped, which was examined by Dr. Kanthack and found to contain actinomycotic filaments. Two weeks later another swelling formed in the chest wall, which was also incised; it did not appear to communicate with the pleural cavity. The sinuses continued to discharge, and two months later iodide of potassium was given in increasing doses till thirty grains per diem was reached. There was at once a marked improvement, and it seemed that the child might recover, but he died unexpectedly during the administration of chloroform for the extraction of a tooth, although he had previously taken it well on two occasions. At the necropsy the left lung was found completely collapsed, and the pleural cavity was filled with cheesy material and collections of pus. The chest wall was much thickened, the ribs, which were unaffected, being embedded in dense fibrous tissue in which a very few actinomycotic groups could be found after careful searching. No deposits were found in the lungs. The case was remarkable on account of the age of the patient, of the escape of the lung, and of the striking improvement under the administration of iodide of potassium.—Dr. EDMUND GREEN mentioned a case of disseminated actinomycosis in a boy, fourteen years of age, who had first a swelling across the lower part of the abdomen, which was opened, and later another over the ninth costal cartilage, and a third in the left inguinal region. The fungus was found in the pus, and iodide of potassium administered with temporary success, but now the patient was going down hill.—Mr. CECIL BEADLES mentioned a case of actinomycosis of the mamma, in which an abscess was opened, and was found to communicate with the interior of the thorax by a sinus which could be tracked down the thorax to the region of the liver.—Dr. A. F. VOELCKER had performed a post-mortem examination on a case which had been under treatment for some time for actinomycosis of the skin. The lower lobe of the lung was firmly adherent to the chest wall by dense fibrous tissue as in Dr. West's case, and in the liver there was a cicatrised patch of actinomycosis. There was also double psoas abscess, the pus containing actinomycetes, and there was amyloid disease of the liver and other organs. There had been temporary improvement under iodide of potassium.—Mr. EVE said that iodide could not be looked on as a specific in this disease. It was a curious fact that it was often most difficult to find the fungus in cases in which there was a large quantity of diseased tissue present.

Mr. HARRISON CRIPPS showed a Concretion removed from the rectum of a woman sixty-three years of age. She had suffered from almost constant diarrhœa, but had not had hæmorrhage. The concretion was removed by dividing the posterior wall of the rectum and extracting with a scoop. It weighed nearly half a pound, and was composed chiefly of carbonate of magnesium. No nucleus such as a gall-stone could be found. Careful inquiry failed to bring to light any article capable of producing the concretion in the previous diet of the patient, and she had taken no magnesia medicinally.—Dr. ORD showed some fragile calcareous concretions passed from the bowel by a patient. The abdomen was explored, but nothing was found but a dilatation of the sigmoid flexure. Dr. Ord also showed a calcareous concretion removed from the rectum of the guanaco.—Mr. W. G. SPENCER said that he had removed a similar concretion, which was composed of a nucleus of vegetable matter surrounded by many layers of calcareous material.—Dr. VOELCKER suggested that the calculi shown by Dr. Ord might have originated in the pancreas.

Mr. HARRISON CRIPPS exhibited a specimen of Cystic Degeneration of the Omentum which was removed from a woman. It was found unexpectedly during an operation for recurrent appendicitis. The omentum was converted into a cystic mass, and was removed through the wound, when it resembled a bunch of white grapes. No evidence of hydatid disease could be found, and he thought that the cysts were due to dilated lymphatics. They were lined by columnar epithelium.—Mr. EVE referred to a specimen in the Museum of the Royal College of Surgeons of England in which there were similar cysts lined by columnar epithelium. He agreed that they were probably dilated lymphatics, and similar to the dilated lymphatics containing chyle that were occasionally met with in the mesentery.

Mr. JAMES BERRY showed a specimen of Cystic Degeneration of the Great Omentum discovered accidentally when making a post-mortem examination of a woman who had died in St. Bartholomew's Hospital from carcinoma confined to the rectum. The peritoneum in most parts was healthy, but the presence of a few adhesions here and there in the abdomen indicated slight peritonitis at some bygone period. The great omentum presented a very remarkable appearance; it was much atrophied and contained no fat. It was represented mainly by a network of slender fibrous bands passing from the transverse colon to the sigmoid flexure, to which they were firmly adherent. Connected with these bands, lying between them and hanging from them, were numerous cysts or vesicles, all of which had exceedingly delicate and perfectly transparent walls and contained a pale yellow, slightly viscid fluid. The shape and size of the vesicles varied considerably, from the size of an egg to that of a pea. Most of the vesicles were at one end quite free, while at the other they were attached to the rest of the omentum by a narrow stalk. Mr. Berry was unable to offer any decided opinion as to the nature of the disease in his specimen, but from the exceeding delicacy of the cyst walls and from the tubular nature of many of the cysts he was inclined to believe that the cysts might be regarded as distended lymphatic vessels.

Mr. G. B SMITH and Dr. J. W. WASHBOURN described a series of Infective Tumours occurring in the Genitals of Dogs. A dog affected with a tumour on the penis served twelve bitches, of whom eleven became infected. Three of these bitches were then served by a second dog, who subsequently developed a growth on the penis. After becoming infected this second dog served two healthy bitches. One of these bitches developed a growth in the vagina while the other remained unaffected. A dog which was artificially

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inoculated on the penis developed a growth similar to those in the above series. The tumours commence as minute translucent papules which grow slowly, and at the end of about twelve months are converted into lobulated masses. At a late stage the vagina may be filled with lobulated masses, which protrude from the vulva and distend the perineum. In the majority of cases there was no deep induration, and the tumour was readily removed from the subjacent structures with the mucous membrane to which they were attached. In two cases in which a post-mortem examination was made there was infiltration of the muscular wall of the vagina, and in one of these cases the lymphatic glands in the groin were affected. The microscopical structure of all the tumours examined was identical. It consisted mainly of cells of a rounded or polyhedral shape, in the latter case giving at first sight the impression of an epithelial new formation. A careful examination, however, proved that the cells were not derived from epithelium The stroma varied considerably in different growths, sometimes being scanty and sometimes relatively abundant. In the latter case the cells were enclosed in irregular alveolar spaces. There was nothing in the microscopical appearance of the tumours to distinguish them from the sarcomata met with in the human subject. The tumours were not due to irritation produced by discharge. In fact, in the majority of cases there was no discharge whatever either at an early or a late stage of the disease. There was no tendency to spontaneous cure; but when the tumours were completely removed at an early stage they did not recur. Attempts to infect rabbits and guinea-pigs failed. In two cases the tumours were successfully transplanted to the subcutaneous tissue of dogs. In conclusion, Mr. Smith and Dr. Washbourn gave reasons for believing that the tumours were of a similar nature to those described by Geissler, Wehn, Duplay, and Cazin in their work upon the infective nature of cancer. They had not yet been able to get conclusive results from cultivations from the tissues.

Mr. CECIL BEADLES showed a specimen of Tuberculous Peritonitis associated with an Inguinal Pouch of the peritoneum, which was taken from the body of an imbecile old woman who had symptoms of strangulated hernia. On operation an inguinal pouch was found filled with pus. The sac contained no bowel, but there was a mass which was either thickened Fallopian tube or broad ligament. The bowels were all matted together and drawn over to the right side of the abdomen.

Dr. JOHN FAWCETT showed a specimen of Hydrocephalus, with blocking of the posterior end of the aqueduct of Sylvius, which was apparently the direct result of a blow on the head.

Dr. SAMUEL WEST and Dr. F. W. ANDREWES exhibited a specimen of Rupture of a Healthy Œsophagus caused by Vomiting. The patient was a man fifty-five years of age, who was brought to hospital for acute pain referred to the left side of the chest and persistent vomiting. After death a long rent three inches in length was found in the posterior wall of the œsophagus near the cardiac end. There was dark fluid in the posterior mediastinum as high as the root of the lung and in the retro-peritoneal tissue below the diaphragm as far as the pancreas. There were also collections of brown fluid between the base of each lung and the diaphragm. There was no sign of previous disease of the œsophagus, and the rupture appeared to have been directly caused by the vomiting.

SOCIETY OF ANÆSTHETISTS.

A New Anæsthetic Inhaler.—Occurrence of Pneumonic Conditions after the Administration of Anæsthetics.

A MEETING of this society was held at 20, Hanover-square, W., on March 18th, the President, Mr. G. H. BAILEY, being in the chair.

Professor HOLIDAY (of the Royal Veterinary College) exhibited a New Anæsthetic Inhaler. The first apparatus, which was made for him by Messrs. Arnold and Sons of West Smithfield, consisted of a small bottle with a wide neck, to which was fitted a cork bored for the passage of two tubes. One tube, at the lower extremity of which was fitted a valve to prevent egress, allowed admission of air which passed over the chloroform in the bottle and took up vapour in its course, the other was for the exit of a mixture of air and vapour. To the latter tube was attached the extremity of a pair of rubber bellows, the action of which was to send vapour from the bottle and force it on towards a mask which fitted the patient's face. The amount of anæsthetic vapour admitted into the mask was regulated by a tap placed in the lower portion and by pressure upon the ball. In a room at a temperature of 60° F. with 6 drachms in the bottle, when the bellows were worked as much as possible there passed out of this at each pressure about two-fifths of a minim of chloroform vapour well mixed with three and a half ounces of air, thus giving a proportion of one part of chloroform vapour to 4200 parts of air. This proportion could be still further diminished to 1 in 8000 or even much less by having a mask with an open end (such as he used for the dog) or by putting a less amount of chloroform in the bottle at the commencement. The second apparatus was so devised that it forced a certain amount of air over the surface of the chloroform in the bottle, the proportion in this case being approximately (when six drachms were in the bottle and the room was at a temperature of about 60°) one part of chloroform vapour to 3000 parts of air, the apparatus sending out about half a minim of vapour at each pressure of the ball. This latter apparatus thus occupied a middle place between the first and Junker's (which forces air through chloroform). The advantages were that the chances of death from overdose were minimised (the strength of vapour and amount allowed to be inhaled could be regulated to a nicety), there was no fear of irritant or rubefacient effects on the face of the patient, the chloroform was less likely to become oxidised or otherwise changed (as may take place when air is bubbling through it), and also that the amount taken up from the surface was more constant than when air is forced through an ever-diminishing quantity of the fluid. In the case of the dog alone Professor Holiday said they had records of over 300 consecutive cases in which either one or other of the apparatus had been used without a single death which could be attributed to the chloroform, and in only three cases had they had to resort to the antidotal measures of hydrocyanic acid and artificial respiration. Recovery, too, was always tolerably rapid and unaccompanied by the nausea and depression which he had seen after administrations by the open methods. For the trial in human practice of the first form of apparatus Professor Holiday was indebted to several gentlemen, particularly Dr. Dudley Buxton, who kindly tested the first one which was made. All the gentlemen to whom he had submitted it spoke favourably upon its merits for children, parturition cases, and prolonged operations, but for adult men the vapour was apparently too much diluted. He was hoping, however, that the second form of apparatus would get over this difficulty and at the same time retain all the advantages.—Professor HOLIDAY also showed an arrangement for Passing Compressed Air from an Iron Bottle over the Surface of Chloroform for use either with the above or a Junker's inhaler.

Dr. SILK then introduced a discussion on the Occurrence of Pneumonic Conditions after the Administration of Anæsthetics, a *résumé* of which was published in THE LANCET of March 20th.—Mr. RICKARD LLOYD remarked that in consequence of the seeming opportunity for the spread of disease afforded by the repeated use of the uncleansed bag of Clover's small inhaler, he suggested in THE LANCET of May 28th, 1887, the use of a new or a thoroughly cleansed bag for each patient. The new bags appeared to be too expensive for general use. Messrs. Maw, Son, and Thompson made them of rubber at 9*d.* each, and Messrs. Barth, more successfully, of prepared paper, at 3*d.* or 4*d.* each. A week or two ago the latter firm thought it possible to produce the bags much cheaper. It had often occurred to Mr. Lloyd that more might be done to protect patients from possible chill about the time of operation and in the wards afterwards, as the risk of simple inflammation of the respiratory passages was greatly increased, if not solely induced, by this, and specific bacilli would find it a great auxiliary in the production of disease. He read extracts from the notes of Mr. C. H. Wilmer, house physician at the West London Hospital, of a case in which bronchitis, followed by left lobar pneumonia and left pleurisy with effusion, developed successively from the time of operation for removal of a broad ligament cyst in a pale, delicate-looking woman, twenty-four years of age. She ultimately recovered. There were no other cases occurring about that time in the hospital; and, indeed, bronchial irritation calling for treatment was in his experience rare, while he was unacquainted with any case of

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pneumonia attributed to an anæsthetic, and the case cited was not apparently of specific origin.

ÆSCULAPIAN SOCIETY OF LONDON.

Exhibition of Cases and Specimens.

A MEETING of this society was held on April 2nd, Mr. STEPHEN PAGET, President, being in the chair.

Dr. R OSTLERE showed a man with red-brown Discolouration of the Skin of the Face and Forearms suggesting sunburn or Addison's disease, but really consequent on chronic eczema. The patient was an in-door worker. His general health was good and as far as was known he was free from constitutional taint.

Dr. L. U. YOUNG showed a case of large Intra-peritoneal Abscess with Visceral Fistulæ. This patient, a girl aged twelve years, had also been under the care of Mr. S. Paget and Mr. H. J. Waring. She came first under treatment with the abscess, which was believed to be tuberculous, discharging at the umbilicus. This was freely opened up and found to be intra-peritoneal and to communicate with an opening in the ascending colon. Later, a similar vesical fistula was also discovered. The colic fistula was converted into an artificial anus and the patient's general condition had since then much improved. No fæces had passed per anum for three months.

Mr. W. C. M'DONNELL showed a case of Lead Paralysis in a man who had nearly recovered under glycerine-tannate of iodide of potassium and Faradism.

Mr. S. PAGET showed:—1. A case of Lupus Infiltrating the Pinna of the Ear in a boy. 2. A case of Hermaphroditism in a child aged nine years. The penis was adherent along its entire under-surface dividing the scrotum into two pseudo-labia. The urethra opened at its base like a small vagina, coming out under the pubic arch. The testes were undescended. 3. A case of Well-marked Genu-valgum in a man almost amounting to Dislocation of the Knee-joint. (Both of these cases were under treatment in the Metropolitan Hospital).

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The Epidemic of Small-pox at Gloucester.

A MEETING of this society was held on March 29th, Dr. G. P. BATE, President, being in the chair.

Dr. JOHN CAMPBELL read a paper on the recent Epidemic of Small-pox in Gloucester, of which city he was the medical officer of health. The population, he said, was about 41,000, of whom very few adults had ever been re-vaccinated, and since the guardians ten years ago ceased to enforce the Acts the great majority of the children, forming probably nearly a fourth of the inhabitants, had remained entirely unprotected. Indeed, the anti-vaccinationists boasted that Gloucester was the least vaccinated town in England and had enjoyed immunity from small-pox for twenty years. The death-rates for the three years preceding the epidemic had been 20·17, 15·34, and 18 46, and the zymotic rates 2·17, 1·29, and 1 65; while deaths from typhoid fever were few. So far from the epidemic being due, as the anti-vaccinationists alleged, to defective drainage, overcrowding, and insanitary conditions, the small-pox originated in, and was almost confined to, a district where the sewerage was excellent and the density of population 31·41 to the acre, but where there was the largest proportion of children nearly all unvaccinated; and the reason why it did not extend to the poorer, ill-drained districts, with 64·3 inhabitants to the acre, was obviously that so soon as the outbreak in the better part of the town assumed alarming proportions the panic-stricken people of the other districts crowded to the vaccination stations in thousands. The first cases occurred in June and July, 1895, but were concealed, no medical man being called in; others derived from these were notified in August and promptly removed to the hospital, the houses being disinfected, but others, described as measles, escaped notification. By the end of the year 26 cases had been notified, and probably as many concealed. The hospital accommodation was inadequate and no means existed for the disinfection of bedding. In January, 1896, the sanitary authority awoke to a sense of the danger, but the guardians, supported by an active anti-vaccinationist propaganda, remained passive for some time longer. The notifications, some dual, in January were 41, in February 150, in March 518, in April 783, in May 367, in June 112, and in July 23, after which there were no more. In February Dr. Bond, supported by Dr. Sweeting from the Local Government Board, brought the guardians to a sense of their duty. A Lyon's disinfector was set up, hospital accommodation was extended, and the additional vaccinators appointed by the sanitary authority were taken over by the guardians and placed under the supervision of Dr. Bond. Only 742 cases were received in the hospitals, the rest having been treated at home. There were 710 cases under ten years of age, of whom 23 had been vaccinated and 687 were unvaccinated. Of the former none, of the latter 278 died. Between ten and twenty years of age there were 309 cases; 260 vaccinated in infancy with 9 deaths, and 49 unvaccinated with 13 deaths. At ages above twenty there were 925 attacks, 889 vaccinated with 99 deaths, and 36 unvaccinated with 15. There were also 35 cases occurring in persons who were said to have been vaccinated in infancy, but who showed no marks; they were therefore practically unprotected, and 15 of them died. Not one of the nurses engaged in the hospitals or on the district staff was attacked, all having been successfully re-vaccinated, but all of those in the service of Mr. Pickering, an anti-vaccinationist, contracted the disease except one, who, having been previously on the hospital staff, had been re-vaccinated there. Of the 200 deaths occurring in the hospital 127 were of unvaccinated children under ten years of age, and the total mortality among patients of that age was 64 per cent., or nearly double what it had been in the previous epidemic, when a larger proportion of the children had been vaccinated.

A short discussion followed, in which Dr. SEATON, Dr. GWYNN, and the PRESIDENT took part.

Reviews and Notices of Books.

A Manual of Chemistry. By WILLIAM A. TILDEN, D.Sc., F.R.S., Professor of Chemistry in the Royal College of Science. London: J. and A. Churchill, Great Marlborough-street. 1897. Price 10s.

IT is a strong proof of the rapid progress which has been made in chemical science—and especially that part dealing with the inorganic elements—during the last quarter of a century that in the familiar work before us, which is based upon Fownes' original manual, revision has necessitated the re-writing of a large part of the existing matter and the addition of a considerable amount which is new even to the edition of it by the late Henry Watts. To Dr. Tilden's lot it has fallen to remove the last traces of the work of Fownes. We are glad, however, that he has found it possible to preserve the original form of the old manual. On turning over the pages without reference to its title chemists will observe at once the form and style of the old text-book which was their true and faithful companion in the days long since gone by. The book, of course, is brought well up to date, as instanced in the references to the work of Professor Smithells on the structure of flame; to Professor Clowes's new and ingenious method for the detection of inflammable gas in the air of coal mines; to the work of Professor Dewar and of Professor Olszewski on the liquefaction of oxygen, air, and hydrogen; and to the discovery of argon and helion by Lord Rayleigh and Professor Ramsay. Dr. Tilden has wisely added an introductory chapter on the most important historical events in the development of chemistry from the time of Boyle. Such a preface cannot but prove to be useful to the chemical student. The plan of the original work is also preserved. Thus the mathematical side of the science is deferred until the student is made familiar with the chemistry of the non-metallic elements and the facts concerned. On page 232 he commences the study of the principles involved. As we have indicated, the book is an admirable lecture and laboratory companion. We presume the present volume will be followed

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by a second devoted to organic chemistry. In Fownes's manual both sections were dealt with in one volume, but in Watts's edition the book was divided into two volumes. We can gather no indication in the present volume that a second volume on organic chemistry is in preparation, although surely it would be justified since Dr. Tilden, in the preface, remarks, "This book is not intended for children." And organic chemistry is not an easy subject.

Lectures on Renal and Urinary Diseases. By ROBERT SAUNDBY, M.D. Edin., F.R.C.P. Lond. Second edition. Bristol: John Wright and Co. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1896. Price 10*s.* 6*d.* net.

IN this volume Dr. Saundby has included the substance of his two monographs on Bright's Disease and on Diabetes, with considerable revision and addition. The result is a work which embraces questions of great pathological moment that have for long received much attention in the scientific world; and it is the product of one who has devoted especial care to the study of these subjects. The author is particularly mindful to assign credit for observations and opinions stated in the text, each chapter having appended to it a list of bibliographical references that prove the width of his reading and his anxiety to present the questions according to their most recent developments. A preliminary chapter on the Anatomy of the Kidney is followed by chapters on the Pathology of Albuminuria and on Dropsy. As regards the former we commend for particular notice by medical officers to insurance companies the statements that "albuminuria may be present in healthy persons for long periods without causing any derangement of the general health or of the structure of the kidneys," and that "albuminuria *per se* should not be regarded as an insuperable objection to life insurance." The present standpoint of the Pathology of Uræmia is well explained in the almost too brief exposition given in Chapter VII. A separate chapter is devoted to Retinal Changes in Renal Disease. Dr. Saundby's classification is suggestive and is based on etiological grounds. By it he divides the various forms of Bright's disease into (1) infective nephritis, comprising all cases due to infectious diseases, and including, therefore, most cases of acute parenchymatous nephritis, of chronic fatty kidney, and many of typical granular kidney; (2) toxic nephritis, which largely consists of cases of red granular kidney ("lithæmic" nephritis, as he elsewhere calls it) that occasionally, owing to intercurrence of acute attacks, may become enlarged and fatty; and (3) obstructive nephritis, that needs no explanation. This classification, though scientifically justifiable, yet has the drawback of referring anatomically similar lesions to separate heads. Lardaceous disease is kept apart, as it is not entitled to rank as a form of nephritis or Bright's disease. The chapters on Diabetes are full of interest, and on the whole they strike us as being more pervaded by the results of the author's personal observations than the other sections do. Nothing can be better than the descriptions given of the morbid anatomy of diabetes mellitus or the careful exposition of its clinical history, whilst the interesting subject of diabetic coma is amply and clearly discussed.

The Essentials of Chemical Physiology. By W. D. HALLIBURTON, M.D. Lond., F.R.S. London: Longmans, Green, and Co. 1896. Price 5*s.*

THE fact of a second edition of this essentially practical work being called for is evidence of its usefulness, especially as it differs little from the previous edition except in respect of the record of some recent advances and some small revision to increase its instructional value. It affords a handy companion for the use of students working at the physiological bench. Its contents amount to a series of lessons comprising an elementary and an advanced course. Each lesson is prefaced by practical directions for the experimental verification of the facts which are subsequently described. The tests thus enumerated bear the stamp of practical proof. In the appendix several well-known forms of physiological apparatus are described. We do not, however, find any mention of the application of Lovibond's tintometer to the estimation of the corpuscles and the colouring matter of blood. In a course of physiological chemistry such a book as this is indispensable.

LIBRARY TABLE.

Toxicology. Edinburgh: E. and S. Livingstone. Price 1*s.*— The interrogative method of teaching a subject is useful enough because, perhaps, it leads the student to think a little more than he would by merely reading. The little production before us is one of the catechism series. It is concise, to the point, and correct, but would have been improved if a little more system had been adopted in the arrangement of subjects. Of course, the book is not one for reference, but for rudimentary instruction; all the same, it would have been better if some sort of division had been made between the facts regarding one poison and those regarding another.

A Course of Practical Chemistry for Medical Students as Prescribed by the Conjoint Board. By CHAS. FREDERICK BAKER, Lecturer on Chemistry in Mason College, Birmingham. Birmingham: Cornish Brothers. 1896. Price 2*s.* 6*d.*— This book presents the usual deficiencies of those intended exclusively for examinational purposes. It is written within very close limits of the requirements of the primary chemistry examination of the Conjoint Board. Any modification that the Board of Examiners may choose to adopt will therefore soon render it valueless. As it is, the information given in regard to the specific reactions of a salt, with a view to detection, is distinctly meagre. The methods given for the preparation of various compounds are good and intelligible.

Chemical Notes and Equations. By G. H. GEMMELL, F.I.C., F.C.S. London: Baillière, Tindall, and Cox. Price 5*s.*— The student of medicine attending chemistry lectures for the first time frequently finds it useful to have recourse to a small book which will refresh his memory in regard to the facts he has had brought before him. The book before us supplies such a want, dealing, as it does, with brief notes on the various subjects, to which are added the principles involved in chemical changes and the equations representing them. It is impossible, however, to overlook a specimen of slipshod writing which is calculated to instil wrong ideas. Thus for the symbols of carbon, oxygen, sodium, and silver the author writes a mixture of wrong and hypothetical formulæ as follows: C_3 O_4 Na_2 Ag_2. We believe we are in agreement with the highest chemical authorities when we state that the number of atoms in the molecules of carbon and sodium, for example, and their molecular weight are not known with the certainty which this would imply.

MEDICO-PSYCHOLOGICAL ASSOCIATION. — The spring meeting of the South-western Division of this association is to be held at Barnwood House, Gloucester, at 2.45 P.M. on Tuesday, the 27th inst. Dr. Soutar invites the members to luncheon at 1.30. After the election of members and the transaction of business a discussion will be opened by Dr. Soutar on Recoveries in Asylums, to be followed by a paper by Dr. Goodall on the Systematic Collection of Anthropometrical Data in Asylums. The members will dine together at the New Inn Hotel at 5.45 P.M.

THE RESPONSIBILITIES OF PUBLIC BODIES.— Under this heading in THE LANCET of March 6th we recorded judgment at the Hants Assizes in favour of a gentleman living at Bournemouth, whose garden was overflowed with sewage from a drain of insufficient capacity. The matter has since been taken to the High Court, where Mr. Justice Vaughan Williams has confirmed the decision of the court below, giving judgment for the plaintiff on the findings of the jury.

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Analytical Records
FROM
THE LANCET LABORATORY.

NEW TABLOIDS.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL-BUILDINGS, E.C.)

INTERESTING additions to the useful list of tabloids have recently been made in the following:—Tabloids of stypticin for administration both hypodermically and by the mouth in doses of one-quarter and three-quarters of a grain. Stypticin is the name given to hydrochloride of cotarnin, an oxidation product of narcotine; it appears to be allied in its therapeutic action as well as in chemical structure to hydrastinin, but as a uterine hæmostatic it is said to possess distinct advantages, since it is also sedative in its action. Eucaine hydrochloride is prepared in soloid form for the convenient preparation of a standard solution of the salt for producing local anæsthesia. Its action is similar to cocaine, but without its objectionable toxic effects. Tabloids containing five grains of trional are convenient for the administration of this comparatively new hypnotic. (As pointed out in a paper read before the Clinical Society by Dr. Rolleston and reported in THE LANCET of March 27th, the administration of this drug may lead to excessive urobilinuria.) An equally rapid hypnotic is tetronal, which is suitable, it is said, for prolonged administration. Further useful combinations in the form of tabloids are as follows: Quinine salicylate tabloids containing three grains of the salt which has been prescribed for influenza and in the treatment of rheumatic gout (the salt is insoluble in water, but readily breaks up in a slightly acid medium); compound bromide tabloids, containing the bromides of sodium, strontium, and ammonium, with a small quantity of arseniate of soda to obviate acne; codeine tabloids, containing each half a grain of the alkaloid; mercury with chalk and opium tabloids, for use in syphilis; blue and compound rhubarb tabloids, containing equal quantities of blue pill and compound rhubarb pill, and therefore useful as a cholagogue and purgative; compound iridin tabloids, containing iridin, extract of hyoscyamus and compound rhubarb, serving as a valuable combination, possessing alterative and cathartic properties; compound colchicum tabloids, containing one grain of the acetic extract of colchicum with one and a half grains of salicylic acid, the joint effect of salicylic acid upon febrile conditions and of colchicum in increasing secretions and diminishing arterial throbbing and relieving pain, rendering this combination of especial value in the treatment of gout and acute attacks of rheumatism. Lastly, two useful combinations of pepsin and strychnine, with and without bismuth, according to requirements, afford an excellent formula, in the treatment of atonic dyspepsia.

PURO TEA.

(THE SHANGHAI AND FOOCHOW ASSOCIATION, 22, FENCHURCH-STREET, E.C.)

Puro tea is offered to those who find ordinary tea indigestible or with whom tea generally disagrees. The leaf is treated with a small quantity of a solution of bicarbonate of soda and an alkaline salt, and then dried in a revolving drum in the ordinary way. The infusion accordingly is distinctly though not excessively alkaline, while the alkalinity of the ash obtained on incineration is, of course, somewhat above the average yield. The effect of this treatment would be obviously not to remove the tannin, but simply to neutralise it as a free acid and form a neutral and soluble tannate. It is probable that free tannin is accountable for the injurious effects of tea, since it would appear that when this tannin is neutralised the ordinary retarding effect of tea upon the digestion is entirely removed. The proportion of caffeine was normal. Puro tea may prove suitable in some cases where ordinary tea cannot be taken without discomfort, but not in all.

INFANTS' FOOD.

(THE BRITISH MALT PRODUCTS CO., 98, BERMONDSEY-STREET, S.E.)

This is a completely malted preparation, and therefore may be regarded as having been prepared in anticipation of the peculiar dietetic requirements of infants. It consists of brown brittle grains possessing a sweet malty taste, and is to a very large extent soluble. It is well adapted for the purpose of an infants' food when prepared with milk in suitable quantity.

WHOLE MEAL BREAD.

(CHAPPELL AND SONS, 132, HIGH-ROAD, KILBURN.)

On microscopical examination this bread proved to contain a mixture of cereals, each of which would contribute special food factors. Branny particles occur in a somewhat coarse condition, so that it is probable that the bread would have some irritating action upon the intestinal tract. The total mineral matters amounted to nearly 1·9 per cent., which is consistent with the statement that the bread was prepared with whole meal.

JYREE TEA.

(A. C. IRWIN AND CO., 40 AND 42, GREAT TOWER-STREET, E.C.)

Jyree is the name given to a tea composed of ordinary tea leaves mixed with the leaves of a certain Indian plant. The infusion of the leaf appears to have distinct sedative properties and also the property of counteracting the injurious effects of an ordinary over drawn or strong infusion of rich tea. The leaf is of a light green colour, very small, and not unlike the small leaves of the yew; it measures on an average about three-eighths of an inch long by not more than one-tenth of an inch broad. The leaves yield on infusion a dull yellow liquid, which turns to a bright yellow on the addition of an alkali. The infusion is pleasantly aromatic and slightly bitter to the taste, and it is possible that its soothing effects are due to a principle allied to the lupulin of hop, which is well known to promote sleep. On extraction with suitable solvents no definite principle was obtained, but a wax-like residue of peculiarly bitter taste and an aromatic oil. The infusion of the leaf is evidently rich in soluble nitrogenous matters, which are thrown partly out of solution on the addition of the tannin of tea, so that on adding an infusion of tea to the infusion of the Indian leaf a precipitate occurs, and this may account for the soft character of the infusion made from a mixture of the leaves with tea. The foreign leaves themselves, however, contain a variety of tannin. They appear to have been used with benefit as an application to wounds in reducing inflammation and in alleviating pain, and an alcoholic extract is prepared for medicinal purposes. From the accounts which are to hand from Indian natives of the virtues of the leaf of this interesting plant it would seem to deserve further and extended attention being given to it. Its admixture with tea to nullify the latter's astringent and harmful properties is a decidedly novel expedient, and we think far preferable to chemical treatment.

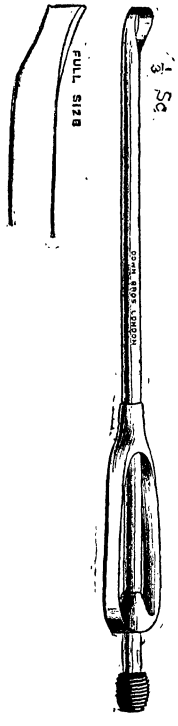
A NEW ISOLATION HOSPITAL NEAR WINCHESTER.

An iron isolation hospital has just been opened for the New Winchester Rural District Council on the downs to the east of the city. The building has been supplied by Humphreys of Knightsbridge, and consists of two principal wards 30 ft. by 20 ft., with matron's room and offices in the centre. The lighting is by hanging lamps, the ventilation is overhead, and the heating is by slow-combustion stoves. There are dry-earth closets with drainage in connexion. There has been extensive planting around the hospital, and the total cost has been £500.

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New Inventions.

AN IMPROVED UTERINE FLUSHING CURETTE.



THE advantages of a flushing curette for the uterus are obvious, but those hitherto made have many disadvantages. Most of them do not give a good flush; in some the curette is too large compared with the diameter of the tube, and is hence liable to get "nipped" by the cervix closing upon the shaft. Even in the most modern forms the scraping edge is too extensive and liable to cause unnecessary laceration in a longitudinal direction. The instrument figured here is an attempt to avoid these drawbacks. It is simply a modified Barker's flushing curette made to a size to fit the uterus, and with two scraping edges at the end. The advantages are (1) a good flush; (2) the curette is only one-eighth of an inch wider than the shaft; (3) the scraping surface at the back of the curette enables a backward scrape to be given when dealing with the angles of the uterus without turning the instrument round; and (4) the flush is directed forwards by the anterior opening being larger than the posterior. The instrument was made from my drawings by Messrs. Down Bros. of St. Thomas's-street, London, S.E.

C. F. MARSHALL, M.D. Vict., F.R.C.S. Eng.
Lock Hospital, Harrow-road, W.

REPORT ON LEPROSY IN NEW SOUTH WALES FOR THE YEAR 1895.[1]

THIS Report contains clinical and etiological notes by Dr. Ashburton Thompson on the cases of patients admitted during the year 1895 in the lazaret for New South Wales, and notes on the histo-pathology of the tissues of patients who died in 1895 by Dr. Frank Tidswell. These reports have a special interest. In New South Wales an attempt is being made to restrict the spread of leprosy by compulsory isolation of lepers, and, as this is a measure which is urged on all civilised Governments who have lepers amongst their subjects and is likely to be more and more strongly urged, the experiment deserves careful study, particularly by Englishmen who are responsible for the government of India, where up to the present time there has been no efficient control of lepers and where spread by contagion is untrammelled. The care, sometimes excessive, with which the law is administered in New South Wales is evident from a consideration of these reports.

A woman consulted a practitioner on account of an affection which he believed to be leprosy, and he reported her under the Leprosy Act. She had given a false name and address, but was soon discovered. Her sister, who was a leper, lay concealed at the time in the same house. The patient was admitted to the Coast Hospital for observation, but her regular attendant maintained that she was not suffering from leprosy. The signs of leprosy were not considered to be sufficiently objective and she was not detained. Subsequently, in January, 1896, she consulted her regular attendant and two other medical men were called in consultation, one of whom reported the patient as a leper and described unmistakeable symptoms of leprosy, but she had again given a false name and address, and was not again seen in New South Wales. She was next heard of as a patient at University College Hospital in London![2] This history shows the difficulties inseparable from the administration of the Leprosy Act, but it also shows the necessity for restriction. The two leper sisters were the children of Irish parents. The question of heredity cannot come in, and, considering the very small number of lepers in New South Wales, the probability that the one was infected by the other is so strong as to be practically certain.

Another case is interesting. The patient, a man, aged forty-nine years, and a native-born white of New South Wales, presented the following symptoms. The right hand was analgesic. The cubital nerve, although not enlarged at and below the notch, was easily perceptible far upwards, and was therefore enlarged from that point. On pressure, sensation was limited to the fourth finger only. The left hand was also analgesic, although sensation was not so much disturbed as in the right. The ulnar nerve was large, but not hard. There were scars of recent blisters on both hands, and there were also scars on and below the right patella which were analgesic. The feet were also analgesic. In the left lower extremity there was a cluster of scars on and below the patella, which were analgesic. On the plantar aspect of the foot, at the base of the fourth and fifth toes, there was a dry, shallow and nearly insensitive ulcer, surrounded by much thickened cuticle which shelved down to the surface of the sore, marking the site of an old blister. There was a smaller ulcer on the heel of this foot. This foot was more analgesic than the right. Under pilocarpin the feet, hands, forehead, and right chin remained perfectly dry, while the rest of the body sweated freely. Dr. Ashburton Thompson naturally considered this to be a case of pure lepra nervorum—an opinion shared by other medical men—and the case was reported under the Act. It being the custom to seek a second certificate from a practitioner not in permanent relation to the Government, such a gentleman was requested to examine and report. As he was unable to satisfy himself that the disease presented was leprosy, and as the patient claimed discharge, the law giving no power to detain suspects, he was allowed to depart. This case shows the care that is taken in Sydney to secure the rights of suspected lepers. Any physician who has a practical knowledge of leprosy will have no doubt regarding the nature of the disease in this case.

Two other cases of a somewhat similar nature were diagnosed by Dr. Ashburton Thompson as cases of nerve leprosy, and the symptoms reported seem to us to completely justify the diagnosis; but two other medical men called in separately, although they considered it most probable that the disease was leprosy, declined to certify under the law. These two patients were children of the same parents, natives of New South Wales, of English descent, and resident in Sydney. In another case the patient, of English and Irish descent, was born in New Zealand, but was taken to Fiji when she was two years old. When she was twelve years of age her left forefinger became sore. It got well again in a week, and the occurrence would not have been remembered but that it was immediately followed by severe aching pains in the arm and by wasting and loss of power in the hand. Leprosy developed, and she died from that disease in September, 1895.

The reports on the histology of the fatal cases are full and careful, and will interest pathologists who specially occupy themselves with studies of the leprosy bacillus. Twelve well-executed micro-photographs are appended to the Report, in which many changes produced by the development of the bacillus and the bacillus itself are well shown. We would specially call attention to a most excellent photograph of the bacilli in serum expressed from a tubercle, magnified 1000 diameters. This photograph shows a large number of the leprosy bacilli very distinctly, and in excellence we have rarely seen it equalled. Dr. Tidswell is to be congratulated on the success which has enabled him to give the profession these excellent photographs. On Dec. 31st, 1895, there were thirty-seven lepers in the lazaret. Sixteen of them were whites, of whom four were females; the remaining twenty-one were members of various coloured races.

[1] Addressed to the Houses of Parliament of New South Wales.

[2] See THE LANCET, August 8th, 1896, p. 365.

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THE LANCET.

LONDON: SATURDAY, APRIL 10, 1897.

THE Hospital Reform Association has appointed a committee to inquire into the working of special hospitals in London, and the report of this committee will be found on page 1041. It is an interesting document, and shows that the newly formed Association perceives the responsible nature of the work that it has assumed. For in these critical times for hospitals it is necessary to recognise, firstly, their value, and, secondly, the danger that there is of their altogether losing their original character and with it their claims as charitable institutions of the first order. It must be remembered that this report deals only with special hospitals — institutions of comparatively recent growth, but so numerous and in some cases so pretentious as to threaten seriously the prosperity and the very existence of the general hospital, which in its catholicity embraced all cases and preserved the broad character of medicine and surgery. It is gratifying already to see in several directions indications of a reaction against specialism. In general hospitals and in private practice men are everywhere being trained whose readiness in different emergencies rebukes those who would restrict their practice to this or that branch of medicine.

Our readers will study the report for themselves, but we must emphasise a few of the chief facts which it brings out, and may be allowed a preliminary word of praise in reference to the tone of moderation which characterises it. The authors seem ready to admit, if not the virtues of special hospitals, at least the virtues of those who represent them. If they point out in clear words the reluctance of some officials to give information as to their institutions, they are equally ready in other instances to acknowledge candour and willingness where they have met them. Hospital abuse is not to be removed by random and reckless censure. Some special hospitals have justified their existence by their work, and have put the great general hospitals of the country on their mettle, leading them to introduce into all their work provision for the special case. Let us now come to some of the individual facts which the report brings out. Looking especially at the financial system on which a large number of these hospitals are worked, we find that they are largely dependent on the payments of patients. Of the forty-one special hospitals visited, at least thirty receive direct payments from their patients, the receipts from this source amounting in 1895 to £24,085. The authors of the report significantly tell us that over half of these institutions obtain more money from patients than from annual subscribers. One institution receives twenty-five times as much from its patients as from its subscribers. At St. John's Hospital for Diseases of the Skin the payments of patients (out-patients from 1*s.* to 2*s.* 6*d.* weekly, in-patients 15*s.* weekly) amount to £2263, while annual subscriptions amount to only £773; at this institution the secretary showed every willingness to answer questions. At the Central London Ophthalmic Hospital more than half the income is derived from patients. At the Hospital for Diseases of the Throat, Golden-square, patients in 1894 paid £2858 and the annual subscriptions amounted to £286. At one hospital it is open to the medical officers to see private patients, and it was not easy to ascertain who decided which were private and which were hospital cases. The questionable nature and influence of these hospitals is further shown in the petty nature of the sums charged per visit to out-patients. Thus at the Central London Ophthalmic Hospital out-patients are charged 2*d.* a visit, while the system of inquiry into their circumstances is stated in the report to be merely nominal. At St. Peter's Hospital, with £2186 derived from patients' payments and £250 from annual subscriptions, the authorities appear by the report to be accommodating in their charges to out-patients, who may be called upon to pay on a sliding scale from 6*d.* to 1*s.* or 10*s.*

The conclusion is irresistible from these facts, unless the report can be gainsaid, that at these institutions charges are made which would bring any private practitioner into discredit, and that medical and surgical practice is carried on in unfair competition with the general practitioner. What would be thought of any private practitioner who pretended to supply skill and medicines for 6*d.* or even 2*d.* a visit? Yet here are hospitals, in some cases officered by gentlemen of the highest reputation, which, according to this report, enter into wholesale competition with private practitioners, and secure patients, it would seem, by the lowness of the fee demanded. The time will come when our consulting brethren will refuse to be made the tools of such a ruinous and demoralising system. The report concludes with sundry recommendations for the amendment of these evils, such as the insistance on a wage limit, with occasional departures from it at the discretion of a competent inquiry officer; the total abolition of the system of subscribers' letters; more care on the part of subscribers, and especially of the Hospital Saturday Fund, in the gifts of such letters as they have. Like ourselves, the Association looks with confidence to the staffs of the hospitals to help to avert the ruin alike of the truly charitable institutions and the profession at large by the monstrous system of indiscriminate and inefficient relief which now prevails.

DURING the last few years the relations existing between the epidemiologist and the oyster have not, it is to be inferred, been of the most cordial description, and although the oyster, owing doubtless to its high value both financially and gastronomically, has borne the chief brunt of the attack, it cannot be said that certain other shell-fish, such as mussels and cockles, have come out of the ordeal to which they have been subjected altogether unscathed. For many years it has been matter of common knowledge and experience that certain persons and families possess a peculiar susceptibility with regard to mussels, and numerous instances are on record in which the consumption of this

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mollusc in an uncooked condition has been followed by serious and often fatal manifestations of ptomaine poisoning. Within recent years, however, evidence has been accumulating which tends to incriminate mussels as being at times responsible for conveying enteric fever, and in the recent Local Government Board report on "Oyster Culture in Relation to Disease" Dr. BULSTRODE has contributed a chapter in which he shows, after discussing its natural history and distribution, that the mussel is at times gathered from localities dangerously near to sewer outfalls, and that there is need for some control in reference to mussel "lays" and "gardens."

We note that Dr. RIDLEY BAILEY, medical officer of health of Bilston, in his current annual report which has just been issued, records an interesting instance in which four persons, visitors to Blackpool, were seized with symptoms of ptomaine poisoning shortly after consuming raw mussels procured from the vicinity of a sewer outfall, and two of these four persons subsequently developed enteric fever at such a date after the ingestion of the mussels as to render it highly probable that the shell-fish were the means of conveying the disease. These facts were reported to Dr. JASPER ANDERSON, medical officer of health of Blackpool, who stated that there were at that place in October last no less than six cases of enteric fever which had apparently been caused by the ingestion of raw mussels procured from a bed where sewage contamination was a matter of probability. Dr. ANDERSON very properly had notices placed on the mussel beds warning the public as to the danger of consuming the fish. We learn, too, from the Local Government Board reports that in 1883 Dr. M. K. ROBINSON, medical officer of health of the East Kent Combined District, reported two case of enteric fever contracted from consuming raw mussels procured from a locality liable to sewage pollution, and that in 1894 Dr. F. C. H PIGGOTT of Teignmouth and Dr. NEWSHOLME of Brighton reported cases where the evidence pointed strongly in a similar direction. Ptomaine poisoning as the result of eating mussels dates back, however, considerably earlier than 1883, and it is recorded that in 1827 some thirty persons were attacked with serious symptoms, which in two cases ended fatally, after eating mussels collected from the dock gates at Leith, and animals to which some of the mussels in question were given were similarly affected. Amongst other disasters of a like nature may be mentioned that of Wilhelmshaven, where the mussels which caused the mischief were procured from the bottoms of two vessels in the harbour; and in 1890 there occurred what was known as the "Seapoint calamity," in which a mother and four children died from the effects of eating mussels procured from a locality to which sewage had access.

There is still much to be learnt in connexion with the subject of mussel poisoning, but it is obvious that there are other factors than idiosyncrasy involved. It is generally considered that the poisonous effects are due to what is known as *mytilotoxin*, a poison produced by the agency of bacteria which have as a rule been conveyed to the mussels through the sewage pollution of the water in which they have grown or been placed; and although there would seem to be certain instances on record in which sewage could hardly have polluted the water, a large number of outbreaks have been caused by mussels taken from places liable to pollution of one kind or another, and there is thus clearly need for some control of the mussel industry. There would seem to be no very satisfactory evidence pointing to copper as the cause of the peculiar symptoms observed, as in the Leith instance Dr. CHRISTISON analysed some of the mussels taken from the stomachs of persons attacked, but was unable to detect a trace of the metal in question, while it appears that in some instances copper could not possibly have gained access to the bivalves to which the illness was traced. It is a difficult matter to prevent mussels from growing in the vicinity of sewers, and it is also difficult to prohibit excursionists and others from helping themselves to such mussels; but it would certainly seem that sanitary authorities in whose districts are mussel "scalps" liable to sewage pollution should take steps such as have been taken by Dr. ANDERSON at Blackpool, and in any subsequent legislation on this subject powers might be conferred to prohibit the laying down of these molluscs in unsafe positions. The cooking of all mussels intended for human consumption would doubtless do much to remove the risks of contracting enteric fever, but this process would not be equally effective against ptomaine poisoning. In this latter connexion it may be of practical utility to record that in the Wilhelmshaven outbreak, which was investigated in one or another of its aspects by numerous observers, amongst whom were VIRCHOW and SALKOWSKI, it was discovered by the latter that *mytilotoxin* became inactive when treated with carbonate of soda, and that mussels boiled for some six minutes in a solution of this salt lost their toxic properties—a fact which appears to afford indication for treatment in cases of poisoning by mussels.

THE literature on the health of the soldier in India has grown until it is impossible to deal with it in its entirety, Happily, there is not any need to do so, for the facts and the moral they convey are comparatively plain and simple, and as they are quite capable of being understanded of the people there is a general consensus of opinion that something has to be done to check the evil. Two ways of dealing with this form of contagious disease have been proposed—namely, that of the Secretary of State in his despatch to the Government of India regarding the measures to be adopted for checking the spread of venereal disease among the British troops in India, and that of "The British Committee of the Federation for the Abolition of the State Regulation of Vice" in a published document which strikes us, we confess, as in some respects a feeble and jejune production manifesting but little acquaintance with human nature or the Army. What is the practical good of a Select Committee going again into the fundamental constitution of the British Army? The broad facts are admitted, and the case as it stands has to be met by some practicable remedial measures capable of speedy application. It puzzles us, as it does most people, to understand how the presence of disease is to be ascertained without examination. If the abolitionists of the State regulation of vice, as they are pleased to style themselves, have no more plausible, practical, and unobjectionable measures to suggest in the way of remedy

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than those they have put forward in their circular we do not think they will obtain the support of many sensible people. Lord GEORGE HAMILTON rests upon a firm foothold of facts, and the position he has taken up in his despatch is a logical, well considered, and studiously moderate one. HER MAJESTY'S Government, recognising the extent of the evil, its appalling increase of late years, its increasing virulence, and the way in which the health of the civil population, and of subsequent generations in this country, is imperilled by the annual discharge from the Army of men constitutionally diseased, cannot acquiesce in the continuance of the existing state of things. The Government considers that the cantonment rules laid down in the Act of 1889 should not merely be applicable to "cholera, small-pox, diphtheria, or typhoid fever," but to all contagious and infectious diseases, including venereal disease. We may parenthetically remark that the Indian Government has quite recently passed an Epidemic Diseases Act for the express purpose of dealing with the present epidemic of plague. Now plague is a very rare and occasional visitant of that country, and, however infectious and fatal it may be, it is not an hereditary malady; whereas the scourge of syphilis is permanently present, it is eminently contagious and hereditary, it gravely affects the constitutions of those attacked by it for long periods of time, it overlaps and complicates the course of other diseases, and very often involves the innocent and is transmitted to the unborn. It follows, therefore, by a parity of reasoning, that in these respects syphilitic disease calls for the application of preventive measures quite as much as plague. If the State owes it as a duty to its subjects to interfere with their liberty in order to protect them against disease in one case, it does so in the other. But to return to the Government despatch. The Secretary of State mainly adopts and follows the recommendations of the memorandum of the Army Sanitary Commission on the subject. He calls upon the Government of India to consider the whole question and to forward a copy of the draft rules proposed to be issued in order to give effect to the decision of HER MAJESTY'S Government. We quite appreciate the need which exists for the Government proceeding warily if they are to avoid giving "occasion for the enemy to blaspheme" in a matter about which so much ignorance, prejudice, and false sentiment prevail. But it cannot be said that the Government has not safeguarded the moral aspect of the question, or that the measures proposed in the official despatch are not of a most moderate and reasonable character.

The whole question is eminently one on which the members of the medical profession are qualified to speak, for they best know the gravity of the case; and the Royal College of Physicians of London and the Royal College of Surgeons of England have, most properly, in the interest of public health and in the cause of humanity—and especially as far as the unfortunate women are concerned—done what it was their plain duty to do to strengthen the hands of the Government in this matter. It is really a national demand that an earnest attempt should be made to deal with what amounts to a national scandal. We do not think that we can do better than summarise the recommendations and suggestions that have been already put forward, with such additions as occur to us. In the first place it must be frankly recognised that venereal disease belongs to the category of contagious and preventable diseases, and we are consequently bound to take what steps we can to prevent it. Women in a diseased condition should not be allowed to propagate contagion, but be required to go to hospital or leave the cantonment, and the measures that are necessary to prevent women from spreading contagion are, of course, applicable to soldiers under the same circumstances. The examination and treatment of females should be conducted by trained members of their own sex under medical supervision, in order to lessen or remove objections in this respect; but it would be well that medical officers who have the treatment of soldiers of the European Army should be also connected with the hospitals for female cases. And, in view of the importance of detecting and treating these diseases in their earliest and initial stages, means should be taken to secure that soldiers suspected of concealment, and those who have suffered from venereal disease, should be subjected to inspection—the latter for a year after infection.

Not only should soldiers arriving in India be systematically warned of the serious risks they incur, but it would be well to have a pamphlet printed and distributed among them, showing in a very simple way the extensive prevalence of venereal disease in India, giving plain and terse statement as to the lamentable and far-reaching consequences likely to ensue, and emphasising the great importance of early treatment when the disease has been contracted. This having been done, it might subsequently be worth consideration whether soldiers suffering from this malady might not be subjected to some pecuniary fine or loss, the proceeds to go to the benefit of the corps to which they belonged, and not to the State. Such a regulation, however, would enhance the risks of concealment. The powers of the commanding officer to place suspected places out of bounds, to prevent the employment of female labour in cantonments and women lurking about their vicinity, should be enlarged, and the cantonment magistrate should, as far as possible, aid in these efforts. It is worth considering whether the bazaars could not be placed in charge of some native contractor accustomed to oriental life and habits, who should be held responsible to the local European authorities for the proper conduct of the bazaar, and who could act in concert with such authorities in any repressive measures that might be deemed expedient. It is scarcely necessary to add that every care should be taken to make the hospitals for the treatment of females comfortable, and to secure for the patients humane, considerate, and kindly treatment, in order to induce them to recognise and desire to reap the advantages they afford. Finally, we consider that, after all, the most important point is to give the authorities in India a free hand in this matter, with the view of devising some scheme and the machinery for working it; otherwise they cannot accomplish an object so eminently necessary on the grounds alike of justice and humanity.

ROYAL INSTITUTION.—The following are among the lecture arrangements after Easter: Dr. Ernest H. Starling, three lectures on the Heart and its Work; and Professor Dewar, three lectures on Liquid Air as an Agent of Research.

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Annotations.

"Ne quid nimis."

THE WORKHOUSE INFIRMARY NURSING ASSOCIATION.

IF Boards of Guardians would only realise that whatever tends to promote the rapid recovery of the sick under their care, tends also to diminish the length of time a sick pauper remains dependent on the rates, they would surely appreciate the great work which this association has done for them and for the sick poor committed to their care. Surely if they could once be made to grasp this obvious fact they would be induced to contribute more liberally than is indicated in the annual report of the philanthropic association now before us. The paltry one, two, or three guineas which these bodies contribute each year is wholly out of keeping with the benefits they receive in return and inconsistent with the hundreds of pounds spent for other purposes less necessary and less advantageous. The association depends entirely upon voluntary contributions for support, and the training of every nurse supplied costs, if our information be correct, approximately 21 guineas. Surely it would not be too much to ask the guardians to contribute a portion of this sum for every fresh nurse supplied to them. It is the bounden and fundamental duty of the guardians of the poor to provide for the sick poor, and we fail to see why a philanthropic public should be called upon to discharge the duties which properly belong to these officially appointed representatives of the ratepayers. Year by year the difficulty experienced by guardians, especially in provincial and rural districts, in procuring good nurses becomes greater. The openings for trained nurses are constantly becoming more numerous, and the conditions of workhouse and infirmary nursing certainly do not become more attractive. We hear of guardians advertising again and again without result. Some of these boards then apply to the association, in the report of which we read: "There have been 130 applications for nurses, and 73 nurses have been appointed during the year"; and, again, "Twenty-four boards have applied to us for the first time, but only twelve of these have been supplied with nurses." Now, why is it that hardly more than half of the applications have been responded to? Here is the answer: "Financial statement.—Unless we receive more support our training must be further diminished." We commend this matter earnestly to the attention of the guardians, in view of the extreme importance of having properly trained nurses for their sick, especially when the medical officer is non-resident, and in view of the economy to the rates which may be effected in the more speedy and successful cures. Some of the boards show their appreciation of the efforts made by the association on their behalf by waiting some months for its nurses. Something, however, must be done to meet this steadily declining supply of good nurses. Why do not some of the boards join hands with each other and with the Nursing Association to organise a central training school of their own? Meanwhile, surely, it is not too much to ask of the guardians of the poor that they will, for each trained nurse supplied, contribute, say, half the cost of her training—10 guineas—leaving philanthropy to do the other half. It is with no sudden impulse that we make this suggestion. We have watched with considerable attention the growth of the Workhouse Infirmary Nursing Association, and now and then have criticised its methods; but it has stood the test of time and the most searching investigation, and we confidently believe that no more suitable body could be entrusted with the work referred to. It is true that something might be done to increase the attractiveness of workhouse and infirmary nursing in one or two directions. The first of these is to give the nurse a more clearly defined position in her work and make her more directly responsible to the medical officer. The other is to raise the salary and emoluments to a degree commensurate with the monotony and drawbacks of the work. The Metropolitan Fever Hospitals, acting on this principle, give adequate salaries and never want for candidates. But unless the guardians take these matters into their earnest consideration, and adopt some such action as that which we have above suggested, the evils referred to will become steadily worse and worse, and by-and-bye we shall find that we have reverted to the condition of things revealed in the inquiry initiated by the Founder of THE LANCET half a century ago. We have received a copy of the return made to the House of Commons showing the proportion of sick to the nurses and pauper helps attendant on them, and this we propose to notice in a future issue.

PROFESSOR R. KOCH'S FURTHER RESEARCH ON TUBERCULIN.

NO one conversant with the thoroughness of all Professor Koch's work will have been surprised at the announcement that, undaunted by the comparative failure of tuberculin as a remedial agent, he should have been engaged during the seven years that have elapsed since he made his discovery known in endeavouring to determine the causes of its failure and to obtain a product which should be free from the drawbacks of the glycerine extract. For the details of the method which he at length arrived at and the ingenious processes it embraces we may refer to the account given by our Berlin correspondent. Suffice it here to say that they aim at separating the bacillary substance into two components, one of which, containing ingredients soluble in glycerine, has the properties of the original "tuberculin," producing marked reaction in tuberculous subjects and setting up changes around tuberculous foci. The other constituent, mechanically separated from the former, contains ingredients which are mostly insoluble in glycerine and also differs from the other moiety in its physiological action, only producing reaction if given in large amount. But this new product, the "tuberculin remainder," or "TR," as he terms it, is found to possess marked "immunising" effects, and its administration is proceeded with in gradually increasing doses until immunity is obtained. Professor Koch has not published these researches before being enabled by extensive trials to pronounce very definitely upon the superiority of the new preparations, and the results they produce in cases of tuberculous disease. It is noteworthy that he speaks with commendable caution as to the permanency of the results he has obtained, and he thinks that it may be possible to produce a lymph of still greater efficacy. We are glad to observe that he lays stress on the fact that these remedies are only efficacious in the early stages of tuberculous disease, a fact which was largely lost sight of in the former therapeutic trials, which ended perhaps in too sweeping a condemnation of the remarkable agency which Professor Koch had discovered. It is not unlikely that, as one consequence of the inconsiderate and irrational manner in which the use of tuberculin was then adopted, the improved lymph may not for some time be tried on a sufficiently wide scale to judge of its efficacy. Nevertheless Professor Koch's persevering labours and the knowledge that he would not venture to recur to the subject without good cause must have weight, but we trust that those who do make trial of the remedy will

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strictly adhere to the conditions which he lays down and will, moreover, keep careful and accurate records of the cases so treated.

ENGLISH-MADE THERMOMETERS.

IN our remarks upon this subject in THE LANCET of March 27th we expressed our opinion that the most reliable mercurial thermometers were of English manufacture, and that distinct confirmation of this was afforded in the fact that in the Kew verifications the returns showed that the corrections were seldom two-tenths different from the graduated mark. We should point out, however, that owing to a clerical error we stated in the article referred to that the average deviation is never more than one degree, whereas it should have been two-tenths of a degree. We have received this week a beautifully mounted thermometer from Mr. Hicks in substantiation of the case he originally made out in regard to the accuracy of English-made mercurial thermometers. It registers from 20° Fahrenheit up to 100°, and is evidently suited, therefore, for the gauging of the temperature of the living room or of a sick-room or hospital ward. The corrections to be applied to the scale readings are, according to the determinations by comparison with the standard instruments at Kew, as follows: At 32°, −0·0°; at 42°, −0·0°; at 52°, −0·0°; at 62°, −0·1°; at 72°, −0·1°; at 82°, −0·1°; and at 92°, −0·0°. The instrument is graduated into unit graduations Fahrenheit, which are divided again into two-tenths of a degree. The accuracy of a thermometer is, of course, of the utmost clinical importance, and the point raised by Mr. Hicks as to the greater constancy of English glass in regard to contraction is one entitled to consideration. We should like to know what Mr. Hicks's actual experience is in regard to the slight diminution of bore which the tube of a thermometer undergoes after a time, and what is the usual extent of the error thus involved.

SANITARY MEASURES IN THE DIAMOND MINES.

IN an exceedingly interesting lecture delivered recently by Professor Crookes he refers incidentally to the subject of the environment of the native workers in the South African diamond mines. It cannot be doubted that there is every necessity for this class of labourers to be watched over in regard to hygienic conditions. For instance, we are told that "all below ground is dirty, muddy; grimy, half-naked men, black as ebony, muscular as athletes, with perspiration oozing from every pore, are seen in every direction, hammering, picking, shovelling, wheeling the trucks to and fro, keeping up a weird chant which rises in force and melody when a titanic task requires excessive muscular strain—the whole scene is far more suggestive of a coal mine than a diamond mine. And all this mighty organisation, this strenuous expenditure of energy, this clever, costly machinery, this ceaseless toil of skilled and black labour going on day and night, is just to win a few stones wherewith to deck my lady's finger." Professor Crookes, however, does not go so far as to say whether this employment is made as healthy as possible for the employés. It is true, as he says, that every kind of recreation seems to be provided for them, and in cases of accidents or illness there is a well-appointed hospital, where the sick are attended and medical supervision, nurses, and food are supplied free by the company. There is, of course, some amount of preventive treatment in the provision of recreation, but on the whole the measures would seem to be curative rather than preventive. Seeing the wealth of material they turn out, the labourers deserve every care at the hands of their masters. In regard to this wealth of material there can be little doubt, since "from two to three millions of carats of diamonds are turned out of certain mines in a year, and as five million carats go to the ton this represents half a ton of diamonds. To the end of 1892 ten tons of diamonds had come from these mines, valued at sixty millions sterling. This mass of blazing diamonds could be accommodated in a box 5 ft. square and 6 ft. high." Professor Crookes looks back with pleasure upon the Arabian Nights vision of the strong-room of one of the biggest companies which he visited, which was "literally heaped with stones won from the blue ground, purified, flashing, and of inestimable price, ready to play their part in the lives of men and women." We need hardly add that the discourse dealt with some interesting facts on the properties of the diamond. Perhaps the most remarkable physical property next to refraction is that of becoming phosphorescent after exposure to the sun's rays, one green diamond in particular in Professor Crookes's collection giving, as he stated, a pale green, almost white, light as brilliant as a candle flame. It was also pointed out that the x rays may be used very successfully in discriminating between imitation and real diamonds, the former being perfectly opaque and the latter extremely transparent. We found some months ago, when experimenting with "paste" and real gems, that this difference could be distinctly seen on the fluorescent screen.

IRON STAPLE IN THE ŒSOPHAGUS; REMOVAL AFTER LOCALISATION BY THE ROENTGEN RAYS.[1]

WE recently published two cases in which by means of skiagraphs halfpennies were diagnosed impacted in the œsophagus, and their removal was effected.[2] This case is more important because in the absence of the exact diagnosis furnished by the skiagraph, on the one hand, the most disastrous laceration might have followed attempts at removal in the ordinary way by the probang; or, on the other hand, the operation of œsophagotomy might have been unnecessarily performed. A man, aged sixty-nine years, was in the habit of swallowing his food after very slight mastication, in consequence of the absence of his molar teeth. Whilst eating a piece of mince-pie he was conscious for a moment of a hard substance in his mouth. Agonising pain followed, which radiated from the entrance of the œsophagus outwards and upwards along both sides of the neck and appeared to be caused by two sharp points which pierced the tissues with each attempt at deglutition. The pain, though much lessened in intensity, remained the same in locality and character until the foreign body was removed two weeks later. On the evening of the first day laryngoscopic examination showed that the normal contour of the arytenoids and aryepiglottic folds was lost, and that the area presented a confused mass of œdematous tissue which obscured the view into the larynx. Dyspnœa was slight, although distressing when an attempt was made to probe the œdematous area even after the free use of cocaine. The voice was husky and weak and interrupted by severe paroxysms of coughing. An enormous quantity of thick, ropy, clear-coloured mucus welled up from the œsophageal region of the pharynx, and blood oozed from the region at the back of the larynx. Neither by laryngoscope nor palpation could a foreign body be detected. The patient was first fed upon milk and then upon soft food, hashed meat, eggs, &c. The œdema subsided, and on the tenth day a small rounded substance was seen behind the right arytenoid. It resembled the elbow of a bent piece of heavy wire. A blunt hook was passed around it, but it was found to be firmly adherent. It was readily grasped by Cuscoe's forceps, but all the force that could be used failed to move it. Skiagraphs showing antero-posterior and lateral views were taken. The

[1] Bliss: International Medical Magazine, March, 1897.
[2] THE LANCET, Jan. 30th, 1897, p. 313.

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object seemed to be the frame of a buckle, and lay diagonally across the œsophagus, mainly to the right of the median line, about in front of the fourth cervical vertebra. It was then possible to remove it with the laryngeal forceps. It proved to be a meat staple, unusually large, such as are used for fastening cards of address on meat. It consisted of a body an inch in length, which bore at each end an arm at right angles to it half an inch in length, the whole thus forming three sides of a rectangle. The arms were extremely sharp and ragged, and were firmly attached to the anterior wall of the œsophagus behind the arytenoid and cricoid cartilages.

SOLID SOLUTIONS.

IT is practically accepted now that the interesting class of bodies known as alloys are simply the solution of one metal in another. Some interesting experiments on this subject were shown in a lecture by Mr. C. T. Heycock, F.R.S., at the Royal Institution on the 2nd inst. The fact that when a weak solution of permanganate of potassium is frozen the ice yielded is quite colourless, so that the salt becomes concentrated, is probably true also for metals, and further confirmatory evidence is gained in the following ingenious experiment devised by Mr. Heycock and his co-worker Mr. Neville. If a solution of gold in sodium be allowed to solidify slowly the appearance of the block, or a section of it, would be quite uniform to the eye—that is, the gold, apart from the sodium or *vice versâ*, would be indistinguishable to the eye. By taking, however, a shadowgraph of the section by means of the x rays, a photograph is obtained showing the actual structure of the alloy, the sodium being transparent to the x rays while the gold is opaque. From the way the two metals are disseminated in crystalline form through the mass as it becomes solid a remarkable analogy evidently exists between the behaviour of an alloy and a solution in the act of solidifying.

WATER-SUPPLY AND SEWERAGE OF SYDNEY.

THE eighth annual report of the Sydney Board of Water-Supply and Sewerage states that during the eighteen months from Jan. 1st, 1895, to June 30th, 1896, the average amount of water supplied daily was 16,645,014 gallons; the estimated population using the water was 408,282, so that the average daily consumption per head was 40·76 gallons, as against 34·23 gallons in the year 1894. During the same period more than ninety-nine miles of new mains were laid, and 1438 houses were connected to the water-supply, making a total of 85,059 houses at present supplied, and a total length of 891 miles of water-mains, exclusive of trunk mains. The supply is derived from the Nepean River and two of its tributaries, the Cordeaux and Cataract Rivers, the catchment area being about 354 square miles. From the intake the water is led for a distance of about forty miles through open canals and tunnels to the first reservoir, which is called Prospect Reservoir and is about twenty miles from Sydney. The monthly analyses show the quality of the water to be excellent; the total solid residue, dried at 220° F., varied between 5·8 and 6 6 grains per gallon, the chlorine "as chlorides" varied between 2·3 and 2·6 grains per gallon. For water supplied for domestic purposes otherwise than by measure the charge is 10*s.* per annum for lands and tenements assessed at £17 and under, 7*d.* in the £1 for assessments from £17 to £300, and slightly reduced rates for higher assessments. Public hospitals and charitable institutions have a free supply limited to fifty gallons daily for each resident in the former and thirty gallons for each in the latter. The water revenue for the year ending June, 1896, was £174 357, and the expenses, including maintenance, management, depreciation, and interest, were £182,075, so that there was a deficiency. The returns of the sewerage department show that during the eighteen months 22½ miles of sewers were laid by the board and 5½ miles by the Government, making a total of 230 miles of sewers now under the control of the board. There are two outfalls, one discharging into the open sea and the other on to a sewage farm. About two years ago the board made over the farm to a lessee for a period of ten years, but it was worked in an unsatisfactory manner and the board exercised their power of re-entry for breach of the conditions of the lease. The daily discharge on to the farm is 2,059,000 gallons, which are disposed of over 65½ acres of land. The effluent runs into Botany Bay. The sewerage rate is 10*s.* per annum for premises assessed at £17 or under, and 7*d.* per £1 for assessments over £17. The accounts show that the sewerage revenue for the year ending June, 1896, was £85,486, and the total expenses, including maintenance, management, depreciation, and interest, were £98,749, so that there was a deficiency of £13,263. A report prepared by Mr. T. M. Kendall, medical adviser to the board, gives some statistics for the year 1895 relative to the prevalence in Sydney of some zymotic diseases more or less dependent on faulty drainage or the consumption of impure water. The population of the "metropolis"—i.e., the combined city and suburbs—was 423,000; the total deaths were 5549 (or 130·7 per 10,000), including 297 from diarrhœa, 88 from diphtheria, and 81 from enteric fever. The last-mentioned disease unfortunately increased in the beginning of 1896, and during the six months ending June 30th, 1896, it caused 102 deaths. The lowest temperature for the year 1895 was 36·8° F., registered on July 9th, and the highest was 96·8° on Dec. 16th; the greatest daily range—viz., 31°—occurred on Nov. 7th. The weather was extremely hot in the beginning of 1896, a temperature of 108·5°, which was the highest ever recorded in Sydney, having been reached on Jan. 13th. The greatest daily range for the first six months of 1896 was 32·2°, which occurred on Jan. 16th, when the temperature was 105·2° at midday and 73° at night.

"THE EDUCABILITY OF THE NERVOUS SYSTEM."

THE above was the title of an able and original scientific paper read by Dr. Rorie of the Dundee Royal Asylum at a recent meeting of the Naturalists' Society of that city. Professor Waymouth Reid occupied the chair. The experience and authority of the lecturer on the subject of psychology lent additional value to an excellent contribution, which was received by an appreciative audience with evident approbation. The text was set out in the following principles: "Can the functions of the nervous system be raised by care and steady diligence to a higher standard than would appear at present to hold ground? In other words, Could the present mental and moral standard of the human subject be raised by the improvement and education of the nerve cell; and, secondly, would mere neglect in the regular exercise of the various nerve centres—allowing these to sink into a state of atrophy—result in moral and intellectual degeneration?" In elaborating his theme the lecturer proceeded to give a lucid explanation of recent additions to the knowledge and functions of the nerve cells, illustrating his remarks by means of a large series of diagrams; their structure and development and the importance of a healthy nutrition were fully explained. It was also pointed out how periods of mental depression and barrenness and states of activity and fruition were in their turn to be traced to the exhaustion and recuperation of the nerve cells respectively. The condition of the nerve-cell in relation to the development of insanity and its bearing upon the elucidation of many most important points connected with criminal anthropology were touched upon. In conclusion, Dr. Rorie

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stated that the latent capacities of individuals were in the majority of cases, if not in all, far beyond what are usually reached, and that the possibilities of increasing and developing these to their full extent depended on raising the vitality of the nervous system to its highest degree. In every individual vast numbers of cerebral cells probably remained undeveloped, and although as yet no nerve centres had been found corresponding to our knowledge of good and evil, of justice and benevolence, of purity and veracity, it could hardly be doubted that these had correlative neural equivalents equally with the mental and intellectual faculties, and they were therefore as much worthy of careful training.

ROYAL COMMISSION ON TUBERCULOSIS.

SITTINGS were held at 7, Whitehall-place, on April 1st and 2nd, Sir Herbert Maxwell, Bart., M P., being in the chair The other Commissioners present were Dr. R. Thorne Thorne, C.B., F.R.S., Professor G. T. Brown, C.B , Mr. Shirley F. Murphy, Mr. J. Cooke Trench, and Mr. J. Speir, The evidence was heard of three of the gentlemen nominated by the Cattle Diseases Committee of the Central and Associated Chambers of Agriculture—namely, Mr. B. St. John Ackers (chairman), of Gloucestershire, Mr. T. Carrington Smith, of Staffordshire, and Mr. J. Kay, of Lancashire. The evidence of the witnesses had reference, amongst other points, to the nature of the disease, its extent in various herds of cattle, and to the loss inflicted upon dairy farmers and agriculturists generally by its prevalence. The view was expressed that a stamping-out process, such as has been practised in the case of cattle plague, foot and mouth disease, and pleuro-pneumonia, was not applicable to tuberculosis, but that compensation should be given to the owners of animals which when living were apparently healthy, but which after slaughter were condemned and confiscated in the interests of the public health by reason of the presence of the disease.

THE CHEMICAL SOCIETY.

THE proceedings of the Chemical Society, as becomes the now largest affiliated branch of the Royal Society, are invariably conducted with due decorum and with but little excitement. The annual meeting of the Fellows on the 31st ult. was, however, an exception, on the occasion of the election of a new president in succession to Mr. Vernon Harcourt. The council had recommended Professor Dewar, but for some reason a good number of the Fellows took objection to the council's recommendation and put forward Professor Ramsay to represent them in his stead. This amounted to a vote of censure on the council's discrimination, and so there were important issues at stake, and in consequence there met together a record gathering of the Fellows. The method of ballot led to considerable confusion and discomfort. It consisted in the Fellows coming forward to the table and placing a voting paper in the basket watched over by the scrutators, and giving in at the same time their names. This procedure leads, of course, to the gathering of a crowd round the tables, to gain access to which is a struggle and for a voter to resume his own seat even worse. It would be much simpler, and certainly more comfortable, if the scrutators were to go round with their baskets while the company remained seated. The result of the election proved in favour of Professor Dewar, although, through some doubt as to certain of the votes being invalidated, the actual numbers were not disclosed. The President-elect occupied the chair at the annual dinner in the evening, when there were several distinguished representatives of science present. Amongst these was Lord Lister, who, in proposing prosperity to the Chemical Society, remarked on the enormous growth of the society, which was a fact curiously in contrast with the doubt that had been expressed by a scientific man at the time of its inception as to whether chemistry was a subject which would sufficiently occupy the attention of a society. The society's rooms at Burlington House were now becoming insufficient for the purpose. Other toasts were proposed by Professor Crookes, Dr. Gladstone, and Dr. Russell, and amongst those who replied were Professor Michael Foster, Sir John Evans, and Professor Thomson.

TREATMENT OF CHOREA BY EXERCISES.

As until recently in heart disease the value of rest was well recognised, whilst that of exercise was overlooked, so in other diseases in adopting one principle we thereby often fail to see that its opposite may also have an application. Most practitioners would insist on rest in the acute stage of a case of chorea that was at all severe, but they would never think of treating the chronic disease otherwise than by drugs, though gymnastics are not ignored in the list of remedies of the text-books. In a recent number of the *Canadian Journal of Medicine and Surgery* (March, 1897) Dr. M'Kenzie and Dr. Galloway bear testimony to their value which is decidedly convincing. A boy, aged eight years, the subject of chorea, came under treatment for lateral curvature of the spine. He was permitted to join a gymnastic class and take light work. At first he could not make the required movements, but he was allowed to continue and do the best he could. After the first lesson it was evident that the incoördination was less marked. The exercises were continued daily, and in less than a week every sign of chorea had disappeared. The treatment was tried in three other cases. In two no improvement occurred, but the circumstances were very unfavourable, and the patients only remained in the class a short time. The third was a girl, aged eleven years, who had suffered from chorea for two years, and had ceased to improve for several months, though under competent supervision. After three weeks' treatment careful examination revealed only an occasional slight incoördinate movement of the right foot in walking.

ELECTRIC LIGHTING IN MANCHESTER.

SOME remarkable statements were made at a recent meeting of the City Council showing the rapid growth of electric lighting in Manchester. Plant was put down in the first instance to last, as was thought, for three years. In five months the plant was increased sufficiently to last, as was expected, twelve months, but it only sufficed for seven months. Alderman Higginbottom, chairman of the Electric Lighting Sub-committee, said: "Beginning with a capital of £120,000, they had increased it to £300,000, and that would be gone this year, and in another six months they would have to come to the council for another quarter of a million for new plant." They began with 8000 sixteen-candle lamps three years ago. Now there are over 70 000. It appears to be profitable to the city, for in the first year expenses were covered, and in the second a handsome profit was made. Last year £11,000 of the profits were given in aid of the rates, and the cost to consumers was reduced 25 per cent., while this year it is said the cost will be reduced by another 25 per cent., and a larger sum given to the city in reduction of rates; and in a few years, Alderman Higginbottom added, "the new light will be within the reach of every man." So much has the undertaking increased that a new committee has now been formed—the Electricity Committee—"to deal with all matters arising under the Electric Lighting Acts, 1882 and 1888." In spite, however, of the extension of electric lighting, the consumption of gas steadily increases, and the Gas Committee will still have enough on their hands to occupy their best energies. The use of gas for cooking and in various ways for heating purposes, as well as for gas engines, is every day

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becoming greater, and will do something to lessen the canopy of smoke which too often broods over Manchester.

THE ILLNESS OF MR. J. B. BAILEY.

WE regret to announce that Mr. J. B. Bailey, the librarian of the Royal College of Surgeons of England, is very seriously ill. Mr. Bailey has been well known for some years to readers in the library of the College, and many of the medical profession have reason to be grateful for the help which he was always so ready to afford to those who stood in need of it.

THE STRUCTURE OF NASMYTH'S MEMBRANE.

CONSIDERABLE light has been thrown on the structure of Nasmyth's membrane by the recent researches of Mr. Paul of Liverpool. Hitherto this tissue has generally been regarded as a thin layer of cementum, but from Mr. Paul's specimens there seems to be but little doubt that it is at any rate epithelial in character, and therefore in all probability a remnant of the enamel organ. He has shown that the membrane is composed of two layers, the outermost being composed of large flattened epithelial cells, beneath which is a thin, translucent pellicle usually marked with hexagonal impressions derived from the ends of the enamel prisms. Mr. Tomes, who has been the principal advocate of the cementum theory, has, in a letter in a recent issue of the *Dental Record*, acquiesced in the views held by Mr. Paul.

STREET NOISES.

EASTBOURNE is once more to the fore in the suppression of street nuisances. This time newsboys were in trouble. Five or six shouting together were said to have been heard at a distance of 300 yards. Five of the lads were defended, it being argued that it was an idle suggestion that vendors of newspapers could not cry in the streets. The by-law was directed against continuous calling or shouting, and it was submitted that unless the shouting was deliberately and in such a manner as to cause annoyance there was no offence. The bench were of opinion that the by-law was reasonable and that there was no doubt the shouting—in one case it was 6 o'clock A.M.—was a nuisance. They expressed an opinion that this was more the case in a town where there were many invalids, such as Eastbourne; and, while discharging the lads with a caution, they hoped their employers would give them such instructions that they would not again get in trouble. We in London are still patiently awaiting legislation of this kind.

INTESTINAL IRRIGATION.

IN a paper in the *New York Medical Journal* of March 13th Dr. R. C. Kemp discusses the various uses of rectal irrigation and describes a double-current irrigator which he uses for this purpose. The apparatus is essentially the same as that of the ordinary rectal douche, with the addition of a double-current tube, which varies from four to fourteen inches in length, the latter size being flexible. This method, as the writer allows, is not novel, and it derives its chief interest from the fact that in Dr. Kemp's hands it has been made to serve a great variety of purposes and has on the whole fulfilled his expectations of its value as a means of treatment. As in using the ordinary enema, the patient's position is carefully adapted to the end to be served and the part of the colon to be reached by irrigation. A variety of mild antiseptic solutions are employed. Among the diseases said to have been thus treated successfully are, besides ordinary fæcal obstruction, colitis (simple and membranous), gastro-enteritis, dysentery, and typhoid fever. Shock, uræmia, and hæmorrhage appear to have been distinctly benefited by this means, warm, or in the last case hot, saline solutions being used. Relief has in like manner been afforded in cases of pelvic peritonitis, cystitis, and inflammatory trouble in the prostate and adjacent structures. By means of an apparatus which, like this, allows the return of the fluids injected irrigation can be so carried out that as much as several quarts may be passed into and more or less freely ejected from the colon. We observe that Dr. Kemp has used the irrigator very freely in such diseases as dysentery and typhoid fever, and apparently with advantage. We cannot but think, however, that in morbid conditions like these, associated with inflammation and usually also with ulceration, irrigation might easily be overdone and prove injurious. The purpose in view is antiseptic and so far logical, but it were surely best to limit the use of the douche to the early stages of these diseases and to, at most, a few occasions. Then, too, it should prove of especial value by removing septic and irritant matter and so reducing the dose of morbid poison in the bowel. Its administration under such conditions is certainly suggestive, and may very probably aid in abating the severity of the enteric disorder.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, QUEEN-SQUARE.

THE festival dinner of this institution, over which the Duke of Connaught presided, at the Hôtel Métropole on Friday, April 2nd, cannot be said to have been a success if the amount subscribed on the occasion is not supplemented by further donations. The sum of £10,000 is urgently needed for the purpose of (1) re-arranging and enlarging the out-patient department, (2) the acquisition of an open space to be used as an airing court for male patients, (3) some improvement in the accommodation provided for the nurses, and (4) the completion of the building fund of the new country and convalescent branch at Finchley. Yet in spite of His Royal Highness's eloquent appeal the secretary was able to announce only the small sum of £3000 as a result of the dinner. As His Royal Highness said, "this hospital was started thirty-five years ago, and during this time it has steadily advanced in utility. It treats diseases which are exceptional and require exceptional treatment, and not only does it require that patients shall be kept in the hospital for three months or six months, but sometimes for a year, and even on the completion of that long time they are often unfit to take part in any of the public duties of a citizen. It is therefore of especial value that not only should inmates be treated for their terrible diseases, but that some proportion of them at least should receive pensions to enable them to live after treatment."

ADULTERATION, UNWHOLESOME FOOD, AND MARGARINE.

MATTERS connected with the purity of food-supply are coming very prominently before the public at the present time. This may be mainly accounted for by the strong efforts which are being made by certain of our legislators to push through the proposed new Food and Drugs Bill, which is to strengthen the hands of those entrusted with the duty of keeping our daily food free from objectionable admixture. There would be little difficulty in carrying out effectively the provisions of the present Act if all offences were of the remarkable character of an instance reported last week. Certain grocers in the Battersea district were convicted for selling as arrowroot an article containing 100 per cent. of borax, and as sago an article containing 100 per cent. of tapioca. The blame was attached to a young assistant (how often the young assistant is made the scapegoat) who had failed to distinguish the articles. The possibilities of this gross want of acumen on the part of the young assistant are

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appalling. It is fortunate that he did not substitute something worse, although even in the case of borax mischief might have been done. In a district not far off a pastry-cook was found premeditating the admixture of unsound condensed milk, which was totally unfit for the food of man, with certain other materials for the preparation of "pound" cakes. Some of the tins were without labels and "blown." It is evident that the tricks of unscrupulous persons have not been entirely suppressed, as some would have us believe. It is for those forms of fraud, which have now grown so ingenious, that the provisions of the new Act have been principally strengthened. The margarine fraud is one of them. The law very properly requires the seller to call margarine by its proper name, and to sell butter as everybody understands that term, without any admixture with foreign fats. No one can doubt the wholesomeness of margarine as a food, but when butter is demanded pure butter alone should be supplied. The margarine industry objects to certain clauses of the proposed new Act on grounds the logic of which we fail to see, and this position is well defined by a writer in the *Times* of April 2nd.

THE SALE OF POISONS.

THAT the law is not always logical was very well illustrated in a prosecution at Heywood last week, when a chemist and druggist was charged with selling poison—namely, strychnine—to a person unknown to him, and who was not introduced to him by a person of whom he had knowledge. A woman asked for rat paste, but he could not supply it, and instead gave her vermin killer. On her return journey home by train the woman swallowed the preparation, and death eventually took place. The defence was that rat paste was quite as deadly as vermin killer, but it did not come under the schedule of the Act. The defendant was convicted and fined ten shillings and costs. It is the same old story. The Act, in attempting to provide against the indiscriminate sale of poisons fails in a great measure because it is not sufficiently comprehensive or stringent. We have had more than enough evidence lately to prove the necessity of placing several poisons within the meaning of the Act that are at present not so classed. Apart from the injury done to the community, these omissions make it unnecessarily difficult for the pharmaceutical chemist to conduct his business comfortably and legitimately, since, there is reason to suppose, he is just as anxious to comply with the requirements of the law as any other erson. Still, in the present case the druggist committed an offence by neglecting to sell a scheduled poison in the prescribed way. The rat paste would have done the same mischief, but then he would have been free from blame. Bumble surely would have been right in his opinion of the law in this case.

"GAS BACILLI" AND PUTRESCENCE IN UTERO.

DR. G. W. DOBBIN reports a case of puerperal sepsis, due mainly, he considers, to the bacillus aerogenes capsulatus.[1] The patient, a multipara with generally contracted pelvis, had been in labour two days with a child of large size, and was under the care of a midwife. On approaching the bed a sweetish, offensive odour was perceptible and the maternal genitals emitted a bubbling, crackling sound, whilst the vaginal discharge contained many gas bubbles. Delivery was accomplished with the Tarnier basiotribe, under chloroform. Immediately after it there was an explosive escape of sickening fœtid gas from the uterine cavity. There was as yet no tissue emphysema. Next morning "gas bacilli" were found in the tissues of the fœtus and in the placenta, and the same evening the mother died. A few hours later the body was enormously swollen and emphysematous all over. The fœtus and the placenta were likewise infiltrated with gas, which burnt with a flame when ignited, and was infested everywhere by the "gas bacilli" along with staphylococci and streptococci. The placental bloodvessels contained gas cysts surrounded by a zone of these bacilli, cultures of which were made. A pigeon and a rabbit were inoculated and rapidly developed an œdematous emphysema. These observations are in accord with those of Welch and Nuttal,[2] who attributed many cases of supposed entrance of air into the uterine sinuses to this parasite. They also found that this bacillus when inoculated into rabbits was not usually fatal, but that if the animal were then killed the micro-organism developed rapidly with abundant formation of gas in all organs. Dr. Dobbin argues that in his case the bacilli were introduced by the nurse; that they found in the dead fœtus, as in the dead rabbit, a suitable nidus, and filled the uterine cavity with putrid gas; and that the mother died not infected by the bacilli, but poisoned by the toxins produced by them, her own macerated vaginal tissues, moreover, acting as a seat of germ development. Whether this explanation be in all points correct or not, the case itself should serve to accentuate the danger of delay in cases of prolonged and difficult labour.

[1] Johns Hopkins Hospital Bulletin, February, 1897.

DEATH UNDER NITROUS OXIDE AND ETHER DURING A DENTAL OPERATION.

AN occurrence so unusual requires careful examination. Has the feeling of security which has grown with regard to this combination since Mr. Clover first introduced it into common practice been a delusion, or is some explanation at hand? The report of the death from a lay contemporary[1] states the facts as follows. The patient, a woman aged twenty-nine years, had been a nurse and was an able-bodied woman free from organic disease, but as she suffered from neuralgia the removal of several stumps and teeth was considered advisable. Mr. Arthur Vernon Evans, M.R.C.S., L.R.C.P., administered nitrous oxide gas and ether, and "about one and a half drachms" of ether were used. We may presume that an inhaler was employed. The dentist had removed three teeth, when Mr. Evans observed that the patient's face changed colour and that the pulse ceased. Prompt removal from the chair and the performance of artificial respiration with hypodermic injection of strychnine failed to restore animation. Death, it was thought, took place three minutes from the appearance of collapse. A necropsy was made, which showed the organs to be uniformly healthy. It seems hardly likely that ether played any part in the catastrophe. The inhalation of about ninety drops would produce an almost inappreciable effect. There appears little doubt that the case was one of simple cardiac syncope occurring during the state of recovery from a light anæsthesia. The assumption, which appears in the evidence, that nitrous oxide acts as a cardiac depressant is, of course, not generally admitted, and, as is well known, syncope under that agent is most rare. What happens in some cases is that an impediment to expiration exists—such, for instance, as the forcing back of the tongue during the extraction of lower teeth, dropping of the jaw, or the faulty position of the patient's head, and this leads to the patient being unable to rid the circulation of the gas which has been inhaled. This will produce syncope and death. The danger of such a proceeding has only to be pointed out to be avoided. It is no exaggeration to say that nitrous oxide gas has been given many millions of times and with impunity, and is being

[2] Ibid., August, 1892.
[1] The *Windsor and Eton Express*.

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so given thousands of times daily. Perfection in anæsthetics has yet to be found, but it may fairly be claimed for nitrous oxide that it has stood the test of time well and may still claim for its title "the safest of anæsthetics." It must be understood that nitrous oxide anæsthesia is not asphyxia; the one condition is associated with increased vigour of the heart's action, the other rapidly leads to paralytic distension of the blood-vessels owing to impeded circulation through the lungs.

THE PLAGUE ON BOARD A BRITISH TRANSPORT.

THE *Dilwara*, hired transport, bringing troops from India, arrived at Southampton on April 6th. This is the vessel on which a case of fatal plague occurred on March 18th. On reaching Suez the persons who had been in immediate contact with the deceased child were landed at Moses' Wells, disinfection was carried out, and the vessel was allowed to pass through the Suez Canal in quarantine—that is to say, with guards on board to prevent communication with the land on either side. Before the arrival of the ship at Southampton Dr. Bulstrode, of the Medical Department of the Local Government Board, went down to Southampton to confer with Mr. Harris, the port medical officer of health, and to arrange with the naval and military authorities as to the landing of some 1200 men, women, and children on board, and he remained there to watch the disembarkation of the troops, &c. All necessary arrangements were completed before the arrival of the vessel, and, in accordance with English practice, no persons were detained, since all were healthy on arrival. The arrangements at Southampton, which are largely due to Mr. Harris's admirable initiative, sufficed for all purposes; and since no fresh cases had occurred on board nothing but medical inspection and certain measures of disinfection were necessary. This case proves anew how easy it is, with proper sanitary administration and healthy conditions on board, to deal with and to prevent recurrences of plague, and it also justifies the action laid down by the Local Government Board in dealing with this disease, which was formerly subject to quarantine at our ports. This is the third vessel reaching an English port in which there has been plague derived from Bombay, and in no case has there been any extension of the disease.

A CLINICAL meeting of the Neurological Society of London will be held at the rooms of the Medical Society, 11, Chandos-street, W., on April 22nd, at 8.30 P.M. Members wishing to show cases are invited to communicate with one of the hon. secretaries, Dr. F. W. Mott and Dr. J. S. Risien Russell, as soon as possible, and are requested to send to 4, Queen Anne-street, W., very short abstracts dealing with the salient features of the cases.

THE Hospital Reform Association will present its memorial against hospital abuse to the Royal College of Physicians of London in a few days' time, so that members of the profession are invited to sign it without delay. At the meeting of the Council of the Association held on April 1st it was decided to prepare a memorial on hospital reform for presentation to H.R.H. the Prince of Wales.

UNDER the auspices of the American Surgical Association and the Alumni Association of the Jefferson Medical College of Philadelphia the statue of the late Professor Samuel D. Gross, M.D., will be unveiled near the Army Medical Museum, Washington, D.C., on Wednesday, May 8th, 1897.

INFANTILE MORTALITY IN EGYPT.

A CORRESPONDENT, who has been examining the weekly statistical returns issued by the Egyptian Sanitary Department, has tabulated a summary of the facts relative to the deaths of children during each quarter of the year 1896; and the results, which are shown below, may be correctly described as appalling.

Place.	Quarter of 1896.	Deaths. Under 1 year.	1 to 5 years.	Over 5 years.	Percentage. Under 1 year.	Under 5 years.	Remarks.
Cairo.	First ...	1194	1216	1710	29·0	58·5	Deaths from cholera excluded.
	Second ...	1763	1922	1861	31·8	66·4	
	Third ...	2052	1378	1605	40·7	68·1	
	Fourth ...	1239	1305	1593	29·9	61·4	
	Total ...	6248	5821	6769	33·2	64·0	
Alexandria.	First ...	588	469	819	31·3	56·3	Ditto.
	Second ...	769	559	859	35·1	60·7	
	Third ...	1031	601	744	43·3	68·6	
	Fourth ...	822	581	766	37·8	64·6	
	Total ...	3210	2210	3188	37·2	62·9	
Eighteen towns in Lower Egypt.	First ...	772	590	1129	30·9	54·6	Deaths from cholera included.
	Second ...	1075	1072	1696	27·9	55·8	
	Third ...	1495	1643	2173	28·1	59·0	
	Fourth ...	935	1166	1259	28·4	62·8	
	Total ...	4307	4471	6257	28·6	58·3	
Eleven towns in Upper Egypt.	First ...	624	383	857	33·4	54·0	Ditto.
	Second ...	838	818	1280	28·5	56·4	
	Third ...	886	915	1727	24·9	51·4	
	Fourth ...	842	820	788	34·3	67·8	
	Total ...	3190	2966	4652	29·5	56·9	

The unavoidable inclusion of the cholera deaths in the portion of the table referring to the provincial towns has the effect of making the infantile death-rate appear to be more favourable than was actually the case, for judging by Cairo and Alexandria the number of young children carried off by the epidemic must have been comparatively small; but even as they stand the figures represent a terrible preponderance of premature mortality, no fewer than sixty out of every hundred burials having been of children under five years of age. Compared with the births this slaughter of the innocents comes out in, if possible, a worse light, as will be seen by the subjoined table.

Deaths per 1000 Births.

—	Cairo.	Alexandria	Eighteen towns in Lower Egypt.	Eleven towns in Upper Egypt.
Under one year ...	237	279	241	273
One to five years	267	192	250	254
Total	554	471	491	527

In the former table one of the most noteworthy features is the progressive increase in the mortality up to the end of the third quarter. It is not until the Nile rises and washes away the impurities that the death-rate begins to diminish.

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THE HOSPITAL REFORM ASSOCIATION.

REPORT OF THE COMMITTEE APPOINTED TO INQUIRE INTO THE WORKING OF THE SPECIAL HOSPITALS OF LONDON.

To the Council of the Hospital Reform Association.

GENTLEMEN,—In pursuance of your instructions to inquire into the working of the special hospitals of London we have personally visited forty-one institutions, which has necessitated about eighty separate visits, besides numerous letters. We herewith append in tabular form the specific details required of these institutions. In the following remarks we abstain as far as possible from mentioning individual institutions. Unless otherwise specified, all the details in the table are taken from the published hospital reports for the year 1895. With few exceptions we were well received and the information for which we asked was readily given. We have nearly always interviewed the secretaries, and in some cases we have also seen members of the visiting staff or officials in charge of the out-patient departments. In many cases the secretaries recognise the possibility of abuse; in very few instances was its existence absolutely denied. It should be borne in mind that in all cases our information has been obtained from interested parties. There are several points to which we wish to draw attention in detail.

1. *Subscribers' letters.*—Out of the forty-one hospitals ten do not issue letters, and of the remaining thirty-one only six rigidly enforce their use. Some of the smaller institutions appear to use letters to enable them to obtain a grant from the Hospital Saturday Fund.

2. *Payment by patients.*—Thirty-two hospitals receive payment from their patients, collecting a large sum annually (£24,085 in 1895). We would point out that this amount is earned entirely by the work of the medical staff, who receive no portion in return. More than half (eighteen) of these institutions obtain more money from their patients than from their annual subscribers; in some cases as many as from ten to twenty-five times as much. On comparing the patients' payments and annual subscriptions for these thirty-two hospitals we find that these received £7000 more in patients' payments than in annual subscriptions in 1895. We cannot refrain from drawing attention to the fact that at one institution the average sum received for treatment from each paying out-patient is 11*s.* 9*d.* The payments are often made to subordinate officials, and no register or check is kept.

3. *Inquiry as to the means of patients.*—At fifteen of these institutions there is practically no inquiry at all, patients being admitted unquestioned, so that anybody may apply for, and will as a matter of course receive, treatment. Where an inquiry exists it is for the most part inefficient and wrongly directed. It partakes, as a rule, of one of two characters, either (*a*) How much can the patient pay the hospital? or (*b*) Can the patient pay a specialist's fee of one or two guineas? In neither instance is the patient asked if he or she could afford to pay the fees of a general practitioner. The inquiry is usually of a most cursory nature; the word of the patient is accepted, and no steps are taken to verify the statements. In other cases we found that although the letters contained spaces for the insertion of wages, means of livelihood, rent, &c., these particulars were neither filled in nor the questions asked. At some hospitals it appeared to be the custom to put upon the medical staff the duty of deciding the eligibility of the patients. We consider this to be unfair and unadvisable. This work is obviously outside the duty of the visiting staff, who as a rule have much more to get through than they can conscientiously do in the time at their disposal. Besides, it involves a personal element. If a medical man tells a patient he can afford to pay a practitioner it is equivalent to saying to the patient, "You can consult me at my own house." Even at those hospitals which profess some form of inquiry it is unusual to ask any questions of patients bringing a subscriber's letter for fear of offending the subscriber, and still rarer of those patients bringing letters from the Hospital Saturday Fund. We had repeated statements from the hospital secretaries as to the unsuitability of many of these latter patients for hospital treatment.

4. *Limitation to the speciality for which the hospital nominally exists.*—This limitation is fairly well enforced. However, at some chest hospitals large numbers of cases of anæmia and dyspepsia are treated; the Cancer Hospital treats abscesses, syphilis, and piles; and at women's hospitals generally the cases are by no means all obstetric in character.

5. *Limit to the number of new cases in the out patient department.*—Only two have a fixed limit. In the majority the attendance is small, but there are undoubtedly cases of overcrowding. The new patients on one day at the following hospitals are: No. 11, occasionally fifty; No. 22 an average of from thirty to forty; No. 3, from thirty to fifty; No. 10, from twenty-five to thirty; and No. 6, from twenty to thirty. Many of the cases treated at these special hospitals are of a common nature, could be suitably treated by a general practitioner, and do not require the skill of a specialist. For example, at ophthalmic hospitals a large proportion of the cases are ophthalmia and common diseases of the eyelids; at skin hospitals, pediculi, scabies, and ringworm; at chest hospitals, anæmia and dyspepsia; and so on.

We are of opinion that considerable abuse exists among these special hospitals in the following ways: (1) by the treatment, either free or for a small sum, of patients who could afford to pay a reasonable fee outside; (2) by the admission of patients who do not actually require treatment by a specialist; and (3) by the treatment in some instances of more patients in a given time than can be considered either advisable or defensible.

Recommendations.—In attempting to recommend what course should be adopted by the association as a remedy for the present state of things we are confronted at the outset by a very serious difficulty. The majority of these hospitals would cease to exist were it not for the payments they receive from their patients. A rigid inquiry and the consequent rejection of many patients would so seriously diminish the receipts that some at least of these institutions would be unable to keep open. It is, therefore, *primâ facie* improbable that we shall receive much support in this direction from the hospitals themselves. We recommend that each of these hospitals be asked to appoint an inquiry officer. We recognise the importance of this post being held by a reliable and suitably paid individual. In view of the necessary cost we recommend that hospitals in one locality—or, better still, the hospitals with the same speciality—should combine to support a joint inquiry officer, who shall devote his or her whole time to the work. We recommend that a wage limit be fixed for out-patients, say, 30*s.* a week for a single person and 50*s.* for married people. Some deviation from this rule might be allowed at the discretion of the inquiry officer in cases of a lingering character such as phthisis, or in cases requiring a long course of special treatment. In no instance should an able-bodied person living on his or her private means be admitted as an out-patient to any hospital. We recommend that an appeal be made to the management of the Hospital Saturday Fund asking them to exercise more care in the bestowal of their letters and to exclude as far as possible persons in a position to pay fees. We consider that much might be done if the medical staffs could be induced to take an active interest in the subject of abuse. It is probable no hospital committee would continue to act in opposition to the unanimous views of the staff, provided such views were strongly and persistently laid before them. We therefore recommend that a letter be sent to every member on the staffs of these hospitals asking them to take an interest in this question, and pointing out (*a*) the pauperisation of the patients through the present abuse, (*b*) the serious injury they are doing to their fellow practitioners, and (*c*) the large amount of money they are earning of which they receive nothing.

Subscribers' letters.—We have pointed out that out of the forty-one hospitals ten do not have letters. These do not appear in consequence to suffer any loss in public support, for the average amount of their annual subscriptions is £743, as contrasted with £758, the average annual income from subscriptions returned by the others. At most institutions patients bringing subscribers' letters are admitted unquestioned, and it is certain that large numbers of undeserving cases gain admission in this way. As only six out of the remaining thirty-two hospitals rigidly enforce the use of their letters it is probable that no very serious objection would be raised to the total abolition of the letter system. At any rate, we trace the worst instances of abuse to this system, and we would therefore strongly recommend its total abolition.

Many hospital secretaries have expressed the opinion to

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TABULAR STATEMENT OF REPORT OF COMMITTEE APPOINTED TO INQUIRE INTO THE WORKING OF THE SPECIAL HOSPITALS OF LONDON.

No.	Name of hospital and number of beds.	Subscribers' letters.	Payment by patients.	Inquiry as to patients' means.	Limitation of cases for special treatment.	Limit to number of new out patients.	Patients' payments in 1895.	Annual subscriptions in 1895.	Remarks.
							£	£	
1	Hospital for Skin Diseases, Blackfriars (10 beds).	Out-patients: Yes, about one-quarter. In-patients: Admitted through out-patients.	Out-patients: 1s., 2s. 6d., and 10s. per two months; £490 a year. In-patients: 10s. a week; £59 a year.	Dispenser inquires as to how much a patient can pay.	Limited.	None; average 10.	549	155	There is little or no inquiry into the circumstances of patients. The patients' payments are three and a half times the annual subscriptions.
2	London Skin Hospital, Fitzroy-square (11 beds).	Out-patients: Yes, very few. In-patients: Yes, not enforced.	Out-patients: about 1s. weekly (from 3d. to 2s. 6d.) £636 a year. In-patients: No free beds; 15s. a week; also from £1 1s. to £4 4s. weekly; £204 a year.	The secretary states that he sees all patients and inquires; often rejects one or two a week.	Out-patients: Limited. In-patients: Staff are at liberty to send other cases into private wards.	None; average 3 or 4.	840	122	Questions openly answered by secretary. A fair attempt is made to prevent abuse. The patients' payments are seven times the annual subscriptions.
3	St. John's Hospital for Diseases of the Skin (40 beds).	Out-patients: Yes, the majority. In-patients: Yes.	Out-patients: If no letter, from 1s. to 2s. 6d. weekly, or 10s. a month, privileged cases; £2263 a year. In-patients: 15s. weekly; £105 a year.	All are seen by a clerk, who refers to the secretary doubtful cases, and he frequently rejects.	Limited.	None; average 20 (30—50).	2368	773	The secretary willingly answered questions and appeared to be doing his best to stop abuse according to the views of his committee. The report for 1895 states that £2263 were received from 3857 patients, which gives 11s. 9d. per head. The patients' payments are three times the annual subscriptions.
4	Western Skin Hospital, Great Portland-street (no beds).	Yes, very few; only necessary if unable to pay 1s. or more per week.	Without letter free, or 1s. or 2s. (rarely 10s.) weekly; £144 a year.	The secretary sees and inquires what they can afford to pay; refused two patients in fifteen years.	Limited.	None; average 3.	144	42	Questions freely answered. A patient unable to pay a fee of 1 or 2 guineas would not be considered abusing the charity by paying 10s. The patients' payments are more than three times the annual subscriptions.
5	British Hospital for Diseases of the Skin, Euston-road (12 beds).	Yes; not enforced.	Yes.	None.	—	None.	860	35 and donations	We had the greatest difficulty in obtaining any particulars of this institution. We explained the object of our visits to the officials, who refused us verbal information, and told us to write. When we wrote to the secretary, and afterwards to the members of the staff, we received no reply. When we called again the lady official at the desk refused to send in our card to the member of the staff who was in the hospital at the time. We, however, obtained a report from which we find that patients' payments amount to nearly twenty-five times as much as the annual subscriptions and donations put together.
6	Central London Ophthalmic Hospital, Gray's-inn-road (13 beds).	Out-patients: Yes, about half. In-patients: Yes.	Out-patients: 2d. a visit to 2s. 6d. per month; £426 a year. In-patients: All expected to pay 1s. a day, occasionally £1 a week; £30 a year.	"Inquiry officer" fills in forms, &c., and if he thinks proper brings the patients up to the secretary to be inquired into; has no power himself to question.	Limited.	None; average from 30 to 50.	456	104	Inquiry officer only in name. The report says more than half of the income is derived from patients; four times the annual subscriptions.
7	Royal Eye Hospital, St. George's-circus (40 beds).	Out-patients: Yes, about 1 in 100. In-patients: Admitted through out-patients.	Out-patients: None. In-patients: None. A few at £1 1s. weekly, and four beds at £3 3s. weekly; £318 a year.	The clerk inquires as to the occupation, &c., of out-patients, and occasionally refers to the secretary, who has the right of refusing.	Limited.	None; average 25.	318	344	The secretary was very willing to answer questions, and appeared to be doing her best to prevent abuse.
8	Royal London Ophthalmic Hospital, Moorfields (100 beds).	Out-patients: Yes, about 1 in 20. In-patients: Ditto.	None.	An inquiry officer sees all and refuses more than one a day; the inquiry here even extends to those sent by the Hospital Saturday Fund.	Limited.	None; very large.	318 (boxes)	817	Some care is obviously taken to prevent abuse; the system of inquiry here appears to be good.

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9	Royal Westminster Ophthalmic Hospital (30 beds).	None.	Out-patients: None. In-patients: None. One bed at £2 2s. weekly; £73 a year.	A clerk sees all and enters occupation, and occasionally refuses.	Limited	None; average 15 to 20.	73	752	The secretary denied the existence of abuse. If the inquiry is thorough it should check serious evil.
10	Western Ophthalmic Hospital, Marylebone-road (12 beds).	Yes, a minority.	Out-patients: No regular payment—an open bowl on secretary's table. In-patients: None.	Assistant secretary sees all and rejects if earning 30s. a week single or 50s. a week married.	Limited.	None; average from 25 to 30.	118 (boxes)	223	No separate heading in accounts for patients' donations, and no register of these is kept. During 1895 1315 cases of ophthalmia were treated; most of these probably did not require a specialist's advice. The report also states that all are admitted without unnecessary formalities.
11	Hospital for Consumption and Diseases of the Chest, Brompton (321 beds).	Rigidly enforced.	None.	Out-patients: Practically none; sister sees all cases and is supposed to refer wealthy patients to the secretary. This is a very rare occurrence; the secretary could not say if it had occurred once during 1896.	Apparently no restriction; the visiting staff has power to see or refuse any case other than chest disease.	None; average from 30 to 40, occasionally 50.	26 (boxes)	7784	Many patients come up from the country. The visiting staff have to attend at noon to enable these privileged people to return to their distant homes the same day. The secretary considered that a patient who persistently gave up a day's work and came from the country and paid from 5s. to 10s. in railway fares was a deserving case for the charity. Practically no inquiry is made; the subscriber who gives the letter is considered responsible.
12	Infirmary for Consumption and Diseases of the Chest and Throat, Margaret-street (no beds).	Rigidly enforced.	None.	None.	Unlimited.	None; average 10.	—	122 and donations	Questions willingly answered.
13	National Hospital for Diseases of the Heart and Paralysis, Soho-square (26 beds).	Out-patients: Yes; about half. In-patients: Yes, with payment.	Out-patients: With letter, free; without 6d. or 1s.; £137 a year. In-patients: All pay; children 5s., and adults from 10s. to £2 2s. weekly; £170 a year.	The secretary inquires and gives special forms to be signed by clergyman or minister in doubtful cases.	All admitted; selection left to staff.	None.	307	958	Questions readily answered; system should be fair if efficiently carried out, but patients come from all parts.
14	North London Hospital for Consumption, Fitzroy-square.	Strictly enforced.	Out-patients: None. In-patients: Occasionally £1 1s. weekly, not encouraged; £38.	Out-patients: None. Seen by clerk; no questions asked; left to subscribers.	Not strictly limited.	None; average 12.	38	1616	No very obvious abuse; the patients all appeared to be poor.
15	Royal Hospital for Diseases of the Chest, City-road (80 beds).	Rigidly enforced.	None.	Out-patients: No inquiry officer; there was one formerly. The visiting staff are at liberty to refer any patient to the secretary. In-patients: None. Subscribers' letters state that patients are without the means of paying for proper medical advice and comforts.	Left to visiting staff.	Yes, 15.	111 (boxes)	2218	Questions very readily discussed by the secretary, who considered less abuse existed than formerly, because the staff were more alive to the fact.
16	Chelsea Hospital for Women (52 beds).	Out-patients: Yes, about three-quarters. In-patients: Yes, rather more.	Out-patients: If no letter, 1s. a week; £263 a year. In-patients: Without letter, 10s. 6d. to £2 2s. weekly; £211 a year.	Out-patients: Clerk inquires and refers doubtful cases to the secretary; this happens daily, and about one-half of these are sent away. In-patients: Some inquiry.	Limited.	None; average from 10 to 25.	474	1635	The secretary answered questions openly and realised the possibility of abuse, and makes a fair attempt to cope with it.
17	The Hospital for Women, Soho-square (60 beds).	Out-patients: None. In-patients: Yes.	Out-patients: None. Contribution box by dispensary; £99. In-patients: Free; 10 beds at £1 1s. a week, £469.	Out-patients: None. In-patients: Have to send a special form signed by a magistrate, clergyman, minister, or medical man.	Out-patients: Sister inquires, and then usually consults visiting staff as to seeing other cases.	Yes, 20.	573	1287	If the in-patient forms are honestly filled up there should be no abuse of this department; as, however, the out-patient department is "perfectly free at 10 o'clock daily, disease and poverty being the only passport required," and no questions are asked. The secretary did not consider there was much abuse. The out-patient sister thought that most patients could quite well pay.

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TABULAR STATEMENT OF REPORT OF COMMITTEE APPOINTED TO INQUIRE INTO THE WORKING OF THE SPECIAL HOSPITALS OF LONDON—(*Continued*).

No.	Name of hospital and number of beds.	Subscribers' letters.	Payments by patients.	Inquiry as to patients' means.	Limitation of cases for special treatment.	Limit to number of new out-patients.	Patients' payments in 1895.	Annual subscriptions in 1895.	Remarks.
18	Grosvenor Hospital for Women and Children, Vincent-square (50 beds).	Rigidly enforced.	Out-patients: All pay, from 6*d.* to 1*s.*; £170 a year. In-patients: From 5*s.* to £1 1*s.* weekly; £173 a year.	Out-patients: None with letters. Some inquiry if without.	Not limited to gynæcological cases.	None: average from 10 to 15.	£ 344	£ 504	The patients are seen by the lady visitors, who fill in letters as to name, &c. Spaces in letters for rent and means of livelihood are left blank; no questions are asked. The hospital is being rebuilt.
19	Royal Hospital for Children and Women, Waterloo-road (52 beds).	Rigidly enforced.	Out-patients: 1*d.*, £127 a year. In-patients: From 1*s.* a week, £132 a year.	Out-patients: Sister inquires and refers to the secretary or medical officer, who refuses if thought necessary, which seldom happens. In-patients: Not admitted without a medical man's certificate.	Limited.	None; average 25, occasionally 50.	259	793	The secretary thought that abuse existed in all out-patient departments. We consider under the circumstances that so few patients are sent away that abuse exists.
20	Samaritan Free Hospital for Women and Children (53 beds).	None.	None.	Out-patients: Children, none; adults, space on letters for rent and means of livelihood. (We do not know if these are filled in.) In-patients: Fairly full particulars are requested.	—	None.	8 (boxes)	1615	The secretary was very polite, but did not wish to answer questions without the special consent of his committee. We were unable to ascertain that any real inquiry was made.
21	Central London Throat, Nose, and Ear Hospital, Gray's-inn-road (17 beds).	None.	Out-patients: 6*d.*, 1*s.*, and 2*s.* 6*d*; £1136 a year. In-patients: Majority free; 14*s.* weekly; £176 a year.	The secretary sees all and fills in forms, rejecting about fifty a year.	Limited.	None; average 25.	1322	318	Questions were openly answered and every facility for inquiry offered. The secretary did not think as much abuse existed as formerly and appeared very anxious to avoid it. About one-seventh of the patients are recommended by medical men, and many come from a distance. The payments from patients amount to four times the annual subscriptions.
22	Hospital for Diseases of the Throat, Golden-square (26 beds).	Out-patients: Yes, about one-eighth. In-patients: Rather less.	Out-patients: With letter free; without from 1*s.* to 2*s.* 6*d.* weekly; £2486. In-patients: With letter free or payment of 10*s.* weekly, 2*s.* 6*d.* to 25*s.* weekly; £372 a year.	Out-patients: The clerk inquires and refers to secretary; a daily occurrence. In-patients: Secretary sees.	Limited to throat, nose, and ear, including enlarged glands, goitre, &c.	None; average from 30 to 40.	2858 (In 1894)	286 (In 1894)	It appears the question here asked is whether a patient can afford a specialist's fee of from one to two guineas a visit. The patients' payments are nearly ten times the amount of the annual subscriptions.
23	London Throat Hospital, Great Portland-street (5 beds).	Out-patients: Yes, about one-third. In-patients: Admitted through out-patients.	Out-patients: With letter free; without, expected to pay from 1*s.* to 2*s.* 6*d.* weekly. In-patients: About 5*s.* weekly; £737 a year.	Left to visiting staff.	Limited.	None; average 20.	737	118	A proper system of inquiry is absent. The patients' payments are six times the amount of the annual subscriptions.
24	Metropolitan Ear, Throat, and Nose Hospital, Fitzroy-square (no beds).	Yes, about one-eighth.	From 2*s.* to 5*s.* per visit, occasionally £1; £101 a year.	None.	Left to the visiting medical officer.	None.	101	11	There was considerable hesitation on the part of the secretary in replying to questions. The medical officers are allowed to see private patients at the hospital. We were unable to ascertain who decided which were private and which were hospital cases. Many come from the country and can have their medicine repeated by post. The subscribers' letters apparently exist to gratify the Hospital Saturday Fund. The patients' payments amount to ten times the sum of the annual subscriptions.
25	Royal Ear Hospital, Frith-street, Soho (9 beds).	Out-patients: Yes, about a quarter. In-patients: A few.	Out-patients: 1*s.* per visit; £468 a year. In-patients: From 5*s.* to 12*s.* weekly; £127 a year.	Lady secretary inquires, and refuses unsuitable cases.	Limited.	None; average 15.	595	79	We saw no evidence of any very great abuse, but patients' payments amount to nearly eight times the sum of the annual subscriptions.

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26	Municipal Throat and Ear Infirmary, City-road (no beds).	—	—	—	—	—	280	—	No report is published. This appears to be a private concern, and, we presume, patients pay the medical officer.
27	Hospital for Epilepsy and Paralysis, Regent's Park (25 beds).	Out-patients: Yes, if unable to pay 6d.; about one-half have letters.	Out patients: With letter, free; without, pay from 6d. to 2s. 6d. weekly; £226 a year. In-patients: About half pay from 5s. to 10s. weekly; private wards from £1 11s. 6d. to £3 3s. weekly; £406 a year.	Out-patients: Dispenser sees and questions, and occasionally refers to secretary.	Out-patients: left to visiting staff. In 1895, 41 cases other than nervous were treated. In-patients limited.	None; average from 2 to 3.	632	380	The secretary was very courteous and quite alive to the possibility of abuse, but could not suggest any improvement except an inquiry officer or reference of all metropolitan cases to the Charity Organisation Society. The patients' payments are considerably more than the annual subscriptions.
28	National Hospital for the Paralysed and Epileptic, Queen-square (130 beds).	Out-patients: Yes; less than one-half. In-patients: None; many admitted through out-patients.	Out-patients: None. In-patients: Free, or £1 1s. weekly (32 beds); also private wards, from £3 3s. to £5 5s. weekly; £1799 a year.	Out-patients seen by steward, who possibly refers to the secretary; this may happen once or twice a month. In-patients have to get letter signed of inability to pay for adequate medical treatment.	Limited; registrar selects.	None; average 15 (from 10 to 35).	1799	1761	Information not readily given. The secretary considered his institution differed from all others and was not a public body, and no one had any right to interfere with it. More money is received from the in-patients alone than in annual subscriptions.
29	West-end Hospital for Diseases of the Nervous System and Paralysis, Welbeck-street (50 beds).	Out-patients: Yes; about one-half. In-patients: Yes; if free.	Out-patients: With letter, free; without, from 1s. to 5s. weekly; £354 a year. In-patients: With letter, free; without, from 3s. 6d. to £1 weekly; £120 a year.	The secretary sees all patients and questions as to means; often rejects two a week; he never questions those with Hospital Saturday Fund or Hospital Sunday Fund letters.	Left to visiting staff.	None; average 7 or 8, occasionally 20.	474	800	There is a good attempt at inquiry, and with the exception of those with Hospital Saturday Fund and Hospital Sunday Fund letters, abuse to any extent can only exist through deceit.
30	British Hospital for Mental Diseases and Brain Disorders, Euston-road (no beds).	A few bring letters; all have to get them.	None.	The secretary sees all and makes inquiries, and in doubtful cases tells patients to bring a letter from a clergyman stating poverty, &c.	? Limited.	None; average from 6 to 8.	—	—	No report had been issued since 1894.
31	City Orthopædic Hospital, Hatton Garden (50 beds)	None.	Out-patients whose wages are over £2 are expected to put 2s. 6d. in the box for two months. In-patients: Free, and six beds at £1 1s. weekly; £6 6s.	The secretary sees all cases and fills in letters with occupation and income; if he has any doubt he refers case to the Charity Organisation Society (about five or six a year).	Limited.	None; average 6.	19	416	The secretary appeared willing to give all information. We should have considered it hardly worth the secretary's time to note the very small amount represented as received from patients.
32	National Orthopædic Hospital, Great Portland-street (60 beds).	Out-patients: Yes; but very few are brought. In-patients: Yes.	Out-patients: None. In-patients: 7s. 6d. under twelve years of age, and 10s. 6d. over twelve weekly; £101 a year.	Out-patients: Matron sees personally all cases and makes inquiries; refuses herself or refers to the secretary.	Limited.	None; average from 6 to 10.	1001	349	Questions very openly answered. Apparently every precaution to prevent abuse is taken, the possibility of which is most fully recognised.
33	Royal Orthopædic Hospital, Oxford-street (50 beds).	Out-patients: Yes, majority bring or have them given. In-patients: Yes, not enforced.	Out-patients: None; £16 in boxes. In-patients: Free or pay from 2s 6d. to 10s. weekly; £107 a year.	Out-patients registered by porter, seen by surgeon, who can refer to secretary, who refuses about one a month.	Limited.	None; average 2 or 3.	123	540	Questions very openly answered. The secretary has put in letters that "Patients may be called upon to furnish such information as will enable the authorities to judge of their eligibility for charitable relief."

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TABULAR STATEMENT OF REPORT OF COMMITTEE APPOINTED TO INQUIRE INTO THE WORKING OF THE SPECIAL HOSPITALS OF LONDON—*(Continued)*.

No.	Name of hospital and number of beds.	Subscribers' letters.	Payments by patients.	Inquiry as to patients' means.	Limitation of cases for special treatment.	Limit to number of new out-patients.	Patients' payments in 1895.	Annual subscriptions in 1895.	Remarks.
							£	£	
34	St. Peter's Hospital for Stone and Urino-genital Organs, Covent-garden (26 beds).	Out-patients: Yes, very few. In-patients: None; admitted through out-patients.	Out-patients: With letters, free; without, 6*d*., 1*s*., or 10*s*.; £1947 a year. In-patients free; £254; two beds at £5 5*s*. a week, £185 a year.	Out-patients: Secretary sees and questions, and possibly refuses fifty a year.	Left to surgeon.	None; average 12.	2186	250	Questions freely answered. Nearly £2200 a year received from patients, more than three times the annual subscriptions and donations together; probably much abused.
35	Gordon Hospital for Fistula, Piles, and Diseases of the Rectum (20 beds).	No regular subscribers' letters.	Out-patients: Free; box, £68 a year. In-patients: Nearly all pay from 2*s*. to £3 3*s*. weekly; £759 a year.	Out-patients: None; left to visiting staff. In-patients inquired very fully into by secretary, who refuses about two a year, and keeps a very complete detailed record.	Left to surgeon.	None; small.	827	143	Questions most openly answered and fullest facilities for inquiry given. We doubt if there is much abuse with the in-patients; as, however, there is no inquiry with the out-patients there appears to be considerable abuse of this department. The patients' payments are nearly six times the annual subscriptions.
36	St. Mark's Hospital for Fistula, City-road (34 beds).	None.	Out-patients: None; boxes, £42 a year. In-patients: None.	Practically none.	Hospital surgeon selects.	None; average 12.	42 (boxes)	306	In the absence of any genuine inquiry abuse must exist, probably to a considerable extent.
37	Lock Hospital and Rescue Home (135 beds).	None.	Out-patients: Pay 2*d*., 6*d*., 1*s*. up to 5*s*. per visit; £1422 a year. In-patients: None.	Out-patients: The secretary, clerk, or dispenser inquires, and has the right of refusing. In-patients: No inquiry; usually recommended by clergymen or medical men.	Strictly limited.	None.	1422	75	We could get no direct evidence of abuse by the out-patients; but it probably exists. The majority of in-patients come from all parts of the country without any inquiry, so it is difficult to believe that no abuse exists. The out-patients' payments are over eighteen times the annual subscriptions.
38	Dental Hospital of London, Leicester-square (no beds).	Yes.	None; have to pay for extra gold for stopping; £239 a year.	None.	Limited.	None.	305	1121	There is an appliance department where very strict inquiry is made and no abuse exists, but, as all subscribers' tickets are admitted without inquiry, abuse must exist, especially as a large school is attached, and students naturally prefer clean to dirty people.
39	National Dental Hospital, Great Portland-street (no beds).	Yes; the majority.	With letter, free; without, free or pay 2*s*. 6*d*. for gas or gold stopping; £1113 a year.	Porter sees all, and has power to refuse. This occasionally happens. No inquiry of those with letters.	Limited.	None; often from 70 to 100.	1113	126	The inquiry does not appear very efficient; only the wealthy classes refused, if found out. Hospital practically self-supporting. Notices to the effect that the hospital is only for the necessitous poor are put up. Patients' payments are eight times the annual subscriptions.
40	Friedenheim, or Home for the Dying (40 beds).	None.	In-patients: Most free or pay from 2*s* 6*d*. to 10*s*. weekly; occasionally £1 1*s*.; £308 a year.	Certificate by attending medical man has to be sent in.	Cases have lived four years.	—	308	511	No evidence of abuse.
41	Cancer Hospital, Fulham (105 beds).	None.	None.	—		—		1994	The secretary refused to be interviewed and also to answer our questions when sent by post. We have no particulars of out-patients. Cases other than cancer are treated as in-patients in large numbers, such as piles, fistulæ, tuberculosis, syphilis, abscess, &c. In fact, according to the report, only rather more than half the patients are acknowledged to be suffering from diseases of a cancerous nature We consider it unfortunate that an institution which appeals to the public as a cancer hospital and receives, we believe, donations and legacies for this reason should treat other conditions.

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us that the amount of the specialist's fee for private consultation often conduces to instances of abuse of the special hospitals. Thus numbers of patients who pay the hospitals as much as from 5*s*. to 10*s*. are unable to pay 1 or 2 guineas to the medical man at his own house. With reference to this we fail to see any very strong objection to institutions acknowledged to be on a business and not on a charitable basis. In such institutions patients *bringing an introduction from their general practitioner* (this we regard as essential) might obtain a specialist's advice on the payment of a small sum, say, from 5*s*. to 10*s*., a portion of which would go to the specialist himself.—We are, Gentlemen, your obedient servants,

W. KNOWSLEY SIBLEY, M.D. Cantab., M.R.C.P. Lond.,
ERNEST A. SNAPE, M.D. Brux., L.R.C.P. Lond.

HISTORICAL NOTES ON MEDICINE, SURGERY, AND QUACKERY.

III.[1]

SOME time between 1780 and 1785 an extraordinary exhibition took place in a garden in the upper part of Fleet-street, Liverpool, when that street, though laid out, was not a thoroughfare. A person professing to be a medical practitioner, called Dr. Graham, arrived in the town and recommended the use of earth baths as a cure for various complaints. His plan was to have the patient buried up to the neck in earth, and in order to set the example he and a woman who was said to be his wife were buried up to their necks in the garden with their faces towards each other. They had their heads dressed with hair powder, as was the fashion at that period, and the public were admitted on payment of a small sum. There is not any reason, however, to believe that they induced any patient to follow their example.

The following advertisement appeared in Williamson's *Liverpool Advertiser* of Feb. 18th, 1757: "To prevent the Unwary from being drawn in by ignorant Pretenders to Midwifery in this town (as I have been lately), I think it my duty to acquaint the public that my late beloved wife, Mary Reily, was taken suddenly in labour on Saturday, the 5th instant, upon which the Surgeon we had formerly on the like occasion employed was sent for, but not then being at home, were under the Necessity of immediately applying to some other. Mr. John Wareing, a young Surgeon in Preeson's-row (unfortunately for me), was the person brought, who pretended to be acquainted with such like cases, & took upon him the remainder of the business of a Midwife (the child being born before his arrival); and tho' Contrary to the advice of an experienced Woman Midwife, who was called in, in the Hurry, & told him he was doing wrong, has occasioned (thro' ignorance) the Loss of my dear Wife and Child, who are since dead. This I am ready to attest upon oath, & can bring several experienced Persons to verify.—THOMAS REILY, Hatter, in Redcross-street." Something of the proverbial madness which clings to the calling of a hatter must have moved Mr. Reily in this affair. In the next number but one of the paper appeared a reply couched as follows: "Whereas an Advertisement was inserted in this paper of the 18th ult., signed by one Thomas Reily, a Hatter, in Redcross-street, addressed to the public, greatly aspersing the Character of Mr. John Wareing, a Surgeon, in Preeson's-row, in Liverpool, thereby charging him with being the instrument, thro' Ignorance, of the Death of said Reily's Wife and Child; which upon strict Enquiry is found to be altogether unjust and untrue; as it will be proved such Advertisement was inserted therein at the Instigation and by the Dictating of a Person in Town whose Character is too well known to want an Eclaircissement; and can assure the public that such Advertisement is utterly false and scandalous, and without the least Foundation, and was intended, thro' Malice, to injure the Character of Mr. Wareing, and no other Motive; as Mrs. Reily for many months before laboured under a Consumption; the Birth untimely, being but in the seventh [? month] of pregnancy, and the Child born before Mr. Wareing was sent for, and she was attended by another Surgeon (whose Prescriptions only she took) both before such Delivery and afterwards, till the Time of her Death, which was on the 10th Day after her Delivery, and not before; for which an Action at Law is, or soon will be, brought against the Writer and Composer of the same.—N.B The publisher of this Paper assures the Public that the Advertisement inserted in the *Manchester Advertiser* of last Tuesday, relative to the above affair, is entirely False, notwithstanding what is there asserted, and the same was refused on that Account to be inserted in our last Paper."

On July 29th, 1757, the following announcement (for which the printer received 12*s*., according to the file copy) appeared in the *Advertiser*: "To the Public: Whereas an Advertisement was inserted on Friday, the 18th of February, 1757, in this paper, Signed by me the underwritten Thomas Reily, a Hatter in Redcross-street in Liverpool, adressed (as therein is mentioned) to the public, *to prevent the Unwary from being drawn in by ignorant Pretenders to Midwifery*, whereby the Character and Reputation of Mr. John Wareing, Surgeon, in Preeson's-row, Liverpool, is greatly aspersed and injured by attributing the Death of my late Wife, Mary Reily, and the Child which she had then lately been delivered of, to the Ignorance of said Mr. Wareing in the Practice of Surgery and Midwifery; to which false and scandalous Aspersion, I, the said Thomas Reily, was irritated by Mr. Ralph Holt, of Liverpool, Surgeon, the person to whom Mr. Wareing faithfully served a legal apprenticeship; and for which Injury Mr. Wareing has had Recourse to the Law against me and Mr. Holt for Satisfaction, but upon a Meeting of Mr. Wareing, Mr. Holt, and myself (at the Request of Mr. Holt), I find that Mr. Wareing did faithfully perform his Duty to my said late Wife, and that such Aspersion and the whole of the said Advertisement is utterly false, and was intended to injure the Character Mr. Wareing, for which I am extremely sorry and sincerely ask his Pardon. And I the underwritten Ralph Holt, of Liverpool, Surgeon, do hereby declare that the said Mr. Wareing did faithfully perform his Duty as Man Midwife to Mrs. Reily, that the whole Contents of this Advertisement are strictly true, and that the said Advertisement of the 18th of Feby. last is without the least Foundation; that said Mr. Wareing faithfully served me a legal Apprenticeship in the Practice of Surgery and Midwifery, and after that studied the same and was regularly educated therein at one of the best Schools in Great Britain, and that I believe the said Mr. Wareing to be in every Respect duly qualified in these Professions; and am sorry that I was in any wise the Occasion of so false and scandalous an Aspersion, as I was misinformed relating to the subject matter of the said Advertisement, for which I have not only payed all Cost & Charges incurr'd by the said Prosecution commenced against me & the said Thomas Reily, but have asked Pardon of the said Mr Wareing in Public. Witness our Hands the 27th of July, 1757.—THOMAS REILY, Hatter; RA. HOLT, Surgeon." Even at this distance of time one cannot but rejoice at the failure of this dastardly attempt to ruin the young surgeon on the very threshold of his career.

In consequence of the ravages of the small-pox it was resolved, in the month of March, 1783, that a general inoculation of the inhabitants of Liverpool should take place. The following medical men were formed into an Inoculation Society for that purpose: Dr. Houlston, Dr. Brandreth, Dr. Binns, Dr. Worthington, Dr Camplin, Dr. Currie, Dr. Lyon, Mr. Alanson, Mr. Blundell, Mr. Buddicumb, Mr. R. Gerard, Mr. J. Gerard, Mr. Goldie, Mr. Hughes, Mr. Moss, Mr. Parke, Mr. Renwick, Mr. Shortcliffe, and Mr. Tetlow.

Dr. Currie, the biographer of Burns, was born on May 31st, 1756, at Kirkpatrick Fleming, near Gretna, his father being the parish minister. He settled in Liverpool as a physician in 1780, and filled for twenty-five years a most honourable position. Dr. Currie published, under the pseudonym of "Jasper Wilson," a letter to Mr. Pitt strongly condemnatory of the war with France, which caused an extraordinary sensation. Three large editions were sold in two months, besides reprints in Scotland, Ireland, and in the country. It was reprinted in America and translated into French and German. Dr. Currie died on Aug. 31st, 1805. His life was published by his son, William Wallace Currie, the first Mayor of Liverpool under the Reform Act. Dr. Currie was a staunch opponent of the slave trade. In 1788 he wrote: "The general discussion of the slavery of the

[1] Nos. I. and II. were published in THE LANCET of March 6th and March 27th, 1897, respectively.

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negroes has produced much unhappiness in Liverpool. Men are awaking to their situation, and the struggle between interest and humanity has made great havoc in the happiness of many families. If I were to attempt to tell you the history of my own transactions in this business, I should consume more time than I can spare. Altogether I have felt myself more interested and less happy than is suited to my other avocations. The attempts that are continually made to justify this gross violation of the principles of justice one cannot help repelling; and at the same time it is dreadful to hold an argument where if your opponent is convinced he must be made miserable. A little scoundrel—a Spanish Jesuit—has advanced to the assistance of the slave merchants, and has published a vindication of this traffic from the Old Testament. His work is extolled as a prodigy by these Judges of Compositions and is, in truth, no bad specimen of his talents, though egregiously false and sophistical, as all justifications of slavery must be. I have prompted a clergyman—a friend of mine—to answer him by telling him that if such be religion I would 'none on 't.' Whatever be the issue of the present efforts for the Parliamentary abolition of the slave trade, much good, I am persuaded, will be done by the discussion of the subject. We shall in future find fewer persons so abandoned in their modes of reasoning and practice towards the unhappy negroes as many now are, for there is something in the censure of man which the greatest villain dreads and does much to avoid. It likewise gives one a better opinion of the present generation to find that they can be roused by the pure dictates of humanity, independent of all party questions or distinctions, and there can be no doubt that sooner or later the voice of freedom and truth will exert itself on this subject with irresistible influence. Priestley, who spent an evening with me lately, is of opinion that no effort, even of the humblest individual, is ever lost. Let there be but agitation of any question and the interests of truth and virtue are promoted; no matter in what direction the motion comes, let there *be* motion—that is enough; the tide-mill goes equally whether the water runs with the flood or the ebb. This is a great man, and a most agreeable one." By writing in defence of the negro and in reprobation of the slave trade Dr. Currie, then rising into notice in Liverpool as a physician, had the courage to risk popularity and practice. To his own imperishable honour and to the honour of the great profession to which he belonged, his name stands in the page of history as one of the few men "who first raised the standard of justice and truth in Liverpool against a profitable traffic which had been sanctioned for centuries by the practice of every European nation, which had been recognised in numerous national treaties, and which did not want defenders even among t the ministers of religion themselves." Dr. Currie raised his voice against the pernicious practice which had been introduced in the new streets on the south side of the town of building houses to be let to labourers in small confined courts which had a communication with the street by a narrow aperture, but no passage for air through them. The consequences of overcrowding, filth, want of light, &c., were already frightful in the town. Fever naturally took up its abode among the dark dens where the ashpits sent their liquid filth oozing through the walls and their pestiferous gases flowing into the windows of the densely packed houses. In 1788 the physicians of the town brought this fearful state of things under the notice of the Mayor and magistrates, and in 1802 the corporation applied to Parliament for an Improvement Bill, wisely seeking in framing it information and suggestions from the medical officers of the infirmary and dispensary. An interesting report, containing enlightened views on sanitary matters, was drawn up by Dr. Currie and his coadjutors, and on this the sanitary clauses of the Bill were based. But the interests of different individuals being affected by the Bill, the old cry of rights of property was, as usual, raised in defence of the wrongs of property, and inferior consideration triumphed over the public good. The attempt to remove the causes of the evil failed; but at a cost of 9*d.* in the pound, which if properly expended would have gone far to remedy the mischief, a fever hospital was erected to mitigate the scourge, and a new cemetery was bought to hide its victims. These facts were stated by Mr. James Newlands, F.R.S.S.A., Borough Engineer of Liverpool, before a meeting of the National Association for the Promotion of Social Science, Department of Public Health, held at St. George's Hall on Oct. 15th, 1858. "I beg to claim your attention to the Report that these gentlemen made," said Mr. Newlands, referring to the report of Dr. Currie and his professional brethren; "the clear perception of sanitary principles which they possessed and unfolded in this document would do honour to any man in the present day."

In January, 1847, Dr. Duncan was appointed medical officer of health for Liverpool, an office in which he rendered the greatest services to the health of the town. At the time of this appointment Mr. Edwin Chadwick, the Registrar-General, made the following remarks on the necessity of a liberal expenditure for sanitary purposes in a place at once so rich and so unhealthy as Liverpool then was: "A parsimony," he said, "for objects of such importance as the saving of pain and misery would ill become Liverpool, where there is in course of expenditure for splendour on one single edifice, St. George's Hall, upwards of £100,000—a sum which would, if so applied, serve to sweep and cleanse in perpetuity and make decent the filthy by-streets of upwards of 23,000 houses out of the 45,000 houses which are under the corporation jurisdiction. And allow me to pause by the way," he added, "to offer the suggestion for consideration, since that edifice is to be adorned with statues, whether a place may not be found for one, amongst other men who have adorned Liverpool, to the late Dr. Currie, who, with the physicians of the fever hospital, in the year 1802, pointed out preventive measures which if they had been adopted would have prevented Liverpool being now the least healthy city in Great Britain, and would have averted the heavy mortality burdens by which its population is now depressed." Commenting on this Mr. Thomas Baines, in his History of Liverpool, remarks: "The suggestion of ornamenting St. George's Hall with a statue of a man whose memory is so justly dear to the friends of literature, freedom, and benevolence as that of Dr. Currie must ever be is worthy of adoption; but it must be added, in justice to Liverpool, that whilst nearly £200,000 has been expended in adorning the town with one of the noblest buildings of modern times, two, if not three, times that sum has been spent, or is spending, on improvements designed to promote the public health by means of sewage and cleansing, of baths and washhouses, of improvements in the residences of the poorer classes, and of an abundant supply of water, brought from a distance of many miles. It is doubtful whether a town like Liverpool, which can be reached at a trifling expense by the most destitute of the Irish poor, will ever be as healthy as towns less accessible to that poverty-stricken people; but it would be a great injustice to suppose that the people of Liverpool are erecting magnificent buildings and leaving the poor to perish. Nothing can be further from the truth." Mr. Baines was writing of a period when all Ireland was suffering under the plague of famine, when the influx of the destitute into Liverpool was so overwhelming that not less than 29,417 persons received parish relief, as casual poor, in six days, in addition to the resident poor. The actual number of Irish poor who arrived in the town from Jan. 16th to April 17th in 1847 was 127,785 persons—namely, 69,695 men, 36,234 women, and 22,686 children.

"Liverpool a Few Years Since," by "An Old Stager" (the late Rev. James Aspinall, M.A., Rector of Althorpe), a book published in 1852, mentions several medical men of note. "Dr. Currie, so celebrated in his day and so celebrated yet, lived in Basnett-street. Bold-street had its Tobins, Aspinalls, Dawsons, &c. That kind-hearted man, Rector Renshaw, lived here in a corner house, with its door opening up Newington Bridge. ..... Opposite to the house of Rector Renshaw was that of Harry Park, as we familiarly called him, the Abernethy or Astley Cooper of Liverpool, as a surgeon, we believe, second to no man of his day. At the very next door lived Dr. Brandreth, of whose eminence, or pre-eminence, as a physician it is impossible to speak too highly. In all our wanderings over and sojournings in different parts of the world we never remember to have met with a medical man whose standing was so thoroughly ascertained, admitted, and appreciated. And his position was as elevated in the social as in the medical world. There was no appeal against the fiats which Fashion issued from her seat in Bold-street. ..... In Seel-street was Mr. Perry, the first dentist of his day and locality; and next door to him lived the tremendous Mrs. Oates, the best instructress of small children in the rudiments of English whom the world has ever seen. She had a knack of measuring baby capacity and of drawing out all that it contained, helped thereto doubtless by a concentrated essence of birch-rod look which she constantly wore in school hours,

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and which had "no mistake" written upon it in large letters."

Besides the illustrious Roscoe, who in 1789 was elected President of the Liverpool Library, there were associated with him as active members of the committee, amongst others, Dr. Currie, Dr. Bostock, Dr. Rutter, and Dr. Worthington. Of Dr. Currie we have already spoken. John Bostock, M.D., was the author of an "Essay on Respiration," 8vo, Liverpool, 1804; "Remarks on the Nomenclature of the New London Pharmacopœia," read before the Liverpool Medical Society, 1810; "Elements and System of Physiology," 8vo, 1824; and numerous communications to the *Medical Memoirs* and *Nicholson's Journal*.

Dr. Rutter, a celebrated physician of his day, resided in St. Anne-street, then the fashionable quarter of the town. He was of the Society of Friends, like Dr. Jonathan Binns. Dr. Rutter was the founder of the Medical Institution and Library in Hope-street, the books of which were bequeathed by him to the profession. The Liverpool Athenæum Newsroom was also established by Dr. Rutter in the year 1798, associated with him being Mr. Joshua Lace, Mr. Roscoe, and Mr. Currie. The idea of the Athenæum arose from the annoyances that gentlemen had to encounter at the "Merchants' Coffee House" in the Old Churchyard, and at "Pontack's" in Water-street, through the boisterous conduct of the sea captains who frequented those taverns. The newsroom stands on the site of a large pond whereon the lads used to slide in winter. In 1788 the dispensary was erected on the site of an orchard adjoining the pond. This charity owed its existence to Mr. Wyke, a watchmaker in Dale-street, who in 1778 started it at No. 75, Prince's-street, John-street. On the sale of the property in Church-street in 1829 for £6000 the dispensary was removed to Vauxhall-road. Towards its original foundation the subscriptions of 102 subscribers, amounting to £117 12*s.*, were supplemented by 100 guineas contributed by the parish. According to the report of the dispensary published at the beginning of the year 1786 it appeared that 66,359 persons had been relieved up to that time. The subscription list and the list of the medical officers of this charity for the first year of its institution gives us practically a register of the leading members of the profession at that time practising in Liverpool. Its physicians were Dr. Joseph Brandreth, Dr. Jonathan Binns, and Dr. James Worthington; its surgeons were Mr. Wright Gleave, Mr. Edward Alanson, and Mr. James Gerard. These gentlemen subscribed a guinea each, as also did Dr. W. F. Blencome, Dr. Joseph Camplin, Dr. Matthew Dobson, Dr. Thomas Houlston, Dr. John Kenion, Dr. Wainwright, Dr. Henry Richmond, and the following surgeons: Robert Buddicombe, Henry Parke, John Lyon, Richard Gerard, William Moss; and James Leigh, apothecary. Among the non-professional subscribers were the illustrious Roscoe and Benedict Paul Wagner, merchant, the latter being the maternal grandfather of Felicia Dorothea Hemans. The rent of the institution for one year is put down at £3, and the salary of Mr. Avison, the apothecary, at £60.

Appended are a few facts concerning the above-named physicians and surgeons, taking them at random. Dr. James Worthington resided in Drury-lane, off Water-street, where also lived the wealthy merchant and ex-slave captain William Boates, who on being told that one of his ships had captured a rich prize ran about the pier-head exclaiming, "Billy Boates, once a beggar, now a lord." Billy had been a waif found in a boat. Dr. Worthington published a treatise on the "Mineral Spring in the Quarries near St. James's Mount." Mr. William Moss, surgeon to the Liverpool Lying-in Charity, published "An Essay on the Management, Nursing, and Diseases of Children," 1794; also a "Medical Survey of Liverpool," 1794. Jonathan Binns, M.D., was for many years senior physician to the Liverpool Dispensary. He published at Edinburgh, in 1762, "Dissertatio Medica in Auguralis de Exercitatione." He superintended for some time the school belonging to the Society of Friends in Yorkshire, and whilst there published an English Grammar and also a Vocabulary. He removed to Lancaster, where he practised as a physician until the time of his death in 1812, aged sixty-five years. Dr. Binns had the courage to oppose the slave trade when it was bringing a profit of from £200,000 to £300,000 a year into the port of Liverpool. The only two Liverpool members whose names appear in the list of the original members of the Society for the Suppression of the Slave Trade were Dr. Jonathan Binns and William Rathbone. Liverpool has never lacked a William Rathbone since to help in all good work, and it was the lot of Sir Joseph (now Lord) Lister, on Sept. 20th, to pay a graceful tribute to the munificence of the present William Rathbone in connexion with the efficient nursing of pauper patients in the Workhouse Infirmary.

Mr. Richard Gerard, surgeon, Mayor of Liverpool in 1780, resided at one time in Church-street, and at another period in Duke-street. He was the father of Dr. Gerard, and an especial pet with the ladies in St. Anne-street because he accepted all their invitations to their routs, which must have been a trying ordeal. Dr. Gerard's famous recipe for making toffee has rendered Everton as well known in connexion with it as Shrewsbury by its cakes, Bologna by its sausages, Strasburg by its pies, Chelsea by its buns, and Islay by its whisky. The original possessor of Dr. Gerard's recipe was one Mistress Molly Bushell, who resided in one of the old cottages (about midway up "the town" of Everton) which were said to have been the quarters of the Royalist officers when fiery Rupert besieged Liverpool. Toffee was recommended at first as a specific for coughs, colds, and catarrhs, and it so speedily became known and patronised by the sweet-consuming world that it tended greatly to Molly's mental content and worldly prosperity.

Matthew Dobson, M.D., F.R.S., was the son of the Rev. Joshua Dobson, "a respectable Dissenting minister" in Yorkshire, and was originally designed for the ministry. His inclinations, however, led him to the study of medicine and he took his degree at Edinburgh. He afterwards settled at Liverpool, and acquired very considerable practice; but bad health induced him to remove to Bath, where he died in the year 1784, and was buried at Walcot Church. At the time of his death he was preparing materials for the natural and medical history of the town of Liverpool. In Enfield's History are two essays by him: Observations on the Temperature of the Air, and on the Variations in the Temperature of the Sea. He also published the following: "A Medical Commentary on Fixed Air," London, 1779; "Experiments and Observations on the Diabetes"; "A Successful Treatment of a Supposed Hydrophobous Internus" ("Medical Observations and Inquiries," vol. vi., p. 48); "On the Benefit of a Resuscitated Salivation in the Cure of Several Anomalous Symptoms" (Ibid., p. 174); "A Description of a Petrified Stratum formed from the Waters of Matlock in Derbyshire" (Philosophical Transactions, Abstract, 13, p. 510, 1774); "Experiments in a Heated Room in the Hospital at Liverpool" (Ibid., p. 687, 1775); Observations on the Annual Evaporation at Liverpool (Ibid., 14, p. 137, 1777); and "An Account of the Harmuttan, a Singular African Wind" (Ibid., 15, p. 23, 1781). Dr. Dobson was succeeded in his practice by Dr. Brandreth from Ormskirk. Whilst resident in Liverpool he lost a daughter, to whose memory a monument, with an affectionate Latin inscription, is placed in the chapel near the Dingle. Mrs. Susannah Dobson, formerly Miss Dawson of the South of England, the wife of Dr. Dobson, was renowned in her day as the author of the "Life of Petrarch," abridged from the French, 2 vols, 8vo, London, 1775; "The Literary History of the Troubadours," collected and abridged from the French of De St. Pelaie, London, 1779; "Memoirs of Ancient Chivalry," London; "Petrarch's View of Human Life," 1791; and "A Dialogue on Friendship and Society" (anonymous). She died in London in 1795, and was buried at St. Paul's, Covent-garden. William Lowndes, grandson of Dr. Dobson, was the author of a "Treatise on the Law of Legacies."

Mr. Edward Alanson was the author of "Observations on Amputation," 8vo, 1779; second edition, 1782; "An Account of Simple Fracture of the Tibia" (Medical Observations, vol. iv.). Dr. Houlston was a physician of some note in his day. He discovered in 1773 a ferruginous spring of water in the great quarry, which he dignified by the title of the "Liverpool Spa." The great quarry is now St. James's Cemetery, which is overlooked by Hope-street. This spot in Dr. Houlston's time was covered with the wild heather and furze, while the spring now flowing in the cemetery is not that about which Dr. Houlston wrote, although it has been credited with the same properties, tending to the cure of rheumatic complaints. Dr. Houlston had a house in Chapel-street, probably at the junction of that street with High-street, as, according to one authority, he resided in the latter thoroughfare, which then extended to Chapel-street. To-day the Liverpool Town Hall flanks one side of all that remains of High-street, and the merchants of Liverpool on 'Change make and lose fortunes

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on the spot where the old-world physician wrote his prescriptions and healed the men and women whose thoughts were engrossed by the prices of slaves and sugars. Dr. Houlston took a great interest in the public institutions of the town, and he was the originator of the Humane Society. An essay entitled "Plain Directions for the Recovery of Drowned Persons," signed by "Humanus," written, there is reason to believe, by Dr. Houlston, appeared in the *Liverpool Journal*, Sept. 24th, 1773, but no proceedings were then taken to form a society. The Humane Society in London was instituted in 1774 at the suggestion of Mr. Hawes and Dr. Cogan. The latter had, in 1773, translated a Dutch memoir on the subject, and in 1775 a house of reception was opened in Liverpool, on the north side of the old dock (the site of the Custom House), and an institution established at the instance of Dr. Houlston on a similar plan to that in the metropolis, which was maintained with vigour for some years, but was afterwards suffered to fall to decay. A new society, entitled the Marine Humane Society, was established in 1823. Dr. Houlston published the following: "An Essay on the Liverpool Spa Water," 1775; "Observations on Poisons and the Use of Mercury," 1784; "Observations on Mineral Poisons, with Cases" (Med. Comm.); "Observations on Canine Madness" (Ibid.), and "Remarks on the Hydrophobia and on the Ormskirk Medicine," 1786.

Dr. Bromfield, probably the alderman already mentioned, was interested in the salt water bath "at the Bath Hall and Coffee House," a description of which appeared in *Williamson's Advertiser* of June 18th, 1756; the advertisement, at any rate, was debited to Dr. Bromfield, according to the file copy of the paper, now extremely rare.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT the last meeting of the Council the following document was signed by all the members of the Council present, but we were unable to publish it in our report of the meeting as it formed part of a Parliamentary paper which had not then been presented to Parliament.

"We, the Council of the Royal College of Surgeons of England desire to impress upon Her Majesty's Government the urgent need for the adoption of measures to check the prevalence of venereal disease in the Indian Army.

"The extent to which the British troops in India are shown by official reports to be now infected with venereal disease not merely seriously impairs the efficiency of the Army in that country, but constitutes, we believe, a grave danger to the health of the nation at home.

"When we know that 13,000 soldiers, of whom only 4 per cent. are married, leave India every year, and that at least one quarter of them have been affected with constitutional syphilis during their service in India, we can realise the risks to which the civil population in this country are exposed when these men return home.

"It has been shown that in 1894 only 37 per cent. of the British troops in India had never suffered from any form of venereal disease, that 28 per cent. had been treated for syphilis; and that of late years there has been a rapid increase in the frequency of both the primary and secondary forms of syphilis, and also, in a marked degree, in the virulence of the disease. In face of such facts, it is difficult to overestimate the amount of suffering which must follow, not only in the near future, but in years to come.

"We therefore express our earnest hope that Her Majesty's Government may take effective means to check the ravages of a disease which not only undermines the constitution of those who contract it in the first instance, but, by reason of the many ways in which it may be transmitted, destroys the health and happiness of countless other persons, and induces in the children of those originally infected diseases of a most formidable character."

THE PLAGUE IN BOMBAY.

THE total number of cases of plague in Bombay since the outbreak of the epidemic is returned as 10,583, of which 8976 proved fatal. The mortality from all causes during the last week reported amounted to 1149, against 1139 in the preceding week.

The Secretary of State for India has received the usual weekly telegram from the Governor of Bombay, from which we extract the following:—"Deaths from all causes in Bombay city for the week ended April 2nd, 1099; reported plague deaths, 481. During the past week one European plague case in Bombay city, one death in Mofussil. At Karachi during the week ended April 2nd, 189 plague deaths; marked decrease in Trans-Lyari, but marked increase in Keamari and one quarter of town, and a few cases in and about cantonment limits. At Sukkur plague is established; 103 cases, 58 deaths during week; Plague Committee formed; special civil and military officers sent, and thirty English soldiers being sent. At Haidarabad practically no change."

We may add that the death-rate at Poona is decreasing, and that recoveries are becoming much more frequent than they were. House-to-house visitations in plague-infected districts, inspections, and preventive measures generally are being energetically carried out.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of this society was held on April 6th, at which the following resolutions were carried unanimously:—

"That the Association of Fellows and the 201 Fellows who voted in favour of extending the franchise to the Members be cordially thanked for their liberal-minded action, and this committee is confident that their example will be followed by the majority of Fellows on the next occasion."

"That a letter be written to the Association of Fellows stating that in the opinion of this committee it would be greatly to the interest of the College if steps were at once taken to invite Lord Lister to allow himself to be nominated as a candidate at the next Council election with a view to his becoming President of the College in July next."

"That the committee of this society observes with pleasure that the Council proposes to celebrate the Diamond Jubilee of Her Majesty in some fitting manner, and the committee trusts that this may take a form in which the Members generally may be able to participate."

"That the best thanks of this society be offered to Mr. Walter Rivington for his consistent advocacy for many years of the Members' claim to representation, and for the manner in which he has sacrificed his collegiate interests to promote the true welfare of the institution and of all connected with it."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6475 births and 3866 deaths were registered during the week ending April 3rd. The annual rate of mortality in these towns, which had been 18·7 per 1000 in each of the two preceding weeks, declined again last week to 18·3. In London the rate was 17·6 per 1000, while it averaged 18·9 in the thirty-two provincial towns. The lowest death-rates in these towns were 12·6 in West Ham, 12·9 in Croydon, 13·1 in Derby, and 13·4 in Gateshead; the highest rates were 24·0 in Nottingham, 26·4 in Salford, 27·0 in Burnley, and 34·8 in Bolton. The 3866 deaths included 344 which were referred to the principal zymotic diseases, against 344 and 359 in the two preceding weeks; of these, 105 resulted from whooping-cough, 89 from measles, 66 from diphtheria, 28 from scarlet fever, 23 from "fever," (principally enteric), and 23 from diarrhœa. No death from any of these diseases was recorded last week in Swansea, in Birkenhead, or in Wolverhampton; in the other towns they caused the lowest death-rates in Norwich, Huddersfield, and Halifax, and the highest rates in Leicester, Manchester, Salford, and Bolton. The greatest mortality from measles occurred in Newcastle-upon-Tyne, Burnley, Plymouth, Salford, and Bolton; from whooping-cough in Bristol, Leicester, and Manchester; and from "fever" in Derby. The mortality from scarlet fever showed no marked excess in any of the large towns. The 66 deaths from diphtheria included 41 in London and 3 in Salford. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns. There were 17 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 3rd inst., against 30, 29, and 21 at the end of the three preceding weeks; no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 2512, against 2685, 2622, and 2585 on the three preceding Saturdays;

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219 new cases were admitted during the week, against 218, 206, and 224 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 317 and 313 in the two preceding weeks, further declined last week to 282, and were 145 below the corrected average. The causes of 52, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Cardiff, Leeds, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Salford, Preston, Huddersfield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·3 and 22 6 per 1000 in the two preceding weeks, further declined to 22·1 during the week ending April 3rd, but was 3·8 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·4 in Paisley and 17 0 in Perth to 22·9 in Edinburgh and 24·1 in Glasgow. The 659 deaths in these towns included 41 which were referred to whooping-cough, 29 to measles, 17 to diarrhœa, 9 to diphtheria, 6 to "fever" (principally enteric), and 2 to scarlet fever. In all, 104 deaths resulted from these principal zymotic diseases, against 106 and 96 in the two preceding weeks. These 104 deaths were equal to an annual rate of 3·5 per 1000, which exceeded by 1·9 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 33 in each of the two preceding weeks, rose again to 41 last week, and included 28 in Glasgow and 9 in Edinburgh. The deaths referred to measles, which had increased from 27 to 36 in the three preceding weeks, declined again to 29 last week, of which 15 occurred in Glasgow and 12 in Edinburgh. The 9 fatal cases of diphtheria considerably exceeded the number recorded in any recent week, and included 6 in Glasgow and 3 in Edinburgh. The deaths referred to different forms of "fever," which had been 11 and 4 in the two preceding weeks, rose again to 6 last week, of which 5 occurred in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 155 and 159 in the two preceding weeks, declined to 146 last week, but exceeded by 39 the number recorded in the corresponding period of last year. The causes of 45, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 40·4 and 36·1 per 1000 in the two preceding weeks, rose again to 38·5 during the week ending April 3rd. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 40·2 per 1000, the rate during the same period being 18·4 in London and 22·4 in Edinburgh. The 258 deaths registered in Dublin during the week under notice showed an increase of 16 upon the number in the preceding week, and included 47 which were referred to the principal zymotic diseases, against 74 and 67 in the two preceding weeks; of these, 27 resulted from measles, 9 from whooping-cough, 4 from scarlet fever, 4 from diarrhœa, 2 from "fever," and 1 from diphtheria. These 47 deaths were equal to an annual rate of 7·0 per 1000, the zymotic death-rate during the same period being 1 6 in London and 5·0 in Edinburgh. The fatal cases of measles, which had been 46 and 37 in the two preceding weeks, further declined to 27 last week. The deaths referred to whooping-cough, which had been 20 and 19 in the two preceding weeks, further fell to 9 last week. The 4 fatal cases of scarlet fever exceeded the number recorded in any recent week. The 258 deaths registered in Dublin last week included 48 of infants under one year of age and 47 of persons aged upwards of sixty years; the deaths of infants showed a slight decline; while those of elderly persons exceeded the number recorded in the preceding week. Five inquest cases and 3 deaths from violence were registered; and 76, or nearly a third, of the deaths occurred in public institutions. The causes of 17, or nearly 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR W. F. HEFFERNAN is attached to the Station Hospital, Poona, for duty. Surgeon-Captain C. G. Spencer has been posted to India, and Surgeon-Captain S. Powell to Aldershot.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the undermentioned officers are placed temporarily at the disposal of the Government of Bombay for employment on plague duty: Surgeon-Captain C. T. Hudson (Bombay), Surgeon-Captain C. H. Bedford (Bengal), Surgeon-Captain C. Milne (Bengal), Surgeon-Captain E. A. Newman (Bengal), Surgeon-Lieutenant B. H. F. Leumann (Bombay), Surgeon-Lieutenant H. J. K. Bamfield (Bengal), Surgeon-Lieutenant V. B. Bennett (Bombay), Surgeon-Lieutenant S. Evans (Bombay), Surgeon-Lieutenant A. Hooton (Bombay), Surgeon-Lieutenant A. W. R. Cochrane (Bengal), Surgeon-Lieutenant N. R. J. Rainier (Bengal), Surgeon-Lieutenant W. J. Niblock (Madras), Surgeon-Lieutenant H. J. Walton (Bengal), Surgeon-Lieutenant A. E. H. Pinch (Bengal), Surgeon-Lieutenant J W. Cornwall (Madras), and Surgeon-Lieutenant W. G. Richards (Madras). The services of the undermentioned officers are placed temporarily at the disposal of the Government of the North-Western Provinces and Oudh for employment on plague and famine duty:—Surgeon-Captain A. W. Dawson (Bengal), Surgeon-Captain B. R. Chatterton (Bengal), Surgeon-Captain J. Mulvany (Bengal), Surgeon-Lieutenant C. H. Bensley (Bengal), Surgeon-Lieutenant J. C. Robertson (Bengal), Surgeon-Lieutenant C. D. Dawes (Bengal), Surgeon-Lieutenant C. B. Harrison (Madras), Surgeon-Lieutenant J. S. Stevenson (Bengal), Surgeon-Lieutenant A. Miller (Madras), and Surgeon-Lieutenant H. R. Brown (Madras). The services of Surgeon-Captain J. J. Bourke (Bengal) are placed temporarily at the disposal of the Chief Commissioner of the Central Provinces for employment on plague duty. The services of the undermentioned officers are placed temporarily at the disposal of the Foreign Department for employment on plague duty: Surgeon-Major Jamshedji Kharshedji Kanga (Madras), and Surgeon-Lieutenant J. Stephenson (Bengal).

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Fleet-Surgeons: Theodore J. Preston to the Royal Victoria Yard, Deptford, and Richard S. P. Griffiths to Haulbowline Hospital. Surgeon Benjamin G. Heather to the *Virid*.

VOLUNTEER CORPS.

Royal Engineers: 1st Lancashire: Surgeon-Lieutenant J. M. Whiteford resigns his commission. *Submarine Miners:* The Clyde Division: John Rowan, M.B., to be Surgeon-Lieutenant. The Tees Division: Surgeon-Captain W. J. Williams M.D., resigns his commission. *Rifle:* 3rd Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant-Colonel G. Okell resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 3rd Volunteer Battalion the King's (Liverpool Regiment): Thomas Hammond Fisher, gent, to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment) Surgeon-Lieutenant S. Lodge, M.D., to be Surgeon-Captain. 3rd Volunteer Battalion the Cheshire Regiment: Lieutenant Charles Adolphe Knowles Renshaw resigns his commission, and is appointed Surgeon-Lieutenant; Edward John Sidebotham, M.B., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Northamptonshire Regiment: Herman Stedman, M.D., to be Surgeon-Lieutenant. 9th Middlesex: Charles Ernest Goddard, gent., to be Surgeon-Lieutenant. 3rd Volunteer Battalion (the Manchester Regiment): Surgeon-Captain J. Duncan, M.B., to be Surgeon-Major. 1st Sutherland (the Sutherland Highland): Surgeon-Lieutenant J. B. Simpson to be Surgeon-Captain. 6th Volunteer Battalion the Gordon Highlanders: Alfred Bell Whitton, M.B., to be Surgeon-Lieutenant.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain J. Duncan, M.B, to be Surgeon-Major. Surgeon-Lieutenant Hugh Dickie, M.B., 1st Volunteer Battalion the Northumberland Fusiliers to be Surgeon-Captain. Surgeon-Lieutenant William Pemberton Peake,

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1st Volunteer Battalion the Leicestershire Regiment, to be Surgeon-Lieutenant.

THE HEALTH OF THE TROOPS IN INDIA.

The *Times* of the 1st inst. publishes an analysis of the memorandum which has just been issued by the British Committee of the Federation for the Abolition of the State Regulation of Vice, signed by the chairman, Mr. Walter S. B. Maclaren, and accompanied by a "brief statement as to the nature and tendency of the Contagious Diseases Acts and why their re-introduction should be resolutely opposed." The committee recognise the seriousness and difficulty of the situation, and although they declare a return to the old regulation system to be impossible, not only because it encouraged vice, but because it failed in its object, they are not in favour of a do-nothing policy. What, in their opinion, must be done is to attempt honestly to diminish the vice which is the cause of the disease. To this end moral character should be made an important element in promotion; a man's "medical history sheet" should be taken as an indication of character in the same way as the "defaulters' sheet," and regiments in a specially bad condition should be treated with special discipline. Further, a Select Committee should consider how the moral tone of the Army can be raised amongst both officers and men; how further occupation and recreation can be provided; why the percentage of married soldiers is so much smaller than it used to be; whether a longer service system for older men is feasible or desirable; why the numbers of cantonment hospitals and cantonment general hospitals have so greatly decreased; how the contraction of disease may be made more difficult; and why the admissions to hospital vary so much in different stations and different regiments. The committee point out that anything on the lines of the Act for the Notification of Diseases and the detention or imprisonment of persons in hospitals would lead to improper denouncing in certain cases and blackmail. They object to any scheme which necessitates the examination of women, and are prepared to resist to the uttermost such a system as that of the Cantonments Regulations.

GUN-SHOT WOUNDS DURING THE MADAGASCAR EXPEDITION.

That the late Madagascar war cost the French dear is unfortunately well known, but not many of the casualties were due to the weapons of the enemy. According to a return which has just been published by order of the War Minister 46 men belonging to the flying column were treated for gun-shot injuries in the ambulance which was established at Isoavinandriana in the building formerly occupied by the English hospital. The strength of the column which left Andriba on Sept. 14th, 1895, was 237 officers and 4013 men, with 1515 non-combatant followers. It was not until the 26th that the first batch of wounded, consisting of 6 men, reached the ambulance. On the 28th 5 arrived, and the next day 5 more. The final consignment, 30 strong, was received on the 30th; 44 men out of the 46 were wounded by soft lead bullets fired from breech-loading rifles of a large calibre. Two men only were struck by small bore projectiles of the Winchester pattern. The shells that were discharged by the Hova artillery were badly aimed and seldom or never burst; no one was injured by them. Five deaths took place among the wounded, a result which, considering the bad health of the troops and the hardships and privations they were exposed to, must be regarded as highly creditable to the medical officers of the ambulance. Only one amputation was performed, the 40 remaining cases recovering without the loss of a limb.

THE "ALEXANDER MEMORIAL FUND" PRIZE.

The prize of £50 and the gold medal for the "Alexander Memorial Fund" for 1896 has been awarded to Surgeon-Major Cecil Birt, Army Medical Staff. The subject for the next competition is "Injuries to Joints and Long Bones caused by Modern Small Arm Projectiles; their Nature, Diagnosis, and Treatment, with special Reference to the Appliances Required and Available on Field Service." Essays must reach the President of the committee on or before December 31st, 1899. Essays are to be legibly written, superscribed with a brief motto, and accompanied by a sealed envelope similarly superscribed, containing the name and address of the author. No essay shall exceed in length fifty pages of ordinary printed octavo, which may be estimated as amounting to 20,000 words. This limit is exclusive of tables, which may be added in the form of appendices. The competition is limited to executive officers of the Army Medical Staff on full pay; but professors and assistant professors at Netley are not allowed to compete while so employed.

THE HEALTH OF THE TROOPS.

A Parliamentary paper has been issued showing the average annual strength of the troops at certain home and foreign stations in the years 1894 and 1895, with the admissions of soldiers to hospital and the ratio of admissions per 1000 of mean strength for all forms of venereal disease and the ratio constantly sick from such causes per 1000 of mean strength. From this return it appears that the ratio of admissions to hospital and of men constantly sick from all forms of venereal disease shows a decrease in the named years in the United Kingdom, in the West Indies (including Jamaica), and in Egypt; but an increase in Gibraltar, Malta, Canada, Bermuda, South Africa and St. Helena, China and the Straits Settlements, and in India; while as regards Cyprus the ratio of admissions has increased, but of men constantly sick has decreased, and as regards Mauritius and Ceylon the opposite has taken place.

Correspondence.

"Audi alteram partem."

RIGHT-HANDEDNESS.

To the Editors of THE LANCET.

SIRS,—In his Lumleian Lectures on Aphasia Dr. Bastian makes allusion to right-handedness and its probable influence on the localisation of the speech faculty in the left cerebral hemisphere, and he says, in effect, that none of the answers hitherto given to the question, "Why are we right-handed?" are altogether satisfactory. All are agreed that the causes of right-handedness are to be looked for in our remote ancestors, and an appeal is made to education and heredity as offering sufficient explanation. I believe that right-handedness is a necessity and depends upon the distribution of the weight of the viscera in the thorax, and that our four-limbed ancestors were right-pawed long before they began to stand on their hind-legs for oratorical or other purposes. The weight of the viscera in the left half of the thorax is considerably greater than that of those in the right half. This is evident in the dead body; but the contrast during life, when the heart is full of blood and the right lung is thoroughly inflated, must be far greater than it is after death.

When an animal stands upon its four limbs, the body being horizontal, it is evident that the centre of gravity of the thoracic cavity is nearer the left fore-limb than the right fore-limb, and that the stability of the body is more upset by taking the left fore-limb off the ground than it is by removing the right fore-limb off the ground. If an animal, therefore, wishes to make independent use of one of its fore-limbs, it probably chooses the right for that purpose, because by so doing it interferes very little with the stability of the body, and it is evident that unless the body be firmly planted on the ground the independent use of one of the fore-limbs cannot be really effective. A little child left to itself and crawling on "all fours" would for the same reason use the right arm by preference for purposes which are independent of locomotion.

I am, Sirs, yours truly,

Wimpole-street, April 8th, 1897. G. V. POORE.

"A QUESTION FOR ANÆSTHETISTS."

To the Editors of THE LANCET.

SIRS,—As far as facts and figures are concerned, Mr Clement Lucas's two long and genial letters furnish no additional arguments in favour of his views. My reading of Mr. Lucas's original article led me to the conclusion that he wished to establish some connexion between the occurrence of pneumonia and the administration of the anæsthetic, and my argument is that there is no reliable evidence in favour of this view, but that when the matter is critically examined it is seen to rest on mere tradition. There can be no two-

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opinions as to the desirability of cleanly administration, but there is surely a far cry between this admission and the association in question. In matters bacteriological I see no shame in admitting that I am "a child," and for this reason I was careful not to give my own opinions, but, as the context showed, the opinions of leading authorities. Whether the opinions of Crookshank and Sternberg are accepted by modern physicians is a matter for the modern physicians themselves to determine; it is true, of course, that Crookshank's last edition is now a few months old, and many theories may have been advanced since then. The diatribe against the Clover's inhaler, quoted by Mr. Lucas, is, I fancy, not unknown even in this (anæsthetically) degenerate Western hemisphere, but it loses much of its force when we recollect that almost precisely similar invective may be directed against any surgical instrument or surgical procedure. Anyone who cares to take the trouble can clean, boil, or superheat a metal inhaler with ease, and, on the other hand, a surgical instrument in careless hands may become the very acme of all that is foul and filthy; the antiseptic process itself has been condemned because of failures consequent upon faulty technique.

I have the honour to remain, Sirs, your faithfully,

J. FREDK. W. SILK.

Devonshire-street, Portland-place, W., April 5th, 1897.

"AN UNDESCRIBED SYMPTOM."

To the Editors of THE LANCET.

SIRS,—In connexion with Mr. Battle's paper in THE LANCET of March 27th, "An Undescribed Symptom in Peritonitis," it may be of interest if I briefly describe a very similar case which I recorded in THE LANCET of May 10th, 1890, p. 1015, under the title of "An Unusual Case of Strangulated Hernia." A middle-aged man suffering from strangulated hernia was admitted into the General Hospital, Birmingham, under the care of Mr. Haslam, to whose courtesy I was indebted for permission to publish the case. The man's general condition was very much the same as that of Mr. Battle's patient. He was in a condition of collapse and could hardly answer questions, so it was difficult to get a history. His abdomen was distended, motionless, and tympanitic. Over the lower part of it was an œdematous swelling. The swelling occupied both groins, especially the right, and extended into the perineum as far as the base of the triangular ligament. The scrotum was swollen and tense. The swelling on the abdomen was limited towards the thighs by Poupart's ligament. The whole appearance was so like that produced by extravasation of urine that more than one surgeon who saw the case was inclined to make that diagnosis rather than the one of strangulated hernia, to which other symptoms pointed. The patient was placed under chloroform, and an incision over the right inguinal region showed a hernia of the small intestine. The gut was gangrenous and piebald in colour, though it had not given way. The sac was full of purulent fluid. The tissues over the sac were also infiltrated with fluid. The bladder and urethra were examined, but no extravasation of urine was found. They were quite healthy. The patient was now in a moribund condition, or the abdomen would have been opened and washed out. He died a few hours after. A post-mortem examination showed extensive suppurative peritonitis which had probably started in the hernial sac.[1] The condition of œdema was almost exactly like that which Mr. Battle describes. In both cases the symptoms appeared in a "late stage of the disease" and "indicated a very intense inflammation of the peritoneum." In future cases of the kind the bacteriology ought to be carefully worked out.

I am, Sirs, yours faithfully,

Hove, March 29th, 1897. D. R. P. STEPHENS F.R.C.S. ENG.

"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—Any one knowing much of epileptics—whether suffering from immediate traumatic epilepsy or transmitted (?) or obscure epilepsy—must know that even the best of them are quite unfitted for responsibility. They may be skilled up to certain points in music, art, literature, or manual work; but they are always subject to fits of more or less irresponsibility, they are always uncertain and not to be relied upon, and thus are quite unfit to have the training or hold the destinies of others in their hands. Thanking you in anticipation for your courtesy in giving my letter room,

I am, Sirs, yours faithfully,

MABEL ANDERSON, Lady Superintendent.

Meath Home for Epileptics, Godalming, April 3rd, 1897.

THE PROPHYLACTIC VALUE OF QUININE IN MALARIA.

To the Editors of THE LANCET.

SIRS,—I am reported in THE LANCET of April 3rd as having drawn attention, in a note upon Central African malaria, read before the Liverpool Medical Institution, to the "prophylactic value of small daily doses of quinine sufficient to cause slight aural disturbance." In discussing the prophylactic measures adopted by me in Central Africa, I gave a certain amount of credit to the exhibition of small daily doses of quinine, commenced at sea before entering the country and continued whenever the line of march lay along the course of low-banked rivers or cut across marshes or alluvial plains at a watershed foot. The doses were quite small, about four grains per diem, and were never pushed to the causation of symptoms.

The physiological index is of great value in the treatment of actual febrile manifestations. The personal equivalent being such an uncertain factor, it is impossible to lay down an unalterable dosage of quinine which will be applicable to all cases and which will yield universally good results. In two patients, under the same external conditions, suffering from malarial fever of the same type, a dose which will be quite effective in one may show little or no good in the other. In Central Africa it was found after experience that the best clinical results were obtained by apportioning to each individual such an amount of the drug as sufficed to produce in him an aural disturbance indicative of the commencement of quininism.

I am, Sirs, yours faithfully,

STANLEY KELLETT SMITH, F.R.C.S.,
Late Surgeon, Rhodesia Exploratory Expedition to Central Africa.

Liverpool, April 5th, 1897.

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—It would seem useless to repeat arguments against midwives registration worn absolutely threadbare from reiteration. Nevertheless, as some of your correspondents appear to take an *ex parte* view of the scheme, may I offer a few remarks? Nobody can dispute that melancholy casualties occur at rare intervals from employing the Gamps—which, after all said, is only equivalent to having no attendance at all; but it is curious to note how the registration schemes have recently unearthed a state of affairs—i.e., the dire mortality due to Gamps—that nobody until quite lately seemed aware of. It should appear quite self-evident that if these fatalities exceed anything beyond rare occurrences the Gamps would not have held their own for so many generations past in country and other places where they have plied their craft, seeing how pronounced fatal cases of midwifery are. Further, if otherwise, it is impossible to conceive that in Continental countries where civilisation runs parallel with our own, and where legislative restraint has been at play for many years past, the mortality should exceed that of our own country. I am aware that certain undetermined factors such as contracted pelves, &c. (as amongst the Germans), have to be taken in to consideration; but it is preposterous to contend that these slender factors would suffice to strike a balance of mortality in favour of our own country if the damage due to midwives was anything like that represented by the witnesses who gave evidence before the Select Committee of the House of Commons. Granting, therefore, that I am correct in stating that the fatalities due to midwives are rare, I should like to ask Mr. Humphreys and his followers if such retrograde and revolutionary measures as the public have been edged on to anticipate are not likely to produce a greater mortality, taking all things into consideration, than already exists. I have remarked that the employment of Gamps is equivalent to having no attendance at all; but of what earthly use is it employing a registered

[1] I have not the report of the case by me, but my memory is very clear as to the above described symptoms.

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midwife unless she is armed with ordinary therapeutic agents, such as antimony, ergot, opium, chloral, chloroform, or any other mortal drug? If she is allowed to use them she becomes, as Dr. Rentoul tersely puts it, a member of "an inferior order of medical practitioners"; if otherwise, and the State handicaps her from adopting the necessary treatment, the parturient woman might, and probably with greater safety would, be left in the hands of the Gamp. If, however, I am wrong as to these fatalities being rare—that is to say, the mortality being such as the promoters of registration appear to affect—let them then have the courage of their convictions, steer clear of all quackery, and move for an amendment of the Medical Acts so as to render it illegal for unqualified persons to practise midwifery for the purposes of gain—a procedure quite justifiable under such circumstances, and, moreover, consonant with the times, and infinitely preferable to bringing the rank and file of our profession in petty competition with a class of females; and God only knows (and I use the expression reverentially) where these will begin or where they will end.

I am, Sirs, yours truly,

Queen's-road, Peckham, April 3rd, 1897. CLEMENT H. SERS.

"A VERY GRAVE SCANDAL."

To the Editors of THE LANCET.

SIRS,—Having been favoured with a copy of THE LANCET and a marked paragraph in it, I fear I might not be showing that respect for your journal which I have always felt if I passed over in silence the matter underlying "A Very Grave Scandal." Whether some correspondent has veiled his inaccuracies under anonymity, or whether the matter is a cutting from a newspaper or an annotation of your own, there is not even so much as an inverted comma to indicate. Out of regard to my own time and your space I do not propose to correct inaccuracy, but content myself with answering the question which you put in the last sentence. I might have shown that my telegram was designedly sent in emphatic terms in order to prevent a very grave scandal. The question you want answered is—In case the man ran amok at the workhouse and killed someone, who would be responsible? The answer cannot be given in a word—it is a complex one. The persons immediately responsible would be the guardians, because the case was remitted to their care by the justice; then the justice, for making an order for the reception of a lunatic into a workhouse where there is (not) proper accommodation (see Sec. 21, Lunacy Act, 1890); but, taking them in inverted order, primarily the local authority (Sec 238, Lunacy Act, 1890). The local authority is defined in Sec. 240 of the same Act to be the council of every administrative county—a council which is well represented on the Eastbourne bench of magistrates; and, if I mistake not, one of its most influential members was the very justice before whom this might-be dangerous lunatic was taken. The county council, then, is the power you must arraign in your court of censure for not having provided asylum accommodation.

As the person, perhaps, more immediately concerned than any other individual in the trouble and annoyance due to want of asylum accommodation, I am not likely to make light of the incident described as a very grave scandal; but there are proper and improper ways of discussing it, and a good case needs no exaggeration to bolster it up. But, Sirs, "all's well that ends well," and instead of giving you the opportunity of inserting another sensational headline, there has been no "horrible discovery" or other tragic outcome of a lunatic being remitted to a workhouse for fourteen days (as other lunatics are constantly being sent for various reasons other than want of accommodation in the county asylums). Rather a comedy than a tragedy has been enacted; for when the lunatic in question was again taken before the justice so that a reception order might be made for his admission into the county asylum in which there was then a vacancy, the "dangerous" lunatic was allowed to escape. He did not "run amok," but made his way peaceably enough into another union, where, I am told, he is now detained. I repeat your question—If, when he was in charge of the workhouse officials and escaped from them, he had run amok, who would have been responsible? Sensational headlines are not in harmony with the usual matter we expect to find in THE LANCET; but I dare say the insertion of the paragraph which has called forth this answer will have served someone's purpose, although it has failed to secure your endorsement.

I am, Sirs, your obedient servant,

THE MEDICAL SUPERINTENDENT.

East Sussex County Asylum, Hayward's Heath, April 5th, 1897.

"THE OFFER OF THE 'ROYAL RED BOOK.'"

To the Editors of THE LANCET.

SIRS,—Our attention has been drawn to a paragraph in THE LANCET concerning the suggested introduction into our "Royal Red Book" of a list of the various physicians and surgeons practising specially. We should be greatly obliged if you would publish the notice that the scheme has been withdrawn entirely. On receipt of a great deal of correspondence commenting on it from all points of view we laid the matter before the Royal College of Physicians, who have condemned it, and it is therefore withdrawn without demur, and we have returned the subscriptions already received. At the same time we should like to point out that we raised the question, "Would it not be unprofessional?" and the professional gentleman who proposed it to us was of opinion that it would not. Moreover, we have received a good many orders from well-known medical men; we think, therefore, that we may fairly be excused for falling into the error, our desire being always to take advantage of suggestions we think likely to increase the usefulness of the work. We looked upon it as an ordinary subscription to a book. We trust that you will publish this letter in order that as many of the profession as possible may be acquainted with the facts, so that any sense of irritation they may still feel may be speedily allayed.

We are, Sirs, your obedient servants,

THE PROPRIETORS OF "WEBSTER'S ROYAL RED BOOK."

Piccadilly, April, 1897.

*** We are glad to learn of this very proper decision on the part of the Proprietors of the "Royal Red Book."—ED. L.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Royal Infirmary.

THE election committee of the Royal Infirmary met on March 24th to fill up the vacancy caused by the resignation of Dr. Davidson. As was anticipated, Dr. James Barr, junior physician to the Liverpool Northern Hospital, was the successful candidate. The intelligence of the death of Mr. Heywood Bright, the recently appointed chairman of the Royal Infirmary, which took place on March 24th, after an illness extending over some weeks, was received in the city with much regret. His term of office as chairman was but of short duration, he having been elected as recently as Feb. 11th, in succession to Mr. H. B. Gilmour, who resigned at the annual meeting. He had never been able to preside over the meetings of the committee, as at the time of his election to the chair he was suffering from the illness which terminated fatally. The deceased was related to the late Dr. Bright, the physician who first accurately described the disease now so well known as "Bright's disease."

Liverpool Medical Club.

Dr. F. H. Barendt read a paper on Specialism before the members of the above club a fortnight ago. He treated his subject from four points of view: (1) specialism in general; (2) specialism in relation to the lay public; (3) specialism in relation to the general practitioner; and (4) specialism in relation to the specialist. In tracing the gradual growth of specialism he predicted that the general consultant would gradually be replaced by the specialist—in fact, many present consultants had attained eminence in the profession through the special study of some system or organ. He urged the importance of a knowledge of languages, and quoted Sir James Simpson in support of this qualification. With regard to the general practitioner, he ventured to suggest that in his consultations he should seek the advice of those who had become qualified by special study of the disease in question, and who avoided all semblance of entering into rivalry with him. He considered it futile to expect that the relationship between

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practitioner and specialist should be on the same lines as that between solicitor and barrister in respect to practice. Patients would never admit such a relationship. On the other hand, he urged that general practitioners might do much to prevent patients leaving them by recommending them to specialists so soon as they detected any restlessness on their part; it would increase their own prestige and restore the confidence of the patient, and in many cases prevent the evil of hospital abuse. Pure specialism did not exist; the specialties themselves overlapped, and treatment itself was far more often general than special. On the other hand, the specialist should bear in mind his *raison d'être* and not compete with the general practitioner. The second annual dinner of this club will be held at the Adelphi Hotel on April 7th, when the chair will be taken by Mr. Mitchell Banks, the senior surgeon to the Royal Infirmary.

Donation to a Liverpool Charity.

Mr. T. Sutton Timmis has sent a donation of £1000 towards the building fund of the new Consumption Hospital on Mount Pleasant.

April 6th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Royal Infirmary.

THE official proposal by the Lord Provost to celebrate the Diamond Jubilee by the partial reconstruction of the Royal Infirmary on its present site continues to receive criticism from both professional and lay quarters. The suggestion already advanced in my letter in your issue of March 20th, that the opinions of the medical, surgical, and sanitary experts, upon whose advice the Lord Provost says he is acting, should be published, has been reiterated by numerous correspondents in the *Glasgow Herald*, but has failed to excite any response from the authorities, and it seems to be doubtful whether any detailed scheme has really been considered or planned. Thus at a recent meeting of the committee a letter was read from Dr. J. B. Russell, in reply to a request from the Lord Provost, stating that in his opinion the present site was quite suitable for a hospital, but expressing his inability to give any opinion as to its suitability for the reconstructed hospital until the plans of this had been submitted to him. It is certain that no local expert opinion would have greater weight with the public than that of Dr. J. B. Russell, and yet it would appear that no definite scheme was placed in his hands when he was asked for an expression of opinion on the official proposal. Under these circumstances it is not unnatural that some suspicion should arise as to whether any definite scheme has really been formulated. The promoters of the movement will be well advised to issue a frank and detailed statement at an early date. The public has a right to expect it, and without it success is scarcely possible. Already certain rival schemes are beginning to be pushed from various quarters. One of these is the proposal to raise a sum of money for the purpose of completing the Homes for Consumptives at Bridge-of-Weir. The construction of these, as far as they have been completed, is highly satisfactory, but Mr. Quarrier, who has raised the money for the homes and is practically the proprietor, appears to be strangely reluctant to consult the committee of medical men appointed to advise him on various matters. At least nothing is heard of this committee or its views or recommendations, and it is difficult to believe that its members approve of one part of Mr. Quarrier's plan—viz., the erection of a dispensary in Glasgow at the cost of £3000 for the treatment of out-door patients. The present infirmaries and dispensaries already offer ample opportunities for such treatment, and to spend £3000 on a new dispensary will be simply a waste of money. Certainly the profession generally will not extend confidence to the proposals of Mr. Quarrier unless he can show that they are endorsed by Professor Gairdner and the other members of the committee. It is true that there is one medical practitioner enthusiastically in favour of Mr. Quarrier's scheme; but in his letters to the local press he modestly signs himself "M.D."

University of Aberdeen: Honours to Medical Men.

For the first time in the history of the University the honorary and ordinary graduates were capped together on the 2nd inst. The graduation ceremony took place in the Mitchell Hall in presence of a brilliant audience. Among those who received the degree of LL.D. *honoris causâ* were Mr. Edward Albert Schäfer, F.R.S., Professor of Physiology in University College London, and Examiner in Physiology for various bodies; and Sir Thomas Grainger Stewart, M.D., Professor of Medicine in the University of Edinburgh. The same degree was also conferred in absence on Dr. Alexander J. C. Skene, one of the leading physicians in Brooklyn, a professor in the medical faculty and President of Long Island College Hospital, and author of various works and papers. In order to mark the new departure the members of the Senatus gave a "reception" in Marischal College in the evening, which was largely attended. On Saturday Principal Sir W. D. Geddes and Lady Geddes entertained to luncheon the honorary graduates, the two deans who were promoters, and Dr. Stephenson, Professor of Midwifery, the Senior Member of the Senatus.

April 7th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Queen's Nursing Home, Steevens' Hospital.

A VERY influential committee has been formed, and circulars have been widely distributed, for the purpose of raising a sum of £5000 to build and equip a Nurses' Home in connexion with this old-established hospital. It is proposed to lay the foundation-stone of the new building on the anniversary of Her Majesty's accession in June next.

Royal College of Surgeons in Ireland.

Dr. Thomas Myles has recently resigned the position of Professor of Pathology in the Medical School of the College of Surgeons. A successor will be appointed on the first Tuesday in May. A number of candidates are already in the field.

Health of Belfast.

The working of the new Notification Act brings out clearly the deplorably unhealthy state of Belfast, as during the four weeks from Feb. 25th to March 24th 358 cases of zymotic diseases have been reported, and of these 215 were typhoid fever, 53 scarlet fever, 26 measles, 24 erysipelas, 12 diphtheria, 12 simple continued fever, 6 membranous croup, 4 typhus fever, 3 whooping-cough, 2 puerperal fever, and 1 chicken-pox. The deaths from zymotic diseases were 75. As to typhoid fever, even the public officer of health admits he had no idea himself of the extent of the prevalence of this disease. No part of the city seems free from it, and, as Dr. Whitaker says, "I think that there is no city or town in the kingdom in which this disease prevails to such an extent as with us." Scarlet fever is still very prevalent, but the type is mild. It seems very strange that neither measles nor whooping-cough, though so infectious, is on the list of notifiable diseases as enumerated in the Act of Parliament.

The County Down District Asylum.

In his very full and interesting annual report for 1896 (just published) the superintendent, Mr. Nolan, reiterates the view he has expressed in previous reports that, notwithstanding the large increment of lunatics in asylums, there is no considerable real increase in insanity through the country generally, although in a current number of a monthly magazine, in an article entitled "Which is the Maddest Part of the Kingdom?" the writer answers, by statistical diagrams, "Ireland." Mr. Nolan's opinion as regards Ireland agrees with that of the Commissioners of Lunacy in their recent report as regards England.[1] In the Down Asylum there were 660 cases (336 males and 324 females) under treatment during 1896. The number of cases admitted was 128, being 10 less than in 1895, and 31 less than in 1894. This asylum is being much enlarged and improved, and the "Plenum" system of ventilation is being introduced.

Reformatory and Industrial Schools.

Mr. John Fagan, F.R.C.S. Irel., of Belfast, has been appointed Inspector of Reformatory and Industrial Schools, in place of Sir R. Blennerhasset, who has been appointed to the Presidency of Queen's College, Cork. Mr. Fagan

[1] THE LANCET, April 3rd, 1897, p. 968.

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has for a lengthened time been surgeon to the Belfast Royal Hospital, a post which he will now resign. Professor Sinclair will be promoted, it is believed, and become a full surgeon, and Dr. Mitchell will get his place as senior assistant surgeon.

April 6th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Appendicitis at the Medical Societies.

THE question of appendicitis continues to occupy the attention of the societies. At the Academy of Medicine M. Reclus has sided with M. Lucas Championnière in what he has already said in opposition to M. Dieulafoy, and argues that in appendicitis the *rôle* played by a previous entero-colitis is a very important one. If this theory has been stated rather late it is because no one thought of establishing the relationship; and the cases cited by M. Dieulafoy where there was entero-colitis without appendicitis prove nothing, for they date from a time when appendicitis was not known or inquired into. It is probable, according to M. Reclus, that the co-existence of these two diseases is much more frequent than is generally supposed. He himself recently saw with M. Oettinger a case in which the etiology was as plain as if it had been a laboratory experiment. A young woman wishing to rid herself of some thread-worms had the foolishness to take an enema containing seven and a half grains of corrosive sublimate. Although she almost immediately afterwards took a second enema to bring away the first, she presented all the symptoms of acute enterocolitis, with griping pains and the passing of membranous shreds. Eight days later she was attacked by appendicitis with all the classical symptoms. M. Reclus referred to many other cases reported by such observers as M. Brissand, M. François Franck, and others, and he considers that now that attention has been directed to this subject we shall arrive at fresh knowledge. He considers that the stagnation of fluids plays an important part in some cases, as where there is a kink at the level of the neck of the appendix.

Two Interesting Debates.

Two important discussions have been going on at the Therapeutical Society recently. The first dealt with the intolerance of certain drugs displayed by some patients, in particular as regards antipyrin. M. Lyon, M. Dalché, and M. Duchenne reported cases of stomatitis, pemphigus, and various rashes produced by antipyrin. M. Blondel related a case where the use of antipyrin produced buccal lesions in a woman exactly like mucous plaques and also a rash resembling syphilitic roseola, so that the diagnosis from syphilis was rendered very difficult. The majority of patients with this idiosyncrasy had no albuminuria, so that it did not seem to depend upon faulty elimination, but rather on some particular predisposition of the subject. It was possible that in many cases the digestion was at fault, for, on the one hand, these accidents more rarely followed the use of antipyrin in solution than as a powder, and, on the other hand, the drug was much better tolerated if given with bicarbonate of soda or some intestinal antiseptic. The second subject discussed was chlorosis and its treatment. M. Barbier read an important report dealing with all the various theories as to the causation of chlorosis. M. Fernet spoke of the various general intoxications which may bring about the same condition. M. Huchard strongly advocated the least possible use of drugs in treatment, but the employment of fresh air, rest, and strict hygiene. M. Albert Robin opposed the opinion advanced by M. Hayem, who distinguished two periods in chlorosis—that of "déglobulisation," when iron is harmful, and that of "reparation," when it is of the greatest service. M. Robin divided the anæmic, in whom oxidation is very slow, from those in whom the exchange of oxygen is very rapid. Iron he considered good for the first group and arsenic for the second, for these drugs have directly opposite properties, and it is important not to give the one in place of the other. The chemico-biological state of the patient is the guide as to which drug shall be employed. M. Bardet recommended the administration of hæmoglobin in preference to any other form of iron, it being easily assimilable. At the last meeting of the society M. Blondel spoke upon chlorosis considered as an intoxication produced by the absorption of the products of the secretion of the ovary—a very modern view. M. Blondel considered that it is not amenorrhœa which causes chlorosis, but chlorosis which causes amenorrhœa, and that the consequences of this last, which are always the same, whether in the natural menopause, or after castration, or from retarded puberty, are added to the symptoms proper to chlorosis, but must not be confounded with them. Amenorrhœa appears in chlorosis as in many other dyscrasias, such as tuberculosis, malaria, and enteric fever. The secretion of the ovary cannot itself be the poison of chlorosis, as Charrin had argued in that society; for the internal use of ovarian extract had a good effect in chlorosis, as he himself had found in common with Spillmann, Jacobs, Etienne, and others. However, the frequency with which chlorosis occurs in young women just at the time of puberty made it obvious that the genital function had something to say to it. M. Blondel considered that chlorosis arose from some defect in the blood-forming organs, especially the red bone marrow, a tissue very easily influenced by various toxins and organic poisons, as is exemplified by the well-known fact that infectious fevers accelerate the growth of children. It is possible, he thought, to make use of the well-known antagonism existing between the internal secretions of the thyroid and the ovary. That action of the thyroid which is known to increase the growth of the skeleton and so govern the bone marrow has for a counterpoise the secretion of the ovary which comes into play at puberty, causes the disappearance of the thymus, and stops osseous growth. If this secretion is ineffective or remains in abeyance the action of the thyroid and thymus are prolonged beyond the necessary limits, organic oxidation is delayed, the osseous growth goes on, the bone marrow is "fatigued," the blood formation suffers, and the alteration of the corpuscles (together with the insufficiency of oxidation) will partly explain the classic phenomena of chlorosis. In such cases M. Blondel recommended the restoration of the ovarian function by the use of ovarian extracts, hydro-therapeutics, bicycle riding, and similar exercise. He also spoke well of the administration of iron and extract of bone marrow.

The Generosity of Madame Charcot.

The widow of the late Professor Charcot has resigned the annual pension of 2000 francs which she received from the State in favour of other widows and children of professors or *Agrégés* of the Faculty of Medicine of Paris who have died without leaving provision for their survivors. Madame Charcot has refunded all the money that she has received from the pension since the death of her husband.

Hospitals for Tuberculous Patients.

The authorities of the *Assistance Publique* have adopted in its entirety a plan for dealing with this subject drafted by M. Grancher and M. Thoinet. Special wards for tuberculous patients are being erected in three hospitals (the Lariboisière, the Tenon, and the Laënnec) to accommodate 600 patients. Three sanatoria are being constructed in other hospitals (the Broussais, the Cochin, and the St. Antoine) which will afford room for 600 more. Special precautions will be taken in the waiting-rooms, and deep spittoons will be lavishly provided. The idea of founding a special hospital at Brévannes has been abandoned owing to the opposition of the residents.

The Cost of the Plague.

The Chamber has unanimously passed a Bill to allow a sum of 297,000 francs to be set aside for the payment of expenses incurred on account of defensive measures taken against the plague. The introducer of the Bill, M. Bouge, congratulated the Chamber on the success of the measures proposed by France at the recent Sanitary Conference.

April 5th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The New Tuberculin.

A GREAT sensation was caused by the announcement made by Wolff's Telegraphic Agency that Professor Koch has discovered a new and powerful remedy against tuberculosis, and the last number of the *Deutsche Medicinische Wochenschrift* contains a detailed account of the investigations on the treatment of tuberculosis with which he has been

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engaged since his first publications on the subject appeared in 1890. In the introductory part of his paper Professor Koch makes some general remarks on immunisation, saying that—unlike cholera, typhoid fever, &c., which confer immunity against subsequent attacks—an infection by the tubercle virus predisposes to new attacks of tuberculosis. But there are nevertheless indications that under certain circumstances an immunisation may take place. These circumstances are present in the experimental tuberculosis of guinea-pigs and in the general miliary tuberculosis affecting the human subject, where at a certain stage the bacilli completely disappear. Immunisation is therefore apparently attained when the whole body, as in general tuberculosis, is invaded by great masses of tubercle bacilli and when these bacilli come in direct contact with normal tissue. Professor Koch accordingly endeavoured to produce analogous bodily conditions in the hope of arriving at artificial immunisation. He first experimented by extracting tubercle bacilli with decinormal caustic soda. The fluid obtained in this way was not free from bacilli, for in a field of the microscope there were from five to ten of them to be seen, lying separately, not in heaps; they were, of course, dead. This preparation is designated as TA (i.e., Tuberkulin, Alkalisches), and produces when administered reactions quite similar to those of the old tuberculin of 1890; relapses were, however, less frequent. But there was one drawback: when more than a certain dose was given suppuration occurred at the place of the injection, the abscesses being due to the presence of dead tubercle bacilli in the preparation. The fluid was therefore filtered and the bacilli completely removed; when this was done suppuration was avoided, but the action of the TA was still identical with that of the old tuberculin of 1890. As, moreover, the fluid was easily spoiled and required constant fresh preparation, Professor Koch finally abandoned the TA and proceeded to other experiments. Having found that normal tubercle bacilli are not easily absorbed by the organism, he endeavoured to facilitate their entrance into the body by mechanical means. He has made the very interesting discovery that the bacilli are covered with a layer of a fatty acid which makes their absorption difficult, and which must therefore be previously removed. This he accomplished by triturating dried cultures in an agate mortar. After some time only a few bacilli remained entire, and they were got rid of by dissolving the mass in distilled water and treating the solution in a powerful centrifugal apparatus. In this way the fluid was divided into two layers: (1) an upper one not containing any tubercle bacilli, and designated as TO (i.e., Tuberkulin, Oberst); and (2) a lower one, which consisted of a colloid sediment with a few bacilli, and was designated as TR (i.e., Tuberkulin, Rest). The TR was then again dried, pulverised, and treated as before in a centrifuge, the process being repeated till the last bacillus was destroyed and the whole fluid became perfectly transparent. This product caused no suppuration and was easily absorbed. The action of TO is very like that of the old tuberculin and the TA, with the exception that it does not cause suppuration. Its immunising action is very slight, whereas that of the TR is very marked. When an excessive quantity is administered to tuberculous patients it, of course, sets up reaction, both local and general, but its immunising effect is quite independent of this; whilst with the old tuberculin and with the TA and TO reactions are necessary for an immunising effect. Such reaction must be avoided in TR. A man immunised by TR does not show any reaction when he is treated with TO and TA, so that he is immunised against every constituent of the bacillus. For the preparation of TR the most virulent and recent cultures must be used. The processes are very dangerous owing to the fact that living bacilli of high virulence have to be pulverised in an open mortar; indeed, Professor Koch felt as anxious as if he had to do with an explosive substance, and he points out that in making tuberculin on the large scale every care must be taken to prevent the bacilli from being scattered about, adding that this can only be done in a large factory. The Hoechst factory has been entrusted by him with the preparation of the TR. In making use of the TR it is administered by injection into the back with a well sterilised Pravaz syringe. One cubic centimetre of TR, containing 10 milligrammes of the dry substance, is mixed before use with weak sodium chloride solution, and in the first injections $\frac{1}{100}$ milligramme of the substance is given. Injections are to be made every second day, and the dose is progressively increased until it amounts to 20 milligrammes. When the temperature rises the injections must be stopped for some time. Guinea-pigs treated in this way were so completely immunised that injections of virulent cultures had no effect on them. When TR was administered after an injection of tubercle bacilli a marked regressive metamorphosis of the tuberculous organs was observed. Full immunity is only attained two or three weeks after the administration of the maximum dose both in the case of the lower animals and in the human subject. In the beginning of the treatment there is no apparent effect and no impression is made on the tuberculous state until half a milligramme or one milligramme has been given, so that patients who are likely to live only a few months should not be subjected to the treatment. Also patients suffering from secondary infection by streptococci and those in whom septic processes complicate the tuberculous affection will not derive any benefit from it. Temperatures exceeding 38° C. (100·4° F.) indicate a mixed infection and thus render the patient unfit for the TR treatment. Professor Koch has administered the TR to a great number of patients, especially sufferers from lupus, and in nearly every instance an improvement occurred—he did not say a "cure," because the time during which a relapse might take place was not yet past. In lupus it was especially remarkable that, notwithstanding a very small local reaction, the disease became less. This result is the reverse of that which was found to occur with the old tuberculin, where the therapeutic effect depended on the degree of the local reaction. In pulmonary tuberculosis the only local reaction observed after the administration of TR was a temporary increase of the catarrhal symptoms. After a few injections the sputum decreased in quantity, and at last it disappeared. In no instance did the general health suffer, nor were any undesirable symptoms observed. The patients' weight increased, and their temperature remained normal. Professor Koch concludes that probably the methods of administration may be improved, perhaps by combination with serum; but he thinks it will be impossible to improve the preparation itself.

It is to be hoped that Professor Koch's work, which undoubtedly is of the highest theoretical interest, will prove to be of practical value. The public and the lay press, remembering the collapse of the expectations aroused in the year 1890, are rather reserved on the subject, so that disappointments similar to those of the first tuberculin era will probably be avoided.

April 6th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Price of Panic.

"WHAT the 'pestis bubonica' costs the Treasury" is at present agitating Italy, whose impecuniosity can ill bear the additional burden of diminished harbour dues and money compensation for excess of sanitary jurisdiction. The opening of the year found her, principally at her seaports, quite "off her head" from panic at the apprehended invasion of the "pestis bubonica," in illustration of which the following incident and its financial sequelæ are not likely to be soon forgotten. On Jan. 22nd there arrived at the harbour of Ancona the English steamship *Glenorchy* with a cargo of jute, hailing from Calcutta. According to the regulations issued by the Board of Maritime Sanitation on Dec. 29th preceding, and applicable, as against the importation of the "pestis," to all ships hailing from countries beyond the Straits of Bab-el-Mandeb, the *Glenorchy* was forthwith subjected to sanitary inspection and to all the prescribed disinfecting processes. These being duly performed and certified the *Glenorchy* on the afternoon of the same day was admitted to "free course" (*libera pratica*). That evening, however, there reached the Prefect of Ancona a telegraphic order to send to the sanitary station of Alberoni, in Venetian waters, for visitation and disinfection, all ships arriving from British India. This order, as a prophylactic measure, was, in consequence of information received by the Prefect and of instructions forwarded from Rome, declared applicable to the *Glenorchy*. There arose, in fact, the

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doubt, after that ship's admission to "free course," whether the said admission was legal. This doubt was more than accentuated by the panic in Ancona due to an arrival from suspected shores—a panic which seems to have been shared by the law advisers of the Commune, who threatened to absolve themselves of all responsibility should the dreaded consequences ensue on the admission of the *Glenorchy* to free course being sustained. So, "*per assicurare anzi tutto la tutela dell' ordine pubblico*" (to ensure above all things the safeguard of public order), the *Glenorchy* was made to comply with the detaining ordinance. Against this, however, her captain, in the name of the eminent London house which employed him, formulated a regular protest, and this in due course came before the Italian Government. The captain's plea was found, on expert consideration, to be, indeed, a strong one, and the Government, convinced of the advisability of avoiding an appeal to the law courts, and in consequence of negotiations conducted between the Minister of Foreign Affairs and H.B.M. Ambassador, Sir Clare Ford, saw it expedient to accept the claim for indemnity advanced by the captain, to pay him 10,000 lire (£400), and to quash all further procedure on account of the enforcement of the detaining ordinance against the *Glenorchy*. As I have said, the incident has made a profound impression on a kingdom chronically suffering from what Lord Beaconsfield called "that ignoble melancholy arising from pecuniary embarrassment"; and even if the findings of the International Sanitary Conference were less significant than they are against "excess of sanitary jurisdiction," the mulcting of the Treasury in £400 for what was simply a concession to unenlightened panic will teach Italy a lesson she stood much in need of. In fact, she is gradually coming to see that sanitary and hygienic reform is a much less expensive policy than her traditional system of "maritime boycotting," and that if she were better protected at home she would have less reason to dread epidemic invasion from abroad.

Psittacosis.

The "pestis bubonica" has had its pathological "side-lights," and one of these has been the demonstration—formerly a vague suspicion—of the power possessed by lower animals of conveying infective disease. A curious illustration of this power comes from Genoa, where the Civico Ufficio d'Igiene has just had to warn the citizens by circular against keeping parrots as domestic pets. A family named Rivalta in that seaport had been presented with one of these birds, and shortly thereafter its members, one after the other, became affected with broncho-pulmonary symptoms which took a rapidly "pernicious" course, carried off the father and mother, and placed the rest of the household in imminent danger of their lives. Similar cases of pneumonia, traced to the same cause, threw the population into panic, to allay which the Civic Office of Hygiene had to intervene with the following manifesto: "Parrots are susceptible of a peculiar infective disease very easily communicable to persons coming in contact with these birds when so affected. The disease, known by the name of 'psittacosis,' betrays itself in marked broncho-pulmonary disorder which very often runs a fatal course. Two parrots, recently arrived in Genoa by the steamship *Manilla*, set up two 'focolai' (centres of infection) of the aforesaid disease, and this has caused a number of victims. The best mode of avoiding so grave a risk is not to keep parrots; when they cannot be parted with all caressing of them or contact with them should be discontinued, especially if they show signs of malaise. In this latter case recourse ought at once to be had to the Uffizio Municipale d'Igiene. Such precautions are all the more indispensable as, in the day now passing, there have occurred cases of 'psittacosis'—a grave but easily avoidable malady." Some three years ago THE LANCET [1] described the illness and death from broncho-pneumonia of a well-known Florentine family, supposed to have contracted ptomaine poisoning from the consumption of unsound fish. At the time there was a counter explanation of the malady on the part of more than one consultant, who traced it to the presence of parrots as domestic pets in the household. This latter theory, which, in spite of the medical certificate, had strenuous supporters, seems to derive confirmation from the Genoese incident, and the case it accounted for may henceforth be cited as one, not of "death in the pot," but of "disease in the parrot."

April 4th.

[1] THE LANCET, Nov. 17th, 1894, p. 1169.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Physicians' Claims against Patients' Estates.

A BILL has been introduced into the New York Legislature having for its object the compulsory payment of physicians' bills against estates of dead patients. It provides that every executor and administrator must proceed to pay the debts of the deceased in the following order: (1) Debts entitled to a preference under the laws of the United States; (2) taxes assessed on the property of the deceased previously to his death; (3) debts of the deceased, because of services rendered and materials furnished by physicians, pharmacists, nurses, and undertakers; (4) judgments docketed and decrees entered against the deceased according to the priority thereof respectively; and (5) all recognisances, bonds, sealed instruments, notes, bills, and unliquidated demands and accounts. Preference shall not be given in the payment of a debt over other debts of the same class, except those specified in the fourth class. All debts specified in the third class shall become due upon the death of the deceased and shall be paid within ninety days thereafter.

Compulsory Reports of Cases of Phthisis.

The action of the New York Board of Health requiring physicians to report all cases of tuberculosis has excited much opposition in the profession. The committee on hygiene of the Medical Society of the County of New York, however, endorses the recent mandate of the health board concerning compulsory notification of cases of pulmonary phthisis as follows: "Realising the need of proper measures to prevent the spread of pulmonary tuberculosis, and regarding it as an essential preliminary that all physicians be impressed with the importance of making an early diagnosis of the same by microscopical examination of the sputum, we earnestly recommend that physicians avail themselves of the offer of the bacteriological department of the board of health to make such examinations. We approve of the compulsory reporting of cases of pulmonary tuberculosis, if the inspectors are forbidden to visit or to have any communication with the patients without the consent of the attending physician, believing that the attending physician is capable of giving all necessary instruction."

The Contagiousness of Pulmonary Phthisis.

Colorado Springs, Colorado, in the Rocky Mountains, is a famous resort for phthisical patients. Dr. Solly of that city, son of the late Mr. Solly of London, thus speaks of the contagiousness of that disease in that climate: "At least a third of our population are consumptives. The town, which contains some 15,000 people, has been established twenty years. An inquiry made by disinterested physicians into the number of cases of consumption that were known to have originated in the town resulted in a report of twenty in all. Although it is probable that our brilliant sunshine and dry air more quickly destroys the vitality of the bacilli than your eastern atmosphere, yet in the poorer lodging-houses of the town there are many ill-ventilated rooms, inside or on the north side of the building, inhabited by consumptives and their families, where recklessness of expectoration and carelessness of ordinary cleanliness are marked features of their domestic *ménage*; yet cases of contagion do not average more than one a year. At Colorado Springs the consumptives mingle with the other residents of the city on all occasions, at church service, theatre, concerts, and in the over-heated and crowded rooms of private residences during social functions; they reside in the same hotels, boarding-houses, and private dwellings with those not afflicted with the disease, and no attempt at isolation has been made. Notwithstanding this apparent indifference on the part of the local authorities to the contagiousness of the disease, only twenty cases have originated in Colorado Springs in twenty years."

New York Saturday and Sunday Association.

The total of last year's collections was $22,190.76 from churches, and $58,919.45 from other sources. Bed patients numbering 30,700 were cared for. Of these 23,271 were free. Medical aid was given to 250,000 free dispensary patients. The executive committee in their statement set forth that the hospital expenses of the past year were $1,323,238.15, with an income of $292,581.83 from funds invested, from paying patients $299,996.79, and from the city $66,047.91. The

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association now embraces thirty-eight hospitals, and the collection is divided among them on the basis of free work performed by them during the year preceding on behalf of the poor.

Fined for "Spitting" in the Cars.

The first case of arrest and punishment of a person for violating the health ordinance against "spitting" in the cars occurred a few days since in this city. A passenger on one of the street cars expectorated very freely and without regard to the ordinance which was posted conspicuously in the car. At length the conductor called his attention to the rule of the health board and requested him to comply with it. He at once became abusive and began to expectorate around the car, whereupon he was summarily ejected and handed over to the police. On the following day he was arraigned in the magistrate's court, where the conductor of the car preferred charges against him for violating a health ordinance. His defence was that he had a severe cold and was obliged to expectorate freely. The court fined him five dollars.

Quarantine Measures against the Bubonic Plague.

In view of the alarming nature and spread of the bubonic plague now prevailing in India and the adjacent countries, and in view of the danger of this scourge being brought to the United States, Congress has adopted a resolution that at any port or place in the United States where the Secretary of the Treasury shall deem it necessary for the prevention of the introduction of contagious or infectious diseases incoming vessels, vehicles, or persons shall be inspected by a national quarantine officer; such officer shall be designated or appointed by the Secretary of the Treasury on the recommendation of the Surgeon-General of the Marine Hospital Service; and at any such port or place no vessel, vehicle, or person shall be admitted to entry without the certificate of the said officer that the United States quarantine regulations have been complied with.

March 19th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Small pox at Melbourne.

FOR the second time during the last few years the strict quarantine regulations in force in Victoria have failed and small-pox cases have been landed in Melbourne. The steamer *Nineveh* was inspected by the port health officer at Port Phillip Heads, given a clean bill of health, and came up to Melbourne, where her passengers were landed. Some of the crew had, however, suffered from ill health of a suspicious character, and Dr. Gray, the assistant medical officer of the Board of Health, made further investigation and discovered that they were either suffering or convalescing from small-pox in a mild form. The ship was at once quarantined and the health authorities, with the assistance of the police, succeeded in tracing almost all the passengers, who were placed in quarantine and vaccinated; and the action taken was so prompt and energetic that apparently no harm has been done. The occurrence, however, shows the necessity of appointing a man with special knowledge to the position of port medical officer, which is being temporarily filled until a permanent successor is appointed to the late Dr. Browning. At present there are three port medical officers—one at "The Heads" and two at Williamstown—and most of the large steamers and mail boats are examined at the latter place. It is suggested that all vessels should be examined at "The Heads," as was formerly the custom.

The Health of Sydney.

The annual report of the medical officer of the Sydney Water and Sewerage Board (Mr. Kendall) stated that, although the year 1896 exhibited remarkable extremes of heat and cold and great unevenness of rainfall, the general health of the metropolis was much improved, and notwithstanding the increase of typhoid fever during the year the general death-rate was lower than in preceding years. The zymotic death-rate had fallen from 2·4 per 1000 in 1895 to 1·3 in the city, and in the suburbs from 2·6 to 1·1. The mortality from diarrhœa had fallen from 7·0 per 10,000 to 6·1 per 10,000, and, as before the installation of the water and sewerage system the rate was 10·5 per 10,000, it was only fair to attribute at least a portion of the good result to the operations of the board. The mortality from diphtheria showed only a small decrease, and in certain districts it appeared to be endemic. Still, as the board had been extending its operations the mortality had fallen from 4·1 per 10,000 to 2·07. The mortality from phthisis in the metropolis had been reduced during the last nine years from 20 to 10·5 per 10 000. The death-rate from typhoid fever had increased to 4·2 per 10,000 from 1·92 for 1895. Mr. Kendall is inclined to ascribe the continued prevalence of typhoid fever to the breaking up of sewage-soaked soil in the extension of the sewerage works. More than half the cases did not arise in the city, but came from outside to get treatment. Typhoid fever was exceptionally prevalent among school children, and Mr. Kendall urges a thorough investigation of the sanitary condition of schools, and the Education Department has accordingly undertaken to reorganise the sanitary arrangements of the public schools

Phthisis in New South Wales.

In the year 1894, 1 in 14·5 of the total deaths, or 1 in 1201 of the population, of New South Wales was due to pulmonary phthisis, and of the total 1042 deaths 494 of the deceased persons were born in Australia, and only 71 had been less than five years in the colony. Practically hardly any accommodation is provided for cases of phthisis. The general metropolitan hospitals and convalescent homes only admit cases for the relief of temporary complications, and a small but varying number are admitted. During the last three years at the Prince Alfred Hospital, Sydney, 20 per cent. of such cases died, the rest were discharged with the advice "to go into the country." But how are they to go? their only means of livelihood being in the towns. Some time ago Dr. Sydney Jones suggested the establishment of sanatoria in the country for such cases, but nothing has been done. Now Dr. Sawkins, medical superintendent of the Prince Alfred Hospital, has made another suggestion. Many country hospitals are situated in climates suitable for incipient and non-progressive cases of tubercle, they are maintained at the public cost, but are hardly ever more than half full; and Dr. Sawkins suggests that the unoccupied beds in these institutions should be utilised for the reception of suitable cases of phthisis to be sent there from the metropolitan hospitals.

The Board of Health and the Dairymen in New South Wales.

Under the Public Health Act for New South Wales, passed last November, the Board of Health was empowered to administer the Dairies Supervision Act, the provisions of which were made to apply to cream, butter, and cheese—in short, to the whole dairying industry. The Board has drawn up a manual of instructions for the dairymen, and its inspectors and veterinarians are investigating and reporting, with the result that a number of dairymen are protesting against the stringent clauses of the Act. These clauses have been really in operation since 1886, but the local authorities did not enforce them. Now the Board is compelling the municipal bodies to carry out the provisions of the Act. In some districts milk vendors have closed their business rather than comply with the requirements. On the other hand, the suppliers of dairy produce for export have all along observed the conditions laid down, and are glad to see them enforced on all.

FOREIGN UNIVERSITY INTELLIGENCE.—*Basle:* Dr. Gonner and Dr. Burckhardt, *privat-docenten* of Surgery, have been promoted to Extraordinary Professorships.—*Erlangen:* Dr. Specht has been appointed Professor of Psychiatry in succession to Professor Bumm; and Dr. Heim of Würzburg has been appointed Extraordinary Professor of Hygiene.—*Kiel:* On the occasion of the centenary of the Emperor William I. Professor von Esmarch has been granted the title of Excellency.—*Lemberg:* Dr. Ladislaus Szymonowicz of Cracow has been appointed Professor of Histology and Embryology.—*Prague:* Dr. Boennecken of Bonn has been appointed Extraordinary Professor of Odontology, with charge of the Dental Institute; and Dr. J. Thomayer, Extraordinary Professor of Special Pathology and Therapeutics, has been granted the title of Ordinary Professor.—*St. Petersburg (Military Medical Academy):* Dr. A. Likhacheff has qualified as *privat-docent* of general pathology.—*Vienna:* Dr. Franz Chvostek, *privat-docent* of Internal Medicine, has been appointed Extraordinary Professor.—*Zurich:* Dr. H. Müller, *privat docent* of Internal Medicine, has been appointed Extraordinary Professor.

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Obituary.

WILLIAM HICKMAN, J.P., M.B. LOND., F.R.C.S. ENG., D.L.

WILLIAM HICKMAN of 122, Harley-street, and Camberlot Hall, Sussex, Surgeon-in-Ordinary to the Duke of Saxe-Coburg and Gotha, died at his residence in Harley-street on March 27th. He was educated at University College Hospital and took the degree of M.B. of the University of London in 1860 and became a Fellow of the Royal College of Surgeons of England in 1861. While at the hospital he held the posts of house surgeon, house physician, and ophthalmic surgical assistant, while his essay "On Some Varieties and Effects of Cancerous Disease of Bone" gained for him the Liston Surgical Gold Medal in 1860. After a prolonged visit to the East, he returned to London and set up in general practice in Dorset-square, N.W. He was surgeon to the Western General Dispensary, and for a time surgeon to out-patients at the Samaritan Free Hospital. At this time he published various cases and observations in the medical papers and societies' transactions; among these there are two specially interesting cases of transposition of the viscera recorded in the twentieth volume of the Transactions of the Pathological Society. Mr. Hickman was a past president of the Harveian Society, and in his presidential address (1883) on "The Aids and Hindrances to the General Practitioner" he advocated two reforms which have since been adopted—viz., the addition of a fifth year's study to the medical curriculum and the direct representation of general practitioners on the General Medical Council. He had thoroughly at heart the welfare of the general practitioner, and in this address he suggested a post-graduate system for their benefit. His plan was that the younger members of the hospital staffs should teach the students, and that the seniors should devote themselves to lecturing and demonstrating to medical practitioners. In 1885 Mr. Hickman exerted himself to bring about the amalgamation of the two Royal Colleges of Physicians and Surgeons into a Royal College of Medicine with power to grant the degree of Doctor of Medicine. He wrote, spoke, and originated a memorial to the Presidents of the Royal Colleges in favour of this scheme, which has been such a burning question since. Mr. Hickman pleaded for a degree-conferring Royal College of Medicine which would be retrospective and admit all those holding the qualifications of the two London Colleges to an M.D. degree. It was not intended to supersede the University of London, but to promote the interests of the rank and file of the students of the metropolitan hospitals. His arguments were always dignified, convincing, and the outcome of sound, shrewd, common sense, and, though it is perhaps hardly generally recognised, he did much to improve the status and education of his professional brethren.

In the spring of 1892 he received the appointment, in succession to Sir Oscar Clayton, of Surgeon-in-Ordinary to H.R.H. the Duke of Saxe-Coburg and Gotha. In 1865 he married Emmeline, youngest daughter of the late Mr. Thomas Lea, and by her had one son, Dr. H. R. Belcher Hickman. The primary cause of Mr. Hickman's death was malignant disease of the sigmoid flexure; this necessitated colotomy in May, 1896. After this he temporarily improved, but before Christmas, 1896, signs of secondary growths in the liver appeared, and he died after some months of constant suffering in his sixty-first year.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Ludwig Hollaender, Professor of Odontology and Director of the Dental Institute of the Berlin University, in his sixty-fifth year. In early life he had practised as a medical man in South Africa.—Dr. de Marbaix, in Louvain, in consequence of a malarial affection contracted in the Congo, where he had lived for some years, and is well known as the founder of the Bacteriological Institute in Boma and for his researches on the diseases of that part of Africa.—Dr. Michel Stukovenkoff, Professor of Dermatology in the University of Kieff.—Dr. Eugène Afanassieff, formerly Professor of Medical Pathology in Kieff.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen have passed the Second Examination of the Board in the subjects indicated, viz.:—

Monday, March 29th:

Anatomy and Physiology.—Robert Cyril Turnbull, student of London Hospital; Godfrey Russell Potter and Benjamin Gowing, Yorkshire College, Leeds; Thomas Adam and Herbert Alfred Mason Firth College, Sheffield; Charles Ferrier Walters, Claude Alfred Heath Gee, Frederick Williams Cotton, and Alfred Coleridge, University College, Bristol; Reginald Shirley Burd and Arthur John Awdry, Mason College, Birmingham; William Nicholson, John Hoyle, and George Edward Seville, Owens College, Manchester; William John Young, William Arthur Bailey, and Robert Jaques, University College, Liverpool; Cyril Raymond Mass, Oxford University and University College, Liverpool; and William Warwick James, Middlesex Hospital.

Anatomy only.—William Morgan James, Cambridge University; and Thomas Arthur King, Cambridge University and St. Thomas's Hospital.

Twenty gentlemen were referred in both subjects, one in Anatomy only, and three in Physiology only.

Tuesday, March 30th:

Anatomy and Physiology.—Ernest Russell-Risten and Ernest Wethered, St. Bartholomew's Hospital; Arnold Edward Soden, McGill University, Montreal, and St. Bartholomew's Hospital; Arthur Pearson, Alan Carpmael Ransford, Frederick Curtis, and William Howard Edwards, Guy's Hospital; Edwin Wallace Goble, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology; Zebulon Mennell and John Wishart Little, St. Thomas's Hospital; Stanley James Kerfoot and Lewis Eccles Hertslet, London Hospital; Arthur Gentry Pitts and Burton Alexander Nicol, Charing-cross Hospital; Herbert Hugh Blair Cunningham, St. Mary's Hospital; Edward Mello Saunders, King's College, London; John Howard Addinsell, University College, Liverpool, and King's College, London; and William Wijeyesaker, Ceylon Medical College and University College, London.

Anatomy only.—Mr. Henry Joseph Butler, Carmichael College, Dublin, and St. George's Hospital.

Physiology only.—Walter George Douglas Miller, Cambridge University and University College, London; Leslie Frederick Enthoven, Cambridge University and Mr. Cooke's School of Anatomy and Physiology; Thomas Langton Butler, St. Mary's Hospital; and Orme Stirling Kellett, Cambridge University, London Hospital, and Mr. Cooke's School of Anatomy and Physiology.

Thirteen gentlemen were referred in both subjects, four in Anatomy only, and one in Physiology only.

Wednesday, March 31st:

Anatomy and Physiology—Reginald Gauld, London Hospital; Hugh Stannus Stannus, Robert James Harris, and Saville Waldron Hanbury, St. Thomas's Hospital; Suhrid Nath Chowdry, University of Calcutta and St. Thomas's Hospital; John Wilfred Nunn and Herbert Ernest Ashley, St. Bartholomew's Hospital; William Bastian and George William Morris Pritchett, University College, London; William Arthur Durance and Herbert Halliday, Westminster Hospital; William Vare Chalmers Francis, Westminster Hospital and Mr. Cooke's School of Anatomy and Physiology; James Frederick Robinson and Francis George Cross, Guy's Hospital; Iain Mackinnon Jefferiss and Dudley Beckit Truman, King's College, London; and Ernest John Manning, St. Mary's Hospital.

Nineteen gentlemen were referred in both subjects.

Thursday, April 1st:

Anatomy and Physiology.—Robert Dunstan, Alec Leslie Matthews, and Michael Foster Reaney, London Hospital; Albert Remington Hobbs, Ernest William Holyoak, Charles Hildred Brodribb, and George Barnes, St. Mary's Hospital; Herbert Raymond Bateman, John Coates, and Thomas Henry Edwards, St. Thomas's Hospital; Henry Arthur Bramsden Bransbury and Walter Fedde Fedden, St. George's Hospital; William Henry Loosely and Charles Edward Hicks, Guy's Hospital; Maurice Gilbert Hannay, Charing-cross Hospital; Robert Lewis Thornley and Alexander Robert Tweedie, St. Bartholomew's Hospital; Felix Anthony Boissiere and William Henville Lowman, King's College, London; and Charles Visger, University College, London.

Sixteen gentlemen were referred in both subjects.

Friday, April 2nd:

Anatomy and Physiology.—Roy Henry Rollinson Whitaker, Maurice Guy Winder, Francis Musgrave Howell, Ernest George Smith, Arthur Tregelles Pridham, and Charles Archibald Scott Ridout, St. Bartholomew's Hospital; Philip Hedgeland Ross, Otago University, New Zealand, and St. Bartholomew's Hospital; Edward Cohen, Robert William Basil Hall, and David Forsyth, Guy's Hospital; John Ford Northcott, Cambridge University and Guy's Hospital; Henry Lloyd Driver, John Aylward Churchill, and Thomas Crisp English, St. George's Hospital; Frederick Charles Carlé and Alfred Carleton Williams, King's College, London; Godfrey Brookes Dixon, Charing-cross Hospital; Sydney Pern, Archibald Douglas Jameson, and Sydney Hunt, St. Thomas's Hospital; Hardy Vesey Wells, St. Mary's Hospital; Norman Navarra, Middlesex Hospital; Alfred Richard Spencer and David Leighton Davies, University College, London; and Hermann Balean, London Hospital.

Twelve gentlemen were referred in both subjects.

Saturday, April 3rd:

Anatomy and Physiology.—Richard Horace Paramore, St. Bartholomew's Hospital; Ernest Henry Bonney and Sydney George

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Harrison, Charing-cross Hospital; Edward Norman Tilly Rogers and Cecil Rodney Rickard, Middlesex Hospital; Percy Harold Ward, Guy's Hospital; John Tattersall, St. Mary's Hospital; Frank Miller Bingham, St. Thomas's Hospital; William Benjamin Batchelor Taylor, London Hospital; Laurence Jones, St. George's Hospital; and William MacLellan, Edinburgh University.
Four gentlemen were referred in both subjects.

UNIVERSITY OF GLASGOW.—The following have passed the Second Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated (A., Anatomy; P., Physiology; and M., Materia Medica and Therapeutics):—

Robert Fisher Ballantyne (M.), James Napier Baxter (M.), James Freeborn Bennett (A., P.), Andrew Brownlie (A., P.), John James Buchan (M.), William Adam Burns (A., M.), Thomas Bullough Calland (P.), Ranald Douglas Campbell (A., P., M.), James Carruthers, M.A. (A., P., M.), James Robert Chalmers (A., P.), William Crerar (A.), John Cullen (M.), Charles Cheven Cumming (A., P.), John Ronald Currie, M.A. (M.), Archibald William Wallace Davidson (A. P.), David Curr Douglas (A.), James Drummond (A., P.), Binnie Dunlop (P., M.), Hugh Campbell Ferguson (A., P.), William Gibson (A., P.), James Garden Green (P.), David Sloan Harvey (M.), Thomas Inglis (P.), Nicol Jamieson (A., P.), Andrew Kerr (A., P.), Andrew Stewart Lang (M.), Robert Luman (A.), Ramsay Millar (A.), Hugh Miller (A., P.), Norman M'Leod Miller (A., P.), Ernest Wardlaw Milne (M.), James Hogg MacDonald (A., P.), Peter MacIntosh M'Fadyen (A., P.), John M'Gilchrist (A., P.), Charles Forbes Maclean (A.), Norman Forbes Macleod (A. P.), Alfred Robert Maclurkin (A., P.), John M'Millan (A., P.), William Gardner Neill (M.), Alexander Duncan Nicolson (M.), John Patton (A., P.), William Alexander Riddell (A., P.), Arthur Robin (A., P.), James Scott, M.A. (A., P.), James Shearer (A., P.), David Ap-Simon (P., M.), Andrew James Smith (M.), David James Smith (A., P.), James Smith (M.), James Johnston Smith (P., M.), Peter Alexander Steven (A., P.), Alfred George Stewart (A., P.), Andrew Taylor (M.), Charles Pinkerton Thomson (A., P.), William Brown Thomson (A.), Henry Nisbet Turner (M.), William Webster (M.), Alexander Simpson Wells, M.A. (A., P.), William Wright (A.), and John Doctor Young (A., P.). Women—Sarah Davidson (A., P.), Marjorie King Henderson Fleming (A.), Jessie Downie Granger (A., P., M.), Jane Grant (M.), Mabel Hardie (A., P.), Jessie Sophia Beatrix Hunter (P., M.), Ina Lochhead M'Neil (A., P.), Jean Effie Prowse (M.), Sara Maude Robertson (A.), Maude Spencer (A., P.), Gertrude Florence Fleetwood Taylor (A., M.), and Grace Lorrain Young (A., P., M.).

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

(*a*) *Including Pathology.*—John Donald, George Murray, Archibald Stevenson, and Alexander James Thompson Swann. (*b*) *Not including Pathology.*—John James Edgar, William Humphreys Jamison, George Moreland, James M'Caig, David Wallace Smith, and Alexander Waugh.

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated (P., Pathology; M., Medical Jurisprudence and Public Health):—

John Aitken (P., M.), George Alexander (P., M.), Alexander Smith Allan (P.), Arthur James Ballantyne (P., M.), Andrew Aitken Barclay (P., M.), William Bennett (P.), James Symond Beveridge (P., M.), George MacLellan Blair (P., M.), John George Wilson Boleyn (P.), Andrew Clark (P., M.), Robert Crawford (P., M.), Robert Douglas, M.A. (P., M.), Kenneth M'Kenzie Duncan (P., M.), James Finlayson Fleming (P.), Robert Fullarton, M.A. (P.), Alexander Garrod (P.), Harold Smith Heap (P.), John Henderson (P., M.), William Wallace Keir (P., M.), Alexander Lawrie (P., M.), Alexander Matheson (P., M.), James Blakely Miller (P., M.), James Alexander Mitchell (P., M.), Murdoch Macdonald (P., M.), Laurence Abel Mackenzie (M.), Roderick Reid Macnicol, M.A. (P., M.), James M'Whir (P., M.), Robert Niven (P., M.), Percival Leslie Pearce (P.), Joseph Wilkie Scott (P., M.), John Shaw, M.A. (P., M.), John Laird Simpson (P., M.), John Macfarlane Sloan (P., M.), Peter Donald Strachan, M.A. (P., M.), James Douglas Carnon Swan (P., M.), Daniel Rees Thomas (P., M.), Walter Lewis Thomson (P., M.), William James Alexander Walker (M.), Robert Andrew Hanan Watson (P.), Edward Roberts Weir (P.), James Patterson Wilson (P., M.), and William Wyper (P., M.). Women—Daisy Annabelle Bennett (P., M.), Agnes Forbes Blackadder (P., M.), Jane Lorimer (M.), Eva M'Call (P., M.), Minna Amelia Macfarlane (P., M.), Annie Louise M'Ilroy (P., M.), Margaret Wallace Howie M'Neil (P.), Mabel Catherine Poulter (P., M.), Agnes Renton Robson (P., M.), Marion Jamieson Ross (P., M.), and Sara Whiteford (P.).

UNIVERSITY OF ABERDEEN.—The degrees indicated have been conferred on the following gentlemen:—

Degree of M.D.—Edward Nicolls Carless, M.B., C.M., Devizes, Wilts, (under the new Ordinances); Frank Austin Gill, M.B., C.M. Rosskeen, Invergordon; *John Henry Goodliffe, M.B., C.M., Lancaster; Angus McGillivray, M.B., C.M., Dundee; William Mackie, M.A., M.B., C.M., Elgin; Leslie James Milne, M.A., M.B., C.M., Mirfield, Yorks; and Bertram Saunders, M.B., C.M., Exminster, Devonshire.

Degrees of M.B., C.M.—Forbes James Alexander, Aberdeen; John Wilhelmus Samuel Attygalle, Galle, Ceylon; Frank Hay Cantlie, Fochabers, Morayshire; William Lumsden, Aberdeen; Ronald Campbell Macfie, M.A., Old Aberdeen; James Mansie, M.A., Aberdeen; †Maurice George Robertson, M.A., Huntly, Aberdeenshire; William Alexander Salmond, Aberdeen; John George Stuart, Tarland, Aberdeenshire; George Fexil Thomson, Halifax, Nova Scotia; and Robert Valentine, Gourdon, near Montrose.

Degrees of M.B., Ch.B. (New Ordinances).—Robert Bruce, M.A., Myreton, Insch, Aberdeenshire; Alexander Ledingham, M.A., Boyndie, Banffshire; †Thomas William Lumsden, Midmar, Aberdeenshire; John Stewart Milne, M.A., King Edward, Aberdeenshire; Joseph Pozzi, M.A., Mintlaw, Aberdeenshire; and Thomas Snowball, M.A., Huntly, Aberdeenshire.

* Thesis considered worthy of commendation.
† With honourable distinction.

ANNUAL MEETING OF THE METROPOLITAN PROVIDENT MEDICAL ASSOCIATION.—This meeting was held on March 27th. The executive committee were able to announce the receipt of a handsome donation of £1000 from the Baroness de Hirsch towards the formation of new branches. The report showed that the association had nineteen branches. The total number of cards was 10,619, showing a small increase on the previous year, with a corresponding increase in the members' payments, which now amounted to £4870. It was noticeable that the payments to the medical staff had increased in a greater proportion than the number of cards. In introducing the annual report the chairman, Mr. Bousfield, referred to the efforts that were being made to deal with the question of hospital out-patient departments. Some radical change could not much longer be delayed, and everything pointed to the probability that the work would be handed over to provident associations, friendly societies, and similar institutions. It was therefore of the utmost importance that the organisation of the Metropolitan Provident Medical Association should be complete when this time should arrive. An interesting experiment was made during the year. In view of the ever increasing number of applications for chest hospital letters the Hospital Saturday Fund made a special grant to the association, in return for which they undertook to sift the cases. The results of the inquiry were published in THE LANCET of March 20th, p. 820. Another matter of considerable interest to the medical profession was the endeavour to determine by means of a conference a fair rate of payments for women's provident medical clubs. Several meetings were held, but it was unfortunately found impossible to come to any definite conclusion. The chief cause in bringing about this abortive result was stated to be the want of organisation of the medical profession, in the absence of which it was impossible to reconcile conflicting interests.

PRESENTATIONS TO MEDICAL MEN.—Alderman J. B Richardson, J.P., M.D., C.M. Edin., L.R.C.P. Lond., &c., who was Mayor of Torquay during 1894-95, has been presented with his portrait in oils as a mark of appreciation of the manner in which he and Mrs. Richardson conducted the duties of Mayor and Mayoress. A bound album containing the names of 200 subscribers was given to Mrs. Richardson.—In recognition of his three contests for a seat on the Torquay Town Council Mr. E. Last Smith, J.P., L.R.C.S., L.R.C.P. Edin., was recently presented with an engraved silver salver and an illuminated address by a large number of friends.—At Bath, on March 20th, Mr. John Maurice Harper, M.R.C.S. Eng., was presented by the members of the Larkshall branch of the Rational Sick and Burial Friendly Society, of which he is the surgeon, with a handsome spirit case on the occasion of his marriage. The Mayor of Bath was to have presided at the meeting, but was prevented by illness. His worship, however, sent a kindly letter to Mr. Harper, with a handsome gold pin.—At a well attended meeting of residents in Torpoint and neighbouring parishes held on March 19th in the Mechanics' Institute, Torpoint, Mr. Charles Wm. Chubb, M.R.C.S. Eng., in recognition of his long connexion with the district, he having been in practice there for a period covering upwards of fifty years but having recently retired, was presented with a silver salver, a pair of silver candlesticks, and an illuminated address signed by all the subscribers representing the parishes of Torpoint, Antony, St. John's, and Wilcove. The salver and address were each appropriately inscribed.—On March 22nd, at Hamilton, Mr. J. Murray Young, M.B., M.S. Glasg., was presented at a social meeting of the members of the Livingstone Ambulance Class with a very handsome alabaster reading-lamp and shade in recognition of his services as instructor.—On March 16th, at St. Saviour's Infirmary, East Dulwich, Mr. H. Elwin Harris, B.A., M.B. Camb., F.R.C.S. Eng., medical superintendent, was presented by the staff of the above institution with a handsome gold watch and chain, suitably inscribed, on the occasion of his resigning his appointment. The Rev. G. Elliott, in presenting the testimonial on behalf, and in the presence of,

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the whole of the staff of the infirmary, spoke in eulogistic terms of the many improvements which Dr. Harris had instituted during his five and a half years' tenure of office, laying special stress on his organisation and the method in which the nurses' training school was conducted, also the manner in which he championed the nurses' cause in the recent discussions on the Poor-law Superannuation Act.—At a public meeting held in Ferndale on March 24th Mr. S. Hamilton, B.A., M.B., B.Ch. R.U.I., was presented with an illuminated address, a marble mantel-piece clock, and a pair of bronze figures by the inhabitants as a mark of their appreciation of his services during his residence in Ferndale.—At a meeting at the Council Chambers, Municipal Buildings, Bournemouth, held on March 22nd, his Worship the Mayor presiding, Mr. Philip W. G. Nunn, L.R.C.P Lond., M.R.C.S. Eng., was presented with a cheque for £54 odd, subscribed by friends and patients as a mark of respect and esteem on his retirement from private practice in order to devote himself exclusively to his work as medical officer of the borough.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—At a meeting of this society, held on April 2nd, Dr. Thudichum being in the chair, Dr. Gossage gave a demonstration on the Serum Diagnosis of Typhoid Fever.—Dr. Harry Campbell read a paper on the Pathology and Treatment of Emphysema. He attributed the enlargement of the chest to diminution of pulmonary elasticity and consequently to diminished suction on the interior of the chest walls, also to chronic over-action of the inspiratory muscles in consequence of dyspnœa This caused contracture of the inspirators and fixation of the chest in the expanded position. Treatment should be directed to the preservation of pulmonary elasticity and to the strengthening of the expiratory muscles by means of special exercises so as to counteract the tendency to over-action of the inspirators.—Dr. Campbell Pope alluded to the occurrence of emphysema in muscular men with large chest capacity. Such men are frequently shallow breathers, the expansive muscles of respiration not being fully exercised. This predisposes to fixation of the rib-joints and ossification of the cartilages, the result being a large chest with little mobility, so that after an attack of bronchitis the less supported portion of the lungs—viz., the apices and margins—become emphysematous.—Dr. Thudichum dwelt on the importance of coughing as a cause of emphysema.

BEDFORD MEDICAL SOCIETY.—A meeting of this society was held on March 25th, Mr. Kinsey, the President, being in the chair.—The President gave an address on Medical Defence.—Dr. Goldsmith read notes of a severe case of Tetanus treated with antitoxin and morphia injections. The patient, a lad aged sixteen years, was first seen on Dec. 28th, 1896, with symptoms of tetanus. Two months previously he had cut a finger with a butcher's knife, and two weeks previously he had fallen on gravel and grazed his wrist, the latter probably being the origin of infection. On Dec. 29th 30 c.c. of Pasteur's fluid antitoxin serum, obtained from Messrs. Burroughs, Wellcome, and Co. were injected. On Dec. 30th 30 gr. of the solid serum, obtained from the British Institute of Preventive Medicine, were injected, and this was repeated the same evening and again on Dec. 31st. On Jan. 1st and 2nd 10 c.c. of the fluid serum (obtained from Messrs. Burroughs, Wellcome, and Co.) were given. He progressively got weaker and more emaciated until Jan. 6th, after which he gradually improved. Frequent injections of morphia were given from the commencement of the attack until the 17th, when the spasms had ceased and the patient was practically convalescent. Dr. Goldsmith was of opinion that the antitoxin had very little to do with the result, and that the injections of morphia were of the greatest benefit in checking the paroxysms.—Dr. Willmer Phillips read notes of a fatal case of Meningitis following an attack of Influenza and Pneumonia in a child aged two years, death occurring on the seventh day from commencement of influenza.—Mr. Nash read a paper on Inflammation of the Accessory Sinuses of the Nose and Ear, with special reference to several cases treated by free drainage.—The following specimens were shown: Adeno-carcinoma of the Rectum by the President; Tibia from a case of Acute Idiopathic Osteo-myelitis, which proved fatal in five days, by Dr. Ross; Excised Portions of the Knee-joint, Cystic Ovaries, Scirrhus of a Male Breast, a Gall-stone passed by Bowel after symptoms for three days of Intestinal Obstruction, and Skiagraphs of a Bullet in the Hand, by Mr. Nash

MEDICAL MAGISTRATES.—Dr. Reginald G. Alexander of Bradford and Dr. Robert Forsyth of Birstall, near Leeds, have been placed on the Commission of the Peace for the West Riding of the County of York.—Mr. Simeon Snell, F.R.C.S. Edin., L.R.C.P. Lond., M.R.C.S. Eng., and Mr. Alfred Wright, M.R.C.S. Eng., have been placed on the Commission of the Peace for the City of Sheffield and the County of Essex respectively.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on March 17th, Dr. W. B. Ransom, President, being in the chair.—Dr. Carroll read a paper on the Composition and Properties of Water, its Powers of Dissolving Gases and Minerals and thus breaking down rocks and forming soils. The causes of lead-poisoning in various places—e.g., Chesterfield rural district—were then indicated and the importance of other metals in solution shown. The law relating to water-supply was then briefly dealt with, the powers and duties of sanitary authorities under the various Acts, and the Dairies, &c., Order of 1885 being stated, and also the powers under the Rivers Pollution Prevention Act, 1876, to prevent the pollution of streams and other sources of water-supply. The substitutes for lead pipes were then reviewed. The intermittent and constant system of water-supply, the wholesomeness, the impurities, the hardness, and the purification of water were then gone into, and the importance of using bacteriological filters was shown. The softening of water by chemical means, and the enormous saving in soap, wear and tear of clothes, better cooking of food, repairs to boilers, and the use of less fuel, &c., were next alluded to, stress being laid on the facts that the harder the water the better it paid to soften it, and that the cost increased with the increase in the sulphates. By softening and subsequent filtration the water is practically sterilised. The analysis of water was next considered, the lecturer pointing out the danger of relying implicitly on a chemical analysis alone to prove the wholesomeness or otherwise of any particular water. The connexion between the use of polluted water and widespread outbreaks of enteric fever and cholera was next shown. In conclusion, the means of prevention of these diseases by destruction of the stools and other excreta by fire were advocated. It was pointed out that the present system of using disinfectants in the vessel to receive the excreta and emptying at once was simply a farce.—The President, Dr. Bolton, Mr. Littlewood, Dr. Hunter, and Dr. Mackenzie discussed the paper, and Dr. Carroll replied.

HARVEIAN SOCIETY.—A meeting of this society was held on April 1st, the President, Dr. Milson, being in the chair.—Mr. Buckston Browne read a paper on "Is it ever Impossible to Pass a Catheter through the Urethra into the Bladder?" He maintained that it was never impossible, even in the worst cases of stricture of the urethra, where the urethra had not in any part of its course actually ceased to exist, to pass an instrument. If an instrument was once passed the case could be brought to a successful issue without any perineal incision, and that being so the patient was saved all the risks of hæmorrhage and of that terrible misfortune, a perineal fistula. In the most severe cases of prostatic enlargement the urethra was simply tortuous. The difficulties were fully described and instruments were shown by which all these difficulties could be overcome. In no prostatic case was it allowed that the urethra was impassable by instruments, and therefore there was rarely any need for any form of prostatectomy or for castration. Other forms of urethral obstruction were discussed, and the question which was formulated in the title of the paper was answered emphatically in the negative.—Mr. Freyer remarked on the practical character of the paper. He was surprised to find that Mr. Browne had discarded soft for hard metal bougies in the treatment of strictures. He agreed that the knife was too frequently had recourse to in the treatment of stricture. He thought internal urethrotomy a safe and sound operation, but he believed external urethrotomy to be the only resource in other cases. He had never met with dangerous hæmorrhage in external urethrotomy, but sometimes a troublesome fistula remained. He also agreed that patient and cleanly catheterism was the best treatment for hypertrophy of the prostate.—Dr. Cock mentioned a case of intractable stricture in which he had drained the bladder above the pubes, and the patient led a comfortable life by wearing a tube and

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spigot —Mr. Browne, in reply, said it was only in strictures, miscalled impassable, that he advocated the use of hard metal bougies.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Scotch Public Health Bill.

THE Bill of the Government to amend and consolidate the laws as to public health in Scotland has been read a second time in the House of Commons, and referred for consideration to the Grand Committee on Law. A proposal was made and largely supported to make the reference to a special committee consisting of all the representatives of Scotch constituencies, with fifteen members added by the Committee of Selection, but it was resisted by the Government, and on a division rejected by the House. This Bill was introduced last session in the House of Lords, where its details were closely examined and considerably altered by a Select Committee.

HOUSE OF COMMONS.

THURSDAY, APRIL 1ST.

The Plague in Bombay.

Sir Charles Cameron asked the Secretary of State for India whether his attention had been called to the systems of anti-plague inoculation which were being tried in India by M. Haffkine and Dr. Yersin, and the statement contained in a recent official despatch from Bombay that 3296 persons had already been inoculated by M. Haffkine; and whether, with a view of securing a prompt test of the protective and curative value of the procedures referred to, he would take steps to secure an independent official registration of all anti-plague inoculations, so as to enable the practical efficacy of the systems to be tested by subsequent comparison between the disease and death-rates among inoculated and non-inoculated persons.—Lord George Hamilton replied: I have been in frequent telegraphic correspondence with the Bombay Government regarding inoculations against plague. I have requested the Bombay Government to report periodically the number and the results of inoculations under M. Haffkine's and Dr. Yersin's systems separately.

FRIDAY, APRIL 2ND.

Military Hospital at Felixstowe.

Mr. Goddard asked the Under-Secretary of State for War whether the Army Sanitary Committee had made an inspection of the site for the proposed military hospital at Felixstowe, and whether he could give any information as to the site chosen.—Mr. Brodrick replied that the site approved by the Army Sanitary Committee for the proposed military hospital at Felixstowe was about 1000 yards north-east of Landguard Fort and 165 yards from high-water mark.

Lunacy Administration in Ireland.

Mr. Shee asked the Chief Secretary to the Lord-Lieutenant of Ireland whether, in view of the friction which had arisen between many of the boards of governors of Irish lunatic asylums and the Board of Control, he would take some steps, by legislation or otherwise, to amend or re-model the constitution of the Board of Control so as to render it directly representative of the ratepayers; whether he was aware that the Lunacy Commissioners in England acted in a similar capacity to the Irish Board of Control, but nevertheless claimed no power of veto such as the latter body claimed; and whether the governors of Irish lunatic asylums were allowed any discretion as to the extent and nature of the accommodation they might provide for inmates.—Mr. Gerald Balfour replied that the whole question of lunacy administration in Ireland was one requiring attention, though he could not promise that he should be able to deal with the matter in the immediate future. He was not sufficiently acquainted with lunacy administration in England to answer the second paragraph of the question. As regards the third paragraph, the fullest opportunity was uniformly afforded to local authorities to submit their views on any plans proposed for improved or increased accommodation, and these views received the most careful consideration of the Board of Control, with the utmost desire to adopt them so far as they might be found practicable.

Venereal Disease in the Army.

On the motion of Major Rasch a return was ordered of the amount of all classes of venereal disease (including simple venereal returns) for all stations where the Contagious Diseases Act was in force from 1864 to 1883, and a similar return for the same stations from 1886 to 1895.

MONDAY, APRIL 5TH.

Invalided Recruits.

Colonel Wyndham Murray asked the Under-Secretary of State for War whether his attention had been drawn to the fact, as shown in the Annual Report of Recruiting, that although the number of men under two years' service in the army was less last year than in any of the previous four years, yet the number of men under that length of service who were discharged as invalids was greater than in any of those years, and whether he could explain the reason for this increase of invalid recruits; and, with reference to the same report, whether he could state the reason why the numbers of militiamen who joined the regular forces had constantly diminished during the last five years, and whether the question of the reduction of the bounty given on completion of preliminary drill had been considered in connexion with this decrease.—Mr. Brodrick replied that there was a small increase in the invaliding of men under two years' service. It was probably attributable to the increased attention paid to physical training, by which men who were unable to bear the strain were more rapidly and surely found out. The diminution in the numbers of militiamen who had joined the regular forces might to some little extent be due to the reduction in the rate of bounty payable on completing their drill on enlistment. If it should continue to increase the question would be considered.

Irish Poor-law Relief Bill.

Mr. Gerald Balfour, in reply to Mr. McCartan, said it was not intended to appoint a committee to make inquiry into the working of the Poor-law system in Ireland in connexion with the Poor-law Relief Bill shortly to be introduced. It was hoped that the effect of the Bill would be to remove some of the difficulties standing in the way of classification and of other reforms.

TUESDAY, APRIL 6TH.

Health Lectures for Young Soldiers.

Colonel Wyndham Murray asked the Under Secretary of State for War whether he would consider the advisability of carrying out the recommendation of the Committee of the Royal College of Physicians contained in their report forwarded to the Secretary of State for India on March 29th, that medical officers of the army should give elementary reading-room lectures on the preservation of health to young soldiers; and whether these lectures could especially be given before or during their voyage to India.—Mr. Brodrick replied that the recommendation that medical officers of the army should give lectures to young soldiers on the preservation of their health was one to which great importance was attached, and the question of the time and manner in which such advice could be given was under consideration.

The London Water Question.

Mr. Sydney Buxton asked the President of the Local Government Board, with regard to that portion of the instructions to the Royal Commission on the London Water Companies which instructed them to inquire and report whether the financial considerations of the question rendered it desirable that the undertaking of the water companies should be acquired by a public authority or authorities, if he would state on what basis of purchase the Commissioners would be able to form an estimate of a fair price, whether it would be on the basis of proceedings under the Lands Clauses Act, under the so-called "Plunket" Clause, or under some other form of arbitration.—Mr. Chaplin said it appeared to him that it would be for the Commissioners to form such estimates as they might consider necessary for that purpose and to adopt such method or methods as they might deem desirable. They could, if they thought fit, form alternative estimates on different bases, but this was a question for them to decide.

WEDNESDAY, APRIL 7TH.

Local Officers Superannuation Bill.

Mr. Leuty asked the President of the Local Government Board whether he had taken any steps to ascertain the feeling of the local authorities of England and Wales as to the provisions of the Local Officers Superannuation Bill; and, if he had, would he inform the House with what result.—Mr. Chaplin replied that the Local Government Board had not taken any steps to ascertain the views of the local authorities in England and Wales as to the provisions of this Bill. There were many thousands of such authorities, and the Board had not seen any reason for adopting the unusual course of asking the authorities for their views as to the measure.

Institutions for Idiots and Imbeciles.

On the motion of Mr. Tomlinson a Bill was introduced and read a first time to exempt from poor and other local rates all registered institutions for the care, training, and education of idiots and imbeciles.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

AITKEN, J., M.B., C.M. Glasg., has been appointed Medical Officer by the Lancaster Board of Guardians.

BARTLETT, B. P., M.R.C.S., has been appointed Medical Officer for the Bourton Sanitary District of the Shaftesbury Union.

BATELY, JOHN, M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the Belton Sanitary District of the Mutford and Lothingland Union.

BAYNES, Mr., has been re-appointed Public Analyst for the Borough of Hull.

BULLMORE, W. K., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Falmouth and Truro Port Sanitary Authority.

CALEY, H. A., M.C. Lond., M.R.C.P., has been appointed Lecturer on Materia Medica and Therapeutics in St. Mary's Hospital Medical School, vice Sidney Phillips, resigned.

COLLINGRIDGE, WM., M.D. Cantab., D.P.H., has been re-appointed Medical Officer of Health by the Port Sanitary Committee of the London Corporation.

CORSER, F. R. S., M.B., C.M. Edin., has been re-appointed Medical Officer for the Bourton-on-the-Water sub-Sanitary District.

CRERAR, CHAS., M.B., Ch. M. Edin., has been appointed Medical Officer for the Holme Abbey Sanitary District of Wigton Union.

DANIEL, R. A., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Chatteris Urban District Council.

DAVIDSON L. GORDON, M.B., Ch.M. Syd., has been re-appointed a Medical Officer to the Balmain Cottage Hospital, Sydney, New South Wales.

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DUCAT, A. D., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for Chiswick, Middlesex.

DUNDAS, M. G., M.R.C.S., has been re-appointed Medical Officer for the Fanshaw Sanitary District by the Mitford and Launditch Rural District Council.

FAUSSET, H. J., M.D., M.Ch. Dubl., has been re-appointed Medical Officer of Health for the Tamworth Urban and Rural Sanitary Districts.

FISHER, F. C., F.R.C.S. Eng., has been re-appointed Medical Officer for the Abbott's Langley Sanitary District of the Watford Union.

GRAHAM, J. B., M.D., Ch.M. Irel., has been re-appointed an Honorary Medical Officer to the Balmain Cottage Hospital, Sydney, New South Wales.

HARRIS, D., M.B., C.M. Glasg., has been appointed Medical Officer and Public Vaccinator for the First Sanitary District and Workhouse of the Carmarthen Union, vice W. L. Hughes.

HOGARTH, A. L., M.B., C.M. Glasg., has been re-appointed a District Medical Officer by the Cheltenham Board of Guardians.

JAFFREY, FRANCIS, F.R.C.S. Eng., has been appointed Surgical Registrar to St. George's Hospital, London.

JONES, EDWARD, M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health for Dolgelly.

KELLY, P. J., M.B., Ch.H. Syd., has been re-appointed an Honorary Medical Officer to the Balmain Cottage Hospital, Sydney, New South Wales.

LIMRICK, W. S., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer by the Waterloo (Liverpool) District Council.

LYSTER, A. E., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Chelmsford Union, vice W. Hart.

MELSON, G. H., M.D. Lond., M.R.C.S., has been re-appointed an Honorary Physician to the Moseley Hall Convalescent Home for Children.

MILLER, J. T. R., L.R.C.P. Irel., has been re-appointed Medical Officer for the Leavening Sanitary District of the Malton Union.

MURPHY, D. J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg. has been appointed Officer for the Youghal Workhouse, Cork.

NICHOLS, H. G., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Medical Officer to the Moseley Hall Convalescent Home for Children.

OWEN, ARTHUR DUNLEY, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer to the Mashonaland Mission Hospital, Fort Salisbury, Mashonaland, South Africa.

PALMER, A. M., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer by the Whittington Urban District Council.

PARKER, J. E., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer for the Ince-in-Makerfield Sanitary District of the Wigan Union.

PEARCE, A., M.R.C.S., has been re-appointed Medical Officer by the Kingsbridge and Salcome Port Sanitary Authority.

PRIESTLEY, THOMAS, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Royal Hospital, Sheffield.

REYNOLDS, J. H., M.B., C.M. Edin., has been appointed Special Non-Resident Clinical Clerk to the Lock Wards, Royal Infirmary, Edinburgh.

RIDING, EDWIN, M.R.C.S., has been re-appointed Medical Officer of Health by the Rural District Council, Repton.

SMALLWOOD, R. P., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Eighth Sanitary District of the Chelmsford Union, vice E. P. Cockey.

SMITH, K. R., M.D. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Totnes.

TEMPLE, GEO. H., M.B., C.M. Edin., has been appointed Medical Officer for the Weston Super-Mare Sanitary District of the Axbridge Union.

TOTHILL, F. C., M.B., C.M. Edin., has been appointed Medical Officer for the Ashford Sanitary District of the Staines Union.

TUKE, G. M., M.R.C.S., has been re-appointed Medical Officer of Health by the Hollingbourne Rural District Council.

UNDERHILL, F. W., F.R.C.S. Edin., M.R.C.S., has been re-appointed an Honorary Medical Officer to the Moseley Hall Convalescent Home for Children.

WILSON, J., M.D., C.M. Edin., has been re-appointed a District Medical Officer by the Cheltenham Board of Guardians.

YOUNG, MEREDITH, M.B., C.M. Edin., D.P.H. Vict., has been appointed Medical Officer of Health for the Borough of Crewe.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOROUGH OF BRIGHOUSE.—Medical Officer of Health for the Borough. Salary £200 per annum. Applications to the Town Clerk, Town Clerk's Office, Brighouse.

BRENTFORD UNION.—Dispenser for the Infirmary Workhouse and Schools at Isleworth. Salary £100 per annum, with dinner and tea daily.—Applications to the Clerk, Union Offices, Isleworth, Middlesex.

BRITISH LYING-IN HOSPITAL, Endell-street, Long-acre, W.C.—Administrator of Anæsthetics.

BURY DISPENSARY HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with board, residence, and attendance.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—House Surgeon, unmarried. Salary £90 per annum, with board, lodging, and washing.

COMBINED DISTRICT OF BATTLE, CUCKFIELD, EASTBOURNE, &c.—Medical Officer of Health, for three years. Salary £600 per annum, to include all travelling and other expenses. Applications to the Secretary, Haywards Heath.

DUNDEE ROYAL INFIRMARY.—Second Honorary Assistant Physician.

GENERAL INFIRMARY, Leeds.—Resident Surgical Officer. Salary £100 per annum, with board, residence, and washing.

GERMAN HOSPITAL, Dalston, N.E.—Honorary Ophthalmic Surgeon.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in hospital provided.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Knowle, Fareham.

HOSPITAL FOR WOMEN AND CHILDREN, Leeds.—House Surgeon for twelve months. Salary £90 per annum.

LIVERPOOL NORTHERN HOSPITAL.—Honorary Physician.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £80, to be increased to £90 per annum after the first year's service, with apartments, board, and attendance. Applications to the Secretary, 34, Moorfields, Liverpool.

NEW SOUTH WALES.—Bacteriologist and Assistant to the President of the Board of Health of the Colony. Salary £600 per annum. Applications to Agent-General for New South Wales, 9, Victoria-street, London, S.W.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer, for six months. A salary at the rate of £50 per annum for the senior post.

NOTTINGHAM GENERAL DISPENSARY.—Junior Assistant Resident Surgeon, for six months. Salary at the rate of £120 per annum, with rooms and attendance.

PARISH OF ROUSAY AND EGILSHAY, Orkney.—Medical Officer. Salary £51 sterling per annum. Applications to the Clerk of Parish Council, Rousay, Orkney.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Examiners.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought), Greenwich, S.E.—House-Physician. Salary £75 per annum, with board and residence.

ST. SAVIOUR'S UNION, Surrey.—Medical Superintendent at the Infirmary, East Dulwich-grove, S.E. Salary at the rate of £400 per annum, with unfurnished house, coals, gas, and water. An annual percentage deduction from the salary and emoluments will be made according to the Poor-law Officers Superannuation Act, 1896. Applications to the Clerk, Union Offices, John-street West, Blackfriars-road, S.E.

SHEFFIELD GENERAL INFIRMARY.—Junior Assistant House Surgeon, for three years. Salary £50 per annum, with board, lodging, and washing.

TAUNTON AND SOMERSET HOSPITAL, TAUNTON.—Assistant House-Surgeon for six months. Board, washing, and lodging in the institution provided.

UNIVERSITY COLLEGE, Bristol.—Medical Tutor. Stipend £125 per annum.

WESTMINSTER GENERAL INFIRMARY, Gerrard-street, Soho, W.—Resident Medical Officer, for one year.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for six months. Salary at the rate of £70 per annum, with rooms, board, and washing.

WONFORD HOUSE HOSPITAL FOR THE INSANE, near Exeter.—Assistant Medical Officer. Salary £150 per annum, with furnished apartments, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

EMMETT.—On April 2nd, at Woodville, Kingston-road, Portsmouth, the wife of Richard Emmett, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

MCKENZIE.—On March 12th, at Glenlyon, Berea, Durban, Natal, the wife of Dr. Archibald McKenzie, of a daughter.

THOMSON.—On April 1st, at Elleray, The Avenue, Ealing, W., the wife of George Thomson, M.B., of a daughter.

MARRIAGES.

BERNHARDT—FLACK.—On April 3rd, at Christ Church, Brondesbury, Dudley Richard Bernhardt, M.R.C.S., L.R.C.P., L.S.A., of Hamilton-terrace, W., to Beatrice Mary Flack, of South Mansions, Streatley-road, Brondesbury, fourth daughter of the late Horace Flack.

EYRE—LEWIS.—On March 31st, at the Parish Church, Folkestone, Surgeon-Lieut.-Colonel Montague Stokes Eyre, I.M.S., second son of the late Surgeon-General Eyre, to Emily Frances, eldest daughter of Henry Lewis, M.D., Folkestone.

DEATHS.

GARDNER.—On April 1st, at Naples, William Gardner, M.D. Glasg., of Melbourne, Victoria.

REILLY.—On March 30th, in London, Edwin James Reilly, M.R.C.S., L.R.C.P.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 8th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April 2	29·63	N.E.	40	38	86	48	36	...	Cloudy
,, 3	29·54	E.	41	40	70	47	38	...	Cloudy
,, 4	29·45	N.E.	46	41	88	50	41	...	Cloudy
,, 5	30·03	E.	38	36	74	47	34	...	Cloudy
,, 6	29·72	S.E.	42	38	87	51	38	0·25	Cloudy
,, 7	29 58	S.E.	41	39	82	53	39	0·14	Cloudy
,, 8	29·99	N.E.	43	41	85	50	41	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (14th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (15th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (17th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (12th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. Mr. R. Harrison (President): Case of Extrophy of the Bladder with Epispadias, treated by Left Nephrectomy and Right Ureteral Transplantation.—Mr. Turner (for Dr. Rolleston): (1) Case of Spastic Hemiplegia after Whooping Cough; (2) Case of Acromegaly.—Mr. Battle: (1) Result of Operation for Excessive Deformity of Lower Extremities; (2) Amputation of Thumb for Large Sarcomatous Growth in a Man the subject of Multiple Bony Growths; (3) Dislocation of Head of Radius from Ulna due to Rupture of Orbicular Ligament; (4) Early Condition of Baker's Cyst of Knee.—Dr. L. Guthrie: Multiple Spontaneous Fractures in an Infant.—Mr. Turner: Case of Lymphangioma.

TUESDAY (13th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8 30 P.M. Mr. R. L. Knaggs: Compound Depressed Fracture of the Skull, Cerebral Abscess. Hernia Cerebri, Recovery, with a consideration of the subject of Hernia Cerebri based upon 109 collected cases.—Dr. J. W. Carr: Non-Tubercular Posterior Basic Meningitis in Infants.

WEDNESDAY (14th).—HUNTERIAN SOCIETY.—Clinical Evening. Cases will be shown by Mr. H. Grant, Mr. J. H. Sequeira, Mr. T. H. Openshaw, Mr. H. V. Hickman, Dr. Woods, and Dr. F. J. Smith.

SOUTH-WEST LONDON MEDICAL SOCIETY (Stanley's, 235, Lavender-hill).—8.30 P.M. Paper:—Dr. C. Smith: Etiology of Diphtheria, with special reference to two localised outbreaks in Wandsworth. Dr. Sims Woodhead will give a Limelight and Microscopic Demonstration of the Diphtheria Bacilli.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens will be shown by Dr. Pegler, Dr. H. L. Lack, Mr. de Santi, Dr. A. Bronner, Dr. F. de H. Hall, Dr. F. Potter, Dr. S. Spicer, Dr. W. Hill, and Dr. Bennett.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (12th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Dr. G. Reid: Sanitary Appliances.

WEDNESDAY (14th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Mr. O. Fleming (conducted by): Inspection and Demonstration of Artisans' Dwellings, Boundary Street Area, Bethnal Green.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"SAFE LAMPS."

THE Moonlight Patent Lamp Company, Limited, of 126, Paddington Liverpool, have submitted to us for inspection a model of their night lamp. The essential principle of this lamp is that the reservoir never contains an excess of oil; that is, instead of filling the reservoir with oil in the usual way it is only necessary to saturate the absorbent with which it is charged. There is therefore no room for explosion in the reservoir, the space being occupied by the absorbent. The lamp is well adapted for burning benzoline, the cost of its employment as a nightlight being, it is stated, only a penny a night. A decided advantage is that the wick does not char and consequently very seldom requires adjusting. It gives a clear, white, steady flame which is entirely without smell. The same principle is applied to cycle lamps, carriage lamps, &c., all of which give an excellent degree of illuminating power.

MR. J. H. LAPTHORN, of 361A, Oxford-street, Manchester, sends us two lamps which provide against the ordinary disadvantages of the reservoir being constructed of glass on the one hand and of metal on the other. The main objection to glass is that it is fragile and liable to crack with alternations of temperature, but one advantage it presents is that the amount of oil in the reservoir may be seen. The disadvantage he proposes to overcome by placing the reservoir in a strong basket of wire after the manner of a "seltzogene," while the disadvantage of a metal reservoir—that is, its opacity—he proposes to remedy by placing a small ballcock in the reservoir, which would show by means of an indicator outside the quantity of oil contained in the reservoir. Neither device appeals to us as offering any satisfactory solution of the problem of lamp construction; we have seen much simpler designs which are more reliable and more convenient.

MR. W. MACADAM, of 7, Latchmere-street, Battersea-park-road, has submitted to us a drawing of a safety lamp which he proposes to construct. It contains a wick tube running to the base of the reservior and terminating in a small box containing a spherical plug. When the lamp is in an upright position the oil is free to flow through the wick tube, but should the lamp be upset in any direction the spherical plug blocks the wick tube and prevents the escape of oil. This method may be applied to the duplex lamp also. In addition, it is practically impossible for an explosion to take place since the air space is quite cut off from communication with the flame. The design is simple and we should say fulfils the requirements of a lamp that can correctly be called safe.

Dr. S.—If our correspondent can prove what he says he would have grounds for demanding an explanation and probably would be well advised in seeking one. But he must not rely too much on the accuracy of the patients.

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DR. CALMETTE'S ANTI-VENOMOUS SERUM.

DR. HAZARD, of the French Colonial Service, reports (*Archives de Médecine Navale et Coloniale*, March, 1897) a case of recovery from snake bite after injection of Dr. Calmette's anti-venomous serum. In December last at Martinique a soldier, aged twenty-three years, was bitten in the left thumb by a vigorous trigonocephalus (Bothrops Lanceolatus), nearly five feet in length. When the accident occurred the man was in a squatting position, but although he instantly jumped to his feet the action failed to dislodge the reptile, which remained for some moments firmly fixed to his digit, and it was not until he struck it on the head with his fist that it relaxed its grip and fell to the ground. There were two punctured wounds about half an inch apart, one of which was bleeding slightly. With a penknife the soldier enlarged it superficially, and he sucked the place three or four times. An officer then bound a ligature tightly round the root of the thumb, and dispatched the man to the hospital, where he arrived breathless from running some ten or twelve minutes after receiving the bite. To save time he was attended to in the office. Ten cubic centimetres of anti-venomous serum (which had been received from Lille in the course of the preceding month) were subcutaneously injected into the patient's left flank. The seat of injury was washed with hypochlorite of lime, and five cubic centimetres of the latter solution having been injected into and around the punctures the constricting ligature was removed. Soon afterwards the principal medical officer arrived at the hospital, and the case being in his opinion very grave he ordered a second injection of 10 cubic centimetres of serum, as well as a second local injection of 4 cubic centimetres of the hypochlorite. The patient was then put to bed under several blankets and given strong coffee to drink at frequent intervals. For forty-eight hours he complained of darting pains in his arm, loss of appetite, and sleeplessness—the last symptoms being no doubt due to the coffee—but with these exceptions the indications were entirely favourable. There was no local tumefaction, and the axillary glands remained unenlarged. On the fifth day the man had perfectly recovered and was discharged to duty. Immediately after he was bitten he says his forearm became heavy and numb, as though it were asleep, and neither the incision he made himself nor the hypochlorite injections caused him the least pain. This anæsthesia only lasted a few hours, the sense of feeling being fully restored by the next morning.

Viator.—The right course to be taken is to approach the local sanitary authority. When this has been done, and to no purpose, we might try to be of use, but the properly appointed officer must first be found wanting.

QUACKS AND THEIR WAYS.

To the Editors of THE LANCET.

SIRS,—I beg to enclose a letter which was sent to a patient of mine, whose name I will ask you to suppress. The patient is an advanced general paralytic. I am, Sirs, yours faithfully,

Brackley House, Newmarket, April 6th, 1897. JOHN H. MAUND.

[ENCLOSURE.]

March 30th, 1897, 54, Watkinson-street, Liverpool.

Mr.——I wrote to you yesterday, but I understand that the doctors will not allow you to try my cure. If you will send for me to come to you I will certainly give you such relief that will result in a return to perfect health. I await your reply. TIMOTHY NARY.

Mr. J. T. Clare (Straits Settlements).—The communication has been forwarded to the patentees of the apparatus mentioned.

M.D. (Chiswick) would like to hear of an institute or home where a girl aged eight years, could be received. She is now in a Poor-law infirmary, but the board of guardians would pay from 7*s.* to 10*s.* per week for her maintenance. She suffers from a mild form of idiocy and has a slight epileptic fit about once a month; occasionally she has a more severe fit. She frequently has incontinence of urine at night. Her general health is good.

THE PROPOSED NATIONAL PROVINCIAL CRIPPLES AID UNION.

MR. GILLINGHAM of Chard, whose scheme we noticed in THE LANCET of Feb. 13th, sends us a long letter on the same subject. He draws attention to the fact that though the London aid societies are doing good work in aiding cripples, still this presses very hardly on provincial mechanicians, who are in many cases quite equal to making the necessary appliances. But as the London societies are under contract to metropolitan firms these latter always get the orders. We are afraid that this is not the only instance where the provinces are deprived of their due by the octopus of London. The same holds good as regards metropolitan hospitals, and we quite agree with Mr Gillingham's argument that if the proposed union were arranged it would not only be a benefit to many cripples by bringing aid to their doors, but would also bring about an increase of trade to provincial mechanicians.

A RELATION OF EDWARD JENNER.

A CORRESPONDENT has called our attention to the fact, with reference to the Jenner Memorial Celebration, that a relation of Edward Jenner—a second cousin—is still living in the person of the Rev. Edward Henry Lane Noott, vicar of St. John's, Dudley, and now in his eighty-first year. Mr. Noott's mother, whose maiden name was Miss Mary Higgon, was a first cousin to Dr. Edward Jenner and was vaccinated by him personally.

Enquirer is placed in a somewhat awkward position by the case he describes. There is no greater kindness in the heads of houses than to act with consideration to their servants when they fall sick, especially with a grave and infectious disease like scarlet fever, as in this case. But the kindness to be complete must extend till all desquamation is over. Here—naturally, no doubt—the lady has become impatient. It is certainly desirable that where a case of scarlet fever arises there it should remain, saving always removal to an isolation hospital provided in the district for such cases. Is there any reason why the lady and family should not return to her house? We assume that the patient and nurse have been kept to one or two rooms. As to removal to a distance of six miles, this can be done, no doubt, and with due precautions need not involve any violation of the Public Health Acts; but the course is very objectionable. Without a proper ambulance and trained persons to carry out the removal there will be a great probability of carrying infection to a new district, and such action might involve the good relations of the patient's father with his employer. We scarcely think that any action would lie on the ground of such removal, if due care against exposure of the patient or his clothes is observed and the carriage in which he is conveyed is thoroughly disinfected. The objecting parties have no legal power to prevent the boy going to his own home; but it is highly desirable that the case should remain where it is till all trace of desquamation is over. If this cannot be, some amicable arrangement must be sought for by which the shepherd may be kept apart from the desquamating patient till all risk is over.

THE ENTERPRISE OF AN L.O.S.

To the Editors of THE LANCET.

SIRS,—Thinking the enclosed might be interesting to the profession as indicating what we may expect in the near future, I have cut it from the advertisement columns of one of our local papers.

I remain, Sirs, yours truly,

EDWARD LYNN, M.R.C.S. Eng., L.S.A. Lond.

New Charlton, April 5th, 1897.

[ENCLOSURE.]

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.
MRS. HOBBS, L.O.S.,

Trained at, and afterwards on the Staff of, Queen Charlotte's Hospital, may be consulted at 81, Lee High-road, Lewisham, either personally or by letter. A full stock of Drugs, Chemicals, and Herbs kept constantly on hand.

Diplomas, Certificates, and Testimonials may be seen on application.

—*Kentish Mercury*, April 2nd, 1897.

F. V.—There is no book that we know of dealing with French watering places exactly as our correspondent requires. The most suitable for his purpose would be one of the "Guides Joanne" which deals with the Normandy coast, to be procured from Hachette et Cie. or through any bookseller. Etretat, Trouville, St. Addresse, Berck-sur-Mer, and Wimereux are all well-known places on the north coast, and further south there are Biarritz and St. Jean de Luz, as well as the Riviera resorts, which it is unnecessary to particularise. The sanitation of Boulogne has improved immensely of late years. It has a main drainage system, with which all houses are obliged to be connected, and a good water-supply. A correspondent who has exceptional sources of information says that during four whole years and three summers of three other years he saw only one case of diphtheria and three of typhoid fever there, one of the latter being imported.

A READY RETORT.

OUR contemporary the *Guyoscope*, whose April issue has the same meritorious quality of lively good humour that marked its former numbers, is responsible for the following:—

> A gentleman, not unknown to fame, had left his corner seat in the already crowded carriage to go in search of buns and milk, or cake and sherry, leaving a rug to reserve his seat. On returning he found that, in spite of the rug and protests of his fellow-passengers, the seat had been usurped by one in lady's garments. To his protestations her lofty reply was: "Do you know, sir, that I am one of the director's wives!" "Madam," he replied, "were you the director's only wife, I should still protest."

THE Worshipful Company of Skinners have sent a donation of ten guineas to the Royal Hospital for Diseases of the Chest, City-road.

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CHICAGO VITAL STATISTICS.

THE report of the Bureau of Vital Statistics of Chicago for February, 1897, contains a large number of interesting details of the disease and mortality of that wonderful city, with its population of 1,619,226. But what seems a new feature in it is a circular for distribution, either generally or among families affected with infectious complaints. The circular, we are told, has been written at the request of physicians who have not time to write in sufficient detail and with necessary precision instructions for the restriction and destruction of contagion. The idea is a good one, and might be more extensively adopted among ourselves with advantage. We cannot refrain from giving the following particulars of antitoxin diphtheria treatment, verified by the name of Dr. E. P. Murdoch, chief of the antitoxin staff:—

No. of cases visited	... ...	152
,,	bacterially verified as true diphtheria ...	81
,,	treated with antitoxin	81
,,	recovered	72
,,	died	5
,,	remaining under treatment	4
,,	treated with immunising doses	40
,,	treated with immunising doses subsequently attacked with diphtheria	0
,,	intubated	8
,,	intubated which recovered	7

Exclusive of 4 cases remaining under treatment at the end of the month, the mortality rate was 6·4 per cent. of bacterially verified diphtheria—72 recoveries, 5 deaths. Out of a total of 1772 deaths, 31 were caused by puerperal septicæmia.

Delta.—There is nothing unprofessional in informing patients of an intended change of address, but our correspondent must be very careful only to inform *his* patients. No circulars should be sent broad-cast to the public, and advertisements in local papers are inadvisable.

"MATERNAL IMPRESSION ON THE FŒTUS."

To the Editors of THE LANCET.

SIRS,—Many medical men believe in maternal impressions on the fœtus, and personally I do, from nearly twenty-nine years of midwifery practice in which I have seen some remarkable cases. Puppies brought up under the influence of red light are said to grow up irritable and pugnacious, and those exposed to a green or blue light to turn out good-tempered. Carry out the same surroundings with a bitch or any other animal during the whole time, or at all events the early part, of pregnancy, and carefully test the results in a number of the young animals for a year or two succeeding birth. Other experiments of a somewhat different nature could then be tried, and if the conclusions arrived at pointed to a distinct effect being produced on the fœtus through the mother's perception it would go a good way to prove that a branch of science in relation to the human mother has not received the attention which is due to it.

I am, Sirs, yours faithfully,

March 29th, 1897. ANOTHER M.R.C.S., L.S.A.

Mr. C. E. Abbott.—In our opinion the responsibility devolved on B., as the infant had developed an entirely new complaint since A. had seen him last.

Dr. A. P. de Andrade does not appear to us to make out a very good case for the proposed innovation.

THE PROVINCE OF THE OPTICIAN.

WE have received from Mr. Frank Howard a second communication concerning our notice of his circular, which he says amounts to a libel. We confess our inability to see the matter in the same light. Mr. Frank Howard is not an ophthalmic surgeon, and in making an offer to the profession to diagnose surgical cases and to recommend appropriate treatment he seems to us to have exceeded his province. Mr. Howard sees in our treatment of his communication last week an aggravation of our offending and a proof of malice, but there he does us no justice. If he will glance at our columns he will see (1) that a discussion on any subject in THE LANCET is *always* continued under its original heading, and (2) that the type used for the headings to editorial paragraphs is *always* smaller than that used for the headings to letters from correspondents. This is our invariable rule, which we break on this occasion. The following letter requires an explanation from Mr. Howard to be given to all the medical men who have received his circular:—

To the Editors of THE LANCET.

SIRS,—I am directed by the Committee of the Central London Ophthalmic Hospital to state, in reference to some correspondence under the heading "An Insolent Advertisement," that the only opticians officially recognised by this institution are the firm of Messrs. Curry and Paxton.

I am, Sirs, yours faithfully,

Central London Ophthalmic Hospital, J. G. BRYANT,
Gray's-inn-road, W.C., April 6th, 1897. Secretary.

RADIOGRAPHIC DERMATITIS.

To the Editors of THE LANCET.

SIRS,—I am much interested in your annotation on "Radiographic Dermatitis with Ostitis." I have been working on the x rays for over twelve months; during that time my hands and arms must have been exposed to the rays for many hours, sometimes for several hours at a time, when making experiments with new tubes and apparatus. I will premise that I have an exceedingly sensitive skin, so much so that when I spend a week under canvas with the Volunteers I invariably have severe erysipelatous inflammation of the skin of the face and have often been almost blind for two or three days. My hands, also, will blister directly if exposed to the direct rays of the sun for any length of time. In spite of this I have never noticed the faintest trace of any inflammation or bronzing due to the x rays, nor have I ever seen any signs of irritation of the skin in any of my patients. I have had many prolonged exposures of children with delicate skins, frequently with the skin entirely unprotected by clothing, &c.

In view of your suggestion as to the *luminous* rays, it will interest you to know that I perform all my experiments with the entire apparatus enclosed in a large, light-tight box with cardboard doors, so that no luminous rays can penetrate. Is it not also possible that the signs of ostitis in Mr. Gilchrist's case may be due to the puffy inflammation of the skin? I have frequently noticed that on examination of, say, a hand when the soft tissues are inflamed, as in cellulitis, one finds an apparent thickening of the bone, really due to the swollen soft tissues preventing close contact of the bone with the sensitive plate. Even a fraction of an inch will give an apparent enlargement. The loss of detail in the bone would also be due to the same cause. I find I have to be constantly on my guard to avoid these skiagraphic fallacies.

I am, Sirs, yours faithfully,

Northwich, March 30th, 1897. ALF. H. MARSH, L.S.A.

L. D. T.—Our correspondent is quite right with regard to the insanitary nature of both methods of procedure. But he is wrong in thinking that they pass unnoticed, for much has been done in the past and continues to be done in the present to put a stop to them.

H. R.—"A Guide to the Examination of the Urine," by J. Wickham Legg, M.D., F.R.C.P. Lond. (London: H. K. Lewis), price 3*s.* 6*d.*; and "Notes on Examination of Blood and Excreta," by Sidney Coupland, M.D., F.R.C.P. Lond. (H. K. Lewis), price 1*s.* 6*d.*

H. B.—We cannot vouch for the facts, but some years ago it was commonly reported that a corpse was preserved on the top of a house in the West-end of London. It was said to be embalmed and placed in a glass coffin.

Paine.—A death from hydrophobia was recorded in THE LANCET of July 25th, 1896, p. 256. It occurred at Radcliffe about ten days previously. The victim had been bitten by a mad dog in the preceding November.

M.R.C.S.—Nothing has yet been decided about reproductions, but there is to be a meeting of the committee of subscribers on Friday, the 9th, when the matter will be discussed.

An Old Subscriber is requested to supplement his information from the Central Criminal Court by giving us his name and address—of course, in strict confidence.

ERRATUM.—In our notice in THE LANCET of April 3rd, p. 965, of Mack's Austrian Pine Products, the word "soluble" should have been inserted before the word "essence" in the sixth line, and instead of "colourless oil" in the succeeding line it should read "colourless *liquid*." The essential oil itself boils at between 330° and 350° F.

During the week marked copies of the following newspapers have been received:—*Bath Herald, Daily Mail, Hull News, Folkestone Express, Evesham Journal, Derbyshire Times, Bury Free Press, South Durham Mercury, Bournemouth Directory, Times of India, Bedfordshire Independent, Pioneer Mail, Leicester Post, Bradford Observer, Manchester Courier, Newcastle Journal, Builder, Dundee Courier, East Anglian Weekly Times, South Wales Daily News, Architect, Liverpool Daily Post, Scotsman, Citizen, Norwich Mercury, Grantham Journal, Hastings Observer, Yorkshire Post, Hereford Times, Bristol Mercury, Sussex Daily News, Portsmouth Times, Leeds Mercury, Wolverhampton Chronicle, Midland Counties Express, Worcester Echo, Sheffield Telegraph, West Kent Advertiser, Bexhill-on-Sea Observer, Chatham News, South-Eastern Gazette, Somerset Herald, Andover Advertiser, Surrey Comet, Acton Gazette, North British Daily Mail, Worcestershire Chronicle, Sketch, City Press, Birmingham Post, Sanitary Record, Cayuga County Independent, Auburn, N.Y., Reading Mercury, Crewe Chronicle, Mining Journal, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Hertfordshire Mercury, Shetland News, Surrey Advertiser, Local Government Journal, Public Health, Devizes Gazette, Aldershot News, Wigan Observer, Poole Herald, Wrexham Argus, Witney Gazette, West Middlesex Herald, South Western Gazette, National Press Journal, &c., &c.*

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The Photographic Art

AS AN AID TO MEDICAL AND SURGICAL SCIENCE.

The utility of photography as an aid to medical and surgical science is so obvious that it is a matter of surprise that its use has been hitherto, comparatively speaking, restricted. As a means whereby clinical results and microscopical researches may be permanently recorded, photography is far more accurate than any drawing can hope to be, and in the hands of the careful worker is capable of producing important results. The successful application of the x rays to surgical diagnosis has undoubtedly acted as a great stimulus to the adoption by medical men of the longer known but somewhat neglected art. Again, the camera naturally appeals to the medical man as a means of relaxation and a scientific hobby after his own heart. In any case the introduction of Photographic "Tabloids" has done much to render the manipulation of plates and prints a matter of much greater ease than hitherto. In the past the great drawbacks, especially to the busy physician or surgeon, have been the time and trouble required to prepare the necessary solutions, and their liability to decompose and become uncertain in composition and action when prepared at home or purchased ready made.

The Photographic "Tabloid" disposes of every previous objection. Each "Tabloid" contains in a compressed and soluble form, a definite quantity of photographic chemical. No weighing is required, and uniform results are obtained. There is no danger of deterioration as in the case of stock solutions, as the "tabloid" is dissolved only when required, and furnishes a fresh and active solution for immediate use.

A medical officer writing from Lake Tanganyika, British Central Africa, says: "I always use your 'tabloids' in photography; they are most excellent in every way, uniform in strength, cleanly, inexpensive, and everything to commend them. I have tried all sorts of developers, but none equal your 'tabloids.'"

Photographic "tabloids" occupy very little space, an important point when travelling, and have the additional advantage of being free from the tendency shown by fluids to do irretrievable damage to the other contents of the knapsack should accidental leakage or breakage occur.

PHOTOGRAPHIC "TABLOID" LIST.

Developing "Tabloids":—

Eikonogen, Eikonogen with Quinol; Paramidophenol; Pyro-Developer; Pure Pyrogallic Acid, 1, 2, and 4 grs.; Quinol (Hydroquinone); Pyrogallic Acid with Eikonogen; Quinol with Pyrogallic Acid.

Accelerator "Tabloids."

Restrainer "Tabloids":—

Potassium Bromide, 1 gr.; Ammonium Bromide, 1 gr.
In large and small bottles, 5d. and 9d. per bottle.

Toning "Tabloids":—

Toning Gold Compound, *in tubes at 8d. each.*

"SAXIN TABLOIDS."

"Saxin" has been aptly termed "the sweetest thing on earth," being about 600 times sweeter than sugar. It is perfectly harmless, as it undergoes no change in its passage through the digestive system, but simply imparts its delicate sweet flavour to the food or fluid with which it is used. For these reasons it is indicated in such conditions of disease as diabetes mellitus, gout, obesity, glycosuria, &c., in which the patient is debarred from taking sugar and yet retains an intense desire for the sweet flavour to which the palate has by long use become accustomed.

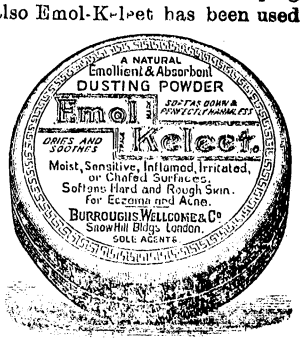
"Saxin" has important qualities which render it superior to other sweetening substances. It is unfermentable and permanent. It operates antiseptically, and prevents decomposition. In flavour it is more delicate than any other sweetening agent, and, in the shape of "Saxin Tabloids," ¼ gr. each, it provides the maximum amount of sweetening power in the smallest possible space. A small bottle, containing 100 or 200 "tabloids," can be carried in the vest pocket without the slightest inconvenience, and thus the patient who must avoid sugar can have a delicately flavoured, harmless sweetening agent always handy when at business or when travelling at home or abroad.



"Saxin Tabloids," ¼ gr., are each equivalent to one lump of best loaf sugar, and are supplied in bottles of 100 and 200 "tabloids," at 7d. and 1s. 1d. per bottle.

EMOL-KELEET.

Emol-Keleet is a natural mineral powder carefully purified but unsophisticated in any way. It has been largely used by physicians as a dusting powder in the treatment of cutaneous diseases, and for allaying irritation such as occurs in urticaria, the eruptive period of measles, &c. In moist or weeping conditions of the epidermis also Emol-Keleet has been used with most beneficial effects, and has further attracted attention owing to its wonderful softening influence upon the horny accretions of keratosis and other hardened conditions of the skin.



A recent report in the BRITISH MEDICAL JOURNAL (March 13th, 1897) by the lecturer on Pharmacology at Westminster Hospital points out the dangerous adulteration that is carried on in the case of many toilet powders, such minerals as zinc, bismuth, and lead being present in some samples to the extent of 40 per cent.

The effect of such powders on the delicate skins of infants may be readily recognised, and it is suggested that the physician guards against their use in the nursery.

By chemical analysis and extended therapeutic trial, Emol-Keleet has been proved to be a pure, emollient, natural mineral powder, possessing marked soothing and healing properties.

Emol-Keleet is supplied to the profession in boxes at 9d. each.

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On Sundays, Holidays or when our offices are closed, B. W. & Co. preparations urgently required can be obtained from
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SOME OPINIONS OF EXPERTS AS TO THE VALUE OF

TAKA-DIASTASE

AS AN AID TO DIGESTION.

"Hitherto the digestive properties of diastase have been appropriated chiefly by using active extracts of malt, which, of course, contain a large excess of malt sugar, which in certain cases it is desirable to exclude. The use of the Taka-Diastase, therefore, offers obvious advantages on this head."—THE LANCET, May 25th, 1895.

"There is no doubt ..... that in Taka-Diastase we have an exceedingly powerful starch ferment which will give us results more certain than those we have hitherto learnt to be thankful for."—QUARTERLY MEDICAL JOURNAL, January, 1896.

"It is capable of converting over one hundred times its weight of starch into sugar, and it must, therefore, be a valuable drug in the treatment of amylaceous dyspepsia."—BRISTOL MED. CHIR. JOURNAL, September, 1896.

"It seems to be established that flatulent dyspepsia is most commonly caused by faulty starch digestion, in which case we should expect benefit to follow the ingestion of this ferment. Such, we find, occurs in practice, with the further advantage that the constipation which almost always accompanies this form of dyspepsia is rapidly relieved at the same time."—QUARTERLY MEDICAL JOURNAL, April, 1897.

"We have carried out a series of tests with the Taka-Diastase, comparing it with three of the best-known malt extracts; also with a sample of commercial diastase in powder. The result of these experiments showed that Taka-Diastase was, weight for weight, sixty times the diastasic strength of the malt extracts, and that the commercial diastase had no starch-converting power at all."—CLINICAL SKETCHES, November, 1895.

"It is evident that in this product we have a medicinal agent for which there should be a place in therapeutics."—CHEMIST AND DRUGGIST, Jan. 25th, 1896.

"The question of the dependance of many forms of dyspepsia on the presence of undigested starch in the stomach is one which is not so fully recognised by all practitioners as it should be, and we can recommend any of our readers who expect such to be the nature of some cases of intractable dyspepsia to try the effect of Taka-Diastase. We also venture to suggest its use in the feeding of infants, in whom the dire effects of starchy foods and their influence on rickets is well known."—WEST LONDON MEDICAL JOURNAL, January, 1896.

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The Goulstonian Lectures

ON

THE CHEMISTRY AND PATHOLOGY OF GOUT.

Delivered before the Royal College of Physicians of London,

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PHYSICIAN IN CHARGE OF OUT-PATIENTS IN ST. MARY'S HOSPITAL, AND LECTURER ON FORENSIC MEDICINE IN ST. MARY'S HOSPITAL MEDICAL SCHOOL.

LECTURE III.[1]

Delivered on March 30th.

CAUSES AFFECTING THE DEPOSITION OF SODIUM BIURATE.

Deposition encouraged by concentration of medium and proportions of sodium salts present.—Sir William Roberts found that sodium biurate is very sparingly soluble in blood serum; at blood heat the amount dissolved is about 1 part in 10,000 (about one-tenth of its solubility in water). This lessened solubility is entirely due to the saline ingredients of the serum, as on depriving the serum of its salts by dialysis it was then found to exercise the same solvent action on the biurate as simple water. Sir William Roberts found that the sodium salts especially diminish the solvent power of a medium on sodium biurate, and that this diminished power is mainly, if not entirely, due to the sodium, and is apparently not much, if at all, influenced by the acids combined with it, since solutions of sodium bicarbonate, chloride, sulphate, phosphate, and salicylate, prepared so that the percentage of sodium in them was the same, exhibited the same solvent action. His experiments also show that if a medium be rich in urates, but poor in sodium salts, its tendency to precipitation is feeble, and *vice versâ*. Since structures belonging to the connective tissue class are rich in sodium salts and are also liable to uratic deposits, while muscle, brain, liver, and spleen are poor in sodium salts and not liable to uratic deposits, he considers that the proportion of sodium salts in a tissue is an important factor in determining the deposition of urates in that tissue. Another factor, according to this authority, in facilitating the precipitation of urates is to be found in the synovial fluid. Sir William Roberts's view is that the uratic precipitation actually takes place from the synovial fluid, and does not originate in the cartilaginous substance. This view is based in part on the microscopic appearance of vertical sections of gouty cartilage, in which the deposit is seen to be greatest on the synovial surface of the cartilage and to become gradually sparser and sparser towards the deeper layers, and in part on the fact that synovial fluid has been repeatedly found heavily laden with crystals of sodium biurate. He considers (as opposed to Ebstein's view) that the process of deposition in the cartilage is a purely passive and physical one, and that the synovial fluid, charged with its dissolved urate, penetrates by liquid diffusion into the superficial layers of the cartilage, and that when the critical moment arrives precipitation takes place simultaneously in the synovia and in the cartilage. According to this view the after consequences are entirely secondary, and are due to inflammation set up by the presence of the foreign body in the tissue.

As regards the varying liability of different joints to gouty attack, Sir William Roberts considers that it is, at all events in part, dependent on a greater concentration of the synovia of some joints and on a variable proportion of sodium salts and possibly of sodium biurate. The experiments made by Frerichs[2] on the comparative composition of the synovia of animals leading idle or active existences somewhat support this view. Frerichs found that the synovia of stall-fed horses and oxen leading an idle existence was more watery and contained a larger proportion of sodium salts than the synovia of similar animals doing work or roaming in the meadows. Moreover, the joints of the idle animals contained twice as much synovia as the joints of similar animals taking active exercise.

Deposition encouraged by sluggish movement of medium.—It is highly probable that the very sluggish movement of fluids in the cartilaginous and fibrous tissues favours the deposition of urates from the medium in which they are dissolved. As illustrating the fact that whatever interferes with the movement of the animal fluids favours the production of gouty symptoms and of an attack of gout itself, an interesting case has been recorded by Charcot,[3] who observed, in a hemiplegic woman aged forty years, that most of the articular cartilages on the right (paralysed), side were infiltrated with urates, whereas those of the non-paralysed side showed no such deposits. Sir William Roberts considers that the chief reason why in the post-mortem room the cartilages figure more prominently than the fibrous structures as the seat of deposition of sodium biurate is to be found in the fact that in the fibrous tissues there is a comparatively free lymph flow, which exercises a more effective solvent action on uratic deposits than can be effected by the sluggish lymph flow in the cartilages. With regard to the reason or reasons that gouty precipitation takes place preferentially in synovia rather than in the serum of blood and lymph, Sir William Roberts considers that the motionless condition of synovia as compared with the state of rapid movement of blood and lymph would give to synovia a priority in uratic precipitation. In addition, it is possible that, as Sir Alfred Garrod suggests, there is some special attraction in the joints for uric acid.

Deposition encouraged by nervous influences.—It is possible, given the condition in which there is a fair amount of sodium quadriurate or biurate circulating in the blood, the amount not being quite up to saturation point, that nervous influences may accelerate deposition of sodium biurate. It is well known that whatever produces depression of the nervous system, such as excessive exercise carried to the point of fatigue, rage, fright, worry, excitement, or venereal excess, may cause an attack of gout in a gouty subject. It appears to me that a possible explanation of this result is that nervous influence affects the kidneys and depresses their excretory power for uric acid, which is consequently absorbed into the general circulation and rapidly raises the quantity of urate in the blood to the point of over-saturation. Probably the well-known effect of an exposure to cold inducing a paroxysm of acute gout is due to a similar cause.

Deposition encouraged by abnormal constituents of the blood.—As previously stated, in cases of chronic lead poisoning there is a deficient excretion of uric acid in the urine and an accumulation of it in the blood. As to the actual way in which the lead favours or hastens the deposition of sodium biurate and so produces gout there are different opinions. Sir William Roberts[4] considers that it is difficult to believe that lead poisoning produces the same constitutional diathesis as that which exists in true gout, and prefers to think that, while gout and plumbism differ in all other respects, they have one tendency or vice in common—namely, the tendency to uratosis—that is, to the deposition of sodium biurate. He considers it is more accurate, instead of speaking of *ordinary gout* and *saturnine gout*, to speak of *gouty uratosis* and *saturnine uratosis*. It appears to me that gout and plumbism have more in common than this tendency to uratosis in that they both have the same tendency to cause the presence of an excess of urates in the blood. The association of lead poisoning with gout has been repeatedly observed, but Oliver[5] states that in the North of England this intimate relationship between gout and lead poisoning is not seen. He is not satisfied that the reason why gout is so little known in the North as a symptom of lead poisoning, while it is so common in the South, is entirely due to the difference in the drinking habits of the people—whisky being the general alcoholic drink in the North and malt liquor in the South. At the same time he confesses his inability to offer any further explanation.

I am of opinion that the influence of lead in producing gout depends solely on the extent to which the kidney parenchyma is damaged. With much damage done to the kidney cells, whose function it is to excrete uric acid, absorption of quadriurate into the blood occurs; the subsequent development of an attack of gout entirely

[1] Lectures I. and II. were published in THE LANCET of March 27th and April 3rd, 1897, respectively.

[2] R. Wagner's Handwörterbuch der Physiologie, 1884, Band iii., part i., pp. 463-466.

[3] Maladies des Vieillards et les Maladies Chroniques, 1874.

[4] Transactions of the Medical Society, vol. xiv., p. 88.

[5] Goulstonian Lectures on Lead Poisoning, THE LANCET, March 7th, 14th, and 21st, 1891.

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depends on the amount of absorbed quadriurate, which in its turn depends on the amount of kidney mischief.

Deposition encouraged by injury to joints or by interference with their nutrition.—A slight injury to a joint, which in a healthy person would speedily pass off, in a gouty person renders the part susceptible to the deposition of sodium biurate if sodium quadriurate be circulating in the blood. This susceptibility is probably in some way connected with an impairment of the nutrition of the affected tissues. Fagge, indeed, regarded a paroxysmal attack of gout in the light of an accident occurring in the course of an essentially chronic change in the joint affected.

As regards the relation between gout and rheumatism, Sir Alfred Garrod has remarked that if gout supervenes in individuals who have suffered from rheumatism it is generally the articulations which had been affected before that are attacked first; so that joints which have been the seat of acute rheumatism are especially predisposed in gouty subjects to become the seat of uratic deposits. Dr. Latham[6] thinks it is probable that the uric acid circulating in the blood might exert a toxic effect on certain portions of the spinal cord which control the nutrition of the joints, and so cause nutritive changes or inflammation in the joints connected with that portion of the cord; as a result of the inflammation or nutritive changes in the joints sodium biurate is deposited in them or in the tissues around the affected joints. Ebstein[7] considers that deposition of sodium biurate is dependent on, and is produced by, previous necrosis of the affected tissues, and that the uratic deposit never occurs in a normal tissue. His view is that the neutral sodium urate circulating in the blood acts as an irritant and produces necrosis of the cartilages or other tissues, in which the sodium is subsequently deposited; as a result of this necrosis he considers that an acid is developed which converts the neutral urate into acid urate, which compound is then deposited in the necrosed areas. I have already fully stated the objections to this theory. Klemperer[8] does not consider that uric acid is responsible for the necrotic changes in tissues, nor that the phenomena of gout can be due to mere crystallisation of sodium biurate from the blood, because in leucocythæmia, where an excess of urate is present in the blood, neither local necrosis nor uratic deposits occur. He believes that some unknown substances in gout lead to inflammatory and necrotic processes in various tissues; these necrotic areas then attract the uric acid from the blood, the chemical affinity of the necrotic parts for uric acid being so great that the blood cannot re-dissolve it. Von Noorden thinks the unknown substance which starts the inflammatory and necrotic processes, is a ferment, and that the uric acid crystallises out in the necrotic tissues.

Deposition encouraged by diminished alkalinity of the blood.—Various writers have put forward the opinion that uratic deposition is dependent upon a diminution of the alkalinity of the blood. Mordhorst[9] considers that the tissues affected by gout are less alkaline than the blood, and that if the alkalinity of the latter becomes lowered then deposition may take place. Dr. Haig considers that diminished alkalinity of the blood causes deposition of uric acid in the liver, spleen, fibrous tissue, and joints, and that increased alkalinity of the blood causes its re-solution. The view that diminished alkalinity of the blood causes uratic deposition and that increased alkalinity of the blood causes re-solution of the uratic deposits is in my opinion erroneous and untenable for the two following reasons: (1) The view is apparently based on the supposition that the deposit is uric acid, whereas it is sodium biurate, the solubility of which, as Sir William Roberts has shown, is not increased by increased alkalinity of the blood; and (2) from a series of experiments that I have conducted, and which will be subsequently described, it appears that a diminution of the alkalinity of a medium does not affect the deposition of sodium biurate from that medium.

Reasons for the special selection of the great toe and ear as seats of gouty deposits.—There are several reasons to account for the special causation of uratic deposits in the great toe: (1) there is the liability of the metatarso-phalangeal joint to injury from having to support the weight of the body and from being subjected to sudden shock; (2) the remoteness of the joint from the heart and the force of the circulation being consequently at its minimum at that part; and (3) the poor vascularity of the tissues of the joint. The liability of the joint to injury is shown by Sir Alfred Garrod's examinations of the great toe joints of 20 subjects known not to have had gout. In 14 he found ulceration of the cartilages of one or both joints. Of these 20 subjects, 3 were under thirty years of age and showed no ulceration of the cartilages; the remaining 17 were over thirty years of age, and of these 14, or 82 per cent., showed ulceration of the cartilages. All the subjects over fifty years of age showed ulceration. In the helix of the ear the sluggish circulation and the coldness of the organ are quite sufficient to account for the frequency with which uratic deposits are formed in that part.

Cause of the inflammation which accompanies the gouty paroxysm.—The gouty paroxysm is due to precipitation of sodium biurate, which always takes place in crystalline form, the crystals being distributed through the implicated tissue in the form of delicate needles, aggregated into tufts, bundles, and stars. When deposition occurs in cartilage the crystalline deposit acts as an irritant and causes inflammation leading to proliferation and necrosis of cartilage cells, which may be followed by erosion of cartilage and of uratic deposits and consequent displacement of the latter into the cavity of the joint. Along the borders of the cartilage, where the deposits are comparatively small and the tissues are relatively rich in capillary vessels, the inflammatory processes may produce a more luxuriant growth of the cartilage cells, resulting in the formation of ecchondroses at the margins of the articulation. Although I consider that the inflammatory part of the gouty attack is secondary to the deposition of sodium biurate crystals, yet it must be granted that such deposition should occur fairly copiously and suddenly in order to start the inflammatory process. Undoubtedly urates may deposit slowly and quietly in joints without the development of any acute attack, or for some time antecedent to the development of an acute attack. The observations of Moxon and Fagge support the conclusion that the discovery after death of uratic deposits in a joint is not always to be regarded as a certain proof that the joint has passed through an inflammatory gouty attack. Sir Alfred Garrod's views, which are shared by Sir William Roberts and supported by abundant evidence, are in favour of the deduction that the deposition of crystalline biurates is not merely an accompaniment, but is the direct cause of the joint troubles of gout. It is therefore of practical importance to know what are the various factors or conditions which may influence the conversion of sodium quadriurate into biurate, which may alter the solubility of sodium biurate in the blood, lymph, and synovia, and which may affect the precipitation of the sodium biurate.

CERTAIN CONDITIONS AND FACTORS AFFECTING THE SOLUBILITY AND THE PRECIPITATION OF SODIUM QUADRIURATE AND SODIUM BIURATE.

Diminution of the alkalinity of the blood.—It is well known that an attack of gout may be accelerated by ingestion of food or beverages harmful either as regards their quality or quantity. Such substances may exert a direct or indirect chemical action which facilitates the precipitation of sodium biurate—this is the chemical view; or they may possibly exert a physical action only in hastening such precipitation—this is the mechanical view. A view to which I have previously referred, which is commonly held as to the influence of diet and certain beverages in accelerating an attack of gout, is that such substances reduce the alkalinity of the blood and so hasten the precipitation of sodium biurate. As I believe this view to be erroneous I will ask your attention to a consideration of my reasons for holding this opinion. It is remarkable what a number of writers incline to the view that diminution of the alkalinity of the blood causes the deposition from it of sodium biurate, and that a subsequent rise in alkalinity causes solution of the previously formed deposits. It is assumed that a nitrogenous animal diet diminishes the alkalinity of the blood and so causes deposition of sodium biurate. It is also assumed that a similar result is caused by the acids contained in wines and beers, and that the pains in the joints that frequently occur in gouty subjects soon after taking certain wines or beers are due to deposition of biurate following on the reduction of the alkalinity of the blood by the acid so introduced. Now, in the first place, is there any substantial proof that the alkalinity

[6] Croonian Lectures, THE LANCET, April 3rd, 10th, 17th, and 24th, and May 1st, 1886.

[7] Die Natur und Behandlung der Gicht, 1882.

[8] Deutsche Medicinische Wochenschrift, 1895, Band xxi., p. 655.

[9] Verhandlungen des Congresses für Innere Medicin, 1896, p. 405.

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of the blood is much reduced in connexion with gout? Careful experiments by Klemperer[10] that have recently been conducted show that the alkalinity of the blood of gout is but very little, if at all, diminished, and that corresponding variations in the alkalinity may frequently be met with in healthy individuals. There is certainly no good ground for the belief that an "acid dyscrasia" underlies the gouty condition. Recent researches show that a diminution of the alkalinity of the blood is a common pathological condition in diseases that are in no way associated with uratic precipitation, such as acute rheumatism, leukæmia, diabetes, carcinoma, and pyrexia. In the second place I have been unable to meet with any experimental proof that a diminution in the alkalinity of blood containing uric acid in solution either facilitates the deposition of sodium biurate from it or diminishes its solvent power for sodium biurate or for uric acid. I therefore considered it advisable to experimentally investigate these different points, and for that purpose the following series of experiments was undertaken.

I. *Experiments showing to what extent the rate of formation and precipitation of sodium biurate is affected by diminishing, by the addition of acids, the alkalinity of blood serum charged with uric acid.*—Seven bottles, each containing 40 c.c. of blood serum, were raised to 100° F. and then charged with uric acid to the extent of 1 in 1000. As soon as the uric acid was dissolved varying quantities of hydrochloric acid were added to the contents of three of the bottles, and of tartaric acid to another three, so as to partially reduce the alkalinity of the serum; the contents of the seventh bottle were left unaltered. The bottles were kept in a warm chamber at 100° F., and the commencement of the precipitation of sodium biurate crystals was then looked for by examining some of the contents of the bottles under the microscope every few minutes so as to note the time when the formation of biurate crystals commenced. The quantities of hydrochloric acid added to the contents of three of the bottles were such as to neutralise respectively three-fourths, one-half, and one-fourth of the alkalinity of the serum remaining after solution of the uric acid. To the other three bottles corresponding quantities of tartaric acid were added to produce similar results. The following tables (Table V. and Table VI.) show the results of these experiments.

TABLE V.—*The Results of Experiments made with Blood Serum charged with Uric Acid to show the effect which the Diminution of the Alkalinity of the Serum by the addition of Hydrochloric Acid has on the Precipitation of Sodium Biurate.*

Solution.	Commencement of precipitation.
Blood serum containing 1 in 1000 uric acid	Crystals of sodium biurate first appeared in from 6 to 7 hours.
The same one-fourth neutralised by hydrochloric acid	
The same one half neutralised by hydrochloric acid	
The same three-fourths neutralised by hydrochloric acid	Some crystals of uric acid appeared in 5 minutes. Crystals of sodium biurate first appeared in 12 hours.

It will be seen from the results of these experiments that the effect of diminishing the alkalinity of blood serum as far as one half has no influence whatever in hastening the conversion of the sodium quadriurate into biurate, or, in other words, does not influence the deposition of sodium biurate from the serum. When the alkalinity is reduced by three-fourths by the addition of hydrochloric acid some crystals of uric acid were almost immediately precipitated, but when this precipitation of uric acid had ceased then the deposition of sodium biurate did not begin till twelve hours had elapsed. The reason that the deposition of sodium biurate was delayed a longer time than in the cases of the serum the alkalinity of which was reduced respectively by one fourth and one-half was that the removal of some of the uric acid rendered the solution of sodium quadriurate weaker, and, as has been pointed out by Sir William Roberts, the amount of uric acid in solution exercises a very important influence on the rate of maturation of the quadriurate and on the advent of precipitation of the biurate. This early shower of uric acid crystals that occurred when sufficient hydrochloric acid was added to the blood serum to neutralise three-fourths of its alkalinity has no bearing whatever on the chemistry of the gouty attack, since the gouty deposit always consists of sodium biurate and never of uric acid. The following table shows the results of the experiments with tartaric acid and blood serum.

TABLE VI.—*The Results of Experiments made with Blood Serum charged with Uric Acid to show the Effect which the Diminution of the Alkalinity of the Serum by the Addition of Tartaric Acid has on the Precipitation of Sodium Biurate.*

Solution.	Commencement of precipitation.
Blood serum containing 1 in 1000 uric acid	Crystals of sodium biurate first appeared in from 6 to 7 hours.
The same, one-fourth neutralised by tartaric acid	
The same, one-half neutralised by tartaric acid	
The same, three-fourths neutralised by tartaric acid ...	

From these experiments it is evident that even the reduction of the alkalinity of blood serum by three-fourths has no influence in hastening the precipitation of sodium biurate from blood serum impregnated with uric acid. The view, therefore, that a diminution of the alkalinity of the blood promotes an attack of gout by favouring the deposition of sodium biurate is, in my opinion, untenable. In order to give an idea of the amount of acid that would be required to reduce the alkalinity of the blood of an adult human being by three-fourths I made the following estimation and calculation. I found that the acidity of some 1847 port, reckoned as tartaric acid, was equal to six grains of acid to the wineglassful. In order to neutralise three-fourths of the alkalinity of the blood serum of a man of average weight it would be necessary that all the acid contained in two bottles of such port should be introduced at one moment into the circulation. It appears to be very doubtful indeed whether there really is any appreciable diminution of the alkalinity of the blood in gout. Klemperer[11] examined the alkalinity of the blood in three gouty cases and found that it was only slightly diminished. He found a much more conspicuous diminution of alkalinity in other morbid conditions which are not associated with the deposition of sodium biurate.

II. *Experiments to show the solvency of uric acid in blood serum the alkalinity of which has been reduced by the addition of an acid.*—The effect of hydrochloric and tartaric acids respectively was investigated. As will be seen from the results, there is a remarkable difference in the solvent power of partially neutralised blood serum for uric acid accordingly as its alkalinity is reduced by the addition of hydrochloric or tartaric acids. The experiments were carried out in the following manner. Four bottles containing 25 c.c. each of blood serum were taken; three of them were treated respectively with different quantities of hydrochloric acid so as to reduce the alkalinity of the serum in one case by one-fourth, in the second case by one-half, and in the third case by three-fourths; the contents of the remaining bottle were left untouched. The bottles were placed in the warm chamber till their contents were at 100° F., and then an excess (from 60 to 70 milligrammes) of uric acid was added to each. They were kept in the warm chamber for two hours, during which time they were frequently agitated; the contents of the bottles were then filtered from undissolved uric acid, and the dissolved uric acid in each filtrate was estimated. The following table shows the results.

TABLE VII.—*Showing the Solubility of Uric Acid at 100° F. in Unaltered Blood Serum, and in Blood Serum the Alkalinity of which is Proportionately Reduced by the Addition of Hydrochloric Acid.*

Solvent.	Uric acid dissolved.
Unaltered serum	2·03 per 1000
Serum one-fourth neutralised by hydrochloric acid	1·48 ,,
Serum one-half neutralised by hydrochloric acid	1 00 ,,
Serum three-fourths neutralised by hydrochloric acid	0 45 ,,

Similar experiments were carried out using tartaric acid in the place of hydrochloric acid. The following table shows the results.

[10] Deutsche Medicinische Wochenschrift, 1895, Band xxi, p. 655.

[11] Deutsche Medicinische Wochenschrift, 1895, Band xxi., p. 655.

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TABLE VIII.—*Showing the Solubility of Uric Acid at 100° F. in Unaltered Blood Serum, and in Blood Serum the Alkalinity of which is Proportionately Reduced by the addition of Tartaric Acid.*

Solvent.	Uric acid dissolved.
Unaltered serum	2·03 per 1000
Serum one-fourth neutralised by tartaric acid	2·01 ,,
Serum one-half neutralised by tartaric acid	2·01 ,,
Serum three-fourths neutralised by tartaric acid	2·02 ,,

It is seen from the results of these experiments that if the alkalinity of blood serum is reduced by the addition of hydrochloric acid the solvency of the serum for uric acid is correspondingly altered. This is what one would expect, since the conversion of some of the sodium bicarbonate of the serum into sodium chloride renders that portion of the sodium unattainable by the uric acid and prevents the solution of a corresponding amount of the latter as sodium quadriurate. Such a result, however, does not follow the reduction of the alkalinity of the serum by the addition of an organic acid such as tartaric acid. It will be seen that serum, the alkalinity of which is reduced respectively by one-fourth, one-half, and three-fourths, practically does not vary at all as regards its solvency for uric acid. The explanation, no doubt, is that the uric acid is able to displace the tartaric acid from its combination with sodium and utilise the sodium of the tartrate as readily as the sodium of the bicarbonate to form the soluble sodium quadriurate. Since the acidity of wines is due to organic acids (mainly tartaric, malic, and succinic acids) it would seem very doubtful, judging from the results of these experiments, whether, even if any alteration in the alkalinity of the blood were produced by the drinking of acid wines, the solubility of uric acid in such blood could be affected in the slightest degree.

III. *Experiments to show the solvency of sodium biurate in blood serum the alkalinity of which has been reduced by the addition of an acid.*—The effect of hydrochloric and tartaric acids respectively was investigated. The experiments were carried out in a similar manner to those just described, except that an excess of sodium biurate was substituted for the uric acid and the digestion with the sodium biurate was carried on at 100° F. for five hours. The following tables show the results.

TABLE IX.—*Showing the Solubility of Sodium Biurate at 100° F. in Unaltered Blood Serum, and in Blood Serum the Alkalinity of which is Proportionately Reduced by the Addition of Hydrochloric Acid.*

Solvent.	Sodium biurate dissolved.
Unaltered serum	0·05 per 1000
Serum one-fourth neutralised by hydrochloric acid	0·05 ,,
Serum one-half neutralised by hydrochloric acid	0·07 ,,
Serum three-fourths neutralised by hydrochloric acid	0·10 ,,

These results show that sodium biurate is slightly more soluble in serum which has been partially neutralised by the addition of hydrochloric acid than it is in unaltered serum.

TABLE X.—*Showing the Solubility of Sodium Biurate at 100° F. in Unaltered Blood Serum, and in Blood Serum the Alkalinity of which is Proportionately Reduced by the Addition of Tartaric Acid.*

Solvent.	Sodium biurate dissolved.
Unaltered serum	0·05 per 1000
Serum one-fourth neutralised by tartaric acid	0·08 ,,
Serum one-half neutralised by tartaric acid	0·08 ,,
Serum three-fourths neutralised by tartaric acid	0·12 ,,

These results also show that sodium biurate is more soluble in serum the alkalinity of which has been reduced by the addition of tartaric acid than it is in unaltered serum. I think that the view that uric acid is deposited in the liver, spleen, joints, and fibrous tissues owing to diminished alkalinity of the blood should be abandoned. It is based on an error—viz., that the deposit is uric acid, whereas it is sodium biurate. The results of the experiments that I have just described indicate that diminution of the alkalinity of the medium does not promote the deposition of sodium biurate. The other view, that increased alkalinity of the blood dissolves and sweeps out the accumulations of uric acid from the various organs and tissues, should also, in my opinion, be abandoned. It is based on the same error—viz., that the deposit is uric acid, whereas it is sodium biurater. That this body is not more soluble in highly alkaline fluids has been proved by the experiments of Sir William Roberts,[12] and is confirmed by the experiments that I have just described.

Certain drugs reputed to facilitate the deposition of uric acid.—Another erroneous idea, in my opinion, is that uric acid may be precipitated from the blood in the form of insoluble urates by certain metallic salts; these insoluble urates are supposed to be deposited in various tissues or organs, and yet in some mysterious manner to be subsequently re-dissolved when the alkalinity of the blood rises. There is absolutely no experimental proof to support such statements. Dr. Haig is, I believe, the chief apostle of these doctrines. As an instance of their erroneous nature I will briefly refer to Dr. Haig's[13] statement that "calomel clears uric acid out of the blood and retains it in the body by forming an insoluble urate of mercury." This statement is based on the fact that solutions of urates give with *soluble* salts of mercury a precipitate of urate of mercury. But how can an insoluble compound like calomel act in such a manner? It might be assumed that the calomel first forms in the system a soluble salt of mercury. If such were the case, then every time we give a full dose of calomel we should kill the patient by acute mercurial poisoning. Moreover the error of Dr. Haig's deduction is illustrated by observing the amount of uric acid supposed to be converted into urate of mercury. He mentions only one experiment in which half a grain of calomel is supposed to precipitate and retain in the system as urate of mercury 1·4 grains of uric acid. Now, even allowing that all the mercury in the half-grain of calomel is capable of forming urate of mercury, then it could only combine with one-fourth of the 1·4 grains of uric acid supposed to be precipitated by its means. Yet from this one assumed retention of uric acid by calomel Dr. Haig[14] remarks: "Mercury diminishes the excretion of uric acid in the urine, clears it out of the blood and retains it in the body, because it forms with it an insoluble compound, and it is therefore a single instance of my law of solubilities."

Influence of certain articles of diet on the precipitation of sodium biurate.—It is well known that the excessive consumption of rich nitrogenous food, combined with excesses in wine and malt liquors, both induce and excite gout. The comparative immunity of females and young people from gout is mainly explained by the absence of such determining causes of the gouty attack, combined with, in the case of young people, the absence of predisposing causes, and also the fact that the secreting functions are in full activity. The subjects of gout are generally persons who live well and consume a large amount of animal food. Dr. Budd, speaking from a long and extensive professional connexion with a large rural district, states that he never knew an instance of gout occurring among agricultural labourers. The generally accepted view that a highly nitrogenised animal diet necessarily produces an excessive amount of uric acid is disproved by the experiments, previously referred to, of Bleibtreu and of Hirschfeld. These experiments show that there is an increased elimination of urea to compensate for an excessive intake of nitrogenous food, and that the amount of uric acid remains practically undiminished. Judging by the results of the experiments which I have undertaken and previously described, it is highly improbable that any diminution in the alkalinity of the blood which might be produced by the consumption of an excessive amount of animal food could in any way affect its solvent powers for uric acid or accelerate the precipitation of sodium

[12] Croonian Lectures on Uric Acid Gravel and Gout, THE LANCET, June 18th and 25th, 1892.
[13] Uric Acid as a Factor in the Causation of Disease, 1896.
[14] Loc. cit., p. 63.

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biurate. My own view is that, as regards the production of uric acid from proteid matter, it is of little importance whether the proteid is of animal or vegetable origin; the same harm may result from an excessive consumption of either form of proteid. But although animal and vegetable proteids may react alike with regard to the production of uric acid, it is quite possible that the different saline constituents of animal and vegetable foods might very materially affect the solubility of sodium biurate and therefore influence its precipitation. As I have been unable to find any record of experimental work bearing on this matter, I thought it advisable to ascertain if the saline substances contained in different articles of diet appreciably affected the solvency of sodium biurate at the temperature of the human body, as obviously the subject might have both a pathological and therapeutical bearing. The following experiments were therefore carried out.

Experiments showing the influence of the mineral constituents of meat, milk, and vegetables respectively on the solubility of sodium biurate at 100° F.—A series of experiments were undertaken, operating upon the ash respectively of lean beef, milk, and mixed vegetables (potatoes, spinach, and French beans). The experiments were carried out in the following manner, which is similar to the method adopted by Sir William Roberts in determining the influence of various therapeutical salts on the solubility of sodium biurate. The contents of a number of bottles each containing 100 c.c. of distilled water were mixed with known quantities of the different ashes and placed in the warm chamber until they were at a temperature of 100° F., when an excess of sodium biurate was added to each. The bottles were kept at 100° F. for five hours, during which period they were frequently agitated. At the end of that time the contents of the bottles were filtered and re-filtered through double filters until perfectly clear filtrates were obtained. The amount of uric acid in each of the filtrates was then estimated by adding an excess of strong sulphuric acid and titrating with the standard potassium permanganate solution: the quantity of uric acid found was subsequently calculated into terms of sodium biurate. The results thus obtained are shown in the following tables. The solubility of sodium biurate in distilled water is placed at the head of each table for comparison.

TABLE XI.—*Showing the Influence of the Mineral Constituents of Meat (lean beef) on the Solubility of Sodium Biurate at 100° F.*

Solvent.	Sodium biurate dissolved.
Water	1·10 per 1000.
Water containing:—	
1·0 per cent. of meat ash	0·93 ,,
0·5 ,, ,, ...	0·76 ,,
0·2 ,, ,, ...	0·56 ,,
0·1 ,, ,, ...	0·32 ,,
0·05 ,, ,, ...	0·15 ,,
0·02 ,, ,, ...	0·11 ,,
0·01 ,, ,, ...	0·85 ,,

From the above table it is seen that the mineral constituents of meat in all proportions between 1·0 and 0·01 per cent. diminish the solvency of sodium biurate. The effect is most marked when the proportions are between 0·1 and 0·02 per cent., which are proportions that may certainly be present in the blood after eating a few ounces of meat. It is therefore quite possible that the well-known influence of excessive meat eating on the hastening or maturing of an attack of gout may, in part at least, be due to the action of the mineral constituents of the meat.

From Table XII. it is seen that the mineral constituents of milk in all proportions diminish the solvency of sodium biurate. The effect is most marked when 0·1 per cent. of milk ash is present. It is extremely unlikely that such a proportion could be present in the blood unless a person were exclusively fed for some time on milk. To introduce 0·1 per cent. of the mineral constituents of milk into the blood would require that all the mineral constituents of about twenty-two ounces of milk should be introduced at one moment into the blood of an adult of average weight. These experiments therefore seem to indicate that the mineral constituents of milk can exercise no appreciable influence in hastening or maturing an attack of gout.

TABLE XII.—*Showing the Influence of the Mineral Constituents of Milk on the Solubility of Sodium Biurate at 100° F.*

Solvent.	Sodium biurate dissolved.
Water	1·10 per 1000
Water containing:—	
1·0 per cent. of milk ash	0·62 ,,
0·5 ,, ,, ...	0·58 ,,
0·2 ,, ,, ...	0·49 ,,
0·1 ,, ,, ...	0·44 ,,
0·05 ,, ,, ...	0·72 ,,
0·02 ,, ,, ...	0·90 ,,
0·01 ,, ,, ...	0·94 ,,

From Table XIII. it is seen that the mineral constituents of vegetables in quantities of 0·1 per cent. and above very appreciably increase the solvency of sodium biurate. In quantities below 0·1 per cent the solutions exercise the same solvent power on the biurate as distilled water.

TABLE XIII.—*Showing the Influence of the Mineral Constituents of Vegetables (potatoes, spinach, and beans) on the Solubility of Sodium Biurate at 100° F.*

Solvent.	Sodium biurate dissolved.
Water	1·10 per 1000.
Water containing:—	
1·0 per cent. of vegetable ash	2·15 ,,
0·5 ,, ,, ...	1·70 ,,
0·2 ,, ,, ...	1·35 ,,
0·1 ,, ,, ...	1·15 ,,
0·05 ,, ,, ...	1·10 ,,
0·02 ,, ,, ...	1·10 ,,
0·01 ,, ,, ...	1·10 ,,

These experiments indicate that the mineral constituents of vegetables, if taken in sufficient quantities, would delay the advent of an attack of gout by increasing the solvency of sodium biurate.

I next endeavoured to ascertain whether the mineral constituents of milk, meat, and vegetables possessed any inhibitory powers over the decomposition of sodium quadriurate; and, if so, what were their comparative powers. It has been demonstrated by Dr. Bence Jones and by Sir William Roberts that the quadriurates, which consist of a molecular combination of a biurate with uric acid, are resolved by the action of water into moieties—the biurate moiety, which is dissolved by the water, and the uric acid moiety which is precipitated in the form of ovoid crystals. My object was to ascertain whether this change was delayed by the presence, in the water of small quantities of the mineral constituents of milk, meat, and vegetables respectively; and, if so, what the relative inhibitory powers of these constituents were. In connection with this investigation some very remarkable results were obtained. The method I employed was that originally used by Sir William Roberts. Some pure sodium quadriurate was prepared by the method described by him. A very small quantity was placed on a glass slide, and stirred up with a drop of water. A cover slip was applied, and the result watched under the microscope. The time was noted at which crystals of uric acid began to make their appearance. Fresh quantities of quadriurate were then treated in a similar manner with 0·1 per cent. solutions of the mineral constituents of milk, meat, and vegetable ash respectively, and the different times at which crystals of uric acid commenced to form were noted. These were compared with the time required by distilled water to start the decomposition, which was taken as the standard of comparison. It was found that when the quadriurate was treated with distilled water crystals of uric acid commenced to form at the end of half a minute, when treated with a 0·1 per cent. solution of milk ash in distilled water at the end of half a minute, with a 0·1 per cent. solution of meat (lean beef) ash at the end of one minute, and with a 0·1 per cent. solution of mixed vegetable (potato, spinach, and beans)

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ash at the end of two hours. Taking, for purposes of comparison, the time occupied by distilled water to start the decomposition as unity, the comparative influences exerted on the decomposition of the quadriurate by 0·1 per cent. solutions of the mineral constituents of milk, meat, and vegetables respectively are shown in the following table.

TABLE XIV.—*Showing the Comparative Inhibitory Powers on the Decomposition of Sodium Quadriurate possessed by Distilled Water and by 0·1 per cent. Solutions of the Mineral Constituents of Milk, Meat, and Vegetables respectively.*

Medium.	Comparative inhibitory power.
Distilled water	1
0·1 per cent. solution of milk ash	1
0·1 per cent. solution of meat ash	2
0·1 per cent. solution of vegetable ash	240

These results show that a 0·1 per cent. solution of milk ash acts precisely as does distilled water on the decomposition of the quadriurate; that a 0·1 per cent. solution of meat ash delays the decomposition of the quadriurate twice as long as distilled water, but still only for a very brief period; and that a 0·1 per cent. solution of vegetable ash delays the decomposition of the quadriurate 240 times as long as distilled water, and 120 times as long as does the meat ash solution. It must be borne in mind that the action of distilled water in causing decomposition of the quadriurate is very rapid as compared with blood serum, as the latter takes some hours to effect decomposition. It is highly probable that the addition of a small proportion of the mineral constituents of vegetables to blood serum would delay decomposition of the quadriurate for a very considerable period of time. I propose to further investigate this matter and to endeavour to ascertain to which of the saline constituents of vegetables this remarkable inhibitory power belongs The investigation appears to be a promising one, but time has not allowed me to prosecute it further at present. The net results of these experiments and of those previously described indicate that the mineral constituents of meat only delay for a brief period the decomposition of the quadriurate, and when it is once decomposed they hasten the precipitation of the biurate. On the other hand, the results indicate that the mineral constituents of vegetables delay for a remarkably long period the decomposition of the quadriurate, and then subsequently retard the precipitation of the biurate by increasing its solvency. I do not wish to attribute the different effects of animal and vegetable diets on gouty subjects to the saline constituents alone, but it is, I think, to the different mineral constituents of animal and vegetable foods and to the different effects they have on the quadriurates and biurates that we must look for at least a partial explanation—perhaps a main one—of the known facts that an excessive diet of the one tends to produce gout and of the other tends to retard it.

Influence of alcoholic drinks on the gouty process.—It is well known that certain alcoholic drinks injuriously affect the gouty process, whilst others exert a less injurious influence. Alcoholic drinks which have been obtained by fermentation, but which have not been submitted to distillation, such as wines and beers, appear to exercise a more harmful influence than if the same amount of alcohol be consumed in the form of one of the distilled spirits, such as whisky, brandy, &c. Sir Alfred Garrod considers that the reason for the prevalence of gout in the South of England and its rarity in Scotland is chiefly due to the different beverages drunk in the two countries. Distilled spirits contain little or no acid, whilst wines and beers are distinctly acid, and to the acids contained in these drinks many physicians have attributed, and still do attribute, their gout-inducing properties. The acids present are tartaric, succinic, malic, acetic, formic, propionic, butyric, and œnanthic. The acidity of wines is mainly due to tartaric, malic, and succinic acids. The amount of free acid in sound wine, reckoned as tartaric acid, varies between 0·3 and 0·7 per cent. I found the acidity of some 1847 port, reckoned as tartaric acid, to be 0·6 per cent. Cider owes its acidity mainly to malic acid. Its total acidity is usually 0·1 per cent. If we arrange the various wines in (*a*) their order of acidity, and (*b*) the order of their gout-inducing power, we find that the most acid wines are not those which most predispose to gout. The arrangement of wines and beers in the order of acidity, beginning with the most acid, is that given by Dr. Bence Jones, while the arrangement in the order of their gout-inducing power is that given by Sir Alfred Garrod.

TABLE XV.—*Wines and Beers arranged in order of Acidity and Gout-inducing Power.*

Acidity (beginning with the most acid).	Gout-inducing power (beginning with the most powerful).
Moselle.	Port.
Rhine wines.	Sherry.
Burgundy.	Other stronger wines.
Madeira.	Champagne.
Claret.	Stout and porter.
Champagne.	Strong ales.
Port.	Claret.
Sherry.	Hock.
Malt liquors.	Moselle.
	Weaker kinds of ales.

Claret, hock, moselle, and the weaker kinds of ales have comparatively little gout-inducing power.

Sir Alfred Garrod considers that acidity of alcoholic liquors cannot have much influence in determining an attack of gout, as port, sherry, and malt liquors, which are the most powerful predisposing agents, are amongst the least acid; whilst the more acid wines, such as clarets, are comparatively harmless in this respect. This opinion is entirely borne out by the experiments I have described in this lecture, which show that a dimunition of the alkalinity of blood serum does not hasten the conversion of sodium quadriurate into biurate, does not diminish the solubility of sodium biurate, and therefore cannot promote deposition of sodium biurate, and so be a determining cause of an attack of gout. The question is, To what constituent or constituents of wines and beers are their gout-inducing properties due? They are not due to the alcohol alone; for in countries such as Scotland, Norway, Sweden, and Poland, where distilled spirits are, or were, freely consumed, gout is almost unknown. Moreover, several experiments that I have made indicate that alcohol, in such quantities as it is ever likely to be present in the blood, has no effect either upon the conversion of sodium quadriurate into biurate or on the solubility of the latter. The gout-inducing properties are most probably not due to the acids of the wines and beers, for the reasons which I have already given. They are also most probably not due to the sugar. The late Dr. George Harley experimentally investigated the subject and stated that the popular notion as to the pernicious effects of sugar in cases of gout is open to grave criticism, seeing that not only can no reliable facts be adduced in favour of the statement, but no reliable authority for the assertion can be cited even by its believers. I have myself found experimentally that sugar has no appreciable effect either on the decomposition of sodium quadriurate or on the solubility of sodium biurate. The gout-inducing properties are certainly not directly due to the œnanthic ether and other ethereal salts of wines exerting any effect either on the rate of decomposition of the sodium quadriurate or on the solubility of the biurate. To demonstrate these points I have extracted from old port wines the ethereal salts to which the bouquet of the wines is due, and have experimented with these ethereal compounds on the quadriurates and biurates. Using quantities far in excess of those likely to be present in the blood after the moderate, or even immoderate, consumption of such wine, I find that none of these volatile constituents exercise the slightest effect either in hastening the decomposition of sodium quadriurate, or in diminishing the solubility or hastening the precipitation of sodium biurate. As to the *modus operandi* of certain wines, such as port, &c., in hastening an attack of gout, I am not at present prepared with an explanation, as I have not yet completed the experiments I am conducting with the view of endeavouring to throw some light on the subject. I, however, incline to the opinion that the influence of wines on the development of gout is in great part due to the effect they have on the metabolism of the liver, and the consequent increased amount of glycocine that passes on to the kidneys. At the same time it must be remembered that those

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accustomed to drink wine are also able to indulge in other luxuries of the table which greatly favour the development of gout.

CONCLUSIONS.

The main points and conclusions arrived at in these lectures are as follows:—1. Uric acid is not normally present in the blood of man and other mammals, nor in the blood of birds. 2. Uric acid is normally produced only in the kidneys. 3. Uric acid is normally formed from urea, probably by conjugation of that substance with glycocine in the kidneys. 4. Uric acid is present in the blood in gout as the soluble sodium quadriurate. In its soluble form it is not a toxic agent. It deposits from the blood as sodium biurate, which acts passively and physically as a foreign body in the tissues or organs in which it is deposited. 5. The presence of uric acid in the blood in gout is due to its deficient excretion by the kidneys and to the subsequent absorption of the non-excreted portion into the blood from those organs. 6. Gout is probably always preceded by some affection of the kidneys, functional or organic, which interferes with the proper excretion of uric acid. The probable seat of the kidney affection giving rise to gout is in the epithelium of the convoluted tubes. 7. In certain blood diseases and disorders accompanied by leucocytosis uric acid is formed within the system from nuclein. Under such circumstances it passes at once into the blood and is rapidly eliminated by the kidneys. 8. The solubility of uric acid in the blood is not affected by a diminished alkalinity of the blood produced by the addition of organic acids. 9. The deposition of sodium biurate is not accelerated by a diminution of the alkalinity of the blood. 10. An increased alkalinity of the blood does not increase the solubility of deposits of sodium biurate. 11. The saline constituents of vegetables exercise a remarkable inhibitory power over the decomposition of sodium quadriurate. 12. The solubility of sodium biurate in the blood is increased by the presence of the saline constituents of vegetables. 13. The solubility of sodium biurate in the blood is diminished by the presence of the saline constituents of meat. 14. The gout-inducing properties of certain wines are not due to their acidity. Probably they owe their gout-inducing action to the effect they exercise on the metabolism of the liver.

NOTE ON LACTOSURIA.

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A CASE of saccharine urine in connexion with lactation that has recently fallen under my observation has prompted these few remarks upon the subject. Mention has been for a long time made of the condition, and a considerable amount of literature is to be found regarding it. It is a matter which is quite devoid of any intrinsic importance, but at the same time may in certain instances give rise for a while to a considerable amount of mental disquietude.

In the case in question the patient was first seen by the country medical attendant of the family and was brought to me by the London medical attendant. Attention was in the first instance drawn to the state of the urine by an unusually frequent desire for micturition being experienced by the patient. She had been suffering for a little time from dyspeptic troubles, and through these was weaning her child which she had been nursing for a period of five months. She reduced the times of nursing to twice daily for a few days and then ceased altogether, without having recourse to artificial means for the removal of the milk. The breasts were hard and lumpy and a little tender, but showed nothing more. It was at this period that the urine was examined and found to be of specific gravity 1040 and to give a strong reaction of sugar, the quantity indicated by the copper test being eight grains per fluid ounce (19 per 1000). Hopes were entertained when the discovery of the presence of sugar was made that it might be due to a re-absorption of milk sugar, but anxiety was created on account of the family history of diabetes in the mother. When I saw the patient, three days after the sugar had been recognised, she had been placed on a restricted diet, with the administration of codeina. A specimen of the urine passed on going to bed on the previous night was of specific gravity 1036. It gave an indication of containing 6·75 per 1000 of sugar reckoned as glucose. The urine passed on rising in the morning was of specific gravity 1034. The figures for sugar stood at 5·26 per 1000. Both specimens had thrown down a copious deposit of urates, and it had been noticed that the amount of urine passed was considerably below the normal. I suggested that the state of the urine should be watched with a trial of a gradually advancing liberty of diet if circumstances should be found to permit. I subsequently learnt that the sugar soon disappeared, and when I saw the patient two months later she appeared to be in good health, was taking ordinary food, and passing urine free from sugar. In order to subject her condition to a thorough test she was desired to partake to a fuller extent than ordinarily of starch and sugar-containing articles of food. A fortnight later the urine was again found to be free from sugar.

The high specific gravity of the urine in this case when the sugar was first recognised contributed to excite alarm. It arose, as not unfrequently happens with ladies, from undue concentration dependent upon the ingestion of an insufficient quantity of liquid to permit of the secretion presenting its ordinary state.

With the advance of knowledge that has latterly taken place we have now at our disposal the means of readily differentiating lactosuria from true glycosuria. In former times it was different, and the sugar of lactosuria was assumed to be the same as that met with in diabetes. Hofmeister[1] in 1877 conducted an inquiry into the nature of the sugar present, and found that in the saccharine urine associated with the puerperal state the sugar presented the characters of lactose instead of those of glucose; and it is now admitted that in the form of saccharine urine under consideration lactose, and not glucose, is present. It would seem that a slight amount of lactosuria is of very common occurrence, but it is only where the secretion of milk is profuse enough to lead to an undue accumulation in the gland, or where from any cause undue retention occurs, that marked lactosuria is met with. According to the observations undertaken by Ney[2] in the Midwifery Clinic at Basle, in 152 cases where attention was given to the state of the urine after childbirth a reaction with the sugar tests was obtained in 77 per cent. With a natural progress after childbirth Ney argues that the occurrence of a saccharine reaction may be taken as an indication of the possession of good nursing capacity on the part of the mother. It shows that milk is secreted in such abundance as to lead to a re-absorption of some of its sugar.

The presence of sugar other than glucose was determined in the case under consideration by means of its cupric oxide reducing power taken before and after boiling with sulphuric acid and also by treatment with phenyl-hydrazine. Boiling with sulphuric acid, associated with the application of the copper test, affords a most useful means of determining the kind of carbohydrate that has to be dealt with. I have used the procedure very largely in my physiological researches, and it has proved of the highest value. I have applied it to the urine of diabetes in a large number of instances, and only upon exceptional occasions have I found that it has done otherwise than indicate the presence of glucose. In the case before us the cupric oxide reducing power stood much below that of glucose. As a matter of fact the figures obtained were below the figures ordinarily taken to represent the cupric oxide reducing power of lactose. The osazone crystals obtained on treatment with phenyl-hydrazine did not agree with those of glucosazone, but, on the other hand, corresponded with those yielded by a low cupric oxide reducing sugar like lactose.

The elimination of lactose under the circumstances in which it is found has an interest of another nature besides that belonging to the clinical aspect of the question. It has a bearing of fundamental importance in relation to the physiology of the carbohydrates, touching as it does the consideration of their mode of application within the animal system. Under the doctrine that implies a functional transit of sugar through the circulation an insuperable difficulty is presented. All evidence goes to show that whenever sugar, no matter of what kind, reaches the general circulation it becomes revealed in the urine. For sugar to be kept out of the urine it must as a preliminary condition be kept out of the general circulation, and this is effected with the carbohydrate of alimentation by its being disposed of before the opportunity is afforded of its reaching the systemic

[1] Zeitschrift für Physiologische Chemie, Band i., p. 101.
[2] Archiv für Gynäkologie, Band xxxv., p. 239.

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vessels. It has always been a puzzling matter under the old view that sugar supposed to reach the general circulation through the portal system from the alimentary canal should readily disappear, whilst after direct introduction by subcutaneous or intravenous injection it should remain susceptible of recognition and become discharged with the urine. With reference to milk sugar in relation to this point, von Noorden [3] writes: "We have here in the case of milk sugar to do with a substance which is in an eminent degree a physiological nutrient material, a substance which is taken in 'milk-cures' to the amount of from 100 to 150 grammes a day, and which can be ingested by most healthy individuals in single doses of 100 grammes and be rapidly absorbed without a trace escaping decomposition and appearing in the urine. Why, then, should a nursing woman excrete in the urine the certainly very small amount of sugar which she has elaborated in her own mammary glands and which has been thence taken up in the blood? A number of researches which I have made with a view to a solution of this problem have led me to the hypothesis that in the puerperal state the capacity of the tissues for breaking up milk sugar is diminished. We have here an instance of adaptation to an end, in that the cells of the mother refuse a material which is pre-eminently suited to the nutritive wants of the nursling."

The fact is, the milk sugar which is received into the alimentary canal does not reach the general circulation, as hitherto supposed, but becomes assimilated or disposed of instead. Experiment shows that if it did reach the general circulation the fact would be indicated by its passage into the urine. I have found that the injection of lactose only to the extent of one gramme per kilo of body weight, either subcutaneously or intravenously, gives rise to an enormous appearance of lactose in the urine. In absorption from the mammary gland the position may be looked upon as identical with that in absorption from the subcutaneous tissue, and when circumstances exist to lead to its occurrence the passage of lactose into the urine occurs. Lactose, then, cannot be conveyed as such in the blood to the mammary gland for separation by secretion any more than, as I contend, sugar can be conveyed to the tissues for destruction. In either case the urine would infallibly afford indication of the transit. Under the glucoside constitution of proteid matter set forth by me in my "Physiology of the Carbohydrates" carbohydrate matter can be transported without being in a position to run off with the urine, and with lactose taking origin as a cleavage product in the mammary gland all difficulty is overcome. It is quite obvious that if lactose reached the mammary gland, as such, for secretion it would similarly reach the kidney for elimination. By analogy the position of lactose throws light upon the broad question of the physiology of the carbohydrates in the animal system.

Grosvenor-street, W.

ILLUSTRATIVE CASES OF APHASIA.

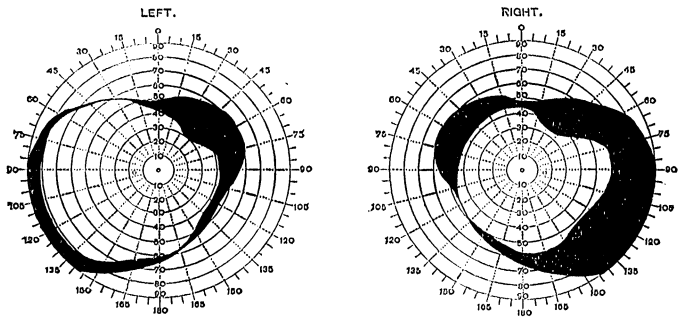
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(Continued from p. 1022.)

CASE 5. *Word-blindness in a patient who had never learned to write; constriction of the fields of vision chiefly towards the right; no obvious word-deafness; cardiac and renal disease; death; extensive old softening in the white matter of the left occipital lobe and of the left angular gyrus, and the back part of the first temporo-sphenoidal convolution.*—This patient was seen at the out-patient department of the Edinburgh Royal Infirmary on Nov. 7th, 1888, and was carefully examined at her own home on several subsequent occasions. I have, unfortunately, mislaid the detailed notes which were made except at the time of her visit to the infirmary, but my recollection of the leading facts is quite definite. The chief point of the case is that, although the posterior part of the first left temporo-sphenoidal convolution was extensively destroyed by an old softening, there was no obvious word-deafness. I should, however, here state that I had not seen the patient for several months before her death. It is therefore possible that the cerebral softening was much more extensive at the time of death than at the date of my last examination. I merely suggest this possibility, for there was nothing in the condition of the brain after death to lead me to suppose that this was the case. The word-blindness is explained by the lesion of the angular gyrus and adjacent white matter. The lesion must have involved, at all events in some degree, the optic radiations of Gratiolet. One would therefore have expected more complete right-sided lateral homonymous hemianopsia than the perimeter chart shows (see Fig. 15); but, as I have explained in the text, there was great difficulty (owing to the inability of the patient to concentrate and fix accurately) in mapping out the visual fields. The hemianopsia was probably more complete than the perimeter chart shows. Possibly the softening had become more extensive after the perimeter measurements were made. It is unfortunate that the patient had never learned to write, but there can be little doubt that if she had been able to write there would have been agraphia, for the visual speech centre (the angular gyrus) was involved in the lesion (see Fig. 16). The notes are as follows:—"The patient was a woman, aged fifty-six years; she was seen at the out-patient department of the Edinburgh Royal Infirmary on Nov. 7th, 1888, complaining of loss of memory, inability to read, dimness of vision, and dropsy. With regard to her previous history, the patient and her friend who brought her to the hospital stated that she had suffered from her heart for the past eight years, and that she had been much worse and troubled with dropsy, cough, and shortness of breath for the past six months. A fortnight previously she suddenly lost the power of speech. This continued for some hours. She then gradually regained the power of speaking and had been able to speak well since. Since the attack her memory had been much impaired and she had been quite unable to read. She was never a good reader, and had never learned to write. At the present time the patient is suffering from general dropsy, the face as well as the feet being swollen. She is very short of breath. The heart is much enlarged and there is a well-marked mitral lesion. The urine is albuminous. As to the speech faculties, the patient appears to understand everything that is said to her and has been able to do so since the attack commenced. There was therefore no indication of any lesion of the auditory speech centre. The patient answers questions and speaks quite well. No marked defect of the motor vocal speech apparatus was detected on any of the occasions on which she was examined, but the friend with whom she lived subsequently told me that she not unfrequently made use of wrong words (paraphasia) and forgot the meanings of others. The patient is quite unable to read either letters or words (complete word-blindness). There is well-marked right-sided homonymous hemianopsia to the rough test. The fields of vision were subsequently mapped out (on Jan. 17th, 1889) by means of the perimeter (see Fig. 15). The chart shows a partial condition of right-sided homonymous lateral

FIG. 15.



Perimeter chart of the fields of vision in Case 5, taken on Jan. 17th, 1889. The patient died on May 1st, 1890.

[3] Twentieth Century Practice of Medicine, vol. ii., 1895, New York, p. 45.

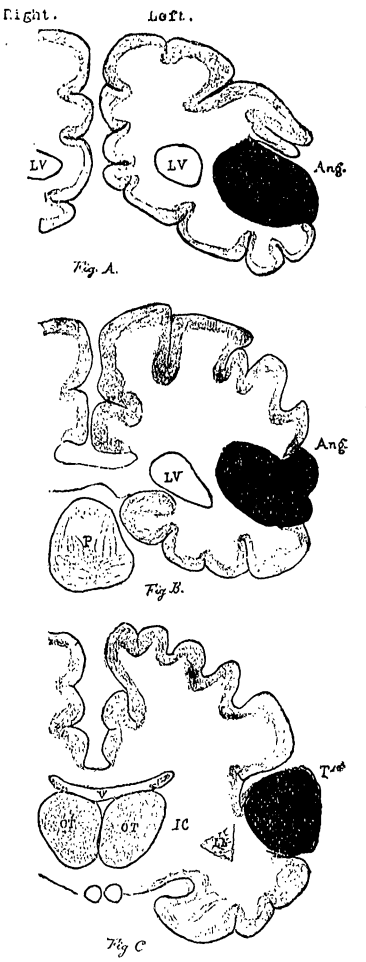
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hemianopsia, with some constriction of the left halves of the fields. The hemianopsia was probably more extensive than the chart shows, for except when the test object was quite at the outer edge of the fields the patient's answers were indefinite. She had never learned to write, consequently the presence or absence of agraphia could not be determined." On one of the subsequent examinations (the notes of which I have mislaid) the patient's friend told me that the patient understood everything which was said to her, but she did not think she understood things which were read to her. This statement seems to indicate a certain degree of word-deafness; but I could never satisfy myself that any obvious word-deafness was present. She also stated that the patient used to read her Bible night and morning, but she (her friend) did not think that the patient understood what she read. On the several different occasions on which I examined her I invariably found that she could understand spoken language and could herself make use of language (speech). But I never got her to read any question which I put to her in writing. She could read a few short printed words, such as "dog," "cat," and "hat," but made frequent mistakes in reading even these short words and in reading the alphabet. She was also very bad at reading figures. For some months before her death she was in a restless condition; her friend, who lived next door to her, said that she was "queer in the head." On May 1st, 1890, she was found drowned in the Water of Leith; she had wandered out of the house and apparently fallen into the stream.

Necropsy.—Dr. Harvey Littlejohn examined the body post mortem and kindly sent me the brain. The arteries at the base of the brain were atheromatous. An extensive area of old softening was present in the left hemisphere. It involved the white matter of the left occipital lobe, the left angular gyrus, and the back part of the first temporo-sphenoidal convolution. The exact position of the softening is shown in Fig. 16 (Sections A, B, and C), which were drawn from fresh sections of the brain. The kidneys and liver were cirrhotic. The heart was very large, the left ventricle much hypertrophied and dilated, the mitral valve considerably dilated, and the heart muscle degenerated.

CASE 6. *Marked temporary motor aphasia, word-blindness, and agraphia; optical aphasia; no word-deafness; the word "dog" written as "God," which was then read as "dog."*—This case is chiefly interesting from the facts that, while there were marked temporary motor aphasia, word-blindness, and agraphia, there was no obvious word-deafness, and that after the temporary effects of the primary lesion had passed off the patient wrote some words backwards—e.g., he wrote "God" for "dog," and after having written "God" for "dog" he read the word "God" as "dog." The notes are as follows:—The patient was a man, aged forty-two years. He was seen at the Edinburgh Royal Infirmary on Sept. 8th, 1890, suffering from motor aphasia, word-blindness, and agraphia. With regard to the previous history, he had been quite well until five days previously. On getting out of bed in the morning he felt sick, but did not vomit; he fell over three times in trying to get up. When his neighbours went into the room they found him quite sensible, but unable to speak. There was no headache and no giddiness. His condition was as follows. The patient seemed to understand everything that was said to him (the auditory speech centre did not appear to be affected). There was marked motor aphasia, almost the only words he could use being "yes" and "no." There was also marked word-blindness. When asked in writing, "Are you a fool?" he showed no sign of intelligence. When the sentence was read aloud to him he laughed and seemed much amused. There was also marked agraphia. He could not write his own name when told to do so. There was some right-sided hemianopsia. There was no obvious paralysis of the face. The right arm was much weaker than the left. The grasping power of the right hand as measured by the dynamometer was 85, and that of the left 116. In walking the right leg was dragged slightly. There was no cardiac lesion and no albuminuria. On Sept. 9th the patient's power of speaking was better and the motor power in the right arm was almost equal to that in the left. The dynamometer registered on the right 130, and on the left 135. On Sept. 10th the speech faculties were again carefully tested. The patient understood everything that was said to him. He spoke much better than on admission, but there was still a marked degree of motor vocal aphasia. Reading and writing were very markedly impaired—especially writing. He could not name a knife when it was shown to him. He read his own name correctly; but read "you" as "out" and made many similar mistakes in reading. He knew the figures "2" and "1." He could not read "42"; he said "41" was "5." He knew the individual figures "4" and "5" in "45," but he could not combine them. When asked to write

FIG. 16.



A series of transverse vertical sections through the brain, seen from the front, in Case 5 (word-blindness, but no obvious word-deafness) showing the exact position of the lesion (softening) in black. Fig. A represents the occipital lobe; Fig. B further forward at the level of the pons Varolii; and Fig. C further forward at the level of the optic thalami and corpora albicantea. The softening involves the angular gyrus (pli coubre) and first temporo-sphenoidal convolution.

"cat" he wrote "s a m a n." He could not write his own name. He wrote the letters "a" and "b" correctly when asked to do so. He could not write the letters "o" and "t." He said he was "forty-two years of age," but could not write it. He wrote "12" for "21." He could copy letters, figures, and words quite easily and correctly. On Sept. 13th he was very much better. He wrote his name and address quite distinctly. When asked to write "dog" he wrote "God," and when asked to read the word "God" which he had written read it as "dog." When told he was wrong, that he had written "God," he said, "Oh! yes, you have another way of writing it," and laughed. After an interval he was asked to read the word "God," and said, "That is very good, the name of God." On this day the patient discharged himself, and was not seen again.

CASE 7. *Case of word-blindness and agraphia; instead of reading individual letters as letters, the patient substituted a word commencing with the letter which he could not read—"George" for "G," "nearly" for "n," &c.*—The patient, a man aged fifty years, was seen on June 29th, 1893. With regard to the previous history, the patient, who suffered from free aortic disease, great enlargement of the heart, and

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albuminuria, had had two cerebral attacks. The first occurred on June 15th, 1892. In this attack he became paralysed on the right side, but did not lose consciousness. Speech was not affected. The paralysis slowly improved, but still continued. The second attack occurred on April 17th, 1893. The day before the attack (April 16th) he complained of violent headache, inability to see to read, and giddiness. The next morning his wife noticed that he could not speak properly. The paralysis of the arm and leg was no worse after this attack. He had been unable to read since this attack, and only able to write very imperfectly. He looked well in the face and said he felt well. His appetite and digestion were good. His wife said that he was very restless, always wanting to be off somewhere. He himself said: "Oh, I get tired of one place; if I could only read it would not be so bad." He was much more irritable than he used to be. He walked with a slight limp. There was little or no paralysis in the right arm. The grasping power of the right hand as measured by the dynamometer was from 90 to 105, and that of the left from 85 to 90. With regard to his speech faculties, he seemed to understand everything that was said to him (the auditory speech centre was unaffected). There was no marked defect of vocal speech, but his wife said that every now and again he made use of a wrong word. For example, "I want a pint of 'matter,'" meaning "milk." "Church," "white," and "height" were great words of his; he was constantly bringing them in in wrong places. His wife said that he was all wrong about figures and names. He repeated anything he was asked to repeat correctly. He was almost completely word-blind. His wife said that he would not admit this himself. He made a point of "reading" the paper every morning, but she was sure he could not understand it. She had on several occasions noticed that he held it upside down. When tested he could not read the words "November," "Edinburgh," "thus," "house," "Edinburgh Hospital Reports"; but read the words "dog" and "hat" correctly. He was unable to read the individual letters; he said "a" was "m," "o" was "d," "h" was "10," and "p" was "d." When asked to read the individual letters he in many instances said a word beginning with that letter; for example, he said "n" was "nearly," "G" was "George," and "J" was "James." He could not read numbers. Asked to read "10," he said, "No, I don't know." There was marked agraphia. He could sign his own name; and when asked to write something spontaneously wrote, "I am getting better." He was unable to read this sentence after he had written it. He could not write "June, 1893," "Edinburgh, 1896," when asked to do so. He wrote "26" for "28." His wife said that he often did stupid things; for example, he would eat his egg with his fish-knife. Shortly after this report was written the patient died suddenly; a post-mortem examination was not allowed.

CASE 8. *Case in which right-sided hemiplegia, complete motor (vocal) aphasia, word-blindness, and agraphia (probably due to embolism of the left middle cerebral artery) were suddenly produced, but in which there was no word-deafness; slow and gradual recovery; condition of the patient fifteen years after the original accident; mirror writing, &c.*—The chief points of interest in this case are: 1. That after a severe cerebral lesion, the exact nature of which is not clear, there was complete motor aphasia, word-blindness, and agraphia, but (if the patient's statement is to be relied upon) no word-deafness. 2. That the motor vocal aphasia was only very slowly recovered from. 3. That when the patient was admitted to the infirmary, fifteen years after the original seizure, marked word-blindness, with great constriction of the fields of vision and almost complete agraphia, were still present. 4. That she was able to write her own name with the left hand in mirror writing with comparative ease; but that other words, which were written with much greater difficulty and effort, were written with the left hand in the ordinary direction (from left to right). 5. That she could read and write numbers and figures much better than letters and words. The notes of the case are as follows:—The patient, an unmarried woman aged thirty-one years, was admitted to the Royal Infirmary on April 4th, 1896, complaining of pains in the right leg and foot of two months' duration, and of old-standing right-sided hemiplegia. With regard to the previous history, the patient stated that she enjoyed excellent health until she was sixteen years of age. She then had a long illness, the exact nature of which is doubtful, but which she termed intermittent fever, and was confined to bed for seven months. During convalescence from this illness she suffered from severe frontal headache; it occurred daily and lasted for about an hour at a time. Some days after the headache commenced she suddenly became unconscious while sitting at the table getting tea; she stated that she remained unconscious for a long time (? several weeks). On recovering consciousness she found that the right side of the body was paralysed, the right side of the face, and the right arm and leg being affected, and that she was speechless. She was also unable to read, and of course unable to write. In addition to the motor paralysis there seems to have been right-sided hemianæsthesia. She stated positively that as soon as she regained consciousness she was able to understand what was said to her perfectly well. This is a very interesting and important fact. It seems to support the view that the auditory word-centre in the right hemisphere is in some persons sufficiently educated and active to carry on the function of understanding spoken language when the corresponding centre in the left hemisphere is destroyed; in other words, that compensation is more quickly and easily effected in the case of the auditory speech than the motor vocal and the visual speech centres. There can be no doubt that in this case there was a very extensive lesion on the left side of the brain. The sudden onset of the attack and the age of the patient at the time when the attack occurred (sixteen years) are strongly suggestive of embolic infarction rather than of cerebral hæmorrhage. It is difficult, too, to suppose that if the case had been one of hæmorrhage such extensive results—complete right-sided hemiplegia, motor vocal aphasia, and word-blindness—would have persisted for such a length of time. It must, however, be admitted that the long duration of the coma and the hemianæsthesia which appears to have been present were in favour of hæmorrhage or (leaving the hemianæsthesia out of account) of thrombosis rather than of embolism. Now, if the case was one of embolism or arterial thrombosis it seems certain that the blood-supply to the parts of the brain to which the middle cerebral artery is distributed must have been completely interrupted; and if this was so it is probable that the auditory speech centre was implicated as well as the visual speech centre and Broca's convolution. Although the patient stated that she could understand spoken language quite well, it did not, of course, follow that there was no defect in the action of the auditory speech centre. Déjerine, Mirallié, and others are of opinion that any severe lesion in the "zone of language"—which comprises the motor vocal speech centre (Broca's convolution), the auditory speech centre (posterior part of the first or upper temporo-sphenoidal convolution), and the visual speech centre (angular gyrus and supra-marginal convolutions), and which involves any one of these three great centres for language (say, the motor vocal speech centre)—produces some, and usually very obvious, defects in the action of the others (say, the auditory and visual speech centres). In some cases the derangement of function in the centre or centres which are not directly involved by the lesion is latent and only to be demonstrated by careful testing. It is quite possible, therefore, indeed probable, that if the faculty of auditory speech had been carefully tested in this patient at the time when she recovered from the acute attack some defect in her power of understanding spoken language would have been observed. But this does not in any way invalidate my argument—viz., that in some cases in which there is every reason to suppose that the auditory speech centre is the seat of a profound lesion, the faculty of understanding spoken speech is comparatively little affected. And if this proposition be granted, the only satisfactory explanation which I can see of the facts is that the auditory speech centre in the right hemisphere is in some degree functionally active and capable of carrying on the function of the left auditory speech centre which is destroyed. In my experience word-deafness in a complete form is less common than the other forms of aphasia. This is, I think, best explained by one or other of the following suppositions: (*a*) that the auditory speech centre is less vulnerable, so to speak, than the other speech centres—in other words, that its inosculatory circulation is more free and that complete destruction or softening of the auditory speech centre (the first, and perhaps also the second, temporo-sphenoidal convolutions), the result of embolic infarction, is consequently less frequent than complete destruction of the visual speech centre (angular gyrus) and the motor speech centre (Broca's convolution), though I am not aware that this has been

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actually proved to be the case; or (*b*) that in some persons the corresponding auditory speech centre in the right hemisphere of the brain is functionally active in some degree. For the reasons given below this view is, I think, highly probable. In short, I am disposed to think that in some persons there are two more or less active (functionally educated) auditory speech centres for the reception of spoken languages—one in the left and the other in the right hemisphere (the first and perhaps also the second temporo-sphenoidal convolutions). It is difficult, I think, without adopting this supposition to explain the facts: (1) that complete word-deafness is, comparatively to the other great primary forms of aphasia (word-blindness and motor vocal aphasia), rare; (2) that recovery from word-deafness is usually much more rapid and more complete than recovery from motor aphasia or word-blindness;[1] and (3) that extensive lesions of the left temporo-sphenoidal lobe (such as softening due to embolic infarction, tumours, and abscesses) are occasionally, though probably very rarely, met with after death in cases in which there was no obvious or marked word-deafness during life.[2] Clinical and pathological observations undoubtedly show that in the great majority of persons the auditory word-centre in the left hemisphere is far more highly educated and active than the corresponding centre in the right hemisphere. Indeed, so much so is this the case that most authorities seem to think that the auditory speech centre in the left hemisphere is the only active auditory speech centre. In cases in which word-deafness persists in a marked degree (unrecovered from) for a considerable period of time before death and in which the left auditory speech centre is on post-mortem examination found to be destroyed it is obvious that the left auditory word-centre was the "driving" or active centre, and the right auditory speech centre was inactive and uneducated, or, to speak with absolute accuracy, insufficiently active and insufficiently educated to carry on the speech function which was destroyed; just as in the great majority of persons the left motor speech centre and the left visual speech centre are the "driving" or active centres. But for the reasons I have just stated there are, I think, some grounds for supposing that in some persons the auditory speech centre in the right (inactive) hemisphere is in some degree functionally active—in other words, somewhat more highly educated than the other speech centres (the visual and motor speech centres) in the right hemisphere. I am aware that, in supposing that the auditory speech centre in the right (usually inactive) hemisphere, so far as speech is concerned, is in some persons possessed of some active speech function, I differ from the usually accepted opinion—viz., that the speech centres are only active in one (the left) hemisphere. Thus Mirallié says—and his opinion represents the usually accepted opinion of the day—"le cerveau droit n'a rien à voir avec la fonction du langage."[3] With this opinion I cannot agree. Everyone admits that if Broca's convolution is destroyed in a young person the motor aphasia which results may be, and usually is, completely recovered from, and that this recovery is due to the fact that the opposite motor speech centre in the right hemisphere takes up and carries on the function of the left motor speech centre which is destroyed. Barlow's classical case completely proves this. Further, there is every reason to suppose that in young persons the same process of compensation may and does occur in the case of the sensory speech centres (auditory speech and visual speech centres). Again, it is certain that the same method of compensation, though it is far less easily established and much less perfect when established, occurs in the adult as well as in the child. Now, my argument is that this process of substitution and compensation is in many persons more easily established in the case of the auditory speech centre than in the case of the visual speech centre and the motor vocal speech centre.[4] This is only, I think, what we might expect on physiological grounds, since the auditory speech centre is first partially educated, and its action is, in most persons at all events, more automatic than the action of the visual speech centre, and possibly somewhat more automatic than the motor vocal speech centre, the action of which is to a large extent initiated, regulated, and governed by the auditory speech centre. And this supposition is, I think (for the reasons already advanced), confirmed by the effects which are produced by disease.

But to return to the details of the case. After recovering from the coma the patient remained speechless and unable to read and write for a very long time. The facial paralysis was recovered from in the course of a few weeks; some motor power was slowly and gradually regained in the right arm and leg. She stated that she was almost speechless for seven months and that the power of speech was then very slowly and gradually regained. It was only during the past two or three years—that is to say, it was not till twelve or thirteen years after the attack—that she had been able to speak with anything like facility. The power of reading was regained more slowly still, and since her illness she had not made any effort to write. Ever since the attack she had been more or less delicate and had had repeated attacks of bronchitis. Four years ago she suffered from congestion of the lungs. About five years ago there was some skin eruption on the forearms, apparently psoriasis. With regard to the family history, her father died from congestion of the lungs, chronic bronchitis, and ague; her mother from typhus fever; and a sister in childbirth. She had two brothers and four sisters alive and well, but one brother had had three attacks of rheumatic fever and another brother was for a long time troubled with rheumatism, while a sister was also much troubled with chronic rheumatism; in fact, the patient said that a large number of her near relatives had been rheumatic. She did not know if any of them had ever suffered from heart disease. The patient was well nourished and appeared to be in good health. She still walked with a slight limp, and the right arm and hand were still markedly paralysed. Both knee-jerks were exaggerated, the left even more so than the right. Ankle-clonus could also be elicited in the left leg. The pain in the right leg and foot of which she complained was apparently the result of muscular spasm or cramp; it was increased by walking and when pressure was made on the ball of the great toe. She also said that it was worse in damp and changeable weather. The grasping power of the hands, as measured by the dynamometer, was in the right 15, and in the left 50. There was no perceptible difference in the muscular power on the two sides of the face. The right arm and leg were smaller than the left. The detailed measurements were as follows: The right arm at the thickest part, 13¾ inches; the left arm at the thickest part, 12 inches; the right forearm at the thickest part, 9¼ inches; the left forearm at the thickest part, 9¾ inches; the right thigh at the thickest part, 16¾ inches; the left thigh at the thickest part, 17¼ inches; the right calf at the thickest part, 12 inches; and the left calf at the thickest part, 12¾ inches. The right hand was smaller and more delicate looking than the left; the fingers were slightly flexed, and the thumbs were slightly drawn into the palm. There was no perceptible difference in the tactile sensibility on the two sides of the body. The fields of vision were markedly constricted in each eye (see Fig. 17). As to the speech functions, the patient was mentally quite bright and alert and seemed to understand everything that was said to her. The only apparent defect in motor speech was a difficulty in pronouncing long words—"Constantinople" for example. She could sing a little; after the attack she lost the power of singing for a time, but it had gradually come back to her. Her reading was very defective. Before the onset of the hemiplegic attack she was a good reader and good writer. She said herself that now she could hardly read anything and that she could not spell at all. She read her own name, the words "dog" and "hat," and the individual letters of which they were composed; also the letters

[1] In my experience word-deafness is more easily recovered from than motor vocal aphasia, and motor vocal aphasia than word-blindness. The order of recovery, be it observed, is that in which the speech faculties are trained and developed.

[2] Possibly the relative rapidity with which word-deafness is usually recovered from explains, in some measure at least, its apparent rarity; possibly word-deafness is more common than my own observation would lead me to suppose, the aphasic defect being, in some cases at least, recovered from before the patients come under observation. It must also be remembered that until quite recently the true nature of cases of marked word-deafness was often unrecognised. Such cases were not unfrequently, and they, perhaps, are still occasionally, thought to be cases of insanity, or of ordinary deafness (as distinct from word-deafness), or of motor aphasia.

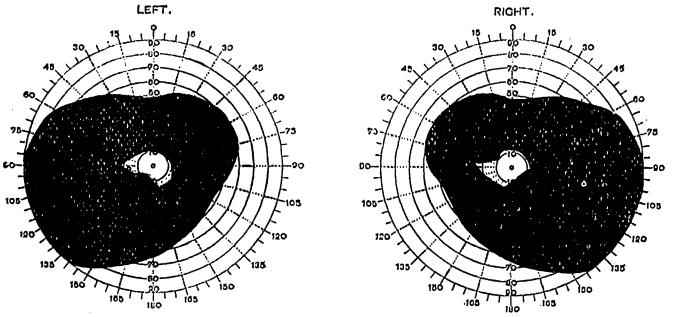
[3] De l'Aphasie Sensorielle, p. 93.

[4] I am disposed to think that in some persons the visual and motor vocal speech centres in the right hemisphere may also be active in some slight degree, and that, in young persons at all events, when the active or driving centres in the left hemisphere are destroyed they (the visual and motor vocal speech centres in the right hemisphere) may become active in a high degree.

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"e," "o," "m," "b," "s," "n," and "w" correctly. She could read numbers and combinations of numbers much better than letters and combinations of letters (words). Her power of spelling was very defective. Asked, "What is your name?" she gave it correctly. When asked, "How do you spell it?" she replied, "Cannot." When asked to spell her Christian name, she spelt it correctly. When asked to spell her surname, she replied, "Don't know." Asked what was the first letter she replied "M"; the second letter, she replied "Don't know." She continued to say "Don't know." She soon got tired with reading; she reads, she says, much better to herself than she can read aloud. She knew and named correctly a knife, key, watch, and a button-hook after some hesitation; she did not know a tuning-fork (apparently because she had never seen the object before), and said, "Oh! that is a doctor's thing"; in short, there did not appear to be any optical aphasia. She could copy letters

FIG. 17.



Perimeter chart of the fields of vision in Case 8, showing marked constriction of the peripheral portions of the fields in both eyes.

with either hand. She wrote her name with the right hand. When asked why she could not spell it she said sharply, "Well, because I did not know; other things I cannot spell; wrote it just out of my mind." She wrote the word "dog" as "doy," and said, "But mind, I'm no' donnert" (daft). She wrote "o" with the left hand, and "b" after looking at it, with the left hand as "a." On April 6th she read, "Are you very old?" and the numbers "10," "200," and "58" correctly. She named pieces of money (a halfpenny, a shilling, and a threepenny-piece) at once without any hesitation. When asked to write the word "cat" she wrote "c" and said, "You see, I have lost all my spelling. Well, I cannot make that." She could not write "God" two minutes after she had copied it. She wrote her own age (thirty-one) correctly. She wrote her names correctly with the left hand in mirror writing, also the word "cat" with the left hand in mirror writing; "54" in the usual direction with the left hand, and "37" and "hat" in the usual direction with the left hand. Asked to write down how she felt she said, "Oh! I cannot." Asked to write down the word "dog" with the left hand she said, "Oh! I could not; don't know how to spell." On April 21st she wrote her names in mirror writing with the left hand; and "God," "cat," and "dog" (doy) with the left hand in the ordinary direction. The power of writing was tested on several subsequent occasions, with the result that she invariably wrote her name with comparative ease (apparently automatically and without much effort) with either hand; but it was always written with the right hand in the usual direction (from left to right), and always written with the left hand in the reverse direction (in mirror writing), whereas other words which she had great difficulty in writing, and which were only written very slowly with much effort and thought, were almost invariably written with the left hand in the ordinary direction (from left to right), and with the exception of the word "cat," as stated above, never written in mirror writing.

(To be continued.)

BATH AND SOMERSET SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS.—At the annual meeting of this society, which was recently held in Bath, it was stated that legacies amounting to £315 had been received in 1896, but the expenditure had exceeded the income by £36.

BATHS AND GYMNASTICS IN ARTERIO-SCLEROSIS.

BY MEDICINALRAT J. GROEDEL, M.D.,
BAD-NAUHEIM.

FOR many years I have devoted great attention to the treatment of arterio-sclerosis, and on several occasions have published the results of my experience, which, however, may not have come to the knowledge of the majority of English physicians. For this reason, and because so much interest has been shown of late by medical circles in England in the balneological and gymnastic treatment of heart diseases I have felt induced to discuss the above subject in an English medical journal. I shall begin with the treatment by baths. The first question is, "May any person whatever with demonstrable arterio-sclerosis, or where such may with probability be assumed, be allowed to take baths?" The increased pressure of blood which is considered the usual consequence of treatment by Nauheim baths may at first sight seem to indicate that every patient with arterio-sclerosis should be excluded from a treatment by baths. A further increase of the high blood-pressure usually found in arterio-sclerosis[1] must not only surcharge the heart more than is already the case, but also create the danger of the bursting of a cerebral miliary aneurysm, so often present in cases of arterio-sclerosis. I have, however, by numerous observations been able to convince myself that baths can be prescribed for these patients in such a manner that the increase of blood-pressure does not take place, or only in a very slight degree. If the temperature be kept almost at the point of indifference, that is, about from 92° to 93° F., the primary acute increase of blood-pressure caused by the contraction of the cutaneous vessels, and most to be feared, will be very slight, and if there be carbonic acid in the bath at the same time will quickly disappear. If the skin of the patient be cooled somewhat by moistening the parts particularly sensitive to cold before entering the bath, the avoidance of that primary increase of blood-pressure, or, indeed, any shock whatever, will be the more certain. A similarly good effect is produced when the patient is only allowed to take half-baths and the exposed parts of the body are wrapped up so as to prevent cooling. In most cases the amount of water can be increased little by little at each bath until a full bath is at length attained, but even then it is advisable to let the patient only submerge his body by degrees, and placing cold bandages on the bather's head is often indicated. By proceeding cautiously in this manner I have never had an unfortunate case in the course of a practice of twenty-two years in Nauheim. Under what conditions can a course of baths be indicated or beneficial in cases of arterio-sclerosis? It may be desirable to give baths for some other disease when arterio-sclerosis is present. It is mostly a question of diseases based on the same etiological principle as arterio-sclerosis itself, or such as usually lead to it. By combating these we can at the same time retard the progress of the sclerotic process in the vessels. I will only mention gout, chronic articular and muscular rheumatism, arthritis deformans, and neurasthenia.

That it is possible completely to remove existing sclerotic degeneration by any means I do not believe; we are, however, undoubtedly able to retard (aufzuhalten) the deleterious process. The first thing is, of course, the removal of all conditions disposing to arterio-sclerosis. One of these, for which treatment by baths is especially serviceable, I have already mentioned. Of the greatest importance is a proper diet and general regimen, to which the patient must be trained, and this is easier and more successful in a watering-place than at home. But even a direct influence of the baths on the sclerotic process, and with it a limitation of the disease, is in my opinion possible. When I consider all the

[1] Basch considers that every permanent super-normal blood-pressure (more than 150 mm. Hg at the radial artery) is to be considered a sign of arterio-sclerosis, even when there are no other symptoms. He calls this "latent arterio-sclerosis."

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theories that have been propounded regarding the origin of arterio-sclerosis, I come to the conclusion that a disturbance in the nutrition of the walls of the vessels must play an important part, and that functional troubles of the vascular innervation are perhaps the primary cause. The acknowledged tonic effect of the baths on the nervous system may, of course, be taken into especial account for the vaso-motor part of the process. Disordered nutrition in certain organs can no doubt be entirely removed, or at least improved, by means of baths; why not also disordered nutrition of the vascular system?

Of particular importance is a course of baths in cases of arterio-sclerosis, when owing to this change the heart is no longer able to satisfy the increased claim on its functional capacity. So much has been written of late years about the tonic effect of carbonic acid thermal baths on the heart that I need not enter further into this subject. I shall content myself with stating that with disordered circulation also, when this is caused by arterio-sclerosis, the manifold consequences of cardiac insufficiency, if recent, sometimes disappear, and if more advanced can often be decidedly improved. We find not infrequently that in the course of a "kur" the pulse improves considerably as regards frequency, quality, and rhythm. On examination the heart also shows a corresponding change for the better compared with its former state. Yet there are cases enough in which the success is only a slight one, especially those in which the arterio-sclerosis has attacked the greater vessels in a more extensive manner or has even led to a dilatation of the aorta and aortic regurgitation; then, again, little success is attained in cases in which there is already an advanced degeneration of the myocardium. In such cases we may be satisfied even with a little success. Baths are contra-indicated for arterio-sclerosis when there is such a high degree of insufficiency of the cardiac muscle that digitalis and the other usual drugs remain without any effect. For patients with remains of apoplexy the following rules may be laid down. If apoplectic fits have already occurred repeatedly every kind of bath treatment must be avoided. After the first attack six months at least must pass before a course of baths is prescribed, so as to be to a certain extent sure that there is no tendency to recurrence. For those persons, however, whose apoplectic fit has occurred more than a year previously a course of baths may be prescribed without any misgiving whatever. In cases of sclerotic contraction of the kidneys (as well as of contracted liver in cirrhosis), according to my experience, treatment by baths is of little use, both as regards the sclerotic process in these organs and the secondary disturbances in the organs of circulation which are dependent on it. For patients of this class who are very much enfeebled baths are absolutely contra-indicated. The same may be said when arterio-sclerosis is combined with diabetes, if patients are very much enfeebled. But if there be no great weakness patients usually feel very well during a course of baths of not too severe a character, if a corresponding mode of life be observed. Patients with aortic aneurysm should only be advised to take a course of baths when the disease has assumed a more stable character. In the course of years I have treated a comparatively large number of such patients. I have usually observed a decided improvement in their general state of health, and likewise in the state of their circulation, without ever having had an unpleasant incident to record. As regards angina pectoris following sclerosis at the commencement of the aorta near the origin of the coronary arteries, or sclerosis of these arteries themselves, I may state that I have seen many patients with all the appearances of angina pectoris take a course of baths with very good results; but others have derived no advantage from it whatever, or only very little. That in the cases first mentioned I had always to deal with true angina pectoris (sclerotic) I will not venture to maintain.

The mechanico-gymnastic treatment is of less importance for arterio-sclerosis than the baths, and can only be applied to a limited extent. A gentle, not too prolonged, general massage is almost always permissible; likewise passive movements may be employed, as thereby only relief of the heart is brought about without any incitement to the energetic output of force and without any increased blood-pressure. As regards the circulation of the blood itself, the result is not usually very great, whereas for the above mentioned diseases that often accompany arterio-sclerosis, such as rheumatism and gout, massage is often beneficial. Resistance gymnastics cannot be allowed in cases of universal arterio-sclerosis of a high degree. The increased energy of the heart action caused by the muscular exercise is only compensated in an incomplete and unsatisfactory manner by a corresponding dilatation of the arteries, and therefore a dangerous raising of the blood-pressure and surcharging of the heart takes place. Instead of an improvement of the cardiac insufficiency in such cases, the opposite is brought about; whereas if the arterio-sclerosis be not advanced or be apparently confined to only a few vascular regions an attempt with resistance gymnastics may be made, but gymnastics must be very gentle—that is, the exercises should be made with little resistance and all trying movements avoided. For this purpose I prefer the Swedish manual gymnastics as modified by the late A. Schott, and which I have made use of since the publication of his first paper on this subject (1881). The mildest form of these manual resistance gymnastics resemble passive gymnastics very much in effect. The incitement to venous discharge from the capillary regions and the peripheral veins, as well as the easing of the arterial current—that is, relief of the heart—surpass by far the increase of the cardiac action which is caused by motor impulse and other circumstances. As regards the so-called Zander mechanical gymnastics for these patients, only those apparatus can be made use of which serve for passive movements, massage, or vibration; yet in exceptional cases some other apparatuses are applicable.

It is a matter of course that patients who have once had apoplexy are not to be treated by resistance gymnastics, nor those patients affected with aneurysm. Some may think the same applies to angina pectoris, but in this disease I have sometimes seen a good result produced by resistance gymnastics. Whether in these cases it was a question of sclerosis of the coronary arteries or not is difficult to say. I can only state that the patients showed unmistakeable signs of arterio-sclerosis. Of course, in these cases, too, the movements must be of the easiest kind, and must be desisted from altogether, as previously explained, if the peripheral arteries are very rigid.

Some patients feel greatly benefited by vibrations applied to the back by Zander machines. Last year I had a patient under treatment who was able to cut short the attacks of angina pectoris by applying vibration to the cardiac regions with a small special apparatus. I must, however, here caution the reader not to regard what has been stated as universally applicable. We must in each case, cautiously feeling our way, try whether gymnastics can be borne, and if there be the slightest doubt we must desist.

Now a few words about the "Terrainkur" (pedestrian exercises). Many patients with arterio-sclerosis complain of oppression even while walking up gentle ascents; but sometimes we hear that such patients feel very well while walking slowly up-hill; however, as a rule, I should not advise methodical hill climbing to be used therapeutically for persons with arterio-sclerosis. Fifteen years ago it happened that a patient with angina pectoris under my treatment while attempting to climb a hill near Nauheim, in spite of my having forbidden it, fell down dead. I have been obliged to express myself very briefly, so as not to exceed the space at my disposal, and have especially avoided, as far as possible, all theoretical views and physiological explanations. My chief aim has been to give some useful hints and advice to the profession, relying upon a large experience gained during many years' practice, and I hope thereby to have been serviceable to some.

Nauheim.

AN ARTIFICIAL LARYNX.

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THE patient for whom I contrived this artificial larynx was a man who had had his larynx removed, on account of carcinoma, by Dr. A. MacCormick at the Prince Alfred Hospital, Sydney, on Jan. 31st, 1895, and was brought under my notice by Dr. MacCormick in the end of the same year. The wound had duly healed, leaving the tracheal opening, in which the patient wore a soft rubber tracheotomy tube with a soft rubber shield, and leaving also above the tracheal opening a small fistula opening into the pharynx. Between these two openings was a wide groove not deep enough to

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contain an apparatus of any size. Further, the patient had a deal of chronic bronchitis, and so frequently coughed up a copious tough secretion that any of the artificial larynges I had read of or had seen figured appeared to me to be quite unsuited to his case, owing to the ease with which secretions could lodge on the reed and so silence it. Moreover, in all such instruments, as, for instance, Gussenbauer's or its modifications, where respiration and phonation take place through the same channel, if that channel is large enough for respiration it is too large for phonation, and if it is small enough for phonation, then it is too small for comfortable respiration. Further, where respiration and phonation are through a common opening the reed may sound during ordinary breathing—a most objectionable feature when present. This was recognised by Heine,[1] and Heine accordingly made the reed so that it could be moved aside during respiration—that is, it was in position only when required to phonate. I therefore determined to start on what appeared to be new lines—to make an instrument with which the patient's breathing should be free and unrestrained, and with which therefore he should not habitually breathe through the reed opening, in which the reed should be brought into play only when he desired to phonate, and which, being protected from the secretions of the air and food passages, should continue to act all day long, even during meals. It also appeared desirable that no metallic part should anywhere come into contact with the tissues. It is, moreover, obviously of the greatest importance that the patient should himself be able to apply the instrument, to remove it and to clean it easily. The instrument should also be comfortable to wear and thus willingly worn. All of these conditions were fulfilled by the instrument to be presently described, so that the patient himself applied it and wore it all day long, even during meals, and removed and cleaned it himself. I mention these points somewhat prominently, because from the figures—for I never saw an artificial larynx until I had made one—I should say that, at all events, some of these larynges were anything but comfortable to wear, even if they were efficient as phonators. Indeed, comfort in the wearing of such instruments is almost as important as their efficiency as sound producers, because the patient will very soon lay them aside if they are not comfortable. Further, the flexibility of its parts and the ease with which their exact shape and dimensions can be modified to permit this larynx to be adapted to almost any conceivable case, for each case has its own peculiarities, and, moreover, it requires no very skilled workman to make it, so that it can be made almost anywhere, since there are few places where one cannot find a clock- or watch-maker or a jeweller. As a matter of fact, I have availed myself of such materials only and of such workmanship as may be had in any part of the world almost. This, however, is a distinct advantage, for cases requiring the application of substitute larynges are not so common that in practice the artificial substitutes can be kept in readiness for possible cases.

Hitherto, when speaking of the clogging of the reed, I have had in view mainly the tracheal secretions, but in truth the mouth secretions may be very copious. The difficulty has been recognised and has been met by a lid in Gussenbauer's larynx[2] to act like a little epiglottis, on the theory that the epiglottis acts like a lid, a theory, however, which we have shown to be incorrect.[3] In other modifications of Gussenbauer's larynx an obturator[4] is used; in others a cork or a plug of cotton-wool (Czerny), and so forth. In my instrument the difficulty is entirely got over; no saliva escaped down the pharyngeal tube, and the patient swallowed his meals without any, even liquid, food coming down; but further, even it had come down, it would have been very easy to get rid of it before it touched the reed. I had one larynx made with such a provision (see Fig. 5, *g*), but since I eventually found that it was unnecessary I omitted it in the final form. In Gussenbauer's form the reed can readily be removed and replaced for the purpose of being cleaned, and I fancy that, owing to the secretions and coughing, this will often require to be done. By the protection afforded to the reed in my instrument the necessity for removing it is abolished. I did make a form in which the reed was removable, but I abandoned it when I found that the provision was not needed. Obviously the more simple one can make such things the better—so long as they act efficiently, and of this there can be no question at all in the case of the instrument now under description. The tone of the voice produced was, I dare say, monotonous, as, indeed, has been described in connexion with other instruments of the sort; yet the word monotonous conveys rather a false impression, for although modulation in the sense of varying the pitch of the sound produced within the artificial voice-box was not possible, yet the resonating chambers, by variously reinforcing the fundamental tone and its overtones, did introduce a sort of modulation or timbre which prevented the voice from being quite without character. The patient's family, for instance, told me that in the new voice there was a distinct reminder to them that their father was speaking, with a voice much altered of course, but still with much of the character of the old voice. The reeds which I used were of the commonest. I merely cut into segments the reed-plate of a common mouth-organ; each segment was a reed and the lowest pitched ones were used—viz., d, e, and a. Owing to the untimely death of the patient from scurvy I had not an opportunity of trying other than these reeds, otherwise I should have tried the non-metallic reeds of ivory, horn, cane, and vulcanite which Foulis[5] says he found to be better than the metallic. The modified Gussenbauer's larynx, with the lobster-tailed tracheal and pharyngeal tubes figured in Jacobson[6] shows that the desirability of having the tubes flexible had already been recognised. In the "International Encylopædia of Surgery" already quoted similar devices are said to have been made by von Bruns and by Caselli. In truth, judging from what I saw in my own case rigid unyielding tubes would have been most comfortable. Even the lobster-tailed tubes however, cannot have been so comfortable as the ones I adopted. First, with regard to the tracheal tube, of necessity the patient wears a rubber tracheal tube from the time of the operation, so that by the time he is ready for the substitute larynx he is quite accustomed to the rubber tracheal tube. My form of the larynx, then, is simply inserted into the mouth of this, his ordinary tracheal tube, and nothing new to him is introduced, so that the application of the artificial larynx did not at all worry the patient.

In regard to the pharyngeal tube, it must fit the fistula, or fluids will come down by the side of it, keeping the neck of the patient and the mouth of the tracheal opening continually wet. The size of the tube will vary with that of the fistula, but as the latter is more or less under control (of this more later) it is as well to keep it small, the outside diameter of the tube being a little over 6 mm. It should be quite flexible in every direction transversely, but at the same time rigid longitudinally when compressed, so that it may be pushed into the fistula, and in the movements of the head and neck run no chance of kinking, while at the same time it freely yields to these movements. It should likewise be incompressible laterally, so that no pressure of the muscles or other parts can occlude it. Rubber tubing does not meet these conditions unless the wall be very thick, but in that case the lumen of the tube is very small, considering the size of the tube externally. Further, I found that the valve which I adopted at the upper end of the tube was with difficulty fixed to the rubber. My first successful pharyngeal tube was the vein of an ox hardened in 2 per cent. solution of alum for forty-eight hours. The vein was supported by a closely wound spiral of piano wire half a millimetre thick. The outside measurement of the coil was 6 mm. The coil ended in a less closely wound cupola, at the apex of which the wire was turned into the interior of the whorl, so that it could not injure anything. The vein being left projecting about one-third of an inch beyond the apex of the wire coil, air could pass upwards freely, though fluids could not pass into the tube downwards. The cupolar ending of the coil prevented the wire from cutting the vein, kept the vein from being inverted into the interior of the coil, and gave a more or less pointed end for introducing the tube into the fistula. The wire was not closely wound at the cupola, and thus permitted the air to escape without obstacle. The vein, however, proved too fragile—the wire tore it during the act of introducing it, the movements of the pharynx tore it over the cupola, and the warmth and moisture softened it and made it useless. I then tried tubes of silk, cotton, and thin leather, but finally found perfect satisfaction in winding

[1] Böhm.: Correspondenz-Blatt, No. 17, 1874.
[2] See Fig. 1097, International Encyclopædia of Surgery, vol. v. London: Macmillan and Co., 1885.
[3] See Anderson Stuart and MacCormick: The Position of the Epiglottis in Swallowing, Journal of Anatomy and Physiology, vol. xxvi., 1892.
[4] See Fig. 36, The Operations of Surgery, Jacobson, second edition. London: J. & A. Churchill. 1891.
[5] THE LANCET, Jan. 26th, 1878.
[6] Loc. cit.

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a strip, 12 mm. wide, of sheet rubber a quarter of a millimetre thick, such as is used by dentists, slightly on the stretch, obliquely around the wire coil, with its edges slightly overlapping so as to make a continuous tube. The wire coil has, as it were, a spiral bandage of rubber applied to it. The more the rubber is stretched during its application the more unyielding is the resulting tube. If the rubber available is very thin one may have two layers, and in that case one would commence below and wind upwards, and then return winding downwards to the base-collar, to which the rubber is then made fast by a thread. When only one layer of rubber is used one had better begin to wind it above, the upper end being fixed by winding one or two turns, one over the other, before commencing to descend. The valve at the upper end of the pharyngeal tube is made of a piece of suède or kid leather and is absolutely efficient, for while when wet it readily permits the sound-bearing air to pass into the pharynx it quite prevents anything from passing down into the artificial larynx, so that the patient wore the apparatus the livelong day. The valve is attached to the wire coil by a loop of thread around a part of the coil, where two or three turns of the wire are soldered together, so that the thread has no chance of separating the wire turns. The free part of the valve is from 12 to 15 mm. long. At its lower margin it is covered by the rubber, so that there is an easy transition from the surface of the rubber to the leather, and the rubber helps to bind the valve to the wire coil. Before introducing the tube into the fistula the valve should be wetted and rolled between finger and thumb or folded upon itself lengthwise, so that it becomes a sort of point to the tube. The patient may wet the tube with saliva as a lubricant, and while it is being pushed in it should be rolled round its long axis to help its progress. Coughing not unfrequently is excited when the tube enters the pharynx, but in my case it very soon ceased. It is of importance that the pharyngeal tube be neither too long nor too short, for if too short the force required to drive the air through it is too great, while if it be too long it irritates the pharynx and gets in the way in swallowing. To measure accurately the length required I fixed to the base collar a small flexible rubber tube about one and a half feet long; the other end was in my own mouth, and by blowing I kept up a steady air pressure while the tube was passing up the fistula. When the air passed quite freely I marked the length of tube within the fistula, and adding a little extra to allow for movements of the parts I took this as the length of the tube to be ultimately adopted. When the leather wears out the valve can be easily replaced. Placed as I was at the Antipodes, I had, as already said, to work with the materials to be had on the spot, and I accordingly used sheet brass from ½ to 1 mm. thick, soldered at the joints. Owing to their non-corrosibility, gold plate and vulcanite would have been good materials in which to make the permanent form. Further, it might be advantageous to have a sort of hood on the front of the rubber shield to lodge and cover the artificial voice-box, partly to protect it and partly to make it inconspicuous, though owing to its small size this larynx was not very noticeable. I once went along a crowded street with the patient wearing the larynx and hardly anyone noticed him.

The pharyngeal fistula in this case was the upper end of the original wound, so that the line of the cicatrix extended downwards from the fistula. As it was found that the presence of the tube seemed to stretch the cicatricial tissue and dilate the fistula unduly, the fistula was by a subsequent operation closed, and at the same time a new opening in sound tissue was made just below the hyoid bone. A small rubber tube closed at the upper end was kept in the new opening until granulation was complete, and the pharyngeal tube now inserted gave entire satisfaction. I may mention in passing that the epiglottis was absent. At this stage the question was raised whether it would not be desirable when practicable to close the œsophageal wound at the time of the first operation. The pharyngeal opening for the artificial larynx could be made at the same time or subsequently. Meanwhile, the closure of the gullet would prevent the escape of fluids which is such a source of trouble and danger. Should another opportunity of performing the operation present itself Dr. MacCormick proposes, immediately after stitching the trachea to the edges of the skin, to bring together the edges of the mucous membrane of the alimentary canal and secure them with interrupted sutures of catgut, and then to bring together and secure in like manner the edges of the skin with sutures of horsehair. Feeding would thus be from the first by tube through the nose or the mouth, so as to avoid interference with the œsophageal wound, and when the time came for the fitting of the artificial larynx an opening—if not already made at the time of the first operation—would be made just below the hyoid bone, and either in the middle line or to the side, according to circumstances. In the event of the new opening for the pharyngeal tube being made at the time of the first operation the new opening might be made use of to feed the patient by pumping the food through a fine catheter.

Points which the foregoing description may not have made clear will most likely be understood on reference to the figures. Fig. 1: The artificial larynx before its tracheal tube *a* is inserted into the rubber tracheal tube, as seen in Figs. 10 and 11. The hood *b* widens the inferior opening of the larynx; owing to this enlarged inferior opening the

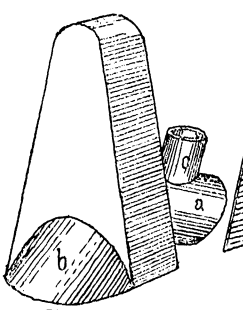


Fig. 1.

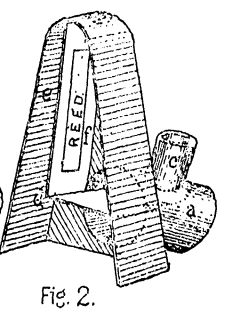


Fig. 2.

escape of the air in expiration is made so easy that very little of it passes upwards through the passage *d* to the reed, and thus the reed does not sound except when the inferior opening is closed during phonation. The closure being effected by grasping the larynx between finger and thumb (the finger on the apex of the larynx and the thumb over the inferior opening), the closure is rendered more easy by filling the right angles of the inferior opening with solder, as is seen in Fig. 4. The complete septum between the butt of the pharyngeal tube *e* and the tracheal tube *a* is partly indicated by a dotted line in Fig. 2, but is seen best in Fig. 3. The arrows in Fig. 3 and Fig. 5 show the direction taken by the air during phonation. Fig. 2: The larynx with front removed, showing the opening *d* leading out of the inferior chamber of the apparatus into the chamber *e*, whence the reed opening leads into the chamber *f*, which now leads into the pharyngeal tube *e*. These relations are seen also in Fig. 5. Fig. 3: A vertical and antero-posterior section. The dotted parts of the arrows are within the chamber *e*. The lower arrow passes through the opening *d* and the upper arrow through the reed opening. The course of the air in phonation is thus *a*, *d*, *e*, *f*, *e*. Fig. 4: The larynx as seen from below. The space *g* is in the simpler form of the apparatus a part of the general inferior opening, but where the chamber *f* is drained, as in Fig. 5, the space *g* is the lower end of the drain; in that case the dotted line alongside *g* in Fig. 5 is a solid septum,

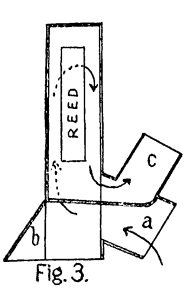


Fig. 3.

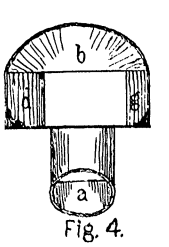


Fig. 4.

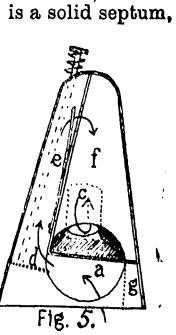


Fig. 5.

and the septum between *a* and *f* is wanting above *g*. By the filling up of the posterior angles of the wide inferior opening of the instrument closure by the thumb in phonation in more easily accomplished. Fig. 5: A vertical transverse section. This figure shows two modifications which may perhaps be useful in particular cases, though neither was needed in my case. The opening *d* may be closed by

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the valve shown when, in violent coughing, secretion is forced up into the chamber *e*. This valve is depressed when the larynx is grasped by the finger and thumb during phonation, and it is raised again by the spiral spring shown around its stem. The chamber *f* may be drained by the channel *g*, if it is found that secretions get into the chamber *f*. This channel also is closed by the thumb in phonation. Figs. 6, 7, 8, and 9 show the pharyngeal tube and its parts;

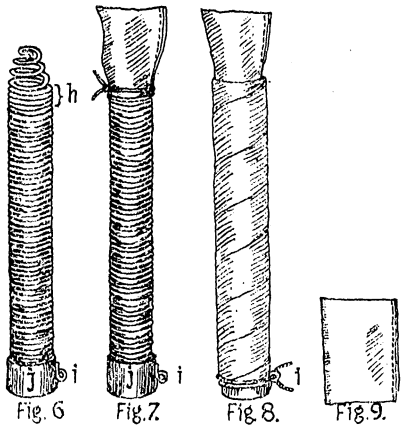


Fig. 6 Fig. 7. Fig. 8. Fig. 9.

the wire collar is soldered to the brass collar *j*, which fits upon the butt of the pharyngeal tube *e*. The three turns at *h* are soldered together, so that the leather valve, Fig. 9, may be tied upon the coil here. The turns in the dome are somewhat widely separated, so as to offer less resistance to the sound-bearing air. The end of the wire is turned within the dome, so that it cannot injure anything. The end of the

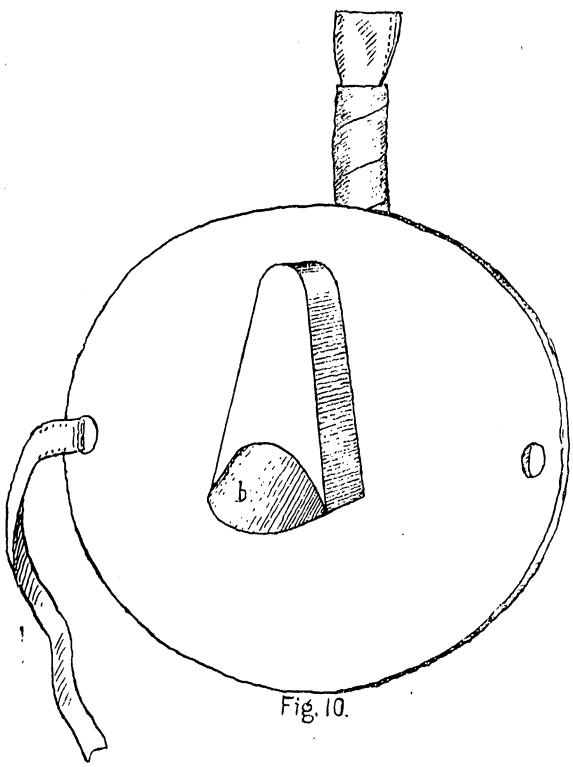


Fig. 10.

thread by which the rubber bandage is secured to the brass collar is brought through the ring *i* and then round the tracheal tube as in Fig. 11, so that the whole is secure. Figs. 10 and 11: Almost a full face view and a full profile view of the entire apparatus fitted up ready for use. The obliquity of the tubes *c* and *a*, as shown in Fig. 3, enables the

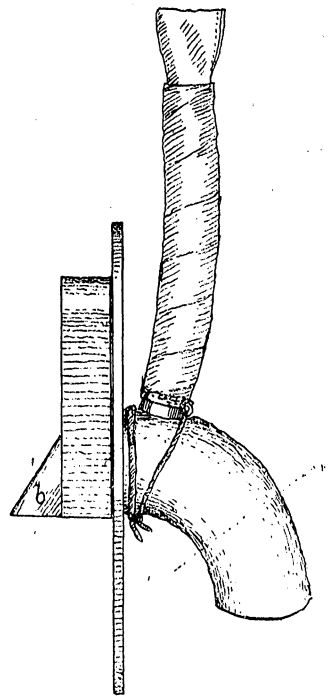


Fig. 11.

larynx to accommodate itself to the direction of the pharyngeal and tracheal openings.

Sydney, New South Wales.

ON CERTAIN SYMPTOMS OF SPINAL CORD AFFECTION IN BICYCLE RIDERS.

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WE have recently been associated with Dr. Hughlings Jackson and Dr. Cayley (to both of whom we are much indebted for suggestions in reference to the present paper), and also with Dr. Voelcker and Dr. Colman, in the care and treatment of a patient suffering from myelitis, in whom the first symptoms—numbness in the perineum and loss of muscular sense in the legs—came on very soon after hard bicycle riding. This case has been the means of directing our attention to the possible association in other cases of symptoms indicating an affection of the nervous system with bicycle riding. The case of the patient referred to above we are not at liberty to publish at present, but we are able to give an account of a case of a similar nature which has been under treatment in hospital.

CASE 1.—The patient was a young man, who had had a chancre, but no sore-throat or skin eruption, and had otherwise enjoyed good health. He was in the habit of riding a bicycle daily and he rode as hard and as fast as he could, and after getting home he not infrequently lay in a draught to cool himself. After some months he found that he had numbness in the penis and perineum, and that during connexion he had no sexual sensation although there was emission. He still continued to use his bicycle, but he then began to have difficulty with his legs, first with the right and later with the left, and he found that he

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could not feel the pedals of his machine as he rode. He then had incontinence of urine, and he also found that he had no sensation when he passed a motion. There was now also much adductor spasm in the legs, so that they sometimes became crossed, and remained so until forcibly replaced with the hands. He became unable to walk unless supported on either side, and he had difficulty in lifting the feet, the toes (especially of the left foot) seeming to cling to the ground. There was no wasting of the muscles or change in electrical reactions. The knee-jerks were exaggerated and ankle clonus was present on both sides. There was diminished sensation above the knees, and the sense of position as regards the left foot was lost. His condition gradually improved, so that he became able to walk without support, although there was some unsteadiness, which was chiefly manifested when he stood with his feet together or when in walking he suddenly turned round. His gait was markedly spastic, and the knee-jerks were still exaggerated and ankle clonus was present. There was no impairment of sensibility and he had regained to some extent control of the bladder, although he had no sensation in the urethra when he passed urine, and he had neither erections nor emissions.

This, then, was the case of a man, otherwise apparently strong and healthy, in whom impaired sensibility in the penis and perineum and loss of sexual sensation succeeded hard bicycle riding, and to these symptoms were superadded others which pointed unmistakeably to an affection, probably a slight diffuse myelitis, of the lateral and posterior columns of the spinal cord.

CASE 2.—The next case that came to our knowledge was that of a strong and healthy man, aged thirty-two years, who mentioned in conversation that some years ago, after a long bicycle ride, he experienced a sensation of coldness, numbness, and tingling in the penis. On being recently questioned he repeated the above statement, and in reply to a question said that he did not feel the urine pass if he micturated within some hours after a long bicycle ride, and that he then had to look to see when the stream of urine stopped, having no knowledge of its cessation unless he did so.

CASE 3.—Another patient seen by one of us was a man who spent his last autumn holiday on a bicycling tour. He stated that he experienced numbness, cold, and "pins and needles" in the penis and perineum after riding, and he also noticed that when bicycling, instead of being, as he usually was at other times, regular in his bowels, he never had any call to stool. He went as usual, however, but he passed his motion without any of the ordinary sensations.

In all these cases, apparently, a similar condition existed—viz., a sensation of numbness in the penis and perineum, and loss of sensation during the passage of urine and motions for some hours after riding. We have also heard, through a woman whom they themselves informed, of two sisters, enthusiastic bicycle riders, who habitually experienced numbness in the perineal region after riding, and total loss of sensation when passing urine, this loss persisting for several hours. In Case 1, however, although similar symptoms were present, others were superadded, indicating a more serious condition—viz., an actual affection of the spinal cord. It is not unlikely that in all of them there was produced, presumably through pressure, some condition of the nervous structures subserving the perineal region, possibly analogous to that which obtains in pressure palsy or crutch palsy. It is possible that in the case in which the spinal cord became most involved this condition became an actual neuritis, and that the inflammation spread so as to set up a similar process in the spinal cord. It is a well-known fact that after an operation for hæmorrhoids there may be temporary retention of urine, and in a case mentioned by Mr. Jonathan Hutchinson[1] there was, following such an operation, complete permanent paralysis of the sphincters of the bladder and anus, an effect probably of a localised destructive lesion in the spinal cord. It is probable that a similar mechanism was effective in the case mentioned of myelitis which was preceded by numbness in the perineum.[2]

The matter seemed to us to be so important, in view of the wide prevalence of bicycling as a sport and as a pastime, that we have thought it well to publish these facts without insisting too much upon the connexion of the more serious conditions with bicycle riding. The association is certainly very suggestive, but it will be well to await further evidence before definitely regarding one as the cause of the other. There is no doubt that whatever inconvenience or danger may exist can be altogether avoided, or at least minimised, by attention to the saddle and to the attitude assumed by the rider. One man whom we interrogated informed us that he used to experience sensations similar to those described by the patient in Case 3 until he had adopted a different method of pedalling, what we believe is called the "push and draw stroke," which also necessitates an upright posture, with the weight thrown well back on the ischial tuberosities. There can be little doubt that the attitude in which the rider leans forward over the handle-bar is one in which pressure will be exerted on parts which ought to be free from it. It is also obvious that a saddle or handle-bar which in any way conduces to such a posture is a source of danger. There are other effects of a bad saddle and an unsuitable attitude in the saddle, such as tenderness, swelling, and actual inflammation of the external genitalia, of which two instances have come under our notice. These, however, are outside the scope of this paper, in which our object is to direct attention to the occurrence in certain cases of not only slight, but also severe, affections of the parts of the nervous system specially related to the perineal region and the lower limbs, in association with the use of the bicycle.

[1] Illustrated Medical News, Jan. 26th, 1889.

[2] We have been informed that one who was a well-known professional bicycle rider a few years ago had always to have his urine drawn off after a hard race. Our informant, however, had no actual knowledge of the facts.

NOTES ON ONE YEAR'S SURGICAL WORK.

BY HORATIO P. SYMONDS, F.R.C.S. EDIN.,
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THE following paper contains the notes of the hospital work done by me during the year from Sept. 23rd, 1895, to Sept. 23rd, 1896. The number of cases under each head is given and any remarks as to history or treatment that may be of interest have been added. I have carried out the modern aseptic surgery in as strict a manner as possible, and I append the directions which I supply to nurses in charge of my abdominal cases as illustrating how the principles of these modern methods are applied by me in a particular group of operations. For the notes of the cases I have to thank Dr. F. G. Proudfoot and Dr. W. L. Fry, the house surgeons during the period covered.

1. *Radical cures of hernia.*—Eight in number. Operation by Macewen's method, the age of the patients ranging from three years upwards. The patients laid on their backs for six weeks.

2. *Operations for necroses of bones.*—Five in number.

3. *Radical cure of hydrocele.*—Five in number. The method adopted in each case was this: An incision was made over the tumour varying from one inch to two inches in length. The fluid contents were evacuated. The anterior wall of the sac was excised, and then the edges of the skin wound were brought together. No drainage was used.

4. *Osteotomy.*—Five cases. These included two cases of genu valgum and three cases of bowed tibiæ. The method used in the former was that of Macewen's, with the difference that for the chisel a saw was substituted. In the latter cases a small incision was made over the tibia, which was sawn through at the position of the greatest curvature.

5 *Flat foot.*—Four cases. The method adopted in two of these cases was as follows. The metatarso-phalangeal joint of the great toe was excised, and the ends of the bones were brought in apposition and kept there by silver wire loops. By this means the inner aspect of the foot was shortened and a permanent arch was formed.

6. *Kidney.*—The first kidney case died from immediate shock, after a prolonged and difficult operation of removing the remains of a suppurating kidney from which on a previous occasion several calculi had been removed. After the removal of the kidney more calculi were found within, which could not be removed until the kidney was taken away. The second kidney case—a suspected hydro-nephrosis—died from suppression of urine ten days after operation. The kidney was much damaged mechanically in an exploratory operation.

7. *Bronchocele.*—Five cases. In one of the cases, that of a young girl, the cyst was simply drained. The anterior

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wall of the sac was removed and the edges were sutured to the margin of the wound. It continued to discharge for several months, but the last report from the patient stated that the wound had closed up. In the other cases one lobe of the gland was removed. The incision in one case was the ordinary longitudinal incision, in the remainder a transverse incision was employed. In the course of the operation each bloodvessel was clamped with pressure forceps and not ligatured till the tumour was removed. In this way the dangerous part of the operation—viz., the removal of the tumour—was quickly got over, and the wound toilet was performed leisurely. In each case the operation was done because of urgent dyspnœa. In one case, that of a woman, there was subsequent delirium for five days.

8. *Acute abscess requiring incision.*—Four cases.

9. *Abdominal section.*—Four cases. (*a*) A girl, aged twelve years, was admitted because her mother affirmed that she occasionally passed blood in her urine. On examining the abdomen a small tumour about the size of a walnut was felt in the lower part of the abdomen. It was decided to cut down on this. There was no blood in the urine on admission. When the child was under the anæsthetic the tumour was noticed to have disappeared, and to find out what had caused this temporary swelling a small incision was made over the region of the bladder, when the tumour was found to be an abnormally large uterus. This was examined carefully, and apart from its size nothing abnormal was seen. Two days after the operation the patient passed per vaginam a small body about the size of a walnut, which on microscopical examination proved to be a myoma. She made a perfect recovery. The blood mentioned by the mother as coming with the urine was doubtless from the uterus. (*b*) This was a case of severe gall-stone colic in a man, aged thirty-four years, but with no jaundice. A stone was felt near the origin of the cystic duct, but on manipulation it returned into the gall-bladder. (*c*) This was a case of pyonephrosis, with persistent discharge of pus after several operations for removal of calculi had been performed, each time with the removal of calculi. The kidney was found to be merely a sac, with no kidney substance, and firmly bound down by adhesions. No attempt was made to remove the kidney. (*d*) This was a case of prolapsus uteri in a woman, aged forty-seven years. The uterus had been prolapsed for three years and had been treated by means of pessaries with no benefit. The following operation was performed: An incision was made as for oöphorectomy. Each ovary was removed, together with about one inch of the broad ligament. A transverse incision was made through the rectus muscle on each side, and the stump of the broad ligament was brought up and sutured to the division in the rectus on each side. The stump was thus embraced by the rectus muscle and the uterus was drawn well up into the abdomen. The woman made an excellent recovery, and there was no evidence of any prolapse.

10. *Middle-ear disease.*—Three cases.

11. *Amputation of fingers.*—Three cases.

12. *Post-pharyngeal adenoids.*—There were three cases in which post-pharyngeal adenoids were curetted. The method of administering chloroform was to bring the patient only half under its influence and while operating to have the head of the patient well over the end of the table.

13. *Epithelioma of the lip.*—Three cases. One patient, an old man aged seventy years, with very extensive growth, died. After the first operation some of the sutures gave way, leaving a gap. He was anæsthetised a second time for the purpose of dividing the cheek to relax the tension. This was done, but he died somewhat suddenly a few hours after from cardiac failure.

14. *Bursa patellæ.*—Two cases.

15. *Hysterectomy.*—Two cases. (*a*) This operation was performed through the abdomen, the patient being a woman, aged thirty-nine years. There was a history of a swelling in the abdomen for six years, which had increased rapidly within the previous twelve months. On admission the abdomen was found to be much distended, the measurement round the umbilicus being thirty-seven and a half inches. A diagnosis of fibro-cystic tumour of the uterus was made. At the operation an incision, at first three inches long, was made below the umbilicus, and afterwards enlarged to within one inch of the ensiform cartilage. The tumour was found to be incorporated with the uterus. The whole was removed with the exception of the stump of the uterus. The patient recovered well from the operation. Death occurred seven days afterwards from exhaustion following acute intestinal obstruction. Post mortem the bowel was found to be adherent to the stump of the uterus. (*b*) This operation was one of vaginal hysterectomy, the uterus being removed by the method recommended by Martin of Berlin, as follows: The cervix was fixed by volsellum forceps and the uterus was pulled well down. The mucous membrane was divided at the junction of the cervix and anterior fornix. A finger was introduced and the ureter and bladder were pushed well out of the way. The peritoneum was cut through and the fundus of the uterus was grasped and pulled down into the vagina along with its appendages. Both broad ligaments were ligatured and the whole was removed. No attempt was made to suture the peritoneum to the vaginal mucous membrane. The patient, beyond a slight attack of pneumonia, progressed satisfactorily, and left the hospital well one month after the operation.

16. *Varicose veins.*—Two cases. The veins were marked before operation and two tiny incisions were made on either side of the vein, a flat blunt handled needle with ligature attached was passed in at one incision under the vein and out at the other incision, and the needle withdrawn. It was then re-inserted unthreaded at the point of the first incision, being this time passed over the vein and out at the second incision. The needle was then threaded with the end of the ligature and both were withdrawn and the ends of the ligatures were tied. This was done in several places as often as was considered necessary.

17. *Excision of the tongue.*—Two cases. This operation was performed by Whitehead's method, both patients being able to leave the hospital within a fortnight.

18. *Periostitis of the ulna.*—Two cases treated by incision.

19. *Epithelioma of the jaw.*—Two cases, in which the submaxillary glands were involved. In one case the jaw, with the glands, was removed, and the patient left the hospital considerably relieved. The other case was one with extensive involvement of the glands. No attempt was made to remove the jaw, but several of the glands were removed, as they were causing the patient great pain. He left the hospital free from pain, but he has since died.

20. *Tuberculous abscess of the hip.*—Two cases, in which the head of the femur had previously been removed, and one case in which there was no marked disease of bone. Improvement was great in each case.

21. *Scirrhus of the mamma.*—Two cases, in which the breast and glands were very freely removed.

22. *Curettage of the uterus.*—Two cases.

Operations Performed Once.

23. Bad union of both bones of the forearm after fracture above the insertion of the pronator radii teres.

24. Amputation at the hip joint for sarcoma of the head of the femur.

25. Extensive scalp wound.

26. Loose semilunar cartilage, which was removed.

27. Dilatation of the cervix uteri for dysmenorrhœa causing epileptiform fits. The patient was under observation for several months, but there was no recurrence of fits.

28. Ingrowing toe-nails.

29. Adenoma of the breast.

30. A case of abscess behind the sigmoid flexure of the large intestine. The patient, a boy aged fifteen years, was admitted with symptoms of acute intestinal obstruction. There was a history of his having eaten large quantities of walnuts. His temperature on admission was 100°F. After frequent enemata, with a purgative pill containing aloes, cascara, and nux vomica, his bowels were moved freely five days after the constipation had set in. The temperature, however, still kept high, and on further examination tenderness was made out in the left iliac region, with definite fluctuation. An incision was made over this region and a large quantity of fœtid pus was evacuated. A fæcal fistula was diagnosed two days afterwards. The patient for six weeks hovered between life and death, his condition at one time being aggravated by basal pneumonia. Several fæcal stones were removed at the end of the fifth week, and thereafter the patient immediately began to improve. The wound ceased discharging and the boy rapidly became quite well. He remained in hospital for three months.

31. Amputation of the penis for epithelioma of the glans.

32. Urethral caruncle excised.

33. A case of ovarian cyst. In this case there was a history of abdominal swelling for three years and the cyst had been tapped on four occasions. At the operation the cyst was found to be multilocular. Forty-one pints of fluid were evacuated. The cyst was adherent in several places

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to the peritoneum. In separating the adhesions part of the anterior layer of the peritoneum was stripped off. The patient recovered well from the operation, and for seven days went on without a bad symptom. At the end of that time, however, symptoms of peritonitis set in, and the patient died. At the necropsy the peritoneum was found to be adherent in several places.

34. A case of empyema in which the pleural cavity was drained, after the removal of two ribs, for six weeks. Eventually the lung expanded to a considerable extent, and the patient recovered.

35. Aural polypus removed by torsion.

36. Case of Tagliacotian skin-grafting after an extensive burn. There was marked contraction at the elbow and wrist. The skin was freely dissected up from the elbow and the arm fixed to a raw surface on the breast for three weeks. The result was entirely successful as regards the raw surface on the wrist, but some contraction at the elbow remained.

37. Urethro-vaginal fistula for torn urethra after labour.

38. A case of ruptured urethra which after several operations made a very good recovery. The case was complicated by the addition of a fractured femur.

39. Erasion of the knee-joint for tuberculous disease in a child. The patella tendon, with the tubercle of the tibia attached, was turned up, the joint was exposed, and all the diseased tissue was removed.

40. A case of imperforate anus.

41. A case of papilloma of the neck.

42. A case of inguinal colotomy for intestinal obstruction, from which the patient died. At the necropsy a large gall-stone about the size of a small hen's egg was found obstructing the small intestine. At the operation no distended intestine was found, though a small piece of the small intestine seemed rather inflamed, but there was no exudation upon it.

43. A case of lupus.

44. Removal of sebaceous cysts.

45. Excision of glands of the neck.

46. A case of gall-stones in which there had been a history of gall-stone colic and jaundice for three years. On opening the peritoneum the liver presented, but no gall-bladder was seen. On passing the hand in a large gall-stone was felt under the surface of the liver. This was removed, and was found to be of the size of a pigeon's egg. The edge of the gall-bladder could not be brought to the surface of the wound. A glass tube was put into the gall-bladder and packed firmly round with sterilised gauze pads. Eventually a tract for the bile formed shut off from the peritoneal cavity. The patient continued to improve, and left the hospital with no bad symptom, the jaundice having entirely disappeared and the stools containing bile.

47. A case of transverse fracture in which the patella was wired. The patient walked with the aid of crutches in ten days. He returned after two weeks with pain in the joint. The silver wire was then removed. In six weeks from the accident he walked about with only a slight limp.

48. Removal of fatty tumour from the shoulder.

49. Division of the tendons of the sterno-mastoid for wry-neck.

50. A case of tuberculous meningitis in which the cerebellum was trephined. The trephine entered just below the occipital protuberance. Some cerebro-spinal fluid escaped. The patient improved for two days, but gradually sank and died.

51. A case of pyosalpinx, in which the ovaries and Fallopian tubes were removed.

52. A case of rectal polypus.

53. A case of hammer-toe.

54. Amputation of the thumb.

55. A case of rodent ulcer.

56. Excision of epitheliomatous glands of the neck.

57. Hæmorrhoids removed by Whitehead's operation.

58. A case of ruptured perineum.

59. A case of hare-lip.

60. Perineal section for extravasation of urine, in which the patient made a good recovery.

61. A case of spina bifida, in which the tumour was opened and the cauda equina found in the centre. This was separated and placed in a trough cut out of the tissue on the sacrum. A portion of the parietal bone of a recently killed rabbit was sutured over the opening in the sacral canal. The patient died.

62. A case of intestinal obstruction by Meckel's diverticulum. The band was found at the operation and divided, but there was evidence of peritonitis then, and the patient died from peritonitis two days after the operation.

63. A case of dermoid cyst of the ovary, which was felt per vaginam and diagnosed as a prolapsed ovary. The patient had been treated for years for malposition of the uterus. The patient made an excellent recovery.

64. There were two cases of amputation at the hip-joint, one being for tuberculous disease of the joint. The patient made a good recovery. The other was in consequence of a sarcoma of the head of the femur. The patient recovered well from the operation, but died five months later from secondary growths in the lungs. The causes of the nine deaths which thus occurred were as follows: (1) obstruction by a gall-stone in the small intestine; (2) excision of the kidney; (3) ovariotomy, adherent peritoneum; (4) fibro-cystic tumour of the uterus, adhesion between the intestines and the stump of the uterus; (5) epithelioma of the lip, heart failure after the second operation; (6) nephrectomy; (7) trephining the cerebellum, tuberculous meningitis; (8) spina bifida; and (9) intestinal obstruction by Meckel's diverticulum.

Oxford.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL FOR SICK CHILDREN, PLAISTOW.

FATAL CASE OF PURPURA HÆMORRHAGICA AND PEMPHIGUS OCCURRING IN A RICKETY CHILD.

(Under the care of Mr. ERNEST A. T. STEELE.)

WHATEVER may have been the etiology and the exact pathology of the case recorded below, it cannot be doubted that a great morbid change had taken place in the blood. It is in some respects very suggestive of "scurvy-rickets," but it certainly does not readily fit into the classical descriptions of cases of that disease.

A female child, aged four years, was admitted into the hospital on July 1st, 1896, with the history that she had never been a healthy child, did not walk till late, and, as the mother said, had "always had rickets." Her diet for a considerable time past had consisted entirely of milk and farinaceous foods. Her present illness began on the evening of June 26th, when she seemed to be poorly and had a slight cough. On the 27th her nose bled a good deal and her gums slightly. On the 29th she developed a papular eruption on the face and limbs and was drowsy. The eruption was scanty and of a dark rose colour, but there were no vesicles or bullæ. On admission into the hospital her condition was as follows:—On the left side of the forehead and left cheek, the right cheek, and both arms and legs there were numerous purple patches varying in size from a sixpence to a five-shilling piece, and in the centre of many of these patches there were large circular bullæ containing dark-coloured serum. (When a photograph was taken eight hours after death the bullæ had collapsed and one over the left orbit had burst.) Both wrists and ankles were swollen, and the child cried if moved. Her temperature was 103° F. and her pulse was 130. There was considerable bloodstained discharge from the nose, but the gums were not bleeding. During the day she passed a small quantity of very dark-coloured urine which, however, could not be saved for examination. She was very restless all day and her breathing became very hurried. The temperature rose to 106° at 10 P.M. At 1.30 A.M. on July 2nd she became very drowsy, had a slight rigor, and died comatose at 2 A.M. At the necropsy, which was made twenty-four hours after death, the main lesions discovered were innumerable small hæmorrhages into the lungs and a decolourised blood-clot in the right heart,

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which was distended, the left heart being empty and contracted; there was a decolourised clot filling the superior longitudinal sinus. The organs were otherwise healthy. The bones were soft and porous, and the ends of the ribs were enlarged.

Remarks by Mr. E. A. T. STEELE.—The above case appears to me to have been an advanced type of scurvy-rickets, the most noticeable points in the diagnosis being the history, the long-continued farinaceous diet, and the swelling of the wrists and ankles in the neighbourhood of the epiphyses of the tibiæ and radii. The complication of pemphigus is unusual and difficult to explain. Dr. Sansom has reported[1] a case of purpura hæmorrhagica associated with acute pemphigus, but this was in a girl aged twelve years and was a sequence of influenza.

THE AUCKLAND HOSPITAL, NEW ZEALAND.

TWO CONSECUTIVE CASES OF TETANUS TREATED WITH TETANUS ANTITOXIN AND CHLORAL HYDRATE; RECOVERY.

(Under the care of Mr. ARTHUR MARSACK.)

ALTHOUGH the value of tetanus antitoxin is very generally acknowledged, yet it cannot be said that we are at present fully possessed of exact indications either as to the quantity to be administered or as to the cases in which it is likely to be really beneficial. In many cases, and those not necessarily very severe, but little benefit seems to follow its employment, while in others the improvement is striking and enduring. Under these circumstances it is highly desirable that all those cases of tetanus should be put on record in which the antitoxin has been thoroughly tried. The following two cases are noteworthy in that chloral was extensively used as an adjuvant, and the value of this drug in symptomatic treatment by controlling the spasms is often very marked. For the notes of these cases we are indebted to Dr. J. C. Pabst, assistant medical officer.

CASE 1.—A lad, aged fifteen years, was admitted to the hospital on the afternoon of Aug. 13th, 1896. He was able to give the following history. On Aug. 1st, whilst walking barefooted, he trod on a piece of glass and cut his right foot. He continued to limp about, and a few days later squeezed some "matter" out of the wound, after which it rapidly healed. On the 5th during a game of football he had a severe fall, but was well enough to continue the game. Next day he went to school, but returned early as he did not feel well. For the next two days he was able to walk about, but did not feel well, and noticed especially a pain in the right hip. On the 9th he noticed that he continually bit his tongue, but though he still had pain in the hip he did not go to bed. There was no change till the morning of the 11th, when he felt too ill to get up; he "felt stiff" in places, especially in the neck, jaw, and legs. In the evening he got up, but shortly afterwards his body becoming "stiff all over" several times, he went back to bed, and passed a very restless night. On the evening of the 12th he was seen by Mr. Marsack, who found him with marked trismus, profuse sweating, and severe clonic spasms. He prescribed belladonna and a purgative, and ordered his removal to the hospital, which was done next day. On admission his temperature was 102·2° F., the pulse 120 and feeble, and the respirations were 22. The tongue was slightly coated and dryish; it was protruded with difficulty. He was mentally clear and very cheerful. There was profuse sweating. There was trismus, the incisor teeth being separated only to the extent of half an inch. Marked risus sardonicus was present. The pupils were equal, a little dilated (belladonna), and reacted sluggishly to light. He lay on his back with his knees slightly flexed. The abdomen felt like a board and the muscles at the back of the neck were very rigid. There was opisthotonos, so that the hand could be easily placed between the back and the bed. The muscles of the thighs and legs were rigid, but those of the upper extremities were quite flaccid. He could flex and extend both arms and legs. There was apparently no loss of power and no loss of sensation. The cutaneous reflexes were greatly exaggerated. The patellar reflexes could not be made out owing to the rigidity of the limbs. He was able to swallow. The heart's action was rapid. The lungs were normal. He complained chiefly of pain in the right hip. On the sole of the right foot there was a small scar in which a small splinter was buried; this latter was immediately removed. The urine was turbid, acid, of specific gravity 1030, and showed a large deposit of urates, but no albumin. The examination was frequently interrupted by short severe spasms. Five grains of calomel were immediately given, and at 3 P.M. one gramme of antitoxin (the dried form from the British Institute of Preventive Medicine) was injected into the subcutaneous tissue of the upper abdomen on the right side. During the next five hours the number of spasms, which had been thirty-six, steadily lessened, until from 7 to 8 P.M. there were only seventeen to the hour. At 8 P.M. another gramme of antitoxin was injected into the left upper abdomen. The lump raised by the first injection had not entirely disappeared, and pressure on the spot caused pain and gave rise to a spasm. At 11 P.M. the patient seemed very drowsy, but his sleep was disturbed every few minutes by a severe spasm. At 12 midnight the spasms still continued, and the prospects of a good sleep appeared bad; he was given a tablespoonful of the chloral mixture, and one gramme of antitoxin was also injected. During the next two hours the number of spasms became reduced to nine and seven respectively; however, as his sleep was still much disturbed the dose of chloral mixture was repeated at 2 A.M. on the 14th. Between 5 and 7 A.M. there were no spasms at all. At 10 A.M. the physical condition of the abdomen, neck, and face was precisely the same as on admission. At 12 noon one gramme of antitoxin was injected, and until 4 P.M. the spasms gradually increased in number and severity. There was considerable difficulty in swallowing. During the night he was delirious and tried to get out of bed. On the 15th, at 9 A.M., he was given two doses of chloral mixture and a suppository containing a quarter of a grain of morphine. His tongue was very sore from his biting it. The respiration was very laboured and noisy, especially during sleep. He was continually bathed in sweat. The trismus, risus sardonicus, and board-like abdomen remain unaltered. At 8 P.M. the question of continuing the use of antitoxin or not was discussed. It was decided to continue, for although no apparent beneficial effect could be detected, neither could it be said that the case was aggravated by its use. One gramme was therefore injected. At 12 P.M. another gramme of antitoxin was injected. The patient slept well during the night after a dose of chloral. At 9 A.M. on the 16th the bowels were well opened by five grains of calomel. Three of the points of injection were very red and tender. At 12 noon one gramme of antitoxin was injected (last dose). From this time till 9 P.M. the patient became much worse, the spasms being so numerous and the opisthotonos so marked that the chloral mixture was given, improvement immediately following. The antitoxin was now discontinued, as it was felt that the bad symptoms which followed so quickly upon the last dose might in some way be due to it. During the next two days the patient's condition remained practically unaltered. The trismus, sardonic grin, and rigidity of the muscles of the abdomen and legs were quite well marked. Chloral was pushed at night so as to secure sound sleep, and discontinued during the day, a dose, however, being given whenever the spasms became so frequent as to cause great distress, and the result was uniformly satisfactory. On the 19th there was an urticarial rash on the chest, abdomen, and back. Four of the points of injection looked angry and the glands in the right axilla were tender; however, as the temperature was not above 99° they were not opened. The body was covered with sudamina. On the afternoon of the 20th the pain in the right hip suddenly increased in severity, so much so that a quarter of a grain of morphine suppository did not give relief and had to be repeated. On the 21st, at 12 noon, as the bowels had not been open for nearly forty-eight hours, an enema was given, a scanty motion resulting. Immediately afterwards the patient was seized with a severe spasm in which the respiratory muscles were involved, the cyanosis being marked. Similar but less severe fits occurred frequently during the afternoon, and his temperature rose to 102·6°. Five grains of calomel were given, and five minims of tincture of digitalis were added to the chloral mixture. The patient passed a very bad night; he was delirious, and had numerous severe spasms. Another morphia suppository (one quarter of a grain) was given. During the next three days the patient appeared to be better, although the tonic rigidity persisted. On the 25th, from 9 P.M. to midnight, there were ninety-nine spasms. Two doses of chloral mixture were given, and the spasms rapidly

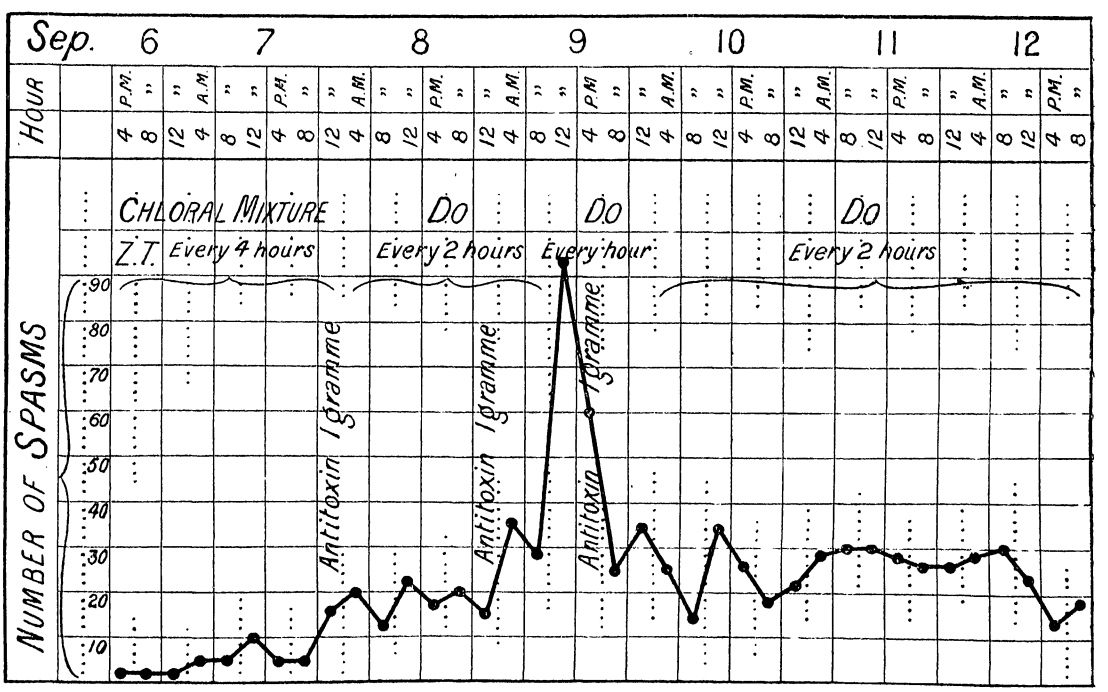
[1] Report of a meeting of the Clinical Society, THE LANCET, June 2nd, 1894, p. 1375.

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subsided. All medicine was discontinued for four days, only one dose of the chloral mixture being given daily. The patient was allowed solid food on the 29th. On the 31st there was still a little trismus, and the muscles of the abdomen and neck were rigid, though less so than formerly. The lumps formed at the point of injection were much smaller and showed no signs of inflammation. The urticarial rash and sudamina had entirely disappeared. On this date the patient was removed to the general ward as a convalescent. Up to this stage of the case the temperature and pulse had been taken every four hours and the urine measured and tested daily. The temperature during the first week averaged 100°, only once touching 101°. The pulse varied directly with the temperature and ranged usually between 100 and 110. No relation could be detected between the use of the antitoxin and the condition of the muscles or between it and the temperature and pulse. The quantity of urine was fairly constant and averaged fifty ounces daily; there was never any albumin. The patient took his food well, averaging six pints of fluid daily. On Sept. 5th he was able to walk about the ward, and on the 11th he was discharged.

CASE 2.—A boy, aged four years, was admitted to the hospital on Sept. 6th, 1896, at 2 P.M. His mother dated the illness from Sept. 3rd, though she noticed that for a week previously to this he had not taken his food so well and appeared to have a "cold." However, on the date mentioned he was seized with severe "screaming fits," during which he clenched his teeth and bit his tongue. In the intervals he was unable to open his mouth widely and sweated profusely. The "fits" increasing in frequency and severity he was on Sept. 6th taken to Mr. Lewis, one of the honorary surgeons of the hospital, who recommended the patient's immediate removal to the hospital. On admission the patient was found to be a well-nourished and very intelligent child, but he refused to protrude the tongue for fear of having it bitten. His temperature was 98° F., the pulse 96, and the respirations were 32. He was sweating profusely. There was slight risus sardonicus. He could only separate the incisor teeth to the extent of one-third of an inch. There was slight rigidity of the muscles at the back of the neck, but the sterno-mastoids were unaffected. The abdomen was quite lax and there was no rigidity of the extremities. The cutaneous reflexes were exaggerated, but the patellar reflexes were absent. There was very little difficulty in swallowing. The heart and lungs were normal. The pupils were equal and reacted to light. The urine was acid, of specific gravity 1032, and contained neither sugar nor albumin. The patient was immediately placed in a warm bath, after which he was given a powder containing ten grains of calomel and five grains of compound scammony powder, also a drachm of the chloral mixture, the latter to be repeated every four hours. So far the case differed little from one of simple trismus, and although a minute examination was made no sign of a wound could be found. During the night the patient slept for six hours; and at 9 A.M. on the 7th his physical condition was unaltered; the nurse reported nine spasms. On the 8th, at 1 A.M., one gramme of antitoxin (British Institute of Preventive Medicine) was injected, as there was no longer any doubt about the condition; the abdomen was board-like, the muscles of the neck were very rigid, the risus sardonicus was much more marked, and at frequent intervals there were severe clonic spasms which threw the body into a condition of opisthotonos. A powder containing three grains of santonin and five grains of compound scammony powder was given, to be followed by a drachm of castor oil, repeated if necessary. The dose of the chloral mixture was doubled. At 9 A.M. it was noted that there had been sixty-nine spasms in the twenty-four hours. At 11 P.M. one gramme of antitoxin was injected. By 9 A.M. on the 9th the patient's condition was much worse, he lay practically on his head and heels, and the slightest touch precipitated a spasm. The bowels had been opened thoroughly and one motion contained a round worm. At 4 P.M. one gramme of antitoxin was injected. By 9 A.M. on the 10th the patient had had 252 spasms, the majority being very mild. The condition of tonic rigidity of the body remained unaltered. The increase in the number of spasms followed rapidly the last dose of antitoxin. During the next three days the patient improved; the spasms were less frequent and less severe, and the rigidity of the muscles of the abdomen and neck was less marked, though the trismus and risus sardonicus appeared to be unaltered. On Sept. 14th there was an urticarial rash on the abdomen. By the 16th the rash had almost disappeared, but two of the lumps raised by the injection were very discoloured and tender. On the 21st the patient was removed to the general ward as a convalescent. During the whole illness the temperature was very little above normal; the urine, though tested daily, never gave evidence of albumin. The patient was always able to take his food. On the 1st he was discharged. He was able to walk, though the abdomen was still a little rigid.

CASE II – CHART SHEWING SPASMS.



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Remarks by Dr. PABST.—The foregoing cases complete a list of eleven cases of tetanus treated at this hospital during the past two years. Of the other nine cases (all of which passed through my hands as house physician) seven died and two recovered completely. In five of the cases the patients died within forty-eight hours after the onset of tetanic symptoms. These five cases were definitely traumatic; by this I mean that at the time they came under observation there was an unhealthy wound to be seen. These cases were treated with chloral hydrate, eserine, and morphine, combined with local treatment by the application of carbolic acid to the wound. In two other cases one patient died on the fifth and the other on the sixth day after the first symptoms appeared. Both these cases were indefinitely traumatic—one following a "gumboil" and the other a scratch on the foot; they were treated with chloral hydrate and eserine. The remaining two patients who recovered were both treated with chloral hydrate and bromide of potassium. One was definitely traumatic, following twelve days after a wound of the knee caused by a fall upon a piece of glass; the other was apparently idiopathic, as there was neither history nor trace of any wound. These eleven cases as regards their acuteness fall naturally into two groups:—1. The five rapidly fatal cases which may be taken as examples of acute traumatic tetanus, their severity depending not so much upon the shortness of the incubation period (the most rapidly fatal case of all having an incubation period of twelve days), but upon the rapidity with which the spasms followed one another, and so exhausted the patient. 2. The six sub-acute (fairly severe) cases in which the symptoms after first showing themselves developed slowly. To this group belong the two cases treated with antitoxin and chloral. They were therefore not of the severest type, and it will be noted that both cases had shown symptoms for three days before admission—a period in which the cases belonging to Group 1 had all ended fatally. Still, it would seem that sometimes after the first signs there is a period of quiescence, after which the symptoms reappear with increased severity; this would appear to be what occurred in Case 2, where for the first twenty-four hours after admission there was little else than trismus, after which the symptoms assumed the severest type. Having indicated the type of case (an essential point), it only remains to try to form a correct estimate of the value of the remedies used to bring about the successful result. A difficulty arises in that there are undoubtedly two factors—antitoxin and the chloral mixture. The effect of the chloral mixture had been studied in the two patients mentioned who recovered under its use; it lessened the number and severity of the spasms, and when pushed procured sleep. When given with the antitoxin its beneficial action was quite as apparent; after giving it improvement was expected; if none occurred the dose was increased gradually, and always with the required result. With regard to the antitoxin no improvement at all could be detected after its use; there was nothing comparable to the improvement seen to follow an adequate dose of diphtheria antitoxin in a case of diphtheria. On the other hand, in both cases the injection of the antitoxin was sometimes (not always) followed by aggravation of all the symptoms. Still, the duration of the two cases treated with antitoxin and chloral was much shorter than those two treated with chloral alone, the general prostration was less, the stage of convalescence was shortened, whilst the acute stage was about the same length. In this respect there is some resemblance to diphtheria in which a case sufficiently bad to be treated with antitoxin often convalesces more rapidly than a case which has been so mild as not to require antitoxin. This shortening of the course of the disease was to my mind the most marked feature in both cases and must be ascribed to the antitoxin. On the whole, though both these cases might possibly have recovered under chloral alone, I believe that the antitoxin was of value probably in the way of preventing the rapid development of severe symptoms; that it shortened the course of the case I feel certain. Some other points require notice. In using the antitoxin the directions issued with it were carefully followed. A rather turbid fluid was the result, and the lump raised by its injection served as a source of peripheral irritation. For this reason a more potent antitoxin would be an improvement and is more called for than in the case of diphtheria. The urticarial rash was probably a direct result of the antitoxin, but not so the sweating, which was equally profuse on admission, and, moreover, was a marked symptom in the fatal cases in which the patients did not have antitoxin. I have come to the conclusion (1) that moderately severe cases may recover under the use of chloral and bromides; (2) that although cases have recovered under tetanus antitoxin alone, its use should not preclude the adoption of measures to meet the urgent symptoms which are almost constantly present, and that in this respect the treatment should resemble that of diphtheria, where the successful issue of a case in which the antitoxin has been used so often depends upon the prompt way in which every symptomatic indication is met; and (3) that the treatment which offers the best prospects of success is that in which tetanus antitoxin is combined with chloral and bromides.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Hernia Cerebri.—Non-tuberculous Posterior Basic Meningitis.

A MEETING of this society was held on April 13th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

Mr. LAWFORD KNAGGS read a paper on a case of Compound Depressed Fracture of the Skull, followed by Cerebral Abscess and Hernia Cerebri, together with a consideration of the subject of hernia cerebri based on 100 collected cases. The patient, a man, was operated on for compound depressed fracture of the left parietal bone on Sept. 11th, 1894. Though the membranes and the brain were injured, and the wound subsequently suppurated, healing took place in due time, and he became an out-patient on Nov. 28th. He was re-admitted in February with some cerebral symptoms and a protrusion of the soft parts over the bony aperture. On Feb. 4th he was unexpectedly found at the point of death, and the swelling was explored and then opened with a penknife by Mr. Thompson, the resident surgical officer. An ounce of pus was evacuated from a cerebral abscess, and the patient brought round by artificial respiration. Hernia cerebri and paresis of the right arm and leg at once developed. The former grew as large as a hen's egg in a fortnight, remained stationary for three weeks, and then shrank, and by July 7th had disappeared. He left the hospital on Aug. 3rd well, except for some remaining weakness of the forearm muscles and a hesitation in his speech; and a year later his condition remained unaltered, except that he had a fit every eight weeks. He was working as a labourer. In discussing the subject of hernia cerebri the intracranial conditions which produce it were described—viz.: (1) increased tension; (2) a softened or diffluent state of a portion of the cerebral substance; and (3) inflammation of the brain substance, which leads to an increase in bulk, to its softening, and when prolonged to its replacement by granulation tissue, and finally by cicatrix. The inflammation also impairs, suspends, or even destroys the functions of the centres implicated. The duration and size of the hernia are influenced by the extent of the inflammation. The causes are traumatism and sepsis, either separate or in combination. If sepsis be avoided the inflammatory effusion is gradually absorbed and the protrusion will certainly dwindle and disappear after it has reached its maximum. The time required varies from a few days to several months, and depends on the amount of brain involved and the absence or presence of any continued irritation. The results of septic infection are abscess, meningitis, and diffuse inflammation, and abscess is the only one that is not always fatal. Hæmorrhage and abscess may be associated with hernia cerebri, and attention was drawn to the importance of gravity in certain cases and to the sudden but transient enlargement of the tumour, which may result from trivial causes, either local or general, such as probing the wound or an attack of tonsillitis. The prognosis was stated to be good if sepsis were avoided, and it was to be borne in mind that septic infection might be a result, not only of the original injury or consequent operation, but of interference. The results of treatment by pressure, by caustics, and by various operative procedures, as well as of those left to nature, were then fully considered, and the conclusion arrived at that most of the recoveries were due to natural processes, and that most of the successful cases would probably have recovered if left alone. Three more might have recovered

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nowadays without mutilation of the brain, but for the remaining three excision must have credit given to it. Sepsis was the almost universal cause of death, and the increased percentage of deaths in the operative cases (28·5 per cent.) was not without significance. Treatment should be: 1. Preventive. Every case of compound depressed fracture of the skull should be thoroughly treated, and the wound made aseptic. This is now generally done, and probably accounts for the rarity of the cases in current literature. 2. Non-interference should be the rule, and the tumour allowed to run its own course. 3. Operative treatment may be necessary when abscess is present, and should aim at evacuation, not mutilation. It may be necessary to remove embedded fragments after their position has been demonstrated by skiagraphy, but it was difficult to imagine a condition in which excision could be justified.—Mr. BALLANCE congratulated Mr. Lawford Knaggs on the result of his case and on his exhaustive treatment of the subject. He attributed the rarity of hernia cerebri at the present time to the successful avoidance of sepsis. Provided that there was an aseptic condition, as in surgical operations, extensive injury might be done to the brain without hernia cerebri. After an accident it might be impossible to obtain an aseptic condition of the parts. He found it difficult to believe that the hernia might push through the uninjured dura mater. The cases ought certainly to be carefully treated at the onset, and he was in hopes that the surgeon might be able to deal with and render aseptic compound fractures of the base as well as those of the vault.—Mr. LAWFORD KNAGGS, in reply, said that he thought that he had seen some patients in whom hernia was due to traumatism without sepsis, and in one of the patients who died the post-mortem appearances were quite the reverse of any septic inflammation.

Dr. J. WALTER CARR read a paper on Non-tuberculous Posterior Basic Meningitis in Infants. The object of the paper was to show that there was a distinct form of meningitis, occurring almost exclusively in infants, which has not at present received adequate recognition, though described by Dr. Gee and Dr. Barlow in the St. Bartholomew's Hospital Reports for 1878 under the title of "The Cervical Opisthotonos of Infants"; that it mainly affects the posterior part of the base of the brain, is entirely independent of tuberculous disease, runs a sub-acute or chronic course with fairly characteristic symptoms by which it can be diagnosed during life, and presents very constant and definite post-mortem appearances, although its actual causation remains at present unknown. The description of this disease was based upon eleven cases observed by Dr. Carr at the Victoria Hospital for Children, Chelsea, narrated in detail, and compared with those recorded by Dr. Gee and Dr. Barlow in the above-mentioned paper. All the cases occurred in previously healthy infants under a year old; the onset was gradual in some, sudden in others; but in all, the most constant and characteristic symptoms were severe vomiting, extreme retraction of the head, and stupor passing into coma of remarkably long duration, generally several weeks, the excessive retraction of the head persisting to the last. The cases all terminated fatally, none in less than five weeks, whilst some lived for three months or even longer. At the necropsies (ten in number) inflammation of the pia arachnoid was found over a very definite area at the base of the brain, hydrocephalus in all the cases, and in some closure of the openings between the fourth ventricle and the sub-arachnoid space. In no instance was any sign of tuberculous disease discovered, either in the cranial cavity or elsewhere. The possible causation of the ventricular effusion was fully discussed in the paper. The possible connexions of the disease with injury, ear disease, and congenital syphilis were successively discussed, and reasons given for concluding that none of these could be really causes of the meningitis. It was suggested that possibly there might be some relation between the disease and epidemic cerebro-spinal meningitis, but that bacteriological investigation only could determine this, and at present this had not been carried out. Under diagnosis the chief points of distinction between this disease and other forms of meningitis, especially the tuberculous variety, were fully described. In regard to prognosis, it was stated that, whilst usually fatal, recovery was probably not impossible, and cases were quoted in support of this, and to show that the disease may occasionally give rise to ordinary chronic hydrocephalus. As regards treatment, it was said that medical treatment was probably of little avail, and the question of operative interference, either by tapping the lateral ventricles or by trephining, was therefore discussed. In two of the cases described the former measure was tried without evil effects, and in one with distinct improvement, all acute symptoms subsiding, and the child living for several months. Trephining in two other cases proved rapidly fatal, the great danger consisting in too rapid an escape of fluid.

MEDICAL SOCIETY OF LONDON.

Extroversion of the Bladder.—Spastic Hemiplegia.—Acromegaly.—"Baker's Cyst" of the Knee.—Osteotomy for Deformity.—Sarcoma of the Thumb.—Spontaneous Fractures.—Multiple Tumours of the Skin.

A MEETING of this society was held on April 11th, the President, Mr. REGINALD HARRISON, being in the chair.

The PRESIDENT showed a case of Extroversion of the Bladder treated by left nephrectomy and transplantation of the right ureter through the loin. The patient, now fifteen years of age, came under observation in July, 1895, in a very emaciated condition, with congenital extroversion of the bladder and epispadias. The posterior wall of the bladder protruded, and both ureters were visible. The thighs were excoriated. In January, 1896, the urine having been ascertained to be normal, the left kidney was removed by a lumbar incision, and eleven months later an incision was made in the right loin, and the ureter of the remaining kidney found and divided, and its proximal end brought out to the lumbar incision, where it was attached by one silk suture, and urine at once issued from it. As the ureter was being manipulated there was continuous and violent retching, which was also troublesome for a few hours after the operation. During convalescence there were some unexplained attacks of pyrexia. The urine now flows readily from the wound, where an apparatus is to be worn to collect it. The urine is clear and does not irritate the skin, and there has been no tendency to the deposit of phosphates. The boy is able to maintain the erect position. As there are some signs of cicatrisation in the exposed vesical mucous membrane, any attempts to close it in by plastic operations have been postponed. Possibly this method might enable the surgeon to extirpate the bladder for malignant disease or for some advanced forms of suppurative disease.—Mr. MORGAN inquired what were the reasons for sacrificing the left kidney. The freedom from phosphatic deposit in the urine was very striking. The method was novel, and deserved careful consideration, as ordinary attempts to ameliorate the local condition were usually very disappointing and complete closure rarely obtained. The condition of the bladder did not appear to have been much improved by the operation.—Mr. STANLEY BOYD thought that it was too early to say much about the value of the operation, as there were risks both of ureteral stricture and of "surgical kidney." He could see no reason for removing the left kidney.—The PRESIDENT, in reply, said that he removed one kidney because it would have been extremely difficult to collect the secretion satisfactorily from two orifices.

Dr. ROLLESTON showed a case of Spastic Hemiplegia after Whooping-cough. The patient was a girl, aged thirteen years, with right spastic hemiplegia associated with a varying amount of athetoid movement. The condition dated from an attack of whooping-cough when ten months old, and was considered to be due to hæmorrhage into the cortex from one of the cerebral veins during a paroxysm of coughing. The face, speech, and mental powers were unaffected. The upper limb was extended and hypertrophied. The wrist was flexed and adducted to the ulnar side, and the fingers were flexed into the palm; occasionally, especially on excitement, there was mobile spasm of the fingers. The muscles of the arm and that side of the chest were hypertrophied from the constant spasm. The right leg was spastic; there was no exaggeration of the knee-jerk. The patient was bright mentally, although ill health had interfered with her education.—Dr. MAGUIRE said that without knowing the history the case might have been put down as due to hysteria. He agreed that the only possible lesion was a cortical hæmorrhage. The prognosis was not good, as a large proportion of these cases developed epilepsy about the age of puberty.—Dr. GUTHRIE thought it surprising that cerebral hæmorrhage did not occur more frequently in whooping-cough. He had recently seen a case in which right hemiplegia and aphasia

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occurred suddenly during an attack of whooping-cough. The hemiplegia passed off after a few months and speech returned, when an attack of left hemiplegia occurred, and the child was now, he feared, permanently dumb.

Dr. ROLLESTON also showed a woman, aged twenty-six years, suffering from Acromegaly. For two and a half years the hands and feet had been getting larger, the nose becoming more prominent and the face enlarging, while amenorrhœa had existed for the same period. For a month before admission to St. George's Hospital, in October, 1896, she had suffered from severe headache. Under treatment by thyroid and pituitary extract combined this symptom had been relieved, though the skeletal changes remained. The treatment had been continued with good result since her discharge from the hospital, so that the good result could hardly be explained merely as the result of rest in bed. A somewhat similar beneficial result had been obtained in a more advanced case of the disease. Since pituitary extract alone had been found to be unsuccessful, and since there were some superficial resemblances between acromegaly and myxœdema, it seemed reasonable to try a combination of pituitary and thyroid extracts. Physiologically the action of these two extracts was opposed, and it seemed possible that acromegaly was the result of a disturbance of a chemico-physiological equilibrium maintained in health by the activity of these two glands.

Mr. W. H. BATTLE showed a woman, twenty-four years of age, with a "Baker's cyst" in the calf communicating with the knee-joint. There had been pain and swelling in the calf for some time, and a fluctuating swelling could be felt beneath the deep fascia. On examination it was found that there was a painless effusion, with very little synovial thickening, in each knee-joint, and a semi-membranous bursa communicating with the joint. There also appeared to be a communication between the cyst and the semi-membranous bursa. It was difficult to explain the effusion, which had remained stationary for three years.—Mr. BATTLE also showed a woman, twenty-one years of age, on whom he had performed Osteotomy for Extreme Deformity. There was extreme genu valgum of one leg and equally marked genu valgum of the other. Successive osteotomies by Macewen's method were performed, and the girl, who had previously been bedridden, was now able to walk without pain and without the aid of any apparatus.—Mr. BATTLE also showed a boy who fell and sustained a Compound Comminuted Fracture of the Patella. The wound was cleansed, some of the fragments removed, and others united as far as possible with wire, and the boy had now been able to return to his employment.—Mr. BATTLE also showed a Giant Thumb which he had removed in January from a man fifty years of age, for sarcomatous degeneration of an enchondroma, which had existed, with many others on the hand and forearm, from infancy. The tumour microscopically was a spindle-celled sarcoma, with remains of cartilage tissue. The sudden enlargement appeared to have followed an injury. The man had since died from "chronic bronchitis," possibly associated with secondary growths in the lungs.—Mr. MORGAN said that degeneration of these tumours was very rare. He had recently published a case in THE LANCET in which a congenital tumour degenerated into a sarcomatous growth at the age of fifty years.

Dr. L. G. GUTHRIE showed a Jewish child, two years of age, suffering from Multiple Spontaneous Fractures. The child was brought up on cow's milk and water, the milk being probably of poor quality. Four months previously discoloured patches "like bruises" were noticed about the thighs, arms, and clavicles. On admission to hospital the child was found to be very badly nourished, extremely sensitive to any manipulation, and there were definite fractures of the shafts of the clavicles, femora, and the right humerus, with considerable deformity. Skiagrams were shown demonstrating the lesions of bone. Several of the fractures had united, but there was still mobility of some. He believed the condition was probably due to scurvy-rickets, although there was no positive evidence of the condition, except, perhaps, the bruises. The child had rapidly improved on a diet of milk and cream, with raw meat juice and orange juice.—Mr. MORGAN said that he had just now under his care at the Hospital for Sick Children, Great Ormond-street, a boy seven years of age, also a Jew, with deformities due to a condition similar to that in Dr. Guthrie's patient. He thought the diagnosis of scurvy-rickets questionable, as in that disease the hæmorrhages and fractures were usually near the epiphyses, and not in the centre of the shaft.

Mr. F. C. WALLIS showed a man who had been under treatment for some years for a Mass of Glands on the right side of the neck believed to be lymphadenomatous. There were thirteen of these swellings, some of them as large as a turkey's egg. They were excised and found to be undergoing calcareous degeneration. The wound healed quickly, but lately about 100 subcutaneous tumours had appeared in the adipose tissue of the abdominal wall and elsewhere.

CLINICAL SOCIETY OF LONDON.

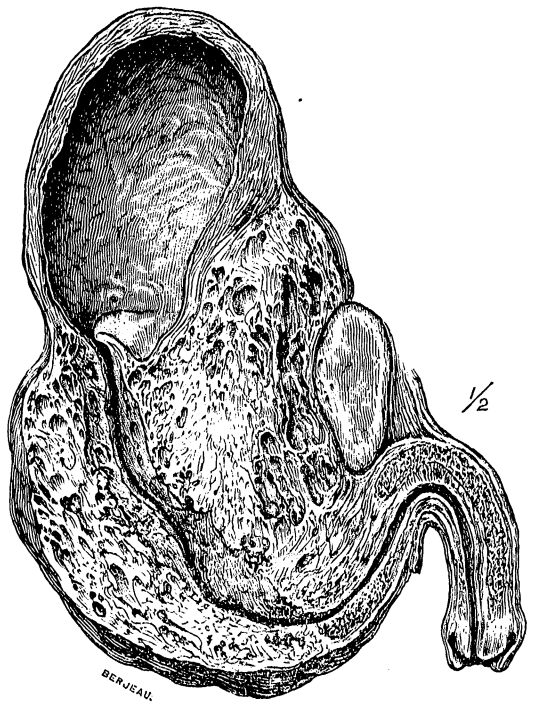
Sarcoma of the Prostate.—Ovariotomy in a Child.—Hydatid Cysts of the Liver, Pleura, and Abdominal Cavity.

A MEETING of this society was held on April 9th, the President, Dr. BUZZARD, being in the chair.

Mr. HOWARD MARSH related a case of Sarcoma of the Prostate. The patient, aged fifty-seven years, was admitted into St. Bartholomew's Hospital in May, 1896. Two and a half years previously laparotomy had been performed for a tumour, which on exposure seemed to be a sarcoma growing from the left ilium. As the tumour could not be removed the abdomen was closed. When the patient came into St. Bartholomew's Hospital a tumour was found involving the prostate, and so large that it filled the pelvis, displaced the bladder, and so pressed upon the rectum that the bowels could not act, and the abdomen was becoming distended. Colotomy was performed, but the patient died. On post-mortem examination it was found that, apparently from the dragging action of several pounds of dry fæces in the colon and sigmoid flexure, the bowel at one point had fallen away from the wound and that acute peritonitis had followed. The tumour, which measured 7½ in. by 4½ in., was enclosed in a firm fibrous capsule. On section it was of a whitish colour and firm consistence. On microscopic examination it was a spindle-celled sarcoma. Mr. Marsh remarked that both sarcoma and carcinoma occurred in the prostate, though both were rare. Not a few cases of sarcoma had been met with in quite young children, a good example being that recorded in a boy, aged five years, by Mr. Spanton. The affections had occurred in all the decades of life up to the age of seventy-five years. The chief symptoms were:—1. Difficulty of micturition. In some cases the urethra was completely destroyed by the growth, in other instances, however, micturition had been scarcely, if at all, interfered with. 2. Difficulty of defecation from pressure on the rectum. 3. The presence of a tumour in the situation of the prostate. 4. Hæmorrhage from the urethra; but this was frequently entirely absent. 5. Pain, sometimes only slight, but in some cases extremely severe. 6. The bladder was displaced so that it lay, not in the pelvic cavity, but in the hypogastric region of the abdomen. As to treatment, but little that was satisfactory could be done. Removal of the tumour was usually impossible; in some instances it was necessary to drain the bladder by supra-pubic puncture, while in many colotomy for the relief of intestinal obstruction had been necessary. In cases in which the growth was a firm spindle-celled sarcoma patients had lived for four or five years; but where, as often in children, the tumour was a myxo-sarcoma undergoing softening and tending to infiltrate the surrounding structures, death occurred in the course of a very few months.—Mr. BLAND SUTTON said that knowledge of the minute anatomy of prostate tumours was still very imperfect. The terms "scirrhus" and "encephaloid" were often applied to such tumours from their superficial resemblance to similarly named growths in the mamma. Carcinoma of the prostate was most liable to occur in advanced life, and gave rise to secondary deposits in the bones. The soft tumours in young people, often described as "encephaloid," were probably sarcomata, as in the case related by Mr. Marsh. Sarcoma might occur in children under the age of ten years. He mentioned the case of a boy, seven years of age, who, after difficulty in emptying his bladder, extending over a few weeks, came under observation with a soft tumour presenting in the perineum. An exploratory incision was made, and a piece of the growth removed and examined and found to be sarcomatous. He died soon afterwards, and secondary growths were found in the lungs. The condition

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of the parts after death is shown in the accompanying illustration. He had also received from others sections of similar tumours removed from children. The prostate therefore resembled the retina, ovary, and kidney in the liability to sarcoma in the first ten years of life, the liability recurring in the third decade.—Mr. JOSEPH GRIFFITHS showed a specimen of sarcoma of the prostate in a child extending along the urethra. He insisted on the importance, for purposes of diagnosis, of examining the condition of the urethra through the rectum. A bougie should be first passed down the urethra. In simple enlargement of



Sarcoma of the prostate, from a boy aged seven years.

the prostate there was never infiltration behind the membranous part of the urethra, but in malignant disease of the prostate thickening of the urethra in this situation could almost always be felt.—Mr. J. H. TARGETT showed a specimen of the same kind from the museum of Guy's Hospital. He thought that many of these cases arose in the connective tissue of the recto-vesical folds.—Mr. S. G. SHATTOCK remarked on the atrophy of the glandular elements of the prostate after double castration. It was possible that this was partly due to loss of internal secretion of the testis, and seeing the effect that double ovariotomy appeared to have in arresting malignant growths of the mamma he suggested a trial of double castration in these cases.—Mr. BUCKSTON BROWNE did not think that infiltration was always to be felt behind the urethra, and mentioned a case in which it was almost all in front, giving rise to a distinct prominence above the pubes. He remarked that hæmorrhage was more common in carcinoma of the urethra than in sarcoma. Severe neuralgic pain, often simulating double sciatica, was frequently met with in carcinoma of the prostate.

Mr. RAYMOND JOHNSON reported a case in which Axial Rotation of the Pedicle of an Ovarian Cyst was met with in a child five years of age. She had been ailing for six months, and during that time had suffered from numerous attacks of abdominal pain attended with diarrhœa and vomiting. These attacks increased in frequency and severity, and three weeks before the child was brought to the Victoria Hospital for Children the abdomen was noticed to be swollen. On admission the child was thin and looked ill; the temperature was 101° F. The abdomen was considerably distended, and the right half was occupied by a tender elastic swelling, which was most prominent below and to the right of the umbilicus. The diagnosis of localised tuberculous abscess of the peritoneum was made, and operation was at once undertaken. An incision was made over the prominent part of the swelling in the right linea semilunaris and a cyst of the right ovary was exposed. The wall of the cyst was hæmorrhagic and the pedicle had undergone two complete rotations. Ovariotomy was performed, the child making an uneventful recovery. The general features of the case were so suggestive of tuberculous peritonitis that the question of the diagnosis between a localised abscess and a cyst was not really taken into consideration. The case was recorded on account of its rarity, no other record of axial rotation of an ovarian pedicle in a young child having been discovered. Indeed, ovariotomy in a child of five years is sufficiently unusual to make the case of interest.—Mr. BLAND SUTTON said that out of all the cases of ovarian tumour that he had collected, only 15 per cent. were in children under ten years of age. Statistically, ovariotomy appeared to be most successful between the ages of ten and fifteen years; below the age of ten years it was not so successful. Twisting of the pedicle was unduly common in children, although the usual causes of that condition in adults—association with uterine myoma, pregnancy, or tumour of the opposite ovary—were not present.

Mr. W. G. SPENCER related a case in which Hydatid Cysts were removed from the Left Pleural Sac, from behind the Mesentery, and from the Right Lobe of the Liver. The case was that of a young women, aged twenty years, whom he had seen with Mr. Thomas Bond. She was supposed to have suffered from an attack of pleurisy, and they thought that an empyema had formed and was tending to point below the left costal margin. On incision of the prominent swelling a hydatid cyst was found occupying the lower half of the left pleural cavity. The parasitic cyst was removed without tearing it by passing a stream of water from an irrigator between it and the adventitious cyst. Upon the patient coughing the lung expanded, burst through the adhesions representing the adventitious cyst, and filled the whole cavity. The patient recovered the complete use of the left side of the chest. Meanwhile, dulness and resistance increased on the right side in the region of the liver from the nipple down to the level of the umbilicus. Two months after the first operation an abdominal incision was made, the liver hooked up, the large and small intestines pushed aside, the mesentery cut through, and the cyst, situated behind the mesentery and distinct from the liver, reached. The parasitic cyst was removed as before and the adventitious cyst washed out and sewn up. Finding that the cyst in the right lobe of the liver could not be reached, the abdominal wound was sewn up. An incision was then made into the pleura through the tenth interspace in the right mid-axillary line, the diaphragm stitched to the upper edge of the wound, and then incised. The cyst was reached one and a half inches within the liver and was drained. Fluid, shreds, and hooklets came away through the wound, and the patient has gradually recovered complete health. Mr. Spencer pointed out the dangers which might have attended operation either from sudden flooding of the lungs or from hæmorrhage, and how much safer and better than aspiration were incision and removal of the cyst.—Mr. HOWARD MARSH congratulated Mr. Spencer on the result of his treatment of the case. He thought that everyone would endorse his condemnation of the old practice of aspirating hydatid cysts. He had found the method of floating the cyst by irrigation described by Mr. Spencer very easy and successful. The closure of the adventitious cyst was often a very long and tedious process.—Mr. F. C. WALLIS had seen two patients suffering from hydatid cyst die directly after tapping. If the cyst was dead there were usually adhesions between the parasitic cyst and the adventitious cyst, and the method of washing out might fail. In that case it was quite easy to separate the parasitic cyst with the finger.—Mr. MAKINS said that cases like this one gave the surgeon great anxiety, as when it was discovered that there were more than one cyst he was left in doubt as to how many more might be distributed among the internal organs. The closure of the fistula was often a difficult result to secure; he recalled one case in which such a fistula from a hydatid cyst of the spleen never closed, the patient ultimately dying from amyloid disease. In some cases these sinuses had been shown to become tuberculous. Among the many objections to aspiration was the chance that the cyst might be packed with daughter cysts and only a few drops of fluid obtained when there was really a large cyst present.

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OBSTETRICAL SOCIETY OF LONDON.

The Treatment of Placenta Prævia by Champetier de Ribes' Bag.—Exhibition of Specimens.

A MEETING of this society was held on April 7th, Dr. C. J. CULLINGWORTH, the President, being in the chair.

A vote of condolence with the family of the late Sir Spencer Wells was passed.

Dr. G. F. BLACKER read a paper on the Treatment of Placenta Prævia by Champetier de Ribes' Bag. He said that in the more severe cases of hæmorrhage from placenta prævia Champetier de Ribes' bag might be employed in place of version by introducing it into the amniotic cavity after rupture of the membranes. Used in this way the bag acted both as a tampon in arresting the hæmorrhage by pressing the separated portion of the placenta firmly against the uterine wall, and also as a dilator of the cervical canal and a very powerful stimulus to uterine contractions. The use of the bag was therefore advocated in grave cases of hæmorrhage from placenta prævia as an easy method of arresting the hæmorrhage, and at the same time as likely to reduce the heavy fœtal mortality which usually occurred in these cases after the performance of version. Dr. Blacker had treated 5 cases of placenta prævia in this way, and had collected 17 other cases similarly treated. The details of these cases were given in full in the tables accompanying the paper. An analysis of the chief features of interest in the cases was given, showing that only in one case did severe hæmorrhage occur after the introduction of the bag; that such hæmorrhage might, as a rule, be readily controlled by traction upon the bag; that in none of the cases was any difficulty experienced in introducing the bag or was preliminary dilatation of the cervix necessary; and that the average length of time required for the complete dilatation of the cervix after the introduction of the bag was five hours and ten minutes. Of the mothers, 1 died from septicæmia—probably present on her admission to the hospital—before the introduction of the bag. Of the others, 5 had a slight elevation of temperature during the puerperium, the highest point reached being 100·6° F.; while in the remainder recovery was perfect and the puerperium afebrile. Of the 22 children, 14 were born alive, and 8, or 36·3 per cent., dead. Of the 14, 4 subsequently died, giving a total mortality of 54·5 per cent. The advantages claimed for the bag were: (1) ease and facility of introduction; (2) the certain arrest of the hæmorrhage; (3) any further hæmorrhage was controllable by traction upon the bag; (4) the bag, and not the child's body, dilated the cervical canal; (5) the ease of delivery after expulsion of the bag; (6) the fact that the bag was a very powerful stimulus to uterine action; and (7) the lessened fœtal mortality as compared with the results obtained after version. The objections brought against the use of the bag were considered—viz., the risk of septic infection, the danger of rupture of the uterus, and the displacement of the presenting part caused by its introduction. The further objections that the bag was difficult to introduce, and that preliminary dilatation of the cervix was required, were shown to be groundless. Even in cases of central placenta prævia the use of the bag was practicable and likely to give results just as good as, if not better than, the performance of version.—Dr. HERMAN agreed with Dr. Blacker's practical and useful paper. He thought the bag was a better plug than the half breech, because it pressed on the whole circumference of the lower uterine segment, while the half breech did not. The hæmorrhage in placenta prævia was produced by dilatation of the cervix, hence the bag could always be introduced when considerable hæmorrhage had occurred. His own experience of the use of Champetier de Ribes' bag in placenta prævia was altogether favourable.—Dr. HORROCKS said that he had for some years used Champetier de Ribes' bag, not only in cases of placenta prævia, but also in all cases where formerly Barnes's hydrostatic dilators had been used. In cases of placenta prævia the bag had been placed in the amniotic cavity only when the membranes had been ruptured. In cases where they had been intact care had been taken to avoid rupture. The presenting portion of the placenta had been detached by sweeping the finger round the lower zone, and then the bag had been passed into the uterus so as to lie below the membranes. Good results had been obtained by this method, which had much to be said in its favour. In so-called accidental hæmorrhage the membranes were ruptured because it was the quickest method known of securing uterine contraction, which stopped the hæmorrhage, whereas in the hæmorrhage from placenta prævia the principle of treatment was precisely the reverse—that is, instead of invoking uterine action it was endeavoured to avoid it and to dilate and deliver by artificial means, and only when the cervix was sufficiently dilated were the membranes ruptured. He considered that the chief danger was sepsis from the bag itself, which was difficult to get aseptic owing to its composition of indiarubber and the material used to render it waterproof.—Dr. H. R. SPENCER said he had had considerable experience of placenta prævia and of the employment of Champetier de Ribes' bag, though he had not employed the bag in the treatment of placenta prævia, but usually for the induction of premature labour. That experience led him to agree with most of Dr. Blacker's conclusions, but he thought that some further points should be taken into account in order that discredit might not be brought upon this method of treatment by its adoption in unsuitable cases. In cases of complete placenta prævia he doubted whether it was advisable to use the bag unless an edge of the placenta could be separated; for the child in these cases almost always died, and it would generally be impossible so to control the bag during its introduction as to be sure that it did not push up the placenta instead of passing into the amnion, and that the hæmorrhage which it was intended to check was not increased by the treatment. Dr. Spencer called attention to the paper of Dr. Camille Juge, which had appeared since Dr. Blacker's paper was written, in which an account was given of 9 cases treated by the introduction of the bag into the amniotic cavity. Of these 9 cases, 3 mothers died and 6 children were born dead. These cases, added to those in the table, gave a maternal mortality of 13 per cent. and a fœtal mortality of at least 58 per cent. The bag often caused a great deal of pain, and in three of Dr. Juge's cases it produced syncope—a very grave condition in cases of this nature. It also often took a long time to induce labour, as long as twenty hours in 2 of the cases in the table, whereas he (Dr. Spencer) found that after version the labour was over in 16 out of 17 cases in three hours, and in the seventeenth case within five hours.—Dr. BLACKER, in reply, said that he was indebted to Dr. Herman, not only for the remarks he had made about his paper, but also for the fact that it was mainly on his recommendation that he had first employed this mode of treatment in placenta prævia. He thought introduction of the bag after rupture of the membranes was certainly superior to its introduction before, as the latter method was almost certain to be accompanied by an unnecessary and avoidable amount of hæmorrhage.

The following specimens were exhibited:—

Mr. TARGETT: Large Encysted Peritoneal Abscess simulating Ovarian Cyst.

Dr. DRUMMOND ROBINSON: Cystic Ovaries removed by Anterior Colpotomy.

Dr. LEWERS: (1) A Monster, apparently consisting of a somewhat spherical mass of flesh with one limb attached; (2) a Skiagraph of the Monster; and (3) a Uterus with Fibroids removed by Abdominal Hysterectomy.

Dr. EDEN: Incomplete Decidual Cast of the Uterus from a case in which there was no evidence of Extra-uterine Gestation.

Dr. BOTTOMLEY: (1) A Fœtal Monstrosity; and (2) a case of Fœtus Compressus.

Dr. DUNCAN: Further Specimens of Fibroid Tumours of the Uterus removed by the Intra-abdominal Method.

Dr. HERMAN: Specimen of Ectopic Pregnancy going nearly to Term in the Peritoneal Cavity, the placenta being attached to the top of the uterus.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.

Microscopical Aspects of Certain Lesions induced by Dental Caries.

AN ordinary meeting of this society was held on April 5th, Mr. JOHN FAIRBANK being in the chair.

Mr. FAIRBANK referred to the death of Mr. Salter, and remarked that the council had sent a letter of condolence to the family in the name of the society.

Mr. HOPEWELL SMITH read a paper on the Microscopical

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Aspects of Certain Lesions induced by Dental Caries. His paper dealt chiefly with the various calcareous formations met with in the pulp and on the walls of its cavity. He remarked that the formation of such masses was due not only to caries, but also to traumatism, senile changes, and obscure conditions, and suggested the following classification:—1. Calcareous degeneration of the pulp through changes in the pulp alone: (*a*) common, due to vascular changes in the pulp in association with caries; and (*b*) rare, due to idiopathic or constitutional changes—e.g., gout. 2. Secondary dentine in pulp cavity, through changes in the primary dentine and pulp: physiological, due to senile conditions of both permanent and long-retained deciduous teeth. 3. Adventitious dentine in the pulp cavity, through changes in the primary dentine and pulp, the result of caries. Mr. Hopewell Smith then referred to the fact that carious stimulation of the dentine was associated with marked cellular activity on the part of the pulp, and he discussed the question under three headings—namely, conditions associated with (*a*) superficial caries; (*b*) deep caries; and (*c*) penetrating caries. The conclusions arrived at were—(1) that nearly every degree of dentinal change is attended with hyperæmia and cell proliferation in the pulp tissues and, generally speaking, the formation of adventitious dentine; (2) that the latter may have its origin as a conversion or secretion of the dento-genetic cells, producing, on the one hand, the areolar, laminar, or hyaline varieties, when the formative cells alone happen to be concerned, and, on the other hand, the fibrillar or cellular forms when odontoblasts or connective tissue cells are by chance incorporated in the deposit; (3) that there are no proofs that the cells called odontoblasts take any part in the production of the matrix of the new dentines, the term being therefore a misnomer; and (4) that the new dentines by a system of extension from the affected areas may be just as much subjected to the peptonising action of the micro-organisms as the primary dentine of the tooth.—Mr. MUMMERY, Mr. STORER BENNETT, Mr. F. J. BENNETT, Mr. GOADBY, and Dr. PARE took part in the discussion, and Mr. HOPEWELL SMITH briefly replied.

LIVERPOOL MEDICAL INSTITUTION.

Intermittent Hemiplegia.—Tetanus.—Enucleation of Uterine Fibroids.—Operative Treatment of Injured and Painful Blind Eyes.

A MEETING of this society was held on April 8th, Mr. ROBERT JONES, Vice-President, being in the chair.

Dr. ALEXANDER DAVIDSON read notes of a case of a man, aged seventy-three years, who had Intermittent Attacks of Hemiplegia. The patient was taken into hospital on Jan. 18th at 6.30 P.M. suffering from left hemiplegia; two hours later he recovered power in the face and limbs. On the morning of Jan. 19th there was no paralysis in the arm or leg; at 12 mid-day paralysis returned; at 1.45 P.M. power was gradually recovered. On Jan. 20th paralysis returned and was permanent.—Dr. KENNAN referred to a case of a man with Complete Left Hemiplegia, which disappeared in a quarter of an hour, only to return half an hour later and become permanent.

Dr. CARTER related two cases of Tetanus in which he had used the tetanus antitoxin. The first case was that of a boy, aged fourteen years, in whom the symptoms of tetanus were well marked; he had a slight wound on the back of the hand. Antitoxin from the Institute of Preventive Medicine was injected on three occasions, the amount used being 10 c.c., and during this time no other medicine was used. As the patient became worse, having almost constant spasms, opisthotonos, and no sleep, chloral and gelsemium were given with marked relief to the symptoms, and the patient ultimately recovered. The second case was that of a man, aged twenty-six years, who was kicked by a horse on the finger and had marked symptoms of tetanus. An injection of 30 c.c. of antitoxin obtained from Paris was given and a mixture of chloral and gelsemium was also taken. The symptoms becoming worse, 24 c.c. of antitoxin were injected, but the spasms became continuous and the man died. Dr. Carter did not think that the antitoxin had produced any material effect in these cases.

Dr. ALEXANDER described a method of Transperitoneal Enucleation of Uterine Fibroids, which he advocated as a substitute in many cases for removal of the appendages and for partial hysterectomy or pan-hysterectomy. Its advantages were greater safety without any mutilation of the patient. The operation consists of a median laparotomy, a longitudinal incision in the uterus in the median line down to the fibroids, their enucleation through one opening, closure of the incision in the uterine wall by catgut sutures, packing of the cavity occupied by the fibroid for forty-eight hours with iodoform gauze, an end of the gauze being left out of the lower end of the abdominal wound, and temporary ventro-fixation of the uterus whilst the cavity is drained. He related six cases, all successful, the number of fibroids removed varying from one to twenty-six.—Professor WALLACE remarked that the operation was not of wide application or fitted for single tumours.—Mr. HAWKINS-AMBLER said that Dr. Alexander's operation appeared to be a good one.

Mr. BICKERTON read a paper on the Operative Treatment, Past and Present, of Injured and Painful Blind Eyes, giving an Historical Sketch of the old practice of Extirpation of the Globe. He alluded to the alternative methods of treatment—e.g., optic neurotomy and neurectomy—as procedures to be discarded, and strongly advocated the performance of Mules's operation in all suitable cases.—Mr. G. E. WALKER doubted if it was worth incurring the great suffering caused by the introduction of a foreign body into the eye in order to bring about a little improvement in the appearance and mobility of an artificial eye.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.—Surgical Treatment of Gall-stones.

A MEETING of this society was held on March 25th, the President, Mr. RECKLESS, being in the chair.

Mr. PYE-SMITH showed a case of Supposed Fracture-dislocation of the Cervical Spine between the third and fourth vertebræ without Paralysis. The patient, a man, aged twenty-six years, fell six feet, alighting on the top of the right side of the head, nine months ago. The head was in a flexed position and could not be fully extended. There was pain in the region supplied by the supra-clavicular nerves.

Mr. HERBERT HALLAM showed a boy with Mediastinal Growth.

Mr. CONNELL showed a specimen of Tumour growing through the Orbit and extending widely into the Cranial Cavity.

Dr. SORLEY read notes of a case of Abscess of the Liver.

Dr. SINCLAIR WHITE read a paper on the Surgical Treatment of Gall-stones, and presented a tabular statement of the cases—nine in number—he had operated on. Operations on the gall-bladder were best classified under two heads: (*a*) those of necessity, and (*b*) those of expediency. Among the former the most frequent causes were acute suppuration of the gall-bladder, complete obstruction of the common bile-duct from an impacted calculus, with permanent jaundice and suppurative cholangitis. Among the latter chronic distension of the gall-bladder and repeated severe attacks of biliary colic occurred. Cases of chronic distension were common, and should not be dealt with surgically unless the condition gave rise to discomfort or interfered with the health of the patient. When repeated and severe attacks of biliary colic were present an important point, and one that was commonly lost sight of, was whether gall-stones appeared in the fæces. Should these be found after each attack it was right to wait, in the reasonable hope that eventually a natural cure would result; on the other hand, their absence was an indication for cholecystotomy. The success attending the employment of Paul's tubes in intestinal surgery had induced Dr. White to extend their application to the gall-bladder. A glass tube three inches in length and a third of an inch in diameter, with a constriction at each end, was employed. One end was tied in the gall-bladder and the other connected by means of a rubber tube with a bottle for collecting bile. The parietal peritoneum was stitched around and to the peritoneal covering of the gall-bladder on the proximal side of the ligature. By this means the possibility of fouling the peritoneum was avoided. The first dressing was not disturbed for ten days, by which time the ligature had cut its way through the gall-bladder and the tube could be removed.

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The device had not only abolished the necessity for frequent change of the dressings, but materially shortened the time required for the operation. In one case, that of a woman weighing sixteen stone, the abdominal fat was four inches thick, and it was impossible to bring the gall-bladder to the surface. The case was successfully dealt with by introducing a teacup into the abdomen and allowing the contents of the gall-bladder to fall into it. In another case, where there had been innumerable attacks of severe colic followed by jaundice, the gall-bladder was filled with biliary sand. It was out of the question to suppose that this could have produced blocking of the common duct, and the case goes to prove, observations to the contrary notwithstanding, that transient jaundice may be produced by catarrhal inflammation spreading from the gall-bladder to the common duct.—The PRESIDENT, Mr. LOCKWOOD, Mr. PYE-SMITH, Mr. CUFF, Mr. SNELL, Mr. CHEESEWRIGHT, Dr. RHODES, and Dr. ADDISON made remarks.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Infective Endocarditis.—Roentgen Photographs.—Locomotor Ataxy.

A MEETING of this section was held on March 26th, Sir CHRISTOPHER NIXON being in the chair.

Dr. M. A. BOYD described a case of Infective Endocarditis. The patient was a man, aged twenty-five years, who died, after an illness of three days' duration, marked by pyrexia, delirium, and petechial eruption. At the necropsy there were found miliary abscesses in the kidney and myocardium, and the mitral valve presented an area near the margin of one cusp devoid of endocardium and coated with recent fibrin. The blood was fluid. Sections made from the mitral valve showed extensive necrosis and the margin fringed with compact clusters of cocci. The capillaries of the myocardium were plugged with cocci and the kidney showed similar conditions. Cultures produced pyococcus aureus. The illness dated from severe exposure to wet and cold. The mode of entrance of the organisms was otherwise unexplained. There had been no disease of the middle ear and there was no indication at all in any organ of a primary seat of disease.—Dr. E. J. M'WEENEY said that on cultivation the staphylococcus aureus was obtained, and a plate cultivation showed the liquefying power of the organism upon gelatin. The organisms produced a pale yellow colour, and had evidently been circulating in the blood of the patient.

Dr. LANE JOYNT gave a lantern exhibition of a series of thirty-five X Ray Photographs illustrative of various pathological conditions and showing the extent and utility of this aid to medicine and surgery. Four cases of Colles' fracture were shown, of which three cases had fracture of the styloid process of the ulna. The bones of tuberculous patients when rendered visible by the x rays showed some difference from sound bone. The most noticeable feature was the homogeneous appearance of the ends of bones, such as the phalanges, with marked atrophy of the compact covering, and in some cases the shafts of the bones were seen to be in a similar condition. The bones as a whole were more transparent than sound bone, even in parts not showing the clinical signs of disease.

Dr. COLEMAN and Professor O'SULLIVAN described a case of Locomotor Ataxy. The patient was a man, aged forty-one years. He had never had syphilis, but had suffered much from exposure to wet and cold. His symptoms began two and a half years before his death with lightning pains in the legs, followed six months later by slowness in micturition and occasional incontinence of urine. Eighteen months before his death he had transient diplopia, stumbled in the dark, and felt unsteady on his legs; about the same time he noticed numbness of the fingers of his left hand. The unsteadiness in walking progressed for the next twelve months, at the end of which time he suffered from painful tenesmus and girdle sensation. On admission to hospital his symptoms were as follows: slightly ataxic gait; incoördination of movements of the arms; Romberg's sign well marked; tactile sensation deficient over the distribution of the left ulnar nerve, less so in the right hand; thermo-anæsthesia in the left arm and both legs, with slight analgesia and retarded transmission of painful sensations; Argyll-Robertson pupil; loss of knee-jerks and of plantar, cremasteric, and abdominal reflexes. The nutrition of the toe-nails and of the skin of the soles of the feet was much impaired. He had old-standing tuberculo-fibroid disease of both lungs, and he died five weeks after admission to hospital from disseminated pulmonary tuberculosis.—Professor O'SULLIVAN said that the post-mortem examination showed thickening and sclerosis of the aortic valves, cavities, fibroid changes, and bronchiectasis in the right lung and disseminated tubercles in the left. On microscopic examination the nerves of the cauda equina showed increase of endoneurium and marked thickening of the inner coats of the arteries. The cord showed degeneration of the posterior columns, which could be traced from the lower coccygeal region, where the cord was two millimetres in diameter, to the medulla oblongata. The ventral field of the posterior columns was free from degeneration throughout. A narrow zone running along the median septum was free in the lower part of the cord. In the dorsal region the medullated fibres of Clark's column had entirely disappeared. The posterior roots outside the cord were markedly degenerated up to about the fifth dorsal segment; from this on to the second dorsal segment they were almost free, and the path of these undegenerated fibres in the cord formed a narrow strip, which could be traced along the outer margin of Goll's column to the medulla, where they ended in the nucleus cuneatus. Above the second dorsal segment the degeneration of the posterior roots recurred, and was most marked in the cervical enlargement. Their path in the cord was marked by a strip of degeneration lying outside the last mentioned and also passing to the nucleus cuneatus. Above the cervical enlargement the degeneration of the incoming roots suddenly ceased. The degeneration was most marked throughout on the left side. Two of the spinal ganglia which were examined showed slight proliferation of the layer of cells lining the spaces occupied by the ganglion cells.

Reviews and Notices of Books.

Ospa i Ospoprivivanié: Pamiati Jenner'a. (*Small-pox and Vaccination: To the Memory of Jenner.*) Vol. I. By Dr. V. O. HUBERT. St. Petersburg: The Russian National Health Society. 1896. Price 3 roubles.

FOR this handsome volume we have nothing but praise. Last year, it will be remembered, the Russian National Health Society organised an elaborate commemoration of the centenary of Jenner's great work in proving the value of vaccination as a preventive of small-pox. For various unforeseen reasons the commemoration was postponed, and was finally held just before the close of the year. A description of the memorial meeting and of the exhibition connected with it appeared in our columns at the time. The volume now under notice was prepared by the secretary of the society and issued on the day of the meeting. The second volume is in course of preparation. The work could scarcely have been put into more capable hands than those of Dr. Hubert. The present volume contrives in the course of some 530 pages to give a complete history of small-pox and the methods of dealing with it from the very earliest historical times down to the beginning of the present century. In the earliest chapters we find a good account of small-pox, or of such scanty historical references to it as remain, in ancient Egypt, in China, in India, among the Hebrews, and later among the Arabians; and here is included a complete Russian translation, the first ever published, of Rhazes's well-known essay "De Variolis et Morbillis." A history of small-pox in the middle ages, followed by a full account of the practice of small-pox inoculation, leads naturally to the epoch-making work of our truly great fellow countryman, who robbed small-pox finally and for ever of the terrors it possessed for our ancestors. The story of Jenner's experiments and the final triumph of his discovery is, or should be, well known to most educated people in all countries, but it bears the

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re-telling, especially when such a wealth of detail and lavishness of illustration are added as in the case of the present Russian version. And here we must add a word of special praise for the illustrations throughout the volume. There are in all between 400 and 500 portraits, drawings, facsimiles of ancient manuscripts, title pages, and so forth, and they are most of them excellently reproduced. We say "most" advisedly, for it is a matter of regret that some of the portraits are not so pleasing as they might be. Dr. Hubert has succeeded in collecting between thirty and forty different portraits of Jenner[1] and large numbers of likenesses of other celebrities and authorities upon small-pox, but in transferring by one of the mechanical processes the lines of old prints to new, very highly glazed paper the result is not in all cases satisfactory. These are, however, small blemishes, and the remainder of the illustrations, some of which are in colours, are excellent. The reproductions of Jenner's drawings for his "Inquiry" are particularly good; they are almost indistinguishable from the originals. Not only the "Inquiry," but all the other productions of Jenner's pen, including his verses, are here printed in full, either in Russian translation or in the original English, or in both, and a full life of Jenner completes the chapters relating to the introduction of vaccination.

The chapters on Small-pox and on Inoculation and Vaccination in Russia are naturally among the fullest in the book, and contain a vast amount of curious and interesting information. We have only space to call attention to the curious popular pictures here reproduced. These were apparently issued by the Government or philanthropic societies early in the century and distributed among the peasants. They are mostly crude, but very unmistakeable, representations of the disastrous effects of small-pox and the beneficial effects of vaccination, and it must have been the dullest of intellects that failed to read the lesson they were meant to teach.

It is a matter of regret that this work is in a language so little known outside its own country as Russian. But in view of the great number of illustrations it contains, and of the fact that it is dedicated to the memory of Jenner and his work, there is no reason why it should not find a welcome place in the libraries of many English medical men.

A Handbook of the Diseases of the Eye and their Treatment. By HENRY R. SWANZY, A.M., M.B. Dub., F.R.C.S. Irel., Surgeon to the National Eye and Ear Infirmary. Sixth Edition. London: H. K. Lewis. Pp. 608, post 8vo. Price 12*s.* 6*d.*

WE are glad to welcome another edition of this excellent manual. The changes that are to be found in the present edition, considering that only two years have elapsed since the appearance of the last, are of course not extensive, and many pages are simply a reprint; but the author has devoted much attention to the ocular diseases that are associated with morbid conditions of the brain and has greatly improved and extended the arrangement given in previous editions. The following is the order in which he has described these affections: Ocular diseases and symptoms liable to accompany focal disease of the brain, which include, amongst others, hemianopsia, alexia, visual aphasia, dyslexia, amnestic colour-blindness and mind-blindness; ocular diseases and symptoms liable to accompany diffuse organic diseases of the brain, as sclerosis, meningitis, epilepsy, and chorea; ocular diseases and symptoms liable to accompany diseases and injuries of the spinal cord, as tabes dorsalis, myelitis, syringomyelia, myotoma congenitalis, and acute ascending paralysis; nervous amblyopia or asthenopia; and, lastly, various forms of amblyopia—such as scintillating scotoma, congenital and reflex amblyopia, and erythropsia. Mr. Swanzy's work contains in an appendix a very useful enumeration of the regulations in respect to vision which disqualify candidates for admission into the public services, and it is much to be desired that these rules should be placed before those who are interested in the education of the young before they have commenced their special studies.

LIBRARY TABLE.

On the Plans of Modern Asylums for the Insane Poor. By JOHN SIBBALD, M.D. Edin., Commissioner in Lunacy for Scotland. Edinburgh: James Turner and Co. 1897.—In view of the expressed intention of the English Lunacy Commissioners to furnish reduced plans of proposed asylums, embodying the latest approved architectural arrangements, this paper, written by Dr. Sibbald for the information of the authorities of the recently constituted Edinburgh Lunacy District and since reprinted, appears very opportunely. The authorities on whom devolves the duty of making provision for the steadily increasing numbers of the registered insane will now have ample opportunity of studying the matured opinions of the heads of the central departments on the subject of modern asylum requirements. Dr. Sibbald has acted wisely in publishing his views; they breathe the spirit of progressive enlightenment which characterises, and has characterised, the administration of Scottish lunacy affairs. The author describes the gradual development which has taken place during the century in the care and treatment of the insane and in their environment. He gives a description of several asylums built at different periods and shows the progressive steps that have been made with regard to the housing of the insane poor. As illustrating the latest type of asylum in the British Isles he describes the Gartloch Asylum (City of Glasgow), which is built on the pavilion system; and he instances the Middlesex Asylum at Claybury and the West Riding Asylum at Menston as being, from certain points of view, among the most admirable of the newer asylums. The village system which has recently come into favour in Germany and the United States meets with his warmest approval, and he gives a lucid and interesting account of the Alt-Scherbitz Asylum near Halle in Prussia. This asylum is administered on the village system, and Dr. Sibbald regards it as the type of asylum that conforms in the highest manner to the most modern and the best idea of what an asylum ought to be. He states that it carries further than any other type the idea of making asylum arrangements similar to those of ordinary life, and every development in asylum construction which has stood the test of experience has been made in this direction. Altogether this is an instructive and readable paper, and should certainly accomplish the object for which it was written.

Transactions of the American Gynæcological Society. Vol. XXI., for the year 1896. Philadelphia: William J. Dornan.—The volume before us contains several interesting contributions. Among these may be particularly mentioned a paper on the Liability to Prosecution for Damages in Abdominal Surgery by Dr. Kirkley, and one by Dr. John Byrne on the Relative Merits of Total or Partial Hysterectomy for Cancer of the Cervix by Ordinary Methods and Supra-vaginal Excision by Galvano-cautery. Dr. Boldt contributes a paper on the Implantation of the Ureter into the Bladder by Abdominal Section for the Cure of Uretero-Vaginal Fistula. There is also a paper by Dr. Charles Noble on Suspensio-uteri, with Reference to its Influence on Pregnancy and Labour. The question of the best technique to be adopted in abdominal hysterectomy for fibroids is once more to the front in a valuable paper by Dr. Byford, entitled "Drainage of the Stump and Connective Tissue in Abdominal Hysterectomy

[1] One portrait (that on p. 351, a seated figure in cocked-hat) is surely an error. It is, we believe, not a portrait of Dr. Jenner, but of Dr. James Sims, M.D., LL.D.

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for Fibroids and Inflammatory Disease." The volume quite maintains the high standard of excellence reached by its predecessors.

Dental Materia Medica, Pharmacology, and Therapeutics. By CHARLES W. GLASSINGTON. London: J. & A. Churchill. 1896. Price 6s.—A good text-book dealing with dental materia medica has been sorely needed for some time, and although we can hardly state that Mr. Glassington's book comes up to our most sanguine expectations, nevertheless it must be regarded as a distinct advance on anything as yet published. There are some omissions and a few inaccuracies which will no doubt be remedied in a future edition and so increase the value of the book, which should be a welcome help to the dental student and practitioner.

JOURNALS AND REVIEWS.

Science Progress (April, 1897). — This issue provides abundant material for study and reflection and should suit a very wide range of readers. Perhaps the most widely interesting contribution is that by Professor Poulton (Oxford) on a Remarkable Anticipation of Modern Views on Evolution, in which the author draws attention to the very pregnant conclusions of "that great pioneer of modern anthropological and ethnological research James Cowles Pritchard" (born 1786) as bearing upon the views of the present day in regard to the transmission of acquired characters. These views, which were arrived at independently by Professor Weismann over half a century later, appear, strange to relate, to have passed unnoticed. Even Darwin must have overlooked all notice of the remarkable anticipations published in a second edition of Pritchard's work on "Researches into the Physical History of Mankind." The issue contains also some papers of interest to the physicist, chemist, botanist, and student of medicine, while a paper on "Wind Scorpions" contains a very interesting account of these curious but somewhat discomposing creatures. They occur in Arabia, and are described as looking like "a piece of thistledown driven before the wind," and possess somewhat remarkable anatomical characters. They have terrible jaws and exhibit in general very formidable powers.

Journal of Mental Science (April, 1897).—In the current number of this quarterly Dr. Julius Mickle continues his interesting observations on Atypical and Unusual Brain-forms in Relation to Mental States. Dr. J. F. Woods relates his personal experience of suggestion, with or without hypnosis, as a therapeutic agent in the treatment of mental and nervous diseases. He commenced experiments in 1892 with very decided scepticism as to the value of this method; but the results he has achieved in the course of five years have convinced him of its efficacy, and he affirms that, in certain disorders, no other mode of treatment can compare with it. Dr. C. Hubert Bond, in a paper of much clinical interest, throws considerable light upon the relationship of diabetes, including glycosuria, to insanity. In a vigorous article Dr. Mercier discusses the question of Medical Reticence, both as regards sane and insane patients. He formulates his views in no half-hearted manner, but goes straight to the point, and strenuously upholds the sacredness and inviolability of professional secrecy. Duty to the patient, he says, should be the first and paramount consideration. He deplores the apathy and silence displayed by the great medical corporations on the subject, and indulges in a free criticism of some of the evidence tendered during a recent celebrated trial. Dr. Mercier reviews in detail the various exceptions to the general rule which were brought forward at the time, and which aroused so much discussion. With regard to sane patients he will hear of no exceptions, and states that a medical man is not, under any circumstances, justified in revealing the confidence of a patient without the patient's consent. Respecting the communications of insane patients the circumstances are somewhat different, and he concludes that the information obtained from an insane patient may be revealed when, and only when, it is expedient for the welfare of the patient or for the public safety. The whole question will come up for discussion at the annual meeting of the Medico-Psychological Association, and should give rise to an animated and interesting debate.

The *Humanitarian* for April has an interesting article on "The Women of the Pit," by John Pendleton. The life of the woman who helps to supply our hearths with fuel is very different from what it was before the Act of 1842 prohibited female toil in mines, but the pit-brow lassie still exists and, notwithstanding the smallness of the pay, seems to love her calling. Says this writer: "Whether the Legislature will ultimately decide that the pit-brow lass must abandon her work, or whether her muscular help will be superseded by mechanical appliances remains to be seen; but her own verdict is emphatically in favour of the continuance of her industrial life. She prefers it to the enervating work of the cotton mill; in fact, she is so attached to the free, though toilsome, employment on the pit brow, that after she has listened to the love avowal of miner or weaver and entered into the bonds of matrimony she is loth to leave her old career, and if her husband has no objection sometimes resumes her toil on the pit brow."

The April issue of *Knowledge* contains a brief summary of the progress of Chemistry and the Chemical Arts during the Queen's reign by Professor Thorpe, LL.D., F.R.S. This is the contribution for the month to the serial articles dealing with the science of the Queen's reign. He concludes with the pessimistic opinion that, "so far as can be seen, there is no immediate hope that this country will be able to compete with Germany in the manufacture of those products which are the direct outcome of the application of the higher and more recondite branches of chemical science to industry, nor will there be even the prospective hope until our manufacturers as a body bring the spirit of science into their work and show a greater receptivity and a more widespread desire to turn the ever growing development of the science to practical account."

New Inventions.

CELLULOID CYLINDER DRESSING-BOX.

A CONVENIENT means of keeping surgical dressings in an aseptic condition and available for immediate use is sure to have a favourable reception, and most of the qualities requisite for this purpose seem to be combined in a receptacle which has been devised by Messrs. Reynolds and Branson of Leeds. This article is in the form of a tall cylinder, which being made of celluloid is transparent, light, and neat in appearance; moreover it is not liable to be affected by antiseptics nor is it easily broken. The cover of the cylinder is an "air filter," a shallow circular dish, also of celluloid, fitting tightly into the upper part of the cylinder, and filled with cotton wool; the lid and the bottom of this dish are perforated, so that after the cylinder is closed air cannot enter without passing through the cotton wool. The cylinders are meant to be carried in an instrument bag; they are made in two sizes, one being 9 in. deep and 3 in. in diameter and the other 7 in. deep and 2¼ in. in diameter.



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KNIFE FOR SLITTING OPEN THE TONSILS IN CASES OF LACUNAR TONSILLITIS.

IF we carefully examine enlarged or apparently normal tonsils we find in many cases deep crypts or lacunæ. These

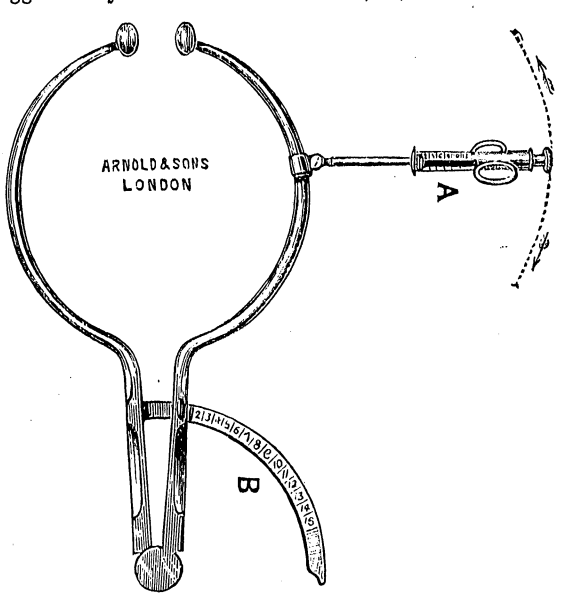


crypts frequently contain masses of grey caseous matter, and under the microscope large numbers of various kinds of micro-organisms are seen—often the tubercle bacillus, leptothrix, pneumococcus, Loeffler's bacillus, &c. These organisms frequently cause local or general infection. Most cases of recurrent sore-throat, drain-throat, or even of gouty throat, and many cases of enlarged cervical or bronchial glands, are due to infection which is contained in the crypts of the tonsils. The germ of rheumatic fever is believed by some authors to enter the lymphatics through the tonsils. In many cases of apparently normal tonsils we find quantities of tubercle bacilli in the crypts. In treating cases of diseased tonsils we try to destroy or obliterate the crypts in the tonsils, and thus prevent the accumulation of caseous matter and micro-organisms there. If the tonsils are large, we remove them by the guillotine, the snare, or the knife. If they are small, we try to obliterate the crypts or lacunæ by the galvano-cautery, by caustic, by sharp forceps, or by slitting them open with a knife. The last named is the least painful and most efficacious method. I have had a knife made by Messrs. Down Bros., St. Thomas-street, Borough, in the shape of a strabismus hook with a cutting edge. This is introduced into the crypts and drawn downwards or upwards, thus slitting open the tonsils. The crypts are thus converted into open fissures, and any subsequent accumulation of caseous matter, or of germs, &c., is prevented. The tonsils are then painted with 1 in 1000 perchloride of mercury solution for a few days. From one to three operations on each tonsil generally suffice. At some future time I hope to enter more fully into the methods of infection and the various diseases which can be caused by infection through the tonsils.

ADOLPH BRONNER, M.D.,
Surgeon Bradford Eye and Ear Hospital, Laryngologist Bradford Infirmary.

SPRING PRESSURE GAUGE CALIPERS.

THE illustration shows a pair of calipers made at my suggestion by Messrs. Arnold and Sons, 31, West Smithfield,



and presents an innovation at A, the use of which, though difficult to convey in writing, has, I know from trial, met a distinct want. It may be said that calipers might with advantage be more widely adopted in surgery as a diagnostic aid; for instance, not only in fractures and dislocations and joint diseases, but in some cases of abdominal and pelvic tumours (in the latter instance one limb of the instrument being inserted into the rectum or vagina). Yet my reason for calling attention to the present instrument lies beyond this. I presume others have, as I have, met with abdominal cases, especially in the obese, in which an accurate means of determining the different degrees of resistance to pressure as a diagnostic aid would be desirable, let the locality be the flank, over the cæcum, or elsewhere. Not infrequently, indeed, one is puzzled to know if one part is more resistant than a corresponding part. The instrument I submit will meet this want. If, for instance, it takes in one locality a pressure of 6 lb. of the spring A (note scale) to approximate the limbs so as to register six inches on the scale B, whilst at another locality it takes a pressure of 3 lb. only, then of course the former locality will have a resistance—and a diseased one—of 3 lb. greater than the latter. I hope, therefore, this aid alone may be an apology for another new instrument.

JAMES MACMUNN, L.R.C.P. & S. Irel., L.R.C.P. Lond.
Finsbury-pavement, E.C.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

ELECTION OF PRESIDENT.

THE annual meeting of the Fellows of the Royal College of Physicians of London for the election of President took place on Monday last. Dr. Wilks, in laying down his office gave an address, in which he first dealt with the question of professional secrecy, then reviewed the work of the College during the past year, and finally gave brief obituary notices of the deceased Fellows, the list comprising Sir J. Russell Reynolds, Sir G. Johnson, Dr. G. Harley, Dr. Langdon Down, Dr. W. Cholmeley, Sir B. W. Richardson, Dr. E. Ballard, Dr. C. H. Ralfe, Dr. G. Child, Dr. W. Wilson, Dr. Parry McConnell, Sir Thomas Logan, Dr. C. P. Blake, and Dr. H. Fearnside. At the close of the address a vote of thanks was passed to the President on the motion of Sir Alfred Garrod. The ballot was then taken, when Dr. Wilks received 79 votes; Sir W. Broadbent, 4; Sir R. Douglas Powell, 2; Sir W. Roberts, 1; and Dr. Church, 1. Dr. Wilks was then inducted into office by the Senior Censor (Dr. Church), and briefly thanked the Fellows for having elected him to a second term.

On the motion of the President it was resolved to present a loyal address of congratulation to the Queen on the completion of the sixtieth year of Her Majesty's reign.

Permission was granted to Dr. Hale White to deliver the Croonian Lectures in the Examination Hall, the subject of the lectures being the Means by which the Temperature of the Body is Maintained in Health and Disease.

In response to an invitation from the authorities of the International Medical Congress the President nominated Sir Dyce Duckworth and Dr. Lauder Brunton as delegates of the College to the Congress to be held at Moscow in August next.

A fine portrait of Sir Henry Halford, Bart., President of the College, 1820–44, by Sir Thomas Lawrence, was on view, it having been bequeathed to the College by his grandson, the late Sir Henry Halford.

SOCIETY FOR THE STUDY OF INEBRIETY.—The annual meeting of this society was held on the 8th inst., the President, Dr. Norman Kerr, being in the chair.—Dr. C. R. Drysdale read a paper giving the Results of Experiences of the Successful Treatment of Disease Without Alcohol, a conclusion which Dr. David Walsh thought might be attributable to other factors.—Dr. Kerr protested against the common accusation launched against the medical profession that their prescriptions were "one of the chief causes of drunkenness," he having found that less than ½ per cent. of his cases of inebriety had originated in "doctors' orders."—Dr. Morton, Mr. Riley, and the President discussed a paper by Mr. Cherrill, all concurring in the view that acquired characteristics may be transmitted.

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THE LANCET.

LONDON: SATURDAY, APRIL 17, 1897.

As the date of the day appointed to be for ever memorable comes near public interest in the scheme of the PRINCE OF WALES'S Hospital Fund grows deeper and deeper; and it is of a twofold character. There is interest as to the amount of the Fund that is to signalise so great an event, and there is almost equal interest in the principles on which it is to be used and distributed. It is impossible as yet to form any precise conception as to the amount of the Fund. It is gratifying to see day after day that it continues to draw large sums and small sums from all sorts and conditions of men. Hospitals have never received subscriptions from so many individuals as those from whom they will have received contributions by the end of this year. This—probably even more than the sum raised—will be the glory and the distinction of the PRINCE'S scheme. HER MAJESTY appeals with a commanding effect to all her people, especially for any object in which the element of suffering or of human sympathy is involved; and she does so all the more effectually through her illustrious son, who has the same strong human sympathies which have been such a powerful factor in HER MAJESTY'S character.

We are not of the number of those who think that the main support of hospitals should come from the poor, or even from those of moderate means. Such classes do a far more creditable thing when they make self-reliant provision for their own ordinary medical wants and come to terms with a medical man of their own neighbourhood, either through the medium of a club or—better still—by private understanding on respectful and self-respecting terms. Such ailments of the mass of the people above the ranks of pauperism have no claim to hospital treatment. It is scarcely reasonable, therefore, to expect much in the way of contribution to hospitals from the classes in question. The hospital is properly the gift of the rich to the poor—of the man who is able in his own comfortable home to provide medical and nursing skill for himself and has enough and to spare to provide the extra medical and surgical skill, with corresponding nursing, which his poor neighbour requires in the emergencies of life when overtaken by grave accident or disease. One good likely to be effected by the PRINCE'S scheme is the bringing into the line of hospital supporters thousands with ample means who have hitherto not contributed—rather, perhaps, from want of thought than from want of heart. It is one of the mysteries in connexion with the support that is extended to hospitals that it is at present given by so few. It is an insoluble puzzle that thousands of well-to-do people should every day of their lives pass hospitals to which they never contribute a farthing, and yet never seem either to sleep or to dine the worse for their neglect. The lists which we see daily and the general sentiment which has been stimulated by the PRINCE'S action lead us to hope that a permanent blow has been struck at this indifference, and that consequently the hospitals of London, in reasonable numbers, and attempting to deal only with fit cases, will henceforth be less straitened in their endeavours to meet the really urgent cases of the classes for whom they were originally intended. If the rich—if even the comfortable men—of the metropolis would do what GUY did 160 years ago, the question of impecuniosity of hospitals would disappear; an efficient central authority would prevent the further multiplication of rival, and particularly of special, institutions; and the one care of administrators would be to accommodate fit cases and to exclude the unfit.

The administration of the Fund and the uses to which it is to be applied give us, we confess, more concern than the amount of it. It would seem from the successive circulars that emanate from the Council of the Fund, and from the somewhat vague terms in which the future form and use of the Fund are spoken of, as if these were still matters for further consideration. There is some wisdom in this vagueness. It gives time to study the trend of public opinion and the real questions that are at stake in any movement for helping voluntary hospitals and placing them in an unassailable position in public opinion. There are two or three principles which doubtless His Royal Highness and his colleagues will bear in mind with advantage. The first of these is to do nothing in promoting their own most popular Fund to damage the existing agencies by which hospitals are supported. It would be a poor effect of the Fund to in any way damage permanently the Hospital Sunday or Saturday Fund. The former especially is an institution which has existed for a quarter of a century and has raised a very large sum of money. It annually appeals to the charity of a number of those who do not more directly contribute to hospitals; and, while it might do much more, it has already done much to improve hospital administration. It should be recognised as a powerful and permanent agent for stimulating hospital charity and wisely supervising its administration. Still less would the PRINCE desire to interfere with the ordinary subscriptions of those whose steady benevolence has been the reliance of hospital treasurers in the past. We have heard whispers of diversion of funds from their ordinary channels into this magnificent and extraordinary channel of 1897. This, of course, is no gain at all to the cause which we all have at heart, and is a poor compliment to the QUEEN and His Royal Highness. It is merely saving with one hand what is given with another—it is robbing Peter to pay Paul. Finally, it would be well, and would powerfully contribute to the success of the Commemoration Fund, if it could be confined and concentrated in respect of the duration of the appeal. The continuation of it into future years will certainly tend to detract from its success and its brilliance as a Commemoration Fund, and to compete seriously with established agencies. Its success is evidently part of the *annus mirabilis* of 1897, and should not be imperilled by having to rely on competition with common methods of appeal and advertisement in ordinary years. We make these observations in sincere sympathy with the general object of the PRINCE'S scheme, and fervently hope that when

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by its aid the hospitals are freed from the ever-pressing load of debt they will be once more at liberty to pursue their merciful work of relieving the sick and suffering without the temptation, which now too frequently arises, of distributing that relief with too lavish a hand.

THE advertisements and announcements having reference to the QUEEN'S Commemoration in June which meet the eye on every side should serve as a warning that the influx of visitors to London at the time of the festival is likely to be unprecedented. It is impossible to find data for a reliable estimation of the extra visitors which London is to expect, but the million and a half which is freely spoken of does not strike us as being in any way impossible.

How many persons can find accommodation to see the procession? The route is six miles in length, and standing shoulder to shoulder and allowing eighteen inches for each person it would take 15,120 persons to reach the length of the route. Doubling this we get 30,000 as the number for one line on each side for a length of six miles. In order that 1,500,000 spectators may view the procession there must be fifty rows of 15,000 on both sides of the route. It seems scarcely possible that accommodation can be found for such a huge concourse, but that many will have to be content with the enchantment of very distant views, and doubtless London will recall the Rome of CÆSAR, as imagined by our ever-living poet:—

"Many a time and oft
Have you climbed up to walls and battlements,
To towers and windows, yea, to chimney-tops,
Your infants in your arms, and there have sat
The livelong day, with patient expectation,
To see great Pompey pass the streets of Rome."

Few are aware of the enormous elasticity of London and the constant variation in the number of its inhabitants which is constantly going on. The dwellers and workers in the City are ten times as numerous at high noon as they are at midnight, and it is estimated that over a million persons enter and leave the City daily on business of one kind or another. What is true of the "City" proper is also true of central London generally, so that it may be assumed that the machinery now existing for the transport of people is quite adequate for the Jubilee. Ordinary business will be necessarily set aside to a great extent along the line of procession for at least three days previously, and as the Commemoration day is to be a holiday many who would ordinarily visit the City will stop away. After making every allowance, however, there can be no doubt that for two or three days at least London will be choke full, and we are bound to ask whether the over-crowding which will necessarily obtain is fraught with any danger to the public health.

Doubtless, as always must be the case, the ends of some few persons who are "ripe to depart" will be accelerated by the excitement and extra exertion, and it is equally not to be doubted that an average number of casualties will take place, and that some will be made ill by feasting "not wisely, but too well." Beyond this we are inclined to think that the festivities, with all the overcrowding they entail, will not appreciably affect the death-rate. Of all causes which tend to produce a high death-rate overcrowding is by far the most potent, but the ill-effects of it are seldom produced acutely, and it must be remembered that over-crowding in the open air is far less dangerous than over-crowding within four walls and under a common roof.

To be shut up for some hours in a crowded room with a case of infective disease is doubtless very dangerous, and our readers do not need to be reminded of the instances of the infection of judges, counsel, jury, and spectators by prisoners with gaol fever, or of the spread of infant maladies by means of indoor "treats" of various kinds.

The QUEEN'S Commemoration will be unique in the fact that all ceremonial is to be out of doors, and HER MAJESTY deserves the thanks of her subjects for this novel departure from customs which are more honoured in the breach than in the observance. The QUEEN has always manifested what may be called a "living faith" in the value of fresh air. HER MAJESTY has a wholesome horror of close and stuffy rooms, and it is well known that in the summer HER MAJESTY'S breakfast, luncheon, and tea are often served out of doors, and dwellers on the Dee side are aware that no ordinary weather (be it never so "saft" or even snowy) will deprive them of the pleasure of seeing their Sovereign in the well-known wagonette with grey cobs. It is largely owing to this fact that HER MAJESTY'S seventy-eight years sit so lightly upon her, and HER MAJESTY'S example, if loyally followed by her subjects, would have an incalculable influence for good upon the public health.

The difference in the susceptibility of individuals to the effects of foul air is very remarkable. There have been judges, and many, who have lived to a vigorous old age, and have continued to deliver the clearest judgments in the thickest of atmospheres, and who have remained in happy ignorance as to what is meant by foul air. On the other hand, there are many persons who cannot spend an hour or two in a crowded theatre or a crowded church without suffering from subsequent headache or malaise, or without "catching cold," as the inevitable consequence of their imprudence. HER MAJESTY has always manifested considerable intolerance of the atmosphere of crowded places, and it has been one of the penalties of her high position and popularity that every place which she honours with her presence has been "crammed to suffocation." Those who remember the intolerable heat and stuffiness of St. Paul's Cathedral at the Thanksgiving Service of 1872 or of Westminster Abbey at the Jubilee of 1887 will be thankful that in commemorating the sixtieth year of her reign our venerable Sovereign is to be saved from any similar trying ordeal.

AMONG the principal questions likely to engage the early attention of the General Medical Council at its meeting in May will doubtless be the judgment of the Lords of HER MAJESTY'S Most Honourable Privy Council on the subject of the refusal of the General Medical Council at its meeting in November last to accede to the application of the Apothecaries' Hall of Ireland to appoint surgical and, if it pleased, medical examiners also. Our readers will remember that on the first occasion, in 1896, when this subject was before their Lordships after the first refusal of the General Medical Council to assist the Apothecaries' Hall to maintain a position as a licensing body, they advised that the Hall should again approach the Council, asking them

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to re-consider their attitude and to appoint examiners, not only in surgery, but also in medicine. This suggestion was accepted most willingly by the Hall, and in their next application to the Council for assistant examiners in surgery, while suggesting two gentlemen as examiners in medicine, they expressed their willingness to substitute any other examiners the Council might prefer. The Council in June last, though influenced by four or five unsatisfactory reports of successive inspections and visitations of the examinations of the Hall, was still unprepared to go the length of a direct refusal to appoint the examiners asked for, and, on the motion of Sir WILLIAM TURNER, directed communications to be made to the Royal College of Surgeons in Ireland and the Apothecaries' Hall of Ireland asking them to re-consider their respective positions with a view to a second combination between them such as should maintain an efficient standard of examination. But this well-meant device did not succeed. The Royal College of Surgeons in Ireland declined to enter again upon a conjoint scheme with the Hall; and when the Hall in November last, acting on the advice of the Lords of the Privy Council, asked the General Medical Council to appoint examiners, the Council by a vote of 23 against 2 (the proposer and seconder only) declined. The motion declining to make the appointments was proposed by Dr. MACALISTER and seconded by Mr. TEALE. Dr. MACALISTER in his speech[1] argued that it was so unlikely that the Council would be able to supervise and control the examination effectually after appointing surgical examiners that it would be better to leave the responsibility of such appointments with the Privy Council than for the General Medical Council to accept it. This view was adopted by the large majority of the Council which we have named, but the Privy Council has taken a different view of the question. Their Lordships have notified that, having heard counsel on both sides, their opinion is "that occasion has arisen for the General (Medical) Council to appoint assistant examiners in surgery under the Medical Act, 1886, for the purpose of qualifying examinations to be held by the Apothecaries' Hall of Ireland; and accordingly, in pursuance of the Provisions of Section 19 of the Medical Act of 1886, the General (Medical) Council is directed to appoint such examiners."

This episode in medical history is one upon which it is permissible to dwell for a few moments, and this we do with due respect to the Lords of the Privy Council before whom the matter was laid—viz., the Lord President (the Duke of DEVONSHIRE), Lord MACNAGHTEN, Lord JAMES OF HEREFORD, and Lord RATHMORE—although we are not prepared to find their judgment beyond criticism. We have often pointed out that in the last resort the Privy Council is the authority in law with which the General Medical Council has to reckon, and it is not a little creditable to the General Medical Council and the various medical bodies over whom it has jurisdiction that the Council has administered the Medical Acts for forty years without having come into collision with the Privy Council. There is no evidence now of any want of mutual respect between these two bodies. The opposite conclusion which has been reached by them only expresses their natural difference of standpoint, and time will show whether this difference is one affecting the mere order of procedure or whether it is of deep and serious import. For it would be a serious thing in the eyes of the medical profession if, after patient and costly inspections and visitations by the General Medical Council, an unneeded medical corporation had by the order of the Privy Council to be preserved and to be allowed to compete with other examining boards after its *raison d'être* had ceased in the estimation of the General Medical Council. This result does not necessarily follow from the action of their Lordships in this case, but it seems to be the immediate consequence of their judgment. They recite Section 5 and Section 19 of the Medical Act of 1886 as if the General Medical Council had no discretion in the matter but to appoint examiners for a body in the position of the Apothecaries' Hall of Ireland, and as if they themselves had as little discretion to abstain from notifying the same to the General Medical Council. They seem to have decided that, in the event of the Council not complying with their directions and notifications no responsibility with regard to the appointments rests with themselves. That four gentlemen, however eminent in statesmanship or law, should have such power over a medical body of thirty members, representing the profession and all its corporations, the universities, and the Crown, is indeed a serious fact, and one which will not readily be understood by the public or the medical profession. The General Medical Council, as a non-legal body, naturally sees in the words "if they see fit" a certain discretion as to its function of appointing additional examiners. But the judgment of their Lordships seems to abolish all discretion in the matter. It is time, in the interest of common sense, that either these words should cease to be used in the Acts of Parliament or that they should be allowed their natural meaning.

Meanwhile it seems to us to be a very regrettable matter that the General Medical Council, which may surely at least be credited with a desire to act in this respect with a due regard to the best interests of both the medical profession and the public, should have received such a rebuff at the hands of the Privy Council.

[1] THE LANCET, Nov. 28th, 1896.

Annotations.

"Ne quid nimis."

THE PORT OF LONDON.

THE half-yearly report of Dr. Collingridge, medical officer of health for the Port of London, shows that 14,422 vessels were visited and inspected in the Port of London during the half-year ending Dec. 31st last—a considerable increase on the number for any previous half-year. Of the number stated 82·4 per cent. were British and 9·7 per cent. Scandinavian. Forty-eight sick seamen were referred to hospital. Attention is drawn to a sanitary defect frequently met with in these days of iron and steel ships—namely, the condensation of moisture which occurs on the under side of decks over forecastles, the result being that this moisture runs down on to the bunks below, and it is no uncommon thing to find men's bedding and clothes saturated from this cause, a serious matter as affecting the

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health of seamen who are well known to suffer beyond the average from rheumatism and its train of concomitant diseases. A coating of granulated cork on the iron is good as a palliative procedure, but the only effectual method of dealing with the nuisance is to have a wooden deck over the iron and the under surface completely lined with the same material close up to the deck, all beams being encased. The instructions to surveyors last issued by the Board of Trade prohibited the placing of bunks under an unsheathed deck, but the operation of this section was postponed. Another matter in the port which calls for attention is the condition of the cabins of lighters and other "dumb" craft. The Merchant Shipping Act and Canal Boats Act provide for the comfort of persons living in craft registered under these Acts, but in the case of lighters, though the cabins cannot strictly be considered as dwellings, they have to serve as temporary habitations, often for considerable periods. The Port Sanitary Authority is now, since the Public Health Act, 1896, practically the health authority for the port, and its medical officers have discretionary powers as to the detention of vessels in reference to the diseases named. During the half-year eighty-eight cases of infectious disease came under the notice of the authority's officers. Two cases of plague, the diagnosis being verified by bacteriological examination, were admitted into the Seamen's Hospital in 1896. The first case was that of a native of Bombay admitted on Sept. 19th, who had apparently been ill for twelve days or less, and who died five hours after admission. The other case was that of a patient ill for four days, who was admitted on Sept. 29th and who died on Oct. 3rd. Careful instructions were given to the boarding medical officers as to dealing with suspected cases found on vessels. The order of the Local Government Board requiring in certain circumstances the disinfection of rags imported from abroad has been rescinded. Details of nuisances dealt with are given, and in consequence of the continuance of the practice of pumping filthy bilge-water into the docks and river a special notice has been published as a warning. Particulars are given of some cases of overcrowding, and especially insanitary condition, found on some foreign vessels. At the hospital of the authority 29 patients were treated during the half-year, of whom only 4 died; the average number of patients under treatment daily was 3 6, and the average number of days spent in hospital by each patient was 21·7. A considerable number of seizures of unsound food was made during the six months, comprising 2758 carcases and 1469 pieces of mutton and lamb, 14 quarters and 30 pieces of beef, 2 tons of bacon and hams, 18 casks of horse beef, 496 tins of meat, 45 cases of salmon, 2909 lobsters in jelly, 41 cases of desiccated soup, 4270 tins and 74 cases of rabbits, 198 cases of condensed milk, 7100 crates of bananas, 5000 boxes of oranges, 146 packages of fruit and vegetables, sundry small parcels consisting of apricots, bacon, brawn, cheese, chestnuts, confectionery, currants, hams, kidneys, olives, ox tails, peaches, persimmons, pickles, pines, suet, sultanas, tomatoes, tongues, tripe, &c. An additional new launch has been added to the service of the Port Sanitary Authority, whereby the duties of inspection have been greatly facilitated, though it has only been at work since September. The number of canal boats inspected was 668, a slight increase; 114 boats were found to be in some way infringing the regulations. The number of women and children carried shows a slight increase for the past two years, being to some extent due to the great frost of 1895 which, paralysing the canal traffic as it did, compelled many boatmen to break up their homes on shore and take their families afloat — a serious matter, as canal boats are not a desirable habitation from either a moral, sanitary, or educational view for women and children. A new order respecting cattle ships was issued on Dec. 8th last, which makes several concessions to ship-owners for which they have striven for some years. Reference is made to the report by the medical officer of the Local Government Board on oyster culture in relation to disease, several oyster lays being within the jurisdiction of the Port Sanitary Authority, though it does not appear that a sanitary authority has any definite power to act in the matter of oysters at these places. The subject is considered an important one, and a strong case exists for proper systematic supervision.

ROYAL COMMISSION ON TUBERCULOSIS.

THIS Commission sat at 7, Whitehall-place on April 8th and 9th, Sir Herbert Maxwell, Bart., M.P., being in the chair. The other Commissioners present were Dr. R. Thorne Thorne, C.B., F.R.S., Professor G. T. Brown, C.B., Mr. Shirley F. Murphy, Mr. T. Cooke-Trench, and Mr. J. Speir, Evidence was heard from the following gentlemen:—Dr. Smyth, medical officer of Naas dispensary district, as to the subject of tuberculosis in the small towns and rural districts of Ireland; Mr. Thomas Nuttall, representing the Central and Associated Chamber of Agriculture, as to his experience of the prevalence of the disease in the district of Leicestershire; Mr. J. Lang and Mr. Scarlett, of the Paisley United Fleshers' Society, as to the action of the local authority in condemning carcases affected with tuberculosis, and the system of insurance adopted by the butchers to protect themselves from the losses sustained in consequence of such action; and Mr. J. Bell, President of the Carlisle and District Butchers' and Insurance Association, as to similar action in Carlisle.

MEDICAL FEES IN AMERICA.

MEDICAL fees in America, taken all round, are higher than those in England. It has been computed that there are two or three consultants in New York who make £20,000 a year, five or six who make £10,000, and several who make £5000 and upwards. Locality has, of course, a great deal to do with the rate of fees, for a man who settles in the country naturally does not expect to have so large an income as one who takes a house in a rising town or in a large city. Fees in New York are somewhat higher than elsewhere in America. As a rule, in that city a family attendant receives an amount varying from $2 to $5—i.e., from 8*s*. to £1—per visit, and the average fee of those whose practice lies wholly among the wealthy is from $5 to $10. Consultants' fees range from $10 to $25. Visits at a distance from home are at the rate of from $10 to $20 per hour, not including travelling expenses, and a fee of $25 for the consultation itself. Fees for surgical operations run from $100 into several thousands. In the lower district of New York a practitioner must be content with a fee of $1 (i.e., 4*s*.) for a home consultation and from $1 to $1.50 for a visit. In the other large towns of America the ordinary fee for advice is from $1 to $2, and never less than $0·50; for a visit the charge is from $1 to $5, and never less than $1. Midwifery fees vary from $10 to $50. The fact must also be borne in mind that in the States a medical man rarely does his own dispensing, and the druggist charges for making up the requisite medicine a sum of at least $0.50, so that in all cases advice and medicine will cost the patient at the lowest estimate $1. In many of the smaller towns a physician is glad to give advice at his house for $0.50 (i.e., 2*s*.) and to make a visit for $1. Such an institution as the cash practice, where advice and medicine may be had for 6*d*. or 4*d*., is absolutely unknown in America, and it may be asserted without fear of contradiction that the average income of a medical man there is higher than in England. One drawback, however, is attached to the practice of medicine in the States which does not exist to the same extent in Great Britain, this being the greater difficulty

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experienced by American physicians in collecting debts due to them, for practice is carried on almost wholly on the credit system and it often happens that a patient after consulting a specialist does not leave his fee on the table. Why fees in the States should be generally so much higher than in England is a matter somewhat difficult to comprehend. Less competition cannot be the cause, for in the States there is one medical man to every 500 persons, whereas in England there is only one to every 1500. The working classes in America receive larger wages than in Great Britain, and no doubt this partly accounts for the higher medical fees, but a still more potent reason is the fact that in America the members of the medical profession stand well together and are resolved to resist as vigorously as possible any attempts to lower the rate of fees.

COOKERY AND FOOD EXHIBITION.

THE Cookery and Food Exhibition, which is held annually under the auspices of the Universal Cookery and Food Association, instituted and promoted to extend a better knowledge of the various substances used as food and the best and most economical method of cooking, will be opened on Wednesday, May 12th, at the Niagara Hall, St. James's-park, London, S.W., and will remain open till the following Wednesday. The exhibits will be classified under the headings of Education in its connexion with Cookery; Plain or Household Cookery; Army, Navy, and Mercantile Marine Cookery; Artistic Cookery; Cookery Teachers' Competition; Artistic Confectionery, &c.; Bread and Pastry; and Provisions, &c. Various demonstrations and lectures will be given. This is the tenth exhibition of the kind that has been held, and we wish it every success. Bad cooking is answerable for some of the ills of the flesh, and to any efforts to improve what is almost a neglected art in this country, especially amongst the poor, we give our hearty support.

PHOTOGRAPHIC ENERGY OF THE LIGHT OF FIRE-FLIES

A VERY interesting investigation of the luminous and other radiations emitted by fire-flies has just been published in the ninth volume of the *Journal of the College of Science*, Imperial University, Tokyo, Japan. The author, Mr. H. Muraoka, who writes in German, is Professor of Physics at Kyoto. He mentions that the spectacle produced by the fire-flies about the middle of June is one of the sights of the place, and he states that the present inquiry was suggested to him by the resemblance of their light to that of fluorescent bodies, some of which have been shown by H. Becquerel to emit radiations possessing properties analogous to those of the Roentgen rays. The flies are most luminous from about 6 P.M. to 11 P.M. The experiments were made by placing a number of them, varying from 300 to upwards of 1000, in a small flat box in which they were confined under a net made of hemp ("deren Wegfliegen mit einem Hanfnetz verhindert wurde"). The box also contained a photographic dry plate, in contact with which were plates of various metals (copper, aluminium, zinc, and brass), all of similar thickness, sheets of cardboard, both entire and also with cruciform patterns cut out of them, being sometimes interposed between the sensitive plate and the metal and sometimes used alone with the sensitive plate. Thin wooden boards were also employed for the same purpose. The sensitive plate and the objects in contact with it were wrapped in several thicknesses of black paper and left in the box with the flies for two nights. The experiments were made in a photographic dark room, sunlight and artificial light being carefully excluded. The sensitive plates, though thus wrapped up, and additionally protected by metallic plates and layers of cardboard, gutta-percha, cloth, silk, &c., were always more or less blackened. Professor Muraoka makes frequent reference to the papers published in *Nature* in the early part of 1896 by Dr. John Macintyre of Glasgow and Mr. J. J. Thomson. His experiments led him to the following conclusions:—1. The light of the flies in its original state behaves like ordinary light. 2. The light contains rays which pass through cardboard, metal plates, &c., and possesses properties analogous to those of Roentgen rays or Becquerel's fluorescent rays. 3. When the photographic plate is covered with layers of cardboard it presents an appearance which calls to mind the permeability of iron to magnetic lines of force. 4. The properties of these "filtered" rays appear to be influenced by the materials through which they have passed, perhaps by the thickness of the materials. 5. The properties possessed by the radiations and specified under No. 2 are apparently non-existent, or at least undiscoverable until after "filtration." The Roentgen rays are similarly undiscoverable until after "filtration"—i.e., through the glass of the Crookes's tube—and "filtration" may, perhaps, afford a means of rendering the x rays homogeneous. 6. The "filtered" fire-fly rays undoubtedly admit of reflection. Refraction, interference, and polarisation could not be demonstrated, but Professor Muraoka is of opinion that they take place. 7. The "filtered" firefly rays seem to resemble Becquerel's fluorescent rays in possessing properties intermediate between the ultra-violet rays and the Roentgen rays. The volume of the *Journal of the College of Science* in which this article appears contains over 200 pages; all the other papers are in English, and are mostly chemical, except four, the subjects of which are electricity, magnetism, geology, and astronomy.

TRICUSPID STENOSIS.

TRICUSPID stenosis is a disease of some rarity. Dr. James B. Herrick, having found three cases in the post-mortem room not diagnosed during life, writes on the subject.[1] He has collected all the cases published since Leudet's thesis, which appeared in 1888 and gave a complete bibliography to that date. To the 117 cases (of which 114 had records of necropsies) furnished by Leudet the writer is able to add 40 with necropsies. He gives abstracts of most of these, and on the basis of the whole 154 cases constructs an account of the disease. But he has little to add to Leudet's conclusions, which must still be the foundation of future work. Tricuspid stenosis may be congenital, and then it is either the result of a develop mental defect or of intra-uterine endocarditis. It is usually accompanied by other abnormalities—pulmonary stenosis, defects in the inter-ventricular septum, patent foramen ovale and ductus Botalli. The symptoms are cyanosis, clubbed fingers, and diastolic and systolic murmurs. Few patients survive until twenty years of age. In the acquired form antecedent rheumatism occurred in 30 per cent; but there were also doubtful cases, so that for this and other reasons the relationship is understated by the writer. Leudet, indeed, estimated it at 50 per cent., which appears to be nearer the truth. The age at death of the greatest number affected with the acquired form was between thirty and forty years. As in mitral stenosis, the disease was more prevalent in females than males, the proportion being 114 to 32. The tricuspid leaflets are generally found adherent by their free borders. The opening may admit only one finger-tip or less. Naturally, with the stenosis there is regurgitation. The disease is rare as an isolated lesion; in Leudet's 114 cases this occurred in only 11. Mitral stenosis was by far the commonest concomitant (78 cases). Mitral and aortic stenosis occurred in 21 cases, and pulmonary stenosis in 3. The right auricle is usually enlarged, sometimes considerably, "like a

[1] Boston Medical and Surgical Journal, March 18th, 1897.

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supplementary heart." Where the stenosis was marked there was usually a small right ventricle, and this in spite of the fact that there was also mitral stenosis. Commonly, however, the combined lesions produce general enlargement of the heart. The symptoms are those common to valvular disease. Dyspnœa may be extreme. Cyanosis is generally marked, with perhaps œdema. The pulse, from deficient supply of blood, is small. Presystolic venous pulse is generally seen, often with systolic from concomitant insufficiency. Percussion reveals an enlarged right heart, and commonly left also, from mitral or aortic disease. Dulness may commence as high as the second space to the right of the sternum, suggesting auricular enlargement. Thrills are at times present. The murmur is diastolic, heard best over the right fifth and sixth cartilages, but it is frequently inaudible. The diagnosis presents great difficulty; only 6 of the 114 cases were recognised during life. The disease may be suspected in a female who has mitral stenosis with a history of dyspnœa, palpitation, œdema with remissions, and cyanosis, especially if persistent. Right auricular enlargement is very suggestive. If, in addition, there is a presystolic or diastolic murmur heard best over the ensiform or right fifth and sixth cartilages, particularly if this differs from the mitral in character, or if there is an area between the two where none is heard, the diagnosis is reasonably certain. The prognosis in general is bad, but must depend on all the circumstances of the case. It should be remembered, however, that a patient may live to sixty-five years. The treatment is similar to that of heart disease in general.

A CHILD KILLED BY FERRETS.

AT Bromsgrove, on the 6th inst., an inquest was held on the body of Ernest Lewis, aged two years. On March 26th the deceased and four other children, whose ages ranged from five months to seven years, were left in bed, locked up in a house at Dodford, whilst the parents went to market. Two ferrets which were kept in the house broke loose, and getting upstairs attacked the sleeping children. The eldest boy repeatedly threw the animals downstairs, but as there was no door to the bedroom they returned. The boy Ernest sustained a number of severe bites, to which he succumbed. A large part of his mouth and nose were eaten away. The medical man stated that all the children except the eldest would be permanently marked. The jury blamed the father for not taking proper precautions to secure the animals. Such is the matter-of-fact account furnished by some of the daily papers of this gruesome tragedy. The sufferings of these unfortunate children both from physical pain and terror must have been intense and long continued. It is difficult to conceive anything more ghastly. It does not appear to be generally known how very ferocious these beasts are, especially when hungry. To the censure of the jury on the father we would add that the animals should not have been kept in the house at all. We trust the case will serve as a warning; but we fear it may not attain the publicity that it should.

THE SMOKE NUISANCE IN SHEFFIELD.

THE air of Sheffield is proverbially in a chronic state of murkiness, and the town suffers considerable reproach on this head. But in a most comprehensive report on the causes of prevention of smoke recently drawn up by Dr. Littlejohn, the medical officer of health, he very properly points out that in contrast with other towns Sheffield is seriously handicapped by the fact that it contains a much more closely packed smoke-producing area. The amount of coal consumed in Sheffield annually is about one and a quarter million tons, and this within an area of thirty square miles. In London in 1892 the amount consumed was the same, but the area of distribution is 235 square miles, so that were London factories brought into a square whose sides were three miles distant north, east, south, and west of Charing-cross, it may be assumed that the conditions of the metropolitan atmosphere would be much the same as that of Sheffield. The amount of sulphuric acid corresponding to the amount of sulphur in that quantity of coal would amount to 37,500 tons, so that in Sheffield, while the sulphuric acid deposited in the rain would amount to 1000 tons to the square mile, in London it would only be equal to 140 tons. In other words, London receives on the ground just as much sulphuric acid as Sheffield, but over a larger area and consequently more diluted. It is probable, however, that London is more favourably situated than is Sheffield for the removal of smoke. It is, no doubt, the continued prevalence of winds during the last few winters—and London has no barrier against the onset of winds in any direction—which has resulted in the notable absence of fogs in the metropolis of late. Dr. Littlejohn, we are glad to see, points out to the Sheffield Health Committee that much more may be done by efficient control and regulation towards mitigating the evil still further, and his report is a valuable contribution on the subject.

PARISH MORTUARIES.

WE have many times insisted upon the paramount necessity which exists, especially in thickly populated town parishes, for the erection of properly appointed mortuaries. To say nothing of the question of decency and reverence it is acknowledged by every one that the presence of a corpse in a small room, often less than eight feet square and inhabited day and night by several persons, is not conducive to health. A praiseworthy attempt is now being made by the vicar of the very poor parish of St. Augustine's, Stepney, to raise a fund for the erection of a decent and well-fitted mortuary for the reception of the bodies of those who die in his parish. That such is needed is obvious when it is remembered that the parish can be walked in its length in four minutes and across in two minutes, while the population is 7500. A sum of £915 has already been raised and £585 are required in addition. Donations may be sent to The Vicar, St. Augustine's, Stepney, E., and we cordially commend this scheme to the generosity of those who have any money to spare. It must be remembered that the mortuary will also serve for the needs of adjacent parishes which are quite as crowded as is St. Augustine's.

PLAGUE AT HONG-KONG IN 1896.

WE have received a copy of the Blue-book dealing with this epidemic. Plague is at all times an interesting disease, and is doubly so to us at the present juncture. The report is drawn up by Dr. Wilm, a staff surgeon in the Imperial German Navy, whose services were kindly placed at the disposal of the Colonial Government by the admiral in command of the German Asiatic Squadron. He was placed in charge of the Kennedy Town Hospital and the bacteriological laboratory which was established there in May, 1896. During his term of office he treated 300 cases of plague and examined the bodies of 867 persons who had died from the disease. In most of the cases there were no prodromata, the period of incubation was usually from three to six days, but in one instance apparently fifteen days. There was intense prostration and delirium with fever, the temperature ranging from 100·6° F. to 106° F., but a high or low temperature seemed to make no difference in the fatality. The fever lasted from six to ten days, rising from the third to the fifth day, and then gradually falling to normal; but later a secondary fever appeared, apparently

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due to some septic absorption from buboes. Petechiæ—probably the "tokens" which Boghurst and other seventeenth century writers mention as of unfavourable import—only appeared in 3 per cent. of the cases, and these very severe ones. The mortality among hospital patients was 73 per cent., and among Europeans 50 per cent. Convalescence was very slow. From a series of bacteriological experiments Dr. Wilm concludes that infection is possible through the skin, but that this is uncommon; the most frequent mode of invasion is by the alimentary tract. The bacillus is very sensitive to heat, light, and fresh air, and plague, like typhus, would seem to be essentially a filth disease. The treatment employed was merely symptomatic, but Yersin's serum treatment as used by himself in Canton is said, if employed within the first three days, to have met with great success. Dr. Wilm gives a scheme of prophylactic measures, chiefly hygienic—strict cleanliness, destruction as far as may be of infected material, and special attention to the water-supply being the most important points. We have only given the barest outline of Dr. Wilm's researches, but the whole Blue-book is deserving of the most careful attention, and the thanks of everyone are due to Dr. Wilm, and also to his superiors for the use of his services. The report is translated by Dr. Maurice Eden Paul.

LORD LISTER AND HIS FORMER HOUSE SURGEONS AND DRESSERS.

NOT the least interesting of the many expressions of esteem and regard which have been offered to Lord Lister on his elevation to the peerage is the banquet which is being organised by those who have served under him in Glasgow, Edinburgh, and London as his house surgeons, clerks, and dressers, and who have therefore been intimately associated with him in the spread of his discoveries and the elaboration of his principles. The dinner will take place at the Café Royal, Regent-street, on Wednesday, May 26th. It will be presided over by Professor Joseph Coats, and will be limited to those who have served under Lord Lister as house surgeons, clerks, or dressers, as its intimate character is to be strictly preserved. Lord Lister entered on his duties at Glasgow in 1861 and at Edinburgh in 1869, so that considerable difficulty has been experienced in obtaining the names and addresses of his assistants in the early period of the thirty-two years during which he was a teacher of clinical surgery. We are asked to say that all who have filled any of the offices mentioned should communicate at once with the honorary secretary of the dinner committee, Dr. St. Clair Thomson, 28, Queen Anne-street, London, and should mention the year in which they held office, and it is hoped that this information will be given whether they are able to attend the dinner or not, as it is desired for sentimental reasons to draw up a correct list, in chronological order, of the gentlemen who have been privileged to assist practically in the development of antiseptic surgery.

THE FEEDING OF YOUNG CHILDREN.

ERRORS in the feeding and management of young children are responsible for much of the sickness, suffering, and mortality of early life, and while some parents who ought to know better are culpable of gross ineptitude in the care of their offspring, there are many among the poorer classes who are quite ignorant of the principles which should underlie the rearing of young children. The Sanitary Committee of Brighouse, Yorkshire, have had prepared by their medical officer, Dr. Meredith Young, a set of rules, based largely upon the Obstetrical Society's recommendations, printed on a card with a loop of tape attached for the purpose of hanging up for reference. It is proposed to distribute these rules by the agency of the local registrars of births and deaths. This is certainly a step in the right direction, and we should like to see its more general adoption; but if the information could be compressed, printed in larger type, and adapted more to the requirements of the very poor, the value of the plan would be increased. It is useless to tell a certain class of the population that children should sleep in large rooms, for the simple reason that the poor cannot afford to rent large rooms; and we doubt very much if this class of the community understands anything by being told that the infant's bath should be at a temperature of about 90° F. As warm as could be comfortably borne by the mother's elbow would be a far preferable direction. Apart, however, from these slight defects the card should certainly prove to be of use.

THE NEW BRITISH HOSPITAL AT CANNES.

A PROPOSAL was made some five years ago to erect a permanent British hospital at Cannes, and the building, if not already *un fait accompli*, will, we hope, be so shortly. On April 8th, the first stone of the new buildings was laid by His Royal Highness the Prince of Wales at Sunny Bank, in, as his Highness himself expressed it, "this charming Cannes—in this beautiful country." The temporary buildings which at present constitute a British hospital were opened at the end of 1893, since which time about 100 patients have been successfully treated. The new buildings, as Sir Sydney Waterlow stated in his address to the Prince of Wales, will provide ten beds for ordinary cases and five beds for contagious cases which will be completely isolated, and the whole will cost about 55,000 fr. Such an institution is much needed, and will no doubt be greatly appreciated by many.

THIOSINAMINE IN KELOID.

DR. RICHARD C. NEWTON[1] reports a case of keloid treated with hypodermic injections of thiosinamine. We are reminded that this drug, an allyl-sulpho-urea procured from the volatile oil of horseradish by the addition of ammonia, was originally used by Hebra as an absorbent of exudates in corneal opacities and in lupus, and later by Dr. Tonsey of New York in the treatment of keloid. The amount injected by Dr. Newton was from fifteen to twenty minims of a 10 per cent. solution. After repeated injections a diminution both in size and hardness of the keloids was observed. In another case of tight contraction of the skin and subcutaneous tissue after an extensive burn a marked increase in mobility with softening of the affected tissue followed the use of these injections. Recovery from a disease like keloid, we fear, is hardly to be expected under any method of treatment save excision, but something will have been gained if further experience of thiosinamine should confirm the results already claimed for it as an absorbent of scar tissues.

THE JENNER SOCIETY.

WE have before us the report of the executive committee of the Jenner Society for the year 1896, a society which was founded in Gloucestershire at the time that the city of Gloucester was being so severely visited by small-pox, the main object of the organisation being the dissemination of knowledge concerning vaccination, which was sadly wanted there. The society thus formed comprises many influential persons, and, thanks to the untiring energy and enthusiasm of its moving spirit, Dr. F. T. Bond, the honorary secretary, much useful work has been done during the first year of its existence. It was fitting that such a society should have its origin in the county where Jenner lived and worked, but we would fain hope that the good work thus

[1] New York Medical Journal, March 20th, 1897.

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inaugurated may be extended by the inclusion of members from all parts of the kingdom. The report speaks in no uncertain tones upon the tactics and objects of the Anti-vaccination League, and declares that not to oppose "such an organised and aggressive conspiracy against the best interests of humanity would be an abnegation of duty." Yet it is plain that if such opposition is to be commensurate with the operations of the Antivaccination League it will be necessary to widely enlarge the scope and work of the society. If therefore the Jenner Memorial movement can only be devoted to the prosecution of research in the field in which Jenner was the pioneer, we would ask whether it might not be wise to meet the agitation against vaccination by an active propaganda undertaken by a national association which would have the support of all who love truth and value the benefits conferred upon mankind by the introduction of vaccination.

THE CONDITION OF THE PORTSMOUTH SLUMS.

CONSIDERABLE stir has been made in Portsmouth by a report issued by the "Social Reform Society" on the slums of that extensive town. It declares that the society recently instituted an inspection, and instances as a sample of its findings a yard of twelve houses, all badly out of repair and in a filthy condition, with two waterclosets only, and these without water. Another court contained eleven houses, the rooms in which were said to be mere boxes, 8 ft. square by 7 ft. high, and all in a dirty and insanitary condition. The rooms in thirteen houses in a third court were 9 ft. by 7 ft. 6 in. They were in a bad state of repair, and in each case the watercloset was in the cellar under the only living-room, and there was no ceiling to either watercloset or cellar. Assuming that these facts are correct, the reflection upon the sanitary authority is indeed a serious one. Investigations by representatives of a local paper have resulted in the discovery of similar instances of filth and overcrowding, and the matter is certainly one that should be thoroughly examined into.

THE HEALTH OF THE ARMY IN INDIA.

AFTER the meetings that have taken place at the Royal United Service Institution, and the reading of a paper by Major C. B. Mayne, R.E., with a long discussion thereon, it was only to be expected that a good deal of correspondence would follow in the public journals. There is at present, however, a lull in the discussion. The real fight will ensue when the proposals of the Government of India reach this country. Meanwhile, the general impression in India, derived from the telegraphic summary of Lord George Hamilton's despatch to that country, seems to be that the Secretary of State's proposals will prove quite inadequate; while, on the other hand, the opponents of all legislation in this country regard the despatch as going too far or are suspicious that it is intended to prove the proverbial "thin end of the wedge" for the subsequent introduction of all kinds of objectionable measures. The British Committee for the Abolition of State Regulation of Vice in India are actively engaged in sharpening the old weapons in their armoury and in printing and distributing their productions on the subject. No useful purpose will be served at the present moment by occupying our readers' attention with the matter. The profession, as represented by the Royal College of Physicians of London and the Royal College of Surgeons of England, have already spoken with some authority, and "what we have written we have written." This much, however, it is necessary to say. Any proposals that are made by the Government have reference to the British army in India only. Anyone interested or taking part in the controversy should refuse to step outside those limits. There is no pretext for now saying that it is intended to re-introduce the Contagious Diseases Acts into this country. It is the present state of health of the European force in India, and how best to protect or safeguard it against existing or prospective evils, that has now to be considered. The Secretary of State has been most moderate and guarded, it seems to us, in his despatch. We have sufficient confidence in the fairness and wisdom of the majority of people to believe that they will recognise the present lamentable state of things and the dangerous consequences that will ensue from their continuance or probable extension. Let the moderate men of all parties then honestly consider what remedial measures are at once prudent and practicable under the circumstances.

THE MÜTTER LECTURESHIP OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

THE next course of lectures, ten in number, instituted by the late Professor Mütter, the subject being "Some Point or Points in Surgical Pathology," are to be delivered during the winter of 1899–1900 before the College of Physicians of Philadelphia. The remuneration is 600 dollars. The lectureship is open to the profession at large, and applications for the post stating in full the details of the proposed lectures must be sent in before Oct. 1st, 1897, to the Committee of the Mütter Museum. The chairman is Dr. J. H. Brinton, corner of 13th and Locust streets, Philadelphia, Pa.

AT a meeting of the Incorporated Society of Medical Officers of Health held at No. 197, High Holborn, W.C., on Friday, the 9th inst., Mr. Edward Seaton, M.D., F.R.C.P. Lond., F.C.S., medical officer of health of the administrative county of Surrey, was unanimously elected President of the Society for the session 1897–98. At the same meeting a resolution was adopted to present a loyal and dutiful address of congratulation to Her Most Gracious Majesty the Queen on the occasion of completing the sixtieth year of her reign.

IT is stated that Lord Llandaff (Mr. Henry Matthews) has accepted the chairmanship of the Royal Commission on Metropolitan Water-Supply. The inquiry will refer to financial considerations, prospective requirements, the constitution of new powers of control, the possibility of connecting two or more different systems as occasion may require, and the division into water districts.

THE Home Secretary has selected Dr. H. Smalley, of H.M. Convict Prison, Parkhurst, to fill the post of Medical Inspector of Local and Convict Prisons, vacant by the resignation, through ill-health, of Dr. R. M. Gover. The appointment is one that is likely to be received with general satisfaction throughout the prison service.

A MEETING to promote the objects of the Hospital Reform Association will be held in the Grand Hotel, Birmingham, on Wednesday, April 21st, at 4 P.M.

ROYAL LONDON OPHTHALMIC HOSPITAL.—The annual meeting of the Royal London Ophthalmic Hospital, Moorfields, was held in the institution on March 30th, Sir John Lubbock presiding. The report for the past year showed that there had been 2006 in-patients admitted; there were also 26,074 out-patients, who made 130,370 attendances. The new buildings in the City-road were being rapidly proceeded with, and the Prince of Wales had promised to lay the foundation-stone shortly after Easter. The income for the year was £4809, and the total expenditure was £7770.

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The Lancet Special Commission

ON THE

METROPOLITAN WATER-SUPPLY.

VIII.[1]

KENT WATERWORKS COMPANY (*concluded*).

Present State: General Description.

THE whole of the water supplied by the Kent Waterworks Company is obtained from deep wells and is delivered direct to their customers. There are therefore no depositing reservoirs and no filter beds. The reservoirs of the company are for the temporary storage of water. The stations of the company are: Deptford, wells, pumping station, reservoirs, and offices; New Cross, reservoir; Woolwich Common, reservoir; Plumstead, well and pumping station; Plumstead Common, reservoir; Greenwich Park, reservoir; Chislehurst, reservoir; Shortlands, wells and pumping station; Crayford, wells and pumping station; Dover-road, Shooter's Hill, pumping station; Shooter's Hill, reservoir and standpipe; Farnborough, wells and pumping station; Cowlass Hill, Farnborough, reservoir; Dartford, reservoir; Layham Farm, West Wickham, reservoir; Knockholt, reservoir; Wilmington, wells and pumping station; Westerham, well, pumping station, and reservoir; Betsom's Hill, reservoir; Pilgrim's Way, well and pumping station; and Eltham, reservoir. There are two wells under construction.

Deptford (see A on Map).—The station at Deptford is on the site of the original works of the company; part of it is to the east and part to the west of the River Ravensbourne. The part on the west side of the river consists of the offices of the company, the engineer's house, a well called the Garden Well, the old engine house, and a large garden containing the reservoir which was formerly used. The Ravensbourne is crossed by a bridge, on the site of the old water-wheel which was used for pumping. The fall in the Ravensbourne at this point is not now made use of. To the east of the river there is an enclosed space containing two wells (the New Well and the Bath Well), engine houses, and two covered reservoirs. This is the site of the filter beds which were used when the river was the source of the water-supply.

The *Garden Well* derives its name from its situation. The ground level here is 20 ft. above ordnance datum. The depth of the well is 100 ft., the diameter at the top is 15 ft., and at the lower part 12 ft. The upper 15 ft. are lined with brick, the lower part is lined with iron cylinders. There are some headings in this well and a bore-hole. The water from this well is pumped by some of the original machinery put up by Boulton and Watt. There are two engines of 50 horse-power (nominal), and these work force-pumps, which raise 42 gallons per stroke and work at about the rate of sixteen strokes a minute. The steam is generated by three Cornish boilers. The water is pumped to the high-level district in connexion with the reservoir on Woolwich Common.

The *New Well* was sunk in the year 1868. It is 100 ft. in depth and has headings. It is lined with iron cylinders to a depth of about 75 ft. The water is pumped by two Cornish engines; of these one works a lift-pump, which raises 300 gallons per stroke, and the other a force-pump, which distributes 200 gallons per stroke. The latter works against a head of 180 ft. and pumps the water to the reservoir at New Cross. The steam is generated by five Cornish boilers working at a pressure of 35 lb.

The *Bath Well* gets its name from a neighbouring street, Cold Bath-street. It was sunk in the year 1874. The depth of the well is 100 ft. and it has headings which extend for 80 ft. to a bore-hole which is situated beneath a disused well. The diameter of the well is 10 ft. and the upper part is lined with iron cylinders to a depth of 70 ft. The water is raised by a Cornish engine (brought here from Charlton, dated 1859) which works a lift-pump and a force-pump. The lift-pump raises 240 gallons per stroke from the well, and of this water so raised the force-pump lifts 100 gallons per stroke to Greenwich Park, working against a head of from 150 to 160 ft. The remainder of the water raised by the lift-pump flows to the covered reservoir. The steam for the engine is generated by three Cornish boilers working at a pressure of 35 lb. Near the Bath Well is a disused engine house.

There are two reservoirs capable of storing 2,000,000 gallons. The reservoirs are covered by concrete arches built on brick walls, and the arrangement of the walls insures a circulation of the water in the reservoir.

According to the report given by the secretary of the Company, the engines at Deptford have a total horse-power of 858.

New Cross (see B on Map).—The station at New Cross is situated in Jerningham-road, Hatcham, not far from the church dedicated to St. James. It consists of a reservoir, built in brick, arched over, and covered with turf. It is capable of holding 1,750,000 gallons. The top water line is 163 ft. above ordnance datum.

Woolwich Common (see C on Map).—There is a covered reservoir on Woolwich Common. It is situated to the south-west of the Royal Military College, and to the south of the road between the college and the Herbert Hospital. The part of the common which is occupied by the reservoir is enclosed by low iron railings to keep off cattle. The reservoir is of oblong form, covered by brick arches, and turfed over. It is capable of holding 1,500,000 gallons and is situated 248 ft. above ordnance datum.

Plumstead (see D on Map).—The station at Plumstead consists of a well and pumping station. The well is 136 ft. in depth and is lined by brick to a depth of 78 ft., and there is a bore-hole 600 ft. in depth. When visited on March 25th the water level was 107 ft. below the surface. After pumping the level has been as low as 112 ft. below the surface. Usually the well is pumped for from twelve to sixteen out of the twenty-four hours. The water is pumped by a rotative engine of 60 horse-power, which works a pair of lift-pumps and four force-pumps driven through tooth gearing. The steam is generated by two Cornish boilers working at a pressure of 30 lb. The amount of water pumped daily averages about 750,000 gallons. From this well Plumstead and Woolwich are supplied directly, and some of the water goes to the reservoir on Plumstead Common.

Plumstead Common (see E on Map).—The reservoir, built in the year 1854, is situated at a height of 170 ft. above ordnance datum. It is covered by brick arches which are supported by iron girders. The reservoir is divided into two parts internally. It is capable of holding 650,000 gallons. There is sufficient land here for another reservoir of the same size.

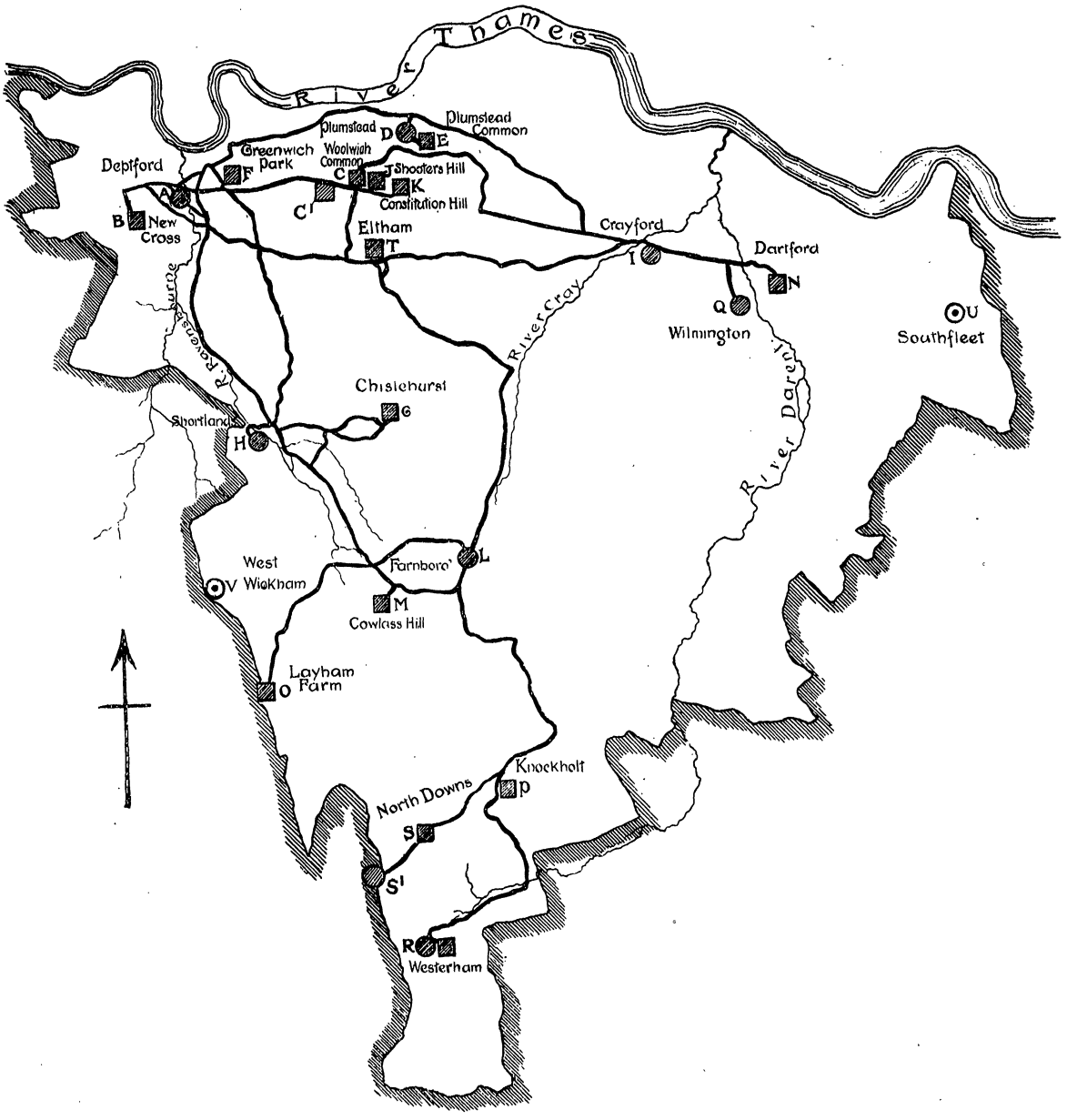
Greenwich Park (see F on Map).—This reservoir is situated at the highest part of Greenwich Park, not far from the Royal Observatory. The original reservoir was built by the Admiralty to store water to be used in case of fire at the Dockyard, the Victualling Yard, or the Greenwich Hospital (now the Royal Naval College). It was made about the year 1845, just after a destructive fire had occurred at the Tower of London. The reservoir is circular in form, and is now covered over by brick arches which are supported by iron joists. It is capable of holding about 1,125,000 gallons, and the top water-line is 158 ft. above ordnance datum. The water is used for the supply of Deptford and Greenwich. There is an electrical apparatus here connected with an index at the Deptford station which shows the height of the water in the reservoir, which it is necessary for the Company to know, because under the terms of their agreement with the Government Department a sufficient amount of water has to be constantly kept here, so that it may be available at all times in case of fire. The electrical apparatus was put up and is kept in working order by the Post Office authorities at the expense of the Company.

Chislehurst (see G on Map).—This station is situated at the upper part of Bickley Park, near Chislehurst Common. There is a reservoir, built of brick, covered with arches and turfed over. It has a capacity of 450,000 gallons, and the top water line is 315 ft. above ordnance datum. The water is supplied from Shortlands, and is distributed to the Bromley district.

Shortlands (see H on Map).—The station at Shortlands is situated 130 ft. above ordnance datum. There are here two deep wells sunk into the chalk. The wells are about 80 ft. in depth and lined with iron cylinders. From the bottom of

[1] Nos. I., II., III., IV., V., VI., and VII. were published in THE LANCET of Feb 20th and 27th, March 6th, 13th, 20th, and 27th, and April 3rd, 1897, respectively.

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THE KENT WATERWORKS COMPANY.

The shaded outline with the Southern bank of the river define the area supplied by the Company. Wells are marked as shaded circles. Wells under construction are marked as plain circles around a central dot. Reservoirs are marked as shaded squares. A. Deptford well, pumping station, and reservoir. B. New Cross reservoir. C. Woolwich Common reservoir. C¹. Dover-road, Shooter's Hill, pumping station. D. Plumstead well and pumping station. E. Plumstead Common reservoir. F. Greenwich Park reservoir. G. Chislehurst reservoir. H. Shortlands well and pumping station. I. Crayford well and pumping station. J. Shooter's Hill reservoir. K. Shooter's Hill stand-pipe. L. Farnborough well and pumping station. M. Cowlass Hill, Farnborough, reservoir. N. Dartford reservoir. O. Layham Farm, West Wickham, reservoir. P. Knockholt reservoir. Q. Wilmington well and pumping station. R. Westerham well, pumping station, and reservoir. S. Betsom's Hill reservoir. S¹. Pilgrim's Way well and pumping station, situated, as will be seen in the Map, on the defining line of the Company's area. T. Eltham reservoir. U. Southfleet, Gravesend, well (under construction). V. West Wickham well (under truction).

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the wells bore-holes pass to a depth of 200 ft. The natural water level is about 10 ft. below the surface of the ground. After pumping the level has sunk to a level of 34 ft. 6 in. below the surface. The amount of water pumped averages 2,250,000 gallons daily. It is raised from the well to the ground level by two lift-pumps and forced into the mains by two piston and plunger pumps, worked by two inverted Cornish engines, for which the steam is generated by four Cornish boilers. These wells supply Chislehurst reservoir, Deptford, and Lewisham.

Crayford (see I on Map).—This station is situated 30 ft. above ordnance datum. There are three wells here. The one first made is 28 ft. in depth, the second 34 ft., and the third 48 ft. The wells are lined with iron cylinders. Each well has a bore-hole about 200 ft. in depth. Wells No. 2 and No. 3 are generally used. The water has been as low as 28 ft. below the surface in No. 2 and as low as 35 ft. below the surface in No. 3. At this station pumping is continuous, and the amount of water obtained averages 3,500,000 gallons daily. The water is raised to the surface by lift-pumps and forced into the mains by three-throw plunger-pumps, worked by two rotative beam-engines. The steam is generated by six Cornish boilers. No. 2 engine pumps to the high-level reservoir at Woolwich Common, and No. 3 to Plumstead and Woolwich. The well No. 1 is now not used. The pumping arrangements consist of a lift-pump and a direct acting force-pump, worked by a horizontal engine. The united horse-power of the three engines is 186 (nominal).

Dover-road, Shooter's Hill (see C^1 on Map).—There is a pumping station here. A pair of 24 horse-power horizontal engines work direct acting force-pumps for the supply of Shooter's Hill. Some of the water passes though a standpipe (see K on Map) situated on the summit of the hill, and of which the highest point is about 470 feet above ordnance datum. The engines are worked for about six hours a day.

Constitution Hill, Shooter's Hill (see J on Map).—There is a reservoir here, covered with brick arches, capable, theoretically, of holding 300,000 gallons, but it is not filled. It stands at a level of 320 ft. above ordnance datum. The higher parts of Plumstead and Abbey Wood are supplied from this source.

Farnborough (see L on Map).—The Farnborough station is situated 220 ft. above ordnance datum, near Orpington railway station on the South-Eastern Railway. The chalk is here about 30 ft. below the ground level. There are two deep wells about 15 ft. apart, but connected below by a gallery. The upper 30 ft. of the wells are bricked, and there are iron cylinders below this level. When visited on March 25th the water level was about 60 ft. below the surface of the ground. Occasionally in summer the water level is as low as 90 ft. below the surface. The average amount of water pumped daily is from 2,500,000 to 3,000,000 gallons. There are four engines and pumps at this station. A pair of plunger-pumps, worked by a double-cylinder Cornish engine of about 120 horse-power, pump water to Sidcup, Eltham, and Woolwich. A piston and plunger pump (No. 1), worked by a Cornish engine, pumps the water to Farnborough and Chislehurst. A small engine of the Worthington type is used for pumping to the reservoir at West Wickham and to Keston. Another small engine of the Worthington type pumps water to Knockholt reservoir. The steam for these engines is generated by six Cornish boilers, four working at a pressure of 100 lb. and the other two at 35 lb. There is an apparatus at this station for softening the water used for the boilers. A workman's cottage is situated here.

Cowlass Hill, Farnborough (see M on Map).—There is a reservoir at Cowlass Hill, near Farnborough. It is square in form, covered with brick arches, and turfed over. It is capable of holding 1,400,000 gallons. The top water level is 439 ft. above ordnance datum.

Dartford (see N on Map).—Here there is a reservoir of circular form, 60 ft. in diameter, and 20 ft. in depth. It is covered by arches of brick resting on rolled joists supported partly by a central iron column. The capacity of the reservoir is theoretically 370,000 gallons, but it is not filled. The top water level is 130 ft. above ordnance datum.

West Wickham (see O on Map).—The station to which this name is given is situated close to the high road about three miles from the village of West Wickham, on Layham Farm. There is a circular reservoir covered with brick arches and turfed over. It has a capacity of 250,000 gallons. The top water level is 550 ft. above ordnance datum. The reservoir is enclosed by an iron fence.

Knockholt (see P on Map).—The station is situated near to, but on higher ground than, the well-known Knockholt Beeches, which are a landmark for miles round. There is a reservoir, covered with brick arches and turfed over. The top water level is 795 ft. above ordnance datum. The water is pumped here from Farnborough and is used for the supply of Knockholt, Brasted, and Westerham.

Wilmington (see Q on Map).—The station at Wilmington is situated at the extreme northern extremity of that parish, about a mile south of the town of Dartford, near the Dartford powder-mills, in the valley of the Darenth, and not far from the river. Two wells, pumping apparatus, and workmen's cottages are situated here. The wells are about 100 ft. in depth, lined with iron cylinders, and bricked at the upper part. One of the wells (No. 1) has a short gallery in the chalk. The other (No. 2) has a longer gallery ending in a bore-hole about 200 ft. in depth. The water level varies from 40 ft. to 80 ft. below the ground level, which is 30 ft. above ordnance datum. The amount of water pumped daily varies from 3,000,000 to 6,000,000 gallons. The water is pumped by a pair of compound rotative beam-engines of 260 horse-power, which work two lift-pumps for raising the water from the wells, and two pairs of force-pumps which send the water through a 24 in. main to Eltham reservoir.

Westerham (see R on Map).—The Westerham station is situated on the outskirts of the Equerry's Park. It consists of a well 70 ft. in depth, pumping arrangements, and a reservoir. The water is pumped by an overshot water-wheel, and the stream which turns it has a fall of about 15 feet. The amount of water pumped daily is about 25,000 gallons. It is pumped to a reservoir situated on an eminence hard by, at a height of 444 ft. above ordnance datum. The reservoir is a covered one, and is capable of holding 60,000 gallons. The village of Westerham is supplied partly from this source and partly from Knockholt.

Betsom's Hill (see S on Map).—This hill forms part of the North Downs, and on the map the station is marked too far to the east. It is nearer the boundary. There is here a covered reservoir, built of concrete, capable of holding 68,000 gallons. The top water line is 818 ft. above ordnance datum. The reservoir supplies a few houses on the hill. The water is pumped as occasion requires by a portable engine from a well (see S^1 on Map) situated at the foot of the downs, close to the Pilgrim's Way and the boundary between the counties of Kent and Surrey.

Eltham (see T on Map).—The station at Eltham is situated at the eastern end of the village of that name, at a height of 240 ft. above ordnance datum. There is a circular reservoir, covered with brick arches, capable of holding 3,000,000 gallons. The internal arrangements of the reservoir insure a circulation of the water, which comes in at the outer circle and makes three circuits before it passes out at the centre. All the water is pumped into and passes out of the reservoir every day. The property here is about three acres in extent and there is room for another reservoir of the same size. There is a garden enclosed, on three sides by a high brick wall. There is also a small house between the reservoir and the road.

Communications with other companies' mains.—There is no communication with the mains of any other company.

Length of new pipes.—The length of new pipes ranging from 3 in. to 20 in. laid in 1895 was 10½ miles, and during the year 1896 was 15⅛ miles.

Hydrants.—The number of hydrants erected during the year 1895 was 274, and during the year 1896 it was 613.

Houses under constant supply.—The number of houses under constant supply on Dec. 31st, 1894, was 61,312; on Dec. 31st, 1895, 66,750; and on Dec. 31st, 1896, 71,463.

Percentage of houses under constant supply.—On Dec. 31st, 1896, the percentage of houses under constant supply was 85.

Average daily supply per head.—The average daily supply per head for the year 1896 was 32·17 gallons. These figures are arrived at by the Company as follows: Average daily supply, 16,069,991; average population, 500,286. The difference between the figures given by the Company and those given by the water examiner appointed by the Local Government Board is caused by the fact that whereas the secretary to the Company makes no allowance for "slip quantities in the pumps," an allowance for this is made by the water examiner to the Local Government Board.

Date of maximum and minimum supply.—The following

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table gives the date of the maximum and minimum supplies and the average daily quantities supplied :—

—	Year 1895. Month.	Year 1895. Quantity in gallons.	Year 1896. Month.	Year 1896. Quantity in gallons.
Maximum ...	June	19,875,709	July	19,392,072
Minimum ...	December	15,156,144	November	14,621,294

Communication between the Company's stations.—With the exception of the electric communication between the Greenwich reservoir and the Deptford station there is no direct communication between the Company's various stations.

Area of Supply.

The Act of 1809 authorises the Kent Waterworks Company to supply the following places, some of which are entirely supplied and some partly supplied.

Supplied: Deptford (St. Nicholas), Deptford (St. Paul), Greenwich (St. Alphege), Lee, and New Cross (within the manor of Hatcham),

Partly supplied: Rotherhithe and Lewisham.

The Act of 1811 authorises the Company to supply the following places, of which some are entirely supplied, one is supplied in part, and some are not supplied at all.

Supplied: Charlton, Plumstead, and Woolwich (south of the Thames).

Partly supplied: Peckham.

Not supplied: Bermondsey and Peckham Rye.

The Act of 1864 authorises the Company to supply the following places, which are entirely supplied: Bexley, Bromley, Chislehurst, Crayford, Dartford, Eltham, Erith, and Wickham.

The Act of 1877 authorises the supply of the following places which are entirely supplied: Beckenham (part of), Chelsfield, Foots Cray, North Cray, St. Mary Cray, St. Paul's Cray, Darenth, Eynsford, Farnborough, Farningham, Hayes, Keston, Orpington, Stone, Sutton-at-Hone, Swanscombe, West Wickham, and Wilmington.

The Act of 1888 authorises the supply of the following places some of which are entirely supplied, one is partially supplied, and some are not supplied at all.

Supplied: Cudham, Downe, Halstead, Horton Kirby, Knockholt, Southfleet, and Westerham.

Partly supplied: Brasted, Chevening, Shoreham, and Sundridge.

Not supplied: Lullingstaine or Lullingstone (private residence), and Sundridge (part of).

Subject to request by the Sevenoaks Rural Sanitary Authority: Brasted (part of), Chevening, Otford, Shoreham, and Sundridge.

New Works in Progress.

New wells are being sunk at Southfleet, near Gravesend (see U on Map), and at West Wickham, in the valley about half a mile from West Wickham Court (see V on Map). An engine house has already been erected here.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on April 8th, the President, Sir WILLIAM MACCORMAC, being in the chair.

Mr. William Johnson Walsham and Mr. William Henry Bennett were introduced, and made declarations in the terms of the oath prescribed by the Charter of 1800 on their admission as members of the Court of Examiners.

The report of the Jacksonian Committee was received, and in accordance with its recommendation the Jacksonian Prize was adjudged to Mr. Cozens Bailey, F.R.C.S. Eng., the author of the dissertation bearing the motto, "There's the respect that makes calamity of so long life."—*Hamlet*, Act III., Sc. 1. The subject of the dissertation was "The Pathology, Diagnosis, and Treatment of Diseases of the Prostate Gland."

The selection of a subject for the Jacksonian Prize for 1898 was postponed.

The prize founded by the dental profession in honour of the late Sir John Tomes, F.R.S., was awarded to Mr. Charles Sissmore Tomes, F.R.S., Member and Licentiate in Dental Surgery of the Royal College of Surgeons of England, for his original and other scientific work in relation to dental surgery, dental anatomy, and histology.

The following report from the Committee of Management was received and adopted :—

The Committee of Management beg to make the following recommendations :—

1. That the following institutions be added to the list of recognised places of instruction in chemistry, physics, practical chemistry, and biology :—
   a. Bournemouth School of Science and Art (without biology).
   b. Bradford Technical College.
   c. Brighton Municipal School of Science and Art.
   d. Gloucester Municipal Schools of Science, Art, and Technology (without biology).
   e. Kingswood School, Bath.
2. That the courses of laboratory instruction in public health at the following medical schools be recognised as fulfilling the requirements of the regulations for the diploma in public health—viz. :
   St. Thomas's Hospital Medical School.
   Owens College, Manchester.
3. The Committee beg to report that in accordance with the request of the Royal Colleges they have considered the recommendations of the General Medical Council.

"That in regard to the midwifery practice to be required of candidates for licences to practise, it is desirable that the alternative to three months' attendance on the in-door practice of a lying-in hospital be in future defined as follows :—

"'Or to have been present at not less than twenty labours, at least five of which shall have been conducted throughout under the direct supervision of a registered practitioner.'"

The Committee have made inquiries of the teachers of the medical schools, both metropolitan and provincial, and have obtained from them their views on the recommendation of the General Medical Council in regard to practical midwifery. It appears that though in a certain number of schools the teachers are of opinion that the suggested alteration in the certificate is desirable and can be carried out satisfactorily, in others the teachers consider that the proposed attendance can only be fulfilled in a perfunctory manner; and in a majority of the schools the teachers are of opinion that it would be impracticable to carry out the proposed arrangements.

The Committee report that it is not desirable to adopt the alteration in the regulations suggested by the General Medical Council, and they recommend that a reply to this effect be sent to the Registrar of the General Medical Council.

The following report from the Laboratories Committee was received and adopted :—

1. *The work on Diphtheria for the Metropolitan Asylums Board.*

The Preparation of Antitoxic Serum.

Since December 4th the Director has supplied 3001 doses of antitoxic serum containing 4000 units each, 125 doses containing 3000 units each, 350 doses containing 2000 units each, 300 doses containing 1500 units each, and 499 doses containing 1000 units, for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, and all the demands have been fully met. During this period 14,028,000 units have been supplied, against 10,074,000 units last quarter, being an increase of 3,954,000 units.

2. *Researches in connexion with the Grant from the Goldsmiths Company.*

The Director has made the following report on the recent work done under the Goldsmiths' Research Grant, viz. :—

Since my last report on the work done in connexion with the Honourable Goldsmiths' Company Grant, Dr. Wood has continued his investigations on the production of potent diphtheria antitoxins, and has succeeded by his new method (already reported) in obtaining large quantities of strong antitoxic serums.

The highest of these serums (800 units per c.c.) is much more potent than any that has yet been placed on the market, even in Germany, where the only one that approaches it in strength is that manufactured by Professor Behring, which contains 600 normal units per c.c.

The strongest of these serums prepared by Dr. Wood has been supplied to Dr. Sidney Martin at University College Hospital, who reported to THE LANCET, Oct. 17th, 1896, that he had obtained most remarkable results by its use. In 1894 the percentage death-rate from diphtheria in that hospital was 39. In 1895, the first year in which antitoxin was used, the death-rate had fallen to 28, and in 1896 (Sept. 22nd), when the strong serum was used, to 20·5.

In Dr. Martin's figures we have additional evidence of the importance of the treatment of diphtheria by antitoxin serum at as early a stage of the disease as possible.

Dr. Martin also notes that the number of cases of post-diphtheritic paralysis was very small—only three in the whole of the cases that recovered—that not a single case of abscess occurred, and that rashes on the skin and pains in the joints were of very rare occurrence.

He further notes that no cases proved fatal unless they were severe on admission, and states that the more potent the serum the better will be the results obtained by its use, both as regards immediate effect and as preventing injurious after effects.

Dr. T. G. Brodie continues his investigations on the separation of antitoxin from the serum in which it is contained, but as yet has nothing further to report.

Whilst these investigations have been in progress I have consulted with the various workers, and have inspected and controlled many of the experiments, especially those connected with the determination of the strength of the antitoxin produced. Along with Dr. Wood I have made a large series of experiments on the standardising of test toxin

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and antitoxin, which, however, are not as yet completed. In addition I have, with the help of the laboratory staff and the gentlemen above mentioned, been able to make numerous improvements in the methods of injecting the horses, of collecting blood, and separating the active serum; of keeping it aseptic; of clearing it by sedimentation; of storing it in bulk, and of decanting and distributing it in convenient form for use. Concerning these and other improvements in methods and detail I hope to give a fuller report at a future date. I cannot speak too highly of the fashion in which the investigators under the grant have carried out the work assigned to them.

In fulfilment of one of the conditions of the grant from the Goldsmiths' Company, that antitoxin should be, if possible, supplied for use amongst the poorer classes of the community, antitoxic serum has been supplied to various general and children's hospitals in London during the past quarter, as well as to certain medical practitioners for cases fulfilling the necessary conditions.

The Laboratories Committee have made a grant of £100 to the Director for his valuable services in connexion with these researches.

A statement of the attendance at the lectures delivered at the College was presented, from which it was seen that the average number of persons attending at each lecture was slightly over thirty.

The President stated on behalf of himself and the vice-presidents that they considered it desirable that an address of congratulation should be presented by the College on the occasion of the sixtieth anniversary of Her Majesty's accession, but that no further steps should be taken to celebrate the event.

A letter was read from the British Institute of Preventive Medicine offering to the Council the opportunity of nominating a representative on the Council of the Institute in the vacancy caused by the death of Sir Spencer Wells. It was agreed that the President for the time being should act as the representative.

The President (Sir William MacCormac) and Mr. T. R. Jessop were appointed delegates to the Twelfth International Congress at Moscow.

In reply to a letter from the Earl of Stamford, requesting each member of the Civil Rights Defence Committee to contribute £15 in order to discharge the liabilities of the Committee, amounting to £150, it was agreed to say that the Council could not make any contribution out of the College funds.

The Honorary Medal of the College was awarded to Sir James Paget and to Lord Lister.

Mr. William Appleton Meredith was elected a Fellow of the College under the section relating to the election of Members of twenty years' standing.

The consideration of Mr. W. Rivington's proposal to appoint a committee to inquire into the origin and meaning of By-law XV. was postponed.

BUBONIC PLAGUE IN INDIA.

THE accounts in the Anglo-Indian papers received by the last mail are more satisfactory. They show that the diminution that has taken place in the prevalence of the disease is being maintained. The latest telegram from the Governor of Bombay to the Secretary of State for India contains, however, news of a later date than that furnished by the Indian press, which only extends to the 27th ult., whereas the telegram furnishes intelligence up to the week ending the 9th inst. The deaths from all causes up to that date in Bombay city were 983, and the reported deaths from plague 368. We learn from the Indian papers that the Plague Committees are working very energetically, and the work of house-to-house visitation has resulted in the discovery of many concealed cases. The health of the city is reported as having improved during the week ending March 27th last, the total mortality, although still 600 above the average for the corresponding period during the preceding five years, was 119 less, and the deaths from plague 5 less, than that of the past week. His Excellency the Governor of Bombay had recently accompanied the committee in a tour of inspection of the isolation hospitals provided for the sufferers from the disease. The Mohammedan population recently presented a petition praying to be exempted from the segregation regulations, but the Governor very wisely, in the interest of public health, refused to accede to their request. The natives of India are naturally a very patient and law-abiding people, and notwithstanding the strength of their caste prejudices and traditions they like to have a Government which really governs, if they are only convinced of its honesty, justice, and impartiality. There have, of course, been some riots and manifestations of resistance to the new order of things. This was only to have been anticipated. But the way in which the natives have yielded to the orders of Government in connexion with the efforts that are being made to control the spread of the disease has been a remarkable and, on the whole, gratifying feature in the history of the epidemic. We trust that the application of the powers conferred by the Epidemic Diseases Act will be limited to plague cases, and that the natives will be relieved of all expense attending the cleansing and disinfection of their houses. We have already apprised our readers of the telegraphic intelligence received by THE LANCET, that the results of Dr. Yersin's antitoxic serum treatment had, unhappily, not been so successful as was anticipated, and that it was, in fact, regarded as having failed. M. Haffkine's work has appreciably increased. A laboratory has been fitted up for him on the Malabar Hill ridge. Requisitions are being received from all parts of the Presidency for the supply of his prophylactic serum, and he has been compelled to discontinue his inoculation work in order to devote himself to the preparation of serum, prophylactic and curative, to meet the demands. The number of persons that have been inoculated since Jan. 1st to March 22nd, the *Times of India* tells us, is 3452, of whom 376 are Europeans, 1632 Parsees, 174 Brahmins, 848 Hindoos, 242 native Christians, 159 Mohammedans, and 20 Jews. Amongst the inoculated are the Bishop of Bombay, the Hon. Mr. Nugent, Member of Council, judges of the High Court, several officials, and notable citizens. Tested by the method observed in the Pasteur Institute at Paris the result of the prophylactic treatment has proved to be productive of good.

The plague still continues at Karachi, and, according to the news received by the last mail, shows no signs of abatement. The total number returned from the beginning of the outbreak to March 26th is 2919 cases and 2470 deaths. At Poona there have been altogether 869 cases and 654 deaths.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6550 births and 3917 deaths were registered during the week ending April 10th. The annual rate of mortality in these towns, which had been 18·7 and 18·3 per 1000 in the two preceding weeks, rose again last week to 18·6. In London the rate was 17·5 per 1000, while it averaged 19·3 in the thirty-two provincial towns. The lowest death-rates in these towns were 11·2 in Brighton, 12·6 in West Ham, 13 5 in Swansea, and 14·2 in Halifax; the highest rates were 23·1 in Liverpool, 26·2 in Bolton and in Huddersfield, 26 7 in Manchester, and 27·1 in Salford. The 3917 deaths in these towns included 338 which were referred to the principal zymotic diseases, against 359 and 344 in the two preceding weeks; of these, 106 resulted from whooping-cough, 88 from measles, 46 from diarrhœa, 43 from diphtheria, 31 from scarlet fever, and 24 from "fever" (principally enteric). No death from any of these diseases was recorded last week in Croydon, Swansea, Derby, or Halifax; in the other towns they caused the lowest death-rates in Leeds, Bradford, and Norwich, and the highest rates in Oldham, Gateshead, Bolton, and Salford. The greatest mortality from measles occurred in Gateshead, Newcastle-upon-Tyne, Manchester, Burnley, Salford, and Bolton; and from whooping-cough in Salford, Huddersfield, Bristol, and Gateshead. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 43 deaths from diphtheria included 23 in London, 5 in Cardiff, 3 in West Ham, 2 in Oldham, and 2 in Liverpool. No fatal case of small-pox was registered last week in any of the thirty-three large towns. There were 16 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, April 10th, against 29, 21, and 17 at the end of the three preceding weeks; one new case was admitted during the week, against 2·2 and 0 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylums Hospitals and in the London Fever Hospital at the end of the week was 2449, against 2622, 2585, and 2512 on the three preceding Saturdays; 224 new cases were admitted during

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the week, against 206, 224, and 219 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 313 and 282 in the two preceding weeks, further declined last week to 271, and were 121 below the corrected average. The causes of 47, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Oldham, Sunderland, Newcastle-upon-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Leicester, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 23·3 to 22·1 per 1000, rose again to 24·6 during the week ending April 10th, and was as much as 6·0 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 19·5 in Leith up to as much as 25·8 in Dundee and 26·7 in Edinburgh. The 733 deaths in these towns included 38 which were referred to whooping-cough, 33 to measles, 14 to diarrhœa, 4 to diphtheria, 3 to scarlet fever, and 3 to "fever." In all, 95 deaths resulted from these principal zymotic diseases, against 96 and 104 in the two preceding weeks. These 95 deaths were equal to an annual rate of 3·2 per 1000, which exceeded by 1·5 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 33 and 41 in the two preceding weeks, declined to 38 last week, and included 26 in Glasgow and 6 in Edinburgh. The deaths referred to measles, which had been 36 and 29 in the two preceding weeks, rose again to 33 last week, of which 21 occurred in Edinburgh and 10 in Glasgow. The 4 fatal cases of diphtheria showed a decline of 5 from the number recorded in the preceding week, and included 2 in Glasgow and 2 in Edinburgh. The deaths referred to different forms of "fever," which had been 4 and 6 in the two preceding weeks, declined again to 3 last week. The deaths from diseases of the respiratory organs in these towns, which had been 159 and 146 in the two preceding weeks, rose again to 153 last week, but exceeded by 66 the number in the corresponding period of last year. The causes of 38, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 36·1 and 38·5 per 1000 in the two preceding weeks, declined again to 35·9 during the week ending April 10th. During the thirteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 40·2 per 1000, the rate during the same period being 18·4 in London and 22·4 in Edinburgh. The 241 deaths registered in Dublin during the week under notice showed a decline of 17 from the number in the preceding week, and included 41 which were referred to the principal zymotic diseases, against numbers declining from 74 to 47 in the two preceding weeks; of these, 25 resulted from measles, 9 from whooping-cough, 3 from scarlet fever, 2 from diphtheria, 1 from "fever," and 1 from diarrhœa. These 41 deaths were equal to an annual rate of 6·1 per 1000, the zymotic death-rate during the same period being 1·5 in London and 5·5 in Edinburgh. The fatal cases of measles, which had been 46, 37, and 27 in the three preceding weeks, further declined to 25 last week. The deaths referred to whooping-cough, which had declined from 20 to 9 in the three preceding weeks, were again 9 last week. The 3 fatal cases of scarlet fever were within one of the number recorded in the preceding week. The 241 deaths in Dublin last week included 43 of infants under one year of age and 43 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from the number recorded in the preceding week. Seven inquest cases and 7 deaths from violence were registered; and 71, or nearly a third, of the deaths occurred in public institutions. The causes of 21, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN W. B. LEISHMAN, having reported himself at the Royal Victoria Hospital, Netley, is taken on the strength and posted to the Surgical Division for duty. Surgeon-Major Crofts and Surgeon-Lieutenant Stammers proceed to Cork for duty, and Surgeon-Lieutenant Clarke has been posted to Dublin. Surgeon-Colonel Townsend has embarked for Bombay, and Surgeon-Major Lyle has been appointed to the charge of the Station Hospital at Colaba. Surgeon-Major North has joined at Woolwich for duty.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant-Colonel J. McCloghry and Surgeon-Major W. H. Burke have respectively delivered over and received charge of the Rajkot Prison. The services of Surgeon-Lieutenant C. Thomson (Bengal) are placed temporarily at the disposal of the Government of the North-Western Provinces and Oudh.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Fleet Surgeons: Anthony Gorham to the *President;* and Michael Fitzgerald to the *Majestic.* Staff Surgeon Henry E. South to the *Intrepid.* Surgeons: John Lowney to the *Melampus,* and Herbert P. Shuttleworth to Chatham Hospital.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain William Lloyd Edwards, Severn Division, Submarine Miners, Royal Engineers (Volunteers), to be Surgeon-Captain. The under-mentioned officers to be Surgeon-Lieutenants: Surgeon-Lieutenant Harry Legh de Legh, 1st Volunteer Battalion the Princess of Wales's Own (Yorkshire Regiment), and Surgeon-Lieutenant William A. Griffiths, 1st Volunteer Battalion the Hampshire Regiment.

VOLUNTEER CORPS.

Royal Engineers (Volunteers): 1st Hampshire: Surgeon-Lieutenant William Blaikie Mason resigns his commission, and is appointed Second Lieutenant. *Rifle:* 3rd Volunteer Battalion the Lancashire Fusiliers: Surgeon-Lieutenant S. McNair resigns his commission. 3rd (Duke of Connaught's Own) Volunteer Battalion the Hampshire Regiment: Surgeon-Captain C. Knott to be Surgeon-Major.

RATES OF PAY FOR THE MEDICAL SERVICES IN INDIA.

The Secretary of State for India has approved the following revised rates of pay for officers of the Army Medical Staff borne on the Indian establishment and for certain grades of the Indian Medical Service, with effect from April 1st, 1897: Brigade-surgeon-lieutenant-colonel, Rs. 1150 per mensem; surgeon-lieutenant-colonel, Rs. 1056—after twenty-five years' service, Rs. 1093; surgeon-major, on appointment, Rs. 789—after fifteen years' service, Rs. 825; surgeon-captain and surgeon-lieutenant, Rs. 350; surgeon-captain after five years' service, Rs. 450; surgeon-captain after ten years' service, Rs. 500. These rates of pay, however, will not be applicable to officers of the Indian Medical Service holding no specific appointments, except surgeon-captains and surgeon-lieutenants. The grade pay laid down in Article 306 C, Army Regulations, India, Volume I., for officers of the Indian Medical Services is to be revised as follows: Brigade-surgeon-lieutenant-colonel, Rs. 900; surgeon-lieutenant-colonel, Rs. 852—after twenty-five years' service, Rs. 888; surgeon-major, on appointment, Rs. 640—after fifteen years' service, Rs. 677; surgeon-captain and surgeon-lieutenant, Rs. 300; surgeon-captain after five years' service, Rs. 400; surgeon-captain after ten years' service, Rs. 450. These rates of pay will be drawn by all medical officers in receipt of staff salary or holding no specific appointments, except as provided in Article 520 of the Regulations quoted. A brigade-surgeon-lieutenant-colonel in charge of a native regiment is to receive Rs. 1100 per mensem, consolidated pay.

THE "DRUMMOND CASTLE" AND "WARREN HASTINGS" DISASTERS.

The extremely kind and sympathetic way in which the French have behaved to the passengers and crews in connexion with both these wrecks has been most gratifying. Of course, the scene of the disaster was different in the two cases, but the treatment accorded to the sufferers was the same. It will be remembered that in the case of the

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Warren Hastings the troops on board that vessel, who behaved with so much courage, coolness, and perfect discipline under the most trying circumstances, met with great kindness and assistance from the French authorities and inhabitants. The circumstances of the *Drummond Castle* disaster are still fresh in the recollection of most people. We are glad to notice that a clock for the church tower of Molène has recently been presented, in commemoration of their charitable and friendly conduct to the curé and the rest of the French population of that place. The medals struck by order of Her Majesty to mark the memorable services of the fisher-folk at the time of the loss of the *Drummond Castle* will be presented by Sir E. Monson, the British Ambassador, on the 27th inst.

THE TURKO-GREEK FRONTIER FORCES.

No information has been published regarding the health of the Greek force. There has been a heavy fall of snow in the vicinity of Trikhala, and some of the Italian volunteers who took part in the late invasion of the Turkish frontier have been unable to endure the cold and have returned. The Turkish army is said to be healthy and fairly well provided. The number of their sick in the four divisions posted in the neighbourhood of Elassona only amounts, it is reported, to 1 per cent. Edhem Pasha has authorised the *Times* special correspondent to contradict the rumour as to the prevalence of small-pox in his force; there is not a single case in the whole army.

The Queen has granted the under-mentioned officers Her Royal licence and authority to wear the Insignia of the Imperial Order of the Medjidieh of the Fourth Class, which has been conferred upon them in recognition of active and distinguished service before the enemy during the recent Dongola Expedition: — Surgeon-Captain Charles Stuart Spong, A.M.S., and Surgeon-Captain Henry Ernest Hill Smith, A.M.S.

Correspondence.

"Audi alteram partem."

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of to-day Professor G. V. Poore remarks—"I believe that right-handedness is a necessity and depends upon the distribution of the weight of the viscera in the thorax, and that our four-limbed ancestors were right-pawed long before they began to stand on their hind-legs for oratorical or other purposes. The weight of the viscera in the left half of the thorax is considerably greater than that of those in the right half." That is so, but it is mainly in the abdomen the disturbance of equipoise arises, the liver more than balancing the cardiac preponderance on the left side, and placing the centre of gravity to the right side. For the demonstration of that, reference may be made to the evidence contained in my paper "On the Relative Weight of the Viscera on the Two Sides of the Body; and on the consequent position of the Centre of Gravity to the Right Side."[1] From experiments made in the dissecting room and post-mortem room, extending over several years, the conclusion reached was that the viscera give a preponderance to the right side of 22¾ oz.; or, if deduction be made for the weight of food in the stomach, of 15 oz. clear preponderance on the right side, in the adult. And that is not an over-estimate. We have thus a natural physical cause. The greater weight on the right side leads to resting most on the right leg, and, from this pillar of support, we naturally use the right upper limb preferentially.

The question is—Why the hand of that side is the preferred one among all races of mankind? In view of the close correspondence in internal structure among all races of mankind, it is not easy for the anatomist to believe that the human species arose otherwise than from one centre. That may be held although the phenomena of development, the presence of rudimentary structures, and the occurrence of minor variations point to the descent of man from some previous form. On the hypothesis of unity of origin the explanation of right-handedness is easy. One hand would naturally be fixed on; the young would be trained to use the same hand; and the influence of that on the left hemisphere of the brain would ere long give a hereditary or "instinctive" tendency to prefer the right hand. But from the beginning there has been the natural physical cause in visceral preponderance on the right side, and whatever hypothesis we adopt as to the origin of man, that cause has been in operation as a potent accompaniment of the erect posture.

The late Professor Andrew Buchanan of Glasgow had, in 1862, propounded the hypothesis of the above-mentioned physical cause, founding it on the idea that by the descent of the diaphragm in inspiration the liver is pushed to the right side, disturbing the supposed equipoise. My research, above referred to, gave his hypothesis a basis in anatomical fact, that there is naturally a considerable visceral preponderance on the right side, and the mode of operation of that physical cause is evident. To that passive physical cause would soon come to be added the effect of the greater use of the right hand on the activity of the left cerebral hemisphere; thus bringing heredity to strengthen the tendency to prefer the right hand, originating in the visceral preponderance. Thus, the greater activity, or it may be also the greater bulk, of the left hemisphere of the brain is not the primary cause, but merely the secondary or ancillary cause.

The whole question is ably discussed by my late esteemed friend, Sir Daniel Wilson,[2] but it will not do, as he concludes, to put aside the hypothesis of the influence of visceral preponderance from the difficulty of its not fitting every exceptional case. For example, cases of transposition of the viscera in which the person was not left-handed. We do not know what the early domestic training of these persons was, and it does not follow that the hereditary transmission to the left brain had also been transposed. No explanation that I have yet seen propounded can account satisfactorily for the occasional occurrence of instinctive and inveterate tendency to left-handedness, of which Sir Daniel Wilson himself was an example. The supposition of variation in the direction of the heredity, going to the right hemisphere instead of the left, might, however, be a satisfactory explanation. There is no accounting for some of Nature's variations. Why not the occurrence of transposition of heredity between the two sides of a bilateral organ *per se*, as well as the occurrence of transposition of unilateral organs *per se*? We can give no reasonable explanation of the latter occurrence.

The preferential use of the right hand does not, according to my observation, show itself in very young children, but only after they have assumed the erect posture and begun active exertion. Nor does it follow that the part heredity plays will operate from the very beginning. Heredities have their period in showing themselves. The visceral preponderance hypothesis applies to a much less degree in the quadruped, but leather merchants tell us that the right side of the hide is known as the "lying" side. The want of equipoise tells more in the human form, owing to the erect posture and the greater lateral development of the trunk; and the less intelligence of the quadruped dispenses with the advantage of a skilled limb. In regard to the use of our feet, relatively there is not much difference, but we use the right preferentially in vigorous acts. The right lower limb has become the stronger from being the chief pillar of support under visceral preponderance, and the reaction of the consequent greater development of the left cerebral hemisphere will come to contribute. I think most persons, who have never had an injury to either lower limb, will find that the sole of the right shoe wears before that of the left.

I am, Sirs, yours faithfully,

Edinburgh, April 10th, 1897. J. STRUTHERS.

[1] Edinburgh Medical Journal, 1863.

[2] The Right Hand: Left-Handedness, Nature Series, 1891.

"THE HOSPITAL REFORM ASSOCIATION: REPORT OF THE COMMITTEE APPOINTED TO INQUIRE INTO THE WORKING OF THE SPECIAL HOSPITALS OF LONDON."

To the Editors of THE LANCET.

SIRS,—Permit me, as a hospital secretary with an experience in both general and special hospitals of close upon a quarter of a century, to make brief comment on the "Report of the Committee appointed to Inquire into the

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Working of the Special Hospitals of London." Presuming to take my own case as a sample of the rest, I fully reciprocate the general acknowledgment of the committee for courteous reception, but I must add from the manner in which they exercised their commission, as well as from the very nature of a tabular statement, no new facts are really brought forward. Those that are presented we have been quite familiar with, for similar statements have been published times without number during the past twenty-five years. But the report now under consideration clearly shows that the imputation so freely laid against special institutions, that "hospital abuse" is more rampant with them than with the older and larger hospitals, is practically dispelled.

To state my objections, still briefly, but with more detail. In the first place the visit, which should have been one of hours in duration, was, at this hospital at least, hardly of minutes, and this in spite of my eagerness for thorough investigation. In fact, an excuse for hurry both commenced and cut short the interview. So anxious, however, was I that the report should be full and complete that I called on one of the members of the committee. As a result I was asked to add in writing to their report; but since this addition—to be presently alluded to—is not published it might as well not have been made. Secondly, a tabular statement, always incomplete, is in this instance especially unsatisfactory, since it implies an effort to bring into harmony things which are dissimilar—e.g., an ophthalmic hospital, treating probably a hundred new out-patients each day, is compared with a hospital for paralysis, which admits from two to three only. Thus, although £318 is taken in boxes from the former, the proportion of self-help on the part of the patient is nothing when compared with that of £632 from the Paralysis Hospital, where, with an average of from two to three per diem, one-half are stated to have a letter and the remainder are reported to pay only 6*d*. Without pointing to other discrepancies, the appended "remarks" are both incomplete and incongruous—incomplete, for instance, because I stated, in answer to an invitation, that in the past year 1000 patients had been sent by medical practitioners, and "that the majority of these patients sent by medical men are in a much better position of life than the patients not so recommended, and that the patients are not merely sent for a diagnosis, but for the treatment." These words have been omitted. Indeed, so frequent is the charge that general practitioners are injured by these special hospitals that it is a matter of surprise the committee did not ask for information on this point. Had they done so my experience leads me to believe that this imputation would have been dispelled as completely as many other equally baseless in fact. To give but one instance of the incongruity of the "remarks" of the committee, they have included two or three institutions which are apparently private concerns, and another one which is in no sense a hospital, but a home for the dying. Finally, it must be gratifying to all concerned with special hospitals that there is no evidence deduced that the medical officers of the institutions derive personal emolument as has been so frequently asserted; and, indeed, the suggestion of the committee that patients "might obtain a specialist's advice on the payment of a small sum, say, from 5*s*. to 10*s*., a portion of which would go to the specialist himself," would be generally dismissed with scorn. The committee, however, be might have gone further; the information supplied shows that an institution may be conducted on a charitable basis yet with businesslike principles, and, indeed, if these were more generally recognised the whole question of hospital impecuniosity might be solved—but that is another story.

I am, Sirs, your obedient servant,

RICHARD KERSHAW,
Secretary, Central London Throat and Ear Hospital.
Gray's-inn-road, April 12th, 1897.

HOSPITAL ABUSE AND ITS SUCCESSFUL PREVENTION.

To the Editors of THE LANCET.

SIRS,—During the last six years a scheme for the prevention of abuse in the out-patient department has been in force at the Great Northern Central Hospital at Holloway, and the success that has attended it will be of interest to hospital managers and others who have paid attention to this vexed question. The Great Northern Central Hospital scheme consists essentially of systematic inquiry both as to the social and as to the medical fitness of its applicants for relief. The social qualifications are investigated by a sub-committee composed of representatives of the committee of management and the medical staff. Their inquiry officer, who must be well acquainted with the district and with the conditions of labour therein, is required by them to investigate every case, and if any doubt arises in his mind as to the social fitness of any patient for gratuitous relief he is empowered to put a series of questions laid down by the sub-committee and to record the answers on special forms. These questions relate to wages and income from all sources, number of children, duration of illness, whether in or out of work, &c. The answers are then compared with a wages scale, carefully drawn up to meet all ordinary cases, and approved by the local managers of the Hospital Saturday Fund. If the case does not come within the limits of the scale the patient is refused further aid unless he provides himself at his next visit with a certificate of fitness from his own medical man or his employer, a blank form being given to him for the purpose. First aid is, however, given in nearly all cases. The medical fitness of applicants is decided by a special medical officer, also a resident in the district, who only admits patients to the out-patient department suffering from definite illness. He is empowered to treat the trivial cases once, but such patients are not permitted to attend a second time.

In October, 1891, after the system had been in force for twelve months, the sub-committee were able to report "that cases of flagrant abuse of the charity have been promptly detected and summarily excluded, and that more than half the number of those required to bring certificates failed to bring them." A second inquiry into the working of the system from 1892 to 1896 has recently been made, and it has been shown that flagrant abuse is now rarely attempted. For instance, in the year 1895 the total number of new patients was 18,050, of whom only 423 were excluded. In the year 1896 the number of patients had risen to 20,935, and the cases excluded by the system of inquiry fell to 200. Taking the figures for both years it is shown that the number of actual rejections has been as few as 1·6 per cent. The figures show that the number of applications has increased, and it is thus evident that the system has only driven away the unsuitable applicants for relief, while it remains popular with the really necessitous poor. It is worthy of note that in one year 68 per cent. of the certificates returned were signed by the patients' own medical men. It may be assumed that many of the patients who have been refused as unsuitable at the Great Northern Central Hospital have applied successfully at some other hospital where no questions are asked, and it is obvious that the abuse of the charities by such people can only be checked by the adoption of a uniform system of inquiry. We consider, however, that the experience of our hospital has clearly shown that it is possible to protect the great medical charities from abuse without any injustice towards rightful applicants for relief.

We are, Sirs, yours faithfully,

C. T. MURDOCH, Chairman,
W. BURDETT-COUTTS, Treasurer, } Great Northern Central Hospital.

March 31st, 1897.

To the Editors of THE LANCET.

SIRS,—I wish to bring this paragraph in the *City Press* to your notice as we have been told that special hospitals are particular offenders against the medical profession in the matter of indiscriminate out-patients:—

"So much is constantly heard of the laxity that prevails at our hospitals as regards the admission of patients who are able to pay for medical attendance that it may not be inopportune, more especially in view of the Prince's appeal, to give a glimpse of the other side of the picture. Such a view is afforded by a statement made in the annual report of the Royal London Ophthalmic Hospital. It seems that last year no fewer than 823 persons were rejected on the ground that, on investigation, it was found that their cases were not such as to entitle them to relief. This total represents something like 3 per cent. of the total number of out-patients. In other hospitals a like stringent inquiry takes place, with equally commendable results."

I am, Sirs, yours faithfully,

April 12th, 1897. G. P.

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THE NOTIFICATION OF TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—In the account of my paper read before the Epidemiological Society on the Prevention of Tuberculosis given in your issue of April 3rd one or two misapprehensions have occurred.

I did not say that congenital tuberculosis rarely, if ever, occurred. The words "if ever" should be omitted. I did not admit that notification of phthisis had been tried in Manchester and had failed. Notification in any proper sense has not been tried in Manchester. Less than thirty cases were, I understand, submitted to the Health Office for purposes of disinfection, which was then taken to mean chiefly fumigation. This is not intended to minimise the excellent work of education done by Dr. Ransome, but to prevent an unjust aspersion being put on notification, its objects and its uses.

I am, Sirs, yours faithfully,

Manchester, April 9th, 1897. JAMES NIVEN.

DEBT-COLLECTING ASSOCIATIONS.

To the Editors of THE LANCET.

SIRS,—Several complaints having reached my society concerning the methods adopted by certain so-called associations professing to have been formed for the purpose of collecting medical debts, my society will be glad to hear from any of your readers who have had dealings with any of such associations and who are dissatisfied with their procedure. An association of the kind referred to, which has especially been brought under the notice of my society, has changed its name and address so frequently that it is difficult to suppose that inconvenience has not been caused to members of the medical profession.

I am, Sirs, yours faithfully,

HUGH WOODS,
Hon. General Secretary.

The London and Counties Medical Protection Society, Limited,
12, New-court, Lincoln's-inn, April 12th, 1897.

THE ROYAL COLLEGE OF SURGEONS IN IRELAND AND THE PREVALENCE OF VENEREAL DISEASE AMONGST THE BRITISH TROOPS IN INDIA.

To the Editors of THE LANCET.

SIRS,—I am directed to inform you that at their last meeting the President, Vice-president and Council of the Royal College of Surgeons in Ireland passed the following resolution: "We, the President and Council of the Royal College of Surgeons, being deeply impressed by recently ascertained facts concerning the development and alarmingly increased prevalence of venereal disease amongst British troops in India, and also the apparently exceptional virulence of the malady there, are strongly of opinion that the time has arrived when some active steps should be taken by the Government to check the disease, not alone in the interests of those primarily affected, but of their immediate descendants and of the community at large in India and the United Kingdom. The facts recently elicited by the Departmental Committee presided over by Lord Onslow the President and Council of this College consider as nothing short of appalling, and such as to imperatively require that an effort should be made at once to check and mitigate the evil, as otherwise the public health in these countries, not merely in the present, but in the future, will be seriously imperilled."

I am, Sirs, yours faithfully,

ROBT. H. WOODS, F.R.C.S. Irel.,
Secretary of Council.

Dublin, April 7th, 1897.

THE INTERNATIONAL CONGRESS OF MEDICINE, MOSCOW, 1897: A GOOD ARRANGEMENT.

To the Editors of THE LANCET.

SIRS,—It is probable that many London and provincial medical men will attend the Congress at Moscow, from Aug. 19th to 26th. There is always a certain amount of trouble and inconvenience in arranging isolated parties of twos and threes, and it occurred to me that it might be a pleasant arrangement if those of us who are going from this country were to form a party and go together. I have been in communication with Messrs. Thomas Cook and Son, who have been most obliging, and they have prepared a programme at an inclusive fare of 45 guineas each person, providing for first-class travel tickets from London, *viâ* Berlin and Warsaw, to Moscow, returning *viâ* St. Petersburg, Helsingfors, Stockholm, Copenhagen, and Hamburg, Flushing, London, with hotel accommodation consisting of breakfast, luncheon, dinner, and bedroom, lights and service, restaurant and sleeping-car accommodation, free conveyance of 56 lb. of luggage, fees to hotel and railway servants, *and the services of a competent conductor*, who will superintend the travelling arrangements throughout. Messrs. Cook and Son's terms are so reasonable that I hope many will be prepared to join the party. Messrs. Cook and Son will send a detailed programme to anyone applying, and will be pleased to answer all questions.

I am, Sirs, yours faithfully,

ARTHUR G. BLOMFIELD, M.D. Aberd.

Exeter, April 12th, 1897.

"THE ESSENTIALS OF CHEMICAL PHYSIOLOGY."

To the Editors of THE LANCET.

SIRS,—In the review of the above book, published in THE LANCET of April 10th, I notice that your reviewer blames me for introducing no mention of the application of Lovibond's tintometer to the estimation of the corpuscles and the colouring matter of blood. May I be allowed to point out that the book in question was published in the early part of last year, prior to the publication of Dr. George Oliver's work on this question? I was perfectly well acquainted with the principles of Dr. Oliver's new hæmoglobinometer at the time, but it was obviously impossible for me to publish prematurely what Dr. Oliver had been doing. Your reviewer is in error when he speaks of the applications of the tintometer to the enumeration of the corpuscles. Dr. Oliver's hæmocytometer is sold by the Tintometer Company, but it has no further relation to the tintometer of Lovibond.

I am, Sirs, yours faithfully,

April 10th, 1897. W. D. HALLIBURTON.

"TINNED SALMON."

To the Editors of THE LANCET.

SIRS,—Will you permit me to call your attention to the enclosed notices from the *Manchester Courier* and the *Manchester Guardian* of what took place in the police-court of that city on the 26th ult. The Charles Wood therein referred to is the person who wrote a letter to the *Globe*, from which you quoted and upon which you commented in your issue of the 20th ult., under the heading of "Tinned Salmon." Having regard to the motives which actuated the writer of the letter in question we feel that we are justified in asking you to explain to the readers of your much valued journal that the source from which the damaging reports emanated is, to say the least, an entirely unreliable one. We need hardly point out that a reproduction of a false report by a publication of the authority and influence of THE LANCET is in the highest degree damaging to the interests of those engaged in the trade.

The tinned fish trade has developed enormously, and it is computed that not less than 20,000 tons is annually consumed in this country. The packing of the canned salmon is carefully watched by the Canadian Government, and the out-turn on this side is very critically and thoroughly inspected in the ordinary course of trade by experts before a single tin is offered for sale. In fact, the trade have recognised that it must, in their own interest, be their first duty to protect the consumer, and it would under present conditions be quite impossible for such fish as described by the *Globe* correspondent to reach the public. We notice your article has been reproduced and quoted in other publications, which, although of comparatively little importance in themselves, yet when mentioned in connexion with the name of your paper cannot fail to be seriously regarded. We very sincerely hope that you will see your

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way to inform your readers of the unreliable source from which the information in the first instance arose.

I am, Sirs, yours faithfully,
(For J. Travers and Son, Limited),
London, E.C., April 9th, 1897. H. STABLEFORTH.

*** We noticed Mr. Wood's letter, published in the *Globe* of March 10th, in our issue of March 20th because of the startling statements it contained, but we expressed a doubt as to the accuracy of the details, seeing that the statements had been categorically denied.—ED. L.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

VII.—COVENTRY.[1]

Predominance of the Working Class Subscribers.—The Visiting Staff and the Out-patients.

THE question of working-class control in the management of hospitals, which is causing so much discussion in Leeds, has also been ardently debated in Coventry. Nor is this a new difficulty. So far as Coventry is concerned, it dates back to the year 1889; and, of course, it is intimately associated with the problem of hospital abuse. At the annual meeting of subscribers to the Coventry and Warwickshire Hospital, held in 1883, four governors were elected from the Working Men's Hospital Saturday Committee. That was the best moment for protestations, for it was then that the principle of working-class representation was established. The number of working men representatives and the amount of their subscription were then so small that their admittance seemed to be merely a question of courtesy instead of an act likely to produce far-reaching practical consequences. It was not till the year 1889 that the possible effects began to be realised. In May of that year a proposal was brought before the general committee, which is the managing body of the hospital, demanding that for every £20 the workmen subscribed they should be empowered to elect one governor. The rule of the hospital is that "all persons being subscribers of one guinea or more annually shall be governors during payment." In 1888 the workmen had subscribed more than £900, and yet only appointed four governors. To elect a governor it had cost the workmen over £230, though the ordinary subscriber became a governor at the cost of only one guinea. As a compromise between these two extremes it was proposed to give the workmen a governorship for every £20 subscribed. This would have placed forty-five working men representatives on a body consisting of 450 governors. On the financial basis the workmen might have claimed a larger representation; but as far as could be ascertained they seemed well satisfied with this compromise. A general meeting of governors was convoked to discuss the matter, and readily adopted a resolution that the number of working men on the general committee should be increased from four to six. This was illogical, for if working men are to be excluded as governors why should they be admitted on the managing committee. The discussion displayed considerable class feeling. It was said that the middle classes subscribed to provide a hospital for the working class, and that as the middle classes did not derive any benefit from it they ought to control the institution. The answer made was that in that case obviously the working-class ought not to be asked to subscribe. Also it was pointed out that the middle and upper classes did derive benefits from the hospital, for they not infrequently went there themselves, and often sent their servants. The alarm was also raised that the hospital would become a provident dispensary. In looking back at the records of this dispute I find much that confirms what I have already stated with regard to a similar movement at Leeds. For instance, the following passage from the first leading article in the *Coventry Herald* of May 19th, 1889, is almost identical with the description I gave of the feeling at Leeds: "It need not be wondered at if the Saturday collection should to some extent have fostered the idea that those contributing to it thereby establish special rights. The hospital is very properly held up as a working man's interest, and when working men subscribe to it the further step to a sense of proprietorship is easy. A penny a week to the provident dispensary gives such and such privileges; why not the same at the hospital? They are both medical institutions, and both exist for the benefit of the working class. If this reasoning is fallacious we must admit that it is also natural, and therefore in a measure inevitable."

To the claims set up by the working men it was objected that the hospital buildings and plant had cost about £25,000 and the working men had not contributed anything to this capital outlay. On the other hand, the majority probably of the present guinea subscribers had also not contributed to this original capital outlay, and yet they were governors. Another argument was based on the belief that the honorary medical staff were opposed to the innovation, and the time, skill, and knowledge they devoted to the care of the patients were more valuable than the £900 contributed by the workmen. Nobody, however, denied this, and any claim the medical staff might have made to a voice in the management of the hospital would have been received with favour. At the meeting of the governors convened to discuss the whole question Dr. Milner Moore urged that for years people had been in the habit of receiving charity from the hospital and that of late only had they been stirred to such a sense of self-respect as led them to contribute to the hospital at first £200 in a year and now £900. But they had at the same time received the benefits of the institution. The medical staff received no return for the work they gave. In large centres like London or Birmingham there was an advantage in belonging to a hospital. A medical man might there become a professor and a consultant and derive advantage from his students, who in after life called him in. This was not the case in the smaller towns where there was no clinical school. The original subscribers to the Coventry Hospital, who had devoted hundreds of pounds to build it up, never intended that it should become a provident dispensary for persons able to pay, and he thought that by increasing the working-class representation they were drifting in that direction. Mr. Iliffe urged that this tendency would drive medical men in self protection to demand payment for the services they rendered at the hospital—a suggestion which was received with cheers. He thought workmen who earned £2 or £3 a week could afford to pay for medical attendance, and he objected to granting them a governor's rights for every £20 they subscribed "because under such a plan the time would come when those who freely gave their donations would be overwhelmed in the administration of the institution. Coventry was a growing city and sooner or later the adoption of this proposal would convert the hospital—erected as a refuge for the poor—into one gigantic provident institution." In spite of these two protests the resolution was only defeated by a majority of one—16 to 15. This was such a small vote and such a small majority that it was decided to submit the question to all the governors, a poll having been demanded.

Pending the day of the poll the controversy was resumed, notably by the local press, and some communications were also addressed to the medical journals on the topic. Protests were made that subscriptions, whether large or small, conferred no rights on the patients, that it was easy to understand the dissatisfaction of the medical men who gave their services gratuitously when they found the penny a week subscriptions flung, as it were, in their faces. The honour of the working men as a class was appealed to and they were urged to put an end to so unworthy a conception. If they wanted a return for their pennies, then the benefit societies or the provident dispensaries were open to them. It could not, however, be denied that the dispensary idea did prevail among many of the hospital patients. This found its origin not so much in the Saturday collection, but rather in the fact that for every guinea subscribed three letters of recommendation to the hospital were given. In 1888 the Working Men's Committee had received 2586 tickets, and thus the connexion between paying and receiving had been established. Then, again, it was pointed out that, whereas the middle-class governors of the hospital took but little interest in the

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *continued*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *continued*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; and (6 *concluded*) Feb. 13th, 1897, Leeds.

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work, rarely attended meetings and rarely voted, the forty-five workmen, if they were appointed, would attend regularly and vote as one man. This, though undoubtedly true in fact, was a poor argument to adduce, as it is difficult to evoke sympathy for people who fail to attend to their own affairs.

The worst feature of the matter has still to be mentioned: the workmen's subscriptions, in the majority of cases, though theoretically voluntary, are in practice compulsory. Taking the evidence of workmen themselves this is how the matter is explained by a journeyman watchmaker whose letter the *Coventry Herald* published on May 31st, 1889: "They say that it is a rule made by the men—a rule of the shop—and can be altered if not liked. This rule was made three or four years ago, because workmen had been urged by certain gentlemen at hospital annuals. Say, then, a man this year makes application for employment, he gets put on; he is told of this rule, but is also told that he need not pay if he don't like—that it is voluntary. He is compelled to pay because others pay, and he would be marked among his mates and boycotted, so he keeps his mouth shut and pays, glad to get employment on such terms. Say, however, he is told it is voluntary; then the rule would be a lax one. Soon it would be whispered A, B, and C don't pay—then why should I pay?—and the whole concern would pretty well soon fall to the ground, for it would not hold together six months, much more three or four years; but, say all of them are loyal and keep loyal, then, sir, they deserve all they ask for, even if it is only a tribute to their self-denial."

This workman then goes on to complain that certain gentlemen for several years patted his class on the back and urged them to show their independence. When the workmen take this hint to the extent of subscribing £900 a year, then these same gentlemen turn round and, as the writer describes it, say: "Oh, come, we did not bargain for this; this is too much. You must keep as you were. You must let us patronise you. You haven't got the same intelligence as we have to manage a large institution like a city hospital. It was built expressly for you, not for us; then it is impudence of you to want to share in its management." Thus we have the dilemma: Either the workmen are independent donators—and in that case they claim to have the same share in the management of the hospital as is given to the middle-class donators—or else they are not independent; then they ask for a return for their money on the provident dispensary principle.

Such were some of the arguments with which the governors of the hospital had to deal. As if to confirm the argument that a small body of workmen would override a large body of middle-class men because of the lack of discipline and the negligence of the latter, barely more than 10 per cent. of the governors went to the poll. In this small poll the majority in favour of the working men's claim was in the proportion of two to one. At the last moment the opposition made by the honorary medical staff of the hospital completely broke down and the workmen and their friends swept the boards. From that day for every £20 collected among working men a working-man governor of the hospital has been appointed.

Since this eventful decision the population of Coventry has greatly increased. A large number of workmen have come to this town so as to profit by the "bicycle boom," and the workmen's subscriptions for the year 1896 amounted to £1300. Consequently there are sixty-four elected working-men governors and six *ex-officio* working-men governors. The subscribers of a guinea and upwards amount in all to 560 or thereabouts; but though these latter are also governors and still constitute a vast majority, it is, as foreseen, the working-class element that is the active element. Thus it may now be said that no medical man could be elected on the staff of the hospital if the working-classes were opposed to him. The recent election of a surgeon to the hospital staff was carried by the working class vote. To avoid this Dr. Moore, consulting surgeon at the hospital, had proposed that the medical officers of the hospital should be appointed by a special committee of selection to be nominated by the general committee which manages the hospital. But a working-class representative at once moved an amendment to the effect that such a course would reduce the privileges of the subscribers. Dr. Moore urged that it was an expensive matter for a candidate to canvass an electorate of some 600 persons; also such canvassing was a means by which medical men might unfairly advertise themselves. On the pretext of canvassing for his election a new comer or a comparatively unknown practitioner might call on all the donators to the hospital, and in soliciting their vote would have an excuse for expatiating on his own merits. Then he could also appeal to the public in the local papers, always in view of the election. Finally, as the new comer or unknown practitioner would have no serious chance of being elected he might magnanimously withdraw at the last moment. In the meanwhile a good advertisement would have been secured. Then, again, it was urged that the better class of subscribers did not like the annoyance of being canvassed. These arguments were met by the working men representatives. The latter declared that if appointments were entrusted to a small and special committee such a body would be sure to incur the suspicion of jobbery. If the high-class subscribers objected to be canvassed the working people who were also subscribers had no such objection; then as the workmen constitute the majority of the patients it was very natural that they should wish to have a voice in the appointment of the medical men. These arguments prevailed, and Dr. Moore's proposal was rejected. Thus once again the workman element was master of the situation.

While the working classes are increasing their hold on the hospital the usual subscribers and donators are showing some lukewarmness. Thus for the year 1896 the income of the hospital from all sources amounted to £3374 8*s.* 4*d.*, or £57 16*s.* 6*d.* less than the previous year. But while the general sources of income fell off the workmen's subscriptions, which amounted to £1000 in 1895, rose to £1300 the year following. But for the extra £300 given by the workmen the condition of the accounts would have been little short of calamitous. The workmen have contributed more than a third of the total receipts of the year; their subscriptions are ever increasing, while the donations from the other classes were last year £123 less than the former year, the collections in country parishes £10 18*s.* less, and the legacies £70 less. There can be no doubt that the voluntary subscriptions given by the middle and upper classes are declining in the face of the working-class subscriptions. A local practitioner with whom I discussed this matter said that there did not seem energy enough remaining even to organise a bazaar for the hospital. On the other hand, he maintained that the workmen resented the pressure put upon them by their employers or foremen, by which they were obliged to subscribe their penny a week. These enforced subscriptions engendered the conviction that the subscriber had a right to go to the hospital, and they are indignant when the hospital they pay for is described as a charity. What is compulsory cannot be a charity. The workman who has been forced to subscribe asks whether the gas which burns in the street and for which he is forced to pay rates is also a charity. The impression is gaining ground that the imposition of what is nominally a subscription, but in reality a tax, must tend towards the municipalisation of hospitals, for the voluntary element is dying out. This impression is based on the fact that the workmen's subscription has increased from £132 in 1874, when it was started, to £540 in 1884, to £1000 in 1894, and to £1300 in 1896, that the other subscriptions are declining and now represent less than two-thirds of the total income. The workmen who find themselves compelled to pay will naturally feel resentful against those who do not pay. If the tax were compulsory everywhere, a penny a week on all adult males would bring in about enough to support the hospital without any voluntary subscription whatsoever. So long as a hospital was supported by the subscriptions of a few rich persons it could be justly considered as a gift—a charity; but if a hospital is to be supported, paid for, and maintained by everybody, and if everybody is to have a voice in its management, it is not surprising if some persons think the day is not so far off when such a hospital will be looked upon, not as a private charity, but as public property. There will not then be far to go before reaching the municipalisation of hospitals. Such in any case is the forecast which the present situation at Coventry suggests, and naturally, as the charitable element disappears, the necessity of paying the whole medical staff becomes more and more obvious.

With such large subscriptions coming in from workmen who in many instances believed that by subscribing they acquired a right to go to the hospital, it was to be anticipated that there would be a great deal of hospital abuse. The staff, however, took a wise measure to check such abuse. They decided that the out-patients should be seen only by the

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house surgeon and the assistant house surgeon. The out-patients come in the morning. When there is a very serious or complicated case, and a second opinion is thought necessary, the patient has to return in the afternoon and is then seen, in consultation with the house surgeon, by one of the honorary visiting staff. In other towns people throng to the hospitals so as to obtain what they conceive to be superior advice, even though they are often suffering only from some ordinary or trivial complaint. A person who can pay a 2*s.* 6*d.* or 3*s.* 6*d.* fee goes to the hospital so as to obtain advice from a consultant to whom he would have to pay a guinea if he applied to him privately. This cannot be done at Coventry, as advice from the visiting staff is, as already stated, only obtained in exceptional cases. According to another rule, no member of a club or medical aid society can obtain advice at the hospital unless he brings a letter from his club medical officer. In practice this means that a club patient can only come to the hospital for a second opinion. Then even the visiting staff do not enjoy a much higher reputation than the other practitioners of the town, so there is not the rush for superior advice which in larger centres causes much hospital abuse. On the other hand, there is no method of inspection to prevent abuse. The house surgeon is supposed to ask questions, and the former house surgeon did ask a good many questions, with the natural result that he became proportionally unpopular. It is impossible to expect that a young house surgeon, especially if he hopes ultimately to set up in practice, should ask many questions. Thus it amounts to this, that few questions are asked unless a case threatens to become very troublesome, then it is worth while to see whether the patient is justified in coming. Many Coventry patients, however, go to the Birmingham hospitals, though they could well afford to pay the fees of the Coventry practitioners. The tendency of the patients is to go to a large centre. In the smaller provincial towns, where every medical man is a general practitioner, the highest standard of work cannot be so easily attained, and this tends to render hospital abuse less frequent. Perhaps it is more prevalent among the in-patients of the Coventry hospital. To prevent this no one is admitted as an in-patient unless he has six recommendations, whereas one suffices for the out-patients. Even the patients who come with a letter from a medical man are asked to get recommendation tickets as well, and are only admitted without them when the case is very urgent. As, however, three recommendations are given for every guinea subscribed, they are not difficult to obtain, and at the end of the year many subscribers still have unused tickets remaining. The medical staff is opposed to the ticket system, but the workmen want a *quid pro quo* for their subscriptions. The public has been so thoroughly educated to the ticket system that it is thought the subscriptions would be very greatly reduced if the system were abolished. A very few paying patients are admitted, the charge is generally a guinea per week, but I have not heard that this has given rise to any particular complaint. Though I have listened to the bitterest denunciations of the abuse prevailing at the Coventry Provident Dispensary, there is comparatively little said about abuse at the hospital so far as the patients are concerned. The great question at Coventry is the advent of the working men as the preponderating influence in the future of the hospital.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Royal Institution for Deaf and Dumb Children.

THE Royal Institution for Deaf and Dumb Children held its annual meeting on April 9th. The Lord Mayor (Mr. James Smith) presided. The report stated that important extensive alterations had been made during the past year at a cost of £4000. The institution now provided accommodation for 102 boys and 82 girls, the number on the register being 147, which has since increased to nearly the full complement. The balance-sheet showed the total receipts to have been £4483 odd, and this amount had been exceeded in the expenditure by £30 odd. Two-thirds of the amount received from scholars come from the School Board, the Government insisting upon the recognition by the school boards of the deaf and dumb children of the country. Lord Calthorpe was elected president and the usual votes of thanks were passed. The system of education and management of this institution has always received commendation, the school being considered to be one of the best of its kind in the kingdom.

Country Holidays for Town Children.

Sir Willoughby Wade presided at the fourth annual meeting of this useful society on the 11th inst. He pointed out that, with the exception of an infinitesimal expenditure on incidental expenses, all the money contributed was applied directly to the objects for which it was collected. Out of £616 raised last year, the outgoings for incidental expenses only amounted to £34. They could not but recognise what an advantage it was to the health of the children for them to have a free run in the country, and though their visit only extended to a fortnight the effect was not temporary, but lasting. The civilising influence of the holidays was also an important feature. An additional advantage which accrued from the holidays was educational, as the novel surroundings of the children elicited thought and imparted new ideas. A fortnightly holiday was provided at a cost of 11*s.*, including railway fare, but a large amount of labour was given by the ladies who interested themselves in the movement. The Bishop of Coventry was elected president for the ensuing year. It was mentioned that last year the children themselves contributed £208 towards the expenses.

Queen's Hospital.

Dr. Suckling has resigned his position as physician to the hospital after fifteen years' service. It is hoped that he will be elected on the consulting staff, as a recognition of the important and valuable services which he has rendered.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

The Manchester Sewage Problem.

THE difficulties with which Manchester has to contend in the disposal of its sewage were fully set forth at a meeting of the Manchester Statistical Society held on March 31st, when a paper making definite practical suggestions was read by Mr. Nathaniel Bradley, J.P., F.C.S., a member of the city council. At present 26,000,000 gallons of sewage have to be dealt with every day, the effluent from which, after treatment at Davyhulme with chemicals and precipitation, is discharged into a nearly stagnant portion of the Ship Canal. In passing under review the various methods of sewage disposal Mr. Bradley commenced with filtration through land, but dismissed it with the remark that it was out of the question in the case of Manchester, because the necessary quantity of land was not available, and even if it could be obtained it would be of a kind that would be unworkable and probably a source of infection to the whole neighbourhood. The two remaining plans were disposal either by the Ship Canal or by an underground culvert leading to the Mersey where it became tidal. At Davyhulme precipitation was at present effected by the addition of milk of lime, and subsequently by the addition of copperas (protosulphate of iron), about seven grains of each being added to every gallon of sewage. On the present system of sludge pressing and working (without artificial filters) the cost of this treatment averaged £2 2*s.* per million gallons; in London the cost was £2 9*s.* 6*d.* per million gallons. In a report published in 1893 Mr. J. Carter Bell, F.I.C., analyst for the county borough of Salford, gave a description of twenty various sewage processes which were tried at the Salford sewage works, but after four years of experiments not one of them was adopted by the Salford Committee, either because the effluent soon set up secondary putrefaction or because the cost was prohibitive. Notwithstanding reiterated assertions to the contrary, the precipitate from sewage has no commercial value as manure. The Local Government Board in August, 1894, issued a return called for by the House of Commons, containing information on the subject from about 220 districts in England and Wales in which systems of treating sewage by precipitation were in use; 160 of them had no sale whatever for their precipitated sludge; sixty places had a slight sale at prices from 6*d.* to 2*s.* 6*d.* per ton; in two or three places the price was 3*s.* per ton. The filtration of sewage through three feet deep of cinders or finely broken clinkers, weighted

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down with a six-inch top layer of gravel, obtained from the State of Massachusetts the name of "bacteriological method," and there was an artificial filter called the septic tank, which was said to purify sewage by means of bacteria and practically to form no sludge. The London County Council constructed such a filter an acre in extent, and their chemist, Mr. Dibdin, made experiments on these bacteriological lines at the northern outfall works at Barking. The Manchester Rivers Committee were also attracted to this bacteriological process and erected two small filters for experiments at Davyhulme. The Corporation of Glasgow had previously sent representatives to various places in England to obtain information, and had had under consideration all the known systems of sewage purification that were of importance. In the light of this knowledge sewage works were opened at Dalmarnock, the eastern district of Glasgow, in May, 1894, capable of dealing with 10,000,000 gallons per day. The buildings, railway sidings, tanks, and filtering beds covered an area of nineteen acres; the land cost £38,000, and the buildings, tanks, and machinery an additional £67,000, or £105,000 in all. This was substantially the so-called bacteriological treatment on an extensive scale, inasmuch as the sewage after precipitation was filtered through cinders and sand. After three years' experience, however, the Glasgow Corporation decided that this filtration was inapplicable in the case of a large community, and they have recently obtained Parliamentary authority for discharging their effluent into the tidal waters of the river Clyde. London also has discontinued the bacteriological filter, and conveys the effluent to the tidal waters of the Thames. Mr. Bradley therefore concludes that Manchester will be under the necessity of constructing a culvert leading to the tidal waters of the Mersey.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Bristol.

AT the meeting of the Bedminster (Bristol) board of guardians held on March 23rd it was decided, by 21 votes to 8, that the board should adopt the recommendation of the Royal Commission on Vaccination and allow persons having conscientious objections to vaccination to make a statutory declaration before a magistrate of such objection, and that such a declaration duly made would bar proceedings. One guardian, in opposing the resolution, very wisely remarked that they as a board had no power to adopt such a resolution, as they were there to administer the law as it stood. Unfortunately, however, his advice was not taken.—The new infectious diseases hospital at Ham Green, under the control of the sanitary authority of Bristol, is rapidly approaching completion. It will have four wards and an isolation ward in separate buildings 40 ft. apart. Each of the four wards will contain seventeen beds. The isolation ward is divided into four apartments, with two beds in each. The total cost is about £27,000. The establishment will be lighted by electricity.

The late Dr. Brabazon.

A handsome painted glass window has been recently placed in the Church of St. Mary, Bathwick, as a memorial to the late Dr. Anthony Beaufort Brabazon of Bath, who died in March, 1896. The window is executed in the manner of the fifteenth century, and contains large figures of St. Luke the Evangelist and of SS. Cosmas and Damian, also patron saints of medical men.

Small-pox on Board Ship.

At Cardiff Police-court on March 26th the master of the Norwegian steamship *Parisien* was fined 20*s.* and costs for failing to send notice to the medical officer of health of the Cardiff port sanitary authority that he had on board a person suffering from small-pox.

Death of Mr. J. C. Christison Beddoe.

The particulars of the death of Mr. J. C. C. Beddoe, the only son of Dr. Beddoe, F.R.S., of Bradford-on-Avon, have now reached this country. Mr. Beddoe had an accidental fall amid the Quaebac Hills on Jan. 12th, and died before assistance reached him. He held a responsible position in Major Lugard's African exploring expedition to Lake Ngami. The greatest sympathy is felt for the bereaved parents.

University College of South Wales and Monmouthshire.

A special meeting of the Council of this College was held at Cardiff on March 24th, under the presidency of Dr. Sheen, for the purpose of appointing a professor of anatomy. The three selected candidates appeared before the Council, and eventually Mr. A. Francis Dixon, B.A. Dub., M.B., B.Ch., B.A.O. Trin. Coll., Dub., was appointed to the vacant chair. Professor Dixon has for the past four years held the post of chief demonstrator of anatomy in the University of Dublin; previously he had worked for three years in the zoological laboratories of Trinity College, Dublin, and of the Royal College of Science, Dublin, and obtained the gold medal and senior moderatorship at the examination for B.A. in 1889 at the University of Dublin.

Proposed Cottage Hospital for Chippenham.

It is proposed to commemorate the Queen's Diamond Jubilee at Chippenham by the erection of a cottage hospital. The scheme originated with Sir J. Dickson Poynder, who has subscribed £500 for the purpose. The Mayor will shortly make an appeal for funds, which will doubtless receive a generous response.

Proposed New Hospital for Barry.

The Barry urban district council, at the meeting on April 2nd, decided to recommend to a town's meeting that by way of commemorating the Queen's Jubilee a general hospital should be provided for the town out of the rates, but in the first instance that an accident hospital be erected and also a permanent home for the Barry Nursing Association.

New Convalescent Home at Llanfairfechan.

The Heath Memorial Convalescent Home at Llanfairfechan, North Wales, was opened recently. It has been erected at a cost of about £20,000 by Messrs. Robert James and Arthur Heath, as a memorial to their father, Mr. Robert Heath, the well-known ironmaster.

April 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University Graduation Ceremonial.

THE spring graduation ceremonial of the University of Edinburgh took place on the 13th inst. The following well-known gentlemen received the honorary degree of LL.D.: Professor James Dewar, F.R.S., of the Royal Institution, London; Emeritus Professor Sir Douglas Maclagan, F.R.S. Edin.; Mr. John Rae, M.A., of London; the Right Hon. Lord Russell of Killowen, Lord Chief Justice of England; and Mr. John Wyllie, M.D., F.R.C.P. Edin. In presenting Dr. Wyllie the Dean of the Faculty of Law said that he (Dr. Wyllie) had acted for fifteen years as physician to the Royal Infirmary, but Dr. Wyllie's title to the honour which was to be conferred upon him rested mainly upon the remarkable scientific work which he had achieved.

Glasgow Medico-Chirurgical Society.

The April meeting of the society was held on the 2nd inst., the chair being taken by Mr. H. E. Clark. Dr. George H. Edington showed a boy on whom he had performed Excision of the Ankle three years ago for tuberculous disease after several partial operations had failed. The excision was done through a transverse incision extending across the dorsum of the foot from the external to the internal malleolus. The astragalus was removed entirely, the cancellous tissue of the os calcis was scooped out, and a slice taken from the lower end of the tibia and fibula. On two or three subsequent occasions a small sinus in the cicatrix needed attention, but otherwise the result was satisfactory. The boy retains a useful foot, and in walking with his boots on it is impossible to distinguish the affected limb. There is no ankylosis. Dr. Edington also showed a boy whose tarsus had been entirely removed with the exception of a limited portion of the os calcis. The operation was performed eleven months ago, and the boy can now walk with a barely perceptible limp. The foot is much shortened, but there is considerable freedom of movement both between the os calcis and the metatarsus and between the leg bones and the os calcis. In the discussion on these cases there was a general consensus of opinion in favour of partial operation rather than

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amputation for tuberculous disease affecting the feet in children, though amputation as securing prompt and certain removal of the entire disease and more rapid healing of the wound was not without its advocates. Dr. Crawford Renton and Dr. Snodgrass submitted notes of a case in which abdominal section was performed for rupture of a gastric ulcer. There were unusual difficulties attending the diagnosis and the operation could not be completed, the explanation, as found on post-mortem examination, being that adhesions between the stomach and the diaphragm rendered access to the ulcer impossible. Dr. Renton also showed a patient on whom he had successfully operated for gastric ulcer. The clinical notes of the case were submitted by Dr. Adamson, who drew attention to the following points: (*a*) the slight degree of shock which was manifested and the rapidity with which evidences of this disappeared, so that it was difficult to convince the patient that an operation was necessary; (*b*) the board-like rigidity of the abdominal wall; (*c*) the diminution of the hepatic dulness without evidence of tympanitic distension of the abdomen; (*d*) the presence of a tinkling sound over the upper abdomen; and (*e*) the complaining of pain—doubtless a referred pain—above the clavicles. Dr. J. H. Nicoll showed the following:—(*a*) two specimens of Paget's Disease of the Nipple; (*b*) the Parts removed from a case of Strangulated Interstitial Inguinal Hernia; (*c*) Vermiform Appendix Removed with an Abscess Cavity containing it; and (*d*) an Encysted Vesical Calculus.

Medical Appointments.

Henry A. Watson, M.A., M.B. Glasg., who has just completed a period of service as house physician in Professor Gairdner's wards in the Watson Infirmary, has been appointed house surgeon to the Royal Hospital for Sick Children, Glasgow.—Geo. A. Turner, M.D. Glasg., has resigned his appointment as physician for Diseases of Women in the Central Dispensary, Glasgow. Dr. Turner was recently elected to the corresponding position in the dispensary of the Watson Infirmary.—Geo. Balfour Marshall, M.B. Edin., has been appointed Government Visitor at the examinations of the Pharmaceutical Society held in Edinburgh, in succession to Sir Douglas Maclagan, M.D., resigned.

April 14th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

THE Council of the College has nominated Mr. William Thomson (president), Mr. Swan (vice-president), Sir Charles Cameron (secretary), and Sir William Stokes to represent the College at the Moscow International Congress.

The Apothecaries' Hall in Ireland.

The Apothecaries' Hall has recently received from the Privy Council of England notification of the result of its appeal against the decision of the General Medical Council, which body refused to appoint examiners in surgery for the qualification of the Hall. The Privy Council has allowed the appeal and directed the General Medical Council to appoint such examiners.

The Adelaide Hospital, Dublin.

Dr. W. J. Smyly, who has recently finished his term of office as master of the Rotunda Lying-in Hospital, has been elected obstetric surgeon to the Adelaide Hospital, in succession to Dr. Purefoy, the present master of the Rotunda.

Belfast Board of Guardians.

The results of the recent elections just declared show that a lady has been returned at the head of the poll for one of the principal wards of the city.

Londonderry Asylum Board.

The secretary of the board of control in Dublin has intimated to the governors of the Londonderry Asylum that the Treasury have sanctioned a loan of £110,000 for the erection of a new asylum at Gransha for the Londonderry district, the periods of repayment and rate of interest to be as follows: £102,000 in fifteen years, at 3½ per cent. per annum; £7700 in twenty years, at 3½ per cent. per annum.

Death of Professor Townsend of Cork.

The death on the 11th inst. of Dr. Edward Townsend has been the cause of general regret in Cork medical circles. Though suffering from heart disease and aneurysm, he had been actively engaged in his profession within the past fortnight. Educated at Trinity College, Dublin, he graduated in the year 1857, and succeeded his father in a large practice in Cork. He was senior physician to Cork South Infirmary and County Hospital, physician to the Cork Lying-in Hospital, and consulting physician to the Hospital for Protestant Incurables, and in all these institutions his work gained esteem for him. In 1888 he was appointed Professor of Medicine at the Cork Queen's College, and his lectures were much appreciated by the students for their lucidity, erudition, and happy selection of illustrative cases.

April 14th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Academy of Medicine.

THE discussion upon appendicitis was continued last week at the Academy of Medicine, but much of its interest was lost, as nearly all that could be said had been said. M. Potain supported M. Dieulafoy in saying that he, unlike M. Lucas Championnière, M. Reclus, and surgeons in general, had never seen appendicitis as a consequence of entero-colitis. On this question the different surgeons and physicians joined issue, and apparently each intends to retain his personal view. At the same meeting M. Brouardel gave an account of the part that he played at the recent International Sanitary Conference at Venice, and discussed the conclusions that the delegates had arrived at.

The Service Médical de Nuit.

Another, the fifth, Commission of the Municipal Council of Paris has been instituted, on the proposition of M. Fourest, to arrange for the organisation of a gratuitous medical service between the hours of 5 P.M. and 10 P.M. It is well known, on the one hand, that the medical officers of the charity organisations are not obliged to visit the sick after 5 P.M., and, on the other hand, that the *Service Médical de Nuit* only comes into action after 10 P.M. Recent events have called attention to the inconvenience of this interregnum. The same Commission of the Municipal Council has been approached by M. Breuille, who desires a modification of the rules of the service, so that if one district should be overcrowded it should have the right to apply for medical assistance to a less crowded district of the same arrondissement. At the sitting of the municipal council on Monday last M. Edmond Gibert read a report on the petition of a Doctor Da Costa Leite who protested against the situation in which some medical men were placed who had undertaken the duties of the *Service Médical de Nuit.* Dr. Da Costa Leite stated that he had made nineteen night visits during January and up to Feb. 15th inclusive, during which time the new night service had been definitely at work. The new organisation would credit him with 75 fr., which amounted to 3 fr. 95 c. per visit. Dr. Da Costa Leite thought that having accepted the proposals of the Préfecture of the Police that he should guarantee his services during the night in the district where he resided he ought not to be victimised to this extent. It will be remembered that originally the officers of the service received 10 fr. for each visit.

Death of Dr. Maisonneuve.

One of the most illustrious surgeons of the century, Maisonneuve, whom a large number of people thought to be dead, on account of the silence which has shrouded his name for many years past, has just departed this life, aged eighty-seven, at his chateau of Missillac, Loire Inferieure, where he had lived in retirement for the last eight years. Born at Nantes in 1810, Jacques Gilles Maisonneuve became resident medical officer at the Paris hospitals, and afterwards prosector at Clamart. In 1840, after a brilliant *concours*, Maisonneuve was nominated surgeon to the Cochin Hospital. Thence he transferred his services to the Pitié, and finally to the Hôtel Dieu. He soon became noted as the most skilful surgeon of his time, being particularly well known for the number of surgical instruments which he invented, and some of which—for instance, the urethrotome—are still in use under his name. Maisonneuve was the first surgeon to perform the operation of resection of the hip-joint, while his

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conservative surgery was as sensational as his operative. In 1862 he showed before the Academy of Medicine the case of a young engineer whose leg he had preserved by the practical application of the physiological theories of Flourens as to the reproduction of bone by the periosteum. In this case he removed the fractured tibia, retaining the periosteum, out of which a new tibia was formed. Since 1875 he had retired from the practice of his profession so entirely that, as I have already said, many even in his own country thought him to be dead.

April 13th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Inter-Academic Courtesies.

TO-DAY will set out from Milan *en route* for Berlin a company of 350 students and graduates representing every seat of learning in Italy. They are drawn from every faculty, law and medicine preponderating, and are under the guidance of several well-known occupants of university chairs. The medical group, for example, is conducted by Professor Porrando of Genoa and Professor Panzeri and Professor Sormani of Pavia. The trip is organised by the University Association of Pavia, and its object is to afford the renascent schools of Italy an opportunity of witnessing the *modus operandi* pursued at one of the most splendidly equipped and efficiently organised centres of culture, whether theoretical or practical, in Europe. Nothing but good can come of the object lesson thus presented; indeed, its underlying conception and its realisation are among the most hopeful symptoms observable in the evolution of Young Italy. From having been the mother and mistress of modern learning she has lapsed into being the daughter and pupil; but as a first step to regain the ground she has lost she sends a chosen band of her best *alumni* to visit the advanced posts of inductive research and professional qualification, so that on their return these youths may report to their respective schools the impressions they have received and the suggestions they have gathered, with a view to making profitable innovations on their backward traditions. While Berlin is the final goal of the trip, a good many other seats of learning will be visited going or coming—for instance, Zürich, Heidelberg, Cologne, Leipzig, and Munich. In future years these academic excursions will venture further afield, and the universities or provincial schools of the British Isles and the United States are already set down for eventual visits. London has on more than one memorable occasion extended her scientific or professional hospitality to foreign guests, her International Congresses of Hygiene and Demography and of Medicine and Surgery being still quoted as models of what such gatherings should be. These, it is true, she organised for the proficients, or the "past-masters," in science and in its practical application; but when the time comes for the young graduates and advanced students to pay her their contemplated visit she will prove equal, I do not doubt, to her best traditions, and add another to the many pleasant experiences which her Italian guests particularly delight to recall.

"Enlighten the Mothers."

This is the watchword of an organised attempt to realise in Italy the ideal so well formulated by the late eminent Commissioner in Lunacy, Sir James Coxe: "Let every child be taught to become the intelligent custodian of its own health." The Palazzo Gaetani has for some time been the centre of attraction for all interested in the organised attempt aforesaid, Dr. Minossi addressing there considerable audiences, mainly female, on Pronto Soccorso (First Aid), which he handles in a popular yet essentially scientific and practical style. On the medical side of the subject he dealt yesterday with microbic infection, and startled his hearers with the announcement, drawn from official returns, that in Italy 200,000 persons die every year from infective—that is, from preventable—maladies, and that of those victims the majority are young, "the hope of families, the resource of the coming generation." If mothers of households were properly alive to the danger and to the preventability of these maladies, a first step would be taken towards minimising this annual death tribute, and by way of showing what means they may command for such an end Dr. Minossi gave clear and impressive descriptions of the genesis, course, and culmination of the more familiar infective maladies, assisted by preparations which made his meaning unmistakeable. He was effectively supported by representatives of the various cliniques, by numerous consultants, general practitioners and advanced students, and also by well-known leaders of society, all of them in hearty sympathy with the undertaking, of which he is one among its numerous medical promoters.

The Return of Winter in Italy.

The last four months have been peculiarly trying on the Riviera Ponente and even the Riviera Levante, what with rain, occasional snow, and the intermittent sting of the east wind. And now, just as spring was attempting a "transformation scene," winter has again put in an appearance, greatly to the disappointment of visitors to the attractive towns of the Alta Italia and the Italian lakes. On the 9th inst. at Savona a violent storm, accompanied with dense hail showers, burst over the neighbourhood, the hail in some spots lying half a foot deep and doing immense damage to fruit trees in blossom. At Brescia the cold is Siberian, again caused by the heavy hail all over the province; and at Pallanza—"the Nice of the Lago Maggiore," as it is happily called—a correspondent tells me, the climate is once more "that of January," so torrential has been the rainfall, so frequent the snow-storms on the heights, and so piercingly cold the winds. Matters are still worse on the Swiss side of the Alps, where the frost has injured irreparably the fruit trees and vineyards. The travelling Briton should therefore think twice before exchanging the comforts of home for the imprisonment of a sub-Alpine or north Italian hotel.

April 10th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The X Rays and Anatomical Preparations.

PROFESSOR DIAKONOF[1] discusses the use of the Roentgen rays in preparing photographs, or radiographs, of anatomical preparations. Structures like arteries, veins, bronchi, and broncheoles may be injected with various materials more or less opaque to the x rays, and the resulting radiograph shows with perfect accuracy their relative distribution. The best material for injecting is mercury, on account of the ease with which it can be manipulated and the fact that the same injecting fluid can be used over and over again. When it is wished to inject two sets of vessels in the same organ and to show their distribution in the radiograph mercury may be injected into one set and a still more opaque material into the other. The following mixture is suggested: of gypsum, cinnabar, and red lead, twenty parts each; of flour, ten parts; add enough water to make the mixture sufficiently fluid to flow into the smallest vessels. This mixture is too opaque, and the resulting shadows in the skiagraph too black, to be recommended as a substitute for mercury, but it is useful in combination with it as a contrast.

A Balneological Congress.

It is proposed to hold during the year 1898 a Russian conference upon balneology and climatology. It will be one hundred years next year since the mineral springs of the Caucasus, still the best known and most frequented of Russian spas, were discovered, or, to speak more accurately, since they came to be used therapeutically. The proposal to mark the centenary by holding such a conference originated with the Russian National Health Society, and a committee has been elected to make the necessary arrangements. Foreigners who attend the International Congress in Moscow this summer will have an opportunity, if they can spare the time, of seeing the group of watering-places in the Caucasus just alluded to. A fortnight's tour through the Caucasus, details of which have already appeared in THE LANCET,[2] has been arranged for members of the Congress, and as the itinerary of the tour allows for a stay of two days at Kislovodsk this will permit those who wish to visit Essentuki, Piatigorsk, and Jeleznovodsk, which with Kislovodsk are the most important centres of this great group of springs.

[1] Chirurgia, February, 1897.
[2] THE LANCET, April 3rd, 1897, p. 974.

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St. Petersburg and the International Medical Congress.

The town council of St. Petersburg has voted a sum of 5000 roubles (over £500) for expenses in entertaining the members of the International Medical Congress. Part of this sum will probably be spent in the publication of two guides to the city—one general and one medical.

Fatal Fire at an Asylum.

A fire broke out on the evening of March 16th (28th) in a lunatic asylum in the town of Yaroslavl. A ward containing forty female patients was completely destroyed, and three of the patients lost their lives in the flames. The remainder succeeded in escaping.

A Conference on Water supplies.

St. Petersburg might well be termed a city of conferences. A useful one was held here last week to discuss the question of water-supplies to communities. The members were chiefly hygienists, engineers, and municipal representatives, who discussed the different aspects of the main question at a series of meetings prolonged over six days. A new project for the water-supply of St. Petersburg, which is at present admittedly unsatisfactory, was the subject of prolonged debate.

The Cost of Providing for Lunatics.

The municipality of St. Petersburg has voted the sum of 1,000,000 roubles (over £100,000) to the building and maintenance of new lunatic asylums in the capital.

April 12th.

Obituary.

MARK ANTHONY FENTON, M.D. T.C.D., L.R.C.S. IREL., &c.

DR. M. A. FENTON, medical officer of health of Coventry, died at his residence at Coventry on April 6 h. He had been in indifferent health for some time past and was compelled to relinquish his work upon March 27 h. Eventually pneumonia developed, from which, although nursed and tended with every care, he was unable to rally. He was educated in Dublin, and his first appointment was that of resident medical officer to the Worcester Dispensary. After this he was appointed house surgeon to the Coventry and Warwickshire Hospital, a post he held for two years, and upon relinquishing it was elected one of the medical officers to the Coventry Dispensary, a position he continued to hold until the day of his death. The chief work of his life, however, and that for which he will ever be gratefully remembered by the citizens of Coventry, was sanitary. Appointed medical officer of health in 1874, at a time when the death-rate was 27 per 1000, Dr. Fenton never rested or spared himself in his efforts to improve the sanitary conditions of the city. How well he succeeded may be judged from the fact that at the time of his decease the death-rate had been reduced to 16 per 1000. A health committee was appointed at his request, isolation of infectious cases when they did occur was thoroughly carried out, and the building of the City Hospital was entirely due to his exertions. In all sanitary matters he was looked to as a leader in the district, and he held the post of President of the Birmingham and Midland Association of Medical Officers of Health; he was also a Fellow of the Society of Medical Officers of Health and medical officer to the City Hospital for Infectious Diseases. He contributed a paper to the *Sanitary Record* for 1880 upon Infantile Mortality, and another to *Public Health* in 1888 upon the Elementary Education Act as a Factor of Infectious Disease. Dr Fenton married in 1874, and leaves a widow and several children.

PTOLEMY SAMUEL HENRY COLMER, M.D. DURH., L.R.C.P. EDIN., L.F.P.S. GLASG., L.S.A.

DR. P. S. H. COLMER of Yeovil died suddenly on April 8th. He had been subject to epileptic attacks for the past year, although with the aid of his son, Mr. P. A. Colmer, he still continued his professional duties. The deceased received his medical education at Anderson's College, Glasgow, and took the qualifications of L.R.C.P. Edin. and L.F.P.S Glasg. in 1862. In 1882 he graduated M.D. of Durham University. Dr. Colmer had an extensive practice, and was highly respected by the inhabitants of Yeovil. He took the greatest interest in all public affairs connected with the town, having been a member of the corporation for over twenty years, and at the time of his death held the position of alderman He had been mayor of Yeovil on four occasions. He was a borough magistrate, a member of the school board, the board of guardians, and the Somerset County Council. He was an honorary medical officer of the Yeovil District Hospital and surgeon to the majority of the friendly societies in the town. The deceased, who was fifty-six years of age, leaves a widow and several children, for whom much sympathy is felt.

THOMAS CARLYLE BEATTY, M.R.C.S. ENG., L.S.A. LOND.

SEAHAM HARBOUR has sustained a severe loss by the death, at the age of eighty-three years, of Mr. Thomas Carlyle Beatty, who had been for upwards of half a century a much-respected and hard-working practitioner in that town. The deceased was the son of the late Dr. William Snow Beatty of Hull, and was educated at Glasgow University, where he was, like his immediate predecessor and life-long friend Benjamin Ward Richardson, a prizeman in every class. He began practice at Easington, in the county of Durham, but early in 1850 removed to Seaham Harbour, where he obtained the appointment of surgeon to the Marquis of Londonderry's collieries of Seaham and Seaton. He filled all the public appointments and was Admiralty surgeon to the Seaham district for more than forty years. He was a surgeon to the Seaham Harbour Infirmary and Surgeon-Lieutenant-Colonel in the 2nd Durham Artillery Volunteers, having held a commission in this celebrated regiment from the beginning of the Volunteer movement, and he was one of the first Volunteer officers to receive the decoration. At the special request and by the influence of Colonel the Marquis of Londonderry he was enabled to retain his commission long after the usual time for retirement, but a few years ago he felt obliged, owing to failing health, to send in his resignation much to the regret of all the officers of the brigade. Mr. Beatty became deaf early in his career, which probably prevented his attaining that higher eminence in his profession which his distinguished University career and his great ability might have brought within his reach. He, however, had considerable reputation as an able general practitioner. He was a generous friend to the poor, and a great part of the work of his practice was done gratuitously.

Mr. Beatty had been a widower for some years before his death. He leaves two sons, both in practice as medical men, and four daughters, three of whom are married. The funeral took place on April 6th at Seaham Cemetery, and was attended by a large number of relatives and friends.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the primary examination in April the following candidates passed in the subjects indicated:—

PART I.

Biology.—C. F. Bluett, St. Bartholomew's Hospital; S. F. Hickman and C. Hind, Royal Free Hospital; F. H. Maberly, Birmingham; M. Malcolm, Royal Free Hospital; E. Osborne, Birmingham; H. Richardson, Leeds; and C. M. Scott and M. E. Unwin, Royal Free Hospital.

Materia Medica and Pharmacy.—R. R. P. S. Bowker, Middlesex Hospital; M. E. Fendick, Royal Free Hospital; W. H. Gale and A. H. Gibbon, St. Thomas's Hospital; B. Hogan, London; G. R. Lucas, Edinburgh and St. Bartholomew's Hospital; C. C. Morgan, St. Bartholomew's Hospital; H. Munro, Guy's Hospital; F. Robinson, Royal Free Hospital; J. Welsh, Dublin; H. F. Willington, Manchester; and L. Wright, St. Thomas's Hospital.

PART II.

Anatomy.—H. J. Aldous, King's College Hospital; T. P. Allen, St. Bartholomew's Hospital; W. Asten, Birmingham; E. O. Balleine and A. St. J. Bateman, King's College Hospital; A. F. Carlyon, Middlesex Hospital; E. L. D. Dewdney, King's College Hospital; M. E. Fendick, Royal Free Hospital; C. Fisher, St. Bartholomew's Hospital; J. S. Goodall, Middlesex Hospital; J. E. Griffith, St. Bartholomew's Hospital; H. M. Hardy, Guy's Hospital; R. J. Harris, St. Thomas's Hospital; W. G. Hopkins, St. Mary's Hospital; F. A. Hort, Cambridge; D. Jeaffreson, St Bartholomew's Hospital; H. Jessop, Birmingham; J. McOlinock, King's College Hospital; C. J. Marsh, University College; E. R. Millar, University College

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Hospital; H. E. Morris, Guy's Hospital; F. Robinson, Royal Free Hospital; H. Smith, Birmingham; A. C. S. Waters, Cambridge; J. Welsh, Dublin; B. B. Westlake, Guy's Hospital; H. E. Weston, St. George's Hospital; A. H. Wilson, Birmingham; J. P. Woodhouse, Liverpool and Durham; and T. Young, St. Bartholomew's Hospital.

Physiology.—M. A. Alabone, Guy's Hospital; H. J. Aldous, King's College Hospital; T. P. Allen, St. Bartholomew's Hospital; A. St. J. Bateman, King's College Hospital; S. F. Cheesman and C. E. C. Child, Charing-cross Hospital; H. H. Cotman, Aberdeen; M. B. Dawson, Middlesex Hospital; M. E. Fendick, Royal Free Hospital; C. Fisher, St. Bartholomew's Hospital; J. S. Goodall, Middlesex Hospital; W. H. Goodchild and J. E. Griffith, St. Bartholomew's Hospital; H. M. Hardy, Guy's Hospital; R. J. Harris, St. Thomas's Hospital; W. G. Hopkins, St. Mary's Hospital; D. Jeaffreson, St. Bartholomew's Hospital; H. Jessop, Birmingham; J. McClintock, King's College Hospital; E. R. Millar, University College Hospital; H. E. Morris, Guy's Hospital; R. C. Morris, Birmingham; D. V. Muller, Charing-cross Hospital; W. A. Pitt, Edinburgh; C. V. Smith, University College Hospital; H. Smith, Birmingham; A. C. S. Waters, Cambridge; J. Welsh, Dublin; B. B. Westlake, Guy's Hospital; H. E. Weston, St. George's Hospital; A. H. Wilson, Birmingham; W. R. Wilson, Dublin and Belfast; and T. Young, St. Bartholomew's Hospital.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the First Examination for the degree of Bachelor in Medicine at the College of Medicine, Newcastle-upon-Tyne, in April, the following candidates satisfied the examiners in the subjects indicated:—

OLD REGULATIONS.

Chemistry with Chemical Physics.—Robert Tilbury Brown, M.R.C.S., L.R.C.P., and Gerald Burton Brown, L.S.A., Guy's Hospital; Gilbert Smith, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; John Henry Tripe, London Hospital; Thomas John Augustus Tulk-Hart, M.R.C.S., L.R.C.P., Guy's Hospital; and Percy Edward Turner, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital.

NEW REGULATIONS.

Elementary Anatomy and Biology, Chemistry, and Physics.—Second-class Honours: James Willie Heslop, College of Medicine, Newcastle-upon-Tyne. *Pass List:* Robert Story Brown and George Burrows Brown, College of Medicine, Newcastle-upon-Tyne; Howard Payne Fox, Cooke's School of Anatomy; and Charles William Turner and Frederick Percy Wigfield, College of Medicine, Newcastle-upon-Tyne.

Chemistry and Physics.—Annie Tombleson Brunyate, London School of Medicine for Women; Bernard Edward Granville Bailey, St. Bartholomew's Hospital; Frederick Clarkson and Samuel Thomas Cochrane, College of Medicine, Newcastle-upon-Tyne; William Claughton Douglass, St. Bartholomew's Hospital; Albert Ernest Hodge, College of Medicine, Newcastle-upon-Tyne; Evan Llewellyn Jenkins, Cooke's School of Anatomy; William Pattullo, Edinburgh School of Medicine; Stanley Raw, College of Medicine, Newcastle-upon-Tyne; Leonard Satchwell Smith, Mason College, Birmingham; and William Waters Stainthorpe, Ralph Thomas Vaux, and Frederick George Wilson, College of Medicine, Newcastle-upon-Tyne.

Anatomy and Biology.—Alice Maud Dodd, London School of Medicine for Women; James Farrage, College of Medicine, Newcastle-upon-Tyne; Ida Emilee Fox and Cbella Mary Hankin, London School of Medicine for Women; Frederick Percy Joscelyne, Yorkshire College, Leeds; Guy Hannah Kirby, Mason College, Birmingham; Florence Dyer Durell Ledgard, London School of Medicine for Women: Michael Joseph Quirke, Mason College, Birmingham; and Hugh Widdas, College of Medicine, Newcastle upon-Tyne.

Elementary Anatomy, Chemistry, and Physics.—Mary Jane D'Vaz, London School of Medicine for Women, and David Henry Jeavons Kirton, Mason College, Birmingham.

Elementary Anatomy.—Otto Charles Henry Leopold Moll, Guy's Hospital, and Theophilus William Morcom, London Hospital.

PROPOSED KURSAAL FOR CHELTENHAM.—At a meeting of the Cheltenham Town Council held on April 5th, Mr. Ward-Humphreys, M.R.C.S. Eng., L.R.C.P. Lond., introduced a scheme for the demolition, or at least the removal, of the glass and brick structure of the present Winter Garden, and the erection of a kursaal and municipal buildings on the site at a cost of £48,000. After a lengthy discussion the plans were passed.

LITERARY INTELLIGENCE.—Messrs. Rivington, Percival, and Co. announce for early publication a small volume entitled "Some Aspects of Infantile Syphilis," being the Hunterian lectures delivered at the Royal College of Surgeons of England in 1896, by J. A. Coutts, M.B. Cantab., M.R.C.P. Lond., physician to the East London Hospital for Children.—The first number of a new Portuguese medical journal, entitled *Archivos de Medicina*, has reached us. It is edited by Dr. Camera Pestana, of Lisbon, and is to appear on the 25th of every month. The issue before us contains original articles on the Diagnosis of Diphtheria and on Malarial Psychoses, and some reviews; also a table of the results of anti-diphtheritic serum treatment during January from the Lisbon Bacteriological Institute, there being only two deaths in nineteen cases.—Mr. Grant Richards announces the publication of a series of portraits by Mr. Will Rothenstein of literary and artistic persons.

MERTHYR TYDVIL GENERAL HOSPITAL.—Lord Wimborne has promised a donation of £1000 towards the Diamond Jubilee Ward of this hospital.

MR. ODED LOWSLEY, public vaccinator of the Reading district, has just received from the Local Government Board the sum of £101 2*s.*, as an award for efficient vaccination.

TAUNTON NURSING ASSOCIATION.—At the annual meeting of the Taunton Nursing Association which was recently held it was stated that 941 cases had been treated during 1896, necessitating nearly 16,000 visits. The maternity branch had dealt with 258 cases.

ST. JOHN AMBULANCE SOCIETY.—Mr. Hermann Rogers-Tillstone, M.D., C.M. Aberd., of Clevedon, Somerset, has been elected a life member of the St. John Ambulance Society in recognition of his services in delivering gratuitous courses of lectures on "First Aid" and "Nursing."

CHARING-CROSS HOSPITAL.—A meeting of the Special Appeal Committee of Charing-cross Hospital was held in the board-room on April 11th. Donations amounting to £23,450 were announced, including £1000 to endow a bed from a patient of Dr. Travers, of 2, Phillimore-gardens, Kensington.

BRISTOL MEDICAL MISSIONARY SOCIETY.—The annual meeting of this society was held on March 23rd. The report showed that 7252 patients had been treated at the mission, the attendances numbering 22,793, and that 1506 patients were visited at their homes. The honorary secretary stated that additional funds were needed, for the ordinary contributions were from £130 to £150 below the ordinary expenditure.

HOSPITAL SATURDAY AT BRISTOL.—At a meeting of the Bristol Joint Hospitals Committee it was decided that in anticipation of the numerous demands to be made upon the purses of the public during the year of Her Majesty's Diamond Jubilee, the committee will suspend the street collections for the current year, but they hope to receive contributions from organisations and individuals who may be disposed to assist the funds of the local medical charities. The ladies and other helpers of last year will be requested to continue their good offices on future occasions.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—The committee of the Hospital for Consumption and Diseases of the Chest, Brompton, have issued an appeal for a sum of £20,000 to be employed in providing a country branch in connexion with the hospital. It is hoped that a suitable site may be given free of cost by some benevolent person, and the committee's proposal is to erect separate cottage buildings, each of which will accommodate ten or twelve patients, with probably a separate bedroom for each, and also with apartments for the attendants. An endeavour will be made to obtain Her Majesty's permission to call the new branch "The Victoria (Country) Branch of the Brompton Hospital for Consumption." Contributions may be sent either to the treasurer, Mr. W. S. Deacon, 20, Birchin-lane, or to the secretary, Mr. W. H. Theobald, at the Hospital, Fulham-road, S.W.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following is the prize list for the winter session 1896-97:—Descriptive Anatomy—Junior: J. F. Peart, first; W. R. Meredith, second. Senior (two prizes): J. S. P. Stewart and Miss F. A. Dreaper, first; J. S. P. Stewart and Miss F. A. Dreaper, second. Practical Anatomy—First year: A. S. Ellenbogen, first; J. F. Peart, second. Second year: J. S. P. Stewart, first; Miss F. A. Dreaper, second. Third year: G. W. Little, first; J. M. M. Crawford, second. Practice of Medicine: D. A. Fitzgerald, first; S. R. Godkin, second. Theoretical Surgery: A. S. Green, first; F. J. Palmer, second. Midwifery: F. J. Palmer, first; D. Hadden, second. Physiology: J. S. P. Stewart, first; Mrs. H. L. Hennessy, second. Theoretical Chemistry: J. P. Byrne, first; J. P. O'Donnell, second. Pathology: W. H. May, first; P. H. Falkner, second. Physics: E. Glenny, first; S. Gordon, second. The summer session commenced on Thursday, April 1st, for the three months' course of operative surgery, practical chemistry, histology, pharmacy, public health and forensic medicine, materia medica, biology, and uncertified dissections.

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FOOTBALL CASUALTY.—On Saturday last, in a match between Batley and Widnes, one of the visiting team of players had his right leg "fractured, or dislocated near the ankle," and was carried off the field.

PRESENTATIONS TO MEDICAL MEN.—The following gentlemen have been the recipients of presents for honorary instruction given to their respective ambulance classes, namely: Mr. Francis Ward, M.B., C.M. Edin., senior house surgeon at the Ipswich and East Suffolk Hospital, from the Orwell Works ambulance class, a handsome silver "Tantalus," bearing a suitable inscription; Mr. James Adamson, M.D. Glasg., of Hetton-le-Hole, Durham, from the ambulance classes at Hetton-le-Hole, an electro-plated tureen and vegetable dish; and Mr. John J. Adams, M.D. R.U.I., of Ashville, Antrim, from the St. John Ambulance Class, Antrim, a silver cigar-case, cigarette-case, and a match-box.—Mr. C. St. John Wright, M.B., C.M. Aberd., M.R.C.S. Eng., on his resignation of the office of medical superintendent of the infirmary and medical officer of the workhouse of St. Mary's, Islington, after fifteen years' service, received on March 25th in the board-room an illuminated testimonial on vellum, framed, from the guardians, justices of the peace, and in-door and out-door officers, as a mark of the respect in which he was held by all with whom he was officially associated. The address states that a silver candelabrum was at the same time presented to Dr. Wright. This is a magnificent piece of plate of solid silver with four branches, and bears an inscription round the base stating the facts and dates of Dr. Wright's long connexion with the infirmary and the workhouse.—Mr. John Sutherland, M.B., C.M. Edin., of Netherfield, Nottingham, has received the gift of a travelling bag from the members of the Colwick Branch of the St. John Ambulance Association as a token of appreciation of his First Aid instructions.—In the course of a musical entertainment at the Recreation Hall of the Melton Asylum, Suffolk, on the 27th ult., which was well attended by the patients, staff, and several visitors, Mr. W. Eager, L.R.C.P. Lond., M.R.C.S. Eng., the resident physician and superintendent of the asylum, who is leaving after many years' service, was presented with a solid silver salver and a silver tea-service. The salver was the gift of the present staff, and the tea-service of the past officers, of the asylum.—Mr. George Black, M.B., B.S. Lond. of Hurstpierpoint, Hassocks, Sussex, has received the present of a handsome walking stick as an acknowledgment of his gratuitous lectures to the Hurst Ambulance Classes.—At the recent grand *finale* in connexion with the Fraserburgh Mutual Improvement Association, held in Dalrymple, Mr. Archibald Dingwall, M.B., C.M. Aberd., past president of the association, was presented with an illuminated address on the occasion of his leaving Fraserburgh. An honorary life-membership of the society was at the same time conferred upon him.—Mr. T. Carson Fisher, M.D. Dub., and Mr. William G. Armstrong, M.B. Syd., D.P.H. Camb., medical officers of the Berrima District Hospital, New South Wales, have each been presented with an honorarium of 25 guineas.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Midwives Registration Bill.

AN attempt was made after midnight on Thursday, April 8th, to obtain a second reading for the Midwives Registration Bill, but it failed, and the order was put down again for Monday, May 3rd.

Irish Poor Relief Bill.

The Bill to amend the law in Ireland with regard to the relief of the destitute poor was formally introduced on Thursday, April 8th, by Mr. Gerald Balfour, Chief Secretary to the Lord-Lieutenant.

Removal of Bodies.

In view of the Committee stage of the Public Health (Scotland) Bill an amendment has been drawn up by Mr. Caldwell, proposing that it shall not be lawful to transport the body of any person who has died from an infectious disease by railway or other public conveyance, not being a conveyance reserved for such purpose, unless and until the medical officer has certified that every precaution necessary for the public safety has been adopted to his satisfaction.

HOUSE OF COMMONS.

WEDNESDAY, APRIL 7TH.

Marking of Foreign Meat.

This sitting of the House was occupied with a second reading debate upon a measure for the marking of foreign meat and cheese, and for the registration of persons who deal in these commodities. The Bill differs from the measure of last session in several respects, but notably in this, that it does not propose that small sections of meat and cheese should be marked, but only carcasses, or sides, or hams, or the rinds of cheese. In the course of the debate an hon. Member put forward the idea that frozen meat was a cause of cancer, but Dr. Farquharson assured him and the House that any such apprehension was entirely out of the question. The Bill was read a second time and referred to a Select Committee.

THURSDAY, APRIL 8TH.

The Army Medical Service.

Captain Norton asked the Under Secretary of State for War whether the Army Medical Service was at the present time sufficient, not only for mobilisation, but for medical military needs at home and abroad, and, if not, whether any steps were being taken to increase the staff.—Mr. Brodrick replied that the establishment of officers of the medical staff was about forty under strength. Measures to make good this deficiency were now under consideration.

Mr. Bartley asked whether it was not the case that the officers on the retired list were as numerous as those on the active list, and whether steps would be taken to remedy this state of things.—Mr. Brodrick said that the officers on the retired list were employed on the home service, and there were complaints in consequence that the officers on the active list were debarred from employment on the home stations.

The Troops in India.

Captain Pirie asked the Secretary of State for India what steps, if any, had been taken to carry out the urgent recommendation of the Sanitary Commissioner with the Government in India, in his report for 1894, which was also quoted with approval in the Report on Sanitary Measures in India in 1894-5, that much might be done to diminish the extent and severity of contagious diseases among the British troops in India by providing increased facilities for bathing with comfort and convenience in private and public baths, and by inculcating habits of personal cleanliness among the troops.—Lord George Hamilton replied that he had received no special report as to the action taken on representations made by the Sanitary Commission in 1894, but he understood that in the opinion of the military authorities ample provision was made for supplying British soldiers in India with the means of personal cleanliness. The importance of the matter was so well understood in India that it would hardly be necessary to call for any special report.

Oysters in Relation to Disease.

Sir William Priestley asked the President of the Local Government Board whether, in view of the report published last year concerning oyster culture in relation to disease and the diminished consumption of oysters which had resulted therefrom, he proposed to have oyster beds regularly inspected, or to adopt such other measures as would give the public a reasonable assurance that oysters in the market were derived from healthy sources and not likely to be the cause of disease.—Mr. Chaplin replied that the subject of this question was one of great importance. It presented, however, many difficulties. The inspection of the oyster beds in this country would not in itself secure the result suggested, and the question had to be considered in connexion with oysters imported from abroad as well as those obtained from English beds. Any scheme to be effective would require legislation, but the subject was receiving his careful consideration.—Sir William Priestley asked whether in localities where oyster beds and pits had been certified to be contaminated by sewage any steps would be taken to improve their condition.—Mr. Chaplin replied that without notice of the question he could not say what steps were or were not to be taken by local authorities.

Verminous Persons Bill.

At this sitting the Bill conferring powers as to the cleansing of verminous persons was read a second time.

MONDAY, APRIL 12TH.

Relief for Army Medical Officers.

Dr. Farquharson asked the Under Secretary of State for War whether, seeing how short-handed the Army Medical Department was at home, and the difficulty of getting leave, he would arrange some system of relief, so as to enable medical officers to obtain relief according to regulations.—Mr. Powell Williams, who replied for the Under Secretary, said he was happy to be able to inform the hon. Member that arrangements were in progress which it was hoped would afford greater facilities to military medical officers for obtaining leave.

BOOKS, ETC., RECEIVED.

APPLETON, D., AND COMPANY, New York.
The Journal of Experimental Medicine. Edited by W. H. Welch M.D., Baltimore. Vol. II., No. 2. March, 1897.

ASH PARTNERS, 36, St. Martin's-lane, London.
Zalma. By T. Mullet Ellis. Illustrated. 1897.

CHAPMAN AND HALL, London.
English Sonnets. Edited, with Introduction and Notes, by A. T Quiller-Couch. 1897.

CHURCHILL, J. & A., Great Marlborough-street, London.
St. Thomas's Hospital Reports. New Series. Vol. XXIV. 1897. Price 8s. 6d.

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BAILLIÈRE ET FILS, Paris.
Formulaire des Médicaments Nouveaux pour 1897. Par H. Bocquillon-Limousin. 1897.

BALE, JOHN, AND SONS, Great Titchfield-street, London, W.
A Manual of Medical Exercises. By Dr. Percy Lewis. 1897. Price 2s.

CLOWES, WM., AND SONS, Charing-cross, London.
Sanitation and Health. By Brigade-General R. C. Hart, V.C. Revised by Brigade-Surgeon-Lieutenant-Colonel T. H. Hendley, C.I.E., M.R.C.S., L.R.C.P. Third Edition. 1897. Price 1s. 6d.

HIRSCHWALD, AUGUST, Berlin.
Specielle Diätetik und Hygiene des Lungen- und Kehlkopf-Schwindsüchtigen. Von Dr. F. Blumenfeld. 1897.
Casuistische Beiträge zur Forensischen Psychiatrie. Von Dr. E. Siemerling. 1897.
Encyklopädie der Therapie. Von O. Liebreich. Zweiter Band. 1897.

JARROLD AND SONS, Warwick-lane, London.
The Idiot: His Place in Creation and his Claims on Society. By Sir Fred. Bateman, M.D., LL.D. Second Edition. 1897.

KIMPTON, HENRY, High Holborn, London, W.C.
Practical Diagnosis: the Use of Symptoms in the Diagnosis of Disease. By H. A. Hare, M.D., B.Sc. Illustrated. 1897. Price 21s. net.

LIPPINCOTT, J. B., COMPANY, Henrietta-street, Covent-garden, London.
Genito-Urinary Surgery and Venereal Diseases. By J. W. White, M.D., and E. Martin, M.D. Illustrated. 1897. Price 21s. net.

LONGMANS, GREEN, AND CO., Paternoster-row, London.
A Guide to the Clinical Examination of the Blood for Diagnostic Purposes. By Richard C. Cabot, M.D. Illustrated. 1897. Price 16s.

MACMILLAN AND CO., London.
A System of Medicine by many Writers. Edited by T. C. Allbutt, M.D., LL.D., F.R.C.P. Vol. II. 1897. Price 25s. net.

METHUEN AND CO., Essex-street, Strand, London.
Life in West London. By A. Sherwell. Second Edition. 1897. Price 2s. 6d.

MORTON & BURT, Edgware-road, London.
Descriptive Catalogue of the Pathological Museum of St. Mary's Hospital: Additions, 1891-1897. By J. Jackson Clarke, M.B. Lond., F.R.C.S. March 25th, 1897.

PRIBER, M., Berlin.
Zeitschrift für Criminal-Anthropologie. Von W. Wenge. Band I. Heft I. 1897.

REEVES, WM., Fleet-street, London, E.C.
Outspoken Essays on Social Subjects. By E. Belfort Bax. 1897.

SALLMANN, CARL, Basel und Leipzig.
Festschrift Eduard Hagenbach-Burckhardt; zu seinem 25-jahrigen Professoren-Jubiläum, von seinen Schülern. 1897.

SCIENTIFIC PRESS, Southampton-street, Strand, London, W.C.
The Burdett Series. No. 2. The Matron's Course: an Introduction to Hospital and Private Nursing. By Miss S. E. Orme. 1897. Price 1s.

SMITH, ELDER, AND CO., Waterloo-place, London.
Dictionary of National Biography. Edited by Sidney Lee. Vol. L. Russen—Scobell. 1897.
Collected Contributions on Digestion and Diet, with an Appendix on the Opium Habit in India. By Sir William Roberts, M.D., F.R.S. Vol. II. 1897. Price 5s.
Transactions of the Pathological Society of London. Vol. XLVII. 1896.

THE NEW SYDENHAM SOCIETY, London.
Lectures on Pharmacology. By Dr. C. Binz. Translated from the second German edition by Peter W. Latham, M.A., M.D. Vol. II. 1897.

THE SAVOY PRESS, 115, Strand, London.
Musa Medica: a Sheaf of Song and Verse. By J. Johnston, M.D. Edin. 1897. Price 2s. 6d.

VOGEL, F. C. W., Leipzig.
Diagnostik der Inneren Krankheiten. Von Dr. C. Vierordt. 5. Auflage. 1897.

WRIGHT, J., AND CO., Bristol.
The Swedish System of Physical Education: Its Medical and General Aspects. By Theodora Johnson. Illustrated. 1897. Price 3s. 6d. net.

Who's Who, 1897; edited by Douglas Sladen (Adam and Charles Black, Soho-square, London, W.C.)—Transactions of the Obstetrical Society of London, vol. 38, for the year 1896 (published by the Society, Hanover-square, London, 1897; price 10s.)—Transactions of the 18th Annual Meeting of the American Laryngological Association, May, 1896 (D. Appleton and Company, New York, 1897).—The Plough Court Pharmacy, Pharmaceutical Journal; reprint (Pharmaceutical Journal Office, Serle-street, London, W.C., 1897; price 1s.)—Contingent Reversions: Approximate Values; by James P. Bourne (Lee and Nightingale, North John-street, Liverpool; price 3s.)—Drunkenness: Its Treatment on entirely new lines; by "Roentgen Ray," with preface by Dr. Sims Woodhead (Horace Marshall and Son, Temple-avenue, London, E.C., 1897; price 6d.)—Gillingham's Surgical Mechanist; Prospect House, Chard, Somerset; illustrated; 1897.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ABBOTT, F. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Tooting Workhouse of the Wandsworth and Clapham Union.

ANDREW, J. GRANT, M.B., C.M. Glasg., has been appointed Assistant Surgeon to the Victoria Infirmary, Glasgow.

BEHRENDT, M. R. J., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer of Health by the Brumby and Frodingham Urban District Council.

BOX, CHARLES RICHARD, B.Sc., M.D., B.S. Lond., M.R.C.P. Lond., F.R.C.S. Eng., has been appointed Resident Assistant Physician at St. Thomas's Hospital, vice Seymour G. Toller.

BRISCOE, W. T., M.D. Dub., M.Ch., has been re-appointed Medical Officer of Health by the Chippenham Town Council.

BUCH, JOSEPH, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Hunslet Rural District Council.

BURGESS, E. A., M.R.C.S., has been appointed Medical Officer for the Thorncombe Sanitary District of the Beaminster Union.

CRADDOCK, S., M.R.C.S., has been appointed Medical Officer to the Cottage Home Schools of the Bath Union.

DIXON, A. FRANCIS, M.B., B.Ch., B.A.O. Dub., has been appointed Professor of Anatomy at the University College of South Wales and Monmouthshire.

FOSTER, H. G., L.R.C.S. Edin., has been re-appointed Medical Officer of Health by the Swaffham Rural District Council.

FRANCIS, G. P., L.R.C.S. Edin., L.A.H. Dubl., has been re-appointed Medical Officer by the Brecon Rural District Council.

HAMERTON, G. A., F.R.C.S. Eng., has been appointed Medical Officer to the Inland Revenue Department, Somerset House, London.

HARVEY, GEO., L.R.C.P. Edin., L.R.C.S. Irel., has been re-appointed Medical Officer of Health by the Matlock Bath Urban District Council.

HOME, GEORGE, M.D., has been appointed a Clinical Assistant to Out-patients at the Chelsea Hospital for Women.

JENKINS, T. W., M.D., C.M. Glasg., has been appointed Assistant Surgeon to the Victoria Infirmary, Glasgow.

JONES, M. R., M.D. Glasg., has been re-appointed Medical Officer for the Devynnock Sanitary District of the Brecon Union.

JONES, RICHARD, M.D. Edin., D.P.H. Camb., has been re-appointed Consulting Medical Officer of Health by the Merioneth County Council, and Medical Officer of Health by the Ffestiniog Urban District Council.

KEIR, W. J., F.R.C.S., L.R.C.P. Edin., has been re-appointed Medical Officer by the District Council of Melksham.

KINGDON, J. R., B.A. Camb., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Weston-super-Mare Hospital and Dispensary, vice Gurney, resigned.

LOCKWOOD, JOSEPH, M.R.C.S., has been appointed Medical Officer of Health by the Whitley Upper Urban District Council.

LOW, CHARLES W., M.B., D.P.H., F.C.S., has been appointed Medical Officer of Health by the Stowmarket Urban District Council.

MACLEOD MUNRO, D. G., M.B., C.M. Edin., has been appointed Resident Physician to the Victoria Hospital for Consumption and Diseases of the Chest, Craigleith, Edinburgh.

MORCOM, A., L.R.C.S., L.M. Edin., has been re-appointed Medical Officer of Health by the Dunstable Town Council.

MORGAN, OWEN, L.R.C.P., L.R.C.S. Edin., L.F.P.S., L.M. Glasg., has been appointed Medical Officer for the Central District of the Newport Union, vice T. Limbery, deceased.

MURPHY, WM., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Holbeach Urban District Council.

NETTLE, WILLIAM, M.R.C.S., has been re-appointed Medical Officer of Health by the Liskeard Town Council.

NEWMAN, GEORGE, M.D. Edin., C.M., D.P.H. Camb., has been appointed Medical Officer of Health for the Parishes of Charterhouse, Furnival's Inn, and Staple Inn, London.

PHILLIPS, S. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the North Peckham Sanitary District of the Camberwell Parish.

PINEO, E. G. D., M.R.C.S., L.R.C.P., has been appointed Provident Medical Officer to the Weston-super-Mare Hospital and Dispensary, vice A. L. Webb, resigned.

REES, D. V., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Brecon Urban District Council.

SMITH, W. T., M.R.C.S., has been re-appointed Medical Officer of Health by the Lepton Urban District Council.

SOUTHEY, A. J., M.R.C.S., has been re-appointed Medical Officer of Health by the Eton Urban District Council.

STEPHENS, JAS W., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Cardigan Town Council.

SYMES, W. S., L.R.C.P., L.R.C.S. Irel., has been re-appointed Medical Officer of Health by the Newbold Urban District Council.

TAYLOR, C. H., M.B. Lond., M.R.C.S., has been appointed Honorary Surgeon to the Derbyshire Royal Infirmary, vice J. A. Sharp, resigned.

VERNON, WILLIAM, M.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer for the Bitton District of the Warmley Union.

WADE, REGINALD, M.R.C.S., has been appointed Medical Officer of Health by the Highbridge Urban District Council.

WATERS, A. J. G., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the March Urban District Council.

WATTS, JAS. A. W., M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer to the Post Office at Hyde, vice G. W. Sidebotham, resigned.

WIGGINS, CHARLES, L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Bexhill District Council.

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WILLS, C., M.R.C.S., has been re-appointed Medical Officer of Health for the Borough of Newark.

WRANGHAM, WILLIAM, M.B. Lond., M.R.C.S., L.R.C.P., has been appointed an Assistant House Surgeon to the Leicester Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN.—House Surgeon, unmarried. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance.

BRIGHTON, HOVE, AND PRESTON DISPENSARY, Queen's-road, Brighton.—House Surgeon for the Northern Branch, unmarried. Salary £140 per annum, with furnished apartments, coals, gas, and attendance.

BURY DISPENSARY HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with board, residence, and attendance.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-street, S.W.—Surgeon.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident House Surgeon for two years. Salary £100 per year, with board, apartments, and laundress.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield.—House Surgeon, unmarried. Salary £90 per annum, with board, lodging, and washing.

COMBINED DISTRICT OF BATTLE, CUCKFIELD, EASTBOURNE, &c.—Medical Officer of Health, for three years. Salary £600 per annum, to include all travelling and other expenses. Applications to the Secretary, Haywards Heath.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing provided in the hospital.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Knowle, Fareham.

HOSPITAL FOR SICK CHILDREN, Great Ormond street, Bloomsbury, London.—Assistant Surgeon. Also House Physician for six months. Salary £20, with board and residence in the hospital. Also House Surgeon for six months. Salary £20, with board and residence in the hospital.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, lodging, and washing.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer, for six months. A salary at the rate of £50 per annum for the senior post.

PARISH OF ROUSAY AND EGILSHAY, Orkney.—Resident Medical Officer. Salary £51 sterling per annum. Applications to the Clerk of the Parish Council, Rousay, Orkney.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board and lodging. Stimulants and washing not provided.

SEAMEN'S HOSPITAL SOCIETY (Dreadnought), Greenwich, S.E.—House Physician. Salary £75 per annum, with board and residence.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House Surgeon, non-resident. Salary £200 per annum.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Assistant House Surgeon for six months. Board, washing, and lodging in the institution provided.

WINDSOR ROYAL INFIRMARY.—House Surgeon, unmarried. Salary to commence at £100 per annum, with residence, board, and attendance.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for six months. Salary at the rate of £70 per annum, with rooms, board, and washing.

WONFORD HOUSE HOSPITAL FOR THE INSANE, near Exeter.—Assistant Medical Officer. Salary £150 per annum, with furnished apartments, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

DEVEREUX.—On April 11th, at North House, Tewkesbury, the wife of William C. Devereux, M.A., M.B., of a son.

GARDENER.—On April 10th, at Darley House, Sydenham, the wife of William F. Gardener, M.R.C.S., of a son.

MARRIAGE.

HOME—RICHARDSON.—On April 8th, at Holy Trinity, Upper Chelsea, by the Rev. A. L. Lilley, William Edward Home, Surgeon Royal Navy, to Ida Mary Geraldine, second daughter of the late J. Smith Richardson, Buncrana, co. Donegal, and of Mrs. Richardson, 41, Holbein House, Chelsea.

DEATHS.

WOODCOCK.—On April 9th, at Old Trafford, Jessie, eldest beloved daughter of Sam. Woodcock, M.D., aged 24 years.

IN MEMORIAM.

TOWNSEND.—On Sunday morning, April 19th, 1896, at 68, Queen's-gate, London, Mary Alice, only daughter of the late Thomas Ainsworth, of The Flosh, Cumberland, and for nineteen years the beloved wife of Thomas Sutton Townsend, of Clifton Manor, Warwickshire.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 14th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April 8	29·99	N.E.	43	41	85	50	41	...	Cloudy
,, 9	30·06	S.W.	46	44	82	56	41	0·06	Cloudy
,, 10	30·07	N.	47	45	85	55	45	...	Cloudy
,, 11	30·25	S.E.	48	42	100	55	37	...	Cloudy
,, 12	29·76	S.W.	49	45	71	53	45	...	Overcast
,, 13	29·71	S.E.	51	48	86	61	47	0·04	Overcast
,, 14	29·57	S.W.	51	50	97	56	49	...	Raining

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (21st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (22nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (24th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (21st).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Mr. F. Enoch: Exhibition of Microscopical Entomological Specimens.

THURSDAY (22nd).—NEUROLOGICAL SOCIETY OF LONDON (Medical Society's Rooms, 11, Chandos-street, W.).—8.30 P.M. Clinical Meeting. Dr. Ferrier: A Remarkable Form of Nervous Disease occurring in Several Members of one Family.—Dr. Donkin: (1) A Man with Paralysis and Atrophy of one Leg; (2) A Boy with Paresis and Wasting of some Muscles of the Lower Extremities; (3) A Girl with Paresis and Paroxysmal Rigidity of the Lower Extremities.—Dr. Gossage: Progressive Muscular Atrophy commencing at the age of ten and a half years.—Dr. Lunn, Dr. Beevor, and Mr. Ballance: Cerebellar Tumour successfully Removed.—Dr. J. Taylor: Syringomyelia with Bulbar Symptoms.—Dr. Harris: Syringomyelia with probable Hæmorrhage into the Cavity.

FRIDAY (23rd).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Clinical Evening. The following cases will be shown:—Mr. C. J. Symonds: (1) A Case of Relapsing Myositis and Osteitis; (2) Subclavian Bruit in a Man aged twenty-five years; (3) A Boy from whose Jaw a Myeloid Sarcoma was Removed fifteen months ago without sacrifice of Bone.—Mr. F. Eve: (1) Congenital Dislocation of the Shoulder; (2) Arrest of Growth in Humeri.—Mr. H. Marsh: A Case of Hydronephrosis with Unusual Characters.—Dr. H. R. Smith: A Case of Amyotrophy of the Peroneal Type illustrating family predisposition to the affection.—Dr. J. K. Fowler: A Case of Myositis. Patients in attendance at 8 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

THURSDAY (22nd).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. W. C. Tyndale: House Drainage.

SATURDAY (24th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—Mr. T. Walker (conducted by): Inspection and Demonstration at Beddington Sewage Farm, Croydon.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

VERSION IN PREMATURE DELIVERY.

To the Editors of THE LANCET.

SIRS,—Will you kindly enlighten me as to when the above-named operation is deemed absolutely necessary, if it will not occupy too much of your time or space to do so, as the statements contained in text-books on the subject seem confusing? For instance, the operation of version (bipolar or internal) is described as if only applicable at or near term, while malpositions of the fœtus and accidental or unavoidable hæmorrhage are admittedly of frequent occurrence before term. One writer dismisses the subject of abortion during the fifth or sixth month with a few lines; another in a chapter on "Turning" says, "Of course, it is not necessary to turn a six months child"; while in a chapter on accidental hæmorrhage and when writing of its occurrence before term he says, "The child will be small and *unless lying transversely* its head or breach will come down into the cervix and dilate it," &c.; and further on, when speaking of the administration of ergot, "Ascertain first the position of the child, and *if transverse* correct it by abdominal palpation." In one sentence it is stated that "the uterus should not reach higher than half way between the ensiform cartilage and the umbilicus *after* the waters have escaped, and the head or breech presenting" (otherwise the position of the child is to be corrected); in another, "In short, in accidental hæmorrhage occurring before the uterus reaches higher than half way between the ensiform cartilage and the umbilicus, see that the canal is not contracted and that the child's long axis corresponds to that of the uterus. These conditions being present, *rupture* the membranes, put on a firm binder, and give ergot." I have emphasised the points which appear most confusing to myself.

I am, Sirs, yours truly,
April 5th, 1897. PERPLEXED.

*** Our correspondent's difficulty appears to us to arise from his endeavouring to establish any hard-and-fast rule as to when version should be performed. Each case must be considered on its own merits. Thus in placenta prævia the mother's safety is the chief consideration, and very possibly version may be the best means of dealing with a particular case. But it is not always necessary even in placenta prævia. The same applies to accidental hæmorrhage. Again, when premature labour is induced on account of contracted pelvis version is to be avoided if there is any reasonable chance of the child being delivered either spontaneously or with the forceps. But it may have to be resorted to. In cases of miscarriage at the fifth or sixth month in a normal pelvis the fœtus will probably be delivered whatever its position if there are good pains without any assistance; but if there is delay and the os is sufficiently dilated there can be no objection to seizing a foot and bringing it down. We believe if "Perplexed" will consider the circumstances of each case, instead of trying to have a stereotyped rule, he will have little difficulty in deciding as to when to perform version.—ED. L.

SMALL-POX AND VACCINATION.

To the Editors of THE LANCET.

SIRS,—With regard to the history of vaccination I have never seen any allusion to the remarkable story told by Captain W. Butler (now General Sir W. Butler, K.C.B., F.R.G.S.), in the fourth edition of his book, "The Great Lone Land," 1873 (Sampson Low, Marston, and Co.). I will take the liberty of making extracts from General Sir William Butler's book, not only to further glorify Jenner for his discovery, but also with the hope that anti-vaccinationists, by the force of sane reasoning, some day may be driven to see the effect of small-pox on a nation unprotected by vaccination and the value of this great man's work.

"Small-pox, in its most aggravated type, had passed from tribe to tribe"—speaking of the British American (Canadian) Indians of Saskatchewan on pages 20-2-3—"leaving in its track depopulated wigwams and vacant council lodges; thousands (and there are not many thousands all told) had perished on the great sandy plains that lie between the Saskatchewan and the Missouri. ..... They knew nothing of this terrible disease; it had come from the white man and the trader. ..... For eighty years these vast regions had known at intervals the deadly presence of this disease, and through that lapse of time its history had been ever the same. ..... The camp moved away, but the dread disease clung to it—dogged it with a perseverance more deadly than hostile tribe or prowling war party; and far over the plains the track was marked with the unburied bodies and bleaching bones of the wild warriors of the West. The summer which has just passed had witnessed one of the deadliest attacks of this disease."

"Fort Pitt"—(pages 250-1) one of the Hudson Bay Company forts, about 1000 miles from Lake Superior towards the Rocky Mountains—"was free from small-pox, but it had gone through a fearful ordeal; more than 100 Crees had perished close around its stockades. ..... From a spot many marches to the south the Indians had come to the fort in midsummer, leaving behind them a long track of dead and dying men over the waste of distance. 'Give us help,' they cried, 'give us help, our medicine-men can do nothing against this plague; from the white man we got it, and it is only the white man who can take it away from us.' But there was no help to be given, and day by day the wretched band grew less. Then came another idea into the red man's brain: 'If we can only give this disease to the white man and the trader in the fort,' thought they, 'we will cease to suffer from it ourselves.' So they came into the houses dying and disfigured as they were, horrible beyond description to look at, and eat down in the entrances of the wooden houses, and stretched themselves on the floors, and spat upon the door-handles. It was no use, the fell disease held them in a grasp from which there was no escape, and just six weeks before my arrival the living remnant fled away in despair."

"I now enter upon that portion of your Excellency's"—the Hon. A. G. Archibald, Lieutenant-Governor of Manitoba (pages 366 and 368)—"instructions which has reference to the epidemic of small-pox in the Saskatchewan. ..... In the immediate neighbourhood of Fort Pitt two camps of Crees established themselves, at first in the hope of obtaining medical assistance, and failing in that—for the officer in charge soon exhausted his slender store—they appear to have endeavoured to convey the infection into the fort." This circumstance has been already alluded to. " ..... It is singular that only three persons within the fort should have been infected with the disease, and I can only attribute this to the fact that Mr. John Sinclair had taken the precaution early in the summer (1870) to vaccinate all the persons residing there, having obtained the vaccine matter from a Salteaux Indian who had been vaccinated at the mission of Prince Albert, presided over by the Rev. Mr. Nesbit, some time during the spring."

I am, Sirs, yours faithfully,
Canterbury, April 4th, 1897. PUGIN THORNTON.

Distress.—We sympathise with our correspondent, but we cannot answer questions which should obviously be addressed to her medical man. The condition is an obstinate one, from which immediate relief must not be expected.

O. C.—We never prescribe or recommend individual practitioners. Our correspondent must consult his own medical man.

Recovery is entitled under the circumstances to make his usual charges.

A MONSTER.

FROM Leghorn comes the announcement on the 8th inst. of the birth of a monster, the mother being a poor water-carrier of the city, and her offspring resembling from the head to the umbilicus a hare, and from the umbilicus to the lower extremities a normally developed infant. Dr. Botlari, who assisted at the birth, reports that the monster is alive; in place of eyes it has two cavities, its mouth and nose are similar to those of a hare, and it rejects by the one what is sent into the other and *vice versâ*. The mother volunteered the statement that during pregnancy in a house where she was carrying water she saw a hare cut up in quarters on the kitchen table, and was strongly impressed by the sight. Her health is good; while as to her offspring, in the more than probable event of its dying, it will be added to the local museum in illustration of the *lusus naturæ* which figure in Saint Hilaire's "Teratologie," as due to the impressionability of the pregnant.

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A PLEA FOR THE CLIMATE OF THE CAPE PENINSULA IN CASES OF PHTHISIS.

To the Editors of THE LANCET.

SIRS,—So much has recently been written on the subject of South Africa as a health resort that some apology is almost needed for again bringing it before the profession. My excuse must be that in my daily practice I am constantly being made aware that a considerable amount of misconception still exists among English physicians on the subject. It is a most usual thing for patients consulting me on arrival in Cape Town, no matter at what time of the year it be, to say, "Where shall I go 'up country'? My doctor in England said, 'You must on no account remain in or about Cape Town.'" Now, I am very decidedly of opinion that phthisical patients arriving from England during the months October to March, as a rule, will do very much better by remaining in the Cape peninsula than by hurrying off to the excessive and trying heat of the higher altitudes of South Africa. This opinion, formed from my own experience and observation, is, I find, borne out not only by practitioners of long residence and experience in the Cape peninsula, but also by those resident in such places as Kimberley, Cradock, &c. These latter are unanimous in their view that during the summer months these higher altitudes in the colony are extremely trying to phthisical patients. The excessive heat, though the air be dry, seems to do more harm in the way of exhausting the phthisical patient than the dry air and sunshine do good. During the summer months in the Cape peninsula the rainfall is small, rarely exceeding six inches for the six months October to March, and the temperature is never excessive. The prevailing south-east wind is dry and cool, and in the suburbs of Cape Town, such as Wynberg, Newlands, or Sea Point, the boisterousness which the wind occasionally assumes can always be avoided. In an excellent article on this subject published in the *South African Medical Journal* of May, 1893, Dr. C. F. K. Murray, of Wynberg, says; "It is want of precise knowledge ..... that leads to the idea, 'Get away at once up country, and don't stop in the Cape peninsula.' I maintain that such is bad advice and must be qualified by careful consideration of the patient's actual condition, the season of the year, and the type of the case." My own experience has proved to me conclusively that cases of phthisis which are likely to be influenced by climate do extremely well in the Cape peninsula during the summer months, while I am equally certain that much harm is often done to such cases by hurrying them into the blazing plains of the Karoo and higher "plateaus," there to exhaust themselves in the unaccustomed heat. I have not in this short note sought to introduce statistics showing how equable is the climate of the Cape peninsula during the months of October to March, because such are easily available to all; but I feel, judging by my own experience and that of many of my *confrères*, that the logical deductions have not always been drawn from these figures. To conclude, then, I would recommend that early phthisical cases leaving England from October to March—and it is in these months that most do leave—should remain in and about the Cape peninsula, certainly not going beyond Ceres, until March. With May our winter rains set in, and it is then most advisable that all chest cases should seek a habitat beyond our winter rain-belt in the higher altitudes.

I am, Sirs, yours truly,

E. BARNARD FULLER, M.B., C.M., F.R.C.S. Edin.

Cape Town, Jan. 25th, 1897.

H. H.—Brown bread is made with bran, which contains a high proportion of mineral matters, but it is doubtful whether bran possesses any advantages from the dietetic point of view. It escapes digestive action and acts as a mechanical irritant in the intestinal tract. The special bread our correspondent mentions is free from irritating branny particles, but is considerably enriched by the addition of a notable proportion of wheat-germ, which is highly nitrogenous.

SOUTHALL'S NEW SANITARY TOWEL.

THE well-known sanitary towel for ladies' use, supplied by Messrs. Southall Brothers and Barclay of Birmingham, has from time to time undergone various improvements, and the same makers have now introduced a thoroughly serviceable modification at a much lower price for the benefit of those who do not care to obtain the superior qualities. The new towel consists essentially of an absorbent material made by a patented process from finely divided cellulose mixed with a soft white infusorial earth ("Dimatos") lighter than magnesia, and capable of absorbing upwards of six times its weight of liquids. This powder under the microscope is seen to consist of infusorial skeletons. It is free from starch and does not fuse on heating, as would be the case if borax were present. It is highly diffusive, as well as absorbent, and when enclosed in an envelope of absorbent wool wadding forms a pad peculiarly well adapted for the purpose for which it is intended. Cellulose by itself, when manufactured into wadding, loses its soft and elastic properties as soon as it is wetted, becoming, in fact, almost a pulp, but when it is combined with "dimatos" the compound possesses all the valuable diffusive properties of cellulose, together with the elasticity of absorbent cotton. The towels are about nine inches long and three inches wide, and have loops at each end for the purpose of fastening them in position. They are sold in packets of twelve for sixpence, so that the price of each towel is a halfpenny.

INTESTINAL IRRIGATION IN PUERPERAL ECLAMPSIA.

To the Editors of THE LANCET.

SIRS,—An apparatus for rectal irrigation similar to that described by Dr. R. C. Kemp in the *New York Medical Journal*, and referred to at page 1038 of THE LANCET for April 10th, was used by me about two and a half years ago in a case of puerperal eclampsia, pending completion of delivery. On this occasion I obtained very marked success with an improvised apparatus. I made a note of it at the time and had a nozzle constructed, but no further cases of eclampsia have occurred in my practice. The apparatus might have been used in a case of uræmic convulsions, complicated with glycosuria, which subsequently came under my care, but ordinary measures fortunately proved successful, and as long as the well-trodden paths of treatment lead to the desired end I prefer to keep to them, rather than to follow new lines.

I am, Sirs, yours faithfully,

G. G. GIDLEY, L.R.C.P. Lond., M.R.C.S. Eng.

Cullompton, Devonshire, April 11th, 1897.

A Constant Reader will probably get the information he requires by writing to the Laboratory Principal of the Royal Agricultural Society of England, 22, Tudor-street, New Bridge-street, London, E.C.

THE AFTER-CARE ASSOCIATION.

THIS excellent society has charged itself with the duty of looking after poor patients discharged recovered from asylums for the insane. It is the only one of its kind in the kingdom, and deserves every support. At the annual meeting held recently the chair was taken by the Archdeacon of London, and among those present were Dr. Henry Rayner and Dr. Nicolson. The report showed that 135 patients had been helped in various ways, and the accounts, we are glad to see, show a balance on the right side; but with a larger income much more work could be done, and we earnestly hope that the appeal of the committee for the coming year will meet with a generous response.

Common Sense.—The origin, though unknown, is not more mysterious than the origin of most other diseases, and the mode of transmission is well known. All the recognised text-books supply the answers to the questions.

B. R. D.—We think that B. should resign the case to A., unless his further attendance in consultation be desired.

A PHOTOGRAPHIC EXPOSURE.

IN the discussion which followed Mr. Campbell Swinton's interesting demonstration of improved x ray apparatus at the Camera Club on April 12th one of the speakers mentioned that he possessed a fluorescent screen measuring 6 ft. by 1½ ft. It is intended to show the bones and soft parts of a full-length figure all at one view, and on an occasion when the apparatus was being inspected by a number of persons it was the means of creating an embarrassment almost beyond the power of words to describe. A lady having incautiously passed in the line of the rays was suddenly displayed on the large screen, and as dress materials are very transparent to the rays her costume, of course, did not count for much in the picture!

Mr. R. Denison Pedley will obtain the information he requires by communicating directly with Professor E. Waymouth Reid, University College, Dundee.

ERRATUM.—The address of the importers of the Jyree tea, Messrs. A. C. Irwin and Co., is Billiter-buildings, Billiter-street, E.C., and not Great Tower-street, as stated in our issue of April 10th.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Somerset County Herald, Hereford Weekly Times, Sussex Daily News, Wigan Examiner, Lincoln Gazette, Suffolk Chronicle, South-Eastern Gazette, Citizen, Scotsman, Times of India, Wolverhampton Chronicle, Pioneer Mail, Devon Weekly Times, Leicester Daily Post, Portsmouth Times, Architect, Hampshire Post, Derby Mercury, Manchester Guardian, Kentish Mail, Liverpool Daily Post, Builder, Isle of Wight Times, Ripley Advertiser, Alcester Chronicle, Leeds Mercury, Woburn Reporter, Ilfracombe Gazette, Bradford Argus, Birmingham Gazette, Poole Times, Chatham News, Newbury Weekly News, East Anglian Times, Brighton Gazette, Bristol Mercury, Dundee Courier, Coleshill Chronicle, Kidderminster Sun, Western Mail, Cork Constitution, Hastings Times, Herne Bay Argus, City Press, Reading Mercury, Weekly Free Press and Aberdeen Herald, Hertfordshire Mercury, Mining Journal, Sanitary Record, Evening Citizen (Glasgow), Surrey Advertiser, Tenby and County News, Local Government Journal, Levant Herald, Cape Times, Brisbane Courier, Berkshire Chronicle, Singapore Free Press, Watford Observer, Watford and West Herts Post, Times of India (Bombay), Yorkshire Post, Express and Star, Wellingborough News, Yarmouth Mercury, Merthyr Times, Chesham Examiner, &c., &c.*

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The Lumleian Lectures

ON

SOME PROBLEMS IN CONNEXION WITH APHASIA AND OTHER SPEECH DEFECTS.

Delivered before the Royal College of Physicians of London on April 1st, 6th, and 8th, 1897,

BY H. CHARLTON BASTIAN, M.A., M.D. LOND., F.R.S.,

CENSOR OF THE COLLEGE; PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

LECTURE III.[1]

Delivered on April 8th, 1897.

MR. PRESIDENT AND GENTLEMEN,—At the close of the last lecture I considered the different degrees of amnesia verbalis that may result from functional defects or partial lesions of the left auditory word-centre. We must now consider the effects produced by more serious lesions of this centre.

(*b*) *Effects produced by destruction of the left auditory word-centre.*—Where, instead of partial or mere functional defects, we have to do with more or less complete destruction of the left auditory word-centre by some organic disease a correspondingly complete word-deafness is produced, so that the patient is no longer able to comprehend spoken language. Spoken words become to such a patient mere meaningless sounds. As I have already pointed out, word-blindness (or alexia) is also an occasional consequence of such a lesion, though it is not to be regarded as a necessary accompaniment, whatever Wernicke and Déjerine may say to the contrary. These authorities, moreover, as well as Mirallié, hold that paraphasia is the kind of speech defect that is entailed by destruction of the auditory word-centre. Wyllie also, in his recent work on "The Disorders of Speech," says (p. 289) that the extreme defect in an "auditive" in consequence of this lesion would be what is termed "gibberish aphasia," and adds: "In general, the destruction of the auditory centre leaves the patient in possession of considerable powers of expression." This question as to the nature of the alteration of speech that goes with destruction of the auditory word-centre is a very interesting and important one, and will require careful consideration.

The views that I entertained on this subject some years ago were thus expressed[2]: "Suppose a person to be suffering from defective activity of the auditory word-centre, so that names cannot be recalled 'voluntarily' or by 'association.' There would already be great hesitation and difficulties in the expression of thoughts both in speech and in writing. But suppose this mere defective activity to be replaced by actual destruction of the left auditory word-centre so that its functional activity became actually lost, words could then, of course, neither be recalled 'voluntarily' nor by 'association,' and, still further, they could not be perceived and consequently could not be imitated. An individual thus affected would neither be able to speak nor to write—that is, he would be completely aphasic, with the superadded peculiarity that he would not readily comprehend spoken and perhaps written language." It should be observed that these statements were made partly as *a priori* deductions and partly as a result of the observation of actual cases, though at this period there had only been too few of them. Still, it seemed to me then—and from several points of view would still seem a legitimate conclusion—that loss of articulate speech should result from destruction of the auditory word-centre, just as agraphia results from destruction of the visual word-centre. Ballet[3] and Ross,[4] following me, expressed very similar views, though the majority of writers have rather followed Wernicke, and regarded paraphasia as the natural accompaniment of word-deafness.

[1] Lectures I. and II. were published in THE LANCET of April 3rd and April 10th, 1897, respectively.

[2] The Brain as an Organ of Mind, 1880, p. 685.

[3] Le Langage Intérieur, 1886, pp. 91 and 166.

[4] On Aphasia, 1887, p. 119.

Now that more cases have been observed we are in a better position for throwing light upon this point. An examination of the recorded observations in which the lesion has been limited to the hinder part of the first, and perhaps also of the second, left temporal convolutions (without perceptibly encroaching upon the visual word-centre) shows surprisingly different results in regard to the nature and degree of the speech alteration met with. In some of the cases there has been aphasia; in others a more or less marked paraphasia; whilst in two or three of the cases the defect in voluntary speech has been less marked. Thus, looking to the same sixteen cases of destruction of the auditory word-centre to which I previously referred[5] when speaking of the frequency with which word-blindness and agraphia occur as additional symptoms, I find that what is described as "motor aphasia" existed in six of them (viz., in Mirallié's list Nos. 7, 11, 12, and 25; and in Amidon's list Nos. 14 and 18). In six of the cases also some amount of paraphasia existed (viz., in Mirallié's list Nos. 3, 4, 19, 21, and 23; and in Amidon's list No. 7). In one case (Mirallié's No. 14) both aphasia and paraphasia are said to have existed; while in the three remaining cases (Amidon's Nos. 6, 15, and 17) voluntary speech seems to have been rather less affected.[6]

Thus it will be seen that we have all been more or less wrong; and I must confess that the revelation of these apparently contradictory results in the way of speech disturbance in association with word-deafness surprised me not a little. The meaning of such remarkable variations demands a careful consideration.

The three cases last referred to in which voluntary speech has been least interfered with are, I believe, altogether exceptional. One of them is a case recorded by Claus,[7] concerning which, unfortunately, there are only a few meagre details.

CASE 22.—A man, aged sixty-eight years, understood nothing said to him. He answered always wrongly, while he spoke correctly. His intelligence was weakened. His hearing was good. A focus of softening was found involving the left first temporal convolution, except its anterior third. This disorganised portion of the cortex and also the corresponding border of the second temporal convolution had a brown colour.

I have been unable to obtain any further particulars concerning this case, as the periodical in which it is reported is not contained in either of the libraries to which I have had access. It seems to be Case No. 20 in the "Table of Cases of Sensory Aphasia with Lesions and Symptoms" cited by Allen Starr,[8] and there also no further details are given. No weight, therefore, can be attached to this example, the details of which are so incomplete. The second case is one that was originally recorded by Wernicke,[9] and the following are all the essential details that are given.

CASE 23.—A woman, aged seventy-five years, was admitted to hospital on Oct. 7th, 1873, showing well-marked indications of old age. It was ascertained from her relatives that her speech had suddenly become troubled and almost lost on Nov. 2nd, 1872. On admission her psychical condition seemed to be that of a crazed person complicated with aphasia. She mostly lay huddled up in bed, and suffered from incontinence of urine and of fæces. She answered all questions put to her quite wrongly, and did not attempt to do anything she was told. She paid little attention to her surroundings and showed no desire to make any communications concerning her distressing condition. Her spontaneous speech was comparatively insignificant, though it was sufficient to show she was not suffering from motor aphasia. Her speech trouble was further shown by her alteration and displacement of words. Thus she often said correctly, "I thank you heartily," and another time, "I thank you most givelv," &c.; "I am quite ill"; "Ah! how cold I am"; "You are a kind gentleman." These were usual expressions; yet the medical man whom she had just called a kind gentleman she called soon after "mein Tochtel" or "mein Sohnel." An ophthalmoscopic examination on Nov. 5th, 1873, showed grey atrophy of the right optic disc. Sensibility seemed intact, and the hand-grip was weak, but equal on the two sides. More exact observations on these points were not made. There was no improvement in her psychical or bodily symptoms, and death occurred as a result of intestinal troubles on Dec. 1st, 1874. At the

[5] Excepting that I omit Mirallié's Case 10, and include instead his Case 2, where the only lesion beyond the destruction of the first temporal convolution was a very minute "plaque jaune," no more than a millimetre square, situated in the upper border of the foot of the third frontal convolution.

[6] Numbers of the cases of "sensory aphasia" hitherto recorded are comparatively valueless for the purpose of any critical study of their symptoms, either on account of the nature, extent, and complication of the lesions, or from the paucity of the clinical details, or perhaps from two or three of these causes in combination. Among such more or less vague cases I include thirteen in Mirallié's list (viz., Nos. 2, 15, 18, 20, 22, 27, 28, 32, 33, 34, 35, 36, and 37), and three in Amidon's list (viz., Nos. 8, 9, and 22). In four other cases—namely, Nos. 10, 11, and 17 of Mirallié's list, and No. 20 of Amidon's—there was a lesion in Broca's centre as well as in the auditory word-centre.

[7] Der Irrenfreund, No. 6, 1883.

[8] Brain, 1890, p 100.

[9] Der Aphasische Symptomen-Complex, 1874, p. 43.

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necropsy there was found an increase in the sub-arachnoid fluid, and the convolutions generally of both hemispheres were somewhat wasted. There was also an excess of fluid in the lateral ventricles. All the brain arteries were highly atheromatous, and there was thrombosis of some of the terminal branches of the left middle cerebral artery. The whole of the upper temporal convolution and part of the supra-marginal lobule were in a state of yellow softening. The island of Reil was intact.

It will be seen from the above particulars that this patient's spontaneous speech was extremely limited and that she made frequent mistakes in words and in their pronunciation. The statement contained in Amidon's abstract, therefore, that her "spontaneous speech was very good," certainly goes far beyond what there is any warrant for. It is worthy of note also that the auditory word-centre may not have been entirely destroyed, since the second temporal convolution seems not to have been at all involved. In the previous case, reported by Claus, it should also be observed that the second temporal convolution was only very slightly involved. It is merely said that its upper border was affected ("had a brown colour").

The third case, curiously enough, has often been quoted as though it were a typical example of word-deafness rather than one of an unusual character. It was recorded by Giraudeau,[10] and some of the principal details are these.

CASE 24.—The patient, a woman, aged forty years, had previously enjoyed good health, though she had never menstruated. For three months before admission to l'Hôpital St. Antoine she had suffered from a constant headache, with nocturnal exacerbations of such a character as to render sleep impossible. There had been no vomiting or epileptiform attacks. For upwards of a month before admission she was obliged to give up work in consequence of the severity of the pain. At about the same time it was observed that she no longer understood what was said to her and that she did not answer when spoken to. This information was obtained from the persons who accompanied her to the hospital. On admission the patient was found to be very stout; there was no fever, the right pupil was slightly dilated, and there was severe headache. When asked her name she raised her head, but did not answer. When asked a second time she answered, "What do you say?" and on the same question being put a third time she said, "I don't understand." When asked a fourth time she answered correctly, "Marie Bouquinet." On being asked, "How long have you been ill?" she evinced the same difficulty of understanding, but replied, after a time, "Three months." When asked to give her address she replied, "Perhaps for three months and a half." Being interrogated as to her occupation, she presented the prescriptions of the physician who treated her in the town, and added, "A white powder" (sulphate of quinine). On several occasions we changed the mode of our interrogations, but the replies of the patient were always analogous to those mentioned above. After having by great difficulty made her understand a question by frequent repetition she answered; but whatever subsequent questions were put to her she followed her first idea, and her subsequent replies had no relation whatever to the questions put to her. Sometimes, however, it was impossible to make her understand our meaning at all, and to every question addressed to her she invariably replied: "What do you say? I don't understand. Cure me." Her hearing however, was unaffected; there was no discharge from the ear; she heard the ticking of a watch, and turned her head at any slight noise made near her. Vision was good in both eyes, and there was no word-blindness, for she could easily read the headings of the bed-ticket and written questions put to her, to which she replied verbally or in writing after a little reflection. Tactile sensibility was preserved, as well as the senses of taste and smell, and her motor power was unaffected. Without entering into further details, suffice it to say that the psychical affection rapidly increased, and on the ninth day after her admission the word-deafness was complete, and whenever she was addressed she invariably said, "I do not understand," and then began to weep. The next day she fell into a state of coma and died. At the necropsy a sarcomatous tumour of the size of a walnut was found occupying the posterior part of the first and second temporo-sphenoidal convolutions of the left hemisphere, the rest of the brain being healthy.

Here the details are fortunately more ample. Although this patient's speech was limited, there was clearly neither aphasia nor paraphasia, and this may, I think, be explained either by supposing that the lesion in the early days did not destroy the whole of the auditory word-centre—which is more than possible seeing that the lesion was a tumour and also that the word-deafness was not absolute; or else that the patient was a strong "visual"—a person, therefore, in whom the excitation of Broca's centre might have been brought about directly from the visual word-centre, both in spontaneous speech and in reply to written questions. And to the latter she is expressly said to have replied "verbally or in writing, after a little reflection." This possibility might, of course, be applicable also in explanation of the other two cases.

There is an interesting point worth noticing here in reference to cases of partial word-deafness, illustrating the increased power of recollection or comprehension when two or more bonds of association are simultaneously called into activity. Thus, in a case of incomplete word-deafness observed by Fränkel, when the patient was asked, "What is a fork?" he replied, "I don't know what you say." But when a fork was shown to him at the same time that its name was pronounced he not only recognised the fork, but comprehended its name and repeated it, the visual image of the object here helping to revive the auditory image of the word. At other times when this same patient was questioned, at first he did not understand, but he would struggle to articulate the words used and would thus, after various attempts, arrive at the meaning of the question. Another instance in which visual impressions were habitually called upon to aid a damaged auditory centre was long ago recorded by Abercrombie in his "Inquiry into the Intellectual Powers," where he says (seventh edition, 1837, p. 158): "The gentleman to whom it referred could not be made to understand the name of an object if it was spoken to him, but understood it perfectly when it was written. His mental faculties were so entire that he was engaged in most extensive agricultural concerns, and he managed them with perfect correctness by means of a remarkable contrivance. He kept before him in the room where he transacted business a list of the words which were most apt to occur in his intercourse with his workmen. When one of them wished to communicate with him on any subject he first heard what the workman had to say, but without understanding him further than to catch the words. He then turned to the words in his written list, and whenever they met his eye he understood them perfectly. These particulars I had from his son, a gentleman of high intelligence."

This slight digression may serve to illustrate one of the two suggestions I have made in explanation of the comparatively slight defects in speech presented by the three altogether exceptional cases of word deafness to which I have above referred. But, before pursuing our attempt to explain the differences presented by the other cases, it will be well first of all to see what the results have been in two other sets of cases involving destruction of the left auditory word-centre as one component of the existing lesions—that is to say, in the two next sets of cases already cited for consideration—viz., (2) the cases in which there have been combined lesions of the auditory word-centres in each hemisphere; and (3) the cases in which the auditory and the visual word-centres have been destroyed or severely damaged in both hemispheres.

(2) DEFECTS RESULTING FROM LESIONS OF THE AUDITORY WORD-CENTRE IN EACH HEMISPHERE.

Cases of double lesion in the upper temporal convolutions are extremely rare. Only four such cases are known to me, and concerning these clinical details in three are unfortunately extremely meagre, consisting of particulars obtained from friends or others, rather than from the examination by a skilled observer.

The first of these cases to which I will refer is one that has been recorded by Kähler and Pick,[11] though the details are very scanty and of the kind above mentioned.

CASE 25.—A woman, aged forty-two years, was seen eighteen months after the attack. Her husband stated that she suffered from headache for three months, when loss of speech and hearing supervened, and symptoms of apparent dementia. She uttered inarticulate sounds almost all day long. She was after a time admitted to an asylum, where she remained for six months, to the date of her death. Whilst there she continued to mumble constantly, the only articulate sounds she uttered being "Tschen" and "Tscho." She occasionally moved her head when spoken to as if she heard, though she did not understand what was said. There was no paralysis or other motor disturbance. At the necropsy there was congestion of the membranes, the frontal and parietal convolutions were somewhat wasted, the sulci being wide and filled with serum. Over the left temporal lobe the pia was jelly-like, whilst its convolutions were swollen, pressed together, and of soft, jelly-like consistence. The right temporal lobe was also slightly softened. Sections showed that the softening was confined to the cortex—on the right side of all the temporal convolutions except the basilar, and on the left side to the same region. The foot of the third frontal convolution was not involved.

The second case is one that has been recorded by C. K. Mills,[12] and although the details of the necropsy are full and all that could be desired, the patient only came under his observation a few days before her death when she was very weak and ill, suffering from the effects of an old valvular disease of the heart. He says: "Some of the facts of her history were obtained from relatives who came to see her at the hospital, and others were procured after her death from a brother and sister-in-law, whom I sought out and carefully interviewed." The following are

[10] Revue Médicale, 1882, p. 448.

[11] Vierteljahresschrift für Praktische Heilkunde, No. 1, 1879, p. 6.

[12] Philadelphia University Medical Magazine, November, 1891; and Brain, 1891, p. 468.

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all the particulars given that are of any importance from our point of view.

CASE 26.—A woman, aged forty-six years, was admitted to the Philadelphia Hospital in August, 1891. Fifteen years before her death she had an apoplectic attack which left her word-deaf but not paralysed. Prior to the first attack of apoplexy her hearing had been good, but after it she could not by hearing understand anything that was said to her. She could, however, hear music and sounds of various kinds; for instance, when an organ or band had performed in the street she at times had called attention to the fact, and she had also come down from the second or even the third storey to open the front door in answer to a knock. She could hear such sounds as a bell ringing and a clock ticking. These facts were elicited from her relatives through various statements made by them, chiefly spontaneously. When anyone wished to communicate with her it was done by means of writing or signs, as she had fully preserved her vision and was evidently not word-blind either for writing or printing. She often read the newspapers, and could do so with intelligence up to a few weeks before her death. [It correct this is remarkable, as it would have been long after the destruction of both auditory word-centres.] Her sister-in-law said that several times she had heard her try to read the newspaper aloud, and in so doing she had seemed to understand what she read, "but made a tangle of her words." From the time of the first attack she had never been able to speak well, her words becoming jumbled or tangled. From the description given of her manner of speech the defect was evidently a serious form of paraphasia and paralexia. Her relatives spoke positively of her deafness as having been due to the "stroke"; but the apoplectic attack, although it had at once caused this word-deafness and paraphasia, had not in any way, as far as could be ascertained, affected either motion or sensation. She could write, but "sometimes mixed up her words in writing." Nine years before her death she had another and more severe apoplexy, after which her deafness increased for sounds as well as words until it was almost total. This seizure left her also with partial left hemiplegia, chiefly affecting the arm. Dr. Mills adds: "She was first examined by me on Aug. 24th, 1891. Her condition then was one of almost complete helplessness. It was impossible to make her understand what was said to her, and, so far as could be determined by repeated tests, she was totally deaf; but notwithstanding her weakness, helplessness, and deafness, her face had a somewhat intelligent expression. She looked about her as if she knew what was going on. She was very emaciated; her heart's action was excited, and examination showed the presence of marked murmurs, both mitral and aortic She became feebler day by day, and died Aug. 28th." At the necropsy the posterior two-thirds of the left first temporal convolution was found to be shrunken to a thin strip, and the posterior fourth of the second temporal convolution was also atrophied. The other left temporal convolutions were healthy. On the right side there was an old and very extensive hæmorrhagic cyst, which had completely destroyed the first and almost completely the second temporal convolution, as well as the island of Reil and other parts in the immediate neighbourhood. (Very full details of the condition of the brain are given, and in the *Philadelphia University Medical Magazine* there are two excellent photogravures showing the extent of the lesions.)

This is undoubtedly a very important case, especially from the point of view of cerebral localisation, from which standpoint Mills principally deals with it. It is interesting to find that after the patient became word-deaf, owing to the first lesion on the left side, there was no word-blindness, as "she often read the newspapers and could do so with intelligence"—although some would have us believe that even the destruction of Broca's centre, which is so much further away from the visual centre, causes alexia. There was, however, paraphasia and paralexia. Unfortunately there is no definite statement as to what alteration took place in the patient's speech after the lesion occurred on the right side—that is, nine years before her death. I therefore wrote to Dr. Mills to ascertain whether he could supply any further information on this important point, and his reply is as follows: "She was admitted to the hospital some little time (probably two or three weeks) before I examined her, and my recollection is that it was reported to me that she had not spoken during that time, but more than this I cannot say ..... and unfortunately I have no longer the means of verifying my recollection. She certainly was not able to speak, or at least did not speak, at the time of my examination." I will merely add that, from the fact of the word-deafness in this patient not being associated with word-blindness, it does not necessarily follow that the paraphasic speech should have been lost—that is to say, that there should have been speechlessness—immediately after the occurrence of the lesion in the right hemisphere. There is the possibility that she might have been one of those "visuals" capable of speaking, though in a disordered fashion, by the direct action of the visual word-centre upon Broca's convolution. It seems pretty clear, however, from what Dr. Mills says, that at the time she went into the hospital she was incapable of speaking. Still, it is important to bear the above-mentioned possibility in mind, as it is one to which we shall have to recur.

The third case is one that was recorded by Wernicke and Friedländer[13] and an abstract of it has been given by Ferrier[14] which I will now quote.

CASE 27.—A woman, aged forty-three years, who had never suffered from deafness or affection of vision, was attacked on June 22nd, 1880, with right hemiplegia and aphasia. She remained in the hospital until Aug. 4th, when she was discharged. At this time the patient could speak, but she spoke unintelligibly, and was sometimes believed to be intoxicated. She not only could not make herself understood, but she could not understand what was said to her. She was received into the hospital again on Sept. 10th, with slight paresis of the left arm. The right hemiplegia had entirely disappeared. The patient was looked upon as insane She was absolutely deaf, so that she could not be communicated with. She died from an attack of hæmatemesis on Oct. 21st. An extensive lesion was found in each temporal lobe (of which figures are given). On the left side it involved the posterior half of the first and second temporal convolutions and a small part of the third; on the right side it involved the angular gyrus, the posterior extremity of the upper temporal convolution, and encroached slightly on the occipital convolutions.

The fourth case has been described by Pick. It is one of great importance, but as it is also one of a very exceptional nature I reserve its consideration for the present.

(3) DEFECTS RESULTING FROM DESTRUCTION OF THE AUDITORY AND VISUAL WORD-CENTRES IN EACH HEMISPHERE.

There is only one case known to me in which these combined lesions have existed in the two hemispheres, although there is another with which it will be not uninteresting to compare it where complete blindness and deafness had been produced in infancy by peripheral lesions.

The case definitely belonging to this category was reported many years ago by J. C. Shaw,[15] but unfortunately in this as in other rare cases many essential details are omitted. Still this case is so valuable by reason of its extreme rarity that we are glad to accept it notwithstanding the paucity of clinical details. All the essential recorded facts are these.

CASE 28.—A woman, aged thirty-four years, was admitted into King's County Lunatic Asylum on Sept. 25th, 1879. A few facts concerning her were obtained from a sister. Two months before admission she complained of being unable to use the right arm. Soon afterwards she had a sudden attack characterised by loss of consciousness, inability to speak, and loss of hearing. They did not notice at this time that she had any loss of vision. She is said to have remained "unconscious" about two weeks, after which she was able to get up, and then began to talk. But she could talk sensibly only for a few minutes, then she would ramble and become incoherent. The friends were indefinite as to the extent of her sight trouble at this time, but there seems to have been marked mental disturbance. The certificates committing her relate that "she says some men are trying to kill her; she screams without cause; and she is at times violent." The following meagre notes concerning her condition are then given:—"On admission she is found to be very stupid; does not answer any questions, evidently does not hear them; is quite deaf. Pupils slightly dilated and equal; she is evidently quite blind. Physical condition poor; habits dirty. Oct. 18th and Nov. 21st: Had a severe epileptiform fit on each of these days. Dec. 11th: Repeated tests of tactile sensibility and smell show them to be unimpaired, but she is absolutely deaf to all noises and also blind. Dec. 16th: Walks about the hall using disconnected and unintelligible words; at times speaking very loudly and screaming. Jan. 31st, 1880: Severe convulsions lasting seven hours. Muscular spasm most marked on left side (the right arm remained contracted afterwards during two days). Feb. 14th: Is up again; walks about; shows no sign of paresis anywhere. October: She has become quite noisy, talking and screaming unintelligibly night and day; is growing thinner and more stupid, if that were possible." The patient remained in about the same condition till September, 1881, when she developed a low form of pneumonia and died on Sept. 19th. At the necropsy an almost exactly symmetrical patch of cortical atrophy was found in each hemisphere. It involved (as is shown by two figures) the greater part of the upper temporal and angular gyri, the marginal lobule, and the upper parietal lobule on each side. In the affected areas it was found "that the grey matter had entirely disappeared, leaving the very outer layer to which the pia was attached and the white matter below, so that there was really a cavity or space between the two, formed at the expense of the grey matter. Microscopic examination showed this outer layer to be composed of dense connective tissue filled with nuclei." There was no atheroma of the great vessels, and, except that the patches of cortical atrophy mentioned involved on the left side a small portion of the upper part of the ascending parietal, and on the right side a small portion of the lower part of the corresponding convolution, other portions of the brain seem to have shown no appreciable lesion.

It is interesting to find also that in the celebrated case of Laura Bridgman, who was totally deaf and blind from about the end of her second year, her power of uttering articulate sounds was not very different in kind, though less in degree, than that which was met with in the case above recorded. The following account of her condition in this respect is given by Kussmaul[16]:—

CASE 29.—The child lost her eyesight and hearing about the end of her second year, when she was beginning to talk, and in consequence soon lost the power of speech. Now, although it may be assumed that she retained no memory of sounds, which long experience teaches us is the rule with those who become deaf-mutes so early, yet she was able to produce a multitude of sounds. She took the greatest pleasure in

[13] Fortschritte der Medicin, Band i., No. 6, 1883.
[14] Lectures on Cerebral Localisation, 1890, p. 89.
[15] Archives of Medicine, New York, 1882, p. 80.
[16] Loc. cit., p. 634.

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giving utterance to these, and even went so far occasionally, in order to indulge herself in noises to her heart's content, as to lock herself up when her teachers endeavoured to restrain her from so doing. These noises were, in fact, inarticulate—e.g., a kind of chuckling or grunting, an expression of contentment; while others—e.g., "h-o-ph-ph"—were better formed, and served for an indication of astonishment. Other sounds, again, she elevated to the dignity of names, and bestowed them on certain persons. She uttered these latter when those so denominated approached her, or when she wanted to find them, or even at times when she only thought of them. She employed some fifty or sixty such sounds as names, many of which could be written down, such as fu, tu, pa, fifpig, ts, pr, lutt, &c.; many, however, it would be almost impossible to express in letters. She formed, however, only words of one syllable, but frequently re-duplicated them two or three times, as fu-fu-fu, tu-tu-tu.

There was therefore slowly developed in this child something more of method in the use of the simple or complex sounds that were uttered than has been met with in the early stages, or for some time after the onset, of the cases of disease in which both auditory word-centres have been destroyed. The sounds emitted were also less voluble and free, which is only to have been expected, seeing that in Laura Bridgman the glosso-kinæsthetic centres had never been developed as they have been in the case of patients who, by reason of the lesions above mentioned occurring in adult life, have been reduced to a condition in which their speech has become unintelligible. The powerlessness of Broca's centre when unaided for the production of anything like intelligible speech is, however, clearly shown.

After the narration of these additional cases in which there was a destruction of the auditory word-centre in each hemisphere we may now with more advantage return to the question why in a certain number of the cases of destruction of the left auditory word-centre alone there is (1) an aphasic loss of speech, in others (2) paraphasia, and in still others (3) a comparatively slight impairment in voluntary speech.

My original contention was that an aphasic loss of speech is what is naturally to be expected as a result of such a lesion, if we are to suppose, as seems highly probable, that the auditory word-centre in the great majority of persons holds a relation to Broca's centre similar to that which the visual word-centre holds to the writing centre. It would appear, therefore, that what stands in need of explanation is the occurrence of the second and third class of cases—namely, those in which more or less marked paraphasia, or even fair speech, has existed.

The evidence in favour of the posterior half of the upper, with perhaps the posterior part of the middle, temporal convolutions being the chief, if not the exclusive, seat of the auditory word-centre must be regarded as very conclusive.[17] The difference in voluntary speech power presented by the cases above referred to cannot therefore be explained by the supposition that the auditory word-centre has not yet been properly localised.

The various possibilities that suggest themselves to me in explanation of the differences in the degree of impairment of speech in different cases in which lesions have been found in the left auditory word-centre are as follows:—

(*a*) There is the possibility that in some of the cases in which the word deafness has been complete whilst voluntary speech has been fairly good the auditory word-centre has been rather isolated from its afferent fibres than destroyed. These would be cases in which the amount of damage to the auditory word-centre itself was small—cases approaching those named by Lichtheim "isolated speech-deafness," which will be subsequently considered.

(*b*) Then in some cases the auditory word-centre may be damaged sufficiently to prevent perfect comprehension of speech, though it may still be sound enough with the aid of the visual word-centre for the production of paraphasic speech. This might afford an explanation of certain cases in which there is only partial damage of the auditory word-centre, together with incomplete word-deafness, as in No. 7 in Amidon's list, and Nos. 2 and 48 of Mirallié's list, as well as in a case by West,[18] which is not included in either of them.

(*c*) In other cases, where the individuals affected are strong "visuals," the paraphasic speech may be produced by the action of the visual word-centre taking the place of the auditory word-centre—that is, by the passage of the stimulus directly from the visual word-centre to Broca's region across the commissure *e e*, as represented in Fig. 5. Such an explanation may be applicable to some of the cases where the destruction of the auditory word-centre has not produced word-blindness as well as word-deafness. And this, as we have seen, has been what has occurred in about two-thirds of the recorded cases.[19]

There is one extraordinary case that has been recorded by Pick[20] which seems, moreover, quite incapable of being understood except by the supposition of the adequacy of the direct action of the visual word-centre upon Broca's region even for the production of correct speech—as it is brought about, in fact, in all deaf-mutes who are taught to speak. This is the case of lesion in the upper temporal convolutions of each hemisphere, the consideration of which was deferred because of its altogether exceptional character. Although this patient was perfectly word-deaf, he was able to speak correctly, to read correctly, and to comprehend writing perfectly, as may be gathered from the following details.

CASE 30.—A day labourer, aged twenty-four years, was completely word-deaf and behaved like a deaf person, taking no notice of ordinary sounds near him. It was found that he only noticed loud calls, clapping, or ringing of bells, and this not always readily. Yet if one shouted to him unexpectedly, he said, angrily, "Don't shout at me so"; and he often said spontaneously, "I hear quite well but I don't understand; I can hear a fly flying past me." His power of recognising airs previously known to him seemed to be also lost. His speech was perfectly correct. He spoke fluently, and only occasionally hesitated about the right word. He named objects shown to him correctly. He could not repeat words or phrases. Writing was executed slowly but quite correctly, though he could not write from dictation. With regard to his power of copying nothing could be stated, as he could not be persuaded to make the attempt. He read aloud easily and quite correctly, and he understood both print and writing perfectly. Writing afforded the only means of communicating with him apart from gestures. The patient's condition in the above mentioned respects remained essentially unchanged during the whole period of his stay in the hospital, from Jan. 17th to May 12th, 1891. At the necropsy the upper parts of both temporal lobes were found to be shrunken, soft, and of a yellow colour. On the left side the posterior half of the upper temporal convolution and the supra-marginal gyrus were the parts that were softened. The island of Reil was intact. On the right side there was softening of the upper temporal convolution and a great part of the second temporal, as well as of the island of Reil, together with some small foci in the lower part of the ascending frontal, and in the third frontal, convolution.

It appears from the history of this patient that the first lesion occurred on the right side of the brain about ten years before his admission to the hospital. Six years later the lesion in the left hemisphere occurred, which resulted in the production of word-deafness. Speaking of this patient's condition during the four months that he was under observation Pick says that his intelligence was distinctly weakened and his behaviour childish. It was difficult to fix his attention; he was very emotional and spent much time in prayer. When so engaged no sort of noise seemed to disturb him, for, notwithstanding what he said as to his hearing, it appears that, like Lichtheim's patient,[21] he was also really very deaf to ordinary sounds. As above stated, there seems no way of explaining this case except by supposing that the left visual word-centre was capable of acting directly upon Broca's centre, and without any aid from the left auditory word-centre (the destruction of which had caused the word-deafness four years previously) of acting so effectively that the patient was capable of reading aloud and of speaking, even without making mistakes in words. The word-deafness was clearly caused by the lesion in the left auditory word-centre itself, and it seems equally certain, therefore, that this centre could not have been instrumental in enabling the patient to speak. It is superfluous, consequently, to look for a sub-cortical lesion.[22]

(*d*) Another possibility in explanation of the preservation of slight or disordered speech after destruction of the left auditory word-centre is that the auditory word-centre of the right hemisphere acts, by means of commissural fibres passing obliquely through the corpus callosum, upon the left third frontal convolution. This is a possibility which has not, I believe, been previously suggested by any writer on speech defects, though it seems to me almost the only means of accounting for the existence of speech of a paraphasic type in those cases where the destruction of the left auditory word-centre leads to word-blindness as well as to word-deafness—that is, in about one-third of the total number of such cases. The addition of word-blindness as a symptom in these cases must, as I have said, be supposed to

[17] On this subject see Ferrier on Cerebral Localisation, 1890, and C. K. Mills, in Brain, 1891.

[18] Brit. Med. Jour., vol. i., 1885, p. 1242.

[19] The next explanation is, however, equally applicable to this class of cases as well as to those in which word-blindness co-exists with the word-deafness.

[20] Archiv für Psychologie, 1892, p. 909.

[21] Loc. cit., p. 460

[22] Yet Mirallié actually quotes it as an example of a sub-cortical lesion

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be due to the very close functional and topographical relations of the auditory and the visual word-centres; but if the visual word-centre has had its functional activity so deranged as to have led to word-blindness it cannot reasonably be supposed that it could in that state take on independent functions in the way of supplementing the activity of the destroyed auditory word-centre.

The argument in favour of the possible action of the right auditory word-centre in the manner indicated is, however, even stronger than that just stated, because we shall find in a future section, when dealing with cases in which there has been more or less complete destruction of both the auditory and the visual word-centres of the left hemisphere, that out of fifteen of such cases, in two speech is reported to have been fairly good, in seven there was jargon speech or paraphasia, whilst in six it was more or less markedly aphasic. But when the auditory and the visual word-centres of the left hemisphere are destroyed speech, if it is to be produced by that hemisphere alone, would have to be effected solely by Broca's centre. We have, however, already seen that with double destruction of the auditory word-centre, as well as with double destruction of the auditory and the visual word-centres, speech has always been rendered unintelligible, except in one single case—that of Pick, above recorded. It thus seems to stand out very clearly that Broca's centre alone is not capable of acting as an instigator and adequate guide for the production of intelligible speech. We have good reason for believing, moreover, as I have previously pointed out, that it is not a centre whose images are much used as counters for thought, although the rousing of the sub-conscious memories of this centre is, under proper guidance, essential for the production of speech as a series of voluntary movements.

We are therefore absolutely driven to look for aid or guidance from the right hemisphere if we are to account for the production of even paraphasic speech in cases of damage to the left hemisphere of such a nature that word-deafness is associated with word-blindness, whether the latter be of structural or of functional origin. This same hypothesis enables us to understand the unintelligible character of the speech in three out of the four cases cited of double destruction of the auditory word-centre, as well as in the case in which the auditory and the visual word-centres were destroyed in each hemisphere. The old notion that intelligible speech can be initiated and produced by the influence of Broca's centre alone must be absolutely renounced.

By reference to other considerations it may also be shown to be by no means devoid of probability that both auditory word-centres are actually in structural relation with, and therefore capable of acting upon, the glosso-kinæsthetic centre of the left hemisphere. It will not be difficult to show that the notions hitherto prevalent in regard to the understanding of spoken and written language and the utterance of speech have probably left altogether too much out of account that conjoint activity of the right and left hemispheres which almost certainly exists in connexion with perceptive processes, and which therefore we may suppose exists in connexion with derivative intellectual processes, as well as during the initiation of all sorts of motor reactions directly or indirectly following thereupon.

It is well known that each olfactory bulb and that each retina is connected with both cerebral hemispheres. Modern knowledge compels us to believe that in every act of visual perception the half-vision centres in each occipital lobe are called into concurrent activity. It would be contrary to existing knowledge for us to suppose that the cochlear fibres of the auditory nerve come into direct relation with each hemisphere, although Lichtheim does make an assumption to that effect.[23] On this subject of the intra-cerebral distribution of auditory fibres Foster says[24] the evidence derived from "secondary degenerations" "suggests that the path of auditory impulses is along the cochlear nerve to the lateral fillet of the crossed side, and so by the posterior corpus quadrigeminum and median corpus geniculatum to the cortex of the temporal lobe of that crossed side." Still, this distribution cannot yet be considered quite settled, so that, as Foster adds, "the matter needs further investigation."

The probabilities are, however, that each auditory nerve is indirectly connected with each hemisphere through the intermediation of commissural fibres between the two upper temporal and other convolutions in each temporal lobe, constituting the cortical seat of this endowment—such commissural fibres forming part of the corpus callosum.[25] In this way, therefore, a provision exists for the conjoint activity of the two hemispheres in connexion with the sense of hearing. In healthy persons auditory impressions pass equally to the two sides of the brain, and it is commonly supposed that minute differences in intensity of the impressions, dependent upon the source of the sound in relation to us, enable us principally to judge of the direction whence the sound emanates. Although we have no distinct proofs other than those of an analogical order that the general auditory centres are connected by commissures, we have proof that the specialised portions of them known as auditory word-centres must be so connected. Had it not been for the existence of such a connexion word-deafness would result from absolute deafness in the right ear (whether due to labyrinthine or to middle-ear disease), owing to the left auditory word-centre being cut off from all afferent impressions, as I pointed out some years since.[26] We know, however, that this does not occur; therefore impressions must reach this centre through the left ear, the right auditory word-centre, and thence across the commissure in the corpus callosum. And the fact that in such cases the comprehension of speech seems not to be diminished would point, I think, to the probability that the right auditory word-centre is about as well developed as the left on its receptive side.[27] And if that be so, is it to be supposed that it would remain functionally inert, save in the case of the accidental supervention of right-sided deafness?

Clinico-pathological investigations have long since taught us in an unmistakeable manner that the right auditory word-centre usually exercises (in right-handed persons) little influence upon the glosso-kinæsthetic centre of its own side; and now I would urge that new clinico-pathological observations should strongly incline us to believe that it must to some extent coöperate with the left auditory word-centre in the excitation of Broca's region for the production of articulate speech. We have seen that instances of paraphasic speech in cases of word-deafness associated with word-blindness are only capable of being explained in accordance with some such hypothesis, and there is the additional fact that speech has been found to be so much worse (with one exception) as to be quite unintelligible when both the auditory word-centres have been destroyed.

A difficulty that presents itself in connexion with such views as I have just been expressing is to account for the non-production of any amount of word-deafness from disease of the right auditory word-centre alone. It might be thought that even if the left auditory word-centre exercises an altogether preponderant influence in connexion with the comprehension and the production of speech, still the destruction of the auxiliary right auditory word-centre ought to produce effects of some kind, of a temporary if not of a permanent nature. Extremely little evidence, however, is available upon this subject, and it is one to which most careful attention should be given in the future.[28] We know, of course, that in left-handed persons the predominant activity of the auditory and the visual word-centres is in the right hemisphere, and that consequently in them we may get as a result of lesions in this hemisphere either word-deafness or word-blindness or both, just as we may get aphasia either alone or in association with left hemiplegia. Such cases of so-called "sensory aphasia" due to lesions in the right hemisphere have been recorded by Kussmaul[29] and also by Bernheim,[30] and there are doubtless many others. There was also a typical case of amnesia verbalis due to a right-sided lesion recorded by Trousseau.[31]

In what I have said hitherto I have only been contending

[23] Loc. cit., p. 483.

[24] Physiology, fifth edition, 1890, p. 1089.

[25] The anterior commissure seems mainly to connect the convolutions of the tip and under surface of the temporal lobe, so that it is more probable that its upper and posterior regions should be brought into structural and functional relation through fibres of the corpus callosum.

[26] Paralyses: Cerebral, Bulbar, and Spinal, 1886, p. 267.

[27] On this subject see what has already been said towards the end of the last section but one of the first lecture.

[28] What has just been said concerning the right auditory word-centre applies almost equally strongly to the right visual word-centre. We want to know also to what extent and for how long the comprehension of written and printed words is impaired by destruction of the right angular gyrus and supra-marginal lobule.

[29] Ziemssen's Pathologie und Therapie, Band xii., 1876, p. 168.

[30] Revue de Médecine, 1885, p. 625.

[31] Lectures, translation by Bazire, pp. 253, 267. This is quoted in part as my Case 16.

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for the existence of another special illustration of a general principle which has previously been strongly advocated by others—namely, that of the double representation of movements in each hemisphere of the brain. Indeed, for many years Hughlings Jackson has gone further still, and has advanced the speculation[32] "that all parts of both sides of the body are represented in each half of the brain." Definite evidence on this subject was brought forward by Goltz, who, at the Physiological Congress in Basel in September, 1889, showed a dog from which almost the whole of the left hemisphere had been removed, and from whose behaviour, as demonstrated to the Congress, he felt able to announce the following important conclusions[33]: "Each cerebral hemisphere is in connexion with the voluntary muscles of both halves of the body. It appears, however, that the connexion between one cerebral hemisphere and the muscles of the opposite half of the body is more convenient than that on the same side. Hence a dog whose left hemisphere is destroyed prefers to use the left paw, because the will impulses from the right hemisphere flow by more convenient paths to the left limbs." He showed that sensibility was also present, and only somewhat impaired, in the right limbs of this dog. On the death of the animal the brain was removed, and was subsequently submitted to a most thorough examination by Langley and Grünbaum, who, at the conclusion of their report, say[34]: "We have seen that in this dog there was on the left side no part of the cortex remaining except a small portion of the hippocampal convolution, and a little grey matter round the optic chiasma; that the left corpus striatum had been removed, and that the nerve cells of the left optic thalamus had degenerated. Notwithstanding this, it appears from Professor Goltz's account that the animal retained voluntary power over all its muscles and could feel in every part of its body." So far as the production of movements is concerned, these results are harmonious with the well-known results obtained by Franck and Pitres,[35] who, after removing the so-called motor cortex on one side in a dog, found on faradaisation of the opposite cortical region that a convulsion was produced which involved first the limbs of the opposite side and then those of the same side of the body. Although this evidence tends in the same direction, it is not nearly so conclusive as that of Goltz.[36]

There is likewise actual evidence tending to show that in man also all movements are to some extent represented in each hemisphere of the brain. The representation of bilateral movements, as Broadbent originally pointed out, is commonly pretty equal, whilst that of limb movements is very unequal, being strong for the independent movements of the opposite limb and weak for the corresponding movements on the same side of the body. In support of this double cerebral representation there is the well-known fact that in hemiplegia some amount of paresis exists also on the opposite side of the body (that is, on the side of the brain lesion). There is also the well-known fact that in cases of large lesions in one hemisphere occurring in early life defects of sensibility are often even more thoroughly recovered from than the motor defects.[37]

What has already been said tends to show that bilateral arrangements of different kinds exist in the brain more or less analogous to that which I now postulate, namely, that Broca's centre is connected with both auditory word-centres—very intimately with the centre of the same side, and less intimately with that of the opposite side. The fact, moreover, that there are half-vision centres only in each hemisphere would seem to make it highly probable that for the voluntary performance of movements of one hand and arm, as in writing, there must in undamaged brains also be concurrent activity of these two centres brought to bear upon the cheiro-kinæsthetic centre during the conception and voluntary initiation of the movements. It has long been known that a functional activity of the visual centre is as essential for the conception and initiation of voluntary limb movements as a functional activity of the auditory centre is for the initiation of the voluntary movements concerned with speech. It would seem, therefore, as if in each case we have double auditory or double visual centres exercising their influence upon a kinæsthetic centre in the left hemisphere, in which speech movements have been registered in the one case and writing movements in the other.

The existence of the kind of nervous arrangements that I have been endeavouring to indicate in the two hemispheres would clearly necessitate the presence of numerous fibres in the corpus callosum having an oblique direction, in addition to those that are more directly transverse. It is well known that for long Meynert's view was generally accepted, to the effect that the fibres of the corpus callosum only serve to connect similar regions in the two hemispheres. By the careful study of the course of "secondary degenerations" in the corpus callosum resulting from lesions of different parts of the cortex Sherrington has, however, shown that this was an erroneous view. He has found[38] that not only similar but dissimilar parts of the two hemispheres are connected through this commissure. In regard to some inquiries of mine concerning this subject Sherrington writes: "My evidence was in part, as you suggest, the obliquity of the fibres, and also in part the spreading of them. ..... I found the degenerations from even circumscribed lesions of the fronto-parietal cortex spread considerably, especially after crossing the corpus callosum. I saw nothing at all incompatible with what you urge, but anatomically everything in favour of it."

There is another point of great interest in this connexion, and that is the greatly increased development of the corpus callosum in man as compared with that in the brain of the great man-like apes. We have it on the excellent authority of the late Professor Marshall[39] that the bulk of the corpus callosum, in proportion to the size of the brain, is twice as great in man as it is in the chimpanzee. It is only fair to assume that this relatively enormous increase in the comparative bulk of the corpus callosum is due in large part, either directly or indirectly, to man's acquirement of language and all the mental and moral development that has grown out of it.

(4) DEFECTS RESULTING FROM ISOLATION OF THE LEFT AUDITORY WORD-CENTRE.

A clinical condition is produced by the isolation of the left auditory word-centre—that is, by the cutting it off from all its afferent fibres—which was first described by Lichtheim in 1884,[40] upon the basis of a single case of word-deafness that seemed to differ from all others that had been previously recorded. To this condition Lichtheim gave the name of "isolated speech-deafness." It has been spoken of also by Wernicke as "subcortical word-deafness," whilst lately a similar condition has been described by Dójerine (who seems to have been oblivious or unaware of Lichtheim's case) under the name of "pure word-deafness." The state itself is simple enough, though an extremely interesting one. It is the condition of a partially deaf man, the deafness being not general, but limited to word-deafness. The patient can hear ordinary sounds, though more or less badly, he can talk correctly, can write correctly, can read aloud, and understand what he reads. His three disabilities are that he is unable to comprehend spoken words, and that he is consequently unable either to repeat words or to write from dictation.

I cannot agree with the pathology of the affection as given by Lichtheim or with that advanced by Dójerine. Lichtheim says[41]: "Both ears are capable of receiving and transmitting excitations of speech, but intelligence of language is bound up with the activity of the left hemisphere only, so both acoustic nerves must enter into relation with the latter." Thus the affection we are considering, he adds, "can obviously come into existence only if the irradiations of both acoustic nerves in the left temporal region are broken through." He concludes that the union of these two tracts takes place in the cerebral hemisphere above the level of the

[32] Brit. Med Jour., vol. i. 1884, p. 593.
[33] Journal of Physiology, 1890, p. 608.
[34] Loc. cit., p. 634.
[35] Archives de Physiologie, Aug. 15th, 1883.
[36] It has been shown by Sherrington and others in their studies of "secondary degenerations" that some of these double motor effects may be accounted for by the distribution in the cord of the fibres of the pyramidal tracts. It is known also that Broadbent explains some of the bilateral movements by reference to commissures existing between functionally related bilateral centres in the cord. But the voluntary movements of the right fore-paw in Goltz's dog must have implied the development in the only existing right hemisphere of the animal of all the nervous arrangements needful for the "conception" of separate movements in this right limb, that is, the passage to it and registration of kinæsthetic impressions from this limb, as well as the bringing of this centre into relation with the visual centre, in the manner that would be needful for the production of its voluntary movements.
[37] Paralyses: Cerebral, Bulbar, and Spinal, 1886, p. 262.
[38] Journal of Physiology, 1889, p. 429.
[39] Natural History Review, vol. i., p. 296.
[40] Brain, January, 1885, p. 460.
[41] Ibid., January, 1885, p. 482.

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internal capsule, and he believes it to occur somewhere in the white matter of the temporal lobe. A lesion in this situation, therefore, cutting off, as he assumes, the afferent fibres of both auditory nerves on their way to the left auditory word-centre, is the explanation that Lichtheim gives of the production of "isolated speech-deafness." Déjerine's view is still less satisfactory, as he speaks only of a severance of one set of afferent fibres proceeding to this centre.[42]

In regard to these explanations it may be said that the view of Déjerine is certainly insufficient, since, as I have already observed, it is well known that the cutting off of the afferent impressions going to the brain from the right ear alone does not give rise to word-deafness. Lichtheim's explanation, on the other hand, is unsupported by any anatomical facts showing the distribution that he assumes to exist, which would really be that of a semi-decussation of the auditory nerves, since, after speaking of his imaginary arrangement on the left side of the brain, he adds in a footnote, "a similar distribution must obtain in the right hemisphere." Both Lichtheim and Déjerine seem to think that the right auditory word-centre is either non-existent or possessed of no functional activity, and consequently that it is not brought into relation with the left auditory word-centre. They seem also to hold similar views as to the absence of a visual word-centre in the right hemisphere. If these views were correct, surely such convolutional regions in the right hemisphere ought to show some distinct diminution in size and development as compared with those of the left side. But no one as yet seems to have noticed anything of the sort.

There was no necropsy in Lichtheim's case of "isolated speech deafness," and from the particulars given it seems clear that the patient was generally rather deaf, altogether apart from his word-deafness. Thus my interpretation of this case some time since, after a careful study of its details, was that there probably existed pretty complete deafness on the right side, cutting off the left auditory word-centre from its proper incitations, whilst the slight sudden brain attack that is recorded to have occurred in June, 1882, may in some way have destroyed the commissural fibres connecting the left with the right auditory word-centre. In this way we should have the isolation of the left auditory word-centre brought about without the necessity for postulating the existence of any hypothetical and altogether unproved distribution of the auditory fibres within the brain. We should, in fact, have to do with a man partially deaf, capable of hearing noises only, but not able to perceive the meaning of spoken words—owing, on the one hand, to the complete isolation of the left auditory word-centre from all sounds; and, on the other, to the inadequacy for this purpose of the right centre alone, because of the imperfect development of associational fibres in connexion with speech functions in this hemisphere. This view has since been rather confirmed by the record of another case by Sérieux,[43] in which it is definitedly stated that the patient was absolutely deaf on the right side, as a sequence of an old otitis. The following are a few brief details concerning this case.

CASE 31.—The patient was a woman, aged fifty-one years. She had been suffering from partial word-deafness for six years. There was a complete absence of word-blindness, of motor aphasia, and of agraphia. Her hearing was normal on the left side, but absent on the right by reason of an old otitis. There was musical amnesia, the patient being unable to recognise or to sing certain airs. There was incomplete word-deafness; and writing from dictation was defective. There was slight paraphasia and paragraphia in spontaneous speech and writing. Comprehension of written language was slightly affected. There was progressive development of symptoms; especially subsequent to another slight cerebral attack, after which the word-deafness became complete and the power of writing from dictation was lost. Her spontaneous speech and writing still remained incorrect. Reading aloud was possible, but most frequently without comprehension of what was read.

Strangely enough it has been found that a very similar clinical combination may be produced in quite a different way, as may be seen by reference to the very remarkable case, previously cited from Pick, of destruction of the auditory word-centre in each hemisphere. Here the clinical condition was almost identically the same. There was even a certain amount of general deafness, though it was not due to middle-ear disease, nor did it seem to be definitely localised to one side. As I have already said, this case seems absolutely inexplicable unless we are to suppose that the patient was a "visual" who could speak, write, read aloud, and understand wha he read, mainly through the activity of the visual and the kinæsthetic word-centres—at all events without the coöperation of the auditory word-centres, seeing that these were destroyed. The case shows, moreover, that general deafness does not result from destruction of these special word-centres even in both hemispheres. The patient's general hearing power was defective, though far from lost.

These are the only three cases of "isolated word-deafness" known to me.[44] It will be seen from what I have said that this rare group of symptoms is capable of being induced in two very different modes—just as we shall find subsequently that what Déjerine has called "pure word-blindness" may also be produced in two different modes, and that the modes are analogous in the two cases. Pick was fully aware of the very unusual nature of his case. He recognised that it could not be a case of sub-cortical word-deafness of Lichtheim's and Déjerine's type, though he was not prepared to advance any other interpretation. Mirallié, however, has been so very uncritical as to cite it[45] as an example of Déjerine's type, notwithstanding the fact of the existence of the double cortical lesions occupying the sites of the auditory word-centres.

(To be continued.)

[42] Mémoires de la Société de Biologie, 1891, p. 112.
[43] Revue de Médecine, 1893, p. 733. It is quoted also by Mirallié (loc. cit., p. 190).
[44] Though Wernicke says a few words concerning a case that had come under his observation (see Fortschritte der Medicin, 1886, p. 474).
[45] Loc. cit., p. 171.

TWO CASES OF

INTUSSUSCEPTION SUCCESSFULLY TREATED BY LAPAROTOMY; ONE PRESENTING SEVERAL UNUSUAL FEATURES.

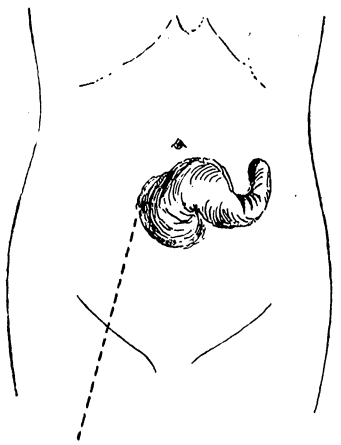
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OF the following cases the first is of special interest, more from the suggestive nature of some of the symptoms than from the numerous risks which the little patient successfully surmounted.

CASE 1.—A girl, aged eight years, the subject of a perfectly controlled right inguinal hernia, was admitted into the Leeds Infirmary under Mr. Mayo Robson on Aug. 7th, 1896, and in his absence came under my care. Seventeen days before, when at school, she was seized with pain in the abdomen during defecation. From that time vomiting had been constant and pain intermittent. Actions of the bowels were obtained on the sixth and eleventh days, and the motions contained neither blood nor mucus. Though flatus was passed occasionally, the abdominal distension had gradually increased. Two days before admission all her symptoms were aggravated and the obstruction became apparently complete. When first seen on the evening of Aug. 7th there was great abdominal distension and general tympanites. Vigorous visible intestinal movements could easily be excited, but no tumour could be felt. The tongue was moist and furred, the pulse was 140, and the intelligence was clear. The condition to be dealt with was obstruction, not strangulation, and the patient's condition was critical; so enterotomy, to tide her over the immediate danger, was decided upon in case there was any difficulty in finding the cause of the trouble. On opening the abdomen in the middle line the distension produced by the enlarged small intestine was so tight that the utmost difficulty was experienced in insinuating the fingers between it and the parietes to explore the hernial orifices and the cæcal region. Nothing suspicious was detected, and to have done more some of the coils of bowel must have been brought outside the abdomen, a proceeding which I feared would be likely to add very greatly to the severity of the operation. A knuckle of small intestine was therefore selected and fastened in the lower angle of the wound, which was then closed. The bowel was opened at once and a Paul's tube inserted. The operation did not take long, and the patient stood it well. Perfect relief was obtained, and the patient's general condition quickly improved, but she remained subject to spasms of pain—less severe, certainly, than before, but sufficient to wake her during sleep and to call for the administration of opium at times. When the distension had completely

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subsided a distinct thickening could be felt in the right iliac and lumbar regions, and the resonance over it was much impaired. The character of the swelling varied, being sometimes soft and almost imperceptible, and at other times (especially after examination) hard and distinct, when the abdominal surface became slightly raised, as if the bowel underneath were in excessive peristalsis, and pain was complained of in the tumour and down the right thigh and over the instep. The diagnosis of intussusception was made, and it was soon evident that it was permeable, for on the 17th there were two evacuations by the rectum, one of which was slightly streaked with blood. Some delay in dealing with the tumour now occurred in attempting to improve the surface of the abdomen, which had become raw over a large area. The last plan tried was the insertion of a Paul's tube to lead away the fæces through the dressings, but one night it slipped in and was lost. For the next thirty-six hours the patient was kept lying on the left side to prevent the right from being soiled, and on Sept. 3rd the following operation was performed under A.C.E. mixture. The artificial anus was plugged and the abdomen, especially the right side, was carefully cleansed with soap and carbolic lotion, and then with benzine, and finally washed with carbonate of soda solution and soap. Pieces of gauze were then spread over the artificial anus and the raw surface on either side of the intended incision. This was four inches long and extended from one inch below the costal margin to a point inside the anterior superior spine, external to the right linea semilunaris. On opening the peritoneum the large bowel was found with the small intestine invaginated into it. At this point there was some congestion, and strands of lymph were stretched between the two portions of bowel. The cæcum and vermiform appendix were not involved in the tumour, which was about ten inches long. The apex of the intussusception was brought to the surface, and by pressing up the lower end of the invagination reduction was quite easily accomplished; numerous bands of stringy lymph, which united the two opposed serous surfaces, being ruptured as the outer layer peeled down from the tumour. The invaginated bowel was small, much contracted, and reddened, and showed the results of plastic peritonitis; the mesentery was congested and puckered by adhesions. About six inches above the ileo-cæcal valve a thickened lump projected from the inner surface of the bowel opposite to the mesenteric attachment. This was no doubt the presenting portion of the invagination, which was of the ileo-colic variety. The Paul's tube was sought for and found, and as it could not easily be passed back through the artificial anus it was passed on through the bowel that had been reduced and left at the top of the ascending colon. The wound was sutured in layers and dressed with collodion and gauze. At the moment when the tumour was brought to the surface and put somewhat on the stretch and during its manipulation the patient became very pale and collapsed, but an ether injection helped her, and at the close of the operation her condition was satisfactory. From this operation the child made a good recovery, except for some suppuration about the wound, which eventually became soundly healed. She was completely relieved of "the pain in her inside," and the bowels acted by the rectum occasionally up to Sept. 23th, when a spur had formed. On Sept. 13th, as she had been complaining of spasmodic pains, she was anæsthetised to see if the Paul's tube could be detected. It was found where it had been left. The opportunity was taken to close the artificial anus by dissecting the edges down, inverting and suturing them. The union had completely broken down on the 18th, but the fæces had passed along the colon for at least three days, and the Paul's tube came away after an injection on Oct. 6th. In October a remarkable series of events took place. For some time the child had been suffering from colicky pains, for which it had been necessary to give opium occasionally. These pains increased in severity, and by Oct. 20th a protrusion of the bowel had appeared from the artificial anus on seven occasions, usually after an exacerbation of the pains. It generally attained a length of three or four inches, was usually in a state of active peristalsis, was firm and solid, and in appearance was exactly like the intussusceptum of an invagination. Its reduction was on several occasions so difficult that an anæsthetic had to be given. I was only fortunate enough to see the protrusion once, when it lay upon the surface of the abdomen with the sigmoid curve represented in the sketch. An inability to obtain a probe at the moment prevented me from settling its real nature—whether prolapse or intussusception—before reducing it; and, unfortunately, I never had another opportunity, nor am I aware that the investigation was ever made. These protrusions came sometimes from the upper, and on two occasions at least from the lower, segment of bowel. This point was settled by the escape of fæces from the apex in some instances, and in others, when the lower segment was affected, by their discharge at the root of the outgrowth. On the latter occasions the prolapsing gut would disappear down the aperture on one side of the spur, whilst fæces would pour away from the opening on the other. But a still more interesting fact was noticed on Oct. 16th, when the swelling appeared from the upper



portion. The Sister attempted to return it, but only succeeded in diminishing it by half an inch. When Mr. R. H. Trotter arrived twenty minutes later it was about an inch long. As soon as it was uncovered spontaneous reduction began and the tumour disappeared without being touched. It was in active peristalsis the whole time, and the reduction took place from the end, the outer layer being continually inverted at the apex until the whole had disappeared. On Oct. 20th, with some misgiving in consequence of this peculiar behaviour of the intestine, I proceeded to perform enterectomy for the closure of the artificial anus. The edges of this aperture were first separated, and then carefully closed over a plug of gauze with a continuous suture. The raw abdominal surface was next cleaned with the same precautions as before, and covered with gauze around the intended incision. The abdomen was then opened, the intestine isolated from its attachments to the parietes, and a loop containing the artificial anus was clamped with india-rubber tubing. Two inches of intestine including the opening, were cut away, and the divided ends sewn together over a Mayo Robson's bobbin. The wound was then closed. Nothing was found in the appearance of the bowel close to the part resected to explain the tendency to protrusion. The patient did well uninterruptedly. Ether sickness persisted for thirty-six hours and then fluid food was retained. Nepenthe was twice ordered for pain connected with the operation, but after the first day it was evident that the child was greatly relieved. She slept peacefully, and was not roused by spasmodic pains as she had been before the operation, even when taking opium regularly—indeed, she did not complain of pain at all. She was happy and cheerful, and gained flesh daily. The bowels were moved on the second day and have acted regularly since. The bobbin came away on the fourth day. The wound was healed on Nov. 11th. The patient was up on the 14th and went home on the 21st, and remains well. I gratefully acknowledge the help received in the course of the case from several of my colleagues, the resident surgical officer (Mr. Basil Hall), and particularly from the house surgeon (Mr. R. H. Trotter), upon whose careful observations and notes much of the interest of the case depends.

CASE 2.—Late in the evening of Nov. 14th, 1896, I was asked to see a boy, aged eight years, who had been admitted into the Leeds Infirmary under Dr. Chadwick on the previous afternoon. He was suffering from all the typical signs of acute intussusception. The vomiting, which had been severe so long as nourishment had been taken, had moderated.

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The pain had kept him awake all the previous night and at times was so severe as to make him cry out. Numerous evacuations containing blood-stained mucus and no fæces had been passed, and a tumour could be felt just below the splenic region. This was sometimes soft and at others hard, and when in this latter condition it formed a visible swelling as big as an orange. There was no abdominal distension, the pulse was 130, and the patient was in fair condition, though the onset had occurred with sudden pain before breakfast on the 10th, and the symptoms had been acute from the commencement, the vomiting and bloody stools beginning almost directly after the first attack of pain. At midnight, therefore, on Nov. 14th, he was put under A. C. E. mixture, and inflation was performed with a Higginson's syringe. As this proceeded, and the large intestine became distended, the tumour was excited to very powerful peristalsis. It gradually appeared as a curved mass with one extremity above and to the right of the umbilicus, and the other dipping down into the left lumbar region. It stood up on the surface of the abdomen as a sharply defined, firm, bossy swelling of considerable elevation. Its length was quite six inches, but it was subsequently found that the whole of the tumour could not have been visible. As inflation progressed its only effect was to make the mass stand up more vigorously; so it was discontinued, when the swelling gradually faded away. After the usual preliminaries the abdomen was at once opened by a median incision three inches long, beginning a little above the umbilicus. The descending colon was found at once and traced up until the tumour could be felt. The fingers of the right hand in the abdomen then compressed the ensheathing bowel upon the invagination, and, gradually, inch by inch, the colon came down from it as the apex was pushed up. When some inches had been drawn down in this way the presenting portion could be brought into the incision and its dark colour recognised through the healthy bowel covering it. The neck was now sought for by the left fingers and found deeply situated against the spine and very firmly fixed there. The tumour at this stage felt to be six or seven inches long and much thicker than the lower part when first grasped, as if the intussusception had been simply crowded up into a smaller space. However, as the process was continued the tumour was felt slowly to diminish, and when only about one and a half inches remained it became more moveable but more difficult to unroll. It was now easily brought into the wound and the disinvagination completed in sight, some difficulty being caused by the stiffness of the presenting part. This was a disc-like portion of the bowel rather larger than a shilling, situated away from the meso-colic attachment, convex towards the lumen, and concave externally. It was so stiff that it felt as if any attempt to press out the concavity would crack it. This disc was situated in the large intestine, which, both above and below, was much thickened and altered in colour from the congested interior showing through the peritoneal covering, which also presented signs of inflammation. The intussusception was therefore of the colic variety, but no attempt was made to learn how far the presenting part was from the ileo-cæcal valve. Several ruptures of the peritoneal coat of the bowel were produced by the manipulations, but these were not touched, and as soon as the reduction was completed, and the soundness of the part last unrolled ascertained the abdomen was closed. The proceeding had been carried out almost entirely inside the abdomen, where the distension produced by the inflation had proved to be somewhat embarrassing. With the exception of an attack of bronchitis following the operation, the subsequent record is one of steady convalescence. Relief was complete. Vomiting stopped, fluid nourishment was retained, and a natural motion was passed within eighteen hours of the operation. A dull area was present in the umbilical region for some time and probably corresponded with the position of the thickened bowel. Healing was complete by Dec. 20th, the child went home on Jan. 2nd after the Christmas festivities, and he remained well at the time of writing.

Remarks.—When a condition such as intussusception shows so high a percentage of cases as 62 in which no obvious exciting cause can be detected it presents at least a fair field for speculation. According to the figures given by Mr. Treves [1] about half the remaining 38 per cent. owe their origin to some local trouble, whilst some ailment, the influence of which is doubtful, is usually associated with most of the others. When no gross explanatory lesion is forthcoming it is only natural that we should turn to the nervous system for inspiration, for the movements of the intestines are under the influence of a somewhat complicated piece of nerve mechanism, a description of which is given in Foster's "Physiology," Part ii., p. 491. To anyone interested in the etiology of intussusception the section is very suggestive, and not the least so that portion of it which applies more particularly to the intussusceptions of the dying. It is sufficient for my purpose, however, to remind the reader that stimulation of the vagus gives rise to powerful peristaltic movements, or increases those previously going on, and that efferent impulses along this path may be excited by afferent ones, such as emotion, fear, or chill—to mention some which are matters of personal experience to most people. This reflex phenomenon is no doubt more readily produced in some than in others, and even in the same individual the ease with which it is excited may vary considerably and be largely influenced by the state of health and the consequent tone of the nervous system. It is of importance here because it is sufficient to explain those violent and irregular intestinal movements which are regarded as the predisposing causes of an invagination; and the fact that the subjects of intussusception noticeably belong to the category of weakly or delicate children, in whom the nerve functions are likely to be more than usually sensitive, does not diminish the probability that the exciting cause of many an invagination may be found in some peripheral irritation.

Now, there are some points in the first case that have a marked bearing upon this matter. First, for the sake of clearness, let it be understood that the protrusions which came from the artificial anus will be regarded as complete prolapses of the bowel, because such a condition would be less remarkable, and consequently more probable, than an intussusception.[2] The presence of the Paul's tube might have been thought sufficient to account for those manifestations had not the painful peristalsis and consequent prolapses increased in severity and frequency after its expulsion. Circumstances, however, point strongly to the conclusion that all the trouble was due to the frequent irritation of the raw abdominal surface by contact with the intestinal contents, for as soon as the enterectomy was performed and this could no longer occur, the painful peristalsis became a thing of the past. The association between prolapse and intussusception is so close (and particularly so in this instance, as will be seen from what is said below) that an influence which can lead to the one is probably quite capable, under suitable conditions, of giving rise to the other.

In the light of the present case there is nothing difficult to understand in that of a child, aged five years, mentioned in Mr. Treves's monograph, who died with an intussusception four days after a burn,[3] nor in the six cases collected by Leichtenstern, in which symptoms appeared after exposure to cold. If this reasoning is correct it should excite no surprise that the etiology of so small a number of cases of intussusception is cleared up by post-mortem examination, for it is more than probable that the real exciting cause of not a few is some external influence, often so slight as to be easily overlooked, or of such a temporary character as to be incapable of recognition by the children who are affected.

Mr. Golding-Bird [4] records a case in which a retrograde intussusception made its appearance on the surface of the abdomen through a patent Meckel's diverticulum. The cord had separated four days after birth and fæces had been discharged from the navel from that time. Mr. Golding-Bird refers to a paper by Barth,[5] giving about a dozen instances of prolapse and one of intussusception under similar conditions. These cases have a striking resemblance to the one under discussion, but the point to which I would draw particular attention is that the same form of surface irritation was certain to have been present in all.

The strong points of likeness that exist between the prolapses and the invagination in this case are due to the particular variety to which the latter belonged—viz., the ileo-colic. Mr. Treves has pointed out that this form originates in a different way from any other. It begins as a prolapse

[1] Treves: Intestinal Obstruction, p. 211.

[2] Golding-Bird: Transactions of the Clinical Society, vol. xxix.

[3] Dr. Heckford: THE LANCET, March 23rd, 1867, p. 362.

[4] Loc. cit., p. 34.

[5] Deutsche Zeitschrift für Chirurgie, 1887, vol. xxvi.

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of the ileum into the ascending colon, which increases so long as the length of the mesentery permits it. When the ileum can prolapse no further the process changes, the cæcum and ascending colon being gradually inverted and the continued growth of the tumour taking place in the usual way. Here the second stage had not begun.[6] It is evident from this that in their nature and mode of origin the two conditions were practically identical. This identity is of special interest when viewed in connexion with the unassisted return of the prolapse which was witnessed upon one occasion. If a prolapse through an artificial anus can recede of its own accord, one lying loose in the capacious ascending colon can probably do the same. The possibility of spontaneous reduction of an intussusception is admitted and thought to occur not unfrequently, though from the very nature of the case actual proof is wanting. But the method by which it is accomplished can be gathered from this observation. A vigorous peristalsis occurs in the entering tube of bowel, and as the wave passes downwards succeeding lengths of longitudinal fibres contract and invert successive portions of the returning layer at the apex. In this way the intussusceptedbowel diminishes, and is finally reduced. If the methods of artificial and spontaneous reduction are compared an interesting difference is revealed. The surgeon disengages the bowel by peeling the sheath downwards off the intussusceptum, at the expense of the upper end of the returning cylinder, until reduction is completed; but the intestine produces the same result by the intrinsic action of the entering layer, which rolls the returning cylinder inwards at its lower end until the whole of it has disappeared and the invagination no longer exists.

Attention cannot fail to be attracted by the fact that in Case 1 reduction was easy of accomplishment after symptoms had existed for forty-four days. In Mr. Hutchinson's well-known case disinvagination was safely performed at the end of a month. But neither of these approaches the case recorded by Dr. Handfield-Jones and Mr. Page,[7] in which an invagination was reduced after a probable duration of three months.

The variety of the intussusception and the diversion of the fæces were no doubt the two contributing factors to this result in my first case. Had the intussusceptum been firmly grasped by the sheath, instead of lying rather loosely in it, the congestion would have been much greater and the inflammation of the opposed serous surfaces more intense and of earlier date; whilst the artificial anus probably prevented the continued growth of the tumour by the inverting of the cæcum and ascending colon, a circumstance that would quickly have been followed by acute symptoms. It has been pointed out that the absence of bloody stools may be due to strangulation of the invagination, and that consequently that important symptom is not to be relied upon as a trustworthy indication of the condition of the bowel. But if it be considered in association with the constitutional symptoms and condition of the patient it is a distinct help. If there be no bloodstained discharge from the rectum in a case of intussusception, it probably means either that the blood flow through the tumour has been suddenly stopped or that it has not been seriously affected. In the former case the usual signs of strangulation will quickly make their appearance; in the latter they will not. In this instance the absence of a bloodstained mucous discharge and of excessive tenderness about the tumour led me to hope that the opposed serous surfaces would not be found inseparable.

One other point is worth mentioning. On one occasion when the first patient was under an anæsthetic I introduced my finger through the artificial anus to feel the tumour bimanually, and was astonished at the facility it gave for exploring the abdominal cavity. So freely could the finger be moved about in all directions that for a moment I feared it might have got inside the peritoneum. The intussusception could be felt from its neck in the right iliac fossa to its os uteri-like apex near the gall bladder. The left loin and iliac fossa could be examined with equal ease, and no doubt the pelvis and higher abdominal regions could have been similarly investigated had I not felt that it is sometimes wise to set a limit to curiosity.

Leeds.

[6] Treves: Loc. cit., p. 173.

[7] Transactions of the Royal Medical and Chirurgical Society, vol. lxi., 1878.

HEPATIC FISTULA SUCCESSFULLY CLOSED AFTER SIXTEEN MONTHS.

BY D. M. MOIR, M.A. ST. AND., M.B., C.M. EDIN.,
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AN Armenian, aged twenty-seven years, while employed in railway construction at Selangor in the Straits Settlements about the middle of December, 1893, began to suffer from what eventually proved to be an abscess of the liver. He was admitted into hospital at Perak at the end of January, 1894. Early in March he was transferred to the hospital at Penang, where he was operated on for an abscess of the liver. Six weeks later he was discharged apparently cured, the wound having closed. He sailed for Singapore, but the wound re-opened on the voyage, and there was a copious purulent discharge. On arrival at Singapore he went into hospital, and a drainage-tube was inserted. The wound was again healed by the end of June. After remaining six weeks longer at Singapore the sinus reopened and again began to discharge pus. Accordingly he sailed for Calcutta, and was admitted into the Presidency General Hospital on Sept. 4th, 1894. No antecedent history of dysentery or drink could be elicited. On admission he was in rather a reduced condition, weighing only 123 lb. The liver was of natural size, but there was a hepatic fistula discharging unhealthy pus in the eighth intercostal space and pretty far back in the infra-axillary region. On Sept. 6th the first attempt to close the sinus was made. An incision was made to explore for dead bone, but the ribs were quite healthy. After a little manipulation the fistula was found to be very narrow, slightly tortuous, and six inches long. Its track was dilated so as to admit a long and narrow drainage-tube. On the 10th the patient was transferred to my wards, and he continued as my patient until he finally left the hospital in October, 1895. Syringing with iodine lotion and insufflation with iodoform were tried, but ineffectually. Then on Sept. 28th, 1894, an inch and a half of the eighth rib was resected in the region of the fistula. The channel was over six inches, very narrow (admitting only a fine probe or a knitting needle), and had dense walls which felt almost cartilaginous in consistence. In its course the fistula traversed the pleural cavity (the pleura being adherent around it), the diaphragm, and a considerable thickness of liver tissue near the upper surface of the right lobe. The track was dilated gradually with some difficulty, until, finally, a cavity was reached. The finger could just reach this cavity; but it was estimated, with the help of instruments, that it was about the size of a hen's egg, and that it had thick walls. A collection of pus, caseous material, and sloughy tissue was removed by a long-handled Volkmann's spoon. A drainage tube having a diameter of three quarters of an inch was inserted. For the next two or three days the patient suffered from acute epigastric pain, nausea, and vomiting; but after Oct. 1st there was no further trouble. Up to the end of November his physical condition was good, and he weighed 138 lb., having gained over a stone; but the fistula would not heal, and at this time was two and a half inches long. Although the discharge had become scanty it frequently contained bile and mucus for several days at a time—and the bile seemed to retard healing. Various solutions were tried for syringing the fistula—e.g., carbolic acid, perchloride of mercury, boric acid, thymol, iodine, iodoform in ether, and sulphate of zinc. The tube was gradually shortened, then smaller tubes were substituted, and finally when the fistula narrowed a strip of lint was inserted. Bark and ammonia and hypophosphites were given, and on several occasions sponge grafting was tried, but nothing succeeded. In December he began to lose ground again, and the length of the fistula varied from three to four inches. The discharge contained flaky pus, occasionally bile, and tenacious glairy mucus. The wound was syringed twice, sometimes thrice, a day. This improved the character of the discharge. A solution of nitrate of silver was once injected along the track; but it proved injurious, causing acute pain in the epigastrium, vomiting of bile and mucus, and an increased discharge of bile from the wound. Sulphate of copper was also applied without material benefit. On Dec. 18th an incision was made through the former cicatrix, and the fistula was slit up and dilated. The cavity

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was now smaller and more shallow, and so could be better explored by the finger. The dense connective tissue lining the walls of the fistula and cavity for the entire length of the track was thoroughly scraped with a Volkmann's spoon and the débris removed; then the entire raw surface was well swabbed with a solution of chloride of zinc (forty grains to the ounce) and a large drainage tube was introduced. This operation was not attended with any serious hæmorrhage. That night and next day there were cough, bilious vomiting, and epigastric pain. The drainage-tube seemed to irritate the diaphragm, but after the first two days he had little pain or discomfort. In January, 1895, he began to improve again. The fistula became smaller and the discharge less; but still the dressings were often bile-stained. Quinine and iron, nitro-muriatic acid, and nux vomica were administered. During February his general health was excellent, but the fistula remained much the same. Syringing and insufflation were discontinued, and a probe covered with cotton-wool and dipped in compound tincture of benzoin was daily inserted in the fistula. This proved more efficacious than anything hitherto tried; still, the track would not close, and the discharge contained bile at intervals. In March the same treatment was continued and the discharge almost ceased, but the fistula was still nearly two inches in depth, so on March 22nd he was sent on a voyage to Singapore in the hope that the change and sea air might prove beneficial. He returned to hospital on May 24th. The trip had apparently done him more harm than good. He looked worse and said he had felt miserable all the time he was at sea. The sinus was two and a half inches long and had been constantly discharging bile, mucus, and pus. His weight was 131 lb. He was given a tonic mixture, the wound was dusted with alum and iodoform, and a dry dressing of perchloride of mercury was applied. Early in June minute particles of nitrate of silver were inserted into the fistula, which remained about two inches long and continued to discharge bile occasionally. His weight rose to 136½ lb. On June 8th a probe heated red-hot was introduced and the walls of the track were thoroughly cauterised. This was the only operation which was followed by fever, and the febrile reaction was severe. Next day his temperature rose to 102° F., on the following day it varied from 100° to 104 2°, on the 11th from 101° to 104°, and on the 12th from 101·8° to 105·4° F. He was very restless and suffered from intense headache, and the discharge was profuse, greenish, and viscid. On that day he developed acute orchitis and epididymitis without any obvious cause. This was treated by free leeching and an evaporating lotion. By June 18th the fever had quite left him and he again began to improve, but the fistula had increased to three inches. The right testis remained large, and on the 22nd fluctuation was discovered, and his temperature again began to rise. An abscess in the globus major of the epididymis was incised and drained. He was given a mixture of strychnine and iron, with sulphate of magnesia occasionally, and powdered boric acid was applied to the fistula and a dry dressing. Early in July an emulsion of eucalyptus oil was injected into the fistula, which was again two and a half inches long. The track began to contract rapidly, and by July 8th the fistula was occluded and there was no discharge. The fistula was soon firmly healed and subsequently gave no further trouble. He remained under observation until Sept. 16th, when he was discharged feeling perfectly well and strong. But four days later he was re-admitted suffering from an anal abscess, which was incised on the day after admission and the wound healed readily. He was finally discharged on Oct. 7th, 1895, at which time the scar of the hepatic fistula was quite firm and the liver seemed sound. He went to Burmah, and I have heard nothing more of him.

Remarks.—This case is of some interest owing to its obstinate course, to the number of operations performed, and to the intercurrent complications. The persistence for sixteen months of a hepatic fistula, after an abscess of the liver was opened, illustrates the evil of the too early removal of the drainage-tube. Probably, also, too small a tube was used in the first instance. For the drainage of an abscess of the liver the larger the tube the better, and there should never be any hurry to dispense with the tube. *Festina lente* is just as important a principle in the after-treatment of an abscess of the liver as is the avoidance of delay in operating when once the abscess has been diagnosed. Quite a variety of causes were at work to prevent the closure of the fistula—(1) There was the absence of surgical rest owing to the cavity and fistula having such close relations to the diaphragm, a muscle which is never at rest; (2) the course of the fistula was somewhat tortuous through the various layers of liver, peritoneum, diaphragm, pleura, intercostal muscles, and skin; (3) there resulted consequently an ill-drained cavity at the end of a long and sinuous passage, which would not heal owing to retained sloughs; (4) the escape of bile and mucus from time to time through the fistula caused irritation and retarded union; and (5) the chronic nature of the case tended to further the formation of a lining of dense cicatricial tissue in the walls of the fistula, which, until it was destroyed, of itself precluded the possibility of closure.

Calcutta.

ILLUSTRATIVE CASES OF APHASIA.

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(Continued from p. 1080.)

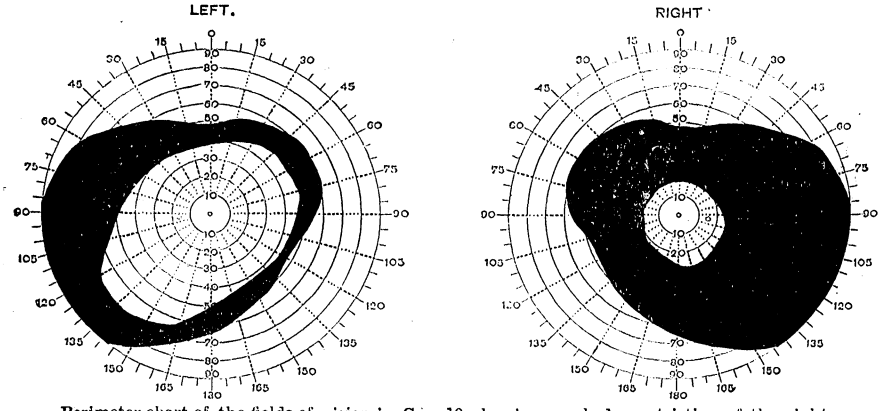
CASE 9. *Complete motor aphasia, word-blindness, and agraphia; no obvious word-deafness.*—This is another case in which the patient could understand spoken language; in other words, in which there was no obvious affection of the auditory speech centre, but in which there were complete motor vocal aphasia, word-blindness, and agraphia. This condition was present from the first. The absence of word-deafness in an otherwise complete aphasia of rapid development suggests either (*a*) that in some persons the auditory speech centre is active on both sides, or (*b*) that a profound vascular lesion which completely destroys the functional activity of the visual speech centre, the motor vocal speech centre, and which produces complete agraphia, does not implicate the auditory speech centre. In commenting upon Case 8 I have already referred to this most interesting and important question. The notes of the present case are as follows. The patient, a man aged sixty-three years, was seen on Aug. 31st, 1893, suffering from slight right-sided hemiplegia and aphasia. On the 27th he had some difficulty in speaking and his wife noticed that he repeated some words two or three times. This passed off in the course of a few hours. The next day the difficulty in speaking returned and again passed off. He remained fairly well until the 30th, when he had a more severe attack. He completely lost his speech, the temperature rose, his head became very hot, and he wandered a little in his mind. Since then he had complained of numbness and weakness in his right hand and leg. On examination the right side of the face was found to be markedly, and the right arm and leg very slightly, paralysed. Mentally the patient appeared pretty acute. He seemed to understand everything that was said to him; he put out his tongue, moved his hand, leg, &c., when told to do so. The auditory speech centre did not appear to be affected, at all events in any marked degree. There was complete motor vocal aphasia. He could not even say "yes" and "no." There was complete word-blindness. Several simple questions were put to him in writing, but he manifested no sign of intelligence. The rough test seemed to show that there was right-sided homonymous lateral hemianopsia; but in the patient's aphasic and word-blind condition it was difficult to be sure of this. He was quite unable to write; although there was little (gross) loss of power in the right arm and hand he seemed unable to hold a pen or pencil securely. A week after my visit he became very much worse, the temperature rose, he seemed to suffer from headache, and the right arm and leg became completely paralysed. The attack was probably due to secondary inflammatory changes around the lesion. He slowly recovered from this condition. On Nov. 8th, 1894, his wife, who was consulting me about herself, reported that he was able to walk and had regained some power in the right hand. He seemed to understand everything that was said to him, but was totally speechless; he could not even say "yes" and "no." He could not understand written language. He could sign his own name, but could not write anything else. She doubted if he always made signs correctly. She thought he sometimes pointed in one direction when he meant another. Nevertheless,

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he interested himself in his garden and grounds, and was constantly out of doors in fine weather, giving directions by signs, which were evidently intelligible, for the gardener did what he wished him to do.

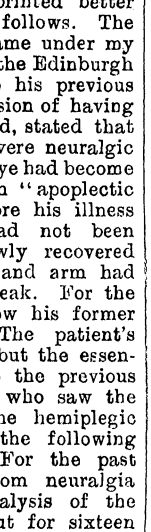
CASE 10. *Left hemiplegia with paralysis of the muscles supplied by the right third nerve; word-blindness; paragraphia.*—This case is of considerable interest from the fact that the marked word-blindness and paragraphia were apparently the result of a lesion of the right hemisphere, though the patient was right-handed. I say apparently the result of a lesion in the right hemisphere, for in the absence of post-mortem verification it is impossible to be absolutely sure on this point. There may, of course, have been a double lesion—one in the right side of the brain causing the paralysis of the right third nerve and the left-sided hemiplegia, and another in the left side of the brain (left angular gyrus) causing the word-blindness and paragraphia. But this is unlikely. An interesting point in the case is the fact that the patient could read printed better than written characters. The notes are as follows. The patient, a man aged thirty-four years, first came under my observation in the out-patient department of the Edinburgh Royal Infirmary on Feb. 10th, 1886. As to his previous history, the patient, who gave me the impression of having been both intelligent and fairly well educated, stated that four years previously he suffered from very severe neuralgic pains in the head and the muscles of his right eye had become paralysed. Three years previously he had an "apoplectic attack" followed by left hemiplegia. Before his illness he could read and write well. He had not been able to speak well since. He very slowly recovered from this attack; the paralysis of the face and arm had entirely disappeared, but the leg was still weak. For the past four months he had been able to follow his former employment and to earn 15*s.* a week. The patient's memory was evidently very much impaired, but the essential accuracy of the above statement as to the previous history is confirmed by Dr. John Thomson, who saw the patient a few days after the onset of the hemiplegic attack, and to whom I am indebted for the following note, which was made at that time. "For the past twelve months the patient has suffered from neuralgia of the head. This was followed by paralysis of the right third nerve. The right eye was shut for sixteen weeks, the patient saw double; the rest of his face was not affected, and no other parts of the body were paralysed. The right eyelid has always drooped since the attack. Since the paralysis the patient has suffered from recurrent attacks of neuralgia in the head. On the morning of Jan. 26th, 1883, he choked while sitting at breakfast; he then 'took a shiver' and was put to bed; there was some difficulty in getting his coat off his left arm. During the afternoon the left side gradually became more paralysed; he spoke a little when roused, but he has never spoken clearly since. He lay for two days in a stupid condition, and seemed to have pain in the throat; he was very cross and irritable, and would not swallow. Three days after the attack he was able to speak quite intelligently and was not so irritable; had a dose of castor-oil; has refused to take everything since; he attempted to get up and go out; had to be held down in bed." His condition on Feb. 10th, 1886, three years after the original seizure, was as follows. The patient, who was right-handed, was well nourished. The gait was markedly paralytic, with much circumduction of the left leg. The left arm was slightly weaker than the right and the left side of the face seemed somewhat flatter than the right. There was some ptosis of the right eyelid; the patient could neither rotate the eyeball upwards nor downwards; the eyeball was not rotated inwards during efforts of fixation for near objects, but it was moved inwards—i.e., to the left—in association with the opposite eye—i.e., when both eyeballs were turned to the left. The patient said that he saw double on looking up. The right pupil was dilated and twice the size of the left; its outline was slightly irregular; it contracted, but not briskly, both to light and accommodation. Both the acuity of vision and the field of vision were considerably impaired in the right eye, much less so in the left (see Fig. 18). On ophthalmoscopic examination the retina surrounding the margins of the right disc was perhaps a little hazy, the disc a little paler, and the veins a little larger and more dilated than those in the left. The other special senses appeared to be normal. Both the deep and superficial reflexes were greatly exaggerated (knee-clonus and ankle-clonus) in the left paralysed leg, and considerably exaggerated in the right. Urination and defecation were normal. The sensibility of the skin to tactile and painful impressions seemed normal and equal on both sides of the body. The heart and kidneys appeared to be healthy. As to his psychical functions, memory seemed much impaired and the cerebration generally slow, but the patient seemed to understand everything that was said to him and did what he was told. His emotional faculties were under loose control; he laughed much too easily. He seemed inordinately amused at many of the tests which were applied in eliciting the foregoing particulars. With regard to his speech faculties, there was no motor aphasia. The articulation was somewhat slow, thick, and hesitating. There was no obvious word-deafness. There was considerable word-blindness. The patient seemed to be able to read printed (type) characters much better than manuscript. The printed words "the," "on," "of," "by," "hotel," "same," "each," and "Switzerland" were read correctly. The word "the," written as in Fig. 19, he said was three figures. When asked after a considerable interval to read the same word he said, "It is two strokes and a nothing." The word "on," written as in Fig. 19, he read correctly. The word "no" (see Fig. 19) he read as "nothing"; and as to the word "by" (see Fig. 19) he said after some hesitation, "It is b y; no, it is b e; no, by." When tested on another occasion he was unable to read the written words "the" and "of," while "by" he said was "baby." While being tested on this occasion he was obviously quite conscious of his defects, for he said, "I am like a daft man; before I spell that out now I forget what I began with." On another occasion he correctly read his own name, "Edinburgh," and "How do you feel?" but could not read the words "dog" and "cat" when written by me. There was marked paragraphia. His manipulative powers were unimpaired, but he

FIG. 18.



Perimeter chart of the fields of vision in Case 10, showing marked constriction of the right and some constriction of the left field, perhaps the result of former papillitis.

FIG. 19.

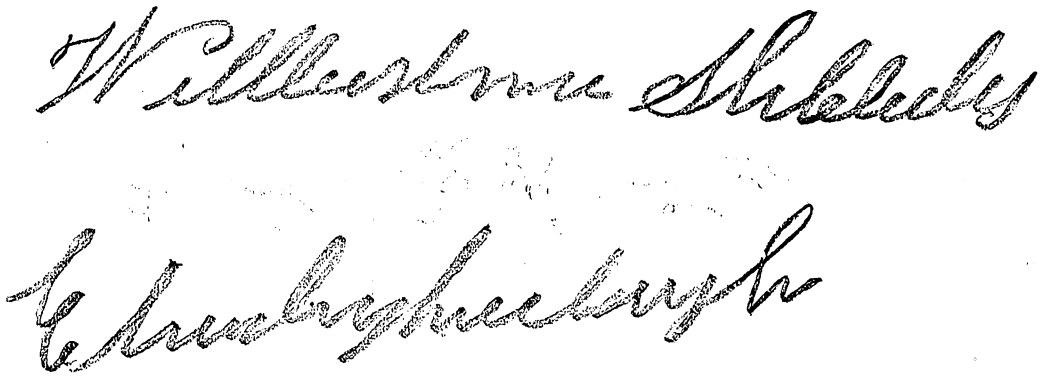


Facsimile of written words, some of which the patient was unable to read on June 2nd, 1887.

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always introduced too many letters into his words. Even his own name and the word "Edinburgh," which must have become by frequent repetition, when he was well, thoroughly "well organised," were hopelessly mis-spelt. A facsimile representation of his signature, and of the word "Edinburgh" as he wrote it, are given in Fig. 20. He also made mistakes in writing individual letters. The letters "a," "o," "c," "g," "t," "p," and "e" were written correctly, but he wrote "w" for "v," and "v" for "b." On the same occasion he wrote "good" for "God," "goog" for "dog," "tct" for "cat," "alon" for "no," "htee" for "the," and "ndam" for "and." He also made mistakes in reading and writing figures and numbers. He was able to read and write single numbers (from 1 to 9) correctly; beyond this he was invariably wrong; the mistakes were in many cases repeated, although they were not in all cases identically the same. On different occasions he wrote the number 10 as follows: 100, 101. 1001. 10001, and 10101. On May 8th 11, 12, 13, 14, 15, 16, and 17 were written 111, 121, 131, 141, 151, 161, and 171. On June 2nd 14 was written 1141 and 15 was written 501. The number 100 was written on different occasions as 1001, 10001, and 100001. The number 20 was written on different occasions as 120, 210, 200; the latter mistake was made on two separate days. On one occasion 30 was written 300 and 310, 50 was written 1601, 60 was written 115, 70 was written 071, and 80 was written 8100. On June 2nd the number 10 was read as 100; 101 as 10; 1001, which he had previously written as 10 or 100, was not read, but he said, "Oh, it is millions." 201 was read as 300, and before arriving at this result he said: "That is a two and a one, that is three, that is three hundred." 20 was read as 200, 210 was read as 400, 150 was read as 155, 21 was read as 12, and 13 as 31. On June 8th 10 was read as 100, 1000 as 110, 101 as 111, and 1001 as 111. On the same occasion all the single numbers were read correctly. He was then asked to read 15, and said: "Oh, but you are coming it too heavy on me now." When pressed to try to read it he said: "That is one and five, that is six." In all these mistakes there is, it will be observed, the tendency to put in too many figures and to end up with the figure 1. Some of the mistakes, such as 210 being read 400, it seems impossible to account for.

FIG. 20.



Facsimile of the patient's signature and of the word "Edinburgh" as he wrote it on June 2nd, 1887.

(To be continued.)

A CASE OF PERSISTENT PRIAPISM.

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A MAN, aged thirty-two years, unmarried, applied for relief at the London Lock Hospital on April 20th, 1896. He had suffered from continuous erection of the penis with much pain for five days, and had had no sleep. On admission his family history was negative. He had had no illness or serious accident, had always been temperate, and had never lived abroad or suffered from ague. There was no history of any venereal disease. He stated that he always bruised very easily. Eight days before admission he had had intercourse, but had noticed nothing unusual afterwards. Five days before admission he got up at midnight to pass urine, having been asleep for some hours. On returning to bed erection of the penis occurred. This condition remained through the night unchanged, with much pain referred to the body of the organ. He went to work the next day, but afterwards remained in bed on his back with the knees drawn up. Any attempt to turn on his side was followed by greatly increased pain. There were no emissions or sexual desires. The patient was a small, weedy individual, with a weary aspect. The penis was hyper-erected, being almost in contact with the median line of the abdomen. The erection was confined to the corpora cavernosa, the rounded ends of which could be clearly felt through the substance of the glans, which, together with the corpus spongiosum, was perfectly flaccid. The corpora cavernosa were of almost wooden hardness, and fluctuation could not be felt. Any attempt to depress the organ caused acute pain; the skin was normal, and there was no localised swelling. The pulse and temperature were normal, the tongue was clean, and the urine was acid, with no albumin. The heart and lungs were healthy. The left side of the abdomen was somewhat rigid, and felt uniformly hard. The spleen was considerably enlarged, and its anterior margin could be felt near the umbilicus; no bruit or friction fremitus were present. The liver was apparently normal. There were large, soft, smooth glands in the groins, axillæ, and sides of the neck; they were moveable, painless, and discrete; the skin over them was natural. There were no signs of local hæmorrhage. The patient was not markedly anæmic, and complained of no symptoms of that condition. There was much pain and straining on micturition, so a soft catheter was passed periodically. The penis was treated with lead and opium lotion and supported by masses of cotton wool and a light bandage round the body. The bowels were opened with salines and citrate of potash and hyoscyamus given. He slept badly and required hypnotics. On the third day there was little change. An inflammatory swelling was found over the right corpus cavernosum near the crus, this subsided spontaneously. Iodide of potassium was given in ten-grain doses three times a day. The penis became very gradually less painful and rigid, and about the seventh day fluctuation could be felt over the corpora cavernosa. The spleen increased in size and the notch could be felt at the umbilicus, while the lower border extended down to the crest of the ilium. On the tenth day the Clinical Research Association reported on the blood as follows:—"Hæmoglobin and red corpuscles 50 per cent. of normal. Proportion of white corpuscles to red 1:8." Increasing doses of arsenic were given together with iodide of potassium. On the eighteenth day the patient could pass water without the catheter. The spleen was still increasing. The Clinical Research Association again reported as follows:—"In the specimen of blood examined the leucocytes are in greatly increased number in an average field—1:2. They are mostly of the large and not very sharply staining variety, but the eosinophile and granule cells are also increased. The lymphocytes do not seem to be increased. Poikilocytosis is not marked, but nucleated red blood-corpuscles are occasionally met with. A few cells of

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doubtful nature, containing large splotches of material staining purple with methylene blue and eosine, are met with; these possibly are fragments of broken-down red blood-corpuscles. The blood is typically leucocythæmic and would point to the splenic variety of the disease." By the end of the fourth week the priapism was much less, and the penis fell forwards when the man stood up. He felt better in all respects and slept well without drugs. His condition continued to improve, and by the end of the eighth week the penis was almost normal. One or two indurated masses remained in the crura. On the morning before leaving the hospital the patient had a normal erection without pain which soon subsided. He was transferred to St. Mary's Hospital for further medical treatment. Two months later Dr. John F. H. Broadbent kindly reported that there had been no return of the priapism, that the spleen was very much smaller, and the condition of the blood improved. The patient had gained weight and seemed to be fairly well. The arsenic treatment had been pursued.

Remarks.—This rare case I consider to be one of spontaneous thrombosis of the corpora cavernosa consequent on the blood condition and established by an ordinary erection. The extraordinary hardness of the parts at first could only have been produced by the distension of the cavernous tissue with a passive clot. This large mass would naturally disintegrate in a few days and then afford a sense of fluctuation, but the thrombosis of the emissary veins persisting would prevent any escape into the circulation and at the same time keep up the condition of erection. I regarded the inflammatory swelling on the right side as probably surrounding a blocked emissary vein. The indurated masses which were felt in the crura at the end of the case were probably portions of the thrombus, which had organised more or less completely. The iodide treatment was adopted with a view of promoting the absorption of the clots, and this process was probably assisted by the local pressure, which at the same time gave the patient considerable ease by preventing the extreme tension which any displacement of the penis caused. I determined to avoid making any incisions if possible, although no doubt the disintegrated clots might have been squeezed out through them. But sepsis in this situation was only too likely to occur, and in the patient's general condition might have been disastrous. I doubt if anything short of actual suppuration justifies incisions in such a case, since even if sepsis be avoided adhesions between the trabeculæ must occur at the seat of the incisions and might cause distortion, while a septic condition would probably result in the entire loss of erectile power. I cannot help concluding that all these cases of persistent and rigid priapism must be referred to a local thrombosis due either to abnormal coagulability of the blood or to injury with laceration of the cavernous tissue or emissary veins, in which case thrombosis would occur as in the distal ligature of an aneurysm. The fact that the corpus spongiosum is generally unaffected indicates most strongly that neither reflex nor cerebral nervous irritation can be the cause of this condition; besides, it is nearly inconceivable that priapism could be kept up for weeks or months without exhaustion of the nerve centres if it depended on their

TWELVE CASES OF PERSISTENT PRIAPISM.

Case.	Where published.	Age.	Cause.	Duration.	Result.	Treatment.	Complications, &c.
1	Mr. Calloway: Medical Repository, 1824.	—	Intercourse.	3-4 weeks.	Impotence.	Venesection; leeching; hot bath; tobacco enema; tartar emetic; nitre; mercury ointment; and incisions.	Suppuration.
2	Mr. J. W. Tripe: THE LANCET, July 5th, 1845, p. 8.	26	Intercourse.	3 months.	Subsided spontaneously some months after leaving off treatment.	Cold lotions; calomel; antimony; opium; leeches; and venesection.	—
3	Mr. Lloyd: Medical Times and Gazette, vol ii., 1852, p. 186.	29	Third attack; no cause.	7 weeks.	Cured; penis stated to have later performed its functions satisfactorily.	Leeches; camphor; opium; tartar emetic; blisters; chloroform; and venesection.	Hæmoptysis, severe—1 pint.
4	Mr. R. W. Dunn: THE LANCET, Aug. 8th, 1863, p. 162.	48	—	5 weeks.	Returned to work cured.	Iodide of potassium; leeches; and compound soap pill.	—
5	Mr. Birkett: THE LANCET, Feb. 16th, 1869, p. 207.	44	Intercourse.	4 months.	—	Incisions.	Suppuration.
6	Mr. Hird: THE LANCET, Jan. 18th, 1873, p. 90.	55	Second attack.	19 days.	—	Purgatives; fomentations; calomel; belladonna; camphor; bromides; chloral; chloroform; and iodide of potassium.	—
7	Mr. Johnson Smith: THE LANCET, June 7th, 1873, p. 804.	46	Accident.	1 month.	—	Bromide of potassium; belladonna extract; and mercury ointment.	—
8	Dr. Salzes of Worms: The Practitioner, vol. i., 1880, p. 296.	46	—	7 weeks.	Impotence; died one year later.	Camphorated poultices; leeches; chloral; chloroform; camphor; and opium.	Large spleen from previous intermittent fever, thirty-one years ago.
9	Dr. Mackenzie Booth: THE LANCET, May 14th, 1887, p 978.	55	—	7 weeks.	—	Purgatives; bromides; laudanum enema; ice; oleate of morphia; suppositories; blisters; leeches; and iodide of potassium.	—
10	Mr. Hulke: THE LANCET, Feb. 18th, 1888, p. 321.	34	Intercourse.	4 weeks.	Impotence.	Sulphate of magnesia; antimony; bromides; belladonna extract; and mercury ointment, with ice to the penis.	—
11	Mr. W. H. Crago: Australian Medical Gazette, 1888.	54	Gout.	5 weeks.	—	Colchicum; tartrate of soda; lead and opium lotion; mercury and belladonna ointment; quinine; bromides; Dover's powder; belladonna suppositories; and urethane.	—
12	Dr. Vorster: THE LANCET, Dec. 8th, 1888, p. 1144.	—	Straining at stool.	36 days.	—	Incision.	Hæmophilia and splenic leukæmia.

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action. An essentially mechanical cause has to be sought for locally, and thrombosis, due either to coagulation or laceration, seems to account for the matter satisfactorily.

I have to thank Mr. A. Shillitoe, registrar to the London Lock Hospital, for the careful notes of the above case. He has also looked up and arranged the twelve cases given in the accompanying table; these are interesting especially from the point of view of treatment. These cases, with that already described, give thirteen examples of prolonged priapism, not the result of any cerebro-spinal lesion. Three were complicated with splenic trouble. In only four is the condition stated to have followed on intercourse. In three the final result was impotence. In Case 3 the organ is said to have afterwards performed its double functions satisfactorily. In the other cases the impairment or otherwise of function is not remarked upon. In the *New York Medical Journal* for 1888 Mr. George Peabody said he had collected thirty-two cases of prolonged priapism, six of which were complicated with enlarged spleen and its results. Among the six are a case under the care of Dr. Klemme (Schmidt's "Jahrbücher," 1866); one under the care of Dr. Louquet (*Allgemeine Medicinische Central-Zeitung*, 1876); and one under the care of Dr. Matthias (*Berliner Klinische Wochenschrift*, 1879).

Hertford-street, Mayfair, W.

ACCIDENTS ATTENDING VACCINATION.

BY P. MURRAY BRAIDWOOD, M.D. EDIN.,
CONSULTING MEDICAL OFFICER TO THE WIRRAL HOSPITAL FOR SICK CHILDREN.

FROM a copy of the "Inquiry into the Causes and Effects of the Variolæ Vaccinæ" (third edition, 1801, p. 5) I learn from the discoverer of vaccination that when milkmen and milkmaids get infected by vaccinia their systems become affected, "the pulse is quickened; shiverings, succeeded by heat, general lassitude, and pains about the loins and limbs, with vomiting, come on. The head is painful, and the patient is now and then even affected with delirium." This graphic description would apply to an attack by any of the causes which induce constitutional disturbance. It is therefore of no wonder that vaccinia, even in the mild form of arm-to-arm vaccination, is occasionally attended and followed by accidents. Jenner always maintained febrile reaction to be "the only perfect proof of constitutional affection and absolutely essential to the perfection of the prophylaxis." Without it he considered a vaccination to have been "merely local and quite or nearly without value." Again, in animal vaccination, where the vaccine has been continuously transmitted through heifers without having ever been in contact with human blood, the vaccinia pursues a definite course, papulation appears at the end of the third or beginning of the fourth day, areolation commences at the latter end of the ninth or beginning of the tenth day, the formation of crust or scab being accomplished on the sixteenth or seventeenth day, and falling off spontaneously about the twenty-fifth day. In children vaccinated with humanised lymph the stages of vaccinia are of much shorter duration. The crust resulting from animal vaccinia approaches very nearly the size of the vesicle, is of a rich brown or dark mahogany colour, and when employed for vaccinating children shows great reluctance to affect the human system. In animal vaccination there is noticeable very decided febrile reaction coincident with the rise, development, and decline of the areola, and the disease results in an indelible cicatrix or scar of a peculiar and well-defined type. On the other hand, vaccinia induced by humanised lymph runs a rapid course, its vesicles are easily ruptured, the crust is of much smaller size than the vesicles, falls off early, and the cicatrix forms a comparatively imperfect mark. It is well, further, to bear in mind the bovine origin of vaccinia, its relationship to diseases in the lower animals, its epidemic character when spontaneously generated in the bovine economy, but not when introduced there by inoculation; its analogy to, but not fraternity with, human epidemic affections, and its inoculability both into the lower animals and into man.[1]

[1] The Morphology of Vaccine Lymph, by P. M. Braidwood, M.D. Edin., in the British and Foreign Medico-Chirurgical Review, January, 1873.

It is no uncommon occurrence for a child to be exposed to measles, varicella, &c., and at the same time to be vaccinated, so that he is under the influence of two contagia, and the result depends on which of the two contagia takes the lead. "If," says Dr. Seaton, "vaccination has been successfully performed during the incubation of measles, but the vesicles have not reached their mature or areolar stage by the time that the disease manifests itself, it will very frequently, if not usually, be found that they will not go through that stage until such time as the measles have subsided." Jenner gives a very interesting account of two sisters in whom scarlet fever manifested itself on the eighth day after vaccination. In one the vaccine vesicle remained at its maturity, but "there was a total suspension of areola till the scarlatina had retired from the constitution"; as soon as this occurred the areola advanced in the usual way. In the sister the symptoms indicative of scarlet fever came on severely for about twelve hours; then a rash showed itself upon the face and part of the neck, but in two or three hours suddenly disappeared, and the patient was free from every complaint; it was then observed that the vesicle had the usual areola, and this continued till the fourth day, when it subsided, and scarlet fever again appeared and went through its course with the common symptoms. Vaccination has been repeatedly seen running its course along with scarlet fever, or measles, or chicken-pox. In the case of concurrent variola and vaccinia, if both diseases obtained equal mastery of the system, each pursued its own course as far as the local phenomena were concerned, though even then the constitutional effects of the small-pox were often somewhat modified. If, however, the small-pox had got a distinct mastery of the system before the cow-pox it was unaffected by the latter; and the cow-pox did not exhibit its full local phenomena when the system was under the influence of the small-pox contagion. If, however, vaccinia precedes variola it modifies the latter, or altogether prevents its development. Comparative pathology often exemplifies this. Vaccine lymph produces vaccinia, and no disease but vaccinia. These remarks, preliminary to the subject matter proper of this paper, seem to me to be called for by the hazy knowledge of vaccination I have met with among young practitioners and from the manner of teaching it I have experienced.

As regards, now, some accidents which may attend this great earthly blessing (vaccination). In the first place, the vaccination may not "take"; that means that the infective matter (vaccine) applied to the scratched surface of the skin does not affect the system and does not produce the desired vesicles. This accident may be due to the lymph being rubbed off before it has been absorbed, and can be avoided with a little care. The lymph should be thoroughly dried on the surface of the skin before the vaccinated spots are covered. Or the vaccine may not be "active" owing to its being not quite fresh, and having been stored too long. It should be used as soon as possible after removal from the vaccinifer. Secondly, in the case of vaccination of adults it may not succeed because they had been successfully vaccinated in infancy, and again about the age of fifteen or later. Thirdly, it seems hard occasionally to account for vaccination not succeeding till, a few days later, the child or the adult develops some other form of fever. For example, after a child has been carefully and properly vaccinated the vesicles do not appear, but he shows the morbillar or scarlatinal rash, or develops pneumonia. Either of these diseases had first taken hold of his system and prevented the vaccine lymph from having its effect. It is most important to learn from those who bring children to be vaccinated that they are perfectly healthy and well, and have not recently been exposed to infection. Adults, too, should bear in mind that they ought to be quite well before being vaccinated.

I have already mentioned that vaccinia affects the body as other constitutional diseases do; hence it is needful to avoid colds or other accidents which may interfere with its running the natural course. Sometimes as the vaccinia abates the affected arm becomes very red, swollen, and painful, even down to the elbow, while there is sympathetic axillary lymphangitis. At its commencement this distressing condition can be relieved by painting the surface of the arm once or twice lightly with spirit of terebinth, avoiding, of course, the seat of vaccination. A saline aperient is also useful when the constitutional symptoms are severe. The amount and extent of the inflammation attending vaccination varies according to the constitution and to the state of health of the person or child. From the third or fourth day

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after vaccination, when the vesicles begin to form, the vaccinated spots should be protected from abrasion by stitching some cotton-wool on the inside of the sleeve. Vaccination shields are in my experience very hurtful. As vaccinia finishes its course troubles often arise through the vaccinated spots not healing rapidly. Various circumstances account for this, the most important being that the crust is rubbed off during sleep. If, then, the vaccinated spots are not protected, not only are they liable to receive surrounding impurities, but may lead to auto-inoculation. In the out-patient department of hospitals such cases are frequently met with, and the infant's mother wrongly ascribes it to the vaccine. Such impetiginous eruptions are really due to ill-health and uncleanliness and may appear on any part of the body. A form of eczema often attacks infants' heads and likewise is ascribed to vaccinia without reason. After the vaccine has dried on the scarified spots the infant can have his usual bath, but on no account should moist applications be used over the vaccinated spots. It should be remembered, too, that the irritation of teething often accompanies vaccinia.

The principal causes of bad and unprotective vaccination are, however, ascribable to the operator—the use of lymph taken at too late a period in the course of the disease, vaccinating with lymph removed from vesicles themselves badly developed or imperfect in character, the employment of lymph too long preserved, the use of a rusty or dirty lancet, and the manner of operating so that no blood is drawn and the lymph does not reach the cutis vera. It should be borne in mind that lymph from an exhausted vesicle is imperfect in power. It is improper, too, to vaccinate with lymph removed from a vesicle after the areola has been fairly formed, and it is decidedly injurious to vaccinate with lymph which is undergoing suppurative deterioration. An occasional accident attending vaccination is erysipelas.

In order to vaccinate always successfully great attention should be paid to details, and it requires a very decided degree of technical skill, patience, and experience. This is the more important when heifer vaccine is coming into general use. Its action is stronger than that of humanised vaccine.

Trevenson, Aylesbury.

NOTES ON THE TREATMENT OF SEA-SICKNESS.

BY M. CHARTERIS, M.D. EDIN.,
PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS AT THE UNIVERSITY OF GLASGOW.

IN my winter lectures it has been my practice to speak of the climatic treatment of disease, and notably of the magic effect produced by sea voyages. I had also to point out that in many cases the patient's liability to sea-sickness prevented the full use of this the best of nature's tonics, and in order to show my students how this disadvantage may be removed I have drawn their attention to the preparation called chlorobrom, which, as I know from personal experience, in many cases cures, and in all cases alleviates, sea-sickness. From time to time reports on its efficacy are sent to me by old students who have had experience at sea, and I have now some fresh cases to communicate.

Six ship surgeons previously prone to sea-sickness, who during the last six months have, by following my directions, sailed to Calcutta and back without suffering the least inconvenience, report as follows.

Examples of prophylactic treatment. — (*a*) Dr. Dunlop writes on Jan. 13th, 1897:—"I am an indifferent sailor, and the prospect of a voyage to India in the capacity of a surgeon was marred by the thought that I would suffer from *mal de mer*. By following the directions given me as to a cholagogue, dietary, and dosage of chlorobrom, I suffered no ill effects from the voyage." (*b*) Dr. McLure, on Jan. 23rd, 1897, reported as follows:—"Ordinarily a poor sailor, by acting on your directions I was enabled to reach Calcutta without the slightest feeling of nausea, and although on the homeward voyage we had a very rough passage across the Bay of Biscay, I was equally free from any feeling akin to nausea or sickness." (*c*) Dr. McNaught, on Sept. 25th, 1896, wrote *inter alia:* "In my own case I had an opportunity of trying chlorobrom as a prophylactic remedy, and I feel sure it was the means on several occasions of warding off unpleasant attacks of sea-sickness." The others testify in a similar manner. (*d*) Dr. Allan gives the following account of a case of prophylactic treatment: "A lady who had always suffered from sickness when the surface of the waters was troubled, was treated as follows. Before sailing she took, according to my advice, a smart calomel purge; on retiring to her cabin in the evening she had one drachm of chlorobrom; next morning a light breakfast and then another drachm of chlorobrom. At noon—the steamer beginning to roll—she had three drachms, and I asked her to lie down for an hour or two; she did this. She at no time felt sick, and in the course of the afternoon she expressed her astonishment and gratitude at such unaccustomed immunity."

Examples of curative treatment. CASE 1.—A man was very sick one hour after putting to sea. He had just partaken of breakfast. After the stomach was cleared he had a glass of soda water. Five minutes afterwards he took twenty-five minims of spiritus chloroformi. The stomach being now soothed, he had two drachms of chlorobrom and one drachm every half hour for three doses. About noon he fell asleep and awoke at 4 P.M. He had one drachm of chlorobrom and also three grains of calomel. He felt thoroughly well, and at 6.30 P.M. he sat down to dinner and enjoyed a hearty meal. The same course was pursued later when he sickened in the monsoon, and a similar happy result was obtained.

CASE 2.—A man, who had been previously free from any symptom of sickness, complained of depression and what I called mental pain and nausea. After taking a dose of calomel he lay down, and half-an-hour afterwards he was given half an ounce of chlorobrom. Towards night he felt better. At 8 P.M. and at 9 P.M. he took one drachm, and at 10 P.M. two drachms of chlorobrom. Next morning he was up early and, as he expressed it, "as lively as a cricket." For the next three nights he had one drachm of chlorobrom. At no time had he any return of the symptoms.

These cases are almost picked at random and are illustrations of the efficacy of chlorobrom. I have no hesitation in saying that, if administered in a sensible and thorough manner, chlorobrom will effectively meet each and every symptom of the dreaded sickness. And I am glad to give my testimony of the success of a treatment which I learned within the walls of my University.

Glasgow.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF FOREIGN BODY IN A BRONCHUS.

BY T. LAUNCELOT ARCHER, M.R.C.S. ENG.

IN November, 1895, I was sent for to see a boy, aged nine years, who had been ailing for a few days, gradually getting worse. The temperature was 103° F., there was a rapid, full pulse, the expression was anxious, and he had a short spasmodic cough without expectoration. The lower lobe of the left lung was congested, but all the remainder of the lungs was clear. I saw the child daily for more than a week, during which time his temperature varied but little, the congestion did not clear up, and the cough was, if anything, worse, added to which there were violent retching and some diarrhœa. He also complained of great pain about the level of the ensiform cartilage on the left side. Eleven days after my first visit I received an urgent message saying that the child was choking. When I arrived he was pale and exhausted, but quiet. His mother said that he had had a violent fit of coughing, lasting for twenty minutes, followed by some blood-stained expectoration. On examining the sputa I found a piece of a nut of the size of a large bean, surrounded by blood-stained purulent matter and mucus of very offensive smell. The child passed a quiet night, coughing only three or four times, but expectorating purulent matter, and in the morning he was decidedly better; from that time he steadily improved to complete recovery.

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On inquiry his mother said that a fortnight before I was first sent for he was eating some nuts when a piece "went the wrong way"; he choked and coughed for a time, but soon recovered himself, and she thought that he had got the offending morsel up, but from that time he had complained of pain in his chest and he had been a little unwell until I was sent for. I suppose that the nut found its way into one of the bronchial tubes which it closed up, causing the lung mischief and setting up some inflammation resulting in a small abscess, and so becoming loose was coughed up, as I have described, a month after the accident. The case is an unusual one, and as such I have thus briefly described it, thinking it may be of interest to other readers of THE LANCET.

Vincent-square, S.W.

A CASE OF POISONING BY OYSTERS.

BY EDWARD BUXTON, M.D., F.R.C.S. EDIN., D.P.H.

ON Nov. 24th, 1896, at 9.30 P.M., I was hastily called to a man whom I found in bed writhing in the most intensely agonising pain in the epigastric region. I immediately gave him a hypodermic injection of half a grain of morphinæ sulphas and one-seventy-fifth of a grain of atropinæ sulphas, and applied flannels wrung out of hot water and sprinkled with laudanum over the region of the pain. Before my arrival he had fortunately vomited freely several times. When in the course of an hour or so the pain slightly moderated, upon inquiry as to the supposed cause of the trouble, I learned from him that he had arranged to dine with a few friends in the city (Liverpool) and to commence with he had three oysters. He was perfectly well when he sat down to dinner, but had not swallowed the oysters more than two minutes before a feeling of discomfort, rapidly merging into more and more acute painfulness, was felt in the stomach. Not wishing to disappoint his friends, he endeavoured to mask his condition, and partook of a little soup. The pain continued to get worse, however, but he still tried to bear it, and waited until the next course was served. The agony he then suffered overpowered him, and he was compelled to leave the hotel, and by means of cabs and railway reached his home, some five miles out of the city, and went to bed, where, as I have mentioned, I found him in great pain with symptoms of collapse rapidly setting in. I remained a considerable time with him and used morphine freely. The pain became somewhat modified by the opium, but lasted all the first night and following day. On the second day the pain had left him, but he was exceedingly weak. I prescribed four-hourly doses of a mixture of three grains of subnitrate of bismuth, ten minims of solution of perchloride of mercury, B.P., and two minims of diluted hydrocyanic acid until the stomach could retain milk and soda water, and subsequently a little dry champagne. On the fifth day he was able to resume his duties, and his recovery was uninterrupted.

The interesting point in this case arises from the exceedingly short period that elapsed between the time of swallowing the oysters and the onset of toxic symptoms.

Waterloo, Liverpool.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL. — The forty-eighth annual meeting of the Wolverhampton and Staffordshire General Hospital was held in the Bell Medical and Surgical Library on March 9th. The report showed that 1859 in-patients were treated during the past year; there were also 12,195 out-patients, who made 42,879 attendances. The average cost of the in-patients was £3 9*s.* 8*d.* per patient and £50 4*s.* 4*d.* per bed occupied; the average stay in the hospital was twenty-three and three-quarter days. The total income for the past year was £8714 and the expenditure was £8461. At the meeting held a year previously attention was called to the necessity for renovating the operating theatre in order to adapt it to modern requirements, and it was now stated that the necessary alterations and re-furnishing were carried out under the superintendence of Mr. T. Vincent Jackson, the senior honorary surgeon, at a cost of £287 11*s.*, and that the theatre was re-opened on July 24th last by Mr. Christopher Heath. In the afternoon a reception was held in the hospital and grounds by Mrs. Thorneycroft and Mrs. Twentyman.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

PERFORATION OF THE STOMACH BY CHRONIC ULCERATION; PERITONITIS; LAPAROTOMY AND SUTURE OF ULCER; RECOVERY.

(Under the care of Mr. A. QUARRY SILCOCK.)

OF the many morbid conditions at one time considered purely medical which have of late years been handed over to the surgeon, few give more satisfactory results from surgical treatment than perforation of a simple gastric ulcer; but it is essential that only a few hours should intervene between the perforation and the laparotomy, and the satisfactory ending of Mr. Silcock's case, though perforation had occurred twenty-four hours before operation, must be attributed to the careful cleansing of the peritoneum in the neighbourhood of the perforation. The method employed in this case to cover the perforation has been used for the treatment of dilated stomach, as in a case under the care of Dr. Ewart and Mr. Bennett.[1]

A woman, aged twenty-five years, was brought to St. Mary's Hospital by Mr. E. Archer Wood, of Dulwich, on July 11th, 1896, suffering from perforating gastric ulcer and peritonitis. Her history was as follows. She had been in delicate health since the age of sixteen years. On Sept. 5th, 1895, she suffered from hæmorrhage from the stomach and much vomiting. Since that date she had been under treatment for gastric ulcer from time to time, having once been an in-patient at Charing Cross Hospital. On the evening of July 10th, 1896, at 11 o'clock, whilst out for a walk, she was suddenly seized with pain in the left hypochondriac region, vomiting, and collapse. She was seen and attended immediately by Mr. Archer Wood, who diagnosed perforation of a gastric ulcer and prescribed such treatment as was possible under the circumstances; he prohibited any food or fluid by the stomach, and accompanied her on her journey to St. Mary's Hospital the next day. When seen by Mr. Silcock on the evening of the 11th, nearly twenty-four hours after the accident, she was evidently extremely ill and very pallid. The pulse was 100 per minute, regular, and fairly strong. Her temperature was 100°F. The tongue was somewhat dry. The respiration was entirely thoracic, 20 per minute; the diaphragm did not descend in inspiration; the abdomen was considerably distended, the distension being evenly distributed. She complained of pain and tenderness all over the abdomen, but especially in the left hypochondriac region. On percussion the abdomen was found to be generally tympanitic. The liver dulness was lost. The urine was normal. She was at once taken to the operating theatre. An incision about four inches long was made, commencing one inch to the outside of the ensiform cartilage and carried outwards on the left side parallel to, and about half an inch below, the lower border of the ribs. On the peritoneum being opened a large amount of gas escaped. The wound was found to be immediately over the perforation of a large gastric ulcer, through which white curds of milk mixed with gastric juice were escaping. The perforation was in the anterior wall of the stomach about two inches to the left of the middle line. A stomach tube was passed down the œsophagus, about ten ounces of fluid containing a good deal of white curd were syphoned off, and the stomach was thoroughly washed out. Around the perforation the stomach wall was indurated and covered with lymph. The zone of induration extended through all the coats and for an area roughly three-quarters of an inch in width beyond the margin of the perforation, which was about the size of a No. 9 catheter. The silk sutures, inserted

[1] THE LANCET, July 4th, 1896, p. 8.

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after the method of Lembert with a view to closing the perforation, tore out by reason of the want of flexibility and friability of the infiltrated tissues, only one holding. The stomach wall was therefore widely reduplicated, the folds being vertical and made outside the zone of leathery induration, so that the perforation was overlapped by them; their peritoneal surfaces were brought into contact and fixed by silk sutures. The peritoneum in the immediate neighbourhood of the incision was then thoroughly cleansed by sponges and irrigation so far as was possible. The parietal wound was closed by sutures, except for a short distance over the site of the ulcer; the sutures passed thorough the entire abdominal wall, including the peritoneum and the integument. A gauze tampon was left in the open part of the wound for drainage. Dressings of cyanide gauze and wool were used. She was treated by nutrient enemata until July 22nd, when small quantities of liquid food were given by the mouth at frequent intervals. The recovery was uninterrupted, except that the wound suppurated, some fever being thus engendered in the earlier days after the operation, and she was discharged from the hospital on Aug. 29th.

Remarks by Mr. SILCOCK.—Two points in connexion with this case are worthy of note. In the first place, a considerable extravasation of the contents of the stomach into the peritoneal cavity had occurred during the somewhat lengthened interval between the time of actual perforation—as indicated by the sudden supervention of pain and collapse—and that of the operation; in that interval, quite contrary to the emphatic and reiterated orders of Mr. Wood, it was evident that the sympathising friends had induced or allowed the patient to ingest a quantity of milk. Indeed, so considerable was the amount of the contents of the stomach found in the neighbourhood of the perforation, and so marked was the peritonitis, that the chances of recovery seemed at the time of the operation to be but slight. Another point is the success which followed the manœuvre of making wide folds of the stomach wall so as to cover the perforation. It will be remembered that a somewhat similar proceeding has been recommended and adopted in America in cases of dilatation of the stomach with a view of lessening its cavity. One feared lest by some sudden strain, as by vomiting or coughing, the frail hold which the sutures had on the wide duplicatures might give way, and in any case the strain upon them must have been considerable, but fortunately there was no sickness after the operation. The use of the gauze tampons, now a favourite device with surgeons in similar cases, no doubt played its part in securing adequate drainage. The patient was last seen at the end of November, and had married. She would not be dissuaded from taking this step, although warned that the consequences might be serious; she was carefully carrying out the directions of Mr. Wood as to diet, and did not suffer from any pain after food; in fact, she was practically well.

Medical Societies.

HUNTERIAN SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held at the London Institution on April 14th, Dr. G. E. HERMAN, President, being in the chair.

Dr. BUTLER HARRIS gave a demonstration of the Treatment of Chronic Ulcers by Ozone.—Dr. F. J. SMITH remarked on the probable usefulness of ozone in chest disease.—Dr. HARRIS pointed out that it would be too irritating.

Dr. J. H. SEQUEIRA showed a case of Infantile Hemiplegia in a girl, aged three and a half years, which followed after a fit; the paralysis involved the left side. He referred to two other cases; in all three recovery had taken place except in the arm affected. A distinction was drawn between cases of a congenital nature and those following a febrile attack.

Dr. F. J. SMITH showed a case of Spastic Paraplegia in a child aged five years. She had always been healthy except for the condition of the legs, in which there were increase of knee-jerks and ankle-clonus.—Remarks were made by Mr. A. H. TUBBY and Dr. ST. CLAIR SHADWELL.

Dr. J. F. WOODS showed two cases of Trigeminal Neuralgia successfully treated after three or four sittings by Hypnotism and Suggestion. Both these cases had been operated on previously by Mr. Charters Symonds, who had removed Meckel's ganglion in one case and had divided the infra-dental nerve in the second, and had attempted on another occasion to reach the third division of the foramen ovale without success. Both cases only temporarily improved and eventually relapsed into their former condition after surgical treatment.—Remarks were made by the PRESIDENT and Dr. GLOVER LYON.

Mr. HOPE GRANT showed a man who had suffered from Numbness in the Thumb, Forefinger, and Middle Finger of the Left Hand, with inability to flex them; sensation was diminished; he had had rheumatic pains for two years somewhat like "lightning pains." There were no loss of knee-jerks and no ankle-clonus; the pupils were insensitive to light, and there was no reaction to accommodation. The patient reeled when standing with his eyes shut. He had had a chancre in his youth and had been a hard drinker.—Remarks were made by Dr. GLOVER LYON, Mr. A. H. TUBBY, and Dr. F. J. SMITH.

Dr. GLOVER LYON showed a case of Fibrosis of the Left Lung with Paralysis of the Left Vocal Cord and with the left pupil smaller than the right.

MANCHESTER MEDICAL SOCIETY.

Peripheral Neuritis in Pregnancy and the Puerperium.—Notification of Phthisis.—Unusual Condition of the Spleen.

A MEETING of this society was held on April 7th, Dr. GRAHAM STEELL being in the chair.

Dr. ERNEST S. REYNOLDS gave a short communication on the forms of Peripheral Neuritis occurring in Pregnancy and the Puerperium. He separated those cases obviously due to injury or inflammation of the nerve roots in the pelvis from those of multiple neuritis affecting the arms or legs, or both, in which some poison was probably the cause. He pointed out how often in the latter cases there had been persistent vomiting of pregnancy, and related a case in which this had occurred.

Dr. JAMES NIVEN read a paper on the Notification of Phthisis,[1] in which he pointed out that with regard to the modes of transmission of tuberculosis and the means by which such transmission can be intercepted our knowledge is more complete than in the case of any other infectious disease. Notification of phthisis to be of much value must be compulsory. Difficulties will arise in connexion with the expense of notification; but the expense is not prohibitive. The class of cases which require notification comprises tuberculous phthisis, tuberculous diarrhœa, tuberculous glands and ulcers whatever may be the cause of the ulceration—in fact, all cases with well-marked discharge. In order to enable us to exercise some control over our public milk-supplies we also require notification of cases of tabes mesenterica. In connexion with the practical routine of notification it will be necessary (1) to make a careful record ledgered for names, addresses, and places of occupation of the cases reported—such a record will be of immense importance in tracing the pathways of infection; (2) to ascertain and remove the conditions which have proved active in producing the disease in the cases notified; (3) to see that strict personal hygiene is carried out for each case reported both in his own interest and that of others—this the medical attendant would be expected to see to, but information would be obtained by the delegates of the health office as to the steps actually taken; (4) to carry out disinfection and other arrangements for cleansing and for the maintenance of cleanliness in the surroundings of the tuberculous person, to disinfect rooms vacated by phthisical patients in hotels, lodging-houses, &c.; (5) to enable the medical staff of the health department to collect information and make investigations as to the conditions of propagation of tuberculosis with a view to prevention; (6) to enable education in preventive measures to be applied at the most useful time and in the most useful way; and (7) to assist the health officer in tracing tuberculous food infections.

Mr. C. E. RICHMOND showed a Spleen enclosed by a layer of very tough fibrous tissue which was two inches thick in

[1] This paper will shortly appear in our columns.—ED. L.

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some places. This layer was apparently organised inflammatory deposit; it contained bloodvessels of considerable size and was outside the spleen capsule. The spleen pulp itself almost everywhere showed cirrhotic changes. The patient was a female aged twenty-eight years. There had been pain and gradual enlargement for two years, but there was no history of syphilis or ague. The condition of the blood and the clinical phenomena were not at all those of leucocythæmia. The other viscera generally were healthy.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens.—Injury to the Brachial and Cervical Plexuses of Nerves.—A Case of Tetanus treated by Antitoxin; Recovery.—Lupus of the Vagina.—Twin Labour.—Vaginal Hysterectomy for Cancer.

A MEETING of this society was held on April 6th, the President, Mr. GODFREY CARTER, being in the chair.

Dr. EURICH gave a demonstration of Microscopical Specimens illustrating Locomotor Ataxy affecting the Cervical Region of the Cord, Ataxic Paraplegia, and Psammoma.

Dr. HOWARD GLADSTONE related two cases of old-standing Injury to the Brachial and Cervical Plexuses of Nerves, and described the appearances of the structures of the forearm as seen on dissection of the limb after amputation.

Dr. CHAPMAN related a case of Tetanus treated by Antitoxin and resulting in recovery. The patient was a man, aged twenty-seven years, who sustained a lacerated wound of the forearm. Tetanic symptoms commenced after a lapse of eighteen days; the wound had not suppurated freely, but there were some redness and gaping of its edges. The temperature was 100° F. The spasms were of moderate severity, but the patient was scarcely ever free from some spasm; they continued for eleven days, during which time 360 grains of antitoxin were administered subcutaneously. On the fourth day a macular rash appeared on the sides of the chest wall. One week after admission the patient became delirious and remained so for a fortnight. About the time that the administration of antitoxin was stopped pain and tenderness of several joints were noticed, and these symptoms persisted for some three weeks, although during the greater part of this time there was no febrile disturbance. Dr. Chapman said that the part played by the antitoxin in the successful issue of the case was somewhat doubtful, as from the first the prognosis was favourable, owing to the considerable lapse of time (eighteen days) between the receipt of the injury and the onset of tetanic symptoms.—Dr. CAMPBELL, Dr. HORROCKS, and Dr. SHIACH discussed the case.

Dr. HORROCKS showed a specimen of Lupus of the Vagina and made some comments on ulceration affecting the orifice of that canal. He said that there was a group of symptoms—namely, local smarting and aching pain, much increased by micturition, defecation, and coitus—associated with a condition of injection with superficial ulceration of the mucous membrane of the vulva, together with a whitish discharge. He further affirmed that these symptoms were not relieved by simple local treatment such as vaginal injection and emollient applications, or even by scraping the ulcers and applying caustic, as in the treatment of lupus, but that the only successful treatment was by free and deep excision of the ulcers, which had been followed by cure in a number of cases. Dr. Horrocks called attention to another condition of the parts associated with symptoms suggesting caruncle of the urethra. On examination there is found, instead of the vascular papilloma (caruncle) a mass of exuberant granulations blocking the urethral orifice and having the colour of lupus; these may spread on to the vestibule or along the floor of the urethra to the opening of the bladder, and may cause incontinence of urine. The ulceration spreads very slowly, but is very resistant to all treatment. This condition may be associated with the shallow ulceration of the vulva previously described. Dr. Horrocks pointed out that the confusion of true caruncle with this lupoid condition of the urethral orifice has led to the idea that caruncles may recur after removal.

Mr. HEBBLETHWAITE related a case of Twin Labour in which unusual difficulties occurred.

Dr. RABAGLIATI described three cases of Vaginal Hysterectomy for Cancer by Martin's method. The results were immediately successful, but in two of the cases recurrence of the disease took place after two and eight months respectively.

Dr. ARNOLD EVANS showed specimens of Measly Pork, and demonstrated the cysticercus of the tænia solium under the microscope.

Reviews and Notices of Books.

The Pathology and Surgical Treatment of Tumours. By N. SENN, M.D., Ph.D., LL.D., Professor of Practice of Surgery and Clinical Surgery, Rush Medical College, Professor of Surgery, Chicago Polyclinic, &c. Illustrated by 515 Engravings, including Coloured Plates. Philadelphia: W. B. Saunders. Pp. 709. Price $6.

THE name and work of Professor Senn of Chicago are so well known in England that the appearance of a treatise by his hand on so important a surgical subject as tumours must awaken general interest.

The volume naturally resolves itself into two parts: a portion dealing with the pathology of tumours, and a portion which is concerned with their treatment, though in the work itself the two divisions of the subject are mingled together, as the description of each variety of tumour is followed by an account of the appropriate treatment.

The first question which presents itself in the pathology is naturally, "What is a tumour?" The author, in answer, emphatically lays down the proposition that "a tumour is a localised increase of tissue, the product of tissue-proliferation of embryonic cells of congenital or post-natal origin, produced independently of microbic causes." This is practically Cohnheim's theory, with the not unimportant modification that the embryonic cells may be of post-natal origin, "being derived from pre-existing mature tissue in consequence of injury or disease, and failing to undergo the normal transformation may give rise to tumour formation in the same manner as embryonic cells of fœtal origin." The same idea is re-stated as follows: "We regard the matrix of embryonic cells as the essential cause of tumour-formation, without which all intrinsic and external exciting causes are inadequate to produce a true tumour." Cohnheim's theory of the "embryonic" origin of tumours was at one time very generally accepted, partly because of the extremely simple way in which it explained the existence of various forms of tumours, and partly because no other theory of any value could be advanced; but, except in the teratomata, the support which this theory receives from ascertained facts is very slight, certainly not more than sufficient to justify it being considered a very ingenious hypothesis, capable of explaining in a fairly satisfactory manner the occurrence of some tumours, and therefore it must be decidedly misleading to a student to have the theory, ingenious though it may be, stated as a fully ascertained fact. Dr. Senn further holds that to obtain a tumour of any special variety of tissue it is necessary that the "embryonic matrix" should be composed of embryonic cells identically the same and not merely derived from the same blastodermic layer. Thus we are told that "heterotopic chondroma" must have arisen from "a matrix composed of embryonic cartilage cells." The theory certainly seems to require a rather reckless scattering throughout the body of useless embryonic cells. There is another part of Professor Senn's definition from which we must dissent. In one of the passages already quoted we are told that a tumour is "produced independently of microbic cause." We practically agree with him when he says that "the microbic origin of tumours ..... has not been established by any convincing experimental investigations or clinical observations," though there are not wanting facts that are most easily explicable on this supposition; but Dr. Senn goes on to say: "Should

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future research demonstrate a direct causative relationship between certain yet unknown bacteria and the growth of some of the tumours, such tumours would have to be eliminated from this group of pathological products and classified with the granulomata." That is to say, if carcinomata should ever be shown to be due to a micro-organism, then a scirrhus of the breast would no longer be a tumour. This is surely a *reductio ad absurdum*. Dr. Senn does not seem to recognise that, hough it may be convenient to try to obtain a pathological definition of a tumour which will embrace all those "swellings" which are usually classed as tumours, yet the word is generally and most conveniently used in a *clinical* sense. Certainly in the definition no etiological element should be introduced while we are still absolutely ignorant of the exact cause of any tumour whatsoever.

The pathological anatomy of the various growths is well described, and the clinical characters are excellently given. Numberless illustrations accompany the descriptions of the structure of the tumours; many of them are original, and some are admirably reproduced in colours. The classification adopted is simple, depending primarily on the blastodermic origin of the tissue in which the tumour appears.

Though we can speak very favourably of the pathological section of the work, yet, bearing in mind the author's reputation as a surgeon, we turn with the most interest to the clinical portion of the volume. A chapter is devoted to the general principles of the treatment of new growths, and here we find laid down careful rules for the palliative and curative treatment, with a description of the various methods which have been employed at different times. As we have already mentioned, the pathological description of each tumour is followed by its treatment, and in this way descriptions of a large proportion of the operations of surgery are given; for instance, we find an account of hysterectomy in the section evoted to the treatment of carcinoma of the uterus, and of nephrectomy for the same disease in the kidney; the operation of gastrostomy is described in the account of the treatment of malignant stenosis of the œsophagus, and rhinoplasty is given with carcinoma of the nose. Naturally the result is that the volume is large, but its excellence prevents it from being too large. The paper and printing are perfect. We must confess that we think the index might easily have been fuller, for it at present contains no reference to many of the subjects of which the book treats. The volume is inscribed to the memory of Samuel David Gross, and we can give no higher praise than to say it is worthy of such a dedication.

JOURNALS AND REVIEWS.

The Practitioner.—The most interesting paper in the April number of this journal is one by Mr. Watson Cheyne upon the Prophylactic Injection of Anti-streptococcic Serum. Mr. Cheyne has tried this method in three cases of removal of malignant disease about the tongue and the upper part of the pharynx; two of the patients recovered without any of the septic troubles which are so wont to follow such operations, the third died from a cerebral embolus washed into the brain from the lingual artery, and in this case there was a slight amount of sloughing. This method of protection certainly seems to promise well. Dr. Walter Smith reports an interesting case of Fœtid Suppurative Pericarditis. The Hero of Medicine for the month is Sir Charles Bell.

Quarterly Medical Journal for Yorkshire and Adjoining Counties.—The opening article is a clinical lecture on Differential Diagnosis, delivered by Dr. W. R. Gowers; the patient suffered from weakness of the legs with excessive knee-jerks and an affection of speech. Dr. G. Sims Woodhead describes the effect of a temperature of 50° or 60° C. in modifying the pathogenic activity of tubercle bacilli contained in tuberculous milk. He looks forward to the time when a saprophytic tubercle bacillus may be demonstrated which, though non-virulent in itself, may be the means of continuing the life of the tuberculous virus outside the body for very long periods. Mr. H. Lockwood (Sheffield) gives an account of a case of Myositis Ossificans in a boy aged four and a half years.

Edinburgh Medical Journal.—Dr. J. Batty Tuke contributes the first instalment of a paper on Clinical Cases illustrative of the Insanities. The brain of one of the patients, who died on the seventh day from acute mania, yielded cultivations of a bacillus of uncertain classification, which, however, had no pathogenic effect on guinea-pigs or rabbits. Dr. Tuke refers to various observers who have found micro-organisms in the brain or cerebro-spinal fluid of the delirious or insane. Dr. W. P. Herringham (London) describes a case of Paroxysmal Tachycardia, and gives a summary of fifty-three recorded cases. Dr. A. Francis Dixon (Dublin) writes on the Course of the Taste Fibres. He criticises the view held by Dr. W. R. Gowers that the fifth nerve is the nerve of taste, and concludes that taste impulses reach the brain by the seventh and ninth nerves.

Dublin Journal of Medical Science.—Mr. W. I. Wheeler gives a summarised account of sixty-one cases in which he either partially or completely excised the tongue. Several of these patients, operated on for cancerous disease, had no return of it afterwards for periods varying from one to fifteen years. Dr. Montague L. Griffin describes a case of enormous enlargement of the spleen unattended by leukæmia. The patient measured fifty-five inches round the waist. After twenty-one months' treatment with liquor arsenicalis the splenic area of dulness became normal and the patient regained good health.

Treatment.—The first two numbers of this new journal of practical medicine and surgery contain a variety of interesting original articles by writers each of whom is an authority on the subject of which he treats. The first paper in the first number is by Dr. James Taylor and fully describes the Management of Cases of Acute Myelitis. The patient should lie on a water-bed and every precaution should be taken to prevent the formation of bed-sores; constipation may often be diminished by belladonna extract; any form of counter-irritation is inadmissible until there is no further danger of the inflammation extending, but when this stage is reached the Paquelin cautery may be cautiously applied to the back. Dr. G. A. Sutherland writes on the Use of Chloral Hydrate in Some Diseases of Children; in his hands it has proved very useful in epilepsy, progressive chorea, and asthma. The articles in the second number include a good one by Dr. J. W. Silk on the Preparatory Treatment of Patients subjected to Anæsthesia. The editorial notes and comments, reviews of books, and abstracts from current literature supply a large amount of valuable information in a very convenient form. The price of the journal is 6*d*., and it is published on the second and fourth Thursday in each month by the Rebman Publishing Company, 11, Adam-street, Strand.

The *Veterinary Journal* for this month contains Notes on the Roorkhee Disease by Veterinary-Captain H. J. W. Mann, a disease in which innumerable filariæ are demonstrated, filariæ which in appearance are said to resemble somewhat closely the parasites found in surra, but which differ from these organisms in that they do not attack the red blood corpuscles, but appear rather to confine their attention to the liquor sanguinis. Eight Cases of Tetanus in the Horse treated with the aid of Behring's Tetanus Antitoxin are here recorded, the record being taken from the *Deutsche Thierärztliche Wochenschrift*, from which it is argued that Behring's antitoxin when administered at the proper time and in sufficiently large amounts (in some cases amounts measured in litres) can cure tetanus in the horse. The results obtained differ materially from those recorded by Nocard, but the

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author, Veterinary-Surgeon Casper, maintains that these differences are accounted for almost entirely by the greater potency of the serum supplied by Behring with which he was able to work. (We should also add the enormous doses that could be used.) He says that "differences in results must accordingly be sought in the difference in effective value of the antitoxin employed, and there will be no difficulty in tracing them." Accounts of clinical cases and the "Order" of the Board of Agriculture as regards the muzzling of dogs are also given, whilst the veterinary profession are warned that another serious outbreak of pleuro-pneumonia has occurred in England. The Experimental and Clinical Study of the Aspergillus Fumigatus is continued, and a number of other papers and abstracts, notes and news, and reports of veterinary associations are also given.

The *Veterinarian* for April contains several interesting original articles, the first of which, by Veterinary-Captain R. W. Burke, is a note on Malarial Fever or "Surra" in Horses in India, a disease very similar to the tsetse-fly disease of South Africa. An interesting parallel between the organisms found in malarial fever in man and those met with in the blood of horses is drawn, though the author does not adduce sufficient evidence to prove that the diseases are identical or are caused by the same parasite. Mr. A. E. Mettam contributes an account of a case of Cyclopia in the Sheep. In this number there is also an article by the late Professor Walley, Principal of the Royal Dick Veterinary College, Edinburgh, on the Prevention and Suppression of Contagious Diseases of Animals, the last important paper written by him. He draws a distinction between contagious diseases, infectious diseases, and those which are both contagious and infectious. In the first group are included in the present part of the paper "specific urethritis" and "rabies," two diseases which he maintains are purely contagious or infectious only in a limited degree. The Month's Progress and some interesting notes on Current Topics will be read with interest by members of both the veterinary and medical professions. The reports of the various veterinary societies are also of considerable interest.

In the *Phonographic Record* for April Dr. Gowers, after narrating a Case of Hæmoptysis accepted for Insurance as a Loaded Life, lays down the principle that recurring hæmorrhage from the lungs, however slight, should preclude insurance. Mr. Lamming Burton concludes his interesting Notes on the Life of a Ship Surgeon, and says that for pleasure, for health, and possibly for the experience to be gained, the life is to be recommended; but the man who takes a ship in the hope of making money or reading for an examination will find he has made a mistake. The life grows on a man, making it more and more difficult for him to settle down to the humdrum routine of general practice; unless he is a teetotaler and on a good line he will be out of pocket, and the life in time has a lowering tendency, so that a man's sympathies are blunted. But for teaching self-reliance and confidence in one's self the life is an excellent monitor. A ship surgeon should unite a trinity of virtues in a unity of body, and should be a medical man, a sailor, and a card-player. If he can sing or play some musical instrument and has a stock of novels he will be all the more popular. Mr. Peyton Beale writes upon Flat-foot and its Treatment, whilst a short account is given of the efforts which the Society of Medical Phonographers has made to render the inclusion of shorthand in the medical preliminary examination practically effective.

Scottish Medical and Surgical Journal.—Professor D. J. Hamilton (Aberdeen) criticises the view that pulmonary hæmorrhagic infarction (pulmonary apoplexy) is due to embolism, and argues that it is caused by blood from ruptured capillaries injecting a group of air vesicles and their attendant bronchus. Dr. G. T. Beatson (Glasgow) discusses the Value of Cachexia in the Diagnosis of Malignant Disease, and describes a case in which well-marked cancerous cachexia was associated, not with cancer, but with myoma of the uterus. Dr. T. G. Nasmyth gives details of the distribution of cancer in Scotland. Altogether there are nine original articles.

Mercy and Truth.—The mission hospitals described this month are those at Pakhoi and at Hangchow, both in China. There is an article stating that the committee of the Church Missionary Society feels that, as a general rule, it is better for a medical missionary not to be in holy orders.

The Journal of Pathology and Bacteriology. Edited by G. SIMS WOODHEAD, M.D. Edin. Vol. IV., No. III. March, 1897. Price 8*s.* 6*d.*—1. The Varieties of Ankylosis by Bone in different parts of the Skeleton, by Joseph Griffiths, in which the normal ankylosis which occurs between certain bones before birth or at different periods during life, as well as those due to pathological conditions, are fully considered and illustrated. 2. The Mechanism of Reaction to Peritoneal Infection, by Herbert E. Durham. In this paper the changes that take place in the peritoneal fluid are very clearly described, and Mr. Durham makes some suggestions as to the nomenclature of the cells found which will probably prove very useful. Part of this important research was recently communicated to the Royal Medical and Chirurgical Society, and reported in THE LANCET of March 13th, 1897. 3. The Toxins and Antitoxins of Symptomatic Anthrax, by William Hanna. 4. Resistant Forms of the Pneumococcus, by J. W. Eyre and J. W. Washbourn. 5. A Case of Fibrinuria in a Child, by David M. Greig. 6. Fibro-lipoma of the Kidney, by A. S. Warthin. 7. Keratinising Epithelial Tumour of the Scalp, by S. G. Shattock. 8. Formalin as a Preservative for Cultivations of Bacteria. By this method the growth of organisms on different media can be stopped at any period, characteristic appearances are preserved, and the specimens utilised for teaching purposes.

Australian Medical Gazette.—In the February number Mr. G. T. Hankins records a case in which, during the removal of a sarcoma from the left subclavian triangle, the thoracic duct was accidentally wounded. Mr. Hankins then divided the duct completely across and ligatured both ends. The patient made a good recovery, and has, so far, suffered no inconvenience and has gained 7½ lb. in weight. Dr. Sydney Jamieson describes three cases of beri-beri in Chinamen associated with jaundice, in which, post mortem, he found that the bile-ducts were dilated and filled with numbers of fluke (*distoma sinense*). The gall-bladder and common bile-duct contained no flukes. He ascribes the jaundice to the obstruction of the ducts by the flukes.

New Inventions.

THE STETHONOSCOPE.

WE have received from Messrs. Maw, Son, and Thompson, of Aldersgate-street, E.C., a specimen of the stethonoscope, an instrument constructed on the principle of the microphone, and intended to be attached to the ordinary binaural stethoscope, in order to magnify the sounds within the chest. It is stated to be of English manufacture, and it is claimed for it that "the variety of râles can be most easily distinguished, and areas of tubular breathing can be mapped out with greater facility than heretofore. ..... Murmurs can be distinguished which under other circumstances would pass unnoticed." The instrument certainly magnifies sound, but though there are fewer noises produced by creakings of the instrument itself than in the case of the phonendoscope, there are spontaneous noises which at first are very confusing. It does not appear to

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magnify all sounds equally, and during a somewhat extended trial of the instrument we have found no instance in which any more information has been obtained about a case than had already been made out by the ordinary binaural stethoscope, except in the case of adults with much deposit of fat on the chest wall, in which the magnification of the sounds was of distinct advantage. The instrument is small and can quite well be carried about in the waistcoat pocket. A chest piece for the binaural stethoscope is supplied with the instrument. The price, in case, is 21*s.* 6*d.*

NEW SURGICAL NEEDLES.

MESSRS. MAYER AND MELTZER, of 71, Great Portland-street, have sent us a set of twelve newly designed surgical needles, which they have called Hagedorn's Reversed Needles. The first six figures of the illustration show the exact size and shape of the fully curved needles; the next

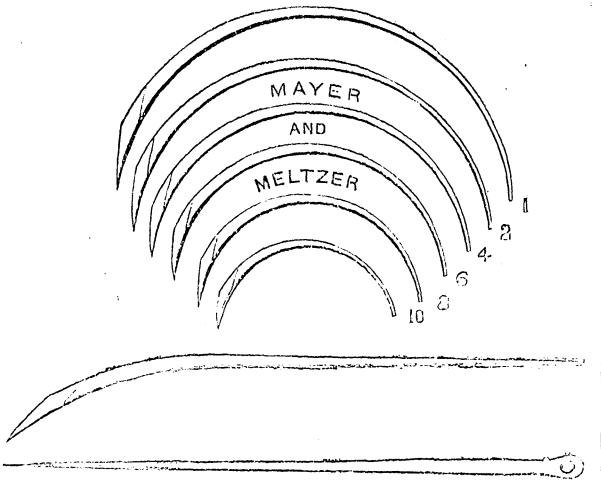


figure similarly represents the largest of the six needles of the straighter pattern. The advantage of Hagedorn's needle is claimed for this pattern in respect that the point is flat, but the eye being reversed, or, in other words, pierced not from side to side of the needle but from front to back, the needle can be held firmly with any ordinary holder, thus dispensing with the costly Hagedorn's needle-holder.

Analytical Records
FROM
THE LANCET LABORATORY.

SCHACHT'S NEW DIGESTIVE FLUIDS.
(GILES, SCHACHT, AND CO., 52, ROYAL YORK-CRESCENT, CLIFTON.)

SATISFACTORY combinations of the active digestive principle of malt with pepsin are the exception rather than the rule, and practitioners will accordingly welcome the introduction by Messrs. Giles, Schacht, and Co., of three excellent and reliable preparations of this order. We have thoroughly tested the "Schacht Bi-digestive Fluid," which is a combination of their "pepsina liquida" with a very active fluid malt. It proved to act powerfully, under proper conditions, both upon white of egg and starch, converting them into easily assimilated food substances. In addition it is by no means unpleasant to the taste. The "Schacht Bi-digestive Tonic" exhibits a similar excellent composition and degree of digestive activity, but contains also the bromo-hypophosphites of lime, iron, and potash, with cinchona and nux vomica. We had no difficulty in demonstrating the presence of each of the constituents thus enumerated; it should prove to be a reliable and valuable therapeutic combination. The third preparation, known as "Coca Bi-digestive," possesses again the active digestive properties of malt, diastase, and pepsin. It is suggested as possessing restorative and stimulant properties referable to the presence of coca extract, and is indicated in nervous depression as a useful digestive agent or in other debilitated conditions. We were easily able to separate the cocaine on suitable treatment with ether, the alkaloid being recognised by producing a marked numbing sensation when rubbed upon the tongue. The preparation, though sweet to the taste, is free from sugar and contains no alcohol. As aids to digestion, especially in enfeebled conditions, these preparations will be of undoubted service.

SOLIDIFIED SOUP SQUARES.
(E. LAZENBY AND SON, 18, TRINITY-STREET, S.E.)

We prepared some of these "squares" in the manner directed, and found them in each instance to yield a really good, palatable, and nutritious soup. The Julienne "square" consists of a cake of extract of meat enclosing a selection of desiccated vegetables, as carrot, onion, &c. The vegetable sections become softened on boiling, while at the same time they impart to the liquid a pleasant vegetable flavour. The tomato "square" consists of a uniform mixture of desiccated tomato soup, stock, and farinaceous substances. The resulting soup possessed the agreeable piquant taste of the fresh tomato. The thickness and starchiness might perhaps be reduced a little with advantage. The gravy "square" was evidently of the same composition as the Julienne "square," but without the addition of vegetables. The mulligatawny square proved to yield a rich, aromatic, but somewhat pungent soup made thick by a proportion of flour. The list includes also carrot, lentil, green pea, household, vermicelli, tapioca, and haricot "soup squares." Judging from those which we tried, which were taken at random, these preparations serve admirably as economical portable, and palatable nutrients.

HEALTH BATH SALT.
(CHARLES JUNE AND CO., 15, LOWER PHILLIMORE-PLACE, HIGH-STREET, KENSINGTON.)

This salt, according to our analysis, consists of a mixture of innocuous materials, chiefly bicarbonate of soda and borax, for use in the bath. It could be made more pleasant by the selection of more agreeable aromatic agents. It smells decidedly of turpentine, with a trace of orris root, which latter is more perceptible when the salt is dissolved in water. It may be used in the bath with advantage as contributing more effective detergent properties than when soap and water are alone employed.

(1) ESSENCE OF COFFEE; AND (2) COFFEE WITH CHICORY.
(PEEK BROTHERS, WINCH, AND CO., 20, EASTCHEAP, E.C.)

The genuineness of both these preparations is evidenced in the fact that we obtained a satisfactory yield of the stimulating principle, caffeine, on suitable treatment. The pleasant aromatic flavour of the freshly roasted berry is also preserved. In this respect the flavour of the coffee preparation unmixed with chicory is, we think, superior, although, of course, the latter possesses more body, and on that account may be preferred by not a few. Both preparations are as satisfactory as any we have previously examined, and an instructive comparison of the merits of various coffee extracts will be found in THE LANCET of July 7th, 1894.

ANTISEPTIC PELLETS.
(THE SANITAS COMPANY, LIMITED, BETHNAL-GREEN, E.)

The convenience of these pellets for the extemporaneous preparation of an antiseptic solution of definite strength is obvious. Thus one of the corrosive sublimate pellets, which are coloured blue when dissolved in half a pint of water, yields a solution containing one part of corrosive sublimate in 1000 parts of water. This constitutes the antiseptic solution prescribed by the Local Government Board. The permanganate of potash pellets contain five grains of the salt, so that

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one dissolved in a pint of water gives a conveniently strong disinfectant solution; whilst one dissolved in one ounce of water yields approximately the liquor potassii permanganatis B.P. The carbolic acid pellets contain two grains of the acid, which, dissolved in half a pint of water, give a solution convenient for most purposes.

PERFECT HEALTH RUSKS.

(A. J. G. KING AND SON, 19, REGENT-STREET, SWINDON, WILTS.)

Special attention appears to have been given to the choice of ingredients in the preparation of these articles of food. Thus the milk used is sterilised, and a certain proportion of malt extract introduced. The rusks are acceptably crisp, and of a somewhat sweet flavour due to the malt sugar, and to the digestive effect of the diastase upon the carbohydrates. They contain a small proportion of branny particles; they are well made and afford a useful and convenient form of food.

EMULSIO OL. MORRHUÆ (HAYES).

(R. O. HAYES, HAYWARD'S HEATH, SUSSEX.)

The following formula is suggested to enable the quick preparation of a satisfactory emulsion and its administration when freshly made: sodium hypophosphite, 20 grains; liquor calcis saccharatus, 1 drachm; cinnamon water, 1 ounce; cod-liver oil, 1 ounce; and oil of cinnamon, 1 drop. The soda salt and lime syrup are placed in a three-ounce bottle with the proper quantity of water, and after solution has taken place the contents are transferred to a measure. Into the bottle thus emptied the cod-liver oil, to which one drop of cinnamon is added, is poured, and to this are added the hypophosphites and lime mixture in quantities of a drachm at a time, shaking well after each addition. In this way an excellent emulsion may be extemporised in a few minutes, and it keeps for a fairly long time without separation. We succeeded in obtaining a good emulsion by following these simple directions, a knowledge of which should prove useful to practitioners. The suggestion is said to be the outcome of considerable experience in the preparation of emulsions.

CARBOLIC LOZENGES.

(BLAKE, SANDFORD, AND BLAKE, 47, PICCADILLY.)

Lemon flavouring is employed in these lozenges to mask the taste of carbolic acid. It is a very successful combination, the disagreeable flavour of carbolic acid in the mouth being fairly well disguised. They afford a useful and convenient means of administering small doses of the acid as a local antiseptic.

BUBONIC PLAGUE IN BOMBAY.

ACCORDING to the weekly returns published on the 15th inst. there were 390 cases of plague, of which 194 proved fatal, in Bombay, against 360 cases and 323 deaths in the preceding week, and the mortality from all causes was 970, against 1007. It is estimated that the total number of cases of plague in Bombay since the outbreak of the epidemic amount to 11,333, of which 9493 were fatal. The official reports received by the Secretary of State from the Governor of Bombay contain pretty full information regarding the state and progress of the epidemic. The Governor states that, as regards Poona, satisfactory progress is being made in disinfection and sanitary work and in the diminution of mortality. The death-rate in the Mofussil, however, continues high. In Poona city for the week ending March 12th last, the deaths from plague and from all causes were 160 and 434 respectively; for the week ending April 9th they were 149 and 219, the normal weekly deaths being from 60 to 70.

"In the Mofussil districts the figures are:—Surat district, 310 cases, 220 deaths; Thana district, 369 cases, 323 deaths; Satara district, 1 case, 1 death; Ratnagiri district, 6 cases, 3 deaths; Kolaba district, 176 cases, 155 deaths; Poona district, 1 case, no death; Ahmedabad city, 1 case, 1 death; Kathiawar, 15 cases, 13 deaths; Cutch, 18 cases, 12 deaths; Baroda, 51 cases, 39 deaths; Palanpur, 23 cases, 19 deaths; Karachi city, for the week ended April 9th, 161 deaths. Search parties are at work; disinfection of clothing and bedding of all suspicious arrivals at Karachi is enforced. In Haidarabad and Sukkur number of plague deaths increased. Two-thirds of Sukkur is described as deserted and three-fourths of population said to have left. No signs yet that Rohri or Shikarpur is infected."

A long report from the *Times* correspondent at Simla on the 18th inst. is published in that journal of the 19th inst. It gives a description of the progress of the plague in Western India and Sind. The disease, which was at first described as bubonic fever, appeared in Bombay city early in October, 276 deaths being officially reported in that month. The deaths went on increasing during November, December, and January, and in February had reached 3072; there was a fall in March, and a still further fall during the first fifteen days of April, when they dropped to 804, showing a marked improvement. "The week of highest mortality was that ending on Feb. 9th, when the deaths from all causes in Bombay were 1891, or at the rate of nearly 120 per mille on the assumed population of the city, from which some 300,000 people had fled. This rate had sunk to under 71 per mille in the week ending March 30th, and it is now considerably lower owing to the practice among the native population of concealing cases. The official returns show only known deaths from the plague, whereas many thousands more must have occurred. Hence the true test of the decline of the disease is the falling off in the number of deaths from all causes. The returns recorded officially give 11,300 seizures with 9662 deaths in Bombay city from Oct. 2nd to April 15th. The percentage of recoveries was thus very small."

"In Karachi the plague broke out on Dec. 10th, 59 deaths occurring in that month. The mortality rose to 745 in January and 971 in February, and then sank to 868 in March, while 301 deaths have been reported in the first half of April, which goes to show that the disease is declining as in Bombay."

The plague in Karachi seems to have been of a severer and more fatal type than in Bombay, 2944 deaths having occurred out of 3531 cases.

The statement in the *Times* goes on to furnish figures and details of the epidemic in the areas outside Bombay and Karachi—in Thana, Poona, Surat, Colaba, Sukkur, and Haidarabad (Sind), and other places. The *Times* correspondent concludes his statement as follows: "To review the whole position, the area of which the plague has taken hold forms less than a tenth part of India. The disease shows no signs of spreading into the heart of the country, and it is reasonable to hope that it may gradually die out, as fewer cases are now reported from day to day."

The Governor of Bombay has been occupied in making some conciliatory and explanatory speeches at Poona and elsewhere regarding the aim and object of the Epidemic Diseases Act, and has given his assurance that the Government was doing everything in its power in the interest of the people to stay the plague. Great care will be taken to make proper arrangements for male and female patients and to protect the privacy of the latter by the employment of females to visit and attend upon them; also to feed the sick and to indemnify the owners of property that had to be destroyed. Of course, there have been various exhibitions of resentment and some rioting here and there on the part of the Mahommedan population, but the opposition to Government measures has so far been much less than might have been anticipated. We are glad to be able to congratulate Mr. Hankin on his recovery; his services generally in India have been very great, and he has not spared himself during the present epidemic; indeed, all have worked enthusiastically and well during the crisis which is, we trust, now subsiding.

NORTH-WEST LONDON HOSPITAL.—The annual meeting of the North-West London Hospital was held in the institution on April 6th, Lord Rathmore presiding. The report showed that during the year there were 578 in-patients under treatment; there were also 17,800 new out-patients, and 38,545 attendances. The total income for the year was £6863, including £1000 from Baroness de Hirsch, £1000 from Mr. Herring, £383 from the Hospital Sunday Fund, and £149 from the Hospital Saturday Fund.

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THE LANCET.

LONDON: SATURDAY, APRIL 24, 1897.

THE enormous responsibility of the medical profession with regard to hospital abuse becomes more and more apparent the more closely we investigate and study the subject. The profession is used by hospital authorities for their own purpose and very much according to their own sweet will. If the out-patient rooms have to be enlarged, or if a little money has to be made by applying wards meant originally for the poor to the purposes of those who can pay, the members of the medical staff are expected to fall in with the views of the committee and to accommodate their services to the exigencies of the situation. And hitherto the profession has proved most acquiescent. There is scarcely an instance on record of emphatic protest and refusal to fall in with schemes which are ruining and demoralising medical practice. We make every allowance for the insidious and gradual growth of the system of indiscriminate hospital relief and for the kindly motives with which it has been associated in the minds of the promoters and in the minds of the members of the profession who have been its principal supporters. We remember the exigencies of medical education and all the arguments with which on this score such a system has been defended. But with all deductions and qualifications the fact remains that hospital practice is threatening private practice and that the public is being demoralised by indiscriminate medical charity in a way for which there is no excuse and which has no parallel in connexion with any other department of human wants; and we feel that for this state of matters the medical profession has largely itself to thank and to blame.

It is customary to speak as if the principal responsibility for this serious state of matters rested with the medical staffs of the hospitals. And undoubtedly this is true. Moreover, we ourselves have been foremost in pointing out that such is the fact, and at this critical juncture we look chiefly to them for the salvation of the profession from this huge evil. They are not selfish men. They are for the most part men of high education, proud of the traditions of the profession and of the old-fashioned charity which has created and maintained our voluntary hospitals for certain high purposes. They do not want to see these noble institutions converted into cheap dispensaries, demoralising those who come to them and sapping their self-respect and providence. Moreover, as medical teachers they have a real and natural interest in the success of the pupils they educate, and would not willingly compete with them in the less pretentious ranks of general practice. If they have done much harm we believe it to have been done unconsciously and unintentionally, and we are certain that when convinced of the fact they will be the first to demand reform in hospital administration and to vindicate the rights of private practice. By united action and representation they could reduce the scandal of hospital abuse in six months to half its proportions, and in twelve months they could practically abolish it altogether. They have the ear of the committees, executive and general, of the hospitals. They know the working of the evil system, and how, without much direct benefit to them, it threatens the very basis of private practice. Their intercourse with general practitioners must suffice to supply them with constant instances of men, whose education they have conducted and whose efficiency they know, being discouraged and dispirited in the battle of life, waged in neighbourhoods which cannot altogether do without them, but which the hospitals demoralise by gratuitous attendance or by a system of petty charges which convey the lowest suggestion of the value of medical service.

But while we think seriously of the way in which the honorary staffs of hospitals are responsible for hospital abuse we do not think that they are the only members of the profession who are to blame. General practitioners are themselves often parties to hospital abuse. For one reason or another they send patients, whom they know to be capable of paying private fees, to hospitals and often to particular members of hospital staffs. It may be to please the patient or to rid themselves of the trouble or responsibility of cases which they do not care personally to treat; it may be to humour the meanness of a patient who could pay but would rather not; but on some ground or other of a doubtful character they often suggest the hospital to patients who can afford to pay a reasonable fee for a private consultation. When the question comes to be investigated further this statement will be borne out, and the members of the medical staffs will be able to show that in cases of abuse they are often acting on the suggestions of private practitioners. It is in vain for general practitioners to complain of hospital abuse if they themselves are parties to it. No doubt a decent and respectable private patient, from the general practitioner's point of view, may often be incapable of paying the fees of a consultant whose opinion the practitioner desires. But ways of meeting this difficulty will be found when the different sections of the profession whose business it is to rectify present abuses come into friendly consultation for the purpose. We content ourselves here with saying that both consultants and general practitioners are to blame, and that they will be wise to confer with each other on the subject rather than indulge in mutual accusations. One thing is certain, that both consultants and general practitioners are serious sufferers from the existing state of things. Patients who can pay consulting fees and the fees of general practitioners are shown to be receiving gratuitous treatment in all our hospitals for comparatively slight diseases as well as for grave ones. For the sake of their common interests, as well as the interests of the public, both sections of the profession should consult together for the remedy of this grave abuse of charity.

THE annual summary of births, deaths, and causes of death in London and other great centres of population has at length been issued from the General Register Office. This publication, which relates to the year 1896, appears this

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year even later than is usual. And inasmuch as the annual reports of the metropolitan medical officers of health cannot be completed until certain statistical information which the summary contains is available, it follows that the presentation of these important documents to the local authority is also delayed in consequence. We are led to make these remarks, not from a desire to find fault unnecessarily with a public department, but because we attach a high value to this particular publication of the statistical department of Somerset House. We candidly express our appreciation of the improvements which have been effected of late in the Registrar-General's annual summary and annual report, as well as in his weekly and quarterly returns; and it is to direct attention to a most important statistical development in the present summary that the following remarks have been penned. The information contained in the present issue differs in no appreciable degree from that presented in previous summaries so far as the thirty-two great towns outside the metropolis and the sixty-seven other large towns dealt with by the Registrar-General are concerned. It is in respect of London, and especially of its forty-four sanitary areas, that we notice the chief innovations in the summary for 1896.

We are told that the rates of mortality in the sanitary areas of the metropolis, when calculated on the deaths locally registered, convey very erroneous ideas of the relative healthiness of these areas. The presence of hospitals, workhouses, and other large public institutions in certain parts of London unduly raises the recorded death-rate of the areas in which they are situated, whilst the mortality of other areas from which patients have migrated to those institutions is correspondingly lowered. Until the deaths occurring in public institutions have been distributed to the sanitary areas from which the patients originally came no reliable rates of mortality for these areas can be calculated. For some years past the deaths occurring in metropolitan institutions have been distributed to the areas from which the patients were derived, but no attempt has been made to calculate rates of mortality in the absence of reliable data as to the population of these areas. In the present summary the actual rates of mortality from all causes, and from certain specified causes, are published for the first time, the inauguration of a quinquennial census for London in 1896 having rendered it practicable to form estimates of population from year to year which perhaps may be regarded as sufficiently accurate for this purpose Several tables are given showing the death-rates in the several metropolitan areas after due correction for institution mortality. In the case of phthisis, for example, some of the London sanitary areas afford striking testimony as to the necessity of distributing deaths occurring in public institutions in order to arrive at a fairly reliable measure of local mortality from that disease. Thus, for example, in Kensington, which area contains the Marylebone Infirmary and the Brompton Hospital for Consumption, 407 deaths were registered during the year 1896; but it was found on examination of the entries relating to these deaths that nearly half of them were of non-residents which had taken place in Kensington public institutions. After distribution of these deaths the Kensington death-rate from phthisis was reduced from 2·35 to 1·42 per 1000. St. Olave is another sanitary area similarly in point. This area contains Guy's Hospital, the deaths of non-residents occurring in which had the effect of raising the registered death-rate from phthisis of St. Olave by 3·04 per 1000 in excess of the true rate. On the other hand, St. Margaret Westminster, Clerkenwell, Limehouse, St. Saviour's, St. George Southwark, and Newington are examples of sanitary areas the death-rates from phthisis of which have been very considerably increased by the apportionment thereto of deaths from phthisis which had occurred in hospitals outside the boundaries of those areas.

An interesting table is inserted at page 7, in which the death-rates of the various sanitary areas of London are given (1) as registered and (2) after distribution of deaths in public institutions. Study of this table at once shows the effect of distribution in the case of London sanitary districts. Take, for instance, the case of Hampstead, which in 1896 had a registered death-rate from scarlet fever of 1 22 per 1000; correction reduced this rate to 0·09. The registered death-rate of the same district from diphtheria was 3·24, but when the deaths were distributed it fell to 0 39. On the other hand, the district of Chelsea had a recorded death-rate of 0·51 only from diphtheria; but when the hospital deaths were fully distributed the rate became 1·17. The effect of distribution is even more apparent in the case of mortality from phthisis, and the table referred to gives numerous instances of important alterations of the local death-rates attributable to this disease. In the year 1896 the net gain in life saved in London was represented by 6854 lives. In other words, had the average death-rate in 1886-95 continued throughout 1896, that number of lives would have been sacrificed in addition to those actually lost. In this year there was in London an excess of 938 deaths from measles, 797 from diphtheria, 256 from whooping-cough, and 483 from cancer. Under most of the headings the mortality in 1896 was below the average.

THE subject of premature burial has recently been discussed in Paris, and although the result has not brought the contending parties to general agreement on the value of the signs of death, it has served the purpose of showing that there is still much to be desired in the verification and certification of that event. In the large towns in France there exists a system which would, if properly carried out, afford a satisfactory safeguard against "live burial." Two certificates of death are required, firstly, by the medical attendant, and, secondly, by the official verifier. But Dr. OSCAR JENNINGS has shown that the latter too often performs his duty in a perfunctory manner, instead of satisfying himself of the fact of death by strict personal observation. Thus far the fault lies not with the legislature but with the executive, but there are said to be out of 36,000 communes (parishes) in France 29,000 without any medical practitioner, and consequently in such there is no medical certification. It is against Sir HENRY THOMPSON'S eulogy of the French system that Dr. JENNINGS brings these damaging statements. It is computed that in England 15,000 persons are annually interred without medical certificates of any sort, while in the North of Scotland this applies to 50 per cent. of the population. No one will demur to the assertion that in

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most, if not in all, of the European States certification of death is still inadequately provided for, and whilst this is the case many criminal acts will continue to escape detection.

But Dr. JENNINGS'S advocacy is directed against premature burial, and the basis of his contention is the value of the signs of death. Having subjected each to critical examination, he arrives at the conclusion that the only infallible proof is post-mortem decomposition. We do not propose to review in detail all the means, scientific or secular, that have been suggested as proofs of death. Many antiquated popular ideas have long since been rejected as unworthy of serious consideration, but a slight sketch may not be out of place here. The erstwhile common procedure of placing a feather over the nostrils to ascertain if breathing had ceased met with decisive refutation of its value in SHAKESPEARE'S description of the death of King Henry IV. It will be remembered that Prince Henry, who sat and watched his father, exclaimed :—

> "By his gates of breath
> Their lies a downy feather which stirs not;
> Did he suspire, that light and weightless down
> Perforce must move."

But ere the king expired he gathered strength to administer reproof to, and bestow an intensified blessing on, his son. A somewhat similar incident pertinent to the issue of the "breath of life" is to be found in *King Lear*. The aged monarch, bearing the dead body of Cordelia, delivered himself of the imposing words :—

> "I know when one is dead, and when one lives;
> She's dead as earth. Lend me a looking-glass;
> If that her breath will mist or stain the stone,
> Why, then she lives."

These classical presentments are the records of what was then considered as the passage of the Angel of Death. Even yet a procedure to prove the cessation of breathing, and inferentially of life, is sanctioned by some high authorities. Sir HENRY THOMPSON says: "To detect whether a patient is dead or only in a trance, place a shallow vessel brimful of water upon the chest. If there is any life the liquid is bound to be agitated in a greater or lesser degree." We are compelled to subscribe to the reply of Dr. ICARD in his recent work (1897). "The test is untrustworthy, for besides the act of breathing there are other conditions, such as the fermentation of cadaveric fluids and post-mortem diaphragmatic movements, which may cause vibratory movements in the liquid; on the other hand, these movements may be wanting although respiration is going on, by reason of the absolute fixity of the chest wall, the breathing being carried on by the insensible movements of the diaphragm." It may be noted that in the experiment in question it has been recommended to watch the movement of the image of an object mirrored in the water, as well as to observe the vibratory movement of the water itself. The rippling of the surface from actual respiratory movement of the chest would probably be more uniform and rhythmic than if due to an adventitious cause.

The unreliability of the respiratory test led observers to centre their attention on the question of cessation of the heart's beat. Previously to 1846, when BOUCHUT published his researches, made with the aid of the stethoscope, it was difficult, and, indeed, well-nigh impossible, to arrive at a definite conclusion on the matter; and at the present time it is asserted by some that the cardiac pulsation may be so weak as to be unrecognisable by the means at our disposal. BOUCHUT undoubtedly erred in making too short the period of time elapsing after the heart's sounds ceased to be audible which he took as proof of, death. Nevertheless, if an interval of five minutes elapses the presumption of death is great. If no cardiac sounds can be heard after the respiration has apparently ceased for half an hour, it is well-nigh, if not absolutely, certain that life is extinguished.

In discussing the subject under notice it should be borne in mind that after somatic death molecular life, taken in terms of physico-chemical action, continues. Thus the irritability of the muscles is not at once extinguished. The temperature of the body in some cases, and notably where death has supervened upon an acute febrile affection or upon a cerebral lesion, continues to rise after the patient's decease, so too much reliance must not be placed on the body heat taken unconditionally. As regards the rigidity of the body, a careful observer could scarcely be deceived, for in the rigidity of trance the temperature is more or less sustained; moreover, the whole body becomes equally rigid at the same time. If the limbs of a person in cataleptic spasm be flexed the rigidity soon returns, whereas in cadaveric stiffness it re-appears slowly or perhaps not at all. It is impossible to assert that such a ghastly event as burial of the living has never occurred. There are well authenticated cases of bodies having been laid out for interment that yet retained their vitality; still, if the list of alleged burials of the living were subjected to critical examination we opine that it would dwindle to very narrow proportions. We ardently support the reform of death certification. No argument is needed to enforce the desirability—nay, the paramount necessity—of efficient death verification; but we cannot acquiesce in the proposal that no interment should take place prior to the advent of cadaveric decomposition, believing as we do that a conscientious medical observer can verify the decease of a human being before the body is "green in death and festering in a shroud."

Annotations.

"Ne quid nimis."

WORKHOUSE NURSING.

WORKHOUSE nursing seems to have been attracting a considerable amount of public attention lately, and seeing that THE LANCET has played an active part in this arena, we feel it our duty to call the special attention of our readers to this matter. Mr. Ashton, M.P., asked in the House of Commons in May last for a return showing the number of persons occupying the sick wards in workhouses and infirmaries on June 1st, and the number of paid officers, probationers, and pauper helps employed in attending on them. A very large number of figures are given in the return concerning the different workhouses and infirmaries throughout England and Wales. We do not, however, think it worth while to criticise them at any length, because the whole return is the subject of a very serious fallacy. On June 1st the numbers of the inmates of workhouses and infirmaries are at their very lowest, and experienced Poor-law officers generally

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reckon that there are in the summer very little more than half the number of inmates who are in these institutions during the winter months; and as the paid staff and the number of helpers are not reduced at the slack time of year, the proportion between the patients and the nurses and pauper helpers who attend on them, as represented by this return, is no guide whatever to what really obtains during the rest of the year. If any inferences were to be drawn from these figures as to the adequacy, or rather inadequacy, of the supply of nurses, they would be wholly misleading. "Provided, fifthly, that any pauper of the fourth class whom the master may deem fit to perform any of the duties of a nurse or assistant to the matron may be so employed in the sick wards." The inmates belonging to Class 4 are "women infirm through age or any other cause." These are the words in which the Poor-law Commissioners, by Article 99 of their General Order, dated Dec. 8th, 1847, instructed the masters of workhouses, both London and provincial, in the duties of their office and the classification of paupers. This article was the origin of "pauper nurses," the article which rendered them official; and this, if we mistake not, is the cause of their perpetuation at the present day. The abuses to which it gave rise were the subject of a very exhaustive inquiry initiated by the Founder of THE LANCET many years ago. It is therefore with great regret that we notice that this old and obsolete article is still unrepealed; and it is also with corresponding pleasure that we see that at last the masters of workhouses themselves—namely, those officials with whom these evils are ever present and by whom their rectification should really be initiated—have evinced some interest in the matter. Our contemporary, the *Local Government Chronicle* of April 3rd, contains the report of a meeting of the Workhouse Masters' Association, and prints *in extenso* a paper contributed by Dr. Malden, medical officer to the Tonbridge Union Workhouse. It is too long for us to notice at any great length, but in general terms it has our cordial approval, and we hope that it may be the means of stirring workhouse masters and matrons to a sense of their responsibilities in the way of inducing the guardians to provide adequate nursing for the sick in workhouses. We are amused to notice in the discussion which followed that some of those present seemed to complain that the Workhouse Nursing Infirmary Association was not the right body to carry out this reform. It is true, quite true, that a philanthropic body should not perform the duties of masters of workhouses and guardians of the poor, but if those individuals do not discharge the duties which they owe to the sick poor, surely they cannot complain if other people step in and fill their places. As regards some adverse remarks made against this association—to which, by the way, the speaker owed her training—we have it on the best authority that the association is very careful never to interfere with the internal administration of workhouses so long as a skilled and properly trained nurse is supplied with the means of carrying out her duties thoroughly. The great work which this association has done is pointed out in a later issue of our contemporary, where it is mentioned that during the past eighteen years that body has spent over £3000, collected in voluntary subscriptions, in training and supplying to workhouses and infirmaries nearly 800 nurses.

A CURIOUS VERDICT: A CORONER'S VIEW OF MEDICAL EVIDENCE.

AN unfortunate occurrence happened a few days ago in the Wigan Corporation Baths. A young man, who had gone on the previous evening to have a bath (the ordinary slipper bath), was found by the attendant next morning (when taking a person to have a bath) dead with his head completely under water. An inquest was held in due course, and the jury, without having any medical evidence as to the precise cause of death, found "that death had resulted from failure of the heart's action (syncope) whilst the deceased was having a bath." They further stated that they were hardly satisfied with the evidence given, and as there was a police doctor they would have preferred to have heard some medical evidence in connexion with the case. The coroner asked if they would like the inquest adjourned for medical evidence, but the foreman of the jury thought it hardly necessary. The coroner then said, according to the *Wigan Observer* of the 10th inst., "that where the cause of death was so apparent they considered that it was unnecessary to have medical evidence. In fact, it was like throwing ratepayers' money away, and in that case they considered they were saving it. A medical man would not give evidence as to the cause of death when he was called in after death unless he made a post-mortem examination, which was not only objectionable to the relatives, but rather expensive." In this case, where an unfortunate young man was left in a bath all night, the most searching inquiry should have been held, not only to find out if anyone was to blame for neglect, but to ascertain whether the death was from natural causes or from drowning. Such could not be done without a post-mortem examination; and if the coroner thinks that the sum of one guinea remunerates a medical man for this disagreeable work he is much mistaken. Many medical men would prefer not to make such an examination, but know that it must be done if the true cause of death has to be found. And what is the value of an inquiry like this? If the coroner knew that the man had died from natural causes, why did he summon twelve good men and true away from their businesses? Such an inquiry without a post-mortem examination is useless.

LUNACY IN EGYPT.

DR. JOHN WARNOCK'S annual report on the Cairo Lunatic Asylum for 1896, although only half as long as its predecessor, is, nevertheless, a notable record of continuous progress in the only hospital for the insane which Egypt possesses. Mechanical restraint of every description has at length been completely abolished, and owing to the introduction of pass keys and substantial asylum locks it has been possible to re-arrange the establishment into six sections containing 70 patients each. A new system of drainage has been adopted, so that all foul water now flows out beyond the hospital premises instead of into percolating cess-pits inside the walls. This is, doubtless, advantageous to the institution, but as Cairo is not yet sewered the adjoining ground must necessarily suffer. A great many structural alterations and additions were completed during the year at a cost of £E3573, and equipment valued at £E827 was also added to the existing stock. Many innovations, however, are still required, including a male infirmary, a laundry, additional first- and second-class accommodation, and extension of the section for cases of acute insanity in men. The estimated expense is £E5840, and Dr. Warnock hopes that some at least of the items may be supplied, "notwithstanding the many other claims on the finances of the country." The number of inmates has fallen from 488 to 417. "This is partly due to the cessation of admissions during the cholera outbreak" and partly to the impossibility of properly accommodating more than 420. The "average daily number resident" was 477 (337 males and 140 females). In the course of the year 425 cases were admitted, no fewer than 136 of them being re-admissions, some for the eighth or ninth time; 145 of the new patients bore marks of injury more or less severe, nine among the number having broken ribs. Many of them had "broad scars over vertex, temple, and occiput, due to cauterisation

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when in their homes," and marks left by ligatures were frequently visible on their wrists and ankles. There is no separate section in the asylum for criminal cases. In addition to ordinary prisoners and persons under police surveillance 23 individuals accused of capital crimes were sent in from the tribunals for observation or treatment. 29 general paralytics were admitted in 1896, against 19 in the previous year, 4 of the number being Greeks. Only one was a fellah; the others were pedlars, servants, artisans, &c. Dr. Warnock thinks it is probable that general paralysis exists in Egypt to a much larger extent than was formerly believed, but does not give the reasons on which this opinion is based. The relation of the affection to syphilis receives support from his observations. "Hasheeshism still remains the most potent cause of insanity in Egypt"; 90 of the admissions were clearly due to abuse of the drug, and there is reason to believe that "the real percentage of male admissions caused by hasheesh is nearer 50." 81 deaths took place during the year, including 23 from tuberculosis and 10 from cholera. The number of foreign lunatics at present in the asylum is 41, chiefly Greeks, Jews, and Syrians. They occupy room which can only be ill spared, but apparently it is impossible to get rid of them. Some of the Syrians are brought to Egypt on purpose to obtain admission, as there is no establishment for the insane in their own country. Dr. Warnock has been informed that some lunatics are kept in Damascus in stone cells, with chains round their necks.

CASTRATION FOR ENLARGED PROSTATE.

THE misery of existence for anyone suffering from enlarged prostate and all the evils which this affection brings in its train have been so universally recognised that it is no wonder that surgeons should have been for some time seeking some method of relief. Prostatectomy is dangerous and oftentimes brings no amelioration of the trouble; therefore, it was proposed by Professor White of Philadelphia to cause shrinking of the prostate by removal of the testicles, a result which undoubtedly sometimes does follow. The operation, however, is liable to be followed by various unpleasant symptoms and in some cases by death. Mr. F. E. Fremantle, of Guy's Hospital, recently read a paper before the Physical Society of that hospital, wherein he has carefully collated all the published literature on the subject so far as he could, and has compared the relative advantages of bi-lateral castration, uni-lateral castration, and excision of the vas deferens. Shortly, his conclusions are as follows:—1. Removal of the testes in cases of hypertrophied prostate causes a relief of symptoms, and usually a reduction of the hypertrophy analogous to the effect of oöphorectomy on uterine fibro-myomata. 2. Shrinking of the prostate is probably due to the removal of some sub-conscious reflex stimulus, normally conveyed to it from the testes by way of a lumbar spinal centre. 3. This is more especially suggested by the fact that removal of one testis will sometimes cause a corresponding one-sided shrinking of the prostate. 4. The immediate or rapid relief of symptoms in these cases is almost entirely due to relief of congestion and œdema in the lymph-spaces and venous plexuses of the urethra and prostate. 5. Double castration is less dangerous than prostatectomy, and will cause an amelioration of the chief symptoms in about 80 per cent. of the cases. 6. The mortality is greatly increased by operating on patients with advanced kidney disease, and operation in early stages will be performed with a better chance of complete cure and almost without risk to life. 7. If castration be refused, after a firm and honest statement of the dangers of refusal, excision and torsion of the vasa deferentia, although of less certain efficacy and of doubtful moral expediency, may with regret be recommended. Mr. Fremantle's paper, which was published in the *Guy's Hospital Gazette*, is a carefully compiled summary of present opinion upon the subject, and although, as the writer himself says, it does not pretend to any originality, it will be found useful for reference.

KING'S COLLEGE SCHOOL.

THE Council of King's College, London, has sanctioned a reduction of 20 per cent. in the fees of all boys who pass after not less than five terms of study from King's College School into the medical school. King's College School has recently been removed from the Strand to Wimbledon Common, where a large mansion has been purchased standing in what we are informed is an unimpeachable site. Certainly Wimbledon is a thoroughly pleasant and healthy suburb, in every way suitable for school premises, and we may anticipate for the school in its new quarters a maintenance of its good moral tone and high level of scholarship.

DRINKING A QUART OF WHISKY.

THE folly, in a young man aged twenty years, of drinking a quart of whisky for the wager of £1 would seem incredible were it not that the literature of medical jurisprudence supplies us with several similar instances. One is recorded by Professor Christison in his book on Poisons—that of a London cabman who, for a bribe of 5*s*., drank at a draught a whole bottle of gin. In a few minutes he dropped down dead. The same high authority says that such accidents are not infrequent in Scotland. He gives one instance of death in four hours. The victim was a man who had stolen a bottle of whisky, and as the surest way which occurred to him of escaping detection drank it all. In the case recently reported death seemed to occur in about eight hours. There was a difference of opinion at the inquest as to the complicity of others. It was not proved that the publican was aware of the use to be made of the drink which he supplied. It would seem to be but right that the other party to such an experiment should be held responsible for the consequences.

EPIDEMIC SMALL-POX IN NEW ORLEANS.

AN interesting statement, illustrative of the malignancy of small-pox, is contained in the Report of the British Consulate on the Trade of New Orleans for 1896. The statement consists of an extract from the record of the small-pox outbreak in New Orleans in 1895-96, and is from the pen of Dr. Woods, the chief sanitary inspector of the city. The extract is so pithy and significant that we have no hesitation in reproducing it as given in the Consular Report: "In February, 1895, a man came here from Arkansas, and afterwards developed a well-marked case of variola. At that time the disease existed all over the Eastern Arkansas and Western Tennessee counties. Otherwise than in a very general manner we could not further or more definitely trace the origin of the disease. From this case others in due season developed. In February, 1; in March, 4; in April, 3; and in May it reached the alarming proportion of 58 cases; in June there were 36 cases. After the first case in February the authorities vaccinated all parties living in the infected localities—that is, all who would accept vaccination. The clothing, bedding, and wearing apparel, except those worn by the patient when sick, and the bed upon which he slept, were subjected to boiling water for thirty minutes, and afterwards left over night in a bichloride solution of 1 in 1000. Those articles and fabric coming in direct contact with the patient were destroyed by fire. All carpets and matting in the patient's room were also destroyed by burning. The walls, floors, all furniture and fixtures, the galleries, and even walks, yards, and outhouses, were sprayed or otherwise washed down with a bichloride solution of 1 in 1000. The interior of the house, after thoroughly closing the openings and chinking all cracks, was subjected to sulphur fumes for nine hours, with from 5 to

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7 lb. of sulphur candles to 1000 cubic feet of air space. With these rigid measures observed in every instance of the disease the outbreak was in a manner controlled during the summer months of 1895, but with the advent of winter the disease seemed to take a fresh start, having been re-introduced from time to time from the country parishes where it existed to quite an extent. In the fall of 1895 a very rigid vaccination campaign was inaugurated by the Board of Health, and the work was not stopped until the entire city had been canvassed by a large and efficient corps of physicians, who systematically, by districts, went from house to house offering and urging free vaccination. During this campaign 53,437 people were vaccinated and re-vaccinated. After this systematic vaccination campaign was over, and the influx of darkies from the country parishes had ceased, the disease steadily decreased. In March, 1896, we had the greatest number of cases of any month during its prevalence, reaching a total of 334 cases. Since the introduction of the disease in February, 1895, we have had 1126 cases with 291 deaths, making a death-rate of 25·84 per cent."

ICHTHYOL IRRIGATION OF THE URETHRA FOR GONORRHŒA.

WE publish in another column an interesting account of eighty-two cases treated in this way which have been recorded by Dr. Werner. Gonorrhœa so often proves intractable and the complications and sequelæ connected with it are so numerous and severe that every new method employed in its treatment is worthy of careful attention. The intractability of the disease is really due to the difficulty which exists in bringing an efficient antiseptic in contact with the gonococcus without injuring the mucous membrane. Janet's method of irrigation is especially useful in that the fluid pressure distends the urethra, and so obliterates the folds of the mucous membrane which shelter the organism from ordinary injections; but the method is by no means free from risk, for the inflow of the solution used may carry gonococci with it, and so cause not only an extension backwards of the urethritis, but also cystitis and epididymitis. Ichthyol is a fairly good antiseptic, and as the cases quoted show, can give much better results than the permanganate of potassium originally used by Janet.

SWINE FEVER.

THE Departmental Committee of the Board of Agriculture appointed to inquire into the etiology of swine fever have issued their second Report, containing experimental and other evidence of great interest. The committee refer to pneumonia of the pig and to swine erysipelas, two diseases distinct from swine fever, and incidentally referred to in the first Report. Pneumonia of the pig is recognised by American veterinary surgeons as a disease distinct from swine fever and is regarded as identical with the disease known in Germany as *schweinseuche*. The same bacterium has been found in both countries in association with this disease. The committee obtained cultures from Dr. Salmon of America and from Professor Schütz of Germany, but they found that the cultures had only a feeble effect on pigs, though highly virulent to rabbits and pigeons. The committee isolated a bacillus, indistinguishable from the *schweinseuche* bacillus, from the lungs of English pigs affected with pneumonia complicating swine fever, and they conclude therefore that the pneumonia of the pig, which is occasionally encountered as an independent disease and sometimes in association with swine fever, is to be ascribed to organisms which are "generally saprophytic and only in particular circumstances able to multiply in the air passages, and thus induce pneumonia.' With regard to swine erysipelas the committee have not been able to find any outbreak of the disease in an acute or epizootic form in the United Kingdom, but they made the interesting discovery that the bacillus of swine erysipelas was present in twenty-eight out of thirty-eight cases of verrucous endocarditis. Further inquiry did not lead the committee to conclude that the frequently encountered cases with chronic heart disease represented pigs that had survived an acute attack during an outbreak of the disease; and attempts to infect healthy pigs by feeding them with blood or cardiac vegetations containing the bacilli, or with artificial cultures, gave in every case negative results, though the bacilli were virulent to mice and pigeons.

THE HERMITE PROCESS AT BOMBAY.

THE Hermite process, which consists of the use of electrolysed sea-water for the deodorising and sterilising of sewage, and which was reported upon by THE LANCET Special Analytical Sanitary Commission on the Hermite Process of Sewage Treatment by Electricity,[1] has already been tried in Worthing, Netley Hospital, Havre, and elsewhere, and is now about to be adopted at Bombay. The plant has been erected at Carnac Bridge and an agent has arrived to superintend the experiment. The Hermite system is, we should imagine, specially adapted to a city like Bombay, where the sewers are defective and the sewage can be run into the sea.

THE SURREY COUNTY HOSPITAL AND HOME VISITS.

THERE has lately been much discussion in Guildford as to the visiting by members of the Surrey County Hospital staff of sick persons, patients of the hospital, at their own homes. A scheme has been considered by which the hospital authorities are to work with the townsmen who are promoting the Jubilee commemorations, and the townsmen offer £50 annually to the hospital if 200 tickets for home visits are supplied and an out-patient letter given with each. The chief opposer of the scheme argued that it would fall through by the introduction of out-patient tickets, that £50 for 200 tickets was a most inadequate sum, that the country subscribers would say that the town of Guildford obtained too much advantage, that it was the duty of the committee to oppose a scheme which would tend to pauperise a portion of Guildford, and that the home visits were likely to introduce infection into the hospital. The hospital committee are greatly in favour of the scheme being adopted. With regard to the objections given above we agree with them all except the last. Unless the staff of the hospital are to be debarred from all private practice, we do not see why the visiting of a poor patient should be more likely to introduce infection than a visit to a patient who is better off. Disease is no respecter of persons, station, or wealth, and a medical man is as little likely to carry infection from a hovel as from a palace. As to the practice of hospital staffs visiting hospital patients at their own homes, it is one of which we do not approve; hospital patients when they are discharged from the wards should cease to be hospital patients other than as out-patients.

THE ELECTRO-CAUTERY AS A HÆMOSTATIC.

A HÆMOSTATIC application of the electro-cautery is reported by Dr. Alexander J. C. Skene in the *New York Medical Journal* of March 27th. This consists in its employment instead of the ordinary torsion artery forceps and the compression forceps. In the case of the artery forceps a thin platinum plate is attached to the distal extremity of either blade, but isolated from it by a sheet of mica. The proximal ends of the plates are attached to copper wires, also isolated, which pass along the proximal end of the forceps

[1] THE LANCET, May 26th, 1894.

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through a vulcanite case and communicate with a battery. It is sufficient, says Dr. Skene, that one blade only be thus electrically fortified. In the case of the compression instrument a modification of the original plan is introduced, a platinum wire passing inside a flat watertight metal chamber applied along the inner side of one blade to the distal end of the instrument, where it is attached to a platinum plate. It is, of course, isolated. At its proximal end it is connected with a copper wire which traverses a vulcanite case and passes, together with a wire attached to the handle of the forceps, to the battery, as in the artery forceps. In order to develop sufficient electrical resistance the platinum wire in the metal chamber is made to take a zigzag course. Dr. Skene has also devised a clamp with the electrical modification. He states that by this means the required degree of heat—170° to 190° F.—can be attained very quickly, and that the apparatus can be easily adapted either to a suitable battery or to the current from the electric light mains. He has made use of his invention in treating the pedicle in ovariotomy, in operations on the broad ligament of the uterus, and in vaginal hysterectomy. As yet he has not employed it in abdominal hysterectomy, but he is confident that it is suitable for this operation also.

THE SUPPLY OF STIMULANTS AT THE GAOL HOSPITALS IN NEW SOUTH WALES.

EARLY in 1895 the Comptroller-General of Prisons brought under notice the extravagant use of stimulants in the hospital of one of the large gaols, and a report was obtained from the then Government medical officer on the subject. It was recommended that white spirit, diluted to 40°, should alone be furnished in response to requisitions for alcohol. This recommendation was approved. Two visiting surgeons to gaols—Mr. Carruthers and Mr. O'Connor—have recently objected to using this white spirit, and wish to be allowed to use their discretion as to what form of stimulants should be ordered, and Dr. Ashburton Thompson, the Government medical officer, has sent in a further report on the subject. He had the brandy previously supplied under contract to the gaols analysed, and found that it was composed almost entirely of the "white spirit" to which objection was taken, coloured and flavoured. It was not brandy from the grape, but a spirit of less certain wholesomeness than that to which Mr. Carruthers and Mr. O'Connor objected. He adds that everyone interested in the matter knows that the spirits of commerce very seldom have the origin their names specify, and the compound in question is everywhere accepted in the course of ordinary business as "brandy." As the complaint was that the medical officers were compelled to give up the contract article, now shown to be a more or less impure "white spirit," Dr. Thompson says, "nothing remains to be considered." Whether everyone will agree with him in this opinion is another matter.

POISONOUS ICE CREAMS.

EVIDENCE comes almost day by day, at any rate in the summer season, of the desirability of placing the manufacture of ice creams under definite control. There is no reason why an inspector should not be appointed to seize any materials intended for the preparation of ice cream that prove to be unfit for food, just in the same way as meat or any other article which is in an unwholesome state may be seized. As was shown in the report of THE LANCET Commission on the Sanitary Condition of the Italian Quarter as far back as Oct. 18th, 1879, the surroundings under which cheap ice creams are very commonly made are often loathsome in the extreme, and it is not surprising that recent bacteriological inquiry has demonstrated the presence in them of the organism that is a normal inhabitant of the human bowel, and it is well to bear in mind that any objectionable taste that the ingredients may have is not noticeable owing to the numbing effect of cold upon the tongue. Only this week an inquiry was held touching the death of a child, aged fourteen years, who, four days after partaking of some ice cream obtained from a barrow in the street, died from ptomaine poisoning. The post-mortem examination showed that all the organs were healthy except the stomach, which was greatly congested, evidently by the action of an irritant poison. A verdict of accidental death was returned. There is little doubt that the ptomaines were derived from bad eggs or perhaps highly decomposed milk. Seeing the great number of innocent juvenile partakers who are to be found round the barrows almost every day, it is high time that ice creams and the ingredients employed in their manufacture should be subjected to the same control as are unsound meat, fruit, and tinned and other articles of food.

THE LATE MR. JAMES BLAKE BAILEY.

IT is with great regret that we announce the death of Mr. J. B. Bailey, the Librarian of the Royal College of Surgeons of England. Mr. Bailey, who was in his forty-ninth year, had for some time been suffering from symptoms of malignant disease of the liver, and no hope of his recovery had been entertained for the past few weeks. He had held the post of Librarian to the College for the period of ten years, and previously to accepting that appointment had been the Librarian to the Royal Medical and Chirurgical Society since 1884. Before this date he had held the office of Librarian of the Radcliffe Library at Oxford under Sir Henry Acland. Mr. Bailey's loss will be very much felt by all who have ever come into contact with him. He was an admirable man for his post, always able and willing to give information, and devoting his whole time to his books. He was never tired of hunting among the archives of the College, and brought to light many a forgotten pamphlet or book of interest, which he sometimes republished and illustrated with notes that showed a keen critical and literary insight. His latest publication was the interesting little book, "The Diary of a Resurrectionist."

THE MICROBE OF CHICKEN CHOLERA.

THE invasion of the various colonies of Australia by rabbits is one of the most serious difficulties with which agriculturists have to contend, and numerous attempts have been made to get rid of these animals by trapping, by a "poll-tax," by phosphorus poisoning and in various other ways. Some time ago it was suggested that Pasteur's fowl cholera organism or Koch's rabbit septicæmia organism should be introduced into the colonies with the object of killing off the rabbits by a kind of artificial epidemic. It was objected, however, that the introduction of this organism might do more harm than good by killing all the poultry and perhaps not getting rid of the rabbits. Mr. C. J. Pound, Government Bacteriologist to the Colony of Queensland, now states in a report presented to the Houses of Parliament of the colony that fowl cholera is already present in the colony. This being the case he has taken the opportunity of carrying on a series of experiments with the fowl cholera organism, as a result of which he is convinced that by the judicious use of food mixed with this organism in dry weather he will be able to set up an epidemic amongst rabbits, even those in a wild state, which would in time mitigate to a very marked degree this rabbit plague, and he recommends his Government to give permission to agriculturists to use this organism as a rabbit poison. Whether this can be carried out on a large scale, and whether it would be successful if carried out, still remains to be proved; but from all accounts the

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rabbit nuisance has reached such proportions that any method of keeping down these "vermin" will probably be tried in Queensland; whilst, should it prove successful, it will be hailed with almost as much delight as that with which Koch's method for treating rinderpest has been received by the South Africans.

LONDON POST-GRADUATE COURSE.

ON Monday, May 3rd, the summer term will commence, and will include courses at Blackfriars (Skin), King's College (Bacteriology), London Throat Hospital, Parkes Museum, Institute of Preventive Medicine (Urine Testing), and Cleveland-street Infirmary (General Medicine and Surgery). All information will be afforded and fees received by Dr. Fletcher Little, secretary, 32, Harley-street, London, W.

THE ROYAL COMMISSION ON TUBERCULOSIS.

WE understand that the Royal Commission on Tuberculosis has been much impressed with the general concurrence amongst the witnesses who have been heard as to the necessity of establishing public abattoirs wherever this is possible, both in the interest of the public health and to protect graziers and butchers against the present want of uniformity in the seizure of carcasses on account of tuberculosis. Several members of the Royal Commission have, therefore, commenced a tour of inspection of foreign cities to study this question and to learn generally what action is taken abroad both as to tuberculous carcasses and tuberculous milch cows. The first cities to be visited are Brussels, Cologne, Berlin, and Leipzig. Other visits will probably follow later.

THE MUZZLING ORDER.

AN impassioned correspondence has been going on in the daily press about the recent muzzling order and the Board of Agriculture has been assailed with a virulence which certainly seems excessive when we remember what slight cause it has given for such abuse. On one point we can agree with the objectors to the order, and that is we consider that the muzzling order ought to have been made universal throughout the kingdom, and that on the expiration of the appointed period a strict system of identification of dogs and their owners should be inaugurated by means of registration and the wearing of a marked collar by the dog. But in most ways many dog-owners seem to have completely lost their heads and to have imported political bias into the question, which is quite beside the mark. Anyone who is so foolish as to say that a Government or a candidate will lose his vote on account of this order is quite unfit to exercise the franchise at all. If these silly persons had ever seen a case of hydrophobia they would think no means too stringent to stamp out such a fearful disease, although we quite agree that the present methods of procedure are inadequate.

MORTALITY STATISTICS AMONG FOREIGNERS IN SHANGHAI.

THE annual report of Dr. J. Taylor Grant, municipal surgeon and medical officer of health, shows that during the year 1896 there were 141 deaths of foreigners registered in Shanghai, including 4 adults whose bodies were brought to Shanghai for burial and 2 stillborn infants. Taking the whole foreign population, resident and non-resident, including the French Concession and the foreign shipping, this gives an annual death-rate of 22 per 1000, as compared with 23·5 in the previous two years and 18·4 in 1893. Of these deaths, 19 were due to small-pox, 14 to tuberculosis, 12 to drowning, 10 to cholera, 10 to enteric fever, 1 to cholera morbus, and 2 to opium poisoning. As far as can be gathered from the native returns, only 18 deaths of natives were due to cholera during the past year, as compared with 928 in 1895. Among the natives 316 deaths are certified as due to small-pox. In the native hospitals vaccination is performed regularly twice a week by the native practitioners, whose returns show that the natives in and around Shanghai appreciate it more each year, and that 7160 vaccinations were performed in the city alone during 1896. Preparations were made against a threatened invasion of plague, but the disease did not spread to Shanghai. During September and October dengue prevailed extensively throughout the Settlement. This specific eruptive disease attacked alike foreigners and natives, adults and children, but in no case among foreigners was there a fatal termination.

OYSTERS AND DISEASE.

AT their meeting on Thursday, April 15th, the Brighton Corporation drafted the petition which they intend to send to the Local Government Board asking for a Bill to control the dissemination of oysters and other shell-fish proved to be contaminated by sewage. The support of other municipalities is to be sought in the matter. Speaking first of the "increasing bulk of evidence" that enteric fever is communicated from this source, the memorial goes on to say that certain of the memorialists have had within their districts cases traced to this cause. The report of Dr. Bulstrode, it is claimed, proves the danger and the need of remedial measures. It is suggested that these latter should include the giving of powers to local authorities similar to those of Section 4 of the Infectious Diseases Prevention Act, 1890, in the case of milk—i.e., to prohibit the supply within their district of any shell-fish from any water proved to the local authority to be contaminated by sewage, the consumption of such shell-fish being proved to be, or being likely to be, dangerous. An appeal to the Local Government Board from the local authority is suggested. Further, they ask that power to totally close oyster-beds or ponds on the representation of the local authority shall be vested in the Local Government Board.

THE Order of the Double Dragon has been conferred by the Emperor of China on four of the surgeons who took part in Red Cross hospital work during the Chino-Japanese war. The names of the recipients of the honour are—Thomas Brander, M.B., C.M. Edin., Dugald Christie, L.R.C.S., L.R.C.P. Edin., Charles De B. Daly, M.B., M.Ch. Dub., and D. C. Gray, M.B., C.M. Glasg.

THE East London Hospital for Children, Shadwell, has now been recognised by the Conjoint Board for England as a place of instruction for students, at which six months of their fifth year under the new regulations may be spent in clinical work. Full information on all points may be obtained from the secretary at the hospital.

THE annual dinner of the Army Medical Staff will be held this year in the Whitehall Rooms, Hôtel Métropole, at 7.45 P.M., on Monday, June 14th, the Director-General in the chair, and it is hoped that the Army Medical Staff band from Aldershot will play during dinner.

WE understand that Mr. Bennett May, Professor of Surgery in Mason College, Birmingham, is an intending candidate for the vacancy on the Council of the Roya College of Surgeons of England caused by the death of Mr. Oliver Pemberton.

THE Prince of Wales will open the new buildings of the Sarah Acland Home for Nurses at Oxford on May 12th.

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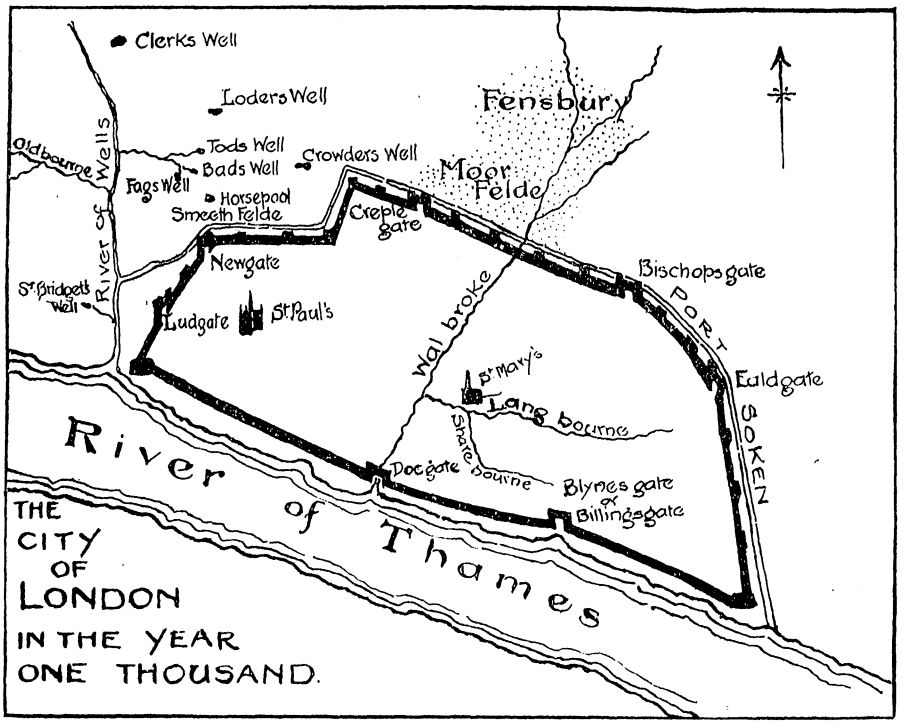
The Lancet Special Commission
ON THE
METROPOLITAN WATER-SUPPLY.

IX.[1]

Historical.

BEFORE describing the three companies which still remain to be reported upon it will be convenient to give a few more details of the past history of the water-supply of London, a partial *résumé* of which has already been given.[2]

In the early period of its history London, as we have seen, was supplied by water from the River Thames, from streams which ran through the city and from a number of wells. The accompanying map is reproduced from one in the Grace collection now in the Print Room at the British Museum. It shows the probable position of the wells and streams in and near the City of London in the year 1000. Stow says that at one time Walbrook was "a fair brook of sweet water, which came from out the north fields through the wall and midst of the city into the River of Thames, and which division is till this day constantly and without change maintained."



There was, says Stow, "a long bourne of sweet water, which of old time, breaking out into Fenchurch-street, ran down the same street and Lombard-street to the west end of St. Mary Woolnoth's Church." This was the Langbourn, and there is no doubt as to the course of this stream, which is correctly given in the map. As to the Shareborne, it seems by no means certain that the map is correct. Stow says that from the west end of St. Mary's Church the Langbourne, "turning south and breaking into small *shares*, rills, or streams," gave the name to Shareborne-lane. The site of Crowder's Well is now Well-street, Jewin-street. At the early part of the eighteenth century the water of this well was, according to Strype, "esteemed very good for sore eyes to wash them with. ..... And some say it is very good for men in drink to take of this water, for it will allay the fumes and bring them to be sober."

River pollution.—The pollution to which the streams were subject gave rise at quite an early period to complaints, and river pollution was an object of legislation in the Parliament which met at Carlisle in the twenty-fifth year of the reign of Edward I. The Earl of Lincoln complained that the pollution of the Old Bourne had become unendurable in consequence of the filth from the tanneries situated on the banks of the stream. The citizens were ordered to cleanse the river. The people who in early times made a trade of getting water from the river had not always a very easy task in consequence of the condition of the banks. There is a case recorded in which one of these people was drowned in trying to land. The report of the inquest is in the City archives.

Supply to the religious houses.—Before leaving the early history of the London water-supply it may be worth while to mention that the religious houses had, in most cases at any rate, an independent and good water-supply. St. Peter's Abbey at Westminster was supplied by water from Hyde Park and the Charterhouse by water derived from Islington. The Priory of St. Bartholomew's had also a good water-supply. The destruction which occurred at the Reformation and the breaking up of the religious houses interfered for a time with some of the purest sources of supply.

The earliest water businesses.—The first time in the history of London in which the supply of water became a considerable business was undertaken by Moris, and to this reference has already been made.[3] The other early water businesses which were started for the supply of places north of the Thames were the New River, the York Stairs, and two smaller ones in the East-end. Of these the New River Company is the only one which still exists in recognisable form, and we propose going into its history later. The East-end businesses are now represented by the East London Waterworks, in connexion with which their story will be told, and we need here only say a few words as to the London Bridge and the York Buildings Waterworks.

The London Bridge Waterworks.—Little need be added to the history already given of the early career of the London Bridge Works. Every drawing of Old London Bridge shows the water-wheels, and the *Philosophical Magazine* gives an

[1] Nos. I., II., III., IV., V., VI., VII., and VIII. were published in THE LANCET of Feb 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd and 17th, 1897, respectively.

[2] THE LANCET, Feb. 20th, 1897.

[3] THE LANCET, Feb. 20th, 1897, p. 541.

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account of the pumps. We cannot do more here than give dates at which the arches of the bridge were given up to the business[4] and pass on to describe the state of the undertaking at the early part of the present century. The quantity of water supplied by the London Bridge Company in 1810 was estimated at something between 3,000,000 and 4,000 000 gallons daily, and the water-wheels worked about twenty hours each day. When the tide was very low less water was raised by the wheels and the quantity was made up by working a steam engine. The superintendent of the Company gave a somewhat depressing account of the business in the year 1821. They had at that time a very "strong enemy" against them, which had taken away many of their customers. "They were in a state of pauperism and much to be pitied." The strong enemy was the New River Company, which had the power of raising water higher than the London Bridge Company could possibly do. The new fashion of building high houses was disastrous to the Company, because cisterns and water-closets were placed at an unreasonable distance above the ground in the new buildings. The pipes used by the Company were made of wood, and they had not enough money to replace them by iron ones. They were unable to supply water at a higher level than the second storey of a house. The superintendent of the Company would not admit that the water supplied was of a bad quality, and he said that in many instances distillers took it in preference to any other, but he admitted he never thought of drinking it. The ebb tides brought down a considerable quantity of soil from the rivers which ran into the Thames and the water was frequently foul, but after it had stood in a cistern for twenty-four hours it became "finer than any other water that could be produced." For his own supply the superintendent had two large cisterns, and by drawing out the water alternately every other day he had "as clear water as could be imagined." The rates charged for supplying the tenants of the London Bridge Waterworks varied according to the amount supplied, from a minimum of less than £1 to a maximum of over £20 per annum. The total number of customers was a little over 10,000, and sixty-eight public buildings were supplied. The method of arranging as to the price charged to customers was that the surveyor first examined the premises closely and reported to the superintendent what he thought the consumption was likely to be and the size of the service pipe. A price was then fixed, and if in the course of time it was found that the consumption was more or less than had been estimated, an abatement or increase in the sum charged was made, according to the circumstances of the case. Brewers, stable-keepers, and some other tradesmen were subject to an extra charge. The amount of water considered necessary for a daily supply to a house was one butt, and any quantity above that was considered an "extra service."

With regard to the ultimate failure of the London Bridge Waterworks it may be said to have been chiefly due to the fact that the New River Company were able to supply water at a higher pressure. which enabled them to force it to the upper storeys of the London houses. The London Bridge Waterworks were destroyed on the demolition of Old London Bridge.

The York Buildings Waterworks.—In the reign of Charles II. a patent was granted to allow waterworks to be made to supply the West-end of London with water from the Thames. The undertaking was called the "York Waterworks," and the premises used occupied part of the site of old York House. The original works were destroyed by fire in the year 1690. In 1691 an Act of Parliament was obtained by which the proprietors of the York Waterworks were incorporated under the style and title of the "Governor and Company of Undertakers for raising the Thames water in York Buildings." In the early part of the eighteenth century the company did not confine the business to water; they speculated largely in land. A number of forfeited estates which had belonged to Scottish Jacobites were bought up at a cheap rate, with the immediate result that there was an enormous increase in the market value of the shares (£10 shares became worth £305) The works were situated at the bottom of Villiers-street, under which the chief reservoir extended. Water was supplied to Piccadilly, Whitehall, and Covent-garden, and the intervening streets. The number of tenants supplied by the York Buildings Company was just over 2000 in 1804; in 1814 it was 2740, and in 1818 2636. It was perhaps rather unfortunate for this Company that there was a fire in the district supplied by them at a time when they were unable to supply water because their own boiler had burst. The fire proved fatal to two or three people, and the fact that there was no water-supply to quench it appears to have made the Company somewhat unpopular. The Company was finally ruined by the competition of the newer companies. Some of the tenants went to the New River Company, some to Chelsea, and some were supplied by the Grand Junction Company. The York Buildings Company ceased to exist in 1818. They leased their pipes to the New River Company and sold their business for a fixed annual consideration. Before that time the Company had been losing money in accordance with the prophecy of a financial poet:—

> "You that are blest with wealth by your Creator,
> And want to drown your money in Thames Water,
> Buy but York Buildings, and the cistern there
> Will sink more pence than any fool can spare."

[4] The lease of the first arch of London Bridge was granted by the Lord Mayor and Commonalty in the year 1581 for a period of 500 years. In 1583 the second arch was granted for a period of 500 years from that date, and a lease of the fourth arch was given in 1701 for a period of 381 years. In 1761 the third arch from the north was granted for a period of 321 years; and, finally, in 1767, the fifth arch from the north end and the second arch from the south end were let on lease to the company for 315 years. The arch on the south side of the bridge was used for putting up a pump for the supply of Southwark.

ANNUAL REPORT OF THE SANITARY COMMISSIONER OF THE GOVERNMENT OF INDIA FOR 1895.

[FIRST NOTICE.]

THESE reports always afford much excellent reading in the way of information derived from various sources—Continental and British—bearing upon the etiology and pathology of disease, in addition to furnishing a public health record of the military and native populations of India. It is to be regretted that their publication has to be delayed until the facts which they chronicle are no longer fresh, but have been supplanted by other and more recent occurrences. It cannot, we presume, be otherwise in regard to official documents, the value of which mainly consists in their accuracy, and which are based upon information and tables derived from various centres. India has, as we know, been passing through a most serious ordeal of late; plague, pestilence, and famine have altogether absorbed public attention and for a while obliterated other and lesser evils from consideration. But there is a great deal of very interesting material in these annual records. The report for 1895 is less voluminous than its predecessors. Acting in accordance with the instructions and suggestions of the Army Sanitary Commission the tables appear in a new and simpler form; they have been reduced exactly by one half, and yet, owing to a process of re-casting and re-arrangement, nothing of importance has, we are told, been omitted; on the contrary, a considerable amount of fresh information has been furnished.

The changes introduced in this respect are numerous and in our opinion an improvement. Among them we may mention that information regarding the distribution of some entozoa is given for the first time, a column has been added to Table XIV. (an important table) showing the number of men added to each regiment by arrivals in India during the year. This is of importance, because, though a regiment may have been a certain number of years in India or at any particular station, yet the actual men in the regiment do not remain the same. A new feature also is the inclusion in one of the tables dealing with European troops of the constantly sick from each disease.

The health of the European army in India, so far as the admission and death-rates are concerned, was better in 1895 than in the preceding year. The chief causes of admission were venereal disease and ague; the former caused 36 per cent. and the latter 23 per cent. of the total sickness. The chief causes of mortality were enteric fever (which caused 44 per cent. of the total deaths), hepatic abscess, and dysentery. Contrasting the past and present mortality of European soldiers in India, reference is made to a statement that the ratio for the period from 1800 to 1830 was 84·60 per 1000; from 1830 to 1856, 56·70; from

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1869 to 1878, 19·30; from 1879 to 1888, 16·02; and the ratio for the period from 1889 to 1894 was 15·91 per 1000 These figures serve to show very satisfactorily the progressive decrease which has been taking place in the mortality of the European army serving in India. The subject is pursued somewhat further and somewhat more in detail in the Sanitary Commissioner's report in connexion with the mortality from certain diseases for India as a whole from 1870 to 1895 and for the Bengal Presidency from 1858 to 1894, the last year in which this Presidency existed as a separate command. Some of the facts and statistical data are interesting. The earliest year for which statistics are available for India as a whole is 1870. In that year the short service system was inaugurated in England and is presumed to have begun to affect India seriously from 1877. There are no records of enteric fever in the Sanitary Commissioner's office before 1870, although it appears from 1861 onwards in the Army medical blue books. There can be no doubt, however, about the previous existence of the disease in India, but it was returned under the head of other fevers. The increase of enteric fever and venereal disease in India is largely associated with the short service system. Those of our readers who are interested in the subject of the past and present history of disease in India must refer to the tables in the report for themselves; we may content ourselves with merely recapitulating some of the points and quoting the following remarks:—

"The increase in ague may be due to exposure on active service and to the addition to the empire of large malarious regions on the north-western and eastern frontiers. The increase in mortality from respiratory diseases is partly certainly due to the epidemic of influenza, which has not left the country since it first appeared in 1890. The decrease in cholera, scurvy, and some other diseases may be put down to improved hygiene. The decrease in remittent and simple continued fever is probably mostly due to change in diagnosis and transfer to the head of enteric fever. Hepatitis was shown by Dr. Bryden to be a disease of degeneration, a disease of the old soldier. Its diminution appears, therefore, to be a good result of the short service system."

Passing over the subjects of influenza, cholera, small-pox, and the various forms of malarial and the simpler kinds of heat fever among the British troops for 1895 we come to that scourge of the young soldier and officer serving in India—enteric fever. The remarks on this subject, the references to its literature, and the results of bacteriological researches in the report under review are very full and worth reading. We are told that "increased experience has not, on the whole, made the bacteriological investigation of diseases easier. The progress of knowledge has revealed how little is known, the characters of many bacteria do not appear so sharply defined as at first, and identification has become a complicated and laborious process." There is no need to discuss the relation of the prevalence of this disease to the susceptibility of the material supplied to India under the short service system, because that is a matter which has already been threshed out, and occupies an accepted and stereotyped position in official reports from India. It does not, after all, carry us very far. What we want to know is something more precise about its assigned cause, how to detect the typhoid fever bacillus, its life-history, the channels by which it effects its entrance into the body, and the way to prevent it doing so. If we may judge from statistical data and making every allowance for differences attributable to an improved diagnosis we are, notwithstanding all our efforts, still far from having attained success in devising practical measures for preventing or limiting its spread. There are too many subjects in the Sanitary Commissioner's report to be dealt with, even cursorily, in the limits of a single notice, and we must therefore defer our remaining remarks.

NEW SANITARY BY-LAWS FOR LONDON.

UNDER date Dec. 15th, 1896, the London County Council, under the Metropolis Management Act, 1855, are proposing to issue some new sanitary by-laws. In a laudable endeavour to add, if possible, to the utility of what promises to be a very valuable addition to the cause of sanitation in the metropolitan area, Dr. James Edmunds, medical officer of health for the Vestry of St. James, Westminster, and Mr. Henry Monson, the vestry surveyor, have issued a report to their vestry, which was approved and adopted on Feb. 26th, 1897, and printed. Their example might well, and doubtless has been, followed by other vestry officers, as criticisms from such sources, whether accepted or not, cannot but be of value to those who have the responsibility of framing such by-laws and who have the welfare of the public at heart.

The following is a brief outline of the intended by-laws, with the aforesaid criticisms in a condensed form, together with a few of our own comments upon each. The agreement between the mode of procedure advocated by THE LANCET Special Commission on the Relative Efficiency and Cost of Plumbers' Work[1] and the proposed new by-laws is very noticeable.

SUMMARY OF PROPOSED BY-LAWS.

By-law 1 deals with the trapping of subsoil drains ultimately communicating with a sewer, and proposes to ventilate their disconnecting traps only.

By-law 2, paragraph 1, treats of the disconnexion over gulleys of all rain-water pipes; and paragraph 2 directs that these rain-water pipes are to be exclusively used for the passage of rain-water.

By-law 3, paragraph 1, regulates the nature and construction of all soil drains communicating with a sewer; paragraph 2 relates to their thickness and weight in relation to their diameter; paragraph 3 determines the size of and the manner of laying them, the jointing, &c., also as to testing with water; paragraph 4 declares that no drain shall pass under any building unless any other mode of construction is impracticable; paragraph 5 prescribes for the laying of any drain which shall pass under a building, the same to be laid in a direct line and embedded in and covered with concrete; paragraph 6 defines the composition of the concrete to be used; paragraph 7 provides as to the treatment of iron drains fixed above the surface of the ground; paragraph 8 refers to access to drains passing under a building; paragraph 9 decides as to the trapping of all inlets to a drain other than ventilating pipes, and prohibits the use of bell-traps, dip-traps, and D-traps; and paragraph 10 indicates how drains passing under any wall are to be protected.

By-law 4 insists upon the provision of and fixes the position for, and also the means of access to, the disconnecting traps in main drains.

By-law 5 disallows the use of any right-angled junctions in any drain.

By-law 6 assigns the means to be used for the efficient ventilation of the drains communicating with a sewer. Paragraph 1 ordains that two untrapped openings be provided in one or other alternative ways: (*a*) requires that an opening near the level of the ground be placed as close as convenient to the disconnecting trap on the house side as a fresh-air inlet, and describes how a ventilating pipe is to be carried up from the drain at a point as distant as possible from the first opening to a suitable height above the roof; and (*b*) defines that where this is impracticable inlet and outlet pipes in the reverse position to the last are to be adopted as an alternative. Paragraph 2 provides that a suitable grating or cover shall be fixed to these ventilating pipes, the openings in which shall equal the sectional area of the drain. Paragraph 3 settles that these ventilating pipes shall be of a sectional area not less than the drain with which they communicate. Paragraph 4 forbids the use of any bends or angles in these pipes unless unavoidable; and paragraph 5 allows the use of soil pipes or wastes of slop sinks as ventilators in place of the foregoing (By-law 6, paragraphs 1 and 2), provided they conform in all respects with the provisions already laid down and are of an internal diameter of not less than 3½ in., which shall be deemed sufficient for a 4 in. drain.

By-law 7.—Paragraph 1 prohibits the construction of any inlet to a drain within a building other than from a watercloset or slop-sink; paragraph 2 demands that all bath, sink, and lavatory wastes be suitably trapped immediately underneath and continued so as to discharge in the open air into or over a gulley, and if necessary be provided with an anti-syphonage pipe; and paragraph 3 points out that all safe-wastes and overflows of cisterns must deliver into the open air.

By-law 8.—Paragraph 1 deals with the soil-pipes both of new and old buildings. It reads: "Any person who shall provide a soil-pipe in connexion with a new building, or shall construct or refit a soil-pipe in connexion with an existing building," and directs that they shall be fixed outside if possible, and that they shall be of drawn lead if inside, adding directions as to joints and construction, and that the connexion with drain be made by means of a brass thimble. Paragraph 2 deals with the sizes, weight, and thickness of soil-pipes; paragraph 3 states that no rainwater-pipe shall be directly connected with the soil-pipe of any watercloset, and that no soil-pipe shall have a trap between it and the drain; paragraph 4 provides that they be not less than 3½ in. in diameter and be fixed free from bends if possible, and that they be open at the top, with a safe outlet for foul air; paragraphs 5, 6, 7, and 8 relate to various connexions between the several kinds of drains and soil pipes; and paragraph 9 stipulates as to the connexions of various kinds of closet traps and soil-pipes.

By-law 9 describes the anti-syphonage pipes for watercloset traps.

By-law 10, paragraph 1, provides for the proper trapping of slop sinks and prohibits the use of D-traps; and paragraph 2 treats of the size and weight of slop sink wastes, which wastes are not to be less than 3 in. in diameter and are to be provided with anti-syphonage pipes.

By-law 11 declares that the owner of any building shall maintain all pipes and drains in a proper state of repair.

By-law 12 decrees certain penalties for infringement of these by-laws.

By-law 13 is as follows: "These by-laws shall, so far as practicable, apply to any person who shall construct any pipe or drain or other means of communicating with sewers, or any trap or apparatus connected therewith, so far as he shall effect any such works in any building erected before the confirmation of these by-laws as if the same were being constructed in a building newly erected."

[1] The Report can be obtained from THE LANCET Office, 423, Strand, price 6*d*.

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SUMMARY OF THE REPORT TO THE VESTRY OF ST. JAMES, WESTMINSTER, BY DR. EDMUNDS AND MR. MONSON, WITH OUR COMMENTARIES THEREON.

Dr. Edmunds and Mr. Monson report (*a*) that portions of the proposed by-laws are prolix and obscurely worded; (*b*) that some of the provisions are ambiguous and unintelligible; (*c*) that some of the requirements are unnecessary and oppressive; and (*d*) that in some points the requirements are inadequate. They also point out the importance of greater clearness and conciseness, and recommend that they be reconsidered, seeing that £40,000,000 sterling is the annual value of the rateable property affected by them.

In reviewing this criticism in detail, the suggestion (*a*) as to greater brevity and clearness is in several instances certainly very desirable. The objection (*b*) is also applicable to By-laws 8 and 13, where reference is made to other than new buildings. The next objection (*c*) is more open to question, as by a little less ambiguity in By-laws 8 and 13 many possible objections would be removed. Several of the by-laws, in every way desirable and reasonable when applied to new buildings, would possibly prove arbitrary and vexatious if enforced in an old one. Whether the term "so far as practicable" in By-law 13 is intended to leave some amount of discretionary power in the hands of local authorities is not quite clear; at all events, it should do so. It should not, however, be overlooked, that with any law made to benefit the many, it must happen that it will press heavily upon a few in some instances. Regarding objection (*d*) the suggestions given are: (1) That a by-law is required regulating traps; (2) that urinals should be assimilated to waterclosets and slop sinks; (3) that all cast-iron pipes for drains should be packed with yarn, jointed with molten lead, and properly caulked, also that old drains and filthy earth should be removed; (4) that drainage plans should be deposited by builders with the local authorities under penalty for neglect or falsification; and (5) that builders should fill drains with water and demonstrate the action of the drains under the direction of vestry officials when required. This last may be open to question.

To these might well be added:—(1) A specification of the number of tacks to be used on a soil pipe (an insufficient number is very frequently the cause of a fracture), say 6.8 lbs. cast lead tacks to each 10 ft. length; (2) that all bath or lavatory wastes being longer than 10 ft. should, in addition to the anti-syphonage pipe, be carried up to some convenient spot and left open at the top to ensure a free current of air through same; (3) that By-law 1 be made to include further provision as to ventilation—the subsoil drain under a house should at least be as well off in this respect as the soil drain that has to have sealed joints and is covered with concrete, seeing that they both communicate with a sewer, and with this drain there is the extra risk of the water in the trap becoming saturated with sewer air in dry weather.

By-law 1 has escaped criticism, though it would seem to be an elementary principle that an open-jointed drain passing under a house and ultimately connected with a sewer should not only be ventilated at the trap near the sewer, but that the extreme ends should be brought up just above the ground level and be left open to admit of a free current of air through them; also, instead of an air shaft by the trap, they should discharge over a gulley in an open area, if only as large as an ordinary manhole.

By-law 2, paragraph 2, regarding the exclusion of bath and sink or lavatory waste from rain-water heads, is considered by Dr. Edmunds and Mr. Monson as likely to be oppressive and unnecessary. Is not this criticism somewhat strained? The use of a large rain-water pipe for this purpose is often very objectionable, and with new buildings the use of any need not be necessary.

Regarding By-law 3, paragraph 1, exception is taken to the use of the word "communicating," which it is held is used in this and in By-laws 1 and 6 in varying senses. This criticism is difficult to follow. There is a great distinction to be drawn between communicating ultimately with a sewer and directly communicating. Is not this question rather of an academical than of a practical nature? The criticism of paragraph 3 defines more fully the composition of and the manner of forming the concrete bed, and these suggestions might be adopted with advantage. In criticising paragraphs 4 and 5 the report points out the difficulty frequently existing to the construction of a drain outside a building; though such a course may be possible, and suggests that this should be left optional to the local authorities. It also adds that in some buildings it is impossible to lay a drain in a direct line. The answer to this criticism is that in new buildings there should be no difficulty, if By-law 13 is rendered clear as to the meaning of the words "so far as practicable," there would be no difficulty in the case of old buildings either. The criticism of paragraph 9 suggests the substitution of the word "Mason's trap" for that of "dip-trap," on the grounds that the latter is ambiguous. This alteration would certainly improve the clause if Mason's trap is the one intended.

The criticism to By-law 5 proposes the addition that all branch drains should be provided with proper means of access.

In criticising By-law 6, paragraph 2, Dr. Edmunds and Mr. Monson propose that air inlets should be fitted with mica or other approved valves to prevent the reflux of air from the drain, and that the grating should stand vertical. Mica valves to fresh air inlets are a delusion and a snare. In a properly laid and ventilated drain foul air should be comparatively non-existent, and the small amount likely to issue from the air inlet, considering the situation, need not be thought of. Mica valves often become choked with dirt after a short time and are then worse than useless. The grating suggested should certainly stand vertically. In paragraph 3 they remark that the term "communicates" is here used obscurely, and question if it is intended where a 9 in. drain is used that a 9 in. ventilating pipe is to be used also. This criticism should undoubtedly be followed and the sense in which the word "communicate" is used made clear. The presumption is that it refers to the usual short branch drain with which the ventilating shaft is commonly connected. This view is corroborated by the reference to the use of the soil-pipe for this purpose in paragraph 5. Apart from the absurdity of a 9 in. ventilating pipe, it is difficult to imagine anyone using a 9 in. drain under these by-laws.

The criticism of By-law 7, paragraph 1, demurs to the prohibition of inlets to a drain within a building other than from a watercloset or slop sink, on the ground that in urban districts often the whole ground is covered. To this criticism it may be pointed out that with new buildings there can be no difficulty. For old ones provision is made in By-law 13. Gulleys in buildings frequently remain uncharged and manhole covers become loose with traffic.

The criticism of paragraph 2 of the same by-law is directed against the compulsory trapping of bath, lavatory, and sink wastes, and their being compelled to discharge over gulleys instead of rain-water heads and to the addition of anti-syphonage pipes. In reply to this it may be said that the by-law is to be preferred to the amendment: new buildings must not be allowed to offer any difficulties, and where there is any difficulty in old ones, owing to the want of proper fall in the waste pipes, the enforcement of this by-law is most essential, owing to the accumulation of dirty soap in them.

In criticising By-law 8, paragraph 1, the report most correctly proposes that the phrase "refit a soil pipe" needs further definition; in paragraph 3 it advises that the word "directly" be struck out, and approves of the word "connected" in preference to the word "communicate." In paragraph 4 it suggests that much of this might be struck out if all principal ventilating pipes were defined to have a minimum clear cross section of not less than nine square inches; and in paragraphs 5, 6, and 7, it is advisedly suggested that the words "to be approved of by the local authority" be added.

The criticism to By-law 11 questions the use of the word "owner," and would add "owner, lessee, and rated occupier," making all responsible to the local authority. This would undoubtedly be an advantage.

The criticism to By-law 13 maintains that this by-law is unintelligible, and would prevent improvements in old buildings for fear of bringing such under the operation of these new by-laws, and that no slight alteration could be made to any fittings without a liability of having to reconstruct the whole drainage system. It is proposed, with a view not to prevent gradual improvements, that the local authority should have discretionary power. As already remarked, this criticism points to a desirable alteration in rendering By-law 13 clearer upon the points raised.

ICHTHYOL IRRIGATIONS IN GONORRHŒA.

ONE of the newer methods of treating gonorrhœa is that proposed and carried out by Janet in 1892—viz., irrigation of the urethra with a solution of permanganate of potassium of the strength of a fifth of a grain to the ounce. This plan was subsequently practised in the St. George's Hospital at Hamburg, but without very satisfactory results; sometimes, indeed, very unpleasant effects were produced, such as painful œdema, hæmorrhage, and peri-urethral infiltrations. The Hamburg surgeons, however, have recently made further trials of Janet's irrigations, but with different solutions substituted for the permanganate. Ichthyol having been shown by Jadassohn to exert a very antagonistic effect to the multiplication of gonococci in mucous membrane, and having been favourably reported on by Canova of Paris as suitable for irrigating, was selected. The irrigator reservoir was a large glass vessel holding about four quarts. From this the fluid was conducted by an indiarubber tube, the lumen of which was sufficiently large to admit the thumb. At the other extremity was an ordinary urethral cone. A warm or cold 1 per cent. solution of ichthyol was used during the first five sittings, and afterwards this strength was doubled. The glass reservoir was placed on a stand, the height of which could be altered so as to exert as much hydrostatic pressure as might be required.

The most convenient position for the patient was found to be sitting on the edge of a stool, as in this position the resistance offered by the compressor urethræ and the sphincter appeared to be most easily overcome. In addition to the irrigations, which were carried out daily, the patient was directed to use a urethral syringe with a weak (½ per cent.) solution of ichthyol morning and evening, though but little was expected from this adjunct to the regular midday irrigations performed by the surgeon. These latter were carried out as follows. The patient, having first of all micturated, sits on the edge of a chair, leaning well back, and opening his legs. The terminal of the tube is now inserted into the urethra and the liquid allowed to enter so as to distend the passage. When this is accomplished and the dilatation can be felt by the surgeon's fingers the liquid is allowed to flow out, and will be found to be cloudy from flocculi and threads; and the douches must be repeated until the issuing liquid is quite clear. This generally takes ten or twelve ounces, and in this way the anterior portion of the urethra is effectually cleansed. A height of a little over three feet is sufficient for the reservoir during this part of the operation. If the posterior portion of the urethra is affected the reservoir is subsequently raised to about five feet above the patient's seat and the full force of the column of fluid obtained by compressing the meatus against the glass cone. In many cases the resistance of the compressor is overcome, especially when a little time is allowed, and the fluid passes into the bladder. Several ounces are thus introduced and the patient is then allowed to

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micturate, care being taken once or twice during the flow to compress the urethra suddenly so as to obtain a better dilatation of its lumen.

Dr. Werner, writing in the *Monatshefte für Praktische Dermatologie* for August, gives an account of the results of this treatment in the 82 cases in which information was available. In 20 of these the disease was confined to the anterior portion of the urethra and had lasted for from a week to two months before the beginning of the treatment. Absolute cure was obtained in 19 cases with from 6 to 35 sittings (average 17). In 62 cases the posterior part of the urethra was also affected, and of these a cure was obtained in only 52, the number of sittings required being from 2 to 40 (average 19). The single unsuccessful case of anterior urethritis was one of a month's duration. Here, however, the gonococci disappeared after 28 douches, but as the catarrh continued the cure could not be said to be complete. It was, however, quickly effected by zinc sulphate injections. Of the 9 cases where cure was not obtained some left the hospital against advice before a cure could be effected, and in some epididymitis supervened which obliged the douches to be discontinued. In three of them, however, the gonococci had entirely disappeared after from 3 to 28 douches. Several cases of gonorrhœal cystitis, some of them with pyrexia and severe tenesmus, were very successfully treated by ichthyol douches, but in some others no effect was produced and the cure was obtained by argonin. A number of cases were treated by means of douches of resorcin of the strength of 1 per cent. applied similarly to the ichthyol irrigations, but with very much less satisfactory results. As evidence of absolute cure Dr. Werner requires the following facts: (1) that after twenty-four hours' cessation from treatment no visible discharge is present; (2) that the urine when poured from one vessel into another is free from threads; and (3) that no gonococci can be detected in the last gonorrhœal threads found. Strictly speaking, of course, further examination should be made later, but this is impracticable with hospital out-patients.

A NOTEWORTHY INQUEST.

AN inquest has recently been held at Bushey which presented many features of peculiar interest. The deceased, a woman who had died in childbirth, had arranged to be attended during her confinement by a midwife. At 6 A.M. on the morning of March 29th hæmorrhage came on. The midwife was summoned and arrived at 7.50 A.M. What followed can be learned from her deposition:—

Alice Mary Jennings, a midwife, states: "I saw the deceased woman first about 7.45 on Monday morning, March 29th. I then examined her and found that she had then lost between three and four quarts of blood, so far as I can judge. I was told that she had had a fainting attack. She was on the bed, and I found that the head was presenting with the face, and that the placenta was partially presenting. The head of the child had not entered the pelvis, the os uteri was rather larger than half-a-crown, and the cervix was not entirely shortened. There was not much bleeding going on. I plugged the os lightly with a soft silk handkerchief. I did not attempt to sterilise the handkerchief in any way, but I used a solution of 1 in 500 of corrosive sublimate for washing my hands. I did not use any vaginal douche. When the os was dilated, something after nine o'clock, I ruptured the membranes and separated the placenta as far as I could reach it, and brought down one foot at first, and after that there was little or no further loss of blood. The labour pains were very few and ineffective. I brought down the other foot about 11.30, and the child was finally born at 12.30. I administered one dose of quinine, fifteen grains. When I first plugged the os I gave fifteen grains of chloral. I gave her also one ounce of cane sugar. Neither the quinine nor the sugar had any effect on the pains. After the expulsion of the placenta I gave her a douche of iodine, about a teaspoonful of a mixture of equal parts of the tincture and the liniment of iodine. I gave her two and a half grains of ergotin in tabloid form. The woman seemed fairly comfortable. Her pulse was beating 120 to the minute, it was weak, and was like a pulse which I expect after hæmorrhage. I stayed about one hour and a quarter after the child was born. The uterus when I left was well contracted. The pulse had improved, and she wished to go to sleep. I left about 1.45. She had been taking nourishment very freely all the morning. I gave egg, milk, tea, and no stimulant. About 3 o'clock her husband came for me, saying that she was in violent pain, but by the time I arrived the pain had ceased, the uterus was still well contracted, and there had been no further severe loss of blood. She was looking very ill, her pulse was very rapid, and she complained of feeling faint. I administered about three-quarters of a teaspoonful of sal volatile, and I injected by the rectum three pints of saline mixture. She seemed much better and said she felt more comfortable, but from time to time she said that she felt faint. I administered brandy and sal volatile, bovril, and about 4.30 I noticed her breathing change very much. I then sent for a doctor and I injected ether hypodermically—rather over a drachm in all—but before I had finished injecting the ether the patient was dead. If I had thought it necessary I should have sent for a doctor earlier, but I did not think it necessary considering the condition of the woman. I think now, after the event, that I should have sent earlier for a doctor. I hold a certificate from the British Lying-in Hospital and I hold the Obstetrical Society's diploma. This is one of the cases in which I was taught to send for a doctor immediately."

A post-mortem examination was made by Mr. Arthur Stradling of Watford, who examined the body of the deceased about thirty-two hours after death.

"I examined the heart," he deposed, "and found a clot in the pulmonary artery, the right side of the heart being empty. There was no sign of previous disease in any organ. The uterus was relaxed, somewhat pallid; the appendages normal. The site of the placenta was at the fundus It was empty. There were no signs of any recent operation, nor were there any tears or laceration in any part of the genital tract. I formed the conclusion that death was caused by the clot in the pulmonary artery. There was no sign of the placenta being prævia. I was informed by the nurse that there had been no hæmorrhage previous to the commencement of labour. The body was not actually drained of blood."

At this point the inquest was adjourned until April 7th, when nine medical men appeared to testify to the correctness of the conduct of the case by the midwife. The court was then cleared and the coroner, Dr. Lovell Drage, summed up as follows:—

"The first duty of the jury in an enquiry such as this is is to find the actual cause of death. The evidence provides, in the case of the unfortunate woman of whose body you have had the view, conclusive evidence upon this point, to the effect that it was caused by pulmonary embolism subsequent to ante-partum hæmorrhage, and I charge you to this effect. The second duty is to consider the circumstances of death. The hæmorrhage, which undoubtedly was at the root of the question of the cause of death, occurred before the midwife responsible for the care of the deceased woman arrived. She therefore was in no way responsible for it. But the question arises, given the hæmorrhage at the commencement of labour, is it reasonably probable that the condition which subsequently produced death might have been prevented if skilled assistance had been promptly obtained? I must remind you that the midwife admits in her evidence that during her training she was taught that this was one of the cases in which she must summon a medical man. If she was so taught there can be no reason to doubt that the condition is one well recognised as being fraught with danger to the patient. This question of probability is one of great difficulty, and I urge you to follow closely what I have to say to you. The conditions which favour the formation of such a clot as that which caused this death are three—those peculiar to all pregnant and lying-in women, those the result of hæmorrhage, and those the result of the disease. The two former were present in this case. The deceased woman on the arrival of the midwife had already had a fainting fit, and from the evidence the hæmorrhage must have been a large one. In such a case it was the plain duty of the person responsible to do what was necessary to restore the circulation and to terminate the labour as soon as was practicable. I must remind you that the condition which actually caused death is one which arises under a variety of circumstances, and you must consider carefully whether you should look upon the fatal result as one which was probable in the case of a young healthy woman if skilled assistance had been procured early. Accidents occur, no doubt, in all hands, and, with my experience of midwifery, no one is more alive to this than I am. If you are satisfied that a fairly reasonable treatment was adopted you must come to the conclusion that accident was the cause of that fatal condition. If you are not so satisfied you must carefully weigh the probability of that fatal condition being the result of causes which were not controllable by human agencies and the probability of its being the result of the neglect of measures which might have been adopted and which might have saved life. Death from pulmonary embolism may undoubtedly occur in any woman after delivery, but it is a rare cause. In an experience of about 1200 cases of delivery in private practice I have only known one, and in a hospital experience of about 800 I cannot recollect any. So far as my experience shows it has occurred once in about 2000 cases, and in that case I was not summoned until after delivery was completed."

The following verdict was then given:—

"That the said Adelaide Emily Whiteley died on March 29th from pulmonary embolism, subsequent to ante-partum hæmorrhage. That the midwife is much to blame—(1) for not calling in a doctor when she found at 8 o'clock in the morning the very serious condition of her patient; (2) for not acquainting the husband with that serious condition; (3) for exceeding her duties as a midwife, contrary to the rules of the Obstetrical Society, and in the absence of a medical man."

The verdict is an exceedingly serious one for the midwife. With her actual procedure from a medical point of view we are bound to be satisfied, as it would seem that no less than nine medical men testified to the correctness of her conduct of the case. Her diagnosis of a placenta prævia, however, was directly challenged by medical evidence, so that by analogous reasoning she would seem here to have been in error. But we are not disposed to blame her or add to her grief at the loss of her patient by laying much stress on this failure to comprehend the pathology of the case. Such knowledge was not to be expected of her. Where she went wrong was in assuming responsibilities which she was unequal to meet, and the jury could not have pointed this out to her in more firm and uncompromising terms.

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THE NEW WATER-SUPPLY AT WORTHING.

THERE is no more important event in the history of a town than the inauguration of a pure and plentiful water-supply, and nowhere can there be a subject for warmer congratulation than the completion of the new waterworks undertakings at Worthing. The Council have been beset with all kinds of difficulties and obstacles ever since they have gallantly endeavoured to replace the old and condemned source of supply. The problem has at length been successfully solved, and the authorities are to be highly commended on the excellent spirit and energy they have shown in their anxiety to free the town from so unenviable a subject of reproach as its water-supply. On Monday next, the 26th inst., the new works are to be formally opened by His Royal Highness the Duke of Cambridge, and the occasion is one upon which the inhabitants of Worthing may well rejoice.

The water is drawn from a well at the foot of the South Downs. The new works which are to replace the temporary provision were commenced some two years ago, but several unavoidable delays have occurred. They are situated about two miles north of the town, and with the pumping station and reservoir cover about three and a half acres of ground, the reservoir standing further northward on the chalk soil itself, the excavation for that purpose amounting to no less than 12,000 loads. The capacity of the reservoir is about 2,000,000 gallons, which should serve as an ample stock for daily supply, the requirements being on the average about 750,000 gallons per day. The walls are very solidly built, being constructed of layers of concrete asphalt and very hard brick. The engines to be used alternately are each of about 87 horse power, and each engine and set of pumps is capable of raising a thousand gallons of water a minute to a height of 215 ft. Every possible precaution has been taken to secure the water in the well against contamination. The shaft of 119 ft. is cased with flanged iron shields in segments, the joints being made of pitch pine vertically and of yarn and Russian tallow horizontally, headings having been provided to increase the supply 150 ft. in length, 6 ft. high, and 4 ft. wide.

At our request the Mayor (Captain A. B. S. Fraser) was good enough to forward us a sample of water taken from the reservoir, which we have duly submitted to analysis and examination in THE LANCET Laboratory. The water was contained in a clean, stoppered, clear glass Winchester quart bottle. The stopper was tied down with leather and secured with string properly sealed. A tag tied to the neck had the following written upon it: "From the Mayor, A. B. S. Fraser, 14/4/97; countersigned W. H. P. Fletcher, chairman of Sanitary Committee of Worthing." The label upon the side of the bottle bore the following words: "Water from Reservoir, Worthing New Permanent Waterworks, taken at 7 A.M. Thursday, April 15th, 1897. Frank Roberts, Borough Surveyor; Chas. T. Gardner, Sanitary Inspector." The results of our analysis together with other observations are as follows:—

Analysis of Worthing Water taken from New Reservoir.

Appearance	Bright and clear.
Colour	Slight greenish tint.
Smell	None.
Total solids	19·60 grains per gallon.
Loss on ignition	1·40 " " "
Change on ignition	Slight, no charring.
Temporary hardness	12·52 grains per gallon.
Permanent hardness	4·00 " " "
Chlorine in chlorides	1·82 " " " (equal to common salt, 3·00 grains per gallon).
Nitrogen in nitrates	0·35 grains per gallon.
Nitrogen in nitrites	None.
Free ammonia	None.
Albuminoid ammonia	0·0056 grains per gallon.
Oxygen absorbed	0·02 " " "
Phosphates	No trace.

These results are in perfect accordance with those obtained with water of the well-known purity and character furnished from the chalk. Considering the results as a whole, there is not the slightest indication of contamination with objectionable organic matters. This is particularly evident from the fact that the water was absolutely free from free ammonia, contained no nitrites, and no trace of phosphates, while the solids on ignition yielded no smell or other evidence of organic matter present. The chlorides, again, are typical of pure natural water, and the factor "oxygen absorbed" is so low as to show that the water is quite free from oxidisable substances. Since the water is well aerated it would be a matter of surprise to obtain any other result. Again, the amount of nitrates is distinct and in a quantity characteristic of waters that have met with the great purifying processes of nature. The sample was bright and clear, possessed no smell, and exhibited a slight greenish tint when viewed in deep column. As might be expected, it is somewhat hard, the total hardness being 16·52°, of which 12·52° are removable on boiling.

We congratulate Worthing on at last possessing such an evidently pure and abundant supply of water that proves to be excellent for all dietetic purposes, and we trust that the inhabitants have heard for the last time of the troubles contingent upon the pollution of life's first necessity. The authorities have worked unremittingly towards securing a satisfactory solution of what has proved a difficult problem, and they have not been neglectful to learn and profit by one of the first lessons in sanitation. The experience has been a bitter one, but it has led to an eminently satisfactory issue, and confidence in the future being restored there is no reason why it should not be permanent. We propose to examine further samples from time to time in THE LANCET Laboratory, both chemically and biologically, and to publish the results. It will be interesting to see if the composition of the water undergoes any variation, whether taken from the source, reservoir, or service pipes.

THE FINANCIAL CONDITION AND REQUIREMENTS OF THE UNIVERSITY OF CAMBRIDGE.

WE have received from the Chancellor of the University of Cambridge (the Duke of Devonshire, K.G.) a statement concerning the present financial condition of that University and its future pecuniary outlook, which cannot fail to strike our readers, as it strikes us, as one of the deepest importance. Space will not permit us to do more than summarise the statement, which, it should be added, is authoritative, if not official, being the outcome of a recent meeting to which all the principal officers of the University and representatives of the several colleges were invited. In his Grace's words, it may therefore be considered as "made on behalf of a very large number of those who are conducting the practical educational work of the University."

The statement commences by pointing out that the common assumption that the University of Cambridge is a very wealthy body is not justified or justifiable. On the contrary the fall in agricultural value has seriously diminished the available income of the University and its constituent colleges, while the expenditure necessary to provide for the maintenance of the several branches of instruction and research has steadily increased. Benefactions for general academic purposes have also practically ceased, although many munificent donations have been made for the founding of special prizes.

The expenditure of the University in 1896 was as follows:—

Stipends of officers, professors, readers, University lecturers, demonstrators, examiners, &c.	£33,229
Maintenance of establishments, repairs, rates, wages, &c.	22,057
Instalment in repayment of building loan (£40,000)	2,256
Part of the payment for purchase of building sites	5,000
Total	£62,542

The stipends to be paid number 120, and speaking generally the services rendered amount to tuition in all the higher branches of literary, philosophical, and mathematical subjects, as well as all the various departments of natural science. The stipends are partly met by College Fellowships as the present statutes direct that a professor who is also a Fellow of a hall have his stipend diminished by £200 per annum

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in consideration of his College dividend. College dividends in nearly every instance fall below £200; this means that in many cases the total stipend falls below its nominal amount. The establishments to be maintained comprise the University Library and certain Special Libraries, the Divinity and Literary Schools, the Observatory, the Botanic Garden, eight Museums, and eight Laboratories.

The general revenue for 1896 was thus made up:—

Capitation Tax and fees for matriculations, examinations, degrees, &c.	...£39,366
College Contributions (net.)	... 16,577
Endowments (net.):—	
(*a*) For special purposes	... 5,850
(*b*) Not specially appropriated ...	... 844
Total	£62,637

With regard to the revenue we learn that the Capitation Tax on undergraduates has recently been more than doubled, and that many of the Degree Fees have been raised; that the College Contributions owing to long continued agricultural depression have not ensured to the University the large and expanding income that the Commissioners under the Universities Act of 1877 had anticipated; and, lastly, that the insignificant amount received from Endowments being largely derived from tithe and agricultural rents, has decreased and will decrease still more.

This is the financial position of Cambridge University, exposed by the statement that we have received from the Duke of Devonshire at a time when the number of students in the University is just double what it was in the last generation, and when ample accommodation and equipment in all the departments of learning are urgently required. A number of important branches of study are unrepresented by professorships. There are serious requirements involving capital expenditure, of which the following are specified:—the space occupied by the University Library must be considerably extended; a building must be provided for a School of Law; University lecture-rooms, offices, and examination-rooms are all needed, the present accommodation being totally inadequate; the buildings assigned to the departments of botany, zoology, and pathology are over-crowded and inconvenient; and a suitable museum is necessary for the proper display of the antiquarian and ethnological collections of the University.

"It will thus be seen," the statement concludes, "that while the resources of the University are essentially inexpansive, the reasonable demands upon it for further large expenditure are urgent and increasing. To meet these in the manner contemplated by the Commissioners of 1877 and expected by the nation at the present day, the re-endowment of the University in respect of many of its departments is a pressing necessity."

THE GRECO-TURKISH WAR.

ALTHOUGH it is well known that Turkish troops always form a formidable force to deal with, and that the Turkish soldier is very brave and resolute in battle and what Rudyard Kipling terms a "fust-class fighting man," it was generally believed that, owing to their weak and effete military system, the Turkish army was not well led, well fed, or properly cared for. The accounts that have been published regarding the condition of preparedness of Turkey for war, and of their medical service and field hospital organisation, are consequently calculated to awaken surprise. The Turks, as a Mahommedan Power holding the doctrine of fatalism as an article of their religious faith, have not hitherto been remarkable for the care they have taken of the sick and wounded. But they have apparently learned as a matter of experience the necessity of having a well-organised medical system and properly equipped hospitals for field service, and their advances in this respect have been great if we may judge from the accounts that have appeared as to the efficient and comfortable state of their hospitals in the present war. The excellence of their hospital organisation and arrangements have been more than once adverted to by the special correspondent of the *Times*. Ahmed Pasha is the chief of the medical service at Elassona, and he has lately accepted the offer of medical assistance made by Sir E. Vincent. No accounts have been published of the state of the Greek medical service and hospital organisation for war, although it is well known that great efforts have been made of late in this direction, with what results we shall probably soon learn. The Greeks have, as we know—for several nurses have gone from this country—organised a system of female nursing for their hospitals, and ladies of the Royal family and others have been taking an active part in this and other matters connected with the present war. According to a telegram that appeared in the *Daily News* the preparations still leave something to be desired in the way of surgical and medical stores, such as disinfectants, lint, bandages, &c., for the Hellenic hospitals. The Greeks have sent out two hospital ships to Volo to take off the wounded. The steamer *Thessaly* has been converted into a floating hospital with 300 beds for this purpose, on the initiative of the ladies of Athens and under the patronage of the Queen of Greece.

The accounts from the scene of warfare are somewhat conflicting and difficult to understand. As might be expected, they vary very much according to the source whence they are derived. But there does not appear to be any doubt that the Turks have captured the whole of the Maluna Pass and driven their Greek enemy across the frontier towards the plains of Thessaly, where a big and decisive battle may be expected to follow. Strategically considered, the military importance of this achievement seems undoubted, for the possession of this pass directly opens up the way to Larissa, the headquarters of the Greek force. At Reveni, however, one of the principal entrances into Thessaly, and in some other directions the Greeks claim to have gained great advantages.

The very difficult and mountainous nature of the country where the fighting has hitherto taken place has been opposed to the occurrence of any close and decisive engagement between large masses of troops; and the clearing of the ground and hill sides of the wounded must have been a matter of much difficulty, requiring an ample provision of ambulance transport in order to render timely aid and succour to the wounded of both belligerents, during the severe fighting which has taken place. All accounts agree that there has been great determination and valour displayed on both sides in attacking and defending important positions. It is still possible that, as the fighting is on such extended lines, the war, which looks as if it were too acute to last long, may nevertheless be more protracted than is generally thought, unless some decisive battle on a large scale soon takes place. At the present moment the Turks seem to be the masters of the situation. The object of the European Powers will be, of course, to confine the warlike operations to the belligerents now engaged and prevent, if possible, a general conflagration in the East, the disastrous consequences and ultimate results of which no one could foretell. In the meantime there will, it seems to us, be ample opportunity for the work of volunteer aid and International Red Cross societies to provide hospital and surgical succour for the sick and wounded—Christians and Mohammedans alike.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

THE ROUTES TO MOSCOW AND THE EXPENSES OF TRAVELLING.

THE English Committee acting for the organisation of the Twelfth International Medical Congress to be held in Moscow from Aug. 19th to Aug. 26th inclusive have mapped out a choice of routes by which Englishmen desirous of attending the Congress may proceed to the Russian capital. We propose here to sketch in outline the principal ones—that is to say, those which are most convenient, most direct, and least expensive. It will, of course, be open for individuals to vary the journey by breaking it at interesting places or by going rather off the direct line in order to visit other places of interest. We shall probably, however, not be very far wrong in presuming that most practitioners will prefer to proceed direct to Moscow in time for the opening of the Congress, and that those who wish to break or vary the journey will do so on their way back rather than on the outward journey. The present statement will, therefore, be confined to the most direct routes to Moscow only.

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The following five skeleton routes fall into two groups. By the first two routes, A and B, the journey is an overland one, by rail the whole way; by the remainder the journey is, for the most part, by sea, the time spent in a railway train being reduced to a comparatively few hours.

Route A.—Overland to Moscow, *viâ* Flushing, Berlin, and Warsaw. Approximate time of journey 84 hours. Leave Victoria (say) Saturday, Aug. 14th, 8 30 P.M. Night crossing Queenborough to Flushing. Leave Flushing 5 5 A.M.; arrive Berlin 7 P.M. Sunday. Leave 11 P.M; arrive Alexandrovo (Russian frontier) 7 A.M. Monday. Leave 8 21 A.M; arrive Warsaw 2.32 P.M. Leave 4 5 P.M.; arrive Moscow 8 30 A.M. Wednesday morning, Aug. 18th. The Congress will commence on Aug. 19th. Fares: London to Berlin, £4 3*s.* 9*d.* first class; £2 18*s.* 10*d.* second class. Berlin to Moscow, £4 17*s.* 6*d.* first class; £3 5*s.* second class. Sleeping cars: Berlin to Alexandrovo, 10*s.* 6*d.* first class, 7*s.* second class; Warsaw to Moscow, 18*s.* first class; 16*s.* second class. A return ticket lasting thirty days can be taken from London to Berlin, costing £5 19*s.* first class and £4 3*s.* 5*d.* second class. This route has the great advantage of speed. It will be possible to leave London at 8.30 P.M. on Sunday night, Aug. 15th, and arrive in Moscow early on Thursday morning, the opening day of the Congress. By leaving a day or two earlier the journey might be broken at Berlin, Warsaw, or Smolensk. A branch committee of the Congress has been formed at Smolensk to facilitate the journey for foreigners. The total cost by this route, including sleeping cars, is as follows: Single fares, £10 9*s.* 9*d.* first class; £7 5*s* 10*d.* second class. Return fares, £18 11*s.* first class; £12 7*s.* 1*d.* second class. The living on Russian railways is good and cheap. The fares here given as return fares are obtained by doubling the fares beyond Berlin and adding the return fare to Berlin; return tickets on the Russian lines would probably be less. Messrs. Cook and Son (Chief Office, Ludgate-circus) undertake to supply through tickets if applied for six days in advance; otherwise it is necessary to book to Berlin and re-book from there to Moscow. The travelling expenses by this route, it will be noted, will not exceed £20, to which another £4 may be added for meals, &c., while travelling. The cost of staying in Moscow will depend on whether the traveller stays at an hotel or is entertained by an English family. In any case, the whole trip by this route need not cost more than from £30 to £35, first class both ways; by travelling second class the expenses will be some £6 less. Both the German and Russian lines have comfortable second-class carriages. The sleeping cars are practically the same for both classes. There is some probability that the fares on the Russian lines will be reduced for members of the Congress.

Route B.—Overland to Moscow, *viâ* Flushing, Berlin, and St. Petersburg. Approximate time the same as Route A. Route to Berlin as above. Leave Berlin 11 P.M. Sunday; arrive Wirballen (Russian frontier) 12.9 noon Monday; leave 2.4 P.M.; arrive St. Petersburg 10.45 A.M. Tuesday. Proceed to Moscow the same night or the following night. It is necessary to drive across St. Petersburg from the station of arrival to the Nicolas Station (Nicolaiefski Volksaal). Trains at 3 P.M., arriving at Moscow 8 10 A.M. next day (slow but cheaper) and at 9 P.M., reaching Moscow 10 10 A.M. (faster but more expensive). Fares: London to Berlin as in Route A; Berlin to Moscow, £6 9*s.* first class, £4 8*s.* 6*d.* second class. Sleeping cars, Berlin to Wirballen, 12*s.* 6*d.* first class, 10*s* 6*d.* second class; Wirballen to St. Petersburg, £1 5*s.* first class, £1 1*s.* second class. (The fares on this line vary slightly with the train selected.) This route has the same advantage of speed as the last. It will be possible to leave London on Sunday evening, arrive in St. Petersburg before 11 A.M. on Wednesday, and proceed to Moscow that night. The fares on the Russian lines will probably be reduced for members of the Congress The total cost of travelling by this route will be from £25 to £30 first class, including the cost of living on the journey; or from £20 to £25 second class. There is a *train de luxe du Nord* which starts from Charing-cross and Victoria at 10 A.M. every Saturday (*viâ* Ostend); the single fare to St. Petersburg by this train is £15 4*s.* 6*d.* A similar express train leaves Charing-cross and Victoria at 11 A.M. every Saturday for the Dover-Calais route *viâ* Brussels and Cologne to Berlin. The fare to St. Petersburg by this route is 10*s.* 3*d.* more than *viâ* Ostend. The journey by either route is completed in 52 hours; St. Petersburg is reached on Monday at 3.50 P.M. (Russian time). These trains have dining-cars attached.

Route C.—Direct by sea from London or Hull to St. Petersburg, and by train thence to Moscow. Two English lines of steamers run to St. Petersburg, the Wilson line and the Bailey and Leetham line. The Wilson steamers (London agents, W. E. Bott and Co., 1, East India-avenue, E.C., who will give detailed information of the sailings later) sail every Saturday from Hull, and reach St. Petersburg usually on the following Friday or Saturday. Occasionally in the summer a steamer sails in addition in the middle of the week. The steamers have accommodation for between fifteen and thirty first-class passengers. They do not, as a rule, call at any intermediate port, but the voyage is far from monotonous, the scenery in the Cattegat and Sound and in the Gulf of Finland being exceedingly picturesque. Fares: £5 5*s.* single; £7 17*s.* 6*d.* return (available by any steamer during the season). The charge for meals is 6*s.* 6*d.* a day, exclusive of liquors. The Bailey and Leetham steamers (London address, 12, Mark-lane, E.C.) sail from London every week or ten days; the days of sailing are not fixed. The fares and charges for meals are the same as on the Wilson steamers. From St. Petersburg to Moscow, for trains, see previous routes. The fares are about £2 first class, and £1 5*s.* second class, including sleeping car, but vary slightly with the train selected. The total cost, going and returning by this route, would be as follows:—

Return fare on steamer	£7	17	6
Stewards' fees	1	0	0
Fares to and from Moscow, first class	4	0	0
(If second class only £2 10*s.*)			
Total	£12	17	6

The actual travelling expenses are thus reduced to £12 17*s.* 6*d.*, or with a liberal margin for extras, £14. Living on board is cheap, the charge, as stated above, being 6*s.* 6*d.* a day; twelve days (out and home) at this rate would cost £3 18*s.* The charges at the buffets on the railway are also cheap, so that the essential expenses of the trip would be less than £20. If, as is hoped, the English members of the Congress are to be hospitably accommodated by the English colony in Moscow the additional expenses need be very slight. If, on the other hand, the visitor should stay at an hotel for eight days in Moscow and two or three days in St. Petersburg his additional expenses need not exceed £10, and will probably be less. In this way the whole trip, for which four weeks should be allowed, will cost from £25 to £30. For this sum the trip may be accomplished in ease and comfort. Since the Congress is to be opened on Thursday, Aug. 19th, it will be necessary to sail on Saturday, the 7th, if this route is chosen. The spare three or four days could be spent in St. Petersburg. Should an extra steamer, as sometimes happens, be despatched, say, on Wednesday, Aug. 11th, it would enable passengers to arrive in Moscow on the morning of Thursday, the 19th, the opening day of the Congress.

Route D.—By sea from Hull to St. Petersburg direct, or by sea from Hull to Helsingfors; thence by train to St. Petersburg and Moscow. A Finnish line of steamers (London agents, Chas. Gee and Co, 17, Gracechurch-street, E.C.) sends a boat from Hull every Saturday. The steamer reaches Hango the following Wednesday, and Helsingfors the following Thursday. Trains leave Helsingfors 8.50 A.M., reaching St. Petersburg 10 40 P.M.; and 8.15 P.M., reaching St. Petersburg 9.40 A.M. Trains also go from Hango to St. Petersburg. Fares to members: Hull to St. Petersburg, £4 8*s*; Hull to Helsingfors, £3 15*s.* Charge for meals 5*s.* a day. Fares from Helsingfors to St. Petersburg about £1. Trains and fares from St. Petersburg to Moscow as in previous routes. Members of the Congress who wish to be in time for the opening day would have to leave Hull on Saturday, Aug. 7th, reaching Helsingfors on Thursday, the 12th; this would allow a week to visit places of interest in Finland and to proceed at leisure to St. Petersburg and Moscow. Total cost by this route, Hull to Moscow, £8; return, £14; meals extra. This is one of the cheapest routes. The boats are comfortable and have electric light throughout; the cuisine is Swedish. There is a stop of several hours in Copenhagen, enabling passengers to land and see the city. Helsingfors, the Finnish capital, is also well worth seeing.

Route E.—By sea from London, Hull, or Grimsby to Gothenburg; thence by train or canal to Stockholm; thence by sea to St. Petersburg; thence by rail to Moscow. The s.s. *Thule* or s.s. *Thorsten* (London agents, W. E. Bott and Co., East India-avenue, E.C.) leaves London every Friday morning; voyage to Gothenburg about three days.

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The journey from Gothenburg to Stockholm may be done by rail in twelve hours; by canal, passing some of the most beautiful scenery in Sweden, in about two days. Canal steamers sail almost daily. Steamers leave Stockholm for St. Petersburg three times a week; the voyage takes two and a half days. These steamers call at Abo, Hango, and Helsingfors, and are exposed to the open sea for only a short distance. The Wilson Line sends a steamer from Hull to Gothenburg every Saturday after 5 P.M., and one from Grimsby to Gothenburg every Thursday at noon. From Gothenburg the journey would be continued as above. Fares: London to Gothenburg, £3 3*s.* single, £5 5*s.* return, available during the season. Hull or Grimsby to Gothenburg the same. Living on board in all cases 6*s.* 6*d.* a day. Gothenburg to Stockholm, by rail £1 9*s.* 6*d.* second class, by canal £2 8*s.* 4*d.*, including food. Stockholm to St. Petersburg by sea, to members, £1 16*s.* St. Petersburg to Moscow, *vide* previous routes. The time taken by this route would be as follows:—

By sea to Gothenburg about...	3 days.
Gothenburg to Stockholm by rail or canal...	½ or 2 days.
Stockholm to St. Petersburg	2½ days.
St. Petersburg to Moscow	1 day.
	7 or 8½ days.

To reach Moscow in time for the opening of the Congress it would be necessary to sail from London on Friday, Aug. 6th, or from Hull on Saturday, Aug. 7th, as the following week's sailing would be too late. But it would be just possible to sail from Grimsby on Thursday, Aug. 12th, and, crossing Sweden by rail, to reach Moscow on the morning of Thursday, the 19th, the opening day of the Congress. The total cost by this route would be as follows:—

	£	*s.*	*d.*
Return fare to Gothenburg	5	5	0
Gothenburg to Stockholm and back (second class)	2	1	0
Stockholm to St. Petersburg and back...	3	12	0
St. Petersburg to Moscow and back (first class)	4	0	0
	£14	18	0

Meals for fifteen days' travelling (mostly at 6*s.* 6*d.* a day), say, £5. This will bring the total travelling expenses, going and returning by this route, to between £20 and £25. Add £10 (if the visitor stays at an hotel), and the total expenses amount to between £30 and £35. It would be considerably cheaper to go this way and return direct by sea, or *vice versâ*. Passengers by this route have an opportunity of seeing Gothenburg, Stockholm, Abo, Hango, and Helsingfors, in addition to St. Petersburg and Moscow. Tickets for all routes to Berlin, or all sea routes to St. Petersburg, are issued at any of Messrs. Cook and Son's offices.

Messrs. Thomas Cook and Son have arranged to conduct a party to Moscow at an inclusive rate. The outline of the trip they propose shows that a start will be made from Queenborough for Flushing at 8.30 P.M. on Thursday, Aug. 12th, and that Berlin will be reached on the following day, Warsaw on the morning of the 16th, and Moscow at 2.15 P.M. on the 18th. The return journey, commencing Friday, Aug. 27th, will be by St. Petersburg, Stockholm, Copenhagen, and Hamburg, and London will be reached at 7.50 A.M. on Thursday, Dec. 9th. The fare, which covers railway tickets, hotel accommodation, and conveyance of baggage (56 lb.), is 45 guineas. Messrs. Cook and Son offer an alternative return journey by Berlin and Hanover for which the inclusive fare is only 38 guineas.

Dr. Lunn, 5, Endsleigh-gardens, N.W., has arranged a twenty-eight days' cruise for 25 guineas, exclusive of the cost of living and travelling in Russia. A start will be made in the steam-yacht *Norse King* at 6 P.M. on Tuesday, Aug. 10th. from Newcastle, and St. Petersburg will be reached on Aug. 17th. The yacht will then wait at St. Petersburg, and the return journey will commence on Aug. 27th; Stockholm will be reached on Aug. 29th, Copenhagen on Sept. 3rd, Christiania on Sept. 5th, and Newcastle on Sept. 8th.

An account of the excursion organised by the executive committee of the Congress to visit the Caucasus will be found in THE LANCET of April 3rd, 1897, p. 974.

Whatever route be chosen the intending traveller must obtain a passport from the Foreign Office, and see that it is properly *visé* at the Russian Consulate, 17, Great Winchester-street, E.C. If he is going through Germany he had better get the German *visa* too.

Notice has been received from Professor W. K. Roth, Secretary-General of the Congress, of important reductions in railway fares that will be made to members of the Congress. French, Spanish, and Norwegian railways announce a reduction in fares of 50 per cent. The Italian railways offer a reduction varying from 30 to 50 per cent. The Hungarian railways will convey a member of Congress by a class superior to that for which he holds a ticket. Lastly, *free* return tickets will be given by the Russian railways from the frontier to Moscow and back.

Forms of inscription as Member of the Congress can be obtained from Mr. G. H. Makins, 47, Charles-street, Berkeley-square, London, W.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5754 births and 3764 deaths were registered during the week ending April 17th. The annual rate of mortality in these towns, which had been 18·3 and 18·6 per 1000 in the two preceding weeks, declined again last week to 17·9. In London the rate was 16·6 per 1000, while it averaged 18·7 in the thirty-two provincial towns. The lowest rates in these towns were 9·5 in Croydon, 10·9 in Swansea, 11·9 in Nottingham, and 13·1 in Wolverhampton; the highest rates were 23·3 in Manchester, 23·4 in Halifax, 24·9 in Bolton, 25·8 in Blackburn, and 28·1 in Salford. The 3764 deaths included 335 which were referred to the principal zymotic diseases, against 346 and 338 in the two preceding weeks; of these, 105 resulted from measles, 100 from whooping-cough, 51 from diphtheria, 33 from scarlet fever, 30 from diarrhœa, 16 from "fever" (principally enteric), and not one from small-pox. No death from any of these diseases was recorded last week in Swansea; in the other towns they caused the lowest death-rates in Bradford, Croydon, Nottingham, and Sunderland, and the highest rates in Oldham, Liverpool, Blackburn, Salford, and Bolton The greatest mortality from measles occurred in Bolton, Manchester, Salford, Oldham, Burnley, and Newcastle-upon-Tyne; from scarlet fever in Leicester; and from whooping-cough in Leicester, Manchester, Salford, Burnley, Preston, Blackburn, and Gateshead. The mortality from "fever" showed no marked excess in any of the large towns. The 51 deaths from diphtheria included 30 in London, 3 in West Ham, and 2 each in Birmingham, Liverpool, Manchester, Leeds, and Sheffield. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns. There were 11 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 17th inst., against 21, 17, and 16 at the end of the three preceding weeks; one new case was admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2406, against 2585, 2512, and 2449 on the three preceding Saturdays; 216 new cases were admitted during the week, against 224, 219, and 204 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 282 and 271 in the two preceding weeks, rose again to 274 last week, but were 121 below the corrected average. The causes of 47, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Leicester, Bradford, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Burnley, Blackburn, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·1 and 24·6 per 1000 in the two preceding weeks, declined again to 22·3 during the week ending April 17th, but exceeded by 4·4 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns

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ranged from 18·0 in Leith and 18·4 in Aberdeen to 25·6 in Perth and 26·0 in Edinburgh. The 665 deaths in these towns included 39 which were referred to measles, 39 to whooping-cough, 12 to diarrhœa, 7 to "fever" (principally enteric), 6 to diphtheria, and 4 to scarlet fever. In all, 107 deaths resulted from these principal zymotic diseases, against 104 and 95 in the two preceding weeks. These 107 deaths were equal to an annual rate of 3·6 per 1000, which was 2·0 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 29 and 33 in the two preceding weeks, further rose to 39 last week, of which 19 occurred in Glasgow and 19 in Edinburgh. The 39 deaths from whooping-cough exceeded by one the number in the preceding week, and included 22 in Glasgow, 5 in Leith, and 5 in Edinburgh. The deaths referred to "fever," which had been 6 and 3 in the two preceding weeks, rose again to 7 last week, of which 4 occurred in Glasgow. The fatal cases of diphtheria, which had been 9 and 4 in the two preceding weeks, rose again to 6 last week, and included 4 in Edinburgh, where two of the 4 deaths from scarlet fever were also recorded. The deaths referred to diseases of the respiratory organs in these towns, which had been 146 and 153 in the two preceding weeks, were 154 last week, and exceeded by 44 the number in the corresponding period of last year. The causes of 46, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 38·5 and 35·9 per 1000 in the two preceding weeks, further declined to 28·2 during the week ending April 17th. During the thirteen weeks of last quarter the death-rate in the city averaged 40·2 per 1000, the rate during the same period being 18·4 in London and 22·4 in Edinburgh. The 189 deaths registered in Dublin during the week under notice showed a decline of 52 from the number in the preceding week, and included 36 which were referred to the principal zymotic diseases, against 47 and 41 in the two preceding weeks; of these, 15 resulted from measles, 14 from whooping-cough, 2 from scarlet fever, 2 from diphtheria, 2 from "fever," and 1 from diarrhœa. These 36 deaths were equal to an annual rate of 5·4 per 1000, the zymotic death-rate during the same period being 1·4 in London and 5·7 in Edinburgh. The fatal cases of measles, which had declined in the four preceding weeks from 46 to 25, further fell to 15 last week. The deaths referred to whooping-cough, which had been 9 in each of the two preceding weeks, rose again to 14 last week. The 2 fatal cases of scarlet fever showed a slight further decline from recent weekly numbers, and the 2 deaths from diphtheria corresponded with the number recorded in the preceding week. The 189 deaths in Dublin last week included 34 of infants under one year of age and 38 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further decline from the high numbers recorded in recent weeks. Four inquest cases and 4 deaths from violence were registered; and 53, or more than a fourth, of the deaths occurred in public institutions. The causes of 10, or more than 5 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MARCH, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during March in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 7·8 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 10·7, 9·0, and 8·7 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Paddington, St. George Hanover-square, Marylebone, Hampstead, St. Martin-in-the-Fields, and Clerkenwell; while they showed the largest excess in Chelsea, Holborn, Bethnal Green, Mile End Old Town, Poplar, Battersea, and Wandsworth. Eight cases of small-pox were notified in London during March, against 3, 8, and 48 in the three preceding months; of these, 2 belonged to Strand, 2 to Poplar, 2 to Woolwich, 1 to Hackney, and 1 to Camberwell sanitary areas. There were 17 cases of small-pox under treatment in the Metropolitan Asylum Hospitals at the end of March, against 3, 8, and 43 at the end of the three preceding months; 8 new cases were admitted during the month, against 7 and 53 in the two preceding months. The prevalence of scarlet fever showed a further decline from that recorded in recent months; this disease was proportionally most prevalent in Chelsea, Bethnal Green, Mile End Old Town, Poplar, St. Saviour Southwark, Battersea, Wandsworth, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 2468 scarlet fever patients at the end of March, against 3601, 3246, and 2775 at the end of the three preceding months; the weekly admissions averaged 208, against 355, 245, and 228, in the three preceding months. The prevalence of diphtheria in London differed but slightly from that recorded in the two preceding months; among the various sanitary areas this disease showed the highest proportional prevalence in Chelsea, St. James Westminster, Holborn, Bethnal Green, Whitechapel, Mile End Old Town, Bermondsey, Wandsworth, and Camberwell. There were 776 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of March, against 829, 897, and 855 at the end of the three preceding months; the weekly admissions averaged 101, against 119, 105, and 101 in the three preceding months. The prevalence of enteric fever in London showed a further decline from that recorded in recent months; this disease was proportionally most prevalent in Kensington, Hackney, Bethnal Green, Whitechapel, Bermondsey, and Greenwich sanitary areas. Erysipelas showed the highest proportional fatality in Holborn, Bethnal Green, Limehouse, and Poplar sanitary areas. The twenty-three cases of puerperal fever notified during March included 3 in Fulham, 3 in Islington, 2 in Kensington, and 2 in Newington sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the five weeks ending Saturday, April 3rd, the deaths of 7441 persons belonging to London were registered, equal to an annual rate of 17·4 per 1000, against 17·6, 18·2, and 18·5 in the three preceding months. The lowest death-rates during March in the various sanitary areas were 11·7 in Hampstead, 12·8 in Paddington, 13·0 in Lee and in Plumstead, 13·1 in St. Martin-in-the-Fields, and 13·2 in Lewisham, (excluding Penge); the highest rates were 22·6 in Bethnal Green, 22·8 in Limehouse, 24·2 in St. Luke, 24·5 in City of London, 25·0 in Holborn, 27·6 in St. George-in-the-East, and 27·9 in Strand. During the five weeks of March 660 deaths were referred to the principal zymotic diseases in London; of these, 216 resulted from whooping-cough, 215 from diphtheria, 63 from measles, 63 from diarrhœa, 51 from scarlet fever, 45 from enteric fever, and 7 from small-pox. These 660 deaths were equal to an annual rate of 1·5 per 1000. The lowest death-rates from these diseases last month were recorded in Paddington, Westminster, Marylebone, St. Luke, Lee, and Plumstead; and the highest rates in St. Martin-in-the-Fields, Strand, Bethnal Green, St. George-in-the-East, Newington, and Bermondsey sanitary areas. Seven fatal cases of small-pox were registered in London during March, of which 3 belonged to Camberwell, 2 to Strand, 1 to St. Martin-in-the-Fields, and 1 to St. George Southwark sanitary areas. The 63 deaths referred to measles were less than a fourth of the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Bethnal Green, St. George-in-the-East, and Limehouse sanitary areas. The 51 fatal cases of scarlet fever were 30 below the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 215 deaths from diphtheria were 52 above the corrected average number; this disease was proportionally most fatal in Hackney, Shoreditch, Bethnal Green, Mile End Old Town, Bermondsey, Wandsworth, and Camberwell sanitary areas. The 216 fatal cases of whooping-cough were 125 below the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Fulham, St. Giles, City of London, Newington, Bermondsey, Lambeth, and Camberwell. The 45 deaths referred to enteric fever slightly exceeded the corrected average number; the mortality from this disease showed no

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—MARCH, 1897.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1897.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,463,769	8	1472	1129	—	192	12	23	487	—	3323	7·8	7	63	51	215	216	—	45	—	63	660	1·5	7441	17·4	130
West Districts.																										
Paddington	126,161	—	27	19	—	3	—	1	6	—	56	4·6	—	—	—	5	6	—	—	—	2	13	1·1	155	12·8	105
Kensington	171,427	—	44	28	—	10	1	2	23	—	118	7·2	—	—	1	7	1	—	2	—	2	13	0·8	267	16·2	139
Hammersmith	105,959	—	34	13	—	1	—	—	7	—	55	5·4	—	—	1	4	2	—	1	—	2	10	1·0	159	15·6	99
Fulham	120,040	—	27	34	—	5	3	3	7	—	79	6·9	—	—	1	6	8	—	—	—	1	16	1·4	172	14·9	155
Chelsea	96,692	—	47	34	—	4	—	1	5	—	91	9·8	—	—	2	3	6	—	2	—	1	14	1·5	176	19·0	151
St. George Hanover-square	80,330	—	14	3	—	4	—	—	5	—	26	3·4	—	1	1	—	4	—	2	—	1	9	1·2	120	15·6	157
Westminster	53,027	—	17	12	—	—	—	1	5	—	35	6·9	—	—	1	1	1	—	—	—	—	3	0·6	86	16·9	73
St. James Westminster	22,576	—	4	10	—	—	—	—	1	—	15	6·9	—	—	—	1	1	—	—	—	—	2	0·9	41	18·9	167
North Districts.																										
Marylebone	140,808	—	21	12	—	6	—	—	23	—	62	4·6	—	—	—	3	3	—	2	—	1	9	0·7	250	18·5	127
Hampstead	77,275	—	10	16	—	4	1	—	1	—	32	4·3	—	1	—	4	2	—	—	—	1	8	1·1	87	11·7	81
St. Pancras	242,255	—	61	36	—	6	—	1	36	—	140	6·0	—	2	2	10	18	—	3	—	1	36	1·5	423	18·2	110
Islington	341,124	—	115	84	—	15	—	3	28	—	245	7·5	—	5	8	6	14	—	4	—	5	42	1·3	505	15·4	118
Stoke Newington	34,136	—	12	7	—	4	—	—	1	—	24	7·3	—	3	—	1	2	—	2	—	—	8	2·4	53	16·2	132
Hackney	216,698	1	83	69	—	14	—	1	20	—	188	9·0	—	1	6	13	10	—	2	—	1	35	1·6	325	15·6	118
Central Districts.																										
St. Giles	37,840	—	12	3	—	2	—	1	5	—	23	6·3	—	—	—	1	5	—	2	—	—	8	2·2	70	19·3	234
St. Martin-in-the-Fields	12,711	—	3	1	—	—	—	—	1	—	5	4·1	1	—	—	1	1	—	—	—	—	3	2·5	16	13·1	133
Strand	23,552	2	6	3	—	—	—	—	2	—	13	5·8	2	—	1	2	1	—	—	—	2	8	3·5	63	27·9	208
Holborn	30,493	—	13	12	—	2	—	—	6	—	33	11·3	—	—	—	2	3	—	—	—	1	6	2·1	73	25·0	206
Clerkenwell	66,162	—	16	6	—	3	—	—	6	—	31	4·9	—	3	1	2	3	—	—	—	—	9	1·4	131	20·6	107
St. Luke	41,279	—	5	10	—	2	—	—	6	—	23	5·8	—	—	—	—	3	—	—	—	—	3	0·8	96	24·2	110
City of London	30,228	—	9	6	—	—	—	—	2	—	17	5·9	—	1	2	—	4	—	—	—	—	7	2·4	71	24·5	137
East Districts.																										
Shoreditch	121,883	—	37	39	—	3	1	—	13	—	93	8·0	—	3	—	11	1	—	1	—	2	18	1·5	213	18·2	141
Bethnal Green	129,098	—	51	45	—	9	—	1	30	—	136	11·0	—	16	1	13	1	—	2	—	7	40	3·2	280	22·6	154
Whitechapel	79,724	—	17	20	—	6	—	—	4	—	67	8·8	—	—	—	4	—	—	—	—	4	8	1·0	155	20·3	114
St. George-in-the-East	47,917	—	8	16	—	2	—	—	9	—	35	7·6	—	5	1	2	3	—	—	—	1	12	2·6	127	27·6	160
Limehouse	58,508	—	22	9	—	1	—	1	11	—	44	7·8	—	6	1	1	3	—	—	—	—	11	2·0	128	22·8	150
Mile End Old Town	111,883	—	51	41	—	6	—	—	15	—	113	10·5	—	2	—	9	5	—	—	—	2	18	1·7	210	19·6	138
Poplar	169,811	2	72	53	—	8	—	—	31	—	166	10·2	—	1	—	7	7	—	4	—	—	19	1·2	290	17·8	134
South Districts.																										
St. Saviour Southwark	24,919	—	13	3	—	1	—	—	2	—	19	8·0	—	—	2	—	2	—	1	—	—	5	2·1	50	20·9	200
St. George Southwark	60,388	—	22	9	—	—	—	1	5	—	37	6·4	1	—	—	2	2	—	—	—	—	5	0·9	125	21·6	130
Newington	122,191	—	44	23	—	3	—	2	14	—	86	7·3	—	2	4	3	19	—	1	—	8	37	3·2	258	22·0	113
St. Olave Southwark	11,480	—	4	3	—	—	—	—	2	—	9	8·2	—	—	—	—	1	—	—	—	1	2	1·8	24	21·8	95
Bermondsey	85,629	—	34	32	—	5	1	—	9	—	81	9·8	—	—	2	9	10	—	1	—	2	24	2·9	174	21·2	146
Rotherhithe	40,643	—	8	11	—	—	—	1	4	—	24	6·2	—	2	—	1	6	—	—	—	1	9	2·3	75	19·5	210
Lambeth	300,048	—	97	54	—	16	3	—	20	—	190	6·6	—	6	3	14	28	—	5	—	4	60	2·1	503	17·5	140
Battersea	168,877	—	98	36	—	4	—	—	23	—	161	9·9	—	1	5	5	5	—	1	—	2	19	1·2	256	15·8	140
Wandsworth	195,612	—	78	94	—	9	2	1	27	—	211	11·3	—	1	—	26	4	—	—	—	1	32	1·7	258	13·8	110
Camberwell	257,575	1	94	89	—	10	—	—	26	—	220	9·3	3	—	1	16	18	—	2	—	2	42	1·7	393	15·9	111
Greenwich	178,367	—	67	61	—	15	—	1	23	—	167	9·8	—	1	2	8	1	—	5	—	1	18	1·1	275	16·1	142
Lewisham (excluding Penge)	86,152	—	26	15	—	4	—	—	11	—	56	6·8	—	—	1	6	1	—	—	—	—	8	1·0	109	13·2	114
Woolwich...	41,409	2	5	11	—	2	—	—	2	—	22	5·5	—	—	—	3	2	—	—	—	3	8	2·0	74	18·6	163
Lee	39,215	—	5	10	—	2	—	1	5	—	23	6·1	—	—	—	2	—	—	—	—	—	2	0·5	49	13·0	128
Plumstead	61,057	—	24	5	—	1	—	—	4	—	34	5·8	—	—	1	1	—	—	—	—	1	3	0·5	76	13·0	109
Port of London	—	—	5	2	—	—	—	—	1	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 41 cases of membranous croup.

† Including deaths from membranous croup.

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marked excess in any of the sanitary areas. The 63 fatal cases of diarrhœa were within 4 of the corrected average number. In conclusion, it may be stated that the mortality in London during March from these principal zymotic diseases was more than 33 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths under one year of age to births registered, was equal to 130 per 1000 during March, and was below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Hammersmith, Westminster, Hampstead, and St. Olave Southwark; and the highest rates in St. Giles, Strand, Holborn, St. Saviour Southwark, and Rotherhithe.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL I. B. EMERSON assumes temporary Medical Charge of the troops at Ipswich during the absence on leave of Deputy Surgeon-General W. A. Gardiner. Surgeon-Major S. F. Lougheed will shortly join at Woolwich. Surgeon-Captain M. J. Whitty proceeds to Hong-Kong. Surgeon-Colonel W. Graves has been appointed Principal Medical Officer of the Belfast District.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following retirements are announced:—Brigade-Surgeon-Lieutenant-Colonel Hugh Johnstone (Bengal), Civil Surgeon and Port Health Officer, Rangoon, and Surgeon-Lieutenant Alfred Moore (Madras), both subject to Her Majesty's approval.

NAVAL MEDICAL SERVICE.

The following appointments are announced: — Fleet Surgeon J. C. B. Maclean to the Royal Marine Depôt, Walmer. Staff Surgeons: J. D. Henwood to the *Revenge;* Thomas E. H. Williams to the *Empress of India;* and M. O'Connell M'Swiny, lent to the *Hibernia*. Surgeon Sidney T. Reid, lent to the *Barfleur*.

CHARCOAL DRESSING IN MILITARY SURGERY.

In a small pamphlet issued by the Publishers' Printing Company, New York, Dr. S. Sherwell of Brooklyn claims to be the introducer of charcoal as a dressing for open wounds in field surgery. According to Dr. Matignon of the French army this method was originally devised in 1891 by a Japanese military surgeon named Kikuzi, but ten years previously, at the International Medical Congress in London, Dr. Sherwell read a paper advocating "the instant envelopment of wounds ..... in a sack or bag of charcoal, finely pulverised." It does not appear, however, that Dr. Sherwell ever reduced his theory to practice, whereas the results obtained by Kikuzi at Port Arthur and elsewhere, not only in gunshot and other wounds, but also in frost-bites, are said to have been strikingly satisfactory. The American claimant is of opinion that rice-straw charcoal cannot differ greatly from other charcoals, but in an editorial note to an article in a French medical journal,[1] to which he refers, some experiments are mentioned which would seem to prove that the former possesses peculiarly distinctive qualities, not only as regards softness and elasticity, but also in chemical composition. As the writer of the note in question observes in conclusion, "It is to be desired that further experiments should be undertaken, with a view to the differentiation of the various straw charcoals."

LEAN'S ROYAL NAVY LIST.

The latest issue of this indispensable publication is to hand and will be cordially welcomed by all who have anything whatever to do with our first line of defence. The information which has been brought up to date includes among other matters the war and meritorious services &c. of the officers of the Royal Navy and the Royal Marines; the dates of all commissions; dates of birth (flag officers, captains, and officers of Royal Marines), together with medals, clasps, honours, decorations, and rewards; famous battles against the names of the ships; the details from official sources of the gallant deeds for which the Victoria Cross, Albert Medal, and medals of the Royal Humane Society, Lloyd's Shipwrecked Mariners' Society, Liverpool Shipwreck and Humane Society, and Royal National Life Boat Institution have been awarded; appointments held by retired officers; causes of special promotions; fellows of the learned societies, and deputy lieutenants.

[1] Archives de Médecine et de Pharmacie Militaires, No. 5, May, 1896, p. 386.

Correspondence.

"Audi alteram partem."

THE QUESTION OF THE SECOND OVARY IN OVARIOTOMY.

To the Editors of THE LANCET.

SIRS,—The operation of ovariotomy, requiring little anatomical knowledge, I have always inclined to rank as one for which little surgical training was requisite. Its former reputation depended entirely on the terrible mortality that in years gone by attended the earlier operations, so that a certain amount of courage was necessary in order to undertake it. Great credit was therefore due to those who, by greater attention to aseptic methods and detail, brought the operation to the present degree of safety. Whilst from a surgical point of view a little coolness and courage with a very limited knowledge of the human body are all that are requisite for an ordinary case, it is nevertheless an operation which requires a large amount of common sense in dealing with adhesions and with complications that may be met with.

The question which will interest a great many at the present time will be the rule of the profession in dealing with the second ovary if in an early condition of disease; and without wishing to press strongly my views (which others may regard erroneous) I will state what with me have been the determining factors in practice. In the case of malignant disease no one would, I presume, hesitate to remove every particle of growth it was possible to clear away, so that opinions could scarcely differ if, on removing one ovary which was malignant, a nodule of growth was discovered on the other. Both should be removed. With simple cystic disease, where one ovary is extensively diseased and the other only in an early stage of cystic degeneration it would appear to me that the patient's age and condition of life must be the determining factors. It would, I believe, be generally conceded that with one ovary remaining, and that in a state of partial cystic degeneration, not only would menstruation be continued, but the possibility of impregnation and child-bearing (at any rate, for a time), for corpora lutea are to be found in the undegenerate portion. If both ovaries are removed, however healthy a prospect of life may be thus secured, the woman from that time forth is an unnatural monster, cut off from the next generation, and, if married with this condition secreted, would, I presume, be liable to be divorced. It has twice happened to me recently to be face to face with this position and I acted differently in the two cases. One was a patient under the care of Mr. George Flower of Yeovil. She was in her fortieth year and had had no child for many years. After removing a very large ovarian tumour from one side I found the other in an earlier stage of cystic degeneration. I removed both, telling her afterwards that she could not again become pregnant and that she would be relieved of the inconvenience of menstruation. The other case was a patient under the care of Mr. Challoner Clay of Fovant, Salisbury. She was only twenty-five years of age and was found to have a large unilocular cyst of her right ovary, which contained ten pints of fluid, and connected with the left ovary was a cyst as large as an orange. The right ovary was easily removed and the other was left. The view I took in this case was that at her time of life I had no right to cut her off from the chance of matrimony and of child-bearing. The remaining ovary was not likely to endanger her life for a considerable period, and in the meantime it might be possible for her to become a mother. Should the cystic degeneration increase rapidly there would probably be no great danger in operating a second time for the removal of the remaining ovary.

I am, Sirs, yours faithfully,

R. CLEMENT LUCAS, B.S. Lond., F.R.C.S. Eng.,
Surgeon to Guy's Hospital.

Wimpole-street, W.

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—Professor Struthers' letter in THE LANCET of April 17th affords an excellent illustration of a fact to which I lately drew your attention[1]—namely, that in medical

[1] THE LANCET, April 3rd, 1897.

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literature one constantly meets statements implying a belief that acquired characters are transmissible. Professor Struthers says: "On the hypothesis of unity of origin" (of the races of mankind) "the explanation of right-handedness is easy. One hand would naturally be fixed on; the young would be trained to use the same hand; and the influence of that on the left hemisphere of the brain would ere long give a hereditary or 'instinctive' tendency to prefer the right hand." It appears to me that this "easy" explanation involves an impossible assumption, and one which at the present day is very generally disputed by biologists. Will Professor Struthers explain how modifications *acquired* by the left hemisphere of the brain of the parent can so affect the germ cell—in which there are neither nervous nor muscular tissues—that, after long separation from the parent organism, it (the germ cell) will proliferate into an individual who is right-handed—i.e., who has inborn the peculiarity the parent acquired? Surely that part of Professor Struthers' explanation in which he says, "One hand would naturally be fixed on; the young would be trained to use the same hand," is all-sufficient, and there need be no appeal to what is practically a miracle. No one excepting those who have given special attention to the subject have any conception of how very much of the physical and mental parts of every man is individually *acquired*, and is therefore not inherited or transmissible in the biological sense, and none but those who have so studied the subject have any conception of how vast is its importance, not only to the student of disease and the biologist, but also to the sociologist, the philanthropist, the statesman, &c. For example, every man individually *acquires* the faculty of language and of bi-pedal progression in an erect posture; neither of these is instinctive or inborn, and therefore transmissible; and both result from the fact that the one generation acquires them by imitation from the preceding generation. It is probable, therefore, that most men are now right-handed merely because they acquire or learn this peculiarity from their elders, not because they are born with it. Professor Struthers himself says: "The preferential use of the right hand does not, according to my observation, show itself in very young children, but only after they have assumed the erect posture and begun active exertion."

I am, Sirs, faithfully yours,

Southsea, April 19th, 1897. G. ARCHIDALL REID.

To the Editors of THE LANCET.

SIRS,—Professor Struthers and I seem to afford each other mutual support. While I seek to show that (owing to the centre of gravity of the thorax being nearer the left fore limb than the right) our remote fore-footed ancestor and the crawling child would tend to use the right hand in preference to the left, Professor Struthers maintains that the visceral preponderance over the right leg of the *erect* man would tend to produce the same result. It appears, therefore, that both before and after attaining the erect position visceral preponderance makes for right-handedness. With regard to the feet, I would point out that the drill-sergeant and dancing-master traditionally insist on commencing to march or dance with the *left* foot, the reason being that the stability of the body, owing to visceral preponderance, is less disturbed by taking the left foot off the ground than the right. Left-handedness seldom shows itself so long as movement is mainly coarse and bilateral, but is noticed as soon as a child begins to use a spoon or a pen. Small degrees of hemiplegia are far from uncommon in young children (owing to slight damage to the cerebral cortex during birth), but the trifling disability of one hand is seldom noticed by the friends until the child begins to use the hands independently. I have seen many such cases. In all cases of so-called "writer's cramp" I am accustomed to inquire for "left-handedness" and to look for evidence of congential or infantile cortical lesions, and I have notes of several cases in which the evidence of such lesions, though slight, was complete. I have records of two cases of extreme left-handedness, in which the left arm was broken in childhood and was consequently carried in a splint for some weeks. This, however, did not in either case cure the left-handedness. I have notes of another case in which the right half of the body—face, limbs, and trunk—was obviously smaller than the left half, but the patient was not in the least left-handed. That there must be an anatomical cause for our almost universal right-handedness is certain, but the exceptional left-handedness may obviously be due to a variety of causes. One may be allowed to speculate as to whether people are ever ambi-dextrous (i.e., whether a left hand is ever equal to a really first-rate right hand). That the preferential use of the left hand is often due to a congenital cortical lesion I have no doubt and it may be that such persons have two second-rate hands instead of one first-rate hand.

I am, Sirs, yours truly,

Wimpole-street, April 20th, 1897. G. V. POORE.

THE PERIPHERAL ORIGIN OF SOME SPINAL CORD AFFECTIONS.

To the Editors of THE LANCET.

SIRS,—The question of the possible peripheral origin of some spinal cord affections is raised by the interesting communications from Dr. Semple and Dr. Taylor in THE LANCET of April 17th, "On Certain Symptoms of Spinal Cord Affections in Bicycle Riders." May I be permitted to call attention to a paper of mine entitled, "On the Etiology of Some of the System Diseases of the Spinal Cord,"[1] in which I put forward the view based partly on probability and partly on grounds of observation of the possible peripheral origin of some of these diseases? Dr. Semple and Dr. Taylor say of their cases that "it is not unlikely that in all of them there was produced, presumably through pressure, some condition of the nervous structures possibly analogous to that which obtains in pressure palsy," and "that it is possible that in the case in which the spinal cord became much involved the condition became an actual neuritis, and that the inflammation spread so as to set up a similar process in the spinal cord." In my paper to which I allude I endeavoured to show the likelihood of many cases of so-called lateral sclerosis, as also of posterior sclerosis (or "tabes"), being due to over-use of the motor and sensory apparatus, and suggested that affection of the peripheral nerves might spread to the cord. There are many corrections, additions, and omissions that I should like to make with respect to my crude paper on this matter, written so long ago, but my experience of late years goes to corroborate the view that a large number of cases of both pure and mixed examples of "spastic paralysis" and "tabes" are with the greatest clinical probability etiologically referable to over-use or irritation of peripheral nerves terminating in either skin or muscle.—I am, Sirs, yours faithfully,

London, April 19th, 1897. H. B. DONKIN.

"LACTOSURIA."

To the Editors of THE LANCET.

SIRS,—I have read with interest the article on this subject in THE LANCET of April 17th. Although the occurrence of sugar in the urine during lactation was described by various writers as being frequent, yet on investigating the literature on this subject I was unable to find that any prolonged and careful inquiry had been made. In conjunction with Dr. W. A. Turner I investigated a series of 100 cases[2] in order to answer the initial question, Is sugar always present in the urine of nursing women at some period of lactation? This question we were enabled to answer in the affirmative. In addition to the examination of the urine a daily note was made concerning the condition of the mammary glands, the quantity and quality of the milk, and the sucking and general nutrition of the child. As a result of our observations we concluded: 1. That sugar is present in the urine of women during lactation. 2. That sugar is present at some period in every case. 3. That in the majority of cases the largest amount occurs on the fourth and fifth days of the puerperium. 4. That the quantity depends on (*a*) the condition of the breasts; (*b*) the quantity and quality of the milk; and (*c*) the sucking of the child. Out of 100 cases the average quantity found was 0 35 per cent.—i.e., 1½ grains per ounce. 5. That when lactation is diminished or suppressed the amount of sugar diminishes or disappears. 6. That when the production and exhaustion of the milk are equal the amount of sugar is very small.

The suggestion that the quantity of sugar present in the

[1] Published in the volume of Brain for 1883.

[2] Transactions of the Obstetrical Society of London, vol. xxxiv., 1892, p. 473.

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urine is an indication of value in choosing a wet nurse was made by Blot[3] in 1856. With this suggestion we could not agree, for in cases where large quantities of lactose were present in the urine the nutritive value of the milk, as gauged by the nutrition of the child, was inferior. The milk may be rich in lactose, yet poor in nutritive value, or for some reason more lactose is absorbed and excreted. It is important to remember that the larger amounts of lactose are found at the onset of lactation or at its cessation, especially where weaning has been recommended, as a certain amount of breast distension usually occurs.

I am, Sirs, yours faithfully.

Curzon-street, Mayfair, W., April 19th, 1897. F. J. MCCANN.

"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—Sexual reproduction with its natural variations is as inadequate as Dr. Campbell's previous explanation of coincidence to account for the cases I recorded, nor can I accept the "dictum of an eminent biologist" when it is opposed to a plain matter of fact. Dr. Campbell's doubt of the transmission of gout is contrary to all experience, his explanation of inherited baldness savours too strongly of the *virtus dormitiva* to be intelligible, his argument of circumcision and the docking of horses needs to be viewed in the light of the functional insignificance of the parts docked, and the proneness of the transplanted negro to tubercle has been otherwise explained, but it does not bear on this question.

Dr. Reid dismisses the theory of pangenesis, adopts the view of Weismann, and says "the germ cell, so far as we know, is indebted to the other cells only for shelter and nutrition. This consideration renders unbelievable the hypothesis that acquired traits are transmissible." Even allowing him so to beg the question of the limited dependence of the germ cell, "so far as we know"—and we know nothing whatever about it—this consideration does nothing of the sort. If the germ cells depend for shelter and nutrition on the other cells they are therefore as liable to modification by them as any organism is to the influence of its surroundings. The crabs and other animals that made their home in such caves as those of Kentucky depended for shelter and nutrition on their surroundings no more and no less than the blastogenic cells depend on their surrounding cells. Through disuse of their eyes for successive generations they finally lost those organs, and we find the crab in which "the footstalk of the eye remains, though the eye is gone." Now, does any sane person contend that such a result is a coincidence, or is it a natural variation of sexual reproduction, or is it a proof of the continuity of the germ plasm? It is, of course, an example of the same process of heredity, though slower in operation, that is at work in those cases of the transmission of the results of lesions that I have recorded.

The attitude of those who follow Weismann's theory is well illustrated by your extract from Dr. Pearse's communication; they have accepted a hypothesis, and if the facts will not tally with it, then so much the worse for the facts. There is no mere hypothesis under the sun that is sufficient to justify us in concluding *a priori* that acquired lesions *cannot* be transmitted. Surely the more scientific method would be to investigate cases of transmission, and then to frame a hypothesis that will tally with established facts.

I am, Sirs, yours faithfully,

St. John's Wood-park, N.W., April 3rd, 1897. W. G. THISTLE.

*** This correspondence must now cease.—ED. L.

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—The hopeless muddle into which the promoters of midwife registration have fallen must be my apology for again trespassing on your space in order to supplement my note appearing in THE LANCET of March 27th. The time for academic discussion and for destructive criticism and personal recrimination is past, and the public, Parliament, and the medical profession, or that part of it, at least, who take any interest in the subject, anxiously look for a solution. This is not to be found in the Bill now before the Commons: (1) because it will register the *bonâ-fide* midwife of two years' standing—i.e., the "Gamp" and other untrained and ignorant women who practise midwifery and, according to the medical advocates of registration, scatter disease and death broadcast; this alone would condemn the Bill; (2) the Bill makes no provision for after-nursing, which is a fatal defect if its promoters intend it to apply to "the poor"; (3) there is no provision for medical or surgical aid in emergencies or for the payment of medical men or midwife in such cases occurring among "the poor"; (4) its administration is utterly at fault, as a central board largely composed of specialists know absolutely nothing of local wants and circumstances; and it is manifestly unfair and impolitic to thrust police duties on the medical officer of health or other medical man, whose office, under the Bill, as detective, spy, and informer would be invidious and degrading. Thus, while the Bill would intensify all the existing evils it would (5) sow discord among male and female midwifery practitioners, promote slander and backbiting, and to a large extent deprive the poor of the prompt assistance and sympathy of medical men, whether they are paid or not, and which is denied them by the qualified midwife unless her fee is paid in advance. It is absurd to say, as the promoters express it (*vide* the *Times*, Feb. 26th), "that the midwife must always stand entirely outside the medical profession." On the contrary, when registered she will be an integral part of it, and severely compete with fully qualified medical men, while she is dependent upon them in cases of difficulty and emergency. This must strike the most obtuse as grossly unfair. The promoters of registration give away their case in the following sentence (*vide loc. cit.*): "The utmost that is proposed or could be done is to regulate the practice of those who take the name of midwife; nothing will or can prevent *any person* whatever from practising in this capacity. We demand that the *name* of midwife shall be protected, and shall be *in itself* a guarantee that the bearer of it is competent for the work she undertakes!" In the *name* of common sense, what does the poor woman whose slender means are not equal to a fee of more than 5*s*. or 7*s*. 6*d*. at the outside care for a diplomated and registered midwife, clad in gown and ribbons, who requires another woman to wait upon her and to do the housekeeping, washing, and cooking? And if "any person" can practise midwifery under the registration Bill, how will this meet the case of its medical supporters, who look to it to abolish puerperal fever and the grievous maladies due to the practice of midwifery by the incompetent? The scheme of the Bill, as I said in my former letter, stands "self-condemned," and we must seek for a better.

Having had the midwife question under my observation for nearly five years in the parish of East Sheen, and having regard to the abuses which gradually crept in under the ægis of catering for "the poor," who were at first required to pay only 5*s*, then 7*s*. 6*d*., and with an increase of the wage limit from 30*s*. to 50*s*. per week an enhanced fee of 10*s*., and finding the comparatively rich taking advantage of the midwife's fees and "the poor" left very much to their own resources, I took action in order (1) to have the wage limit reduced again, and in this I succeeded; and (2) to put forward "a scheme" which was intended to meet the requirements of the working and small shop-keeping classes and at the same time to make an honest effort to solve the midwife question to the advantage of the public, the profession, and the midwives themselves. This was done publicly at the annual meeting of the Local Nursing Association (who employ a professional nurse and a diplomated midwife) on Feb. 4th. The vicar was chairman and about forty representatives of the *élite* of the parish were present, and after full discussion and subsequent examination of my proposals in committee they wrote: "The committee authorise me to say that they consider the changes quite impracticable; the class of women whom it is desired to help could not possibly pay for both doctor and nurse. The result would be that they would employ neither, and would revert to the unskilled though kindly meant help of their neighbours. This is exactly what the society desires to avoid." It is none the less what I desire to avoid, as will immediately appear. But the promoters of registration should carefully note the terms employed and the contention of the local society, as these are distinctly adverse to the principle of the Bill, which registers the "Gamp" and recognises the "friendly neighbour." The local committee, however, recognised the injustice of a 50*s*. wage limit, which in two years had reduced the midwifery practice of the medical men from 50 to 60 per cent., and the

[3] Comptes Rendus, xliii., p. 676, 1856.

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limit is now 30*s*. My proposals were made for a parish of 7000 odd, and for an average birth-rate of 180, and if sound should be generally applicable. These are divided for comparative purposes into three sixties: First sixty (wages from 30*s*. to 40*s*.) to contribute 15*s*.; second sixty (wages from 20*s*. to 30*s*.) to contribute 10*s*; and third sixty (wages 20*s*. and under) to contribute 5*s*. (1) The patients to find their own nurses, or contribute towards a trained nurse's salary; (2) the "destitute" to be attended under Poor-law as at present; (3) an honorarium of 5*s*. to be added to each of the above contributions, making medical men's fees 20*s*., 15*s*., and 10*s*. respectively, or an average of 15*s*. each; (4) all resident medical men who practise midwifery to be on the staff and the women to choose their own medical man, and the medical men to be *ex-officio* members of the managing committee with monthly or quarterly meetings; (5) the present midwife to be retained as *obstetric nurse* at a reduced salary or another appointed; and (6) the obstetric nurse to act in *all* cases under medical supervision and do all that is usually done by a *monthly* nurse (except sleeping in the patient's house) should the patient desire her services.

In dealing with the cash account on the basis of the income of the local nursing association—viz., £270—I secure a balance of £135 for distribution among the medical men, after allowing a salary of £60 each to a trained sick and obstetric nurse and £15 for incidentals. Of the £270 income, £90 would be contributed by the women under the above scale, leaving £180 to be raised by subscription, donations, &c. Some rich parishes would no doubt pay their nurses more. Mortlake pays £100 per year to its sick nurse, and it is money well spent; she is a Jubilee nurse with three years' training, and is a boon to "the poor" of the parish. The Jubilee Institute send out trained obstetric nurses at salaries of from £25 to £30, but costume, laundry, and maintenance must be found for them. Every parish, however, has one or two suitable women for obstetric nursing purposes, and local training centres could be fixed for them, and their salaries would be very much less, as they would generally have a cottage of their own in country places. The Mortlake midwife is paid £80 per annum, but began at £60.

Now, if we had a Bill creating obstetric nurses on lines parallel to sick nurses in every parish in the land, and if, like many other Bills, its adoption were optional, there could be no better machinery for its administration than voluntary associations after the type of the Mortlake Association, modified as herein proposed and adapted to local circumstances. This proposed Sick and Obstetric Nurses Bill would assail no interest and would be welcomed by all, and it would open out an immense field of honourable employment for active and intelligent women with a vocation for nursing. I have already pointed out the unfairness of the proposal to create and register a class of quasi-independent midwives to compete with private practitioners of both sexes, and if there is a loss of £135 at an average of 15*s*. per case on 180 cases, it is not so difficult to calculate the loss on the annual birth-rate of the country, apart from the loss of life and health and domestic happiness.

Any Bill which fails to deal with the great mass of the "parturient poor" (and the present Bill fails woefully in this respect) will be unsatisfactory, and no Bill would be complete without a clause empowering boards of guardians, and if need be enforcing them, to contribute towards the maintenance of trained "obstetric nurses" for the poorest of the population. Sick nursing is already provided for by the Consolidated Orders, and has been taken advantage of by the Richmond board to contribute £10 per annum to the funds of the local association. The spirit of the times is against extending medical relief to any but the really "destitute," and out of a population of over 7000 I have only attended twenty such midwifery cases in four years. As things are, and as they would be under the proposed registration scheme, "the poor" would find themselves just where they are, while the trained midwife would find her practice among the patients of private practitioners. And in granting "orders" for confinement on district medical officers much less stringency should be observed by relieving officers, whose hands are tied by the legal phrase "destitute," which in practice means "wholly unemployed" or only "casually employed." Men earning £1 a week, or even more than this, and who have to support a wife and several children, can neither pay medical man nor midwife and are perforce at the tender mercy of the "Gamp" and "friendly neighbour."

I sincerely hope we are on the eve of a solution of this vexed question, and if Parliament cannot find time it may still be solved to the satisfaction of all parties on the lines indicated herein.—I am, Sirs, yours faithfully,

ALEXANDER MCCOOK WEIR.

East Sheen, March 29th, 1897.

HOSPITAL REFORM.

To the Editors of THE LANCET.

SIRS,—At a meeting of the Plymouth Medical Society on Wednesday, April 14th, the following resolutions were carried:—

1. That this meeting, although not pledging itself to the particular recommendations of the Hospital Reform Association, approves of its principles.
2. That a recommendation be sent to the committees of the various hospitals, dispensaries, &c., of the three towns asking them to appoint an investigation committee, whose duty it shall be to inquire into the circumstances of the persons applying for relief, and, if they find it necessary, to appoint an inquiry officer, and so limit the assistance given to the necessitous poor only.

I am, Sirs, yours truly,

W. L. WOOLLCOMBE, Hon. Sec.

The Crescent, Plymouth, April 19th, 1897.

"RECORDS OF FATALITIES UNDER ANÆSTHETICS."

To the Editors of THE LANCET.

SIRS,—Under this heading in THE LANCET of April 3rd you refer to a case which occurred in the Parish Infirmary, Liverpool, and as I happened to be the anæsthetist on that occasion I take this opportunity of informing you that there was *no* anæsthetic of any kind administered *after the patient first showed signs of collapse*. Trusting you will excuse delay,

I am, Sirs, yours faithfully,

THOMAS HENRY MOYLES,
Resident Medical Officer.

Parish Infirmary, Liverpool, April 13th, 1897.

THE NEW KOCH TUBERCULIN.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow us to inform your readers through your columns that we are now in a position to supply the new Koch Tuberculin, having received a consignment from the works? Thanking you in anticipation,

I am yours truly

(Pro Farbwerke vorm. Meister, Lucius, and Brüning),

St. Mary-axe, E.C., April 15th, 1897. F. DIXON.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Queen's Diamond Jubilee.

THE Lord Mayor's committee for the permanent commemoration of the Queen's Diamond Jubilee have decided by a majority which was by no means overwhelming to commemorate that auspicious event by the erection within the city of a central nursing institution for nursing the sick poor in their own homes, with a view to it becoming a training centre in the North of England. Another proposition, which obtained the support and sympathy of the working-class representatives on the committee, advocated the erection of a central People's Hall in the city, where the working classes could meet in social intercourse and also transact the business of their societies, tontines, &c.; in fact, to serve as a huge club for their benefit. Mr. W. P. Hartley advocated the adoption of both schemes, and with his customary liberality and large heartedness offered to contribute £500 towards each of these worthy objects. Mr. William Rathbone strongly urged the claims of a nursing institution, and submitted that one hall would be of little use, but that several would be needed to meet the requirements of the working classes from all parts of the city, a provision which he believed before long would be made conjointly by private beneficence and the City Council. On the other hand, there were many reasons for making Liverpool a centre for extending and completing the system of nursing the poor in their own

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homes. In the first place it was essentially a Liverpool scheme, the district nursing system having originated in Liverpool. Within five years of its establishment the whole city was divided into districts in charge of ladies and nurses. As it now existed, even in Liverpool, the system was imperfect. Moreover, this was the method of commemoration which the Queen herself preferred. He felt sure that a central hall would not be one-tenth part of the benefit to the working classes. A proposition to adopt both schemes was rejected by a majority of five. The number of district nurses now engaged in nursing the sick poor of Liverpool in their own homes amounts to twenty-two.

Sanitary Science Classes at University College, Liverpool.

The arrangements for the lectures and demonstrations on Sanitary Science to be delivered at Ashton Hall, University College, in conjunction with the technical classes under the city council at the Liverpool School of Science, are now complete. They have been especially designed for persons desirous of qualifying as sanitary inspectors, but are also open to all interested in sanitary science, such as teachers, lecturers, builders, foremen of works, surveyors, architects, and others. The laboratories in University College are thoroughly equipped for the more advanced study of hygiene, bacteriology, and diseases of animals, and are under the supervision of the Professors of Pathology and Hygiene. A museum has been formed in connexion with them which contains an increasing collection of diseased animal tissues and of models illustrative of the various sanitary appliances and methods; in fact, it will become the Parkes Museum of Liverpool. The corporation have given a grant of £90 towards the purchase of apparatus, and also a yearly grant for evening lectures. The classes will be under the management of a board consisting of representatives of the city council and University College. Candidates for the sanitary certificates of the Victoria University are required to devote at least two years to their course of training. At the end of the first year they are required to show a competent knowledge of elementary physics and elementary hygiene, and will also receive credit for a knowledge of elementary inorganic chemistry, of mensuration, and of free-hand drawing. The examination at the end of the second year will comprise sanitary law, sanitary engineering and appliances, objects and methods of inspection of nuisances, food inspection, and methods of disinfection. The Victoria University examination for certificates of sanitary knowledge will be held in July in each year. The fee for the ordinary examination and certificate is £2 2*s*.

Sanitary Inspectors' Association.

The tenth annual meeting of the North-Western and Midland Sanitary Inspectors' Association was held on the 10th inst. in the Royal Institution, Liverpool. The following appointments for the year were made:—President: Mr. Francis Vacher, medical officer of health, Cheshire County Council. Vice-presidents: Dr. E. W. Hope, medical officer of health, Liverpool; Mr. Edward Sergeant, medical officer of health, Lancashire County Council; Dr. William Carter, Liverpool; and Dr. George Reid, medical officer of health, Staffordshire. Chairman of Council: Mr. William Urquhart. Hon. Treasurer: Mr. N. Coates, Liverpool. Hon. Secretary: Mr. H. H. Spears, Waterloo.

April 20th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

Glasgow University.

THE graduation ceremony formally closing the winter session took place on the 13th inst. The honorary degree of LL.D. was conferred upon six gentlemen, including Surgeon-Major-General James Jameson, M.D. Glasg., Director-General of the Army Medical Department, and Professor Ramsay, F.R.S., University College, London. Surgeon-Major-General Jameson is an alumnus of the University, where he took his medical degree in 1857; Professor Ramsay is also an alumnus of the University and was assistant to the Professor of Chemistry until 1880, when he was appointed to the Chair of Chemistry in University College, Bristol. Six gentlemen received the degree of M.D. To two of these "commendation" was awarded—viz., to William W. Don, M.B., for his thesis on "Thyroid Therapeutics" and to Walter King Hunter, B.Sc., M.B., for his thesis, "A Contribution to the Etiology of Beri-beri." The class medals in the Faculty of Medicine have been awarded as follows: Midwifery, Samuel S. Sloan; Materia Medica and Therapeutics, Alexander Laurie Watson, M.A.; Medicine, William K. Hutton, M.A.; Clinical Medicine, John Crow, Robert Nelson, and Alexander Wilson; Surgery, William Martin, M.A., B.Sc., and James A. Mitchell; Clinical Surgery, William Martin, M.A., B.Sc., James Rankin, B.Sc., James A. Mitchell, and James Davidson, M.A.; Physiology, James C. Rose and Andrew Mair; Anatomy, John M'Gilchrist and Alexander Munro; Zoology, David Kyle; Chemistry, Alexander V. Lothian, M.A.; Pathology, Robert Fullarton, M.A.; Physics, William M. Brown; Diseases of the Ear, George Clark and William Webster; Diseases of the Throat and Nose, James D. Cochran. Principal Caird presided at the ceremony and delivered an address dealing with the influence exercised by a university education. The summer session for the medical classes opened to-day. Professor Simpson has obtained leave of absence on account of ill-health, and it is with much regret I hear that Professor Coats is so unwell that he cannot be expected to conduct the class of practical pathology during the present session.

Glasgow Hospital Sunday.

The committee in their annual report announce that the total sum collected last year was £4342 17*s*. 4*d*., being an advance of £273 15*s*. 4*d*. on the preceding twelve months. In addition, the committee acknowledge the receipt of £5204 7*s*. 6*d*. from the trustees of the Guesdon bequest. Both sums have been divided among the three general hospitals.

Medical Appointments.

Mr. Peter M'Bryde, M.B., C.M. Glasg., has been appointed physician for diseases of women in the Glasgow Central Dispensary; Mr. C. O. Hawthorne, M.B., C.M. Glasg., has been appointed examiner in physiology to the Conjoint Board for Scotland (triple qualification); Mr. J. Grant Andrew, M.B., C.M. Glasg., and Mr. T. W. Jenkins, M.D. Glasg., have been elected assistant surgeons to the Victoria Infirmary, Glasgow; and Dr. Leitch has been unanimously elected chairman of the Gourock School Board. At the recent election of a School Board in Glasgow there were two medical candidates; one of these, Mr. Archibald Sloan, M.B. Glasg., was elected, but Mr. James Erskine, M.B. Glasg., was unsuccessful.

April 20th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Charge of the Lunatic Poor.

THE Board of Commissioners for the General Control of Asylums for the Lunatic Poor in Ireland has been re-established as follows: Mr. Justice Holmes, Mr. Thomas Robertson (chairman of the Commissioners of Public Works), Dr. O'Farrell (inspector of lunatic asylums), Sir Francis Cruise, M.D. Dub., Mr. Charles Kennedy, and Mr. J. Malcolm Ingles.

Coleraine Cottage Hospital.

At a large and representative meeting of the inhabitants of Coleraine, held on April 13th, it was decided, on the motion of the Right Hon. Sir H. Bruce, Bart., D.L., that considering the great benefit that Coleraine has already enjoyed by the establishment of the Cottage Hospital and District Nursing Institute, the best way of commemorating the Queen's Jubilee was by raising funds so as to place the hospital on an independent basis, and to further increase its efficiency in such manner as may be deemed advisable. At the conclusion of the meeting nearly £200 were subscribed.

The Queen's Jubilee Commemoration.

In addition to what is being done in Coleraine and in Belfast (where the fund to build the new Victoria Hospital amounts now to over £78,000) to commemorate the Queen's long reign the ladies of county Down, under the patronage of Lady Dunleath (whose husband gave £1000 to the new hospital in Belfast), have formed a committee for the purpose of raising a sum of £5000 for the improvement of the County Infirmary in Downpatrick. It is proposed to build a new operating-room and better quarters for the nurses, and to make other much needed improvements, as well as to form a

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permanent addition to the endowment of the infirmary. The Duchess of Abercorn is also making a strong effort to raise money to build the new County Hospital for Tyrone in Omagh.

The Funeral of Professor Townsend of Cork.

The funeral of Professor Townsend was one of the most remarkable which has been seen in Cork for a long time. The hearse was preceded by nurses from the Louth Infirmary and a large body of medical students from Queen's College. After the hearse came the immediate relatives, and they were followed by practically all the medical men in the city walking in a body. The general public were largely represented, and the floral offerings were so numerous that it was necessary to have them conveyed to the grave in a special landau. Professor Townsend took a great interest and an active part in the organised resistance of the medical profession to the encroachments of the clubs, but his action gave rise to no bitter feelings against him amongst those whom he felt it his duty to oppose.

April 21st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Academy of Science.

M. LANNELONGUE opened a discussion upon injuries to the skin caused by the Roentgen rays, and related a case reported by M. Sorel, who had seen two abscesses produced in the chest-wall in an adult whose thorax had been "skiagraphed." M. Lannelongue regretted that no examination of the pus from these abscesses had been made. He added that at his own hospital he had seen severe burns of the skin in children who lived in a shady courtyard, the burns being due solely to the rays of the sun reflected from the sandy floor of the yard. In solar light there were, he said, trophic rays, which, like the x rays, produced profound chemical changes in the cell. Mr. William Crookes, F.R.S., was present at the meeting and asked the permission of the president to say that he had never seen any case of burns from x rays, although he had been working for a long time with skiagraphic apparatus. He considered that individual disposition must play a great part in their causation. M. Remy and M. Contremoulins, who have obtained interesting results by photographing organs, the vascular network of which had been injected with saline solution, so that the skiagraphs showed all the most delicate ramifications of the vessels, brought forward a method for the localisation of a foreign body in the tissues by means of the x rays.—Among other interesting communications made to the society was a plan for treating certain nervous diseases by an electrical current interrupted according to a regular musical rhythm. The interruptions are regulated, not by an ordinary scale, but by a musical box or some other mechanical musical instrument; the current thus brings about muscular contraction with the rhythm of the measure employed, whether a waltz, a jig, or a solemn prayer. As the effects of suggestion are also brought into play most interesting indications of muscular activity are obtained.—Another experimenter, M. Cornevin, has applied the method of microbial vaccinations to what he terms "anti-alkaloidal vaccination." He heats the alkaloid ricinine, the poisonous principle of castor-oil beans, for two hours at a temperature of 100° C. He finds that he can then inject pigs with this alkaloid without giving rise to any symptoms of poisoning, and also that they become immune to a dose of pure, unaltered ricinine. Colza seeds, upon which pigs are frequently fed in the country, sometimes contain castor-oil beans which have been mixed with them, and severe cases of swine poisoning have occurred. Animals, however, vaccinated by M. Cornevin's method escape.

The Provisioning of Ships' Boats in View of Wreck.

In the case of some shipwrecked sailors belonging to St. Nazaire, M. Langlois has made an interesting inquiry into the causes of death by starvation among those adrift in an open boat after a shipwreck. As a result he demands that provisions, prepared beforehand and packed in a watertight compartment, should be carried in all lifeboats. He considers that the quantity of these provisions should be calculated exactly so as to allow for 3000 calories per man per day and two litres of drinking water. In his opinion it is because the food taken is of the wrong kind that shipwrecked men die. Fats and condensed milk are most valuable; alcohol is harmful and useless except in very small doses for its moral effect in keeping up the spirits. M. Langlois' ration for twenty-five men for ten days would weigh half a ton for solids and as much again for water. In making his calculations he has taken into account the loss of heat which a man undergoes when wet either by rain or sea water. Finally, he recommends that there should be frequent lifeboat drills. At St. Nazaire it has sometimes taken six hours to get a life-boat into the water and the crew in their places; and, in addition, the crews, though not hurried, and in broad daylight with a perfectly calm sea, have smashed four boats in letting them down.

Letters of Identification for Lunatics.

An unfortunate accident has recently occurred to a family owing to neglect of prefectoral regulations. A merchant who had begun to show signs of cerebral fatigue from overwork asked that he might undergo hydropathic treatment in the departmental asylum. He came out perfectly well, and continued his business. Two months later, on returning home one day he found a letter addressed to his wife from the prefecture and the envelope of this letter had upon it in large letters, "In the matter of the lunatic X." The unfortunate man, seeing himself stigmatised as a lunatic upon an envelope which all his business house could have read, was seized with a sudden cerebral hæmorrhage and died almost instantaneously. There has been naturally much unfavourable criticism of a system which allows of the sending of letters endorsed in this fashion by employés. The letter, it should be added, was simply a demand for the payment of a small sum still owing for the man's treatment while in the hospital.

Premature Burial.

A conference, organised by the Société Française d'Hygiène, has just been held at the Sorbonne upon the best means of preventing premature burial. Count Karnice Karnicki gave a description of his apparatus, which has been much discussed in the press. At the slightest sigh on the part of the supposed corpse air and light enter the coffin, a bell rings loudly, and a flag indicates the place of the tomb in the cemetery. Several Parisian journalists have allowed themselves to be enclosed in coffins for the purpose of experiment, but the medical profession is less enthusiastic than the public as to the merits of the invention. Mere putrefactive swelling of the corpse would probably suffice to set the apparatus in action, for the starting point of all the signals is a little button which the chest of the body would graze at the slightest movement.

Private Hospitals.

The Municipal Council of Paris has held a long discussion with regard to private hospitals and the conditions under which they should be allowed to keep open. The Prefect of Police has recognised the fact that there exists at the present time no measure of surveillance for these institutions, and asks if inspection is not necessary from the hygienic point of view, quoting the precedent that there are inspectors of madhouses. Accordingly he proposes to submit to the Council of Hygiene every application made to him for the opening of a new establishment, although the Council of Hygiene has decided to refuse reply to applications of this kind, so as to be free from all responsibility on these matters. Many fantastic propositions have been put forward by the municipal councillors for the regulation of private hospitals, among others one forbidding any *clinique* to be opened unless it is founded by former *internes* of the Paris hospitals. The Prefect of Police requires that all deaths occurring in these institutions shall be at once reported to the police.

April 20th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Italian Students in Berlin.

THE visit of Italian students and graduates announced by your Rome correspondent in THE LANCET of April 17th took place just before Easter. On April 14th a party of about 300 members of nearly all the Italian universities, including students of the different faculties, arrived here and

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were cordially received at the railway station by an assemblage, including professors and students of Berlin University and the Italian Ambassador. Both Italian and German students were in academic costume, the Italians wearing caps which showed the colours of their respective faculties. The two nationalities were introduced to one another by the Ambassador, and conversation is reported to have been at first rather difficult, but was eventually accomplished by means of a mixture of Latin and French. In the evening the guests were entertained at a "Commers," and were initiated into the science of consuming large quantities of beer, for which German students rightly enjoy a great renown. An address was delivered by the Rector, Professor Hinschius, who in perfect Italian proposed the health of King Umberto; Professor Massoni of Naples replied, and in his turn proposed the health of the German Emperor. A student, Signor Tonta of Pavia University, on behalf of the visitors presented a memorial plate, which will be placed in the *aula magna* of the university. The following days were spent in visits to the buildings occupied by the different faculties. The medical men were shown over several of our great public and private hospitals, among which mention may be made of the beautiful Friedrichshain Hospital, the university laboratories, and other places of interest. In the evening Italians and Germans were frequently seen fraternising together. The visitors will in the next place proceed to Leipzig and Munich.

The Proposed Reform of the Public Health Service.

The reform of the public health service, which has for a long time been greatly desired both by the medical profession and the public, has hitherto been postponed for financial reasons, but seems now to have become an accomplished fact. A report of a meeting of the Association of Medical Officers of Health appeared in THE LANCET,[1] and in this article I gave a short account of the present organisation, mentioning as the principal drawbacks of the service, firstly, the small salary, which naturally induces the medical officers to engage in private practice, and secondly, their subordination to the administrative authorities. The Government has now ordered the appointment of a Royal Commission to meet in Berlin, consisting of medical officers of health in actual employment, all the medical and some non-medical members of Parliament and commissioners nominated by the Government. The medical papers have published the Government proposals, which are to be considered first by the Commission and afterwards by Parliament; they are substantially as follows: The appointments of medical officer of health and medical expert to advise and give evidence in the law courts, which have hitherto been held conjointly by the medical officer of health (Kreisphysicus), will henceforth be separated. The medical officers of health will have to deal with hygienic questions exclusively, whilst the law courts will have to appoint special officials for medico-legal work. The office of surgeon of a circuit (Kreiswundarzt), who acted as an assistant to the Kreisphysicus, is to be abolished; also the provincial medical boards (Provincial-Medicinal-Collegium) are to be dissolved. The new medical organisation will be as follows: The medical department of the Ministry of Public Instruction will be the central authority, and will remain as at present. In each government district (Regierungsbezirk) a district medical officer (Regierungs-medicinalrath) will be appointed, who will advise the district government in matters of public health. His special duty will be the control of pharmacies, druggists, dispensers, private hospitals, and asylums, according to the existing laws, by-laws, and regulations. He will deal with all matters of ordinary occurrence, but in questions of exceptional importance he will be assisted by the district board of health (Bezirksgesundheitsrath). This board will consist of the president of the district as chairman, the district medical officer, together with one of his subordinate officers, the director of the provincial public health laboratory, and two members of the medical profession. The board will meet whenever convened by the chairman, and in any case not at longer intervals than once a year. Each district is divided into a number of circuits (Kreis). For each of these circuits a medical officer (Kreisarzt) is to be appointed, who will be subordinate to the district medical officer. In contradistinction to the present system the Kreisarzt will henceforth be a fully-salaried Government official and will enjoy all the rights and privileges of such; he will also be entitled to a pension when he retires. He must not engage in private practice, but will be eligible for the offices of hospital physician or surgeon, medical officer of a railway, poor-law medical officer acting under a municipality, &c. He will be required to advise the head of the circuit (Landrath) and will control the licensed midwives, nurses, pharmaceutical chemists, &c., of the circuit. He will, therefore, have to travel from time to time through his circuit and to enter into communication with the local medical practitioners. In urgent cases, especially in the time of an epidemic, he will be authorised to take measures independently of the local authorities, but he will be bound to inform them of his proceedings. He will also be assisted by a board of health (Kreisgesundheitsrath) presided over by the Landrath, and composed of from six to twelve members, medical and non-medical. The duties of this board are the same as those of the district board, but are, of course, confined to the circuit. In the larger towns municipal boards of health are also to be formed, and if the town has a garrison a medical delegate from the garrison has to take part in the proceedings. The office of member of a board of health will be an honorary one, but medical men, although by law exempt from several honorary obligations—such, for instance, as the liability to serve on juries—are not entitled to refuse an election to a board of health. One of the principal innovations of the new system is the institution of provincial public health laboratories. Each province is bound to provide at its own expense a laboratory, where all the microscopical examinations, chemical analyses, and other inquiries of a like kind will be conducted according to the order of the medical officer. Hitherto such work has been done either in private laboratories or in the university laboratories or sometimes in the Imperial Health Office. The latter will, of course, continue to be consulted in difficult cases, but will no longer undertake routine work. The proposals of the Government are undoubtedly a great improvement on the present system; they will, however, be certain to undergo some alteration, both at the instance of the Commission and also in Parliament.

Bacteria in Ink.

It sometimes happens that a trifling scratch or puncture made with a pen gives rise to dangerous septicæmia. The chemical constituents of the ink which is introduced by the pen into the wound are not capable of producing septicæmia, but microscopical examination proves that the ill effects are due to the liability of ink to contain pathogenic bacteria. Dr. Marpmann of Leipzig has recently published the results of the microscopical examination of sixty-seven samples of ink used in schools. Most of them were made with gall-nuts, and contained saprophytes, bacteria, and micrococci. Nigrosin ink, taken from a freshly-opened bottle, was found to contain both saprophytes and bacteria. Red and blue inks also yielded numerous bacteria. In two instances Dr. Marpmann succeeded in cultivating from nigrosin ink a bacillus which proved fatal to mice within four days. This ink had stood in an open bottle for three months, and the inference to be drawn from the inquiry is that ink used in schools should always be kept covered when not in use.

April 20th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Nature-study en Fête.

APRIL 14TH witnessed the twenty-fifth anniversary of the birth of the "Stazione Zoologica" at Naples, an institution which has an epoch-making record in science as the mother and the model of many other "Stazioni" of the kind, one of the latest of which is that established three years ago on the coast of Norway. The Bay of Naples, apart from its incomparable scenery, had long been known to biologists for its wealth in marine flora and fauna; and the history of its having come to be, by a sort of scientific annexation, the favourite dredging-ground of German nature-students has already been told in THE LANCET.[1] Italy, however, had to

[1] THE LANCET, Sept. 26th, 1896, p. 915.

[1] THE LANCET, May 12th, 1894; "In the Wake of the Congress."

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be transformed into a united kingdom before that annexation could be made *un fait accompli*, and it was not until the spring of 1872 that the German Court and the German Government succeeded in founding the "Stazione Zoologica," which is now the resort of nature-students from all parts of the world. Its first director was the distinguished biologist who still remains its inspiring genius, Geheimrath Professor Anton Dohrn, M.D; and from the outset he was fortunate in his working staff, one of whom, Professor Ugo Eisig, is still at his post, and, indeed, took a prominent part in the recent commemoration. Even more fortunate was Professor Dohrn in his wife, who, with noble self-abnegation, sacrificed her whole marriage portion to promote the efficiency of the then infant "Stazione." How the institution has developed and expanded is now familiar history—the most significant feature about it being this: that its "Morphologisches und Physiologisches Laboratorium für Meeres-Zoologie und Botanik" is now frequented by students from both hemispheres, and that many European and Transatlantic States and seats of learning have qualified by a yearly subvention to place a "Studien-Tisch" at the disposal of representatives of their respective nationalities. Cambridge, Oxford, the Columbia University of New York, the Smithsonian Institution in Washington, to say nothing of the British Association for the Advancement of Science, are among those annual subscribers, insomuch that this "festa" was not that of Germany or Italy alone, but that of the whole world of inductive research in its most fundamental and far-reaching department. The proceedings began with the reading of congratulatory telegrams from the King of Italy (represented on the occasion by the Minister of Public Instruction, Signor Gianturco), from the Emperor William (represented by the German Ambassador von Bulow), from the Grand Duke of Saxony, the Ministers von der Bruck, Bötticher, and Bosse, the rectors of the Universities of Munich and Strasburg, the Zoological and Botanical Societies of Austria, Russia, and Holland, and of numerous other scientific bodies, European and American. First to speak was the Senator Francesco Todaro, Professor of Anatomy in the Roman University (who appeared for the Accademia dei Lincei, the Italian analogue of the Royal Society), who tendered Italy's welcome to the assembled visitors; then came Professor Eisig, who spoke for the "Stazione Zoologica" in a similar sense. He was followed by Professor Waldeyer, representing the Berlin Academy of Sciences; and after him rose the Syndic of Naples, who, in well-chosen words, presented Professor Dohrn with an illuminated parchment conferring on him the freedom of the city of Naples. The next item in the programme was the address of Vice-Admiral Palumbo, who spoke for the Minister of Marine (Signor Brin) and the whole Italian navy, succeeded by his Excellency Signor Gianturco, who, in the name of King Humbert, conferred upon Professor Dohrn the Grand Cordon of the Crown of Italy, and nominated him Honorary Professor in the University of Naples. The thanks of Germany for these distinctions bestowed on a compatriot were then given by the Ambassador von Bulow, and then Professor Dohrn rose to make the speech of the occasion. In vivid language he gave an outline of the genesis, the growth, and the future prospects of the "Stazione"—its first inception in 1870–71 and its acquiring "a local habitation and a name" in 1872, when the Court and Government of Berlin endowed it, in perpetuity, with a yearly grant of 40,000 marks. Very touching were the allusions to the part taken by his young wife in the early days of the institution—a devotion which transferred itself, by a generous contagion, to every *alumnus* attached to its teaching. Repeated rounds of applause greeted him as he resumed his seat, acknowledging that his *più alto compenso* (his loftiest compensation) was the *apoteosi di oggi* (the apotheosis of to-day). After this the assembled company, among whom I may signalise a steadfast friend of the "Stazione," Dr. Wilhelm His, Professor of Anatomy in the University of Leipzig, made a round of the laboratories, the aquarium, and the unique collections of the Mediterranean flora and fauna, veritable *spolia opima* of biological science. A great banquet in the evening, held at the West-End Hotel, concluded the programme of a memorable day—memorable not only in the annals of research, but in the record of that international brotherhood which it is one of the subsidiary, but none the less important, functions of science to deepen and extend.

Tragic Incident at Bologna.

Professor Augusto Obici, who recently came from Modena with the highest reputation to fill the chair of Pathological Anatomy in the University of Bologna and had delivered his inaugural discourse to a delighted audience of students and professional colleagues, has committed suicide by throwing himself from the Aposa bridge into the river beneath, a distance of a hundred feet. Death was immediate. Professor Obici was just thirty years of age and had been suffering from profound neurasthenia.

April 17th.

Obituary.

CHARLES HIGATT TENCH, B.A., M.D. DUB., L.R.C.S. IREL., L.M.

THE death of Dr. C. H. Tench of Reading is announced, the deceased having been suddenly struck down by an attack of cerebral hæmorrhage upon April 9th. He was in his fortieth year and had been in practice at Reading for some fifteen years, being at the beginning of his career in partnership with his cousin, Dr. Phillips Conn. He afterwards set up in practice for himself in Oxford-road, Reading, and gained the esteem and affection of all with whom he came in contact. The funeral took place on April 13th at St. Giles's Church, and was largely attended by private friends and relatives, as well as by most of the medical colleagues of the deceased in the city and district.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—Dr. Schaker Sakaki, Extraordinary Professor of Psychiatry and Nervous Diseases in the University of Tokio, from a laryngeal affection, at the age of forty-one years.

Medical News.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the Second Examination for the degree of Bachelor in Medicine at the College of Medicine, Newcastle-upon-Tyne, in April, the following candidates satisfied the examiners:—

Anatomy, Physiology, and Materia Medica.—Second-class Honours: Herbert George Harris, St. Bartholomew's Hospital; Claudia Anita Prout Rowse, London School of Medicine for Women; Solomon Cross and Maurice Jacobs, College of Medicine, Newcastle-upon-Tyne; Selina Fitzherbert Fox, London School of Medicine for Women; Robert Walker, St. Bartholomew's Hospital; Hedda Alström, London School of Medicine for Women; Francis Ward Crossman, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital, and Harold Robert Dacre Spitta, St. George's Hospital. *Pass List:* Laurence James Blandford, College of Medicine, Newcastle-upon-Tyne; Edleston Harvey Cooke, St. Thomas's Hospital; George Oswald Morrell Dickenson, Henry Eggleston, Harold Ferens, Charles Thomas Holmes, and Ernest Inman, College of Medicine, Newcastle-upon-Tyne; Margaret Joyce, London School of Medicine for Women; Ernest George Klumpp and Gilbert Smith, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Eliot Swainston, Fred Stuart, Edward Norman Threlfall, and David Henderson Weir, College of Medicine, Newcastle-upon-Tyne; Frederick Day Welch, Guy's Hospital; and Edgar Sheldon Wilkinson, St. Bartholomew's Hospital.

FOREIGN UNIVERSITY INTELLIGENCE.—*Budapest:* Dr. Alexander v. Korányi has been appointed Extraordinary Professor of Internal Medicine; Dr. G. Fodor, Dr. B. Imródy, and Dr. F. Tauszk have qualified as *privat-docenten* of Internal Medicine, and Dr. G. Rigler as *privat-docent* of Hygiene.—*Jurieff (Dorpat):* Dr. Wilhelm Koch, Professor of Surgery, is about to retire, thus still further diminishing the remaining body of German professors, who are being rapidly replaced by Russians.—*Ghent:* Dr. F. van Imschoot has been appointed Extraordinary Professor of Clinical Surgery.—*Kazan:* Dr. J. Praxin has been appointed Extraordinary Professor of Surgery.—*Lemberg:* Dr. L. A. Gluzinski has been appointed Professor of Internal Medicine.—*St. Petersburg Military Medical Academy:* Dr. J. B. Pavloff has been appointed Professor of Physiology; Dr. Michailoff, Assistant in Professor Sirotinin's clinic, has qualified as *privat docent* of Internal Medicine.—*Tomsk:* Dr. Romanoff has been appointed Extraordinary Professor of Pathological Anatomy.—*Strasburg:* Dr. Ernst Levy has been appointed Extraordinary Professor of Internal Medicine.—*Vienna:* For the first time a lady, the Baronin Posanner, has been admitted to the degree of Doctor of Medicine.—*Warsaw:*

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Dr. W. Brodowsky, Professor of Pathological Anatomy and the senior member of the professorial staff, is about to retire.

METROPOLITAN HOSPITAL.—The annual dinner in aid of the Metropolitan Hospital, Kingsland-road, was held on March 18th at the Hôtel Métropole, the Lord Mayor being in the chair. It was stated that there was at that time a sum of about £5000 owing to tradesmen and that the building was mortgaged for £10,000. The hospital had accommodation for 160 in-patients, but the present state of the finances did not allow of more than about eighty beds being used.

PLYMOUTH ROYAL EYE INFIRMARY.—The committee of this institution have just issued an appeal for funds in order to provide a new building, the present one being inconvenient and unsuitable. The committee have the option of a favourable site at Mutley, and their architects have already prepared plans. The estimated cost of the land and buildings is about £12,000. This work, they think, would be an excellent commemoration of the sixtieth year of the Queen's reign.

UNIVERSITY COLLEGE HOSPITAL.—The annual meeting of University College Hospital was held in the institution on March 19th, Lord Monkswell presiding. It was announced that Sir Blundell Maple, M.P., had given a munificent donation of £100,000 for the purpose of re-building the hospital. None of this sum, however, was available for ordinary expenditure, and the state of the finances was a cause of much anxiety to the committee, the accumulated excess of expenditure over income having been £17,500 at the end of the year.

FOOTBALL CASUALTIES.—On the 10th inst. a member of the Stoke Club, while playing centre forward for his club a few miles out of Thame, sustained a compound fracture of his leg.—During a match between local Volunteers and Shop Assistants at Tamworth on Good Friday, a member of the former team, aged twenty-one years, received internal injuries, from which he died the following day.—In the course of a match at Bedford on Saturday last, betwen Bedford and Abercarn, two players had to be carried off the field to the infirmary, one of the Welsh three-quarters fractured his clavicle, and one of the Bedford forwards broke two of his ribs.

PRESENTATIONS TO MEDICAL MEN.—On the 2nd inst., at a complimentary dinner at Blanchard's Restaurant, Regent-street, London, Mr. Charles R. Walker, M.R.C.S Eng., L.R.C.P.Lond., M.D.Brux., of Leytonstone, was presented with a very handsome ornamental clock as a memento of good wishes and esteem by his brother practitioners and old friends in Leytonstone and district, on the occasion of relinquishing his practice there.—Dr. R. F. Smith, on his leaving Cork, was the recipient on the 5th inst. of an address, pocket surgical case, gold chain, and writing album from his fellow-students of the Queen's College, as tributes of esteem.—Mr. A. Simpson, M.D. Edin., of Perth, received, on the 1st inst., from the members of the St. Andrews Ambulance Association, a handsome cairngorm mounted in gold bearing the inscription, "St. Andrews Ambulance Class to Dr. Simpson, 1897," as an acknowledgment of his gratuitous lectures to the class.—Mr. John Lloyd-Davies, M.R.C.S. Eng., L.R.C.P. Lond., the representative of the Dowlais Iron Company's medical staff at Penydarren, near Merthyr Tydvil, was at a public meeting on April 1st presented with an illuminated address and a purse containing forty sovereigns as a mark of appreciation of his services.—Mr. L. L. Bulkeley Williams, M.B., C.M. Glasg., of Sidmouth, on the occasion of his leaving that town, was entertained by his friends and patients at a dinner and presented with a silver punch bowl in appreciation of his services, public and professional, during his residence in Sidmouth.—The members of the St. John Ambulance class at Blagdon, Somerset, have recently presented Mr. T. Oates Halliwell, M.R.C.S., L.R.C.P. Lond., of Blagdon, with a portable galvanic battery as a mark of their appreciation of his services as honorary lecturer.—On the 8th inst. Mr. Thomas Scott Brodie, M.B., C.M. Glasg., of Houston, Renfrewshire, on the occasion of distributing the proficiency certificates of the combined ambulance classes (ladies and gentlemen), held each winter under the auspices of the St. Andrews Ambulance Association, was the recipient of a beautiful marble timepiece in recognition of the valuable services he had rendered to the classes.

EPIDEMIC OF MEASLES AT WELLS.—At the April meeting of the Wells (Somerset) town council the medical officer of health reported that 320 cases of measles had been notified during the quarter, but the outbreak was now rapidly subsiding.

ISOLATION HOSPITALS IN GLAMORGANSHIRE.—Plans have been prepared for additional isolation hospitals in Glamorganshire, and it is expected that thirteen new ones will be erected within the year, making twenty-one altogether.

THE death of a very successful quack is announced in Berlin by suicide from religious mania. He founded a sort of quack society and persuaded so many people to believe in his nostrums that he is said to have made from £6000 to £12,000 a year.

MEDICAL MAGISTRATE.—On the recommendation of the Lord-Lieutenant, the Lord Chancellor has placed Mr. Wm. Makeig Jones, of Wath-upon-Dearne, Rotherham, on the Commission of the Peace for the West Riding of Yorkshire.

WE are asked by Mr. George Stoker to state that the "Oxygen House" has been moved from St. George's-square to No. 2, Fitzroy-square, W., where demonstrations will be given on Tuesdays, Thursdays, and Saturdays at 4.30 P.M. till further notice.

THE POLLUTION OF THE RIVER DEE.—A conference representing the county councils of Cheshire, Flintshire, Denbigh, Shropshire, and Merionethshire was held recently, and a recommendation was passed in favour of forming a joint board for enforcing the Rivers Pollution Act (1876) throughout the entire watershed of the Dee.

NOTTINGHAM FREE HOSPITAL FOR SICK CHILDREN.—The annual meeting of the Nottingham Free Hospital for Sick Children was held in the Exchange Rooms, Nottingham, on April 7th, Lord Henry Bentinck, M.P., presiding. The report stated that 449 children had passed through the wards, and that there were 2292 out-patients who made over 9000 attendances. The accounts showed an accumulated deficiency of £170.

CARDIFF.—Dr. Williams, the medical officer of health of the Glamorganshire County Council, in the course of a lecture recently given at Cardiff, said that a fitting way to commemorate Her Majesty's long reign would be to establish in Cardiff an institute of preventive medicine in which bacteriological work and analyses of water and food supplies might be undertaken. The Glamorganshire County Council had lately promised £3000 for this object, and he hoped that the corporation of Cardiff might even do better.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting of this society on April 9th, Dr. R. Sydney Marsden, President, being in the chair, Mr. Vacher read a paper on an Outbreak of Typhoid Fever in a large public institution, having in all about 700 inmates. From March 10th to 15th, 1896, seventeen persons manifested signs of the disease, and the inference was that they were all infected at or about the same time and probably from a common source. On inquiry it was found that a nurse attendant who had leave of absence twice a week or oftener, had complained of being feverish and unwell on Feb. 18th, and had gone home on the 26th. Following up this case it was found that it was without doubt one of typhoid fever. Attention was directed to the disposal of this patient's excreta, and evidence was forthcoming that some at least during the early days of her illness had been emptied into a contiguous ashpit. Now the pressure in the water mains at the institution was off during the night, and one of the hydrant boxes was in front of the room in which this patient was located. The position of this hydrant box was at the side of the road on which ashes from the ashpit had been spread to mend it. The box was below the level of the road, and on taking it up there was proof that water from the road had been running into it. As the ball would fall during the night it was obvious that water from the road which had leaked into the box would get into the main. It appeared, therefore, that certain portions of the water used for drinking became infected by means of some of the excreta from the initial case which had first been deposited in an ashpit and then on a road near a hydrant box.—A discussion ensued, in which Mr. Stansfield, Dr. Pinkerton, and the President took part.—Mr. Vacher replied.

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BIRMINGHAM GENERAL HOSPITAL.—The annual meeting of the Birmingham General Hospital was held on March 17th, the Lord Mayor of Birmingham presiding. The report showed that during last year there were 4486 in-patients and 52,203 out-patients. The financial statement mentioned that the banking account was overdrawn to the extent of £1450. The present hospital, which contains 271 beds, was opened by Dr. John Ash with forty beds in 1779, but will not be occupied much longer, as the new hospital will be opened by Princess Christian on behalf of the Queen on July 7th. Of the early physicians and surgeons Dr. Male was on the staff for thirty-six years and Mr. Robert White for forty-four years, while the three Drs. Johnstone, two brothers and a nephew, were honorary physicians for an aggregate period of eighty-five years. A special appeal for funds for the new hospital is to be made.

ANNUAL REPORT OF THE SYDNEY HOSPITAL.—The fifty-second annual meeting of the subscribers to the Sydney Hospital, New South Wales, was held on Feb. 24th. The report showed that the number of cases in hospital on Dec. 31st, 1896, was 271, the percentage mortality on admission 11 3, the average number of beds occupied 275 9, and the average cost per bed £61 2*s.* 2*d.* The total number of operations performed during the year was 1703. The out-door department during the past year had been worked on a more systematic manner, the circumstances of all applicants for out-door relief were inquired into by a special officer, and patients able to contribute the sum of 1*s.* were asked to do so. The Moorcliff Eye Hospital had been thoroughly repaired and renovated. The chairman stated that during the twenty years he had been a director of the institution it had never been in such a good financial position as it was now.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of directors of the society was held on April 14th, Mr. Christopher Heath, Vice-President, being in the chair. Three new members were elected and the deaths of five members reported. The death of a widow was announced who had received £35 per annum since 1886. Applications for grants were read from fifty-one widows, eleven orphans, and five recipients from the Copeland Fund, and a sum of £1210 was recommended to be divided among them at the next court. An extra grant of 24 guineas was made to an orphan to enable him to learn bookkeeping, &c. The expenses of the quarter amounted to £60 7*s.* The directors nominated for election at the annual general meeting the following gentlemen to fill the vacancies among the vice-presidents and directors, viz., Dr. Wilks, Dr. Pollock, and Mr. Felce to be vice-presidents; Dr. Blandford, Dr. Ogle, Dr. Brodie, Dr. de Havilland Hall, Dr. Slight, Dr. James Miller, Mr. Lovett, and Mr. Day as directors. The annual general meeting was fixed to be held on May 19th, at 5 P.M.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The seventh meeting of the session was held on April 14th in the Medical Library of University College, Dr. Aust Lawrence being in the chair.—Dr. Shaw showed a case of Melancholia with Catalepsy.—Mr. Morton showed a patient (and specimen) from whom the Scapula had been removed for Sarcoma.—Dr. B. Baron showed a patient with Lupus of the Nostrils and Throat; also a patient with extensive Web Formation, partially shutting off the naso-pharynx from the mouth.—Dr. P. W. Williams remarked on the cases.—Dr. P. W. Williams showed a patient with Coarse Tremor of the Vocal Cords in a case of Disseminated Sclerosis, and a specimen of Aortic Aneurysm.—Mr. Munro Smith read notes on a case of Abdominal Section in a Python.—Dr. Harrison made some remarks on the case.—Dr. W. H. Newnham read a paper on a case of Puerperal Eclampsia successfully treated by Rapid Delivery.—Dr. W. C. Swayne, Dr. Aust Lawrence, Mr. S. H. Swayne, and Dr. J. G. Swayne commented on the paper.—Mr. J. Lacy Firth read a paper on two cases of Respiratory Paralysis from Intra-cranial Pressure, ending in death.—Dr. Williams, Dr. Waldo. Dr. Fisher, Dr. Aust Lawrence, Dr. Randall, Dr. W. C. Swayne, and Mr. S. H. Swayne remarked on the paper.—Dr. Michell Clarke read a paper on a case of Acute Miliary Tuberculosis treated with Anti-streptococcic Serum on account of the presence in the blood during life of streptococcus pyogenes albus.—Dr. Fisher, Dr. Shingleton Smith, Dr. P. W. Williams, Mr. Morton, and Dr. Rogers made remarks on the paper.

THE ROYAL INSTITUTION OF GREAT BRITAIN.—Lecture arrangements for after Easter include three lectures on Tuesdays, May 25th and June 1st and 8th, by Ernest H. Starling, M.D., dealing with the Heart and its Work; and three lectures on Thursdays, May 27th and June 3rd and 10th, by Professor Dewar, the subject of which will be Liquid Air as an Agent of Research. The lecture hour will be 3 o'clock. On Friday evening, May 21st, Lord Kelvin will deliver a lecture on Contact Electricity of Metals, and on May 28th Professor H. Moissan will discuss the Isolation of Fluorine.

DIPHTHERIA IN LONDON.—In the four-week period ended on March 27th, there were notified 902 cases of diphtheria in London, all the sanitary districts being invaded. This total is slightly less than that of the February period, which was 916, and is a satisfactory decline from the totals of preceding periods. The 902 cases notified yielded a weekly average of 226. In five districts there were 335 cases notified, or more than one-third of the gross number for the whole of the county. In six other districts there were only 10 cases notified. The weekly average in February was 229; there were 299 cases in four of the districts, whilst five other areas had only 9 cases amongst them. In the March period there were 176 deaths registered in London, against 185 in the February period; whilst the per case mortality in March was 19 5 per cent. of the notifications, as against 20·2 in February. In the two weeks that followed the March period the mortality data continued to be very satisfactory. In the week ended April 3rd there were 41 deaths in London, a number which was 10 in excess of the corrected decennial average for the twelfth week of the period 1887–96. The deaths in the three preceding weeks had been 53, 37, and 43 respectively. Of the 41 deaths in the week ended the 3rd instant, there were 40 of persons aged under twenty years, 37 being of young children aged from one to five years. The admissions to hospital in the week numbered 93, against 97, 113, and 91 in the preceding three weeks. There remained under treatment at the close of the week 777 patients. In the succeeding week there was further decline in the number of registered deaths from diphtheria in London, these numbering only 23, and being 9 below the corrected decennial average for the thirteenth week of the year. All were of young persons aged under twenty years. Camberwell was credited with 5 deaths, Mile End Old Town with 3, and Poplar, Lambeth, Bermondsey, and Wandsworth sanitary areas respectively with 2 deaths. The admissions to hospital were 103, and the total number of patients remaining under treatment on Saturday, April 10th, was identical with that of the preceding week—namely, 777. In the week ended April 3rd there were 10 deaths registered from the disease in the Outer Ring, of which half were in the Hendon district, whilst in the next week the total in the Outer Ring rose to 14, of which 6 were in West Ham, and 2 in the Brentford, the Hendon, and the Edmonton districts respectively.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BENNETT, NORMAN G., B.A., B.C. Cantab., L.D.S. Eng., has been appointed Assistant Dental Surgeon to the Dental Hospital of London.

BERRY, H. P., M.B. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Grantham Town Council.

BOND, FRANCIS THOMAS, M.D. Lond., M.R.C.S., F.R.S.E., has been re-appointed Medical Officer of Health by the Chipping Sodbury Guardians and Council.

BOYD, ROBERT, M.B., C.M. Glasg., has been appointed Senior House Surgeon to Huddersfield Infirmary, vice G. W. K. Crosland, resigned.

BURGESS, R., M.B., C.M. Aberd., has been appointed Third House Surgeon to Huddersfield Infirmary, vice R. C. Jameson, resigned.

BURRELL, A. W., M.D., L.R.C.P. Lond., M.R.C.S., has been appointed a Clinical Assistant at St. John's Hospital for Diseases of the Skin, London.

BYFORD, W. F., L.R.C.P. Lond., M.R.C.S., has been appointed, *pro tem.*, Assistant Medical Officer for the Nottingham Workhouse.

CHETWOOD-AIKEN, K. C., has been appointed Senior House Surgeon to the Royal London Ophthalmic Hospital, Moorfields, E.C.

COLLIER, JAS. S., M.D. Lond., B.Sc., M.R.C.P., has been appointed Junior House Physician to the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, vice Purves Stewart.

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COUSINS, J. W., M.D. Lond., F.R.C.S., has been re-appointed an Honorary Surgeon to the Royal Portsmouth Hospital.

CRADDOCK, SAMUEL, M.R.C.S., has been appointed Medical Officer of Health for the Thorncombe Sanitary District of the Beaminster Union.

CREE, J. DOUGLAS, M.R.C.S., M.R.C.P., has been appointed Clinical Assistant to Out-patients to the Chelsea Hospital for Women, Fulham-road, S.W.

CROUCH, E. T., M.R.C.S., has been re-appointed an Honorary Surgeon to the Gosport Hospital.

DAVIES, J. EDGAR P., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer to the South Wales Works, Llanelly.

DRURY, R. S., M.D. Irel., L.R.C.S., has been appointed Consulting Physician to the Children's Hospital, Birmingham.

DUFFY, J. F., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Workhouse, Ballinasloe.

FRYER, G. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Urmston District Council.

GOSTLING, WM. A., M.D. Lond., B.Sc., M.R.C.S., has been appointed an Honorary Medical Officer to the Worthing Infirmary, vice G. B. Collet, resigned.

HALL, A., M.R.C.S., has been re-appointed Medical Officer of Health by the Mayfield Rural District Council.

HITCHINGS, ROBERT, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Headington Sanitary District of the Headington Union, vice G. C. H. Hitchings, resigned.

HOLDEN, J. S., M.D. Irel., L.R.C.S. Edin., has been appointed Medical Officer of Health by the Glemsford Urban District Council.

HUGGINS, SYDNEY P., M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Sussex County Hospital, Brighton.

JAMES, M. B., M.B., Ch. B. Vict., has been appointed Second House Surgeon to Huddersfield Infirmary, vice R. Boyd.

JOHNSTONE, THOS., M.D. Edin., M.R.C.P. Lond., has been appointed an Assistant Medical Officer by the Leeds Board of Guardians.

KEALY, J. R., M.D. St. And., M.R.C.S., has been re-appointed an Honorary Surgeon to the Gosport Hospital.

LARKING, A. E., M.D. Durh., M.R.C.S., has been re-appointed Medical Officer of Health by the Chesham Urban Rural District Council.

LOCKWOOD, JOSEPH, M.R.C.S., has been appointed Medical Officer of Health for the Kirkburton Urban Sanitary District.

LUCAS, R. C., M.B. Lond., B.Sc., F.R.C.S., L.R.C.P., has been appointed Medical Officer for the Fairfield House Workhouse of the Parish of Chelsea.

MAGORIS, N., M.B., B.S., has been appointed Clinical Assistant to Out-patients at the Chelsea Hospital for Women, Fulham-road, S.W.

MCBRYDE, PETER, M.B., C.M. Glasg., has been appointed a Physician for Diseases of Women at the General Glasgow Central Dispensary, vice G. A. Turner.

MCCOMB, WM. T., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Workhouse and for the Beccles Sanitary District of the Wangford Union.

NICOLL, J. MACD., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Jarrow Town Council.

OWEN, A. LLOYD, M.D. Dub., M.R.C.S. Eng., has been re-appointed an Honorary Surgeon to the Royal Portsmouth Hospital.

OXLEY, ALEXANDER WEMYSS, has been appointed Junior House Surgeon at the General Hospital, Nottingham.

PEARSE, F. E., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Horsley Sanitary District of the Guildford Union.

RAILTON, T. C., M.D. Lond., M.R.C.P., F.R.C.S. Eng., B.Sc. Vict., has been re-appointed Medical Officer of Health by the Withington Urban District Council.

REDMAYNE, THOS., M.B., M.A. Cantab., F.R.C.S., has been appointed Honorary Assistant Surgeon to the Hastings, St. Leonards, and East Sussex Hospital.

ROBB, SAMUEL, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Registrar and Resident Medical Superintendent for the Cork-street Hospital.

ROBERTS, E. C., M.R.C.S., has been re-appointed Medical Officer of Health for the Southgate District of the Edmonton Union.

ROBERTS, J. L., B.Sc. Lond., M.D., F.R.C.S. Eng., L.R.C.P., has been appointed House Surgeon to the Windsor Infirmary, vice G. Charsley, resigned.

ROBERTS, S. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Nechells and Saltby Sanitary District.

ROBERTS, SIDNEY JOHN, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer and Public Vaccinator to the No. 3 District of the Aston Union, vice W. G. Creswell, resigned.

RUNDLE, H., F.R.C.S. Eng., L.R.C.P., has been re-appointed an Honorary Surgeon to the Royal Portsmouth Hospital.

STEWART, PURVES, M.A., M.B. Edin., M.R.C.S. Eng., has been appointed Senior House Physician to the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, vice W. J. Harris, resigned.

WALLACE, E. J., M.D., C.M. Glasg., has been re-appointed an Honorary Physician to the Royal Portsmouth Hospital.

WATSON, JAS., M.D. Edin., L.R.C.S., has been re-appointed an Honorary Physician to the Royal Portsmouth Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and a Resident Surgical Officer. Salaries £70 and £50 respectively, with board, washing, and attendance in the institution.

BRIGHTON THROAT AND EAR HOSPITAL, 23, Queen's-road, Brighton.—Non-resident House Surgeon for six months. Salary at the rate of £52 per annum.

BURY DISPENSARY HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with board, residence, and attendance.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-street, S.W.—Surgeon.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident House Surgeon for two years. Salary £100 per year, with board, apartments, and laundress.

CITY OF SHEFFIELD.—Medical Officer of Health for the said city. The salary is fixed at £500 per annum. Applications to the Town Clerk, Sheffield.

DENTAL HOSPITAL OF LONDON, Leicester-square.—Dental Surgeon and Assistant Dental Surgeon.

DEVON COUNTY ASYLUM.—Assistant Medical Officer. Unmarried. Salary £120 per annum, with board, lodging, and washing. Applications to the Clerk, 9, Bedford-circus, Exeter.

GLASGOW ROYAL INFIRMARY, GLASGOW OPHTHALMIC INSTITUTION, ST. MUNGO'S COLLEGE.—Surgeon to the Glasgow Ophthalmic Institution, Ophthalmic Surgeon to the Dispensary of the Glasgow Royal Infirmary, Consulting Ophthalmic Surgeon to the wards of that Infirmary, and Professor of Ophthalmology in St. Mungo's College. By arrangement the same person will be appointed to all these offices. Salary £100 per annum, with share of students' fees.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing provided in the hospital.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London.—Junior Resident Medical Officer. Salary £50 per annum, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—Assistant Surgeon. Also House Physician for six months. Salary £20, with board and residence in the hospital. Also House Surgeon for six months. Salary £20, with board and residence in the hospital.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

LIVERPOOL DISPENSARIES, Moorfields, Liverpool.—Assistant Surgeon. Salary £80, to be increased to £90 per annum, after the first year's service, with apartments, board, and attendance.

LIVERPOOL INFIRMARY FOR CHILDREN, Myrtle-street.—House Surgeon. Salary £85 per annum, with board and lodging.

METROPOLITAN DISPENSARY, 9, Fore-street, E.C.—Non-resident Dispenser. Salary to commence at £100 per annum.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Fully qualified Medical Woman as Assistant Anæsthetist, for one year.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—Resident Medical Officer, for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

SOUTHAMPTON DISPENSARY.—The committee are prepared to receive applications from qualified medical men desirous of acting for the institution. Also for the position of Surgeon Dentist.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House Surgeon, non-resident. Salary £200 per annum.

Births, Marriages, and Deaths.

BIRTHS.

HAWKINS.—On Easter Sunday, April 18th, at 73, London-street, Reading, the wife of Dr. Francis Hawkins of a son.

HIRSCH.—At Charlinch, Rectory-place, Woolwich, the wife of Charles T. W. Hirsch, M.R.C.S. Eng., L.R.C.P. Lond., F.C.S., District Medical Officer, Colonial Medical Service, Fiji, of a daughter.

HULL.—On April 10th, at Beaminster, Streatham, S.W., the wife of Edward Gordon Hull, B.A., M.D. T.C.D., of a son.

JOHNSON.—On April 16th, at Burrage-road, Woolwich, the wife of George A. Johnson, L.R.C.P. Lond., M.R.C.S.E., of a son.

NICHOL.—On April 21st, at 11, Ethelbert-terrace, Margate, the wife of Frank Edward Nichol, of a son.

SMITH.—On April 18th, at Longlands, Henley-on-Thames, the wife of George Smith, M.B., of a daughter.

WEBSTER.—On April 15th, at Duppas-hill, Croydon, the wife of George L. Webster, M.R.C.S., of a daughter.

MARRIAGES.

FLEMING—HOLLAND.—On April 20th, at St. Helen's Church, Cornhill-on-Tweed, by the Rev. H. T. Bowlby, M.A., assisted by the Venerable the Archdeacon of Lindisfarne and the Rev. A. B. Coulson, M.A., Vicar of Branxton, Robert Alexander Fleming, M.D., F.R.C.P. Edin., to Eleanor Mary, only daughter of the Rev. W. L. Holland, M.A., Rector of Cornhill.

ROUW—D'ALMAINE.—On April 14th, at the Parish Church, Sutton Courtney, R. Wynne Rouw, M.R.C.S., L.R.C.P., L.D.S., of Wimpole-street, W., to Beatrice Mary, youngest daughter of H. D'Almaine, of Sutton Courtney, Berks.

WIGHTWICK—TURNBULL.—On April 19th, at St. Augustine's, Queen's-gate, Fallon Percy Wightwick, M.D., of Upper Brook-street, W., to Katharine Kerr, widow of G. B. Turnbull, Esq., of Rosary-gardens, S.W.

DEATHS.

HARDING.—On April 21st, at Whittlesea, Cambs., Charles Fincham Harding, M.D., aged 55 years.

HARPER.—On April 13th, at Stowmarket, John William Harper, M.R.C.S. Eng., L.S.A., aged 70 years.

IRVINE.—On April 18th, at Pitlochry, Robert W. Irvine, M.B., F.R.C.S. Edin., aged 43.

JAMIESON.—At Rome, on April 17th, Ethel Mary (*née* Hensman) wife of Dr. Adam Jamieson.

KING.—On April 13th, at Eltham, William Talbot King, M.D., formerly of Victoria-park-road, South Hackney.

MAGRATH.—On April 10th, suddenly, at Forest Row, Sussex, John Magrath, M.D., in his 53rd year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (29th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (1st).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (26th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. H Marsh: On Senile Tuberculosis and Subcutaneous (Tuberculous) Ulceration.—Mr. W. Armstrong (Buxton): On the Value of an Exclusively Red Meat Diet in certain cases of Chronic Gout.

TUESDAY (27th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8 30 P.M. Dr. J. W. Carr: Non-tuberculous Posterior Basic Meningitis in Infants (adjourned discussion) —Dr. F. Warner: On the Relations between Bodily Development, Nutrition, and Brain Conditions in their Pathological Aspects.

WEDNESDAY (28th).—BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (Limmer's Hotel, Conduit-street, W.).—8.45 P.M. Sir Douglas Powell will deliver an Address. 9 30 P.M. Reception by the President (Dr. A. S. Myrtle) and Conversazione. Exhibition of Drugs and Instruments, &c.

NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Clinical Cases.

HUNTERIAN SOCIETY.—Discussion on Headaches, introduced by Dr. Hingston Fox. Dr. A. Haig and Dr. H. Campbell will join in the discussion.

FRIDAY (30th).—BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION (11, Chandos-street, Cavendish-square, W.).—3 P.M. Cases:—Dr. Macnaughton-Jones: Esthiomenic Menstrual Ulcer of Nose.—Dr. F. Tresilian: (1) Stenosis of External Auditory Meatus; (2) Web Formation in External Auditory Meatus; (3) Congenital Syphilitic Disease of the Nose; (4) Lupus of Vestibule and Inferior Turbinate.—Dr. G. C. Wilkin: Syphilis of Larynx and Lung.—Dr. Milligan: Empyema of Frontal Sinus Cured by Operation. Microscopical Specimens:—Dr. Milligan: (1) Sarcoma of Nasal Septum; (2) Tuberculous Growth (septum nasi); (3) Rodent Ulcer (external ear). A Discussion will be opened by Dr. G. Macdonald and Dr. D. Grant on The Indications for, and the Methods of, Removal of Naso-pharyngeal Adenoid Vegetations.

EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-st., Cavendish-square, W.).—8 P.M. Dr. L. Parkes: Some Observations on the Infectivity of Diphtheria, and its Relation to School Closure.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (26th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Prof. H. Robinson: Sewerage and Sewage Disposal.

TUESDAY (27th).—ROYAL INSTITUTION.—3 P.M. Dr. T. Anderson: Volcanoes. (Tyndall Lectures.)

WEDNESDAY (28th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Mr. W. B. Bryan (conducted by): Inspection and Demonstration at the East London Water Works, Lea Bridge.

THURSDAY (29th).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. C. Mason: Scavenging, Disposal of House Refuse.

FRIDAY (30th).—ROYAL INSTITUTION.—9 P.M. Prof. J. J. Thomson: Cathode Rays.

SATURDAY (1st).—THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—Mr. J. E. Worth (conducted by): Inspection and Demonstration at the Sewage Outfall Works, Barking.

ROYAL INSTITUTION.—5 P.M. Annual Meeting.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

THE CREMATION SOCIETY OF ENGLAND.

DURING the year 1896 there were 137 cremations carried out at Woking, as compared with 150 in 1895, and 125 in 1894. There are at the present time three crematoria open in England and Scotland in addition to the one at Woking which belongs to the Cremation Society of England. These three are respectively at Manchester, where fifty-five cremations took place during 1896; at Glasgow, where there were eleven cremations; and at Liverpool, where two cremations have been performed. The crematorium at Liverpool was only opened in the middle of September, 1896, the inaugural ceremony being performed by the Earl of Derby, who was Lord Mayor of Liverpool at the time. It immediately adjoins, and communicates with, the Anfield Cemetery; the site and crematorium have cost some £7000 and are the property of the Liverpool Crematorium Company, Limited. The published accounts of the Cremation Society of England show for 1896 an income of £820 and an outlay of £740. The full charge for cremation at Woking is £5, the extras being the local clergyman's fee of 1 guinea, if it is desired that he should officiate at the service, and a payment of about 10s. for the attendance of bearers if undertakers' assistants are not brought from London. Unless it is intended to hold a funeral service in public the body should not be placed in a heavy or costly coffin, a light pine shell is the best receptacle for the purpose of cremation. The annual report of the society makes sympathetic reference to the late Sir Spencer Wells, who was one of its founders and whose remains were cremated at Woking. The offices of the society are in New Cavendish-street, Portland-place.

C. B. cannot be advised to break an agreement into which he has entered. His solicitor can tell him how far the contract is binding, or, as he phrases it, "legal." If he is advised that he has contracted himself out of certain facilities he must acquiesce in the consequences of his own act unless he can prove that he was induced to sign by misrepresentation. The fact that he did not understand what he was doing when he signed is of no legal import.

Dr. J. Ross.—Under the circumstances detailed by our correspondent we do not see wherein the necessity for the inquest existed, but the coroner's reason might, nevertheless, be very sound.

THE CRIME OF ABORTION IN THE UNITED STATES.

DR. H. P. BEIRNE, Professor of Natural Science, Corpus Christi Lyceum, Galesburg, Illinois, writes a letter to the *New York Medical Record* of April 10th, 1897, lamenting that American families which used to number eight or ten now consist of three or only two, and attributing it, not to any natural difference, but to moral differences in the estimate of such questions. He instances one woman in a city with a dozen churches and 20,000 inhabitants, who boasted that she had had 100 cases of successful abortions.

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"DR. RENTOUL'S EXPENSES FUND."—FIFTH LIST.

To the Editors of THE LANCET.

SIRS,—It is intended to close this fund next week, when a statement will be made as to the exact amount subscribed. I may say now that after deducting expenses we are about £9 short of the sum asked for at first. As several practitioners who have tacitly promised to subscribe have as yet not forwarded their donations, I beg that they will send them on without delay and allow me to say next week that the sum desired has been subscribed.

I am, Sirs, yours faithfully,

ALFRED COX, M.B. Durh., Hon. Sec. and Treasurer.

Gateshead, April 20th, 1897.

	£	s.	d.
Able, Manchester	0	10	6
L. Cane, Peterborough ...	0	3	6
Robert Cochrane, Birmingham...	0	10	6
W. T. Davies, Liverpool ...	0	10	0
D. T. S....	1	1	0
G. R. Fraser, Wark-on-Tyne	0	5	0
J. Griffiths, Ellesmere, Salop	0	2	6
W. Hargreaves, Sheffield...	0	2	6
W. Russell Hennessy, Birmingham	0	10	6
J. A. Howard, Liverpool...	0	10	6
J. F., Fulham	0	2	6
W. B. Pellew, Haltwhistle	0	2	6
A. Rabagliati, Bradford ...	1	0	0
Arthur Samuels, Liverpool	0	10	0
John J. Savage, Gateshead	0	2	6
Gordon Sharp, Leeds ...	0	10	0
Otho R. Travers, St. Leonards-on-Sea	0	5	0
Per F. Sydenham, Walsall			
T. Longmore, Walsall...	0	5	0
A. M. Mackintosh, ,, ...	0	5	0
W. McKinstry, ,, ...	0	5	0
T. Martland, ,, ...	0	5	0
J. F. O'Meara, ,, ...	0	5	0
G. A. Phillips, ,, ...	0	5	0
H. Shore, ,, ...	0	5	0
F. Sydenham, ,, ...	0	5	0
F. Wilmore, ,, ...	0	5	0
J. Wood, ,, ...	0	5	0
A. McCook Weir, East Sheen, S.W.	0	5	0
J. R White, Brentwood...	0	4	0
R. Moorsom Wood, Ellesmere, Salop	0	2	6

Dr. W. T. Greene.—We thoroughly agree with our correspondent that there ought to be some way of checking the open incitements to immorality and even to the crime of abortion that are furnished by certain advertisements. We have often referred to this matter in the columns of THE LANCET, but the remedy is in the hands of the public. If the public would complain in sufficient numbers to the managers of the papers inserting these filthy advertisements, that either they must lose such advertisers or their readers, the advertisements would cease.

IMPROPER ADVERTISEMENT.

WE have received a copy of the *Louth Advertiser* wherein an advertisement of an optician is supported by signed testimonials from an "M.A., M.D., M.R.C.S.," and a "Surgeon-Major, Army Medical Reserve, &c." We cannot suppose that these gentlemen knew the commercial use to which their testimonials would be put, and advise them to take means to prevent the optician giving them this unfortunate publicity.

AN INTERESTING SOUVENIR.

MESSRS. MARCUS WARD AND CO., Limited, are about to publish a plate depicting the Queen at the Coronation in 1837 and as she appears at the present day. We are asked to announce that the profit realised by the sale of the publication will be handed over to the Queen's Jubilee Institute for Nurses.

DISINFECTION AFTER ANTHRAX.

To the Editors of THE LANCET.

SIRS,—Perhaps some of your readers could give me some information as to the best way of thoroughly disinfecting a cow stable after anthrax. About three weeks ago a farmer near here lost a young cow, which luckily was kept by itself, from the above disease, and the stable it was in was very thoroughly lime-washed and some perchloride of mercury (1 in 1000) used to wash down the floor, but the other day I made a plate cultivation from the soil and dust between the bricks which form the floor of the cow-stable and in a day or two found colonies of anthrax bacilli. I am anxious, therefore, to know the best way to disinfect a stable so as to avoid all risk for the future. I may say that there had been no previous case on the farm within the memory of the present tenant or his father, also that every precaution was taken to avoid spilling any blood when the beast died.

I am, Sirs, yours faithfully,

April 13th, 1897. M. O. H.

*** It will be found a difficult matter to disinfect *in situ* the soil between the bricks, and it would probably be the safest course, having regard to the tendency of the anthrax bacillus to multiply and to form spores in polluted earth, if the floor of the stable were taken up and relaid with new bricks set in cement; and this course would be especially indicated if the floor be at all dilapidated. Care should, of course, be exercised by the workmen in removing the bricks and soil, both of which should be subsequently disinfected and safely disposed of. If entire reconstruction is impracticable the earth from between the bricks might be as far as possible removed, and the intervals, after being saturated with a strong solution of perchloride of mercury or crude carbolic acid, be subsequently filled in with good cement, the surface of the bricks being well covered with the same material. Planing the manger to some depth would appear to be a useful precaution.—ED. L.

AN UNUSUAL CASE.

To the Editors of THE LANCET.

SIRS,—I have been in active general practice for more than thirty years, and of course have met with many cases of intestinal obstruction; in some of these cases the obstruction has been caused by very peculiar articles, but the following case is unique as far as my experience is concerned. Last week I was called to a middle-aged woman, who was suffering from all the symptoms of complete obstruction, and after making the usual examination for hernia, &c., the turn came to the rectum. This I found completely blocked with an immense mass of solid matter on which it was difficult to make any impression with the finger; however, after about half an hour's work I succeeded in excavating a portion of the mass, which on examination proved to consist of wool firmly welded together with fæcal matter. After further work I managed to get the tube of an enema syringe partly through the mass, and injected about three pints of warm water. This made matters worse, for it washed away the fæcal matter, leaving behind a firm mass of nothing but wool, which appeared to fill the whole pelvis. To make a long story short, after three "sittings" at intervals of twenty-four hours I succeeded in removing the whole of the wool and obtaining an action of the bowels with relief of all the symptoms, the quantity of firmly matted wool being larger than my doubled fist, both patient and medical man being considerably "pumped" after each operation. The cause of the whole trouble was that the patient had been partaking largely of lambs' tails ever since the advent of the lambing season. The lambs' tails, instead of being skinned as, I believe, is usual before they are cooked, had only been singed and then baked, thus leaving, probably, much of the wool adherent to the flesh. I could not arrive at any conclusion as to the number of tails eaten, but I suppose they must have been very numerous. The patient declares that she will never eat another tail as long as she lives; but I think very likely about this time next year she will forget her troubles and again indulge in this luxury. If she does so without removing the wool, all I can say is, "May I not be there to see." It would be interesting to me to know if this cause of obstruction has been met with before.

I am, Sirs, yours faithfully,

Kettering, April 18th, 1897. J. WINTER DRYLAND.

B.—It seems to us a pity that our correspondent did not write to A. on the matter, as it is a pity that A. has seen in the omission to do so evidence of serious misconduct. The whole affair is so trivial that surely the parties concerned are not going to allow it to cause a breach in their professional relations with each other.

Juvenis.—We do not know where the literature on the subject can be procured, but there is a society existent for the propagation of the tenets.

R. D. (Westbourne) has omitted to enclose his name and address.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 22nd, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April 16	30·27	S.W.	52	48	88	55	45	0·20	Cloudy
,, 17	29·94	S.W.	52	51	88	57	47	0·12	Raining
,, 18	30·01	N.W.	52	45	100	60	45	...	Fine
,, 19	29·90	W.	49	45	104	58	43	0·21	Fine
,, 20	29·57	N.	48	44	91	57	44	0·02	Cloudy
,, 21	29·78	S.	48	46	62	57	46	0·10	Overcast
,, 22	30·07	E.	46	46	88	51	44	...	Cloudy

During the week marked copies of the following newspapers have been received:—*Brisbane Courier, Scotsman, Huddersfield Chronicle, Glasgow Herald, Lancashire Post, South Wales Daily News, Croydon Guardian, Bradford Observer, Durham Chronicle, North British Daily Mail, Worcester Herald, Bedfordshire Standard, Colchester Gazette, Bolton Evening News, Times of India, Sheffield Independent, Birmingham Daily Gazette, Pioneer Mail, Newcastle Leader, Sheffield Telegraph, Derby Mercury, East Anglian Times, Architect, Kidderminster Shuttle, Liverpool Daily Post, Somerset County Herald, Hampshire Post, Andover Advertiser, Le Temps, Builder, Rochester Journal, Leeds Mercury, Western Press, Windsor Chronicle, Brighton Argus, Sligo Independent, Kingston News, Midland Free Press, Cumberland Advertiser, Yorkshire Post, Alnwick Gazette, Cambria Daily Leader, Hastings News, Sussex Daily News, Leicester Post, Worcester Chronicle, Bristol Mercury, Shields Daily News, Mining Journal, West Middlesex Herald, Sanitary Record, Brighton Gazette, Herald Standard (Melbourne), St. Bartholomew's Hospital Journal, Reading Mercury, Weekly Free Press and Aberdeen Herald, Local Government Journal, Surrey Advertiser, Willesden Chronicle, Hertfordshire Mercury, Local Government Chronicle, City Press, Guernsey Star, The World, Paisley and Renfrewshire Gazette, Liverpool Courier, The Citizen (West of England), West Middlesex Herald, Gloucestershire Chronicle, Stowmarket Courier, &c., &c.*

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Communications, Letters, &c., have been received from—

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D.—Mr. J. W. Dryland, Kettering; Mr J. Devine Greenock; *Devon and Exeter Daily Gazette*, Exeter, Manager of; Messrs S. Dusselsma and Co., Amsterdam; Mr. E. R. Dall, Salisbury.

E.—Dr. W. M. Elliott, Gold Coast Medical Service; Messrs. Evans, Gadd, and Co., Exeter; Edinburgh School of Medicine, Sec. of; Epidemiological Society of London, Sec. of.

F.—Capt. A. B. S. Fraser, Worthing; Mrs. B. Fenwick, Lond.; Messrs. J. C. Francis and Co., Lond.; Miss Fasken, Lond.; Farbwerke vorm Meister, Lucius, and Brüning, Lond.; Messrs. J. B. Flint and Co., New York, U.S.A.

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N.—Mr. H. W. Nott, Liverpool; National Hosp. for the Paralysed and Epileptic, Lond., Sec. of; National Society for Employment of Epileptics, Lond., Sec. of.

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Q.—Queen Charlotte's Lying-in Hosp., Lond., Sec. of.

R.—Dr. R. R. Rentoul, Liverpool; Dr. H. D. Rolleston, Lond.; Mr. J. Ross, Clitheroe; Dr. Richardson, Walsingham; *Revue de Laryngologie, d'Otologie et de Rhinologie*, Bordeaux, Director of; Royal Aquarium, Lond., Managing Director of; Messrs. Robertson and Scott, Edin.

S.—Mr. F. B. Speed, Wimbledon; Society for the Relief of Widows and Orphans of Medical Men, Lond.; Dr. M. F. Squire, Lond.; Messrs. Street and Co., Lond.; J. T. Segrue, Ltd., Lond.; Dr. W. K. Sibley, Lond.; Mr. S. N. Scott, Plymstock; Mr. G. Stoker, Lond.; Dr. P. C. Smith, Wandsworth; Messrs. Schleicher Frères, Paris; Mr. F. W. Sears, Lond.; Society of Arts, Lond, Sec. of; Dr. J. C. Simpson, Tunbridge Wells.

T.—Dr. E. B. Truman, Nottingham; Mr. A. H. Tubby, Lond.; Miss J. Tudor, Hadley; Mr. W. J. Tyson, Folkestone.

V.—Mr. O. Van Vestraut, Lond.

W.—Dr. J. Wallace, Greenock; Dr. W. A. Walker, Southwell; Dr. Weber, Rome; Dr. J. R. Whitaker, Edin.; Worthing Corporation, Sanitary Inspector of; Messrs. J. Wright and Co., Bristol; Wolverhampton Eye Infirmary, Sec. of; Woodside Court, Croydon, Principal of.

Letters, each with enclosure, are also acknowledged from—

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The Lumleian Lectures

ON

SOME PROBLEMS IN CONNEXION WITH APHASIA AND OTHER SPEECH DEFECTS.

Delivered before the Royal College of Physicians of London on April 1st, 6th, and 8th, 1897,

BY H. CHARLTON BASTIAN, M.A., M.D. LOND., F.R.S.,

CENSOR OF THE COLLEGE; PHYSICIAN TO UNIVERSITY COLLEGE HOSPITAL AND TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

LECTURE III.[1] (*concluded from p. 1137*).

Delivered on April 8th, 1897.

(5) DEFECTS RESULTING FROM ABNORMAL CONDITIONS OF THE LEFT VISUAL WORD-CENTRE.

THERE is not the same variety in the defects of speech caused by disease of the visual word-centre that is to be met with as a result of disabilities in the auditory word-centre. This is apparently due to the fact that in the great majority of persons voluntary revival of words occurs primarily in the auditory word-centre, while the visual word-centre is called into activity mainly by stronger stimuli—either by those coming to it through associational fibres or by still stronger incitations that come directly from without. It is only in comparatively rare cases, as we have seen, that the visual word-centre takes the place occupied in the great majority of individuals by the auditory word-centre, as the seat in which words are primarily revived in silent or in spoken thought. Consequently the speech defect known as "amnesia verbalis" occurs almost only as a result of a lowered functional activity in the auditory word-centre, and only in extremely rare cases (where the individual is a very strong "visual") as a result of mere lowered activity in the visual word-centre. Since a volitional stimulus is weaker than that which comes through an associational channel from a centre strongly aroused, and weaker still than that which comes to the centre directly from without, and since a lowered nutrition or diminished molecular mobility of a centre from any cause might lead only to a failure in the centre to respond to the weakest stimuli, it is to be expected that such results in relation to language would show themselves only in connexion with the centre accustomed to respond to such stimuli (namely, the auditory word-centre), and would be almost absent in connexion with the visual word-centre.

Consequently we know next to nothing about the effects of mere functional degradation in the visual word-centre—that is, of slight disabilities such as when occurring in the auditory word-centre are productive of the various degrees of amnesia verbalis already described. All that can be said is that when such functional degradation of the visual word-centre is present it would (*a*) in the rare case of the patient being an extremely strong "visual" of itself tend to produce amnesia verbalis, as was seen in a patient under the care of Charcot, whose case is referred to by Ballet[2]; or (*b*) even in an "auditive" tend greatly to aggravate any disability that may have been caused by a co-existing defect in the auditory word-centre, and also to hinder recovery therefrom; further (*c*) that where the functional defect involves both word-centres the amnesia ought to be more than usually bad and probably associated with more or less of paraphasia.

Effects produced by the destruction of the left visual word-centre.—We have to pass, then, at once to a consideration of the effects produced by destruction of the left visual word-centre, which is now generally supposed to be situated in the angular, and possibly in part of the supra-marginal, convolution. These effects will be found to vary in different individuals, just as variation was found to be the case when we had to do with the results of lesions in the left auditory word-centre.

One important difference between the effects of lesions of the visual word-centre as compared with those following upon lesions of the auditory is that speech is very little, if at all, interfered with. There is no well-marked aphasia or paraphasia, only a very slight amount of paraphasia in some of the cases.[3] That there should at times be such slight disturbance of speech is not to be wondered at if we bear in mind the close functional relationships of the visual and the auditory word-centres, and how easily therefore the functions of the latter may be disturbed by a lesion in the former.

It is often found that word-blindness is associated with right-sided homonymous hemianopsia—that is, on the same side as paresis of the limbs—for there is often no complete hemiplegia in these cases. The hemianopsia is generally due to destruction of the optic radiations of Gratiolet; but where the lesion is quite limited to the cortex these fibres will not be involved, so that hemianopsia is not a necessary accompaniment of word-blindness.

Agraphia also is a symptom sometimes present and sometimes absent in cases of word-blindness. The presence or absence of this symptom is, however, of much more fundamental importance than the presence or absence of hemianopsia. It is best, in fact, to divide cases of word-blindness into two categories—namely, (*a*) cases in which the word-blindness is associated with agraphia, and (*b*) cases in which there is no agraphia. In the latter group it is found that the individuals can write as well with the eyes closed as when they are open, and further that they are, after a brief interval, unable to read what they themselves have written.

(*a*) In the cases where agraphia is present it is commonly found that such patients are capable of writing their names correctly, although they can write nothing else. The signature is an emblem which may, by reason of its familiarity, be executed by the cheiro-kinæsthetic centre with the smallest amount of prompting; and it would appear that this prompting may come from the common visual centre in cases where the left visual word-centre is destroyed. Similarly a word-blind patient may be able to recognise his own name when he sees it, though apart from this there may be complete alexia. As Déjerine says[4]: "He recognises it by its general form, by its physiognomy, and not by the assemblage of letters of which it is composed"—just, in fact, as he would recognise a geometrical figure or any other drawing. Differences of degree are, however, met with in word-blindness. In some cases, though the patients are unable to recognise single words (word-blindness), they can recognise individual letters; whilst in others not even letters can be recognised (letter-blindness). These two forms were distinguished by Kussmaul, though he sought to make a more radical distinction between them—believing that they represented differences in kind rather than of degree. All intermediate forms, however, may be met with. Sometimes patients will recognise certain letters and not others; and in one case recorded by Batterham vowels only were recognised.

In illustration of this first group of cases, where word-blindness is associated with agraphia, I will quote one of a very typical character that has been reported by Déjerine.[5]

CASE 32.—A man, aged sixty-three years, seven years previously had a slight attack of right hemiplegia, not accompanied by speech troubles, which at the time of his entering the Bicêtre (Feb. 12th, 1890) had almost completely disappeared. Soon after his admission he found one morning that he could no longer read his newspaper. On examination it was ascertained that there was no trace of word-deafness: he easily understood all questions. He was unable to understand either print or handwriting, and could not even name a single letter of the alphabet. On the other hand, he could recognise his name and could name all objects shown to him. Right lateral hemianopsia was believed to exist. There was paraphasia both in his spontaneous speech and in his repetition of words, so that it was sometimes difficult to understand what he said. When asked to write he held the pen most awkwardly and could write nothing but his name, and that so badly as to be scarcely recognisable; and whether he attempted to write spontaneously, from dictation, or to copy he wrote only his own name, "Séjalon," in an indistinct fashion. On March 10th the initial paraphasia had almost completely disappeared, so that he could readily give particulars concerning his former life and his present condition. His writing was as bad as before, but he held the pen much better. He could not write a single word spontaneously or from dictation, nor could he copy—he made mere meaningless strokes only; but he could write from dictation a numeral or a number composed of not more than two figures. There was complete alexia, as before; he recognised his own name, but nothing else. On Nov. 5th, 1890, the

[1] Lectures I., II, and part of III. were published in THE LANCET of April 3rd, 10th, and 24th, 1897, respectively.

[2] Loc. cit., p. 101.

[3] For instance, in Nos. 44, 45, 47, 49, 50, and 52 in Mirallié's list of cases included under the heading "Cécité Verbale" (pp. 152-157).

[4] Comptes Rendus de la Société de Biologie, 1891, p. 200.

[5] Loc. cit., p. 197.

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word-blindness was slightly less. He could then recognise "c" and "g" of the alphabet, but no other letters. He could not make out any word, but he recognised and pronounced numerals and numbers of not more than two figures. The agraphia was as complete as before, both for spontaneous writing, dictation, and copying. Death occurred on Nov. 20th, 1890, and at the necropsy a focus of softening having "the diameter of a five-franc piece" was found occupying the inferior three-fourths of the angular gyrus, all the rest of the cortex, including the foot of the third and also that of the second frontal convolution, being absolutely intact. Section of this left hemisphere showed that the softening extended inwards in a wedge shape as far as the posterior cornu, destroying the greater part of the optic radiations of Gratiolet. In the right hemisphere two small foci of softening of the size of a small nut were found—one in the putamen, the other in the anterior part of the thalamus, which destroyed by their union the genu of the internal capsule. (Figures of the lesion in the left hemisphere were given.)

The absolute nature of the agraphia in this case is a noteworthy feature, and may perhaps be accounted for in part by the fact that writing was a comparatively unfamiliar exercise to this man, who was a mere day labourer. Damage to the visual word-centre under such circumstances might be expected to produce its maximum results, while a similar lesion in the case of an educated man much accustomed to write might lead either to no agraphia or to a much less pronounced form of this defect. Another point of interest is the temporary nature of the paraphasia that was at first set up as a consequence of this lesion limited to a part of the angular gyrus. We can only conclude, therefore, that it was due to a sympathetic disorder established for a time in the contiguous auditory word-centre. A third point of interest is to be found in the strict localisation of the lesion to the angular gyrus and its sufficing to produce complete alexia with agraphia.

Another very similar case, and almost equally valuable, has been recorded by Sérieux,[6] of which the following is an abstract.

CASE 33.—A woman, aged seventy-three years, entered the asylum of Ville-Evrard on Sept. 29th, 1891. At the first examination it was ascertained that the patient heard and comprehended all questions well, but that there was some amount of amnesia verbalis. Reading and writing were impossible, although vision was good and she could recognise surrounding objects. After a time, being troubled by her inability to write, she practised much with her pen. At first she could only copy the letters whose outline is most simple, such as m, n, u, o, a. Her alphabet was almost composed of these letters, and they were sometimes grouped so as to give the appearance of words—such as um, aa, monon, mono, muosi. In the month of November the following observations were made: "Intelligence normal. No motor paralysis. No appreciable word-deafness. Slight paraphasia. No object blindness. Word-blindness is almost complete; she recognises a certain number of letters only. Hemianopsia absent. Agraphia is also complete for spontaneous writing, as well as for dictation and copying." On Nov. 23rd the patient had an abrupt apoplectic attack, she became comatose, and died. At the necropsy, in addition to a recent hæmorrhage into the right hemisphere, with extravasation into the ventricles, there was found one old lesion in the left hemisphere. This was a focus of yellow softening rather larger than a five-franc piece, which involved the whole of the angular gyrus and the greater part of the supra-marginal lobule. The contiguous convolutions of the superior parietal lobule as well as the posterior extremities of the first and second temporal convolutions were slightly yellowish and atrophied. All the other convolutions of this and of the other hemisphere were healthy.

Here, although the lesion was more extensive than in the last case, we find both the word-blindness and the agraphia rather less complete. The slight paraphasia, which in this case was persistent, may have been kept up by the slight degeneration of the posterior extremities of the two upper temporal convolutions. It is expressly stated that the patient did not suffer from hemianopsia, so we must conclude that the lesion was superficial and did not extend deeply enough to involve the optic radiations. Another case in which word-blindness and agraphia were produced by a patch of softening limited to the left angular gyrus has been published by Berkhan,[7] though under a very misleading title.

(*b*) In the second group of cases word-blindness is not associated with agraphia, the individuals being able to write, and as well with the eyes closed as open. As I have already said, a precisely similar group of symptoms may be produced in a totally different manner, quite independently of destruction of the left visual word-centre. These cases will be fully considered in the next section.

The effects of destruction of the left visual word-centre are liable to vary much in different individuals in accordance with their different sensorial aptitudes and different degrees of education, just as we have found the results of destruction of the left auditory word-centre to present marked differences in different cases. The results already described under group (*a*) are those which most frequently follow when the left visual word-centre is destroyed in ordinary individuals. But suppose a similar lesion to occur in a person who is a strong "auditive" but a weak "visual," and at the same time, perhaps, an educated person who has previously been in the habit of writing much. It may happen in such a person, after the stage of learning to write has well passed, that the activity of the visual word-centre may be reduced to a minimum during the execution of such acts. We have seen reason to believe that the words about to be written become nascent first in the auditory word-centre, and it seems probable that in individuals with the endowments above mentioned this centre, rather than the visual word-centre, may be the one which acts upon and coöperates with the cheiro-kinæsthetic centre, just as we have seen that in certain persons who are strong "visuals" the visual word-centre may be capable of coöperating directly with Broca's centre for the production of articulate speech. I contend, therefore, that the preservation of ability to write in cases where there has been word-blindness and where the visual word-centre has subsequently been found to be destroyed is to be explained in this way—that is, by supposing that the auditory word-centre, instead of acting, as it usually does, by rousing the visual word-centre to conjoint action, in these cases acts directly upon the cheiro-kinæsthetic centre by way of the commissure *f f* (Fig. 5).[8] The writing thus produced may be fairly good and without mistakes, though that of other patients may show defects of a paragraphic type. The handwriting itself, too, is usually larger than that which was previously customary to the patient. There is also the peculiarity that these patients can write as well with the eyes closed as when they are open, and the still further peculiarity that they cannot subsequently read what they have written except by a manœuvre which causes a stimulus to pass in the reverse way—that is, from the cheiro-kinæsthetic centre back to the auditory word-centre in the direction *f' f'* (Fig. 5). This is brought about by passing the tip of the finger over the outlines of the letters and so reading off the result. The possibility of this mode of reading by the "tip of the finger" seems to have been first noticed in a word-blind patient by Westphall.[9]

There are only two cases with necropsies that I can bring forward in illustration of this group, and unfortunately they are not very well defined cases, being rather complicated, not only clinically, but also by reason of the lesions found at the necropsy. The first of them is also, I believe, the earliest recorded instance of any such defect. It is a remarkable case that was published long ago by Broadbent.[10] The real significance of the case was not, I believe, recognised by him at the time, nor was it by myself some years afterwards when I first endeavoured to interpret it.[11] Now I think its leading peculiarities may be explained by supposing the existence of a weak condition, with lowered excitability of the auditory word-centre, together with a destruction of the visual word-centre. The case is well recorded with full details, but the essential particulars are these.

CASE 34.—The patient was a man, aged fifty-nine years, and of considerable energy and intelligence. His illness commenced early in 1870 with sickness, vomiting, and pains in the head. He was restless and delirious, and did not know his wife for a fortnight. He gradually improved, but after this attack remained unable to read either print or writing, though he could write quite well. Twelve months later he was no longer able to write voluntarily, though he could still write correctly from dictation. Soon afterwards when he came under observation he was found to be unable to read. He could see the words, but could not understand them; he could not even recognise or name single letters; the only exception to this being that he recognised his own name, whether printed or written. His voluntary speech was free except that he was amnesic and much at a loss for names. If a hand or an article of clothing, or any other familiar object, were shown him, he was quite unable to name it, while if the name came up in conversation he spoke it without hesitation. He also immediately recognised the names of common objects when he heard them. Thus, asked the colour of a card he could not give it. "Is it blue?" "No." "Green?" "No." "Red?" "Well, that's more like it." "Orange?" "Yes, orange." A square and a circle were drawn and he was asked to name either. He could not do it, but when the circle was called a square he said, "No, but that is," pointing to the proper figure. He wrote from dictation and took notes of instructions as to the day and hour of subsequent visits (which were seen to be correct), saying he was very forgetful and might make mistakes. He would be utterly

[6] Mémoires de la Société de Biologie, 1892, p. 13.
[7] Archiv für Psychologie und Nervenkrankheiten, 1891, p. 558.

[8] It is worthy of note that both Kussmaul and Spamer seem to think that this is the ordinary way in which writing is effected (see Kussmaul, loc. cit., p. 777).
[9] Zeitschrift für Ethnologie, 1874.
[10] Transactions of the Royal Medical and Chirurgical Society, 1872, p. 162.
[11] Brain as an Organ of Mind, 1880, p. 645.

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unable shortly after to read his own writing, but relied on his wife making out the notes he took. He was a vestryman, and still always attended the meetings of the vestry. He was not able to take part in the discussions as he had formerly done, but it amused him, and he added, "But I dare say I am as useful as many of them still." Broadbent adds: "He was a remarkably intelligent man, cheerful and energetic, even under his affliction. He employed in conversation a very extensive vocabulary, usually speaking fluently, sometimes stopping for want of a word (usually a name), rarely using wrong words (for which I was on the look out), the only ones I have notes of being 'soup' for 'supper,' 'nephew' for 'grandson.'" He remained under observation from May 8th to June 1st, 1879. On June 21st he had a severe apoplectic attack, due to ventricular hæmorrhage, and died within forty-eight hours. The recent extravasation had torn its way into the left temporo-sphenoidal lobe, in which there was a focus of softening, though its extent could not be ascertained in consequence of this irruption of blood. Of principal significance, however, were two old blood-clots, the size and situation of which are thus described: "One about the size and shape of an almond was closely embedded in the infra-marginal gyrus between the deep parallel sulcus on one side and the secondary small gyri on the lower wall of the fissure of Sylvius on the other, about opposite the junction of the upper third with the lower two-thirds of the descending cornu. The other was further back and on a higher level, almost exactly corresponding in situation with the posterior end of the fissure of Sylvius externally and with the junction of the descending cornu with the body of the ventricle internally; in fact, it occupied the thickness of brain substance separating the extremity of the fissure from the ventricle. It was about the size of a bean, yellow, and very tough."

It seems pretty clear that the second of these blood-clots must have been situated in the angular gyrus, whilst the first of them was situated somewhere near the middle of the upper temporal convolution, and therefore that the patient's alexia was due to destruction of the visual word-centre. Notwithstanding the damage to the upper temporal convolution and the existence of an ill-defined amount of softening in the white substance of the temporal lobe, there was obviously nothing approaching to word-deafness in this patient. The only means, therefore, of explaining his ability to write with the right hand is by supposing that his cheiro-kinæsthetic centre must have received its stimulations from the left auditory word-centre, even though the trifling verbal amnesia showed that this centre was slightly weakened.

Another case which, as it seems to me, should find its place in this group has been recorded by Osler,[12] of which the most important details are these.

CASE 35.—A man, aged seventy-two years, applied at the Philadelphia Infirmary for Disease of the Nervous System on Nov. 14th, 1888, complaining of uneasy sensations in his head. He was a healthy, vigorous looking man, perfectly intelligent, and spoke well and clearly. It was not thought at first that there was anything the matter with him beyond slight headache; but it was noticed that he had occasional difficulty in getting the word he wished, and this circumstance led to a more careful examination. For some time past he had not felt so well as usual. On Nov. 1st, while at his supper in a restaurant, he found that he could not read the daily paper. He was sure that this came on quickly, and it had been his chief annoyance, as he was an ardent politician. He had no definite headache, but complained of a diffuse uneasy sensation. Though he spoke clearly and intelligently, and uttered some sentences without interruption, replying promptly and fluently to questions and evidently understanding everything, there was very distinct speech disturbance. Thus, for some time he could not give the address of his residence. He said he knew where it was, but could not utter the words. He gave the first name of the man with whom he lived, but could not give the second. He could not name his own occupation, but said, "Keep, keep, keep; Oh, you say it for me." When told "bookkeeper," he repeated it distinctly. He occasionally misplaced words. In referring to a wetting which he had spoken of he said, "Deliberate attacks of wet dress." When a printed or written page was presented to him he did not appear to comprehend the words. The word "Philadelphia" at the head of a hospital blank he read "P, r, i, n, g, r, e, k." When told that it was Philadelphia he replied, "Oh, certainly it is, I've known it for sixty-five years." His age, "72," written on a slip of paper, he read "213." He did not recognise the words "Cleveland" and "Harrison" at the top of a newspaper column, but when they were read to him he said, "I know all about them," and began making some very shrewd observations. He could write his name, but said that since his failure to see distinctly he did so with difficulty. He wrote as well with his eyes shut as when they were open, but did so with hesitation. He wrote the name of the hospital, and the words "Philadelphia Record." He could not read the words of his name after he had written them. He named objects held before him quite readily. On examination, right lateral homonymous hemianopsia was found. For the first two weeks of his stay in the hospital there was no special change. On one occasion he wrote the word "record" when told to, but after he had written it he spelled it "freedom." On Dec. 8th he talked less freely. He spoke intelligently and plainly at first, but after a few minutes it was difficult to understand what he stated. There were no additional ocular changes. The grip in the hands was equal. He walked with a somewhat tottering gait, though there was no actual paralysis. Early in January, 1889, he became distinctly weaker, duller mentally and more restless, and on the morning of Jan. 15th he was found in a semi-comatose condition, completely paralysed in the right arm, and incompletely in the right leg. He died on the following day. At the necropsy softening was found of the left supra-marginal lobule and of the white substance of the lower part of the angular gyrus; also of the white matter of the posterior parts of the first and second temporal convolutions. There was likewise complete softening of the white matter between these convolutions and the lateral ventricle (posterior horn); while another area of softening two inches in thickness and an inch in breadth was found in the white substance of the temporal lobe, which externally touched the grey matter of the third and the base of the second temporal convolutions. Concerning the focus of softening in the substance of the left hemisphere Osler says: "Posteriorly the softening did not extend behind a line drawn across the level of the parieto-occipital fissure. The white matter of the occipital lobe was firm, and the grey matter of the cuneus was uninvolved." The right hemisphere showed no lesions.

It is, of course, impossible to say how much these areas of softening may have extended during the last four or five weeks of this patient's life, when he seems to have become gradually worse; or, in other words, we cannot say how much more limited the lesion may have been during the first week that he was under observation, to which period the above detailed clinical record pertains. It seems clear, however, that the clinical symptoms were of the type now under consideration—that is to say, that there was no word-deafness, but that the patient was affected with word-blindness without agraphia. On the other hand, it is equally clear that even at the end, when the pathological lesions had attained their maximum development, the softening had not extended into the occipital lobe. We seem, therefore, driven to the conclusion that the word-blindness must have been due to the softening of the angular and the supra-marginal gyri.

What I take to be another example probably belonging to this group is to be found in a patient under the care of Charcot, whose case has been recorded in great detail by Bernard.[13] It is an extremely interesting case, and here, as in that of Sérieux, previously quoted, the destruction of the visual word-centre does not seem to have been complete, as the patient could still recognise individual letters. The following are some of the principal details.

CASE 36.—A man, aged thirty-five years, after unusual excitement, was suddenly seized with right hemiplegia and loss of consciousness. The next day, on recovering consciousness, he stammered and substituted one word for another. At the end of three weeks the disturbance in speech had almost entirely disappeared; the hemiplegia had been gradually subsiding, so that he could now hold a pen and write very legibly. About this time, wishing to give some order about his business affairs, he took a pen and wrote what he wished to have done; then, thinking he had forgotten something, he asked to see the letter that he had just written, but found he was unable to read it. He had been able to write, but could not read what he had written just before. He was also unable to read printed matter. He was seen five months after the onset of his illness by Charcot, who ascertained that there was no longer any hemiplegia or aphasia of motor type, but that in addition to the alexia there was a forgetfulness of a certain number of nouns and proper names. It was observed that he could write a long letter without any notable mistakes in orthography. "I write," he said, "as if I had my eyes shut; I do not read what I write." In fact he wrote quite as well with his eyes closed. Having written his own name he was asked to read it. "I know very well," said he, "that it is my name that I have written, but I can no longer read it." Nevertheless, when it was insisted upon that he should read some written words, it was observed while he was making efforts to do so that with the tip of his right index finger he traced one by one the letters that constituted the word, and he was thus able with much trouble to say what the word was. Or else when he was striving to read he traced in the air with his finger the letters placed before him. It was found that he had much more difficulty in reading print after this fashion than ordinary writing, apparently because of his lack of practice in tracing the former kind of characters. Again, if when his eyes were closed a pen were put into his hand and the latter guided so as to make it write certain words, he was able to say immediately and without hesitation what those words were. He knew separately all the letters of the alphabet, except q, r, s, t, and especially x, y, z. Though he could not make out these latter letters when they were isolated, he nevertheless wrote them easily when they formed part of a word. Numerals he recognised well, and was able easily to perform certain simple operations; but when the multiplications were a little complex he made mistakes. This patient suffered also from right lateral hemianopsia.

In the absence of a necropsy it cannot be definitely said that this case belongs to the group now under consideration rather than to that which is next to be considered. Looking to the fact, however, that a hemiplegic condition existed at first, that there was no hemianæsthesia or hemiachromatopsia, and to the very limited nature of the clinical defects subsequently remaining, it seems to me distinctly less probable that the patient's condition was due to lesion in the occipital region than to one further forward which also involved the visual word-centre itself. If that were the case, the reading by means of kinæsthetic impressions would mean that the excitations of that centre produced by the finger tracing successively the outlines of letters must have been conveyed backwards along the commissure *f' f''* (Fig. 5) to the auditory word-centre, there arousing the corresponding auditory word memories, and subsequently passing over to Broca's centre preliminary to articulation of the words.

It will be observed that in each of these three cases, in which word-blindness has been present without agraphia the patients have been more or less educated persons well

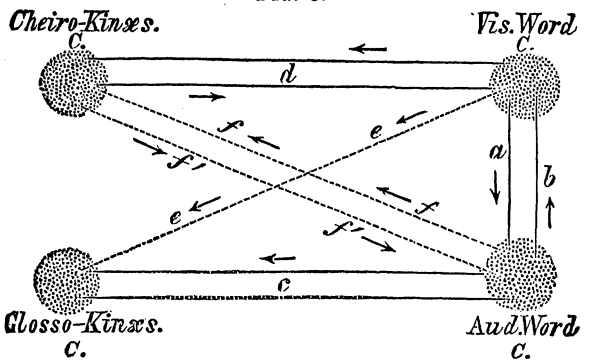
[12] American Journal of Medical Science, March, 1891, p. 219.

[13] De l'Aphasie, 1885, pp. 77-90.

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accustomed to write, and that in the first two, at all events, the incitations could not have come during their illness from the damaged visual word-centre. Therefore it seems only open to us to suppose that these patients were able to write spontaneously or from dictation simply because they were able to call up the familiar activity of the cheiro-kinæsthetic centre directly at the instigation of the auditory word-centre. It is well known that many voluntary movements during the

FIG. 5.



period that they are being acquired, and sometimes for long afterwards, require for their execution the active coöperation of the visual centre, though at a later period the guidance of the kinæsthetic centres may suffice for their production.

(6) DEFECTS RESULTING FROM ISOLATION OF THE LEFT VISUAL WORD-CENTRE.

Isolation of the visual word-centre is a term employed here in the same sense that isolation of the auditory word-centre was previously spoken of—it is not a complete isolation, but merely a cutting of the centre off from all its own afferent fibres, as well as from all communication with the corresponding centre of the opposite hemisphere. The clinical condition itself was first referred to by Wernicke[14] as a companion to the state described by Lichtheim as subcortical sensory aphasia or isolated speech deafness. Wernicke named this condition "subcortical alexia," while it has since been re-christened by Déjerine (who is followed by Mirallié) as "pure word-blindness." The question as to which nomenclature is to be adopted is therefore a little embarrassing. Seeing, however, that, as I have shown, each of these clinical groups of symptoms may be produced in a double way—that is, either by cortical or by subcortical lesions—it seems clear that the term "subcortical" as applied to these conditions by Lichtheim and by Wernicke would, if preserved, lead to great confusion. It seems best, therefore, to adhere to Déjerine's nomenclature and speak of "pure word-deafness" and "pure word-blindness" respectively, but with the understanding that these defects are not necessarily due to subcortical lesions.

The cases of pure word-blindness with which we are now concerned, in which the visual word-centre remains intact, are comparatively few in number. Three complete cases have been recorded with necropsies, whilst of two others the clinical details only have been published. Although the two latter cases probably belong to this type, there is, of course, the possibility that they may rather belong to the second group of cases included in the last section. I shall first give some brief account of the three complete cases, and subsequently discuss the mode in which the lesions found may be considered to be capable of giving rise to so remarkable an assemblage of symptoms.

The first of these cases to be recorded which was followed by a necropsy is one of great value; it was most carefully observed, and has been published in very full detail by Déjerine.[15] The following is the abstract that he gives by way of preface to the fuller details, which will, however, well repay a careful study.

CASE 37.—This patient was a man, aged sixty-eight years, of more than ordinary intelligence and culture. Word-blindness was complete, both verbal and literal. Musical blindness was also complete. There was preservation of ability to read figures and also to calculate. There was no trace of word-deafness, no trace of disturbance in articulate speech, and internal language was preserved. There was no object-blindness or optic aphasia; mimicry was perfect and very expressive; there was perfect preservation of spontaneous writing and of writing from dictation—the patient could thus write whole pages correctly. Writing from a copy was very difficult and defective. There was partial right lateral hemianopsia with complete hemiachromatopsia. There was integrity of motility, and of sensibility general and special, as well as of the muscular sense. The same symptoms persisted for four years. Sudden death occurred after the patient had presented for ten days total agraphia with paraphasia, without any trace of word-deafness. There had been perfect preservation of mimicry and of intelligence. At the necropsy recent lesions were found in the left hemisphere in the form of red softening in the inferior parietal lobule and in the angular gyrus. There were old lesions (*plaques jaunes*) situated in the lingual and the fusiform lobules, in the cuneus, in the white substance of the occipital lobe, and in the posterior extremity of the corpus callosum. The optic radiations were markedly atrophied. The right hemisphere was intact.

The notable features of this case are the absence of any hemiplegia; the combination of complete right lateral hemiachromatopsia with partial right hemianopsia; the absence of word-deafness or speech defect of any kind; the absolute word-blindness coupled with ability to write freely both spontaneously and from dictation, whilst ability to copy writing was very defective; and the length of time that these symptoms lasted without change. The subsequent sudden supervention of complete agraphia associated with paraphasic speech, followed by the discovery of a recent lesion in the angular gyrus and adjacent parts, were also very significant features of the case. Comments upon the old lesions found had better be reserved till some account has been given of the other two cases.

These cond case was recorded by Wyllie[16] two years later, some of the principal details being as follows.

CASE 38.—A man, aged seventy-two years, formerly a clerk of the works, but then a collector of accounts for mercantile men, came as an out-patient to the Royal Infirmary of Edinburgh on Dec. 12th, 1889. About six weeks previously, when in the street, he had a very severe attack of vertigo, and ten days later a feeling of coldness and heaviness throughout the right half of the body. At this time also he discovered that he was word-blind. He could not read even his own name. At first he was even letter-blind, but before coming to the infirmary he had recovered sufficiently to be able to recognise individual letters, though he could read no single word without spelling it. On examination no right hemianæsthesia was found, but typical right hemianopsia, with marked contraction of the remaining left halves of the fields of vision. The contraction was so marked that he saw things as if looking at them through a tube. There was no agraphia; he could write well and made very few mistakes in spelling, such as he did make being evidently due not to his cerebral condition but to defective education. Although he expressed himself in writing with ease and fluency, he could read the writing only word for word, after spelling each word letter by letter. As to spoken speech, the patient expressed himself with great liveliness and volubility, being never at a loss for a word except in the case of proper names, which he was apt to forget. There was no forgetfulness of the names of things and no paraphasia. His intelligence seemed very good, but he complained of a sense of confusion in his head. This, together with his word-blindness, had made him quite unable to continue his occupation of collecting accounts. He died four years later (Jan. 23rd, 1893) of hepatic disease, with jaundice, and at the necropsy the following lesions were found: In the left hemisphere there was atrophy of the inferior surface of the occipital lobe, with a shrivelled condition of the whole lobe. Subsequent examination of sections showed softening of the white substance forming the floor of the posterior cornu of the lateral ventricle, the cornu itself being extremely dilated. The grey matter of the occipital convolutions was not involved in the softening, but the white substance was atrophied from the tip of the occipital lobe as far forwards as the cerebral peduncles. The convolutions affected were the lingual and the fusiform lobules, together with the posterior third of the gyrus hippocampus. The angular gyrus and Broca's convolution were intact.

The third case was reported in the same year by Redlich,[17] of which the following is an abstract.

CASE 39.—A man, aged sixty-five years, a copyist, had some slight cerebral symptoms for one month only in 1891. A year later he had an apoplectic attack, and on examination two days afterwards his intelligence was found to be slightly enfeebled and right lateral hemianopsia was detected. There was also slight paresis of the right arm and the right side of the face, together with slight diminution of sensibility throughout the right side of the body. There was no word-deafness, and spontaneous speech was unaffected. He had difficulty in naming objects shown to him. He could recognise the number of syllables in words. He sang perfectly both the words and the airs of popular songs. There was complete word-blindness, literal and verbal, both for print and manuscript. He could read numerals slightly. He could only write the first syllable of his name, and could not copy at all. At a second examination, one month later, the following facts were noted. Spontaneous speech was perfect, except that he confused certain words, and had sometimes a little difficulty in finding the right word. The word-blindness was still complete. He then wrote his name very correctly; he also wrote a great number of words slowly and with difficulty, both spontaneously and from dictation, sometimes forgetting a letter. The writing was tremulous, but correct. He copied with difficulty, letter by letter. Death occurred one year and a half after the date of this attack, and at the necropsy the following were the lesions in the left hemisphere: A focus of softening was found involving a great part of the calcarine fissure and the lingual and fusiform lobules, and extending to the posterior part of the occipito-parietal fissure; the cornu ammonis was atrophied;

[14] Fortschritte der Medicin, 1886, p. 463.
[15] Mémoires de la Société de Biologie, Février 27, 1892.
[16] The Disorders of Speech, 1894, p. 340.
[17] Jahrbuch für Psychiatrie, 1894, p. 242.

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the cortical softening invaded the white substance of the occipital lobe and of the fusiform lobule, as well as the posterior part of the thalamus, the tail of the caudate nucleus, and the median portion of the corona radiata. Sections in series of the occipital lobe were made and examined microscopically, with the following results. At the tip of the lobe both the white and the grey substance were intact. The focus of softening corresponded with the fusiform lobule, and the inferior half of the lingual lobule. The forceps major was degenerated only in its median portion; its supero-external portion being intact. The tapetum was in part preserved. The inferior longitudinal convolution as well as the optic radiations were degenerated. The hippocampal gyrus was much altered, as well as a part of the third temporal.[18]

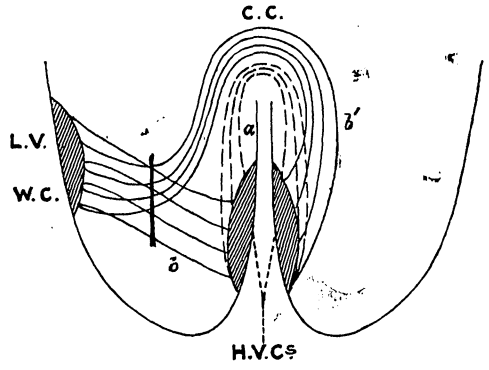
It will be observed that in each of these two cases, as in that of Déjerine, there was no motor paralysis, and only a very slight amount of right-sided hemianæsthesia. There was right hemianopsia in each, but no mention is made of hemiachromatopsia in the cases of Wyllie and Redlich, or of the ability to read words by means of kinæsthetic impressions, though both were present in the case of Déjerine.[19] It seems highly probable, however, that one if not both of these characteristics might have been met with had they been specially looked for. They both existed in one of the two incomplete cases before referred to—namely, in one observed by Gaucher, and recorded by Mirallié[20]; while in the second of these cases, recorded by Batterham,[21] though there is no mention of hemiachromatopsia, the ability to read words by aid of kinæsthetic impressions was present. Word-blindness was not complete in this case, and Batterbam says: "When asked to spell out a word written in the 'round hand' of the copy books, she failed with several letters; but on being told to copy the unrecognised signs, or to run her pencil over them as if writing them, she in most cases recognised their name and significance. This experiment was repeated several times, and the patient was delighted to find that she could 'jog her memory' of letters in this way." Both these cases are well reported, and are worthy of careful study, although there is no record as to the pathological causes of the clinical condition.

The lesions found in each of the three cases where a necropsy was made have shown a striking similarity. In each there was softening and atrophy of the white substance of the occipital lobe, together with more or less damage to certain convolutions—that is, to the lingual and fusiform lobules as well as the hippocampal gyrus and the cuneus, or, speaking more generally, to some of the convolutions on the under and inner surface of the occipital lobe. It seems quite probable, however, that the lesions of the convolutions may be of little significance so long as there is the presence of extensive destruction of the white substance of the occipital lobe. Nothing more definite can be said on this subject at present. Déjerine attaches most importance to the destruction of portions of the white matter—namely, of that in which would be included the "optic radiations" of Gratiolet, the fibres proceeding from the left half-vision centre to the left visual word-centre, as well as the fibres from the right half-vision centre to this same word-centre. This he indicates in a diagrammatic figure of some complexity.

It is clear from the explanation that Déjerine advances of Case 37,[22] and also from what he says elsewhere, that he does not believe in the existence of auditory and visual word-centres in the right hemisphere in ordinary right-handed persons. On this subject he takes much the same view as Lichtheim, and now explains "pure word-blindness" in a fashion analogous to that by which the latter explained "pure word deafness"—namely, by supposing the severance from the left visual word-centre of the associational fibres connecting it with the general visual centre in each hemisphere (see Fig. 6).

I, however, believe in the existence of a visual word-centre in each hemisphere (though unequally developed), and that the two are brought into functional relation with one another by means of commissural fibres in the posterior part of the corpus callosum. I believe also that each of these visual word-centres would be in relation by other associational fibres with the half-vision centre of its own side (which both of us suppose to be commissurally connected with its fellow); and that Déjerine's form of pure word-blindness may be produced by severance of the associational fibres between the left visual word-centre and its corresponding half-vision centre, together with a lesion of the commissure between the

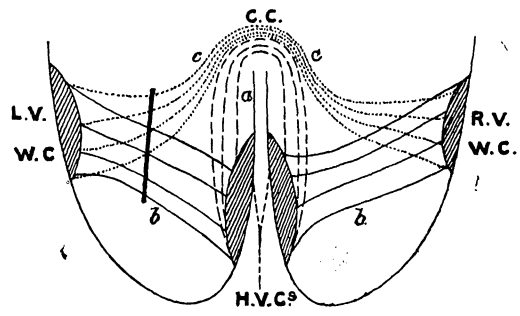
FIG. 6.



A simplified diagram representing Déjerine's view as to the mode of production of pure word-blindness. H. V. C., Half-vision centres. L. V. W. C., Left visual word-centre. C. C., Posterior extremity of corpus callosum, containing commisural fibres *(a)* connecting the half-vision centres, and also fibres *(b)* from the right half-vision centre to the left visual word-centre. (The "optic radiations" have been omitted.) The dark line indicates the site of a lesion which would cut off the left visual word-centre from the half-vision centre of each side.

two visual word-centres, in some part of its course. The isolation of the left visual word-centre would thus be complete; and brought about, moreover, in the same sort of way that I have postulated for the isolation of the auditory word-centre in the condition that Déjerine calls "pure word-deafness."

FIG. 7.



A diagram representing my view as to the mode of production of pure word-blindness. C. C., Posterior extremity of corpus callosum. *c*, *c*, Commissural fibres connecting the two visual word-centres. *b*, *b*, Fibres connecting each half-vision centre with the visual word-centre of the same side.

The commissure between the two word-centres may be damaged, in accordance with my interpretation, by the lesion in the white substance of the occipital lobe extending far enough forwards to involve them, just as Déjerine supposes those from the right half-vision centre to have been destroyed; or else by a separate lesion in the posterior part of the corpus callosum, such as was actually found in Déjerine's case, or in the part of it known as the tapetum.[23]

When we consider how one eye suffices for perfect vision, although only one-half of the proper amount of visual fibres goes to each half-vision centre, we may see all the more fully how complete and intimate must be the co-activity of these centres in vision, even when one eye only exists. That being so, it would be in vain with our present imperfect knowledge to attempt to define the actual mode of association of the half-vision centres with their outlying portions which we name

[18] Concerning some of the less familiar, though for us very important, structures mentioned above it may be well to refresh the reader's memory by quoting what Schäfer says in Quain's "Anatomy" (tenth edition, 1893, p. 129), when speaking of the posterior extremity of the corpus callosum. "The fibres," he says, "from the body and upper part of the splenium which curve over the lateral ventricle form the *tapetum*, whilst a large mass of fibres from the splenium proper curves round into each occipital lobe and is know as the *forceps major*."

[19] Déjerine is inclined to think that achromatopsia may be produced by lesions in the lingual and fusiform lobules. If the hemianopsia were complete, however, from destruction of the "optic radiations," there could be no achromatopsia.

[20] Loc. cit., p. 191.

[21] Brain, 1888, p. 488.

[22] Loc. cit., pp. 87-89.

[23] The tapetum may perhaps include the commissural fibres between the two visual word-centres, and it is specially stated in Redlich's case that these fibres were in part degenerated, as also was the forceps major, which probably includes the fibres connecting the two half-vision centres with one another.

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visual word-centres. All I can say is that such an arrangement as I have previously indicated seems to me to be much more in accordance with all known probabilities than that of Déjerine, who assumes that the right angular gyrus has practically no visual functions,[24] just as he assumes that the posterior half of the right upper temporal convolution has no auditory functions. What I have said towards the end of the last section but one of the first lecture, as well as what we know as to the modes in which recovery takes place in various forms of speech defect, may be considered to lend support to my view.

As I have already indicated, the two modes of producing pure word-blindness are pretty strictly comparable, *cæteris paribus*, with two modes of production of pure word-deafness. One of these forms, which for the sake of distinction may be termed the parietal type of pure word-blindness, is brought about by destruction of the left visual word-centre in persons by whom writing can be executed under the instigation and guidance of the left auditory word-centre, while the other (Déjerine's form), which might be called the occipital type, is due to isolation of the left visual word-centre from the half-vision centre of its own side as well as from the opposite visual word-centre.

At present there seems no very definite means of diagnosing these two types of pure word-blindness from one another during life. The following considerations may, however, afford some help:—

Parietal Type of Pure Word-blindness.	*Occipital Type of Pure Word-blindness.*
Possibly some right-sided paresis.	Probably no right-sided paresis, but possibly some slight right hemianæsthesia.
Speech often slightly paraphasic.	Speech not affected, or slightly amnesic only.
May be no hemianopsia or hemiachromatopsia.	Hemianopsia always, and when incomplete probably also hemiachromatopsia.

These seem to me to be the only approximations to differential characteristics that can be suggested at present, some of them being based upon the fact that destruction of the visual word-centre may be associated with a lesion in the parietal region, and consequently may be associated with some amount of right-sided hemiparesis; while in the cases of occipital type, if the lesion of the occipital lobe extends sufficiently far forwards, we may get more or less marked hemianæsthesia without any motor paralysis. The association of alexia without agraphia in a person whose speech is not appreciably interfered with, and who has slight hemianæsthesia without paralysis, would, in fact, afford strong presumptive evidence that the pure word-blindness was of the occipital type.

(7) Defects Resulting from Combined Lesions in the Left Auditory and Visual Word-centres.

It will have been seen from the cases already recorded that destruction of the left auditory word-centre or of the left visual word-centre alone, and especially in the last case, may be quite compatible with the preservation of a fair amount of intelligence. The result is, however, altogether different when both these centres are badly damaged at the same time. The unfortunate individuals thus affected are generally reduced to a most deplorable condition, seeing that they can usually neither speak nor write intelligibly, and that they are unable to understand the speech which they hear or the language they may see either in writing or in print. They can mostly communicate with others, and be communicated with, only by means of signs and gestures; and at the same time they must necessarily suffer a very distinct amount of mental impairment, owing to the blotting out of the principal linguistic symbols by means of which all but their most elementary thinking processes are carried on.

Although this is the kind of condition that has been met with in the great majority of these cases, yet a careful examination of their published records shows that, as in cases where there is destruction of the left auditory word-centre, so here with combined lesions of the auditory and the visual word-centres, a considerable variation is met with in different cases. These variations depend partly upon differences in the relative completeness of the lesion in one or other of these centres; and in cases where one of the centres is incompletely destroyed probably also to a considerable extent upon individual variations in original endowment—that is, upon the question whether the patients are "auditives" or "visuals," as well as in part upon their degree of education. Where the destruction of both the left word-centres has been complete, moreover, variations in symptoms may depend upon the degree of development of the corresponding centres in the opposite hemisphere.

Taking the lists given by Amidon and Mirallié, and including one case by West[25] not contained therein and two of my own, I find seventeen cases in all of this double lesion; of these, it seems desirable to exclude two—one by Chauffard, as the patient only lived three days, and one by Shaw, seeing that the patient was demented and that the clinical record is very incomplete.[26] Of the remaining fifteen cases, in three the lesion was complete in the visual and partial in the auditory word-centre (in Amidon's No. 4, Mirallié's No. 38, and in West's case); in two it was complete in the auditory and partial in the visual word-centres (in Amidon's Nos. 1 and 2); in four cases it was incomplete in both word-centres (Mirallié's Nos. 8, 23, 24, and 48); whilst in six cases the lesion was pretty complete and equal in both word-centres (Mirallié's Nos. 5, 16, 26, and 29, and my own two cases).

Looked at from another point of view—that is, as to the kind of speech defect presented by these fifteen cases—I find that speech was more or less good in two (Amidon's Nos. 1 and 2); that there was more or less marked paraphasia or actual jargon speech in seven (Amidon's Nos. 5. 16, 23, 29, 38, and 48. and West's case); and more or less complete speechlessness in six (Amidon's No. 4, Mirallié's Nos. 8, 24, and 26, and my own two cases). These very different results may at first seem very astonishing to others, as they did to me. But the more one thinks of cases presenting this double lesion, in which speech was only slightly paraphasic or fairly good, the more it seems necessary to suppose that the auditory word-centre of the right hemisphere must have been able to act upon and with the left glosso-kinæsthetic centre. These cases cannot be explained by supposing that speech was produced by the right auditory word-centre acting with the right glosso-kinæsthetic centre, because all present knowledge goes to show that this could only be brought about after a long interval, during which these centres were educated to act together. In the cases in question, on the other hand, there was evidently no such interval, seeing that the modified speech was initiated in each case just after the brain lesion occurred. It is worthy of note also that in the two cases in which speech was best preserved (Amidon's Nos. 1 and 2) the visual word-centre was only partially damaged, so that some help may also have come from its coöperation.

A few cases may now be given in illustration of the different degrees of speech defect associated with this double lesion with which we are now concerned. The first is one that was published nearly twenty years ago by Broadbent in which there was well-marked jargon-speech.[27] It is given here only in abstract, and is No. 5 of Mirallié's list.

CASE 40.—A man, aged sixty years, previously very intelligent and able to read and write well, but of intemperate habits, had had some sort of fit two weeks before admission to St. Mary's Hospital. From that time he had kept his bed and had been unable to speak intelligibly. When seen there was no hemiplegia, but slight paresis of the right side of the face and some amount of right hemianæsthesia. His speech was an inarticulate jargon and preserved the same character throughout. When questions were asked he attempted to reply, but as a rule nothing resembling a word could be detected in what he said. The voice was inflected and he appeared quite unconscious that his speech was mere gibberish. He seemed to have some idea in his mind and to think that he was giving expression to it. Besides speaking after questions, he would go on talking, addressing himself to one or another of those present, the whole of what he said being an incomprehensible ramble, though at times a distinct word or phrase would slip out. When excited the phrase, "If you please," was several times heard distinctly. He seemed to understand nothing that was said to him, and when told to shut his eyes or give his hand there was never any attempt at compliance. He was similarly quite unable to read writing. [Nothing is said about his ability to read print or his capability of writing, but he was probably incapable of doing either.] He would sit up in bed and appear to watch with interest what was going on in the ward. When the meals were brought in he looked for his portion, and ate his food

[24] One result of this supposition is that in endeavouring to account for the writing of an aphasic person with the left hand he assumes that the right hand and arm centres are stimulated from the one and only visual word-centre, the left—in fact that the left hand and arm are in part under the direction of the left hemisphere for writing movements, while for all other kinds of movements of the left hand and arm the right visual word-centre would, as usual, coöperate with the kinæsthetic centres of the same side. I must confess that this does not seem to me to be very probable.

[25] Brit. Med. Jour., vol. i., 1896, p. 1242.

[26] These are Nos. 5 and 31 of Mirallié's list.

[27] Transactions of the Royal Medical and Chirurgical Society, 1878, p. 147.

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naturally. When the bowels were about to act he called the attention of the nurse by knocking on his locker and then pointing to the commode. There was never anything extraordinary in his behaviour. He died about three weeks after his admission to the hospital. At the necropsy softening of the posterior part of the left hemisphere was found in the region supplied by the third and fourth branches of the Sylvian artery. The convolutions softened were the supra-marginal lobule and the angular gyrus throughout their whole extent, and also the posterior half of the first temporo-sphenoidal gyrus, together with some portions of adjacent occipital and posterior parietal convolutions. Broca's region and the anterior half of the brain as a whole were unaffected.

This is a fairly typical case, the destruction of both the word-centres being complete and speech reduced to an unintelligible jargon. In the next case (No. 29 of Mirallié's list) the lesion was equally complete, though the derangement of speech was less marked—a very bad form of paraphasia being present rather than jargon-aphasia. It has been described at length by Déjerine,[28] but I give it here only in abstract.

CASE 41.—A man, aged sixty-three years, was admitted to the Bicêtre on July 3rd, 1890, having had an apoplectic seizure on the previous evening. The patient was of vigorous appearance and intelligent face, and was said to have been able to read and write previously to his illness. When examined on July 4th he was found to be in a semi-comatose condition, from which he could only be roused momentarily with difficulty. He remained in this condition for four days, and then gradually recovered consciousness. On July 20th he walked about the ward and showed no appreciable hemiplegia. He began to speak two or three days before, but his speech was much altered and he understood nothing of what was said to him. On saying to him, "Comment vous appelez-vous?" he replied, "Je suis et, surtout c'est-à-dire, c'est-à-dire, non, je ne peux pas po pa." "Quel métier faisiez-vous?" "Mon père se nommait, non, peux pas." The only words that he pronounced in a suitable manner were "bonjour" when one approached his bed, and "merci" when one gave him something to eat or drink. When a newspaper or some manuscript was shown to him he looked at the paper and then at the person who had given it to him, and it was evident that they had no meaning for him. When a pen was given him he held it correctly as if he were going to write, but made only meaningless marks on the paper, either when he was left to himself or when a phrase was dictated to him in a loud voice. If one gave him a phrase in manuscript to copy he copied the letters one after the other, but very badly and the words were illegible. Nevertheless, the general form of the letters was preserved, while in his spontaneous writing or that from dictation he was incapable of tracing even the rough outline of a letter. The patient recognised, however, quite well all the objects and persons around him. His hearing was also intact, and the slightest sound behind him would cause him to turn his head. On Dec. 4th, 1890, the word-deafness remained about the same, but he could now recognise one question, "Comment vous appelez-vous?" and gave his surname correctly. But to any question that anyone put to him immediately afterwards he still answered by giving his name. If after an interval one came back to him again he no longer replied as before with his name to all questions, but by words or phrases that had no relation to the question. For example: "D.: Qu'ayez-vous fait hier? R.: Mon père était marchand de vins.—D.: Dans quel hôpital êtes-vous? R.: Je ... vou .:. je voudrai ... non ... papapa ... tou.—D.: Quel age avez-vous? R.: J'avais cent soixante-trois.—D.: Quel métier faisiez-vous? R.: Trois ans, six ans, trente trois, jamais trente un ans jamais, trente, trente, trente, trente-trois ans, jamais trente, trente, trente-trois ans." The patient was still unable to read, but for the last few days he had recognised his name and been able to pronounce it aloud, though he could do this with no other word. Right lateral hemianopsia seemed to be present. The agraphia remained complete as before. The patient remained in about the same condition for another three weeks; then his whole condition changed, he gradually sank into a semi-comatose state (owing to the establishment of a large area of softening in the right hemisphere), and about a month later he died. At the necropsy, in addition to a large area of recent softening in the right hemisphere, there was found a large area of yellow softening completely destroying the visual and the auditory word-centres of the left hemisphere, which also extended forwards into the parietal region and backwards into the occipital. Section of the hemisphere also showed that the lesion extended inwards through the white substance as far as the posterior cornu of the lateral ventricle.

It is worthy of note that there was here no speech at all for sixteen days from the onset of the seizure and for about eight days after the recovery of consciousness; and, looking to the completeness of the destruction of the left auditory and visual word-centres, it is difficult to suppose that the speech which was subsequently possible could have been effected without the aid of the right auditory word-centre. Much the same thing may be said in reference to the next case, although the speech trouble was more like that met with in incomplete motor aphasia. It is No. 8 of Mirallié's list, and has been recorded by d'Heilly and Chantemesse.[29] The following is a brief abstract.

CASE 42.—A woman, aged twenty-four years, became suddenly speechless on Oct. 12th, 1881. She entered a hospital at once. To all questions put to her she would repeat five or six times with different intonations. "Because, because, because." Sensibility and motility seemed perfectly intact. On Oct. 15th, in reply to a question, she answered, "Thank you, sir, I am better"; though, as Bernard points out, she was never able to repeat it. She looked very intently at the speaker, but words seemed to wake in her no image, no remembrance. When told to put her hand to her head she hesitated an instant and appeared to be trying to remember something, but she remained motionless. When the command was accompanied by a suggestive gesture she quickly obeyed. Hearing and vision were both preserved. Her power of calculation seemed preserved, as she could play écarté skilfully, making no errors as to colour or value. When asked, she called her knife, tumbler, food, wine, and plate each "du plan." When an orange was held out to her she answered all questions, "Yes, sir," and reached for the orange. Once when her soles were tickled she said, "Please don't, sir." She could neither copy, write from dictation, nor read. She died on Nov. 3rd from marasmus. There was found at the necropsy a softening from thrombosis of the fourth branch of the left Sylvian artery. This softening involved the upper posterior half of the first temporal convolution, most of the inferior parietal lobule, the supra-marginal gyrus, and some of the sigmoid gyrus. The softening affected only the cortex, and on section was seen to implicate only the extreme posterior hidden part of the insula.

It seems clear from the records of the necropsy that the left auditory word-centre was here only partially destroyed, so that perhaps we need not suppose that help came from the right auditory word-centre for the production of the few short sentences that this patient was capable of uttering.

In a patient recently under my own care, suffering from a softening of the same region of the brain, during the three weeks that elapsed before death occurred there was absolutely no speech. The following are a few notes concerning this case.

CASE 43.—A woman, aged fifty three years, was admitted to University College Hospital on April 28th, 1896. Whilst suffering from inflamed varicose veins in the left leg she began to feel ill on April 22nd, suffering from headache and irritability. On the morning of April 26th these thrombosed veins were rubbed with an embrocation. She went to bed on the night of the 26th with no change in her symptoms, but the next morning she fell from the bed in an unconscious condition. She twitched her left arm and muttered indistinctly for a time, and remained in a stuporous state up to the time of admission (9 A.M. on the 28th). She was found to be semi-conscious and paralysed on the right side, showing some irritability on examination, throwing her left arm and leg about, and occasionally uttering some inarticulate sounds. There was no cardiac bruit; the respirations were natural. Her temperature was 100·8° F. She remained in much the same condition, semi-conscious, yawning frequently, rather restless at times, till May 5th, when she became more conscious, but made no attempt to speak or even utter any sound. She could not be induced to protrude her tongue. She did not attempt to respond or show that she understood any simple request, and appeared to be perfectly word-deaf. She took no notice of written sentences held before her. The right arm was rather rigid. On May 11th she seemed more conscious than she had been but did not speak, nor did she seem to understand anything. One-fourth of albumin was found in the urine. On May 14th she began to suffer from sickness and some diarrhœa (the albumin in the urine persisting), together with lung complications, and she died about midnight on May 18th. At the necropsy the third frontal and the lower part of the ascending frontal convolution were found to be healthy, both externally and on section; but the lower part of the ascending parietal, together with the whole of the supra-marginal and angular gyri and the two upper temporal convolutions, were completely softened throughout. The softening extended to, and partly involved, the outer part of the thalamus and the corpus striatum; it also extended backwards slightly into the occipital lobe. The right hemisphere showed no focal lesion of any kind.

Here, then, there was complete loss of speech as a result of destruction of the auditory and the visual word-centres in the left hemisphere, together with some adjacent tracts of brain tissue, which lasted continuously for just over three weeks. We have seen that Déjerine's patient (Case 41) also remained speechless for sixteen days after the onset of his seizure, and then began to talk in a badly paraphasic fashion. It seem probable, therefore, that my patient might also have developed some sort of power of speaking had she lived longer.

My second case belonging to this group is one of a very extraordinary nature in many respects, the patient having lived over eighteen years after his seizure, and his speech defects having remained constant throughout almost the whole of this period. His spontaneous speech was limited to a few words, and, though he was neither word-deaf nor word-blind, both the auditory and the visual word-centres of the left hemisphere were completely destroyed. The record of this remarkable case, together with illustrations of the brain, will be published in the forthcoming volume of the Transactions of the Royal Medical and Chirurgical Society for 1897.

Time does not permit of my referring either to "object-blindness" or so-called "optic aphasia"—interesting conditions, one or other of which may sometimes be met with in association with such cases as we have just been considering, where lesions producing speech defects extend into the occipital lobes. These conditions, together with other parts of the subject, I shall hope to deal with before long in some other way.

My object in these lectures—after laying down some general principles needful, as I consider, for the proper understanding of speech defects, and culminating in my non-recognition of any distinct and separate "centre for concepts," such as

[28] Comptes Rendus de la Société de Biologie, 1891, p. 167.
[29] Bulletin de la Société Anatomique, 1882, pp. 324-338.

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many postulate—has been to limit myself to a definite set of problems concerning the functional relations of the four cortical word-centres. I have striven to show that the overweening importance attached by many to the functions of Broca's centre is not justified by facts—that too many disabilities have been supposed to result from its destruction by some, and that the power of independent activity ascribed to it by others does not exist. I have tried to show the way in which these views have influenced others to deny the existence of a cheiro-kinæsthetic centre and the fallacious nature of many of the arguments on which they rely. Again, while alluding to the unsatisfactory nature of the nomenclature at present in vogue, I have tried to show that the so-called "sensory aphasia" of Wernicke has no claim, as he supposed, to an independent existence, but really includes a large number of distinct conditions, each of which has to be studied separately and in detail. The great importance of the auditory word-centre has been dwelt upon, as well as the variety of defects produced by functional and structural derangements of this region, and also by its isolation. A study of these results, taken in conjunction with that of the less varied defects resulting from disease and from isolation of the visual word-centre, led to some novel conclusions. We have seen the enforcement of the view to which we had previously been driven as to the comparative powerlessness of Broca's centre alone; we have found evidence for the existence of an unexpected possible amount of functional substitution between the visual and the auditory word-centres for the production of speech and writing respectively; and, still more surprising, we have found reason for believing that both auditory word-centres are accustomed to act upon Broca's region for the production of speech—as well as much evidence tending to favour the view that even in comparatively simple perceptional and intellectual operations very extensive cortical areas in both hemispheres of the brain are called into simultaneous activity.

I can only say, in conclusion, that my best thanks are due and are given to the College for the opportunity that has been afforded me of submitting the results of my labours to its consideration, and to you all for the patient manner in which you have listened to minute details which, I fear, must have been often wearisome and somewhat difficult to follow.

THE MALIGNANT TUMOURS OF INFANCY, CHILDHOOD, AND YOUTH.

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DURING the last half century vast additions have been made to our knowledge of the malignant neoplasms of early life. Unfortunately, most of these precious acquisitions are still buried in the archives of learned societies, where they are beyond the ken of practitioners. In this country not a single endeavour has hitherto been made to make known to the profession the general results thus attained; and in the standard text-books—even in those that deal specially with the diseases of children—little or nothing is to be found on the subject. Hence these diseases are frequently overlooked, and the real nature of the malady is often never even suspected. I was particularly struck with this deficiency; when, desiring to compare my own experience of this particular class of tumours with that of others, I found to my surprise, that no standard of comparison existed, for my predecessors had recorded nothing but isolated cases and small groups of such cases. Under these circumstances I determined to supply the deficiency by collecting cases and reviewing the chief publications in the light of my own experience. Of this undertaking the present article is the outcome. The subject having proved much larger than I at first anticipated, I have endeavoured to make my review representative rather than exhaustive.

Notwithstanding the large number of instances of malignant disease in early life lately recorded, it will be gathered from the subjoined data that fewer cases originate during infancy and childhood than at any other periods of life. Of 941 consecutive malignant neoplasms under my own observation only 25—i.e., 2·6 per cent.—commenced under the age of twenty years; of these, 8 started in the first quinquenniad, 2 in the second, 6 in the third, and 8 in the fourth. This subject is further illustrated by the following table from the Registrar-General's Report for 1886, which shows a lower proportion of cases at early periods—viz., 1·15 per cent. under twenty years of age:—

TABLE I.—*Showing the Deaths due to Malignant Disease at Different Age Periods.*

Sex.	All ages	Under 1 year.	1-2	2-3	3-4	4-5	Total under 5 years.	5-10	10-15	15-20	20-25	25-35	35-45	45-55	55-65	65-75	75-85	Over 85	Total both sexes.
Males	5754	8	6	6	6	5	31	18	18	33	50	145	426	1095	1727	1555	591	65	16243
Females ...	10489	7	6	6	6	6	31	15	16	25	41	321	1313	2464	2922	2330	910	101	

It is sad to have to relate that during the last decennium the mortality due to malignant disease in early life, for the first time, showed a decided increase, although the increment of increase is proportionally much less than at subsequent age periods. This is illustrated by the following table from the Registrar-General's recently issued decennial supplement.

TABLE II.—*Showing the Number of Deaths from Malignant Disease in Early Life per Million Persons Living at each Age Period.*

Age periods.	Under 5.	5-10	10-15	15-20	20-25	All ages.
1861-70	13	7	7	7	17	384
1871-80	12	7	7	15	27	468
1881-90	20	10	11	20	35	589

It will be gathered from Table I. that the relative sex liability to malignant disease in early life shows no such marked differences as are noticeable at more advanced ages.

I have been greatly impressed, as I shall subsequently have occasion to point out, with the large proportion of the neoplasms of early life that obviously arise in connexion with embryonic developmental aberrations. This gives to the whole group a certain peculiarity, but it seems to me undesirable on this account to make a special morbid entity of these neoplasms, as Birch-Hirschfeld and others have proposed. I have found that the proportion of cases in which a history of heredity is recorded is considerably smaller than in the corresponding neoplasms of adult life, consequently I cannot corroborate Hutchinson's dictum that "malignant disease in young persons is generally inherited." The newly-born infants of mothers themselves the subjects of malignant disease are hardly ever thus affected.

Nearly all the malignant tumours of early life are of a sarcomatous nature; true cancers—i.e., malignant epithelial neoplasms—are at this period exceedingly rare.

Of my 941 neoplasms 806 were cancerous and 136 sarcomatous; in only one of the former did the disease begin under twenty years of age, whereas the latter furnished 24 cases.

With regard to the localisation of the disease, this depends largely upon the age at onset. Duzan[1] collected the records of 182 cases in early infancy, which were distributed as follows: Eye in 70 cases, kidney 45, testis 11, prostate 8, bones 5, tongue 5, brain 5, abdomen 5, lung 4, dura mater 4, pancreas 3, liver 2, tonsil 2, rectum 2, and the stomach in 1. During the third and fourth quinquenniads certain of the long bones, together with the superior

[1] For bibliography see end of article.

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and inferior maxillæ, are the commonest seats of the disease.

An analysis of my 55 consecutive cases shows that 13 originated in the first quinquenniad, viz.—in the eye 7, kidney 2, testis, inferior maxilla, basis cranii, and tibia, of each 1; in the second quinquenniad 6 originated, viz.—liver, parotid, kidney, tibia, cervical lymph gland, and inferior turbinated bone, of each 1; the third quinquenniad furnished 16 cases, viz.—inferior maxilla 4, femur 3, fibula 2, tibia, humerus, acromion, parotid, thigh muscles, external ear, and retina, of each 1; in the fourth quinquenniad 20 cases arose, viz—in the femur 4, superior maxilla 3, inferior maxilla 3, lymph glands 2, testis, pharynx, kidney, parotid, basis cranii, humerus, orbit, and subcutaneous connective tissue of back, of each 1.

The great majority of the neoplasms of early life either are malignant or tend to become so; such tumours progress more rapidly, disseminate more frequently, and after removal recur with greater rapidity, than their congeners of adult life. A large proportion of these malignant neoplasms are undoubtedly congenital; that is to say, they originate during intra-uterine life. Moreover, they are often multiple *ab initio*, and not unfrequently bilateral. As I shall subsequently have occasion to mention, all tumours of this kind probably are sarcomatous; but many alleged examples of congenital "cancer" have been recorded. It must be remembered, however, that the sharp distinction now made between cancer and sarcoma is of comparatively recent origin. Many of the malignant tumours of infancy and childhood contain epithelial elements, and this has often led to their being christened "cancer." Numerous examples of this kind have been recorded, especially in connexion with the renal, testicular, ovarian, hepatic, gastric, and intestinal malignant neoplasms of early life. It is now generally recognised that the epithelial elements in such cases play only a secondary part, and that all such neoplasms really are sarcomatous.

In other instances of alleged "cancer" in early life the diagnosis has been based exclusively on the microscopical appearances, the clinical features of malignancy being conspicuous by their absence. Instances of this kind have been published in connexion with the lips, skin, external genitalia, &c. In short, I conclude that infancy and childhood are completely exempt from true cancer, using this term in the sense of malignant epithelial neoplasm. The earliest age at which cancer has been satisfactorily demonstrated is eleven years, the patient being a girl with cylinder-celled cancer of the rectum (Stern).

I have met with the following instance of rodent ulcer in a young woman in whom the disease began at the age of fourteen years.

CASE 1.—At the early age of fourteen years the patient noticed "a small pimple" of the skin of the left temple. No wart, mole, or obvious congenital blemish was previously there. In the course of a few years the "pimple" became a small, scab-covered sore. It took eight years for this sore to attain the size of a sixpence and five years more for it to attain the size of half-a-crown. It was then cauterised, after which it spread more rapidly, involving the left side of the head from the orbit to the ear. It next involved the ear and eyelids, the left sub-maxillary glands at this stage becoming slightly enlarged. Her general health remained unaffected. The ulcer was next scraped, and its peripheral parts extirpated by dissection. Rapid recurrence followed and was destroyed by Fell's paste. Two and a half years later the ulcer was much larger and more like epithelioma, with several adjacent lymph glands enlarged and hard. The disease was again freely extirpated. Three years later it was still progressing, and the orbit was invaded. No further operation was performed. The disease spread in the orbit and perforated its roof, so that the brain protruded through a large chasm. About a year later she died thus from asthenia, the total duration of the disease having been nearly twenty-two years. At the necropsy it was found that the ulceration had ravaged the whole of the left side of the head and face, from the hairy scalp to the lower border of the inferior maxilla, and from the ear to the nose. The left superior maxilla had disappeared, and the pharynx was laid open. The left orbit was eaten away, and the brain projected through its roof. There were no signs of dissemination, either in the adjacent lymph glands or elsewhere. Histologically the disease was typical "rodent ulcer."

With these introductory remarks I will now proceed to the consideration of individual cases, as they are met with in the various organs.

UTERUS.

In early life the uterus and breast are hardly ever attacked by malignant neoplasms. This immunity, which contrasts so markedly with their subsequent proclivity to these diseases, is probably due to their rudimentary condition at birth and during infancy, for it must be remembered that the essential features of their anatomy are almost entirely of post-embryonic origin. No example of congenital malignant disease of the uterus has hitherto been recorded. Under the age of twenty years uterine cancer is hardly ever met with. Of 500 consecutive cases analysed by me the earliest age at onset was twenty-two and a quarter years. Gusserow,[2] by massing the statistics of several Continental and English writers, obtained a total of 3385 cases, and of this large number only two originated under twenty years of age. The earliest age at which the outbreak of the disease has been duly substantiated is seventeen years; Schauta[3] and Glatter[4] have each recorded an instance of this kind, the cervix being the seat of the disease, which was glandular cancer. Mundé[5] has reported a case at eighteen years of age; while Beigel, Tchop, and Eckardt[6] have each met with one at nineteen years of age; the cancerous nature of the affection—"hypertrophy of the cervix with commencing cancer"—in the last case is, I think, dubious. Billroth has seen the disease at twenty years of age. Several instances of so-called cancer of the uterus at still earlier periods have been recorded; but the precise nature of these neoplasms presents some obscurity. Cases of this kind have been published by Rosenstein at two years, Laidley at two and a half years, Ganghofner at seven years, and by Barnes at nine and ten years respectively.

CASE 2.—Rosenstein's[7] patient, aged two years, came under treatment for dysuria caused by an intra-abdominal tumour, which reached far above the pubes. The inguinal glands were enlarged. She died shortly afterwards. At the necropsy a large mass of new growth was found springing from each side of the fundus uteri. There were several nodules of similar growth on the peritoneal surface of the bladder. The mucosa of the uterus, tubes, and vagina was unaffected, and the ovaries were normal. Histologically the tumour consisted of a fine, spindle-celled stroma, the meshes of which contained large polymorphic epithelioid cells. It is described by Rosenstein as "carcino-sarcoma." This anomalous neoplasm appears to me to approximate more closely to malignant anglo-sarcoma than to any other well-recognised type.

CASE 3.—In Ganghofner's case[8] a little girl, nine years old, had an eroded papillary tumour growing from the portio to the vaginal aspect of which it was attached by a distinct peduncle. The symptoms were of two years' duration. The growth was excised, but the patient died from small-pox a few days afterwards. The vagina and adjacent parts were found to be quite free from the disease, and there were no signs of dissemination either in the neighbouring lymph glands or elsewhere. Histological examination revealed the presence of hyperplastic glandular structures beneath the enlarged papillæ. They were evidently derivatives of the cervical glands, and for the most part their lumina were preserved, although the lining cells were often multilaminated. These appearances were thought to warrant the diagnosis of glandular cancer. It seems to me more like a case of non-malignant "cauliflower excrescence," of which several instances have been met with in infancy; this accords with the complete absence of dissemination, although the disease was of two years' duration. The hyperplastic glandular elements were probably of inflammatory origin.

Braetz has described an instance of endothelioma of the cervix at eighteen years of age.

Although in early life sarcomatous neoplasms of the uterus are exceedingly rare, yet they are relatively much oftener met with than cancers. Of seventy-three uterine sarcomata tabulated by Gusserow[9] four began under twenty years of age. Neoplasms of this kind generally present as polypoid tumours springing from the mucosa, and they are usually multiple. In this and in other respects they much resemble the analogous growths so often met with in the vagina of children; and both organs are occasionally thus affected, as well as the urethra and bladder. Cases of this kind have been reported by Holländer[10] in a child seven months old, by Farnsworth[11] at thirteen months, by Pick[12] at two years, by Smith[13] at three years, and by Ahlfeld[14] at three years and four months. Hereford[15] and Clay[16] have related several similar cases. Zweifel[17] has reported a case at thirteen years, and Ahlfeld[18] one at fifteen years. It is evident that these neoplasms are closely allied to the rhabdomyomatous racemose sarcomata of the portio, such as Pernice, Thiede, Rein, and others have described.

VAGINA.

The chief feature in the neoplastic pathogeny of the vagina in early life is the great relative frequency with which multiple polypoid sarcomata arise from its mucosa. In addition to their initial multiplicity these tumours present other special features; they are not unfrequently congenital, and a considerable proportion of them contain striped muscle fibres. These indications point to their origin from developmental irregularities. It will be remembered that the vagina is formed by the coalescence of two pairs of tubes at first widely separated; it is exceedingly probable that during the process of approximation and fusion fragments of muscle matrix, detached from adjacent parts, become included in the developing organ. Most of these peculiar sarcomatous tumours probably originate from dislocated cells connected with aberrant sequestrations of this kind. They have been met with at birth by Gränicher,[19] Chiari,[20] Frick, Schubert, Demme, and others. An excellent specimen of this kind is preserved in the museum of St. Bartholomew's Hospital,

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which is thus described in the catalogue:[21] "A large cluster of polypoid growths removed from the walls of the vagina and from the nymphæ of a child. They were of various sizes and shapes; the largest, about three inches in diameter, was attached to the upper wall of the vagina. They were soft and whitish, some being gelatinoid and pellucid. Histological examination revealed fibro-cellular connective tissue."

CASE 4.—The history of the case was as follows:—At birth a growth "like a bunch of grapes" was observed projecting from the vagina, to the right wall of which it appeared to be attached. It was ligatured and cut off when the child was six weeks old. There was recurrence, but no further operation was done until the child was three years old, when the mass was again ligatured and cut off. This time recurrence was very rapid, for the above described growths were removed only six weeks after the second operation. It was then recognised that the whole of the disease could not be removed, especially in the vicinity of the urethra. Rapid recurrence soon set in, and the child died thus from asthenia three months later.

Growths of this kind are commonest in early infancy. Hauser[22] has met with an instance in a child six weeks old, Frick[23] at seven months, Schuchardt[24] and Kolisko[25] at one year; at rather more advanced ages cases have been reported by Körner,[26] Marsh,[27] D'Arcy Power,[28] Sänger,[29] Soltmann,[30] Pick, Münz, Ahlfeld, and others. Demme has seen a case at seven years, and Kaschewarowa-Ruduewa[31] one at fifteen years; but most cases are met with in children under five years. Growths of this kind may be limited to the vulva, as in cases reported by Thomas[32] and Volkmann. Cancer of the vagina is a very rare disease, even in advanced life, consequently it is surprising to find that of 24 cases tabulated by Kuestner[33] 2 started in young persons under twenty years. Lebert[34] and Guersant[35] have each recorded an example of epithelioma of the introitus in a child only three and a half years old, and Johannovsky[35] has reported a similar case at nine years. Probably these latter cases would be more correctly classed as sarcomata of the type described by Gow.[36]

BREAST.

In early life malignant disease of the breast is even of rarer occurrence than of the uterus. Of 1622 mammary cancers tabulated by Gross[37] the earliest age at onset was twenty-one years. Of 500 consecutive cases analysed by myself the youngest was twenty-four years of age. Haycock[38] has reported a case at twenty-one and a half years, and Erichsen[39] one at twenty-three years. Thus the first four quinquenniads are quite exempt from mammary cancer. Alleged examples of it by Lyford (at eight years), Carmichael (at twelve years), Cooper (at thirteen years), and Home (at fifteen years) were never histologically verified; we may safely assume that the disease in these cases really was sarcomatous. Of 156 cases of mammary sarcoma tabulated by Gross,[40] in 2·7 per cent. the disease supervened before the sixteenth year, the earliest being nine years old. Chambert has met with a round-celled sarcoma, the size of a fowl's egg, in the right mamma of a girl only four months old, and Vieregge with melanotic sarcoma in a young infant. A larger proportion of spindle-celled sarcomata than of other varieties arise during early life, for 12 per cent. of this variety began under sixteen years. In a small round-celled sarcomatous tumour of nine months' growth removed from the breast of a girl aged sixteen years, Billroth[41] found numerous transversely striped muscle cells. A congenital myxoma has been figured by Ashby and Wright.[42] Of 88 cases of cancer of the male breast collected by me, the earliest age at onset was twenty years; Banks[43] has seen a young man with sarcoma of the breast in whom the disease began at twenty years and four months.

OVARY.

A large proportion of the malignant neoplasms of the ovary, which are rare, occur in infants and young children. Of 12 cases in which tumours of this kind were extirpated Aldibert[44] reports that 6 were children between the ages of seven and nine years, and 1 was only four years old. These neoplasms are almost invariably sarcomatous, and both ovaries are often affected. Cases have been recorded by Brown[45] at nine months, Cameron[46] at three and a half years, Marchand[47] at four years, at six years,[48] Croom[49] at seven years, Leopold[50] at eight years, Malins[51] at nine years, Wagner[52] at ten years, Kelly[53] at twelve years, Wagner[54] at thirteen years, Smith[55] at fourteen years, and by Szabo[56] at fifteen years. Doran[57] has found papillomatous cysts in the ovary of a seven months' fœtus. Ovarian dermoid cysts have often been met with at birth, in infancy, and in childhood; but I am not aware that at such early ages malignant disease has been observed in connexion with them. Doran[58] has, however, seen an instance of this at seventeen years and Hauke[59] at fifteen years.

Several examples of alleged cancer of the ovaries in infancy and childhood have been published; but so little that is reliable is known of ovarian cancer that I hesitate to accept them as such. Mengershausen,[60] Leopold,[61] Gussenbauer[62] (at eight years), Kahlden,[63] and Hennig[64] have recorded cases of this kind. What appears to be a duly authenticated example of cancer of the ovary at fifteen years of age has been reported by Doran.[65] It is noteworthy that these ovarian neoplasms, unlike their congeners of the testis, hardly ever contain heterotopic structures such as cartilage and striped muscle—at least, I know of no recent instance in which their presence has been demonstrated.

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(*To be continued.*)

THE NOTIFICATION OF TUBERCULOSIS.[1]

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THE following paper is in no sense intended to be scientific or abstruse, and I would therefore ask for some indulgence if my observations are somewhat brief and desultory.

It is requisite, however, that I should state some fundamental facts about the propagation of phthisis as a basis of action. First, then, we know more about the modes of propagation of tubercle than we do about those of any other of the infectious diseases with which we are familiar. This is sufficiently clear if we consider the facts. As a result of Koch's investigations we are aware that the tubercle bacillus is the invariable antecedent of tuberculous changes and that it is the cause of most diverse conditions, including tuberculous phthisis, tuberculous enteritis, tuberculous ulcers whether of the mouth or glands, tuberculous diseases of

[1] A paper read before the Manchester Medical Society on April 7th, 1897.

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bones and joints, tabes mesenterica, tuberculous meningitis, and other conditions which I need not now enumerate. Whatever discharging lesion tuberculosis sets up the discharge contains the bacillus in greater or less abundance. It is, however, specially abundant in tuberculous sputum and in the discharges from tuberculous bowels. It is also often abundant in the milk drawn from tuberculous udders. From many experiments we are aware that if tuberculous matter is inhaled, ingested, or inoculated in animals in sufficient amount it is liable to produce the disease. We have good reason for believing that only when the discharges of tuberculous persons or animals have got dried and broken into dust are they able to produce the disease by inhalation. We have also evidence that such tuberculous dust is to be found in an active condition in the neighbourhood of phthisical persons when sufficient precautions have not been observed in the removal of infection. The tubercle bacillus is able to grow outside the body at ordinary temperatures, but only extremely slowly and under exceptionally favourable conditions. It is not probable that this factor enters largely into infection. Our chief object, then, in the prophylaxis of tuberculous diseases must be to prevent any part of the discharges from getting dried or otherwise reaching the internal organs of new persons. But it is also necessary as a subsidiary means of defence, especially in lodgings, to see that the rooms occupied by those suffering from the disease are kept thoroughly cleansed in such a manner as to prevent the dispersion of any infective matter which may have lodged and dried in them. We are further aware that the tubercle bacillus is readily destroyed by direct sunlight, and less readily by good indirect light. Inasmuch, again, as a certain concentration of infection is necessary to produce the disease, differing greatly according to the state of health of the infectee, good ventilation will clearly have the effect of diluting the infected matter and so of diminishing its capacity for mischief. Above all, thorough cleansing with water removes the bacillus, and washing with dilute solution of chlorinated lime destroys it.

No one now disputes that tuberculosis is a communicable disease or that it is communicated. The knowledge, however, is not generally a vivifying knowledge, leading to action. For this the chief reason is that the source of infection is often forgotten—often, indeed, overlooked. Take the case of a girl whom I examined as to suitability for the convalescent home in Southport. She was phthisical, and I put the usual question whether some years before she had not been a good deal with some phthisical person. She could not recollect anything, but just as she was leaving she remembered that about three years before she had nursed for several weeks a cousin who was dying from phthisis. Precisely the same experience happened the other day to a medical man in a case into which he was inquiring, only that the facts were not remembered till a second visit was paid. There is, however, no difficulty for anyone who has previously studied the avenues of infection in making out many histories of exposure to infection. Indeed, I was able, after a second inquiry into deaths from tuberculosis in 1890, to show that a clear history of infection could be discovered in the majority of cases investigated, and to formulate the proposition that healthy persons, many of whom take phthisis, do not contract the disease except after prolonged and demonstrable exposure to infection. There are plenty of instances recorded in which infection has been probably traced from one person to another by inhalation and by direct inoculation, and which may be found scattered over the literature of tubercle. Thus, instances of infection by inhalation are given in Dr. G. A. Heron's book on the Communicability of Consumption; of inoculation of tubercle in Dr. Heron's book and in Dr. Senn's work on Surgical Tuberculosis; of inoculation in veterinary surgeons from cattle in Dr. Heron's book and in Arloing's "Leçons sur la Tuberculose"; and of infection of children by ingestion in Professor Delépine's paper on Tuberculous Infection through the Alimentary Canal. The evidence of infection in cattle and pigs is overwhelming, nor is it less so where sound people have been crowded together with the tuberculous under unfavourable circumstances. I venture to say that any intelligent man who may choose to put the necessary trouble into the work will be able to show a similar history of infection in any consecutive series of reasonably intelligent patients whose histories he may choose to investigate. It is true that this particular inquiry will give some trouble, and one needs, especially at first, to have a distinct faith that the facts will be revealed to the inquirer. To myself, personally, this knowledge came only after the partial failure of one investigation in 1886. But even on the first occasion the true relation of the facts had begun to show itself.

Now, we can show no such record of clearly traced sources of infection in respect of our ordinary infectious diseases such as typhoid fever, scarlet fever, and diphtheria, at all events in a large town. In the great bulk of instances no clear exposure to infection is made out. The reason of this is partly that many cases of these diseases are overlooked altogether, and partly that the avenues of infection are not clearly worked out. The bacillus of typhoid fever grows outside the body, and we do not know with sufficient precision where or under what conditions. We are not thus hampered in respect to tuberculosis. But we are hampered by the long periods of time which have often elapsed since infection occurred. In making such an investigation, therefore, we have first to ascertain when the disease definitely showed itself. We may then, in the case of phthisis in an adult, go back from one to two years for the source of infection. But the latent period is a very variable one. First, we ascertain whether any member of the same family with whom the person under investigation came much in contact was phthisical at such a period as was compatible with infection, or whether any intimate associate was affected. Failing in this we consider the occupation of the person, what materials he worked in, the nature of his work, and the possibility of infection among his co-workers. If he was working previously side by side with a sufferer from the disease, what were the conditions of the workroom? Were they such as to lead to the preservation, concentration, or dispersion of infective matter? It is necessary also to ascertain whether the phthisical person was originally of weak physique or had been weakened by any special cause. Had he sustained any injury? Under such circumstances a comparatively slight amount of infective matter may have been sufficient to produce tuberculosis. By these and kindred inquiries the facts will generally be elicited. The success of such an inquiry is ensured by the circumstance that tuberculosis is not an easily acquired disease by a healthy person, and that is why the etiological inquiry is so much more successful for tuberculosis than for other diseases, when pursued with ardour and persistence. The value of such etiological inquiries does not lie in the fact that they add to the proof that tuberculosis is a disease communicable and communicated—the experimental proof of this is such as to defy cavil; but the clear demonstration of the relation between the infector and infectee carries with it a conviction to most minds out of all proportion to its scientific value. Moreover, in this way we obtain a clear conception of the circumstances as regards personal condition, personal habit, circumstances of the dwelling, circumstances of work, and so forth, which determine the occurrence of infection, that we can get in no other way. The facts fall into their natural groupings. After such an investigation we are not disposed either to overrate or to underrate the influences of such factors as overcrowding, defective ventilation, adverse occupations, previous disease, and so on, and it can be seen that the one ever-present factor is a sufficient amount of exposure to infection, the amount differing according to the state of the individual, although, in preventing the disease from being communicated, other factors have, no doubt, to be taken into account. Nor is such an inquiry without individual results of importance. In my first inquiry in 1886 I was able to say that the most common period between infection and death was between two and three years—a period confirmed by Cornet's inquiry into the mortality of the Catholic nursing institutions. These inquiries also brought out the influence of alcoholism.

The record of Manchester work is already an excellent one in regard to the investigation of tuberculosis. For something like twelve years Dr. Arthur Ransome has advocated the instruction of tuberculous subjects in the methods of prevention, and no doubt a decided effect has been gradually produced on the public mind by the distribution of the leaflets of the Manchester and Salford Sanitary Association. A movement was also started by Dr. Ransome to disinfect the rooms occupied by tuberculous subjects, and also those in which such persons had died. This was, however, never prosecuted on any great scale, probably because the methods of disinfection were felt to be, at that time, insufficient. There was never in Manchester, be it said, anything approaching the notification of phthisis properly

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understood. At the same time that Dr. Ransome was pursuing this object in Manchester we were distributing information in Oldham on the means of preventing the disease. This information was sent to every house in the borough, as has since been done in Manchester. This matter of popular instruction has been taken up with considerable vigour in Lancashire, and also, of late, in other parts of the country. Doubtless these instructions have produced an impression, though of what magnitude we have no means of telling.

Our chief contributions to the scientific knowledge of the disease in Manchester have come from Professor Delépine, as I do not need to say. Let me mention one or two points. Professor Delépine's observations have greatly helped in giving certainty to the view that the bacillus of human tuberculosis may be grown in suitable media at the ordinary temperature of the atmosphere, though such growth is very slow. He has added to our knowledge of the method of inoculation as a means of diagnosing tuberculosis. In conjunction with Dr. Ransome he has shown in an adequate manner that light possesses the power of destroying tubercle bacilli, a knowledge which had previously been in part assumed. By his investigations on the action of chlorinated lime he has furnished us with a cheap and efficient means of disinfection, which at the same time, in a proper degree of dilution, is quite safe. Dr. Harris's observations at the Manchester Royal Infirmary have added precision to the facts which show that tuberculosis is often recovered from, a matter of great moment both from the point of view of prevention and as regards treatment. I may also mention Dr. Kelynack's recent observations on the connexion of the occurrence of tuberculosis of the abdomen with cirrhosis of the liver due to alcohol. Dr. Dreschfeld's experiments on the ingestion of tuberculous meat may also be mentioned, though these do not so much concern us.

Notification of phthisis.—In the light of our existing knowledge it seems to me that, whatever the difficulties may be, we ought to try notification of tuberculosis. As I have already said, the cases which would be notified are all cases with tuberculous discharges and also cases of tabes mesenterica. What, now, are the difficulties to be encountered? The first difficulty is one of expense. No doubt the expense is an important matter for the health authority to consider, but it scarcely needs to be much considered here. I may say, however, that looking to the good which I believe we are certain to achieve, the money would be better spent than in regard to any other disease. As regards actual expenditure in notification fees, the average amount would not necessarily exceed that expended on all the other infectious diseases. There are, however, special difficulties attaching to this matter of notification. The duration of a case of tuberculosis is considerable, and the medical attendant is often changed in the course of the illness. If the full fee were to be paid to every medical man consulted by a tuberculous patient the expenses would amount to a large figure. To avoid this I propose to pay the fee only once. If the case were notified a second time by another medical man a small fee would be paid to cover expenses, while an intimation would be sent to him of previous notification with all particulars. Notification would, however, be compulsory. As regards public institutions, it is necessary to remember that a certain number of the cases would not previously have been seen by a medical man. The names and addresses of the cases should, therefore, be recorded and forwarded to the health office, say, once a week. For this service a small annual sum might be paid.

What, then, might we hope to obtain from notification of cases of tuberculosis? In the first place, we should have a continuous record of the persons affected, of their addresses, and of the places where they carried on their employment, or of the school or other daily resort of the person reported. Such a continuous record would clear up many dark places in the history of the propagation of the disease, and would enable us to know precisely where to apply a greater urgency of precautions. In the second place, it is incontestable that the propagation of tuberculosis is much furthered by the adjuvant influence of certain insanitary conditions, by overcrowding, by damp, dark, and ill-ventilated dwellings, and by other influences which would come under the scope of an inquiry instituted by the health office. These conditions it would be the business of the health department to ascertain and remove. In the third place, notification would enable us to deal in an adequate manner with the personal precautions required to be taken by the patient to avoid infection. At present we have no means of knowing to what extent such personal precautions are enjoined by medical men, and I am afraid it is quite certain that they are to a large extent neglected. The proposal is that the health office should coöperate with the practitioner in getting necessary precautions carried out. A certain degree of constraint would necessarily arise in this manner. Inquiries would be made from time to time by the representatives of the health office, on forms prepared for the purpose, of the actual steps taken by the person affected to protect the members of his family and his fellow workers from infection, and an effort would be made to induce phthisical people to carry out necessary precautions, such as those relating to the interception and removal or destruction of sputum at home and in the workshop. As Cornet has abundantly shown, sufferers from tuberculosis, in the absence of such precautions, are a serious danger to their neighbours as well as to themselves, but, if the necessary precautions are carried out, they need not endanger anyone. It is, therefore, not at all necessary to deprive the phthisical of their employment, but it is, on the other hand, remarkable how long they have been allowed to endanger and endamage others. All this needs, however, to be carried out with discrimination, although I do not foresee any great difficulty, if much labour, in obtaining what is needed by the joint action of the medical attendant and of the health office. In the fourth place, as an auxiliary means of defence, it is necessary, especially where you cannot be sure that a strict personal hygiene has been carried out, to have the rooms occupied by tuberculous persons disinfected. The extent to which this is necessary cannot be gauged until, by careful and sufficient observation, it has been ascertained to what extent personal hygiene can be secured. With strict personal hygiene repeated disinfection is not needed. With less strict personal care, such as must often inevitably occur in the last months of life, it is more necessary. Disinfection should be carefully carried out after the death of a phthisical person. Especially is this the case where, as with lodgings, the room is certain to be speedily used by some other person, probably healthy. Besides the advantage of dealing directly with the insanitary conditions which I have mentioned, much valuable information may be obtained in regard to the previous health, habits, and circumstances of the tuberculous which may be supposed to determine the risk of infection. Here, again, the coöperation of the medical attendant would be indispensable. In fact, there is no doubt that to bring a system of notification into successful working implies an even closer relationship between the medical attendant and the health office than now exists. It will be manifest that much work will be thrown on the health office by the notification of phthisis. In order properly to present and utilise the facts of notification it will be necessary to be able to refer at once to the name, address, and principal facts for any case previously reported. This can be done, but it means a good deal of clerical work. The uses to which notification may be applied do not, at present, admit of complete arrangement. They may be presented in a rough shape, but trial alone will enable us to see how the administration will work out. Phthisis stands precisely in the same position now as did scarlet fever, &c., before notification came into force. The only difference is that the problem is larger. Infection in the case of tuberculosis is more easily traced, our knowledge of the precautions necessary is more certain, and our opportunities of usefulness are infinitely greater and more assured. Otherwise there is no difference, except as a matter of administration, between tuberculosis and other notifiable diseases.

There is one scientific question connected with tuberculosis which, perhaps, needs some consideration—viz, the question of heredity. Were tuberculosis congenital, or were there any tissue tendency towards tuberculosis, it might be maintained that our endeavours to prevent tuberculosis would, to some extent at all events, be thereby baffled. There is, however, no reason for supposing that tuberculosis is congenital, except to a trifling extent. As Koch pointed out in 1882, the lesions of tuberculosis are such that the idea of a latent tuberculosis is scarcely to be entertained. Visible lesions of tuberculosis at birth, however, are very rare, and when they do occur point to infection from the mother through the placental circulation. Moreover, statistics given by Professor Delépine in his paper on Tuberculous Infection through the Alimentary Canal show that the records of post-mortem examinations

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available give an almost complete absence of observed tuberculosis in the first two or three weeks of life, the numbers increasing slowly, and then rapidly as the age advances. It is the same with calves. The absence of an inherited latent tuberculosis is further shown by the facts relating to the guinea-pig, the young of which animal, when the mother is tuberculous, is almost never tuberculous, and if reared apart does not become so. Bang's experience with calves is the same. As regards an inherited tissue tendency, we have the facts above mentioned and others of a more general nature, such as the great mortality among healthy people when exposed to intense infection, and also in healthy animals under the same circumstances, and the manner in which the disease has been shown to overrun new populations when freshly introduced among them. Indeed, it would almost seem that infected populations possessed a certain degree of tissue immunity. This conception is strengthened by the large proportion of recoveries from phthisis which we now know to exist, coupled with the temporary refractoriness to tuberculin which is set up after a short course of inoculation. If the recent announcement of the isolation in Koch's laboratory of an immunising body in the bodies of tubercle bacilli be confirmed, this view would be much strengthened. There would remain in that case only the inheritance by the children of tuberculous persons of a weak physique.

Another subject of much importance is the diagnosis of the disease. We have already valuable and much-needed aids in a correct appreciation of commencing tuberculosis. Where a discharge exists we have microscopical examination of the discharge and the extremely delicate test of inoculation, which, however, can only be made in a pathological laboratory. We have also in non-febrile conditions the use of minimal doses of tuberculin, the danger of which is probably not great and which may even be to some extent curative. Finally, we learn from Professor Delépine's paper in the *Medical Chronicle* of April that we may look for a test similar to that now employed for typhoid fever. It would thus seem that we are approaching a period when no error need exist even about living persons, and when, therefore, we may proceed with increased confidence in our preventive measures.

Manchester.

THE PRESENT ASPECT OF THE TREATMENT OF CONGENITAL DISPLACEMENT OF THE HIP.

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THE treatment of this disabling deformity is one that at present exercises the minds of surgeons considerably, because hitherto no particular method has been found to be uniformly successful, and at this time the subject is passing through a transition stage. It is now felt by those who have most experience of the treatment of this affection that operative measures in a wide sense are very far from attaining satisfactory results, and there is, so to speak, a throw-back of opinion in favour of the treatment first initiated by Paci—namely, forcible reduction and the maintenance of the limb in the abducted position. Before going into details it will be advisable, first, to review the various phases through which treatment has passed. There is, however, one considerable difficulty in deciding which is the appropriate treatment for cases, and that is the comparative scarcity of specimens in museums from which to gain definite conclusions. But it would seem that certain factors are always present at birth in truly congenital cases—namely, the acetabulum is, as a rule, in its normal position, though abnormal in shape, being triangular, oval, or elongated, yet very seldom absent.

In early cases, notably those described by Lockwood, the cartilaginous rim is wanting and the mass of fat at the fundus of the acetabulum, the gland of Havers, is much hypertrophied. When the cotyloid border is defective the cavity is almost continuous with a flattened surface on the iliac bone, sometimes covered with cartilage, indicating the new position taken by the displaced head. The head of the femur is round, or irregular, or flattened. In some cases it is said to have been absent even at birth, but this fact is not well authenticated. The neck is short and conical, and forms an angle rather less obtuse than normal with the diaphysis. The round ligament is flattened and slender, or in many cases is absent. The capsule is elongated, thinned, its capacity much increased, and sometimes it is distended with fluid. There is often considerable displacement of muscles, and Lockwood has stated that those which surround the joint participate in the disturbance of position, the obturator externus and quadratus femoris being dragged upwards by the ascent of the head of the femur. The ilio-psoas lies in a deep groove which is situated just below, and internal to, the anterior inferior spine of the ilium, and the tendon of the psoas winds backwards in an exaggerated way to reach the lesser trochanter. Such are the appearances often seen, and the points to be recognised at this early period of life are the abnormal shape of the acetabulum, its shallowness, and the frequent deficiency of the cartilaginous rim around it. In children who have walked the acetabulum is seen to remain small, shallow, and triangular. Above and posterior to it and around the new socket there is sometimes found a growth of bone, which forms a partial rim for the new socket and to which the capsular ligament is attached. The neck of the femur may be shortened or absent, and then the head is supported directly by the shaft, but in other cases the neck is still quite distinct, and an important point is the change in its direction. In cases in which the displacement is dorsal the neck is, as it were, bent backwards; in cases of anterior displacement it is bent forwards, so that it no longer forms a proper angle with the shaft. This is an important point in the question of treatment by manipulative measures, as in some cases, while it is quite possible to get the head in a good position, the whole limb and the foot remain turned outwards or inwards, as the case may be. The capsule is elongated, dilated, and in some cases thinned, while in others it is much thickened. It sometimes has a curious hour-glass shape and its cavity is constricted about the middle. The muscles are stated to be contracted considerably, and their contraction in some cases forms a distinct hindrance to reposition of the head of the bone. In adult life these changes are much exaggerated, but Bradford and Lovett remark that the new cavity on which the head of the femur rests is often deep enough to form a good support. The pressure of the head of the femur in its new position causes absorption of the periosteum and redundant joint-capsule in that place, and the capsule finds a new attachment in the osteophytes thrown out to form an upper rim to the new cavity in favourable cases. Muscular contractures around the joint are best seen in adults, and they are no doubt due to the abnormal position of the head of the femur and to the slight flexion and rotation of the thighs. Considerable shortening is found in the psoas and iliacus and in the peri-trochanteric muscles, while the adductors and internal rotators are affected in an equal degree. Such, then, in brief, are the essential departures from the normal which are found at birth, during childhood, and in adult life.

The methods of treatment of congenital displacement of the hip are three—namely: (1) extension, either in the recumbent position or by apparatus; (2) operative measures; and (3) forcible reduction.

1. *Extension, either in the recumbent position or by apparatus.*—This is the oldest form of treatment, and among its advocates are Pravaz, Buckminster Brown, and William Adams. But to Buckminster Brown should be ascribed the credit of having from the first treated cases in this way with considerable success. He subjected his patient, a little girl, aged four years, to complete recumbency with extension for thirteen months and then allowed her to get about for a year in an apparatus by which she could imitate the movements of walking without bearing the weight on the legs. At the end of two years and three months the trochanters were in place, lordosis had disappeared, and the child was able to run about normally. Unfortunately, the patient, when seen nine years after the conclusion of treatment, had lapsed. In this country Mr. William Adams has advocated this method of treatment, and his experiences are recorded.[1] But, unfortunately, we are not told that the patients were able to get about ultimately

[1] Brit. Med. Jour., Feb. 22nd, 1890

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without apparatus of any kind. I have tried recumbency with extension in two cases with much promise of success, but at present the patients are getting about and walking with an extension apparatus on, and I am waiting until the apparatus has been off for a year before reporting the cases. Sometimes, where it is not possible to submit the patients to prolonged recumbency, I advise the following modification of this treatment—namely, the use of weight-extension at night and the wearing of an extension-instrument by day, the patient being allowed to walk about at will. This plan is very useful in children under four years of age, but is not successful in older children.

2. *Operative measures.*—Those most in use are Hoffa's and Lorenz's. The details of Hoffa's operation are sufficiently well known; it is very severe when carried to its full extent. It almost amounts to amputation at the hip-joint, the femoral artery and vein, the anterior crural and the sciatic nerves alone being left intact, and there is wide and deep gouging of the bone at the site of the deformed acetabulum. Personally I am strongly of opinion that it is not advisable to persuade a patient to undergo Hoffa's operation, because of the unsatisfactory results by which it is so often followed. Hoffa details the results of 112 operations by him on 82 patients; 30 of them had bilateral and 52 unilateral displacements. Death occurred in 3 cases, in 2 of them being due to prolonged anæsthesia, hæmorrhage, and shock, and the third to iodoform poisoning. In 9 cases ankylosis of the hip followed, and return of luxation in 11. Dr. Halsted Myers, in the "Annals of Surgery," August, 1895, remarks that he has notes of 177 cases of Hoffa's operation, or some of its modifications, and amongst these are 6 deaths due directly to operation—namely, 3 of Hoffa; 2 of Kirmisson, 1 from hæmorrhage and peritonitis, eight days after the operation, following perforation of the acetabulum, and 1 from septicæmia; there is 1 death in a case operated on by Broca. Kirmisson states that he knows of a few fatal cases in the hands of other surgeons which he is not authorised to mention. Another point that militates against Hoffa's operation is the fact that cure is by no means certain. Hoffa has himself stated that he wishes it to be distinctly understood that these children cannot be completely cured, since there is always left some shortening of the limb. In bilateral cases, however, he can reduce the waddling gait to a minimum, and can almost overcome the lordosis.

The details of Lorenz's operation are: Division of the tensor vaginæ femoris through a longitudinal incision starting from the anterior superior spine of the ilium, and to the first incision is added another passing transversely inwards at the level of the trochanter; the anterior wall of the capsule is then denuded and the capsule opened by a crucial incision, the acetabulum is hollowed out, and the head of the femur re-formed if necessary; after which it only remains to pull on the latter until it is brought down to a level with the cotyloid cavity; much assistance is now afforded by section of the ham-strings. Lastly, the limb is put up in a position of slight abduction; in four weeks' time massage and gymnastic exercises are begun, and these must be continued for a year. The advantages of this operation consist in causing comparatively little interference with the muscles. In Dr. Halsted Myers's paper in August, 1895, in the "Annals of Surgery," on Congenital Dislocation of the Hip, it is there remarked that Lorenz had then operated on 63 cases and had recorded no deaths and but 3 relapses. Since then Lorenz must have found much cause for modifying his opinion of the value of his operation, as "after much thought and careful observation of the cases he has operated on he resolved to alter his procedure in many cases," and has carried out bloodless reduction with perfect success. This statement coming from so experienced a surgeon as Lorenz, from one who has devoted himself so much to the subject, is worthy of the greatest consideration. But before Lorenz had arrived at this conclusion other surgeons' thoughts were drifting in the same direction. For instance, Professor Schede of Bonn, who has had experience of treating such cases in two ways, either by the operative method or by the method of rest combined with extension and abduction of the limb, reported very favourably of the latter method.

3. *Forcible reduction.*—Paci's manœuvres are carried out as follows. The patient lying down, the surgeon flexes fully the leg on the thigh, and the thigh on the pelvis. This movement carries the head of the femur downwards, especially when assisted by direct pressure. The thigh is now abducted slightly. After this the limb is strongly rotated outwards, and then rather more rapidly fully extended. The last movement throws the head of the femur into, or on, the acetabulum. Paci in 1894 reported on 15 cases, and they were almost perfect a year or more after operation. With the idea of more effectually fixing the head of the femur in its new position or into its proper position, Lannelongue advises the injection of a few drops of a 10 per cent. solution of chloride of zinc at intervals of three or four weeks. This method has answered very well. Lorenz has modified Paci's method, and his present procedure is as follows: First, lowering the head of the femur by traction. Secondly, depressing the head of the femur to the utmost degree by flexion, followed by forcible abduction. The penetration of the head into the cotyloid cavity is announced by a perceptible shock and click. Thirdly, fixation of the femur by a plaster-of-Paris bandage, which prevents reproduction of the dislocation. The plaster-of-Paris treatment should be continued for several months. Lorenz has now employed this method of treatment in 43 cases, aged upwards of six years, and met with success in every case. No apparatus was ever used after the treatment was finished. As a modification Mikulicz employs an apparatus by which extension is made after the reduction, together with considerable abduction, and the head of the femur is pressed firmly into its new position.

It would seem, then, that of the three methods that have been described that of recumbency with extension, although fairly well tried, has not been quite satisfactory; that of open operation — namely, Hoffa's method — is somewhat dangerous, is by no means perfect in its result, and cannot be relied upon, while that of Lorenz, although less severe, yet also cannot be said to be quite perfect, nor can the originator of that operation admit that he himself is quite satisfied with it, while there is to be noted the sudden change of his opinion in favour of the third measure—namely, forcible reduction. For my own part I have been quite unable to convince myself that it is possible, in the first place, to deepen an imperfect and shallow acetabulum in such a way that the head of the femur can be retained in spite of all the shocks of body movement and weight that it has to bear. Nor in the few cases of Lorenz's operation which I have seen has the result been in any sense satisfactory—either the lordosis or some up-and-down movement has remained, or, as in one case I saw, there was bony ankylosis. This was a young girl, aged thirteen years, who went over to Vienna to be operated upon and came back to show herself to me afterwards. I found firm bony ankylosis of the left hip, surely a very serious occurrence in view of the future possibilities of marriage and pregnancy. Nor do I think that those cases which have been operated upon in England have in any sense satisfied the surgeons that Lorenz's procedure is to be relied upon, or that they have a distinct curative value.

In support of these views is the following abstract from the *Sammlung der Gesellschaft Deutscher Naturforscher und Aerzte*, 1896. Professor Schede, who initiated the discussion, stated that out of a total of 99 cases he had in 98 successfully reduced the dislocation by external manipulation. The ages of the patients ranged from infancy to fifteen years. In children who had not learned to walk the reduction was accomplished under chloroform by simple traction on the limb with the thigh abducted. A return of the displacement was prevented by a plaster-of-Paris bandage, which maintained the abducted position of the limb and at the same time exercised pressure upon the trochanter. In all the children where this simple procedure failed it was necessary to make repeated attempts, and especially to overcome in the first instance by means of extension the resistance offered to the reduction by the contracted soft parts. After reduction in unilateral cases, if the child had learnt to walk, he was allowed to go about in a plaster bandage. But inasmuch as the abducted position results in apparent lengthening of the affected limb, the sole of the sound foot must be heightened to a corresponding degree. In bilateral cases it is strongly urged that both dislocations be reduced at one sitting. The thighs are maintained in an abducted position by a plaster bandage like a pair of bathing-drawers—that is, it stops short at the knees. The bandage should be worn for from four to six months. Lorenz formerly the advocate of operative treatment, continued the discussion, and stated that he had been successful in securing reduction by external manipulation in 83 cases. He drew attention to the value of first employing some method of extension whereby the displaced head of the femur can be drawn down to the level of the acetabulum. The joint is then fixed in

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the abducted position until the shorter adductor muscles are sufficiently stretched to allow of the surgeon proceeding to the actual reduction. This latter is accomplished by flexing the thigh to a right angle, and while traction is made in the long axis of the thigh the latter is abducted until the head of the bone enters the socket with a characteristic click. The head may then be felt in its normal position in the inguinal fold midway between the anterior superior spine and the symphysis pubis, while at the same time the thigh becomes visibly longer.

The advantages of securing reduction by manipulation instead of by operation are obvious, apart from the avoidance of risks appertaining to all major operations. There is no scar, there is no possibility of later contracture or of osseous ankylosis, and the after treatment is so simple that children may be treated as out-patients. Operative measures may therefore be said to be restricted in the future to cases in which the manipulative procedure has failed after repeated attempts. Hoffa of Würzburg, Wolff of Berlin, and Kümmel of Hamburg corroborated the opinions expressed by Schede and Lorenz.

It seems, then, that we have reached this position—that operation either by Hoffa's method or by Lorenz's method must be considered seldom necessary, and it is entirely discredited as a means of treating every case of any severity, and that it can only be used as a last resource, and then with no certainty of success, but at considerable risk to the patient. At almost any age up to adult life the manœuvres of Paci, as modified by Lorenz, will be found to afford the best method of treatment. So far, then, we have not attained to any ideal form of treatment of this serious deformity, and the matter must remain for the present in an incomplete stage, but the best we can offer the patient is forcible reduction without an open wound, with the prospect of cure in many cases and of much improvement in others.

Weymouth-street, W.

ON SERUM DIAGNOSIS IN GLANDERS.

BY ALEXANDER G. R. FOULERTON, F.R.C.S. ENG., D.P.H. CAMB.,

IN CHARGE OF THE BIOLOGICAL CHEMISTRY LABORATORY, BRITISH INSTITUTE OF PREVENTIVE MEDICINE.

ALTHOUGH Professor M'Fadyean of the Royal Veterinary College called attention some five months ago to the fact that the serum from a case of equine glanders caused well-marked agglutination in bouillon cultures of the glanders bacillus, no record has hitherto been made of the serum reaction in human glanders. In Professor M'Fadyean's case the serum was diluted with nine times its volume of sterile bouillon and then mixed an equal volume of a bouillon culture of the bacillus. The proportion of serum used was thus one in twenty, and "the reaction was quite distinct after an hour, and at the end of two hours almost the whole of the bacilli had become motionless and collected into large irregular clumps."[1]

In February last I was enabled by the kindness of Mr. Atkinson, house surgeon at King's College Hospital, to investigate thoroughly the serum reactions in a case of glanders occurring in a stable-boy who had been admitted under Mr. Rose. In testing this serum a bacillary emulsion was made as follows. Five c.c. of a 0·5 per cent. sodic chloride solution were added to a five days' old culture of the bacillus on glycerin-agar; the contents of the tube were shaken up gently and then allowed to stand for about an hour in order that any small particles visible to the naked eye might settle. The upper part of the fluid was then pipetted off and the emulsion thus obtained was found to be in every way suitable for the experiments. The bacilli used were of a stock isolated from pus derived from the patient in question. Using hanging drop preparations, in which the proportion of serum to bacillary emulsion was as one to nine, it was found that large clumps always formed before the specimen could be transferred to the stage of the microscope for examination. With one part of serum and nineteen of the emulsion a similar agglutination invariably occurred within ten minutes. Thus the human serum would appear to act more energetically in this respect than does the equine serum as described by Professor M'Fadyean. The agglutinative action of the serum was equally well shown in test-tube experiments. Two series of these experiments were carried out, in one set 0·2 c.c. of the serum with 2 c.c. of the emulsion and in the other 0·1 c.c. of the serum with 2 c.c. of the emulsion being used. There was no appreciable difference in the appearance of the tubes in the two sets of experiments. In either case the upper part of the emulsion began to clear in about six hours, and at the end of twenty hours there was complete sedimentation of the bacilli, which formed a coherent mass at the bottom of the now otherwise clear fluid. Several samples of normal human serum used in the proportion of one part to nine of the emulsion caused no change whatever in the bacilli, whether in hanging drop preparations or in the test tubes. Professor M'Fadyean notes that the same is true of normal equine serum. So far the results of the experiments were quite satisfactory, and in accordance with what has been found to be the action of the serum from cases of cholera, typhoid fever, and diphtheria upon the respective bacteria causing these diseases. But on further investigation it became apparent that this agglutinative action of the glanders serum could not be said to be a specific one so far as the glanders bacillus was concerned, for on repeating the above experiments with a similar bacillary emulsion, but substituting for the glanders serum first anti-diphtheric serum (1 c.c. = 300 normal units) and then four different samples of serum from cases of typhoid fever, it was found that equally well marked agglutination of the glanders bacilli occurred. Similar results were also obtained with bouillon cultures of the bacilli; and it is almost unnecessary to add that control experiments were made throughout.

The result of all this may be summed up as follows. Agglutination of the glanders bacillus can be brought about by contact with (1) a serum from a case of active infection by the glanders bacillus; (2) a serum from a case of active infection by the typhoid bacillus; and (3) a serum from a horse immunised against the diphtheria bacillus. And, on the contrary, no such action is manifested by either normal human or normal equine serum. On reversing the experiments it was found that a certain, though decidedly less active, agglutination of the typhoid bacillus was caused by both anti-diphtheritic serum and glanders serum. With regard to these latter experiments I do not propose to offer any comments now, as I hope to deal fully with them in a paper in the forthcoming volume of Transactions of the Institute of Preventive Medicine. From the above it will be readily seen that the value of the serum reaction in glanders as an aid to clinical diagnosis is extremely doubtful.

As to the interest and immense importance in its bearing on various problems affecting bacterial diseases of the work on serum reactions which we owe to Pfeiffer, Grüber, and Durham there can be no question. But the application of their results for purposes of clinical diagnosis is quite another matter. And without wishing for one moment to underrate the very valuable work in this direction which has been carried out more especially by Widal abroad and in this country by Sheridan Delépine, I would venture to suggest that the absolute specificity of serum agglutination in different diseases has yet to be proved. Indeed, it appears to me to be, in the first instance, most unlikely that the unknown substance which in the serum of typhoid fever—to take that disease as an example—exerts so potent an influence on the typhoid bacillus should be inert as regards other bacteria. One is therefore not surprised to find that the equally unknown, but probably similar, substance in anti-diphtheritic serum has an agglutinative action on both the glanders and typhoid bacilli.[2]

Carlisle-mansions, S.W.

[1] Preliminary Note on the Sero-diagnosis of Glanders, Journal of Comparative Pathology, December, 1896.

[2] With regard to the anti-diphtheritic serum it must not be forgotten that Bordet found that agglutination of typhoid bacilli was sometimes observed with normal equine serum. But normal equine serum has, as already stated, no action of the sort on the glanders bacillus.

THE NEW ELTHAM COTTAGE HOSPITAL.—A dramatic performance will be given on Monday next, May 3rd, at 8.30 P.M., at St. George's Hall, Langham-place, on behalf of the hospital. The play to be performed is the ever popular *Dan'l Druce*. Tickets may be obtained through Mr. Jeken, Bexley-road, Eltham; Dr. Mitchell, Court-road, Eltham; Mr. White, High-street, Eltham; Mr. J. Eagleton, West Chislehurst-park; Mr. E. Hesketh, Court-road, Eltham; Mr. E. R. Sharpe, Court-road, Eltham; and Mr. W. G. Cowell, High-street, Eltham.

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A CASE OF POISONING BY QUININE.

BY GEORGE GRESSWELL, M.A. OXON., L.R.C.P. & S. EDIN., L.F.P.S. GLASG.

I WAS summoned to attend a woman said to be in a fit, and found her at about 11 A.M. prostrated, unable to speak, and with a pallor on her countenance like that of impending death. My first impression was that it was the first stage of a very bad case of influenza, and my second that there had been an apoplectic stroke. Inquiry, however, and further observation soon convinced me that the symptoms were to be referred to a large dose of quinine which had been taken before breakfast. The subject was a woman, aged forty-seven years, and for the last three months there had been no menstruation, the climacteric having, no doubt, supervened. She had just vomited about a quart of what she had taken for her breakfast. When the window and door had been opened, and the patient had been placed in a recumbent posture on the sofa, it was not long before she revived a little, and the pulse and heart-beats showed a very slight improvement, as also did her general aspect, but not in any way markedly until after some hours had elapsed. It appeared that she had taken at least about two teaspoonfuls of quinine (sixpennyworth), and probably more, which she had dissolved in a pennyworth of acid, and soon afterwards had taken her usual breakfast. She then seemed unwell, but, in reply to her husband, said she should soon be all right again. As, on the contrary, she rapidly became worse, and seemed to be in a fit, he became sufficiently alarmed to send for me. When I arrived, her hands and face were extremely pale, the pulse was very quick and irregular—almost fluttering, small, thready, and feeble. The number of beats per minute was well over 120. The heart-sounds, though clear, were of little strength, and had a dull, subdued, metallic character, and yet, though weak, possessed at once a greater vigour and regularity than could have been inferred from the pulse. It is, of course, often the case that very erroneous conclusions regarding the central circulatory power may be drawn from an observation of the radial pulse of both sides. Until about 5 P.M. the patient remained speechless and quiescent, but, as she afterwards informed us, not quite unconscious, although she appeared to be so. On the following day she said she had known something of what was going on around her, but had been unable to speak or hear, and she said she saw me during my second visit. She had been sick several times until about 5 P.M., when, on being asked if she would have some tea, she replied that she would like some. It was about 6 30 P.M. that I saw her for the second time and found her general condition improved. There was a little colour in her cheeks. The pulse was fuller and quieter, but still numbering 108 per minute. Her heart-sounds were stronger, the cardiac muscle evidently having recovered some of its former power. She was still very deaf. The pupils were rather contracted, and, though they reacted to light, did not do so with much readiness, dilating only slightly. The tongue was throughout clean. She said she had no pain and no headache, but a feeling of uneasiness in the throat. She had taken a little brandy and lemonade, but I ordered her to have no more. By inquiry on the following day it was elicited that she had had a queer feeling of faintness about a fortnight ago, and then again about a week ago, but these attacks were described so vaguely that very little account could be taken of them. Some medicine had been given which had helped in producing a sufficient amount of vomiting, although the patient would probably have vomited without the medicine, and no doubt had thrown up the greater part of the quinine. A little calming medicine gave her a good night's sleep, and she awoke refreshed and very much better in the morning. She had again had a little lemonade and brandy. I saw her at noon on the day after the dose, having received a good report of her early. She was able to talk, though she was still deaf, especially in the right ear. She had had a motion on the previous day, but I thought it well to give an aperient pill containing a grain of calomel. The pulse was fairly full and regular, and there was colour in her cheeks. She had had some gruel, and was still recumbent. The tongue was clean but parched, and had little obliquely transverse furrows. Although still weak, she had evidently so far recovered that no further danger was to be apprehended.

On the Wednesday after the Sunday on which the quinine had been taken the patient was again seen in the afternoon. The pulse was then 72, her general condition was greatly improved, yet the heart's action was still feeble and there was a slight presystolic murmur. She was in bed, and had been during the Tuesday. She had taken no solid food. The bowels had acted. There were little furrows on the tongue. The deafness had almost entirely left her. On the following Saturday the patient looked almost quite recovered. The pulse was normal in number and fair in character. The pupils were a little larger, but yet did not react well. There was a slight presystolic hesitation. On the last occasion of seeing her, thirteen days after the above Saturday, her pupils reacted well. There was no deafness. The cheeks had a little colour. The respiration and pulse were good and the heart-sounds were very fair. In describing the onset of her symptoms she said that she first felt faint, then dizzy, was then sick, and then felt "tinglified" in her fingers and all over, and then unconscious and without pain. The deafness was complete and came on rather suddenly, as if from a blow. She heard nothing before the clock striking twelve at night, and that only with the left ear. For some days she was slightly deaf in the right ear. She had been able to see, but did not apprehend the nature of objects until about 4 o'clock in the afternoon.

Although I have attended on previous occasions persons who have taken quinine for ague and malarial fevers in rather large doses, this is the only case of quinine-poisoning I have ever had under my care.

Great Grimsby.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF RUPTURE OF THE HEART.

BY WILLIAM GROOM, M.D. CANTAB.

ON Good Friday morning I received a message to see a lad, aged sixteen years, who, whilst walking with his brother, suddenly fell on the pathway face downwards and was removed to a house close at hand. On my arrival I found him to be dead. The coroner for the Isle of Ely directed me to make a post-mortem examination and attend the inquest, at which the brother in his evidence informed us that about a month previously he and the deceased were at Sutton Bridge hawking fish with a pony and trap; the pony took fright, his brother tried to stop it, and the shaft of the trap pressed him on the chest against some wooden railings. In consequence of this deceased had to stay at Sutton Bridge for five days, and was attended by Mr. Wellington; he then returned home, but remained weak and unwell. At the post-mortem examination no signs whatsoever of injury to the superficial structures or ribs were found; but on opening the pericardium I found it to be filled with blood, some of which was clotted. On removing this, and on turning the heart over without detaching it, I discovered a hole about the size of the end of my little finger through the middle of the back wall of the left ventricle, the actual size of the rupture being about the third of an inch. On removing the heart and opening the ventricle I found the walls to be perfectly sound except at this spot; the hole was quite conical and bulging when my little finger was introduced, and the rupture external and merely consisting of the pericardial covering of the wall. In my opinion, therefore, the accident had caused a partial rupture of the inner part of the wall of the left ventricle (endocardium and some muscle fibres) at a spot opposite to the point on which the shaft of the trap pressed, that the blood pressure had, during the month intervening between the accident and death, caused an aneurysmal bulging of the weakened part, its wall becoming thinner until ultimately it burst. The rupture, seen from the interior of the ventricle, looked much like a bullet hole. Taking into consideration the whole of the facts connected with this case I consider it sufficiently interesting to place

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on record. I have sent the heart for preservation to the Anatomical Museum at Cambridge.

Wisbech.

CHRONIC SENILE DIARRHŒA, PROBABLY FROM DEGENERATION OF THE INTESTINAL WALLS.

BY A. J. B. DUPREY, M.R.C.S. ENG., L.R.C.P. LOND.

DEGENERATION is not uncommonly in persons past middle life the source of various uncomfortable symptoms, and in a tropical country such as that of Trinidad, where old age is to some extent premature, we may expect to find senile troubles manifested sooner than in colder climates. Not unfrequently we meet with cases of diarrhœa in persons approaching or beyond sixty years of age, which can only be ascribed to degeneration of the intestinal walls, due either to albuminoid disease or to some perverted action presumably associated with degeneration. The patient whose illness I am about to describe was a female fifty-six years of age and was a member of a family one of whom I had been attending only a few days previously for poisoning by alkaline ptomaines, an accident which not unfrequently occurs in these parts. She had always enjoyed good health until about twelve months ago, when a small tumour, the nature of which was not properly ascertained, was removed from her nose. About nine months ago she observed an undue looseness of the bowels, since which time she had had three attacks of diarrhœa, each of them more severe than the preceding one. The present attack was therefore the fourth. When I first saw her, her temperature was 101·2° F. and her pulse 84; the heart's area was normal; the sounds were very feeble, but no abnormality in the rhythm could be detected; there was dimness of sight and well-marked arcus senilis of both eyes; the tongue was slightly furred. The patient retched very often and occasionally vomited; she also complained of great pain in her abdomen; it was tender on pressure, and she passed fluid evacuations at intervals of twenty minutes or half an hour. As there had been cases of ptomaine poisoning in the house I considered this illness to be of the same kind, and ordered brandy milk with soda water, and a mixture containing bismuth sub-carbonate and nepenthe. During the next twenty-four hours the diarrhœa was less frequent, but symptoms of cardiac failure were developed, so urgent that death appeared to be imminent. The patient had repeated attacks of fainting, sometimes at intervals of fifteen minutes; her skin was almost icy cold, her lips were livid, and the pulse at the wrist was scarcely perceptible. I was at this time informed that she had suffered from fainting fits during her previous attacks of diarrhœa, although never so seriously as at present. Taking into consideration the marked degeneration of her corneal tissue shown by the arcus senilis, her dimness of vision, the failure of the circulation, and the chronic diarrhœa, I came to the conclusion that degeneration resulting from senile changes might have originated her troubles. Artificial warmth was supplied by hot-water bottles and flannels wrung out of hot water; a mixture containing five drops of tincture of digitalis and twenty drops of spirit of nitrous ether was given every four hours and improvement commenced immediately. When she was able to walk about the room five drops of tincture of strophanthus were given three times a day in place of the digitalis; and except for a slight giddiness on getting up in the morning she has satisfactorily recovered. There can be little doubt about either the degeneration of her heart muscle or the prompt efficacy of the digitalis in strengthening the heart's action, and thereby improving the circulation.

Port of Spain, Trinidad, West Indies.

A CASE OF RECURRENT SCIRRHUS OF THE MALE BREAST.

BY SELBY W. PLUMMER, M.D., B.S. DURH.,
HONORARY SURGEON TO THE DURHAM COUNTY HOSPITAL.

A MAN, aged thirty-nine years, was admitted in March of this year under my care into the Durham County Hospital. He gave the following history. Eight years previously he had noticed a small lump in his right breast, which slowly increased for four years. Although painless itself, shooting pains ran down the right arm from it. In January, 1893, this tumour was removed by Dr. Tough of Crook, County Durham. In 1895 the patient again noticed a hard nodule on the upper and outer part of the right chest, which gradually increased, and similar shooting pains were felt down the arm. This growth was freely excised and proved to be a typical scirrhous carcinoma invading a gland. Dr. Tough, having preserved the specimen which he excised, kindly sent it to me for examination, stating that the size on removal was about that of a pigeon's egg, and sections of this specimen showed it to be a scirrhous carcinoma of the mammary gland.

Notes of cases of cancer in the male breast are, I think, always interesting. It should be added that two of this patient's cousins on the female side died from cancer; in one the growth was located in the breast and in the other in the rectum. There is no other family history of predisposition.

Durham.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

NETLEY HOSPITAL.

A CASE DEMONSTRATING THE APPLICATION OF THE ROENTGEN RAYS TO MILITARY SURGERY.

(Under the care of Surgeon-Colonel STEVENSON and Surgeon-Major H. R. WHITEHEAD.)

THE localisation of bullets has always been a matter of great difficulty, and the majority of the older surgeons refused to attempt the removal of a bullet if it were deeply placed; and in this they were fully justified, for the difficulties and dangers of deep dissections were so great that the patient as a rule ran less risk if nothing were done. By the electrical method employed to a slight extent of late years somewhat vague information could be obtained as to the whereabouts of a deeply-seated bullet, but it was not until the introduction of the Roentgen rays that a surgeon could be quite certain of the exact position of the projectile, and in no case is the surgical value of the x rays more obvious than in this. The opacity of a body consisting of lead is so much greater than that of bone that the shadow cast by it is readily discernible, even when the leaden body is entirely surrounded by osseous tissue. It will be seen in the description of the case that the exact position of the metallic body was ascertained by taking two skiagraphs from different aspects.

The patient was a private in the 1st Battalion Gordon Highlanders, and had received a bullet wound just below the left knee on April 3rd, 1895, at the battle of Malakand Pass, Chitral Expedition. He was admitted to hospital and the wound explored, and he stated that three pieces of lead were removed, although this statement was not supported by documentary evidence. The wound eventually healed up, and the man was sent home and admitted to Netley Hospital on April 28th, 1895. On his admission there he had a firmly cicatrised wound two and a half inches in length situated just below the level of the tubercle of the left tibia on the inner side of the leg. The bone was not enlarged, and pressure on the cicatrix was not painful. He complained, however, of pain deep in the bone at times and lameness, and he fancied that the bullet or some part of it remained in the bone. With the assistance of Surgeon-Captain Aldridge skiagraphs were taken of the leg in two positions—the first from the anterior aspect and the second from the inner surface. A spherical bullet was at the same time fastened against the limb, in order that its image might appear in the picture and might assist in determining whether a bullet was embedded in the bone or not. Both skiagraphs showed a disc of metal, the conclusion, therefore, being that the bullet was present

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and was spherical in shape. Having taken the measurements carefully so as to locate the exact position of the bullet, Surgeon-Major Whitehead cut down, and by trephine, gouge, and chisel penetrated the bone to the depth indicated. The bullet, however, was not immediately found; the surrounding bone was therefore prospected by a drill till a hard substance was felt slightly below the original cavity. On clearing the bone away and applying the electric bullet-explorer it at once indicated the presence of the bullet. On illuminating the cavity by a small electric lamp the bullet could be seen firmly embedded in the substance of the bone, and it was removed without further difficulty.

Remarks by Surgeon-Major WHITEHEAD.—The interest in this case centres in the help derived from the Roentgen rays. There was nothing objective to make one believe that the bullet was still present. The subjective symptoms, however, pointed to this as a possibility. We doubt if any surgeon would have cared to prospect to the depth at which the bullet was at length found unless he had strong evidence of its presence. By means of the skiagraph obtained by the Roentgen rays all doubt was placed at rest, and the operation was confidently undertaken.

STRATFORD-ON-AVON HOSPITAL.

A CASE OF INTESTINAL OBSTRUCTION DUE TO BANDS; ONE DIVIDED BY OPERATION; OTHERS FOUND POST MORTEM.

(Under the care of Mr. HARRY LUPTON.)

STRANGULATION by a "band" is by no means an uncommon cause of intestinal obstruction, and in the vast majority of cases only one band is present; in fact, so rare is it to meet with more than one that Gay described them under the name of "solitary bands." They are, however, by no means always solitary, but may be very numerous, and, indeed, it seems strange that they are not more frequently multiple when it is considered that their formation is due to peritonitis. The treatment to be adopted in any case of intestinal obstruction must depend greatly on the patient's general condition. If this be bad, the less the bowel is manipulated the better; but if, on the other hand, the patient's general condition is good it is certainly advisable to examine systematically the whole of the intestine in order to see if more than one obstruction exist.

A man, aged twenty-one years, was admitted into the Stratford-on-Avon Hospital on Sept. 19th, 1896, with a history pointing to intestinal obstruction. He was thin and looked phthisical, with flattened sub-clavicular regions. He had waxy, transparent-looking hands, a pinched aspect, with sunken eyes; the temperature was sub-normal, the pulse was fast and inclined to be running; the extremities were cold, and the patient was suffering generally from his journey to the hospital. There was a history of bowel trouble for the previous seven days. During the last three days he had had no passage of fæces save a small amount brought away by enema, and this period was also one of vomiting. He had been sick last on the morning of admission. The practitioner who had seen him outside then sent him into the hospital with a view to operative interference. When the patient had somewhat rallied he was seen in consultation, when it was decided to try the effects of a copious enema before proceeding to other measures, if such were found necessary. It should be noted that his abdomen was pinched and flat, showing no signs of distension, and that his inguinal rings were clear, and no tumour was to be felt in the right flank or elsewhere. The enema brought away, with smaller fragments, four large, hard masses, somewhat larger than a pigeon's egg, brown, slime-coated, and evidently old inhabitants. It seemed probable that these masses might have been the cause of the obstruction—they might be said to have been "facetted," and as if they had dove-tailed into one another—and their removal gave so much relief that a "rest-and-be-thankful" policy was adopted, which policy appeared to be fully justified for twenty-four hours, when a dose of castor-oil was ordered. This was rejected before it passed the mouth, and was followed by vomited matter distinctly feculent in its character. Thereupon, after a further consultation, it was decided that the abdomen should be opened, and the cause of the obstruction sought for. This was accordingly done forthwith, Mr. Norbury and Mr. Greene rendering valued assistance, and chloroform being administered by Dr. George Clark Stewart. The abdomen was opened in the middle line. A couple of fingers swept round the pelvis proved the absence of any hernia at the usual sites, nor could any abnormality be detected in the region of the ileo-cæcal valve. The incision was then prolonged upwards, nearly to the umbilicus. Almost immediately beneath it a coil of congested intestine was seen; this proved to be bound down by a band of about the thickness of a porcupine quill. The intestine appeared to be collapsed on one side and distended on the other. No minute investigations as to the relations of the band were made. It was divided between two pairs of pressure forceps. At this juncture the patient vomited violently and became very collapsed; the intestine, immediately released, swelled up, and the pulse improved. Rapidly passing the fingers over and amongst the intestines disclosed no other obstruction, and Mr. Lupton concluded that he had removed the cause of trouble, and was, moreover, anxious to complete the operation and have the patient in bed again as soon as possible. A sponge passed into the pelvis not returning dry it was decided to drain the pelvis—at all events, for the first twelve hours. The abdomen was cleansed by sponging, and the wound closed with interrupted sutures. On the whole the patient was in a somewhat better condition when removed from the table than when placed upon it, but still bad enough, and a subcutaneous injection of ether was given before he was removed to the ward. On the following morning (sixteen hours after the operation) the patient seemed to be better and expressed himself as relieved. About two ounces of clot and serum had been withdrawn from the drainage-tube—during the last two hours only a couple of drachms of clear, sweet smelling serum. The drainage-tube was removed, and an additional suture tied at the lower end of the wound. All went well till the afternoon, when symptoms of collapse came on, with further vomiting, and he died about twenty-four hours after the operation.

Necropsy.—Permission was obtained to make a post-mortem examination, which was done twenty-four hours after death. The abdomen was opened slightly to the right of the middle line, the insertions of the recti were divided, and the abdominal wall turned back, so as to show the inner aspect of the incision. This was well united, the omentum being adherent along the line of incision. There were no signs of peritonitis and no fluid in the pelvis. On following the intestine down from the duodenum another band was met with, less than the one which had been divided at the operation; it gave way when the finger was placed under it. Further down in the ileum was yet another, passing across the bowel and completely constricting it. And yet nearer to the ileo-cæcal valve the ileum made a journey across to the left brim of the pelvis, where it was crossed by a band passing from the brim of the pelvis to a point below the sacral promontory. This also constricted the bowel, and it was easy to see that the operator's fingers had passed *above* this at the time of the operation and so failed in detecting it. It was barely clear of the pelvic brim until lifted by the fingers.

Remarks by Mr. LUPTON.—That a man should have had four distinct obstructions to a free passage through his intestines, all caused by abnormal and separate adventitious bands, is, I think, unusual. The fact that the operation I undertook for the man's relief failed by reason of its insufficiency I must sorrowfully admit, but the point remains, Did I leave undone at the time of the operation, and under the circumstances, what I ought to have done? It is easy to be wise after the event, and it is far easier to detect abnormal conditions on the table of the post-mortem room with an incision extending from the xiphoid cartilage to the pubes and the insertions of the recti divided, and when there is no fear of collapse before our eyes, than it is in the operating-room, with a limited incision and with a patient in parlous condition on the table. Had I turned out through the limited incision and overhauled the whole length of the intestines I should, no doubt, have found the remaining obstructions. But, to put a perfectly imaginable case, suppose I had done this and found no other obstruction, and the patient failed to rally after the operation, I should naturally have thought, How very unwise I was not to be satisfied when I had released the obvious constriction and how much I wish I had left the rest of the intestines alone. The point appears to me to be interesting, and I would venture

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a hope that some whose experience of abdominal surgery is greater than my own may discuss it. In operating for intestinal obstruction, is it advisable to be content when an obstruction has been found and removed, or should it be the rule to overhaul the whole length of the intestine? My own feeling is that cases of multiple obstruction must be so rare that when an obstruction is found and freed, the sooner the wound is closed and the less the disturbance of the remaining intestine the better. I am inclined to think that had I another case with a similar history I should be content with having found an obstruction and released the confined bowel. The bands referred to, with the exception of the pelvic one, passed once across the bowel, from attachment to attachment. It was not the case that a knuckle of intestine had slipped under either one of them, though it was so in the pelvis. I shall be glad if the narration of this case leads to authoritative expression of opinion.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Non-Tuberculous Posterior Basic Meningitis.

A MEETING of this society was held on April 27th, Dr. WILLIAM MARCET, F.R.S., Vice-President, being in the chair.

The adjourned discussion on the paper by Dr. J. W. Carr, read at the meeting of the society on April 13th, and reported in THE LANCET of April 17th, was opened by

Dr. BARLOW, who congratulated Dr. Carr on the thorough and clear presentation of the group of cases referred to in his paper. It was very satisfactory to him to find that Dr. Carr confirmed the description of the clinical type given by him and Dr. Gee years ago. The most typical symptoms were: (1) opisthotonos, which dominated the clinical picture and was a constant, early, and aggressive feature; (2) vomiting; and (3) the tendency to the occurrence of tonic spasm, different from the clonic spasm and subsequent paresis which occurred in tuberculous meningitis as a result of cortical irritation. The limbs were almost always rigid in an extended position. The essential anatomical feature was the occurrence of meningitis, with its maximum in the posterior fossa. Both the intensity of the inflammation and the amount of its extension anteriorly to the base of the cerebrum or downwards into the spinal canal were very variable. But whatever the intensity or extent of the inflammation, it was always characterised by the tendency to the formation of cicatricial adhesions. These could be found post mortem at various points along the spinal cord and often at the tip of the temporo-sphenoidal lobe. But they were particularly apt to occur in the roof of the fourth ventricle, blocking the foramina there. This was accurately described by Hilton in his work on "Rest and Pain," but was only one of the causes of hydrocephalus, as this condition might be produced when the foramen of Magendie was patent. He had seen one case in which it was produced through the blocking of the foramen of Monro, others in which the aqueduct of Sylvius was closed, and one in which the anterior part of the roof of the fourth ventricle was adherent to its floor, and he thought that obstruction sometimes occurred from complete adhesion of the spinal meninges at the level of the first and second cervical vertebræ. With regard to the etiology, he agreed that syphilis was not an operative factor. Syphilitic meningitis did occur, but was usually associated with gummata, signs of cirrhosis, and vascular changes. In one case where symptoms like those described in the paper came on they followed a blow on the occiput, and there were signs of traumatism in the dura mater. Unlike the cases of purulent meningitis that usually followed an acute disease, such as broncho-pneumonia, empyema, &c., and which had a more fulminating character, the posterior basic cases came on in previously healthy infants. But both Dr. Lees and himself had been struck with the frequency with which a history of some catarrh had been met with just before the onset of acute symptoms. It was well known that in infants catarrh of any organ tended to become generalised. He thought that some part was possibly played by the moderate amount of otitis media which was found post mortem in these cases as well as in the bodies of most infants dying from disease. It was conceivable that the muco-pus in the middle-ear formed a convenient nidus for the development of organisms which passed from the fauces along the short Eustachian tubes of an infant. The period of life when posterior meningitis was most frequently met with coincided with that during which there was the greatest tendency to middle-ear disease. Many of the cases came from insanitary houses. With regard to treatment the possible causative effect of catarrh and of otitis media must be remembered. In eight cases in which the symptoms appeared to indicate the commencement of posterior meningitis the symptoms were at once relieved by puncture of the tympanic membranes. A certain number of cases had recovered under mercurial treatment. At his suggestion Mr. Ballance had devised an operation for tapping the fourth ventricle, and the symptoms had been relieved for a time, but never permanently. In one case in which a little fluid only was obtained from this region paracentesis of the ventricles through the fontanelle was also practised, and the patient left the hospital well. He died some weeks later, and at the necropsy the signs of meningitis had quite subsided. This case was operated on early and probably that conduced to the good result obtained. In the cases that recovered there was often amaurosis, apparently complete, without any ophthalmoscopic change.

Dr. LEES referred to a case which he had published some years ago in which life was saved by paracentesis of the tympanic membranes. Basic meningitis was mainly a disease of infants under one year of age, but might occur later. He was unable to accept Dr. Carr's explanation of the source of the fluid as due to obstruction of the ventricular veins. He thought that their engorgement was either part of the inflammatory process or secondary to the distension of the ventricles. The low specific gravity and the small amount of albumin present proved that the fluid was neither inflammatory nor dropsical in origin. The fluid, he believed, was cerebro-spinal fluid, and its accumulation was due to some obstruction in the channels which led from the ventricles where the fluid was secreted by the choroid plexuses to the sub-arachnoid space, from which, as Key and Retzius had shown, it was drained off by the roots of the cerebral and spinal nerves. He observed that Dr. Carr found the foramen of Magendie closed in half of his cases, and in two more it was not excluded. He insisted on the importance of examining the condition of this foramen *in situ* before the rest of the body was opened by removing the occiput and the laminæ of the upper cervical vertebræ and then opening the dura mater. The foramen was large proportionally in infants. Closure of the channel might also occur at other points, as described by Dr. Barlow. He confirmed the statement that optic neuritis was very rare, although both increased intra-cranial pressure and meningitis, which were supposed by many to be the efficient factors, were present. Nystagmus was common, and he believed it to be due to cerebellar influence. The patients were often blind, even when hearing appeared to be acute. Slowing of the pulse was less frequent than in tuberculous meningitis, possibly because, owing to the age of the patients, the inhibitory power of the vagus was not developed. The opisthotonos was often extreme, the occiput nearly touching the buttock. The lower limbs were usually in a state of extensor spasm, and the upper limbs were as rigid as the lower, and also usually extended, but occasionally flexed. If the limbs were watched a periodical accentuation of the spasm might be observed, which he attributed to the influence of the cerebellum. The rhythm of the respiration was rarely typical Cheyne-Stokes, but what he called "cyclical," there being a pause followed by three or four deep, sighing respirations. The amaurosis described by Dr. Barlow completely passed off in some cases.

Dr. NORMAN MOORE mentioned that it was the study of a case of tuberculous meningitis which led Monro to the discovery of the foramen that bears his name. He doubted whether one pathological explanation would be found to cover all the cases, and asked whether some of the cases could be possibly rheumatic in origin. He remarked that the opisthotonos often diminished for a few days before death.

Dr. CHURCH said that from the cases that he had seen he was inclined to take a more hopeful view of the prognosis. Two of the most severe cases had recovered completely at the time that they left hospital. In one of these the opisthotonos was so great that at one time the occiput was only three inches from the buttock. Both patients when they had

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recovered from the meningitis were found to be blind, although there were no ophthalmoscopic changes.

Mr. BALLANCE said that the first case that he had operated on at the Great Ormond street Children's Hospital was in 1891, and the operation had also been performed independently by Mr. Parkin of Hull and others. He operated by turning down a U-shaped flap and then making a small opening with a trephine on one side (or, better, on both sides) of the middle line in the occipital region. In consequence of the extreme retraction of the head it was convenient to use a special trephine with a long handle. The symptoms were in almost all cases temporarily relieved. He thought that the peculiar "chewing" or "champing" movements of the lower jaw were probably cerebellar, as they were met with in cases of abscess and tumour of that organ. The most effective treatment in the cases that he had seen, other than operation, was administration of mercury internally and incision of the tympanic membranes. He believed that if the disease were of an infective nature early operation would have most influence in stopping it. He had recently seen a case with Dr. Buzzard in which purulent infection of the ventricles came on in an adult after the evacuation of an abscess in the cerebellum. Bacteriological investigation by Dr. Jeffner showed that Fränkel's pneumococcus was present, and the injection of a suitable antitoxin serum supplied by Dr. Washbourn relieved the symptoms. Probably if the organism present in these cases could be discovered treatment on these lines would be successful.

Mr. RAYMOND JOHNSON said that he had operated on two of the cases detailed by Dr. Carr, but he should not be inclined to operate again if there was already hydrocephalus, as when free exit was given to the fluid the skull collapsed, and death occurred a few hours later. He thought that early operation alone could be of benefit.

Dr. JOHN ABERCROMBIE said that there seemed to be a season for these cases, most of those he had seen occurring in the spring. One year he saw several in which the symptoms first appeared on the same day in March, and in one instance two children were attacked in the same family. The youngest case that he had seen was that of a child six weeks old, and the disease then ran a very rapid course, death occurring in three weeks.

Dr. CARR, in reply, said that after the information given by Dr. Lees and Dr. Barlow, he felt that the dropsical theory would not account for the effusion of fluid, and he adopted their view that it was retained cerebro-spinal fluid. There was no evidence of a rheumatic causation in any of his cases.

MEDICAL SOCIETY OF LONDON.

Senile Tuberculosis.—Treatment of Gout by an Exclusive Meat Diet and Hot Water.

A MEETING of this society was held on April 26th, the President, Mr. REGINALD HARRISON, being in the chair.

Mr. HOWARD MARSH read a paper on Senile Tuberculosis, which will appear in our columns in full.—Mr. ARMSTRONG spoke of the difficulty of diagnosing between osteo-arthritis and tuberculous disease of the joints in the early stage, and described a case in point in which the diagnosis was only clearly made when softening and suppuration occurred.—Dr. COLMAN referred to three cases of tuberculous disease of the vertebræ in patients sixty years of age without curvature, where the nature of the affection was proved by post-mortem examination, and he confirmed the statement that in adult cases there was often no curvature. He had seen angular curvature produced by syphilitic pachymeningitis, and recalled one case of extensive erosion of vertebræ by an aneurysm in which case there was no curvature, the articular processes being greatly thickened.—Dr. HILL also mentioned a case in which a psoas abscess and an aneurysm eroding several vertebræ were present in the same case without there being any curvature.—Mr. G. R. TURNER referred to the great difficulty of diagnosing between tubercle and syphilis in these cases. In one case the appearance at first pointed to tubercle, and this was confirmed by the presence of signs of tuberculous lung trouble, but the course of the case proved that it was syphilitic.—Dr. THOROWGOOD asked if tubercle bacilli had been found in these cases. He was at present treating an old man suffering from tuberculous laryngitis and phthisis, who had developed an inflammatory affection of the subcutaneous tissues of the back of the hand, which he thought would prove to be tuberculous.—Mr. HOWARD MARSH, in reply, said that bacilli had been found in many of the cases, but that it was often a matter of difficulty to find them even in advanced cases where the diagnosis was not in question. The difficulty of distinguishing between tubercle and syphilis was increased by the fact that they were often present in the same case.

Mr. WILLIAM ARMSTRONG read a paper on the Salisbury Treatment of Gout, which will shortly appear in our columns.—Dr. A. HAIG said that he was familiar with the improvement often noticed in cases treated in this manner, at any rate for a time. It was as difficult at first sight to explain the improvement in cases of arthritis as to explain the good effects of a course of mineral waters at spas where the waters contained abundance of sulphates and lime salts. The same explanation would probably apply to both. He thought that both were stimulants, and as such their first effect was to eliminate uric acid. Meat not merely clears the blood of uric acid, but introduces it into the blood, or at least its physiological equivalents, hypoxanthin, &c. He quoted several cases to show that the treatment is by no means without danger, and he attributed the untoward symptoms to the accumulation of uric acid.—Dr. LUFF said that the effect of the mineral salts in the meat must not be lost sight of. In his recent experiments he had found that the presence of these salts had a great effect in inhibiting the maturation of the ordinary sodium biurate into the quadriurate, which he regarded as one of the chief causes of gout. He did not believe that uric acid was a normal constituent of the blood in man or other animals. It was present in gout from absorption from the kidney, the organ in which it was mainly formed and excreted. Uric acid was also present in the blood in leucocythæmia and pernicious anæmia, and was apparently derived from destruction of the white corpuscles.—Mr. BUCKSTON BROWNE said that no doubt the treatment was very successful in certain cases for a time, but it could not be persevered with for long without danger. He was inclined to attribute the good results obtained to abstention from sweets and starchy food and alcohol rather than to any virtues in the meat diet. He preferred to give a little starch, and all vegetables that grow above ground as well as potatoes and onions, and a moderate meat diet. Under careful diet on these lines symptoms due to uric acid rapidly disappeared.—Dr. THOROWGOOD asked as to the previous habits of the patients who had benefited by the treatment. Persons who lived much on farinaceous food were very liable to flatulent dyspepsia, and their symptoms were often attributed to gout, but rapidly disappeared when the diet was corrected. Possibly uric acid was actually formed in the stomach.—The discussion was adjourned to May 10th.

CLINICAL SOCIETY OF LONDON.

Myeloid Sarcoma of the Jaw.—Congenital Dislocation of the Shoulder.—Hydro-nephrosis.—Muscular Dystrophy.—Subclavian Bruit without any other Symptoms.—Myositis.—Dwarfing of Humeri.—Symmetrical Orbital Swellings.—Keratosis.

A MEETING of this society was held on April 23rd, the President, Dr. BUZZARD, being in the chair.

Mr. CHARTERS SYMONDS showed a boy, fifteen years of age, from whose Lower Jaw he had removed a central Myeloid Sarcoma fifteen months before. The tumour had destroyed a large portion of the jaw and not only projected in front but passed backwards under the tongue. It was removed by enucleation and free erasion from the bone, a bridge of bone along the alveolar border being all that was left for some distance on each side of the middle line. There had been no recurrence, and the patient had now a firm, bony jaw and practically no deformity.

Mr. F. S. EVE showed a case of Congenital Dislocation of the Shoulder. The patient was an infant, nine months old, who was delivered with forceps after a lingering labour. The head of the humerus was displaced backwards, lying just below the spine of the scapula. The case was similar to one shown by him to the society some years ago, in which he had operated and had found the joint well developed, the head of the bone being elongated obliquely backwards. He had to shorten this by shaving off the redundant cartilage

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before he was able to put the bone into a proper position; the ultimate result was satisfactory. He thought that the condition was usually due to injury during birth through undue traction on the axilla or to careless handling by the nurse after birth. In one case there was definite evidence of stretching of the brachial plexus.

Mr. HOWARD MARSH showed a case of Hydro-nephrosis in which the collection of fluid was found between the kidney and the capsule. The patient was a man, twenty-one years of age, who was admitted to St. Batholomew's Hospital on April 23rd, 1896, with the history that he had had uneasiness in the left lumbar region for some years, and that three weeks before he had been seized with intense pain in this region which had persisted. The man appeared very ill, and on examination a large, tense, fluctuating tumour was felt. This was incised through the loin and a large collection of blood-stained fluid was found between the capsule and the kidney, which was found collapsed at the bottom of the sac and was removed. Mr. Marsh thought that the hydro-nephrosis must have occurred very rapidly, and the fluid must have been forced through the substance of the kidney, stripping off the capsule. The cyst was drained, but closed very slowly, and even now there was some slight escape of fluid from the wound every few weeks. The patient had completely recovered his health and had resumed his work. Nothing had been discovered to indicate the cause of the hydro-nephrosis.—Mr. G. H. MAKINS said that he had seen Sir William Mac Cormac operate on a case in which a similar collection of fluid between the organ and its capsule occurred as a sequel to traumatic rupture of the kidney.

Dr. W. ESSEX WYNTER showed a case of Muscular Dystrophy of the Landouzy-Déjerine type in a lad, ten years of age, who was admitted to the Middlesex Hospital in January, 1897, on account of a gradually increasing feeling of fatigue and progressive difficulty in walking. As an infant he was backward and did not cut his first tooth till he was four years old. He now exhibited almost complete paralysis of the facial muscles; the muscles of the upper and lower limbs were weak and wasted and showed diminished electrical excitability. The muscles round the right shoulder were most affected, the deltoid having almost disappeared. None of the other members of the family were affected.

Mr. CHARTERS SYMONDS showed a man, twenty-five years of age, with a loud Subclavian Bruit. He had been under observation for six years and during that time he had had prominence and pulsation beneath the left clavicle, and a loud bruit was to be heard in this position. The left pulse was somewhat weaker than the right. As no change had taken place during this time it was clearly not an aneursym, and Mr. Symonds thought that it was most likely due to the presence of a supernumerary rib which was pressing the subclavian artery forward. He had met with two other cases of subclavian bruit without symptoms—one in a healthy athletic young man, in whom the cause was not known, and the other was probably due to traction on the subclavian artery by the shrinking of the apex of the left lung in a patient with advanced phthisis.—Mr. CLEMENT LUCAS remarked that the late Mr. Hulke had published several cases of this kind, which were at first thought to be exostosis of the first rib, but which were afterwards admitted to be due to a supernumerary rib, and he agreed that this was the probable explanation in this case.—Dr. KINGSTON FOWLER said that the presence of a bruit, or even of a thrill, was not enough to justify the diagnosis of organic disease of the vessels, and he pointed out that in some persons a bruit could be produced merely by pressing the shoulders back.—Dr. C. W. CHAPMAN alluded to the case of a lad, eighteen years of age, who had pulsation and thrill over both subclavian arteries. There was at one time pain down both arms, but this ultimately passed off, although the thrill and bruit persisted.

Dr. KINGSTON FOWLER showed a case of Myositis in a man fifty-four years of age. The patient had previously enjoyed good health and had never had syphilis or gout. In January, 1895, his left thigh became painful, and after a short time some of the muscles were found to be swollen. This swelling increased for some days, the muscles being very hard without œdema of the surrounding parts. There was then a period during which the swelling remained stationary, and it afterwards slowly and completely disappeared. Subsequently various muscles in the calf, shoulder, and other parts were in turn affected in an exactly similar manner, the swelling ultimately completely clearing up except in the biceps, where there were now two small firm nodules. Hard subcutaneous swellings had also formed in the abdominal walls and slowly cleared up, leaving knotty indurations. At present the muscles of the left arm were passing through an attack, the axillary glands were enlarged, and there was some induration of the skin of the neck similar to that formerly present in the abdominal walls. Skiagrams of the arm showed that the bones were normal and that there were no actual bony deposits in the muscles. Dr. Fowler raised the question whether this case ought to be placed in a separate category from myositis ossificans, and suggested that possibly ossification did not occur owing to the patient's age. Warm baths had given the man more relief than any other mode of treatment.—Mr. CHARTERS SYMONDS said that this patient had formerly been under his care at Guy's Hospital, and he confirmed the description of the cycle of changes in the muscles given by Dr. Fowler. Anti-syphilitic remedies had been thoroughly tried without the slightest benefit.—Dr. PARKES WEBER said that the case was like those which had been described as "relapsing dermato-myositis." In several of the recorded cases there had been affection of the glands and nerves. From the position of the patient's hand in this case (Charcot's "attitude of benediction") there must be some paralysis of the ulnar nerve, and the case might therefore, perhaps, be described as one of neuro-dermato-myositis.

Mr. F. S. EVE showed a girl, fourteen years of age, with marked Dwarfing of both Humeri. The condition was first noticed on the right side when she was six years old, and the left limb was affected shortly afterwards. The humerus was now three inches, and the arm as a whole four and a half inches, shorter than the standard for a girl of her height. The lower limbs were normal. There were some creaking and limitation of movement in the right shoulder and a little also in the left. The girl was fat, somewhat lethargic, and she was slow at her lessons. The thyroid gland was not palpable. She was the youngest of eleven children, the others being healthy. There was no direct evidence of specific disease, but there was slight scarring at the angles of the mouth. He thought that the diagnosis lay between a cretinoid condition and syphilitic epiphysitis of the upper ends of the humeri. This would account for the changes in the shoulder-joint.

Dr. W. ESSEX WYNTER showed a boy, aged five years, who exhibited Symmetrical Swellings in the Orbits and both Temporal Regions. He was under the care of Mr. Treacher Collins in 1896 for proptosis of the left eye with failure of vision. Optic neuritis was present and was followed by atrophy. An exploratory incision was made into the orbit, but without disclosing the cause of the swelling, which afterwards subsided. Some months later swelling occurred in both temporal regions, the right eye became prominent, and the sight began to fail, and when admitted into the Middlesex Hospital he had optic neuritis. The parents thought that there had been some impairment of intelligence and difficulty in walking during the last month. There was some enlargement of the glands in the axilla, neck, and groins, and one of these, which was excised, proved to be tuberculous. Round the margin of the swelling in the right temple there were some hard nodules, apparently bony elevations on the cranium.

Dr. COLCOTT FOX showed a lad, ten years of age, who exhibited extreme Keratosis of the nail beds, causing deformities of the fingers and toes, as well as perfectly symmetrical Horny Callosities of the size of walnuts over the ankles, with smaller ones, also symmetrical, on the soles, popliteal spaces, and buttocks. Dr. Fox pointed out that pressure could not account for many of them. The father and grandfather were said to have had a similar condition of the nails and to have had remarkably coarse hair, but there was nothing unusual in the patient in this respect. Dr. Fox showed illustrations from other recorded cases of the kind.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

Sewer Ventilation and Health.

A MEETING of this society was held on April 9th, the President, Dr. G. P. BATE, being in the chair.

Dr. F. J. ALLAN read a paper on Sewer Ventilation and Health, the outcome of inquiries conducted by himself at the

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request of the Strand Local Board as to the experience of a number of sanitary authorities in London and elsewhere with regard to street sewer ventilators. With one or two exceptions the replies, fifty-eight in number, admitted the fact of complaints of offensive smells—at least, in some parts—but the answers to the question whether they had been able to trace any deleterious influence on health to emanations from the street level or other ventilators were less definite, save as regards shafts, to which, when not most improperly placed, no objections were raised, and some authorities found their action, alone or in association with openings at the street level, perfect, the lower apertures where they were retained being converted into inlets only. Notwithstanding the negative evidence as to the occurrence of disease germs in sewer air or gases, Dr. Allan maintained that its inhalation could not but be hurtful by inducing a low state of health, diminished resistance to infection, and, as Alessi's experiments showed, a condition highly favourable to the growth of pathogenic organisms, especially those of a septic character. The poison was, he thought, not so much in the well-known hydrocarbons and sulphur compounds as in indetermined organic products like those given off from the lungs, most abundant and most virulent in ill-constructed sewers, with foul deposits, and in those receiving hot water and factory wastes. That such gases must be allowed to escape, and that their entrance into houses, either directly or by forcing of traps, must be prevented, was obvious; but he doubted the soundness of the views of those who advocated unlimited dilution of sewer air by multiplication of openings as involving a corresponding contamination of the atmosphere of our towns and logically justifying the return to open gutters in the street. He admitted the necessity for ventilation so far as to relieve the pressure on the traps, but held that it should not be more than was required to compensate for the movements of the sewage and changes of atmospheric pressure and temperature, while every effort should be made in the way of improved construction and flushing to avoid deposits and putrefaction. After referring to contrivances in his own district for a coarse screening of the out-going air, and at Worcester for its filtration through cotton-wool treated with germicides, as well as to the Reeves system of chemically evolving permanganic acid and sulphurous dioxide in the ventilating shafts, he went on to discuss the replies he had received as to the practical working of the Keeling-Holman and Webb's or Deakin's patents for ventilating and burning the sewer gases; those as to Keeling's, in which the combustion was effected in a gas furnace in the base of a column, were on the whole unsatisfactory on the score either of efficiency or of cost; but they were decidedly favourable as to Deakin's, in which the sewer gases were burnt in the lantern with apparent increase of illuminating power. Dr. Allan's conclusions were that well-constructed sewers required compensatory ventilation only, which might be at any level, whereas in those of a different character some form of constant ventilation was necessary, the outlets being preferably at a considerable elevation, and that the best arrangements were those providing for the combustion of the gases at the same time.

LIVERPOOL MEDICAL INSTITUTION.

Malignant Growth of the Orbit.—Tumour of the Pons Cerebri.—Presystolic Murmur without Mitral Stenosis.—Addison's Disease.—Peroneal Spasm.

A MEETING of this society was held on April 22nd, 1897, Mr. CHARLES SHEARS, Vice-President, being in the chair.

Mr. C. G. LEE showed a case of Malignant Growth of the Orbit. The patient was a man, aged forty-three years, who had, in October, 1895, a swelling at the inner angle of the right orbit. The growth was considered to be a sarcoma both by Mr. Lee and Mr. Edgar Browne. An operation was performed at once. The growth extended deeply into the orbit above and downwards into the antrum; only a portion of the growth was removed. The patient made a slow recovery, but by January, 1896, the growth had again made its appearance; it was now on a level with the superciliary ridge, and was slightly depressing the eyeball outwards. The tumour continued to grow until March, 1896, when the patient was lost sight of. However, in the following October he again presented himself, when there was scarcely any sign of tumour. The patient attributed his improvement to the use of Ceylon cinnamon. Sections of the excised portions of the tumour were pronounced to be of a malignant nature.—Mr. LARKIN described a case he saw several times with his colleague, Dr. Grossmann, and which closely resembled Mr. Lee's case. The patient also recovered, but without using cinnamon.—Mr. SHEARS also made remarks.

Dr. P. DAVIDSON read notes of a case of Tumour of the Pons Cerebri. The rapid occurrence of paralysis of the sixth and seventh cranial nerves of the right side, with weakness and ataxia of the lower limbs and increased knee-jerks, warranted the diagnosis of a tumour invading the right side of the pons. The subsequent occurrence of paralysis of the left sixth and seventh cranial nerves confirmed the diagnosis of a rapidly growing mass. The diagnosis was entirely confirmed by the necropsy, the tumour being tuberculous. No optic neuritis was present during the first two months.—Mr. RICHARD WILLIAMS said that all the cases of cerebral tumour he had seen had optic neuritis sooner or later, but naturally only the cases whose vision was affected were likely to come under his observation.—Mr. BICKERTON said that in many cases of cerebral tumour optic neuritis did not occur.—Mr. MACLEOD ROSS, Mr. SHEARS, and Mr. C. G. LEE also discussed the point as to the frequency of cerebral tumour without optic neuritis.

Dr. A. DAVIDSON drew attention to the occasional occurrence of a Presystolic Murmur at the Apex of the Heart in cases of Aortic Regurgitation, where subsequent post-mortem examination showed the absence of mitral stenosis. He referred to two cases where this occurred in his own hospital practice. The same observation had been made by the late Dr. A. Flint of New York, and the matter was referred to at length by Dr. Sansom in his book on the heart, otherwise it appeared to be much overlooked.—Mr. MACLEOD ROSS suggested that in some cases of aortic regurgitation where there was no mitral stenosis yet a presystolic murmur, it might be the result of digitalis or other cardiac tonic.—Dr. O'HAGAN related a case which had been examined by men of the highest standing. This patient had a presystolic murmur, but at the necropsy there was no mitral stenosis.—Dr. A. C. E. HARRIS thought the characteristics of a presystolic murmur were mainly its roughness and limited diffusibility, and that in the cases in question these characteristics would be lost or the murmur might be of a musical kind. The importance of Dr. Davidson's observations on prognosis he fully realised.—Dr. DICKINSON, Dr. BRADSHAW, and Dr. BUCHANAN took part in the discussion.

Dr. BRADSHAW read a note on Addison's Disease. He pointed out that neither the glandular nor the nervous hypothesis of the pathology of the disease was quite satisfactory. He criticised Mühlmann's hypothesis, which is that the adrenals are concerned with the elimination of pyrocatechin, which they effect under the influence of the sympathetic, and that when the adrenals or the sympathetic are diseased pyrocatechin accumulates in the blood, and by its toxic action gives rise to the symptoms of Addison's disease. Dr. Bradshaw showed that when pyrocatechin was in the blood it quickly appeared in the urine, but he had failed to find evidence of it in the urine of three patients with Addison's disease who had been under his care during the last few weeks. This and other considerations led him to conclude that Mühlmann's idea could not be maintained. He then showed two patients with Addison's Disease, and the Caseous Adrenals of a patient whom he had shown previously to the society. The semilunar ganglia appeared normal.—Dr. STOOKES and Mr. NEWBOLT made remarks.

Mr. ROBERT JONES read a note on Peroneal Spasm and its Treatment. He drew attention to the causal relationship of spasm of the peronei to a certain type of flat-foot. Many flat feet were accompanied by spasm, but in one variety exhibiting characteristic symptoms the spasm proved the sole cause of the deformity. Of sixty tabulated cases males were affected in the proportion of four to one. Mr. Jones dwelt on the differential diagnosis of this condition from osseous, rheumatic, and hysterical valgus. He had operated on forty cases and found nothing short of an excision of portions of the peronei sufficed. An incision was made at the side of the fibula just above the malleolus, and the peroneus longus was laid bare and about three-quarters of an inch removed. The peroneus brevis was exposed and the same amount of its tendinous portion excised. The foot was then placed in a

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varus position for a fortnight and the patient allowed to walk with an altered boot in three weeks. Simple tenotomy was not sufficient.—Mr. NEWBOLT had seen a number of cases of spasmodic flat-foot, and he agreed with the method of treatment adopted by Mr. Jones.—Mr. PUZEY and Mr. MURRAY made remarks.—Mr. JONES replied.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Nerve Cells.—Exfoliating Cystitis.—Recurrent Appendicitis.—Pernicious Anæmia.—Exhibition of Specimens.

A MEETING of this society was held on April 14th, Dr. THOMAS HARRIS, the President, being in the chair.

Mr. FRICKE gave a Lantern Demonstration on the Structure of Nerve Cells, and discussed some recent methods of investigation.

Dr. WALLS described two cases of Exfoliating Cystitis secondary to retroversion of the gravid uterus. The first patient came under treatment when four months pregnant, and although the conditions were so bad that a fortnight elapsed before the uterus could be replaced pregnancy went on to term. The second patient presented herself after abortion had taken place.

Mr. SOUTHAM made some remarks on the Pathology of Recurrent Appendicitis, and exhibited a number of appendices removed from twenty cases treated by operation. These showed the changes usually met with in this condition—viz., thickening of the wall of the appendix, with constriction or occlusion of its lumen, which in many cases was dilated on the distal side of the obstruction and distended with fluid. In three cases fæcal concretions were found and in one instance a pin. Suppuration had occurred in eight instances, a localised abscess having formed in six cases, while in two there was diffuse purulent peritonitis. Specimens were also shown to illustrate the fact that adhesions might be present after a single attack, or absent after many attacks, of appendicitis.

Dr. MERCER showed Preparations from a case of Pernicious Anæmia in a child aged seven years, running a rapidly fatal course and marked by profound anæmia with pyrexia and gastro-intestinal disturbances. The red blood corpuscles were reduced to 1,000,000 per cubic millimetre and the hæmoglobin to less than 20 per cent., with marked poikilocytosis. The chief points of interest were: (1) the age, the disease being distinctly rare in children; (2) the rapid course the duration from onset to death being less than three months; and (3) the probability of the disease being of septic origin. The child had long-standing middle-ear mischief, and the rapid course and symptoms generally pointed to a rapid destruction of the red corpuscles by the action of a toxin in the blood. At the post-mortem examination advanced fatty degenerative changes were found in the liver and heart, together with a small amount of deposit of iron granules in the liver cells. The spleen was somewhat enlarged, but no morbid changes were discovered under the microscope. The red marrow contained numerous nucleated red corpuscles, but no other abnormal cells.

The following card specimens were shown:—

Dr. FOTHERGILL: Chorioma Malignum.

Mr. FRICKE: (1) Karyokinesis in Cancer Cells; and (2) Secondary Cancer in the Skull.

Dr. HARRIS: (1) Lardaceous Organs; and (2) Aortic Aneurysm.

Dr. LEA: Uterine Specimens.

Mr. MONTGOMERY: Intussusception.

Mr. SOUTHAM: Double Encysted Hydrocele of the Epididymis.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Strangulated Femoral Hernia.—Intestinal Anastomosis.

A MEETING of this section was held on April 2nd, Mr. WILLIAM THOMSON, the President, being in the chair.

Mr. HEUSTON brought forward two cases of Strangulated Femoral Hernia in women over sixty years of age, where, owing to the gangrenous condition of the intestine, it was necessary to excise the intestine and corresponding mesentery. In the first case the symptoms of strangulation had lasted for four days before the operation and the patient was in an extremely collapsed condition; eleven inches of the intestine were removed and the intestine was united by suture. The patient died three days after the operation from collapse, when the intestine was found united, but gangrene had supervened in it for about an inch above the line of suture. The second patient was seen two days after the symptoms of strangulation had come on; eight inches of the intestine were removed and the intestine united by suture; the patient recovered perfectly without complication, the method of radical cure employed in both cases being that advocated some years since by Mr. Heuston and described in Treves's Operative Surgery. In both cases no fluid was contained in the sac, which was intimately attached to the gangrenous contents. Mr. Heuston recommended primary resection whenever possible, instead of the older method of artificial anus, statistics showing that the mortality after artificial anus was about 90 per cent., while that after resection was 47 per cent. He objected to the use of any of the foreign bodies which had been introduced within the past few years, and claimed that the union could be completed by suture in as short a time as by any of these appliances.

Professor BALL brought forward a new pattern of Decalcified Bone Ring for End-to-end Intestinal Anastomosis. It resembled in shape a Murphy's button, but was made in one piece with a deep groove round the circumference of sufficient width to allow the edges of the divided intestine to be involuted, while keeping the peritoneal surfaces in contact, the groove being under-cut to accommodate any surplus intestine. Its essential feature is a lacing suture loosely connecting both ends of bowel round their entire circumference; the ring is subsequently introduced by pulling apart two of the loops, and as the suture is tightened it falls into the groove in the ring, drawing in, and firmly uniting, both edges of divided intestine, while the lips of the groove support the peritoneal surfaces of the intestine in apposition. An additional continuous suture passed round the entire circumference through the outer coats of the bowel only, where the peritoneal surfaces are in contact, completes the union. The decalcified bone was absorbed without difficulty. Four cases were described of the use of this ring, one being a resection of the small intestine for a large gangrenous hernia, one a resection of the upper portion of the rectum, and two being colectomies for malignant disease; one of the latter, a case of very extensive cancer of the transverse colon, died suddenly seven days after operation; the other three made perfect recoveries.—Mr. LENTAIGNE believed Professor Ball's button to be one of the most rapid means obtainable of procuring safe anastomosis, but would not say it was better than Mr. Hayes' method. He could not agree with Mr. Heuston's recommendation that the suture should be used in all cases.—Mr. MCARDLE made some observations in favour of Murphy's button.

CARDIFF PROVIDENT DISPENSARY.—The twelfth annual meeting of the governors of this institution was recently held. The honorary secretary presented the report, which showed that the number of new families admitted as benefit members during the year was 246 and the number of prescriptions dispensed was 20,084. The former showed a decrease and the latter an increase on the numbers for 1895. The number of families now on the books was 1501.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held at Lavender-hill, S.W., on April 14th, Dr. Benjamin Duke being in the chair.—Dr. Caldwell Smith read a paper on the Etiology of Diphtheria, with special reference to two localised outbreaks in Wandsworth, in which he drew attention to the influence of school attendance in causing the spread of the disease.—Dr. Sims Woodhead then gave a limelight demonstration of the Bacillus Diphtheriæ and of the effects of the disease on the nerves, muscles, and other tissues of the body. He emphasised the fact that these injurious effects may occur as early as the third day, and that they cannot be repaired by any amount of antitoxin. He asserted, however, that this, if injected before the third day, will cure 95 per cent. of the cases.—A discussion followed, in which Mr. T. A. I. Howell, Mr. John Gay, Dr. W. Y. Orr, Mr. R. F. Frazer, Mr. A. E. Dodson, and others took part.

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Reviews and Notices of Books.

The Practice of Medicine: a Text-book for Practitioners and Students, with Special Reference to Diagnosis and Treatment. By JAMES TYSON, M.D. Manchester: John H. King and Son. 1896.

The Practice of Medicine. By HORATIO C. WOOD, A.M., M.D., LL.D., and REGINALD H. FITZ, A.M., M.D. London and Philadelphia: J. B. Lippincott Company. 1897.

THE publication within a few weeks of one another of two entirely new works on systematic medicine excites both surprise and admiration—surprise that it should be deemed necessary to add to the already teeming list of works of this class, and admiration at the skill and labour expended on such formidable tasks. For the production of a text-book on medicine in the present day must involve a bestowal of time and labour that can hardly be realised by the reader, who expects to find within the pages of the work the very latest information upon the subjects of which it treats, and the author must, if he be desirous of justifying the claims of his book to consideration, have been most diligent in supplementing his individual experiences with the results of recent investigation. We do not wonder, therefore, that Dr. Tyson in his prefatory remarks should say that the preparation of his book has been the product of years of labour, and we trust that he will find his efforts rewarded by the appreciation which his book will doubtless receive. Of the two works before us, undoubtedly Dr. Tyson's is the more exhaustive and the more ambitious, and it is evident that he has endeavoured to maintain a true proportion between the separate departments of the subject. An interesting feature is the introduction of a concise historical account of the diseases which are dealt with. The infectious diseases are first considered, the subject of typhoid fever opening the volume. We note the approval given to the bath treatment of typhoid patients, and the author's deprecation of the prescription of antipyretic drugs, whilst some excellent practical instructions are appended for the guidance of nurses in preventing contagion. As an instance of the "up-to-date" character of the book it may be noted that there are some paragraphs upon the serum treatment as introduced in 1896 by R. Pfeiffer and W. Kolbe. The final passage of the article is significant: "The *antiseptic treatment* has not a truly rational basis, while the extravagant claims of its advocates discredit their results." The malarial fevers receive adequate notice, including a full description of the "malarial parasite." In respect to cholera the importance of bacteriological examination in diagnosis is insisted on, and directions are given for carrying this out. Under the section on "Treatment" mention is made of M. Haffkine's results of protective inoculation, which is considered to be very promising, and detailed instructions are given as to prophylaxis in dealing with the sick. As is to be expected, the serum treatment of diphtheria receives attention, and it is justifiably held that its introduction has considerably modified opinion on the prognosis of this disease.

Passing over many pages, we come to the sections devoted to Diseases of the Digestive System, where we find under the head of "Diagnostic Technique" a full description of the methods for the chemical examination of the gastric contents that have been mainly familiarised by the writings of Ewald. It is owing to the introduction of these methods that amongst the varieties of gastric dyspepsia it is now legitimate to deal separately with "hyperchlorhydria," to which the author devotes some pages, although he is careful to point out that the same condition may also be met with in organic disease. The "diarrhœas of children" are, we are glad to see, discussed apart, and they are distinguished as depending on at least three different conditions—namely, acute dyspeptic diarrhœa, cholera infantum, and acute entero-colitis. Appendicitis receives ample notice, being introduced by a very interesting historical survey of the evolution of knowledge concerning typhlitis and perityphlitis, and full justice is done to the acumen of the present esteemed President of the Royal College of Physicians of London in early recognising that the appendix was a constant starting point of cæcal inflammation. Three "degrees or stages" of appendicitis are discriminated by the author—(*a*) catarrhal, (*b*) ulcerative, and (*c*) interstitial or parietal. Dr. Tyson speaks very judiciously about the period and indications for surgical intervention, and we commend the following dictum to the consideration of surgeons as well as of physicians. He says (p. 307): "It must be admitted that it is not always easy to lay down a rule by which operation shall be determined, for it is not only that we must know when to operate to save life, but also that we must know when not to operate in cases so severe that operation will be futile, and it is due to the operation that it should be saved the opprobrium of such futility. Certain it is, too, that in cases where operation is of no avail death will be hastened by it, the depressing effect of etherisation co-operating to hasten the fatal end." The various forms of intestinal obstruction are succinctly described and their differential diagnosis discussed. The subjects of gall-stones and affections of the bile-ducts precede that of diseases of the liver, where, it may be remarked, the two forms of cirrhosis are treated together, although the author does admit that the "hypertrophic" variety is in the main etiologically, as well as clinically, distinct from the "atrophic" form. The sections devoted to diseases of the respiratory organs and to diseases of the heart and bloodvessels call for no comment, save that they appear to be exact and well planned, especially as regards the articles on croupous pneumonia, pulmonary tuberculosis, malignant endocarditis, and aneurysm. Diseases of the blood follow, wherein we find separate mention made of splenic anæmia or pseudo-leukæmia, a condition well worthy of extended study, especially in relation to its radical treatment by splenectomy. Noting that "exophthalmic goitre" here finds a place amongst diseases of the thyroid gland, and that myxœdema and cretinism are thoroughly dealt with according to the most recent knowledge, we may direct attention to the succeeding section upon Diseases of the Urinary Organs as affording an excellent study of Bright's disease—a subject to which Dr. Tyson has himself been no mean contributor. The "constitutional" diseases, comprising rheumatism, gout, diabetes, rickets, scurvy, and many other conditions, follow. Diseases of the nervous system are next treated without prolixity and with considerable lucidity, a valuable summary of facts in connexion with the relation of infectious processes to such diseases being appended. Perhaps more space might have been devoted to the myopathies, which are described in the next section. The "Intoxications" and "Parasites" form the closing chapters of a work which represents the outcome of much well-directed labour and constitutes a reliable and useful text-book.

We learn from the preface of the joint work of Dr. H. C. Wood and Dr. R. H. Fitz that the former has contributed the section on Nervous Diseases, the articles on Diseases of the Muscles and on the various infectious diseases except diphtheria, dysentery, tuberculosis, leprosy and syphilis, the chapter on Acute and Chronic Poisoning, and all the therapeutics of the book, the remainder of the volume being from the pen of Dr. Fitz. The scope of the work is practically identical with that of Dr. Tyson, for in neither is there any section devoted to diseases of the skin; but the arrangement is different, and so also is the mode of treating the various subjects. There are no bibliographical

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references in this, the smaller work, and there are very few illustrations. Tuberculosis in all its local manifestations, including pulmonary phthisis, finds a place amongst infectious diseases, whilst considerable space is devoted to functional nervous diseases, including insanity. The sections devoted to thoracic and abdominal affections are such as may be expected from writers who may well claim to rank among recognised authorities in these departments, and although, from the point of view of symmetry, exception might be taken to a disproportionate treatment of some of the subjects, it is always of advantage to receive at first hand the personal experiences of an author. We have no doubt that this text-book will take a worthy place amongst works of its class, for it is comprehensive without being diffuse, and its teaching is rational and accurate. Whilst, then, welcoming these two most recent additions to the literature of general medicine, it is difficult to avoid the thought that the multiplication of text-books must tend greatly to embarrass the student in his choice—a reflection tempered by the knowledge that as between two such works as these he will not suffer by the selection of either.

System of Diseases of the Eye. By American, British, Dutch, French, German, and Spanish Authors. Edited by WILLIAM F. NORRIS, A.M., M.D., and CHARLES A. OLIVER, A.M., M D, of Philadelphia, Pa., U.S.A. Vol. I.: Embryology, Anatomy, and Physiology of the Eye. With Twenty-three Plates and 362 Illustrations. London and Philadelphia: J. B. Lippincott Company. 1897. Pp. 670. Price £1 1*s*.

IT is quite time that an English Encyclopædia of Ophthalmology should be undertaken. The French have in De Wecker and Landolt's "Traité Complet d'Ophtalmologie," of which the fourth and concluding volume was published in 1889, a splendid work of reference brought up with great care and research to that date, and the Germans have the invaluable "Handbuch der Gesammten Augenheilkunde" in seven volumes of Professor von Graefe and Professor Saemisch, which was completed in 1877. But the English student unable to read French or German has been compelled to content himself with the text-books of Berry, Juler, Swanzy, Noyes, Roosa, or the smaller vade-mecums of Lawson and Macnamara. Excellently written as these are, they all attack the subject from the purely practical side. Not one of them contains an exhaustive account of even such large subjects as the anatomy and physiology of the eye, the development of the eye, congenital malformations and abnormalities of it, or describes the relation of ophthalmic disease to the general affections of the system, whilst many important subjects are only glanced at and indicated rather than discussed. The present System of Ophthalmology appears under very favourable auspices. The firm by whom it is published is a liberal one and has spared no expense in illustrations, in type, or in the general get-up of the volume. The editors are gentlemen of high position and large knowledge, and the list of contributors is in itself a promise that the several articles will be well and conscientiously written. With the best men of six nations this System should surpass all its predecessors in fulness and in accuracy. During the last ten years great advances have been made in almost every branch of ophthalmic work, and we sincerely wish success to Dr. Norris and Dr. Oliver in their great undertaking.

The present volume contains eleven articles, the enumeration of which, with the names of the writers, will give some idea of the plan and scope of the work. 1. The first article is by Dr. John Ryder of Philadelphia (to whose premature death the editors refer), who contributed the section on the Development of the Eye. 2. Dr. Thomas Dwight of Boston gives the Anatomy of the Orbit and the Appendages of the Eye. 3. Dr. Frank Baker of Washington, the Anatomy of the Eyeball and of the Intra-orbital Portion of the Optic Nerve. 4. Dr. George Piersol of Philadelphia, the Microscopical Anatomy of the Eyeball. 5. Dr. Alexander Hill, of Cambridge, England, the Anatomy of the Intracranial Portion of the Visual Apparatus. 6. Mr. William Lang and Mr. E. Treacher Collins of London supply the article on Congenital Malformations and Abnormalities of the Human Eye. 7. Dr. E. Jackson, of Philadelphia, writes that on the Dioptrics of the Eye. 8. Dr. J. McKeen Cattell, of New York, that on the Perception of Light. 9. Dr. Eugen Brodhun, of Berlin, discusses Binocular Vision, Conflict of the Fields of Vision, and Natural Size of Objects, &c. 10. Dr. W. Thomson, of Philadelphia, assisted by Dr. Carl Weiland, of Philadelphia, describes Normal Colour Perception; and lastly (11), Dr. Carl Mays, of Heidelberg, gives the Photo-chemistry of the Retina. It would, we fancy, have astonished Mackenzie, Tyrrell, or Lawrence to find that the united labours of three men were required to give a satisfactory account of the second pair of cerebral nerves, and to describe them within the eye, in the orbit, and in the cranium; whilst of the subjects taken up in the two last-named articles one would have been dismissed by the older systematists in a couple of lines, and the other would have been unintelligible to them.

The several articles seem to us to have had full justice done to them by their respective writers. It is difficult to criticise them, because, as each author has only a limited subject to discuss and a free hand given to him in regard to space, he has had an opportunity of introducing all recent and reliable knowledge and at the same time to interweave with the facts discovered or opinions expressed by others the results of his own investigations, which cannot easily be dissociated from them. The chief objection, which, however, is not a serious one, is that the articles of different authors are apt to overlap, as in the case of the cornea, which is treated fully by Dr. Frank Baker in his description of the Anatomy of the Eyeball, and not less fully by Dr. George Piersol in the account he gives of the Microscopical Anatomy of the Eyeball. Both accounts are good, but they might have been combined and condensed. We are struck with the pains the authors, not of these papers only, but of several of the other articles, have taken to collect statistics and the statements of many observers where there are differences in the observations that have been made. Thus in Dr. Baker's article it is given in the text that according to Krause the index of refraction of the cornea is 1·3523, that of distilled water being 1·3358; but in a note it is added that other authorities have given somewhat different figures—Charles Chossat, for example, giving it at 1·33, Aubert at 1·377, L. Matthiessen, 1·3754, and A. Macalister at 1·3825, with in each instance the correct reference, all of which means careful literary work. Yet we observe that Dr. Jackson, in his article on the Dioptrics of the Eye, gives a number which coincides with none of them—viz., 1·3365. There is a similar comparison of the data given by different observers in regard to the thickness of the cornea at the periphery and at the centre, and in regard to the relative length of the several axes of the eye. Both Dr. Baker and Dr. Piersol admit a dilator as well as a sphincter pupillæ muscle, resting their opinion partly on microscopical and partly on physiological grounds. The article on the Dioptrics of the Eye, written by Dr. Jackson, who is known to have devoted great attention to them, is, of course, excellent, but it is short and keeps very strictly to the subject, probably because such subjects as astigmia and other defects of vision will be considered in separate articles. He originally recommended, and still advises, that in adding to the metric series the preservation of the simplicity of the system should be maintained by making the interval one-eighth dioptre, which gives an

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exact division of the interval previously adopted. The lenses between 1 and 2 dioptres would therefore be 1·12, 1·25, 1·37, 1·50, and 1·75. The article on Normal Colour Perception, by Dr. Thomson and Dr. Weiland, will be read with interest. It contains an account of the most recent views of Helmholtz, with a running commentary upon them. Of the remaining articles, as those of Mr. Collins and of Mr. Lang, of Dr. Mays, Dr. Brodhun, Dr. Dwight, and Dr. Cattell, it is sufficient to say that they contain a vast amount of information not easily accessible elsewhere, and invaluable to those who are engaged in the study of ophthalmic disease.

Sanitation and Health. By Brigadier-General R. C. HART, V.C., C.B., R.E., commanding a district in India. Revised by Brigade-Surgeon-Lieutenant-Colonel T. H. HENDLEY, C.I.E., M.R.C.S. Eng., L.R.C.P. Lond., &c., Administrative Medical Officer, Rajputana, and Residency Surgeon, Jeypore, &c. Third Edition. London: Wm. Clowes and Sons, Limited. 1897. Price 1*s.* 6*d.*

THIS small volume is authorised by the War Office for use in all army schools, which is in itself a sufficient indication of the estimate which the military authorities have formed of its merits. We have read it with much gratification: it affords a large amount of information in a condensed and simple form on subjects which it concerns all ranks in the army to know something about. It makes no claim to originality, but it is carefully and correctly compiled. The pamphlet owes its origin to the fact that (as he then was) Colonel Hart, who was in command of the Rohilkund district in 1888, when there was much sickness during the rainy season among the troops stationed at Ranikhet, delivered a lecture to the soldiers in the station; and this lecture has since been revised by Brigade-Surgeon Lieutenant-Colonel Hendley at the lecturer's request. The volume treats of a number of evils which are always present in India, and points out in intelligible terms how much it lies in the power of every individual to safeguard himself and others against them by the exercise of proper care and a little thoughtfulness. Its merits in these respects, which are undoubted, must have been generally recognised, or it would not have reached a third edition.

There is still room, however, in our opinion, for the production of a work for the general use of soldiers which should deal in their own language with personal hygiene in army life in India; that is to say, in a style so familiar, simple, clear, and practical as to be popular among them. A man like William Cobbett, who had himself served as a soldier in the ranks of the British Army, could, for example, have written a work such as everybody would read; and that it would be eminently useful there can be no doubt. A treatise of this sort need not be a big work, for that in itself would destroy its value; it should not be scientific in tone, but free from moralising and technicalities, long words, and attempts at fine writing; moreover, it should be familiar and simple in style, with pertinent anecdotes, crisp illustrations, and humorous references interspersed here and there—appealing to the common sense and moral qualities that are common to all except the basest and most degraded. There is no reason why one great class of disease, omitted from the work under notice, should not be introduced. Rudyard Kipling has given us a true insight into the nature and character of Tommy Atkins as he actually is and has indicated the way in which he can best be approached. In spite of all his faults Tommy is a strong man and a true man and really a grand fellow. Why should we not tell him the truth about things and prove to him that he need not be a fool, and that if, like the rest of us, he is an animal, he need not be a brute? We have an idea of how such a book as we are contemplating could, and should, be written, and we put forward our suggestion in the hope and belief that some medical officer with knowledge of the soldier and some experience of the tropical service will act upon it. The kernel of the work must consist of facts and figures stated in their shortest and most graphic form and in large type as headings to chapters. This might be followed by a statement to the effect that, "Nor did this state of things end here. It is bad enough that out of an army of such a strength so many men should be deprived of their liberty, should be sick and in pain, and passing weary nights in hospital, instead of amusing themselves outside; but this is succeeded by ....." Then should follow an anecdote or story drawn from real life, and this again by an answer to the soldier's inquiry, "Well, what do you want me to do?" in which the necessary advice is given in terse, plain terms. At soldiers' ages men are restrained by thoughts of home, their mothers and their sweethearts, when they are not by religion; and if reference be made to such subjects in judicious touches here and there, and maudlin sentimentality be avoided, the influence and effect might be salutary and good.

The Law of, and Practice in, Lunacy. By A. WOOD RENTON, M.A., LL.B. Edinburgh: Wm. Green and Sons. London: Stevens and Haynes. 1896.

THIS is a very voluminous book and contains what appears to be a very full collection of statutes, which have been carefully and we should think skilfully annotated. It is timely, having regard to the period which has elapsed since the publication of the last edition of Mr. Pope's book upon lunacy—for Mr. Pitt Lewis's work of 1895 comprised but a meagre collection of statutes, and thus left a gap which Mr. Wood Renton has now filled. His work is probably more interesting and useful from the point of view of the practising lawyer than from that of the medical jurist for the dissertation and systematic statement of the law are by no means in proportion, in respect either of bulk or comprehensiveness, to the volume of the book, which is made up mainly of the statutes and annotations thereupon. Thus we look in vain for any systematic treatment of the topic—all important from our particular point of view—of the care and custody of the insane; nor have we succeeded, even with the help of the index, in discovering the latest utterances upon the theme, painfully interesting to practising medical men, of actions for false imprisonment. These references are sufficient to show that this big book is not free from big lacunæ. Even in the matters that are treated systematically we find ourselves tempted to complain that greater thoroughness was to be desired. Thus Mr. Renton arrives as the result of a very brief review of the legal test of lunacy at the conclusion from which as medical jurists, we should strongly dissent, that "there is a steady approximation towards the only uniform test of lunacy which is desirable or possible—viz., was the person whose act is in question able to understand its nature, and to pass a fairly rational judgment on its consequences to himself and others, and was he a free agent so far as that act was concerned?" Now, this strikes us as being very inadequate. In the first place the question of lunacy is in many cases not a question of an act and its consequences at all, but a question of the individual's condition and the duties which that condition imposes upon his neighbours. For these cases Mr. Renton's only possible test affords no criterion whatever. In the next place, in order to answer the question which he propounds as the test, it is necessary first to ascertain whether the person in question was sound in mind or no. If sound he must be presumed able to understand the nature of his act, &c., but not

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otherwise, so that the criterion of soundness must be applied first and from the reaction to that criterion an answer to Mr. Renton's question may be deduced. But it is idle to say that the criterion for testamentary capacity is the same, or tends to become the same, as for criminal responsibility, or this again to be identified with the test of susceptibility for medical treatment or necessity for control. All these things are so radically different *inter se*, that although practical convenience is consulted by treating them all as phases of one condition identified as lunacy, only mistakes and confusion of ideas are fostered by suggesting that they are all so similar in character as to be recognisable by a common test.

We have referred above to the general excellence of Mr. Renton's notes upon the statute law. It is due both to him and to our readers to point out that in the table of statutes prefixed to the book there is on page 63 an unfortunate printer's error, which has resulted in producing some confusion between the references to the Lunacy Act of 1891 and the County Councils Act of that year. The latter is not of great importance from the present point of view; whereas the former is, by reason of its date, one of the topics for which Mr. Renton's book will be most frequently consulted. The slip occasions some perplexity, which cannot well be cleared up by way of explanation, but can easily be set right by any reader of the book whose attention has been drawn to it.

LIBRARY TABLE.

The Drainage of Villages. By WILLIAM SPINKS, Assoc. M. Inst. C. E., &c. Second Edition. London: Sanitary Publishing Co., Limited.—Of a subject which is unquestionably one of the most pressing social problems Mr. Spinks' work forms a useful epitome, presenting in a very small compass a large amount of practical information illustrative of what is considered to be the best practice of to-day. It is throughout well supported by references to the best authorities, whilst the several tables given, together with collated extracts from the numerous by-laws dealing with the question, form by no means the least valuable part of Mr. Spinks' little manual. The ground covered in the four divisions into which the book is separated is considerable and presents a clear, if rapid, sketch to those interested who cannot find opportunity for the study of more voluminous text-books, and will certainly be found convenient for reference by a great number of others engaged in such work. It must, however, be added that, though in towns the disposal of sewage by means of a regular system of water-carriage would seem to be a matter of necessity, it is certainly open to serious question whether its universal application to rural districts might not prove anything but an unmixed blessing.

The Idiot: his Place in Creation and his Claims on Society. By Sir FREDERIC BATEMAN, M.D. Aberd., LL.D. Second Edition. London: Jarrold and Sons. Pp. 120.—Sir Frederic Bateman explains in his preface that the arguments contained in this essay formed the nucleus of an address advocating the claims of the idiot upon the philanthropists of East Anglia at a public meeting held in Norwich in support of the Eastern Counties Asylum for Idiots. In addition to much technical matter in reference to consanguinous marriages, parental intemperance, overpressure in education, and other factors having a causal relationship to idiocy, the author shows how the study of the idiot is calculated to throw light upon the abstruse question of the connexion between matter and mind, and that the whole subject is fraught with interest not only to the philanthropist but to the theologian and to the political economist. Sir Frederic Bateman's definition of idiocy is in our opinion an excellent one both pathologically and psychically. It runs as follows: "An idiot is a human being who possesses the tripartite nature of man, body, soul, and spirit, σῶμα, ψυχὴ, πνεῦμα, but who is the subject of an infirmity consisting, anatomically, of a defective organisation and want of development of the brain, resulting in an inability, more or less complete, for the exercise of the intellectual, moral, and sensitive faculties." A strong distinction is also drawn between idiocy and insanity; this point is especially recommended to the careful consideration of the legislators of the country. The whole book is most charmingly written. The arguments are sound and expressed in phraseology which can be understood by the laity, whilst at the same time losing none of their force for presentation to the professional mind. We sincerely wish that the work may carry out the intention of the original address—namely, to claim sympathy for the institution in support of which it was written — and at the same time draw attention to the true state of the sufferers in the institution, who, like all those similarly affected, "have the germ of intellectual activity and of moral responsibility, and this germ, cherished and nourished by the genial warmth of human kindness, fenced round and protected from the blasts and buffetings of the world by the cords of true philanthropy, and watered by the dew of human sympathy, although possibly only permitted to bud here, is destined hereafter to expand into a perfect flower and flourish perennially in another and a better state of being."

Who's Who, 1897. First year of new issue. Edited by DOUGLAS SLADEN. London: A. and C. Black, Soho-square. Price 3*s.* 6*d.*—This is a useful work of reference, containing, in Part 1 at all events, a variety of information which everybody ought to know and very few people do know. The book, however, is not free from inaccuracies. For instance, it states that Mr. Ernest Hart was for "several years co-editor of LANCET." This is quite incorrect. Mr. Hart was at one time a member of the sub-editorial staff of this journal, but he was never co-editor. Dr. James Wakley succeeded his father, the Founder of THE LANCET, as Editor, and on Dr. Wakley's death in 1886 the present Editors, Thomas Wakley and Thomas Wakley, jun., became responsible for the control of the journal, of which there have been no other editors or "co-editors." The preface to the book is amusing. Does anybody really often ask himself, "What paper is it that 'Madge,' or 'Logroller,' or 'Red Spinner' writes for?" Mr. Sladen also tells us that "certain men and women whose untimely death has left a great gap filled in their biographical forms before they went." We should have thought it sufficiently obvious that they could not have done it afterwards, but anyway the editor has not included anyone not living. The most entertaining part of the book is the section called Biographies, as the biographies are for the most part autobiographies, and in many instances the amount of information given is in inverse ratio to the importance of the giver or subject.

The Swedish System of Physical Education. By THEODORA JOHNSON, Principal of the Swedish Institute, Clifton, Bristol. Bristol: John Wright and Co. Pp. 79. Price 3*s.* 6*d.*—This small book gives a good description of the Swedish system of physical education written by one who is well qualified for the work, having had twelve years' experience of it in England and of observations made in Sweden. The objects of the exercises and the methods of performing them are plainly and fully set forth, and the descriptions of the movements are aided by outline drawings. It seems a pity that less cumbrous terms for the exercises could not be adopted; thus, "arch stoop sitting trunk upraising," or "forward arch lying armflinging," are unwieldly. The insertion of verbs would make the title longer but more explicit. Some of the observations made by the author

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are much to the point, and we cordially endorse them. For instance: "When we find that a doctor gives any man or woman *six lessons* in which to acquire the requisite knowledge of anatomy, physiology, disease, and its treatment by manipulation, and grants, forsooth, a certificate by means of which such person trades upon the ignorance of a gullible public, causing pain and exhaustion, if not serious injury, and so brings 'massage' into sorry disrepute ..... a grave responsibility is incurred." With the condemnation of such a practice we thoroughly agree. It is now too common an occurrence for medical men to teach nurses massage and to take fees from them which they can barely afford, the number of lessons given being absurdly few, and yet their pupils blossom forth as "certificated masseuses" only to live a life of poverty, the market being terribly overstocked. We also agree with the author's remarks in respect to Ling's and Zander's methods, believing that the "delicate manipulations of a highly-developed human hand" are superior to mechanical appliances. With one observation we are not in accord—namely, when the English medical profession is charged with "insular prejudice against anything branded as 'foreign.'" There is probably no country in which the medical profession is so open to receive instruction from, or the results of observations made by, foreign observers as England. The state of our medical libraries is proof of this, where the periodical literature as well as monographs and treatises from all countries are eagerly collected.

Zalma. By T. MULLET ELLIS. London: Ash Partners, Limited.—Mr. Mullet Ellis in this work reminds us by turns of Miss Corelli, Lord Beaconsfield, that immortal work "Codlingsby," Crookshank's Bacteriology, various "penny bloods," "Jack Harkaway," and the earlier effusions of Ouida. But we will credit him with having evolved a simply amazing story, of the *roman à clef* type. Zalma was beautiful and extremely wicked; she also wore the most magnificent clothes, the descriptions of which are enough to make Mrs. Aria or "Virginia" green with envy. The following is her presentation dress, and having read the account of it we can only wonder that she was admitted. "She was in the loveliest pink gown, covered with a mass of old Brussels lace, softened yet more with the softness of fur and feather, and brightened with the damask light of watered silk, revealing, whilst it still concealed, her pulsing busts, which hid behind the down of fur and lace as though they were moons about to appear from masses of feathery clouds." After passing through various vicissitudes, such as a secret marriage, living with the wicked nobleman of the story as his mistress, when she wore a satin dressing-gown with "the allurements of an opening frill," she took to bacteriology, and, having being brought up as an anarchist, bethought herself of working universal destruction by scattering noxious bacilli broadcast, and accordingly cultivated anthrax bacilli in tubs (*sic*), intending to disseminate the cultures over the land by the aid of balloons. However, her scheme was nipped in the bud, and after a Bohemian ball she committed suicide. Mr. Mullet Ellis has taken some trouble to get his bacteriology correct, and for this he deserves praise, but his book is a fine specimen of burlesque.

SUPERSTITION IN THE WEST OF ENGLAND.—The *Western Morning News* reports a remarkable case of superstition. A young woman in Penzance had suffered from "fits," and as a remedy she procured a live toad, placed it in a bag, hung it round her neck, and carried it next to her body. She was also attending a local infirmary and was cured of the attacks, but it is stated that the woman believes that this was only a coincidence and that her strange talisman was the means by which her cure was effected.

Analytical Records
FROM
THE LANCET LABORATORY.

DIETERICH'S PREPARATIONS.
(AGENCY: M. BUCHNER, 149, HOUNDSDITCH, E.C.)

PREPARATIONS of the following type are interesting as examples of skilful chemical combination. The constituents are so associated as not only to result in a stable mixture, but to yield also a combination in which each is presented in an acceptable and easily appropriated form. Thus in the preparation known as ferro-mangan-iodine-peptonate we obtained conclusive proof of the presence and kind of each of the components indicated. It is a somewhat syrupy, sweet, brown liquid, with aromatic taste, and is offered as a substitute for cod-liver oil, partly on account of the iodine combination and partly on account of its beneficial action upon the processes of nutrition. In another preparation the iodine is omitted, while in a third the metals are combined in the form of saccharate instead of peptonate. From a consideration of their composition there is little doubt that they would serve as powerful tonics in many conditions. Of a like complex composition are the cod-liver oil compounds with iron, manganese, quinine, phosphorus, bromine, sulphur, &c., which again, in spite of this complexity, are clear and stable preparations. Moreover, they are reliably constituted, since we were able to satisfy ourselves as to the presence of each of the medicaments indicated. A preparation of interest on the same list is the extract of malted acorns. It is a light impalpable powder not unlike cocoa, with a pleasant malty and aromatic taste, and turning dark brown on the addition of water. It is practically soluble and contains a large proportion of dextrine, as shown by the iodine reaction. It is said to be indicated in rickets in children and persons suffering from the effects of malnutrition. In the capsules which, when taken together, comprise, it is stated, a remedy for tape-worm, are contained, on the one hand, extract of male fern, and on the other castor-oil. The combination is well known as effective when the extract of male fern is taken at night before rest, followed by the castor-oil in the morning. Lastly, the list of specimens submitted to us concludes with "glue bandages" and "soap glue bandages," which offer certain advantages in the protection as well as treatment of wounds or of abrasions. They may be obtained with or without the antiseptic substances usually employed in such bandages. An improvement in umbilical bandages has been also recently introduced by the same firm.

BLACK'S PATENT FOOD.
(HUGH BLACK, 27, MILL-STREET, ROTHESAY.)

There can be little doubt of the high nutritious value of this food. Apart from the somewhat diverse nature of the ingredients employed, each contributing its own specific food value, the method by which it is prepared is calculated to render it not difficult of digestion. It is first prepared from a mixture of lentils, flour, new milk, and eggs, and made into crisp rusks, which are afterwards ground with maize, oatmeal, and lentil flour, and a little sugar and salt added. The microscope served to confirm this statement in regard to each and all of the ingredients. The food yields a high proportion of essential mineral constituents. The taste is good, and the preparation is evidently a food of high merit.

"EODALB."
(J. W. NICHOLL, 25, HIGH-STREET, BELFAST.—AGENTS: F. NEWBERY AND SONS, 1, KING EDWARD STREET, NEWGATE-STREET, E.C.)

This is a dark, olive-coloured, oily preparation containing iodine in a somewhat modified form to the extent of 10 per cent.

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and possessing a faint, though distinct, smell of the essential oil of roses. It does not stain, or produce irritation, while it is rapidly absorbed when rubbed on the skin, as is evidenced by the fact that within a few minutes after the application the taste of iodine is experienced in the mouth, and, as we proved, the presence of iodine may be also demonstrated in the urine. The preparation dissolved completely in chloroform without change of colour, but on adding thio-sulphate of soda the iodine was evidently destroyed, the liquid remaining a dark brown. On treating "Eodalb" with alkali a similar discharge of colour took place, and the oil was saponified. The preparation is one of considerable importance in connexion with the external administration of iodine for many obvious purposes. Whilst ensuring the specific action of the drug, it is free from the marked disadvantages of ordinary iodine preparations.

LACTOMALTINE.

Lactomaltine consists, as our experiments have shown, of a powerfully active malt extract combined with milk and cream. It possesses a good, rich, malty flavour, modified favourably by the smooth taste of milk and cream. On dissolving the preparation in water a milky fluid results, in which under the microscope the fatty particles are seen to exist in a finely divided condition. Lactomaltine is also prepared with hypophosphites. The preparation is clearly a reliable one. An introduction of distinct advantage connected with the bottling of this preparation is that a celluloid cap is provided with each bottle, so that the objectionable stickiness met with in constantly extracting and inserting a cork is satisfactorily avoided.

DALU KOLA TEA.

(THE DALU KOLA TEA CO., LIMITED, IMPERIAL WAREHOUSES, LEMAN STREET, E.)

Characteristic of tea that is grown from China seed in Ceylon, the specimen before us yielded a satisfactory infusion of a light character and free from excessive astringent properties. The infusion, though agreeably tea-like to the taste, is not powerful. It yielded on incineration 5·40 per cent. mineral matter, the alkalinity of which was 1·59 per cent. in terms of potash. There was no indication, therefore, of objectionable treatment or sophistication. The caffeine amounted to 2·8 per cent., a figure in accordance with the composition of tea of good quality.

PURE EXTRACT OF MALTED BARLEY.

(THE DISTILLER COMPANY, LTD., 12, TORPHICHEN-STREET, EDINBURGH.)

This extract is characterised by a remarkable degree of concentration and a very agreeable malty flavour, which is quite free from caramel-like taste, in spite of which its digestive activity upon starch is particularly well marked. In short, it possesses all the satisfactory characters of a malt extract that is concentrated with care and with a due regard to the requirements that it is destined to fulfil. This result might be expected of a product made by a firm which, like the above, possesses a large and wide experience of malting processes.

FREEMASONRY: ÆSCULAPIUS LODGE.—A regular meeting was held at the Café Royal, Regent-street, on Wednesday, April 14th, when there was a good attendance of members and visitors. The Master, Thomas Dutton, M.D. Durh., was in the chair. L. Hemmington Pegler, M.D. Edin., H. Simpson Lunn, B.A., M.D. Dub., W. E. Gillson, M.R.C.S. Eng., L.R.C.P. Lond., and G. Newton Pitt, M.A., M.D. Cantab., F.R.C.P. Lond., were admitted to the third degree, and E. Ramsay White, F.R.C.S. Eng., to the second degree. E. H. Ezard, M.D., D.Sc. Edin., was elected Master for the ensuing year, and G. Danford Thomas, M.D. Brux., coroner for Central London, treasurer. A very sociable evening, the pleasure of which was enhanced by the musical members, was afterwards spent.

New Inventions.

A COMBINATION COUCH-CHAIR FOR THE CONSULTING-ROOM.

MANY general practitioners, owing to the limited area of their consulting-rooms, cannot afford space for a couch of convenient size on which minor gynæcological operations might be effectively performed. Medical men in country practice frequently suffer much inconvenience by having to examine patients per vaginam on an ordinary sitting-room sofa. Many combination chair-couches have been invented and patented, but are offered for sale at prices absolutely prohibitive except to the wealthiest members of the profession. The accompanying illustrations depict a chair which combines extreme simplicity of construction with the utmost rigidity and the most absolute comfort. It is an extremely comfortable and ornamental easy-chair which with half a minute's manipulation can be converted into a perfectly rigid couch capable of bearing a dead weight of 350 lb. A practical cabinet-maker tells me that he can make it in excellent materials for £5.

FIG. 1.

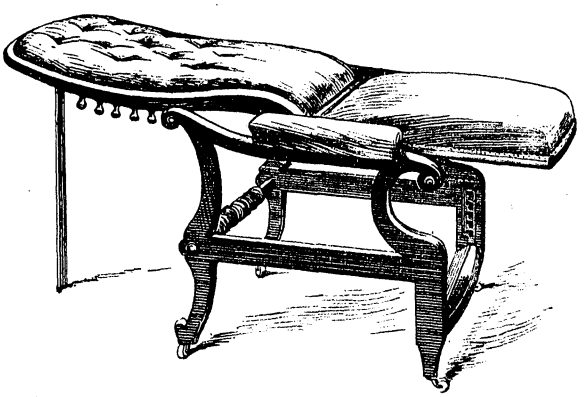
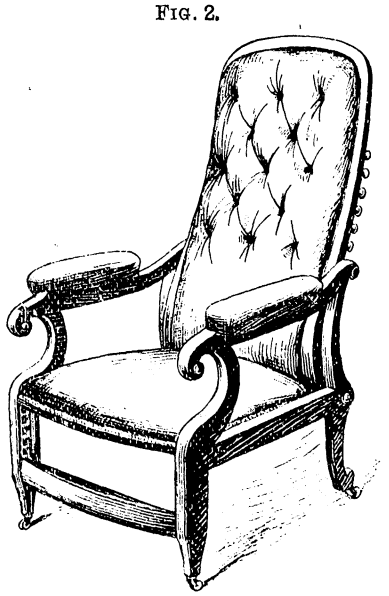


FIG. 2.

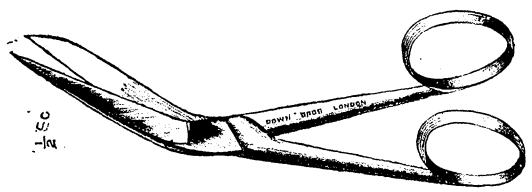


MAURICE G. MCELLIGOTT, L.R.C.P., L.R.C.S.Irel., L.M.
Belper, Derbyshire.

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A NEW PATTERN OF SCISSORS FOR PERINEAL REPAIR.

MESSRS. DOWN BROTHERS, of St. Thomas's-street, Borough, have constructed for me a pair of scissors which are much better for flap-splitting operations than anything I have seen before. They are slim but firm in the blades, the points are very carefully made, and the blades slope gradually to the hilt, so that the flaps can be made with one cut each, and therefore will have perfectly true surfaces—a matter of much importance and I fear, not sufficiently attended to. The joint is a beautiful French contrivance which I first saw on a pair of catch-forceps, and have adapted it to scissors, where it has the important advantage of keeping the cutting edges of the two blades in accurate adaptation. It also enables the blades to be unshipped instantly, and is

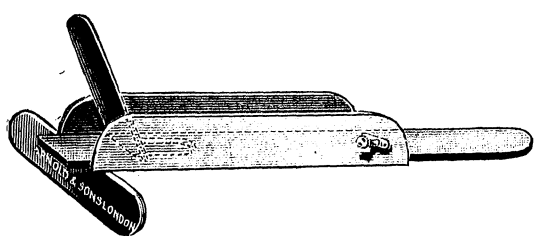


therefore an advantage for aseptic purposes. From the number of cases coming to me of failure of what is said to have been "Tait's" operation I fear my original instructions are not being carried out, for I have altered the operation in no particular and I have no failures to record. My rules are: cut cleanly and deeply on the white cicatricial lines which indicate the healing of the original tear; insert the stitches deeply *within* the skin margin and miss about half an inch at the bottom of the wound. Use salmon gut sutures and tie tightly. Close the skin wound, if needful, by a few superficial sutures. Keep the vagina clean by washing out with soap and water night and morning, and keep the rectum empty.

Birmingham. LAWSON TAIT, F.R.C.S. Eng. and Edin.

NEW PATELLA SPLINT.

THIS splint I have used with complete success in the treatment of fracture of the patella, and in my opinion it is the best appliance for that injury. It consists of a wooden trough with foot-board, in which I fix the limb. Along the upper border of the patella should be placed a padded cord, with lengths extending down both sides of the leg to a pin or screw fixed in the sides of the troughs at about five or six inches distant from the centre of the fracture. Upon tightening this cord apposition of the upper with the lower



portion of the patella is perfected. No constriction of adjacent tissue occurs to endanger punctual ossification and union. By making the two pins (to which the cord is fastened) as rotating screws tension is easily adjusted for exact apposition of the displaced fragment. The usual V posing of the patient is unnecessary; thus another hindrance to the freedom of circulation is dispensed with—a serious consideration in treating these cases.

FRED. DALTON, L.R.C.P. Lond., M.R.C.S. Eng.

Rottingdean, Brighton.

COMBINED TONGUE DEPRESSOR AND INSUFFLATOR.

A COMBINED tongue depressor and insufflator, invented by Mr. W. Thomas, of Bridgend, Glamorganshire, has been sent to us by Messrs. Woolley, Sons, and Co., Limited, of Manchester. The instrument is in one piece, and therefore easily rendered aseptic by immersion in boiling water, and is provided with a glass screen, which, while allowing a good view of the fauces to be obtained, prevents the operator being infected by the child coughing. The instrument will be chiefly of use for insufflating the throats of children, as, for instance, with sulphur in diphtheria, as inspection and insufflation can be carried out simultaneously. The instrument is strong and well finished, and can be obtained, complete, for 8*s.* 6*d.*

SPUTUM BOX AND STAINS.

MR. FEARNLEY of Harrogate has lately introduced a box containing all the requisites for examining sputum and excreta for the tubercle bacilli. The box contains carbol-fuchsine and acid methylene blue in very convenient drop bottles, slides, cover glasses, cedar oil for mounting, spirit lamp, vessels for water, filter papers, scissors, forceps, &c. The box is accompanied by directions by Mr. Fearnley for the use of the stains which are so admirably clear that anyone without previous training can make reliable preparations if he carries them out carefully, and the whole process need not take more than ten minutes. The stains supplied are of excellent quality. The sputum box will be a great boon to the busy country practitioner, who can easily make reliable preparations for himself at once, and will not have to wait until he has obtained a report from some distant authority. The box can be obtained from Mr. Freshfield Reynolds, pharmaceutical chemist, Harrogate, price 12*s.* 6*d.*

THE PROPOSED CENTRAL HOSPITAL BOARD.

THE following is the text of the petition to be presented to His Royal Highness the Prince of Wales concerning the formation of a Central Hospital Board:—

TO HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G., &c.

We, the undersigned members of the Medical Profession in London, and others interested in the welfare of Metropolitan medical charities, humbly venture to submit to Your Royal Highness the following short statement, in the hope that Your Royal Highness may be willing to accede to our petition.

In accordance with a communication addressed by Your Royal Highness to the Public, the Prince of Wales's Hospital Fund for London has been established in honour of the Diamond Jubilee of our Most Gracious Majesty the Queen.

To this Fund a very large sum has already been contributed, both in commemoration of Her Majesty's reign, and in the hope that the hospitals of London may be relieved from the heavy financial pressure from which many of them are suffering.

The establishment and maintenance of so large a Fund under Your Royal Highness's auspices will affect the condition of the hospitals of London for many years to come.

For the distribution of so important a public gift, we venture, in the interests of the poor, the Public, and the hospitals themselves, to urge the formation, at an early date, of a Central Hospital Board, including lay and medical representatives of the medical charities of the Metropolis.

This proposal has already received the approval of a large number of the members of medical profession, and of many others interested in the welfare of the poor.

Established with your Royal Highness's sanction, such a Board would do much to promote consultation and coöperation amongst those who are attached to, or engaged in the management of, London hospitals and dispensaries.

Consultation and coöperation thus promoted would enable the hospitals to deal with some of the acknowledged difficulties of their work, as, for instance, the regulation of the out-patient departments.

The Central Board would also be a guarantee to the contributors that the fund would aid the hospitals in the most thorough and satisfactory manner; by furthering the development of medical charity in such a way as to meet the wants of the growing population of the metropolis; and by preventing those evils of pauperism and dependence which medical relief cannot but produce, if it be not administered with care and discretion and in accordance with sound principles of charity.

All this we would submit to Your Royal Highness, and would at the same time beg that, in view of the great importance of the subject, Your Royal Highness will receive a deputation of leading members of the medical profession and others interested in medical charities, in order that they may explain personally their reasons for asking Your Royal Highness to consider the proposal that we have ventured to make.

And your Petitioners will ever pray.

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THE LANCET.

LONDON: SATURDAY, MAY 1, 1897.

ABOUT twelve years ago M. GLENARD of Lyons drew attention to the fact that in many cases of neurasthenia, in which gastro-intestinal symptoms predominated, there could be found evidence of downward displacement of the stomach or colon. The condition which he termed gastroptosis or enteroptosis was attributed to an undue relaxation or flaccidity of the abdominal walls, so that the visceral contents of the abdomen lost that countervailing support which normally prevents their tendency to obey the law of gravity in the erect position of the body. A similar explanation was offered of the undue mobility and dislocation of the more solid viscera which occurred with varying frequency in those suffering from enteroptosis, adding perchance to the subjective troubles of this class of patients. Since then the recognition of enteroptosis and its allies has been generally accepted, but it is questionable whether the acceptance of the fact has been put to such practical service as was anticipated by M. GLENARD and those who welcomed his discovery.[1] There has just appeared an essay by Dr. C. SCHWARDT of Gotha bearing on this subject that seems to be worthy of notice, if only to illustrate the far-reaching speculations that it is possible to attach to "GLENARD'S disease," and it may be useful to give some account of this writer's views.[2] These amount to an insistance on the fact that enteroptosis is only one symptom out of many that arise in the course of neurasthenia, whilst in its turn it may lead to other conditions, such as auto-intoxication, that aggravate the primary disorder; the inference being that treatment directed to the relief of enteroptosis or other visceral displacements is of little avail, as the underlying causative element cannot be reached by such measures. For example, the rectification of a mobile kidney, though affording relief to the symptoms directly due to it, may have comparatively little effect in curing the patient of neurasthenia. To emphasise this point he gives the details of a case—one, he says, of some forty examples of enteroptosis that he met with in the first eight months of 1896 (surely a large experience). The patient, a young woman, twenty-five years of age, had suffered from headaches in childhood and adolescence; but an attack of influenza in March, 1895, was followed by dyspeptic troubles, which were further aggravated by a dysenteric attack in the following September. On that occasion the right kidney was found to be displaced and apparently fixed to the abdominal wall to the right of the umbilicus. In October she began to complain of feeling tired and to suffer from pseudo-membranous enteritis (colica mucosa of NOTHNAGEL), eventually taking to her bed on Oct. 27th and remaining continuously under treatment until February, 1896. The symptoms—of a character familiar to most physicians—now became very aggravated. Vomiting was severe and frequent, there were headache, insomnia, abdominal pains, palpitation, pulsating aorta, pain in deglutition, scanty urine, sometimes amounting to anuria, constipation, mental depression, great physical weakness, and emaciation. There was no fever; the pulse varied in rate and regularity as in volume. Examination showed a flaccid abdominal wall, which had become very thin, the stomach descending to the umbilicus, a displaced right kidney (which became mobile again after massage of the colon), and a retroflexed low-lying uterus. Enemata were followed by the discharge of membranous shreds and mucus. For a month treatment was directed to relieve the gastroptosis, and subsequently to keep the viscus quite at rest (by rectal feeding), but the administration of "intestinal antiseptics" to neutralise the auto-intoxication process was of no avail, and narcotics had to be given to produce sleep. The adoption after that time of hydro-therapeutic measures, such as packing, followed by cold sponging, produced a marked change, the vomiting ceasing and sleep soon being naturally procured. The same treatment being continued—with gradual addition of massage, gymnastics, &c.—led to an almost complete removal of subjective symptoms, to disappearance of the enteritis and to a great extent of the enteroptosis, and although the kidney was still mobile the uterus had regained its normal position. In other words, the treatment of the neurasthenia had cured the enteroptosis and the train of disorders attributable to auto-intoxication; and Dr. SCHWARDT urges that it shows that the condition of the skin—which is both an excretory and an important nerve-organ—is of prime importance in the production of many of the symptoms which occur in these neurasthenic states.

Enteroptosis, then, according to this view, is but an incident in the long train of conditions which afford a physical explanation of much of the misery which the neurasthenic, or the hysterical, or the hypochondriac subject experiences. The primary derangement is the "irritable weakness" of the nervous system, when the symptoms seem to be wholly functional—lack of energy, muscular weakness, wasting, and anæmia. Then comes the yielding of the abdominal wall, with diminution of intra-abdominal pressure and resulting tendency to gaseous and fluid accumulation in the stomach and intestines, the walls of which lose their tonicity and dilate, whilst there is also hindrance to circulation of blood and lymph and diminution in urinary and biliary secretions The contents of the intestine delayed in the dilated viscus ferment and produce auto-intoxication, and many of the symptoms are ascribable to retention or absorption into the blood of products that are not properly eliminated. Amongst the symptoms are dyspepsia, vomiting, headache, insomnia, tachycardia, anæmia, and muscular feebleness. Indeed, conditions are set up which increase the primary defect, added to which are the displacements of the solid viscera above referred to and defective action of the skin, which in itself increases the toxic agencies at work. The improvement due to acting on skin and muscles by hydro-therapeutic measures and massage is to be ascribed to the general effect on the

[1] See Revue de Médecine, 1887, p. 75.

[2] Beiträge zur Ætiologie, Symptomatologie, und Therapie der Krankheit Enteroptose - Basedow, Myxœdem - Sclerodermie. Jena: G. Fischer. 1897.

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nervous system and to the elimination of the toxic materials in the blood as well as the increase of metabolism.

DR. SCHWARDT, however, does not stop here; if he did perhaps there would not be much that is really novel in his thesis, for the efficacy of such measures as those indicated is one of the best accepted facts in therapeutics. He indulges in speculations which certainly have a novel aspect. At first sight it would not seem as if GRAVES'S (BASEDOW'S is the term which he uses) disease and enteroptosis have anything in common. But that is, indeed, his contention. He argues that as the condition of enteroptosis develops there is at first an effort on the part of many organs to compensate for the troubles it occasions, as evidenced by vomiting, diarrhœa, polyuria, intestinal muscular hypertrophy, and increased cutaneous activity. GRAVES'S disease—the heightened activity of the thyroid function—may be regarded as a similar compensating effort, called for to antagonise by the thyroid secretion the poisons which accumulate in the blood from the intestinal disturbance and renal inadequacy. He contrasts the conditions which prevail amongst the subjects of GRAVES'S disease with those present in the neurasthenic sufferers from enteroptosis, and thinks that they are wonderfully similar, whilst he goes further still and draws into the nexus of conditions assignable to like toxic agencies, scleroderma and myxœdema. It is difficult to follow his argument here—we may, perhaps, be pardoned for failing to comprehend it; for although myxœdema may colourably be supposed to be connected with states in which GRAVES'S disease plays a part, it is hard to see how scleroderma comes in unless it be regarded as a result of the cutaneous atony which, in his view, has much to do with neurasthenic symptoms. Yet he has at any rate given an opportunity for the discussion of some of the deeper problems of pathology in which the blood and nervous system take so large a share, and it may be that through some general conceptions of this kind clearer notions will be gained of the essential causes of derangements which are comprised under the term "functional."

IT is only natural that an individual should resent being told he is not performing his duties well. Very few persons are able to kiss the rod and to rise superior to adverse criticism of this sort, and public bodies do but resemble individuals in this respect when they resent the chastening hand of a departmental inquiry. The President of the Local Government Board would, perhaps, have been wiser to have remembered this platitude when he nominated only seven persons, albeit of great ability, to inquire into the existing systems for the maintenance and education of the 12,000 pauper children in the metropolitan area, in response to an agitation which has been going on for some years. He would, we think, have been well advised to have made this committee larger and less open to the criticism that it was not sufficiently representative. The criticisms on the constitution of the committee, published in a pamphlet before us by the guardians of the metropolis, who are, without doubt, the persons chiefly to blame if the education of pauper children be faulty, appear to us to be extremely feeble. The guardians object to two members of the committee because they have had no special experience of pauper schools, and to two others because they have had such experience. They object to Sir JOSHUA FITCH because he is an "educational expert (*sic*) with no special knowledge of Poor-law schools." Nevertheless, he apparently knew sufficient to point out to some of the witnesses that there had been no material addition to the Poor-law curriculum of instruction beyond reading, writing, and arithmetic since 1847. They object to Mr. EDWARD NETTLESHIP because he has only been connected with the schools on ophthalmic questions, which, by the way, is the point with regard to which of all others the guardians' management of these children appears to have most signally failed. Turning to their criticisms of the seventy-five witnesses, who, the guardians say, were "selected without reference to the boards of guardians," twelve were officials connected with schools and twenty-seven were guardians—that is to say, thirty-nine, or more than half, were representatives of the existing system, which stood, as it were upon its trial. The remaining thirty-six consisted of seven inspectors of the Local Government Board, twelve representatives from other educational establishments, eight from the outside public, five from the various boarding-out committees, and four from different emigration societies. The evidence collected, therefore, was of a very representative kind, and we will first inquire what evils this evidence reveals, and, secondly, what would seem to be the best remedies for them.

The evils existing in the present district schools, with which the evidence teems, come under two headings, medical and educational, with both of which, as a journal interested in the health, both of mind and body, of the future men and women of the nation, we are essentially concerned. It has long been known among ophthalmic surgeons, as pointed out by Dr. STEPHENSON, that the majority of young adults "coming for treatment for chronic ophthalmia at the London hospitals have formerly been inmates of the pauper schools"; and Mr. CHAPLIN stated in Parliament only last session, in reply to Dr. FARQUHARSON, that there were even at that time 6 per cent. of the children in the Poor-law schools suffering from ophthalmia, as compared with ½ per cent. under ordinary circumstances. To properly appreciate the causes of the prevalence of ophthalmia in pauper schools the blue-books of the Departmental Committee should be studied, but that it is due to the unhygienic condition of the schools is shown, among other important data, by the fact that a very much higher percentage of children were affected with granular lids amongst those who had resided in the schools for one year or longer than amongst those who had been in the schools for less than one year. Again, the mere fact that between 6 and 8 per cent. of pauper school children are prevented from going up for examination by reason of sickness is sufficient in itself to show that something is wrong in the administration of the schools. That overcrowding, general want of hygienic management and classification of children suffering from sore eyes, sore heads, and other contagious maladies constitute the causal factors in operation is abundantly evident from the various facts mentioned by the different witnesses. Not only does such overcrowding impair the health and eyesight of the children, but it also endangers their lives, as may be seen from the reports of both Dr. SYKES and the medical officer

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of the Leavesden schools, who inquired into an outbreak of infectious sore-throat in those schools so recently as 1894. The evidence of Dr. BRIDGES, based on over twenty years' experience of the Poor-law schools, which is so amply confirmed by the testimony of others, including the somewhat reluctant testimony of some of the guardians themselves, is well worthy of the most careful perusal. The guardians, in their pamphlet of criticism, attempt to show that the evils referred to belong to "ancient history," but there are ample proofs in the report and evidence that the evils referred to still exist unremedied, though in some of the schools praiseworthy efforts at improvement have been made, and the mere appointment of the Departmental Committee has not been without a salutary effect in this direction. As a matter of fact, the most serious part of the indictment against the managers of the existing schools—that is, the guardians of the poor—seems to be that, although outbreaks of ophthalmia, ringworm, and other diseases traceable to unhygienic management have continually occurred, more has not been done during the past ten or fifteen years to place matters on a better footing, both as regards the overcrowding of the schools and the general want of classification and detail management, the establishment of probation or isolation wards to prevent the introduction of disease, and the like. In some of the schools, we repeat, steps of this kind have been taken, but in general there is a sad deficiency according to the evidence before the committee.

As regards the educational defects, with which we have to deal in a minor degree, but which are intimately associated with the medical and hygienic aspects, it was pointed out by many of the witnesses that the five hours' schooling of a child represents but a very small item in the formation of his character, and that sufficient supervision is not exercised over the children during the remaining nineteen hours, owing, in general terms, to a deficiency and inefficiency in the staff. It is also admitted, even by the guardians themselves, that in these great schools, containing sometimes 1700 scholars, a child loses all trace of his individuality; and that the general trend of the educational scheme is lacking in a technical aspect which not only fits a child hereafter to earn his own living but also by interesting a pupil in his work develops the mind far more than mere book-learning can ever do. The limits of space prevent our discussing on the present occasion the various remedies for these defects, but we propose to refer to this aspect of the question in an early issue.

THE Registrar-General's fifty-eighth annual report, which was published on Saturday last, contains, in addition to the ordinary routine concerning births, deaths, and marriages, certain matters of special medical interest which appear worthy of comment in THE LANCET. Year after year the Registrar-General has had to deplore the large number of deaths which are returned in the registers in such fashion as to be worthless for any statistical purpose, whether in relation to practical medicine or to public health. According to a table at page 12 of the present report we note that out of more than half-a-million deaths registered in 1895 nearly 26,000 were so returned that the causes of death could only be classified as unspecified or ill-defined. In another part of the report it is stated that of the half-million deaths recorded in 1895 as many as 92 per cent. were certified by medical men—of course, compulsorily and without fee. But for the registration of every one of these deaths a statutory fee has been paid to the registrars by the local boards of guardians. In no other country but our own, we opine, would 26,000 fees be paid annually out of public funds for information which has repeatedly been declared to be without scientific value.

For some years past the statistical department has been doing its best to remedy this state of things, and has issued annually thousands of inquiries to medical men respecting death certificates in cases where there was room for doubt whether the actual cause of death had been explicitly stated. That the medical profession have responded handsomely to the appeals from the General Register Office may be gathered from the fact that in the year 1895 there were received more than five thousand replies to medical inquiries, the majority of which contained information which has led to improvements in the classification of causes of death. In that year, as a result of their inquiries, 670 deaths were transferred from vague headings, such as tumour or disease of brain, liver, ovaries, uterus, &c., to cancer; 152 deaths which had been returned as due to pyæmia, peritonitis, pelvic cellulitis, &c., were transferred to puerperal fever; and 91 deaths, which had been ascribed in the first instance to tumour of the brain, were after inquiry referred to syphilis. It is believed, and with good reason, that in the course of years this system of inquiry has led to gradual diminution in the use of vague and unscientific terms in medical certificates of cause of death. In the course of the first half of the current decennium nearly 20,000 letters of inquiry were issued from the General Register Office, and in two-thirds of these cases the classification of causes of death has been altered and improved as the result of these inquiries. The following instances, quoted from the reports, are interesting as showing the variety of names under which serious and important diseases are sometimes disguised in the death certificates. "The terms atrophy of thyroid gland, cachexia, congenital disease, skin disease, constitutional disease, septic disease, pustules, sloughing soft palate, roseola, surgical fever, erythema, visceral degeneration and wasting, were found to have been used as euphemisms to denote syphilis. Abdominal disease, bowel disease, cachexia, disease of breast, disease of face, enlarged glands, exhaustion, organic disease, suppurating glands, and throat disease were used as synonyms for cancer; while alcoholism has been variously disguised as delirium, degeneration of organs, diseased viscera, dysphagia, inflammation of mucous membranes, mania, organic pseudo, general paralysis, toxic palsy, and toxic insanity." In a table at page 22 the result of this system of inquiry and subsequent correction is given for the years 1891–95. The figures show an addition of 8 per cent. to the total deaths from puerperal fever, of 5 per cent. to those from venereal diseases, of 3 per cent. to those from cancer, and of 2 per cent. to those caused by intemperance. On the other hand, they show a reduction of 65 per cent. from the deaths indefinitely referred to tumour, of 46 per cent. from those referred to

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dropsy, of 39 per cent. from those referred to pyæmia, and of 32 per cent. from those referred to hæmorrhage.

Of the half million deaths recorded in England and Wales in 1895, as many as 13,000 or 2·3 per cent., were uncertified. These uncertified deaths include the deaths of infants who had been attended only by midwives, and those who had been attended by unregistered medical practitioners, as well as the deaths of persons who had received no medical attendance whatever. The proportion of uncertified deaths differs widely at the various ages. Thus, in the year 1895, of the total uncertified deaths, 4390, or just one-third, were deaths of infants under three months of age, and these 4390 deaths were 6·27 per cent., or about one in sixteen of all the deaths under three months old. The proportion of uncertified deaths falls abruptly to 2·49 per cent. at three months and under one year of age, and afterwards more steadily to a minimum of less than 1 per cent. at ages from fifteen to thirty-five years, after which the proportion gradually rises as age advances. In the metropolis and in Middlesex less than 2½ per cent. of the deaths of infants under three months old were uncertified, but in eight counties the proportions were over 10 per cent.; whilst in Herefordshire the proportion was 20 per cent. It may be remarked that the proportion of illegitimate to total deaths is high in most of the counties possessing high ratios of uncertified infantile deaths, but in almost every case the mortality of infants under one year of age, compared with the total births, is below that prevailing throughout England and Wales.

WE publish in another column a petition to His Royal Highness the PRINCE OF WALES from members of the profession resident in London and others urging the formation at an early date of a Central Hospital Board, to include both lay and medical representatives of the medical charities of London. The energy of His Royal Highness of late in forwarding the cause of hospitals—as in the case of Guy's Hospital, and still more in the matter of the Fund established to commemorate the Diamond Jubilee of Her Gracious Majesty QUEEN VICTORIA—justifies all true friends of hospitals in believing that he designs, not only their financial relief and prosperity, but emancipation from those faults of administration which impair their efficiency as a refuge for the poor in their distress and which alienate the sympathy of the charitable, by whom they are mainly supported. Indeed, it is not too much to say that if the PRINCE OF WALES can use his great influence to effect a real improvement in this respect he will do more for hospitals indirectly than directly and will secure the lasting gratitude of those who best understand the uses and abuses of the hospital system. Those members of the profession who sign the petition urging the PRINCE to sanction the creation of such a Central Board have much to encourage them to hope for success. Nearly every inquiry into the subject of the administration of London hospitals has resulted in a similar suggestion. The committee of the House of Lords, which went into the subject so minutely, made this a principal proposal for giving system and principle to a set of institutions which for some years have been posing rather as rivals and competitors in the work of charity than as coöperators. But the suggestion chiefly in evidence is that of the PRINCE'S original letter, in which he so ably set forth the cause of hospitals and their claims to a more wide and extensive support than they have ever received. One paragraph of His Royal Highness's letter to the public may well be reproduced.

"I am aware that the task of distributing the funds when collected will not be without its difficulties. It may be desirable in the future to seek the assistance of representatives chosen by the hospitals, but for the first year we shall rely upon the coöperation of the Distribution Committee of the Hospital Sunday Fund."

This paragraph is of the greatest importance. It shows that the PRINCE, with that common sense which is so admirable a feature of his public work, realises that it is not so difficult, after all, to get money as to make a good use of it, and that, indeed, the way to get it in abundance is to use it well—in other words, to distribute it upon principles which commend themselves to those who are able to give. Clearly the hospitals will have to be represented on this Board, and the representation of the hospitals will not be complete without a representation of the medical staffs, by which alone the real ultimate work of the hospitals is done. The medical staffs of the hospitals have hitherto been very modest and taciturn in the discharge of their duties. But it is generally admitted that the time has come when, in their own defence and in that of other members of the profession, as well as in the interest of hospitals themselves, they must assert their claim to be considered and consulted in the burning questions of hospital administration. We may be sure that the PRINC OF WALES will be ready to admit that the enormous and gratuitous services of the medical profession in hospitals entitle them to be included in that representation of hospitals which he foreshadowed in his historical letter. We may hope, too, that His Royal Highness will go still further and admit that the medical profession as such has a claim to be represented among those to whose assistance he looks for dealing with the "difficulties" of distribution in the future. We hear much of the medical charity of hospitals, but we hear little of the medical charity which is administered elsewhere than in hospitals night and day by the rank and file of the medical profession, and which entitles them to be represented on any Central Board meant to regulate the action and the charity of hospitals. We assume, too, that the public, or the charitable section of it, will be in some way called in to the assistance of the PRINCE and his colleagues in this difficult matter of distribution. The petitioners do well to approach His Royal Highness on this branch of the subject. The time is opportune for doing so, and we very cordially endorse their petition. It may be said that the PRINCE might continue to look to the Hospital Sunday Fund, as he proposes to do "for the first year." We are glad that the PRINCE has so far recognised the claims of the Hospital Sunda Fund or of its Distribution Committee to be regarded in this question of distribution of the Commemoration Fund but unless the administrators of the Hospital Sund Fund show some larger sense of responsibility than they have yet displayed, and some keener perception of the dangers of indiscriminate and pauperising charity, w

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cannot admit their claim to be considered a Central Board in the sense in which the petitioners use the word or the members of the Committee of the House of Lords intended.

It only remains for us to assure His Royal Highness that the members of the medical profession generally, both in London and the provinces, concur in the prayers of the petitioners. None recognise more cheerfully than medical men the enormous benefits conferred by hospitals, and none are more anxious that they should be well distributed and dissociated from all evils of administration, owing to which those needy ones for whom these benefits were originally intended are passed over, and those who neither require nor deserve them are demoralised.

Annotations.

"Ne quid nimis."

THE PROFESSION IN FICTION.

LARGE and unusual as are their opportunities of reading character and witnessing its response to the ordeal of circumstance, medical men have consistently shrunk from giving their experiences to the world. Their interest is primarily their patient's physical and mental well-being; the facts which come before them in diagnosis and treatment—often, indeed, intensely dramatic, always of value to the student of human nature—must remain undisclosed, as sacrosanct as the revelations of the confessional, in compliance with an obligation embodied for all time in the oath of Hippocrates. The literary layman, however, is not so bound; and in the world of fiction may reproduce professional facts and characteristics leading up to dramatic *dénoûment*, with a freedom only restricted by the laws of philanthropy and good taste. In these days, when the novel is largely usurping the place once monopolised by the pulpit, and all but abandoned (in spite of Addison's suggestion) by the stage, the field of medical experience is more and more cultivated by the writer of fiction, with a success, moreover, measured by the degree in which the individual has been at pains to master the human organisation and to watch its behaviour when face to face with the realities of disease and death. We could signalise more than one successful contribution to this form of fictitious art, but will confine ourselves to its most recent as well as (to our thinking) its most powerful example — "The Dowager's Determination," by Mrs. Severne. The story turns on the decay, intellectual and moral, of a patrician house, the later heads of which have, by an ill-assorted inter-marriage, tainted it with mental disease betrayed in the lives, generally short, of its successive heirs. The dowager, a powerfully-drawn character, sets herself to force back this degenerative current, and, with equal skill and cynicism, effects the marriage of her grandson, Lord Raymore, with a typically prepossessing English girl, Lilian Jardine, the local rector's niece, between whom and the young practitioner of the neighbourhood, Stephen Brand, there had for some time been developing relations more than friendly. Lord Raymore has already shown signs of insanity—signs professionally known to Dr. Brand, but not known by the girl and all but ignored by her uncle, the social ambition of both being proof against any misgiving as to the sacrifice they are unwittingly courting by acquiescence in the dowager's "determination." The marriage takes place, and then begins a series of incidents, each more dramatic than the other, as husband and wife, like the hero of the "Iron Shroud," find their doom narrowing daily in upon them with a "necessity" (ἀνάγκη) as inexorable as that of the Æschylean Trilogy. Mrs. Severne has read widely and deeply in the literature of mental disease, and for a lay writer steers commendably clear of the rocks on which so many literary voyagers in professional waters have already made shipwreck. Lord Raymore is the central figure, but the "hero" in every sense is the young medical man, whose conduct from first to last is that of a chivalrous gentleman as well as a master in the healing art. It would be ungracious to anticipate the reader's interest by forestalling the course and culmination of the incidents, but we may note in passing the felicity with which the local colour of the scenes of suffering is given—"the ears strained to catch the closing of a distant door or the muffled sounds which, in some peculiar way, tell of sickness in a house." Over and above its success in portraying the profession in real life the novel has a special value in powerfully exposing the sin, the actual "crime," as John Stuart Mill called it of promoting marriages regardless of all but social or financial considerations. Mrs. Severne drives her moral home with force and effect, and the tale that gives point to it might be varied almost indefinitely by reading for "madness" one or other of the scarcely less sombre maladies which convert marriage from a blessing into a curse.

THE DECLINE OF THE SCOTTISH UNIVERSITIES.

THERE is no doubt that, tested by the numbers of matriculated students, the Scottish universities have in all faculties been of late years registering a steady decline. The fact is sought to be explained in diverse ways. In the arts faculty particularly the standard of proficiency on admission to the curriculum has been too low and the instruction given has savoured more of the upper form in schools than of the university, so that for the higher education the more aspiring youth prefer Oxford and Cambridge to Edinburgh or Aberdeen. Another reason for the diminished numbers in the same faculty is the poverty of the career open to the graduate, the teaching profession being almost the only *métier* (and that an underpaid one) in which his qualifications are marketable. Then, again, the Scottish M.A. has never carried with it the same guarantee of thoroughness and academic status implied by that of Cambridge or Oxford. True, the degree attests an acquaintance—it can hardly be called a familiarity—with a greater variety of subjects, but extent of superficies has been gained at the expense of depth and by ignoring the *prima cura* of all university culture, which, according to Froude, is that of teaching the *alumnus* "to know what knowledge of a subject means." The entrance examinations, moreover, which by their laxity ought apparently to attract the freshman in greater force, really repel the increasing number of those who demand what a university ought to give — association with well-trained students competing in generous rivalry for qualifications and honours worth the contest. Yet another cause of the Scottish decline is the excessive number of "seats of learning" north of the Tweed, two at most being all the North Briton requires if his needs are measured by population and the prizes in life within his reach. Again, the lecture system—so traditional a favourite in Scotland — is an effete survival from the Middle Ages, quite necessary, no doubt, when the art of printing was still young, but preposterously overdone, particularly in medicine, to the weariness of the student and the waste of his precious time. "Eyes first, hands next, ears last," the memorable maxim of that excellent teacher, the late Sir G. M. Humphry of Cambridge, is now becoming the practice in all schools, especially in those where applied science and the qualifications required for the noblest of "work-a-day professions" are demanded and furnished. The severe competition of the provincial universities in England, which are

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very flourishing, has not received due attention from the authorities of the Scottish Universities. One final reason which, strange to say, has escaped the Scottish mind in accounting for the university decadence is the undoubted fact that for the last fifty years the competition of English and Irish schools has become more successful mainly owing to the reinforcement of their teachers and examiners from their northern sister. The academic Saturn north of the Tweed, like his antique prototype, is being devoured by his own progeny. For this Scotland has her own lack of professional outlets to thank. The best of her sons are precisely those whom she can least powerfully attract to her own service. Her whole academic and professional life is at present being painfully reminded of its defects under latter-day competition and requirements, but we can hardly think her so unequal to her better self as to suppose that having discovered the kind and degree of the bane she will be unable to devise the appropriate antidote.

ALLEGED NEGLECT OF A SICK PAUPER.

THE Woodbridge board of guardians have been discussing a complaint against one of their medical officers, Mr. Edwardes-Ker, for delay in visiting and in sending medicine to David Gardner. A letter alleged to have been sent by the relieving officer does not seem to have reached Mr. Edwardes-Ker. There were, besides, other discrepancies of statement. The guardians very properly appointed a committee to find out the facts of the case. We hope the guardians will make their investigation complete, and consider the means whereby medical officers are or can be informed in proper time of the illness of patients or can send to them medicines with sufficient despatch. Without judging the medical officer or his accusers, it seems to us that after the defects in these means have been considered there will be little blame attaching to Mr. Edwardes-Ker.

"A NOTEWORTHY INQUEST."

OUR attention has been called to a paragraph in the *Watford and West Herts Post* commenting on the inquest, which we reported in our issue of last week, held at Bushey by Dr. Lovell Drage on a patient who died in child-birth while being attended by a midwife, Miss Alice Mary Jennings. Our readers will remember that the case was one of severe accidental hæmorrhage, and that, according to Miss Jennings's own evidence, three or four quarts of blood had been lost before she arrived, though there was not much bleeding going on when she first saw the case, which was at 7·45 A.M. The head was presenting; she plugged the os lightly with a soft silk handkerchief, and in about an hour afterwards, when the os was dilated, she ruptured the membranes, and brought down first one foot and afterwards the other—in other words, performed podalic version. The child was born at 12.30 mid-day. The patient died about 4.30 P.M. the same day. The post-mortem examination showed that the cause of death was pulmonary embolism and that the case had not been one of placenta prævia, as the midwife had supposed, but that the placenta had been normally situated. The jury found that the midwife was to blame, among other things, for not calling in a medical man in the first instance as soon as she saw the serious nature of the case. It appears from the paragraph in our contemporary above referred to that notice has been given that "Miss Jennings is and will be at perfect liberty to fulfil all existing and future engagements, even if the Obstetrical Society should see fit to recall her diploma." Probably so far as the legal aspect of the matter goes this is so. If those who had engaged her previously, being now aware of the case that formed the subject of the inquest, are still willing to be attended by her they are at liberty to be so attended. The comments which our contemporary makes on the matter seem, however, to call for some notice. In the following passage, for instance, our contemporary misses the point altogether: "Nothing has been done or left undone that could have contributed to the death of the deceased, only a rule of a society has been broken because nothing occurred to show that there was any necessity to comply with it. General sympathy will therefore be with Miss Jennings, who can scarcely be blamed when a doctor would be free." It is not the question whether Miss Jennings adopted the best treatment in this particular instance or not. The point is that in all serious cases—and there could hardly be a more serious one than a case where three or four quarts of blood are lost at the onset of labour—it is the midwife's duty to call in a qualified medical practitioner without delay. It is obvious that a properly qualified member of the profession must necessarily, as a general rule, be a better judge of what should be done in a serious case than a woman whose education is only adapted to fit her to attend ordinary straightforward cases efficiently, and to know in what cases to send for skilled assistance. As Miss Jennings admitted, the case in question was one of those in which she was taught to send for a medical man immediately, and it is because she failed to do so that she was censured.

INSANE JOURNALISTS.

"IN several of the English lunatic asylums," says a writer in a French medical periodical, "the management has had the happy and original idea of introducing journalism amongst the inmates as a curative measure, and according to the reports furnished annually the innovation has been attended with the best effects. Some of the physicians even declare that in many instances they have been indebted to the lucubrations of their patients for valuable hints as to the best way of treating them. One demented person, for example, obstinately refused to take any food, and with equally invincible stubbornness declined to furnish any reason for his refusal. There was no difficulty, however, in persuading him to commit his thoughts to paper, for apparently the *cacoëthes scribendi* is quite as powerful amongst people who have lost their wits as it is amongst those who have contrived to preserve them, and at once this individual's peculiar delusion was made manifest. This is what the hitherto intractable monomaniac wrote: 'I desire to be buried as quickly as possible. It is a monstrous scandal that I should be compelled to drag about all over this house a dead and putrefying corpse.' As soon as the bent of the patient's weak-mindedness was thus brought to light he received appropriate treatment, and is said to have eventually recovered." The French commentator selects *The New Moon*, which he justly regards as very appropriately named, for especial commendation, but he omits to say where this journalistic luminary rises. He quotes from it the following passage, which shows, at all events, that a sense of humour is compatible with lunacy; "Wanted for a throne, which it would be indiscreet to specify at present, an Emperor or King who is thoroughly conversant with the business. It is quite useless for the Czar of Russia to reply to this advertisement." We may inform our contemporary that journalism by lunatics for lunatics is by no means a novelty in our establishments for the insane. Writing in 1857 Dr. Andrew Wynter said, with reference to Murray's Royal Asylum at Perth: "Not content with these efforts, they seem to think that they are nothing unless critical, and accordingly they have set up a journal in which they review their own performances. The first number of *Excelsior* is now before us, in which we find poetry, news, and criticisms

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on music, and contemporary literature; and he who reads with the idea of finding anything odd in this production will most certainly be mistaken, for no one could divine that there was a 'bee in the bonnet' of printer, publisher, and contributor." Anyone interested in the history of lunacy and its treatment in modern times will find much curious information in Dr. Andrew Wynter's article. It was published, together with several other papers by the same author, by Mr. Robert Hardwicke of Piccadilly, in a volume called "Curiosities of Civilisation"—having appeared previously in the *Quarterly Review*.

IDIOPATHIC OSTEOPSATHYROSIS (FRAGILITAS OSSIUM) IN CHILDHOOD.

EXCEPT in old persons fragilitas ossium is a very rare condition. Dr. Griffith relates the following case.[1] A male child was born on June 11th, 1893, after a labour which was neither protracted nor severe. Nothing was noticed until the second day, when it was found that the right femur was fractured. On further examination under an anæsthetic the left was also found fractured at its neck. Both limbs were placed in long splints with silicate of soda bandages. In three weeks union was complete. At the age of three months the right humerus and femur were broken, apparently during a medical examination, which was carried out with due gentleness. Both bones united well. On March 1st, 1894, the child fell forward, but not out of his chair, and sustained fracture of the right femur near the hip. On Sept. 11th, 1894, he broke his left thigh again. Union took place, but two weeks afterwards he broke the bone again. In the spring of 1895 he fell out of his hammock and fractured both femurs. They united well, but three months later the right was again broken. Besides these fractures there were others undiscovered. At times he seemed to have pain in various parts of the body, supposed to be rheumatic; but this was evidently due to fractures, as there were at least one fracture of the left thigh and one of the right forearm found afterwards with angular union. On several occasions he broke his ribs. In all he certainly had twelve fractures, and possibly eighteen. Union was always prompt. No hereditary influence could be traced; both parents and grandparents were unusually healthy. The child was suckled until the age of five months, then fed with cow's milk, and later with food suitable for his age. The general health and nutrition were good. At the age of two and a half years he was a plump, well-developed, healthy-looking boy. He was carried constantly on a stretcher lest sittting him up might produce fracture. The head was decidedly larger than normal. The frontal bones had distinct bosses, suggesting rickets, and the back of the head was flattened, doubtless from the long-continued pressure of an enforced position. There was no beading of ribs, enlargement of epiphyses, on other evidence of rickets. The right arm had a bad angular deformity above the wrist, and the left thigh was similary deformed with eversion of the foot. Curvature of the bones in any part could not be detected. The muscles of the calves were well developed, but the thighs were flabby. The arms were well developed. Advice to the effect that he should be allowed to sit up, to give his muscles the needed exercise, was given. In four months he had greatly improved. He could turn himself over and move his legs freely, and sit upright in the lap. The muscles were evidently gaining strength rapidly. There had been no more fractures. His head, however, seemed even larger, but was not in appearance either hydrocephalic or rickety. After an extensive search through the literature of idiopathic osteopsathyrosis in children, the writer could find but few cases in which the brittleness was greater than, or even equal to, that in this case. He collected fifty-seven cases from which he draws the following conclusions. As to the etiology, inheritance is a marked factor. In eleven it was direct—that is, the disease had appeared in either parents or grand-parents and perhaps in several of the children. In seven others there was a family predisposition without direct inheritance—that is, more than one child were affected, and perhaps some other relatives. There were twenty-four cases in which no family predisposition was recorded. The remaining fifteen are classed as doubtful cases because rickets or other disease was present. Amongst these he places cases resembling the so-called fœtal rickets, and others in which intra-uterine fractures occurred from insufficient ossification. Males were more liable than females in the proportion of forty-seven to nineteen. The disease usually began very early in life, sometimes before birth; in a few as growth advanced. Syphilis and rickets did not appear to have any influence in the production of this strange fragility. Cases in which fracture was secondary to gumma are of course excluded. Where the disease occurs in the subject of rickets the writer considers it to be a case of co-existence and not causation. For in rickets there is a tendency to bend and to the production of green stick fractures; in osteopsathyrosis, on the contrary, the condition is one of extreme brittleness, without any tendency to bend. Osteomalacia shows a similar difference. So-called fœtal rickets is closely allied to osteopsathyrosis, and provisionally placed in this category. Nothing definite can be said of the pathology as the reports of examinations of the bones by different writers are very contradictory. A marked feature of the affection is that union of the fractures is prompt. Pain never precedes fracture as in osteomalacia. The long bones of the extremities, especially the lower, the clavicle, and the ribs, are most frequently broken. In no case was there a fracture of the vertebræ or pelvis. Fractures are entirely independent of the union of diaphysis and epiphysis. In making a diagnosis the presence of any disease primary to the fractures must be excluded—viz., syphilis, nervous disease, osteitis, tumours, &c. Rickets presents many features of its own which enable it to be distinguished. It is questionable if osteomalacia is ever present at a very early age, and it much more resembles rickets than this disease. The prognosis as a rule is unfavourable. The duration of life does not seem to be affected, but the tendency to fracture is apt to continue unabated. In a few, however, it was outgrown. The treatment consists in the administration of alteratives, the maintenance of the general health, and the protection of the limbs. But the muscles must not be allowed to waste for want of use. Union of the fractures should be secured in proper position.

[1] American Journal of the Medical Sciences, April, 1897.

ACCIDENT OR OUTRAGE?

WE fear that the evidence bearing upon the mysterious occurrence of a disastrous explosion in a train at Aldersgate-street Station on Monday night is narrowing down in favour of a dastardly and cowardly miscreant being at large. The theory that the disaster was due to the explosion of the cylinder beneath the carriage containing gas for illuminating purposes cannot be seriously entertained, since on examination the cylinder did not prove to be rent by bursting, but, on the contrary, was indented and intact. If, again, as some have conjectured, it was a portable cylinder of compressed gas in the carriage, where are the remnants? From the accounts of the nature of the explosion given by several witnesses there seems little doubt that the explosive was of the high order and belonged to the "nitro" group. A close examination of the wrecked carriage may perhaps lead to the identification of chemical residues which will enable the experts to say with

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some degree of certainty what the explosive was. Even, however, assuming that this becomes known, it will still remain a mystery as to whether the explosive was left designedly or accidentally in the carriage. The results were serious enough, and have, unfortunately, led to the death of one of the injured; but worse might have ensued if at that moment trains had been coming and going with the rapidity of a busier time of the day. We sincerely hope that the matter will not prove to be beyond elucidation, and, if the evidence points to outrage, that the scoundrel who perpetrated it may be tracked and dealt with as such a scoundrel deserves.

THE INTERNATIONAL MEDICAL CONGRESS AT MOSCOW.

WE desire to impress upon the attention of our readers the statement made in our columns last week—namely, that the Russian railways have most generously decided to grant free passes on the railways to members of the Congress. This piece of courtesy will greatly reduce the expense of a visit to Moscow, and we hope will induce many members of the profession to attend the Congress who might otherwise have been prevented on the score of expense. It is an opportunity not to be lightly set aside, for, apart from the scientific aspect of the Congress, Moscow is one of the most interesting towns in Europe, and, moreover, unknown to the majority of Englishmen.

THE PLAGUE IN INDIA.

WE are extremely glad to recognise that the latest reports from Bombay on this subject are much more satisfactory. There is a still further decline of the epidemic. The stringent measures for dealing with the disease under the powers of the Epidemic Diseases Act, which have now been enforced for some time, have apparently been justified by their success. We trust, however, that the Indian authorities will not rest satisfied with applying measures for limiting contagion, but that the occurrence of this epidemic will lead them to consider what should be done in the way of sanitary and public health improvements to guard against similar occurrences in the future. These cost money, no doubt, but they do not cost so much as outbreaks of epidemic plague, and they are not only the best safeguards we possess against that disease, but against all other epidemic diseases that may occur.

"PRIMARY CANCER OF THE NASO-PHARYNX CURED BY INJECTIONS OF ALCOHOL."

AN interesting case under the above heading is reported in the *New York Medical Record* of April 17th by Dr. Edwin J. Kuh. The patient was thirty-seven years of age and had suffered from "nose-bleed" and nasal obstruction accompanied by viscid discharges since childhood. The growth was removed by operation, but in less than a month the post-nasal space was again almost completely filled by a soft bleeding mass. Sections of the tumour which had been removed by operation showed the characters of epithelial cancer, the diagnosis being confirmed by Professor Senn. Further surgical interference being considered too hazardous the neoplasm was first injected with unfiltered erysipelas-prodigiosus toxins, from five to twelve minims being employed daily. This treatment proving unsuccessful it was decided to inject alcohol into the growth. At first three minims of absolute alcohol were used, this dose being rapidly increased to thirty minims. "The reduction in size began after the seventh injection, and after the eleventh but few remnants of the growth remained. After a dozen more injections the needle would not penetrate into tissues capable of retaining the alcohol, and after a few additional attempts, at intervals of a week or longer, they were discontinued." Some two ounces of iodide of potassium were given during the later injections, but Dr. Kuh contends that the drug stood in no causal relation to the disappearance of the growth. In February, 1897, four months after the cessation of treatment, the naso-pharynx was found, both by inspection and palpation, to be entirely free from growth.

HOSPITAL REFORM.

WRITING to the *Birmingham Daily Post*, Mr. Lawson Tait says that "we [the profession] are entirely responsible for hospitals, and for all their faults as well as their merits." He maintains that the medical officers of the Birmingham Hospital could make an end of the trouble in a month. As a temporary expedient he suggests that they should assign 30 per cent. of their income accruing from hospital position for the assistance of their "struggling extra-mural brethren." We are sure the "struggling brethren" would decline any such remedy. All they ask from their hospital colleagues is to use their influence to restrict the benefits of hospital treatment to those who need it and cannot afford to pay for it. Neither is it of any use to lay the whole blame on hospital honorary officers. The committees and governors of hospitals are equal or greater culprits. Our contemporary's pages are devoted to a discussion of the whole question of hospital abuse and contain many letters which we have not space to notice at present.

THE ATTEMPT ON KING HUMBERT'S LIFE.

FOR the second time within nineteen years an attempt has been made on the life of the King of Italy. The first—that of Passanante—was political in its motive; the second—that of Acciarito—was prompted by misery. This latter provocative of crime is, unhappily, an increasing one in the Italian kingdom. Hardness of living, with all its attendant evils, becomes year by year a more terrible reality within its borders till it inspires excesses which the law is powerless to prevent. To avoid death by starvation the unemployed artisan will qualify for the prison, where at least he will be fed, with a roof over him and a bed to lie on. "I had nothing to eat and had to do something," was the sullen, cynical answer of Acciarito to his interrogators. Surely there must be "something rotten in the state" where would-be Acciaritos may be counted by thousands. To pose as a great Power, to maintain a colossal standing army and a formidable fleet, to attempt colonial expansion, and to carry its "sphere of influence" to the Antipodes may be justifiable in a nation rich in natural resources and strong in character and tradition; but it is at least premature in one which has barely passed its majority, whose resources, abundant by nature, require all its energies to develop, and to whom self-government, by its very unfamiliarity, is infinitely more expensive than to its maturer and more skilfully regulated neighbours. Italy must alter her tack and trim her sails to other winds if she is to escape shipwreck, aggravated by mutiny on board. The recent general elections have given her rulers a hint in that sense which they cannot ignore. In every constituency—nowhere more than in Turin, the cradle of her monarchy, Milan the centre of her enterprise, and Florence the seat of her culture—the Socialist vote was multiplied beyond all European or Transatlantic precedent. True, that vote was given in favour of candidates exceptionally conspicuous for enlightenment, public spirit, and familiarity with the nation's wants. The majority of those whom it returned were medical men o holders of university chairs, whose one aim in entering Parliament was to ameliorate the masses and reduce that hardness of living which is the fruitful parent of crime. These men are society's best friends, having no

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sympathy with anarchy or political chaos, but profoundly interested in the conditions that underlie healthy evolution. From them, in the last resort, neither Crown nor Court has anything to fear—the constitutional monarch being, in their eyes, "one who reigns but does not govern," and constitutional monarchy itself a "republic in which the President is hereditary." All they plead for is education on the lines dictated by hygiene; industrial or agricultural employment under the surveillance of sanitary law; the provision of healthy homes and unadulterated food; the reclamation of lands run to waste; the reafforesting of denuded hillsides and the regulation of watercourses running riot in floods shall—among similar reforms—receive the practical attention of the legislature. This is a "crusade," or rather, in the term coined by John Stuart Mill, a "civilisade," in which the paladins are the medical men whose headquarters are the universities, particularly the Subalpine School. Loyal in a sense unknown to the political agitator or place-hunter these men are labouring for reforms which make government of any kind—monarchical or republican—possible; government "broad-based upon the people's will"—a people, moreover, healthy, happy, and contented. Deplorable as was the attempt on King Humbert it will have the effect of driving home the lesson taught by the recent elections—to wit, that there is nothing so fatal to national stability of any kind than a people denaturalised by hardship, insanitation, and the predominance of conditions that make life not worth living. We are glad to see Italy's leading organs commenting in this strain on the recent incident. "L'Italia abbonda di molti miserabili, di molti infelici. È la sua debolezza ed è la forza dei partiti estrèmi" (Italy abounds with many miserable, many unhappy ones. It is her source of weakness, as it is a source of strength for her extreme parties). Let us hope she will take the lesson to heart, not rejecting the warnings of the socialist Sibyl till they are drowned in the crash they had tried vainly to avert.

FOOD-SUPPLY IN PEACE AND WAR.

THERE are peculiar difficulties connected with that section of legislative administration which attempts to insure for the public a pure food-supply. The problem is to be fair to both purchaser and seller. We have always urged that the law should provide that the purchaser be supplied with the exact article he requires. Considerable impetus towards attaining this end would be derived if the suggestions of the Agricultural Guild, of 17, Victoria-street, Westminster, were adopted. This Guild proposes to hold "an important conference" on May 3rd at the Westminster Palace Hotel at 3 P.M. Amongst the subjects to be discussed are the advocation by legal enactment of the sale of (1) English, (2) foreign, and (3) adulterated food products in *separate and distinct shops*. What an admirable idea. The public would then know which shop to go to for an English, foreign, pure, or adulterated article of food. The second subject for discussion is "the serious deterioration in the stamina of English men and women owing to the consumption of non-indigenous and deleterious food." We are not prepared to admit that there is any deterioration worthy of anxious consideration. But the third and last subject for discussion is as admirable in principle as the first. It is "to consider the imperative necessity, on hygienic and economic grounds, for the removal of the milling and baking industries from the slums of London to the open country." The primary aim of the Guild is to realise the admissions of the late Earl of Derby, that the lands of the United Kingdom, which are, on the whole, naturally fertile, were capable of yielding by intelligent tillages sufficient produce to feed our increasing population for hundreds of years to come. Why, then, should we incur the danger, urges the Guild, of depending on foreign countries for our food-supply in times of both peace and war? Happy Guild, with such noble aims and ambitions in view; but have they reckoned with the economics and other equally important aspects of this vast question?

THE SERUM DIAGNOSIS OF TYPHOID FEVER.

THE Corporation of Eccles, in Lancashire, is to be commended for its enlightened policy in providing facilities for the employment of serum diagnosis in suspected cases of typhoid fever occurring in the borough. Work of this kind can only be undertaken by a professed bacteriologist, for fresh cultures of typhoid bacilli must always be at hand for mixing with samples of blood from the patients. It is, therefore, very satisfactory to find that Dr. J. H. Crocker, the medical officer of health, has informed all the practitioners in Eccles that such samples will be examined for them by Professor Delépine of Owens College, Manchester, and that the results will as a rule be made known the day after the receipt of the specimen. The general arrangements will be similar to those which answered so well at Eccles in the case of diphtheria. Pipettes for the transmission of the samples are kept at the town hall, the expense of the bacteriological examination is defrayed by the corporation, and practitioners are recommended to avail themselves of this diagnostic aid at the earliest possible period of the illness. If the case is notified as typhoid fever the fee of 2*s*. 6*d*. will be paid, even if the bacteriological examination gives a negative result. This new development of practical bacteriology promises to be very interesting.

THE ROYAL SURREY COUNTY HOSPITAL AND HOME VISITS.

THE governors of the Royal Surrey County Hospital have, at a special court, adopted the recommendation of the committee to substitute for Rule 90, concerning home visits, the following words: "Out-patients residing within the borough of Guildford and too ill to attend the hospital may be visited at their own homes on sending an out-patient letter of recommendation from a subscriber and also a home-visit ticket. Two hundred of such tickets, available for the then ensuing year, shall be issued to a committee of the town of Guildford on the payment of a sum of £50 for such year, and so on from year to year until the arrangement be terminated either by the governors or by the said committee." We have already expressed our doubts about this recommendation. It appears that the practice of seeing patients at their homes is not new in the system of this hospital. What is new is that the town, in its Diamond Jubilee gratitude, is to give £50 to the infirmary for 200 tickets. This bargain is not very complimentary either to the medical profession or to the Diamond Jubilee. Hospitals are meant for the treatment of in-patients. To say that people to the number of 200 who are too ill to be accommodated in the hospital are to be treated at home by the junior house surgeon for the consideration of £50 is not to offer them hospital advantages. Hospitals should restrict themselves to their own work and leave outside work to be done by arrangement with medical men acting privately or through a provident dispensary. One speaker defended the arrangement on the ground that cottage hospitals were being multiplied so much as to endanger the support of the county hospital, and that the managers must do more to draw closer the connexion which had always existed between the town and the hospital. We observe, with some surprise, that the medical speakers supported the proposal. Dr. Russell thought that 10*s*. would represent the market price of the visits and medicines to each patient. He

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it remembered that they are ill—patients too ill to attend the hospital—presumably, therefore, in need of much attention and skill. Surely Dr. Russell does not properly hold up either the value of medical service or the standard of attention due to those very ill.

THE LATE MR. L. P. CASELLA.

MR. LOUIS PASCAL CASELLA, who died at Highgate on April 23rd, aged eighty-six years, will long be remembered as the author of many important improvements in scientific apparatus of various kinds, especially in thermometers and in the instruments used by meteorologists. In particular he did much for the clinical thermometer. Sir William Aitken, of the Army Medical School, has perhaps the best claim to be regarded as the pioneer of medical thermometry in this country, and Mr. Casella has the credit of being the first to construct a registering clinical thermometer. The present serviceable pattern was slowly developed. Many middle-aged practitioners will recollect the time when there was no self-registering index and when the stem was about ten inches long, as it was necessary to take the reading before the instrument was removed from the axilla. Mr. Casella belonged to an Italian family, but he was born in Scotland and came to London when a youth.

THE PROFESSION OF MEDICINE A DEPARTMENT OF THE STATE.

OUR Australian Correspondent writes: — The retiring president of the Queensland Branch of the British Medical Association, the Hon. C. F. Marks, M.D.R.U.I., proposed in his address that the medical care of the people should be part of a Public Health Department of the State. He suggested that a medical service for the whole colony be established, modelled somewhat on the lines of the Army Medical Service. The country should be divided into suitable districts having a senior and two junior men to each, with relieving officers and inspectors; salaries to begin at not less than £300 a year, and promotion to be by years of service or for distinguished service on ballot of all the medical officers. Dr. Marks assumes that there are about two hundred practitioners in Queensland, with, roughly, an average income of £1000 a year, and the population is about 500,000. A sum of 8*s*. per head of population raised by Government taxation would give ample funds for the scheme, allowing for fair superannuation allowances. Such a scheme, he maintained, was the only remedy for the present abuses of lodges, dispensaries, and hospitals. At the annual conference of the Political Labour League of New South Wales on Jan. 26th it was moved and carried, "That the care of the public health being among the first duties of the State, the practice of medicine should be a national service, the country to be divided into medical districts in charge of Government medical officers, whose services shall be absolutely free." The proposal simply charmed a large proportion of the conference.

A COURSE of lectures on Diseases of Tropical Climates will be delivered by Dr. Patrick Manson in the medical school of St. George's Hospital on Tuesday, May 18th, and every succeeding Friday and Tuesday till July 23rd, at 5 P.M. The course is intended for medical men intending to practise in the tropics or in Eastern Asia, and as far as practicable will be illustrated by living specimens and by demonstrations of parasitic organisms associated with these diseases. The fee for the course will be three guineas, and application should be made to Dr. Isambard Owen, Dean of the Medical School, St. George's Hospital, S.W., from whom cards of admission may be obtained.

ON Wednesday morning seven more nurses, sent out under the auspices of the committee of the *Daily Chronicle* Fund for the Greek Wounded, left Charing-cross Station, *en route* for Athens.

PROFESSOR GEORGE HARE PHILIPSON, M.A., M.D.Cantab., D.C.L., has been re-appointed the representative of the University of Durham on the General Medical Council.

WE regret to announce the death of Dr. James Andrew, consulting physician to St. Bartholomew's Hospital, which took place on April 21st. Next week we shall publish a full obituary notice of his career.

THE Ingleby Lectures will be delivered at Mason College, Birmingham, by Professor Bennett May on May 19th and 26th, the subject being the Operative Treatment of Cancer of the Breast.

WE understand that Mr. Owen, the senior surgeon to St. Mary's Hospital, will be a candidate for a seat on the Council of the Royal College of Surgeons of England at the forthcoming election in July. The last representative that St. Mary's Hospital had upon the Council was Mr. Haynes Walton, who was elected in 1873.

Pharmacology and Therapeutics.

EUCAINE HYDROCHLORATE.

THIS remedy continues to attract attention, but further experience tends greatly to modify the enthusiastic records of early days. Professor Hobday of the Royal Veterinary College, London, has lately published the results[1] of the use of eucaine as a local anæsthetic. He says that the use of cocaine for operations upon the dog and cat must be attended with the greatest caution, as the toxic doses are very small. The newer remedy has been employed by him in some forty cases, some of them being specially favourable for making a comparison between the action of eucaine and cocaine. His results confirm the opinion that the toxic dose of eucaine is somewhat larger than that of cocaine and, at the same time, that for operations on the cornea eucaine compares very favourably with cocaine, although anæsthesia is not produced quite so rapidly; but for its local anæsthetic effects when injected subcutaneously or applied locally to places other than the eye, the results obtained in the horse, dog, and cat have not by any means come up to the results obtained with cocaine. It has been found, however, that a mixture of cocaine and eucaine dissolved in water possesses the better anæsthetic properties of the cocaine solution, and can be tolerated in larger doses than cocaine alone; and this is undoubtedly of advantage when removing large tumours from animals in which the toxic dose is so small. The solution of cocaine and eucaine recommended consists of half a grain of each to the drachm of water. With regard to the amount that can be used subcutaneously with safety, Professor Hobday considers that in the case of the cat and dog about one-fifth of a grain to each pound of body weight should not be exceeded.

THE TREATMENT OF ASCITES BY THE INJECTION OF OXYGEN INTO THE PERITONEUM.

M. Tessier last year recorded a case of ascites at the Lyons Société Nationale de Médecine, which had been successfully treated by Potain's method of abdominal puncture followed by injections of oxygen into the peritoneum. The case was one of ascites and generalised œdema, which probably depended upon cirrhosis of the liver. After the first tapping fourteen pints were withdrawn, but the fluid rapidly collected again. A second puncture was then made, and followed by the injection of 1300 cubic centimetres of oxygen. The operation was not painful and there was no rise of temperature. The abdominal circumference diminished from 128 to 102 centimetres, and the œdema of the lower limbs disappeared

[1] Journal of Comparative Pathology and Therapeutics, March, 1897.

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very rapidly. When the case was reported the abdomen still measured 102 centimetres, and was quite resonant all over.

ANALGEN.

Analgen is the name given to a drug which for the most part has a similar composition and action to phenacetin. It is, however, said to have less toxic action owing to the fact that quinoline exists in its composition instead of phenol. As an antipyretic it is said to act slowly but surely, and so any sudden drop of temperature which might be attended with collapse is avoided. There is one important fact that is pointed out with regard to its action and that is that it is liable to produce periodical discolouration of the urine. This discolouration is said to be due to the combination of decomposition products of the analgen with the uric acid present in the urine. It is, however, stated that by giving bicarbonate of soda with the analgen this discolouration is avoided.

THE TREATMENT OF HÆMOPTYSIS.

The direct effect of drugs in arresting the hæmorrhage which occurs in cases of pulmonary tuberculosis is very difficult to estimate with any amount of accuracy. The majority of cases tend to become spontaneously arrested, and any drug which has been given previously is apt to get the credit of stopping the bleeding. Dr. Deguy believes strongly in the value of full doses of gallic acid in this condition, and he gives this drug in doses of from four to fifteen grains in the form of powders, pills, or solutions. In cases where the hæmorrhage is very severe he associates the gallic acid with ergotin thus: ℞. Gallic acid, thirty grains; ergotin, fifteen grains; make into twenty pills, of which five or more are to be taken each day. Others, however, do not put much faith in the action of these and other astringents of the same class, and it is difficult to see how such drugs can have any definite action on the bleeding vessels, the walls of which are generally severely diseased. The application of an ice bag is also another method which is believed by some to be efficacious, while others will have nothing to do with it. It is, again, difficult to see how this method of treatment can be of any direct use except by mechanically assisting to keep the patient quiet. One of the most effective methods of treating an ordinary case of hæmoptysis consists in giving a small hypodermic injection of morphia, which generally results in arrest of the hæmorrhage and the patient is at the same time mentally soothed.

THE TREATMENT OF EXOPHTHALMIC GOITRE.

M. Viguard showed a patient at the Lyons Medical Society who had suffered from exophthalmic goitre for three years, and had been treated by section of the cervical sympathetic. The case had been a very marked one in some respects; the exophthalmos and tremor were very marked—the pulse-rate was 108 per minute, but there was no goitre. At the end of January the cervical sympathetic was divided, and the superior ganglion extirpated. Considerable amelioration followed, especially seen in the diminished tremor, but the pulse-rate was not much modified.

M. Huchard prescribes bromhydrate of quinine and extract of ergot in the form of pills in those cases where vaso-motor symptoms are prominent. He has also given antipyrin with good results. Germain Sée has recommended the tincture of veratrum viride in small doses in this disease.

PHENOCOLL IN MALARIA.

Dr. Lavrinovich has found that hydrochlorate of phenocoll will sometimes succeed in controlling obstinate cases of malaria which resist the action of quinine. He prescribes about six grains three times daily, and has not noticed any unpleasant by-effects.

UNIVERSITY OF EDINBURGH.—The following is a selection from the degrees conferred at the Graduation Ceremonial, held on April 10th. Honorary Degree of Doctor of Laws:—Professor James Dewar, M.A., LL.D., F.R.S., University of Cambridge and Royal Institution, London; Emeritus Professor Sir Douglas Maclagan, M.D., &c.; and John Wyllie, M.D. Degree of Bachelor of Medicine and Master of Surgery:—Alexander Moir Rattray, James Trevor Williams. Degree of Bachelor of Science in the department of Public Health:—Patrick Hunter Gillies, M.B., C.M.; Rhodes Haygarth, M.B., C.M.; Herman Schmitz, M.D. (*in absentiâ*).

The Lancet Special Commission

ON THE

METROPOLITAN WATER-SUPPLY.

X.[1]

EAST LONDON WATERWORKS COMPANY.

History.

IN THE LANCET of April 24th (p. 1162) a description was given of certain water businesses which have ceased to exist, and it was mentioned that more than one of such undertakings in the East-end had been absorbed by the East London Waterworks Company. The earliest businesses which were carried on in the East-end of London were those of the New River Company, the Shadwell Company, and the West Ham Company, but the supply was so inadequate that many persons were obliged to get water "by any casual means or circumstances placed within their power."

The Shadwell Waterworks.—The Shadwell works were originated by Thomas Neale, who hired land for the purpose from the Dean of St. Paul's. A four-horse engine was at first used to pump the water, but in the year 1679 the works were enlarged and a second four-horse engine was added to that already in use. In the year 1687 Mr. Neale obtained a charter for carrying on his business and formed a company consisting of thirty-six shares, some of which he was able to sell at a good price. In the year 1691 the shareholders became a body corporate by letters patent. For a long time horses only were used for pumping the water. It was not until the year 1750 that a steam engine was put up. This engine was found to be incapable of doing the work which was necessary, but no further improvement was made until the year 1774, when one of Boulton and Watts's engines was erected. This engine was capable of raising 54 000 gallons of water an hour and was found not only to save expense in working but to increase very much the power of the Company to supply water. The districts supplied by the Company included the space from the Tower of London on the west to Limehouse on the east, and from Whitechapel on the north to the River Thames on the south.

The West Ham Waterworks.—A water business was started in 1745 to supply the lower part of Whitechapel, Stepney, Bethnal-green, and the villages of Bow, Stratford, and Bromley. The water was pumped by a steam engine and by a water-wheel, and there was a reservoir at Mile-end. This property was divided into four shares, and the works and those at Shadwell were bought by the London Dock Company in the year 1807.

The East London Waterworks Company was established in 1808 and purchased the Shadwell and West Ham works. The Company chose Old Ford as the best place for a pumping station and thirty acres on the banks of the Lea were bought. Four reservoirs were constructed having a total area of eleven acres. The two largest of these were situated on the east side of the Lea. The bottom of these reservoirs was made at the level of the bed of the river and their depth was 10 ft. The smaller reservoirs were 15 ft. 6 in. in depth and were situated on the west side of the river. The level of the bottoms of these was 5 ft. 6 in. lower than that of the others, and was 15 ft. below the surface of the water at half-tide, and their surface level was between that of the spring and neap tides. The water from the Lea passed into the reservoirs through six openings which had a total width of 42 ft., but differed in depth. Two of them were 4 ft. 6 in., three others were 4 ft., and was one 3 ft. 6 in. During the spring tides the water ran into the reservoirs for about four hours each tide. During the neap tides the water flowed in for about two hours. The reservoirs had sufficient storage capacity for a week's supply. It was usual to allow the water to remain two or three days in the reservoirs before it was used so that it might "deposit its feculence and become clear." The

[1] Nos. I., II., III., IV., V., VI., VII., VIII., and IX. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, and 24th, 1897, respectively.

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reservoirs were arranged in such a way that the water from any one of them could be drawn off separately. The mud which accumulated at the bed of the reservoirs was removed from time to time. When this was done as much water as possible was allowed to flow out at the time of the lowest neap tides. The water which still remained in the reservoir—a depth of about 18 in.—was pumped out by the engines. An aqueduct which passed under the Lea connected the reservoirs. The Company had another reservoir at Mile-end near the Regent's Canal Bridge. This was situated 60 ft. above the level of the River Lea and was capable of holding sufficient water to supply 6000 houses. The station at Old Ford was a little over three miles from the Thames. The Act of Incorporation of the Company provided that the whole supply of water should come from the Lea when the water flowed up during the tides and the mills were not working. It happened that, as the sluices belonging to the mills on the Lea were not always opened to the same extent, the time at which the water reached the reservoirs varied; but, as a rule, it was found that the time of high tide at Old Ford was an hour later than it was at the point of junction of the Lea and the Thames. It was stated also that the level of the surface of the Thames was 13 ft. lower than that of the Lea. At the mouth of the Lea the rise of the tide was 18 ft.; at the waterworks it was only 5 ft. From these observations it was concluded that the water of the Lea was pent back during the rise of the tide in the Thames, and that as four hours elapsed before water flowed into the reservoirs it was the water which had collected in the Lea between the Thames and the reservoirs which passed the inlet to the reservoirs and filled them. The rate of the flow of the Lea towards the Thames was about two miles an hour, but the water returned at a rate of about one mile an hour, and the ebb tide opposite the works lasted about three hours. It was therefore concluded that only the Lea water was taken into the reservoirs and that the water taken by the Company contained no Thames water. In the year 1829 the Company obtained an Act to enable them to make a canal to convey water from a place near the Lea Bridge Mills and to construct a reservoir for receiving it near their works. In 1835 there were two engines of 40 horse-power, another of 70, and two others of 90 horse-power, which could be worked against a head of 108 ft. A water-wheel at Stratford was also used. The wheel worked generally for about twelve hours a day, and occasionally for a longer time. There was at this time an engine at Shadwell which pumped water from the Thames. The number of customers of the Company was about 45,000, and the district extended from Old Ford to Lower Clapton. From thence the boundary ran to Sun-street, Bishopsgate-street, Mansell-street, and Goodman's-fields, and southwards to the Thames at a point between the London and St. Catherine's Docks. The water was distributed through between 200 and 300 miles of pipes varying in size from 36 in. to 6 in. in diameter. The area supplied extended to a distance of three miles from the central works and the engines worked against a head of 120 ft. of water. At this time the height of the water-service varied from 6 ft. or 8 ft. above the level of the Company's works. Some houses, however, were served as high as 30 ft., but the Secretary of the Company urged that as they neither professed to give high service nor made any charge for it the difference in the height could not be reasonably a source of dissatisfaction to the tenants. The amount of water supplied daily at this period was 170,000 gallons. In the year 1828 the quantity of water pumped daily by the East London Company was 6,512,292 gallons. At this time the engines were able to pump over 8,000,000 gallons, and a new engine was being put up to increase the pumping capacity by over 3,000,000 gallons. The number of houses supplied was about 42,000. In the year 1815 the Company made an arrangement with the New River Company by which each withdrew from a part of its area of supply, and each Company authorised the other to resume its freedom of action in case of neglect or refusal on the part of the other to carry on the business there. By this arrangement no exclusive right was retained. At this time the London Bridge and the Lea Bridge Waterworks were still in the field. In 1820 the Company bought the Hackney Waterworks and Lea Bridge Mills, and obtained an Act of Parliament to enable them to remove their intake from Old Ford to Lea Bridge, from which point the water was brought down by a conduit and stored at the reservoir at Old Ford and pumped thence for the supply of the district. In 1852 an Act was obtained to allow the Company to make a new cut in connexion with the Lea for the purpose of improving the quality of the water, to construct reservoirs at Walthamstow, filter beds at Lea Bridge, and to make an intercepting cut on the west side of the Lea from Tottenham to a point below Ponders End to prevent polluted water from entering the river above the intake. In 1867 an Act was obtained to allow the Company to make a covered reservoir at Finsbury Park, and to make works at Sunbury for the supply of Thames water. By this Act the Company were allowed to take a quantity not exceeding 10,000,000 gallons of water daily from the Thames. In 1867 another Act was passed to allow the Company to increase the number of reservoirs at Walthamstow and filter beds at Lea Bridge, and they were compelled to discontinue the use of, and to fill up, the reservoirs at Old Ford, and to leave off using the open canal which connected the reservoirs with the works at Lea Bridge. This alteration immediately followed the cholera visitation of 1866—a visitation of which the geographical limits were very much those of the area supplied from the reservoir at Old Ford.[2] In the year 1886 an Act was passed which, among other things, authorised the Company to sink wells and to make works with the object of intercepting sewage and preventing it from getting into the river above their intake. In the year 1892 the works at Old Ford were finally given up.

A new reservoir has just been completed, another will be ready for use in the course of a few weeks, and new wells are being sunk. The Company are this session promoting a Bill to authorise them to make more new reservoirs.

THE HOSPITAL REFORM ASSOCIATION.

A MEETING of the Hospital Reform Association was held in Birmingham at the Grand Hotel on Wednesday afternoon, April 21st.

Mr. JORDAN LLOYD, who presided, in opening the proceedings said the meeting was called to create interest in questions which were thought by many to be ripe for discussion, to demand careful inquiry, and for settlement. This matter of hospital reform had been discussed over and over again; it had agitated the lay and the medical mind for many years, and in Birmingham a few years ago a committee sat for some days, and arrived at a series of conclusions which were almost practically identical with the objects of that association. The movement was not a professional one, and he was not sure that its initiation came from the medical profession; it certainly was not confined to the profession. It was a question which concerned the public equally with the profession, and it concerned the philanthropic part of the public as much as any other. The first object of the association was to prevent the abuse of hospitals, infirmaries, and dispensaries. There seemed to be a large number of persons who questioned whether there was such a thing as abuse of these institutions; but no impartial man who looked the facts of the position in the face without prejudice could fail to see that abuse. He thought that abuse was dominant in many of the hospitals of the kingdom. The first purpose of a hospital was to supply the sick with that medical attention which their cases demanded and which they were unable to obtain by reason either of their poverty or of the severity or peculiarity of their malady. Hospitals were not cheap "doctor-shops"; they were not for the distribution of cheap physic; they were not matters of mere public convenience. Another reason for the existence of hospitals—and it was a real reason—was the training of medical men. They were fortunate in Birmingham in regard to their Poor-law administration, and he felt proud of the fact that in that city the very poor people, he would not say were doctored, but had potentialities for being doctored a great deal better than that of the average middle-class. Therefore, what was constantly being said in Birmingham—namely, that the first object of hospitals was the doctoring of the poor was all moonshine. They were delighted to see the poor there, and to do the best they could for them; but the poor knew very well that there were other systems of medical relief which offered them quite as good advantages, and better

[2] "The area of intense cholera of 1866," according to Sir John Simon, "was almost exactly the area of this particular water-supply, nearly, if not absolutely, filling it, and scarcely, if at all, passing beyond it."

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in many respects than were offered to them by the hospitals. That the question of abuse could be dealt with, and would be dealt with, in a way satisfactory both to the public and to the medical profession he was quite confident. The second object of the association was to promote the establishment of central hospital boards in London and other large towns. He had thought over this question for many years, and he was absolutely certain that there were more economical ways of administering hospitals than were now practised. If the whole of the hospitals in Birmingham were administered by some central board or committee the administration would be very much cheaper. That this was done was due to the existence of an absurd jealousy on the part of the hospitals one against another. There ought to be no jealousy in the doing of common work like that of hospitals. The formation of a central board would also assist in preventing abuse. The third object of the association was to provide properly regulated provident dispensaries. One of the suggestions made by the association was that the number of cases seen by one medical man in one day should not exceed twenty. That suggestion he thought utterly impracticable. At the Queen's Hospital one of their officers limited his number to twenty-five, but he (the chairman) had not ventured to adopt any such limit, because it was possible that if he did so he should see twenty of the most trivial cases. Those who were able to push their way to the front and those who lived nearest would get the first attention, and the more trivial the malady the earlier, probably, the patient would be there. He would not allow that every person who received an injury, no matter how serious, was entitled to go to a hospital for a first opinion. Whether persons in such circumstances got the best opinion by going to a hospital was a question he would rather not touch upon, but hospitals were only bricks and mortar, and the skill of a hospital depended upon the skill of its staff. Mr. Jordan Lloyd then moved the following: "That this meeting of the medical profession practising in Birmingham and the district is of opinion that the question of hospital reform should be dealt with without further delay by the lay managers and acting staffs of our various hospitals and dispensaries, and thinks that the recommendations issued by the Hospital Reform Association for the better regulation of the out-patient and casualty departments are worthy of their close consideration."

Mr. M. HALLWRIGHT seconded, and Mr. E. CHESSHIRE supported the motion.

Dr. KIRBY moved as an amendment, that selected representatives of the general practitioners should be added to the committee to consider the subject.

Mr. A. OAKES seconded the amendment.

The CHAIRMAN said he could not accept Dr. Kirby's suggestion as an amendment, because the reference to the central board was one of the objects of the association, and at present it was not defined how that board should be constituted. He had no doubt the claims of the general practitioners to representation would be considered.

Dr. ISAMBARD OWEN said he could not agree with the chairman that the principle of limiting the number of out-patients was impracticable. So far from being impracticable it had been carried on at St. George's Hospital with complete success for over thirty years, and it was a principle which everyone connected with that hospital would be sorry to see altered. Two objects were aimed at: in the first place the benefits of the hospital should go only to those whose poverty rendered them worthy objects of charity, and, secondly, that the hospital charity should go to the severest cases that applied. The out-patients were seen every day, first of all by the resident medical officer, who examined them from the point of view of the severity of their cases, and then from the point of view of their social position. Assuming the applicants to be fit objects for charity, he picked out fifteen medical and fifteen surgical cases, apparently the most serious, for treatment that day, and the other applicants might, if they chose, apply another day. If, however, any of those cases were so urgent that the postponement of treatment would involve any serious risk, the resident medical officer, at his discretion, was empowered to prescribe treatment for a single day, but it was very rare that it was found necessary to exercise that power. At St. George's Hospital, too, there was a system of inquiry by the officers which answered extremely well. There were no out-door inquiry officers, but the resident medical officer made the necessary inquiries of the patient, and he was rarely mistaken in the conclusion he arrived at. If he was doubtful as to the social position of the patient the latter was sent to the secretary, and if the latter had any doubt treatment for the time being was given and the case referred to the Charity Organisation Society. If that society reported unfavourably further treatment was invariably refused. In Birmingham, with its much more complete municipal organisation, he should think there would be little difficulty in organising a central board of inquiry which would be very effective. The system he had alluded to had worked remarkably well at St. George's Hospital during the eleven years he had had experience of it.

Dr. AYSHFORD said he believed that a man who was willing to work hard among the poor could make a good living—in fact, better than he could among the richer classes; but the competition of the hospitals pressed very hardly upon the general practitioner.

The resolution was carried unanimously.

Mr. GARRETT HORDER said that the association, though only six months old, had made some impression upon the hospital world. There had been a distinct reform movement in one of the London hospitals, in which the out-patients and casualty cases numbered 180,000 or 190,000 a year. Birmingham wanted hospital reform very badly indeed. The association proposed to hold the next meeting either in Liverpool or in Manchester, both of which towns were hotbeds of hospital abuse.

The following gentlemen were appointed to form a committee to deal with the subject of hospital reform: Mr. Jordan Lloyd, F.R.C.S. Eng. (chairman), Mr. Edwin Chesshire, F.R.C.S. Eng., Mr. J. T. J. Morrison, M.A., M.B. Cantab., F.R.C.S. Eng., Mr. G. R. Ayshford, M.B., C.M. Edin., Mr. Gordon Nicholls, L.R.C.P. Edin. (honorary secretary), Mr. M. Hallwright, M.R.C.S. Eng., Mr. L. Rose, M.B. Edin., Mr. E. D. Kirby, M.D. Edin., Mr. Arthur Oakes, M.R.C.S. Eng., and Mr. Charles S. Johnston, M.R.C.S. Eng.

THE GRECO-TURKISH WAR.

THE news—so dramatic in its effect and so disastrous to the Greek cause—cannot be regarded as a surprise; the surprise would have been if the reverse had happened and Greece had crumpled up the military power of Turkey. It has not been one of those cases in which educated and thoughtful people were wise after the fact, for there were comparatively few persons, especially among officers of the army, in this country who entertained much doubt on the subject. The difference in population of Turkey and Greece and in the military strength of the two countries, the numerical superiority of the Turkish army, the strength of its artillery arm, the character of its rifled weapons, its experience in military training and in the field, were all factors that had to be taken into account, and they left little room for difference of opinion among military experts. Since the Greek War of Independence the art and science of warfare have been revolutionised. As far as the published accounts of the history of the present war are concerned they gave, no doubt, a meagre, conflicting, and confusing description of the events that were taking place, but there is no longer room for doubt. Edhem Pasha's army has pierced the centre of the Greek frontier defence and proved victorious on its left and then on its right, and apparently secured itself against any serious flank attack. Thessaly, which Greece gained by treaty in 1881, she has lost by conquest in 1897, and the country now lies open to the advancing Turkish army. The territory beyond is historical, and the names of Pharsalia and Thermopylæ recall to mind the studies of school life and the great events of which they were the theatre in times long past. When we said last week that the Turks were apparently masters of the situation we confess that we did not realise, however, that the end was so near and that a few hours were to be crowded with such dramatic results. Turning to the conduct of Turkish troops in this war, we are bound to say that, altogether apart from their acknowledged bravery and fortitude in the field, there seems to be a general consensus of opinion that the Turks have conducted themselves admirably in the present campaign and with great moderation and excellent discipline; there have been no cruel and wholesale massacres of the inhabitants of towns and villages, and the dead and

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wounded have been treated with a respect which has not usually hitherto characterised a Turkish force. On this occasion the Turks seem as if they had forsaken an article and practice of their religion, which recalls some of the wars recorded in Old Testament history, and to have taken a step forward in the conduct of civilised warfare. This should be recognised and placed to their credit and that of their able and seemingly humane leader, Edhem Pasha. Still, from the difficult nature of the country, from the amount of severe fighting which has taken place, and the rapid retreats that have had to be executed, we fear that the sufferings of the wounded and of the fugitive families must have been very great. The accounts that have reached us of the losses in the several engagements have represented these as so small that either the fighting could not have been so severe as described or the estimated losses have been greatly understated. The fact, however, is that these are unknown; there are no statistics, not even approximate statistics, and it is curious how little we have yet learned of the state of the military hospitals of the belligerent forces, of the number of wounded they contain, or of the methods of ambulance transport adopted. All this has still to be recorded, and the medical history of the campaign can only be written when it has terminated. It is fully recognised that the Greeks have fought with gallantry and held and defended their posts with brave tenacity of purpose. Towards the last, and after their defeat at Mati, when they saw that they were being out-manœuvred and surrounded and that the position was no longer defensible and had to be evacuated, it was only natural that some panic should ensue and precipitate flight. The latest accounts, however, give a terrible picture of the scene presented by the retreat of the demoralised and panic-stricken army. The line the Greeks have now taken up at Pharsalia and beyond is supposed to be capable of being far better defended than those they have relinquished, but we fear that at best a continuance of the warfare will only delay the seemingly inevitable end. As we said last week, there is ample room for the provision of medical, surgical, and philanthropic aid to the sick and wounded of both sides, but especially for the side of the Greeks. Switzerland is sending an ambulance corps with nine surgeons to the seat of war. The ambulance hospital and corps organised by the Imperial Ottoman Bank, and under the medical charge of Dr. Lardij, has probably reached Elassona ere this, and several nurses are leaving this country for the seat of war in addition to those who have already proceeded there.

THE NEW WATER-SUPPLY AT WORTHING.

FORMAL OPENING OF THE WORKS.

THOSE who attended the inaugural ceremony at the New Waterworks of Worthing in the brilliantly auspicious weather of Monday last must have been struck by the fact that the inhabitants of Worthing were keenly alive to the importance of the event. The picturesque town was prettily decorated and there was hardly a single householder who did not share in the enlivenment of the proceedings by displaying a profusion of coloured bunting on his house suitable to such an occasion. Nor were the town councillors behind in marking the importance of the occasion, and the Mayor is to be congratulated on arranging an attractive programme and adding brilliance to the ceremony by the excellent display which was provided in the furnishing of escorts, guards of honour, &c., a display notably enhanced by the presence in the demonstration of the lifeboat and fire brigades and a detachment of coastguards. His Royal Highness the Duke of Cambridge, escorted by General Bateson, arrived punctually at the time announced (11.45 A.M.) at Worthing Station, where he was received by the Mayor and Councillors. After an address couched in terms appreciative of His Royal Highness's visit the company proceeded in carriages to the site of the new works, which were inspected with considerable interest. The Duke started the pumping engines by giving a few turns to the steam valve admitting steam into the cylinders. The usual naming ceremony was then performed, the Duke calling one engine Victoria and the other Cambridge. Mr Mansergh, jun., son of the engineer who designed the works, then presented an interesting statement of their history and construction.

It was in 1893 that the Corporation of Worthing resolved that new works should be constructed and that the source of supply should be beyond the possibility of contamination. Subsequently Mr. Mansergh was instructed to prepare a scheme, and after consultation with several leading geological experts the present site was chosen. In the meantime, as was pointed out in THE LANCET of June 9th, 1894, a pure and abundant temporary supply of water was placed most generously, unreservedly, and in a time of the utmost need, at the disposal of the authorities by Mr. Edward Harrison, with permission to use his property at Broadwater as freely as occasion demanded. It is pleasing to learn that this magnaminious action was recently appreciated in a practical manner by the authorities at Worthing, who presented him with a service of plate in acknowledgment of the real and important work of rescue which Mr. Harrison had so nobly and unstintedly done. The new well, which is situated under the western end of the engine house, is 115 ft. deep from the ground surface. It is sunk 60 ft. into loamy clay and sand and 50 ft. of solid chalk. For 80 ft. downwards the boring is 12 ft. in diameter, while lower it is 12 ft. The upper sides of the well to the extent of 33 ft. are lined with eighteen inches of brickwork in cement, and the lower portion with cast iron cylinders. Water was found as soon as the chalk was reached, and by the time the well was sunk to its full depth the quantity yielded was about 1,000,000 gallons per day. From near the bottom of the well headings are driven in a north-westerly, easterly, and south-westerly direction for an aggregate distance of fifty yards, and are lined with brickwork. The pumping machinery consists of two horizontal compound differential condensing engines, each working a pair of pumps which lift the water into chambers under the engine-house floor, whence it is forced by two pairs of double-acting force pumps through a 16-inch rising main to the reservoir in the chalk on the Downs close by, each pair of pumps being driven by one of the engines. When working at the ordinary speed of twelve strokes a minute each will raise 1000 gallons per minute from the bottom of the well to the adjacent reservoir. The reservoir on the Downs is capable of holding 2,000,000 gallons and is circular in plan and 25 ft. deep; it is constructed with concrete walls and floor, and lined throughout with asphalt, the asphalt on the walls being protected by brickwork. The top water level is 190 ft. above ordnance datum, or about 80 ft. higher than the old water tower in the town. The distance of the reservoir is about two miles north from Worthing. A cast iron gravitation main, 14 in. in diameter, is laid from the reservoir to near the railway station, and is connected by branches with all the principal distributing mains in the town and also to a trunk main which is part of the old West Worthing waterworks, which the corporation has purchased, and which supplies the west ward of the borough. The total cost of the undertaking amounts to nearly £31,000. The yield of water has been thoroughly ascertained, and it it estimated at an average of 1,500,000 gallons a day, which at 30 gallons per head per day would be sufficient for the supply of 50 000 persons. Since the resident population is about 19 000 there is an ample margin for the provision of visitors. From the results of an analysis made in THE LANCET Laboratory, and published in our columns last week, it will be seen that the water is of admirable purity and well adapted for all dietetic purposes.

It should be added that the sewerage system has been thoroughly overhauled and reconstructed. A new main sewer has been laid right through the town, and pumping plant and storage-tanks have been installed near the outfall, at the eastern extremity of the borough, for removing the contents of the sewers and for storing the sewage during the time of tide locking, and thus preventing the forcing of the sewage back into the mains, which hitherto had proved a frequent source of annoyance and trouble. The outfall itself has also been lengthened so as to carry the sewage to below low water mark and to avoid the discharge of sewage upon the beach. The discharge is allowed to take place under the best conditions for its removal by the sea without pollution of the foreshore. These improvements have cost a little over £37,000.

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There was a distinguished company present at luncheon at the town hall after the opening ceremony. The Mayor (Captain A. B. S. Fraser) presided. Amongst those present were Lord Edmond Talbot, General Sir William Butler, Sir Henry Fletcher, Admiral Vansittart, the Bishop of Chichester, Colonel Tolson, Colonel Gem, Colonel Nobel Edwards, and the Mayors of Brighton, Chichester, Arundel, and Lewes. The toasts, which were commendably few and short, referred chiefly of course to the important event in the history of Worthing which had been signalised that day. The authorities have not left a single stone unturned to insure the healthiest possible conditions of the town. They have spent a large sum of money, probably amounting to over £100,000; but it would have been impossible to have devoted such a sum to a better purpose. It is an outlay which now enables them with every right to say that the sanitary provisions of the town of Worthing in regard to water-supply and sewage disposal are second to none in any other health and seaside resort in the kingdom. The whole incident has proved an excellent object lesson in the first principles of sanitation, and though the past has been a bitter experience there is no reason now why the future should not bring with it well-earned prosperity. With the ceremony performed by His Royal Highness the Duke of Cambridge on Monday last the sanitary difficulties and troubles of Worthing, we may confidently hope, have ceased.

THE SANITARY CONVENTION OF VENICE, 1897.

No. I.

THE Sanitary Convention which was signed at Venice in March last is the fourth of a series of International Conventions which have as their aim the control of foreign infectious diseases in such a way as to prevent their spread into neighbouring countries other than those in which they happen to prevail, and especially into Europe. For many years before any Conventions were signed there had been international gatherings which had been convened with the same object, but the resulting proposals were all so largely based on purely quarantine lines that Great Britain could never accept them, and not one of the Conventions was ever ratified. The last of these conferences which thus failed was held in Rome in 1885, and after this date it seems to have been understood that a successful conference must mean much more advance on the lines of English sanitary administration than the European nations had ever yet assented to.

The first of the four successful conferences was held in Venice in 1892, and after the resulting Convention had been somewhat substantially modified to meet the views of this country it was ratified and was accepted by the principal European nations. It dealt with cholera, and it went on the mistaken notion that the greatest danger to Europe was by means of the sea route. Those who held that view saw no difficulty in stopping cholera at the Suez Canal, and although they were warned by the British delegates that the land route was a much more serious danger, they contented themselves by controlling the sea route only. The Venice Convention of 1892 was, however, a document of the greatest importance for this country, because it enacted for the first time that a vessel arriving in the ports of any of the contracting countries was no longer to be judged by reason of the health of the port from which it had sailed, but by reason of the actual state of health of those on board. It is true that this great concession to British views was more complete in words than in fact, because free pratique was not to be granted at Suez, for example, unless five days had elapsed since the vessel had left the last infected port. This, however, made no difference to our traffic from Bombay, where cholera is unfortunately all but endemic, because the five days had always fully elapsed before a vessel from British India could reach the Canal; and the condition was hence assented to by this country. Another set of provisions dealt with the case of vessels reaching Suez and on board which cholera had actually occurred. Here again there was substantial advance in the direction of British views; for it was conceded that if the sick persons, together with those who had been in actual contact with them, were landed at the hospital established at Moses' Wells the vessel might after disinfection be allowed to proceed on its journey to the Mediterranean, provided the passage of the Suez Canal was effected "in quarantine," that is to say with guards on board who would prevent communication with the shores of the canal. These were, substantially, the two great points of interest in this Convention in so far as Great Britain was concerned; but the Convention dealt in detail with a number of other subjects, including regulations as to arrivals at Egyptian ports and the re-constitution of the Sanitary, Maritime, and Quarantine Council of Egypt—an international body which is responsible for the control of disease in Egypt, for the management of some of the pilgrim stations on the Red Sea, and also for regulating the traffic of the Suez Canal in so far as health and disease are in question.

But whilst the first Venice Convention was engaged in discussing the sea route, and openly ignoring the land route of cholera, that disease was slowly but surely advancing through Turkestan and towards the Russian frontier, which it soon passed, and then overspread Europe. This event led to the urgent assembly of the second successful International Sanitary Conference, which was held at Dresden in 1893, and which had for its professed object to control cholera when once it had made its way into Europe, and to prevent its diffusion from one country to another, whether across land frontiers or by way of sea and river routes. The question of control by land routes in Europe had no direct concern for this country; but that by way of the sea route was important. The result of the Conference was in this respect in the main satisfactory, for it applied the principles of the Venice Convention of 1892 to the circumstances of Europe, and it avoided, for the first time, making it compulsory for any nation who should adhere to the Convention to impose quarantine in their ports. It is true that quarantine was still permissive under the new name of "observation" for a limited period of five days, but the Convention practically accepted as an alternative the English system of merely keeping suspected persons under supervision in their own homes and of allowing the infected vessel to depart free of control as soon as the sick had been landed in hospital and certain measures of disinfection had been carried out. Great Britain ratified this second Convention after making it clear, by means of a special reservation, that she only adhered to its terms on the distinct understanding that for the purposes of British ports "observation" would never be construed into the quarantine detention of healthy people or of ships which, though they might have been infected, had been properly disinfected.

But the Venice and the Dresden Conventions only professed to deal with the control of ordinary traffic by land and by sea for the purposes of the prevention of cholera, and it was very properly admitted that one of the greatest dangers of cholera lay in the pilgrimages paid by Mohammedans to Mecca and Medina in the Hedjâz. Hence the French Government invited the principal nations of the world to assemble once more in 1894 in Paris in order to prepare a Convention for the control of the spreading of cholera by Mussulman pilgrims, whether they came from British India, the Dutch Indies, or elsewhere in Asia, or whether they started from Egypt, Algeria, Bosnia, Russia, &c., on the Mediterranean side of the Suez Canal. A very complete code was drawn up; but for us its interests centred in the measures to be taken at the departure of pilgrims for Indian ports, at the detention in the island of Camaran in the Red Sea before landing at Yeddah, and in the proposed sanitation of the towns and cities visited by the pilgrims in Arabia. This Convention again exhibited considerable progress, and, above all, it called upon Turkey to give to the quarantine station of Camaran some semblance of healthiness and decency; and to provide for the pilgrims on their journey through Arabia some proper health accommodation, and wholesome water. It also reduced the periods of quarantine detentions hitherto enforced by many days. But, it went on the assumption that Turkey, who took all the sanitary taxes of the pilgrims, would do her duty in this matter, and it failed to take proper account of the endless delays and evasions which always characterise Turkish administration. Turkey, too, declined to sign the Convention and pleaded that this country had only signed with reservations. That was true. One of our reservations was designed to relieve us from the obligation of collecting Turkish taxes for the Turkish Government, for we declined to include all those

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taxes in the price of the pilgrim's ticket; another was concerned with the amount of space to be allotted to pilgrims on board pilgrim vessels; and the third reservation announced that Great Britain and British India refused to be controlled by the regulations laid down as to traffic in the Persian Gulf. The truth was that the Paris Convention absolutely abandoned, as regards the Persian Gulf, all that had been conceded by the Conventions of Venice and Dresden as to judging a vessel by reason of the health on board instead of by reason of the health of the port of departure; and this unfortunate abandonment of principle led to the Paris Convention never being issued by the French Government. It is true that the document had been signed, but it could only be ratified by this country with reservations that were regarded as of such importance that it was deemed preferable to ignore it and await a more favourable opportunity for reviewing the whole matter.

These three Conventions had been concerned with cholera, but last year plague became much the more pressing and important disease. This occurrence afforded an opportunity for a fourth International Conference—namely, the one held this year in Venice. It concerned itself with the control of plague by land and by sea, and it afforded an opportunity of once more raising questions of the ratification of the Paris Convention, which had remained a dead letter. It was under these circumstances that the International Conference recently met and brought to a successful termination labours that resulted in the signature of a fourth Convention—namely, the Sanitary Convention of Venice, 1897, the provisions of which we propose to discuss in some detail in a series of articles.

THE ROYAL ACADEMY.

THE 129th exhibition is, we think, quite up to the level of its predecessors, and if there is no very striking picture there are many above the average. The days have gone by of roped-in pictures attended by a policeman to move on the crowd, but in the present exhibition there are one or two works which will excite worthy attention.

We are glad to be able to note the absence of death-bed scenes and sick children, for the charnel-house school of painting is a thing to be deprecated. Among the works which particularly struck us was "Calypso's Isle" (39) by Mr. Herbert Draper. This artist's work is always clever, and he is quite up to his usual level. The nymph is sitting in a rock with her back towards the spectator; she is correctly drawn and modelled and the flesh tints are good. Also Mr. Draper deserves a word of praise for his sea, for he has managed to give very truly the effect of that ever-changing Mediterranean so indefinite with its blues and greens and purples dashed with red that the old dwellers by its shore were reduced to calling it wine coloured. Mr. Walter Shaw has met with his usual undeserved fate of being very badly hung, but his "Rain Squall" (311) shows his power of representing our cold, grey, northern waters; moreover, his water looks wet, an effect we do not always see in sea pieces. Mr. J. C. Dollman has a "Temptation of St. Anthony" (445). The animals are good, but we do not consider that it would take a saint to resist the young woman, for she looks unhealthy and œdematous. "Hamlet," by Mr. E. A. Abbey, is an amazing picture, barbaric to a degree and blazing with colour. The subject is the Play Scene, although the players are "off"; but the faces of the King, the Queen, of Hamlet and Ophelia, and of the rough soldier courtiers afford wonderful studies of varying expressions.

Mr. J. R. Weguelin deserves a word of praise for the anatomy of his Nymph (600), though she is hung in a bad light. But perhaps the most striking thing in the galleries is (663) "Steady the Drums and Fifes," the 57th (Die hards), drawn up under fire on the ridge of Albuera, by Lady Butler.

To the picture is appended a note from Cardinal Manning concerning the mental strain which such an act involves, and Lady Butler has certainly succeeded in catching passing emotions and fixing them on canvas. The subjects of the picture, in many cases mere children, are waiting in the midst of death, and the mental tension is evident; one child has already been struck down, and clutches in a death grip the leg of his comrade. Mr. Rudyard Kipling's Jake and Lew were heroic, but these are even more so.

To turn to the more purely medical pictures. In the first room is the charming little portrait of the late Dr. E. Ballard by his daughter (9), a reproduction of which appeared in our columns upon Jan. 30th, 1897. Mr. C. Neil Knight has (186) "A Sister of St. Vincent de Paul," representing one of these devoted woman watching by a sick bed in the dim light. Mr. Ouless sends a fine portrait of Lord Lister (296), a presentation portrait. Another presentation portrait is that of Mr. Henry Power, F.R.C.S. (551), by Miss Lucy Power, and presented by his house surgeons at St. Bartholomew's Hospital. The technique is good but we do not think that Miss Power has quite caught the likeness. In Gallery XI. are two portraits of special interest to medical men; one (999) by Mr. H. Harris Brown, of Sir William MacCormac, a good likeness and remarkable for the skilful way in which the various shades of red in the gown, the curtain, and the tablecloth are managed; the other (1028), a very quiet, subdued picture by Mr. Percy Bigland, of the President of the Royal College of Physicians—Dr. Samuel Wilks. Mr. Ralph Hedley (1062) has a well-drawn scene called "Passing the Doctor," a study of recruits being examined. With the exception of the fact that the doctor has his stethoscope at an angle at which we are sure he could not hear anything, the picture is good. In the sculpture room are a fine medal, by Mr. Alfred Gilbert (1079), for presentation at St. Bartholomew's Hospital in memory of the late Sir W. Lawrence; a bust of Sir J. B. Lawes by Mr. F. Verheyden, and another of Mr. Dudley Edginton, M.R.C.S., by Mr. Paul Montford, a design for the Huxley Memorial Medal by Miss Ruth Canton (2035), and (2055) a life-like bust of Sir Richard Quain by Mr. Thomas Brock.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Chelmsford Rural Sanitary District.—Dr. Thresh reports that during the two years in which an isolation hospital has been available for this district the number of notified cases of infectious disease has been but one half of the previous average, and he is inclined to regard this decrease as due in part to the good effect of prompt removal and isolation. An outbreak of scarlet fever occurred in Danbury during 1896 in which those attacked were attending the infants' department of the national schools. The registers were examined, and on visiting the families of certain absentees children were discovered desquamating from scarlet fever. The outbreak in question was apparently caused by the return to school of a child from one of the invaded houses. The report before us contains a table setting forth the meteorological data, together with the deaths and notifications for the district during the past year, and Dr. Thresh observes that he will be glad if any member of the district council will study this and similar tables with a view to pointing out the relationship between the weather and the prevalence of disease. It is well that the councillors should take an intelligent interest in the statistics relative to their district, and we trust that Dr. Thresh will receive the assistance for which he asks.

Withington Urban Sanitary District.—The obscure manner in which school attendance is at times responsible for the spread of infectious disease, although that influence may not be at once apparent, is well illustrated in Dr. Railton's current annual report, in which it is stated that children suffering from measles were found to have continued at school while in an infectious condition, in spite of the fact that the teachers had been especially warned to be on the alert. Dr. Railton insists on the difficulty which must always beset attempts on the part of school teachers to recognise illness amongst their pupils, and he suggests that it would be a useful precaution to have school children inspected daily by a medical man in all instances where a case of infectious disease had been recognised among the pupils, the examination to continue as long as fresh cases occurred. Obviously the ideal conditions of inspection would be found in the regular daily

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inspection of schools by medical men, but, failing that, Dr. Railton's suggestion has much to commend it.

Lytham Urban Sanitary District.—In commenting upon the prevalence of scarlet fever in this district Mr. J. H. Jenkins observes that it will be impossible to prevent occasional cases from occurring until the Notification Act is universally adopted in the country. We are afraid that even when this is the case scarlet fever will not cease from troubling us, since notification is but the expression at any given time of the cases of infectious disease which are recognised; and beyond these there will, at any rate, for many years to come, be an uncertain number of anomalous, and in large part unrecognised, cases. Lytham was one of the places which first gave trial to the Hermite system of sewage treatment, but the trial has now, it appears, been discontinued, and it is proposed to discharge the untreated sewage out to sea on the ebb tide. Mr. Jenkins is not in favour of the scheme, and he points out to the council some of its disadvantages, one of which is the pollution of a bed of mussels on the foreshore. We are glad to note that in the vicinity of this district two joint hospital boards have been formed, one to provide a small-pox hospital and the other a hospital for other infectious diseases.

Thingoe Rural Sanitary District. — Dr. Scott Kilner relates in his current annual report an outbreak of measles in which some of the patients suffered almost simultaneously from an attack of scarlet fever. These instances are always worth recording, and it is well to bear them in mind in all etiological inquiries. The recognition of the coexistence of two infectious diseases in the same individual would perhaps have been made earlier than it was, had it not been for the position taken up by John Hunter that "all diseased actions are simple," and that no two diseases were capable of existing in the body simultaneously. Hunter, however, pointed out that the potentiality of one disease may be present in the body during the manifestation of another, and he gives instances of the arrested action of inoculated small-pox in the presence of an attack of measles.

Maldon Rural Sanitary District.—This district contains, it appears, within its limits some important oyster layings, and we are glad to note that the oyster merchants have been acting, at least partially, on the advice of Dr. Thresh relative to the purification of the Burnham sewage effluent. We regret, however, to note that the sewage works, although completed, have "never been systematically attended to," and that Dr. Thresh on his visits has always found "the tanks more or less foul, and the effluent not what could be considered satisfactory," which fact is much to be deplored. We gather from the Local Government Board report that the waters of the Crouch and the Roach are exceptionally well fitted, from a sanitary standpoint, for oyster culture, and that both these estuaries could easily be rendered quite above suspicion; and the oyster merchants of the district have consequently only themselves to blame if they fail to take advantage of the excellent facilities with which nature has provided them.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6226 births and 3965 deaths were registered during the week ending April 24th. The annual rate of mortality in these towns, which had been 18·6 and 17·9 per 1000 in the two preceding weeks, rose again last week to 18·8. In London the rate was 17·5 per 1000, while it averaged 19·7 in the thirty-two provincial towns. The lowest death-rates in these towns were 10·1 in Derby, 11·2 in Croydon, 11·3 in Gateshead, and 12·5 in Brighton; the highest rates were 24·7 in Liverpool, 27·9 in Salford, 28·8 in Manchester, and 36·1 in Bolton. The 3965 deaths in these towns included 367 which were referred to the principal zymotic diseases, against 338 and 335 in the two preceding weeks; of these, 109 resulted from whooping-cough, 101 from measles, 57 from diphtheria, 40 from diarrhœa, 31 from scarlet fever, and 29 from "fever" (principally enteric). No death from any of these diseases was recorded in Preston; in the other towns they caused the lowest rates in Swansea, Derby, Hull, and Gateshead, and the highest rates in Burnley, Manchester, Salford, and Bolton. The greatest mortality from measles occurred in Newcastle-upon-Tyne, Burnley, Manchester, Salford, and Bolton; and from whooping-cough in Portsmouth, Plymouth, Salford, and Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 57 deaths from diphtheria included 40 in London, and 2 each in Birmingham, Liverpool, Salford, and Leeds. No fatal case of small-pox was registered last week in any of the thirty-three large towns. There were 7 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 24th ult., against 17, 16, and 11 at the end of the three preceding weeks; no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2442, against 2512, 2449, and 2406 on the three preceding Saturdays; 269 new cases were admitted during the week, against 219, 224, and 216 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 271 and 273 in the two preceding weeks, further rose last week to 289, but were 95 below the corrected average. The causes of 59, or 1·5 per cent., of the deaths in the thirty-three towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Cardiff, Bradford, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·6 and 22·3 per 1000 in the two preceding weeks, rose again to 22·6 during the week ending April 24th, and exceeded by 3·8 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·4 in Greenock and 18·1 in Aberdeen to 29·0 in Perth and 29·2 in Edinburgh. The 673 deaths in these towns included 41 which were referred to whooping-cough, 39 to measles, 11 to diarrhœa, 5 to scarlet fever, 4 to "fever," and 2 to diphtheria. In all, 102 deaths resulted from these principal zymotic diseases, against 95 and 107 in the two preceding weeks. These 102 deaths were equal to an annual rate of 3·4 per 1000, which was 1·7 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 38 and 39 in the two preceding weeks, further rose to 41 last week, of which 23 occurred in Glasgow and 13 in Edinburgh. The 39 deaths referred to measles corresponded with the number recorded in the preceding week, and included 23 in Edinburgh and 14 in Glasgow. The fatal cases of scarlet fever, which had been 3 and 4 in the two preceding weeks, further rose to 5 last week, of which 3 occurred in Edinburgh. The 4 deaths referred to different forms of "fever" showed a decline of 3 from the number in the preceding week, and included 2 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 153 and 154 in the two preceding weeks, further rose to 165 last week, and exceeded by 56 the number in the corresponding period of last year. The causes of 46, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 38·5 to 28·2 per 1000, rose again to 34·6 during the week ending April 24th. During the past three weeks of the current quarter the death-rate in the city has averaged 32·9 per 1000, the rate during the same period being 17·2 in London and 27·3 in Edinburgh. The 232 deaths registered in Dublin during the week under notice showed an increase of 43 upon the number in the preceding week, and included 41 which were referred to the principal zymotic diseases, against numbers declining from 74 to 36 in the five preceding weeks; of these, 19 resulted from measles, 14 from whooping-cough, 4 from diarrhœa, 2 from "fever," 1 from diphtheria, and 1 from scarlet fever. These 41 deaths were equal to an annual rate of 6·1 per 1000, the zymotic death-rate during the same period being 1·6 in London and 7·6 in Edinburgh. The fatal cases of measles, which had declined from 46 to 15 in the five preceding weeks, rose again to 19 last week.

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The deaths referred to whooping-cough, which had been 9 and 14 in the two preceding weeks, were again 14 last week. The 2 deaths from "fever" also corresponded with the number in the preceding week, while the mortality from scarlet fever and from diphtheria showed a decline. The 232 deaths in Dublin last week included 45 of infants under one year of age and 47 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed an increase upon those recorded in the preceding week. Six inquest cases and 4 deaths from violence were registered; and 70, or nearly a third, of the deaths occurred in public institutions. The causes of 20, or nearly 9 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL CHRISTOPHER W. M. KEYS M.D., to be Brigade-Surgeon-Lieutenant-Colonel, vice T. O'Reilly, retired.

Surgeon-Lieutenants Gaine and Phillips have joined at Woolwich.

INDIA AND THE INDIAN MEDICAL SERVICES.

Brigade-Surgeon-Lieutenant-Colonel S. M. Salaman has delivered over charge of the Yerrowda Central Prison. Surgeon-Captain J. Mulvany, on duty in connexion with famine relief, Mirzapore, is transferred to duty in connexion with precautions against bubonic plague at Manikpore in the Banda District. Surgeon-Lieutenant C. D. Dawes, on duty in connexion with precautions against bubonic plague at Manikpore in the Banda District, is transferred to duty in connexion with famine relief in the Hamirpore and Jalaun Districts. Surgeon-Captain H. B. Melville, Civil Surgeon, Second Class, sub *pro tem.*, to be confirmed in that appointment, but to continue to officiate as Superintendent, Central Prison, Lucknow. Surgeon-Captain J. Chaytor-White, Officiating Civil Surgeon, to be Civil Surgeon, Second Class, sub *pro tem.* Surgeon-Captain R. E. Molesworth, A.M.S., is appointed to the Civil Medical Charge of the Almora District, in addition to his military duties. Surgeon-Lieutenant-Colonel W. H. Cadge, Civil Surgeon, is transferred from the Medical Charge of the Camp of H.H. the Lieutenant-Governor and Chief Commissioner to the Bareilly District. Surgeon-Captain A. E. Roberts, Civil Surgeon, is transferred from Bareilly to the Medical Charge of the Camp of H.H. the Lieutenant-Governor and Chief Commissioner as a temporary measure. The Queen has approved of the following promotions among the officers of the Indian Medical Service:—Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels: Augustus Napoleon Rogers-Harrison, Madras Estabishment; William Reed Murphy, D.S.O., Bengal Establishment; and Charles Henry Joubert, Bengal Establishment. The Queen has also approved of the retirement from the Service of the under-mentioned officers:—*Bombay Establishment:* Surgeon-Colonel Robert Bowman and Brigade-Surgeon-Lieutenant-Colonel Selim Myer Salaman, M.D.

NAVAL MEDICAL SERVICE.

Inspector-General of Hospitals and Fleets Duncan Hilston, M.D., has been placed on the Retired List.

VOLUNTEER CORPS.

Artillery: 1st Edinburgh (City): Surgeon-Major J. J. K. Duncanson, M.D., to be Surgeon-Lieutenant-Colonel. *Royal Engineers:* 1st Lancashire: George Arthur Hawkins-Ambler, gent., to be Surgeon-Lieutenant. 1st Hampshire: Richard Emmett, gent., to be Surgeon-Lieutenant. *Rifle:* 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment: Surgeon-Lieutenant E. Haydon, M.B., to be Surgeon-Captain; Surgeon-Lieutenant J. Quick resigns his commission. 1st Volunteer Battalion the King's (Liverpool Regiment): Llewellyn Arthur Morgan, M.D., to be Surgeon-Lieutenant. 4th Volunteer Battalion the South Wales Borderers: John Howard-Jones, M.B., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the East Lancashire Regiment: Surgeon-Lieutenant T. Holt, M.B., to be Surgeon-Captain. 1st Volunteer Battalion the Dorsetshire Regiment: Surgeon-Lieutenant H. F. T. Chambers resigns his commission.

VOLUNTEER MEDICAL STAFF CORPS.

The Manchester Companies: Surgeon-Captain I. J. E. Renshaw resigns his commission.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

A keen competition took place on Tuesday last, April 22nd, at the "Artists'" R.V. headquarters, Duke's-road, W.C., when a large number of non-commissioned officers and men of Volunteer Corps of the Home District competed for the Hamilton Challenge Bowl and other valuable prizes of the school. The winning team was composed of members of the Army Postal Corps—viz., Bugler Caney and Privates Perkins, W. Brecknall, and G. H. Haslewood, who obtained 423 marks out of a possible 480. The best man of the school was also found in the same corps, Colour-Sergeant Yardley coming out first with 114 points out of 120. The second team was composed of the newly formed bearer company of the Essex Volunteer Brigade, whose "turn-out" was extremely good; this team obtained 157 marks out of a possible 160 in drill. The subjects of the examination included elementary anatomy and physiology and first aid and stretcher drill. The examiners were Major Andrew Maclure (the President), Surgeon-Captains E. Hughes and G. Ferguson, Surgeon-Lieutenants C. Stonham and Berkley, Captain Lawther (statistical officer), and Surgeon-Captain R. R. Sleman (referee). The prizes will be presented at the inspection of the class on Tuesday, May 4th.

THE LATE MR. THEOPHILUS H. CLARKE.

It is fitting that one who was for so many years the chief clerk of the Army Medical Department of the War Office should not pass away without some tribute to his memory. Mr. T. H. Clarke died on Easter Day, 1897, at Beckenham, aged sixty-eight years. His duties brought him into intimate association with the heads of the Army Medical Department, and he was greatly respected and trusted by them all, and especially by the late Sir William Muir. Those who knew him best had entire belief in his integrity and simple-minded sincerity, for he was incapable of harbouring any mean or unworthy purpose; but, like so many men of this stamp in public spheres of occupation, he did not altogether escape, and could not hope to escape, calumny. It is, to borrow a phrase lately used, one of the perquisites of office, and, it may be added, usually a certificate also of a man's fitness for his post. Be this as it may, the late chief clerk was single-minded and untiring in promoting what he thought the true interests of the medical service and its officers, and we are assured he befriended many who never heard, and will never hear, of his work in this respect. He had many most sincere friends in the medical service to whom he was greatly attached, and, what, after all, is far better, a conscience void of offence.

THE HEALTH OF THE ARMY IN INDIA.

This still forms the subject of a good deal of discussion and correspondence, but without much advantage in the way of advancing our practical knowledge. There does not seem much to be gained by further reviewing the situation at the present moment. The Government of India, having received and considered Lord George Hamilton's despatch, have drafted some regulations in accordance therewith, and these have been submitted to a small committee composed of Colonel Badcock (quartermaster-general), Major Campbell (cantonment magistrate), and Surgeon-Major Williamson for consideration and report. The proposed regulations, when finally revised and approved by the Government of India, will be submitted to the India Office.

The annual mess of the Volunteer Medical Staff, organised by the Volunteer Medical Association, will take place at Limmer's Hotel on Wednesday next, May 5th, at 7.30 P.M. Sir William Mac Cormac, vice-president of the association and President of the Royal College of Surgeons, will take the chair. The Director-General A.M.D. (Surgeon-Major-General Jameson); Sir Francis Grenfell, G.C.M.G., K.C.B.; Surgeon-Colonel T. O'Farrell; and other distinguished guests have promised to attend.

The annual meeting of the Volunteer Medical Association will take place at 20, Hanover-square, on Wednesday next, May 5th, at 4.30. P.M.

Fourteen invalids for the Royal Victoria Hospital, Netley, left Egypt in the s.s. *Tabor* on April 15th.

On April 24th thirty-nine invalids were admitted to the Royal Victoria Hospital from Malta *ex* s.s. *Malacca*.

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Correspondence.

"Audi alteram partem."

"THE CONDITION OF THE PORTSMOUTH SLUMS."

To the Editors of THE LANCET.

SIRS,—An annotation under the above heading in THE LANCET of April 17th concludes with the following statement: "Assuming that these facts are correct the reflection on the sanitary authority is indeed a serious one." In fairness to Portsmouth and the sanitary authority may I ask you to insert the following.

I have visited every place mentioned in the local paper quoted from, and I find that the article is grossly exaggerated throughout. All the measurements given are inaccurate, and in every case they err in making out the places smaller than they really are. The language used to describe them is exaggerated and sensational in tone, and the whole article gives a totally erroneous conception of the condition of Portsmouth. So far from Portsmouth being a "slummy" place, there are few towns in the kingdom of its size and antiquity with fewer slums. The fact that Portsmouth for the years 1894 and 1895 had the lowest death-rate of any large town in the kingdom (with the exception of Croydon) speaks volumes for the health of the town and for the thorough and efficient manner in which the sanitary authority has for years past been carrying out its duties.

I am, Sirs, yours faithfully,

A. MEARNS FRASER.

Portsmouth, April 27th, 1897. Medical Officer of Health.

SENILE DECAY: ITS CAUSES AND TREATMENT.

To the Editors of THE LANCET.

SIRS,—May I add a few words to the report of the meeting of the Medical Society of London in THE LANCET of March 27th (p. 882)? At this meeting Dr. Savill read a paper of unusual importance, and I came up from Cambridge on purpose to hear it and to discuss it. This paper, I venture to think, should not have been put in the second place, especially when a surgical paper of considerable interest took precedence of it. As it was, the important subject introduced by Dr. Savill was very inadequately discussed by subsequent speakers, who rose by permission after the normal time of closure and spoke in haste and under constraint.

Dr. Savill gave the results of a minute pathological research based upon 400 necropsies and some thousands of microscopic sections in support of more than one conclusion. One of these conclusions is that a certain arterial degeneration is normal and inevitable in old persons. This conclusion I am said to have contested. For me to contest any of Dr. Savill's conclusions would be absurd; on the contrary, I recognised by my presence at the meeting the great value of his labours, and I said that I had no minute and exact pathological evidence of my own to set, however diffidently, against that of Dr. Savill. I did but venture incidentally, and on general grounds, to demur to immediate acceptance of this proposition in an absolute form. I have seen many very old persons in whom the arterial coats and the blood-pressures seemed normal to the clinical judgment, and a few in whom the heart and arteries after death, as observed only by the naked eye, seemed as those of young persons. Such cases are rare, I admit, but still, if one such case be proved in a person of, say, over fourscore, senile arterial degeneration can no longer be called "normal." Again, I suggested that Dr. Savill's necropsies being made upon workhouse patients—made, that is, upon persons with whom life had gone hardly—cannot, perhaps, be taken as complete evidence. But I now regret that I made even these small reserves, as, owing to the brevity of the proceedings, they came forward in disproportionate relief against the expressions of great satisfaction and admiration with which in all respects I ventured to greet Dr. Savill's essay.

This gratitude I personally felt the more as I was led to hope that Dr. Savill has proved on the pathological side certain observations which on the clinical side had occupied me for some twenty years. At the Hunterian Society and elsewhere I have described certain cases as "Senile Plethora" or "Arterial Hyperpiesis," but on their clinical aspect only, as after long delay I had never been able to secure a necropsy on such a patient. These cases, I believe, will turn out to be of the same kind as those described by Dr. Savill as "arterial hypermyotrophy." If this be so, I venture to hope that the description of a symptom-group of great practical importance, now fully recognised for the first time, will be placed on the firm basis which in my reports was lacking. I read with much interest that Mrs. Garrett Anderson has described similar cases from her own experience.

I am, Sirs, your obedient servant,

Cambridge. T. CLIFFORD ALLBUTT.

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—Dr. G Archdall Reid seems thoroughly convinced that acquired characters are not transmissible. This is a much disputed point, as to which there is room for difference of opinion. Individually, I strongly incline to the views of Herbert Spencer rather than to those of Weismann on this subject In support of his opposite views Dr. Reid says: "Every man individually *acquires* the faculty of language and of bi-pedal progression in an erect posture; neither of these is instinctive or inborn, and therefore transmissible, and both result from the fact that the one generation acquires them by imitation from the preceding generation." This is a very dogmatic statement, against which much may be said. In your report of my first Lumleian Lecture[1] there is recorded a case of deferred and untaught speech which is adverse to this opinion. On mentioning this case many years ago to a distinguished physician (Sir Richard Quain) he informed me of a closely related fact. "His eldest daughter up to the age of two years had not walked a step, or even tried to walk, when one day he put her down in the standing position, and to his great surprise as well as to that of the nurse she walked from one side of the room to the other. This also was an untaught act, as there had been no previous trials and failures." The above sentences are quoted from my book, "The Brain as an Organ of Mind" (p. 607), and in the same work there is a section (pp. 561, 562) entitled, "Deferred Primary Automatic Movements," in which it is pointed out, in reference to lower animals, that "much difference exists among different animals as to the degree of perfection *at the time of birth* of these inherited cell-and-fibre connexions, and, therefore, similar differences exist among such animals in regard to their power at birth of executing the several movements with which such nervous mechanisms are in relation."

I am, Sirs, faithfully yours,

Manchester-square, April 25th, 1897. H. CHARLTON BASTIAN.

"PREMATURE BURIAL."

To the Editors of THE LANCET.

SIRS—Permit me to make a remark in relation to your observations in an editorial article in THE LANCET of April 24th on a passage attributed to me in inverted commas, describing the test of death by means of a vessel filled with water placed on the body of the supposed defunct. I have never seen the paper from which these words are taken. Some two or three months ago a literary acquaintance called on me to ask for any information I could give him on the subject in question. I learned from him that he was wishing to write something on the subject, and I was not aware that it was an "interview" or that my name was to appear. I remember that I mentioned, first, the well known value of the ligature with regard to blood circulation and other usual tests, and finally named, as of secondary value, that now under consideration. About a month ago I learned by accident that my name was appearing in some journal abroad in connexion with this subject, but I have never been able to ascertain whether any publication of my suggestions had taken place or not until my perusal of your article.

It may be appropriate to state here that in the form of

[1] THE LANCET, April 3rd, 1897, p. 933.

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death certificate which I drew up some years ago for use by the Cremation Society the examination of the dead body and its personal identity is especially required from the medical man who certifies. I enclose you a copy, and will add that it met with the approval of the House of Commons Select Committee on Death Certification, and was by them recommended to take the place of the form at present employed. My approval of the French system as superior to our own is, I think, quite justified; the neglect of its requirements in practice, if it exists, is simply due to a defective administration of the law.

I am, Sirs, yours truly,

April 28th, 1897. HENRY THOMPSON.

"LUNACY IN EGYPT."

To the Editors of THE LANCET.

SIRS,—In an annotation on "Lunacy in Egypt" which appeared in THE LANCET of April 24th you state that "Dr. Warnock has been informed that some lunatics are kept in Damascus in stone cells, with chains round their necks." I can testify from personal observation that five years ago this form of treatment was actually in force in Damascus. In 1892 I visited the "lunatic asylum" in that ancient city and noted the following state of things. The institution consisted of a series of one-storeyed buildings surrounding a central yard, open to the air, which at that height (691 metres) is often very cold. There were seven cells opening on this yard, four double and three single. The single cells measured 8 ft. by 10 ft. They were built of stone, with stone floors, and the drainage system was simple, consisting as it did of a hole in the centre of the floor leading into a drain communicating to a cesspool (probably overflowing into the streams which run through the town and supply its drinking water). The floor was covered for half its extent by boards on which the patients lay. There was no furniture of any kind in the cells. In these seven cells were eleven patients—the term is very applicable—three or four of these were chained by the neck and legs to the wall. They appeared in great misery and imperfectly fed. No doubt they were dependent on charity for their support, and charity, even in a Moslem city, when it has filtered through the hands of Turkish guardians, is not very satisfying to its recipients. I need hardly add that these cells were very dark, being only lighted from the upper part of the doorway, which was built in the same way that stable doors are built here, and the smell was awful. These patients were probably all more or less violent, chronic maniacs, and such like, as the less troublesome lunatics in these countries are always kept by their relatives at home—and naturally. It was a dreadful and degrading sight, and made one shudder to think that man could become so like a wild beast.

So much for Turkey; but I was told a few years ago that in Greece an Englishman who had become acutely maniacal was treated in very similar fashion, being placed in a cell with an iron gate, through the bars of which his food was pushed, and the straw on which he lay raked in and out, and from this treatment he was with great difficulty rescued to be brought home to England. No doubt the state of things I witnessed at Damascus in 1892 has existed for centuries and will persist as long as the Turks hold Syria, but it can hardly be wondered at, under the circumstances, that, as Dr. Warnock says, "some Syrians are brought to Egypt on purpose to obtain 'admission' to the Cairo asylum."

I am, Sirs, yours faithfully,

April 24th, 1897. W. A. WILLS.

"THE QUESTION OF THE SECOND OVARY IN OVARIOTOMY."

To the Editors of THE LANCET.

SIRS,—The points raised by Mr. Clement Lucas in his letter in THE LANCET of April 24th are both interesting and important. I think most men will agree that the right treatment was adopted in removing a slightly cystic second ovary in a woman forty years of age. I go further, and say that in *all* cases of ovariotomy near or after the menopause the second ovary should invariably be removed, whether it looks healthy, cystic, or atrophied. With regard to the case of a woman, aged twenty-five years, whose second ovary contained a cyst the size of an orange, it seems to me that instead of leaving it alone it would have been better either to have removed it altogether or to have excised the cyst and left the ovary—a plan I have successfully adopted in several similar cases.

I am, Sirs, yours faithfully,

WILLIAM DUNCAN, M.D. Brux., F.R.C.S. Eng.

Harley-street, W., April 26th, 1897.

To the Editors of THE LANCET.

SIRS,—I read with interest the letter on the above subject from Mr. Clement Lucas which appeared in THE LANCET of April 24th. The opinion of a surgeon to a great medical school always deserves careful consideration. I cannot, however, say that I agree with Mr. Lucas's conclusions, as they do not accord with my own experience, dating from 1877, of a very large number of ovariotomies performed by myself and my colleagues at the Samaritan Free Hospital for Women and Children. Mr. Lucas holds that little *surgical* training is requisite for ovariotomy. It would have been more correct to say that not very much *anatomical* training is requisite; yet such a statement might do harm. The relations of the tumour to the pelvic viscera, the ureters, and the great vessels must be well understood by the beginner. Few operations test a man's surgical capacity better than that in question. I have known of terrible results due to an operator committing the grave error of making too light of an easy case or mistaking an innocent semi-solid ovarian tumour for a malignant growth, closing the wound and letting the patient die from hæmorrhage. Mr. Lucas is, on the other hand, much to be commended for looking on double ovariotomy as serious even when imperatively needed. My own views on the question will be found in a contribution to THE LANCET[1] entitled "Two Cases of Ovariotomy Performed Twice on the Same Patient." In 1889 I removed a papilloma of the right ovary from a woman aged fifty years. The left ovary, as I noted at the time, was elongated and atrophied. I considered that its removal was not justifiable, and I remain of the same opinion. The disease recurred in 1894 in the remaining ovary, which I took away without trouble. I wrote in the above paper: "Had I removed the flat, atrophied, apparently healthy ovary in 1889 I should have spared both myself and the patient much anxiety and two troublesome complications, which both recurred at and after the second operation. Yet surgeons are not prophets, and the chance of so atrophied an ovary becoming diseased seemed slight in 1889. The surgeon should hesitate to remove a sound organ on the strength of a theory." By "theory" I meant that of Pfannenstiel quoted in my contribution. Sir Spencer Wells declared at a meeting of an American society in 1888 that "if there is no suspicion of disease I do not remove it (the second ovary)." Howard Kelly's statistics support this principle.

When the second ovary is clearly diseased the case is quite different. The further development of a cystic tumour is all but certain, and is an intolerable annoyance to the patient. Cystic disease is not very difficult to diagnose when the ovary has grown to the size of a walnut. "A cyst as large as an orange" is pathologically, clinically, and surgically a tumour, and should be removed. I regret that Mr. Lucas should write down his opinion that when both ovaries are removed "a woman from that time forth is an unnatural monster cut off from the next generation." I know of a considerable number of patients where I and my colleagues have thought it right, on the above principles, to remove the second ovary, and not one of them is in any sense an "unnatural monster." Such a term might as well be applied to any spinster or any married woman sterile from uterine disease. The troubles of a premature menopause are far more tolerable than the worry and danger of recurrence of cystic disease in the remaining ovary. As for certain severe neuroses, they are known after the simplest unilateral ovariotomy.—I am, Sirs, yours faithfully,

ALBAN DORAN, F.R.C.S.Eng.,
Surgeon to the Samaritan Free Hospital for Women and Children.

Granville-place, Portman-square, W., April 26th, 1897.

To the Editors of THE LANCET.

SIRS,—The extraordinary sentences which open Mr. Clement Lucas's letter made me look carefully at the top of

[1] THE LANCET, Dec. 15th, 1894, p. 1415.

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the page to see that dates were right, to make sure I was not reading a copy of your ancestor's journal of 1837. Is it possible that such a view can be held about any operation in surgery, much less concerning one about which there is always so much doubt till it is over? Yet there the words stand. A woman with both ovaries removed for cystic disease does not become an "unnatural monster"; nor is she cut off from the next or any other generation; nor does she stand in the least danger from this cause of being divorced.

Mr. Lucas is a lecturer on anatomy and surgeon to Guy's Hospital and an examiner in anatomy at the Royal College of Surgeons of England, and he records this in your columns this morning: "She was only twenty-five years of age and was found to have a large unilocular cyst of her right ovary, which contained ten pints of fluid, and connected with the left ovary was a cyst as large as an orange. The right ovary was easily removed and the other was left." The tumour which he removed was not a tumour of the ovary at all, but a tumour in the broad ligament, from which the ovary could easily have been separated by a skilled anatomist and left. The second tumour was probably the same, and if so, simple enucleation would have spared the patient the risk of a second operation and both ovaries. There is really no need to remove healthy ovaries at all; besides, it is getting dangerous and had better be carefully avoided. Deliberately to leave cysts is, however, very bad practice, according to my experience and belief.

I am, Sirs, yours truly,

Birmingham, April 24th, 1897. LAWSON TAIT.

To the Editors of THE LANCET.

SIRS,—It is difficult for some of those who are interested in abdominal surgery to accept with complaisant acquiescence Mr. Clement Lucas's views contained in his letter in THE LANCET of April 24th on the treatment of the second ovary in ovariotomy. The advice he gives there as I read it is, "where one ovary is extensively diseased and the other only in the early stage of cystic degeneration," unless the patient is past the child-bearing epoch, that only "the extensively diseased ovary" should be removed, for by removing both "the woman from that time forth is an unnatural monster, cut off from the next generation, and if married with the condition secreted" presumably "liable to be divorced"; and also "should the cystic degeneration increase rapidly there would be no great danger in operating a second time for the removal of the second ovary." I have always been under the impression that it was the duty of the surgeon invariably to ascertain the condition of the second ovary at the time of operation and unhesitatingly to remove it if it were found to be indubitably the seat of disease, although only in an early stage. I believed this to be an accepted surgical rule admitting of little latitude of choice.

If the second diseased ovary is removed, together with the more extensively diseased one, the operation is not thereby made of greater gravity to any appreciable extent. Why, then, should so favourable an opportunity be neglected of radically dealing with the whole disease before the complications, if hitherto absent, to which such tumours are liable, have a chance of developing, as they may do between the two operations if each ovary is dealt with at a separate time? For it is surely quite the exception to observe an ovary, definitely affected with cystic degeneration, enlarged, for example, "to the size of an orange," as in Mr. Lucas's case, remaining in a resting state; the large majority increase steadily, although their rate of growth may vary widely. Moreover, should any patient be subjected, except for most adequate reasons, to the discomforts and risks of a second operation—an operation which, however Mr. Lucas may minimise it as a surgical procedure, still remains a laparotomy, one that certainly few would care to submit to oftener than necessary? Then is every woman who has had the ovaries removed of necessity "from that time forth an unnatural monster, cut off from the next generation"? I for one should be sorry to believe it. Moreover, her connexion with the next generation may have already been secured if she has borne children. That menstruation often continues after double oöphorectomy is a well-established fact. From my own observations I am convinced that the female temperament is much less influenced by this operation than is generally supposed to be the case; certainly to an infinitely less extent than the male temperament by the corresponding operation. Even when the second ovary left, because normal to all appearance, it often in turn undergoes cystic degeneration and the patient has a second time to undergo ovariotomy, and occasionally troublesome complications arise when pregnancy closely ensues upon ovariotomy, as in a recent case under my care where I operated upon a partially irreducible ventral wound-hernia, causing great inconvenience, which had occurred during the pregnancy and was greatly aggravated by the enlarged uterus.

The medico-legal aspect of Mr. Lucas's supposed case, where a woman marries having concealed from her husband the fact that a double ovariotomy had been previously performed upon her, is only of collateral interest and relatively unimportant. But I cannot see that the subterfuge is much less to conceal the fact that one ovary has been removed and the remaining one is known to be cystic "to the size of an orange," as in Mr. Lucas's second case, than to suppress the fact that both ovaries have been removed. Possibly the suitor of such a patient, if possessed of some medical knowledge, might think the latter the lesser ill.

I am, Sirs, yours truly,

J. H. DAUBER, M.B., B.Ch.Oxon., M.R.C.P.Lond.,
Assistant Physician, Hospital for Women, Soho.

Charles-street, Berkeley-square, W., April 27th, 1897.

EPILEPSY AND MARRIAGE: A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—I venture to think that it will be a pity if the interesting correspondence upon the marriage of epileptics should close without some practical good. As a contribution to the theoretical and scientific side of the question the letters you have published have a value of their own; but, apart from this, we are not much nearer the actual facts as to the influence of marriage and epilepsy upon each other. There must be few of your readers who have not had opportunities of becoming acquainted with the history of one or more married epileptics and the effect, if any, on the offspring; and if we could induce you to receive, and your readers to send you, the family histories of cases which have come under their observation a store of facts would be accumulated of more use and practical value even than the instructive correspondence which has just closed.

I am, Sirs, yours faithfully,

April 26th, 1897. NORMAN PORRITT.

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—There having been some delay in the publication of my letter, which appeared in THE LANCET of April 24th, I wish to say that on April 14th Mr. Skewes-Cox, Member of Parliament for the Kingston Division (Surrey), requested me to supply him with a copy of my "Sick and Obstetric Nurses Bill," as outlined in my letter, and I therefore drafted a bill of nine clauses with schedules and sent it on April 19th to the hon. member, who is giving it his careful consideration. It is an adoptive measure, and would be administered by boards of guardians, county, district, and parish councils, or by voluntary nursing associations. Clause 3 renders it "unlawful for any person (male or female) to assume the title or to practise as a midwife, sick or obstetric nurse, without the supervision and control of a fully qualified and registered medical practitioner." Clause 4 provides for "a certificate of competency from a duly recognised teaching authority for every woman acting as sick, monthly, or obstetric nurse." Clause 5 makes it compulsory for boards of guardians to "adopt" the Act in default of other local authority. Clause 7 prohibits both sick and obstetric nurses "from prescribing or administering any noxious drug or using any surgical instrument (apart from those necessary to their calling) or signing any death certificate or certificate of still-birth or of illness for any club or benefit society, the penalty for any one of these offences being three months' imprisonment and dismissal by the authority under which she is acting." This clause would extinguish the female prescriber and abortion-monger once for all. Clause 9 deals with boards of guardians and the fees payable to medical men. These are all on the basis of the Consolidated Orders, but mileage is to be paid for above a mile from the medical man's residence. The schedules deal

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with the administration of the Act, the training of the sick and obstetric nurses, their pay, &c., and I have suggested three grades of sick nurses, with six, eighteen, and thirty-six months' training respectively, their pay being £60, £80, and £100 respectively. Obstetric nurses with a minimum of three months' training to have £60 per annum, both classes being prohibited from accepting fees and gratuities from patients and their friends. The schedules also contain rules and regulations for both the nurses and the medical men. The bill is intended as a compromise, and is drafted on the principle that its working would be largely carried out by voluntarily nursing associations, with "grants in aid" from boards of guardians and local authorities.

I am, Sirs, yours faithfully,

April 27th, 1897. ALEX. MCCOOK WEIR.

"NEW SANITARY BY-LAWS FOR LONDON."

To the Editors of THE LANCET.

SIRS,—In your commentaries upon the proposed new sanitary by-laws of the London County Council in THE LANCET of April 24th you criticise By-law 7, in reference to gulleys being placed outside buildings and waste-pipes discharging over them, saying on page 1165, "With new buildings there can be no difficulty," and again, "New buildings must not be allowed to offer any difficulties." If reference be made to the London Building Act, 1894, it will be found that new buildings erected in existing streets—and this applies to the whole of existing London—may be made to cover the whole of the ground area of the premises, and my experience is that this is taking place. I have a number of examples in which this has taken place during the two years the Act has been in force. If, therefore, under the Building Act, it is possible to cover in all the ground space, and owners avail themselves of the opportunity, how is it possible for the new sanitary by-laws to be enforced?

I am, Sirs, yours faithfully,

JOHN F. J. SYKES,
Medical Officer of Health of St. Pancras.

Camden-square, N.W., April 26th, 1897.

"NOTES ON ONE YEAR'S SURGICAL WORK."

To the Editors of THE LANCET.

SIRS,—Mr. Symonds, in THE LANCET of April 17th, reports that of four cases of flat-foot two were treated by excision of the metatarso-phalangeal joint, and that "by this means the inner aspect of the foot was shortened and a permanent arch was formed." I am wholly unable to see how such an operation can have this result. I could understand if it led to the *effacement* of an existing plantar arch, because it involves destruction of a joint necessary for proper action of the flexor longus pollicis muscle, which "is the real sustentaculum tali." I am here adopting the words of Mr. Barwell in THE LANCET of Jan. 30th, where, in another very happy expression, he speaks of the arch as "a by-product of function"; and I note them with satisfaction as expressing principles on which I have for many years been insisting in these columns, in "The Human Foot," and elsewhere. To those principles the operation recorded, and presumably recommended, by Mr. Symonds is altogether opposed.

I am, Sirs, yours faithfully,

Gloucester, April 23rd, 1897. T. S. ELLIS.

THE ALLEGED INCREASE OF INSANITY.

To the Editors of THE LANCET.

SIRS,—I have carefully studied the special report of the Lunacy Commissioners recently laid before Parliament and admit that insanity, as such, especially in lunatic asylums, may possibly not have increased so much as the number of registered lunatics. I also thoroughly appreciate the thirteen reasons put forward by the Lunacy Commissioners to account for the increase in the number of insane persons; but still it cannot be denied that in thirty-seven years the number of lunatics has increased from 37,762 to 96,446, and will probably continue to increase. Even if these numbers do not constitute "a serious menace to the race," there still, according to my views, remains to the State, and especially to so rich a State as England, the right and duty to seek out and adopt measures for the purpose of limiting as much as possible this increase of insanity, more especially as pauper lunatics will probably, as time goes on, make still further claims to assistance. The thirteen reasons brought forward by the Lunacy Commissioners to explain away the continual increase in the number of lunatics do not take into account heredity and abuse of alcohol. These chief causes for the breaking out and further increase of mental disorders remain unchallenged, and as long as they are not combated by the State the number of lunatics, together with mental disorders, will continue to increase. Most scientific specialists in England will be disposed to concur in these views.

I am, Sirs, yours faithfully,

DR. F. SCHLANGENHAUSEN.

Villach, Carinthia, April 20th, 1897.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

VIII.—THE ROYAL LONDON OPHTHALMIC HOSPITAL.[1]

The Crowd of Patients and Students from all Parts of the World.—The Guinea Fee Limit.—The Difficulty of Dealing with Poor Patients willing to Pay.—A Partial Check on Abuses.

IT is a general complaint in the provinces, but more especially in the smaller towns, that the London hospitals compete disastrously, not only with the local general practitioners, but even with the consultants. Where there is a serious illness or the necessity for an important surgical operation, the patient often has not sufficient faith in the ability of the general practitioner and shrinks from the expense of applying to a consultant. Perhaps also his faith in the provincial consultant is hardly any firmer than his faith in the provincial general practitioner. Hence the tendency, which easy railway communications have greatly increased, to go to London for superior advice. At Leeds, for instance, I was told of a case of a boy who suffered from tuberculosis of the foot. His parents had heard that Sir James Paget was attached to the staff of St. Bartholomew's Hospital, so without further inquiry the boy came up to London. He was under the impression that he would at once be seen and cured by this eminent surgeon. On reaching London he presented himself at St. Bartholomew's Hospital and forthwith asked to see Sir James Paget. The attendants expostulated in vain. The boy took a seat and patiently remained there for four hours. He returned the next day and for several days, and it took some time before it was discovered that the money spent in the journey to London would have sufficed to pay for expert advice in Leeds.

Of the various diseases for advice for which patients can easily come up to London diseases of the eye hold a prominent place. Generally there is no immediate urgency, so that the patient can select his own time for the journey, and as his general health is not impaired he can travel without risk or inconvenience. The temptation in those cases to go to London is all the greater, as the Royal London Ophthalmic Hospital enjoys a world-wide reputation. This was the first institution of the kind founded, not merely in England, but in Europe. It was established in 1804, and then called the "London Dispensary for the Relief of the Poor Afflicted with Eye Disease." The following year the hospital was opened, and during the first twelve months over 700 patients were treated. In 1821 the foundation-stone of the present building in Moorfields was laid. The number of patients, however, increased so rapidly that a new wing had to be added in 1869, and now a special appeal is made for the purpose of erecting a still larger and more suitable building in the City-road. In 1895 there were 28,474 patients treated at this hospital, an increase of 1982 on the previous year. Of this number 2184 were in-patients, of whom 825 were operated on

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *continued*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *continued*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; and (7) April 17th, 1897, Coventry.

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for cataract. The total attendance of out-patients amounted to 131 450 visits, giving an average of more than 400 patients for each working day. Nevertheless this does not suffice, and no inconsiderable number of patients have to be turned away unrelieved. The fact is that the Royal London Ophthalmic Hospital is known to be one of the best schools in the world for ophthalmic surgery. The most eminent ophthalmic surgeons have been members of the staff or students at the hospital, and this reputation is not merely national, but international. Many Germans and Frenchmen come to study at this hospital, as do hundreds of Americans. One of the latter recently said: "We in America think no ophthalmic surgeon can hope for salvation unless he has visited Mecca once." Of course, the Royal London Ophthalmic Hospital is the Mecca in question. Now medical men can scarcely complain if the opinions they entertain are also shared by their patients. The latter hope to obtain the advice of the most eminent visiting surgeons, and know that the assistants and house surgeons are also all highly qualified, some having served on the staff for six or seven years. Patients come from all parts of England and also from abroad and from the colonies. Many patients come from Australia, New Zealand, and the Cape. They hoard up all they can so as to pay for the journey, in the hope of preserving their sight. A large number of medical men have been trained here so as to set up independent centres elsewhere; but this generally fails to divert the current that flows towards the parent institution. A short time ago an artisan arrived from Peru. Possessing hardly any money, he had to work his passage over. It is, however, noted that there are fewer patients from towns where there exists an ophthalmic surgeon of undoubted ability. Some such English provincial towns were mentioned to me; while from other towns, likewise mentioned, where the local ophthalmic surgeons do not enjoy such high repute, a great number of patients come to the Royal London Ophthalmic Hospital. From this it is inferred that the lack of skill on the part of local specialists is one of the causes of hospital abuse. For instance, not long ago a lady consulted the most eminent local ophthalmic surgeon of the provincial town where she resided. He told her that she must have glasses; that if she did not have glasses she would have strabismus and many other evil consequences would ensue. The lady consulted this surgeon several times. He applied atropine four times and in all devoted five hours to the examination of her eyes, but finally had to confess that he could not find any glasses that would suit her. In despair the patient came up to London. The case was difficult, but nevertheless in an hour and a half at Moorfields all the difficulties were overcome, and the suitable glasses provided. Patients cannot be blamed for going where they obtain the best results; and if these patients are not on the ground of poverty entitled to receive such advice, many will not hesitate to pretend that they are poor.

It must be confessed that the methods adopted to prevent such abuse do not seem likely to be very effective. Till within the last three years no system whatsoever was enforced. If there was anything particularly suspicious in the appearance of a patient, he was referred to the secretary. Though there were on an average some ninety new patients per day, only three or four were thus sent up to the secretary. But this was not of much use; they were judged, not from inquiry, but from their dress, and generally seemed to be poor people who had to keep up appearances. Indeed, the dress test, especially when applied to women, is of very little value. A tidy, orderly woman, with good taste and very little money, will appear far more stylish and better dressed than a slatternly woman who has ample financial resources. Besides, mere questioning is scarcely a sufficient test. Thus, several years ago a man was sent up to the secretary for inquiry; he looked respectable and appeared as if he possessed money. In answer to questions he declared that he had lost all his money in South Africa in consequence of the defeat of the British troops at Majuba Hill, and held forth eloquently against Mr. Gladstone's Transvaal policy. The secretary was not altogether convinced; he put it as a matter of honour to the applicant not to take up the place of the poor if he had the means to pay, and then consented to admit him on the patient's own moral responsibility. This patient remained at the hospital a little time as an in-patient and then fell ill from some other disease, and therefore had to be removed to the London Hospital, where he died. It would seem, however, that as he felt his end approaching he was struck with remorse, for he made a will on his deathbed and left the Royal London Ophthalmic Hospital a legacy of £500.

Three years ago, with a view to preventing abuse, the services of a former officer of the Charity Organisation Society were permanently engaged to act as inspector when new patients presented themselves. There is no wage limit. The inspector must try to ascertain whether the applicant can afford to pay a guinea, and, if so, he must send him away. In the course of the year 1895 he thus sent away no less than 823 patients, most of whom admitted that they could pay a guinea. During the previous year 412 applicants were refused admission. They were, for the greater part, people who went for glasses. One among them was a lady who said her husband was a clerk, but the inspector ascertained that the clerk received £300 a year. A good many clerks and persons in similar occupations go to the hospital. If they are in receipt of but a small salary they will very readily give the name and address of their employers. If, on the other hand, they are in receipt of a good income they are ashamed to mention their employer's name for fear that inquiries should be made. Under those circumstances they generally complain about the inquisitorial character of the proceedings and go away in disgust. Patients who go with a practitioner's card are examined like all other patients, unless they are specially recommended to one particular surgeon; in that event the matter is left to the discretion of the surgeon in question. Then there are patients who have been to the hospital some hundred times. These could afford to pay a few guineas, but certainly could not pay a hundred guineas. Patients from the provinces who possess some means generally come up to London to privately consult an ophthalmic surgeon, and after having paid a few guineas for such consultations find they cannot afford the cost of an operation. Under these circumstances they are admitted at the Royal London Ophthalmic Hospital. Others, who could pay a general practitioner, come for the special advice they could not obtain for less than a guinea. It must be borne in mind that no class of patient gives so much trouble, and that the guinea and even the two guineas fee is very often but a small remuneration in comparison with the trouble, occasioned. A difficult case may take two hours to investigate. Half an hour is given at a time to each eye and this is done in stages. A very simple case for spectacles will take twenty minutes, and the general practitioner, even if he is competent, cannot afford to give twenty minutes for a half-crown fee, particularly as the case may require not twenty minutes but a couple of hours. Many patients think that they only want a pair of spectacles, and are quite surprised to find that there are serious difficulties and complications. Numerous patients suffer from persistent headaches due to errors of refraction. It is then necessary to estimate the optical errors, and the case can scarcely be dealt with in less than three quarters of an hour. It is not reasonable to say that because patients can pay 2*s.* 6*d.* they should be referred in such cases to a general practitioner.

The great difficulty is to know what to do with the patient who can afford, and is willing to pay, some ten guineas for an operation. Many people write to members of the hospital staff saying that they have neither the time nor the health to wait for hours in the crowded out-patients' ward and are anxious to be allowed to pay a small fee so as to avoid this hardship. But the leading ophthalmic consultants have to send away daily patients who pay the highest fees, simply because there is not time to see them all. Why should they still further neglect their rich patients so as to see at reduced fees poorer patients? Their natural tendency is to refer these poorer patients to the hospital, where, by the subdivision of labour, the work is more rapidly accomplished. This argument more particularly applies to the operation for cataract. A patient will come, pay his guinea, and will ask what is the fee for the operation. Perhaps he is told 100 guineas. Then he pleads and describes his poverty, and asks what is the very lowest sum charged to poor persons, and probably he is told 50 guineas. Thus a poor man once applied to one of the operating surgeons of the Royal London Ophthalmic Hospital, and explained that he did not like the idea of coming to the hospital. He had during a long life of toil saved £120 for his old age. Out of this he would willingly pay ten guineas if he could have the cataract removed at his own home. This,

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he thought, was a very great sum to offer. It is impossible not to sympathise with such a man. He did not wish for charity, and yet no competent surgeon could undertake such an operation for such a fee unless purely as an act of charity. Then such patients appeal pathetically, and insist that there must be at least some younger surgeons who would perform the operation for about ten guineas. But no operator who is really worthy of the name could do this for so small a sum. Even for normal cases of cataract the patient must be visited twice a day for from five to seven days, then once a day for two weeks, and three or four visits should be paid during the fourth week. After that one or two more visits are required for working out the glasses. Thus the patient has to be seen some twenty times at the cost of from fifteen to twenty hours, so that the ten-guinea fee would barely exceed half a guinea per hour. But complications may arise. For instance, a case was mentioned to me of a woman who had almost recovered from an operation for cataract when she caught cold. This occasioned complications, so that the attendance had to be continued for two months, involving in all seventy-eight visits, and yet the operating surgeon had no claim for an extra fee. It will be seen, therefore, that fifty guineas is not an extravagant sum to charge, and yet the vast majority of likely patients cannot afford to pay this amount.

At the hospital, however, the position is quite different. Here the busy ophthalmic surgeon would undertake operations for five guineas which he would not accept in his private practice for fifty guineas. If the typical ten-guinea patient were allowed to give five guineas to the surgeon and five guineas to the hospital, a very pressing demand, I was assured, would be met. All the subsequent visits after the operation for cataract, which take up so much time, would be avoided at the hospital, as this is done by the house surgeon. The operator does not see the patient again for perhaps a week, and has little or no further trouble unless complications arise. The advantage of subdivision of labour in such cases is obvious; but would not abuses arise in this as they have arisen in the ordinary paying wards of the various hospitals? The public is apt to consider that where payment is accepted that payment is sufficient, and it would be difficult to persuade a person who has given ten guineas that he is the recipient of a charity. Those who could afford larger sums would naturally think it was of no use to give more. Still, it does seem absurd to refuse sums that are often offered and would willingly be given because these sums are not large enough to make it unnecessary for the patient to go to the hospital. It is because ophthalmic surgery is so expensive that many comparatively well-to-do people go to the hospital. Many out-patients go to the Royal London Ophthalmic Hospital for advice which is subsequently carried out by their private practitioner. This class also might be made to pay a small fee; but because they cannot pay a guinea they must pay nothing at all.

About twenty years ago the visiting surgeons used to receive some of their private patients in the dining-room of the hospital. These being for the most part City men found it more convenient to go to the hospital than to go to the West-end consulting-rooms. This accounts, perhaps, for the impression, which still survives in the provinces, that rich people can go to the hospital, and this may be the origin of some cases of abuse. On the other hand, it was pointed out to me at this hospital that the cases of abuse were sometimes very much exaggerated. Thus, a medical man in the North of Scotland recently complained that the wife of one of his patients had been operated on for cataract at the Royal London Ophthalmic Hospital. He said that this patient was a market gardener and a ship-owner. The hospital authorities consequently made inquiries, and they ultimately ascertained that the patient in question cultivated vegetables on half an acre of ground, and owned the sixtieth part of a fishing smack, but his best source of income and his real trade was that of a cobbler. Another case was shown me of a woman who was very well dressed and seemed to hold a good position, but on being hard pressed with questions she had to confess that her husband was a bankrupt.

Such, as far as I was able to ascertain by inquiries made at the hospital, is the present state of affairs at the Royal London Ophthalmic Hospital. Considering that the patients are not visited in their own homes, and that the only form of investigation to which they are subjected is the cross-questioning which they have to undergo at the hands of the inspector especially appointed for that purpose, it is obvious that cases of abuse could easily escape detection. Nevertheless, it is a satisfaction to know that every year some hundred applicants are turned away because it is found that they can afford to pay guinea fees.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hydrophobia and the Muzzling Order.

TWO cases of hydrophobia have lately occurred in this town, in consequence of which a muzzling order for dogs in the midland district has been issued. Much annoyance is felt by the owners of dogs, but the value of the order cannot be questioned when the comparison of the risk to human life is considered. In another instance the occurrence of hydrophobia in a patient after being bitten by a cat has excited an amount of apprehension. Expert authorities do not deny the existence of rabies in cats, but as these animals generally do battle with their claws rather than with their teeth the evil consequences of inoculation do not so often happen. Some protection is necessary when cases of undoubted rabies occur, and the desirability of stamping out the disease must commend itself as an act of justice to the community.

Cycling Fatality.

The death of a professional cycle rider formed the subject of an inquest at the Victoria Courts on April 23rd. Mr. A. W. A. Harris, a well-known rider, when engaged in a race at the Aston grounds, fell heavily from his machine, the front wheel of which had collided with the hind wheel of a rider's cycle in front. The pace at which Harris was riding was stated at the inquest to be twenty-four or twenty-five miles an hour. The death, which happened in the hospital, was found to be due to fracture of the base of the skull. Some criticism has been expressed as to the danger of an asphalt track for cyclists, but it was shown that this was rough and not smooth, not even so smooth as a cinder track.

Hospital Reform.

A meeting was held on April 21st at the Grand Hotel under the auspices of the Hospital Reform Association, having been called by circular expressing the aims and objects of the association. A variety of opinions were expressed as to principles and details. The resolution carried was "that this meeting of the medical profession practising in Birmingham and the district are of opinion that the question of hospital reform should be dealt with without further delay by the lay managers and acting staffs of our various hospitals and dispensaries, and thinks the recommendations issued by the Hospital Reform Association for the better regulation of the out-patient and casualty departments are worthy of their close consideration." It was stated that Birmingham wanted the reform very badly indeed. Last year the number of people relieved in Birmingham, including in-patients and the patients of the West Bromwich Hospital and the General Dispensary amounted to something like 228,738. The general practitioners were advised to take the matter up for themselves if the authorities did not do something towards it. The subject is undoubtedly a great one to deal with; existing barriers of tradition and custom have to be broken down before the ground can be cleared for a change. The tendency of opinion is certainly in the direction of reform, towards which it is expedient that the public should be educated in their own as well as in professional interests.

April 27th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Hospital for Incurables.

THE twentieth annual report of the Mauldeth Hospital states that in November last the number of in-patients, including those at Walmersley, was 110, of whom 29 were males and 81 females, 37 of the latter being at the Walmersley Branch, near Bury, which is designated in full as the Robinson Kay Branch of the Northern Counties Hospital for Incurables. This branch home, to which female patients only are admitted, was a gift from Miss Kay as a memorial of

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her parents and was opened seven years ago. The house is placed in extensive grounds on the uplands adjoining Summerseat, near Bury. Last year the income of the two homes, including a donation of £320 from the Hospital Saturday and Sunday Funds, was £5151, against an expenditure of £5553. Mauldeth Hall is a large country house, about five miles from Manchester, and was at one time the residence of the Bishop of Manchester, but it was given up for the more conveniently situated Bishopscourt.

Child Labour.

In his address at the Conference of the National Union of Teachers, held at Swansea on April 20th, Mr. Adliscot, the president, made some remarks on the subject of child labour that ought to be thoughtfully pondered by the people of Lancashire. "The operatives of one town alone, Oldham (our close neighbour), put away £200,000 for the annual week's holiday, while they sent their little eleven-year-old offspring into the mills to help earn it." ..... "In England we kill them by inches, and we do it in the interest of trade and in the fear of German competition, oblivious of the fact that—and here I quote the recent report of Sir Philip Magnus—'child labour has practically disappeared in German factories.'" He went on to speak of the evils produced by "this miserable half-time system" by which half the day is supposed to be given to education and half to toil. Health and morals both suffer. "Take the blackest among our own counties. Lancashire shows the lowest ratio of pauperism, and, in spite of this, the highest ratio of juvenile crime; but Lancashire is the home of the half-time system." One undesirable result of the women working at the mills from childhood is that they grow up and marry—as a rule, very young—without any knowledge of the art of cooking. Frequently enough little or no cooking is done at home, partly from want of time and partly from ignorance or dislike of trouble, and the cook shops supply the food.

Manchester Royal Infirmary.

At a meeting of the board of management of the Manchester Infirmary, held on April 26th, Mr. J. Whitehead said he had been requested by the sons of the late Mr. Thomas Roberts, who was for many years a member of the board, to state that they wished to endow a bed in the infirmary in memory of their father. The only condition attached to the gift was the significant one that the bed should be in an infirmary on the present site in Piccadilly. The chairman said the announcement was most welcome, and asked Mr. Whitehead "to convey to the sons of their old and valued friend Mr. Roberts an expression of the grateful thanks of the board for their generous proposal."

Clayton Old Hall.

Through the generosity of Lord Egerton of Tatton a most interesting and ancient mansion—Ordsall Hall—is being preserved for Salford, and will be used as a museum. The corporation have acquired the house and grounds of Clayton Old Hall, and it is said that the land is to be laid out as a recreation ground and public park. It was one of the residences of Humphrey Chetham, whose name, even to many outside Manchester, is well known in connexion with the Chetham College and Library.

April 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University.

THE statutory half-yearly meeting of the general council was held last week, Principal Sir William Muir presiding. The draft ordinance issued by the Universities Commission instituting a "Professorship of Public Health and Sanitary Science (to be called the Bruce and John Usher chair of Public Health)" was approved. The professor of this new chair is to have a salary of not less than £600. Mr. A. L. Bruce's bequest was "in acknowledgement of Pasteur's investigations." The number of medical students shows a marked falling off; the numbers are as follows: 1891-2, 1951; 1892-3, 1736; 1893-4, 1560; 1894-5, 1512; and 1895-6, 1455.

Edinburgh Royal Infirmary.

At the half-yearly meeting of the Royal Infirmary managers held this week it was mentioned that the more general use of antitoxins in the treatment of diseases was adding largely to the medical expenditure, one case of tetanus, which happily recovered, having required between £50 and £60 worth of the remedy.

Opening of the Summer Session.

The summer session of the medical classes in Edinburgh will open on Tuesday, May 4th.

Glasgow Medico-Chirurgical Society.

This society met on April 23rd. The chair was taken by Professor McCall Anderson. Dr. J. H. Teacher gave a microscopical demonstration illustrating the Varieties and Life-Histories of the Parasites of Malaria and Malarial Fevers. In addition to describing the forms and development of the parasite Dr. Teacher gave an account of his experience of malarial fever as met with in the southern districts of Spain, and remarked on the great practical importance of the examination of the blood in the differential diagnosis between the irregular forms of malarial fever and other febrile conditions with which such forms have much in common. Dr. Middleton gave an account of two cases of Beri-beri. The patients were young men (Lascars), and displayed the usual symptoms of the disease, including muscular weakness, absence of the knee-jerks, and œdema of the lower limbs; there was, however, no pronounced muscular wasting, no reaction of degeneration, and no cardiac hypertrophy, and the urine in each case contained albumin. Six other members of the crew—the men were sailors—had been similarly affected. Dr. W. K. Hunter gave an account of the Bacteriological Examination of the Blood. The microbe described by Pekelharing and Winkler was discovered in the blood of each patient, and cultures and microscopical specimens of the organism were shown to the society. In addition Dr. Hunter related the Results following the Inoculation of Rabbits with the Micro-organism, and showed specimens demonstrating the occurrence of Peripheral Neuritis in the animals subjected to this experiment. Dr. Barclay Ness gave an account of a case of Myxœdema occurring in a man the subject of organic heart disease. Repeated attempts to practise the thyroid treatment had to be discontinued in consequence of the development of febrile disturbance and of cardiac respiratory distress. The case proved fatal, and specimens demonstrating the histological changes in the thyroid gland, skin and other organs were shown to the society. In the thyroid gland, which only weighed 83 grains, there was an extensive new formation of fibrous tissue with marked destruction of the vesicles and distortion of their lining epithelium. The integument showed cell proliferation in the epidermis, and also in the neighbourhood of the blood-vessels in the cutis vera.

Glasgow Royal Infirmary.

The opposition to the official scheme for the re-building of the infirmary on its present site has now taken definite shape. A meeting of the profession for the purpose of considering the scheme was held on the evening of April 22nd, and though some difference of opinion was expressed with regard to the exact phraseology of the resolutions to be adopted, the meeting was unanimous in condemning the official scheme in so far as it contained proposals to increase the number of beds in the infirmary. The chair was taken by Professor Gairdner, who disclaimed on behalf of the promoters of the meeting any suggestion of antagonism to the Royal Infirmary or any desire to check public liberality or to divert the money subscribed to any other purpose than the welfare of the infirmary. Their sole desire was to secure that the funds raised in connexion with the Diamond Jubilee should be used to the best public advantage. By subsequent speakers it was shown that the present site of the infirmary was already overcrowded, and that the schemes providing an increased number of beds involved the erection of buildings which in their plan and arrangement outraged all recognised principles of hospital construction. The meeting adopted resolutions to this effect, and appointed a committee to press this opinion on the executive committee dealing with the official proposals.

Medical Appointments.

The positions of Professor of Ophthalmology in St. Mungo's College, Glasgow, and Ophthalmic Surgeon to the Glasgow Royal Infirmary, are vacant in consequence of the resignation of Mr. Francis Napier, M.B., B.S. Lond.

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IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Tuberculosis in the Dublin Dairies.

AT a general meeting of the Dublin University Biological Association held in the Museum Buildings, Trinity College, on April 8th, Dr. T. P. C. Kirkpatrick proposed the following resolution: "That this association views with the gravest concern the danger to the public health arising from the prevalence of tuberculosis among the dairy cattle, and is of opinion that vigorous efforts should be made to stamp out this disease and protect the community from this source of infection."—At a meeting of the Dublin Cowkeepers' Association, held on April 14th, the reassuring statement was made that, as the result of an examination of the city dairy cows now in progress, it was found that only four out of 1500 cows already subjected to examination were tuberculous. This examination was carried out by Dr. G. Burbridge White and Mr. Andrew Watson.

Election of Medical Officer to the Ballinasloe Workhouse.

At a meeting of the Ballinasloe board of guardians on April 14th no less than thirty-eight guardians were present, including Lord Ashtown, who was in the chair. After a closely contested election Mr. Duffy, of Kiltomer Dispensary district, was appointed.

Mater Misericordiæ Hospital, Dublin.

The medical board of this hospital has issued invitations to meet the football team at dinner at the Hôtel Métropole on Monday, May 3rd. The entertainment is being given in order to compliment the members of the clinical class constituting the football team in connexion with their recent triumph in obtaining the champion cup competed for each year by the students of the hospitals of Dublin.

Royal Medical Benevolent Fund Society of Ireland.

At the meeting of the committee of this society, held in Belfast last week, grants were made, from which it appears that the branch has given relief to the extent of £90 for the coming year. The treasurer reported a substantial increase in subscriptions in response to a circular issued to the members of the profession in Belfast. The annual meeting is to be held on May 5th.

The McGovern Hydrophobia Cure.

A curious case came before the Irish Master of the Rolls on April 24th. The guardians of the Newry Union, believing in the efficacy of the so-called "McGovern cure for Hydrophobia," in 1895 passed a resolution authorising the master of the union to take three men who had been bitten by dogs to Philip McGovern of Cavan for treatment. McGovern is a farmer and is in no way qualified as physician, surgeon, or apothecary. The Local Government Board, hearing of this, communicated with the board of guardians to the effect that the residence of McGovern was not a hospital or infirmary within the meaning of the Act 25 and 26 Victoria, Chapter 83. McGovern then applied to the board of guardians for £16 for his services to the three men and a girl who had been sent to him. The board, on Nov. 30th, 1895, deferred consideration of the payment, and in May, 1896, McGovern served them with a civil bill process for the amount claimed. The guardians decided not to enter any appearance to the action, and at the succeeding sessions a decree was granted for £16 and £1 1*s.* 6*d.* costs. A cheque was drawn by the guardians for £17 1*s.* 6*d*, but before it reached the judgment creditor the decree was executed, and certain cows the property of the guardians were seized, and the amount claimed, with a further sum of £1 8*s.* 6*d.*, was paid by the clerk to redeem the stock seized. This action of the clerk was approved of by the guardians. The auditor, however, disallowed the £4 which had been charged for travelling expenses and surcharged the special defendants. The present action, brought by the Local Government Board, claimed that the special defendants (who passed the resolution) and the Newry guardians should refund £17 1*s.* 6*d.* to the credit of the union, and that an injunction should be granted restraining the guardians from acting in pursuance of the resolutions already referred to. The Master of the Rolls gave judgment in the terms asked for.

The New Hospital for Tyrone.

At a meeting of the promoters of the new hospital for County Tyrone, held last week in Omagh, it was announced that the subscriptions amounted to £4000, and as the old building is estimated as worth £2000 this would raise the funds to £6000.

Death of the Ex-President of Queen's College, Cork.

Dr. James W. Slattery, M.A., LL.D., ex-President of Queen's College, Cork, has just died at the College. He was appointed President in the year 1890, and his appointment at the time was a matter of surprise, as he was little known to the general public. He had been educated at Trinity College, Dublin, and afterwards was admitted to the Bar. Soon after he was appointed it was found that he was suffering from diabetes and Bright's disease, and owing to his continued ill-health he was retired at the end of last year, but as he was too weak to be removed he continued to reside in the President's house up to the time of his death.

Fatal Accident at a Hurling Match.

During a hurling match in the Cork Park a player received on his neck a blow aimed at the ball with a "hurley" and died within a very short time. It was found that two of the cervical vertebræ were fractured.

April 27th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Academy of Medicine.

THREE important communications have been made to this society by M. Chipault, the distinguished surgeon who has done so much good work as regards surgical operations upon the bony coverings of the cerebro-spinal axis. In the first of these papers he gave an account of his treatment of curvatures of the vertebral column such as scoliosis and Pott's disease by means of what he terms "une planche vertébrale," to which the patient is fixed by means of straps after reduction of the deformity under chloroform. The writer finished his paper by maintaining his priority for this treatment in opposition to M. Callot, for he himself gave an account of this treatment in 1895 at the Congress of Surgery, and in 1896 asked his various friends, and especially M. Callot, to make trial of it. It would be unfair to attribute the merit of this invention to M. Callot, for he did his operations at a much later date than M. Chipault. M. Chipault's second paper dealt with sacro-lumbar puncture. He himself considered that this operation would be a great resource in the future, not only for the tapping of the cerebro-spinal fluid, so as to arrive at a diagnosis in the case of meningeal tuberculosis by the finding of bacilli, but also for the injection by this route of therapeutic serum or other fluid. He published nineteen cases, of which two were particularly interesting on account of severe syphilitic complications. The third paper had for its subject the radical cure of perforating ulcer of the foot by the stretching of the plantar nerves. In seven cases he had met with only one failure. M. Doyen, a young surgeon, has brought out a new method for the extraction of large polypoid growths in the naso-pharynx. He does not remove them by means of snares or by means of cutting them away with forceps. He examines with his finger the region behind the soft palate, and rapidly tears out the growth without being disconcerted by the enormous quantity of blood which generally flows. As soon as the polypi are removed the hæmorrhage stops of itself. M. Doyen has operated on many cases and always with success. Four papers were read upon appendicitis, but this question seems to have lost its interest somewhat. MM. Mourtier and Granier contributed a paper as to the curious effects which static electricity produces in modifications of the human voice. A singer sitting upon an isolated stool coupled to the negative pole of a static machine was made to breathe the atmosphere, which was electrified by means of a brush electrode; after a short time, and very often at the first sitting, the voice became full and clear, the quality much more agreeable, and the voice was less rapidly tired.

The Medical Congresses.

The Obstetrical Society of France has been holding its annual meeting at Paris during the Easter holidays under the presidency of M. Charpentier. Two chief subjects were debated: (1) Fibroid Tumours during Pregnancy and Labour; and (2) Repeated Abortion. As regards the first subject, M. Kaiffer read a very complete and interesting paper,

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Numerous observations had been made by various members of the society. The general opinion was that the right treatment was to wait and not to intervene except in cases of extreme urgency, when operation was advised after the method of Porro.—The Congress of Learned Societies met during the same week and passed a motion that the State ought to put no obstacles in the way of either the foundation or the working of manifestations of private charity. As a matter of fact, the founding of a private hospital is almost impossible, for those wills which bequeath sums for this purpose are almost always set aside by the State either to benefit distant inheritors or itself.—The Physical Society has just held its annual exhibition, the chief objects of interest of which were those connected with the x rays. On the ground floor M. Badiguet had set up a dark room which was a veritable hall of enchantment. To the hangings were attached skeletons giving out phosphorescent rays which were wonderfully indiscreet, for despite clothing they showed up in all their nakedness the innermost depths of the spectators.

An Error of Diagnosis.

At the sitting of March 17th the Court of Appeal at Rouen gave judgment in a trial involving the responsibility of a veterinary surgeon in a case which had been submitted to him. A little girl who was seated by the side of her parents was bitten in the face by a dog. The dog, the owner of which was unknown, was promptly killed and submitted for examination to the veterinary surgeon of the district, M. Vandescal. After a post-mortem examination, which showed that the stomach of the dog was perfectly empty and that the intestine contained nothing except two tapeworms, the veterinary surgeon decided that the dog showed no symptoms of rabies. Nevertheless, some time afterwards the little girl became ill, and died, so three medical men certified, from rabies forty-two days after the accident. On account of this the parents of the child brought an action for damages against the veterinary surgeon. They argued that he was really the cause of the death of their child because he had made a careless post-mortem examination and had assured them wrongfully and so prevented them from taking the necessary measures to have the child treated at the Pasteur Institute. The veterinary surgeon denied that there was any relation between the bite and the death of the child, and that what had been taken for rabies was in reality tetanus. He brought witnesses to show that the post-mortem examination had been carefully made and that there was nothing in it by which he could have diagnosed rabies. The Tribunal of Rouen acquitted him and the Court of Appeal confirmed the judgment. The judgment showed, all the same, that there is no doubt that the dog was mad and that the child died from rabies appearing after the usual period of incubation. But it affirms that nothing was proved to show that the veterinary surgeon had failed to observe the rules of his profession or that he had made any wilful mistake. The post-mortem examination was made in the usual way and the veterinary surgeon could only give a simple and not a circumstantial report.

Obituary.

Many deaths have occurred among the medical profession. Dr. Magitot, who was the founder in France of modern dentistry and has written many important works upon the development of the teeth, died very suddenly during an attack of angina pectoris. He was a member of the Academy of Medicine and had been President of the Society of Anthropology.—Dr. Carrier of Varennes has died suddenly under very painful circumstances. He had just given one of his patients a hypodermic injection of morphia and she was sleeping peacefully. The patient's daughter, seeing her mother so quiet, thought she was dead, and cried out that the doctor had poisoned her. Dr. Carrier was seized with a fainting fit, and fell, unfortunately striking his head against the mantel-piece. He died some hours afterwards, just at the time when the patient woke up much relieved.

Murderous Attack on a Medical Man at Toulon.

In the suburbs of Toulon an abominable assault has been committed upon the person of Dr. Barnier by a Corsican named Cesarine, who had a grievance against him and who had sworn to kill him in a vendetta according to the custom of his country. Cesarine shot at Dr. Barnier in the street, wounded him slightly, and then fled. The following night he broke into his house, and finding his way to the bed-room inflicted on him many cuts with a sword and then shot him twice with a revolver. The mother and daughter of Dr. Barnier, who were attracted by the noise, also each received one bullet from the revolver. The Corsican fled, while Dr. Barnier, previously wounded, was removed to the hospital, where it was found that the facial nerve was cut and his respiration was very feeble. During the night the would-be assassin came to the ward of the hospital right up to the bed and tried to finish his work, but the other patients gave the alarm in time. The condition of Dr. Barnier is very serious. His assailant was arrested on the night of the following day after a regular fight with revolvers between himself and the police, in which he was seriously wounded in the head.

April 25th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Spread of Psittacosis.

IN THE LANCET of April 10th (p. 1058) I mentioned the outbreak of this disease in Genoa, where fourteen persons have already been attacked by it and eight have died—the last death being that of Signor Gavino, brother of the captain of the *Manilla*, in which the two infected parrots were brought from Brazil. Now Captain Gavino himself, his wife, and his daughter are under treatment for the same malady. The Uffizio Civico d'Igiene was not an hour too soon in its warning to the public against harbouring these domestic pets, as from being sporadic the broncho-pneumonia they convey has assumed almost an epidemic form. Meanwhile, the susceptibility of the parrot to pulmonary disorders—above all, to tuberculosis—is being put *en évidence* by the medical journals, most of which refer to the classic treatise on the subject by Dr. A. De Gordon y de Acorta, a physician of Havana. The malady, often hereditary in the bird, is invariably accentuated by the close confinement and the privations encountered during the voyage to Europe, where, again, even if it arrives in fair health it is for the most part exposed to insanitary conditions, under which it often contracts tuberculosis and broncho-pneumonia from proximity to human sufferers from these ailments. In Berlin the profession has long been alive to the danger of harbouring and petting the bird, the Veterinary School there having had 154 parrots under observation, and 54 of them having been found by bacteriological tests applied by Professor Eugen Fröhner to be labouring under advanced tuberculosis. The lesson, so familiar on the Continent, is worth repeating in the British Isles, where the parrot is imported from nearly every colony, tropical or sub-tropical, and where well-nigh every one of its 355 species is typically represented.

The Attempt on the King of Italy's Life.

A host of suppositions as to the motive and the mental condition of Acciarito, the would-be regicide of Thursday last, are in the air; but the "primo interrogatorio" of the police, the more its findings are considered, will suffice to reduce them to a very limited and very commonplace category. Passanante, who made the first attempt of the kind in the late autumn of 1878, was a fanatic, the victim of religious zeal. His was a form of "pazzia ragionante" (ratiocinative madness), and he believed that in striking a fatal blow at the King he was vindicating the Pope. He has been happily defined as a "Ravaillac basilisco" (an ophidian Ravaillac), and is now an inmate of the Asylum for Criminal Lunatics at Montelupo in Tuscany, where his condition in October last was described in THE LANCET[1] under the heading of the "Belva Umana" (human wild beast). But Acciarito, so far as ordinary tests can be relied on, is clearly no lunatic. One of his first admissions was that he was "affamato" (starving), and as this was succeeded by others it became more and more evident to the "judice istruttore" (Juge d'Instruction) that he had to deal with an anarchist of the now familiar type. Accomplices, indicating conspiracy, have already been found and arrested, while the lethal weapon he bore had the same insignia as that of Caserio, the murderer of President Carnot. It is of very fine workmanship and

[1] THE LANCET, Oct. 31st, 1896, p. 1273.

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temper, the twisted handle having wound round it a steel wire, and on one arm of the hilt there is engraved the letter A, signifying "anarchist," and on the other a cross +, signifying death. It will not be till the first days of June that the regular trial will begin; but meanwhile the presumption seems to be almost inevitable that in Acciarito we have a replica of Caserio, whose example in avenging "himself and humanity" on the person of the "bourgeois President" seems closely followed by his Roman disciple, whose victim was to have been the "popular king." Caserio, too, was "affamato." He had not broken bread before he committed the fatal deed, and "hunger," as Acciarito remarked to the judge, "è una cattiva consigliera" (is a bad councillor). No doubt the criminal anthropologist will intervene at the trial, as he did at Caserio's, and it is well that science, even tentative science, should have its opportunity of throwing light on phenomena which are becoming all too flagrant—indeed, periodical enough to be well-nigh systematic. Coincident almost to an hour with the attempt on King Humbert there was one on the President of the Republic of Uruguay. Anarchic conspiracy, it would seem, aims at the suppression of authority in general, with a fine indifference to institutions, whether monarchical or republican. One element, I may add, in Acciarito's purview did not exist in Caserio's. Even had his deadly purpose succeeded he would not have been capitally punished—the guillotine or death by hanging having been abolished in Italian criminal law. It may be time for Italy to revise that innovation and return to the old system, just as Switzerland has had to do. Her statistics demonstrate only too eloquently of how efficacious a deterrent of homicide she deprived herself by the abolition of the death-penalty.

"Radiografia Roentgen."

The Italian schools have enthusiastically taken up the "Roentgen rays" as an auxiliary to diagnosis, treatment, and instruction—none with greater effect than the University of Pavia. Dr. Giuseppe Cattaneo, surgeon-in-chief in the Ospedale Civico of that city, having removed an entire bone from the left inferior extremity of a boy patient, thereafter placed him in the Istituto Fisico of the University, where, under the superintendence of Dr. Petinelli, were initiated, with the help of the Roentgen rays, a series of object-lessons on the reproduction of the lost bone. The organic functions of the osseous tissues as illustrated in the reproductive process were watched and registered from time to time at stated intervals by Professor Petinelli's colleagues and the University students, and the value of the Roentgen rays in surgical diagnosis and treatment, and equally in surgical teaching, was vindicated in the most striking manner. Professor Petinelli's official report of the case, supplemented by illustrations of the successive stages of the reproduced bone will be awaited with interest.

Italy at the Twelfth International Congress of Medicine and Surgery.

Strong and steady efforts are in progress to make the Italian representation at the above congress as numerous and effective as possible. At a meeting just held here, under the presidency of Dr. Baccelli, an order of the day was passed inviting delegates of the several Schools of Medicine and "Accademie Mediche" to form local committees, and establishing a "Comitato Centrale" at Rome to promote the object in view. Of this central committee the president, elected by acclamation, was Dr. Baccelli, and its secretary, Dr. Ezio Sciamanna, Professor of Neuropathology in the Roman University and Director of the Clinique for Psychiatry in the University Institute. Facilities for reaching Moscow by rail were announced on the part of the Italian and Austrian companies, while the Russian companies liberally place at the disposal of the "Congressisti" a free return ticket from the frontier.

April 25th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Sporadic Influenza.

IN an article published in the *Klinische Wochenschrift* Dr. Lindenthal states that bacteriological investigations made during recent epidemics of influenza showed that the contagion of influenza is contained in the fresh and still moist secretion of the nasal and bronchial mucous membrane. It is therefore reasonable to suppose that during the periods when the disease is not epidemically prevalent the contagion is lying dormant in the human organism, and there finds all the conditions necessary for its proliferation. Support is given to this view by the fact that the sputum of persons who have suffered from influenza, especially those who are also the subject of pneumonia, has sometimes been found to contain influenza bacilli even several months after the clinical symptoms of the disease have disappeared. Such persons may infect susceptible individuals, and in the absence of any explanation of the way in which the disease was perpetuated its origin might appear to be spontaneous and independent of previous cases. Dr. Lindenthal has made bacteriological examinations in eight cases of influenza associated with pneumonia. In all of them the bronchi were affected; the ciliated epithelium was either destroyed or elevated by pus cells into which influenza bacilli had penetrated; no bacilli were ever found in the blood. In three cases there was an induration of the pneumonic centres, the alveoli being filled with fresh connective tissue, and the peri-bronchial and peri-vascular tissues being thickened. In these centres the bacilli were few in number and were found only in the pus cells. The exudation in influenza associated with pneumonia may be purulent, fibrinous, serous, or hæmorrhagic. The influenza bacillus is chiefly characterised by being immobile, by growing exclusively on hæmoglobin culture media, and by not being stained by Gram's method.

Anæmia and Enteroptosis.

Anæmia and chlorosis are among the most important concomitants of enteroptosis, and according to Meinert chlorosis arising under such circumstances is due to irritation of the sympathetic centre controlling the formation of hæmoglobin which goes on in the spleen. Dr. Buxbaum, however, has recently published an article in the *Fortschritte der Hydrotherapie* wherein he ascribes this symptom to irregular blood distribution—namely, to what seems to be a passive hyperæmia, without change either in the total quantity of the blood or in its quality. The normal peristaltic movement of the intestine assists greatly in maintaining the circulation in its vessels. A cold hip-bath influences the distribution of the blood by its effect on the splanchnic nerve, exercised both directly and by reflex action; after a time it causes contraction of the abdominal vessels, the consequence being withdrawal of blood from the intestine and the parenchymatous abdominal organs and determination to the parts of the body which are not immersed in the water. The undue accumulation of blood in the intestine in cases of enteroptosis is brought about by the impairment of the peristaltic movement, by the relaxation of the abdominal muscles, and by the inflections of the intestine itself. It follows, therefore, that treatment should be directed to increasing the tone of the muscular layer of the intestine, and one of the most efficacious among such measures is the cold hip-bath.

The Treatment of Epilepsy and Basedow's Disease.

Nine operations involving total and bilateral resection of the cervical sympathetic nerve have been described by Dr. Ullmann. Two of the patients suffered from Basedow's disease, three from well-marked epilepsy, one from chorea, one from tumour of the brain, one from hysteria and one from progressive paralysis, the latter having an epileptic attack at the time of the operation. In both cases of Basedow's disease the exophthalmos disappeared and the goitre was reduced in size; the tachycardia ceased in the one, but continued in the other. In the three cases of epilepsy the improvement was astonishing, for the fits never recurred.

The Medical Chamber.

A meeting of Vienna medical men will be held to-day in the rooms of the Medical Society, the business being to consider whether the Medical Chamber should continue its functions or should be abolished; 325 members of the Chamber will take part in the proceedings. When the Medical Chamber was founded the profession expected that it would accomplish great things as an executive organisation of medical men, and, indeed, the prospect seemed full of promise; but, like everything in Austria that is due to the initiative of the Government, the Chamber has become a purely bureaucratic institution, unrelenting to the medical men, but indulgent to the boards. For instance, the anxiety of the Chamber to be invested with the power of cancelling the diplomas of medical offenders has not failed to arouse

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general dissatisfaction among the profession in Vienna, and the party antagonistic to the Chamber denounces this extension of its powers as an unwarrantable interference with personal liberty. This protest may appear astonishing in a country where political freedom is still in its infancy, and some suggestive comments on the question are made in a letter written by a medical man to a non-medical newspaper. The substance of his argument is that in acquiring the power of cancelling medical diplomas, either temporarily or permanently, and thereby debarring a man from practising, the Medical Chamber nominally exercises no more authority than the Legal Chamber, each in its special sphere; but in reality the two cases are by no means parallel, lawyers being much less affected by this disability than medical men. To be restrained from practice is no doubt a severe punishment for a lawyer, but he has the opportunity of making an income by assisting another lawyer. A medical man, however, is helpless without a diploma, and it is unjust that the Chamber should have the power of ruining him in this way. Furthermore, in the event of the Chamber being armed with this authority, will it have the assistance of the police in preventing advice being given to patients? Medical men who have committed offences against the laws of the land, and have consequently been deprived of their diplomas by the State, forfeit public confidence, but such will not be the case with those whose diplomas may be cancelled merely for transgressing the regulations of the Medical Chamber. In my next letter I will give some account of the proceedings at the meeting.

April 25th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Malignant Syphilis treated with Spermin.

AT the last meeting of the Budapest Hospital Association Professor Schwimmer announced that he had used spermin in six cases of malignant syphilis with very good results. He had chosen for this treatment only malignant cases in which it was impossible to carry out the routine mercurial treatment on account of the patients, in spite of the usual precautions, developing marked mercurial stomatitis as soon as treatment was begun. The last patient received twenty-five injections of the organic extract, which resulted in stopping the progress of the syphilitic ulcerations. Professor Schwimmer ascribes the beneficial effects of spermin to its property of improving metabolism.

Epilepsy Treated with Ovariin.

This case was published by Dr. C. Bodon in the columns of the *Orvosi Hetilap*. The patient was a girl, aged eighteen years, who had during the last four years undergone all sorts of medical treatment without any appreciable benefit. Considering that the patient developed the disease since she began to menstruate, and that her menstruation used to be very scanty and only of one or two days' duration, though she was not suffering from any disease which might have explained the diminution of the menstrual flow; considering, lastly, that Dr. Bodon had seen several instances where the different ailments connected with the climacteric and with menstrual troubles had readily yielded to the ovariin treatment, he resolved to give the ovariin a trial in this case. Before resorting to it he kept the girl under observation for a week, no medicine whatever being given. She had during this time three typical epileptic attacks and from two to five attacks of *petit mal* daily in addition. The day before the commencement of the treatment she exhibited eighteen of these slight attacks. She was given on the first day one tabloid (Merck), the daily dose being gradually increased to eight tabloids. On the second day she had one epileptic fit, but not any more fits during the whole time that the ovariin treatment lasted—i.e., fifty days. After this date ovariin was withheld for a week and large doses of bromides were given. She thereupon had three epileptic fits. Ovariin was again resorted to, and the patient remained free from epileptic fits during twenty-two days—i.e., up to the date of publishing the cases. The slight attacks (*petit mal*), however, did not subside except at the time corresponding to menstruation. Under the influence of the ovariin treatment menstruation became more copious and was of three days' duration. Dr. Bodon concluded that the ovariin treatment should be tried in all cases of epilepsy which appear to be connected with functional troubles of the reproductive organs.

Endemic of Tetany in Budapest.

It is known that tetany may sometimes become endemic, and outbreaks of this kind have been observed in Paris, Vienna, and some other towns. Up to the present time it has only occurred sporadically in Budapest, but it would seem that the disease has lately been assuming an endemic character in this town, no less than ten well-marked cases having been notified during last week. No explanation of the endemic is obtainable.

April 24th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Medical Schools Combine.

AT a special meeting of the Board of Regents of the University of the State of New York the faculties of the Bellevue Medical College and the New York University Medical College were consolidated, and will now be known as the New York University Bellevue Hospital Medical College. The determination to consolidate the colleges was arrived at by their governing bodies on April 5th. The advantages of the scheme were so apparent to both bodies that it required but three weeks to complete the preliminary negotiations. The Council of the University on March 17th laid before the trustees and faculty of the Bellevue College a statement of the benefits, both material and educational, that would arise from uniting the two institutions. Two days later the trustees of the Bellevue College unanimously decided to transfer the direction of the college to the University on the assumption by the latter of the obligations of the Bellevue institution to the city. These obligations were formally undertaken by the Council of the University last Monday, and it only required the consent given by the regents to give effect to the consolidation. The fusion of the two schools, one of which had an enrolment of 713 students last year and the other of 344 students, will make the new college one of the largest and most important seats of medical instruction in the United States. The total faculty will number 113. The facilities and plant of the united colleges will be equal to those of some of the best equipped schools in the world. The University owns buildings covering a frontage of 130 ft. opposite Bellevue Hospital. In addition to the college premises, the Bellevue trustees possess the Carnegie Laboratory in East 26th-street, presented by Andrew Carnegie about ten years ago; also there has just been purchased by the friends of Bellevue College a frontage of 150 feet in First-avenue, adjoining the Carnegie Laboratory. These two properties together would furnish ample building room for all the purposes of a great medical college. In length of existence the University Medical College is older by some twenty years than the Bellevue College. The project of establishing a medical department was first discussed in 1838, though it was not until 1841 that the scheme took practical shape. The first faculty elected comprised Drs. Valentine Mott, Granville S. Pattison, John Revere, Martyn Payne, G. S. Bedford, and John W. Draper. It has graduated 6700 *alumni*. The Bellevue Hospital Medical College was incorporated by a special Act of the Legislature in 1861. It has 4734 *alumni* scattered through this and other countries.

Suffering from the Overflow of the Mississippi.

The enormous floods that have led to the overflow of the Mississippi River have caused an amount of suffering that renders the event a national disaster. The President has sent a special message to Congress recommending a liberal appropriation for the relief of the sufferers. These are stated on reliable authority to be the most destructive floods that have ever devastated the Mississippi valley, the water being much higher than the highest stage it has reached before. From Marion (Ark.) north of Memphis, to Greenville (Miss.), a distance of more than 250 miles by river, it is reported that there are now at least fifty towns and villages under water, and a territory extending from 100 miles north of Memphis to 200 miles south, and from five to forty miles wide, is submerged. Hundreds of thousands of acres of cultivated soil, with growing crops,

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are included in the submerged territory. In this section alone there are from 50,000 to 60,000 people whose property has been destroyed and whose business has been suspended. Growing crops have been ruined, thousands of cattle have been drowned, and the inhabitants of certain areas threatened with starvation. As a great majority of the sufferers are small farmers, they have thus been left entirely destitute and will be unprepared for work, even after the floods have subsided.

Medical Inspection of the Scholars of the Public Schools.

The New York Board of Health has appointed a large number of medical men as inspectors of the children who daily attend the public schools. The object is to prevent those who have symptoms of contagious disease from entering the school, the inspection being carried out at the school-house entrance. The first day's inspection resulted as follows: 140 children were found unfit for association with their schoolmates and sent home with notes to their parents informing them of the children's condition. Among these were 14 cases of diphtheria, 3 of measles, and 1 of scarlet fever; 35 cases of contagious eye diseases, 3 of mumps, and 1 of croup; of parasitic diseases there were 55 cases in which the head was affected, and 12 of the body; and there were 8 cases of chicken-pox and 8 of other communicable diseases.

Inspection of Meats Exported from America.

The new Secretary of the Interior has issued the following Order:—"From and after March 15th, 1897, all beef offered for transportation to European ports—whether fresh, salted, canned, corned, or packed, being the meat of cattle killed after the passage of the Act under which this Order is made—shall be accompanied by a certificate issued by an inspector of the department showing that the cattle from which it was produced were free from disease and that the meat is sound and wholesome; and in order that it may be determined whether all beef exported to European ports has been so inspected and found to be wholesome, it is further ordered that the meat of all other species of animals exported to such ports which for any reason does not bear the inspection stamps of this department shall be packed in barrels, cases, or other packages, which are legibly marked in such manner as to clearly indicate the species of animal from which the meat was produced. Meat which is not so marked, and which is not accompanied by a certificate of inspection, will be classed as uninspected beef and will not be allowed exportation to European ports."

Regulation of Dispensaries.

A law of the State of New York recently made, aims to correct the abuses of out-door medical relief, by requiring that all institutions which give that relief shall be under the rules and regulations of the State Board of Charities. This board recently inspected the dispensaries of the State, and it was found that there has been in the last decade a vast increase of these institutions. In the city of New York they number 115, and their statistical returns show that nearly 50 per cent. of the whole population receive medical treatment gratuitously. The State Board of Charities is a body which under the present Act will have complete control of the methods of out-door medical treatment in the State and will have power to give and revoke licences.

April 17th.

FOOTBALL CASUALTIES.—A member of the Ashton, Cheshire, team died on the 20th ult. from abdominal injuries received in a match on Good Friday between Ashton and Halsall.—In a League Second Division match on the 24th ult., at Blackpool, a player fractured his right arm.—While playing in a match at Tividale last week the centre half-back for the Great Bridge Club, Staffordshire, a player from Horseley Heath, sustained injuries from which he died two days afterwards.—On the 26th ult., at Caledonian-park, Holloway, during a match between the London Caledonians and Tottenham Hotspur Clubs, a player (the Caledonian left wing) fractured his right leg, and was removed to the Great Northern Hospital, Holloway-road.—In the course of a match at Stockport between two factory teams, a player, a collier, sustained concussion of the brain, and was taken to the Stockport Infirmary, where he died on Tuesday last.—On the same day a youth, aged fourteen years, also died in the same infirmary from injuries received while playing in a game with other youths.

Obituary.

JOHN MAGRATH, M.D., M.S. Q.U.I., M.R.C.S. ENG., L.S.A.

DR. MAGRATH, of Forest Row, Sussex, whose death occurred suddenly from cerebral hæmorrhage on April 10th, at the age of fifty-two years, was an able and highly esteemed practitioner. His medical education was commenced at Queen's College, Belfast, and completed in 1872 at University College, London, in which year he took his M.D. degree at Queen's University, Ireland, being first in honours and gold medalist in medicine and other subjects. At the conclusion of his collegiate education he was appointed, in August 1872, resident medical officer to the East London Hospital for Children, and later assistant physician and physician to the same hospital. In 1873 he was appointed assistant physician to the Metropolitan Hospital, Kingsland-road, a post which he held for two years, and also physician to the Metropolitan Dispensary. It was at first his intention to settle in London as a consulting physician, but owing to the sudden death of a relative in 1875 he was compelled to succeed to a practice at Forest Row, near East Grinstead, where he practised until his death. Dr. Magrath was a man whose conspicuous abilities would have secured his success in any walk in life, and he rapidly won for himself the appreciation and esteem of a large circle of patients; in addition to his private practice he held until his death the post of medical officer to the East Grinstead Union and also that of medical officer to the East Grinstead General Dispensary. He was a man of large sympathies, and untiring energies, and his loss will be felt by none more keenly than the poor of the district in which he resided. Recognising the necessity of out-door recreation for the hard-worked professional man, he was one of the founders of, and became largely interested in, the Ashdown Forest Golf Club.

The funeral took place at Forest Row on Wednesday, April 14th, in the presence of a large number of mourners and friends and many others who were anxious to show by their presence their sense of the loss of an able, sympathetic, and kind-hearted medical adviser. The service at the church was conducted by the vicar, the Rev. A. J. Swainson, assisted by the Rev. E. Ruck Keene, rector of Copford, Essex, and the Rev. T. P. Bacon-Phillips, rector of Crowhurst, Sussex, the body being borne to the grave by members of the Order of Foresters.

JAMES METCALFE APPLETON, M.D. PISA, M.R.C.S. ENG., L.S.A.

DR. APPLETON was the second son of Mr. Richard Appleton, of Stokesley, Yorkshire, a country surgeon of extensive practice in Cleveland. He came of a long lineage, for he belonged to an old yeoman family which originally sprang from Appleton le Wiske, and had always lived in North Yorkshire, having for more than two hundred years farmed their own land at Newclose, Hutton Rudby. Commencing his studies at the Leeds Medical School, Mr. Appleton eventually proceeded to Edinburgh, where he was the companion of another Leeds student, whose real name was Roberts, but who afterwards, under the assumed name of Stanley, became famous as one of the naval surgeons of the *Erebus* and *Terror* in the ill-fated Franklin Expedition. Before becoming qualified to practise Mr. Appleton continued his studies in France and Italy at a time when such an undertaking was rarely thought of, and in after years he delighted in giving interesting particulars of his student life abroad, expatiating on the invariable courtesy and kindness of the great French professors of that day. In 1836 he received the Licence of the Society of Apothecaries of London, in 1837 he became a Member of the Royal College of Surgeons of England, and in 1838 he graduated as M.D. at the University of Pisa. He then settled in London, and for more than fifty years practised in Curzon-street and Half Moon-street, Mayfair. Dr. Appleton was for many years on the vestry of St. George, Hanover-square, at a time when it carried on the whole of the administration of this important parish, and was well-known as an active member, possessed of a sound judgment and considerable business ability. He died at his residence, 27, Gilston-road, South Kensington, on April 18th, aged eighty-two years.

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Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board at the quarterly meeting of the examiners in the subjects indicated under the "Four Years Regulations":—

Part I., Chemistry, including Chemical Physics:

Anning, James John, private study.
Jones, Thomas Burnell, St Bartholomew's Hospital.
Pettigrew, William, Firth College, Sheffield.
Verity, Robert James Stanley, Charing cross Hospital.

Part II., Materia Medica:

Anning, James John, private study.
Crabtree, Emilio Fredrico, St. Bartholomew's Hospital.
Molineux, Bernard Newmarch, St. Thomas's Hospital.
Musgrove, Elward Hugh, University College of South Wales, Cardiff.
Peirce, James Arthur Lilwall, Mason College, Birmingham.
Pitts-Tucker, Francis Augustus, St. Thomas's Hospital.
Sparkes, William Moore Bell, King's College Hospital.
Wright, Louis, St. Thomas's Hospital.

Part III., Elementary Physiology:

Robinson, Ricardo Adolfo, University College Hospital.
Sowden, George, London Hospital.

The following gentlemen passed the third examination of the Board at the quarterly meeting of the examiners in the subjects indicated under the "Five Years' Regulations":—

Part I., Chemistry and Physics:

Agar, Samuel Annesley, London Hospital.
Apperley, Henry David, Middlesex Hospital.
Bachs, Johannes Adolphus, King's College Hospital.
Bailey, Charles Henry Farley, Westminster Hospital.
Bates, Joah Edward Lionel, Guy's Hospital.
Blanc, Antonio, King's College Hospital.
Boclet, Faustian Marcel, Charing cross Hospital.
Bridge, John Crosthwaite, Middlesex Hospital.
Butler, Archibald, St. Bartholomew's Hospital.
Capon, Benjamin, University College, Liverpool.
Carling, Ernest Rock, Westminster Hospital.
Clitheroe, Herbert George, London Hospital.
Darbyshire, Harold Stewart Cassam, Firth College, Sheffield.
Drinkwater, Fredrick Andrew Worsley, University College, Liverpool.
Duigan, Victor John, St. Bartholomew's Hospital.
Emerson, Herbert, St. Mary's Hospital.
Evans, David Haydn, University College of South Wales, Cardiff.
Froggatt, George Ernest, Middlesex Hospital.
Gater, Horace James, Guy's Hospital.
Gauntlett, Owen Binns, St. Thomas's Hospital.
Gleig, Percy North, Charing-cross Hospital.
Gover, Henry Arthur Sidney, St. Mary's Hospital.
Graves, Robert Kennedy Grogan, St. George's Hospital.
Hickes, Philip Lansdown, University College, Bristol.
Hosford, Alfred Stroud, University College Hospital.
Huelin, Lewis William, St. Mary's Hospital.
Hulseberg, Emile Castern, Westminster Hospital.
Inness, William James Deacon, St. Mary's Hospital.
Jackson, Frederick Douglas Selmes, Guy's Hospital.
Johnson, William Jerrold Greaves, St. Bartholomew's Hospital.
Lawrence, Charles Ernest, University College, Liverpool.
Lewis, Robert Robinson, Middlesex Hospital.
Mason, Alfred, Middlesex Hospital.
Michel, Arthur George, Charing-cross Hospital.
Moores, De La Hey, University College, Liverpool.
Newport, Harry MacGregor, Charing-cross Hospital.
Page, William Sidney, St. Mary's Hospital.
Paulin, George Alexander, Royal College of Surgeons, Edinburgh.
Penfold, Fred. Bailey, Middlesex Hospital.
Pern, Lionel, Guy's Hospital.
Phelps, Arthur Austin, Guy's Hospital.
Rahim, Bakhshi Isaac, King's College Hospital.
Ramsay, Palmer Devoy, St. Mary's Hospital.
Roberts, John Hamilton, Charing-cross Hospital and Birkbeck Institute.
Rogers, Stanley, St. Mary's Hospital.
Rudge, Frederick Henry, Bristol and Clifton Laboratory.
Rutherford, Randolph Henry Neilson, University College, Bristol.
Shields, William Thomas, University College, Liverpool.
Smale, Herbert, St. Mary's Hospital.
Smith, Herbert James, Yorkshire College, Leeds.
Soper, Arthur Waldron, Guy's Hospital.
Stevens, Warwick Alan George, Guy's Hospital.
Stewart, William Howard Edwin, Cambridge University.
Thomson, Frederic William, Firth College, Sheffield.
Tumber, Henry Shemeld, Firth College, Sheffield.
Turner, Charles Harold, St. Bartholomew's Hospital.
Ward, Joseph, Firth College, Sheffield.
Willan, George Thomas, Guy's Hospital.
Willian, Richard, University College, Nottingham.
Wood, Frederick Joseph, St. Bartholomew's Hospital.

Part II., Practical Pharmacy:

Adams, Harold Cotterell, Middlesex Hospital.
Ainsworth, Ralph Bignell, St. George's Hospital.
Allpart, Ronald Harrison, St. Thomas's Hospital.
Beard, Joseph, Firth College, Sheffield.
Bernard-Onralt, Hugh, Guy's Hospital.
Campbell, George Gunning, St. Bartholomew's Hospital.
Cawston, Albert Edward. Guy's Hospital.
Colyer, Stanley William Randolf, Charing-cross Hospital.
Davies, John, London Hospital.
Day, Charles Frederick, private study.
De Freitas, Quirino Bonifacio, King's College Hospital.
Denny, Herbert Reginald Harry, Guy's Hospital.
Devitt, Herbert Pye-Smith, St. George's Hospital
Dudgeon, Leonard Stanley, St. Thomas's Hospital.
Furnivall, Charles Hilton, St. Mary's Hospital.
Gettings, Harold Salter, Mason College, Birmingham.
Gribbell, William Ernest, St. Mary's Hospital.
Howells, Jenkins, Guy's Hospital.
Jackson, William Taylor, Owens College, Manchester.
Lewis, John Lloyd, London Hospital.
Mackie, Frederick Percival, University College, Bristol.
Michell, Ralph, Guy's Hospital.
Morgan, Charles Cyril, St. Bartholomew's Hospital.
Morgan, Lewis Wayne, University College of South Wales, Cardiff.
Nash, Percy James, Guy's Hospital.
Ross, Edward Halford, St. Thomas's Hospital.
Saunders, Leonard Dimock, King's College Hospital.
Saward, Arthur Henry Michael, Guy's Hospital.
Shields, William Thomas, University College, Liverpool.
Sladen, Reginald John Lambert, London Hospital.
Sturdy, Harry Carlile, Guy's Hospital.
Stusser, Israel, London Hospital.
Tayler, Arthur James, King's College Hospital.
Thompson, Cecil Charles Brandon, St. Bartholomew's Hospital.
Thorneley, Michael Harris, Guy's Hospital.
Thwaites, Harry, London Hospital.
Ward, Joseph, Firth College, Sheffield.

Part III., Elementary Biology:

Alvarado, Ricardo Ramon Eulojio, St. George's Hospital.
Ambrose, Arthur Joseph, Westminster Hospital.
Apperly, Henry David, Middlesex Hospital.
Ashton, John Hilton, Owens College, Manchester.
Baker, Harold Ramsey Popham, St. George's Hospital.
Bekenn, Justin James, Mason College, Birmingham.
Bennett, Francis Gray, University College Hospital.
Bent, Sidney Charles Henry, Guy's Hospital.
Bevir, George, London Hospital.
Blanc, Antonio, King's College Hospital.
Blasson, Charles John, University College Hospital.
Blunt, Thomas Edward, London Hospital.
Bridge, John Crosthwaite, Middlesex Hospital.
Brierley, Charles Isherwood, Yorkshire College, Leeds.
Bromley, James, Guy's Hospital.
Browne, George Buckstone, Guy's Hospital.
Browne, William Walker, University College Hospital.
Burges, Richard, London Hospital.
Burgess, Harold Lynch, London Hospital.
Butcher, Harry Hendy, St. Bartholomew's Hospital.
Butterworth, Rupert, St. Mary's Hospital.
Capon, Benjamin, University College, Liverpool.
Causton, Hubert Cyril, University College Hospital.
Cheese, Frederick William, St. Bartholomew's Hospital.
Cole, William Henchman, Guy's Hospital.
Cox, Clement Harlow, Mason College, Birmingham.
Cox, Ernest Alfred, King's College Hospital.
Croly, Henry Pennington, London Hospital.
Curtis, George William, University College Hospital.
Dall, Elliot Wilfred, St. Bartholomew's Hospital.
Davy, William Bradshaw, Middlesex Hospital.
Dermott, Edward James, University College, Bristol.
Douglas, Saxton Edward, Guy's Hospital.
Dudley, Edward Joseph Scott, Guy's Hospital.
Eames, Thomas Richard, Owens College, Manchester.
Evans, David Haydn, University College of South Wales, Cardiff.
Ewen, Gerald Sidney, St. Bartholomew's Hospital.
Ferguson, Lionel Cecil, St. Bartholomew's Hospital.
Froggatt, George Ernest, Middlesex Hospital.
Furnival, Henry Wallace, University College Hospital.
Gardner, Harry, Firth College, Sheffield.
Gray, William Harrington, London Hospital.
Grellet, Harold Rawdon, Guy's Hospital.
Hackney, Gordon Herbert, University College Hospital.
Harris, John Evans, Mason College, Birmingham.
Harris, Philip, St. Bartholomew's Hospital.
Hayes, George Sullivan Clifford, Guy's Hospital.
Hickes, Philip Lansdown, University College, Bristol.
Hollist, Gerald Wetherell Capron, Guy's Hospital.
Hood, Basil, Charing-cross Hospital.
Houlbrook, William Edward, St. George's Hospital.
Howell, Trevor, University College of South Wales, Cardiff.
Howkins, Cyril Henry, Mason College, Birmingham.
Hubbard, Adrian Russell Fortesque, Charing-cross Hospital.
Huelin, Lewis William, St. Mary's Hospital.
Hughes, Cecil Hugh Myddelton, Westminster Hospital.
Hughes, Edmund Octavius, St. Bartholomew's Hospital.
Humphreys, George Frederick, St. Paul's School, West Kensington.
Jiménez, Ricardo, Guy's Hospital.
Jones, Sydney Herbert, Guy's Hospital.
Keeling, Hugh Nevill, Yorkshire College, Leeds.
Latham, Thomas Jones, London Hospital.
Lawrence, Charles Ernest, University College, Liverpool.
Lemon, Charles John, St. George's Hospital.
Lewis, George Jepson, Guy's Hospital.
Lowe, George Carter, Guy's Hospital.
Lund, John Knowles, Mason College, Birmingham.
MacDowall, William MacDawall, London Hospital.
McMahon, Ernest Hammond, Charing-cross Hospital.
Major, Hugh Marcus, St. Mary's Hospital.
Marshall, Reginald Prynne, Guy's Hospital.
Mason, Alfred, Middlesex Hospital.
May, Charles Montague Neale, St. George's Hospital.
Miéville, George Christian Blake, University College Hospital.
Mills, Henry, St. Bartholomew's Hospital.

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Miskin, Albert Francis, St. Thomas's Hospital.
Moir, Gordon, Guy's Hospital.
Moll, Otto Charles Henry Leopold, Guy's Hospital.
Moores, De la Hey, University College, Liverpool.
Morris, Leslie Miles, St. Bartholomew's Hospital.
Nash, Arthur Charles, Guy's Hospital.
Nash, Percy James, Guy's Hospital.
Osburn, Arthur Carr, Guy's Hospital.
Owen, Charles Louis Claude, St. Bartholomew's Hospital.
Pavitt, Percy George, Middlesex Hospital.
Peel, Harold George, Yorkshire College, Leeds.
Phillips, Nathaniel Richard, University College of South Wales, Cardiff.
Phipps, Charles Arthur Gayer, Owens College, Manchester.
Pollard, Allan Faraday Campbell, St. Bartholomew's Hospital.
Powell, James Farquharson, St. George's Hospital.
Poyser, Richard Cruickshank, Guy's Hospital.
Prall, Sydney Lionel, Guy's Hospital.
Price, Ernest Walters, St. Bartholomew's Hospital.
Raven, Hugh Milville, St. Mary's Hospital.
Reed, Keppel Hart, St. George's Hospital.
Riley, Stanley, Owens College, Manchester.
Roberts, Earnest, Guy's Hospital.
Roberts, William Owen, Guy's Hospital.
Robertson, Struan Arthur, University College Hospital.
Roper, Richard Snelling, Guy's Hospital.
Round, Harold, Mason College, Birmingham.
Rowlands, Moses John, University College of South Wales, Cardiff.
Rugg, Godfrey Faussett, University College Hospital.
Rutherford, Randolph Henry Neilson, University College, Bristol.
Ryley, Charles, St. Mary's Hospital.
Ryman, Carl Anders, St. George's Hospital.
Scoones, Harold Edward, St. Bartholomew's Hospital.
Scott, Maitland Bodley, St. Bartholomew's Hospital.
Sewell, Henry George, London Hospital.
Shadwell, Lancelot Walter, St. George's Hospital.
Shannon, Stanley Samuel Howard, Guy's Hospital.
Sladen, Reginald John Lambert, London Hospital.
Shields, William Thomas, University College, Liverpool.
Smith, Frank Wybourn, Guy's Hospital.
Soper, George Bertram Spencer, Guy's Hospital.
Spalding, Archibald Denize, London Hospital.
Stewart, Charles Ravenscroft, St. George's Hospital.
Stusser, Israel, London Hospital.
Thompson, Francis, London Hospital.
Traylen, Charles Leonard, London Hospital.
Trimmer, Francis Inman, London Hospital.
Tumber, Henry Shemeld, Firth College, Sheffield.
Turner, Francis John, Guy's Hospital.
Upcott, Harold, St. Thomas's Hospital.
Vaughan, Walter Frederick Hamilton, St. Mary's Hospital.
Walker, John, St. Thomas's Hospital.
Wells, John, Mason College, Birmingham.
Whitwell, Hugh, St. Bartholomew's Hospital.
Willan, Richard, University College, Nottingham.
Wilson, Geoffrey Plumpton, London Hospital.
Woods, Charles Murray, Charing-cross Hospital.
Woodwark, Charles Stewart, St. Bartholomew's Hospital.
Wroughton, John Henry, St. Bartholomew's Hospital.
Young, Alister Cameron, St. Bartholomew's Hospital.

SOCIETY OF APOTHECARIES OF LONDON.—In April the following candidates passed in the subjects indicated:—

Surgery.—H. A. Belbin, Sheffield; W. F. Chrispin, Leeds; H. M. Church, McGill University; E. C. Flint, Royal Free Hospital; P. C. Maitland, Middlesex Hospital; A. F. Millar, St. Thomas's Hospital; J. C. Müller, Calcutta; J. Owen, Liverpool; M. Pantin (Section I.), Royal Free Hospital; R. W. C. Pierce (Section I. and II.), St. Thomas's Hospital; G. Renshaw, Manchester; A. W. S. Sheldon, St. Bartholomew's Hospital; and J. Spencer and H. de P. B. Veale, Leeds.

Medicine, Forensic Medicine, and Midwifery.—E. C. Flint, Royal Free Hospital; J. C. Müller, Calcutta; J. Owen, Liverpool; M. Pantin (Section I.), Royal Free Hospital; E. J. Parry, St. George's Hospital; R. W. C. Pierce (Section I. and II.), St. Thomas's Hospital; G. Renshaw, Manchester; and A. W. S. Sheldon, St. Bartholomew's Hospital.

Medicine and Forensic Medicine.—P. M. Brittain, St. Bartholomew's Hospital; A. J. Hayes, Middlesex Hospital; A. E. Seller, London Hospital; and J. M. Wood, Middlesex Hospital.

Medicine.—S. A. Stride, London Hospital.

Forensic Medicine.—A. Avent, St. George's Hospital.

Midwifery.—F. Atthill, Charing-cross Hospital; A. R. Eates, Edinburgh; G. F. May, M'Gill University; and A. P. Square, Middlesex Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:—Messrs. Belbin, Brittain, Church, May, Owen, Pierce, Renshaw, Sheldon, Veale; Miss Flint and Miss Müller.

UNIVERSITY OF CAMBRIDGE.—The following candidates have satisfied the examiners in both parts of the Examination in Sanitary Science, April, 1897:—

Charles H. B. Adams, Octavius W. Andrews, Francis J. Brakenridge, George T. Cattell, Guy B. Courtney, John Donald, George G. Genge, Bertie B. Ham, Charles P. Handson, William A. Justice, John T. Leon, Frederick Pershouse, John Pringle, Frederick A. Rogers, Thomas H. Smith, and Herbert H. Woods.

UNIVERSITY OF EDINBURGH.—The following is the official list of candidates who have completed the First, Second, and Third Professional Examination, respectively, for degrees in Medicine and Surgery during March and April:—

First Professional Examination.—J. F. Alan, C. H. Allen, J. D. Anderson, Mary Anderson, A. A. Ayton, A. C. Begg (with distinction), Hubert Bishop, G. S. Blandy, V. C. de Boinville, E. S. Brett, J. M. L. Brown, M.A., G. C. Burgess, G. B. Butt, M. G. I. Cadell, Ewen Cameron, G. S. Carey, Alexander Cartner, A. W. S. Christie, R. V. Clark, M.A., H. L. Clift, V. A. P. Coghill, John Cook, W. P. Cormack, B. M. Cunningham, M. S. Dickson, T. G. B. Dodds, Henry Dodgson, A. R. Douglas, Charles Douglas, J. W. Duffus, M.A., W. A. Duncan, W. T. Dunn, J. M. Dupont, J. R. Edward, V. G. Fergusson, V. M. Fergusson, D. C. L. Fitzwilliams, B. G. Forman, A. T. Gavin, J. S. Geikie, E. M. Glanville, M. J. Gordon, A. L. Gurney, James Halliday, E. R. Henderson, C. G. Hey, C. E. P. Husband, William Hutchison, C. E. Hutson, J. P. P. Inglis, F. F. C. Jagger, E. M. G. Jayne, William Landsborough, Albert Leach, A. C. Lennie, James Lindsay, Elizabeth M'Elney, A. C. N. M'Hattie, J. H. M'Kee, D. M. M'Leod, L. A. MacMunn, Elizabeth Macroy, M. M. Meikle, William Miller, R. C. Monnington, Peter Murray, M.A., William Murray, J. F. Orr, D. E. S. Park, T. B. Paterson, M.A., W. S. Patton, J. G. Peebles, S. G. Peill, C. E. Pepper, H. G. Pesel, L. T. Price, P. C. Rayner, J. L. Rentoul, H. M. Roberts, J. S. E. Robertson, M. W. Robertson, G. A. P. Ross, L. S. Sandeman, M. S. Scott, Patrick Shaw, G. W. R. Skeen, M. W. Smart, C. W. Somerville, H. L. Spark, B. A. Spence, G. H. Steven, I. S. Stewart, C. P. Strong, G. L. Thompson, Robert Thompson, A. L. Venters, Philip Weatherbe, H. T. Wolfenden, J. H. Wrightson, and J. C. Zuidmeer.

Second Professional Examination in Anatomy, Physiology, and Materia Medica (New Regulations).—John Anderson (with distinction), R. A. J. Asbury, Harvey Baird, W. J. Barclay (with distinction), L. D. H. Baugh, J. G. Bell, H. W. Boreham, A. C. Brown, E. A. Brown, A. E. Burroughs, T. C. Caldwell, H. G. Carlisle (with distinction), L. M. Chesney, R. M. Dalziel, William Darling, Y. A. Djedjizian, C. H. Durrant, D. D. Farquharson, R. R. Fasson, David Ferrier, E. G. Ffrench, A. S. Frank, John Fullarton, A. E. Goldie, J. H. Gordon, T. B. Gornall, A. H. Griffith, A. M. de Gruchy, W. D. S. Harrison, F. J. Hathaway, J. T. P. Heatley, I. K. Hermon, James Husband, W. E. Hutchison, J. G. Jack (with distinction), John Jeffrey, S. H. Johnson, G. D. Laing, Thomas Livingstone, J. L. Louis, B. G. Macdonald, J. M. Macdonald, P. H. Macdonald, Harold Macfarlane, Robina M'Gregor, Andrew M'Kaig, W. M. Mackay, Maxwell Mackelvie, H. M. Mackenzie (with distinction), T. C. Mackenzie, George Mackie, R. C. M'Lachlan, L. Maclagan-Wedderburn, G. C. M'Leavy, Wm. Macniven, D. A. Macvean, J. F. G. Martin, James Masson, M.A., T. R. Matthews, W. W. Maxwell, G. H. Menzies, M.A., James Miller, B.Sc., James Miller, J. G. Mitchell, J. R. Munro, James Orr, E. C. Peake, A. S. M. Peebles, E. J. Peill, Arthur Preston (with distinction), T. A. Price, H. G. P. Raeburn, A. C. Renwick, T. E. Richards, Robert Ritchie (with distinction), William Rogers, Thomas Rogerson, R. M. Rowe (with distinction), Abrahim Shalaby, A. K. Smith Shand, G. F. B. Simpson, V. E. Sorapure, H. B. Sproat, W. J. Stuart, M.A., R. G. Thomson, R. R. Turnbull, N. D. Walker, C. H. J. Watson (with distinction), A. S. Whytock, and W. R. E. Williams.

Second Professional Examination in Anatomy, Physiology, Materia Medica, and Pathology (Old Regulations).—Nisar Ahmed, E. B. Anderson, J. H. Bam, F. J. H. Bateman, William Bennett, A. L. J. Branday, A. J. W. Buchanan, S. G. Champion, J. L. Davies, W. H. Dawson (with distinction), F. B. Feast, G. L. K. Finlay, J. V. Fox, W. F. Godfrey, A. D. Grange, E. I. Hudson, N. T. Kerr, John Mackenzie, C. C. Macmillan, D. J. C. Oliver, W. J. Pierce, G. H. W. Robertson, M.A., F. S. L. Rose, and I. B. Venters.

Third Professional Examination.—D. V. M. Adams, John Aloindor, James Allison, J. R. Anderson, W. N. Barker (with distinction), William Bell, H. A. S. Bird, J. M. Bowie, E. R. Branch, Stanley Branch, C. S. Brebner, R. N. Brebner, H. H. Broome, Robert Bruce, E. H. Brunt, James Burnet, M.A., John Cameron, Robert Cameron, J. A. Craig, William Craig, F. P. Crowther, Robert Cumming, E. F. Cyriax, J. M. Cuthbert, L. J. M. Deas, George Dick, R. J. Dick, W. H. Dickinson, C. H. Elmes, J. F. Falconer, E. G. Ffrench, Duncan Forbes (with distinction), A. D. Fordyce (with distinction), Charles Forsyth, A. F. Fraser, A. T. Gailletson, A. B. George, H. E. Gibbs, Robert Gibson, Dorothy Gilfillan, Andrew Gilmour, Alexander Goodall, A. M. Green, A. A. Gunn, A. G. Hamilton, James Haworth, T. E. Hincks, C. A. B. Horsford, Joseph Hunter, W. E. Hutchison, J. W. Ingles, W. J. Jones, G. R. J. King, G. de Labat, F. O. Lasbrey, E. W. Lewis, A. J. M'Clymont, J. G. M'Conaghey, Edward M'Culloch, W. C. Macdonald, John M'Gibbon, A. C. M'Gilchrist, M.A. (with distinction), A. M. M'Intosh, D. V. M'Intyre, M.A., Andrew M'Kaig, William M'Kay, R. W. MacKenna, M.A., J. W. Mackenzie, D. W. Maclagan, T. D. MacLaren, E. C. G. Maddock, T. R. Matthews, C. A. Mayne, W. P. Meldrum, B.Sc., P. E. Millard, James Monroe, J. A. Murray, B.Sc., F. M. Parry, L. D. Parsons, W. M. Paul, M.A., E. C. Peake, C. M. Pearson, G. B. Pemberton, A. de St. L. F. Perigal, J. A. Raeburn, William Raine, H. H. Roberts, F. E. Robinson, G. A. Rorie (with distinction), A. C. Sandstein (with distinction), R. F. M. Scott (with distinction), Alfred Shearer, A. B. Shed, Ward Smith, Edgar Somerville, W. E. Tellet, A. H. Thomas, A. H. Thompson, P. G. L. du Toit, Henry Wade, W. E. J. Wallis, David Wardrop, A. B. Waters (with distinction), Arthur Whittome, J. R. Williamson, W. C. Wilson, M.A., A. E. B. Wood, and G. J. C. Young.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATION.—Ambrose E. I. Birmingham, M.D., M.B., B.Ch. Irel., &c., having passed the necessary examination, has been admitted a Fellow of the College.

PRESENTATIONS TO MEDICAL MEN. — Mr. Richard Bevan, L.R.C.P. Lond., M.R.C.S. Eng., D.P.H., of Lydd, Kent, has been presented by the Brookland First Aid Ambulance Class with a silver cigarette case, suitably inscribed, in appreciation of the skill and ability with which the classes in that locality have been conducted.—A largely attended meeting of members of the Oddfellows Friendly Society and others was held on April 24th at

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the Llwyngwair Hotel, Newport (Pembrokeshire), the occasion being the presentation of an address to Mr. H. Bowen Perkins, M.R.C.S. Eng., L.R.C.P. Lond., the mayor, who is leaving Newport. The chair was occupied by Dr. D. Havard, J.P. — Mr. R. Clark Newton, M.R.C.S. Eng., of Newcastle-on-Tyne, has been the recipient from the students of the ambulance class (St. John Ambulance Association), under the direction of the Horsley local centre of the Technical Education Committee, of a suitable thankoffering for his appreciated services to the class.

AT a meeting of the Bolton and District Medical Society, composed of twenty-eight members, duly convened and held at Bolton on April 22nd, Dr. Robinson being in the chair, the following motion, proposed by Mr. Jefferies and seconded by Dr. Brazil, was agreed to: "That on and after June 1st, 1897, whenever any registered medical practitioner, or any practitioner entitled to be registered (other than practitioners empowered by the Medical Act, 1886), either directly or indirectly issues, or sanctions, or takes part in the issuing of, any instrument or document which professes to empower the holder of such instrument or document to practise, or to hold themselves out as being in any way entitled to practise, any part or branch of the practice of medicine or of surgery, or of midwifery, such practitioner so doing shall, on due proof being given, be judged by the General Medical Council to have been guilty of infamous conduct in a professional respect, and his name shall be erased from the Medical Register, and any registrable qualification taken from him by the body or bodies which granted such. That the secretary forward a copy of this resolution to Sir R. Quain, Bart., President of the General Medical Council, 299, Oxford-street, London; to the medical journals; to Dr. R. R. Rentoul and the four other Direct Representatives—viz., Mr. G. Brown, 63, Charing-cross-road, London, W.C.; Dr. J. G. Glover, Highbury-place, London, N.; Dr. W. Thomson, Stephen's-green, Dublin; and Dr. W. Bruce, Dingwall, N.B."

THE CITY HOSPITAL, BIRMINGHAM. — Some extensive building operations, lasting over two years, have now been completed at this hospital, and have resulted in such important additions to, and replacement of, the old buildings, as almost to constitute a new hospital. The new buildings comprise two double-storeyed pavilions, each containing four large wards; a two-storeyed isolation pavilion containing eight small wards; an administrative block, with quarters for the staff; and a steam laundry, boiler-house, &c. Access to the upper storeys of the first-mentioned two pavilions is gained by a fireproof staircase terminating below in the open air, and thus effectually preventing any aerial communication between the two storeys. The flooring of the wards consists of polished oak blocks laid on cement concrete, that of the offices, passage, and entrance hall being of mosaic. The walls are faced with Portland cement with a dado of enamelled bricks five feet high, all corners and angles being rounded to facilitate cleaning. Each ward is heated by two double down-draught ventilating stoves, and the offices and halls by steam radiators. The lighting is by the incandescent gaslight. Each ward measures 63 ft. by 27 ft. by 12 ft., and accommodates from twelve to sixteen patients, according as it is used for acute or for convalescent cases. The administrative block contains quarters for the entire staff, there being 100 bedrooms, besides dining rooms, sitting rooms, and recreation rooms. An additional building is about to be erected, which will contain a waiting-room for visitors, a suite of "discharging" rooms, a "receiving" room, and a small bacteriological laboratory. There are no corridors or covered ways between the various buildings, communication being over macadamised roads and footpaths. A footbridge is now being built over the canal separating the Lodge-road Hospital from the branch institution (formerly the small-pox hospital) in Western-road. When this is completed the two hospitals will be worked as one institution, and together they will provide accommodation for 400 patients. All the wards are connected with the administrative block and the medical superintendent's office by telephone. The principal officers remain as before: medical superintendent, C. Killick Millard, M.D. Edin., B.Sc.; assistant medical officers, J. E. A. Chatelier, M.B. Edin.; and J. H. Murray, M.B. Lond.; matron, Miss E. Stansbie; and steward, F. R. Thorley. The architects for the new buildings are Messrs. Martin and Chamberlain, Birmingham, and the contractors are Messrs. W. and J. Webb. The estimated cost is about £35,000.

NEWCASTLE-UPON-TYNE NEW INFIRMARY.—The first meeting of the building committee was held on April 27th. Mr. Riley Lord, ex-Mayor, was appointed chairman, and Professor Philipson vice-chairman. The subscription is now £87,000.

DIPHTHERIA IN LONDON.—The tendency of fatal diphtheria in the county of London has, during the last two completed weeks, been again to increase. In the three weeks ended with April 10th the number of deaths from the disease had been 43, 41, and 23 respectively. In the next succeeding week, ended on April 17th, the deaths registered from diphtheria in London rose to 30, but even so they were 4 below the corrected decennial average for the fifteenth week of the period 1887–96. Of the 30 deaths 4 were credited to Bermondsey and 3 to Whitechapel sanitary areas. All but one were of persons aged under twenty years, and only 2 were of infants under one year. The admissions to hospital in the week were 83, against 91, 93, and 103 in immediately preceding weeks, and the number of patients remaining under treatment on April 17th was 757. Last week the registered deaths from diphtheria in London rose further to 40, and were 10 above the corrected decennial average for the sixteenth week of the period 1887-96. Hackney had 6 deaths credited to it, Chelsea and Battersea each of them 4, and Poplar and Greenwich sanitary areas 3 deaths each. The admissions numbered 96, and the cases under treatment on Saturday last amounted to 774. All the 40 deaths were of young persons aged under twenty years, and only one was that of an infant. In the outer ring in the two weeks in question the registered deaths from diphtheria numbered 7 and 9 respectively.

BEQUESTS AND DONATIONS TO HOSPITALS.—The late Rev. Francis Jacox, of Blenheim-road, St. John's-wood, London, bequeathed £1000 to Charing-cross Hospital to endow a bed to be called the "Francis Jacox bed"; £1050 to the Middlesex Hospital, to found a bed on similar terms; and £3000 to St. Mary's Hospital, Paddington, for three beds on the same conditions.—The Worshipful Grocers' Company has granted a donation of £100 to the Seaside Convalescent Hospital, Seaford.—In behalf of the New General Hospital, Birmingham, building fund Messrs. W. D. Rudder and Son and their employés have contributed 300 guineas.—The Board of Management of the Royal Hospital for Incurables, West Hill, Putney, has received £1000 from the executors of the late Mrs. Jane Lawrence.—The late Mrs. Jane Eleanor Rodgers, of Sheffield, bequeathed £500 to the Sheffield General Infirmary and £250 to the Jessop Hospital for Women.—The treasurer of the Leeds Hospital for Women and Children (new hospital with maternity department) has received £100 from the Pantomime Football Committee.— The treasurer of Guy's Hospital has received £1000 from Miss L. A. Williams, to endow a bed in perpetuity in memory of the late Henry Pratt, M.D., also £113 10*s.*, being a first instalment from the shareholders of the South-Eastern Railway Company, towards the re-endowment fund; also a donation from Mr. H. Stone of £105, and from "J. M." £100.—£700 has been added to the funds of King's College Hospital, being the proceeds of a ball organised by Mrs. Wace, wife of the rector of St. Michael, Cornhill.—The committee of the Royal London Ophthalmic Hospital, Moorfields, London, has received a donation of £100 from the Worshipful Company of Grocers towards the building fund of the new hospital; also 100 guineas from the Worshipful Company of Mercers towards the same fund; also £250 from the Worshipful Clothworkers' Company towards the same fund; and £100 from Mr. E. Speyer towards the same fund.—The Board of Management of St. Mary's Hospital, London, has received £900 from the executors of Mr. J. W. Langworthy.—The treasurer of the Metropolitan Hospital has received £120 6*s.* 8*d.* as the proceeds of the concert given at the Shoreditch Town Hall in January last. — The committee of the North London or University College Hospital has received £100, being the proceeds of a concert in aid of the funds, organised by Mrs. Frederick Roberts; also £250 from the Worshipful Company of Goldsmiths; also £200 from Mrs. Nathaniel Montefiore; also £250 from His Grace the Duke of Bedford, president of the hospital.—The secretary of the British Home for Incurables (offices, 72, Cheapside, London) has received from the executrix of the late Mrs. J. Rennie, of Anerley, £1000.—The Alexandra Hospital for Children with Hip Disease, Queen-square, Bloomsbury, London, has received a

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donation of £200 from a "Lady."—The committee of the London Hospital has received an anonymous gift of £1000 for the endowment of a bed in the hospital.—Mr. E. Hildred Carlile of Helme Hall, Huddersfield, has sent a donation of £8000 to the Huddersfield General Infirmary as his contribution to the completion of the infirmary buildings and "in commemoration of Her Majesty's long reign."—Mr. John Brigg, M.P., and Mr. Prince Smith have each given 1000 guineas for providing better hospital accommodation at Keighley.—The employés of Messrs. W. D. and H. O. Wills, Bristol, have subscribed £172 towards the proposed convalescent home for Bristol.—"C. S. B. D. I." has given £100 towards the extinction of the debt of £668 on the Bristol Hospital for Sick Children and Women.—The Workmen of Sir W. G. Armstrong, Whitworth, and Co., at Elswick, have contributed to the local medical charities £557 10*s.* 6*d.* for the quarter ending March 31st last, and of this sum £413 0*s.* 8*d.* has been allocated to the Royal Infirmary, Newcastle-upon-Tyne.—The treasurers of the Middlesex Hospital have received a donation of £1050 from Mrs. Sarah Moore Thompson to endow a bed in the cancer wards to be called the "Moore Thompson" bed, also £500 from Miss Chippendale in memory of a sister.—The Baroness de Hirsch has sent to the Lord Mayor, the president of the Jews' Hospital and Orphan Asylum at Norwood, a donation of £1000 towards the fund for the new wings, and contributed £1000 in aid of the building fund for a French convalescent home at Brighton in connexion with the French Hospital in London; also £200 towards the extension and improvement fund of Queen Charlotte's Lying-in Hospital, Marylebone, London; also a donation of £300 to the North-Eastern Hospital for Children, Hackney-road, Shoreditch.—The late Colonel H. Page, J.P., of Llandaff, has bequeathed £1000 to the Glamorganshire and Monmouthshire Infirmary and £500 to the *Hamadryad* hospital ship, Cardiff.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Easter Recess.

AFTER a recess of almost a fortnight the House of Commons resumed its session on Monday, April 26th. The House of Lords will resume on Monday, May 3rd.

Public Burial Grounds.

Mr. J. W. Sidebotham intends to move for a select committee to inquire into the subject of burial grounds provided by local authorities, whether any alterations in the law are necessary, especially in regard to the consecration of the ground, the provision of chapels, the allocation of fees, and the appointment of chaplain.

HOUSE OF COMMONS.

MONDAY, APRIL 26TH.

Army Medical Department.

Mr. Bartley asked the Under Secretary of State for War whether it was a fact that the effective branch of the Army Medical Department was, and had been for some time, much below its authorised strength; whether the cost of the non-effective branch of the Army Medical Department was now nearly equal to, if it did not exceed, the cost of the effective branch; whether he was aware that many of the medical officers who now retired on a pension at the early age of about forty-five years were willing to remain on the active list; and whether he would take steps to retain on the active list medical officers who now retired in the prime of life, but who were willing to remain on the active list.—Mr. Powell Williams, who replied for the Under Secretary, said it was the fact that the numerical strength of the Army Medical Department was, and had been, about forty below what was authorised. The non-effective charge was only one-half the effective charge for medical officers. At forty-five years of age medical officers retired voluntarily, but they were required up to fifty-five years to come up for service if an emergency arose.—Dr. Farquharson asked whether it was not the case that medical officers were not compelled to retire before the age of fifty-five years?—Mr. Powell Williams replied that those who retired at forty-five years did so voluntarily, but all who retired at that age were liable to come up for service if an emergency arose.

Overcrowding on the Underground Railway.

Mr. Weir asked the President of the Board of Trade whether, having regard to the excessive overcrowding of the carriages of the Metropolitan and Metropolitan-District Railways, he would suggest to those companies that the by-law approved by the Board of Trade under which a passenger was liable to a fine for travelling in a carriage of a class superior to that for which he was booked should be relaxed when he was unable to find a seat in the class of carriage for which he had taken a ticket.—Mr. Hanbury replied, saying that the President of the Board of Trade was not prepared to make the suggestion referred to in the question to the railway companies, as he doubted if it would act as a remedy for overcrowding. As a matter of practice the Board of Trade understood that the companies did not prosecute except in clear cases of intent to defraud.

TUESDAY, APRIL 27TH.

Medical Inspectorship of Prisons.

Mr. Pickersgill asked the Secretary of State for the Home Department whether Dr. Gover had resigned the medical inspectorship of prisons, and, if so, whether he would take the opportunity to appoint a medical man to be a member of the Prisons Board in accordance with the recommendation of the late Committee on Prisons, and thus assimilate the constitution of the Prisons Board in England to that of the Prisons Board in Ireland.—Sir Matthew White Ridley, in reply, said it was the case that Dr. Gover had resigned his appointment, but he had already decided, after giving full consideration to the recommendation of the Prison Committee, that it was not possible to dispense with the services of a medical inspector, and had therefore appointed Dr. Smalley, the medical officer of Parkhurst, in succession to Dr. Gover. This did not of course determine the question of the appointment of a medical member of the Board, but he did not at present contemplate making any such appointment.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, E. L., M.B., B.S. Lond., L.R.C.P., M.R.C.S., has been appointed a Medical Officer for the Croydon General Hospital.

ALLPORT, WILFRID, L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon to the Queen's Hospital, Birmingham.

ANDERSON, J. S., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Assistant Medical Officer to the Hull Corporation Asylum.

BLOMFIELD, S B., L.S.A., has been appointed Medical Officer for the Hurst Green Sanitary District of the Ticehurst Union.

BUSHBY, THOS., M.B., C.M. Edin., has been appointed an Honorary Physician to the Northern Hospital, Liverpool, vice J. Barr.

BUTLER, A., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Thedwastre Sanitary District, Suffolk, vice H. E. Harper, resigned.

CHALMERS, DAVID A., M.B. and C.M. Glasg., L.R.C.S. Edin., has been appointed Junior House Surgeon to the Greenock Infirmary, vice Dr. Lumsden, resigned.

CROCKER, J. H., M.D., D.P.H., has been appointed Medical Officer of Health of the Manchester Port Sanitary Authority.

CROWE, LEWIS W., M.D. Dub., B.Ch., has been appointed a Resident Assistant Medical Officer at Dyffryn Aled Lunatic Asylum.

DEMPSEY, P. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Employés of the Dublin United Tram Company, vice W. Anderson.

DRUITT, A. E., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Chelsea Infirmary.

EATON, JAMES, M.R.C.S., has been re-appointed Medical Officer of Health by the Grantham Rural District Council.

EDWARDS, ALEXANDER H., M.B. and C.M. Edin., M.R.C.S., has been appointed Senior House Surgeon to the Greenock Infirmary, vice Dr. Miller, resigned.

FLAVELLE, J. M., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the West London Hospital, Hammersmith-road.

FOX, G. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Walsall Union, vice J. Wood, resigned.

GREENWOOD, F. R., L.R.C.P. Lond., M.R.C.S., has been appointed a House Physician to the Queen's Hospital, Birmingham.

GRIFFIN, A. E., M.A. Cantab., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the *Dreadnought* Seamen's Hospital, Greenwich, S.E.

HARRISON, L. K., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to the Metropolitan Hospital, King's-road.

HENDERSON, A., M.B., C.M. Aberd., has been appointed Medical Officer to the Aberdeen General Dispensary, vice J. Gordon, resigned.

MARNOCH, JOHN, M.B., C.M. Aberd., has been re-appointed Medical Officer in connexion with the Gas and Electric Lighting Department by the Aberdeen Town Council.

MAY, H. J., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Royal Surrey County Hospital, Guildford.

NARIMAN, S., M.D. Bombay, L.R.C.P. Lond., M.R.C.S., has been re-appointed Second Assistant Medical Officer by the Shoreditch Board of Guardians.

PRICE, F. E., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the West London Hospital, Hammersmith-road.

PRITCHARD, W B., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Assistant Medical Officer to the Manchester Royal Infirmary.

ROBINSON, E. S., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health, Stourport.

RODOCANACHI, A. J., M.D. Lond., has been appointed House Surgeon to the District Infirmary, Ashton-under-Lyne.

SMITH, E. C. T., L.R.C.P. Lond., M.R.C.S., has been appointed Obstetric and Ophthalmic House Surgeon to the Queen's Hospital, Birmingham.

TYRER-JONES, L., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Trimsaran Collieries and Steel-works, Carmarthenshire.

WHITE, C. P., F.R.C.S., L.R.C.P. Lond., M.R.C.S., has been appointed Pathologist to the General Hospital, Birmingham.

WRANGHAM, J. M., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Fourth Assistant Medical Officer to the Wadsley Asylum, Sheffield.

YOUNG, T. B., M.D. Brux., L.R.C.P., L.R.C.S. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Halesowen Rural District Council.

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Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer, unmarried. Salary £100 per annum, with board and appointments in the Hospital.

CARDIFF INFIRMARY.—Assistant Resident Medical Officer for six months. Board, washing, and apartments provided.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident House Surgeon for two years. Salary £100 per year, with board, apartments, and laundress.

CITY OF COVENTRY.—Medical Officer of Health for five years. Salary £500 per annum. Applications to the Town Clerk, Coventry.

GLASGOW ROYAL INFIRMARY, GLASGOW OPHTHALMIC INSTITUTION, ST. MUNGO'S COLLEGE.—Surgeon to the Glasgow Ophthalmic Institution, Ophthalmic Surgeon to the Dispensary of the Glasgow Royal Infirmary, Consulting Ophthalmic Surgeon to the wards of that Infirmary, and Professor of Ophthalmology in St. Mungo's College. By arrangement the same person will be appointed to all these offices. Salary £100 per annum, with share of students' fees.

CORPORATION OF CROYDON.—Resident Officer for one year for the Borough Hospital for Infectious Diseases. Salary £120 per annum, with board and lodging. Applications to the Medical Officer of Health, Town Hall, Croydon.

GENERAL INFIRMARY AND DISPENSARY, Doncaster.—In-door Dispenser and Assistant to House Surgeon. Board, lodging, and washing provided.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing provided in the hospital.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London.—Junior Resident Medical Officer. Salary £50 per annum, with board, lodging, and washing.

HOSPITAL FOR WOMEN, Soho-square, London.—House Physician for six months. Salary for that period £30.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho-square, London.—Resident Medical Officer for six months. An honorarium of 10 guineas for that period, with board, residence, and laundry.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—Resident Medical Officer, for six months. Salary at the rate of £100 per annum, with furnished apartments, board, and washing.

ROYAL LONDON OPHTHALMIC HOSPITAL, Moorfields, E.C.—Assistant House Surgeon, non-resident. Salary £50 per annum.

RURAL DISTRICTS OF BARROW-UPON-SOAR, BILLESDON, BLABY, and for such districts for the period ending March 31st, 1900. Salary other combined Rural and Urban Districts.—Medical Officer of Health £450 per annum (inclusive of travelling, stationery, and all other expenses). Applications to Mr. Thos. C. Bodycotte, Lutterworth.

Births, Marriages, and Deaths.

BIRTHS.

BOSTOCK.—On April 24th, at Onslow-gardens, the wife of Surgeon-Captain Ashton Bostock, 2nd Scots Guards, of a son.

FAWCETT.—On April 24th, at Beauchamp Lodge, Wimborne, the wife of Dr. Herbert Fawcett, of a son.

GODFREY.—On April 24th, the wife of H. J. Clarendon Godfrey, Surgeon, of Bridlington Quay, of a son.

MOYNIHAN.—On April 27th, at 5, Woodhouse-square, Leeds, the wife of B. G. A. Moynihan, M.S. Lond., F.R.C.S. of a daughter.

MURCHISON.—On April 21st, at Wyke House, Isleworth, the wife of F. F. Murchison, M.B., M.A., of a daughter.

PORTER.—On April 10th, at Knollswood Villa, Simla, India, the wife of Surgeon-Captain Bruce Porter, A.M.S., of twin daughters.

TAYLOR.—On April 21st, at The Cottage, South Petherton, Somerset, the wife of Mark R. Taylor, M.R.C.S., L.R.C.P., of a son.

MARRIAGES.

ADAMSON—OMMANNEY.—On April 20th, at St. Mary Abbot's, Kensington, Robert Oswald Adamson, M.A., M.B., of Ashton-terrace, Glasgow, to Evelyn Mary, daughter of the late Commander Henry Mortlock Ommanney, R.N.

CALLENDER—STEPHENS.—On April 22nd, at St. Mary Abbott's, Kensington, by the Rev. Douglas Stephens, cousin of the bride, assisted by the Rev. Canon Pennefather, Vicar of Kensington, Eustace Maude Callender, M.D., fourth surviving son of the late Mr. S. P. Callender of Whalley Range, Manchester, to Adelaide Frances, eldest daughter of the late Mr. John Beeching Stephens of Ardenlee, Maidstone, and of Mrs. Beeching Stephens of 15, De Vere-gardens, Kensington.

DICKSON—HOWLETT.—On April 21st, at All Saints' Church, Upper Norwood, Thomas Hugh Dickson, M.A., M.B., Medical Officer to the Board of Customs, to Rose Annie, younger daughter of General Sir Arthur Howlett, K.C.B., M.S.C.

DREW—RENWICK.—On April 28th, at Streatham, Edward Hatherell Drew, M.R.C.S., L.R.C.P., son of W. P. Drew of Gloucester, to May, eldest daughter of the late S. T. Renwick of Melbourne, Australia.

FEGAN—BRIGSTOCKE.—On April 22nd, at St. James's, Kidbrook, Blackheath, S.E., Richard Ardra Fegan, L.S.A. Lond., M.R.C.S. Eng., L.R.C.P. Lond., of Old Charlton, to Fanny Isabella, daughter of the late Captain Augustus Brigstocke, 51st King's Own L.I.

FULLERTON—BULLOCK.—On April 26th, at Holy Trinity Church, Upper Tooting, Andrew Fullerton, M.D., B.Ch., B.A.O., of Belfast, to Caroline Bullock, second daughter of J. Thornton Bullock, of Upper Tooting.

GROVE—STEVENSON.—On April 27th, at St. John's, Brixton, by the Rev. R. Abbay, rector of Earl Soham, assisted by the Rev. C. J. R. Cooke, the Rev. A. G. Bowman, and the Rev. C. H. B. Williamson, vicar, William Reginald Grove, M.B., B.C. Cantab., of St. Ives, Hunts, to Clara Hilda, second daughter of Thomas Stevenson, M.D., F.R.C.P., of Sandhurst Lodge, Gresham road, S.W.

HOGBEN—WAGSTAFF.—On April 22nd, at St. Augustine's, Highbury New-park, Edgar Hogben, M.D., M.R.C.P., of Strathmiglo, N.B., to Dorothy Maude, eldest daughter of John Wagstaff, of Highbury Lodge, London, N.

HOWE—WALLWORK.—On April 21st, at Emmanuel Church, Didsbury, George Bradley Howe, M.R.C.S., of Stalybridge, to Ellen, daughter of the late J. W. Wallwork, Esq., of Manchester.

KEOGH MURPHY—SCHOFIELD.—On April 24th, at the Manchester Cathedral, James Keogh Murphy, of Princes-square, Bayswater, M.A., M.B., B.C. Cantab., to Mabel Roney, only daughter of Joshua K. Schofield, of Kersal, Manchester.

LUCAS—BENNETT.—On April 24th, at St. Giles's, Camberwell, Claude Robinson Lucas, M.R.C.S., L.R.C.P., Broadway House, Tooting, to Marion Ada, fourth daughter of the late Edwin Bennett, M.R.C.S., of Worksop, Notts.

MACANN—DAVIES.—On April 24th, Arthur Charles Joseph Macann, M.R.C.S. Eng., L.R.C.P. Lond., eldest son of the late Dr. A. B. Macann, of King-street, Portman-square, W., to Caroline Eliza, youngest daughter of the late John Davies, Esq., of Dale-road, Hampstead.

MILSOME—ARMISTEAD.—On April 22nd, at St. Andrew's Church, Stapleford, Cambs., Harry Blunt Milsome, B.A., M.R.C.S., of Chertsey, Surrey, to Amy Warwick, elder daughter of Dr. Armistead, of Stapleford, Cambs.

PAPILLON—FORD.—On April 24th, 1897, at St. Peter's Church, Belsize-park, Hampstead, by the Rev. Duncan Papillon, M.A., Vicar of Hadley, Wellington, Salop, brother of the bridegroom, assisted by the Rev. Gerard J. Ford, M.A., Rector of Ideford, Chudleigh, South Devon, cousin of the bride, Thomas Alexander Papillon, of 3, Pevensey-road, St. Leonards-on-Sea, son of Major A. F. W. Papillon, R.A., of Reading, to Emma Louisa Wharton, younger daughter of Wharton Ford, of 49, Fellows-road, South Hampstead, N.W.

PENDRED—FLEMING.—On April 21st, at St. Leonard's Church, Streatham, by the Rev. E. L. Berthon, late Vicar of Romsey, great uncle of the bridegroom, assisted by the Rev. Sydney Hall Fleming, Vicar of St. James, Croydon, uncle of the bride, Berthon F. Pendred, M.R.C.S., L.R.C.P., youngest son of Vaughan Pendred, C.E., of Crohill, Streatham, to Eleanor, eldest daughter of Francis Henry Fleming, of Haslemere, Streatham.

PENNY—MACRAE.—On April 24th, at St. John's Church, Upper Norwood, Alfred Gervase Penny, M.A., M.B., B.C., of Peterhouse, Cambridge, and St. Bartholomew's Hospital, to Nellie Grace Gillanders, eldest daughter of late John MacRae, of Arrowah, Bengal.

SLATER—LOY.—On April 22nd, at Whitton Church, near Ludlow, Leonard Slater, M.A., M.B., of Osman House, Fortis-green, London, N., to Agnes, youngest daughter of the Rev. James Loy, Rector of Hardenuish, Wilts.

SOUTHERN—DUNLOP.—On April 21st, at St. Columba's Church, Pont-street, Belgrave-square, London, John Acton Southern, M.B., to Elizabeth Lillias Mary, eldest daughter of the late William Carstares Dunlop, of Gairbraid.

SPARROW—HUGHES.—On April 22nd, at St. Thomas's, Shepherd's-bush, Staff Surgeon Horatio Septimus Richard Sparrow, R.N., H.M.S. *Medea*, fourth son of the late Dr. R. Pennington Sparrow, of Southsea, to Christian Stirling, second daughter of Charles H. Hughes, of Shepherd's-bush.

TORNEY—WOODROW.—On April 21st, at the Skipton Parish Church, Richard Hastings Torney, M.B., Bungay, Suffolk, to Jessie Gunn, youngest daughter of the late John Woodrow, of Sandywood House, Keighley.

WRIGHT—CORRIE.—On April 22nd, at All Saints', Margaret-street, by the Rev. H. C. Wright, of Haileybury College, brother of the bridegroom, assisted by the Rev. Lord Victor Seymour, Rector of Carshalton, Walter Southey Wright, B.A., M.R.C.S., &c., of Park View, Carshalton, youngest son of the late John Freeman Wright, M.R.C.S., &c., of Seymour-street, Portman-square, and of Mrs. Wright, The Hermitage, Shirehampton, to Caroline Maude, younger daughter of B. Corrie, Esq., late R.N., and granddaughter of the late Rev. Frederick Chapman and the Hon. Louisa Yelverton.

WRIGHT—PORTUS.—On April 22nd, at St. Martin's-in-the-Fields, London, by the Rev. Wm. Ball Wright, uncle of the bridegroom, Robert Ball Wright, L.R.C.P. and S. I. of Chester, third son of the late Robert Ball Wright, B.A., J.P., of Foulksneeth Castle, co. Kilkenny, to Dorothea, third daughter of the late George Bullock Portus, of N. Wales.

DEATHS.

ANDREW.—At Tavistock, Devon, James Andrew, M.D. Oxon., Consulting Physician to St. Bartholomew's Hospital, aged 67 years.

APPLETON.—On Easter Day, at Gilston-road, South Kensington, James Metcalfe Appleton, M.D. Pisa (1838), M.R.C.S., Eng. (1837), L.S.A. (1836), aged 82.

DIMSEY.—On April 21st, Alfred Dimsey, M.B., B.S. Lond., of 4, Crouch Hall-road, Crouch-end, N., late House Physician and House Surgeon at University College Hospital, aged 25.

EVES.—On April 26th, at Brooks Lodge, Cheltenham, Charles Thick Eves, Deputy-Surgeon-General, late Indian Service, in his 69th year.

LAWSON.—On April 23rd, at Hay, New South Wales, Thomas Lawson, M.B., C.M., of Dean-terrace, Edinburgh, aged 31. By cable.

ROGERS.—On April 23rd, at his residence, Holland-road, Kensington, W., George Goddard Rogers, M.D. St. And., M.R.C.P. Lond.

TEALE.—On April 19th, John William Teale, M.A. Oxon., F.R.C.S., of Scarborough, aged 58 years.

WILSON.—On April 27th, at Huntly, Aberdeenshire, George Wilson, M.D., in his 86th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (5th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (6th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (8th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (3rd).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Communications by Mr. J. F. Colyer, Mr. W. R. Humby, and Mr. H. Baldwin. Exhibition of a Series of Lantern Slides by Mr. C. S. Tomes.

TUESDAY (4th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Parkes Weber: General Lymphadenomatosis of Bones.—Dr. Rolleston and Mr. E. L. Hunt: Dermatitis Maligna.—Dr. A. Latham: Peculiar Specimen of the Vermiform Appendix.—Dr. G. F. Still: Gumma of the Spleen in Children.—Dr. R. H. Fox: Rupture of the Heart.—Mr. S. G. Shattock: Mucosal Cysts in the Stratum Granulosum. Card Specimens:—Dr. Parkes Weber: Tight-lacing Liver in a Man.—Dr. Rolleston: Non-infective Aneurysms of Cardiac Valves.

WEDNESDAY (5th).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Mr. J. Bland Sutton and Mr. J. H. Targett, (both with Lantern Demonstrations). Papers:—Dr. T. Wilson: Chronic Axial Rotation of an Ovarian Cyst giving rise to extreme Twisting of the Elongated Uterus.—Mr. J. W. Taylor: On a Second Case of so-called abdominal or Ventral Pregnancy at Full Term, Operation at the Twelfth Month, Removal of Child and Placenta, Recovery.

THURSDAY (6th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8.30 P.M. Clinical Evening. Mr. P. Smith: Ophthalmic Specimens mounted in Formol Solution.—Mr. Eve and Dr. F. J. Smith: Case of Obstruction of the Cavernous Sinus.—Mr. Hartridge: Unusual (Congenital) Defect of Crystalline Lens.—Mr. E. Clarke: Three Specimens of Detachment of the Retina.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (3rd).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Malarial Fever.

TUESDAY (4th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—Dr. Beevor: Lecture.

WEDNESDAY (5th).—HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Mitchell Bruce: Enlargement of the Heart with Cases to illustrate its different Forms in Lung Disease, Valvular Disease, Renal Disease, and Graves's Disease.

LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Malarial Fever.

THURSDAY (6th).—ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Liquid Air as an Agent of Research.

SOCIETY OF ARTS.—4.30 P.M. Surgeon-Major Sir G. Scott Robertson: Kafiristan, its Manners and Customs.

FRIDAY (7th).—EAST LONDON HOSPITAL FOR CHILDREN.—3 P.M. Mr. R. W. Parker: Demonstration on Surgical Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—Dr. Colman: Lecture.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 29th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia. in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April 23	30·05	E.	46	44	96	53	40	...	Overcast
" 24	29·90	E.	48	47	94	52	41	...	Cloudy
" 25	29·90	E.	50	45	93	56	41	...	Cloudy
" 26	29·82	E.	51	47	106	65	41	...	Fine
" 27	29·89	N.E.	49	47	82	67	47	0·13	Hazy
" 28	30·00	N.W.	54	53	95	65	49	0·09	Overcast
" 29	30·07	S.W.	51	50	109	65	49	...	Overcast

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

CRIME IN GLOUCESTERSHIRE.

THE report of the Chief Constable of Gloucestershire for 1896, which has been recently issued, states that the total number of crimes reported to the police under the head of indictable offences was 610, being a decrease of 19 as compared with 1895. The number of persons apprehended and summoned for these offences was 658, an increase of 61 compared with the previous year's return. Of these, 440 were tried summarily—159 were discharged and 281 were convicted—96 were committed for trial and sent to prison, 37 were bailed for trial, and 85 otherwise disposed of. For non-indictable offences 1247 persons were apprehended and 5590 summoned, an increase of 536 as compared with 1895.

Mr. James Brown.—The conclusions are too sweeping and quite unscientific. We should like to have the details of some of the successful cases, with the notes of the medical men in attendance.

"WANDERING RASH OF THE TONGUE."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Nov. 21st, 1896, you have a short notice of an article by Dr. J. L. Goodall under the above heading. I have a case which defies all treatment I have brought to bear on it. Will you kindly inform me, either through your readers or by reference to any work, as to the treatment of this troublesome condition. Thanking you in anticipation, I am, Sirs, yours truly,

April 27th, 1896. SAM. T. LORD, M.R.C.S. Eng., L.R.C.P. Lond.

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MEDICAL APPOINTMENTS UNDER THE LOCAL GOVERNMENT BOARD.

Quæsitor (1) will find in "Whitaker's Almanack," under the heading of Government Offices, the names of those attached to the medical staff of the central health departments of the United Kingdom, and in the Medical Directory will be found a list of the medical officers of health to the several sanitary areas of England, Scotland, and Wales. From the same source may also be ascertained the answers to queries 2 and 3. Nos. 4, 5, 6, and 7 may be answered collectively. Without a diploma in Public Health the chances of a medical practitioner who enters the Public Health Service at the present time are not good, and if our correspondent will refer to Section 18, Sub-section 2, of the Local Government (England and Wales) Act, 1888, he will find that a D.P.H. is almost a necessity for anyone wishing to win one of the higher posts, and practically the same conditions obtain in Scotland. In Ireland the state of affairs is somewhat different, but the prospects, even with a D.P.H., are not very promising. An M.D. would certainly improve his chances by taking the D.P.H., but it is necessary to point out that much would depend upon his experience, and, as regards the future, upon his age. The F.R.C.S. would be of but little special value in the service. Probably our correspondent would find that the Local Government Directories, which may be obtained from Messrs. Knight and Co, 98, Fleet-street, London, would afford him some useful information.

J. C. R. (Swindon).—There is not a fixed fee in such cases, but a fee of one guinea in the circumstances mentioned is both reasonable and usual. In the case of certifying lunatics for removal to an asylum the amount of the fee rests with the lunacy justice, but for certifying persons of unsound mind for detention in the workhouse, Section 24, Sub-section 5, of the Lunacy Act, 1890, enacts that "*the guardians* ..... shall pay such reasonable remuneration as *they think fit* to the medical practitioner who, not being an officer of the workhouse, examines a person for the purpose of a certificate under this section." If our correspondent had no previous understanding with the guardians as to what is "reasonable remuneration" he would do well to accept their offer. The only alternative is to sue the guardians in the county court, and this would probably cost more than the matter is worth, and the issue is doubtful, as it clearly rests with the guardians to fix the remuneration, and perhaps they think that some reduction should be made in consideration of the number dealt with at one time.

Mr. C. Williams.—The best way is to consult a list of charitable institutions, such as Burdett's, and to write to the secretaries of two or three for information as to rules, terms, &c.

WANTED A HOME FOR AN IMBECILE BOY.

To the Editors of THE LANCET.

SIRS,—I should be glad to hear of a place where a lad aged about twelve years, and strong in health, though of deficient intellect, could be received and taught. About 10*s.* or 12*s.* a week could be paid for him.

I am, Sirs, yours faithfully,

Wigston Magna, Leicester, April 17th, 1897. A. N. BARNLEY.

P. G. P. (Highbury).—Our correspondent will find a long list of inebriates' homes in Burdett's "Hospitals and Charities." Very few, however, take male patients, and in those that do the lowest fee appears to be two guineas a week.

MEDICAL ATTENDANCE ON THE POOR IN BELGIUM.

THE miserable payments made by local Poor-law authorities in Belgium for medical attendance on paupers have recently formed the subject of somewhat sarcastic remarks in Parliament, from which it would seem that while the usual amount expended on medical attendance, including medicines, by the different boards in the Province of Flanders rarely exceeds a penny per person annually, and in one commune is as low as a farthing, a third of a penny being quite a common rate, a certain typical society in Ghent, composed entirely of healthy men, finds its medical and pharmaceutical expenses amount to about two shillings per head. Again, the horses in the army are supplied with veterinary attendance, at an expense to the nation, which it does not think of grudging, of eighteen shillings. Of course, the comparison between a horse and a human being is not quite fair from a pharmaceutical point of view, but it is always a little tantalising to see contracts given out at fifteen shillings or a guinea per horse to a veterinary surgeon by the same authority that pays its medical officer £50 or £60 for attendance on several hundred poor people, many of whom are chronic invalids and in a condition which, if it existed in a veterinary patient, would lead to a very early interview with the knacker. The Belgian cavalry horses, it will be seen, cost as much to keep in health as is allowed for 900 poor people in some places!

LIFE-SAVING SOCIETY (ANNUAL REPORT, 1895-6).

THIS report contains many interesting features. Among these we may mention in particular an article on Instruction in Swimming at School from the pens of the honorary secretaries of the society, Mr. W. Henry and Mr. A. Sinclair, which shows the use of having a swimming drill on land. The report also gives all the names of persons who have won the society's medallions and certificates during the past year. These awards have greatly increased during the twelve months, while we are also informed that over 2000 persons have acquired a thorough technical knowledge of the various means of saving life from drowning since the work of the society was begun.

Senex.—We do not think that a correct interpretation of the results of analysis can be arrived at without some knowledge of the source of the water and of the possibility of contamination. We attach, also, among the factors which are furnished by chemical analysis some importance to the amount of oxygen absorbed. It is obvious that, although a water may not be polluted with animal matter, yet vegetable pollution may assume an objectionable proportion.

E. H. (Derby).—We never recommend individual practitioners. Our correspondent must consult his own medical man.

"MEN SHALL INCLUDE WOMEN," &c.

To the Editors of THE LANCET.

SIRS,—Your article upon the new Sanitary By-laws for London has set me reading them. I find that all the provisions suppose the persons executing the work to be of the masculine gender. Those who drafted these by-laws have overlooked the possibility of that amorphous precipitate, "the new woman," being thrown down upon the building trade. The position of some unfortunate sanitary inspector unprovided against such a contingency, when suddenly confronted with some defiant specimen of her class, would be suggestive of the roadside toll collector, who, having demanded twopence from two ladies in a dog-cart, and pointed out the by-law that the charge for a man and horse was twopence, was ordered to stand aside as they were two girls and a mare!

I am, Sirs, yours truly,

April 27th, 1897. AN OLD MAN.

Dr. Cafferata.—We do not insert such notices or approve of their publication in the lay journals, such a course being contrary to the code of ethics which governs the medical profession in this country.

A HANDSOME GIFT.

THE *Maryland Medical Journal* states that Dr. Nicholas Senn has purchased the enormous library of the late Professor Du Bois-Reymond, of Berlin, and has presented it to the Newberry Library of Chicago.

Mr. C. Simpson.—Our correspondent had better consult a local medical man and avoid unqualified "specialists."

MEDICAL MEN AND THE TUBERCULIN TEST.

AT a meeting of the Brighton and Sussex Medico-Chirurgical Society the following resolution was passed without dissension after an exhaustive discussion: "That preference should, in the opinion of this society, be given in obtaining milk supplies to such farmers and dairymen as guarantee that their cows have been properly subjected to, and have failed to react to, the tuberculin test for tuberculosis."

C. F. W.—Yes, the name and qualifications mentioned do appear in the current Register.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Dundee Courier, Derbyshire Times, Huddersfield Examiner, Sheffield Telegraph, Somerset County Herald, Norfolk Chronicle, Times of India, Hull Daily News, Pioneer Mail, Surrey Comet, Richmond Times, Scotsman, Sussex Daily News, Manchester Guardian, Builder, Kentish Gazette, Newbury Weekly News, Lichfield Mercury, Architect, Liverpool Daily Post, Luton Reporter, Wolverhampton Chronicle, Coventry Times, Yorkshire Post, Hastings Times, Glasgow Evening News, Birmingham Gazette, Midland Counties Express, Leeds Mercury, Wigan Examiner, Western Morning News, Portsmouth Times, Halifax Guardian, Salisbury Journal, Bristol Mercury, Walsall Advertiser, Birmingham Daily Post, Isle of Wight Times, Family Doctor, Cumberland Advertiser, Sanitary Record, Cambria Leader, Weekly Free Press and Aberdeen Herald, Reading Mercury, City Press, Surrey Advertiser, Hertfordshire Mercury, Citizen (Gloucester), Local Government Chronicle, Derbyshire Courier, Mining Journal, Gloucestershire Chronicle, Local Government Journal, Richmond and Twickenham Times, Health News, Transvaal Critic, Irish Daily Independent Herald, Standard, Melbourne Evening Telegraph, Dublin Sportsman, Burton Evening Gazette, West Middlesex Herald, The Morning, Daily Record, Canterbury Times, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Mr. W. Alexander, Liverpool; Mr. F. Algar, Lond.; Agricultural Guild, Lond., Sec. of; Achaia Deutsche Actiengesellschaft für Weinproduction, Patras, Greece; Dr. H. Appleton, Hull; Messrs. Allen and Hanburys, Lond.; Messrs. Armbrecht, Nelson, and Co., Lond.

B.—Mr. James Brown, Bombay; Mr. Anthony Belt, Sandown, Isle of Wight; Bolton Medical Society, Chairman of; Bath Royal Mineral Water Hosp., Sec. of; Messrs. Burroughs, Wellcome, and Co., Lond.; Broca, Lond.; Messrs. Burgoyne, Burbidge, and Co., Lond.; T. B. Browne, Ltd., Lond.; Beech Hurst, Hanley; Dr. Birt, Lond.; Dr. A. Bronner, Bradford; Miss A. J. Beatty, Lond.; Messrs. Burgoyne and Co., Lond.

C.—Dr. W. F. Colclough, Oporto, Portugal; Mr. A. C. Champati; Krishnaggar, India; Church of England Temperance Society, Lond., Sec. of; Dr. J. H. Crocker, Eccles; Dr. Cafferata, Spa, Belgium; Church Society for the Promotion of Kindness to Animals, Lond., Hon. Sec. of; Cortland Wagon Co., Lond.; Dr. Crook, Margate; Chirurgus, Lond.; Cardiff Infirmary, Sec. of; Mr. W. P. Cox, Leicester; Mr. T. Cooke, Lond.; Cellular Clothing Co., Lond.; Chesterfield Hosp., &c., Sec. of; Messrs. Crossley, Moir, and Co., Lond.; Crichton Royal Institution, Dumfries, Supt. of.

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E.—Dr. A. J. Edwards, Chorlton-cum-Hardy, near Manchester;

F.—Dr. C. R. Francis, Lond.

G.—Dr. A. R. Galloway, Aberdeen; Miss A. G. Green, Lond.; *Gazetta degli Ospedali e delle Cliniche*, Genoa, Italy; Dr. C. L. Gibson, New York; Dr. W. Groom, Wisbech; Mr. G. Gresswell, Grimsby; Messrs. Gardiner and Co., Wisbech; General Apothecaries' Company, Lond.

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I.—Messrs. I. Isaacs and Co., Lond.; Messrs. Ingram and Royle, Lond.; International Exhibition of Motors and Cycles, Lond., Organiser of.

J.—Mr. T. V. Jackson, Wolverhampton; W. Judd, Ltd., Lond.; Jenner Society, Gloucester, Hon. Sec. of.

K.—Mr. H. Kimpton, Lond.; Dr. S. Kitasato, Tokyo, Japan.

L.—Mr. H. L. Upton, Stratford-on-Avon; Mr. S. T. Lord, Castleton, Lancs.; Dr. T. Laird, Heywood, Lancs.; Dr. G. T. Longbotham; Middlesborough; London Association for the Prevention of Premature Burial, Executive Committee of; Dr. P. Letters, Valencia Island, co. Kerry; Mr. H. K. Lewis, Lond.; Dr. A. P. Luff, Lond.

M.—Mr. T Murray, Leamington-on-Tyne; Merchant Banking Co., Lond., Sec. of; Maltine Manufacturing Co., Lond.; Messrs. Macmillan and Co., Lond.; M. A., Lond.; Dr. T. More Madden, Dublin; M.R.C.S., L.R.C.P., London; M.D., Camberwell.

N.—National Hospital for the Paralysed and Epileptic, Lond., Sec. of; National Hosp. for Diseases of the Heart, Lond., Sec. of.

O.—Dr. J. Oliver, Lond.; Dr. H. Lond.

P.—Mr. F. T. Paul, Liverpool; Mr. B. F. Pendred, Lond.; Dr. W. H. Price, Newbridge; Mr. Norman Porritt, Huddersfield; Mr. E. P. Pentony, Middlesborough; Mr. Y. J. Pentland, Edin.; Dr. M. W. Pynappel, Zwolle, Holland.

R.—Dr. R. R. Rentoul, Liverpool; Royal Aquarium, Lond., Sec. of; Messrs. Ross and Co., Lond.; Mr. F. H. Roberts, Lond.; Mr. A. Radcliffe, Heckmondwike; Mr. B. Relton, Rugby; Dr. J. C. Rattray, Swindon; Dr. J. Rose, Chesterfield; Mr. A. Reckless, Sheffield; Royal College of Physicians of Ireland, Dublin, Clerk of; Royal Meteorological Society, Lond., Asst. Sec. of; Dr. H. Renney, Sunderland; Dr. J. D. Rawlings, Lond.

S.—Dr. D. W. Samways, Mentone; The Sanitary Institute, Lond., Sec. of; Mr. A. Stenhouse, Glasgow; Messrs. S. Smith and Co., Lond.; Mr. C. E. Sajous, Paris; Messrs. Street and Co., Lond.; Messrs. Smith, Elder, and Co., Lond.; Messrs. A. G. Spalding and Co., Lond.; Messrs. R. Sumner and Co., Liverpool; Mr. T. Smith, Lond.; Messrs. W. H. Smith and Son, Manchester; Mr. A. A. C. Swinton, Lond.; Society of Apothecaries of London, Sec. of; Dr. C. B. Savory, Lond.; Society of Arts, Lond.

T.—Mr. C. Truman, Nottingham; T. D. P., Preston; Rev. A. Tooth, Woodside; Mr. C. H. Tattersall, Oldham; Town Clerk's Office, Hastings, Clerk of; Mr. H. J. Thomas, Carshalton.

V.—Dr. G. C. L. Vintras, Lond.; Verax, Lond.; Vigilant, Brighton.

W.—Dr. A. McC. Weir, East Sheen; Mrs. M. E. Williams, Truro; Dr. A. R. A. Wilhelm, Barkly East, Cape Colony; Dr. W. A. Wills, Lond.; Mr. C. H. Whiteford, Plymouth; W., Lond.; Mr. S. Wand, Leicester; Mr. T. Woodruff, Withington.

X.—X. Y. Z., Lond.; X., Darlington.

Y.—Mr. E. W. Young, Weedon; *Yorkshire Post*, Leeds; Yorkshire College, Leeds, Registrar of.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. P. O. Andrew, Tavistock; Ashwood House, Kingswinford, Proprietor of; Argentum, Lond.; Alpha (April 17), Lond.; Alpha, Lond.; Mr. W. H. Alger, Devonport.

B.—Miss E. F. Boultbee, Lond.; Bertram, Lond.; Bradford Infirmary, Sec. of.

C.—Mr. J. Carter, Lond.; Col. J. Crosbie, Lond.; Chamberlain Medicine Co., Desmoines, Iowa, U.S.A.; Messrs. E. Cook and Co., Lond.; Messrs. Cassell and Co., Lond.; Mr. F. W. Clarke, Manchester: Mr. J. M. Collins, Lond.; Capt. D. A. Callender, Lond.; Messrs. G. Carré et Naud, Paris; Cavey, Lond.; Dr. P. B. Considine, St. Ives, Hunts; Cymene, Lond.; Mr. W. F. Clay, Edin.; C. H. 301, Aston; Cornwall County Asylum, Bodmin, Clerk of.

D.—Mr. N. Daly, Kingston Bagpuze, Mrs Duncan, Lymington; Dr. J. Dodd, Ashby-de-la-Zouch; Dundee Royal Infirmary, Treas. of; W. C. Downs, Helensville, N.B.; Devon and Exeter Hosp., Exeter, Sec. of; D.P.H. Camb., Lond.; Mr. D. G. Dimsey, Lond.; Mrs. E. Douglas, Lond.; Mr. R. Davis, Lond.; Derbyshire Royal Infirmary, Derby, Sec. of; Dispenser, St. John's-wood.

E.—Dr. F. P. Elliot, Walthamstow; E. J. F., Liverpool; Ex, Lond.

F.—Dr. W. D. Forsyth, Eyemouth; Forceps, Hadleigh; Flintshire Disp., Holywell.

G.—Mr. W. B. Gloag, Perth; Mr. A. B. Gunstone, Sheffield; Grove House Private Asylum, Church Stretton; Messrs. R. W. Greeff and Co., Lond.; Mr. W. A. Gimber, Lond.; Gt. Yarmouth Hosp., Accnt. of; Lt.-Col. H. H. Godwin-Austen, Guildford.

H.—Mr. M. Hall, Birkdale; Mr. J. Harston, Pirbright; Mr. B. H. Herbert, Uttoxeter; Messrs. R. Hogg and Son, Lond.; Hants County Asylum, Fareham, Clerk of; Dr. J. Holmes, Whitefield; Holly, Lond.; Hollinbrook House, Littleborough; Messrs. Hazell, Watson, and Viney, Lond.; Hosp. for Consumption, Brompton, Sec. of.

K.—Mr. A. Kidd, Long Reach; Mr. T. S. Keys, Ton Pentre; Dr. A. Kinsey-Morgan, Bournemouth;

L.—Mr. H. Lloyd, St. Asaph; Messrs. Lee and Nightingale, Liverpool; Messrs. Lee and Martin, Birmingham; Liverpool Royal Infirmary, Sec. of; Dr. R. Liveing.

M.—Dr. W. F. MacDonald, Auchtermuchty, N.B.; Messrs. Maythorn and Son, Biggleswade; Dr. A. G. Macdonald, Chorley; Mr. S. R. Merry, Hemel Hempstead: Mr. S. Mackey, Hodnet; Dr. F. March, Bradford; Martius, Lond.; M.B., London; M.R.C.S.E., Bildeston; M.R.S.S., Ilfracombe; Mr. H. Mason, Lond.; Meddyg, Lond.; Medicus, Lond.

N.—Dr. W. A. Newall, Hartford; Norens, Lond.; Naoim, Lond.; Nebo, Lond.; Mr. Needes, Lond.

O.—Mr. F. A. Osborn, Dover; Omega, Lond.; *Oldham Standard*, Oldham.

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A Clinical Lecture

ON

THE SURGICAL TREATMENT OF RELAPSING APPENDICITIS, WITH A REPORT OF THREE SUCCESSFUL CASES.

Delivered at the General Hospital, Birmingham, on Jan. 27th, 1897,

BY GEORGE HEATON, M.B.OXON., F.R.C.S.ENG.,

HONORARY SURGEON TO THE HOSPITAL; SURGEON TO THE BIRMINGHAM AND MIDLAND COUNTIES HOSPITAL FOR SICK CHILDREN, ETC.

GENTLEMEN,—Inflammation of the vermiform appendix, or, as it was formerly termed, perityphlitis, is a disease from which in the majority of cases a patient suffers once, and once only, in a lifetime. He has an attack—severe or mild as the case may be—and if, under proper medical care and treatment, he is restored to health his appendix in the majority of cases gives no further trouble. But in a certain number of cases, the sequence of events is not so happy. After an interval, it may be of months or of years, a relapse occurs, and this is followed at longer or shorter intervals by a number of other ones varying much in severity. These may be so frequent and so severe as to render the patient a confirmed invalid even if he does not actually die in one of them. Relapses are, I fancy, more frequent than is generally deemed to be the case. Hospital patients, from whom most of our statistics on such subjects are derived are a very wandering population, especially in our big cities, and for this reason it is very difficult to obtain an accurate knowledge of the after history of our patients or to determine the actual percentage of relapses after apparent cures. Hawkins[1] from an analysis of 250 cases admitted into the wards of St. Thomas's Hospital found that in 23·6 per cent. there was a history of one or more previous attacks. These figures show that the percentage of relapses after apparent cure of appendicitis is certainly as high as 23 6 per cent.; and inasmuch as amongst these 250 cases are included cases which, though suffering on admission from a first attack, may possibly, after apparent recovery and discharge from hospital, have had other attacks, the percentage of relapses is probably considerably higher. In almost all these relapsing cases it is the appendix itself which is the starting-point of the recurrent attacks of inflammation. In one or two exceptional cases only have they been traced to ulceration in the cæcum itself. The principal morbid conditions which are found may be grouped under six heads: (1) an enterolith is imprisoned in the appendix (as in Case 1) with occasional distension of its blind end with pus; (2) the appendix is surrounded by dense, inflammatory adhesions enclosing an encapsuled abscess; (3) the lumen of the appendix is destroyed by ulceration and its distal end is distended with mucus or pus; (4) the appendix is coiled upon itself or acutely "kinked" and fixed in this position by adhesions; (5) the appendix is free but much thickened, resembling a mass of cartilage rather than a mucous tube (such an appendix is occasionally lengthened and unequally distended along its length); and (6) the appendix is surrounded by dense old adhesions, matting it to the cæcum, small intestine, bladder, rectum, or the abdominal wall.

In some cases these relapses seem to become milder, in others more severe as time goes on; but a severe or even fatal relapse may follow a succession of very mild ones, and we cannot predict with any certainty the character of future relapses from that of the previous ones. For this reason the principle of treatment by removal of the offending organ during a quiescent period, which has been so ably advocated, and so successfully carried out, by Mr. Treves in this country, cannot be too strongly insisted upon. But I would go still further and make it a rule to strongly advise operation in all cases where there has been a single relapse after the primary attack. Careful dieting and medicine with prolonged rest in bed may in a few of such relapsing cases effect a lasting cure, but this is the exception, and in the majority of cases relapse follows relapse, producing in some cases a chronic state of invalidism, while each relapse adds to the difficulties and dangers of any operation which may ultimately have to be performed. In my own experience during the last few years I know of five cases in which a sudden fatal general peritonitis has followed the repeated warnings given by a succession of mild relapses and in which, had this treatment been adopted and the removal of the diseased appendix been effected after one of the earlier mild attacks, these lives would in all probability have been saved.

The operation itself is often extremely simple; in the first two of my own cases it was so; but it may, on the other hand, be one of extreme difficulty. I have more than once assisted at cases where, owing to the dense and extensive adhesions, and the intimate adhesion of omentum, intestine, and cæcum, it has been found quite impossible even to expose the appendix, and the attempt has had to be abandoned. The mortality, however, attending it in skilled hands is extremely small (Mr. Treves has published a brilliant record of 150 cases with only one death). The repeated attacks of inflammation have fortunately rendered the peritoneum both less vulnerable to injury and less absorbent of poison; and for this reason an amount of tearing and bruising which, with a normal peritoneum would almost certainly set up the most intense inflammation is frequently followed by little or no disturbance. Whenever possible the stump of the appendix left after removal should be provided with a serous covering. With this object in my two first cases I raised a circular flap of peritoneum only from the appendix, commencing some half an inch beyond the point at which it was intended to excise it. The muscular and mucous coated were then ligatured with silk, cut through, and the stump touched with pure carbolic acid. The flap of serous membrane was finally stitched over the stump so as to completely cover it in. It was impossible to do this in Case 3, and I am disposed to attribute the localised suppuration which occurred to an infection of the wound from the exposed mucous membrane. No drainage of the peritoneum is necessary in uncomplicated cases. It should be avoided if possible, as the liability to a subsequent yielding of the scar and formation of a ventral hernia is thus considerably lessened. The rapid gain in weight and flesh and the quick restoration to robust health after the operation is one of its most remarkable features.

CASE 1. *Relapsing appendicitis; removal of appendix after the fourth attack; recovery.*—The patient, a man aged nineteen years, came under my care at the General Hospital on March 19th, 1896, with slight tenderness in the right iliac fossa. His first attack—the most severe one—was five years previously, the second three years, the third six months, and the fourth, whilst at the Jaffray Hospital, one month previously to his coming under my care. The attacks usually lasted about a week or ten days, and were accompanied by some pain and tenderness in the abdomen and a slight rise of temperature. He had never been sick during an attack. The last one was brought on by eating an apple. His condition on admission was as follows. He had no pain, but there was some slight tenderness in the right iliac fossa, On palpation a well-defined mass could be felt about the size of a walnut. It was situated two inches from the right anterior superior iliac spine, along a line drawn from that point to the umbilicus. Operation was performed on March 14th. The abdomen was opened by a linear incision over MacBurney's point. The appendix was found to be surrounded by matted omentum. This was separated and removed. The appendix, which was bound down and twisted on itself, was then separated from its adhesions and its mesentery was ligatured and cut through. A circular flap of serous coat only was raised for about half an inch near its junction with the cæcum. This was turned back, a silk ligature was tied tightly round the muscular and mucous coats, and the appendix cut away. The stump was touched with pure carbolic acid and the serous flap was then stitched over it with a continuous catgut suture. A small drain of iodoform gauze was left in the abdominal wound for twenty-four hours. The wound united by primary union save where the drain had been. His temperature did not reach 99°F. Some three weeks after the operation he had for about ten days some pain and frequency of micturition and a slight elevation of temperature, which with rest and low diet passed off. He

[1] Hawkins: Diseases of the Appendix, p. 112.

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was discharged well on May 4th. When seen in December, 1896, he had some tendency to a small ventral hernia at the seat of the scar, and was ordered an abdominal belt. He had no more pain or abdominal trouble. With regard to the condition of the appendix, it was enlarged and thickened throughout its whole length. In its middle third it was distended into a tense sac, which on opening contained a little muco-purulent fluid and a hard oval-shaped enterolith. The coats of the appendix on section showed evidence of chronic inflammation, which was most marked in that part of the tube where the enterolith lay impacted.

CASE 2. *Relapsing appendicitis; removal of appendix after the seventh attack; complete recovery.*—A lady, aged twenty-eight years, was seen in consultation with Mr. Turner. She had had seven attacks, varying in severity, during the past four years. The present one began seven weeks previously with vomiting and pyrexia. She had been an invalid in bed ever since with occasional pyrexial attacks and exacerbations of pain in the right iliac fossa. The tumour could be plainly felt in the position of the appendix and was tender on palpation. She had lost flesh considerably. Operation was performed on Oct. 16th, 1896. The abdomen was opened by an oblique incision (as for a right inguinal colotomy). The appendix was found to be elongated and much thickened. There were no adhesions around. A circular flap of peritoneum was raised from it about half an inch from its junction with the cæcum. The muscular and mucous coats were ligatured with silk and the organ was removed after its mesentery had been ligatured with several interlacing silk ligatures. The stump of the appendix was touched with pure carbolic acid and the serous coat stitched over it with a continuous suture of fine catgut. The abdomen was closed. Primary union of the wound ensued. The patient has lost all her pains and has been perfectly well since.

The following microscopic report by Dr. Stanley relates to the condition of the appendix. Section through the appendix showed considerable thickening of, and deposit of fibrous tissue in, the peritoneal surface, with formation of new vessels. The muscular coats were also thickened and there was increase of the interstitial fibrous tissue. The mucous coat showed a form of degeneration of the epithelium and sub-epithelial cells into a series of cells having an epithelioid character and forming a fairly thick layer. In this layer the Lieberkühn follicles and solitary glands were embedded. This cellular layer was covered by cylindrical epithelium which was somewhat retrograde in type, being less well-defined than normal and the cells being irregularly shaped.

CASE 3. *Relapsing appendicitis; removal of the appendix after the seventh attack; recovery.*—The patient was a thin, delicate-looking boy, aged six and a half years. He was admitted into the Children's Hospital on Nov. 26th, 1896, suffering from appendicitis. With regard to the history, he had had six previous attacks similar to the present one, but increasing in severity, during about thirteen months. This attack began fourteen days before admission with sudden severe pain in the right groin with acute tenderness and fever. Until these attacks commenced he was strong and healthy; he had been gradually getting thin and weak since. On admission to hospital he lay with his right thigh flexed on the abdomen and complained of much pain in the right iliac fossa. There was a hard, oval, tender swelling to be felt about two inches below, and to the right of, the umbilicus. The bowels were constipated, and the tongue was dry and furred. Under rest in bed the tenderness became less, and though he vomited occasionally he improved somewhat in general health. The swelling became slightly smaller. An operation was performed on Dec. 8th. The abdomen was opened in the right iliac fossa just external to the mass. The intestine was found adherent to the abdominal wall. The appendix was coiled upon itself and distended into a hard spherical lump. This was with difficulty separated from the parietal peritoneum and omentum. It was ligatured with silk at its junction with the cæcum and excised. The stump was touched with pure carbolic acid. The abdominal wound was closed. His temperature remained normal after the operation, but his pulse continued somewhat high, varying from 100 to 120, and he vomited slightly on two occasions. On the third day the wound was dressed, and on inserting a small probe about half an ounce of fæcal-smelling pus escaped. A small drainage-tube was put in. By Dec. 14th all discharge had ceased, the tube was removed, and all stitches were taken out. On the 20th the wound was soundly closed and the patient was beginning to increase in weight. He remained an in-patient until Jan. 20th, 1897, when he was discharged, having quite regained his old weight and colour, and his bowels acting well daily. With regard to the appendix, it was distended in its middle third into a sac, which contained a hard fæcal concretion firmly wedged in it. The distal portion of the appendix was contracted and acutely twisted back upon, and adherent to, the dilated portion. The whole organ was adherent to the coats of the small intestine and the abdominal parietes.

ILLUSTRATIVE CASES OF APHASIA.

BY BYROM BRAMWELL, M.D., F.R.C.P. EDIN., F.R.S. EDIN.,

PHYSICIAN TO THE EDINBURGH ROYAL INFIRMARY, LECTURER ON THE PRINCIPLES AND PRACTICE OF MEDICINE, SCHOOL OF MEDICINE, EDINBURGH, ETC.

(*Continued from p. 1143.*)

CASE 11. *Sudden cerebral attack after confinement; absolute deafness to all sounds for sixteen days; temporary motor aphasia and word-blindness; absolute word-deafness for four weeks; rapid recovery from the motor aphasia; partial recovery from the word-blindness; very slow and imperfect recovery from the word-deafness; slight paraphasia and slight paragraphia; echo speech; retention of the power of writing from dictation and of reading aloud; no hemianopsia; re-development of acute cerebral symptoms (meningitis or cerebritis) six months after the original attack; hyperpyrexia; death; no necropsy.*—This case, which is the most striking example of word-deafness without total aphasia which has come under my own notice, presents many points of interest and importance. It is very unfortunate that there was no post-mortem examination; but there can be little or no doubt that the lesion was entirely, or almost entirely, confined to the auditory speech centre or the afferent tracts going to the auditory speech centre. A profound, sudden, destructive lesion such as it must have been, involving the auditory speech-centre, would necessarily entail at its commencement considerable disturbance in the motor vocal speech centre and in the visual speech centre. That these centres (motor vocal speech centre and visual speech centre) were not themselves directly implicated by the lesion is, I think, conclusively proved by the rapid recovery in the power of motor vocal speech and the very marked recovery in the power of reading which were established. When the patient came under my notice the word-deafness was still very complete; but with the exception of some degree of paraphasia the patient could express herself quite well in spoken speech, the only defect being that she occasionally made use of a wrong word and forgot names of objects (slight paraphasia). She could read aloud anything which was placed before her. She could understand short, written sentences which she could not understand when spoken (by the ear). She could express herself in writing, though not without mistakes. The inability to understand complicated sentences and the mistakes in writing which her letters show that she made can be quite well accounted for by the lesion in the auditory speech centre; they do not necessitate a lesion in the visual speech centre. The patient could repeat correctly words and sentences which she did not understand when spoken, and could write from dictation long sentences which she was quite unable to understand by the ear. It is very difficult to explain the fact that the ability to repeat spoken speech (heard by the ear) was retained, considering that the word-deafness was so marked. The most likely supposition seems to be that the repeated (mere echo) speech passed through the right auditory speech centre (instead of through the left auditory speech centre, the usual channel) to Broca's centre in the left hemisphere. Another point of great interest in the case is that for three or four days after the seizure (although the sensorium seems to have been clear) the patient was stone deaf. Absolute deafness is very rarely indeed, as Dr. Hughlings Jackson has pointed out, the result of a cortical lesion. The fact that this patient was stone deaf is suggestive of a bilateral lesion involving both auditory centres, or the fibres passing to both auditory centres. The supposition that the lesion was bilateral (involved both auditory

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centres) is perhaps supported by the history of numbness and loss of power in the left hand which ushered in the attack. The patient, it must be remembered, was right-handed, and the chief lesion was almost certainly, therefore, situated in the left auditory speech centre. In the absence of a post-mortem examination it is useless to theorise further on the point. But, so far as I know, it has never been shown that a unilateral lesion involving only *one* centre for hearing in the cerebral cortex can or does produce stone deafness. When the patient came under my notice the power of hearing ordinary sounds was perfectly regained, but the power of understanding spoken language was still very imperfect. The remark which the patient herself volunteered ("Is it not a strange thing that I can hear the clock ticking and cannot hear you speak? Now let me think what that means") is a most striking one and emphasises this difference in a very marked way. After the attack and throughout the whole of the subsequent course of the case the patient's musical power seemed to be completely lost; she could neither sing nor play and did not appear to appreciate music of any kind. The notes of the case are as follows. The patient, a woman, aged twenty-six years, was sent to me by Dr. —— on Feb. 10th, 18—, with the following statement as to her previous history:—"The patient was confined on Nov. 22nd. On the eleventh day after delivery she complained of numbness in the left arm, and the nurse noticed that she had difficulty in lifting things with the left hand. This passed off in the course of the same day. On the afternoon of the following day the nurse, who had spoken to her and found her quite well a few minutes previously, was attracted by the sound of her breathing, and on approaching the bed found her in a drowsy condition and unable to speak. When I entered shortly after I found her in a lethargic state, breathing rather heavily, and apparently unable to speak or answer questions. Her eyelids were open, but she took no notice of what was going on around her. On the following day she was found in the same condition, except that she was not so drowsy; she had occasionally followed the movements of those in the room with her eyes. She took no notice when anyone spoke to her. If a question in writing was placed before her she would stare at it for a moment, but gave no indication that she understood it. The loudest noises did not attract her attention. She moved all her limbs freely and took liquid nourishment from a drinking cup when it was given to her. On the third day of her illness she was heard to mention the name of one of her children when he was brought into the room; and for the next three or four days she spoke a word now and again, and afterwards gradually went on to say short sentences more or less correctly. About the third day of the attack she showed that she heard noises, such as the shutting of the door, &c., and also that she understood to some extent *written* questions. She would reply to such a question in writing with considerable intelligence, writing in a good hand but with occasional misuse and mixing up of words. She could also read aloud from a book, with a mistake now and again in pronunciation. It was about four or five weeks after the beginning of her illness before she was able to understand any spoken word. At first she would only pick up very occasionally a single word in the conversation that was addressed to her and would repeat it to herself, but a slow improvement had gone on, and for the past four or five weeks she had been able to repeat with more or less correctness the words of a sentence spoken slowly by another, and to take up its meaning when finished. The pulse and temperature have been normal throughout. The following are copies of two letters which she sent to me; the first was written of her own accord and was a request for a tonic; the second she was asked to send so that I might judge whether there had been any improvement":—

"3rd January, 18——.

"DEAR DR. ——,—I think a little note to let you see and to think it is a little better yesterday. I two notes and ther is a little nonsense read yes I let me to let you know I would like to a deal to make stronger than I was, so I would like now to take more of the housekeeping and take care of the little children so I think you give me if from you so as to make me eating more for I be glad to so a great deal. May I get a little iron do you think? May I get from you just a little to make me something to sleep I allsay seem to think all take me all I am wrong. It reminds thinking all and I dont sleep and then I find the head so stupid too full, and I cannot too many. I am so glad you thinking well. I think you have been *very* kind to me and I am such a kind Doctor. I hope you to glad from us and give you a very Happy New Year and give you from —— and I a very kind regards.

"——."

This letter was written in pencil in a good hand; the letters were well formed; the punctuation, spelling, &c., were exactly as above.

The following, which was written in ink, shows decided improvement in the power of spontaneous writing:—

"January 24, 18——.

"DEAR DR. ——,—I am so glad to think now that you thought that I am improving quickly. How splendid it will be, when I hear you quite well, however I thought perhaps I would never know so much better. Every one has been very kind to us all. ..... How very very many every day you see to the ill ones. How fearfully sad it be must for you and how many getting better too. How *very* good and kind you have been to me. With very kind regards and —— join.

"——."

The previous history, as ascertained from her husband, was practically the same as that given above. He stated: "For the first three or four days after the cerebral attack she was stone deaf, unable to hear loud noises, such as the dinner bell rung loudly in her room. The first sound which she appeared to hear was a poker falling. She did not understand any single word which was said to her for four or five weeks. During this period she could speak and frequently asked questions, and she could understand short written questions and would answer them quite correctly. When she asked a question she would request that the answer should be made in writing. This was the only way in which she could be made to understand. During this period she was able to write, but in writing she made frequent mistakes. Before this confinement she was in perfect health. She has two other children. Both the previous labours were rapidly and satisfactorily recovered from. She is naturally of a nervous temperament and is at times very much depressed, thinking she will never recover her power of hearing and understanding spoken language. Since she began to regain the power of understanding spoken language I have noticed that when she is nervous or excited or fatigued her ability to understand what is said to her almost entirely disappears. When she fails to understand a spoken question she will often say so, and then ask that it should be written down. She then generally understands it." When I saw her the patient had a distinctly vacant expression. Her general health was now fairly good. She slept well. The appetite was rather poor, the tongue somewhat furred, and the bowels constipated. The heart was healthy. The radial pulse was 90 The temperature was normal. The kidneys and liver appeared to be healthy. She had had a good deal of neuralgic pain about the head. The teeth were bad; they had not been abstracted, for in the weak state in which the patient had been it had not been considered advisable to allow her to have chloroform. There was no paralysis in the face, arms, or legs. The grasping power of the right hand, as measured by the dynamometer, was twenty-five and that of the left fifteen (fairly normal for a woman of her physique who has passed through a long and severe illness). The patient was right-handed. The tactile sensibility in all parts of the body appeared to be normal and equal on the two sides. The knee-jerks were normal. The condition of hearing and of the auditory speech centre, so far as ordinary sounds were concerned, seemed quite perfect. She could hear a watch ticking and the tuning fork at a distance of two or three feet from either ear. At this stage of the examination she volunteered the statement, "Is it not a strange thing that I can hear the clock ticking and cannot hear you speak? Now let me think what that means." A marked condition of word-deafness was present. As has been stated above, she was completely word-deaf for several weeks after the onset of the attack. It was only during the past fortnight that she had answered any questions which had been put to her in spoken language. She could now understand some things which were said to her. She understood best when one word was said to her at a time. She was quite unable to understand a long or complicated question. She could understand some short sentences when the words were very slowly and distinctly spoken. It was often necessary to repeat a word more than once before she grasped its meaning. Often, too, she could only understand the significance of a question when the question had been repeated in a different form—a word of the same significance substituted for one which she could not understand. Thus, when asked very slowly and distinctly, "How old are you?" she answered correctly, after an interval, "Twenty-six." Asked, "When was your baby born?" she answered correctly after an interval, "On November 22nd." She always hesitated a long time and seemed to take much time to think.

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out the meaning of simple questions before she answered them When asked, "Let me see your tongue," she made no response, and evidently failed to understand the question. Her husband said that she understood spoken language better when she did not see the speaker—when she was spoken to from a distance and when spoken to quietly and not loudly. He further said that she was able to understand children better than grown-up persons. She herself volunteered the statement to him that they (grown-up people) had too many teeth. Her power of understanding spoken language depended, he said, upon her spirits; it was always worse at night and when she was tired. When asked a question she often echoed the last part of it and then, after repeating some of the words, seemed to understand their meaning (the question here arises whether she did not get information as to the meaning of the words by aid of the ingoing—kinæsthetic—impressions which result from the vocalisation and motor movements attending the production of the words). Thus when asked, "Are you better?" she repeated the word "better," obviously in an automatic, reflex way, then brightened up and said intelligently, "Yes, better." Asked, "Have you any headache?" she repeated the word "headache" in an automatic way, then brightened up and said after hesitation, "Yes, often." Asked, "Are you giddy?" she echoed the word "giddy," then brightened up and said, "No." I subsequently ascertained that after the attack and throughout the whole subsequent course of the case the patient's musical power seemed completely gone; she could neither sing nor play and did not appear to appreciate music of any kind. With regard to the condition of the motor vocal speech centre, a certain degree of paraphasia was present; but with this exception the motor (emissive) faculty seemed to be little affected. She certainly spoke much more correctly (made use of spoken language much more correctly) than I would have supposed from the mistakes which she made in writing (see the letter of Jan. 24th, written a fortnight before I examined her). She volunteered statements, spoke spontaneously, asked questions, and expected to be answered; if she did not understand the answer she asked that it might be repeated, or asked that it should be written down. She seemed to be able to say almost everything she wished to say, but she occasionally made use of a wrong word; for example, she said "My hair" instead of "My skin." Her husband stated that during the early stage of the attack she made frequent mistakes of this kind, and she used to use the word "scarf" for almost everything. He added that the mistakes were chiefly confined to the names of things (objects); very soon after she regained the power of speech she could use the parts of language other than nouns quite well without making mistakes. (In her written speech the mistakes involve all parts of speech, nouns perhaps least of all.) Often when she could not get a word she used to spell it and then pronounce it. In the act of spelling the auditory speech centre and the visual speech centre are both brought into play. Most people spell chiefly by the revival of auditory impressions, though the influence of the visual speech centre is in many persons very active; witness the fact that when doubtful about the spelling of a word many people write it down to see how it looks. In most people both sensory speech centres are called into use. The patient in Case 2, though unable to read, could write quite well, but could not read a single word that she had just written, yet she could spell perfectly. This patient, who was almost completely word-deaf, often when she could not get at the meaning of a word, would spell it out, then pronounce it, and then understand it. As to the ability to repeat spoken language, although she was unable to understand most things that were said to her, she could repeat words and sentences which she did not understand. This was very remarkable and difficult to understand. Further—and this was also very curious—she could write down words and sentences which she did not understand (when spoken), and could then understand them after she had written them. I asked her, for example, the question, "Do you like to come to Edinburgh?" She did not understand it. I then asked her to repeat it after me. She did so without hesitation. I then asked her to write down the words she had just said. She did so without the words having to be repeated a second time, and she then undoubtedly understood the question. At this stage of the examination her husband volunteered the statements that her memory was excellent and that "she repeated what she heard by sound and not by sense." When asked, for example, "How old are you?" she repeated, "Old are you"; then brightened up, and after an interval said "Twenty-six." When asked, "Have you any headache?" she repeated "Headache"; then brightened up and answered, "Yes, every day," and pointed to her forehead. She repeated after me, "Monday, 22nd," "Where are you?" "Where are you to-day?" and "Are you in Edinburgh?" As to the condition of vision and the visual word centre, her sight was perfect, V. = $\frac{20}{20}$. There was no hemianopsia. The optic discs were normal. The pupils were equal and of medium size. She readily understood short questions which were put to her in writing. She occupied a good deal of her time in reading, but her husband said that she did not seem to understand much that she read; she apparently was unable to grasp the meaning of long and complicated sentences, though she generally had no difficulty in understanding short written questions. She seemed, he said, only to be able to understand one sentence at a time. If she read for any length of time she seemed to get confused and not to be able to understand. She recognised and generally named correctly any object which was shown to her. Thus she named correctly a watch. Asked what a tuning fork was, she said "for music, a fork to sing" (slight degree of paraphasia), made it vibrate and held it to her ear, showing that she understood what it was. When asked to pick out a knife, pencil, and buttonhook from a number of different objects she did so correctly. She named scissors, pencil, and india-rubber correctly. The following questions, which she was unable to understand by the ear (when spoken), she was able to understand when written:—"Can you repeat words after me?" "Say the words 'I say.'" "Do you like to come to Edinburgh?" "Can you write what you have just said?" "What do you call it?" (showing her a watch). "Please shut your eyes and tell me what you hear." "Squeeze it [dynamometer] as hard as you can." "Do you feel quite well when you are touched?" "Please look steadily at my eyes and tell me if you see my finger moving." "Do you see my finger?" "You see my finger quite distinctly in all positions?" She read aloud without any hesitation, correctly, but with a somewhat monotonous expression, the following sentence from a book on my consulting-room table: "No issue of a medical journal would be complete at the present time without containing the latest development in this greatest medical experiment of all time." Her mental faculties seemed to be comparatively little impaired. Her husband said that her memory was very good. She could multiply, add, and subtract figures correctly, but she performed all these mental operations very slowly. The following are illustrations. When asked to multiply 60 by 3, the answer, after hesitation, was written by the patient 180. When asked to subtract 54 from 162 the answer was written by the patient slowly, 108. When asked to add together 122 and 101, the answer written by the patient was 223. The sense of smell seemed unimpaired. When asked, "Can you smell?" she made no indication that she understood the question. Some oil of peppermint was then placed to her nose. She immediately said, "Yes, something like strong sweeties." When asked, "Is it peppermint?" she said, "Yes—taste said to be good." The future progress of the case is told by the following letters:—

"March 9th.

"I think it is about a month since we went to Edinburgh to see you. My husband thinks I can hear a very little better, and I am so glad and thankful and it will be splendid when to be quite better. I have taken two bottles from you have given. I have got very bad with indigestion and with newlargia in the system. I got from Dr. —— antipyrine powders. We think of going to —— and I hope the change will be good for me and will be glad if I feel stronger."

I append a portion of this letter in facsimile to show the exact character of the writing (see Fig. 21).

"April 9th.

"Many thanks for your last note. We went to near —— for a week, but the weather was very very cold.

"We think I can hear a little better, but the progress seems very slowly and very little of the general conversation.

"I have got still indigestion and so very cold and chilly all through I think from the circulation of the blood.

"The worst of all the pain is newlargia in my head and I have no toothache. Do you think there is two kinds of headaches, newlragia and from the forehead so hot and always aching, sometime I think from not enough of blood or too slow, or weakness, and such a horrid feeling of lightness and dazed. I will be so glad when I feel I am better. Sometimes I wonder if I really will be so well as before the illness."

On May 28th her medical attendant wrote to me as follows:—

"Mrs. —— (case of aphasia) has not been so well for the past month. After you saw her in February she slowly but steadily improved in the matter of understanding spoken speech, and about six weeks ago if one

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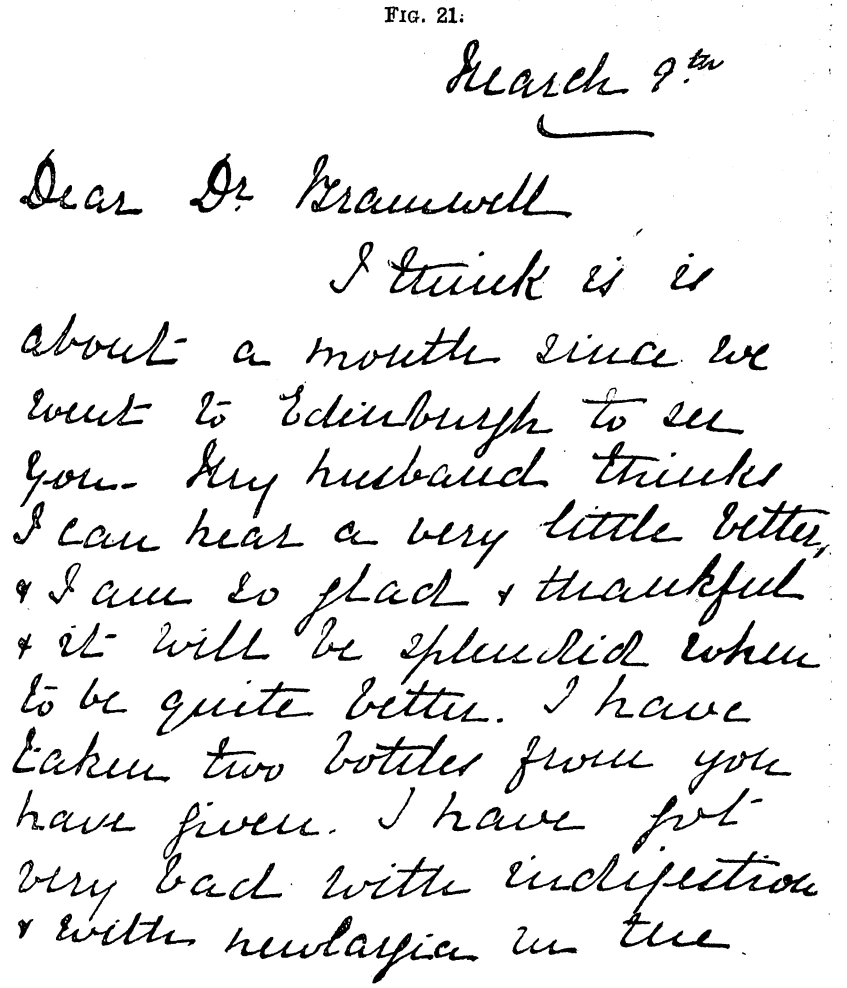
spoke slowly and distinctly she took in almost everything that was said to her. She could not, however, take part in a general conversation, but occasionally picked up what was being said by those around her. Her power of expressing herself in writing, as you would observe from the letters she wrote, had also improved very much. All along she has complained a good deal of uneasy sensations and pain in her head. She has also had a considerable disinclination for food and there has been much difficulty in getting her to take an adequate amount of nourishment. About a month ago she commenced to complain of feeling very tired and weak, and also of some pain in the head—across the eyebrows and over the vertex. She took to bed and has not been up since. The pain seemed to be constant, with paroxysms of increased severity, and accompanied by great intolerance of light and sound. There was no paralysis. Sometimes she complained of pain in the left arm and leg, and once or twice of stiffness of her left forearm. The pulse was slightly quickened, from 96 to 100, but regular; the temperature was normal; the tongue was coated and she had a great dislike for food. Examination of the eyes, so far as it could be made, revealed nothing abnormal. About ten days ago she ceased to complain of the pain in her head, but at the same time began to show a great falling off mentally. She has much less power of expressing herself and does not understand what is said to her so well. She is very emotional. Occasionally she rambles a good deal—imagines there are people in the room, that she is not in her own house, &c. She is rather thin, but her general strength is fairly good. The treatment she has got lately has been ice to the head when the pain was bad, blister to the nape of the neck, small doses of iodide of potassium combined with bromide of potash, and frequent feeding. If you have any suggestions to make I will be very glad to hear from you."

And again on Aug. 6th :—

"I have omitted to let you know of the death of our patient, which occurred about five weeks ago. After I wrote you she got steadily weaker. She fell off very much mentally—talked incoherently, understood very little of what was said to her, and had the delusion that she was not in her own house, that there were people in the room, &c. About a week before her death the temperature began to rise at night and ranged from 101° to 103° F., and on the day she died it was as high as 108°. I tried hard to get a post-mortem examination, but failed."

(To be continued.)

FIG. 21.


March 9th

Dear Dr Bramwell

I think it is about a month since we went to Edinburgh to see you. My husband thinks I can hear a very little better, & I am so glad & thankful & it will be splendid when to be quite better. I have taken two bottles from you have given. I have got very bad with indigestion & with neuralgia in the

Portion of a letter written by the patient on March 9th (Facsimile).

THE MALIGNANT TUMOURS OF INFANCY, CHILDHOOD, AND YOUTH.

BY W. ROGER WILLIAMS, F.R.C.S. ENG.,
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(Continued from p. 1196.)

TESTIS.

THE malignant neoplasms of the testis, especially those of early life, are remarkable for the great frequency with which heterotopic structures—such as cartilage, striped muscle, unstriped muscle, and epithelial elements, often ciliated—are found in them. Many circumstances point to aberrant elements connected with "rests" of the Wolffian body, lodged in the rete testis, as the germs whence most tumours of this kind arise. It is believed that the junction between the Wolffian tubules and the tubuli seminiferi is brought about by the forward growth of the Wolffian tubules into the hilum. At this stage fragments of the adjacent proto-vertebral matrix, &c., may readily be dislocated and become embedded in the evolving organ, where they constitute the "rests" above mentioned. The difference between the ovarian and testicular development in this respect may be the reason why these heterotopic elements are absent from ovarian neoplasms; at any rate, the ovaries are developed in just as close proximity to the proto-vertebral matrix as the testes, and were there not some special difference in their ontogeny the former would be just as liable to these heterotopic inclusions as the latter. Of 51 malignant testicular neoplasms tabulated by Curling,[66] in 5 the disease began under the age of five years and in 1 between fifteen and twenty years. These tumours are occasionally met with at birth and sometimes they are bilateral. They are often described as "cancers," but in reality they are almost always sarcomata, and this is shown by the nature of their metastases. Examples have been met with by Parker[67] at three months, Hutchinson[68] at five months, Silcock[69] at eight months, Depaul[70] at ten months, Chaffey[71] at eleven months, Louvet[72] at sixteen months, Schlegtendal[73] at eighteen months, Butlin,[74] Marsh,[75] and Hertzberg[76] at two years, Johnson[77] at two and a half years, Battle[78] and Neumann[79] at three and a half years, Jacubasch[80] at six years, and Ribbert[81] at thirteen and fourteen years. Trólat[82] has collected 26 cases recorded prior to 1884. In a congenital case of this kind seen by Weber,[83] in which cartilage largely predominated, the tumour—which at birth was of the size of a pigeon's egg—increased in the course of fifteen months to the size of a goose's egg. I have seen a case of adeno-myxo-sarcoma of the left testis in a youth nineteen and a half years old, who died from acute dissemination of the disease sixteen days after castration; when metastatic nodules were found in skin, eye, triceps muscle, both lungs, liver, both kidneys, small and large intestine, and in the retro-peritoneal glands. Edwards[84] has met with sarcoma of the

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epididymis in a child four years old, and Walsham[85] with myxo-sarcoma of the spermatic cord in children aged thirteen months and four years. Marchand thinks that some malignant tumours of the epididymis arise from aberrant suprarenal "rests."

EYE.

In infants no part of the body so frequently originates malignant neoplasms as the eye. Nearly all tumours of this kind are gliomata, but sarcomata of the uveal tract, both pigmented and non-pigmented, are now and then met with. Of 155 consecutive malignant intra-ocular neoplasms from the Prague Clinic 24 occurred in children of from one to ten years old. Gliomata are peculiar to early infancy; they are rare after five years of age, and they hardly ever occur after twelve years. Gliomata have been met with at birth, and exceptionally both eyes are simultaneously affected, but it is much commoner for the disease to begin in one eye and thence to spread to the other. Of 8 cases within my own experience the ages at which symptoms of the disease first appeared were seven months, nine and a half months, fourteen and a half months, sixteen months, one and three-quarter years, two years, three years, and eleven years. In the first 4 of these cases the disease was almost certainly congenital. In 1 case metastases were met with. There are good reasons for believing, as Wintersteiner[86] has shown, that most tumours of this kind arise from "rests" sequestrated from the evolving retina during embryonic life. An instance of congenital sarcoma of the choroid has been reported by McKay,[87] and Williamson[88] has met with spindle-celled leuco-sarcoma of the iris in a girl fourteen years old.

Besides such tumours as the foregoing, a certain number of malignant neoplasms arise in the orbit during early life, quite independently of the eyeball. Thus Courant[89] removed a large congenital teratoid tumour from a newly-born male child, which contained numerous heterotopic elements, and there was defective development of the corresponding orbit. It seems likely that tumours of this kind may originate in association with fœtal inclusions connected with the orbito-frontal fissure.

Probably the "ossifying epithelioma" of the orbit described by Silcock[90] in a young boy, as well as the various more or less malignant ossifying and chondrifying orbital tumours, such as those recorded by Reid[91] in a youth aged nineteen years and by Beaumont[92] in a girl aged sixteen years, also originate from embryonic inclusions. At any rate, we know that such inclusions not infrequently do arise in this vicinity, of which the various congenital orbital cysts and other developmental defects are the evidence. Moreover, Axenfeld has demonstrated the frequent occurrence of islets of cartilage in the otherwise normal orbit. The following instance has come under my own observation.

CASE 5.—A young woman, aged nineteen years, with left proptosis and other signs of orbital tumour. On examination a firm nodulated new growth was felt attached to the upper margin of the orbit. The adjacent lymph glands were normal. Excision of the tumour was performed, and the growth seemed to be limited to the upper part of the orbit and was unconnected with the eye. Recurrence *in situ* took place two and a half years later and excision was again resorted to. A further recurrence took place nine months later, for which the orbit was cleared out. The globe and optic nerve were quite free from disease. The tumour seemed to have originated from the upper and outer part of the orbit.

Other examples of rapidly growing sarcomata of the orbit have been demonstrated by Knaggs[93] in a child aged two and three-quarter years; by Lambert[94] in a boy, aged three years; and by Snell[95] in a girl aged four years, &c. Lagrange[96] has met with a myxo-sarcoma of the sheath of the optic nerve in a boy aged five years.

Besides the foregoing, other sarcomata are found in the orbit which originate quite outside it. The following instance in which the disease arose from the region of the basi-sphenoid has come under my notice.

CASE 6. — A healthy-looking youth, aged eighteen and a half years, with left proptosis and other signs of intra-orbital tumour. The scar of a former operation was seen along the left side of the nose. A swelling from a recurrent growth was present in this region. The left naris was blocked by the new growth. The disease was of eighteen months' duration. Six months previously a sarcomatous growth was removed from the left naso-orbital region by incision along the side of the nose. It seemed to spring from the basi-sphenoid. The floor of the orbit was perforated by the tumour. Soon afterwards recurrence set in. No further operation could be done.

Some remarkable examples of neoplasms of this kind have been published. Lawson[97] had under his care an interesting case of this kind.

CASE 7.—The patient was a male child only two days old, in whom the disease existed at birth; there was rapid recurrence after removal of the tumour, which was a multilocular cyst with much solid new growth. On histological examination it proved to be a round and spindle-celled sarcomatous teratoid new formation containing cartilage, epithelial elements, and other heterotopic structures.

Holmes[98] has met with a similar case. Other instances have been recorded by Targett[99] in a male infant aged one year; by N. Moore[100] in a boy aged one and a half years; by Chaffey[101] in a female aged three years; by Jessett[102] in a female aged one year and seven months; by Pollock[103] in a female five years old; and by Dickinson[104] in a boy aged twelve years. Such tumours probably arise in connexion with developmental aberrations in the vicinity of the anterior extremity of the notochord.

Several instances of cancer of the conjunctiva in youth are on record. Rogman[105] has recently reported an instance in a boy aged fourteen years, and Panas has seen similar cases at twelve and thirteen years of age. The latter observer has pointed out the remarkable fact that in nearly all these cases the disease begins at the outer side of the lower part of the corneo-scleral margin, which is just the spot where congenital dermoid patches are of commonest occurrence.

KIDNEY.

Next to the eye the kidney is the locality in infants whence malignant neoplasms most frequently arise. Judging by the large number of recorded cases, malignant disease of the kidney is of even more frequent occurrence than Duzan's list would lead us to suppose; and some writers consider that the kidney is more often affected than the eye. This proclivity of infants to malignant renal disease is the more remarkable when the extreme rarity of the affection at other periods of life is borne in mind. Tumours of this kind are invariably sarcomatous, although in the older reports they are often described as "cancers," owing to the occasional presence of epithelial structures of simple tubular or papillary cystic type, in the sarcomatous matrix. In certain cases these epithelial elements may be derived from "rests" of the Wolffian body, or from separated fragments of the renal parenchyma itself.* Striped muscle fibres are frequently met with; and it has been remarked that when they are most abundant the tubular structures are generally absent or scanty. I am not aware that either cartilage or bone has been found in these neoplasms, but angiomatous structures are of common occurrence. It seems probable, from recent observations by Lubarsch,[106] McWeeney,[107] and others, that renal sarcomata may not improbably often be derived from suprarenal "rests." Sudeck thinks that some of them arise from "rests" of hepatic origin. The subject is still *sub judice*. The development of the kidney is of such a complicated nature, and so many adjacent structures are liable to be implicated, that it would be surprising if fragments of some of them were not frequently included in it. To such sources we must look for the germs whence most of these neoplasms arise. Renal sarcomata are frequently bilateral, multiple *ab initio* and congenital, but most cases are first noticed during early infancy. Like their congeners of the testis and ovary, these tumours are generally circumscribed, and they usually indent the contiguous renal tissue rather than infiltrate it. Cohnheim[108] seems to have based his celebrated theory of neoplastic pathogeny largely on a case of this kind which he observed in an infant aged sixteen months. In the left lumbar region he found a large tumour, to the border of which the remains of the left kidney, otherwise unaltered, adhered. Within the capsule of the right kidney, at its upper end, there was also a small round circumscribed tumour quite distinct from the kidney substance. Both contained striped muscle fibres and sarcomatous tissue. Of 37 examples of these tumours collected by Röhrer[109] in children aged under ten years, 16 were under two and 31 under five years, and 1 was newly born. Leibert[110] has since tabulated 50 similar cases, and Jacobi[111] 43. Paul,[112] Windle,[113] Eve,[114] and others have published interesting papers on this subject.

I have seen a case of malignant disease connected with the kidney of a male child aged two years quite different from any of the foregoing. Laparotomy was performed for a large tumour occupying the left renal region, but the adjoining glands were so extensively infiltrated that its removal was not attempted. The child died not long afterwards,

* The number of lobules composing the human kidney is greater than is generally believed. According to Maresch, from eight to eighteen distinct lobules can easily be recognised in the fœtal organ. Many incomplete lobules also exist, so that altogether traces of from twenty to fifty lobules may be found in every fœtal kidney.

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and at the necropsy the left kidney was found to be surrounded by a mass of soft, ecchymosed myxo-sarcomatous new growth, which had evidently sprung from the peri-renal fatty envelope, for it was distinctly outside the renal capsule, and the kidney itself was unaffected I have since seen a similar case in an adult, and the glands being unaffected it was successfully removed.

Cancer of the kidney occurs only in adults, and it is very rare; instances have been recorded at the age of twenty-one years by Israel,[115] by N. Moore[116] in a man aged twenty-five years, by Sharkey[117] in a woman aged twenty-eight years, and by Newman[118] at various ages.

SUPRARENAL BODY.

Although the suprarenals so rarely originate malignant neoplasms, that of 8378 consecutive cases tabulated by me only 1 arose in this connexion; yet of the 36 cases of which I have records I find that more than one-third belong to the periods of infancy and childhood. These tumours are occasionally met with at birth, and they may be bilateral. They are invariably sarcomatous, although often described as cancerous. Accessory suprarenal bodies sometimes originate similar tumours, but it is probable that some neoplasms thus described spring from aberrant renal lobules. In a child eight and a half years old Ribbert[119] met with a tumour of this kind which was connected with the outside of the capsule of the kidney in the vicinity of the renal pelvis. Marchand has found accessory adrenals in situations far removed from their normal habitat, such as the margin of the broad ligament and the epididymis.† Instances of malignant suprarenal tumours have been reported by Parker[120] and Dalton[121] in infants only a few weeks old, by Martin[122] at five months, by Cohn[123] at nine months, by Eberth[124] at fifteen months, by Fox[125] and Mankiewicz[126] at two years, by Earle[127] at three years, by Lazarus[128] at four years, by Greenhow[129] at twelve years, by Peacock[130] and by Fränkel[131] at eighteen years.

BLADDER.

In this organ sarcomatous tumours are occasionally met with in early life. The disease usually assumes the polypoid form, and multiple tumours are often met with, or a polypoid condition of the mucosa accompanies the sarcomatous tumour. The condition is analogous to that which so frequently occurs in the vagina; and no doubt its origin is connected with similar embryonic developmental aberrations. These growths are commonest in the lower part of the bladder—that is to say, in the region most intimately connected, developmentally, with the vagina. Steinmetz[132] has collected 32 cases of this kind. Most instances are met with in early infancy, and both sexes are affected. Cases have been reported by D'Arcy Power[133] in an infant, by Shattock[134] at one and a half years, by Dittrich[135] at one and three-quarter years, by Chaffey[136] at three years, by Löhr[137] at three and three-quarter years, by Chiari[138] at five years, and by Fenwick[139] at eight years.

PROSTATE.

Of 96 primary malignant neoplasms of the prostate tabulated by Engelback, 10 per cent. originated in early life—3 in the first year, and 6 in the next 9 years—all of these early neoplasms being sarcomata. Of 16 recently recorded cases collected by me, in 2 the malady began under twenty years of age. It is a very rare affection at any time of life. The instances met with in early life are invariably sarcomatous; and, according to Barth, about half the recorded cases of prostatic sarcoma belong to this period. Examples have been reported by Jordens[140] and Barth[141] at nine months, by Solly[142] at three years, by Wind[143] at five and a half years and at eight months, by Barth[144] at seventeen years, by Coupland[145] at nineteen years, and by Wyss[146] at various ages.

LIPS, TONGUE, AND ŒSOPHAGUS.

The following examples of "cancer" of the lip in early life have lately been recorded by Krasnobaeff[147] (of the upper lip and right ala nasi) in a child eight years old; by Batashoff[148] (of the lower lip) in a girl aged thirteen years; and by Gangolphe[149] (of the upper lip) in a boy aged fifteen years. In all the disease was of the epidermoidal variety. The foregoing cases were "histologically verified"; but whether, in doubtful cases, a diagnosis based solely upon histological analysis can be implicitly trusted is a question I should be inclined to answer in the negative. For the present, therefore, it will be best to regard the morphological diagnosis of such cases as the foregoing as still *in limine*. Of 1003 cases of cancer of the lower lip collected by Paget and Jessett[150] from various sources there was not a single instance of the onset of the disease under twenty years of age; of 43 consecutive cases under my own observation the earliest age at which the disease was first noticed was twenty-six years; Winiwarter, however, reports having met with one instance of lip cancer under twenty years.

In the tongue a few examples of cancer and sarcoma in early life have been met with. In Variot's[151] case of "epithelioma" of the tip of the tongue, in a boy only eleven years old, the diagnosis of cancer rested solely upon the histological examination, the clinical signs of cancer being absent. Billroth[152] has met with the disease in a youth aged eighteen years, Winiwarter[153] at twenty years, and Haward[154] in a woman aged twenty-three years. Of 122 consecutive cases in males under my observation the youngest was twenty-five years and seven months old; of 15 cases in females the youngest was thirty-four years. Of 290 cases tabulated by Barker[155] the youngest was twenty-six years. Of Gross's 133 cases the youngest was twenty-nine years, and of Winiwarter's 136 cases the youngest was twenty years. Thus of these 696 cases in not a single instance did the disease begin under twenty years. About 24 cases of sarcoma of the tongue have been recorded, and several of these originated in early life. Congenital cases of this kind have been reported by Jacobi[156] and Mason;[157] by Stern[158] at four years, and by Lang[159] at twelve years. Such tumours are often multiple *ab initio*, and in the last-named case the neoplasm contained cartilaginous, osseous, and fatty structures. Godlee[160] has met with an adeno-sarcoma of the tongue containing a calcifying nodule in its centre in a woman aged twenty-four years. A congenital form of "epulis" has been lately described by Olivier,[161] who believes it arose from "rests" of the gingival mucosa; of this Gore[162] also has reported a good example. Similar cases had previously been described by Malassez. Myxo-sarcomatous naso-pharyngeal polypoid tumours are not infrequently met with in early life growing from the top of the pharynx. Cases have been reported by Lloyd[163] in a youth aged seventeen years and by Wolfenden[164] in a girl aged fifteen years. I have seen similar instances in a youth, who first noticed the disease when only twelve years old, and in a girl (adeno-sarcoma) aged nineteen years. Berg[165] has reported an instance of malignant disease of the soft palate in an infant aged four and a half years. Bryant[166] met with "cancer" of the tonsil at seventeen years, and Castex[167] with lympho-sarcoma in a girl aged seven years. In a young woman aged twenty-one years S. Paget[168] has seen a sarcomatous tumour of the hard palate with which epithelial pearls were associated. Cancer of the œsophagus is very rarely met with under thirty years of age. Of 18 cases under my own observation the earliest age at onset was thirty-two years and eight months. Stephan[169] has reported a case of œsophageal sarcoma in a child five years old.

STOMACH.

In early life malignant disease of any part of the gastro-intestinal tract is of the greatest rarity. Some idea of the extreme infrequency of cancer of the stomach at this period may be gathered from the fact that of 2075 cases tabulated by Welch only 2 originated under the age of twenty years. Of 2000 necropsies on children analysed by Steiner and Neureutter not a single instance of malignant disease of the stomach was met with. Nevertheless, several instances of alleged cancer of the stomach in infancy have been recorded; and in at least two of them the disease was congenital. In Wilkinson's[170] case marked thickening and induration of the pylorus was noted in a newly-born child; but since none of the other clinical features of cancer were present, and no microscopical examination was made, it is much more likely that the morbid condition was congenital hypertrophy rather than cancer. Several instances of this form of hypertrophy in infants have been met with (Finkelstein, Grau, Kops, and others), and an example of it has lately been recorded by Pitt[171] in an infant seven weeks old. A remarkable case is Cullingworth's,[172] in which a polypoid tumour—evidently congenital—was found growing from the lower border of the pylorus in an infant five weeks old. Histological examination revealed tubular structures lined

† According to Pettit the suprarenals are ontogenetically allied with the sexual glands, being derivatives of the germinal epithelium.

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by cylindrical epithelium, as in cancer; but in the absence of any of the clinical signs of malignancy I should think it much more likely that the disease really was congenital adenoma, with which the histological appearances were certainly consistent. In a case of so-called cancer of the stomach in an infant one and a half years old, reported by Kaulich,[173] the disease was probably sarcomatous, but as other organs were affected it is doubtful whether the disease really originated in the stomach. In Kühn's[171] case of "Adenoid Cylinder-celled Cancer" in a female infant two years old the disease was probably adeno-sarcoma of congenital origin. N. Moore[175] has described a case of "Alveolar Cancer" of the cardiac end of the stomach, close to the œsophagus, in a girl aged thirteen years. The type of cancer met with in this case, as well as the situation of the tumour, are very unusual, and to my mind these circumstances suggest the origin of the disease from congenitally dislocated œsophageal glandular structures. An instance of cancer of the pylorus (with dissemination in the spleen) in a child aged fourteen years has been published by Scheffer,[176] at seventeen years of age by Köster[177] and Landouzy,[178] at nineteen years of age by Hirtz,[179] and at twenty years of age by Glynn[180] and others.

Sarcoma of the stomach is a very rare affection, of which a few examples have lately been met with. Of 352 consecutive cases of malignant disease of the stomach tabulated by me there was not a single instance of sarcoma, and Gurlt's table, which comprises 1103 similar cases, is equally devoid of sarcoma. Pitt[181] has described four cases of lymphadenoma of the stomach in boys aged from four to twelve years; and Hueter[182] reports examples of congenital adenoma.

INTESTINE.

More cases of malignant disease are met with in early life in the intestines than in the stomach. The instances of so-called cancer of the small intestine reported by Duncan[183] at three and a half years, and by Spanton[184] at twelve years (ileum), were evidently sarcomatous. Madelung[185] has described 14 cases of sarcoma of the small intestine in patients of various ages, mostly young; these growths are often multiple and sometimes congenital. In the large intestine similar neoplasms have been met with, but they are rarer. In an infant a few days old Stern[186] met with a fungoid sarcomatous tumour growing from the ileum which had caused death by obstruction. It was an endothelial angio-sarcoma, evidently of congenital origin. Spanton's case of "medullary cancer" of the ileum in a twelve-year-old child belongs to the same category, and with it Steiner's[187] case of "alveolar cancer" of the sigmoid in a child nine years old should be classed. Pépin[188] has described a case of sarcoma of the jejunum in a female child five years old; and Bessel-Hagen[189] a similar case in a boy aged seven years. Abbe[190] has met with sarcoma of the caput coli in a youth aged sixteen years; Homans[191] with sarcoma of the cæcum in a girl aged five years; Kanthack[192] with myxo-sarcoma of the colon in a lad aged seventeen years; and Debrunner with sarcoma of the transverse colon in a boy three years old. Of 227 intestinal cancers in which Gurlt noted the age distribution the disease originated under twenty years in 2—viz., at thirteen years and nineteen years.

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(To be concluded.)

ON SENILE TUBERCULOSIS AND SUBCUTANEOUS (TUBERCULOUS) ULCERATION.[1]

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SEVERAL examples of tuberculous disease occurring in old people have, within the last few months, been under observation in the wards of which I have charge in St. Bartholomew's Hospital. I hope it may be of interest if I briefly relate some of them, and make some reference to the general question of senile tuberculosis. Some discussion appears to be desirable, for although Sir James Paget's original essay on senile scrofula was published in 1867, in some of the principal manuals of the present day the subject is not even mentioned, while in others it is referred to in so cursory a manner as to convey the impression that it is of little importance in the practice of surgery.

[1] A paper read before the Medical Society of London on April 26th, 1897.

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My own experience has led me to believe that the opposite of this is, in reality, the case. The disease in its various manifestations is frequent rather than rare; its early recognition is often difficult; indeed, it is apt to be overlooked by those who regard it as a mere pathological curiosity. Prognosis is generally very unfavourable, and the treatment raises questions of considerable gravity from the patient's point of view. Among the cases met with have been the following:—

CASE 1. *Large double iliac abscess, probably dependent on Pott's disease.*—The patient, a man aged seventy years, was admitted into St. Bartholomew's Hospital about six weeks ago with two iliac abscesses of very large size; that on the left side was already pointing, and proved, when it was opened, to contain about two pints of pus. The cavity was scraped and drained. This abscess is now very nearly healed. The second abscess will be opened in a few days.

CASE 2.—A woman, aged seventy-four years, was recently admitted for an iliac abscess on the right side. Here, as in the former case, there was no angular curvature or other conclusive evidence as to the precise origin of the abscess; but it must be remembered that angular curvature may be absent, notwithstanding the presence of advanced Pott's disease in patients of middle or advanced life. In such patients the vertebræ are so massive and formed of such strong bone, that, although excavation occurs, their framework often resists deformity; while in other cases the disease takes the form of a spreading periostitis, and excavation is either absent or present to only a slight extent. It seemed probable that this patient and the patient in Case 1 were suffering from Pott's disease.

CASE 3.—Last year a woman, aged sixty-nine years, was admitted into the hospital suffering from spinal disease. On examination she was found to have a very marked angular curvature at the level of the eighth dorsal vertebra. The spinous process of this vertebra was sharply prominent and the column above this point for eight or nine inches was perfectly straight. The patient said that for the previous twelve months she had suffered from pain in her back and round the sides of her trunk, and that the deformity of the spine had been progressing for nine months. She could now move and walk only with difficulty, and was obliged to lie down during the greater part of the day. This patient, who came from a distance, was supplied with a poroplastic jacket and discharged, and I heard no more of her. That the angular deformity in this case was due to tuberculosis seemed clear. The alternative view that it depended upon new growth—sarcoma or carcinoma—appeared to be negatived by the absence of severe pain, and of paralysis, and also by the period over which the case had extended; for malignant disease of the spine is generally fatal within nine months, and this patient, although her spinal disease had existed for more than nine months, was still in very fair general health and condition.

CASE 4.—The following remarkable case has lately been under observation. A woman, aged seventy-two years, developed what was evidently tuberculous disease of her left ankle. The joint became the seat of a slowly increasing fusiform swelling involving it in all its aspects. The patient was unable to bear any weight upon the foot and the muscles of the calf underwent marked atrophy. In the course of three months suppuration occurred, and in spite of free incision, scraping, and drainage, pus burrowed widely amongst the tendon sheaths of the deep muscles. Amputation was performed at the junction of the middle with the lowermost third of the leg. The stump healed favourably, although very slowly. A year afterwards the lower third of the left ulna became the seat of extensive tuberculous periostitis, attended with dusky redness and œdema of the skin and considerable pain. Free incisions were made and the granulation tissue was scraped away. The wound slowly healed and the patient remained well for three years. At the end of this time her right ankle became involved in considerable swelling, which seemed obviously to depend upon tuberculous synovitis. Within two months the joint had become disorganised, and the ligaments had been so far destroyed that free lateral movement was easily produced. Suppuration occurred, and as the tissues in the lowermost third of the leg were becoming œdematous, amputation was performed six inches above the joint. The patient, who was now seventy-six years of age, bore the operation perfectly well and the wound soon healed. On dissection the joint was found to have undergone extensive tuberculous disease. The synovial membrane was converted into a thick layer of pulpy granulation tissue. The articular cartilage was almost destroyed, the bones in places were somewhat deeply eroded, and the principal ligaments had in great part disappeared. Microscopic examination showed that the disease was beyond question tuberculous in character.

CASE 5.—There was recently in the hospital a patient, aged seventy-two years, who had been suffering for fifteen months from tuberculous disease of the outer and front portion of the left foot. On examination, the metatarso-phalangeal joint of the little toe was found to be disorganised and occupied by granulation tissue, and a sinus led into the substance of the external cuneiform bone, which was in a state of rarefying osteitis.

CASE 6.—Two years ago a man, aged fifty-six years, was under treatment for what at first appeared to be osteo-arthritis of his right knee. The joint had recently become a little swollen, stiff, and painful. There was some grating on movement, and the muscles of the thigh were markedly wasted. The knee, however, became more and more swollen, the synovial membrane was thickened and pulpy, and the skin over the joint was dusky and abnormally warm. Within three weeks of the patient's admission, and about two months after the commencement of the disease, the joint suppurated, and in spite of complete rest, went from bad to worse, and was amputated three weeks later. On examination it was found extensively disorganised by tuberculous disease. The synovial membrane was converted into a thick layer of granulation tissue, the articular cartilages were eroded, and reduced to thin wafer-like plates, detached from the bones. The bones themselves were in some parts deeply ulcerated. The patient quickly recovered from the amputation.

Several other examples of senile tuberculosis which I remember to have seen might be related, but it will be enough merely to mention them. A patient, aged sixty-five years, with tuberculous epididymitis; a man aged sixty-eight years, with enlarged and suppurating cervical glands; a man aged seventy-five years, with rapid disorganisation of the wrist joint, requiring amputation; a woman aged sixty-seven years, with tuberculous caries of the metacarpal bone of the thumb; a woman, aged sixty-two years, with tuberculous disease of the axillary glands, imitating carcinoma; and tuberculous disease of the kidney in a woman aged fifty-eight years.

The symptoms produced by senile tuberculosis are identical with those met with in the more severe examples of the corresponding forms of tuberculous disease in the young—e.g., in tuberculous disease of the tarsus in a person aged seventy years, the character, position, and extent of the swelling, the congested and dusky condition of the skin and the appearance of any ulcers that form—all these are indistinguishable from the like features when they are observed in a patient aged ten years. The main difference—needless to say, it is one of great importance—between tuberculosis in the old and in the young is that while in the young, if adequate treatment is adopted early and properly carried out, recovery is the rule; in the old, in spite of the best known treatment, the progress of the affection is in the majority of cases from bad to worse. In a joint, for example, the synovial membrane rapidly becomes widely infiltrated with tuberculous products, which quickly undergo caseation. The articular cartilage is destroyed and suppuration takes place. This leads to the formation of large burrowing collections of pus and complete disorganisation of the affected joint, so that amputation is the only course that can be recommended. In other parts—e.g., the testis or the lymphatic glands—early suppuration, with breaking down, occurs. The unfavourable progress in these cases is so constant that I do not myself remember to have seen repair take place in a tuberculous joint in any person over fifty years of age. The disastrous results that will probably follow when one of the large joints, such as the hip, is involved was well shown in the following case, which came under notice five or six years ago. A woman, aged fifty-five years, had tuberculous disease of her hip-joint, which was, for the first few weeks, considered to be, and was treated as, "sciatica." Afterwards the case was treated with absolute rest, secured by a Thomas's splint and weight extension. The joint, however, grew steadily worse; in four months suppuration occurred, and matter was found both in Scarpa's triangle and under the tensor fasciæ femoris, and later under the glutei. The limb became rotated outwards and shortened, and at last it became clear that the head of the femur and the upper border of the acetabulum had been absorbed, so that the upper end of the femur could be pushed up and pulled down on the

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pelvic wall through a range of three inches. Thus this joint within about eight months became a complete wreck. The patient died a few weeks later from phthisis and exhaustion. The best treatment, although it will often be found of little avail, is from the first to place the affected joint at absolute rest; to secure the best conditions for preserving the patient's general health; to open abscesses as they form, with the most rigid precautions against septic changes in the wound; and to resort to amputation when it is found that the progress of the case is in a persistently downward direction. Amputation, if means are taken to prevent hæmorrhage, and if an aseptic condition is maintained, will be perfectly well borne in the case of all the smaller joints and often of the knee. (In the case of the hip, of course, the idea of amputation cannot reasonably be entertained, nor would excision be a proper step.) After amputation has been performed the patient may, as I have several times seen, recover and long maintain perfectly good health. The list of cases of which I have given the foregoing brief account conveys a repetition of Sir James Paget's statement that there are no structures which in the young appear to be "seats of election" of scrofula (or, as would now be said, of tuberculosis) in which the affection is not met with in people over sixty years of age.

Another form of tuberculous disease which is seldom, if at all, referred to in the current manuals of clinical surgery is "subcutaneous ulceration"—a name which, like that of "senile scrofula" (now tuberculosis), we originally owe to Sir James Paget. The nature and course of this affection will be most readily indicated by two or three examples.

CASE 7.—Two months ago a boy, aged nine years, was admitted into St. Bartholomew's Hospital with a sinus on the inner side of his popliteal space and some ill-defined thickening over the neighbourhood of the internal condyle of the femur. These appearances suggested that the case was one of tuberculous disease of the lower end of the femur, attended with suppuration. On passing a probe, however, through the sinus, no bare bone could be detected, and, indeed, it was apparent that the probe nowhere passed through the deep fascia, but that it ran easily in various directions close beneath the skin, which, over the most prominent part of the internal condyle, was scarcely thicker than writing-paper. The probe also passed in the subcutaneous tissue nearly half-way down the leg, and its point moved horizontally through a considerable area, showing that the skin was widely detached. The nature of the case as one of wide undermining of the skin by "subcutaneous ulceration" was now clear. The whole of the undermined area was therefore exposed by free incision of the skin; the flaps thus formed were raised and turned back; the granulation tissue was thoroughly scraped away with a Volkmann's spoon; the wound was dusted with iodoform, and the flaps were replaced and fixed by sutures. Sound healing by primary union occurred except in the immediate neighbourhood of the original sinus. Here an exuberant crop of tuberculous granulation tissue remained, and a second scraping was necessary. Soon afterwards sound healing took place.

CASE 8.—A boy, aged ten years, was admitted some years ago into the Hospital for Sick Children, Great Ormond-street, with three sinuses, three or four inches apart, over the tibia. The orifices of these sinuses were filled with protruding granulation tissue, and their general appearance, together with some swelling of the soft parts, seemed to indicate plainly enough that the case was one of necrosis of the tibia. On proceeding to operate, however, I found that the deep fascia was everywhere intact; but the subcutaneous tissue for some distance around was converted into granulation tissue, so that the skin was completely undermined. In places it was very thin. Free incisions were made, the granulation tissue was scraped away, and the flaps were replaced and sutured. The wound healed in about three weeks.

CASE 9.—A youth, aged eighteen years, was in St. Bartholomew's Hospital two years ago with four sinuses over his occipital region which from their position seemed at first sight to suggest necrosis of the occipital bone. These sinuses had existed for about nine months. On examination it was found that the bone was nowhere exposed and that the sinuses led down merely to the areolar space beneath the occipito-frontalis. The pericranium was quite normal. The probe travelled freely in all directions over a nearly circular area about three inches in diameter. Incisions were made and the scalp over this area was turned up, the granulation tissue was scraped away, and the wound was treated as in the former cases. Healing quickly occurred, and when the patient left the hospital, three weeks later, there remained only three short sinuses which promised to be soundly healed in the course of a week or two.

The explanation of this particular form of tuberculous disease appears to be the following. When the tuberculous process is established in the subcutaneous tissue it extends in a horizontal direction, because the subcutaneous tissue is loose, vascular, and easily invaded, whereas both the skin and the deep fascia, especially the latter, owing to their comparative firmness and toughness, tend to withstand infection. The same fact is illustrated by the ordinary undermining of the skin in superficial tuberculous ulceration. It is illustrated also by the fact that in rodent ulcer the process extends in the subcutaneous tissue further than it does in the skin itself, so that for the complete removal of this disease it is necessary to cut well beyond the limits to which the skin appears to the naked eye to be involved. In fact, in subcutaneous ulceration, as in other instances, the undermining of the skin is due to the fact that the process of infection spreads most readily in the direction of least resistance.

THE

PROGNOSIS OF PNEUMOTHORAX, WITH SOME STATISTICS AS TO MORTALITY AND DURATION, AND AN ACCOUNT OF A SERIES OF CASES OF RECOVERY.[1]

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PNEUMOTHORAX is a subject which does not appear to have attracted of recent years as much attention as might have been expected from the importance of the subject. In the Bradshaw Lecture at the Royal College of Physicians of London in 1887 I drew attention to several points of theoretical and clinical interest. The present communication is of a more practical character and deals with the prognosis of the affection. Prognosis is without doubt the most difficult part of clinical medicine, for it not only necessitates profound knowledge of the natural history of the disease and of the general laws to which it is subject, but it requires also the power of appreciating at their true value the peculiar features of the individual case and of determining the extent to which the general laws must be modified to suit the particular instance. I must premise that in this paper I am dealing only with the cases which are ordinarily indicated by the term "pneumothorax" and not with cases in which the air has gained access to the pleura through a large opening in the chest walls produced by operation or injury. Before approaching the question of prognosis in pneumothorax it is necessary to refer to what is known as the general course of the disease so far as it is indicated by its mortality and duration. Upon this subject my observations are drawn from three sources: (1) a series of 101 cases from the records of the Chest Hospital, Victoria-park, published by me some years ago; (2) a series of 45 cases taken from the registers of St. Bartholomew's Hospital; and (3) a series of 21 cases which have been under my own personal observation. These last two series have not yet been published. Of the first series of 101 cases 66 died, giving, roughly speaking, a mortality of 2 out of 3; but of these 101 cases in 74 the pneumothorax developed in the hospital, of which 57 died—i.e., 77 per cent.; while of the 27 cases of pneumothorax which were admitted into the hospital with pneumothorax only 9 died—i.e., 33 per cent. The difference between the two sets of figures is to be explained by the fact that the mortality from pneumothorax is greatest in the first few days which follow the onset, while the latter group of cases consists entirely of those who had survived this period for varied lengths of time. The rate, therefore, given by the first group probably approaches more nearly to the true mortality of the

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disease than the other. In the second series of 43 cases 26 died, giving a rate of 60 per cent., and this is also the rate yielded by the third series of 20 cases under my own care. We may conclude, therefore, that the general mortality of pneumothorax ranges somewhere about 70 per cent.—i.e., rather more than 2 cases out of 3 die. Saussier's figures give a much higher rate—viz., 131 out of 147, or about 90 per cent.

Duration.—In the first series of 101 cases the duration is known exactly in 39 and approximately in 37 others. Of the cases in this latter group the pneumothorax occurred in 10 patients during their stay in the hospital; but the patients recovered sufficiently to leave, so that the terminus *ad quem* is not fixed. In the 27 other cases the patients were admitted with it, and in many of these the terminus *a quo*—i.e., the date of onset—was not quite certain. Altogether pneumothorax occurred 74 times in patients while they were in the hospital, and in these cases the duration is known in 31 exactly and very nearly in 8 more; while in the remainder all that can be said is that the disease did not last less than a certain time—that is to say, the length of the stay in the hospital.

Table showing duration in 76 cases—39 known, 37 approximate.

Months.	Weeks.	Days.	Duration known (39 cases).	Approximate duration (37 cases). Admitted with pneumothorax. Died.	Left with it.	Developed pneumothorax in hospital and died.	Total 76 died.
		1	10				
		2	3				
		3					
	1	4	4 (18)	—	—	4	
		5					
		6	1 (+8) = 29				45=60%
1		7					
	2		3	—	—	1	
	3		2 (=6)	—	—	2	
	4		4	2	—	1	
	5	—	—	—	—	—	
	6	—	1	5	8	—	
2	7	—	—	—	—	—	9=71%
	8	—	—	—	—	—	
	9	—	1	1	1	1	
3	—	—	—	1	7	1	
4	—	—	1	—	—	—	
5	—	—	1	—	1	—	
9	—	—	—	—	1	—	

Of the 39 cases in which the duration is known 10 patients died on the first day, 2 within twenty minutes and thirty minutes respectively of the attack, and the other 8 within a few hours. In all, 18 had died by the end of the first week and 21 by the end of the fortnight, to which may be added 8 more cases in which the duration cannot be quite determined, though it was certainly less than fourteen days, making thus 29 out of 39 cases which were fatal within the fortnight—nearly 75 per cent.; in other words, 3 out of every 4 cases. Six more died within the second fortnight, making thus 35 deaths out of 39 cases within the month, or 90 per cent.—a figure which exactly agrees with Saussier's statistics already referred to. I believe these statistics are too high for the results of the present day, as will be seen when I refer to the more recent series of my own personal cases. Of the remaining 10 per cent., or whatever the exact figure may be—i.e., of those patients who did not die within the month—the duration was considerably longer, many weeks, occasionally many months, and some patients recovered completely. Of the 35 cases in which the duration was uncertain 9 were admitted with pneumothorax and died in the hospital, 10 developed pneumothorax in the hospital and left at varying dates after the attack, some of whom were known to have died subsequently at their own homes, while 18 patients were admitted with pneumothorax and left with it. Of this second group, taking all the cases together, 10 died within the first month, 8 more within the second, and 2 more within the third, making 19 in all. Taking the 2 series together, of 74 cases 45 died within the month—i.e., 60 per cent.; 9 more died within the second month, making 71 per cent. Of the remainder the duration may be much longer and some may recover; 7 were known to be alive at the end of the third month, 1 at the end of the fifth, and 1 at the end of the ninth. Of the 20 cases which were under my own care, 12 only died and 8 recovered, giving a mortality of 60 per cent., which is exactly that which the records of St. Bartholomew's Hospital for the last fourteen years also yield.

The cause of death.—The real mortality from pneumothorax is difficult to arrive at, for it often happens that the patient gets over the pneumothorax, possibly even recovers completely from it, and yet dies before long either from the diseases which caused the pneumothorax or from the results to which the pneumothorax indirectly led. The causes of death must be dealt with in three groups: the first, in which death is the direct result of the pneumothorax itself; the second, in which it is the indirect result of it and due to the complications which follow—e.g., empyema; the third, where it is the result of the original disease—e.g., phthisis—to which the pneumothorax itself was due, the pneumothorax being at the most but a more or less serious complication, accelerating possibly the end, though not itself entirely responsible for the result.

1. The great majority of the fatal cases of pneumothorax die, as already stated, within the first few days of the disease; nearly one-half—46 per cent.—die within the first week. Of the cases that were fatal during the first fortnight, no less than one-third died on the first day, two within twenty and thirty minutes respectively of the onset of the disease, and the majority of the others within a few hours. Where death is the direct result of pneumothorax the cause of death is suffocation. This is due in most cases to the sudden embarrassment of the respiration and circulation consequent upon the disease, and it is not so much the amount of change as the suddenness of it that is the cause of the grave symptoms, so that if time be given for the circulation and respiration to adjust itself the urgency of the symptoms may pass off, and thus it may be stated that every hour the patient keeps alive the better the chances are of his passing safely through the initial dangers. Another and different cause of suffocation, mechanical rather than physiological, lies in the sudden discharge of the contents of cavities into the air-tubes which get sucked into the remaining lung and thus choke the patient. I have seen this occur more than once. Lastly, there is a class of case in which death may be called sudden or immediate and may be referred to shock. This is very rare and I have never seen an instance of it myself. Lebert describes a case in a young medical man of the age of twenty-eight years. Of the two cases in which the patient died within twenty minutes and thirty minutes respectively of the onset of the disease the cause of death in each was acute suffocation and not shock. The initial dangers can, no doubt, be greatly diminished by the early recognition of the disease and its appropriate treatment, and it is probable that the diminished mortality of pneumothorax in recent years is due to improved diagnosis and treatment.

2. Where death follows at a later period it is often the result of the effusion consequent on the pneumothorax. The effusions are, roughly speaking, serous in one-third of the cases, sero-purulent in another third, and purulent in the remaining third; where the effusion is purulent, sooner or later the side has to be opened, either because the empyema points or discharges itself or because it is deliberately incised. The condition then becomes one of an open empyema, and under unusually unfavourable conditions, for, owing to the prevailing prejudice against early incision in pneumothorax, the lung has been probably bound down and cannot consequently expand, and, secondly, because of the complication of the effusion with more or less extensive tuberculous disease of the lung. Any way, the patients die usually from asthenia, the result partly of the prolonged discharge and partly of the phthisis.

3. In the third group of cases it is not from pneumothorax that the patient dies, but from the original disease which produced the pneumothorax. This is usually phthisis. In

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many of these cases the pneumothorax is nothing more than a more or less grave complication, which may accelerate the end, though it is not of itself the cause of death. In other cases, though the patient is dying actually from phthisis, the pneumothorax which has been produced may get well completely.

Prognosis.—In dealing with prognosis we must presume that we have a case of complete and not of partial pneumothorax to deal with, for localised pneumothorax is comparatively an unimportant affection. Also, that when pneumothorax results from the discharge of an empyema through the lung or externally through the chest walls the prognosis is that of empyema and not of pneumothorax, and therefore relatively more favourable. The three considerations usually embraced by the common term "prognosis" require, in a case of pneumothorax, to be separately dealt with. They are, first, the immediate risk to life; secondly, the possible duration of life; and, thirdly, the chance of ultimate recovery. Many of these points have been already incidentally referred to in treating of the mortality and duration of the disease.

1. *As regards the immediate risk to life.*—This is always great, and greatest during the early hours and days of the disease, as has been already shown, so that, speaking generally, other things being equal, the chances of life increase in proportion to the period which elapses from the onset; but in any given case the actual prognosis at the time must be determined by many other considerations, of which the following are the most important. (*a*) The urgency of the symptoms; (*b*) the effect produced upon the opposite lung and the amount of previous disease in it; (*c*) the effect upon the heart; (*d*) the general strength of the patient; and (*e*) the nature of the cause—e.g., injury, phthisis, gangrene of the lung, &c.

a. The urgency of the symptoms. This is measured practically by the amount of dyspnœa and cyanosis, which is often so extreme that unless relief can be given the patient must die. The greater the relief given by paracentesis, and the longer the interval between successive paracenteses, the better the immediate prognosis.

b. The condition of the opposite lung. This lung, being overworked, may not be equal to the strain upon it, and if it gives way the physical signs of congestion (i.e., of bronchitis) will manifest themselves. Thus it is that rhonchus and sibilus become signs of very bad omen. The amount of previous disease in the lung is important, inasmuch as the lung is rendered thereby less able to meet the extra demands made upon it.

c. The effect upon the heart; for the difficulty of circulation throws extra work upon the right side of the heart, and if this exceeds a certain amount dilatation and its consequences will be the result—a result which will be the more likely to follow if the heart be previously diseased.

d. The general strength of the patient. This is important in two respects: first, in so far as it affects the muscular power, for this is taxed, on the one hand, in the respiratory muscles, which have so much extra work to do, and, on the other hand, in the heart, which in a weakly patient is all the more likely to give way rapidly; secondly, in so far as it affects the general stamina and powers of endurance of the patient.

e. Lastly, a good deal will turn upon the disease which has led to the pneumothorax. In the vast majority of cases this is phthisis, and this class of case may be taken to represent the average. As giving a prognosis better than the average may be instanced cases of pneumothorax following simple injury, such as a stab or a fractured rib, and as giving a still worse prognosis, cases of gangrene of the lung, for these are almost invariably fatal.

2. *As regards the duration of life.*—If the urgent initial symptoms have passed off the prognosis will depend upon the general strength of the patient and upon the nature of the disease with which the pneumothorax is associated, but principally upon the complications to which the pneumothorax may lead—i.e., upon the occurrence of effusion and its character.

3. *As regards recovery.*—Speaking generally, the number of recoveries in pneumothorax is small. Most statistics give a more or less complete recovery in not more than 10 per cent. The figures derived from the St. Bartholomew's records yield over 25 per cent., and my own cases are even more favourable still. In my own 20 cases 5 recovered completely and remained well for long periods; in 3 the recovery from pneumothorax was complete, but the patient died subsequently from phthisis, and in 3 others recovery was incomplete. Besides these I have seen 1 other case in consultation in which recovery was complete, and the patient has remained well for many years. The most favourable cases are those in which no effusion takes place. The air is then simply absorbed, and often with considerable rapidity. Of this there were 4 instances, and to these may be added the consultation case referred to. In another group of cases effusion forms, but it is serous, and recovery then takes place with or without paracentesis, just as it does after ordinary serous effusion. Sometimes the fluid, after being removed by paracentesis, does not re-form, but the air remains for some time longer, though it is ultimately absorbed also. In other cases the air is absorbed first, fluid takes its place, the case becomes one of ordinary serous effusion, and recovers in the same way. When the effusion is purulent the prognosis is much more serious, but even some of these cases in time recover. In one of my cases expectoration took place through the lung, and in the end the patient recovered completely. In one other the pus was discharged externally and recovery was imperfect, the patient being left with a discharging sinus for more than twelve months, by which time extensive phthisis had developed from which the patient soon after died.

I now pass to the account of the cases of recovery, which number 11. In 5 no effusion formed; 1 was dying from phthisis; 1 had phthisis, but was living some months after recovery; in the others no definite signs of phthisis developed. In 4 there was serous or sero-purulent effusion; of these four 1 was under the tuberculin treatment for phthisis at the time, and had two attacks at a short interval on the same side, but gave no definite signs of phthisis; 1 had a second attack on the other side six months after recovery from the first; 1 got completely well; the fourth left with the effusion, having refused operation. Of the 2 cases with purulent effusion, 1 recovered with a fistula, but died from phthisis twelve months later. The other expectorated pus for some time, but refused operation.

CASES OF RECOVERY.

A.—Without Effusion of Fluid.

CASE 1. *Acute phthisis; pneumothorax of the left side developing in the hospital; complete recovery in five weeks; rapid progress in the phthisis, and death subsequently at home from phthisis.*—The patient, a woman aged nineteen years, was admitted into the Chest Hospital, Victoria-park, with acute phthisis of the right apex and with some early mischief on the left side also. The disease was probably of about three months' duration. Six weeks after her admission (April 7th) she was seized one morning with pain in the left side and some shortness of breath. The symptoms were not very urgent, but she was found on examination to have pneumothorax of the left side with considerable displacement of organs. No fluid formed, the air was absorbed, though somewhat slowly, and by May 14th (i.e., five weeks from the onset) the two layers of the pleura were in contact in most places and dry friction was heard, and by the end of the month (i.e., seven weeks from the onset) the condition of the side was the same as before the pneumothorax, the heart's apex was in its normal place, and over it a well-marked pleuro-pericardial friction was present, which persisted for a short time and then also disappeared. The lung re-expanded completely, and nothing was left but a little impairment of percussion at the base behind. There had been no evidence at any time of fluid and succussion had been entirely absent. The temperature was hectic throughout, and was completely unaffected by the occurrence of pneumothorax. On July 10th she left the hospital at her friends' request—i.e., about twelve weeks after the onset of the pneumothorax. The phthisis had all the time been making very rapid progress, and a few weeks later caused the patient's death.

CASE 2. *Pneumothorax of the left side, without definite symptoms at the time of onset, without effusion, and complete recovery.*—A man, aged forty-six years, was sent up to me by Dr. Parry-Jones. About six weeks before admission he was at work and felt a pain in the left side, which made his breath somewhat short. The dyspnœa was not severe, so that he was able to continue his work, and he remained at work until shortly before I saw him, and with no special discomfort, except that he found his breath a little shorter than usual on effort. For this he consulted Dr. Parry-Jones, who found that the patient had pneumothorax, and sent him up to the hospital to me, although the man did not think himself ill enough

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to be placed upon the sick list. The whole of the left side was tympanitic to percussion almost to the very margin of the ribs; the heart was displaced, so that impulse was felt below the right nipple, and the pleura extended one and a half inches to the right of the sternum opposite the third rib. There was no bell sound or succussion; the breath sounds were absent everywhere except in the interscapular space and a little below this, and here the breathing was exaggerated and some metallic tinkling heard. The movements of the side were quite free. I made the following note at this time: the patient had pneumothorax of the left side; the amphoric breathing and metallic tinkling were probably produced in the lung, but the opening was itself closed; the free movements of the side indicated that the lung was not bound down, but expanded readily on inspiration. On Sept. 3rd the patient was quite well, the air was completely absorbed, and the lung re-expanded. The following note was then taken: the percussion was equal on the two sides, the cardiac dulness was in its normal place, the stomach resonance was a little higher than usual, and over a small spot at the base behind there was probably a little pleurisy, for the percussion was slightly impaired, the breath sounds were feeble, and some fine crepitation—probably pleuritic friction—was heard on deep inspiration; i.e., except for this the voice and breath sounds were normal over the whole side. The patient gained 14 lb. in weight in the hospital, and looked and felt quite well. Once or twice during his stay he had a little hæmoptysis, from which he had suffered occasionally before his attack. Dr. Parry-Jones has been kind enough to send me the following report of him this year, ten years since his attack of pneumothorax: "I find the patient has been at work ever since 1886 and has had no illness. He appears to be now in good health and his chest is in every way normal. I hear, however, from a doctor who saw him a few weeks ago that he had then a very slight attack of pleurisy on the left side, but of this there is no sign now.

CASE 3. *A man under treatment for possible phthisis who developed right pneumothorax; complete recovery in six weeks; well twelve months afterwards.*—The patient, a man, aged twenty-four years, had been under observation for some time suffering, it was supposed, from phthisis, of which, however, there were no definite physical signs. On Nov. 7th he was suddenly seized with severe pain on the right side with much dyspnœa. He was taken to the Royal Hospital for Diseases of the Chest, where Dr. Hensley drew off a large quantity of air next day by means of the aspirator. The patient left that hospital and came under my care four days later. The dyspnœa had disappeared, but the physical signs of pneumothorax were obvious. There was no distension of the side to sight or touch, but there was a good deal of subcutaneous emphysema which had followed the paracentesis. The heart was displaced, so that the apex beat was felt one inch outside the left nipple line; there were loud bell sounds and amphoric breathing over the whole side; succussion was absent. On the 15th the physical signs were the same; the bell sounds and amphoric breathing were well marked. On the 20th the physical signs were unaltered, but the apex of the heart had returned to the nipple line. On Dec. 9th the bell sounds had disappeared and did not subsequently return; the amphoric sounds were very weak, and the heart's apex was within the nipple line. On the 20th the right side seemed to be a little flatter and to move somewhat less than the left, but otherwise to be normal; the amphoric breathing had also disappeared and natural breathing was heard over the whole side, back, and front, while the apex of the heart was in its normal place. Thus within six weeks the air had been completely absorbed and the lung had re-expanded. The patient seemed perfectly well and was discharged. He was often seen subsequently, and though troubled from time to time with cough remained in better health than usual, and, indeed, gained flesh. With the exception of a little streaky hæmoptysis five months after his discharge he remained perfectly well, and was known to be in good health more than a year after the occurrence of the pneumothorax.

CASE 4. *Pneumothorax of the right side, probably the third attack; no fluid; complete recovery.*—The patient, a man, aged twenty-two years, was delicate as a boy and was subject to cough, but of recent years had grown stronger, and is now fairly active and strong. He was in his usual health until August, when, whilst walking, he had a sudden attack of pain just above the right clavicle and felt a bubbling sensation in the right side and the breath suddenly became short. After this he noticed that he had a "churchyard cough," but though he was able to keep to his work he was obliged to avoid all violent exercise for about a fortnight, when he got quite well. In the beginning of November—that is to say, four months later—after a game of football in which he was on more than one occasion heavily charged, he became again short of breath. This lasted about a month, but in the end he again got perfectly well. He remained well until just before Christmas (Dec. 23rd), when suddenly, after getting up in the morning, the shortness of breath again appeared and continued so until his admission into the hospital on Jan. 4th. He was then found to have pneumothorax of the right side. The chest was fairly well developed, but was a little flat in the upper part; the heart's apex was in the left nipple line, but the pleuritic hyper-resonance extended across the sternum for nearly an inch to the left. On the right side the breathing was amphoric in character, but no bell sound was obtained and no succussion. The liver dulness was at the lower edge of the seventh rib, so that the tympanitic percussion did not extend exactly to the costal arch. The diagnosis made was that the patient had had pneumothorax and that the air had been partly absorbed. He presented no symptoms; the temperature was normal and he seemed well, so that on the 17th he was allowed to get up, and on the 24th was up all day. He could get about without any shortness of breath and the physical signs were not much altered. On Feb. 5th it was noted that the shape of the chest was symmetrical; movements were free, but there was a little more expansion on the left side than the right on deep inspiration; the liver stood at the sixth rib in the nipple line on the right side; cardiac dulness was normal in place and size; the percussion note was still a little hyper-resonant on the right side, the left was normal; the breath sounds were vesicular and audible down to the base, though a little more distinct at the apex than elsewhere; a little fine crepitation in the mid-axillary line was heard when some pain had been complained of. The patient was seen many times subsequently and was known to be in excellent health for many months, when he became lost to observation.

CASE 5. *Pneumothorax in an apparently healthy girl; no effusion; complete recovery.*—This was a case seen in consultation and is not included in my series. The following account of the case was sent to me by Dr. Waldo of Clifton, Bristol: "The patient, a girl, aged fifteen years, thought she felt something give way in her right side when dancing. She was first seen by me on Aug. 14th, 1890, when she complained of a sharp pain under the right collar-bone. The heart's apex was half an inch outside the nipple line on the left side, and there were the ordinary signs of pneumothorax, but no succussion. Shortly afterwards you saw her and recommended that she should stay in bed for many weeks. I have a note that on Oct. 6th, 1890, the heart's apex was in its normal position and the respiratory murmuring equally good on each side. The patient had never spat any blood and there were no signs of tubercle. Her weight was 6 st. 4 lb. I have seen the patient only a few times since, as far as I can recollect, and I have every reason to think that the patient is still in good health."

I recorded one of the cases just described (Case 3) in the Transactions of the Clinical Society of 1884, and I collated a series of 24 cases of this kind,[2] nearly all in males. The majority of these cases made a rapid recovery; some were well in a few days, others in a few weeks; the longest took eleven weeks. The probable cause was specified in 18; 4 were due to phthisis certainly and 4 more probably, 3 were attributed to emphysema, 2 followed over-exertion in previously strong, healthy persons, and 3 were traumatic. In 4 only was mention made of evacuation of air by puncture.

(To be continued.)

[2] Cf. also Gaillard, Archives Générales de Médecine, 1888, p. 286, with many of the same cases recorded.

THE BATH ROYAL MINERAL WATER HOSPITAL.—The annual meeting of the governors of this hospital was held on May 1st. The report stated that 1263 patients had been treated in the institution during 1896 and that the daily average in the hospital was 142, their average stay being 47½ days each. Fifty-two of the patients were cured and 959 greatly benefited. General Mainwaring was again elected president.

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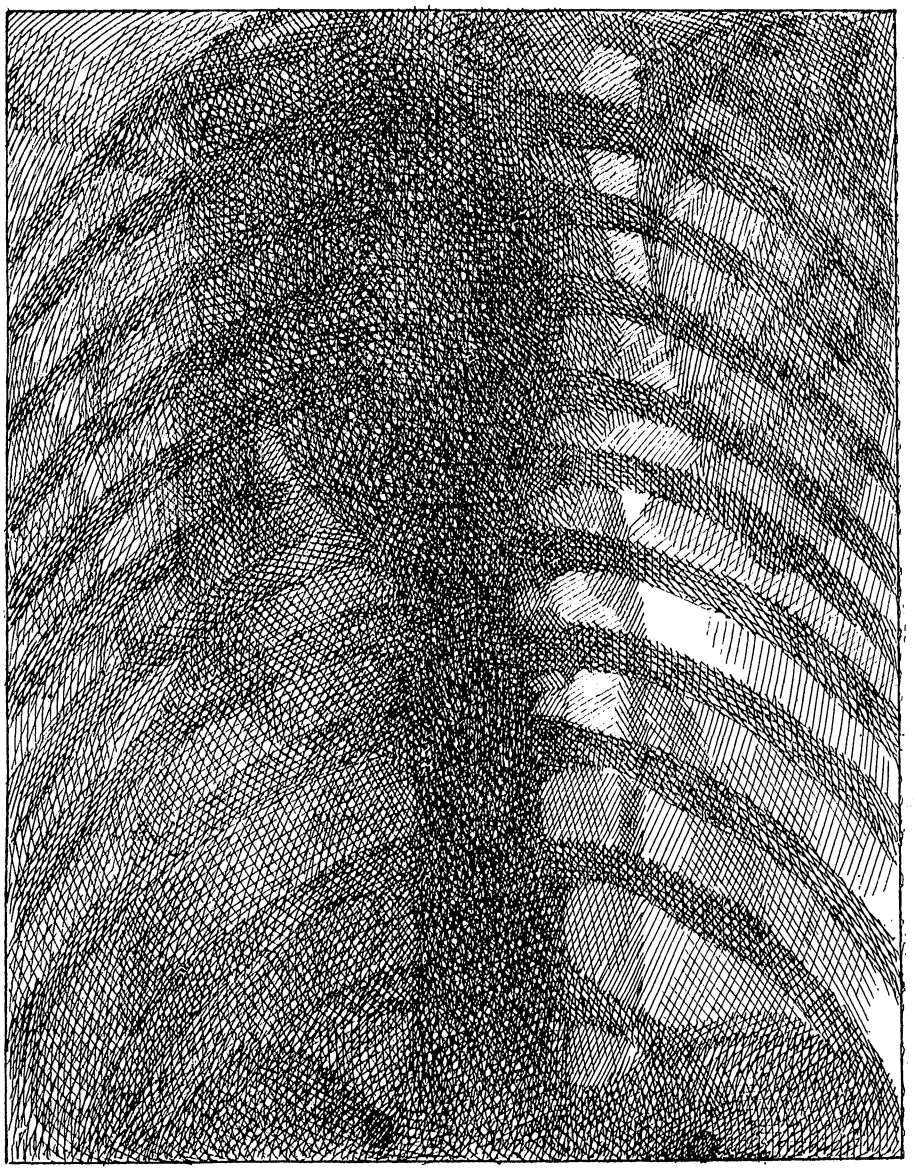
SKIAGRAM OF THORACIC ANEURYSM.[1]

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AND
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ON Jan. 6th of this year Dr. Edmond sent to the Electrical Department, from his wards in the Aberdeen Royal Infirmary, a patient whom he suspected to be suffering from an aortic aneurysm, with the request that a skiagram should be taken in order to confirm, if possible, the diagnosis. On examining the patient by means of the fluoroscope, the shadow of the heart at its upper part was seen distinctly to encroach on the clear area of the right lung. This encroachment had a curved border, with its convexity towards the patient's right. Having observed this abnormality, and being unaware that any successful skiagram of a thoracic aneurysm had been reported, we proceeded to skiagraph the patient's thorax in the manner to be subsequently described. For the following short notes of the case we are indebted to Dr. Edmond.

"The patient was a married man, aged forty-four years. There was nothing of special interest in either his family or personal history. He denied having had any specific disease, but acknowledged to alcoholic excess. He stated that about two months previously to his admission on October 27th, 1896, to the Aberdeen Royal Infirmary he began to suffer from cough and pain in the chest and neck. He lost flesh and strength, and was obliged to cease work and to apply for admission to the infirmary. On admission he complained of cough with scanty expectoration, pain across the chest about the level of the third ribs, shooting into the neck and arms, and shortness of breath on exertion. On inspection his chest appeared to be barrel-shaped, with expansion deficient, particularly on the left side. There was no bulging anywhere visible, and no undue pulsation visible or palpable, either in the chest or neck. On percussion

FIG. 1.



Drawing from skiagram of abnormal thorax. The shadow of the aneurysm is seen lying in front of the spine and extending from the base of the second to the seventh dorsal vertebræ and head of the seventh rib.

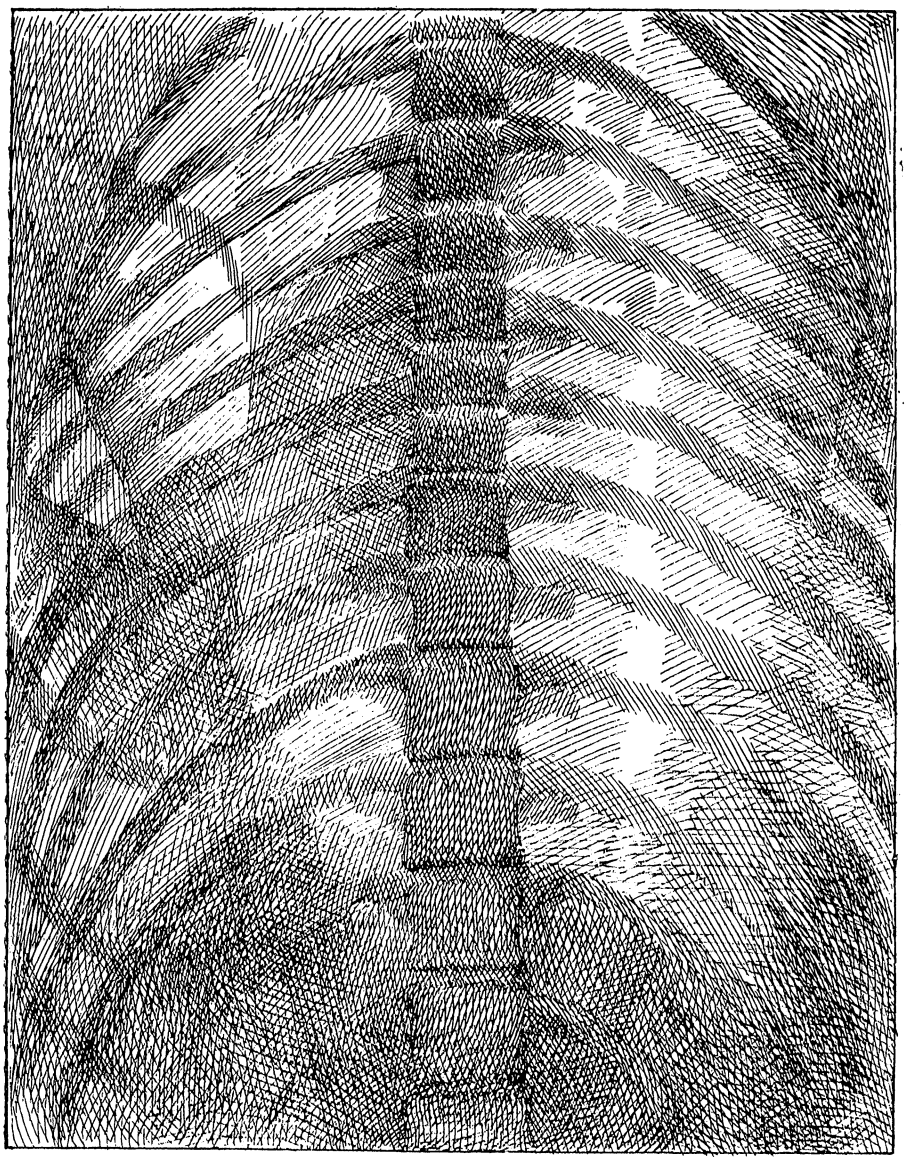
[1] Exhibited before the Aberdeen Medico-Chirurgical Society.

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the note was found to be hyper-resonant over the whole of the front and back of the right side, and rather flat over the corresponding parts of the left. Over the manubrium sterni and extending to the left there was a slightly dull note. On auscultation the breath sounds over the front and back of the right side were loud and harsh, with prolonged expiratory murmur. Over the front and back of the left side the breath sounds were all but extinguished. A few dry rhonchi were heard on the right side. His voice was hoarse and his cough had a distinctly laryngeal tone. The heart's impulse was feeble to palpation and not visible. The area of cardiac dulness was about normal. At the apex the heart's sounds were feeble and free from murmur. At the base, in the pulmonary area, they were scarcely audible; in the aortic area they were abnormally loud, particularly the second, which was markedly accentuated. The pupils were equal in size and reacted freely to light. The left radial pulse was weaker than the right. There was well-marked tracheal tugging. His larynx was examined by Dr. McKenzie Booth, who reported paralysis of the left vocal cord. During his stay in hospital he was treated with large doses of iodide of potash and left somewhat improved. We heard that he died on Jan. 16th, 1897, some weeks afterwards, from lung complications, but found it quite impossible to obtain the permission of the relatives for a post-mortem examination."

The skiagram of the aortic aneurysm was taken while the patient lay on his back upon a 20 × 16 in. professional Cadett plate. The ordinary focus-tube was used at a distance of fifteen inches from the plate and an exposure of thirty-five minutes was given. The 8-inch spark Rhumkorff coil was actuated by five E. P. S. accumulators of about two volts each. On examining the skiagram of the suspected aneurysm the curved shadow on the clear area of the right lung, observed by means of the fluoroscope, is at once seen, along with a larger extension of the same shadow to the left, this latter part of the shadow merging gradually into the normal shadow of the heart. The abnormal shadow is seen to lie in the upper part of the chest, in front of the spine, and extends from the base of the second to the lower part of the seventh dorsal vertebra (Fig. 1). On the right side the gradual curve is seen vividly against the clear lung, commencing at the articulation of the third rib with the spine, curving outwards to a point two and seven-sixteenths inches from the mid-spine, and then inwards to its lower limit at the spinal articulation of the eighth rib.

FIG. 2.



Drawing from skiagram of a normal thorax for comparison.

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A darker shadow lies half an inch inside this outline and follows the same shape of curve. On the left side the lower limit of the shadow is the same as on the right, but its curve is greater, extending to a point three inches from the mid-spine. The upper limit of the curve is lost at a point two and three-quarter inches from the mid-spine opposite the base of the second dorsal vertebra. On the right side the inferior angle of the scapula is well seen between the seventh and eighth ribs, four and a half inches from the mid-spine. The spine of the scapula is seen running from between the third and fourth ribs upwards and outwards towards the shoulder-joint. On this side, also, the lung space is much clearer and the interspaces between the ribs wider than on the left. On the left side the heart shadow (though indistinct, as the patient was lying on his back) is seen extending from the point of maximum curve of the abnormal shadow downwards and outwards to the tenth rib. On this side it is interesting to note that the lung space is much duller in appearance and the interspaces between the ribs narrower, because during life physical examination proved that breath-sounds were almost absent in this lung. The spine and inferior angle of the left scapula can also be seen. The shoulder articulations and shafts of both humeri are visible. The front curvatures of some of the ribs on both sides also appear as large ill-defined shadows, crossing the lung space at right angles to the direction of the ribs at the back. The upper surface of the liver appears very distinctly on the right side. For purposes of comparison a normal thorax of about the same dimensions as the one with the aneurysm was skiagraphed under precisely similar conditions, and the points of interest in it are as follows.

Normal Thorax.—In the upper part of the skiagram no shadow is seen on the right side, nor on the left above the level of the fifth dorsal vertebra (Fig. 2). In these regions the lungs are equally clear on both sides, and the interspaces between the ribs equal in size. The indistinct shadow of the heart is seen on the left, extending from the upper part of the fifth dorsal vertebra downwards and outwards in almost a straight line to a point about five inches from the mid-spine on a level with the lower part of the tenth dorsal vertebra. A darker shadow is visible, leaving the former one at the sixth rib, with a curve which forms its lower border, and reaches to the middle of the eighth dorsal vertebra. This darker shadow is probably the base of the heart. In this skiagram also the spines and inferior angles of the scapulæ are visible.

A CASE OF INJURY TO THE SHOULDER FROM THE SCHULTZE METHOD OF ARTIFICIAL RESPIRATION.

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ASPHYXIA neonatorum is generally treated in Germany by the Schultze method of artificial respiration, which is not in such common use in this country; but it is taught and practised at the Rotunda Hospital, Dublin, and from experience there and subsequently I regard the method as prompt and effective.

The case I now record of injury to the shoulder from the Schultze method is perhaps unique; but it shows the possibility of accident and the necessity for most careful manipulation. The facts are as follow: The child was born at the "klinik" of a celebrated obstetrician in a German city, near which the mother—an Englishwoman—was staying. She was, however, attended by his assistant, also a specialist of high repute. It was fortunate that she was in such good hands; it proved a prolonged and difficult instrumental case, the child, a boy weighing 11 lb. Artificial respiration was necessary; the Schultze method was used and it revived the child. For forty-eight hours he was continuously fretful, and neither slept nor took the breast. There was no explanation of this fretfulness until extensive ecchymosis behind the left shoulder and in the axilla drew attention to the arm, which hung limp and flaccid. When the mother and child left the "klinik" after the usual interval, the arm still hung loosely from the shoulder, and the infant had shown no disposition to use it. Careful examinations had revealed no fracture, dislocation, or other radical injury, and it was believed that nothing existed which time would not remedy. Unfortunately, these hopes were not fulfilled. At three months old the child could make some limited movements with the arm and weak, awkward efforts with the hand, but rigidity at the shoulder-joint had supervened on the primary flaccid limpness. During the seven months following the child's birth the parents were travelling, and after leaving the "klinik" had only once had an opportunity of getting professional opinion about the arm. The child was then four months old, and they were becoming very uneasy; but a medical man, after superficially observing the child without having him unclothed, again lulled their anxiety by treating the matter lightly, and repeating the hope that all would come right with time. They were but too pleased to accept this opinion, particularly as the boy was the long-desired successor to five daughters and remarkably fine and healthy withal. When he was seven months old they had again become so dissatisfied that they had determined, by a friend's advice, to go to London for Mr. Pearce Gould's opinion. They had then come to Brighton, and a brief postponement was caused by severe illness in the family. The baby was eight months old when the mother one day asked me to tell her what I thought of his left arm. While I engaged his right hand he eagerly clutched at my proffered pencil-case with his left hand and arm in a most unnatural position. It was very evident that there was something radically amiss, and the next day I made a careful examination with the child stripped. On inspection from the front the following points were noticed. The whole arm was strongly rotated inwards, adducted, and drawn forwards. So constant was this position that the skin in front of the axilla was folded into a permanent, deep sulcus. Compared with the right the left deltoid was very flat and deficient, likewise the biceps. Inspection behind showed the humeral head and scapular spine unduly prominent, owing to the deficient size of those muscles, which normally make these bony prominences indistinct. The triceps was also undersized. The forearm muscles were not so noticeably undeveloped, and measurements proved the humerus to be only slightly shorter than its fellow. Examination showed that the relations of bony points about the shoulder and elbow were normal, with the exception that the head of the humerus was, perhaps, slightly tilted back towards the posterior lip of the glenoid cavity. The tendon of the pectoralis major was large, tense, and contracted, and kept the arm powerfully rotated inwards, adducted, and drawn across the chest. Attempts to overcome it were futile and caused immediate suffering. When by engaging the sound arm the child was induced to grasp with the other at any attractive article he habitually flexed and internally rotated the arm more excessively, and by bringing the forearm pronators into extreme action carried the little finger and the ring finger uppermost and grasped with them only. These two fingers were well developed, whereas the unused other three were comparatively small. By my advice Mr. Pearce Gould was at once consulted. He concluded from the history, with the important fact of the primary extensive ecchymosis behind the shoulder and in the axilla, and from the condition he found—great wasting of the muscles in the infra-spinous fossa of the scapula, with thickening at the back of the upper end of the humerus—that the infra-spinatus and teres minor muscles had been ruptured when the Schultze method was used, and that the deformity had been gradually produced by the unopposed and naturally stronger internal rotators, the pectoralis major in particular. He advised the breaking down of adhesions and the stretching of contracted tendons by free movements under chloroform, to be followed by massage, movements, and electricity. In a few days' time I administered chloroform, and Mr. Pearce Gould thoroughly carried out these operations and fixed the arm in extreme external rotation by means of broad strapping passed round the limb and then round the chest. On the four consecutive days I repeated the free movements and re-strapped the limb, with the child anæsthetised. The operation then became easier and less painful, and anæsthesia was dispensed with. Mr. Pearce Gould had not given a very favourable prognosis, but yet held out hopes of substantial improvement should after treatment be persistent and thorough. Fortunately, the parents were reasonable and sensible, and they realised that eight months' inaction was only to be counterbalanced by a much longer period of patient, continuous effort. In a week from the primary

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operation I commenced Faradaisation, continuing it on alternate days, in addition to the free movements; the aim was to develop the remains of the injured external rotators with other muscles which might be compensatory and to improve innervation. I picked out the deltoid in particular, the trapezius, rhomboids, &c., also the triceps; and to counteract the constant tendency of the forearm to pronation I tried to increase the development of the supinators longus and brevis, and by inducing strong contractions of the biceps with the forearm flexed to improve its action as a supinator; the radial extensors of the carpus, longior and brevior, were also treated. Rapid increase in the size of all these muscles, with quickened response to stimulus, gave encouragement, and very soon operations were extended with the small button electrode to the small muscles of the undersized thumb, index, and middle fingers, and to the palmar surface of their tips to improve tactile sensibility, with palpable benefit. Sometimes one pole was placed over a muscle and the other over the brachial plexus in the posterior triangle or over the individual nerve supply, and sometimes both poles were placed over either end of one of the longer arm muscles. Frequent intermissions were given to avoid overtiring a muscle. After a month other factors equally as effectual and important helped in the improvement. Nearly all day now the child had his good arm enveloped by a towel tied round his body; he also had a thick stall on the little and ring fingers of the other hand to prevent his customary exclusive use of them. His mother's devotion to a set purpose and her intelligent supervision were now invaluable; she daily gave all her spare time to the various amusements and devices we designed to teach the child external rotation, abduction, supination, and the use of his unaccustomed fingers; it became quite a matter of habit with all the family to discourage the tendency of the limb to internal rotation and pronation; the happy disposition of the child helped us greatly. At the end of two months there was such evident improvement in every way that our task daily grew in interest and lost all tediousness; we began to cultivate the deficient finer movements and sense of touch in the underdeveloped left thumb, index, and middle fingers; with the finger-stall over the other two he was attracted to hold and pick up things. At first he was so awkward and feeble that it was a most difficult matter to get him to take up large lumps of sugar and drop them into a basin, but before many weeks he could confidently pick up such difficult things as pills, small buttons, and safety-pins, coins, &c., with forefinger and thumb opposed in a strong and natural grasp. With his sound arm tied up he now played for hours daily with a variety of articles and with vastly improved method; he was also regularly enticed to reach out after things put round him in different positions, to lift up and take things down from places above him. At the end of four months the regular Faradaisation and free movements—which were now quite painless and easy—with the persistent education of the limb, had effected improvement beyond our hopes. The humerus was very slightly shorter on the one side, but comparison revealed no differences in the muscles now. Force of habit and larger development of the internal rotators always had a tendency to reassert themselves, but the child was now rapidly learning to counteract them by the better use of his improved external rotatory mechanism, which would, however, probably be always weak. At the end of five months we thought our results interesting enough for Mr. Pearce Gould to see, and by his desire the child, now thirteen months old, was taken up to the Middlesex Hospital and shown to his class. It was an interesting case for his hearers, and gave him an object lesson to impress on them that the Schultze method of artificial respiration requires all possible gentleness. Subsequently the little patient went to Germany for a few months. Faradaisation was now almost superfluous, but a battery was taken for occasional use, which the parents could competently manage themselves.

The child was taken recently to see the famous German surgeon, Professor Kraske of Freiburg. I gave him a brief history from the commencement and a statement of the treatment; he has sent me a letter written by a colleague at his request from which the following is an extract. "Besides symptoms pointing to what we call 'Erb's paralysis'—lesion of the fifth and sixth cervical roots above the clavicle—Professor Kraske found the growth of the left humerus impaired, which he was inclined to attribute to traumatic lesion of the upper epiphysis. As to the ultimate result of treatment, Professor Kraske did not feel entitled to express any definite opinion. Since the nervous disturbance had gradually been giving way he considered further improvement very probable." Professor Kraske also says he advised the application of a bandage, which will, while it is worn, fix the humerus in a normal position and prevent its inward rotation. Seven months of treatment had so altered the condition of affairs when Professor Kraske saw the child that it was very difficult for him to realise fully the nature of the primary lesion and the true characters of the resulting deformity. Interesting as his views were, his prognosis was of far more practical importance, and was fully justified, for I now hear that since the intermittent use of Professor Kraske's bandage improvement has been even more rapid than before.

Although I anticipate ultimate success in extent greatly beyond what has been attained, I think the treatment has gone far enough and been successful enough to make the case instructive and to point the moral that in cases of this nature one need not despair of improvement; in fact, in an apparently hopeless instance the commencement of treatment may justify a prognosis which amply repays us for the experiment and encourages us to persevere.

Brighton.

A CASE OF RUPTURE OF THE LIVER SUCCESSFULLY TREATED BY ABDOMINAL SECTION.

BY CHRISTOPHER MARTIN, M.B. EDIN., F.R.C.S. ENG.,
SURGEON TO THE BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN.

IN the early part of the afternoon of May 4th, 1896, a strong, healthy young coal miner, aged nineteen years, was caught, whilst down in the pit, between two sets of trucks and received a severe "rolling crush." He was carried to the surface and sent home in a cart, and Mr. J. M. McCarthy, of St. George's, Salop, was sent for. When he saw him, about 4 P.M., the patient had recovered from the first shock. He complained of great pain in the right side of the chest. There were signs of bruising both on the front and back of the chest, especially on the right side. His pulse was 76, his temperature 98° F., and there was nothing then in his general condition to point to any grave internal injury. In the evening he seemed to be better, and he slept during the night till 5 A.M. Next morning (the 5th) he was, however, decidedly worse, and as the day wore on well-marked symptoms of grave abdominal mischief supervened. The pulse became more and more rapid, the temperature steadily went up, the abdomen became distended, the face pinched, and the respiration sighing. Mr. McCarthy wired for me to go over at once prepared to operate. In his telegram he said: "Case of traumatic peritonitis; probably ruptured viscus." When I saw the patient, about 9 P.M., his temperature was 103°, his pulse 130, his breathing short and distressed, his face pinched, and the abdomen was hard, tense, and distended—tympanitic in front, dull at the flanks, and evidently containing much free fluid. There were, however, no signs of free gas in the peritoneal cavity—no obliteration of the liver dulness—showing that the stomach and intestine had probably escaped. There was no vomiting either of blood or bile, no hæmoptysis, and no hæmaturia. He had passed flatus and the urine was clear. The symptoms were those of progressive intra-peritoneal hæmorrhage and advancing peritonitis. These symptoms, the absence of signs of injury to the lungs, stomach, intestines, kidney, and bladder, and a consideration of the mechanism of the crush, led us to diagnose a rupture of the liver. Mr. McCarthy agreed with me that the patient's only chance lay in immediate abdominal section. To this the patient readily consented; but his parents gave way most reluctantly. The operation was done under difficulties, by the uncertain light of a paraffin lamp, in a miner's cottage, in a pit village on a Shropshire hill-side. About 9.30 P.M. Mr. H. H. Rubra put the patient under chloroform, and, with Mr. McCarthy's able assistance, I opened the abdomen in the middle line by an incision reaching from the ensiform cartilage to the umbilicus. As soon as the peritoneum was opened an immense quantity of black blood—fluid and clotted—escaped, and on examination, the liver was found to be ruptured. A rent, from one to two inches deep, ran from before

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backwards on the under surface of the right lobe, from the portal fissure to as far up the posterior surface as I could reach. There were, in addition, evident signs of commencing peritonitis. I now endeavoured to clear the abdomen of blood-clot by free irrigation with hot water. Floating amongst the clots I noticed a fragment of liver substance wholly detached from the organ. This was examined microscopically by Professor Allen of Mason College, Birmingham, and it proved to be normal human liver tissue. I lay some stress on this fragment, as it is proof positive not only that the blood came from a rent in the liver, but also that the lesion of the liver must have been a severe one. Probably there were other small fragments detached, but they escaped notice amongst the clots. The question then was how to deal with the rent. Had it been on the anterior border or upper surface I could have sutured it with catgut or plugged it with iodoform gauze; but it extended so far backwards and upwards on the posterior surface that suturing was impossible, and I considered that gauze plugging was impracticable. I decided to trust to the hæmostatic effect of free irrigation with hot water, thorough removal of all effused blood from the peritoneal cavity, and free drainage. I accordingly again washed and sponged out the abdomen. In order to effectually drain the pelvic pouch I made a short incision just above the pubes. I then inserted two glass drainage-tubes—one through the epigastric incision going down to the rent in the liver, and the other through the suprapubic opening into the pelvis. The parietal wounds were closed with silkworm-gut sutures, antiseptic dressings were applied, and the patient was lifted back to bed. It was fortunate that I made the suprapubic opening, as for several hours there was a free bloody discharge from the lower tube, though practically nothing came through the upper tube. The patient stood the operation well, but a condition of grave abdominal collapse continued during most of the following day. His temperature fell markedly after the operation, but his pulse continued from 130 to 140 and was at times intermittent and uncountable. Thanks, however, to the frequent administration of brandy and beef-tea enemata, small quantities of brandy by the mouth, and small doses of morphia hypodermically, the patient rallied, and during the afternoon (May 6th) had four hours sleep. Mr. McCarthy and his assistant (Mr. Rubra) were most assiduous in their attention, and the patient owes his recovery in a large measure to their careful after-treatment of the case. After the first twelve hours there was very little bloody discharge from the drainage-tubes, and what there was came from the lower tube. That from the upper tube was scanty, serous, and for a few days bile-stained. On the 10th the glass tubes were removed and rubber tubes inserted. These were gradually shortened from day to day. On the 11th, although his abdominal condition was most satisfactory, the patient developed symptoms of pneumonia. For several days he brought up semi-purulent blood-stained sputum, had a moderate degree of fever, a troublesome cough, and quick, distressed breathing. On the 20th his temperature fell to normal, and from that date he progressed rapidly to recovery. The patient is now (April, 1897) fat, strong, and hearty.

Remarks.—Rupture of the liver, though by no means a rare accident, is a terribly fatal one. The chief causes of death are shock, hæmorrhage, and peritonitis: (*a*) shock from the bruising, tearing, and pulping of a vital organ; (*b*) hæmorrhage from the laceration of the great vessels at the portal fissure and traversing the liver substance; and (*c*) peritonitis from secondary septic changes in the extravasated blood and bile. At the same time it is not an absolutely mortal injury. There have been several instances in which, from the nature of the accident, the clinical signs and symptoms and the after progress of the case, it is extremely probable that the liver was ruptured, and yet the patient recovered. Still more conclusive are four cases (published by Heath, Erichsen, Morris, and Hammond) where the patients survived the accident—14, 16, 21, and 38 days—and then died from other causes. In each case a post-mortem examination showed that the liver had been ruptured—more or less severely—and that a spontaneous cure was taking place. Such cases, however, form an extremely small minority. In the vast majority—probably 99 per cent.—death rapidly takes place. In the above case I am convinced that had the patient not been operated on he would certainly have died. After the first shock of the accident passed off he had no bad symptoms for sixteen hours, during which time he had several hours' sleep. Then he began to show signs of progressive intra-peritoneal hæmorrhage and advancing peritonitis. Hour by hour his condition became graver, and when I saw him some thirty hours after the accident it was evident that he was doomed—unless we could save him by abdominal section. But how did the operation save him? I attribute the good result to the free irrigation of the peritoneal cavity with hot water and to the thorough drainage. By the irrigation I checked the bleeding from the rent in the liver, and removed a vast quantity of effused blood and lymph from the peritoneum. The drainage tube—properly used—is itself an excellent hæmostatic, as all who have had much experience of pelvic surgery are well aware. By draining away the blood as soon as it was poured out it promoted the natural arrest of hæmorrhage. Furthermore, the removal of the effused blood, lymph, and bile checked the progress of peritonitis and prevented its further development. I lay stress on the importance of draining the pelvic pouch by an opening just above the pubes. It is significant that most of the discharge came through the pelvic drainage-tube. In conclusion, I trust that the successful issue of this case will encourage other surgeons to try to save, by timely operation, cases in which the same terrible accident has occurred.

Birmingham.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

EXTENSIVE MALIGNANT DISEASE OF THE TONGUE AND FAUCES; REMOVAL; RECOVERY.

(Under the care of Mr. J. N. C. DAVIES-COLLEY.)

THE very great extent of the structures in the mouth involved in the following case necessitated a departure from the usual Whitehead operation, and the buccal incision, which is generally associated with the name of Furneaux Jordan, though previously described by F. J. Gant, exposed the affected parts better than any other of the numerous incisions which have been employed for removal of the tongue. The approximation of the edges of the mucous membrane and the use of an antiseptic locally account in great part for the rapid healing. As to the prognosis nothing can be said; but whether the disease returns or not the patient is much the better for the removal of so extensive a malignant ulcer. For the notes of the case we are indebted to Mr. H. W. Dudgeon, clinical assistant.

A man, aged fifty-six years, was admitted into Guy's Hospital on March 24th, 1897, complaining of disease of the tongue. He had first noticed a pimple far back on the right side of the tongue just after Christmas, 1896. Thinking it was due to chewing tobacco he gave up the practice, but the pimple steadily grew larger, and continued growing up to the time of the patient's presenting himself at the hospital. For the last seven weeks before admission he had not been able to swallow solid food, and consequently his diet had been entirely fluid. Six days before admission he had, he said, vomited about two quarts of liquid blood with a small mass of solid blood clot. He had never had any pain in the tongue, throat, or stomach except the pain caused by attempting to swallow solid food. For some weeks an offensive purulent discharge had run from the mouth. He had, he thought, lost a good deal of flesh in the last few months, but he attributed it to the abstinence from solid food. On admission the patient was seen to be a well-formed man, but thin. On the right side of the tongue were two extensive ulcers situated for the most part on the posterior half of the tongue. The edges were raised and everted and the centres deeply excavated; the bases were very hard, and the hardness extended downwards into the floor of the mouth on the right side, backwards to within half an inch of the epiglottis, and upwards to the right tonsil and the right half of the soft

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palate. On attempting to swallow he was unable to raise the tongue from the floor of the mouth, to which it had become firmly adherent. The tongue could be protruded slightly, and it then deviated markedly to the right. No enlarged glands could be felt either under the jaw or in the neck, but there seemed to be a fulness beneath the right angle of the jaw. He complained of no pain in the mouth except when taking food, but occasionally he experienced a sharp pain in the right ear. The other organs of the body were healthy. On March 26th the patient was anæsthetised, at first with the A.C.E. mixture and subsequently with chloroform by means of a Junker's inhaler. A gag was introduced on the left side by which the mouth was forcibly opened, and the tongue was transfixed near its apex by a stout silk ligature, by which it was drawn as far out of the mouth as possible. By means of a scalpel the right cheek was cut through in a line with the mouth as far back as the wisdom tooth. Mr. Davies-Colley then snipped away with the scissors all the affected part of the gum, the anterior pillar of the fauces, the right tonsil and part of the soft palate, and finally, by a somewhat oblique incision, practically the whole of the tongue was removed. There was very little bleeding. The cut edges of the mucous membrane were approximated by salmon-gut sutures and the margins of the incision through the cheek were joined by means of a button suture. The patient bore the operation well. A mouth-wash of a solution of resorcin, ten grains to the ounce, with a drachm of glycerine, was used. He was fed by nutrient enemata, and also took a little milk by the mouth. His recovery from the operation was rapid and uneventful, and on April 1st the button suture was removed. At no time after the operation did he complain of any pain, and at an early date he took all his nourishment by the mouth. On April 12th he was practically well.

Remarks by Mr. DAVIES-COLLEY.—This case of epithelioma of the tongue is interesting on account of the great extent of that organ as well as of the soft palate and right tonsil involved without any perceptible enlargement of the lymphatics. I thought, therefore, that I was justified in removing the disease through the mouth by Whitehead's operation. I did not find it necessary to perform laryngotomy, and very little blood got into the air passages, although the section of the dorsum of the tongue on the right side came near to the epiglottis.

GREAT YARMOUTH HOSPITAL.

A CASE OF VERY EXTENSIVE FRACTURE OF THE BASE OF THE SKULL; NECROPSY.

(Under the care of Dr. H. BLAKE.)

THE extensive fracture of the base of the skull which was found post mortem in this case is somewhat unusual from a blow on the occiput. A circular fracture of the base surrounding the foramen magnum is by no means rare when resulting from a fall on the vertex, for then the occipital condyles and the adjacent portions of bone are driven into the skull by the momentum of the body acting through the cervical vertebræ. The ecchymoses seen over the mastoid processes are recognised as a trustworthy sign of fracture of the posterior fossa. For the notes of this case we are indebted to Dr. K. W. Monsarrat, house surgeon.

A man, aged fifty years, was admitted to the Great Yarmouth Hospital on June 2nd, 1896, with a history of having received a blow on the back of the head by a fall which brought it in contact with the kerbstone. He was intoxicated at the time. When admitted he was unconscious, the breathing was stertorous, and there was free hæmorrhage from both ears. The pupils were contracted and equal, both reacting to light; there was a slight conjunctival reflex. Over the occipital bone on a level with the protuberance, and rather more to the left than the right of the middle line, was a large bruise, but there was no other mark of external violence. On the night of the 2nd he developed a condition of great irritability and restlessness, so that he had to be tied down in bed. The struggling was noticed to be much more marked on the right side of the body than on the left. He continued in this state until he died, except that on half a dozen occasions, all at night, he asked rational questions as to why he was tied down, &c.; as a general rule, however, he lay struggling and muttering. On the night of the 7th he had two general convulsions without any localising symptoms. At midnight on the 8th he died.

Necropsy.—The post-mortem examination was made seventeen hours after death, and the following are the notes of interest. There was a distinct flattening of the skull about the region of the external occipital protuberance over an area three inches in diameter; there was no ecchymosis there, but behind each ear over the mastoid there was a distinct bruise. On removing the skull-cap there was found an extensive sub-dural hæmorrhage over the left parietal region, without appreciable flattening of the convolutions. There were also small punctiform hæmorrhages over the right occipital and parietal and the left occipital areas of the cortex. Both frontal lobes were lacerated at their anterior extremities, and there was a considerable amount of clot in their torn substance, especially on the left side; there was also a large clot in the substance of the anterior extremity of the left temporo-sphenoidal lobe and in the central part of the left middle temporo-sphenoidal convolution. On removing the brain there was seen to be a fracture commencing at the torcular Herophili and extending outwards on each side to the junction of the petrous and squamous portions of the temporal. Each petrous bone was fractured in several directions, and the line thence extended to meet its fellow of the opposite side on the sella turcica, the posterior clinoid processes being chipped off and loose. The line of fracture was thus completed round the foramen magnum, and was fourteen inches in extent. The skull was of the usual density and thickness.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Lymphadenomatosis of the Bones.—Dermatitis Maligna.—Bodies in the Vermiform Appendix.—Rupture of the Heart.—Mucosal Cysts.—Gumma of the Spleen.

A MEETING of this society was held on May 4th, the President, Mr. BUTLIN, being in the chair.

Dr. F. PARKES WEBER showed specimens of General Lymphadenomatosis of the Bones from a man aged sixty-one years. He complained of pains in different parts of the body, and notably of bilateral abdominal pains, usually worse when he stood up. His spinal column was kept rigidly fixed; there was kyphosis, which appeared to be progressive; and he walked slowly and carefully with the aid of a stick. A little variable œdema over part of the spinal column and one lower extremity was noticed. His appetite was good and he had no fever, yet he became gradually weaker, and looked more like a man of eighty than one of sixty-one years. His actual death resulted from an asthenic type of pneumonia in both lungs. At the necropsy all the bones which were examined (including all the vertebræ and ribs, the clavicles, and the calvarium) were found more or less affected with the disease. A very vascular, small round-celled growth occupied the centre of the bones and partially replaced the osseous tissue. In some localities the growth was only covered by periosteum, all the osseous tissue beneath it having been absorbed. Portions of the ribs were bulged owing to distension by the rapidly growing neoplasm in their interior. There were some enlarged lymph glands under the right clavicle; these were apparently the site of a similar, but less vascular, growth. The kidneys showed a moderate amount of interstitial change, and in two white specks below the capsule minute, concentrically marked calculi could be seen with the microscope. These, Mr. Shattock ascertained, consisted of phosphates. The lungs showed greyish consolidation at both bases. Part of the consolidated lung was examined microscopically and presented a peculiar homogeneous hyaline appearance of the material between the cells. Unfortunately in the present case no examination of the blood was made. Dr. Weber thought that his case was of the same nature as those variously described as "multiple myeloma," "medullary pseudo-leukæmia," "myelogenic leukæmia," "pernicious anæmia with associated affection of bone marrow," and "primary sarcomatous osteitis."—The PRESIDENT said that in a case which he exhibited before the society in 1879 there were definite myeloid tumours. The existence of any disease had not been suspected until the

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occurrence of a fracture of the femur shortly before death. At the necropsy it was found that the affection of bones was a widespread one. There were other cases on record in which there was nothing during life to suggest the existence of the disease.—Mr. W. G. SPENCER said that when fresh the bones in this case, and in others which he had observed, had a peculiar raspberry-red colour. The colour quickly faded when the specimens were placed in hardening solutions.

Dr. ROLLESTON and Mr. E. L. HUNT brought forward two cases of Dermatitis Maligna, or Paget's Disease of the Skin, in both of which carcinoma subsequently developed. The first case was that of a man, aged sixty years, who had had the glazed, raw condition of the skin above the pubes characteristic of the disease for eight years; two years ago nodules of carcinoma developed. The whole affected area was removed and the man recovered. A somewhat similar case, in which the scrotum and penis were affected, had been described by Dr. Radcliffe Crocker. The carcinoma probably developed from the sebaceous glands, and not from the superficial layers of the skin. The sweat glands were dilated, but did not, as in Dr. Crocker's case, appear to be undergoing carcinomatous change. The growth was a spheroidal-celled carcinoma. The second case was that of a woman, aged forty-five years. The skin affection began eight years ago on the sinus of a mammary abscess, and had spread most extensively. A year ago carcinoma developed. The whole affected area, together with glands from the axilla, was successfully removed. Microscopically the carcinoma appeared to be squamous-celled, showing a transition to a spheroidal-celled type, but no keratinisation had taken place. The modification was probably due to the extensive inflammatory changes, which were also thought to be responsible for the extensive vacuolation seen in the epithelial cells. The carcinomatous growth had certainly not arisen in the mammary glands or in the ducts, as was often the case. It was suggested that Sir James Paget's name would best be honoured by associating it with the actual morbid lesion, a long-standing dermatitis of the nipple, which he originally described, and not with analogous lesions. Both these cases had been most kindly placed at the disposal of Dr. Rolleston and Mr. Hunt by Mr. Marmaduke Sheild.—Dr. THIN said that he had seen one of the cases during life and had made sections from the parts removed. He dissented from the view that the changes were the same as those met with in rodent ulcer. The cells in rodent ulcer had very little protoplasm round the nuclei, while in Dr. Rolleston's specimens it was abundant, the cells being of the same character as those met with in ordinary epithelioma. He was sceptical as to whether carcinoma ever arose from the sebaceous glands, and could see no evidence of it in this case.—Mr. SPENCER did not think the name given to these cases quite a happy one. At the time of death there was no dermatitis, and the term "maligna" was ambiguous because it was often applied in the sense of "virulent" as well as to denote new growth. He thought that the cases came under the category of rodent ulcer and represented two somewhat divergent types, the squamous form, as in Dr. Rolleston's second case, and a commoner sebaceous form, illustrated by the first case.—Dr. ROLLESTON, in reply, said that the term "dermatitis maligna" was given to the cases by Dr. Thin soon after Sir James Paget had described his cases of disease of the nipple. In one of his cases there was dermatitis for seven years before any sign of malignant disease declared itself.

Dr. ARTHUR LATHAM showed a Vermiform Appendix which had been removed from a man, aged forty-six years, who had died from lobar pneumonia. There was no history of any symptoms connected with the appendix having occurred during life. The specimen was nine centimetres long and considerably dilated throughout its course. There was no communication between the appendix and the cæcum, the lumen of the former having been obliterated at its junction with the cæcum by adhesive enteritis. The appendix was completely filled with numerous small bodies which had the appearance of ova. The larger of these was of about the size of a dried pea. On microscopical section they showed an irregular fibrinous structure, which in places was somewhat laminated. They did not give a mucin reaction and stained readily with acid dyes. The wall of the appendix was irregularly honeycombed owing to pressure exerted by the above bodies. It was further thickened, and on section showed loss of mucous membrane and also of lymphoid tissue, possibly due to membranous enteritis. He had been unable to find any similar case recorded.

Dr. HINGSTON FOX showed a specimen of Non-perforating Rupture of the Heart, taken from the body of a stout woman, aged sixty-nine years, of good health and active habits. She was seized with præcordial pain after fatigue and a cold bath; nitrite of amyl was useless, but morphine hypodermically and a small venesection partially relieved her, and she lived forty-eight hours, troubled with vomiting and pyrexia (to 100·5° F.). Death was sudden, on slight movement. At the necropsy the pericardium was found to be full of blood; the heart, weighing fourteen ounces, was loaded with fat; and two small, superficial rents were seen on the wall of the left ventricle, not perforating the wall, and a small ecchymosis beneath the visceral pericardium at another spot. It was probable that during exertion the distended, fatty heart had ruptured the exocardium and some muscular fibres at these sites, causing slow leakage of blood, and death two days later, apparently from syncope. This form of rupture, non-perforating and but slowly fatal, from hæmorrhage appeared to be extremely rare.

Mr. S. G. SHATTOCK made a communication on Mucosal Cysts and on the significance of the Stratum Granulosum. He described three cysts removed from the neck. One, from the upper part of the neck, was lined by stratified squamous epithelium, another by columnar epithelium, whilst in the third both forms were present at different parts of the cyst. He wished specially to draw attention to the absence of any stratum granulosum. He should call all "dermoid" cysts in which no stratum granulosum could be detected "mucosal" cysts, differing from Mr. Bland Sutton, who classed all cysts, whether lined by mucous membrane or skin, as dermoids, on the ground that no line of demarcation could be drawn between skin and mucous membrane. He thought that the presence or absence of this stratum was sufficient to decide which was present. Mucous cysts, due to retention in a mucous gland, must, of course, not be confused with these mucosal cysts. Mr. Shattock remarked that the best way of demonstrating the granules histologically was by staining the sections by Gram's bacteriological method. In true dermoid cysts Mr. Shattock had never failed to find a stratum granulosum, and this was equally true of such dermoids as were devoid of epidermal appendages. He had examined three of this nature from the limbs, and one from the right lumbar region, which arose at the site of a bullet injury. Mr. Shattock held that no appendages were developed in implantation cysts, such hairs and glands as did occur being there by direct implantation only. In the epidermal covering of scars, both in animals and in plants, no growth of hairs or glands ever occurred. The granular cells were not found in the sebaceous glands, but they were found throughout the whole length of the hair follicle, and hence in sebaceous cysts, which really arose in the hair follicle, a stratum granulosum was to be found.

Dr. G. F. STILL showed two specimens of Gumma of the Spleen occurring in the subjects of Congenital Syphilis. The first was that of a boy, eleven years of age, who was under the care of Dr. Lees at the Hospital for Sick Children, Great Ormond-street, suffering from anæmia and an enlarged spleen and a general enlargement of the lymphatic glands, supposed to be due to lymphadenoma. After death the spleen was found to be greatly enlarged and to contain thick fibrous cicatrices in its substance. It was extensively affected with lardaceous disease, and the splenic vessels showed peri- and end-arteritis. There was cirrhosis of the liver of the kind usually met with as a result of congenital syphilis, and there was general enlargement of the glands, which were almost completely converted into fibrous tissue and showed syphilitic changes in the vessels. There was a record of a similar case in which the gummata were small and multiple occurring in the hospital some years ago.

Dr. STILL also showed a specimen from the museum of the same hospital taken from a child, eleven months old, who was under the care of Dr. Barlow some years ago, suffering from well-marked congenital syphilis and an enlarged spleen. There was a localised patch of fibrous tissue in the capsule about one-third of an inch in thickness, which was probably a gumma, although direct evidence, such as the existence of endarteritis in the neighbourhood, was wanting. Gumma of the spleen even in adults was very uncommon, and he had only been able to discover four other cases recorded, all by German pathologists, of its occurrence in children. In almost all there were gummata of the other organs, and in half the cases the gummata were miliary in size.

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Mr. P. FURNIVALL reported that he had made a further examination of a specimen exhibited to the society in November, 1896,[1] by Dr. Kanthack and himself as a case of Myxo-sarcoma of the Colon, and they had now no doubt that it was a specimen of colloid carcinoma. The boy was only fifteen years of age when the growth was noticed, and in several recorded cases the growth had manifested itself at an unusually early age for carcinoma.

HARVEIAN SOCIETY OF LONDON.

The Anæsthetisation of Children.

A MEETING of this society was held on April 29th, Dr. MILSON being in the chair.

Mr. GEORGE ROWELL read a paper on the Anæsthetisation of Children, which will appear in our columns. The method advocated was to begin with the A.C.E. mixture and continue with ether.

Dr. FREDERIC HEWITT said that the guide suggested for estimating the depth of ether anæsthesia in children was a very valuable one. With regard to the vomiting, he considered that an interval of four or five hours after food was sufficient to avert vomiting under nitrous oxide and oxygen, and the anæsthesia thus obtained was the safest yet discovered. The tranquil breathing and somewhat equivocal signs displayed by some children under chloroform constituted an objection to this anæsthetic. He had found that in such cases when employing chloroform it was a good plan when in doubt to press the lower jaw back and so produce snoring-breathing. The slight obstruction caused more vigorous and deeper breathing and better anæsthesia also. He strongly supported Mr. Rowell in his preference for ether in the case of children, but he thought that if ether were not well borne in any case or if any embarrassed breathing arose it was a good plan to continue with chloroform. The latter given just after ether produced effects quite unlike those seen when it was used from the first, and a comparatively light anæsthesia was possible and advantageous. Mr. Rowell had said but little on the subject of laryngeal stridor in children. He (Dr. Hewitt) thought it an important matter. Some years ago he was in the habit of attempting to overcome it by producing a deeper anæsthesia; but he now found that it was better to withhold the anæsthetic until the stridor had subsided. He was aware of the remarkable effects of the particular succession of anæsthetics to which Mr. Rowell had alluded, and, in fact, he had several years ago drawn attention to this point.

Dr. SILK, as a visitor, fully endorsed the view that chloroform was by no means so safe with children as was generally supposed; in fact, he thought that many more fatalities occurred from its use than were actually recorded, and that dangerous symptoms were even more apt to develop in children than in adults. Personally, he preferred the A.C.E. mixture for routine use with children. He had been aware of the principle of giving ether by the semi-open method consecutive to A.C.E. for some time, and had frequently employed it in practice, but he had not worked out the details of the plan so carefully as had Mr. Rowell.

Dr. COCK said that he had used the open method of ether administration after beginning with the A.C.E. mixture occasionally, but it was in a good many cases possible to put quite young children under the influence of ether alone from the beginning, and that without much trouble or the usual drawbacks of ether administration in the very young. Some infants would take this anæsthetic as comfortably as chloroform, using a very fine nozzled drop bottle (Esmarch's) and the German pattern of Skinner's inhaler covered with stockingette and not with flannel.

Mr. ROWELL, in reply, said that laryngeal stridor under ether tended to right itself and was of different significance from the same symptom under chloroform.

HUNTERIAN SOCIETY.

Cerebellar Disease.—Headaches.

AN ordinary meeting of this society was held at the London Institution on April 28th, Dr. G. E. HERMAN, the President, being in the chair.

Dr. ARTHUR DAVIES exhibited a case in which there had been apparent symptoms of Cerebellar Disease, from which the patient had entirely recovered.

[1] Vide THE LANCET, Nov. 21st, 1896, p. 1468.

Dr. HINGSTON FOX introduced a discussion on Headaches by a paper which will shortly appear in our columns.—Dr. HAIG agreed as to the relationship between plus tension and headache, and gave an account of the *rôle* of uric acid in producing headache, and pointed out how by eliminating uric acid and the xanthin group in diet, not only was the headache cured, but the blood decimal markedly improved.—Dr. HARRY CAMPBELL inquired as to the exact relationship between headache and plus tension, and whether both might not be due to the same cause. He dwelt on the difficulty of ascertaining the degree of tension, and considered the aortic second sound as often very misleading, and had sometimes found it increased with a low-tension pulse. Cases of migraine with low-tension pulse were common. He regarded headache as a symptom arising from peripheral irritation in the eyes, nose, teeth, scalp, and ears, and intra-ocular tension. The anæmic headache and that common at the menopause and the syphilitic headache were dwelt upon.—Dr. DUNDAS GRANT found nasal disease a cause of a certain number of headaches, especially when the middle turbinated bodies or the sinuses were affected. Cocaine afforded relief in these cases. Localisation of headache was found to be of little value. In the vertical headache of women suffering from leucorrhœa chloride of ammonium was almost a specific.—Dr. GLOVER LYON pointed out the great value of quinine in three-grain doses in the treatment of migraine.—Dr. J. H. SEQUEIRA considered headache as not the result of plus tension, but as being associated with it.—Dr. J. F. WOODS spoke of the treatment of headaches by hypnotism and suggestion.—Dr. HINGSTON FOX replied.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

THIS society held a clinical meeting on March 16th in the out-patient room of the Leeds General Infirmary.

Mr. LITTLEWOOD showed four cases illustrating the treatment of Joint Tuberculosis by Iodoform Injections. The first patient was a female, aged thirty years, who suffered from tuberculous disease of the elbow-joint, with a history of four years' duration. She was admitted to the Leeds Infirmary on Feb. 11th, 1896, and there was then extensive tuberculous disease of the left elbow-joint, with five sinuses leading down to the soft carious bone. There was also an enlarged gland the size of a walnut in the middle of the arm, and the axilla was full of enlarged glands. The first injection was given on Feb. 12th, 1896, and was followed by twenty-three others, the last being given on Aug. 6th, 1896. She was only in the infirmary for three days and was then treated in the out-patient room. The sinuses have all healed, the enlarged glands can scarcely be felt, and she is now using her arm with great comfort, although there is some limitation of movement. The second patient was a boy, aged eight years, suffering from tuberculous disease of the hip, the history being that he had a fall four and a half years ago and had been lame since then. About Easter in 1896 he again had a fall and his condition became much worse. He was admitted to the infirmary on Sept. 1st, 1896, having well-marked signs of right hip-joint disease with abscess. The subsequent progress of the case was as follows. On Sept. 4th, 11th, 25th, and Oct. 8th the patient was aspirated, two ounces of pus being removed the first time and one and a half ounces on the other three dates. Iodoform was injected on each occasion. On Oct. 25th some clear fluid was squeezed out through the cannula and the patient was again injected. The hip was again injected on Nov. 16th and 30th. At the present time the boy is running about without a splint. The third patient was a man, aged thirty-two years, who suffered from tuberculous disease of the right shoulder-joint. He was first seen by Mr. Littlewood in August, 1896. The joint was then swollen and fixed, and any attempt at movement was extremely painful; there was a sinus in front, just above the insertion of the deltoid. The disease in the joint commenced two years ago, and seven weeks previously to this he had an attack of pleurisy. The joint commenced to discharge from the sinus in August, 1895. He had been injected ten times with glycerine and iodoform. He had had no pain since the first injection and had gained one stone in weight. During this time he had been taking petroleum emulsion. The fourth patient was a female, aged nineteen years, who suffered from tuberculous disease of the ankle joint, which

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commenced twenty-one months ago. She was admitted to the infirmary on Oct. 24th, 1896. The right ankle was then much swollen. The swelling extended upwards to beyond the malleoli and downwards to the tarsus. There were three sinuses—one on the outer and one on the inner side and the third behind. All attempts at movement caused considerable pain. The first injection was given on Oct 26th and after it ten others. She came to the infirmary about once a fortnight, and then went home the day after the injection with the leg in plaster. Both the local condition and her general health have greatly improved.

Mr. LITTLEWOOD also showed a case of Diffuse Popliteal Aneurysm treated by Excision. The patient was a man, aged thirty-seven years, who was admitted to the infirmary on Feb. 8th, 1897, with a large diffuse popliteal aneurysm. He first noticed some stiffness in the ham six weeks previously. After this the swelling increased rapidly and there was a good deal of pain. On Feb. 17th all clot was turned out, and the aneurysmal portion of the vessel was excised. There was no pain after the operation. The wound healed rapidly. The man left the infirmary on March 16th, and he now walks about quite comfortably.

Mr. LITTLEWOOD also showed a small Calculus removed by Nephro-lithotomy from a man, aged twenty-seven years, who had had attacks of renal colic on the left side for four years. Twelve months ago for one day he passed some blood, but he never passed any calculi. An incision was made in the kidney at the lower end, and a small calculus weighing two grains was removed. The wound was quite healed and the stitches removed on the fifteenth day afterwards.

Mr. LITTLEWOOD also described a case in which a Sarcoma of the Upper Jaw was removed three and a half years ago. The patient was a man, aged fifty-six years, who was admitted to the infirmary on Oct. 2nd, 1893, with a sarcoma involving the superior maxilla and malar bones in the left side. He first noticed the swelling two months previously. On Oct. 4th, after preliminary laryngotomy, the upper jaw was removed with the malar bone and part of the zygoma. There has been no recurrence since.

Mr. LITTLEWOOD also showed a patient whose right kidney was removed six years ago for Tuberculous Disease.

Dr. WARDROP GRIFFITH showed a boy, aged sixteen years, who presented the phenomena of well-marked Unilateral Convulsions, which always began in the left hand, sometimes spread to the face and leg, and sometimes culminated in unconsciousness. There was no optic neuritis and no definite signs of gross intracranial disease.

Dr. GRIFFITH also showed a child, aged five years, with symptoms indicative of a Lesion in the Right Side of the Pons involving the Nucleus of the Sixth and partially that of the Seventh Nerve. There was complete paralysis of the right external rectus with partial paralysis of the right side of the face of Bell's type. There was no optic neuritis.

The following cases were also shown:—

Dr. MOUILLOT: A case of Raynaud's Disease in which the hands and feet were markedly affected.

Dr. CHURTON: A case of Traumatic Paralysis of the Left Hand with Sensory, Vaso-motor, and Trophic Symptoms.

Dr. TREVELYAN: Three cases of Graves's Disease and an unusual case of Laryngeal Tuberculosis.

Dr. BARRS: (1) Thoracic Aneurysm with Laryngeal Palsy; and (2) Enlargement of the Spleen with Hæmatemesis.

Dr. WELLS: An Unusual Form of Muscular Dislocation.

Dr. BRONNER: (1) Three cases of Senile Cataract operated on without Iridectomy; and (2) cases of Radical Cure of Mastoid Disease.

Mr. H. SECKER WALKER: (1) A case of Radical Cure of Mastoid Disease; and (2) cases of Mules's Operation.

Mr. W. H. BROWN: (1) A case of Gastro Enterostomy; (2) Malformation after Burns; and (3) Primary Syphilis in a Child.

Mr. WARD: Resection for Ununited Fracture.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

The Diarrhœas of Children.

A MEETING of this section was held on April 9th, Dr. G. F. DUFFEY, President, being in the chair.

Mr. LANGFORD SYMES read a paper entitled, Some Introductory Remarks on the Diarrhœas of Children, in which reference was made to the enormous mortality amongst children from diarrhœa, the difference in the digestive juices in the child as compared with adults, the digestion of milk by infants in the intestine, and the inability of young children to digest starch. Defective water-supply appears to affect principally children over five years of age, but infants are swept away in hundreds by milk which is infected or contaminated. The greater number of fatal diarrhœas are doubtless due to artificial feeding. In Manchester, according to Dr. Niven's returns, 97 per cent. appear to have been hand-fed. This identical percentage was also found to be the rule in America, and Bavaria returned 96 per cent. Mr. Symes classified diarrhœas as (1) dyspeptic, including simple diarrhœa and chronic diarrhœa; and (2) infective, including summer diarrhœa and cholera infantum. Such names as entero-colitis, catarrhal enteritis, muco-enteritis, and gastro-intestinal catarrh are misleading, and cannot be borne out by facts. The prevention of all these diarrhœas can be reduced to three lines of action—scientific regulation of artificial feeding, purification of the ground, and purification of milk.

Dr. W. G. SMITH said that the small intestine was the chief seat of digestive processes in adults as well as in children, and he agreed with Mr. Symes in saying that chemical changes were produced by micro-organisms in the small intestine.

BOMBAY MEDICAL AND PHYSICAL SOCIETY.

Epithelial Xerosis.—Necrosis of the Internal Ear.—Foreign Bodies in the Bladder.—Osteo-mollities.—Radiograph of a Snake.

THE first meeting of this society was held at the Esplanade Hotel Annexe on Feb. 5th, Brigade-Surgeon-Lieutenant-Colonel J. ARNOTT, Vice-President, being in the chair, and twenty-five other members being present.

Surgeon-Captain H. HERBERT read a paper on Epithelial Xerosis in natives of India, illustrating it by patients, photographs, and microscopical sections. He said that the patients showed examples of a general degeneration and chronic inflammation of mucous membranes very commonly met with in Bombay amongst the poorest classes. Very often the conjunctiva, more especially in its exposed strip on either side of the cornea, is the first membrane to show definite changes, and in the milder instances it may be the only one. During the four months from June to September, 1896, Surgeon-Captain Herbert tabulated 100 consecutive cases. Epithelial xerosis of the cornea has been described as a degeneration of the membrane found in debilitated persons exposed to strong glare and in marasmic infants, and showing itself mainly in the formation of dry greasy patches on either side of the cornea. The collection of cast-off epithelial cells and Meibomian secretion which usually covers these areas has been conveniently spoken of as "foam." The conjunctiva is generally thickened, inelastic, and wrinkled, there may be a good deal of inflammatory secretion, and in infants the cornea is liable to rapid suppurative destruction. By far the commonest xerotic area is a small patch just outside the cornea; in 100 cases this spot alone was affected four times as often as the conjunctiva on both sides of the cornea; the inner site was never alone xerotic. The xerotic patches tend to be cast off by inflammation of the cornea, primary and secondary, so that when both corneas suppurate, as they often do, there may be very little beyond a characteristic pigmentation of the conjunctiva to show the true origin and nature of the case. In 16 of the 100 cases there were no xerotic patches whatever, their absence being accounted for by keratomalacia or suppurating ulcers in nearly all. The xerotic degeneration was shown by conjunctival pigmentation, thickening, and wrinkling, and often by finely granular lids. The pigmentation is absent in white-skinned races, so that in them such cases might be difficult of interpretation. In the mild cases the patches are often thinly covered with bright, white, glistening "foam," which is sometimes frothy. Of more interest are the thick collections of soapy material on the lid borders sometimes seen in cases of conjunctivitis, primary or secondary, in Bombay. This material is quite different from the thin, frothy collections on canthi or lid margins seen both in England and India; it is indistinguishable under the microscope from that taken from a xerotic patch, and contains the same bacillus in great numbers—one closely resembling the

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diphtheria bacillus in its appearance. The next evidence of degeneration described was a dirty or muddy-brown colouration resulting from an excessive development of the pigment normally to be detected in an Indian conjunctiva under the microscope. The depth of the tint depends largely on the complexion of the individual, as well as on the degree of the xerosis and the length of time it has lasted. In the commonest type the pigmentation is fairly general on both the lids and eyeball. There is never much on the upper part of the eye. It is well developed on the exposed conjunctiva on either side of the cornea and on the strip immediately below the cornea; the lower fornix is often the most deeply coloured portion of the whole membrane. This pigmentation is characteristic of xerosis, and must not be mistaken for the effects of malarial cachexia, for malaria does not colour the conjunctiva except by weakening the patient and so predisposing to xerosis. After a time "granulations" are formed, usually limited to the tarsal portion of the upper lid and extremely small. In severe cases the cornea commonly shows opacity and dulness, and it is often ulcerated. Insufficient and improper food and lowered general vitality are the principal causes of conjunctival xerosis; the chief reason for its being mainly a tropical affection is not because the glare of the sun is strong, but because in warm climates the poor can support life in a state of chronic inanition which would be impossible elsewhere. The only treatment which seems to have been serviceable is improving the general health and bandaging the eyes; the bandage, however, is often inapplicable owing to corneal complications.

Surgeon-Major W. K. HATCH described a case of Necrosis of the Internal Ear. No history of the patient's illness could be obtained; she was fairly nourished and apparently about thirty-five years of age; her speech was quite unintelligible and she seemed to hear nothing. The left auditory meatus was blocked by a red granular mass, and the part was extremely painful. Dead bone could be felt with a probe, and by means of a gouge a large sequestrum was removed, consisting of the external auditory meatus, semicircular canal, and cochlea. In the result the place healed completely and the patient was discharged from hospital in a fairly good condition.

Surgeon-Major HATCH then gave an account of the Removal of Three Pieces of "Grass Stick" from the Bladder of a woman with a No. 6 lithotrite and exhibited the Skeleton of a female who was the subject of Osteo-mollities; the whole weight of the bones was—skull 6 oz., other bones 17⅛ oz.

Dr. PECHEY-PHIPSON showed a Radiograph of a Snake in which the solid urinary matter was distinctly seen. This was of interest in connexion with the possibility of diagnosing calculi in the human bladder by this means.

MEMORIAL TO THE LATE MR. JOSEPH FRY.—Lord Hillingdon, the treasurer of the "Joseph Fry Memorial Fund," is making an urgent appeal to all those who have not yet subscribed to the fund to send their contributions to him as soon as possible, to 67, Lombard-street, as the committee are anxious to close the subscription list at an early date. It is proposed to endow a bed at the Metropolitan Hospital and to erect a drinking fountain to his memory.

MEDICAL MEN AND CLUBS.—At Truro County Court, on April 23rd, Mr. W. Whitworth, M.R.C.S. Eng., L.S.A., of St. Agnes, Cornwall, sued a labourer of Goonhavern for £2 4*s.* for professional attendance and medicine. Defendant stated that he was entitled to the services of the medical man by virtue of his membership of the club at the dynamite works, Perranporth. Plaintiff said he made a verbal arrangement with the dynamite company to attend the members of families resident at home of men who paid into the club. In this case he attended defendant's daughter, who had been earning her living as a domestic servant, and had come home and died, and he regarded that as outside the scope of the club. His Honour said if a daughter lost her situation and went back home it would be a serious burden on the family. On the other hand, if the arrangement included all children who went back home, it would be a great increase of work to the medical man. There should be a contract in plain writing, so that it should be known what it included. If the girl did not come in the club then she was personally liable, unless it could be shown that the medical man had the defendant's express authority to attend her. Judgment was eventually given for defendant with costs.

Reviews and Notices of Books.

The Sequels of Disease, being the Lumleian Lectures delivered in the Royal College of Physicians, 1896, together with Observations on Prognosis in Disease. By Sir DYCE DUCKWORTH, M.D.Edin., LL.D., F.R.C.P.Lond. London: Longmans, Green and Co. 1896.

RAPID as has been the progress made in respect to knowledge of the nature and phenomena of disease, there is, at any rate, one chapter which is yet but imperfectly written. There is very much still to be learnt concerning the correlation of diseases, or, in other words, the altered conditions which are established by even the most transient and apparently trivial departures from the normal activities of the body. Had we clear knowledge on such matters there might be less need to veil our ignorance by the use of such phrases as imply special proclivities or morbid tendencies, and we should be enabled to understand the meaning of many of those states that now go by the colourless designation of "sequelæ." It was therefore a happy notion of the Lumleian Lecturer of 1896 to devote his lectures to an exposition of present knowledge concerning the sequels of diseases, thereby accumulating facts which may enable us to make some kind of generalisation in a subject that contains so many and various elements. Moreover, the subject has seldom before been regarded from this wider point of view, and its complexity somewhat baffles definition. This much, at any rate, is clear—namely, that a "sequel" may be due to the continued operation of the primary agency, even though separated by a long interval of time from the original disease; or, on the other hand, it may be a fresh derangement entirely, which would not, however, have occurred had not the organism been rendered vulnerable by the changes wrought in it by the previous disorder. It is only in some such sense that one derangement can truly be said to be the sequel of another, and yet in point of fact it is by no means easy to assign the real origin of the secondary affection. Syphilis is a notable example of the long persisting operation of a specific agency, and yet there are morbid conditions which may supervene in those who have been infected which can in no way be referred to the direct action of the virus. It must be more than a fortuitous circumstance that so large a proportion of tabetics should have years previously been the subjects of syphilis, but neither in its pathology nor in its amenability to treatment can spinal sclerosis be regarded as a syphilitic lesion. The numerous sequels of acute infectious diseases—especially those involving the vascular and the nervous systems—cannot in the majority of instances, be referred to the direct operation of the toxine; yet it is impossible to doubt that in some way or other these tissues are rendered by its influence more prone to subsequent inflammatory or degenerative changes. Then, too, one infectious disease may apparently render the body more vulnerable to another infection, as in the liability to tuberculosis so commonly seen after measles, and sometimes after influenza or typhoid fever. Sir Dyce Duckworth naturally devotes most space to a consideration of the sequels of specific infectious diseases, but he also shows that many local disorders have their sequels too. His general summary may be taken as merely provisional, but as offering some means of classifying the various kinds of sequelæ that are met with. These he groups in five categories: (1) The *bacterio-toxic*, which may be early or late, direct or indirect, the last-named ascribable to fresh or secondary infection; (2) the *revealing* sequels, wherein a latent or dormant taint or tendency is first evoked by the occurrence of an acute illness; (3) the *nervous*, of which trophic and sensory disorders are the chief; (4) *chemico-toxic*, as seen in cases of chronic metallic poisoning; and (5) *direct non-toxic* or residual

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sequels. As a contribution to a difficult subject, and as stimulating its study, these lectures should be of value. They are supplemented by an essay on Prognosis in Disease, a vitally important subject, which is treated in a manner to be expected from a physician of ripe clinical experience and sagacity.

The Toxic Amblyopias: their Classification, History, Symptoms, Pathology, and Treatment. (The Alvarenga Prize Essay.) By G. E. DE SCHWEINITZ, A.M., M.D., Professor of Ophthalmology in the Philadelphia Polyclinic. With Forty-six Illustrations and Nine Plates. Philadelphia: Lea Brothers and Co. 1896. Pp. 238.

WHEN the diseases of any organ have been roughly classified, and the principles of their treatment established by long experience, few things more useful can be undertaken than to collect and compare isolated cases described by different authors in books, journals, and reports of societies in which certain symptoms have formed prominent features. By arranging such cases in groups conclusions can sometimes be drawn which may prove of the greatest service in establishing correct diagnosis, and in leading as a result to appropriate treatment. Such service Dr. Schweinitz has rendered to Ophthalmology in the work before us. The extensive bibliography with which each chapter closes shows that he has been most industrious and painstaking in ransacking every publication (and their name is legion) in which reports of cases of toxic amblyopia can be found, whilst the text shows he has taken infinite trouble in mastering their contents. There is, in addition, a considerable amount of original investigation, the author having performed many experiments on animals with reference to the effects of alcohol, quinine, salicylic acid, and filix mas in inducing amblyopia and amaurosis. The classification adopted by Dr. Schweinitz is essentially physiological, and he has brought together notes and observations on no less than eighty-six agents, including those which act as mydriatics, or those which are myotics, those which are nervous sedatives, like acetanilid and phenozone, various anthelmintics, and ptomaines. Dr. Schweinitz appears to entertain no doubts in regard to the existence of alcoholic amblyopia, and observes that most of the investigations show that the anatomical basis of this affection consists of an augmentation of nuclei, hypertrophy of the connective tissue, and wasting of the nerve fibres of a limited portion of the optic nerve, known as the papillo-macular bundle; in fact, that there is an interstitial sclerosing inflammation comparable according to Samelsohn, to the same pathological process which alcohol produces in the liver—for example, an interstitial hepatitis. This statement is supported by the drawings of Nettleship and Edmunds and of Uhthoff. The evidence of the existence of tobacco amaurosis seems to us to be overwhelming, and although apparently many men habitually smoke to excess without experiencing discomfort, yet much allowance must be made in regard to the particular kind of tobacco used, some kinds, as the Havana, only containing 2 per cent. of nicotine, whilst Virginian tobacco contains close upon 7 per cent.; and also allowance must be made for the density of the cigars used, and, in addition, for the particular mode in which smoking is conducted—that is, whether it is simply taken into the mouth and expelled, or whether it is discharged through the nose, or is allowed to enter the lungs, in both the latter cases being brought into contact with a much larger extent of surface. The period of the day also exerts an influence—whether the tobacco be taken before or after meals. Most smokers can probably use without harm from two to three ounces weekly, but idiosyncrasy is an important factor. A larger quantity and stronger tobacco can be consumed in the form of a cigar than in that of a pipe, perhaps owing to the larger formation of volatile bases in the latter case. Though some, like Mr. Hutchinson, have thought that alcohol was antagonistic, others, and with these Dr. Schweinitz is inclined to agree, believe that alcohol freely used with tobacco predisposes the patient to central amblyopia. It is remarkable that certain races, as the Turks, the South Americans, and Cubans, are not liable to tobacco amaurosis. The proper treatment of this affection is total abstinence from tobacco and alcohol, the administration of strychnia, and, perhaps, the application of voltaic electricity. Dr. Schweinitz remarks that the "great consumption of tobacco by sailors and railway employés renders it desirable that examinations for central scotoma should be made among those who are obliged to watch coloured signal lamps." There is an interesting section on Quinine Amaurosis, and it is stated that usually the dose which causes blindness is a large one, but it has varied from fifteen grains to an ounce in twenty-four hours; yet enormous doses—e.g., one ounce—have been taken without disastrous results. The ophthalmoscopic symptoms are that the disc is pallid and the arteries very small, with in many cases a greyish haze of the retina and a cherry-coloured spot in the macula, the appearances resembling those of embolism of the central artery. Many drawings illustrate the extent of the scotomata observed in different cases and of the microscopic appearances of the nerve. We commend to our readers the chapters on Lead and Carbolic Acid Poisoning. Altogether, the work, which must have involved a large amount of labour, is one that should be carefully studied by every ophthalmic surgeon, and it fills a hiatus in the wide subject of ophthalmic disease.

Pioneers of Evolution, from Thales to Huxley. By EDWARD CLODD. London: Grant Richards. 1897.

THERE is not a more fascinating subject than the evolution of "Evolution," and despite the comparatively small size of the volume before us the author has not shorn the subject of one whit of its absorbing interest. We have read this volume with considerable pleasure, giving, as it does, a concise, but none the less clear and complete, account of the history of the origin of species. In it are illustrated the wide fluctuations of human thought and the pernicious influence upon advancing knowledge which certain deep-rooted and erroneous ideas have effected. Dealing in historic sequence with the pioneers of evolution, from Thales to Huxley, the author has interposed a trenchant chapter on the Arrest of Enquiry. It is here that the author shows more animation than when he poses as a mere historian. He is caustically emphatic upon the obstacles placed in the way of advance by the teachings of the Church. "Between birth and revival there were," he says, "The centuries of suspended animation when the nepenthe of dogma drugged the reason." And so the arrest of enquiry occurred between the dates A.D. 50 to A.D. 400, when the Christian doctrine was founded and developed. In all that pertains to these doctrines the author is, of course, a very decided sceptic. He does not, however, in the chapter on Modern Evolution, following that upon the Renascence of Science (A.D. 1600 onwards) improve his position as a controversialist. However right and correct he may be in his views, it is hardly respectful to speak of Dr. Butler as a "desiccated pedagogue" because he publicly rebuked Darwin for wasting time on such useless subjects as, Dr. Butler thought, were experiments in chemistry. Then, again, whilst showing very distinctly that Wallace was the first who conceived the idea of the survival of the fittest, and according him, as Darwin also did, the honour of the conception, still, because Mr. Wallace would not allow that natural selection explains the origin of man's spiritual and intellectual nature, Mr. Clodd regards him as not keeping his first estate and as dropping out of the ranks of the pioneers of evolution. Yet of Mr. Wallace's work Darwin said: "Your words have come true with a vengeance; that

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I should be forestalled," &c. And again: "So all my originality, whatever it may amount to, will be smashed, though my book, if it will ever have any value, will not be deteriorated, as all the labour consists in the application of the theory." We suppose Mr. Clodd would discount equally the work which many eminent men of science of the present day have done who happen to hold different views to his own on certain abstruse subjects. He backs his arguments on the absurdity of entertaining any faith in psychical phenomena by alluding to certain exposures of the tricks of spiritualists. It is to be admitted that in this field there has been much that has been shown to be fraudulent, but the author exhibits prejudice surely by cynically remarking that these things are done "of course in the dark." A scientific thinker must admit all conditions in experiment if he is to make accurate deductions. The luminous property of phosphorus and of other substances can only be made evident by viewing them in the dark, and more recently the existence of a new form of matter in the x rays was only made manifest by photography or by using a fluorescent medium in a darkened chamber. To admit arguments of this kind we are asked to admit also that the degree of conception or insight of all men is the same, but we should have been still in the dark as to the origin of species if some men's insight into the nature of things had not been keener than that of their fellows. The student of science can, after all, only express belief or disbelief, he can never assert positively what is impossible. There are things beyond the mental gamut. The acutely sensitive photographic plate records the existence of more stars than the eye can see, and which is to be believed?

We may point out to the author that Professor Poulton has, in the April number of *Science Progress*, drawn attention to a remarkable anticipation of modern views on evolution which is seen to occur in the writing of "that great pioneer of modern anthropological and ethnological research," James Cowles Prichard, who was born at Ross, in Herefordshire, in 1786. His conclusions in his second volume of researches into the physical history of mankind (second edition, 1826) on the transmission of acquired characters appear to be identical with those independently arrived at by Professor Weissmann over half a century later. Professor Poulton remarks at the end of his paper that sufficient has been said to prove that the author was one of the most remarkable and clear-sighted of the predecessors of Darwin and Wallace. In view of this conclusion the name of Prichard is well worthy to be added to the list of the pioneers of evolution.

The book is illustrated with four admirable portraits, by the Swan Electric Company, of Darwin, Wallace, Spencer, and Huxley. It contains a very readable and interesting history of the growth of thought on the origin of species, and those who have little time to devote to the study of the well-known large and ponderous works should avail themselves of the opportunity of intellectual cultivation which this book offers.

LIBRARY TABLE.

Archives de Physiologie. Publiées par MM. Bouchard, Chauveau, et Marey. Cinquième Série. Tome ix., No. 2. April, 1897.—The more important articles amongst the twenty that are contained in this part of the Archives de Physiologie are as follows:—M. Charles Rouget writes on the Histology of the Terminal Fibres of the Motor Nerves in the Striated Muscles of Amphibia. These he has rendered visible by the employment of methylene-blue, and shows both by description and in drawings that they are arranged in a helicoidal manner and present a moniliform aspect. M. A. Chauveau gives an account of a method of demonstrating that in living muscle positive work subtracts from, whilst negative work adds to, the energy of the motor, as it does in the inanimate world. M. A. Imbert discusses the mechanism of muscular contraction, and associates it with the superficial tension of liquids. M. F. Laulanié gives the results of his experiments on varnishing rabbits and the causes of death. Death ensues, he shows, owing to increased radiation of heat and consecutive disturbance of the digestive functions. M. J. Lefèvre publishes his Calorimetric Researches on the Mammifers, from which he deduces certain general laws of refrigeration by means of water. He shows that the lower the temperature to which the animal is exposed the quicker does its temperature fall. M. C. Delezenne supplies a long article on the Coagulation of the Blood in Birds, the conclusion he has arrived at being reserved for a future paper. MM. Mairet and Vires contribute an article on the Toxicity of the Liver, which they show to be considerable. MM. E. Wertheimer and L. Lepage describe their attempts to discover the mode of absorption of the liver pigments, and are satisfied that it is chiefly accomplished through the blood and not through the lymphatic vessels. M. J. Laudenbach of Kiev continues his Investigations on the Hæmopoietic Function of the Spleen, and has satisfied himself that the spleen does take part in the formation of hæmoglobin and in the maturation of the red corpuscles of the blood. M. Doyon gives the results of his researches on the motor and inhibitory nervous supply to the muscular tissue in the lungs. He finds both sets of nerves in the vagus. M.M. D. Courtade and J. F. Guyon have investigated the motor influence exerted by the great sympathetic nerve. They demonstrate that this set of nerve-fibres causes relaxation of the longitudinal and contraction of the circular fibres. M. Ch. A. François-Franck and L. Hallion continue their researches on the vaso-motor innervation of the liver. M.M. A. Dastre and N. Floresco supply "A Contribution to the Study of Bilirubin," and show that bilirubin does not exist in a free state in nature, but in combination with alkalies forming alkaline bilirubinates.

Fads of an Old Physician. By GEORGE S. KEITH, M.D., LL.D., F.R.C.P. Edin. London: Adam and Charles Black. 1897. Pp. 173. Price 2*s.* 6*d.*—This is practically an improved and enlarged edition of the "Plea for a Simpler Life," which was reviewed in our issue of Jan. 18th, 1896 (page 171). On that occasion we referred to the absence of "instructions for the guidance of individuals in ordinary health," but Dr. Keith has now supplied what is wanting by giving an outline of his daily dietary. His chief meal is dinner at 7 P.M., consisting of vegetable soup or fish-soup, followed by fish (not more than 3 oz.) with a potato and always another vegetable, stewed fruit with cream, or pudding, or fruit tart. If there is no fish an ounce or two, certainly not more, of lamb, game, rabbit, or tripe may be taken once or twice a week. Dr. Keith has followed this system for about forty years, is now seventy-eight years of age, and finds that he enjoys good health. He has much to say on the manifold benefits of drinking hot water; with respect to alcohol he counsels abstemiousness, but not prohibition. His *menus* would inevitably be anathema to the average diner-out, but, on the other hand, many dyspeptics and victims of the uric acid diathesis would probably benefit by them.

Dental Surgeon's Daily Diary and Appointment Book for 1897. London: John Bale and Sons and Claudius Ash and Sons. Pp. 224. Price 6*s.*—This diary is a well-bound volume of quarto size and nearly square; the paper is of good quality; the ruling and printed headings are so planned that six week-days are shown on each alternate opening, three lines being left for the entry of engagements at each hour from 9 A.M. to 6 P.M.; the intervening openings are reserved for memoranda, a few lines being set apart for the Sundays. The alphabetical index is ample and the diary is well adapted for professional use.

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The Ethics of Diet. Revised and Enlarged Edition. By HOWARD WILLIAMS, M.A. London: Swan Sonnenschein and Co. and The Ideal Publishing Union, Limited. 1896. Pp. 597.—This well-written and thoroughly readable book contains much that is interesting from a literary and historical point of view. The author seeks to inculcate vegetarian principles by arguments taken from the works of numerous writers, ancient and modern, his copious quotations being dexterously managed, so that the narrative is never disjointed, prosy, or dull. Physiological questions are scarcely introduced, "kreophagy" being condemned on the grounds that it is both cruel to the lower animals and debasing to mankind. Some of the patristic writers are included among the authorities relied on, but there is naturally no reference to the passage in the Epistle to the Romans where St. Paul remarks that "One believeth that he may eat all things; another, who is weak, eateth herbs."

The Matron's Course: an Introduction to Hospital and Private Nursing. By Miss S. E. ORME, Lady Superintendent, London Temperance Hospital. London: the Scientific Press. 1897. Pp. 87. Price 1*s.*—This little book consists of twelve lectures which give a clear and easily understood view of the things requisite to be learned by a nurse. It is not overloaded with anatomy and physiology, but deals with matters of practical utility, such as disinfection, bed-making, the prevention of bed-sores, the administration of food, details of the attention required by a patient, the observation of symptoms, &c. There is also much judicious advice on the subject of a nurse's general demeanour, but, strangely enough, there appears to be no reference to bathing, except as a method of treatment in typhoid fever.

Madeira and the Canary Islands. By A. SAMLER BROWN. Fourth Edition. London: Sampson Low, Marston, and Co. Cape Town and Johannesburg: J. C. Juta and Co. 1896. Pp. 267. Price 2*s.* 6*d.*—This convenient volume can be recommended to all who wish for information on the subject of Madeira, the Canary Islands, and the Azores. It contains copious lists of the steamers which call at the various ports, maps of Madeira, and of each of the Canary Islands, hints useful both to visitors and residents, whether invalids or not, details of excursions over all the islands, a long account of their commercial position and productive capabilities, past and present, and, in order that nothing may be wanting anywhere, a sketch of their history from the earliest times since their discovery in the first half of the fourteenth century.

JOURNALS AND REVIEWS.

The Practitioner. Dr. J. F. Goodhart, writing on Appendicitis from a Physician's Point of View, gives an interesting and instructive review of numerous cases which have come under his observation. Mr. C. A. Morton of Bristol describes a case of Cholecystotomy in which, finding that it was impossible to bring the gall-bladder to the wound in the abdominal wall, he adopted a recommendation made by Mr. Mayo Robson, and united the parietal peritoneum to the edges of the incision in the gall bladder; before doing this, however, it was necessary to peel the peritoneum off the under surface of the abdominal wall. With a view to increasing the coagulability of the blood, he administered a two-drachm dose of chloride of calcium by enema a few hours before the operation. Dr. G. E. Herman writes on the Kind of Instruction Suitable for Midwives, and Dr. A. G. Miller on the Radical Cure of Hernia. The "Causerie" discusses a financial aspect of surgery in the fourteenth century, and is highly amusing.

Journal of Balneology and Climatology.—The British Balneological and Climatological Society, although of comparatively recent origin, has been so well supported that it finds itself in a position to bring out a quarterly journal devoted to its special subjects. The first number appeared last January, with seven original articles, useful editorial articles and notes, reviews of a number of books, and lengthy reports of two meetings of the Society. The first of the original articles is on Balneology, Old and New, by Sir Edward Sieveking. It is followed by Dr. A. S. Myrtle's Presidential Address delivered at the opening of the second session of the Society last October, after which come short papers on Natural Mineral Waters by Mr. W. H. Pearce, and on the Climate of Ilfracombe by Dr. C. W. E. Toller. Dr. William Ewart contributes a long article, largely historical, on the Decrease of Ague and Aguish Affections in London, and Mr. D. E. Flinn writes on Wintering Stations in Ireland. Most of the papers in the second number are practical ones on the treatment of pulmonary phthisis and gout. Dr. Samuel Hyde, the editor, urges the railway companies serving health resorts to charge lower fares. The journal is published in the middle of January, April, July, and October by Messrs. John Bale, Sons, and Danielsson, 85–89, Great Titchfield-street, W.; it contains rather more than 100 pages, royal octavo; the price is 2*s.*

Le Vélo Médicale.—Cyclists contemplating expeditions in France will find a variety of useful information in this journal, which is brought out monthly under the auspices of the Union Médicale Vélocipédique et Athlétique de France. Dr. Oscar Jennings is president of the association, and has published articles on "Cyclotherapie" in the paper. The office is at 26, Rue Joubert, Paris; the price of the journal is fifty centimes.

New Inventions.

A NEW BOUGIE-CATHETER.

THE Medical Supply Association of Edinburgh have manufactured, at the suggestion of Dr. Cuthbert Bowen, of the General Hospital, Barbadoes, a set of silver bougie-catheters which are a decided improvement on any of the instruments at present in use. The advantage claimed for these bougie-catheters over simple catheters is in the facility with which they can be cleaned and rendered aseptic, the apertures being in the blunt end of the bougie, and not at the side as in the ordinary silver catheter. These instruments, as their name implies, are capable of being used either for gradual dilatation of the urethra in stricture or for the withdrawal of urine in cases of simple retention. By the removal of a screw plug in the handle the bougie can be instantly converted into a catheter, all uncertainty as to whether the instrument is in the bladder being removed by the flowing of urine through the handle. These instruments run in sizes from 1 to 21, the gradations being extremely gradual; thus the advantages of the bougie are retained and the disadvantages of a catheter avoided.

UNIVERSITY OF LONDON.—The following examiners for the year 1897–8 were elected at the meeting of the Senate held on April 28th:—Experimental Philosophy: Professor G. F. FitzGerald and Professor Silvanus Thompson. Chemistry: Professor Wyndham R. Dunstan and Professor William Ramsay. Botany and Vegetable Physiology: Professor J. Reynolds Green and Professor J. W. H. Trail. Comparative Anatomy and Zoology: Mr. F. E. Beddard and Mr. W. Maxland Benham. Practice of Medicine: Dr. W. H. Allchin and Dr. Frederick Taylor. Surgery: Mr. William Anderson and Mr. Henry Morris. Anatomy: Professor D. J. Cunningham and Professor G. D. Thane. Physiology: Professor E. A. Schäfer and Professor William Stirling. Obstetric Medicine: Dr. G. Ernest Herman and Dr. Peter Horrocks. Materia Medica and Pharmaceutical Chemistry: Dr. Sidney Phillips and Dr. W. Hale White. Forensic Medicine: Professor J. Dixon Mann and Dr. Thomas Stevenson. State Medicine: Dr. Edward Seaton and Dr. Arthur Newsholme. Mental Physiology: Professor S. Alexander and Dr. T. Claye Shaw.

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THE LANCET.

LONDON: SATURDAY, MAY 8, 1897.

THE Public Health (Scotland) Bill has begun what will probably prove a slow progress through the Grand Committee stage. Notice has already been given of over sixty pages of amendments, and the list is still being added to. We are glad to observe that they include proposals intended to obviate nearly every one of the defects to which we called attention in a recent article.[1] The formation of port sanitary authorities, the levelling and macadamising of private streets in populous places, the prevention of wakes in fatal cases of infectious disease, and the prevention of railway manure nuisances even when the nuisance arises in connexion with covered trucks are dealt with in suitable amendments. A number of valuable clauses are set down in the name of Sir WILLIAM PRIESTLEY. Sir CHARLES CAMERON is also a member and should be useful, but it is very unfortunate that Dr. FARQUHARSON, in proposing that the Bill should be remitted to a Committee, thereby effected his own exclusion from its deliberations.

The opening meeting on Tuesday last was in some respects satisfactory and in others the reverse. Certain of the proposals made were of a distinctly retrograde character, and one of these was carried, though only by a very narrow majority. In the clause dealing with the appointment of medical officers and sanitary inspectors, one Member made an extraordinary suggestion for the deletion of the stipulation that local authorities "shall allow to every such medical officer and every other officer or clerk appointed by them on account of his employment a proper salary." It did not appear whether the honourable Member thought that the withholding of a proper salary from a competent official, or the appointment of an official so incompetent that he should not deserve a proper salary, would be the better course to adopt in the sacred cause of economy. Anyhow, the amendment was rejected out of hand. It is unfortunate that a proposal advocated by Sir ROBERT REID did not meet with the same fate. At present every new medical officer of health must be the holder of a Diploma in Public Health. It seems that if a vacancy were to occur in a particular town which Sir ROBERT REID represents none of the medical men in practice there would at present be in a position to accept the office, and he urged that the town might in consequence require to bring a man from a distance and pay him a large salary to devote all his time to his duties. The risk is imaginary. The examinations in State Medicine are not prohibitive to a man in practice; and a practitioner who will not take the trouble to study the subject and obtain a qualification has no claim to a new office, which should always be filled by a man who has sufficient belief in the value of sanitation and sufficient perseverance to carry him through the required examination. If by chance any community were without such a man, there are now plenty of qualified applicants even for small salaries. Whether the local authority, which seems to have made a representation to Sir ROBERT REID, had any fear of being compelled to avail itself of the services of a county officer, we know not, but in the interests of administrative uniformity no such fear should have had any weight given to it. In the end, however, the proposal that the Local Government Board be permitted to sanction the appointment in burghs of unqualified officials was agreed to by a majority of two votes, including that of the LORD ADVOCATE, who then blandly inquired whether it was desired to allow the same liberty in the case of county health-officers. We hardly think the Committee will desire anything so reactionary, but the fact is that a genuine sympathy with public health is the first qualification for any Committee or Government which wishes to pass a useful Bill, and in such a matter slackness in detail is likely to be interpreted as due to weakness of principle or to unexpressed dread of sanitary progress.

Whether there will be any further tendency to sanction administration by incompetent and unqualified officials remains to be seen. The opportunity, however, is afforded by a document issued to the Committee by sanitary inspectors in Scotland. It certainly tends to justify the complaint made by Dr. BRUCE in a letter which we publish elsewhere. Anyone acquainted with English methods will hardly believe that in Scotland sanitary inspectors venture to ask Parliament to confer on them the statutory right, in the case of manufactories, buildings, and premises used for trade purposes, to certify what is "a nuisance or injurious or dangerous to the health of any of the inhabitants." It is obviously preposterous that certification of anything as a nuisance or dangerous or injurious to health should be given by anyone but a thoroughly qualified medical man, or by a group of people who feel that their health is actually being injured, as provided for in the clause contained in the Bill. Even in the latter event we can hardly suppose that any local authority would think of acting in the absence of a report from its medical officer. In the same "memoranda" there are various suggestions of a similar character, some of them almost amounting to a proposal that the sanitary inspector should usurp the place of the local authority.

One naturally turns to the Scotch Acts to ascertain what are the special qualifications required of sanitary inspectors which give them any kind of justification for the claims which they advance. The new Bill makes reference to "qualifications set forth ..... in Section 54 of the Local Government (Scotland) Act, 1889." But on turning to this Section, and to the existing Public Health Acts, and to the Burgh Police Act, the fact emerges that the law requires no qualification of any sort whatever for any sanitary inspector appointed by any local authority, urban or rural, in Scotland. In the case of a county council, the person appointed as sanitary inspector must have had three years' experience under a local authority. A county council, however, is not a local authority for administration of the Public Health Acts, and, we repeat, the law demands no examination or certificate

[1] THE LANCET, Feb. 13th, 1897.

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of any kind for sanitary inspectors of local authorities. At the same time, it is just as sanitary inspectors of local authorities that they request power to certify as to what trades, &c., are nuisances within the meaning of the Acts. Seeing that the law requires no qualification for sanitary inspectors, we turn to the document issued by themselves for evidence of competence for such work. It may be assumed that the paper is the outcome of the deliberations of the principal inspectors, and the positions occupied by the signatories support the assumption. Yet the production bears on the face of it evidence that the writers are not acquainted with the most elementary rules of English grammar. They tell us that a particular section of an Act "has been found to work satisfactory." They declare, in small capitals, that "the meeting of local authorities occur either once a fortnight or once a month." In one line "the Council ..... were gratified" and in the next "the Council submits," and so forth. Most absurd of all, regarding Clause 89 they endeavour to instruct the Committee itself in grammar, telling it to delete "that purpose" and insert "these purposes," the matter in question being "a proper supply of water for the use of lodgers." The terminal "s" in lodgers has been enough to lead the whole association of sanitary inspectors astray! One member of the Committee scouted the idea of sanitary inspectors in Scotland being placed in the same category as nuisance inspectors in England, and in doing so he paid only a left-handed compliment to the latter set of officials.

Facts, however, must be faced as they stand. The Government declares that while it will not directly subordinate sanitary inspectors to medical officers its policy is to allow local authorities, subject to the consent of the Local Government Board, to "regulate the duties of ..... medical officers and sanitary inspectors and their relations to each other, whether appointed before or subsequent to the commencement of this Act." This concession is better than nothing. If it is to have the very slightest value in urban districts it is obvious that those Sections of the Burgh Police (Scotland) Act of 1892, which already lay down the duties of medical officers and sanitary inspectors, will require to be repealed. How much they stand in need of repeal may be judged of by Section 75, which runs thus: "The Commissioners shall appoint a sanitary inspector, subject to the provisions of the Public Health Acts, whose duty it shall be to enforce the sanitary provisions of such Acts and this Act." Let it be observed that the term "such Acts" will include the present Bill when it becomes law, and that the law does not require of the sanitary inspector any kind of qualification, but that it does require of every newly appointed medical officer a diploma, not only in medicine, but also in public health. Yet in a newly formed burgh the man who was yesterday plastering a wall or sawing a plank, and who has been similarly occupied during all his working life, is to-day pitchforked into the position of "superintending" the sanitary provisions of the Public Health Acts, while to the doubly examined and certified medical officer are relegated certain duties relating to "the existence of disease" within his district. Mr. W. S. GILBERT never suggested anything more whimsical. We can hardly conceive that the Bill will pass without these clauses of the Burgh Act being erased from the Statute Book.

ANYONE who is privileged to enter the depressing portal of one of our big London infirmaries or workhouses, and who notices the children there, will see some with sore heads and others with sore eyes, who have been there month after month, perhaps year after year, spending the best years of their lives—best, that is, for educational purposes—without any education, and perhaps with harmful associates around them. Yet if these children are sent to, and if they are accepted at, one of the big district schools, they spread, as we mentioned in our leading columns last week, disease amongst the others because of the want of means of classification, and the overcrowding and deficient cubic space. Mr. NETTLESHIP'S letter (dated April 22nd) to the *Times* is well worthy of perusal as an illustration of the evils which result from these schools as regards ophthalmia alone. He mentions there the case of a girl who was under his care on and off from 1873 to 1888 for the results of ophthalmia acquired at one of the schools when she was in the infant department. He says of her: "Her life has been largely spoilt by the disease and the ratepayers put to expense in consequence." Even when the children are cured and sent to one of these schools, some of which contain 1600 or 1700 scholars, they lack anything like personal attention owing to the size of the schools, and owing, as it would appear from the evidence before the Departmental Committee, to the deficiency or the inefficiency of the teaching staff. Hence the want of individuality, the inertness, and sluggishness which characterise the typical pauper child. No one can read the evidence and report of the Poor-law Schools Departmental Committee without becoming aware that grave flaws exist in the administration of these schools, for which, not only the guardians, from whom the managers of these schools are elected, but also the Local Government Board, are responsible. Matters have been going on thus for many years, the number of inspectors being quite inadequate for the work; and it appears from the evidence submitted that it was useless to look for reform either to the managers of the schools or to the Local Government Board. Even when the Local Government Board did make recommendations to the respective managers of schools they were not always carried out, and there existed no adequate means of enforcing compliance (questions 743, &c.). The principal recommendations of the Departmental Committee are:—That a new central authority be appointed for the metropolis, which shall have the control and supervision of *all* the London pauper schools, and *all* the children; that ophthalmic, and other hospital schools be established for the reception of all children suffering from contagious diseases, and that arrangements be made for their education whilst in these institutions; that suitable homes be provided for feeble-minded children on the boarding-out system; and that further provision be made for inspection, additional women inspectors being appointed, who, as a rule, should possess medical qualifications.

On Feb. 20th an important deputation of the guardians

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and school managers waited on the President of the Local Government Board, who, in reply, stated that it was impossible to leave matters as they were and to ignore the recommendations of the Departmental Committee. The remedy lay between adopting them in their entirety, or in part—viz., by placing only the children medically or physically defective under the care of a new central authority. This latter was the plan he proposed to adopt, and to embody in a draft general order. The special classes of children to be thus dealt with will be those suffering from ophthalmia or other diseases of the eye, disease of the skin or scalp, those requiring convalescent treatment, those presenting physical or mental defects, those ordered by a magistrate to an industrial school under the Act of 1866, probably also those in the *Exmouth* training ship, and those who are boarded out. It is proposed that the new authority shall consist partly of guardians and partly of nominees of the Local Government Board. Such an arrangement will doubtless have some advantages, chief among which is that it will liberate at once a great deal of the accommodation in the existing schools which is sadly needed.

But the medical and the educational evils to which we have referred can only be adequately met by the establishment of a new central board for all the pauper children of the metropolis. Such a board would be more likely to consist of persons really competent and experienced in the education and management of children. They would, in the second place, be more likely to elect competent and sufficient officers to the posts of teachers. They would, moreover, be able to balance between the overcrowded schools and those having vacancies, and would be able to establish separate institutions for the treatment of ophthalmia, ringworm, and the other infectious conditions, to which children are liable. Such a central authority would be the most competent to judge how far the existing schools comply with the real educational needs of the pauper children. Those familiar with the average pauper child know that to give such children interest in their work by cultivating their manual dexterity is the best way to educate their cerebral functions, and if more institutions such as the *Exmouth* training ship were established for the boys and more cottage homes for the reception of limited numbers of girls, there is no doubt whatever that the future of these children would be greatly ameliorated, and in all probability they would thus be saved from a career of crime and attracted to a career of usefulness. The half measures proposed will undoubtedly be some improvement, but nothing short of a more radical reform, such as that recommended by the Departmental Committee, will fully meet the necessities of the case.

THE profession and the public of Birmingham have always taken creditable interest in the subject of hospital reform. Dr. HESLOP, of Birmingham, did much to raise the estimate of club practice. A few years ago a committee investigated the subject and anticipated the principal conclusions which have been reached by later inquirers. Birmingham also was largely concerned in the exposure of the abuses of medical aid associations. It is not remarkable, therefore, that Birmingham is again to the fore in the discussion of the question of Hospital Abuse, and that the profession is giving valuable aid in the promotion of the principal objects of the Hospital Reform Association. If we may judge from the letters in the Birmingham papers the whole community is exercised on the subject, and is probing deeply into the very roots and principles of the hospital system. Last week we reported a meeting of the Hospital Reform Association in Birmingham, presided over by Mr. JORDAN LLOYD, F.R.C.S., surgeon to the Queen's Hospital, Birmingham. The speeches made at this meeting originated the correspondence which has since appeared in the *Birmingham Daily Post*. Mr. LLOYD'S speech on the subject is very valuable. When the hospital surgeons of the country take their proper place in this controversy, and lend a helping hand to their brethren in the ranks of general practice in defining to the public the real place and function of hospitals, the day of reform will not be far distant. Mr. LLOYD was explicit on one point on which erroneous representations have been made, and on which it is of the highest importance that there should be no misconception. Mr. LLOYD said: "*The first purpose of a hospital is to supply the sick with the medical attention which their case demanded, and which they were unable to obtain by reason either of their poverty or of the severity or peculiarity of their malady.*" "Another reason," said Mr. LLOYD, evidently meaning a secondary reason, "for the existence of hospitals—and it was a real reason—was the training of medical men." After this clear deliverance from a prominent hospital surgeon it is unnecessary and somewhat ungracious for people to write in the Birmingham papers as if the profession maintained the contrary opinion, that hospitals existed first for the education of medical men and that the advantage of the poor was only a secondary reason for their existence. The fact is palpably as Mr. JORDAN LLOYD states it. Subscribers and governors of hospitals are mainly laymen. One of the last things they think about is the promotion of medical education. They subscribe because they wish to help to provide a bed for a poor sick man, woman, or child. Occasionally there is a selfish object at the bottom of this apparent charity, but we will not libel the generality of subscribers by doubting that they contemplate the relief of an urgent case of disease or accident which can not be accommodated at home.

We are not denying the use of hospitals as centres of medical education. These they undoubtedly are, and the poor as well as the rich benefit by the opportunities thus afforded for teaching. But this *métier* of hospitals is a secondary one. Medical education would take care of itself if there were no hospitals at all. In some conceivable respects it would or might fare better. But undoubtedly in present circumstances hospital practice is an enormous and valuable means of education, though the very popularity of hospitals shows that this means is used humanely and in subordination to the primary purpose of serving and treating the poor. Mr. LLOYD entirely approves in principle of a Central Hospital Board, and proposed a resolution averring that the question of hospital reform should be dealt with without further delay by the lay managers and acting staffs

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of our various hospitals and dispensaries, and that the recommendations of the Hospital Reform Association for the better regulation of the out-patient and casualty departments are worthy of close consideration. He and Dr. ISAMBARD OWEN differed as to the degree in which the number of out-patients could be restricted. But this is a matter of detail and of experience on which there need be no permanent difference between men who with equal earnestness defend the essential principle that hospitals are not for the general accommodation of the public, or even of the poor, but for selected cases, incapable of proper treatment at home, and for the patient who is unable to command at his own expense the skill which his case requires. One other opinion of Mr. JORDAN LLOYD, expressed with much confidence, should be noted—his conviction, after years of thought, that there are more economical ways of administering hospitals than are now practised. This is, and has long been, our own opinion. But it is only fair to remember that some of our best hospitals are administered with an economy contrasting vividly with the costly management of State-aided or rate-supported institutions.

One of the correspondents of our contemporary, the *Birmingham Daily Post*, Dr. FELIX VINRACE, shows with great clearness the tendency to a complete change in the conception of the character of hospitals. Instead of being regarded in the sense which we have expressed above, they have come to be considered by many of the working classes as institutions in which they are entitled to be treated for trivial ailments. This is a misconception entirely unworthy of the British workman, and the sooner he is undeceived by the medical profession the better. He was never more able than he is to-day to offer proper terms for ordinary medical attendance on himself and family and to contribute a small subscription for the help of those whose extreme cases require exceptional skill and hospital accommodation. Is the thriving working man to be entirely exempted from the duty of such a subscription as he can afford to charities that are almost the monopoly of his order? On one important point, however, we entirely agree with Dr. VINRACE. The principle of compulsion must not be applied to working men. Their contributions must be voluntary, and the pressure of the employers and foremen must be restrained. Working men have the same right to freedom in supporting a medical charity which others have, and to make their contribution a matter of compulsion is to spoil it of its charm and to foster the misconception which if not corrected threatens to turn our hospitals into cheap dispensaries.

AN EXHIBITION AT ARCACHON.—We are asked to announce that an International Exhibition of Hygiene, Food, Commercial Produce, and the Industrial and Fine Arts will be opened at Arcachon, near Bordeaux, on July 15th. The exhibition will remain open until October, and all information can be obtained on application to the Direction de l'Exposition, Arcachon-les-Bains, Gironde, France. Arcachon is a thriving watering-place with a large *clientèle* and more than the usual local attractions, so that the founders of the exhibition look forward with some confidence to successful results.

Annotations.

"Ne quid nimis."

THE CALAMITY AT PARIS.

THE disastrous fire which occurred upon May 4th at a charity bazaar at Paris was a fatality peculiarly distressing in its surroundings. Loss of life is always a thing to be regretted, but how much the more in a case like the present, where the victims had assembled together to do their utmost to assist their poorer brethren and sisters. There are various theories as to the cause of the fire; but, however it arose, the flames spread with appalling rapidity, and in some twelve minutes about 150 persons lost their lives. Most of them seem to have been women, but the reports state that the remains found were so charred and disfigured that recognition was in most cases impossible. We can but offer our sympathy to the relatives and friends of the victims, and suggest that in some cases at least the cause of death would be suffocation and not burning, a death, therefore, unaccompanied by bodily pain; but the accident is a heart-rending one, and of the dead we can but say, "Quorum animis propicietur Deus."

THE TREATMENT OF HABITUAL OFFENDERS.

THE unfortunate people who continually reappear before the police magistrates and petty sessions on various minor charges have for a long time been the despair of the philanthropist and the social reformer. The law does not permit more than the infliction of a trivial fine or a few days' imprisonment, the inefficacy of which penalties is sufficiently proved by an early repetition of the offence. The opportunities provided by numerous "homes" and other benevolent agencies seem equally to fail in reclaiming these habitual offenders, and the principle of sentencing them to progressively increased periods of detention—a principle which has for long been advocated by the Howard Association—is at least deserving of trial. The Association argues that the correction of bad habits requires time, and that hitherto the victims of evil habits have been positively encouraged by a system of sentences which has rendered their reformation impossible, and has (at enormous and utterly wasted cost to the public) made them worse instead of better. These repeated short sentences have been strongly condemned by departmental committees of Government on English prisons and Scotch habitual offenders. The Scotch committee made it their chief recommendation that persons who have been three times imprisoned within one year should, on a fourth conviction in the same year, be deemed habitual offenders, and that if they are again convicted during the ensuing two and a half years they should, in addition to the usual brief sentence of imprisonment, be committed to an adult reformatory or labour settlement for a term of not less than twelve or more than thirty months. It has been found in the experience of all schemes of providing work for the vagrant and habitual offender classes that the majority of such persons will not work continuously unless compelled to do so. This has been the experience of the Dutch and Belgian beggar farms, and, in a great degree, of the Salvation Army farm at Hadleigh, and other similar establishments. There must be compulsion, and also detention for a period long enough to alter bad habits and form good ones. There is no prospect whatever of these labour settlements being made self-supporting, but they would, at least, be far cheaper than the ineffectual system hitherto adopted. The Association considers that the Hadleigh farm has been of great service to respectable and willing workers not of the class

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of habitual paupers or vagrants, but that farms are unsuitable for habitual criminals, who inevitably corrupt one another; for criminals (as distinct from habitual petty offenders or misdemeanants) gradually cumulating periods of imprisonment are best, one or two years being added for each successive conviction. Habitual tramps and vagrants, and also the class of paupers who constantly discharge themselves from workhouses after a few days' stay, should be checked by compulsory detention for periods adequate to break them of their habits. First offences, or even occasional ones, should be dealt with compassionately, but habitual offences require reformatory discipline, perseveringly applied for adequate periods. Such are the recommendations of the Howard Association, a society which has made the diminution of crime a subject of special study, and the exertions of which in the cause of social improvement are universally acknowledged.

LITERATURE AND SCIENCE.

THE fact that Lord Lister was to preside at the annual dinner of the Royal Literary Fund gave quite a scientific flavour to the 107th anniversary celebration, and no doubt determined the presence at the table of many members of the medical profession. Among the medical men present may be mentioned: Dr. Barnes, Dr. Buzzard, Sir William Broadbent, Sir J. Crichton Browne, F.R.S., Sir Robert Craven, Mr. C. T. Dent, Professor Michael Foster, F.R.S., Mr. Pearce Gould, Dr. J. Gray, Mr. Hutchinson, F.R.S., Mr. G. H. Makins, Mr. Nettleship, Dr. George Ogilvie, Dr. J. W. Ogle, Dr. T. Oliver, Mr. H. W. Page, Sir William Roberts, F.R.S., Professor Sherrington, F.R.S., Dr. S. Squire Sprigge, Dr. Wilks, F.R.S., Sir John Williams, Dr. Theodore Williams, and Dr. G. Sims Woodhead. The speeches in every case rang changes on the connexion of literature with science, or the antagonism of literary work to scientific work. Lord Lister, in the chief toast of the evening, "Prosperity to the Royal Literary Fund," while acknowledging the debt that scientific men, as much as the rest of the world, owe to the author, disclaimed literary merit for his own writings, saying that he was a student of the book of nature, and that the value of anything that came from his pen was due to the grandeur of his theme and not to his treatment of it. The Bishop of Stepney, in proposing the toast of "Literature and Science," found that in the best journalism the two met harmoniously, however opposed they might be in other ways, the search for reality being here the common object of both. Mr. Traill, in responding for Literature, spoke wittily of the function of the critic as a surgical one, "not necessarily followed by the beneficent results with which the name of the chairman would always be associated." There was, he feared "no kindly healing process for a mortified vanity akin to the processes under which the aseptic wound united." Mr. Norman Lockyer responded for Science, and the Earl of Crewe proposed the Chairman's health in suitable terms.

THE APPRECIATION OF MEDICAL SERVICES.

WE have not often to complain of a want of liberality in the higher courts in their estimate of the value of medical service, but in the case of Douglas and Another *v.* Phillips, before Mr. Justice Cave and a special jury, we cannot refrain from such feeling. The plaintiffs, medical practitioners at Hounslow, claimed £105 5*s.* for medical attendance on the defendant, Miss Florence Phillips, who denied that the charges were fair and reasonable. The services and charges were briefly as follows: Consultation at surgery, 5*s.*; five journeys to Richmond at £1 1*s.* per journey; fourteen journeys to London—involving, we gather, a consultation with Dr. Herschell—at £3 3*s.*; twenty-four journeys to Hampton Court at £2 2*s.*; and a journey to London at midnight, £5 5*s.* On the face of it there is nothing unreasonable in these charges. On the contrary, they are moderate. Which of us, which of the jury that reduced this claim to £50 16*s.* 6*d.*, would like to undertake a journey to London at midnight for five guineas? The other journeys to London, which occupied as a rule five hours, were charged for at the rate of only three guineas. Journeys to Hampton Court, which took three hours, only two guineas; journeys to Richmond, which took two hours, one guinea. Several medical men testified to the general reasonableness of the charges. There was, of course, one medical man—all the way from Liverpool—to say that in his opinion the charges were rather high. And he seemed to weigh more with the jury than several others who rightly defended the charges made. The defendant had actually paid £70 altogether into court. Judgment was given for the defendant, the plaintiff to have the costs up to Dec. 4th, 1896, up to which date only £35 8*s.* 6*d.* had been paid into court. An order was made that the plaintiff should take £50 16*s.* 6*d.*, and the defendant take the remainder of the £70 out of court. We cannot think that such an estimate had the serious approval of the judge. Dr. Christian, the member of the firm who attended Miss Phillips, has done right in vindicating by his action the medical estimate of the value of time and service. We regret his unsuccess. But the profession and, we venture to say, men of other professions will accord him their sympathy and approval.

ANTI-VACCINATION AT GLOUCESTER.

THE anti-vaccination party at Gloucester have at last been made aware that they are not to have it all their own way, as they may have fondly imagined from the results of recent municipal and parochial elections. Indeed, the only wonder is that the citizens have been content to allow them to have so long enjoyed freedom from the criticism which their unwarrantable assertions with regard to the sanitation of the city invited. When, owing to the unprotected state of the children from long neglect in enforcing the law with respect to vaccination, small-pox spread in their midst, the anti-vaccinationists proclaimed loudly on all occasions that such neglect of vaccination had nothing to do with the outbreak, which, according to them, was solely attributable to the grossly insanitary condition of the city. This cry—promulgated by such leaders in the anti-vaccination cause as Lieutenant-General Phelps of Birmingham and Dr. W. R. Hadwen—has ever since formed the staple explanation of the Gloucester epidemic amongst those who had been most active in persuading the people to abstain from seeking the protection afforded by vaccination. The utter baselessness of the assertion was amply shown at the time of its first announcement by the city surveyor; but the anti-vaccinationists have continued to adhere to it, thereby damaging the interests of the city, which had suffered so much already from the epidemic. The occasion of the annual meeting of the Gloucester Branch of the Anti-Vaccination League on the 22nd ult. had been intended by the party to have shown to the world how deep a hold their tenets had gained amongst a community which had experienced the trial and suffering of an epidemic of small-pox. The meeting had been widely advertised, and the chair was occupied by Lieutenant-General Phelps, the President of the Anti-Vaccination League. Mr. Milnes, the champion of the cause, and Dr. Creighton, the medical advocate, whose attacks upon Jenner have proved that even a man of science may be blinded by prejudice, had come from London to support the chair and give their benison to the Gloucester stalwarts. The ranks of the latter have been recently reinforced by Dr. Hadwen himself. The citizens, however, were resolved that those who had defamed the city should not enjoy a monopoly of speech

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on the occasion of this meeting, especially as supporters of vaccination had been directly challenged to reply to the criticisms on the city's sanitation, which had been so freely made. Accordingly, by handbills and posters, the true facts as to vaccination and the refutation of the statements of its opponents induced some to attend the meeting who had no sympathy with its objects. Dr. Bond, the energetic secretary of the Jenner Society, who had been specially challenged, appeared on the platform and obtained a brief hearing whilst he proceeded to demolish the pretensions of Dr. Hadwen to speak of the sanitation of a city in which he was so recent a resident. Another gentleman who essayed to defend Gloucester from the imputations cast upon it was "chucked out," only to re-appear, and after most disorderly scenes to obtain a brief hearing. But the proceedings were not suffered to continue, and disorder reigned supreme, so that the eloquence of Mr. Milnes was lost and the words of wisdom of Dr. Creighton were wasted. We commiserate these two gentlemen on their unfortunate experience, but we cannot say that we are at all surprised at the *fiasco*, which, indeed, was directly provoked by the attitude assumed throughout by the promoters of anti-vaccination in all their references to Gloucester.

THE UNREPORTED DEATH OF A SHIP-SURGEON AT SEA.

MR. S. MASON writes a letter to *Fair-play* which tells a remarkable story of the death of his friend, Dr. W. H. Brendon, on board the steamship *Umona*. The ship arrived in London on March 31st, and as Dr. Brendon's friends received no news from him or information about him they became uneasy, and Mr. Mason was asked to inquire for the missing medical man on April 6th. It so happened that the captain of the ship was in the office, and on being asked if he had had Dr. Brendon on board he replied "Yes." On being asked if he was still on board he replied that he was dead, that he had died on March 17th from dysentery, and was buried at sea on the 18th. On being asked why he or the shipping firm had not communicated the sad fact, he replied that they did not wish to alarm the family, and felt sure that some of the family would be making inquiries. An equally shaky basis of excuse was put forward on the ground of not having the address; but Mr. Mason shows by letters to Dr. Brendon that they had knowledge of his address. A brother had written to the firm to inquire. He was told that the ship had arrived, but no hint was given of the death of his brother. Such consideration for the feelings of a family is most peculiar, and is more honoured in the breach than in the observance. The facts would appear almost incredible if they were not vouched for in a published letter. We cannot imagine that such conduct is common among ship-owners, but we give publicity to these statements so that they may, if possible, be contradicted, and, if not, that they may remain as a unique instance of how not to deal with news so sad respecting the medical officer or, indeed, the humblest passenger or member of the crew of any ship.

CASTRATION AND VASECTOMY IN HYPERTROPHY OF THE PROSTATE.

DR. J. W. WHITE, who introduced the operation of castration for hypertrophied prostate, in a lecture recently delivered states that as oöphorectomy was much abused a few years ago, so is this operation now,[1] and that a similar result in the treatment of appendicitis is threatened. He never encouraged the idea that his operation was a universal panacea. If the patient is not very old, retains his sexual power, has sound kidneys, and only a moderate amount of residual urine, the operation is out of the question and only catheterism is required. If pain is marked and resists small doses of bromide, belladonna, phenacetin, &c., that may be an indication for operation. In such cases vasectomy should be selected. If the residual urine reaches twelve ounces and if it does not diminish under catheterism, the dangers from backward pressure on the kidneys, increasing atony of the bladder, and cystitis are so great that vasectomy is again indicated. In patients with larger prostates, with eight or ten ounces of fœtid or muco-purulent urine, with frequent micturition, and pain on the introduction of the catheter, some operation—vasectomy, castration, or prostatectomy—is indicated. The younger the patient, the greater the sexual power, the sounder the kidneys, and the better the general health, the more the surgeon should incline towards prostatectomy. If the patient is somewhat older and the sexual power is becoming enfeebled vasectomy is to be chosen. Still greater age, with marked renal disease or great failure of health, indicates the same operation. If, however, with the greater age and distinctly lessened sexual power the renal and general conditions are good, castration promises the most benefit with the least mortality. In the worst cases, in which the prostate is enormous, the cystitis excessive, the bladder dilated and atonied, the retention absolute, the kidneys inefficient, and catheterism difficult and occasionally impossible, any operation involves risk. But this must be taken. Castration in these cases is the best procedure. It will occasionally fail, but often the improvement is marvellous.

[1] University Medical Magazine, April, 1897.

A MIDWIFE CAUTIONED.

AN inquest was held at Littlehampton on Friday, the 23rd ult., by Mr. F. W. Butler on the body of Clara Dearing, aged thirty-five years, who had died on the morning of that day. She had been confined of a dead child on the preceding Wednesday. The patient had engaged a midwife to attend her in her confinement. According to the husband's evidence the deceased was well up to the Tuesday evening. It appears that the midwife had seen the deceased on the Saturday and also on the Tuesday before the confinement. Labour apparently began early on the Wednesday morning; the midwife attended as soon as she was summoned, and it seems that when she saw the case she advised that a medical practitioner should be sent for. Mr. Lapthorn attended and gave chloroform, and the patient was delivered of a dead child. In his evidence he said there was a great deal of hæmorrhage, but it is not clear whether this occurred before or after delivery. The patient died early on the Friday morning. Mr. Lapthorn made a post-mortem examination, and as a result of it gave it as his opinion that if medical assistance had been obtained on the Friday or Sunday previously to the confinement the patient would have been saved. The jury found a verdict in accordance with the medical evidence, and suggested that the midwife should be cautioned as to her attendance on such cases in future. Our readers will see that the information given as to the facts of the case is not sufficient for us to form any opinion as to its real nature. Perhaps Mr. Lapthorn will tell us more about it, and especially what the reason was why medical assistance should have been summoned earlier.

EGYPTIAN PRISONS IN 1896.

MANY references have from time to time been made in our columns to the important reforms introduced into the Egyptian prison system since Crookshank Pasha became Inspector-General of Prisons in 1883, and the circumstance that his retirement from that important position has been announced gives additional interest to his official report for the year 1896. During that year the work of the department was carried on under unusual difficulties, owing, firstly, to all grants for the improvement of existing

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prisons or the building of new ones being withdrawn early in the year on account of the Dongola expedition; secondly, to the want of sufficient accommodation for the continually increasing number of prisoners; and, finally, to the outbreak of cholera during the hottest summer months in seventeen overcrowded central gaols. There was a total of 7954 male prisoners confined in twenty-five principal gaols, seventeen of which were invaded by cholera, while eight remained exempt, and among this large number of persons there were only 116 cases of cholera, with 70 deaths. Not a single case of the disease occurred among the female prisoners, and the Inspector is of opinion that this is due to the fact that they are fed by the department, whereas at all but two of the prisons for males the prisoners' food is supplied by their friends and relatives. Whenever cholera broke out in a prison relatives were strictly forbidden either to visit or to bring in food and clothing for a period varying from one to two months, according to the existence of cholera in the neighbourhood, and invariably the disease was stamped out of the prison in a few days. During 1896 there were over 47,000 unconvicted and convicted male prisoners admitted into the central gaols, and during the same period 36,000 were discharged. Female prisoners were very much less numerous than male prisoners.

MEDICAL MISSIONS IN CHINA.

ALTHOUGH the unwillingness of the Chinese to receive instruction from foreign residents only too often shows itself in outbreaks of murderous violence, it is gratifying to find that the work of the Medical Missionary Association appears to be making progress in some of the towns. At the annual meeting of the Association in Exeter Hall, on May 3rd, Mrs. Bishop, who had been three years in the Far East, stated that at Mukden, the capital of Manchuria and politically the second city of China, the Emperor's uncle and another mandarin caused it to be publicly proclaimed that they had received medical treatment at the United Presbyterian Hospital, an example of aristocratic preference for foreign over native methods which is likely to be beneficial all round. Mrs. Bishop seems not to have been altogether favourably impressed with the sanitary condition of some of the mission hospitals she visited in China, but allowance must be made for the great divergence between Eastern and Western opinion in regard to such matters and also for the danger that patients might be estranged or scared away by too abrupt a departure from their accustomed habits. Even in Bombay, where for more than a hundred years the British Government, possessed of absolute power, has had as free a hand as it is possible to have in dealing with Asiatics, the reports of our correspondents show that public sanitation is still in a rudimentary stage.

DUNLOP TYRES AND PRACTITIONERS' CARRIAGES

OF the comfort of the Dunlop tyre as applied to an ordinary carriage there can be no doubt, and the chief question therefore for those who are anxious to use them is as to whether they will wear. Of course, they require care in using and are somewhat expensive in the first instance, but against these items on the debit side must be set various points to their credit. We have recently received two very opposite accounts of the lasting powers of these tyres, which we here lay before our readers. The first is the experience of a practitioner in Sheffield. He allows that, having procured a set of the tyres in question, he found an enormous increase of comfort from the absence of vibration and jolting, and in addition that the body of his carriage, a light coupé brougham, was saved a proportionate amount of wear. But, on the other hand, he found that they frequently burst and, although mended, soon gave way again; that they threw up a quantity of mud, which injured the paint of the carriage; and that the brakes, though efficient, soon wore out. The other experience comes from a medical officer of health in a hilly part of Wales. He had the pneumatic tyres fitted to an ambulance brougham, which in eight months travelled over 750 miles of hilly, rough ground without a puncture and with extreme comfort to the sick transported thereby. The brake blocks wore out in seven and a half months, but the tyres themselves were but little worn by the brakes, although much cut by the roads. This latter seems a pretty severe test, and we are unable to account for the disastrous experiences of the Sheffield practitioner except by assuming that he got a faulty tyre, for even with the greatest care anything manufactured sometimes fails, or else that the tyres were not properly inflated before use and so got nipped between the road and the wheel. The increase of comfort is so great that though it may not be worth while for a medical man to run the risk of having his carriage laid up for long spaces of time, as happened to one who tried the tyres, yet in the light of the Welsh experience they would seem to be quite worth a trial.

HERNIA OF THE BLADDER.

ALTHOUGH hernia of the bladder was recognised as long ago as 1520, when it was met with by Verdier, yet it has been satisfactorily described only within the last few years. In 1895 fifty-eight cases were collected by Curtis, and in March of this year Dr. Gibson published in the *New York Medical Record* a valuable paper on the subject, containing particulars of forty-five additional cases. From this paper we gather that nearly 25 per cent. of these herniæ were of the femoral variety, and that in more than half of the cases the patients were over fifty years of age. The herniated viscus is often not recognised until it has been opened, and in such cases the mortality is high, for even after deducting those deaths which could not be attributed to the wound of the bladder a fatal result followed in 12½ per cent. It is very probable that the condition is by no means so rare as it is usually thought to be. Dr. Gibson also points out the importance of recognising that traction on the sac of a hernia may draw the bladder into the hernial orifice, and so expose it to the risk of being wounded in an operation.

CHLOROFORM ADMINISTRATION IN WARSAW.

ACCORDING to a paper published in a Russian surgical journal by Dr. Soloveischik chloroform has been administered in 500 cases in Professor Tauber's clinic in Warsaw by Junker's inhaler—Krohne and Sesemann's pattern—with very satisfactory results, these being arranged in somewhat elaborate tabular form. Complete insensibility was obtained in male patients in 12· minutes, and in females in 9·7 minutes, taking the average of all the cases. In four females the time required was less than five minutes. In thirty females and ten males five minutes was sufficient. No female required more than twenty-five minutes, but three males required half an hour and one forty minutes. The maximum quantity used to obtain complete anæsthesia was 5 drachms for males and 3½ drachms for females. They were all adults with the exception of seven boys and eleven girls under fifteen years of age. The average quantity of chloroform used in producing complete anæsthesia was for males 2·24 drachms, and for females 1·64 drachms, calculating the fluid drachm as marked on the bottle as equal to 5·3 grammes, instead of Dr. Soloveischik's figure, which is evidently based on the assumption that the marked drachms are equivalent to Russian drachms by weight. The mean quantity used per minute during complete anæsthesia

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was found to be 0·54 gramme, which compares very favourably with the figures given by Gurlt,[1] according to whom when Esmarch's mask is used a gramme of chloroform is required per minute, and when Kappeler's apparatus is employed 0·6 gramme. In one case (empyema) cessation of respiration occurred after only half a drachm had been given. In another case the excitement was so great that after twenty-five minutes, during which half an ounce had been given, Esmarch's mask was substituted for Kappeler's. After ten minutes' further administration breathing ceased, and artificial respiration was resorted to with a successful result. In four cases only was there any vomiting, and in these only towards the end of the operation.

M. HAFFKINE.

OUR readers are well acquainted with the enthusiastic spirit in which M. Haffkine has carried on his labours in India while endeavouring to deal with such diseases as cholera and bubonic plague. We are glad, therefore, to be able to congratulate him on the fact that the Government of India, recognising the arduous and valuable nature of his recent work in connexion with the plague, have sanctioned the grant of a monthly salary of Rs. 2000 to him instead of the allowances hitherto given. This arrangement is to have a retrospective effect from the date on which he began work in Bombay.

VOICE-TRAINING.

THE Society for Physical Voice-training has received favourable notice in the *Cambridge Review* for April 29th. Our contemporary asks, "Why should we not have a professor of rhetoric?" We do not think the present a very good opportunity for the suggestion of new professorships or readerships at Cambridge, having regard to the admitted poverty of the University, but we certainly think that the proper cultivation of the voice is a subject upon which all educational bodies would do well to take thought. Every educated man ought to be able to speak and read aloud in a way that is comprehensible, and not only comprehensible but pleasant, to his hearers, but as a matter of fact the ordinary Englishman can do neither the one nor the other.

"CHURCHED TWICE IN ONE WEEK."

OUR attention has been directed to a paragraph in the *Manx Church Magazine* for January, 1893. An extract from a parish register dated 1630 is there given as follows: "1660. Rob Cottier's wife was delivered of a child which was baptised upon the Monday and she came to the church to be churched upon the Wednesday next after, and after returning home she fell in labour and was delivered of another child, and came to be churched upon the Saturday next after in the same week. Churched twice in one week. This I certify to be the truth.—Edward Crow, minister." It will be seen that the exact interval between the two confinements is not given. For all the register directly says to the contrary, the child whose baptism is mentioned might have been a year old, or even a person "of riper years"; the first churching might, also, have been left somewhat in arrear; but evidently the probability is that Edward Crow was somewhat struck with the fact that after the birth of a mature, or premature, infant a woman, without renewed coitus, may in the course of one, two, or three months give birth to another child, which may be mature or premature. There are three classes of such cases. In twin pregnancies after one child is born the other may be retained some weeks or months and then be born; again, a woman may have a double uterus, in each side there may be an ovum, and each side may expel its fœtus at a different time; lastly, it may be a genuine case of superfœtation. Coitus taking place in the early months of pregnancy, a second ovum may be fertilised, and the children be born at different times. A case recorded by Dr. Bonnar, quoted in Playfair's Midwifery, is a good example of this class. A child was born on Sept. 12th, 1849, and another on Jan. 24th, 1850—that is, about sixteen weeks after the first. Both children survived, so that the second child could not have been conceived after the birth of the first, or we should find a fœtus of about sixteen weeks' development born alive and surviving, which is impossible. On the other hand, the case could not be one of twins, the first of which was expelled prematurely, because the first born who survived would be, on that hypothesis, of only about five months' development.

[1] Archiv für Klinische Chirurgie, 1891 and 1893.

FORTY YEARS OF OFFICE.

MR. SAMUEL STRETTON of Kidderminster has resigned his appointment as medical officer to the workhouse after forty years' service. Forty years is a very large slice out of a man's active life—it is, in fact, a longer time of working activity than the average medical man enjoys—but during all this period Mr. Stretton has devoted himself with enthusiasm to the care of the sick and aged poor of Kidderminster. Familiarity with the duties did not make him weary of them, so that we cannot be surprised that the guardians have received his resignation with outspoken regret, attributing to him the present excellent sanitary condition of their workhouse. We congratulate Mr. Stretton upon the reputation which he has thus won among his fellow townsmen for intelligent and kindly work.

THE RESOURCES OF CAMBRIDGE UNIVERSITY.

DR. BUTLER, the Master of Trinity, has written to the *Times* concerning the pecuniary position of Cambridge University. The precariousness of this position was pointed out in our columns some weeks ago[1] in an article founded upon a circular letter addressed to the press by the Duke of Devonshire, the Chancellor of the University. His Grace's letter concluded, it may be remembered, with the statement that "the re-endowment of the University in respect of many of its departments is a pressing necessity," while Dr. Butler's letter shows that in many of our great public schools practical re-endowment has taken place during the past sixty or seventy years, so that the ancient University has fallen behind the institutions whence she derives a large proportion of her raw material. In fact, the raw material reaches the University in a condition of elaboration almost higher than the University can maintain it at without sacrifices on the part of the executive and all concerned with the administration that should not be expected and cannot be continued. And even so the fall behind has been hardly prevented. This fact comes home to medical graduates more than to any section of the University, as it is in different departments of natural philosophy that an enormous increase of work has been coincident with an equal depreciation in income. One of the most remarkable features connected with the history of the University has been the rapid development of the medical school and the ancillary schools of anatomy and physiology, and now that it has become apparent under what grave pecuniary stress so much admirable work has been accomplished we are certain that the medical profession, whether connected with the University or not, will see that Cambridge has justified beforehand and fully any claim that it may make upon the public for relief. The medical profession may well bring their influence to bear on the public mind in favour of a generous response, should the letters of the Duke

[1] THE LANCET, April 24th, 1897.

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of Devonshire and Dr. Butler be followed in the near future by any sort of appeal.

THE ILLNESS OF THE DUCHESS OF TECK.

THE Duchess of Teck's illness has caused widespread anxiety proportional to her extreme personal popularity. We are glad to be able to inform our readers that Her Royal Highness, upon whom an operation was performed on Friday evening, April 30th, by Mr. Herbert W. Allingham, after consultation with Mr. T. Smith and Dr. Wadd, has since progressed favourably.

ALCOHOLIC PARALYSIS IN A CHILD.

AN account of a very interesting and important case was published some months ago in the *New York Medical Journal* by Dr. Herter. The patient was a child, aged three years, who had taken twelve ounces of whisky, and who very soon after lapsed into a condition of stupor which lasted, with variations, for a couple of months. Frequent convulsions occurred during this time, usually general, but occasionally restricted to the left side. Paralysis of the right side also developed, affecting the arm more than the leg, and contractures took place with muscular atrophy and loss of Faradaic excitability in the muscles. There were also strabismus, occasional sickness, and irregular temperature, due to the development of a slow lobar pneumonia. After an illness lasting about four months complete recovery took place. The case is very interesting on account of its unusual character and the many cerebral symptoms suggesting meningitis which developed, and Dr. Herber is to be congratulated upon his success in the diagnosis and also in the treatment of the condition.

THE CAUSATION OF INSANITY.

THE *Times* of Saturday, May 1st, in alluding to the Holloway Sanatorium, contains the following remarks based upon the annual report of the medical superintendent, Dr. S. Rees Philipps: "Worry was, as usual, the most potent cause of insanity; alcoholic intemperance played a very secondary part. Dr. Clouston, of the Morningside Asylum, Edinburgh, had convinced himself that more insanity was due to alcohol than any other cause. Dr. Philipps' observations tended to show that in England alcoholic intemperance was as often a result as a cause of insanity." These are startling assertions, and the opinions here expressed are undoubtedly opposed to the views held by most alienists. The term "worry" is evidently used in a very comprehensive sense, and seemingly embraces nearly all the causes of insanity denominated "moral" in the tables of the Medico-Psychological Association. Regarded from this standpoint alcohol may rank as a less important cause, but it is generally believed that alcohol and heredity bulk very largely in the causation of insanity. The view that alcoholic intemperance is as often a result as a cause of mental disease will not, we think, meet with much support.

MEDICAL MEN AND HOSPITAL BOARDS OF MANAGEMENT.

THE power for good which may be exercised by timely action on the part of a hospital staff has received practical illustration at Huddersfield. Although the accommodation of the infirmary there has been for some time inadequate, and even behind the times, there was a disposition on the part of the town to overlook its claims to share in any scheme for celebrating the Queen's Diamond Jubilee. Jealous of the welfare, and alive to the needs, of their infirmary the members of the honorary staff addressed a cogent but temperate letter to the local press in support of the infirmary's claim to recognition. But, although the commemoration of Her Majesty's reign was the ground for the response to this appeal, it came not from the townspeople as a whole, but from Mr. Hildred Carlile, who has sent a cheque for £8000 to the President of the infirmary. With this munificent donation the board has now a sufficient sum in hand to allow the additions to, and alterations of, the infirmary to be carried out forthwith. We congratulate the medical staff on the share they have had in conducing to this happy result. The munificence of the generous donor should live long in the hearts of those in the district which this infirmary serves, and other hospital boards may learn the lesson that they will be gainers by closely cementing their relations with the members of their staffs, and by giving them a share and voice in the management of their hospitals with a more generous hand than is sometimes done. The services rendered by hospital physicians and surgeons in their professional capacity surely entitle them to seats on the boards of management, whilst a staff working harmoniously with the lay managers may exert an influence and conduce to such a result as that which is announced at Huddersfield.

A CHINESE ENVOY IN QUARANTINE.

INFORMATION reaches us to the effect that amongst the passengers of the mail steamer *Empress of China* is Chang Yui Huan, the Special Envoy of the Emperor of China to the Diamond Jubilee celebration, and that the steamship is in quarantine at Victoria, British Columbia, on account of small-pox having occurred on board. The envoy protests against the imposition of quarantine upon one who is not under the control of the Colonial Government or the local authority, and he is stated to have forwarded his protest both to Lord Salisbury and to the Emperor of China. We rather doubt whether the envoy has any real remedy as to this. Vessels belonging to foreign Governments, such as men-of-war and transports, are generally exempt from the control of local authorities, but if the vessel is not one of this class, and it goes to a country where quarantine restrictions are applied, we know of no exception as regards individuals on board. Then, again, it is said that the envoy objects to having to undergo disinfection, and that he has announced that he will resist it by force. We hope, for the sake of the Colonial authorities, that no proposal has been made to disinfect an individual who is not actually suffering from disease. The disinfection of individuals is a thing of the past, and has no meaning in the light of modern scientific methods, except, for example, when a convalescent from such a disease as scarlet fever takes baths to rid his skin of desquamating epithelium. The story altogether savours of a past generation and much of it may admit of being explained away.

WE regret to learn of the death, at the age of sixty-five years, of Dr. H. Vandyke Carter, honorary surgeon to the Queen and Deputy Surgeon-General of the Indian Medical Service, which took place on May 4th at Scarborough. Dr. Carter's contributions to pathology and medicine are widely known, especially in such subjects as urinary calculi, relapsing fever, leprosy, and parasitic skin diseases. His researches on mycetoma threw considerable light on the nature of a disease which has since been closely identified with actinomycosis.

THE tenth annual Cookery and Food Exhibition will be opened at Niagara Hall, St. James's-park, S.W., on May 12th, by the Right Hon. the Baroness Burdett-Coutts, accompanied by Lord and Lady Methuen.

THE Conversazione of the Medical Society of London will be held on May 17th in the society's rooms, 11, Chandos-street, at 8.30 P.M. Mr. Edmund Owen will deliver the Oration.

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The Lancet Special Commission
ON THE
METROPOLITAN WATER-SUPPLY.

XI.[1]

EAST LONDON WATERWORKS COMPANY (*Continued*).

Present State.—General Condition.

THE East London Waterworks Company supplies Shoreditch, Haggerston, Stepney, Limehouse, the Isle of Dogs, Bow, Bromley, Homerton, Stratford, East and West Ham, the Victoria and Albert Docks, Leytonstone, Wanstead, Woodford, Buckhurst-hill, High Beach, Waltham Abbey, Chingford, and Walthamstow. The area of supply is situated immediately to the east of that of the New River Company. The sources of supply are (1) the Thames near Sunbury; (2) gravel beds in the parish of Sunbury; (3) the River Lea; and (4) deep wells at Waltham Abbey, Chingford, Walthamstow, and Lea Bridge. The stations of the Company indicated on the map are A, Sunbury (intake and pumping-station); B, Hanworth (reservoirs, filter beds, pumping-station, and arrangements for collecting water from the gravel); C, Hornsey Wood (reservoir); D, Waltham Abbey (well and pumping station); G, Chingford (well and pumping station); H, High Beach (reservoir); I, Buckhurst Hill (reservoir); J, Hagger Lane (reservoir); K, Walthamstow (reservoir, well, and pumping station); and L, Lea Bridge (well, pumping station, and filter beds). There are also three wells under construction. Of these stations two are situated in the valley of the Thames, far away from the others. The remaining stations are situated in the valley of the Lea, in the district supplied by the Company. The Thames stations are Sunbury and Hanworth.

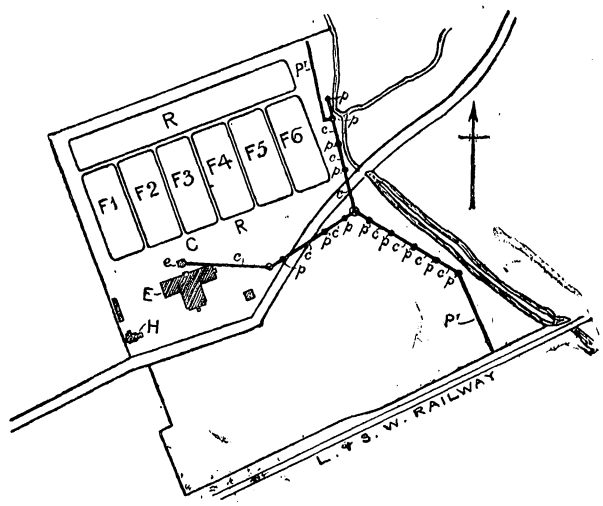
Sunbury (see A on Map).—The station at Sunbury consists of an intake from the Thames and pumping machinery to force the water to the station at Hanworth. The intake from the Thames is situated on the Wheatley's Eyot. This island is in the parish of Walton-on-Thames, in the county of Surrey, but is situated much nearer to the Middlesex bank of the river than to the Surrey bank. The stream which divides it from the Middlesex bank is only twenty-one yards across, and the great bulk of the water of the Thames passes between the island and the Surrey side. The height of the water at the point of intake is 28 ft. above ordnance datum. The East London is the only metropolitan company which takes water from the Thames above Sunbury lock. The intake is 20 ft. in width and 10 ft. in depth. It is guarded by a grating formed of iron bars, 1¼ in. square, placed anglewise. The spaces between the bars are about ⅞ in. in width. These bars form the only screen through which the water passes; there is no wire netting at the intake. From the point at which the water is taken from the Thames three brick culverts pass to the backwater which divides the island from the mainland. The water is conducted under the backwater by three 48 in. iron mains to the mainland. From the bank the water is conducted through three brick culverts into an oval well 18 ft. in length and 12 ft. in width. From the well two egg-shaped culverts pass to the engine wells.

Engine-house.—The engine-house is built of brick. The water is pumped by two single acting Bull engines with 54 in. cylinders, which work plunger pumps of which the diameters are 45 in. and the stroke 9 ft. Steam is generated by four Cornish boilers, which work at a pressure of forty pounds. The water is pumped to the reservoir at Hanworth, a distance of about two miles, through a 36 in. main, which passes along the main roads. At this station there is a stand-pipe 40 ft. in height. When the works were first started here the water was pumped to a cistern 12 ft. in diameter and 20 ft. in depth, which was placed in a water tower, and from this cistern the water flowed by gravitation to the reservoir at Hanworth. The present arrangement is that the water is pumped direct to Hanworth and a stand-pipe is used to equalise the pressure, acting as an air valve. A cottage for a caretaker is situated at this station.

Hanworth (See B on Map and Fig. 1).—The station at Hanworth is situated in the parish of Sunbury, on the borders of the parish of Hanworth. It is called the Hanworth Station by the East London Waterworks Company to distinguish it from the one on the banks of the river at Sunbury which has been just described. The station at Hanworth consists of a reservoir, filter beds, pumping arrangements, and a system of underground works used for collecting water from the sand.

Reservoir (see Fig. 1, R).—The reservoir is 775 ft. in length and 116 ft. in width. The bottom and sides of the reservoir are cemented and the sides lined with brick. The sides are not vertical, but slope slightly (1 to 4). The reservoir has an available capacity of 5,000,000 gallons. It is supplied from Sunbury with unfiltered Thames water, and the water passes from it to the filter-beds.

FIG. 1.



Hanworth station. R, Reservoir. F 1 to F 6, Filter beds. C R, Covered reservoir. E, Engine-house. H, Engineer's house. P', Perforated pipes for the collection of gravel water. *p p*, Perforated iron piles. *c c c*, Culvert. *e*, Engine-house for pump taking gravel water to C R.

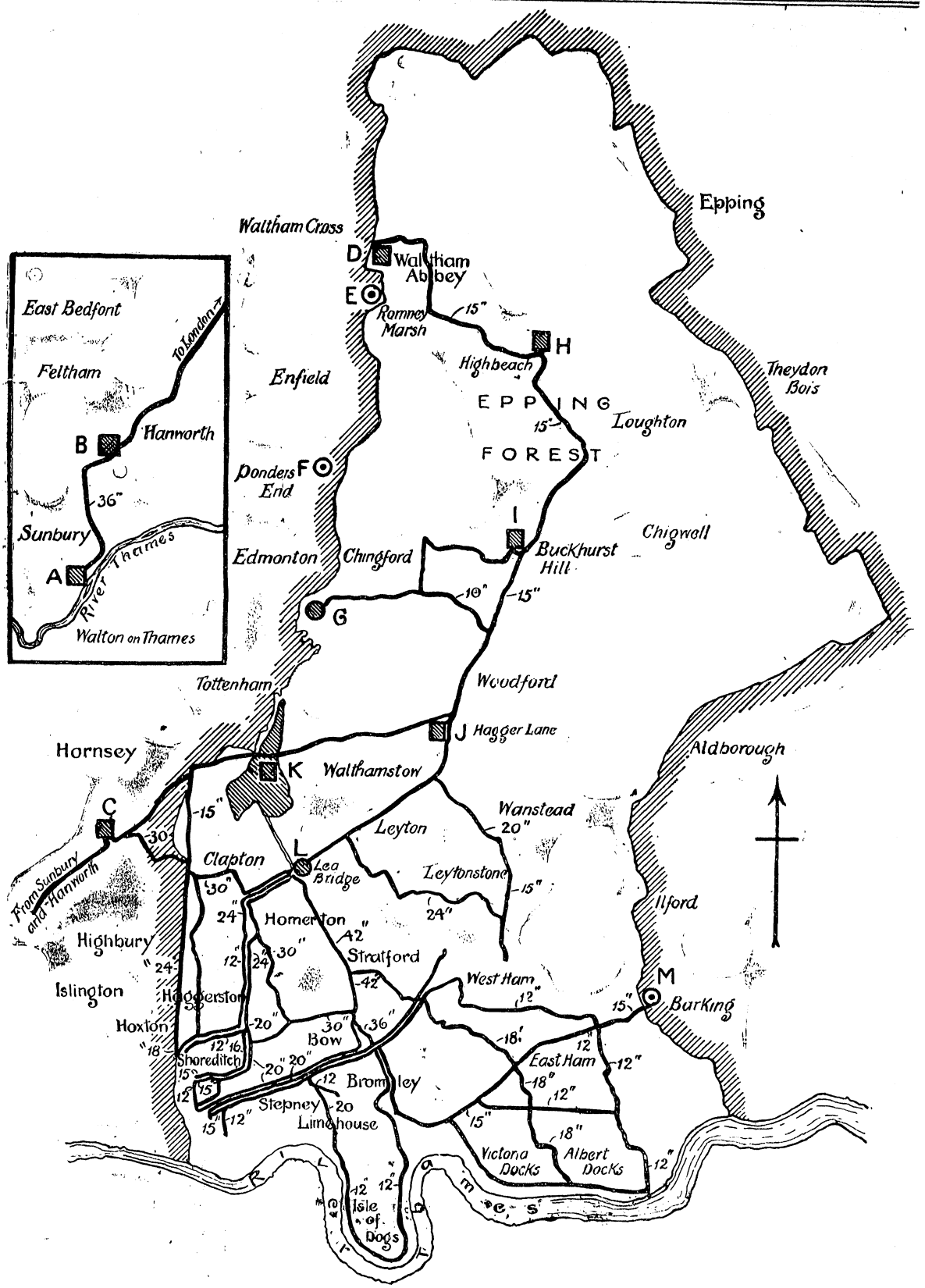
Filter beds (see Fig. 1, F 1 to F 6).—There are six filter beds, which have a total area of five acres. The sides are built of concrete and faced with brick. The composition of the filter beds is as follows. At the bottom a layer of 12 in. of large stones is placed, next a layer of 6 in. of hoggin—that is to say, small stones about the size of peas—above this is a layer of sand 2 ft. 3 in. in depth, when the filter bed is first made. When the sand is scraped off for cleansing purposes the thickness is gradually diminished until the layer of sand is about 1 ft. 9 in. in thickness. The floor of the filter bed slopes slightly towards the culvert, which is placed in the centre. The culvert is of circular form, 3 ft. in diameter, and has a row of perforated bricks level with the floor of the filter. Through these perforations the filtered water passes.

Cleansing filter beds.—As a rule, one filter bed is cleansed each week, so that on an average each filter bed in use is cleansed once in six weeks, or, to put it differently, a filter is allowed to work for about five weeks. During the early summer, however, it is necessary to cleanse the filters much more frequently. There is at this time always a great and rapid growth of weeds, which block the filters, and this makes it necessary that they should be cleansed at the end of a fortnight, or even at the end of a week. The sand is washed by a stream of water from the main at a pressure of about 10 ft. The water which has been used for washing the sand passes to a small pond on the outskirts of the property, where, after it has been allowed to stand in order to deposit its impurities by sedimentation, it passes into a neighbouring ditch.

Underground water.—The arrangements for the collection

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., and X. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, 24th, and May 1st, 1897, respectively.

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THE EAST LONDON WATERWORKS COMPANY.

The shaded outline with the northern bank of the river defines the area supplied by the Company. Wells are marked as shaded circles, reservoirs are marked as shaded squares. The dark lines show the course of the principal mains, the diameters being marked in inches. A, Sunbury, intake and pumping station. B, Hanworth, reservoirs, filter beds, pumping stations, and arrangements for collecting water from the gravel (see Fig. 1). C, Hornsey Wood, reservoir. D, Waltham Abbey, well and pumping station. G, Chingford, well and pumping station. H, High Beech, reservoir. I, Buckhurst Hill, reservoir. J, Hagger Lane, reservoir. K, Walthamstow, reservoir, well, and pumping station. L, Lea Bridge, well, pumping station, and filter beds. E, F, and M, three wells under construction.

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of underground water at Hanworth station differs from the arrangements which have been described as existing at the stations of the Chelsea and Southwark and Vauxhall Companies (see articles III. and V.). It may be best to go into some little detail as to the manner in which the underground water is collected, because, as far as we know, the arrangement here adopted does not exist elsewhere, or, at any rate, it was first carried out here, and was invented by the engineer of the East London Waterworks Company. It will be necessary for the sake of clearness to briefly describe the conditions of the ground here met with in order to explain how it is that the arrangements made are the best that could have been adopted. The story of the origin of the works is briefly as follows. When excavations were made at this station it was found that under 3 ft. of alluvial soil there was a layer of gravel about 18 ft. in thickness. The lower part of this gravel was full of water, which, indeed, gave a good deal of trouble when the original works were being carried out here. It seemed to the engineer of the company that it would be worth while to find out whether this water was of good quality for drinking. It proved to be of good quality, and it was therefore determined to collect it. The fact that the lower layers of gravel were filled with water would have caused a good deal of trouble in laying pipes in the ordinary way, because it would, of course have been necessary to keep the water pumped whilst the excavations were in progress. The impervious nature of the underlying London clay suggested the advisability of making use of this quality by making a culvert in it for the purpose of conducting the water from the overlying gravel to a central well. In order to carry out this idea the method adopted was as follows. A number of hollow iron piles with perforations in the sides were driven from the surface of the ground right down into the London clay, so that only about 2 ft. or so of the pile remained projecting above the ground, and a length of 38 ft. was under the ground. A number of these piles were driven in at regular intervals in straight lines in the direction of a well which had been already sunk (see Fig. 1, *p p p*). The well was then pumped dry and a culvert was dug in the London clay in the line of the piles, so that the lower part of the piles projected into the culvert (see Fig. 1, *c c c*). The condition of things which obtained then was that from the surface of the ground to the culvert hollow iron piles passed, and the lower parts of the piles which projected into the culvert were filled with London clay, which they had met with as they were driven down into the culvert—that is to say, the lower part of each pipe was plugged with a layer of London clay. This clay being removed from below the water was then able to flow from the saturated layer of gravel down into the culvert. The culvert led to a well in an engine-house (see Fig. 1, *e*.), from which it was afterwards pumped to the covered reservoir (Fig. 1, CR). By an arrangement of valves the water contained in each pile can be prevented from passing into the culvert below, and then after the water has been pumped out from the culvert its whole length can be explored. The perforated iron piles which collect the water from the gravel and conduct it to the culvert, which is situated in the clay beneath, were constructed for the purpose which they subserve. The arrangements are simple, ingenious, and carry out perfectly the intention for which they were made. There are altogether about twenty of these iron piles.

Small engine-house (see Fig. 1, *e*).—Another engine-house contains two compound surface condensing centrifugal engines of about 20 horse-power each. These are used for pumping the gravel water into the reservoir.

Covered reservoir (see Fig. 1, C R).—There is a reservoir covered with brick arches and capable of holding 2,500,000 gallons. Into this reservoir the filtered water gravitates and the water from the gravel beds is pumped, and from it the water is pumped to Finsbury-park.

Engine-house (see Fig. 1, E).—The water from the covered reservoir is pumped by three Cornish beam engines, having cylinders 84 in. in diameter and a stroke of 11 ft., working plunger pumps 36 in. in diameter, and having a stroke of 9 ft. The steam is generated by ten Cornish boilers, working at a pressure of 40 pounds. These engines pump filtered water and water from the gravel to the reservoir in Finsbury-park, a distance of about nineteen miles. The main through which the water passes is 36 in. in diameter.

(To be continued.)

THE BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

A CONVERSAZIONE was given by the members of this comparatively new but fast-growing society at Limmer's Hotel, Conduit-street, London, W., on April 28th. An exhibition of drugs, meteorological instruments, and photographs of balneo-therapeutical appliances was greatly appreciated by those present. The attractions of the evening were enhanced by the music supplied by the Blue Zouave Ladies' Orchestra.

Previously to the reception by the President (Mr. Andrew S. Myrtle, M.D. Edin., J.P., of Harrogate), Sir DOUGLAS POWELL delivered an interesting address, which took the form of an extremely entertaining *résumé* of the progress of climato- and balneo-therapeutics during the past few years. Speaking of the origin of the society he said he believed that it was founded in response to a wish or feeling which originated from a Committee of the Royal Medical and Chirurgical Society in 1889, under the presidency of Sir Edward Sieveking. The efforts of that committee were very successful in bringing forward most valuable information with respect to the climatic and balneo-therapeutic resources of the British Isles. He congratulated the British Balneological and Climatological Society upon its growth and upon the fact that its roll contained the names of some of the best-known members of the profession. It was an additional matter for congratulation, he thought, that the society numbered among its members, not only those who were strictly concerned with climato- or balneo-therapeutic work, but also those who, like himself, had no special knowledge of climate or baths except such as was derived from experience or research. Sir Douglas Powell referred to the importance of making a correct diagnosis of a case before it was sent to a spa, although it might often happen that a case was sent to a bath in a state of what he called suspended or tentative diagnosis, with a view to its being carefully watched for a time under treatment at the bath. Speaking of the exercise treatment of cardiac diseases he said that discredit had been brought upon the method by reason of many cases being treated too severely; many cases sent to baths were not in a condition for such treatment. The Schott treatment, too, had been of immense value in a small minority of carefully selected cases, but even this treatment from the very publicity which it had acquired was, he ventured to say, rapidly losing ground. He hoped it would be one of the functions of this society to have a controlling influence in this matter. Whilst the movement and bath treatment of cardiac disease had been carefully organised of late years, insufficient attention, he thought, had been given to the rest treatment in that and other diseases. At all events, such cases as anæmia, cardiac affections in the early and ingravescent stages, and pulmonary affections in the acute and ingravescent cases benefit by a very rigid degree of rest treatment. Much might be done, he said, to improve our health resorts—our southern ones more particularly—with regard to this treatment. What was wanted was more "sun-traps," more balconies with glass screens which would not obstruct the light, but which would protect the patients from winds, and open spaces where the patients might be exposed to the sunshine and sheltered from the inclemency of the weather. He instanced the Madeira-walk at Brighton as a most valuable example that might be followed by other health resorts. Frequently placed sheltered rests were also required. In these sort of things we were outdone by foreign health resorts, which were not to be compared with our own at certain times of the year.

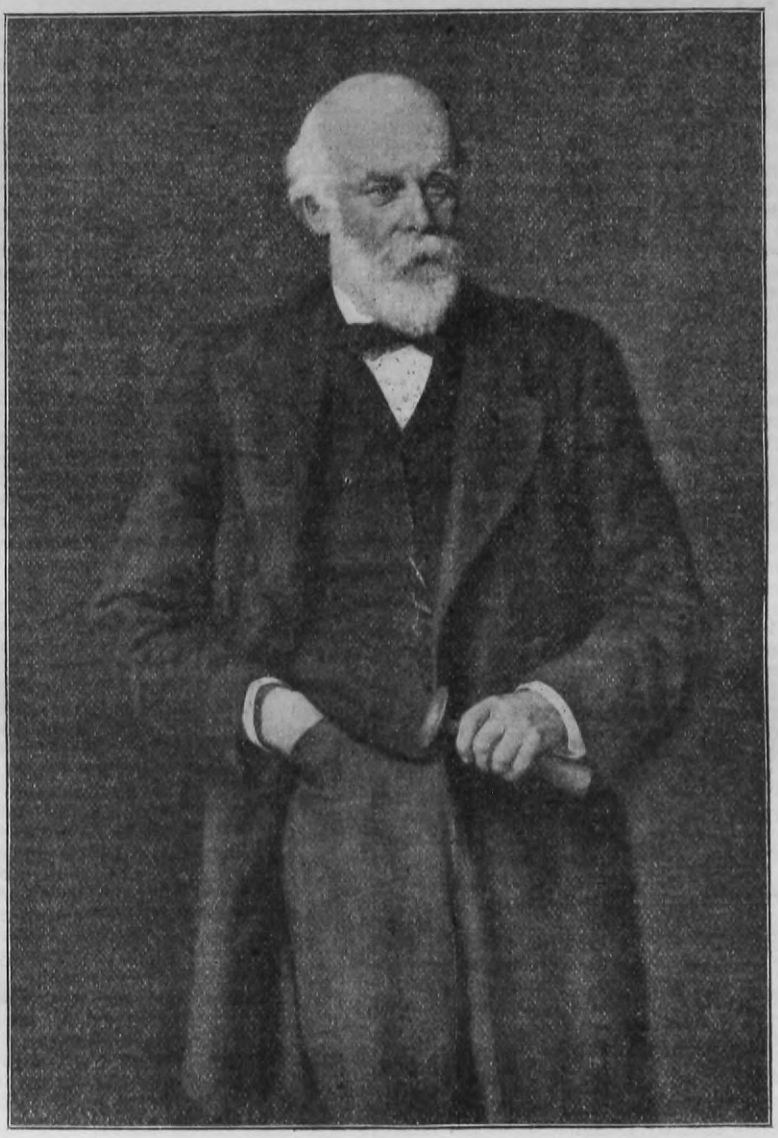
H.R.H. THE DUCHESS OF ALBANY will open the new Convalescent Home of the National Hospital for the Paralysed and Epileptic (Albany Memorial), Queen-square, on Wednesday, June 16th. The home is at East Finchley, and has been provided for a class of patients inadmissible to every other convalescent institution in the kingdom. Only a small balance of the cost remains to be collected, and the board hope to be privileged to inform Her Royal Highness that the home is opened free from debt.

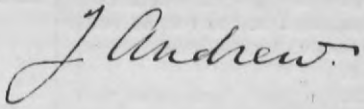
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Obituary.

JAMES ANDREW, M.D. OXON., F.R.C.P. LOND.

ON April 21st, at Tavistock, James Andrew entered into a well-earned rest, aged sixty-seven years. He was born at Whitby, of which place his father was for thirty-four years perpetual curate. He was the youngest of three sons, and had one sister. His early education was partly at the hands of his father and partly from the rector of Glaisdale, the Rev. B Richardson; thence he went to Sedbergh, and thence he matriculated at Worcester College, Oxford, taking his M.B. degree in 1860, and proceeding to that of Doctor in 1863 He was Fellow and Tutor of Wadham College, and was about to proceed to Paris when an opening presenting itself at St. Bartholomew's Hospital he applied for and obtained the appointment of Demonstrator of Morbid Anatomy. This post he held until January, 1867. From 1861 to 1865 he was a warden of the college at the hospital. He was elected assistant physician in 1864, and joint lecturer on medicine the same year, which post he held until 1890. In 1869 he was made full physician, an office he continued to hold until 1893, when he was appointed consulting physician. On his resignation as physician he was presented by his friends with his portrait and among other things a tricycle. In 1890 he suffered very severely from influenza, and although he recovered to a certain extent his health was never the same, and in 1895 he began to fail very fast, eventually dying, as stated above, at Tavistock. On April 24th he was buried at Peter Tavy.





James Andrew was a man not much known out of the ranks of his immediate friends and acquaintances, for he was of a very shy and retiring disposition; but those who had the honour of his friendship—and it was a great honour—knew what sterling worth there was in the man and what a lovable character his was. He was an admirable specimen of that now almost extinct species, the old-fashioned Oxford man, a good scholar and a man of thoroughly cultured mind. He was always ready to assist those in need with either advice or money, and took many a long journey to bring his skill to bear upon cases without getting anything like a fair remuneration. His lectures were instructive, full of sound sense and really helpful, though not perhaps models of oratory. He wrote but little, his chief works being his thesis on the Relation of Anasarca to Renal Disease in Acute Albuminuria, the Diagnosis of Systolic Murmurs at the Heart's Apex, a paper on Disease of the Mitral Valve, and his Lumleian Lectures on the Etiology of Phthisis. Though old-fashioned, he was an absolutely sound and excellent physician, and his kindness and thoughtfulness for his hospital patients was a thing never to be forgotten by those who saw them. His treatment was in the best sense scientific, and his favourite answer to the question of students, "What is the best book on Medicine?" was "Foster's Physiology" — an answer which showed the cast of his mind, and was well illustrated by his Harveian Oration delivered in 1890. He was a keen observer, an ardent dialectician, very fond of the Socratic method of answering one question by another, and never ashamed to own that he had been wrong. No trouble was too great for him to take over a severe case, and he never spared himself in explaining matters to inquirers. For the following more personal reminiscences we are indebted to one who served under him at the hospital and knew him well.

"James Andrew was one of the most helpful and considerate men who ever breathed and as good a physician as London could produce. To all Oxford men his loss will be irreparable. All who had the privilege of being taught by him at those memorable evening meetings will remember

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with affection the little bowed figure who met you at the door of 22, Harley-street, and who dived down the kitchen stairs with a quick movement irresistibly reminiscent of a rabbit, his old briar pipe, and his keen incisive talk upon medicine. No one could put things more clearly or make a subject more interesting, and no one laboured more earnestly to bring down his own intellect to the level of your comparatively dull one. Neither did he forget those whom he had known when they went out into the world, but always had a genial greeting and a kindly query as to their position and prospects. His great amusement was fishing, and he was a thoroughly good sportsman. These details may appear very trivial, but they are very characteristic of the man, and will serve to remind those, if any reminder is needed, who knew him of a very lovable personality."

The accompanying portrait we reproduce by permission of the authorities of St. Bartholomew's Hospital from the one which hangs in the great hall. It is an admirable likeness of the man and his little personal attributes. The old frock coat, with the pin stuck in the lapel and used for testing sensation and the odd-shaped stethoscope, are all part of his personality. And so we close this notice, imperfect at the best, of one who never attained the position he was worthy of, but whose memory will ever live in the minds of those who knew and were privileged to work with him in even the humblest capacity.

Dr. Andrew was married in 1867 to Isabella, daughter of Henry Simpson of Bagdale, who survives him, but he has left no children.

DEATHS OF EMINENT FOREIGN MEDICAL MEN. — The deaths of the following eminent medical men are announced:—Dr. Andreas Anagnostakis, who is described as the Nestor of Greek Ophthalmologists, at the age of seventy-one years. He was born in Crete, but his parents removed to Greece while he was a child, and he studied medicine in Athens and practised in a provincial town. In 1851 he obtained a scholarship from Queen Amalie, by means of which he was enabled to study in Paris and in Germany for five years. After his return he was appointed Professor of Ophthalmology in the University of Athens and inaugurated there an important school in which the teaching of Helmholtz, von Graefe, Donders, and others has been consistently carried out. Dr. Anagnostakis was for several years Rector of the University, where he was held in great respect.—Professor Gustave Braun, a well-known Moscow ophthalmic surgeon.—Dr. G. Limoncelli, *privat-docent* of Mental Diseases in the University of Naples.—Dr. Margitot, Member of the Paris Academy of Medicine.—Dr. Jaime Pi y Suñer, Professor of General Pathology in the Barcelona School of Medicine.—Dr. H. Engel, formerly Professor of Nervous Diseases in the Philadelphia Medico-Chirurgical College.—Dr. S. G. Moses, formerly Professor of Midwifery and Gynæcology in the Missouri Medical College, St. Louis.

ANNUAL REPORT OF THE SANITARY COMMISSIONER OF THE GOVERNMENT OF INDIA FOR 1895.

[CONCLUDING NOTICE.[1]]

IN our former notice of this report we referred to the changes which had been introduced at the suggestion and instigation of the Army Sanitary Commission, to the interesting data contrasting the past and present mortality of European soldiers in India contained in the volume under review, and to some of the epidemic diseases which had prevailed among the troops in 1895.

We learn that the admisssion and death-rates from dysentery were greatly, and those from diarrhœa somewhat, increased in that year, owing for the most part to service in the Chitral expedition. The highest percentage of admissions for abscess of the liver was on the Burma coast, but the highest percentage of deaths from hepatic abscess to total deaths was in Southern India. Speaking generally, groups of stations that had a high admission ratio from dysentery, had also a high admission rate from abscess of the liver, but they do not correspond very closely; 27 per cent., or 42 cases out of 154, were returned as associated with dysentery. Of the 51 fatal cases described with sufficient minuteness, we are told that 21 had a single abscess, and 30 multiple abscesses. There were 7 of the 21 single abscesses associated with dysentery or intestinal ulceration, and 14 not so associated; the thirty multiple abscesses, on the other hand, were associated with dysentery or intestinal ulceration in 21 cases, or 70 per cent., and not so associated in 9 cases, or 30 per cent. These points have an obviously important bearing on medical diagnosis and prognosis in regard to surgical procedure. The question of the causal importance of the amœba coli is still under discussion; but, on the whole, the majority of observers are convinced that there is an amœbic abscess of the liver as there is an amœbic dysentery. The brief remarks on this subject at page 45 of the report are worth reading. A table follows showing that the mortality from abscess of the liver in 1895 was more than seventy times greater among European than among native soldiers, while on the other hand, the admission ratio from dysentery among European soldiers was to that of the native soldiers as 1:1·4. This matter was more fully gone into in the report for 1894. It may be incidentally remarked that, while no cases of hepatic abscess following enteric fever were returned in 1895, there were several cases consequent on apparently non-dysenteric ulceration.

The next subject is one which has of late occupied a good deal of public attention; and no wonder, for the figures may be said to be, without exaggeration, appalling. The admission-rate for India for venereal disease was 522·3 in 1895, against 511·4 in the previous year, and the number of men constantly sick in hospital from venereal disease was equal to over three regiments. As youthful and recently arrived men have become more common in the army venereal disease and enteric fever have, not unnaturally we are told, increased in frequency of occurrence. From a tabular statement in the report we gather that there has been a more or less continuous rise in venereal disease and constitutional syphilis since 1885. But we need not stay to consider the subject further on this occasion, the statistical evidence and the proposed measures in regard to it having already given rise, as everyone knows, to much discussion. We may remark, however, that we do not attach so much importance as some do to ablution as a preventive measure. Practically, it is most difficult to ensure its being so promptly carried out as to be of use. Daily experience with solutions of cocaine, &c., in ophthalmic practice shows that absorption is very rapid. Turning to the vital statistics of officers we find that the death-rate for those of the British army was 11·10, and that for the Indian army 9·62, per 1000 respectively. Enteric fever, the Sanitary Commissioner remarks, caused more deaths among the British than among the Indian officers, apparently because the latter have to serve first with British regiments, and it is known that youthful and newly arrived men are more liable to take the disease than others. The invaliding rate, as might be expected, is much higher for officers than for men. The admission and death-rates from enteric fever among officers do not differ much from the corresponding ratio among the men, but the general admission and death-rates are lower among the former.

Passing on to that section of the report dealing with the native army of India we find several points of interest. Enteric fever is a well-known cause of great sickness and mortality among European troops in India, and the following table brings out the striking difference between the British and native armies and the gaol population of India in this respect.

—	1882-91.		1895.	
	Admissions.	Deaths.	Admissions.	Deaths.
European troops	14·7	4·13	26·3	6·72
Native troops	0·3	0·09	0·2	0·07
Prisoners	0·2	0·10	0·4	0·13

We have previously called attention to tables that have appeared in former reports to the same effect. About the fact, explain it how we may, there cannot be any doubt, for the figures are substantially repeated from year to year.

[1] The first notice appeared in THE LANCET, April 24th, 1897.

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Among native prisoners nearly every fatal case of disease is subjected to post-mortem examination, although these rarely take place in the case of native soldiers. Moreover, the fever mortality in the European army is not the same in amount, which, as the Sanitary Commissioner observes, indicates that the difference is not a mere matter of diagnosis. Taking the percentages in deaths we find that 44·0 and 0·6 represent the mortality from enteric fever among European and native troops respectively. The amount of venereal disease among native troops is relatively small and remains pretty stationary. Native soldiers are usually married; they are abstainers from alcohol, have less pay than European soldiers, and remit much of it to their families; they belong to the country and do not commonly consort with the prostitute class, and would lose caste by doing so; and there has been no change in the native army corresponding to the introduction of the short service system in the British army. With regard to guinea-worm there are some interesting facts respecting the distribution of the parasite recorded in the report. The number of cases during the year amounted to 516, against 499 in 1894. By far the largest number of admissions occurred in South-Eastern Rajputana, Central India, and Gujarat. Of the total number of cases, 9 per cent. declared themselves at Kherwara and 6 per cent. at Sirdarpore. There were only 3 cases altogether in the whole European army. This great contrast is stated to be probably due to the different customs of Europeans and natives as regards bathing and water drinking.

It would be extremely difficult to discuss the sections dealing with the gaol population and the history of the chief diseases among the general population in the limits of space at our disposal; and those of our readers interested in the subject, and in the history of cholera during the year under review, must turn to the report for themselves, in which the results of the various inquiries, and of the bacteriological investigations that were instituted by Mr. Hankin and others are given. Section X. deals with a number of subjects including a summary of the facts connected with the Red Sea pilgrim traffic and the outbreak of cholera at Camaran, the researches conducted in the biological laboratory attached to the office of the Sanitary Commissioner, and other matters.

In an appendix to the Report the new rules are published regarding the measures to be adopted on the outbreak of cholera amongst troops in India, which are the outcome of an inquiry into the subject by a committee specially appointed for the purpose. The revised rules received the sanction of the Government of India on Sept. 10th, 1896.

ADJUSTABLE X RAY FOCUS TUBES.

MR. A. A. C. SWINTON writes:—As all who have had occasion to use x rays for practical purposes are aware, the penetrative value of the x rays produced by any given Crookes's tube depends very largely upon the exact degree to which the tube has been exhausted. Further, as is well known, a tube originally exhausted to any particular vacuum is found in practice to alter its degree of vacuum with age and with use. With tubes of the Jackson focus type that have been well exhausted in the first instance, the vacuum usually increases the more the tube is used, particularly if sufficient power is employed to heat to redness the platinum anti-cathode. Indeed, it is not unusual for this increase of vacuum to be such that it is eventually found impossible to get any discharge to pass through the tube at all. Various arrangements have from time to time been suggested and tried for the purpose of regulating the vacuum in tubes. One plan is to keep the tube permanently attached to the mercury pump, so that a little air can be pumped out or a little let in whenever it is found necessary. Another arrangement is to place some material, as, for instance, caustic potash, which is capable of absorbing air and giving it out again when warmed, in a small pocket or annex to the tube, which can be heated by means of a spirit lamp and the vacuum reduced as occasion requires. This, however, as also the ordinary plan of heating the whole tube by means of a spirit lamp or Bunsen burner, so as to drive off into the interior of the bulb the gases condensed upon the glass, are at best only makeshift expedients, which, though capable of good effect in the hands of skilled experimenters, are not permanent in their results or adjustable with sufficient accuracy to be really satisfactory. Further, exceedingly minute alterations in vacuum will make all the difference between satisfactory and unsatisfactory results in some of the more difficult cases to which x rays are now applied. Under these circumstances I have devoted considerable attention to devising a method whereby the penetrative value of the x rays produced by a focus tube could be easily varied without alteration to the vacuum, and whereby, further, the penetrative value of the rays could be maintained constant at any desired degree, in spite of the uncontrollable variations in the vacuum that are found to occur in practice. The penetrative value of the rays for any given degree of vacuum depends, among other things, upon the area of the cathode disc and upon the lineal distance between the cathode and anti-cathode. Upon these principles I have designed two separate forms of adjustable focus tubes, Figs. 1 and 2 being two views of one of these tubes and Fig. 3 a view of the other.

In the form of tube shown in Figs. 1 and 2 advantage is taken of the difference of effect produced by employing

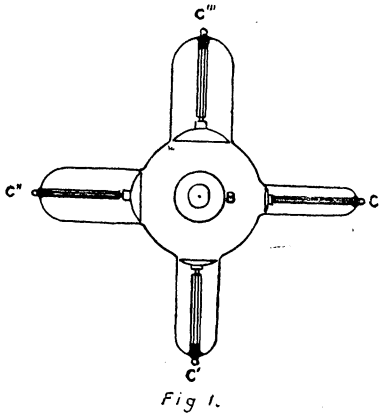
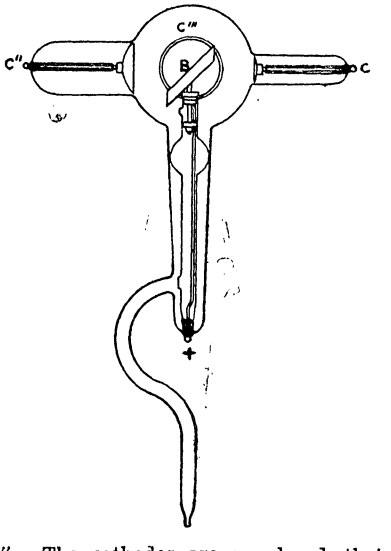


Fig 1.

cathodes of various sizes. As will be seen from the illustration, the tube is provided with four concave aluminium cathodes, C, C′, C″, C‴, all of the same radius of curvature, namely, 0·75 inch, but of four different diameters, varying from 0·5 inch in the case of C, to 1·125 inches in the

Fig 2.



case of C‴. The cathodes are so placed that they all focus on a point in the centre of the bulb of the tube, and the inclined anti-cathode disc B is mounted upon a small steel spindle, turning in aluminium sockets, so that the anti-cathode can be easily rotated by tapping the tube, so as to face any one of the four cathodes that it is desired

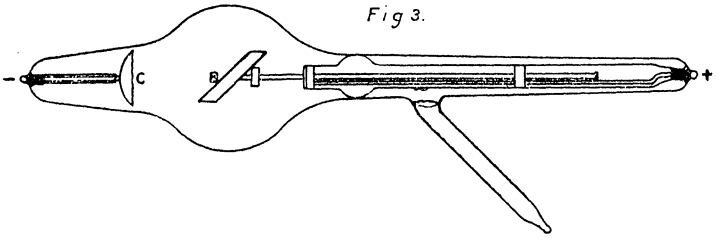
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to work with. The anti-cathode disc B, made of aluminium, is of considerable mass, being an oblique section about 0·25 inch in thickness, cut from an aluminium rod one inch in diameter. The cathode rays are not received direct upon the aluminium, but upon the surface of a disc of platinum about 0·6 inch in diameter, and about 0·025 in thickness, tightly wedged and riveted into a shallow circular depression turned out of the face of the aluminium block. The reason for the particular shape of the aluminium portion of the anti-cathode is to ensure its being balanced in all positions of the tube, so that it should have no tendency to rotate of itself. The object of the general arrangement is to prevent the platinum from attaining an excessive temperature, even when great electrical power is employed, this resulting from the considerable radiating surface of the aluminium, and its considerable mass requiring a long time to heat it up to any high degree. This arrangement makes the tubes take considerably longer to exhaust in the first instance, but renders them much more permanent, as not only is there no danger of melting the platinum, as frequently occurs in the ordinary form of anti-cathode, but also the difficulty experienced with the red-hot platinum occluding the residual gas, and thus increasing the vacuum, is largely done away with, while, in addition, the platinum having only one surface exposed and never getting very hot, the tubes do not blacken so quickly.

As will be seen from the illustration, the anti-cathode is supported in a long double glass tube, through which passes an aluminium connexion to the anode terminal. By this method great rigidity and accuracy are attainable and the anode and cathode terminals are kept well apart. During the process of exhaustion it is necessary to make each of the cathodes operative in turn so as to expel the residual gas, and finally the tube is exhausted to the necessary vacuum to produce x rays of medium penetrative value when one of the intermediate sized cathodes is in use. The tube is then sealed off, and afterwards the penetrative value of the rays can be varied at will by turning round the anti-cathode so as to face any one of the cathodes and making that cathode alone operative. The small cathode gives rays of the highest penetration and the large cathode rays of the lowest penetration. With cathodes of the dimensions given the range is very considerable. It can be diminished or increased by making the cathodes more nearly of one size or the reverse. In place of the rotating anti-cathode a fixed one may be used of four-sided pyramidical form with a platinum disc let in on each face opposite to each cathode. The anti-cathode terminal need not be used as anode, as when one disc is cathode the immediately opposite disc may be employed as anode.

The other tube, by which the penetrative value of the rays can be altered by quite a different method, is shown in Fig. 3. In this case the tube is fitted with but

Fig 3.



a single cathode C, and the anti-cathode B, which is of similar construction to that used in the other tube, is carried upon a steel rod, which slides in two aluminium blocks mounted in a glass tube and connected to the anode terminal. By slightly inclining and shaking the tube the anti-cathode can be made to slide along in the bulb so as to alter the distance between the cathode and the centre of the anti-cathode from about half an inch to three inches. Stops are provided upon the sliding steel rod to prevent its travelling too far in either direction. With a tube of this description it is found that the shorter the distance between the cathode and anti-cathode the higher is the penetrative value of the x rays, and *vice versâ;* so that by simply altering the position of the anti-cathode it is possible both to compensate for variations in vacuum, and also, within limits, to produce x rays of any desired penetrative value. I am indebted to the assistance of Mr. J. C. M. Stanton and Mr. H. L. Tyson Wolff, who made the tubes illustrated, as also all the earlier tubes with which the original experiments were carried out.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary meeting of the Comitia of the College was held on April 29th, Dr. WILKS, President, being in the chair.

The following gentlemen were admitted to the Membership of the College:—William Bain, M.D. Durh., F.R.C.S. Edin.; T. Hillier Chittenden, M.D. Durh.; Alfred Eddowes, M.D. Edin.; and E. S. Pasmore, M.D. Lond. The Licence of the College was granted to 108 gentlemen.

A communication was read from the secretary of the Royal College of Surgeons of England reporting certain proceedings of the Council of the College on April 8th.

The following Members of the College were elected Fellows:—J. A. Coutts, M.B. Camb.; J. Galloway, M.D. Aberd.; W. E. Wynter, M.D. Lond.; W. S. Colman, M.D. Lond.; A. F. Voelcker, M.D. Lond.; James Taylor, M.D. Edin.; G. I. Schorstein, M.B. Oxon.; E. H. Starling, M.D. Lond.; J. S. Risien Russell, M.D. Edin.; A. A. Kanthack, M.D. Lond.; J. R. Bradford, M.D. Lond.

The quarterly reports were received from the Finance Committee and from the Examiners for the College Licence.

A list of books presented to the library during the past quarter was received.

The names of Dr. Theodore Williams and Dr. Hood were added to the Finance Committee.

THE GRECO-TURKISH WAR.

THE latest news from Athens announces the fact that the Greeks are determined to continue the war. With the purely political or military aspects of the campaign we have, of course, but little concern. It is in the sanitary, medical, and ambulance transport arrangements of the belligerent forces that we are mainly interested, and as to these little or no reliable information has reached this country. The readers of the telegraphic reports from the seat of war and from Turkish and Greek sources are perplexed by their different and contradictory statements, but nothing that has occurred during the last few days seems likely to affect the real military situation. The fighting at Velestino may have been altogether, and for the time, in favour of the Greeks, but it does not essentially alter the position or annul the successful and highly important results which the Turkish troops under Edhem Pasha's command have already attained elsewhere. Turkish reinforcements are arriving, and unless there are any political reasons for Edhem Pasha's present inaction, it may be, and probably is the case, that the apparent delay on the part of the Turks is attributable to strategical reasons and to the fact that the Turkish plan of the campaign is not yet ripe, and the arrangements for any supreme or final effort on their part are not completed. Be this as it may, the number of killed and wounded in the engagements that have taken place does not seem to have been great when the strength of the belligerent armies is taken into account. As far as the scanty intelligence that has reached this country goes, the Turkish hospital service seems to be good; at any rate, nothing has been said to the contrary. The fortitude exhibited by the wounded Turks and the rapidity of their recovery have been remarked upon. The hospitals are stated to be well equipped and provided. As far as the Greeks are concerned, our readers have probably noticed that occasional references have been made by some of the war correspondents to the non-employment of chloroform and anæsthetics in their hospitals. Whether this be due to the fact that they have an insufficient supply of these among their hospital stores, or, what is most probably the case, that these agents are not generally used in minor cases of surgery, but reserved for all the major or more severe operations, we cannot say; but the accounts speak of the quiet fortitude and cheerfulness of the patients in the Greek military

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hospitals, and references are made to the benevolent services of the nursing staff. We hear but little of the services of the Red Cross Society, although it is certain that its members must have been actively engaged in administering to the aid of the sick and wounded. A number of English and French surgeons from Constantinople are stated to be present with the Turkish force at Larissa. We suspect that, owing to the hilly and difficult nature of the country, there must have been unusual difficulty in getting field hospitals, or sections of field hospitals, well to the front in the fighting that has taken place hitherto.

BUBONIC PLAGUE IN INDIA.

THE Anglo-Indian papers by the last mail are still very full of this subject, but their general purport is favourable. The worst is over and the epidemic is still declining.

The Secretary of State for India has received the following telegram from the Governor of Bombay on the subject of the plague:—

"Deaths from all causes in Bombay city for week ended April 30th, 683; reported plague deaths, 169. The population is returning continuously and is now variously estimated at from 600,000 to 700,000. All persons coming into Bombay are now medically examined. In Poona city deaths from all causes during the week ended April 30th, 78; reported plague deaths, 45. Further inquiry confirms correctness of figures. Satisfactory result of Poona city operations shown by return of plague cases. They were: for week ended March 26th, 319; April 2nd, 238; April 9th, 235; April 16th, 159; April 23rd, 94; April 30th, 60."

At an adjourned meeting of the Bombay Medical and Physical Society, held on March 19th last, the papers read before the society on the subject of the plague on March 5th were discussed. A large diagrammatic chart has been prepared by Dr. Weir showing the progressive development of the epidemic, and the close relation between the total mortality and the mortality from plague, and the state of the barometer and dew-point during the prevalence of the disease.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6987 births and 3854 deaths were registered during the week ending May 1st. The annual rate of mortality in these towns, which had been 17·9 and 18·8 per 1000 in the two preceding weeks, declined again last week to 18·3. In London the rate was 16·8 per 1000, while it averaged 19·3 in the thirty-two provincial towns. The lowest rates in these towns were 9·9 in West Ham, 12·5 in Brighton, 12·8 in Plymouth, and 12·9 in Croydon; the highest rates were 25·2 in Manchester, 27·8 in Blackburn, 28·3 in Bolton, and 28·9 in Salford. The 3854 deaths included 351 which were referred to the principal zymotic diseases, against 334 and 367 in the two preceding weeks; of these, 110 resulted from measles, 104 from whooping-cough, 55 from diphtheria, 32 from scarlet fever, 31 from diarrhœa, and 19 from "fever" (principally enteric). No fatal case of any of these diseases occurred last week in Brighton or in Halifax; in the other towns they caused the lowest death-rates in Sunderland, Swansea, Derby, and Huddersfield, and the highest rates in Manchester, Burnley, Salford, and Bolton. The greatest mortality from measles occurred in Birkenhead, Liverpool, Bolton, Manchester, Salford, and Burnley; and from whooping-cough in Manchester, Burnley, and Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 55 deaths from diphtheria included 40 in London, and 2 each in West Ham, Birmingham, Sheffield, and Hull. No fatal case of small-pox was registered in any of the thirty-three large towns. There were 12 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 1st inst., against 16, 11, and 7 at the end of the three preceding weeks; 6 new cases were admitted during the week, against 1 and 0 in the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2380, against 2449, 2406, and 2442 on the three preceding Saturdays; 223 new cases were admitted during the week, against 234, 216, and 269 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 273 and 289 in the two preceding weeks, declined again to 273 last week, and were 91 below the corrected average. The causes of 43, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Leicester, Nottingham, Bradford, Leeds, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Wolverhampton, Norwich, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·3 and 22·6 per 1000 in the two preceding weeks, declined again to 22·0 during the week ending May 1st, but exceeded by 3·7 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·9 in Dundee and 18·8 in Aberdeen to 25·6 in Perth and 30·1 in Edinburgh. The 655 deaths in these towns included 52 which were referred to measles, 45 to whooping-cough, 15 to diarrhœa, 6 to "fever," 6 to diphtheria, and 3 to scarlet fever. In all, 127 deaths resulted from these principal zymotic diseases, against 107 and 102 in the two preceding weeks. These 127 deaths were equal to an annual rate of 4·3 per 1000, which was 2·6 per 1000 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 39 in each of the two preceding weeks, rose to 52 last week, and included 35 in Edinburgh and 12 in Glasgow. The deaths from whooping-cough, which had increased from 38 to 41 in the three preceding weeks, further rose to 45 last week, of which 24 occurred in Glasgow and 17 in Edinburgh. The 6 fatal cases of diphtheria exceeded by 4 the number in the preceding week, and included 3 in Glasgow. The 6 deaths referred to different forms of "fever" were all recorded in Glasgow, and of the 3 fatal cases of scarlet fever 2 occurred in Edinburgh. The deaths from diseases of the respiratory organs in these towns, which had been 154 and 165 in the two preceding weeks, declined again last week to 128, but slightly exceeded the number in the corresponding period of last year. The causes of 53, or more than 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·2 and 34·6 per 1000 in the two preceding weeks, declined again to 29·5 during the week ending May 1st. During the past four weeks of the current quarter the death-rate in the city has averaged 32·1 per 1000, the rate during the same period being 17·1 in London and 28·0 in Edinburgh. The 198 deaths registered in Dublin during the week under notice showed a decline of 34 from the number in the preceding week, and included 36 which were referred to the principal zymotic diseases, against 36 and 41 in the two preceding weeks; of these, 16 resulted from measles, 13 from whooping-cough, 3 from "fever," 2 from diphtheria, 2 from diarrhœa, and not one either from small-pox or scarlet fever. These 36 deaths were equal to an annual rate of 5·4 per 1000, the zymotic death-rate during the same period being 1·5 in London and 10·5 in Edinburgh. The fatal cases of measles, which had been 15 and 19 in the two preceding weeks, declined again to 16 last week. The deaths referred to whooping-cough, which had been 14 in each of the two preceding weeks, were 13 last week. The mortality from diphtheria and from "fever" slightly exceeded that recorded in the preceding week. The 198 deaths in Dublin last week included 33 of infants under one year of age and 34 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers recorded in the preceding week. Nine inquest cases and 9 deaths from violence were registered; and 77, or more than a third, of the deaths occurred in public institutions. The

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causes of 15, or nearly 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR F. A. HARRIS and Surgeon-Captain C. W. Reilly have joined at Woolwich.

The under-mentioned Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels:—Oswald G. Wood, vice E. J. Fairland, retired; John Martin, vice T. J. P. Holmes, retired. The under-mentioned Surgeon-Captains to be Surgeon-Majors:—William E. Berryman and Sidney E. Duncan. Surgeon-Captain Harry E. B. Porter resigns his commission.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major R. Ross (Madras) has made over, and Brigade-Surgeon-Lieutenant-Colonel A. F. Dobson (Madras) received charge of, the office of the Residency Surgeon at Bangalore. The services of the under-mentioned officers are placed temporarily at the disposal of the Government of Madras for employment on plague duty:—Surgeon-Lieutenant Illington, Surgeon-Lieutenant Browne, and Surgeon-Major Waddell. The services of the under-mentioned officers are placed temporarily at the disposal of the Government of Bombay for employment on plague duty:—Surgeon-Lieutenant-Colonel Hamilton, Surgeon-Major Routh, A.M.S., Surgeon-Major Deane, A.M.S., Surgeon-Captain Jones, A.M.S., Surgeon-Lieutenant Fleury, A.M.S., Surgeon-Lieutenant King, Surgeon-Captain Jackson, A.M.S., Surgeon-Lieutenant James, and Surgeon-Lieutenant Dee.

NAVAL MEDICAL SERVICE.

Deputy-Inspector-General of Hospitals and Fleets Henry Macdonnell has been promoted to the rank of Inspector-General of Hospitals and Fleets, and Fleet-Surgeon Robert Grant has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets. Fleet-Surgeon Kelly Conway has been placed on the Retired List, with permission to assume the rank of Deputy-Inspector-General of Hospitals and Fleets.

The following appointments are announced:—Staff-Surgeons: Samuel W. Vasey to the *Barfleur*, and James C. F. Whicher to the *Caledonia*. Surgeon: Edward Cooper to the *Victor*, additional.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain S. H. Moore to be Surgeon-Major.

VOLUNTEER CORPS.

Artillery: 1st Essex (Eastern Division, Royal Artillery): Francis Augustus Brooks, M.D., to be Surgeon-Lieutenant. *Rifle:* 3rd Volunteer Battalion the South Wales Borderers: Surgeon-Captain J. W. Davies resigns his commission. 1st Volunteer Battalion the Royal Sussex Regiment: Charles Burnett Scott, M.D., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Royal Sussex Regiment: Surgeon-Lieutenant G. L. L. Hawken resigns his commission; George Black, M.B., to be Surgeon-Lieutenant.

THE HEALTH OF EUROPEAN TROOPS IN INDIA.

Lord George Hamilton's despatch may be fairly regarded as proposing very moderate remedial measures for the consideration of the Government of India. The Anglo-Indian papers appear to consider that these do not go far enough to meet the requirements of the case; whereas, on the other hand, Mr. Walter S. B. M'Laren, the chairman of the British Committee of the Federation for the Abolition of the State Regulation of Vice, urges the Secretary of State for India to withdraw his despatch and substitute for it another of which his committee can approve. We may, therefore, infer that the Secretary of State has been studiously moderate in the expression of his views on this difficult subject. The committee make a great point of the examination of women, to which they are strongly opposed. It is, no doubt, impossible to tell whether a woman is diseased or not without examination, and we fail to see the force of the objection to it in the case of a woman pursuing the occupation in question, where reasonable grounds exist for the belief that she is diseased and the examination is conducted by one of her own sex. As regards what is urged about the discouragement of vice and placing the soldier in an environment tending to develop his best physical, moral, intellectual, and religious faculties, we can only say that high-sounding generalisations of this kind are of too vague and visionary a character to form a basis of practical action. The aim of the authorities in India has practically been in this direction, and there is no reason whatever against efforts being made to remove temptations and discourage vice; but even a small amount of observation and experience of life and of human nature suffice to show how little reliance can be placed on them as safeguards against sexual temptations. The reasons for regarding constitutional syphilis as a contagious and hereditary malady do not admit of controversy, and we cannot see why it should not be placed on the same footing as other contagious diseases which endanger the health of the community, or why those measures which have been found necessary and efficacious in the one case should not be applied in the other. By all means let efforts at moral suasion be carried out; but sensible people will not be disposed to neglect physical methods of a direct and practical nature for limiting the spread of such a dangerous and preventable disease as syphilis.

NON-DIPHTHERITIC SORE-THROAT AMONG SOLDIERS.

The place of honour in Professor Simon Duplay's *Archives Générales de Médecine* for April is accorded to a report on Non-diphtheritic Membranous Sore-throat, by Surgeon-Major P. A. Cassedebat of the 2nd Zouave Regiment. During about twenty months, from January, 1893, to September, 1894, no fewer than 134 cases of this affection occurred among the men of his corps, of which the strength was between 750 and 800. The writer sets forth the details of each case in tabular form, including an epitome of the bacteriological examination, and supplements this information by descriptive letterpress, which is divided into ten sections. A plan of the barracks, showing the general arrangement as well as the position of the infected beds, is also appended. In all the cases the false membrane was firmly adherent to the subjacent tissue, and when removed did not dissolve readily in water. Slight cases of sore-throat, with fugitive, easily displaced membranes, were excluded from the collection, as were also all sore-throats that were dependent on measles, scarlet fever, syphilis, follicular tonsillitis, or ablation of the tonsils. At the onset the only way to establish the diagnosis from diphtheria was by the aid of the microscope, but the true character of the complaint soon declared itself, the vast majority of the patients being fit for duty in four or five days. The bacteriological examination revealed an immense assemblage of microbes of various kinds, but the streptococcus alone was constantly present. It is to this micro-organism that Surgeon-Major Cassedebat attributes the origin of the disorder; and he likewise is of opinion that the varying physical character of the false membranes may be due to a plurality of streptococci. A considerable portion of the paper is devoted to an inquiry into the contagiousness of the affection, but apparently its incidence among soldiers is but little influenced by propinquity of habitation.

DEATHS IN THE SERVICES.

Surgeon-General James Tyrell Carter Ross, C.I.E., F.R.C.S., Bengal Army (retired), aged seventy-four. He served in the Sutlej and Punjaub campaigns and in several Indian expeditions between 1851 and 1854, in the Indian Mutiny campaign, in expeditions from Allahabad and at Khoongunge, and Futtehghur; was principal medical officer in the Duffla expedition of 1874, and took part in the Zulu campaign of 1879.

Deputy-Surgeon-General Charles T. Eves, Indian Medical Service (retired), at Brook's Lodge, Cheltenham, on April 26th last, aged sixty-eight years.

INSPECTION OF MEDICAL EQUIPMENT AT LAHORE FORT.

The Principal Medical Officer of Her Majesty's forces in India, accompanied by several officers, recently made an inspection at Lahore of some new equipment designed for field service, which consisted of the "Tortoise" pattern tent adapted to Indian requirements, a new pattern stretcher for mule transport, and a portable field stove.

WE have received from Messrs. Novello, Ewer, and Co. a "Hymn in Commemoration of Queen Victoria's Nurses" ("How Shall we Teach our Children?"). The words are written by the Dean of Rochester and the music is composed by Dr. G. C. Martin.

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Correspondence.

"Audi alteram partem."

PUBLIC HEALTH (SCOTLAND) BILL.

To the Editors of THE LANCET.

SIRS,—A new Scottish Public Health Bill is before Parliament at this time, and will soon pass, more or less modified, into law. Surely it is becoming that a measure so important to the lieges, and withal affecting our own profession very closely, should be seriously considered by medical practitioners all over Scotland as long as its terms are open to amendment, and yet there is little displayed interest in the subject. It is thirty years or more since the last general Act was passed, and it may be that a third of a century will again elapse before the present Act—when we get it—is again considered.

The Bill slurs over the altogether wrong interdependence of the sanitary officials. It ought to distinctly enjoin the due subordination of *all* the staff to the medical officer of health. Every good organisation, it is surely needless to assert, must have a single controlling head or centre. But this new Bill leaves the relative position of head medical officer and head sanitary inspector as it exists—i.e., at once coördinate and undefined. While medical officers of health, for the sake of harmony, and with a due regard to their position as highly trained and thoroughly educated gentlemen, demand their proper place—viz., that of the recognised heads of the sanitary administration in their particular jurisdictions—on the other hand, it can be easily shown that this is the right and due course to be followed not only in the interests of the public but also in those of the profession at large. The family medical attendant has a somewhat difficult part to play when his patients are the subjects of infectious disease as well in connexion with notification as in regard to the house, its drainage and water-supply, isolation, removal to hospital, and it may be the treatment also of his patients. Even his diagnosis is occasionally called in question. Surely in all such delicate questions it is right that he should be in relation with an authoritative medical brother professional, and not be liable to be hauled over the coals by, it may be, an ignorant and presumptuous sanitary inspector. We do not believe much good will result except from close and confidential working between the practitioner and the chief medical officer of health. And this brings us to consider the propriety of modifying the Notification of Diseases Act. Dr. Cameron, the energetic medical officer of health to Banff, Moray, and Nairn, suggested some time ago that a *single* notification of infection should be enough from each house on the occasion of an outbreak, while the medical attendant should be paid for granting a certificate giving a clear bill of health after termination of the illness for school and other purposes. With this change on the one hand, on the other we might hope to have legal notification of *every* infectious disease, including measles, whooping-cough, mumps, and, let us hope, by-and-by, tuberculosis and syphilis. In addition, we ought to be paid for such certificates. What other profession would have allowed itself to work so long for nothing? It is high time that we should bestir ourselves in this and other directions and refuse to be the slaves of an ungrateful public. There are many other questions which both the profession and people at large ought to study before this Bill becomes law, such as clauses against dangerous trades, overcrowding, &c. But it would take a long time to discuss such matters with advantage. Education of the mind excites general attention, but the care of our bodies little or none. We must e'en bear with it so. I am, Sirs, your obedient servant,

Dingwall, May 1st, 1897. WILLIAM BRUCE.

"NOTES ON ONE YEAR'S SURGICAL WORK."

To the Editors of THE LANCET.

SIRS,—I am much obliged to Mr. T. S. Ellis for his criticism in THE LANCET of May 1st of my remarks on the treatment of flat foot. The reason which led me to adopt the method I described was what happened in a case of hallux rigidus accompanied by flat foot in which I treated the joint by excision and found that the flat foot was at the same time relieved. On trying the treatment in uncomplicated flat foot I found it efficacious. And, after all, it is practical results and not theoretical considerations which is the highest criterion of the utility of any procedure.

I am, Sirs, yours faithfully,

Beaumont-street, Oxford, May 5th, 1897. H. P. SYMONDS.

"THE DECLINE OF THE SCOTTISH UNIVERSITIES."

To the Editors of THE LANCET.

SIRS,—In an annotation in THE LANCET of May 1st you deal with what you call the "Decline of the Scottish Universities." As the annotation is presumably of editorial authority, I trust you will allow me to make a few remarks on the subject, which is of great importance to the large number of Scottish graduates who read THE LANCET. The "decline" is in the number of students at present attending our universities, and you give your view of the causes of the diminution in the matriculation rolls; and the position advanced by you is, in general, that relatively to universities elsewhere examining and teaching are in our colleges conducted on a low standard, and that therefore students who otherwise would have come to Scottish universities go elsewhere to share in the "generous rivalry for qualifications and honours worth the contest." You state that "in the Arts Faculty the standard of proficiency on admission to the curriculum has been too low." If you refer in this charge to the state of matters some years ago it is certainly true; it is quite as certainly untrue now. The entrance examination in Arts is at least as severe, and is as stringently enforced, as in any university in the empire. The questions are set and the examination is supervised by a joint board of examiners elected from all parts of Great Britain by the courts of the four universities so as to ensure that the standard will be maintained and undue favour shown to no candidate. Of this anyone will be satisfied who will look at the questions set and at the *personnel* of the board. You speak disparagingly of the instruction given in the classes—that it "has savoured more of the upper form in schools than of a university." It is true that instruction which might be so characterised has been given, and is being given, and will continue for a short time still to be given; but degree students do not attend such classes, which are not recognised for graduation at all. These lower classes exist to meet what has hitherto been a special Scottish requirement.

To the Universities of Oxford and Cambridge which you contrast with ours students go who are almost entirely from the upper and rich middle classes of society and who have previously been educated at expensive secondary schools. To the Scottish universities students are drawn from every social stratum, and secondary schools until recently have been few and have existed only in four or five of the larger towns. The ordinary school, therefore, had to be in touch with the university, and the gap of the missing secondary school was bridged by the old parochial master doing higher work than his English *confrère* and by the university having special classes which went half-way to meet him. But in Scotland secondary education is making rapid progress, how rapid may be judged by the large numbers of Junior and Senior Leaving Certificates that are annually earned at examinations conducted by the Scottish Education Department at Dover House. So rapidly is higher education spreading in Scotland that the Junior University Classes will soon cease to exist, and an Ordinance has already become law by which the universities can at an early date close these classes entirely. But, as I have already said, these are not degree classes at all. The degree classes are altogether apart; and seeing that they have been and are being conducted by such men as Lord Kelvin, Jebb, Ramsay, Murray, the present Master of Balliol, Butcher and Saintsbury, it is not at all likely that the instruction is less comprehensive or elaborate than that given by college tutors at Oxford or Cambridge. The Scottish University classes are now smaller, not because of inferiority in examination or teaching, but because of the great improvement and spread of secondary education in the country. This allows of men who are going into commercial life and who do not desire a degree, but who do want a sound education up to a certain level, finding what they require amply provided in the public schools, thus leaving the universities free to devote themselves entirely to the higher learning. The very circumstances you have urged in explanation of the decline in numbers did to some extent actually exist in former years, when the classes were

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crowded, and it is because of the very measures you indicate as improvements having been given effect to that for a time the attendance has declined. But it is a decline in numbers only, not a decadence of power or aim. On the contrary, just as in all organic transition there is a temporary disturbance of function, so the fall in numbers in our universities marks the transition to a new and higher academic life in Scotland.

Dealing more particularly with medical education you censure the lecture system in Scotland as wasting the time of the student. Much can be said on both sides of this question. It depends greatly on the subject, and especially on the teacher, as to whether five lectures in the week or three will be better for the student, and this the Scottish teacher has now by Ordinance in his own hand. A course consists, not of a hundred lectures, but of a hundred meetings of the class. The professor may lecture or demonstrate practically or teach tutorially or engage the student in manipulation work according as he, with the sanction of the Senate, may determine. Your objection of over-lecturing, therefore, can no longer be urged against the Scottish universities. But if the Scottish medical professors have in the past given more lectures than their English brethren, they have not on that account done less in the way of clinical teaching than has been the case south of the Tweed; on the contrary, they have done much more. The Scottish hospital physicians and surgeons attend in the wards every day, and every day they give clinical instruction. The Scottish student and the Scottish teacher of medicine alike work with a constancy that does not prevail in England in matters both theoretical and practical. It may be said that this will paralyse original research on the part of the professor, but we can point to the two greatest achievements of the century—that of anæsthesia by Simpson, a hard-working professor in Edinburgh, and antiseptic surgery by Lister, when he was lecturing five days a week in the University of Glasgow and teaching clinically five days a week in the Royal Infirmary.

The final reason you give for our decline is certainly a singular one, coming as it does after the others. Having shown to your own satisfaction that the Scottish system of teaching is so bad that it is ruining us, you say a further cause of our decline is the reinforcement of the schools in England and Ireland by teachers and examiners from the schools of Scotland. Your countrymen believe that it requires a surgical operation to get a joke into a Scotsman's head. Surely the writer of your annotation must be a brilliant surgeon. It is true that many Scottish graduates go to England and Ireland, and Canada and Australia, and India and Africa; but while we lose their services at home they spread the reputation of their universities over the globe and send us students from every part of it. While we give, we also take. Of ours, you have in London Ferrier, and Lauder Brunton, and Duckworth, and Ramsay the chemist, and at Oxford the Master of Balliol; of yours, we have in Edinburgh Turner and Greenfield, and Butcher and Saintsbury; in Glasgow we have Lord Kelvin; from Ireland Bower and Lodge; and, lately, Jebb from England and Jones from Wales. We give of our best where we can spare, and we take of yours as freely as we bestow. A reciprocity of this kind is no sign of decadence. If your annotation was written in any gloomy anticipation that the source from which many of the best medical teachers in England have been drawn is in any danger of drying up, let me assure you that your fear is groundless. In the future, as in the past, the Scottish universities will do their duty alike to Scotland and to you. I am, Sirs, yours faithfully,

Glasgow, May 4th, 1897. D. C. MCVAIL.

To the Editors of THE LANCET.

SIRS,—In an annotation in your issue of May 1st on the "Decline of the Scottish Universities" prominence is given to some remarkable statements which will rather startle Scottish graduates. The standard of the arts entrance examination may be low in Scotland, but it is notoriously so at Oxford and Cambridge; and the reason that Scottish graduates in arts often afterwards take an arts course at Oxford or Cambridge is not that the education there is of higher quality, but that the prizes are greater. It is the value of the exhibitions, scholarships, and Fellowships that is the attraction, for the Scottish degree with honours is quite as good and as much prized as the English.

The writer says the Scottish M.A. "has never carried with it the same guarantee of thoroughness and academic status implied by that of Cambridge or Oxford." It is a matter of common knowledge that the pass standard at both English universities is disgracefully low, and that often a candidate who has one good subject gets through although his others are weak; whereas in Scotland the standard is much more even, and the knowledge therefore more uniform and thorough. If one system savours more of the upper school form, surely it is the English with its system of tutors and residential colleges. The decline in the number of matriculations at the Scottish universities is almost entirely confined to the medical faculty—e.g., at Edinburgh in 1891-2 there were 1951 medical students, whereas in 1895-6 the number had fallen to 1455. No doubt some of the reasons given by the writer of the annotation may have contributed to this result in a minor degree, but it is much more probably due to the institution of the five years' curriculum, which came into force in 1892, and to the present overcrowded condition of the medical profession—two considerations which he neglects altogether.—I am, Sirs, yours truly,

W. CUNNINGHAM MILROY, M.A., M.D.Edin.

Wigan, May 3rd, 1897.

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—The following case, which I met with some twenty years ago, may perhaps be of interest in connexion with the hereditary transmission of acquired peculiarities—a question which has recently been discussed in your columns. The report of the case as published in the Transactions of the Northumberland and Durham Medical Society, Session 1877-78, page 68, is as follows:—

Dr. Byrom Bramwell showed a case of Congenital Under-development of the Left Eyeball or "Microphthalmos," and said: "The condition which this patient presents is a rare one. Dr. Argyll Robertson, of Edinburgh, whose experience is, of course, very great, tells me he has met with few cases, and that little is to be found on the subject in English literature. The patient is aged nineteen. The smallness of the left eyeball was first noticed six weeks after birth. The external parts of the eye are well formed; vision is almost *nil*, owing to the alterations in the optic disc and surrounding portion of retina. There is an interesting point in connexion with the case. The mother, about a year before the birth of this child, received a severe blow on the right eyeball. The globe was destroyed. She was laid up for three months. This child was born about a year (her memory is not accurate on this point, it may be a little more or a little less) after the receipt of the injury. The connexion is an interesting one, and it may be that the injury to the mother's *right* eye had something to do with the under-development of the child's *left* eye. The children born before and after this one are naturally formed."

I am, Sirs, yours faithfully,

Edinburgh, May 3rd, 1897. BYROM BRAMWELL.

A PECULIAR AFFECTION OF THE KNEE-JOINT.

To the Editors of THE LANCET.

SIRS,—The two following cases of disease of the knee-joint which I have met with may be of interest to the profession, as they answer to nothing that I can find in the leading English and German text-books on surgery. The principal features of both consist of acute swelling of one knee-joint occurring suddenly and without obvious cause in delicate young men further characterised by absence of inflammatory symptoms, accompanied by little or no pain, and followed by complete recovery.

CASE 1.—The patient was a thin, weak-looking man, aged twenty-five years. One afternoon after a tennis party, at which, though he played one game, nothing unusual occurred, he found his left knee felt stiff and was swollen. On my examining it the next morning it was found to be moderately swollen, fluctuating, but not tender, the skin was not œdematous or red, and did not feel warm. The patient felt no pain beyond a feeling of stiffness if he tried to bend it. He was told to keep the leg in a horizontal position, and fly blisters were applied. After four days, there being no improvement, a plaster bandage was applied and worn for three weeks, then with a knee-cap and the use of a walking-stick he soon recovered.

CASE 2.—A mealy-faced young man, aged eighteen years, after wheeling about a light barrow one morning felt his right knee become rather painful. He walked home and found that it had swollen. When seen the next day the joint was found to be moderately swollen and gave fluctuation;

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there was no tenderness, redness, or œdema of the skin, but he felt a little pain when he walked. The knee was painted with strong iodine liniment for a few days; no improvement followed. A plaster bandage worn for a few weeks caused the fluid to disappear, and with a leather splint he was soon able to work again in the fields, and quite recovered the use of his knee.

Neither of these patients was a "bleeder." Amongst several medical men with whom I have discussed these cases I may mention that Dr. Genth of Schwalbach tells me that he has met with cases apparently similar; he states that his occurred in nervous young men, and that he found, like myself, that blisters were useless, though the local treatment by baths was very beneficial. As regards pathology, synovitis of the knee-joint, requiring either severe injury or septic infection, seems to be excluded, also rheumatism from the monarthritic nature of these cases and struma from their general nature. The only feasible explanation seems to me to be that they are due to a tropho-neurotic change in the synovial membrane occurring in a debilitated subject from some obscure cause.—I am, Sirs, yours truly,

WALTER G. EARLE, M.R.C.S. Eng., L.R.C.P. Lond.

Tunbridge Wells.

*** We agree with our correspondent in thinking these two cases of interest, but we are inclined to look upon them as examples of a synovitis resulting from very slight traumatism in an unhealthy subject. In each case there was a great likelihood of a slight injury having occurred, and certainly such cases are by no means rare after tennis. The speedy cure which resulted from the use of splints is in favour of this diagnosis.—ED. L.

"ACUTE PEMPHIGUS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 13th, which I received to-day, I read a Clinical Note by Dr. Jón Jónsson on "Acute Pemphigus." It might be of interest to your readers to know that I have seen two cases of "acute *generalised* pemphigus," one in a young man, aged twenty-two years, in the year 1894, and the other in a boy aged thirteen years, in October last. The young man died on the fifth day. The boy lived, and was at the moment supposed to be out of danger, up to the eighteenth day, when he died very suddenly. The symptoms in both cases were exactly those described by Dr. Jónsson and Dr. Priestley. There were vesicles on the inside of the mouth (buccal mucous membrane), but no eczema. I am, Sirs, yours truly,

F. G. CORBIN, M.D. McGill.

Chascomús, Argentine Republic, April 4th, 1897.

FRACTURES OF LONG BONES IN SCURVY-RICKETS.

To the Editors of THE LANCET.

SIRS,—At the meeting of the Medical Society of London held on April 11th I showed an infant suffering from multiple spontaneous (so-called) fractures of long bones, dependent, in my opinion, on scurvy-rickets. In your report of the proceedings[1] you mention that Mr. Morgan thought my diagnosis questionable on the ground that hæmorrhages and fractures in scurvy rickets were usually near the epiphyses and not, as in my case, in the centres of the shafts. As the President did not allow me to reply to Mr. Morgan's criticism at the time, may I venture to do so in your columns?

Central fractures of long bones may occur in addition to separation of epiphyses and hæmorrhages beneath the periosteum in the course of scurvy-rickets. I have Dr. G. A. Sutherland's permission to refer to one of his cases of scurvy, as yet unpublished, in which such conditions were diagnosed during life by him, and verified by myself post mortem. I did not see my own patient until several months had elapsed since the fractures had been produced, and at this time there were certainly no sub-periosteal effusions. Yet, from the history of swelling and bruising of the limbs, I have little doubt that hæmorrhages were present at first. Such hæmorrhages are very quickly absorbed. The point which needs further investigation is whether these central fractures are the cause or the consequence of the extravasations. Effusions beneath the periosteum may lead to fragility of the bones by depriving them of their normal nutrition and support. On the other hand, the general tendency to hæmorrhage in scurvy may cause sub-periosteal extravasation at the time the fractures occur. Opinions on this point were not forthcoming when the case was shown. The time for discussion was limited, it is true; but if in a society like the Medical Society of London discussion of cases is invited at all, I think that answers to criticisms should be allowed. Otherwise the genuineness of cases exhibited must remain for ever doubtful and the value of facts observed may be impaired.

I am, Sirs, yours truly,

May 3rd, 1897. LEONARD G. GUTHRIE.

[1] THE LANCET, April 17th, 1897.

"THE HOSPITAL REFORM ASSOCIATION: REPORT OF THE COMMITTEE APPOINTED TO INQUIRE INTO THE WORKING OF THE SPECIAL HOSPITALS OF LONDON."

To the Editors of THE LANCET.

SIRS,—THE LANCET of April 17th contains a letter signed by the secretary of the Central London Throat and Ear Hospital upon the shortness of our visit to his institution and stating that important matter supplied by him had been omitted in our report. In reporting upon forty-one institutions it was impossible to spend hours over each visit, as he suggests we should have done. In his case we called three times before finding him at home. In regard to the second point, if we had sent to press one-half of what the various secretaries would have liked said about their particular institutions no journal would have published the report on account of its length. Since publishing the report we have been informed by the secretary of the British Mental Hospital that the annual subscription to that hospital in 1895 was £292. We were unable to publish these figures at the time, as this institution has issued no report since 1894.

We are, Sirs, yours faithfully,

W. KNOWSLEY SIBLEY, M.D. Cantab.,

May 4th, 1897. ERNEST SNAPE, M.D. Brux.

"THE QUESTION OF THE SECOND OVARY IN OVARIOTOMY."

To the Editors of THE LANCET.

SIRS,—The question raised by Mr. Clement Lucas as to the necessity for the removal of the second ovary in ovariotomy is a very important one. As one who has not operated extensively, but who, nevertheless, has seen a considerable amount of gynæcological work, I should feel obliged by your allowing me space to record my views, whatever value they may have. I have in the past, acting on the ordinarily accepted views of eminent gynæcologists, removed ovaries that in the light of my own experience since I would not think of removing now. I have in some cases removed both ovaries, while in others I have removed only one, being influenced, as Mr. Clement Lucas evidently is, by the particular circumstances of each case. I firmly believe there can be no fixed, defined, and inalienable rule in these cases. I remember years ago removing a cystic ovary from a young woman, unmarried, leaving the other, which was enlarged and tender. She made an excellent recovery, but when well enough to be discharged and get about she began to complain of symptoms pointing to the ovary which was left behind, and she was repeatedly sent to me to know if she had not another tumour coming and if it was not advisable to have another operation. I saw no reason for it and refused, and this young woman is now perfectly well. There were pain and tenderness, but I did not consider these sufficient to justify another operation. One cannot avoid the feeling that in this case the second ovary might have been removed had I been strongly impressed with the need for it at the time of operation. We might have had this case to swell the number of double removals, and the tender condition and enlargement would have been employed as arguments in justification.

I know of a case of cyst of the broad ligament which I was about to remove five years ago, but which, owing to the very alarming symptoms occasioned by the anæsthetic, I was obliged to desist from doing when just about to enucleate it. The operation was immediately stopped and the abdomen

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closed. From that day to this the cyst has not enlarged; indeed, it underwent some degree of diminution. I have seen the patient at intervals of a few months since and she has continued very comfortable and able to attend to her business. During the time I had the patient under observation previously to the operation the cyst had been increasing, and I only decided to operate because of the disturbance and pain it was causing in its neighbourhood, as well as rendering the woman unfit for her duties and giving her great general discomfort. Its presence does not now cause these symptoms in anything like the same degree, and, as I have already said, she attends to her daily duties, which are of an arduous kind. Why the cyst ceased to increase is another question, but it may have been *in some measure* due to the fact that I made her rest absolutely for six months.

I accidentally discovered a cyst of the ovary when attending a woman four years ago for another matter. It had not increased when I last attended her a few months ago, and she at present suffers only a little from it. She does not know of its existence. Why should she so long as it gives such slight trouble and she is quite able for her duties? She has had two children since I discovered the cyst, and if it has remained *in statu quo* for four years (and perhaps for four years previously to that) may it not remain so for four, or even fourteen, more? I may also instance the case of a young married woman in whom a tumour (cystic) of one ovary has existed to my knowledge for years. It has at times caused a good deal of suffering, and on one occasion I almost decided to remove it. Several months of absolute rest, however, with some treatment, helped her greatly, and she has been able to attend to her household affairs with a considerably greafer degree of comfort than previously. I have known of the existence of this cyst for six or seven years, and it does not increase.

These, possibly it may be advanced, are not instances quite analogous, except the first, to those mentioned by Mr. Clement Lucas, inasmuch as in his the abdomen was opened, and the advocates for removal would say that it would be better to remove the organ then than for the woman to undergo the trouble, anxiety, and suffering of a second operation, with its consequent risk and expense. The risk, of course, is small now, thanks to the progress made in surgery during the last quarter of a century. But there is risk, and it ought to be avoided, to say nothing of the other concomitants of an operation. But if there is a reasonable hope that the ovary may not get worse or may recover, I think the woman, especially if a young one, ought to have a chance and the ovary should be left, and I think it may be fairly said that the cases cited show that ovaries to some extent diseased may be left sometimes with a very fair prospect that they may not only not cause increased trouble in the future, but that they may remain stationary or even recover. If, then, some diseased conditions of the ovaries remain quiescent for years, improve, and even get well, we ought not too hastily to conclude that operative interference is necessary, but should keep our patients under observation and treatment. I am confident that some operations may be avoided by this plan, and the subjects of the disease be enabled to pursue their daily duties with comfort. If the time comes for operation the case can be dealt with then just as well as earlier, provided one does not allow it to go too far until dangerous complications arise. I am quite alive to the necessity for early operation. I am sure, however, we will lose nothing by waiting and watching, selecting the proper cases for such a course.

I am, Sirs, yours truly,

D. THOMSON, M.D. Glasg.

Lowndes-street, S.W., May 4th, 1897.

TUBERCULOSIS IN DAIRY CATTLE.

To the Editors of THE LANCET.

SIRS,—In the issue of THE LANCET of May 1st your Irish correspondent refers to the resolution passed by the Dublin University Biological Association concerning the prevalence of tuberculosis among dairy cattle. He further states that it is reassuring to find in the report of the Cowkeepers' Association that the result of a veterinary examination by two gentlemen shows only 4 cows out of 1500 examined were affected with tuberculosis. There are some considerations which would lead one to place very small reliance on the results obtained by these gentlemen, to which I wish to draw public attention. From a return furnished to me by the Veterinary Department of the Privy Council Office, Ireland, I take the following statement: "It appears from the departmental records that the post-mortem examination of the lungs of cattle slaughtered by direction of the Veterinary Department between the years 1888–1893 in the North and South Dublin Unions as having been in contact with cattle affected with pleuro-pneumonia, or otherwise exposed to the infection of that disease, showed that the proportion of cases in which the *lungs* were affected with tuberculosis was almost 5 per cent. The majority of cattle slaughtered were dairy cows." It is evident from this statement that if only four out of 1500 cows are now affected with tuberculosis there must be a most marked improvement in the health of cattle in this district. Indeed, such a marked change in so short a time is sufficiently remarkable to call for some explanation. So far from any explanation of this improvement being forthcoming it is a matter of common knowledge that little or nothing is being, or has been, done to improve the state of the dairy yards, the unsanitary condition of which has been so often pointed out. Taking these facts into consideration, and remembering that the extraordinary prevalence of tuberculosis among dairy cattle in general has been amply proved by numerous statistics, we shall, I think, be justified in doubting these results so long as the methods by which they were obtained are open to suspicion. Professor McFadyean, when summing up the results of his experiments for the recent Royal Commission, states: "The conclusion that appears warranted is that ordinary clinical examination is almost valueless for the detection of tuberculosis in its early stages." Over and over again in his published works this great authority on veterinary pathology has stated that ordinary clinical examination even in the hands of the most skilled and experienced veterinary surgeons is incapable of pointing out all the animals affected with tuberculosis. Unless some more accurate means of diagnosis is used than ordinary clinical examination affords veterinary surgeons merely leave themselves open to the charge of incompetence by certifying animals to be free from tuberculosis. It would appear that Koch's tuberculin in the hands of skilled surgeons is the most accurate method of diagnosing tuberculosis of cattle, and where it cannot be used most veterinary surgeons decline to express a decided opinion. We cannot, then, accept any statement as to the number of tuberculous cattle in our dairy yards which is not based on examination with tuberculin or the results of post-mortem examination. Was this test employed by the inspectors who reported to the Cowkeepers' Association? If so, where are the tabulated returns of the cattle examined? The answer is, I think, that these returns do not exist, because the method was not used, and in consequence the report is valueless.

I am, Sirs, yours faithfully,

T. PERCY C. KIRKPATRICK, M.D. Dub.

Dublin, May 4th, 1897.

"THE SWEDISH SYSTEM OF PHYSICAL EDUCATION."

To the Editors of THE LANCET.

SIRS,—If you would kindly allow me space in your next issue I should be glad to efface an impression which I regret to have made. In your review of my booklet on the above subject exception is taken to one observation. Your reviewer writes: "The English medical profession is charged with 'insular prejudice against anything branded as foreign.'"[1] Reference was here intended to the British nation as a whole. As a general and national characteristic it would be difficult to deny that John Bull entertains a certain scorn for the foreigner and for what is foreign, and has an ingrained belief in the superiority of himself and his opinions. This remark, however, was not specially directed against the medical profession; for does she not gracefully acknowledge that many of the brightest jewels in her crown have been set there by other than English hands? In proceeding I have ventured to state that that learned body is characterised by a conservative spirit, but between "conservative spirit" and "insular prejudice" exists a distinction which certainly constitutes a difference.

Believe me, Sirs, yours very truly,

Bristol, May 4th, 1897. THEODORA JOHNSON.

[1] "The Swedish System of Physical Education," p. 21.

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A QUESTION OF COURTESY.

To the Editors of THE LANCET.

SIRS,—May I ask for your opinion on the following case? I have for some twenty years held one of the parish appointments of this district, so am well known over it by the gentry and others, and the extent of the boundaries of the district are well defined. In December, 1896, I was attending a woman, a parish patient, in an outlying cottage (a miserable building). She was evidently suffering from some uterine trouble, but being surrounded by three or four very young children she could get no proper attention there. After a good deal of difficulty I persuaded her to come into the Cottage Hospital here, to ascertain what was wrong and treat her accordingly. A lady guardian living near and a parson's sister in January got interested in her case, and, without ever communicating with me, took over Miss Annie M'Call, M.D. Bern, &c., of 131, Clapham-road, S.W., and also a district nurse. The former examined my patient straight away, and the latter persuaded her not to come into the Cottage Hospital, but to go to Euston-road hospital, where, as far as I can ascertain, the right ovary was removed and the uterus, which was retroflexed, was replaced. They sent her out again under a month from the operation to a poor cottage without ever communicating with me even then in the interests of the patient, and she came back on to my hands in a very weakly and hysterical state, and is at present in the Cottage Hospital, where I trust she may get stronger. I wish specially for you to express an opinion whether a woman who happens to have taken a doctor's diploma is exempt—and we poor men not so—from the unwritten law of courtesy in this noble profession.

I am, Sirs, yours truly,

FREDERIC DANIELL MILLER, M.D. Durh., &c.

Horwoods, Basingstoke, April 30th, 1897.

*** Our correspondent has much reason to complain of want of courtesy on the part of the ladies concerned in this case, who, at the least, should have communicated with and consulted him. Surely ladies who are members of our profession, so far from being exempted from its rules, should be particularly scrupulous in their observance.—ED. L.

MEDICAL MEN AND SUBPŒNA.

To the Editors of THE LANCET.

SIRS,—Thinking that my experience may be of use to other medical men and save them having to waste four or five days at the law-courts for nothing I ask if you will be kind enough to give me a little of your valuable space for my letter. Some time ago I received a subpœna commanding me to appear before the Court of Queen's Bench to give evidence concerning an accident case I had attended, and with the subpœna I received half a crown. I protested; but on looking the subject up I came to the conclusion that I was bound to answer to my subpœna, but need not give evidence. The case came on before the Lord Chief Justice. When I was called into the box I refused to be sworn and asked his lordship how I ought to act. He very kindly told me that not only was I perfectly justified in refusing to give evidence, but that I might have ignored the subpœna and the court would have taken no notice of my contempt.

Half-a-crown is not a reasonable *viaticum* to offer a medical man, and a subpœna served upon him with that amount can be ignored.

I am, Sirs, yours faithfully,

WILLIAM F. CLARKE, M.D. Lond.

West Kensington, May 5th, 1897.

UNIVERSITY OF CAMBRIDGE.—The decision of the Senate on the proposal to admit women to titular degrees will be taken on May 21st in the Senate House. The voting on the primary resolution will take place between 1 and 3 P.M. Energetic canvassing for and against the resolution is being pursued by committees of graduates in Cambridge and London. Dr. Nansen has made to the University a gift of £50 for the benefit of the department of geography. The University of Madras, like those of Calcutta, Bombay, and Allahabad, is to be affiliated to Cambridge. At the Congregation on April 29th Mr. R. S. Thomas, M.A., of Jesus College, and Mr. C. S. Storrs, B.A., of Emmanuel College, were admitted to the degree of Doctor of Medicine; and Mr. G. M. MacDonald to the degree of Bachelor of Medicine and Bachelor of Surgery.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

IX.—FRANCE: UNITED ACTION AND LEGISLATIVE ACTION.[1]

THOUGH the grievances are not so widespread and have not reached so acute a stage as in England, the members of the medical profession in France are also greatly exercised by the question of hospital abuse. Indeed, this trouble together with what we have termed "the Battle of the Clubs," are the two principal reasons which have led to the formation of medical syndicates or unions in different parts of France. It may be said that close upon 25 per cent. of the medical men practising in that country are now in union. The Paris branch of the syndicate is the strongest, for it numbers some 600 members. Dr. Albert le Blond, medical officer of the Saint-Lazare prison for women—which is the lock hospital under the French Contagious Diseases Act—and president of the Paris Medical Syndicate, has devoted much time to the study of the question of hospital abuse. By the courteous invitation of Dr. J. Noir, general secretary of the Paris Syndicate, I was able to be present at a meeting of the executive committee of this organisation, and here I met Dr. le Blond, who furnished me with reports and much information on the question at issue. At the same time I communicated to the committee some details as to the position of affairs in England both with regard to hospital abuse and the battle of the clubs. The members of the committee were delighted to hear that successful efforts had been made in various parts of England to form medical unions. They then requested me to transmit to the medical unions in Great Britain expressions of friendship and fraternity on behalf of the Paris Medical Syndicate. Further they explained that they had established intimate intercourse with the Belgium Medical Syndicate and had had the pleasure of receiving and entertaining in Paris the president and secretary of the Belgian Syndicate, Dr. Vandam and Dr. Cuylitz. They hoped that their relations with the British medical societies would become equally intimate, pleasant, and mutually advantageous. It was their conviction that similar grievances afflicted the medical profession in all parts of the world and that the organisation of the profession into unions or syndicates, both nationally and internationally, was the best means of removing these grievances. To this effect I should add that all communications may be addressed to the general secretary of the Paris Medical Syndicate, Dr. J. Noir, 45, Rue Monge, Paris.

The organisation of the relief of the poor in France differs fundamentally from that which obtains in England. Every phase of public relief comes under the one denomination of L'Assistance Publique—namely, out-door relief to the able-bodied, help or asylums for the aged and infirm or for children, and, finally, hospitals, medical attendance, and medicine for the sick. This is based on the principle that the French nation may be considered as one large family. Each private family is bound by the articles 203, 205, 212, and 349 of the Civil Code to assist its poorer members. But, if the family fails to accomplish this duty, then the Commune, the Department, and the State are each in a measure responsible. The National Assembly has proclaimed that society at large must help its poorer members. The laws of the 19th March, 1793, of the 24th Vendémiaire, year II., and the 22nd Floréal, year II., passed by the National Convention, establish that, in principle, the indigent have a right to public help. Subsequent legislation, however, had tended to weaken rather than to strengthen this principle. Dr. le Blond, in dealing with this question, says that without doubt bread should never be refused to the deserving poor, or a bed in the hospital when sick; but Dr. le Blond cannot admit that misers and those who only pretend to be poor should likewise receive public help. Assistance without discrimination engenders thriftlessness, and Dr. le Blond

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; and (8) May 1st, 1897, The Royal London Ophthalmic Hospital.

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declares that the workmen of the large towns already consider the hospital as the ordinary place of refuge when their labour power is checked by even trivial indisposition. There is, perhaps, some exaggeration in this. A strong prejudice against hospitals still survives, especially in the smaller provincial towns. This acts as a natural check and prevents those who can afford to be treated at home from frequenting the hospital. Again, whatever may be the fault of the administration of the relief of the poor in France we in England have always been taught to admire, and if possible to imitate, the thrifty habits of the poorer classes in France. All the writers and social reformers who have dealt with the subject have held up the French people, and especially the French housewife, as examples of order, economy, and forethought. It would indeed be a calamity if the actual methods of poor relief were to undermine such notable virtues. If Dr. le Blond could study the home life of the poorer classes in England he would soon hold a better opinion of the men and women of his own country.

However this may be, there is no doubt that Dr. le Blond, in an address which was delivered to the Paris Medical Syndicate last November, and which, for propaganda purposes, has been printed and circulated, raised a strong point by insisting that what was meant for the poor should be reserved exclusively for the benefit of the poor. The law of the 24th Vendémiaire, year II, article 18, says: "All sick persons with or without legal domicile who are without resources shall be helped either at their domiciles or at the nearest asylum or hospital." To carry out this law the country has been mapped out into medical districts, and lists have been made of persons without means and therefore entitled to medical aid. To admit into hospitals, and in preference to such poor persons, those who, on the contrary, offer payment, has now, however, become a prevalent practice, and this is described as being in antagonism to the spirit of the law. If the object of hospitals is to aid the indigent they should be utilised solely for that purpose. A verdict of the Supreme Court of Appeal (Cour de Cassation), dated Nov. 7th, 1884, declares the gratuitous distribution of medicaments by non-qualified persons to be illegal. This struck at numerous private charities where, notably, unqualified Sisters of Charity dispensed medicaments. On the other hand, the Government introduced a law on June 30th, 1890, authorising the gratuitous distribution to indigent persons of medicine which had been prepared by the dispensing chemists attached to the offices of the administration for the relief of the poor (Bureaux de Bienfaisance). The argument brought forward by Dr. le Blond is that the giving of medical advice should be limited like the giving of medicaments. If the indigent alone are to receive medicaments gratuitously the indigent alone should receive medical advice gratuitously. Why, then, are people allowed to pay for occupying a bed in a hospital? The admission of paying patients must mean the exclusion of pauper patients. In any case this occurs notoriously with regard to pauper patients suffering from phthisis. It is very rare indeed that such patients are accepted in a Paris hospital. The reason for refusing them is that they are too numerous and their cases generally hopeless. Thus there are more than 100,000 patients wandering about in the streets of Paris and spreading the germs of tuberculosis on all sides. If, instead of accepting paying patients, these persons were taken in by special hospitals a source of infection would be removed from the streets and the prevalence of tuberculosis might be very greatly reduced.

The hospitals, however, profiting by decrees which authorised this practice, established a few paying beds. These were at first reserved for persons in needy circumstances who could not afford an expensive home treatment. But the complaint is that this practice has become far too general. The theory in France has now become just the reverse to what it is in England. Theoretically every patient who enters a hospital is supposed to pay, and if he does not do so he must say why. If he does not pay an inquiry is instituted, and if it is found that he is in a good position the bill is presented, and the patient is made to pay just in the same manner as if he had taken a room in a hotel. On inquiry at the Ministry of the Interior concerning this matter it was explained that the patients never refuse to pay, as they shrink from the disgrace a prosecution would entail. All this, however, applies to the middle classes; no workman, no wage earner, is ever expected to pay; but the commercial man, the clerk, &c., if earning a fairly good salary—£200 a year or so—would be made to pay. Most persons in such a position avoid the unpleasantness of an inquiry by at once offering payment, and here the abuse arises. In most hospitals the charge is for medical cases 3 fr. 60 c. per day, and for surgical cases 5 fr. (or 4*s.*). The custom is to pay for a fortnight in advance, the balance being restored if the patient leaves before fifteen days. Now anyone entering a hospital and producing the payment for fifteen days is admitted without further question. Thus, not only persons of limited means, but those who are in the enjoyment of large incomes, are able to gain admission to the hospitals without let or hindrance. Therefore patients who could well afford to be treated at home take up the beds at the hospitals which should be reserved exclusively for poorer people. Nevertheless, this abuse has not been considered sufficiently widespread to justify interference on the part of the municipal council. The question is whether this opinion is based on the real facts of the case or whether it arises from the natural desire of the municipal councillors not to do anything that might vex their electors. But as the majority of electors are poor, and as the abolition of such abuses would be to the advantage of the poor, there does not seem to be much ground to warrant this suspicion. It is nevertheless admitted that abuse exists. The municipal councillors themselves recognise the fact, but they believe that the abuse is not sufficiently widespread to justify interference. Undoubtedly the reputation of the surgeons and physicians attached to the great Paris hospitals is so high that this in itself attracts many persons who, though well off, could not afford the very high fees these same medical men charge their private patients.

With regard to the provincial hospitals it is generally admitted that very little abuse exists. There are but few paying patients in the provincial hospitals. People are too well acquainted with each other, and many persons would not like their friends and neighbours to know that they had been to the hospital. With a view to bringing the same considerations to bear upon the population of Paris, it has now been decided that patients must go to the hospital of their own district, and each district may be considered as a small town in itself. Thus there is more likelihood of neighbours and friends knowing when anyone of their circle goes to the hospital, and this helps to check abuse. In the provinces, there also still survives a strong prejudice against the hospitals. The horrors of a bygone and barbarous age are not forgotten. Tradition is hard to kill, and many country folks fail to realise the improvements that modern hygiene and science have effected. They therefore still look with repugnance upon the hospital and make every sacrifice to avoid going there. It is not like the poor in England, especially the children of the poor who look forward to going to the hospital as a positive treat, a holiday from the squalor, the dirt, the misery, and underfeeding of their own families. How many children have shed bitter tears when brought away from the hospital to return to their wretched homes. In the French rural town the faith in the hospital and the love of the hospital have not yet been engendered, and while the poor continue to shrink in terror from these establishments persons who possess means are still ashamed to go there. The latter, if suffering from some serious complaint, prefer to take a train for Paris, where they hope to find better hospitals, better advice, and where there is less chance of being discovered by their friends and neighbours. In this manner, also, some abuse arises.

It may be said that in official circles the prevalence of hospital abuse in France is not considered as constituting a serious grievance. The old arguments are used as to the difficulty of drawing a line, and it is pointed out that in many cases where, to judge by outward circumstances, a real abuse has arisen a deeper investigation will show that after all the patient was not in a position to remain in his own home. In a word, it is urged that there are other classes beside the labourers and artisans who need the aid that hospitals give, and that a clerk with a frock coat may be just as poor as a workman in a blouse. On the other hand, Dr. le Blond, supported by the majority of the members of the Paris Medical Syndicate, maintains that, on the contrary, the grievance is urgent, is spreading, that a richer class of patients is daily invading the hospitals, to the detriment of the really poor and indigent. The fact that the Poor Relief Administration has, according to official documents, given help for half the accouchements that have taken place in Paris suggests abuse. It is difficult to believe that half the women in Paris are obliged to apply for State aid when about to become mothers.

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There is another very ugly feature due to the admittance of paying patients to the hospitals. As they can afford to pay they can afford to give tips to the attendants and the nurses. The poor patients, on the contrary, cannot give gratuities, and consequently they are more apt to be neglected and are not so well served. Therefore the poor patient, perceiving this partiality, takes a dislike to the hospital, will not return, and sometimes aggravates his complaint or even sacrifices his life by remaining outside too long. Dr. de Beurmann, of the Paris hospitals, agrees with Dr. le Blond as to the presence of well-to-do persons in the hospitals, and Dr. Fissiaux urges that often a poor person fails to obtain admittance because the beds are taken up by paying patients. Dr. Chevallereau of the Quinze-Vingts Hospital and Dr. Bimsenstein recognise the existence of these abuses. M. Navarre, municipal councillor, in a report presented to the Paris municipality in 1892, stated that the number of well-to-do patients frequenting the hospitals is increasing, and this opinion was confirmed by another municipal councillor, M. Lyon-Alemand.

At the National Congress on Poor Relief, held at Lyons in July, 1894, Dr. le Blond submitted, on behalf of the Paris Medical Syndicate, the following cases of hospital abuse:—1. Dr. Barré calls attention in the *Médecine Contemporaine* to a lady possessing an income of £800 who went to the Hospital of Saint-Louis to obtain douches that she had been advised to take.[2] 2. One of my patients, whose husband was at the head of a flourishing business, was operated upon for an ovarian cyst at the Lariboisière Hospital in 1892. 3. A woman possessing a large shop took her child very regularly once or twice a week during four months to the Trousseau Hospital for disease of the foot. 4. Dr. ——, of the faubourg St. Antoine, mentions a woman who, though well able to pay, went recently to be operated upon at the Charité Hospital. 5. A gentleman, visited by Dr. J——, notoriously well off, was operated on at the Necker Hospital in Dr. Guyon's clinic. 6. The child of a hairdresser and coiffeur who pays a very heavy rent was operated on for an abscess this year at a hospital. 7. A woman presented herself on Nov. 6th, 1893, at the St. Louis Hospital. She was covered with diamonds and asked for and obtained a consultation from Dr. G——. 8. A person who lives in an apartment in one of the best quarters of Paris, and pays from £200 to £240 rent, was gratuitously vaccinated at the Hôtel Dieu this year. 9. The proprietor of a large shop was operated on for fistula in 1893 at the Charité Hospital. 10. A wine merchant and vineyard proprietor remained three and a half months as a patient at the Bichat Hospital and did not pay anything. 11. A landowner and cultivator was operated on at the St. Louis Hospital in 1889 by Dr. P——, and even took away with him antiseptic solutions and dressings. 12. A patient of Dr. L—— gave up this practitioner so as to go to the hospital to have the actual cautery applied to the spinal region. While undergoing this treatment he bought himself a house for £1800, in which he lives. 13. A man, proprietor of a house in which he lives and where he lets half a dozen flats, was at the Hôpital Cochin for several weeks in 1892-93. 14. A restaurant keeper, owner of a large house, got his mother admitted to the Pitié Hospital on March 23rd, 1893, for a fractured leg. 15. The proprietor of a large brewery, for which he was offered £12,000 last year, caused his wife to be treated at the hospital when she suffered from a burn during the months of February and March, 1893, and sent one of his children to the Hospital of l'Enfant Jésus. 16. A woman, whose husband employs thirty workmen, was nursed at the Pitié Hospital for a wound received on March 1st, 1894. 17. A wine dealer was treated for a long while in May, 1894, for an injured shoulder at the Lariboisière Hospital. 18 Another wine dealer was operated on at the Lariboisière Hospital in February of this year and was an out-patient at the hospital for fifteen days. 19. A woman who paid 4*s.* fees to her usual medical attendant went and obtained advice and medicine at the Lariboisière Hospital in 1893. 20, 21, and 22. A butter merchant, a commercial man, and a pork butcher sent their wives to the lying-in ward of the Lariboisière Hospital on May 13th, June 13th and 16th, where they were delivered.

The third section of the Congress, enlightened by these facts and the assurance that many other similar cases could be mentioned, unanimously passed the following resolution:—"Firstly, the establishments of public assistance having been created so as to help the indigent and the poor—in a word, the disinherited of fortune—must rigorously close their doors against those who merely pretend to be poor. Secondly, that it is necessary to establish a serious control over all persons who ask for help from these establishments, the actual control being quite futile, since it allows those who pay very small sums to enter, though they possess ample means. Thirdly, consequently we demand that the public powers, the Senate and the Chamber of Deputies, should take into consideration a project of law containing the following stipulations:—Clause A. The hospital is reserved exclusively for the indigent, and those who are deprived of all resources. Clause B. Whosoever, being in a position to pay for his treatment when ill, shall have recourse to these establishments, commits an illegal act. Clause C. Whosoever, except in cases of urgency, shall have committed this illegal act shall be condemned to refund all the cost he may have occasioned and to pay a fine of from 4*s.* to 12*s.* If this offence is repeated a further penalty of one to five days' imprisonment may be inflicted."

Such is the position, briefly stated, of affairs in France. It will be seen that the grievance is not so acute, not so widespread, as in England. Nevertheless, the members of the medical profession in France are taking far more decided action. They have been more successful in the forming of a union. In England such bodies as exist are purely local. No attempt has yet been made to bring about a national federation such as those which exist in France and Belgium. Nor has there been any authoritative pronouncement as to what legislation could effect towards bringing about the desired remedies. There is evidently much to be learned on the other side of the Channel; and now that the road is indicated it is to be hoped that more intimate relations will be established between the medical men of France and Great Britain.

[2] Bulletin Officiel du Syndicat des Médecins de la Seine, vol. ii., p. 194.

THE CONGRESS OF THE GERMAN SURGICAL ASSOCIATION.

(FROM OUR BERLIN CORRESPONDENT.)

THIS Congress was held as usual in Berlin in the week following Easter, and was opened on April 21st, Professor von Bruhns, of Tübingen, being in the chair. The German Surgical Association has now more than 700 members, of whom about 400, including the majority of the leading German, Austrian, and Swiss surgeons, were present. The chairman, in his inaugural address, when enumerating the members of the association who had died during the last twelvemonth, made special reference to the late Sir Spencer Wells, one of its few honorary members. He gave a detailed obituary of the deceased, whom he described as one of the greatest benefactors of humanity, and mentioned that he attended the jubilee meeting of the association.

The Surgical Treatment of Gastric Ulcer.

Professor von Leube, of Würzburg, who had been invited to state his views as a physician, read the first paper brought before the meeting, the subject being the Surgical Treatment of Gastric Ulcer. He said that surgical interference was hardly ever necessary in this disease, and that he had successfully treated about 1000 cases without recourse to surgery. What the patients ought to do is to stay in bed, to use hot poultices, and to drink Carlsbad Water. The poultices must be very hot—hot enough to cause blistering—and they must be changed every ten minutes. The pain usually disappears in about five days, and Priessnitz bandages should then be substituted for the hot poultices and continued for three weeks. Females must not wear corsets. Strict regulation of the diet is indispensable, and Professor Leube gave a detailed account of the dietary system followed in his clinic. The results obtained by this method were very satisfactory. Of all his cases only 2·4 per cent. died; 1·6 per cent. were not benefited, 21 per cent. showed marked improvement, and 75 per cent. were completely cured. Surgical treatment should be resorted to under the following circumstances:—1. When there are repeated hæmorrhages, which make the patient anæmic. It depends on the nature of the individual case whether an operation should be performed or not where there has been only a simple profuse hæmorrhage, for it may be so

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abundant that surgical aid comes too late. On the other hand, patients often recover from the acute anæmia caused by a single hæmorrhage. 2. When long-continued medical treatment has proved ineffectual to relieve the pains gastro-enterostomy may be tried. 3. When there is perigastritis caused by adhesion of the stomach to other organs, especially when a subphrenic abscess has formed. 4. When there is perforation of the ulcer and an opening into the abdominal cavity. The chances of a perforated ulcer healing are of course very small. Professor von Leube has observed only two cases of recovery under such circumstances. The operation must be performed within ten hours after the perforation. As to prophylactic laparotomy, he considered that there were no prodromal symptoms of impending perforation sufficiently characteristic to be of practical utility. In conclusion, Professor von Leube said that although in the great majority of cases medical treatment unaided by surgery was sufficient, there were nevertheless many patients who would only be saved by the coöperation of the physician and the surgeon.—In the ensuing discussion Professor Miculicz, of Breslau, said that the statistical results of other practitioners were not as good as those of Professor von Leube, and relapses were found to be rather frequent. On the other hand, surgical treatment is now so successful that of the patients operated on only 10 per cent. died. He had cured cases by operation although the symptoms had developed seven and nine years previously. Three methods of operating for gastric ulcer must be considered: (1) Resection, which is the most dangerous method and not very satisfactory, but must be performed when the case is considered to be carcinoma; (2) pyloroplasty, which is a more simple method, but can only be carried out when the gastric and duodenal walls are soft; and (3) gastro-enterostomy, which also gives good results, but sometimes the contents of the stomach penetrate into the ascending limb of the jejunum, and Professor Miculicz therefore recommended that a second anastomosis should be made between the two loops. Speaking of the indications, he said that in cases of adhesion of the stomach to adjacent viscera an operation is necessary to relieve the pain and the adhesions must be separated. In cases of perforation immediate laparotomy is essential. When the patient cannot take an anæsthetic local anæsthesia must be used. With regard to the other indications, Professor Miculicz agreed with Professor von Leube. Operation is, therefore, indicated—(1) when the patient's life is endangered by hæmorrhage, perforation, and inanition; and (2) when prolonged medical treatment has proved useless.

The Successful Treatment of a Wound of the Heart.

Dr. Rehn, of Frankfort, opened a discussion on Wounds of the Heart and their Treatment. After pointing out that penetrating wounds of the heart are rare, and that large lesions cause immediate death while small ones may heal, he went on to state that auricular wounds are more dangerous than ventricular owing to the thinness of the auricular wall. Hæmorrhage, however, is apt to be more profuse when the right ventricle is damaged, and the prognosis in any case depends practically upon the quantity of hæmorrhage. The diagnosis of the site of lesion is difficult to make, but in doubtful cases cautious probing must be performed. The main indication of treatment, Dr. Rehn said, was to keep the patient as quiet as possible, but severe dyspnœa generally precludes this. Venesection has been recommended to check the hæmorrhage. To remove the blood from the pericardial cavity it has been recommended to puncture the pericardium; but as there is risk of inflicting a new lesion it is better to make a long incision and discover the seat of the lesion. Italian surgeons were the first to suggest sutures in these cases, and Professor Rehn has lately been so fortunate as to meet with a case of wound of the heart where by suturing he was able to save his patient. A young man was brought to hospital, having received an injury from a knife in the left side of the chest. There was much dyspnœa and hæmorrhage. As the pericardium became dilated the patient's state became worse and worse. The wound in the fourth intercostal space was then opened up, and after resection of the fifth rib the pericardium was incised. A wound one and a half centimetres in length was then found in the right ventricle. This Dr. Rehn closed by three sutures and packed the pericardial cavity with iodoform gauze. After the operation the pulse and respiration immediately improved, and although the patient's convalescence was retarded by suppurative pleuritis he made in the end a complete recovery.

The Value of X Rays in Surgery.

Dr. Kümmel, chief surgeon to the Hamburg General Hospital, read a paper on the Value of X Rays in Surgery. He said that by the technical improvements in the Roentgen apparatus the x rays have become indispensable to the surgeon. He had made more than 1500 skiagrams, about 500 of which he showed to the meeting. Among these, the most remarkable were those showing Murphy's buttons in the intestines and vesical and renal calculi. Biliary calculi could not be taken by the rays. In almost every skiagram of fracture exhibited the position of the bones was taken before and after setting, proving that in doubtful cases the diagnosis could be verified in this way, while in cases apparently perfectly reduced displacement often was obvious. In fact, however good the position appeared there was almost invariably some displacement. In all diseases of the bones, syphilitic or tuberculous, in osteo-myelitic affections, and in osseous tumours, the x rays had proved useful. In arterio-sclerosis the sclerosed arteries became visible as black stripes on the skiagram. With regard to the therapeutic influence of the rays Dr. Kümmel stated that lupus was improved by an exposure to them of about one hour twice a day. Dr. Hoffa (Würzburg), Dr. Joachimsthal (Berlin), Dr. Oberst (Halle), and Dr. Stachow, of the Army Medical Staff, confirmed Dr. Kümmel's views, and also showed large collections of skiagrams, which will be placed in the library of the Surgical Association.

The Operative Treatment of Prostatic Enlargement.

Professor Helferich (Greifswald) stated that Dr. White, of Philadelphia, was the first to perform castration for this condition, but that the views of surgeons greatly differed as to the usefulness of the proceeding. No decrease of the prostatic gland in respect of the cases after this operation had been noted by one observer, while another reported improvement in about 80 per cent. As an alternative to castration the resection of the vas deferens had been suggested by Dr. Kohler, whose results showed thirty-six cases cured, fifteen improved, and three deaths after this procedure, while thirteen cases showed no alteration. Dr. Bottini's method of cauterisation of the gland and Dr. Bier's plan of ligaturing the common iliac artery gave comparable results. It must, however, not be forgotten, said Professor Helferich, that the condition is liable to spontaneous improvement, while regular catheterisation will relieve the pain. But in grave cases operative treatment cannot be dispensed with.

Dr. Freudenberg (Berlin) then described Bottini's treatment of prostatic enlargement by the galvano-cautery. He said that narcosis was not necessary, an injection of cocaine being sufficient. Nor need the patient be confined to bed; he might get up immediately after the operation, as neither fever nor hæmorrhage occurred. Bottini had successfully treated 43 cases out of 57, and no relapses had occurred. Dr. Freudenberg himself has operated on 5 men, of ages ranging from sixty-three to eighty-one years. Two of them were able to urinate spontaneously three and four hours afterwards respectively.

Professor Socin (Basle) said that in cases complicated by grave cystitis an operation might be tried, but the prostatic gland should then be removed. The value of the "sexual" operations was very doubtful.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Northern Hospital.

THE relief to the electoral committee of the Northern Hospital at the termination of the contest for the honorary physiciancy to the hospital, vacant by the resignation of Dr. James Barr, must have been great indeed, as that body had become fairly bewildered as to the merits of the candidates owing to the persistent attentions and persuasive eloquence of the friends of the latter. There were several candidates for the post, all of whom were highly qualified. The contest, however, lay between Dr. Thomas Bushby and Dr. Charles Macalister, the former being elected by a majority of 9 votes out of an electorate present of 81 members.

Liverpool Medical Club.

The first annual report of the directors presented to the

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second ordinary general meeting of the club must be considered satisfactory. An analysis of the profit and loss account and balance-sheet is very encouraging when the difficulties inevitable in organising a new concern are considered; upon the whole, therefore, the directors of the club hope that with continued good management and an increased membership a prosperous future is assured for the club. During the year a debating society has been formed and seven very interesting and instructive meetings have been held. The entertainment committee arranged a number of smoking concerts, billiard handicaps, &c., during the season, which have been a great success and the means of bringing the members together socially. The membership of the club now amounts to 112. Dr. Richard Caton, physician to the Royal Infirmary, has been elected President for the ensuing year, succeeding the genial and popular Mr. Mitchell Banks.

Bequests to Local Charities.

The late Mrs. Mary Elizabeth Fishwick, of Liverpool, has bequeathed the following amounts to local charities:—£500 to the Liverpool Hospital for Consumption, £100 to the Liverpool Royal Infirmary, and £100 each to the Eye and Ear Infirmary, Myrtle-street, and to the Liverpool Infirmary for Children. She also made bequests to non-medical charities.

Health of Liverpool.

The medical officer reported that 375 births were registered in the city during the week ending April 24th, representing a birth-rate equal to 30·2 annually per 1000 of the population. The deaths registered during the same period amounted to 304, making a rate of mortality equal to 24·5 annually per 1000 of the population. Of the deaths, 67 occurred in public institutions devoted to the treatment of the sick. The residences of 9 who died in these institutions were outside the city. Of the total deaths, 124 were of children below five years of age; of these, 82 were infants under one year. Among the causes of death, diseases of the lungs accounted for 70 deaths, tuberculous diseases (including phthisis) for 43, diseases of uncertain seat for 7, of the brain, &c., for 38, of the heart, &c., for 23, and of the stomach, liver, &c., for 19. Under the various other classes of disease there were registered 44 deaths. A report of the medical officer of health as to the result of the recently established inspection of Canadian and other horses was submitted to the health committee. The members of the committee said the inspection had been very satisfactory, and the condition of horses now imported had very much improved.

St. Helens Health Committee.

The health committee of the St. Helens corporation have resolved to extend the sanitary depôt at Boundary-road by the erection of a six-cell destructor, &c., at a cost of £8000, and to take in a large plot of land which adjoins the depôt.

Liverpool Anti-vivisectionists.

The Liverpool anti-vivisectionists recently held a meeting in the hall of the Young Men's Christian Association in Mount-pleasant. The following is a specimen of the intemperate language indulged in by one of speakers, a well-known Liverpool public man: "The other day, sir, I was in a very famous university city, or in the suburbs of it, and there drew up a carriage in which was seated a gentleman. I was immensely struck by his countenance and his expression. I said to myself, Who can that man be? He is a remarkable man, a clever man, but if I ever saw a face that seemed to have come out of hell, that is the face; and I was told immediately afterwards that this was a gentleman of renowned fame for his great skill in the practice of vivisection." The gentleman alluded to in the above statement is the reverse of this description and benevolent-looking to a degree; but such are the weapons employed by these unreasonable people.

The Diamond Jubilee Nurses.

The subscriptions towards the amount required for extending the district nursing staff in commemoration of the Queen's Diamond Jubilee, alluded to in THE LANCET of April 24th, now exceeds £10,000.

May 4th.

HOSPITAL REFORM ASSOCIATION.—A meeting of the medical profession and others interested in hospitals will be held in Manchester on May 24th, at 4 P.M.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Health of Newcastle.

THE twenty-fourth annual report of Dr. H. E. Armstrong, the medical officer of health of Newcastle-upon-Tyne, states that the death-rate of the city from all causes for the year 1896 was 18 4 per 1000 population. The number of marriages was 132 more than in the previous year. There were 43 fewer deaths from zymotic diseases. The sanitary authority of the city last autumn added measles and whooping-cough to the list of notifiable diseases, and resolved to admit domestic servants to the hospital for infectious diseases free of charge.

The Newcastle Hospital for Sick Children.

The mayor and corporation, accompanied by the President and members of the College of Medicine, and the Principal, professors, and lecturers of the College of Science, wearing their robes, attended Divine service in Blackett-street Presbyterian Church, Newcastle, on Sunday last, when a sermon was preached in aid of the funds of the Hospital for Sick Children. This is the first time that the Colleges have attended officially any church service except that at the Cathedral.

"The Queen's Shilling."

Under the above heading the *Newcastle Daily Chronicle* invites its readers to subscribe 1*s.* each towards the building fund of the Royal Infirmary, £13,000 of the £100,000 proposed to be raised being still wanting. The *Chronicle* undertakes to collect the shillings and to acknowledge each donation in its columns. The best thanks of the community are due for this kindly action of the proprietor of the paper.

Cyclists and the Diamond Jubilee.

The National Cycle and Motor Car Insurance Company, 33, King William-street, London, E.C., offer to contribute the odd shilling of their guinea premiums to the Newcastle Diamond Jubilee Fund for the rebuilding of the Royal Infirmary. This gift is to be a permanent donation, not confined to the present year; and the shilling is to come from all the policies, not only in this district, but all over the United Kingdom.

Newcastle, May 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow University.

MISS M. MACLEAN, M.B., C.M. Glasg., has been appointed Demonstrator of Anatomy in Queen Margaret College, and Miss D. Clark Demonstrator in the botanical laboratory. Mr. W. H. Lang, B.Sc, is the new Lecture on Botany in the College, succeeding Mr. J. C. Willis, M.A, who some months ago was appointed Director of the Botanic Gardens at Colombo. — The class of practical pathology in the Pathological Institute at the Western Infirmary is being conducted by Mr. L. R. Sutherland, M.B. Glasg., Professor Joseph Coats being absent on sick leave. It is satisfactory to know that the latest reports concerning Professor Coats are decidedly favourable, and that his enforced rest is likely before long to lead to the complete restoration of his health.—At a meeting of the Natural History Society, held on the 29th ult., Professor F. O. Bower, D Sc., delivered a lecture on Fixity of Position as a Factor in Plant Life.—The statistics of the preliminary examinations issued by the Joint Board of Examiners show that of 488 candidates in the arts and science faculties in the University of Glasgow 216 satisfied the examiners, and of 81 entrants in the faculty of medicine 37 only passed.

Handsome Bequests.

By the will of the late Miss Martha Brown of Waterhaughs a sum of £97,000 is conveyed to trustees for distribution among various charitable and educational institutions. The West of Scotland Home for Incurables receives £21,000, and a similar sum goes to the corresponding institution in Edinburgh; the Universities of Edinburgh and Glasgow, the Royal Infirmary of Edinburgh, and the Royal Infirmary of Glasgow are each allotted £5000; the Sick Children's Hospital, Edinburgh, and the Western and Victoria Infirmaries,

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Glasgow, receive £1000 each; and smaller sums are donated to the special hospitals and nursing institutions.

The Proposed West of Scotland Consumptive Hospital.

A further appeal has been made on behalf of this scheme. Donations of £500 and £250 are acknowledged and suggestions for further contributions are made. One of these indicates the necessity for £3000 to build a dispensary in Glasgow, another is for £300 "to provide a sun bath." The objection to the spending of £3000 in the erection of a dispensary on the ground that such an institution will simply come into competition with existing dispensaries and allied organisations has already been indicated in THE LANCET, and a recent correspondence published in the local press shows that this objection at least commands some sympathy. Meanwhile the medical committee understood to be supervising the arrangements makes no sign. The profession and the public generally naturally expect some guidance from the committee, but since Professor Gairdner's letter to THE LANCET announcing the fact that the committee had so far not been consulted silence has reigned supreme. If the committee is still in existence it is surely high time that it either publicly supported the scheme as published or divested itself of further responsibility.

Eye Infirmary, Paisley.

It is announced that in connexion with the Diamond Jubilee, Provost Mackenzie has intimated his intention to present to the town an infirmary to be devoted to diseases of the eye.

May 4th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Children's Hospital, Temple-street, Dublin.

IN aid of the funds of this hospital a fête arranged on a very large scale was formally opened by Her Excellency Lady Cadogan on the 4th inst. There was a very large attendance of the friends and patrons of the hospital and of the general public.

The Mater Misericordiæ Hospital.

The complimentary dinner given by the medical board of the hospital to its football team took place at the Hôtel Métropole, Dublin, on May 3rd. The members of the medical staff, both visiting and resident, were present and numbered, with their guests, somewhat over sixty.

Outbreak of Typhoid Fever.

At the meeting of the City Council, held on May 1st, it was reported that during the previous four months the medical practitioners of Belfast had notified 416 cases of zymotic disease, and of these 289 were typhoid fever, and as Dr. O'Neill (one of the city councillors) pointed out, if the March cases are added, 641 persons had been notified as suffering from this disease during the two months of March and April. The outbreak is principally among young people. It is a question whether there is any real increase in the number of cases, the apparent largeness of the numbers being due to the more correct information obtained by the working of the Notification of Infectious Diseases Act adopted recently in Belfast. The latest returns show that the death-rate of Belfast is 27·9 per 1000, 9·5 for chest affections and 4·6 for zymotic diseases. Numerous suggestions as to the prevention of typhoid fever were brought forward at the meeting of the council, such as boiling the milk and water, &c.; and a conference of all the medical officers was held some time since in reference to this most important question, but the result of the meeting has not yet been made public.

May 4th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Treatment of Locomotor Ataxy.

AT the Academy of Medicine a communication was recently made by MM. Gilles de la Tourette and Chipault upon the treatment of locomotor ataxy by stretching of the spinal cord which created much public excitement, being reproduced in the lay journals. These observers, having opened the spinal canal in the dead body and exposed the cord, proved that whilst suspension only results in a trifling elongation forcible curvature of the back produces a very real increase in length, amounting to more than a centimetre. They then applied this treatment of incurvation to forty ataxic subjects. They placed the patient in a sitting position on a table and drew his back forwards until his chin nearly touched his knees by means of a cord passing through a pulley-block fixed to the table and attached to a kind of corset fitting tightly to the shoulders and back of the subject. A dynamometer measured the degree of traction exercised. This treatment was afterwards applied by M. Gilles de la Tourette to forty-seven ataxic patients, twenty-two of whom are said to have experienced a cessation of almost all their symptoms—lightning crises and vesical paralysis among others—and fifteen others to have found benefit from the treatment, while ten remained unaltered. At a subsequent meeting of the Academy M. Blondel made a communication which somewhat dashed the enthusiasm with which the discovery of MM. Gilles de la Tourette and Chipault had been received. He mentioned that he had already published some two years ago a note on the treatment of locomotor ataxy by means of forcible incurvation of the spinal column, and that he had obtained remarkable success in one case where lightning pains had been present, while Erb, in a treatise on ataxia, had pointed out the value of the method. M. Blondel had employed the treatment in five cases and met with one success. He believed that it would succeed chiefly in cases of early disease of the posterior columns where the sclerosis was not too hard to yield to elongation, but that in old cases of sclerosis the effects would be *nil*. He pointed out that the anatomical fact that the cord was lengthened by the process of incurvation had been demonstrated on the dead subject by Bonuzzi.

Surgical Interference in Suppurative Peritonitis.

At the *Société de Chirurgie* a long discussion has taken place upon the rules which should guide surgical interference in cases of suppurative peritonitis. M. Jalaquier had under observation certain cases, one of which healed spontaneously by discharge of a collection of pus through the umbilicus, while of four others one patient was operated upon and died. The virulent agent was the pneumococcus. M. Jalaquier, in reporting upon these cases, objected to the employment of solutions of corrosive sublimate for washing out the peritoneal cavity, preferring to use saline solution. M. Gerard Marchand thought that many cases of peritonitis caused by the pneumococcus assumed the encysted form and that the limitations by adhesions explained the numerous spontaneous cures. The surgeon, he considered, ought not to forget the action of these adhesions, but should make use of them during operation as a ready-formed barrier against the spread of the mischief. It is particularly important to operate before symptoms of toxæmia appear. Pain, distension, vomiting, and scanty urine made a group of symptoms authorising interference. The incision should be made in the middle line. The pus being evacuated and the appendix resected if necessary the peritoneal cavity should be asepticised and drained and all shreds of lymph should be removed. Bleeding points should be compressed immediately, and, finally, iodoform gauze should be loosely packed into the cavity. One drainage tube is sufficient. MM. Rontier Nélaton and Quénu took part in the discussion and laid stress on the difficulty of diagnosis.

A Curious Outbreak of Typhoid Fever.

Professor Laveran has published accounts of several cases of typhoid fever occurring in a military dépôt among the non-commissioned officers. The private soldiers escaped infection and the water used at the barracks was of irreproachable quality. Microscopic examination of the food served to the non-commissioned officers revealed the presence of the bacillus typhosus in abundance on the salad, and the ova of the tænia solium were also discovered on these too generously manured leaves. M. Laveran pointed out, in conclusion, that it was impossible to be too careful in the preparation of uncooked garden stuff for the table, and that this precaution applied especially to strawberries.

Poisoned Fish.

A barge freighted with sulphate of copper has "turned turtle" in the Seine, in the basin of La Villette. Pumps were

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got to work at once, but the water in the basin became rapidly saturated and a large quantity of poisoned fish soon made their appearance on the surface of the water. Only the strenuous intervention of the police prevented many of the populace from poisoning themselves by carrying away and eating the fish.

The Closing of Two Cemeteries at Versailles.

Two cemeteries have been closed at Versailles, the clayey soil being found quite unfitted for the reception of bodies. Not only were the coffins on inspection found practically unaltered after six years' burial, but the enclosed corpses had for the most part escaped putrefaction.

May 3rd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

International Congress of the Red Cross.

IN time to catch the members of the International Congress of Medicine and Surgery on their return from Moscow, the sixth International Congress of the Red Cross is organised to meet at Vienna. This, it is expected, will be the most important congress of the series. All the Powers, great and small, as signatories of the Geneva Convention, will be represented at its sittings. Italy, who claims to have conceived and planned, if not actually to have "put on wheels," the entire movement, will send the President of her own organisation, the Count Taverna, assisted by the Commendatore Becchi, Counsellor of State, and Dr. Gaetano Mazzoni, Professor of Clinical Surgery in the Roman School. She will also contribute her experience in the Abyssinian campaigns, rich in suggestions for the still further improvement of the ambulance service in mountainous countries. Rome, it will be remembered, from the full reports furnished by THE LANCET[1] at the time, was the scene of the last (the fifth) International Congress of the Red Cross, and it will also be within the memory of its readers from similar reports in these columns that at the International Congress of Medicine, held two years later in Rome, a distinctive feature was the exhibition of Red Cross *matériel*, much of which was tested sooner than was anticipated in the disastrous campaigns aforesaid. These, however, are not the only military operations on a grand scale which have occurred since the rising of the last International Congress. There has been the war between China and Japan, in which the latter (and victorious) belligerent vindicated its right to rank with the civilised Powers by its effective adoption of Red Cross organisation and methods—a step which it followed up by delegating M. Nagao Ariga, its special commissioner, to Geneva, by way of still further putting itself in touch with Western Europe as to the means for alleviating the miseries of war. In the day now passing, moreover, we have the Græco-Turkish campaign and its lessons in Red-Cross intervention, and who knows what further complications may not increase the war area and put the resources of the organisation still further to the test? In the thirty-three years ending July, 1896, there have been on an average sixteen nations engaged in hostilities every twelve months! These statistics were put *en évidence* last year in the interesting brochure illustrating the magnificent Red Cross chart on view at the Geneva Exhibition, and while they dealt with "little wars," such as the Duke of Wellington used to deplore, the lessons they taught as to the necessity for increased efficacy on the part of the Red Cross are driven still further home by the sanguinary outbreaks in the East, notably the Armenian and Cretan butcheries, culminating in the severe fighting on the Thessalian frontier. The programme for the "Conférence Générale des Sociétés de la Croix Rouge" (to give it its official name), which meets next autumn in Vienna, will, it is probable, be unprecedentedly full, even if it does not witness accessions from a quarter unrecognised at preceding Congresses. That quarter, as was shown in a leading article in THE LANCET,[2] is the civilian world, in which calamities on an increasingly extended scale are coincident with the development of industries and the aggregation of masses of workers in ever-augmenting numbers. Proposals have been formulated, principally by the "Congrès International de Samaritains" originating at Vienna, to utilise the resources of the Red Cross for the disastrous mining accidents, railway casualties, conflagrations, to say nothing of floods, famines, and even pestilences, all too characteristic of the nineteenth century, and so to provide for the twentieth a prompter and more effective system of relief than has hitherto been available. These proposals, probably to be renewed at the approaching Congress, are not (as, indeed, THE LANCET showed) regarded favourably at Geneva, and the argument that their introduction would encumber a programme already ample enough for the time may be utilised to shelve them altogether. Still, there is force enough in these said proposals to impress public opinion, and even to make converts to their reasonableness among the nationalities represented at the Congress; indeed, I can vouch for the fact that Italy is prepared to go a considerable way at least in entertaining them and in passing them through the alembic of discussion. If an alliance could be effected by the "civilian" with the "combatant" organisation, and a "grande armée" mobilised for the relief of suffering inflicted on an extended scale, their twofold resources could be placed at the service of either branch, according as circumstances required—the reserves of one being put at the disposal of the other and *vice versâ*. For one thing, the carrying out of the idea would demand much assistance from the medical and surgical profession, and might, as, indeed, THE LANCET indicated, open an outlet for its surplus hands. As I close this letter I learn from a report just handed to me of the General Assembly of the Italian Red Cross (president, Count Taverna) that in spite of the heavy drain of the Abyssinian war the organisation has a balance of 6,000,000 lire, including the value of its *matériel*. It has in the kingdom 360 sub-committees and 109 ladies' sections, with a total of 25,000 members. It possesses 82 transportable hospitals capable of admitting and treating 7000 wounded, and served by 1000 medical officers, pharmacists, and administrative hands, with 2500 men-nurses and helps.

May 2nd.

[1] THE LANCET, April 16th and 30th, and May 7th, 1892.
[2] THE LANCET, Students' Number, Sept. 2nd, 1893, pp. 536-37.

MONTREAL.

(FROM OUR OWN CORRESPONDENT.)

Golden Wedding Celebration.

AN interesting occasion, a few days ago, was the golden wedding anniversary of Sir J. William and Lady Dawson. Mr. Dawson (as he then was) was appointed Principal of McGill University over forty years ago, when it was in a very weak state, the medical faculty being the only section that was at all vigorous. The wonderful growth of the University in wealth and extent is very properly associated with Sir William Dawson's connexion with it. On the occasion of the celebration congratulations poured in upon him and his esteemed lady from graduates from all parts of the world. The various faculties presented costly and beautiful gifts, with addresses expressing the highest sentiments of respect and esteem for the ex-Principal. Sir William Dawson is now enjoying the *otium cum dignitate* of Emeritus Principal of McGill University, and devoting his time to authorship.

Medical Convocation.

At the convocation of McGill University just held seventy-six gentlemen received the degree of M.D. The number of graduates in the class of the first year of Mr. Dawson's Principalship was nine. This is the last year in which medical "capping" will take place in April. The course now consists of four anni medici of nine months, and graduation must necessarily take place at a later date. The immense attendance at meetings of convocation of the medical faculty has quite outgrown the capacity of the old hall of the College, and these meetings have been held "down town". This year's meeting was held in the largest playhouse, which was quite filled. Sir Donald Smith, Chancellor, presided. A most interesting announcement was made during the meeting, that a brother of a deceased professor of physiology had added to his previous benefactions £5000 for a Drake Physiology Memorial. Laval University (French Catholic) in its medical faculty has just graduated thirty-five men; Bishop's College, eight persons, two being women (this is the only medical school which admits women); the Faculty

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of Comparative Medicine, McGill, thirteen; the College of Dentistry twelve; and the College of Pharmacy twelve.

The Diamond Jubilee.

Various schemes are being discussed for the great celebration here. Many plans of an attractive character have been sketched. The matters of medical interest are a Hospital Jubilee Fund and a Victorian Order of Nurses. This scheme is earnestly and vigorously supported by Lady Aberdeen, the wife of our popular Governor-General. It is not local, but is to be for the whole Dominion of Canada. The particulars have not been given to the public, and, indeed, may not yet be settled in the minds of the proposers. Much correspondence has already appeared in the newspapers, generally favourable to a scheme of this kind, as a permanent memorial of the great event.

British Medical Association.

The meeting of the British Medical Association will be the great medical event of the year. The entire profession is filled with pleasant anticipations of the visit of the many leaders in various departments of medical work who will attend. The Montreal General, the senior hospital, has been receiving attention, extension, and alterations, and will be made as attractive as possible to the medical visitors. The splendid Victoria Hospital will appear at its best. The various committees for the meeting have done an immense amount of work. The committee on invitations has been rather surprised at the number of possible American visitors to the meeting, and a note of warning has been uttered that this is not a pan-medical congress. Some New York journals, fearing the effect of the Montreal meeting on the Philadelphia meeting of the American Medical Association, have flatly stated that they hope no American physicians will attend the British Medical Association unless as the invited representatives of some society or association. There is every reason to believe the meeting will be a great success, although the early anticipations of the large numbers who would attend from England and Europe have been modified somewhat. The committee on exhibits has had a curious experience. A large and excellent hall, the Victoria Skating Rink, was secured and the floor-space laid out in an attractive lithographic plan, and high prices were asked for space, on the supposition that exhibitors would be tumbling over one another in their anxiety to secure places. As, however, there has been no hysterical clamour for space the prices have been brought down. The contractor for the handbook has been disappointed also in the advertising patronage he has been able to secure. This has caused delay, but the book will be issued all the same, and probably during the present month.

Enterectomy and Gastrostomy.

Dr. F. J. Shepherd showed a patient, at a recent meeting of the Medico-Chirurgical Society, an adult male, from whom he had Removed Eight Feet of Small Intestine. The case was one of benignant tumour of the abdomen with extensive adhesions. The patient was in excellent condition.—Mr. Kirkpatrick showed a young woman on whom he had operated for Gastric Ulcer. The patient had been seized while at work with a violent pain in the epigastrium, and was removed to the Montreal General Hospital. Although there was no history of gastric trouble the localised tenderness and suddenness of the attack led to the diagnosis of a ruptured gastric ulcer, and gastrostomy was performed at once. A rupture of the size of a threepenny-piece was found on the anterior surface of the stomach, and the contents of the viscus had escaped. After secure suturing an opening for drainage was made in the abdominal wall lower down, and from this a pint of fluid escaped. The patient made an excellent recovery and left the hospital four weeks after the accident.

April 17th.

SAD DEATH OF A MEDICAL MAN.—A sad death occurred at Uckfield on Sunday last as the result of a bicycle accident. Dr. A. J. Richardson, assistant physician to the Sussex County Hospital, was thrown from his bicycle on Friday, April 23rd, and received injuries causing concussion of the brain and severe lacerated wounds of the face. Until the following Thursday he was progressing favourably, but at that date symptoms of tetanus manifested themselves, and he died at midday on Sunday.

Medical News.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the April sittings of the Conjoint Board held in Glasgow the following candidates passed their respective examinations, those marked with an asterisk (*) passing with distinction:—

First Examination, Five Years' Course.—*John Allan, Glasgow; George Russell Jarvie, Cambuslang; Archibald Buchanan Laidlaw, Glasgow; John Kean, Newry; Frederick C. Willmott, South Africa; John William Dougall, Halifax, N.S.; John Arthur Doyle, Kilkenny; William A. Cole, Lagos, West Africa; John Stewart, Glasgow; William Turner, Glasgow; Robert A. Hamilton, Campbeltown; James S. Colquhoun, Durham; James N. M'Morris, Newfoundland; and David Fyfe, Glasgow.

First Examination, Four Years' Course.—William M. M. Jackson, Brighton; John Robertson, Aberfeldy; Dhanaindranatha Mittra, Bengal; Thomas F. Blake, Andover; and Thomas Marshall Metcalfe, Liverpool.

Second Examination, Five Years' Course.—Duncan M. Macgregor, Oban; Thomas Blane Adam, Glasgow; David Coffey, Ballinahinch; *Joseph Fulton, county Antrim; John George Grant, London; George F. Stoney, Tipperary; Thomas R. W. Atkins, Cork; Lionel R. Popham, Bantry; George Evans, county Londonderry; Alfred Lionel Johnston, Belper; David Scott Russell, Glasgow; and George B. M'Kendrick Overtown, Wishaw.

Second Examination, Four Years' Course.—Louise Fox, India; Richard Brodie, Inverness; Robert J. Morgan, county Antrim; Andrew Dougall, Glasgow; Lilian Edith Sykes, Calcutta; David R. Edwards, Carmarthen; Patrick William M'Hugh, Enniskillen; Alfred B. S. Powell, Kingston-on-Thames; Charles Abbott, Leeds; Daniel Patrick G. O'Sullivan, Cork; Reginald Cecil M. Hoare, Aston, Birmingham; and Frank Hart B. Gaden, Queensland, Australia.

Third Examination.—*Richard Staward, Northfield; Edward H. Harrison, Belfast; William Carey, Haywood; Abraham J. B. Albertyn, Cape Colony; Henry A. Marquis, Lancashire; Robert Mackie, Glasgow; and William Hutton, Greenock.

Final Examination, and admitted Licentiates of the three co-operating authorities.—Charles Frederick Spinks, Maryhill; George Harper Pearce, Redcar; William B. K. Richards, Ross, Herefordshire; Edmund P. Hewitt, Edinburgh; Albert Ernest Blades, Derby; Reginald P. H. Whitmarsh, Brighton; Benjamin Wade, Pudsey; Alexander Kennedy, Ayr; Jane Boyes, Glasgow; Allan Edgar Hawkins, Portobello; Alexandre da Fonceca Dias, Portobello; John William Mackay, Trinity; and James Hamilton Stuart, Edinburgh.

UNIVERSITY OF CAMBRIDGE.—Third M.B. and B.C. Examination, Part I. (Surgery and Midwifery). The following have been examined and approved:

Allfrey, B.A., Trinity; R. H. Bell, B.A., Trinity; Coleman, B.A., St. John's; A. W. Daniel, B.A., Emmanuel; Deller, B.A., Trinity; Forbes, B.A., Christ's; Grey, B.A., Trinity; Gregory, B.A., St. John's; Harrison, B.A., Magdalen; Heilborn, B.A., Caius; Irving, B.A., Caius; Jephcott, B.A., Caius; Lindsay, B.A., Sidney; W. F. Lloyd, B.A., Clare; Lowe, B.A., Jesus; Mathias, M.A., Christ's; E. A. C. Matthews, B.A., Trinity; H. D. O'Sullivan, B.A., Emmanuel; Prest, B.A., St. John's; Roderick, B.A., Emmanuel; Rowland, B.A., Downing; B. H. Slater, B.A., Trinity; C. White, B.A., Christ's; E. A. Wilson, B.A., Caius; W. R. Wilson, Corpus; and Yeld, B.A., Trinity.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—At the Convocation held on April 24th the following degrees were conferred:—

Doctor in Medicine.—James Arnott, M.B., B.S. Durh.; Edward James Brewis, M.B., B.S. Durh.; Henry Fawcett, M.B., B.S. Durh.; Charles Gilbert Burrington Kempe, M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond.; Cuthbert Umfreville Laws, M.B. Durh., M.R.C.S. Eng.; William Martin, M.A., M.B., M.S. Durh.; William Ernest Peacock, M.B., B.S. Durh.; William Harland Peake, M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond.; James Atkin Henton White, M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond., F.R.C.S. Edin.; and Francis James Worth, M.B., B.S. Durh., M.R.C.S. Eng., L.R.C.P. Lond.

Doctor in Medicine (practitioners of fifteen years' standing).—Joseph Hamilton Balfe, L.R.C.P. and S. Edin.; John Cahill, F.R.C.S. Eng.; Henry Clarke, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A.; Edward Cluneglas Davies, M.R.C.S. Eng., L.R.C.P. Lond.; Robert Hugh Hodgson, M.R.C.S. Eng., L.R.C.P. Edin.; Sydney Robert Lidiard, M.R.C.S. Eng., L.R.C.P. Edin.; and Francis Wm. Sutton, M.R.C.S. Eng., L.S.A.

Bachelor in Medicine.—John Charles Anderson, London Hospital; Mervyn Alexander Archdall, College of Medicine, Newcastle-upon-Tyne; John Joseph Foster, M.R.C.S. Eng., L.R.C.P. Lond., Guy's Hospital; Thomas Harold Gibbs, Alfred Phillips Lloyd, John Lowry, Daniel Wells Patterson, Albert Garthorne Widdowfield Pearson, and William Simpson, College of Medicine, Newcastle-upon-Tyne; Charles Seaver Smith, Mason College, Birmingham; Robert Alfred Wilson, College of Medicine, Newcastle-upon-Tyne; John Hutchinson Wood, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; and Thomas Woodman, College of Medicine, Newcastle-upon-Tyne.

Bachelor in Surgery.—Mervyn Alexander Archdall, Richard Henry Bellwood, M.B. Durh., Thomas Harold Gibbs, Wilfred Robert Kingdon, M.B. Durh., John Lowry, Daniel Wells Patterson, Albert Garthorne Widdowfield Pearson, and William Simpson, College of Medicine, Newcastle-upon-Tyne; Charles Seaver Smith, Mason College, Birmingham; Robert Alfred Wilson, College of Medicine,

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Newcastle-upon-Tyne; John Hutchinson Wood, St. Bartholomew's Hospital; and Thomas Woodman, College of Medicine, Newcastle-upon-Tyne.

Bachelor of Hygiene.—John Stratford Hall, M.B., B.S. Durh.; James Henry Hunter, M.D., B.S. Durh.; and Peter Robert Ingram, M.B., C.M. Aberd.

Diploma in Public Health.—Frederick Smith, L.K.Q.C.P., L.R.C.S. Irel.

MEDICAL MAGISTRATE.—Mr. Fred. J. T. Sawkins, M.B., Ch.M. Syd., medical superintendent of the Prince Alfred Hospital, Sydney, has been appointed a Justice of the Peace for New South Wales.

CHURCH SOCIETY FOR THE PROMOTION OF KINDNESS TO ANIMALS.—The Dean of Winchester presided at the fourth annual meeting of the Church Society for the Promotion of Kindness to Animals held recently, by permission of the Duke of Sutherland, at Stafford House. Letters of regret at inability to attend from fourteen English and three colonial bishops and from many others were laid upon the table. A resolution in favour of further legislation respecting slaughter-houses and an enactment whereby the title "domestic" in the Prevention of Cruelty Acts be made to include all animals placed in confinement was moved by Colonel Barrington Foote, seconded by the Rev. A. H. A. Smith, and carried. A resolution urging ladies to give up the wearing of feathers in cases where the procuring of them involved cruelty was proposed by Mrs. Lemon, hon. secretary of the Society for the Protection of Birds, seconded by General Lowry, C.B., and carried. A discussion on the muzzling of dogs ensued, and ultimately the following resolution was adopted: "That in the interest of animals the muzzling order should be extended to the whole of Great Britain and Ireland, accompanied by quarantine and subsequent registration." Votes of thanks to the Duke of Sutherland and the chairman closed the proceedings.

PRESENTATIONS TO MEDICAL MEN.—Mr. Conolly Norman, F.R.C.P., F.R.C.S. Irel., resident medical superintendent of the Richmond District Asylum, Dublin, at a largely-attended meeting of the staff, several governors, and medical friends, held in the dining-hall of the institution on April 27th, was presented with a beautiful illuminated address by the staff of the asylum, on the occasion of his resuming duty after a long illness. At the same time Mrs. Norman was the recipient of a present of silver as a small memento of the occasion.—Mr. Wm. Gardner, L.R.C.P. Lond., M.R.C.S. Eng., on leaving the Warwick County Asylum at Hatton recently, was the recipient of a handsome silver centre bowl and cigarette-case, the gift of the nurses and attendants. Dr. A. Miller, the medical superintendent, in making the presentation on behalf of the nursing staff, said that although Mr. Gardner had been amongst them only a short time, he had endeared himself to all by his kindliness of manner, and would take away with him the good wishes of all for his future welfare.—The members of the St. John Ambulance Classes at Brockhampton, Gloucestershire, have recently presented Mr. William Cox, M.R.C.S. Eng., M.S.A., of Winchcombe, with a silver revolving breakfast dish as a mark of appreciation of his services as honorary lecturer.

MUNICIPAL LODGING-HOUSES.—Two schemes have been submitted by the borough engineer to the corporation of Southampton for the proposed dwellings to be erected on the slum area which has just been cleared. The first scheme suggested a lodging-house for 297 nightly lodgers, no provision being made for families. The cost of this was put at £23,146 10*s*, or £1104 4*s*. 8*d*. annually. The second scheme allows for a lodging-house to cost £14,066, or £642 12*s*. yearly, and another block to be used as artisans' dwellings, and estimated to cost £7080 10*s*., or £323 19*s*. 8*d*. yearly. The second named lodging-house would take 216 nightly lodgers and the artisans' dwellings would be on the lines of those erected by the London, Manchester, and Sheffield Railway Company in St. John's Wood. The medical officer reporting on the matter recommended the second scheme. He said he had calculated that the first would mean an annual loss of £229 4*s*. 8*d*.; the second a yearly profit of £324—£274 on the lodging-house and £50 on the dwellings. He added: "I am bound to state that I cannot explain why the buildings do not show a greater profit, as buildings which have been erected at other places show large profits; the only conclusion I can come to is that the estimate for the buildings must have been made on a liberal scale." The second scheme has been practically adopted by the corporation.

GERMAN HOSPITAL, DALSTON.—The fifty-second annual dinner in aid of the German Hospital, Dalston, was held at the Hôtel Métropole on April 30th. The chair was taken by the Duke of Cambridge, the President of the hospital, who said that an addition of ten beds had been made to the accommodation provided for female patients, and that the children's wards had been much improved. Alterations in the sanitary and lighting arrangements were much required, and for these an outlay of £3000 would be necessary. The benefits of the hospital were by no means restricted to patients of German nationality, many of them, both in-patients and out-patients, being English residents in the vicinity. During the evening a selection of music was performed by Madame Marchesi, Herr Johannes Wolff, and others. The secretary announced a list of subscriptions and donations amounting to £3300, including £250 from the German Emperor, £50 from the Emperor of Austria, £100 from Baron Schröder, and £20 from the President.

THE NEWPORT (MON.) WATERWORKS.—Some uneasiness is felt at Newport with regard to the position of affairs at the new waterworks at Wentwood, which are situated about eight miles from the town. A considerable amount of opposition was originally raised to this site, but the corporation, acting upon expert opinion, let the contract to a Glasgow firm for £95,596. When the work was in progress, however, it was found that the puddle trench had to be sunk much deeper than was at first anticipated, and as this would involve a large additional outlay the corporation obtained fresh advice, the result being that one expert was averse to the work proceeding, while another recommended the corporation to proceed with the work themselves, advising that concrete be added to the reservoir to give additional security. This latter advice was followed, and the original contract was mutually cancelled. For about twelve months the work has been conducted by the corporation, the trench being sunk about 100 ft. A few days ago a test of the puddle trench was made, when it was found that the water oozed in an unsatisfactory manner. The waterworks committee, at their meeting on April 28th, acting upon expert advice, decided to have further tests made, when it is hoped that more satisfactory results will be obtained.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 21st, Mr. Chicken being in the chair.—Dr. Porter read a paper on the Relation of Dentistry to General Practice, in which he said that although many medical men consider they are in no way responsible for the care of their patients' teeth, they can often save patients from the effects of their own ignorance, as, for instance, by urging the necessity of a periodical examination of the teeth; this is especially true in regard to the teeth of children. The pathology of dental caries was briefly discussed to show that it was not in any sense of the word an inflammation. In considering the immunity of certain persons from dental caries, Dr. Black's recent experiments were quoted as showing that it did not necessarily depend upon the density or percentage of lime salts contained in the teeth. The preventive treatment of caries was shown to consist chiefly in a strict attention to oral hygiene and extraction in overcrowded mouths, constitutional remedies being of no direct practical value. General anæsthesia in dental operations was the next question discussed. It was pointed out that for the great majority of such operations nitrous oxide fulfilled all requirements. Should prolonged anæsthesia be necessary the preference was given to nitrous oxide followed by ether. The use of chloroform was strongly deprecated, statistics being given to show the high percentage of deaths from the use of chloroform in dental operations. In conclusion, the severe constitutional symptoms attending alveolar abscess were mentioned, their true cause often being overlooked.—Dr. Hunter showed a stereoscopic photograph of a patient suffering from an Aneurysm of the Femoral Artery.—Dr. Tresidder showed for Dr. Marshall a photograph of a hand showing Onychomycosis. The patient was a boy who had suffered from ringworm of the scalp for years.—Mr. Chicken showed a chart of the temperature of a patient suffering from Diphtheria. Various local applications were used at first with apparently no effect, but eucalyptus oil produced an immediate and marked lowering of the temperature. The pure oil was used and freely painted on the throat. Mr. Chicken also exhibited a skiagraph showing a Coin impacted in the Œsophagus.

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ROYAL INSTITUTION.—The annual meeting of the members of the Royal Institution of Great Britain was held on May 1st at the house of the institution in Albemarle-street, Sir James Crichton Browne, M.D. Edin., F.R.S., treasurer and vice-president, presiding. The annual report of the committee of visitors for the year 1896, testifying to the continued prosperity and efficient management of the institution, was read and adopted. The following gentlemen among others were unanimously elected as officers for the ensuing year :—President: The Duke of Northumberland. Treasurer: Sir James Crichton Browne. Secretary: Sir Frederick Bramwell, Bart. Managers: The Right Hon. A. J. Balfour, Lord Lister, Mr. William Crookes, Mr. Edward Frankland, Dr. Donald W. C. Hood, Mr. Victor Horsley, Mr. William Huggins, Dr. A. W. Rücker, and Sir Henry Thompson. Visitors: Dr. W. A. Brailey and Sir Francis Laking.

DIPHTHERIA IN LONDON.—The deaths registered as due to diphtheria in London last week were identical in number with those registered in the week preceding—namely, 40. In the four weeks ended on May 1st the registered deaths have been 23, 30, 40, and 40, the latter being 8 in excess of the corrected decennial average for the seventeenth week of the period 1887–96. Three of the 40 deaths were of infants under one year of age; 23 others occurred in children aged from one to five years; and 3 were of persons aged over twenty years. Lambeth was credited with 5 deaths, and Hammersmith, St. Pancras, Hackney, Shoreditch, and Poplar sanitary areas were respectively credited with 3 deaths. The admissions to hospitals in the week numbered 102, against 103, 83, and 96 in the preceding three weeks; and 767 patients suffering from diphtheria remained under treatment on May 1st. In the outer ring of London there were last week registered 9 deaths from the disease, of which 3 occurred in Brentford, 3 in Edmonton, and 2 in West Ham districts.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Plumbers' Registration Bill.

THE House of Commons, at its sitting on Friday, April 30th, gave a second reading to the Plumbers' Registration Bill and referred the measure for further consideration to the Grand Committee on Trade. The Bill provides for the examination and registration of plumbers, and while creating no monopoly seeks to prevent unqualified men representing themselves as registered.

Public Burial Grounds.

The House of Commons, on the motion of Mr. J. W. Sidebotham, has decided to appoint a Select Committee to inquire into the subject of burial grounds provided by local authorities, whether any alterations in the existing law are necessary, especially in regard to the consecration of the ground, the provision of chapels, the allocation of fees, and the appointment of chaplain.

Budget Figures.

As usual, in making his Budget statement the Chancellor of the Exchequer gave some account of the food and drink consumed by the people of these islands during the year. As testifying to the prosperity of the country he said that during the past year our people have smoked and drunk more, have earned more money and paid more Income Tax, have written more letters and have paid more Death Duties. The receipts from Customs last year were £21,254,000, or £498,000, representing 2·4 per cent., above the receipts of 1895–96, the estimated increase of the population in the year being 0·8 per cent. The two groups of coffee and dried fruit showed a trifling improvement, which was, he feared, not likely to be maintained owing to the war in the East. Foreign spirits produced a net revenue of £4,316,000 or £99,000 more than in 1895-96. This was due to an increase of £125,000 in the receipts from rum, which, said Sir Michael Hicks Beach, was a most unaccountable article. It had been a favourite Customs theory that the receipts from rum went up as the thermometer went down, but considering the temperature of last winter he did not think that that theory could be maintained. Tea had produced £3,800,000, or £54,000 more than in 1895–96; tobacco £11,013,000, or £265,000 more than in 1895–96; and wine £1,295,000, or £40,000 more than in 1895–96. This increase in wine, he said, was a novelty of recent years. He believed it was mainly due to the increased duty which was imposed some years ago by Mr. Goschen upon sparkling wines. The taste for what was erroneously called champagne was very largely increasing. Coming to Excise, the Chancellor of the Exchequer said that the receipts amounted to £27,460,000, or £690,000 more than in 1895-96. Beer showed an increase of £181,000 and spirits of £434,000.

Treatment of Habitual Offenders.

On Tuesday, May 4th, in the House of Commons, Sir Charles Cameron moved, and Dr. Farquharson seconded, a resolution in favour of the institution of adult reformatories for the special treatment of habitual offenders and misdemeanants on the lines recommended by the Departmental Committee which inquired into this subject in Scotland. Sir Charles Cameron addressed the House at some length in support of the resolution, but Dr. Farquharson had not got far with his speech when the attention of the Speaker was called to the fact that there were less than forty members present, and the House was counted out. Consequently no decision was arrived at on the subject.

Public Health (Scotland) Bill.

The Grand Committee on Law of the House of Commons began on Tuesday, May 4th, the consideration of the Public Health (Scotland Bill, and at the end of a long sitting had got through five of the sixty-three pages of amendments. There was some debate as to the qualifications to be required of medical officers in burghs, in which Sir William Priestley and Sir Charles Cameron took part. The upshot of the business was a compromise allowing men without a particular diploma to be appointed only with the express consent of the Local Government Board.

HOUSE OF COMMONS.

THURSDAY, APRIL 29TH.

Vivisection Certificates.

Mr. Weir asked the Secretary of State for the Home Department if he would state the number of persons in England, Scotland, Ireland, and Wales respectively licensed to practice vivisection, and how many of them held certificates to dispense with anæsthetics.—Sir Matthew White Ridley replied that the number of persons licensed at the present time in England was 145, in Scotland 52, and in Wales 1; the number holding the certificate dispensing with anæsthetics was in England 86, in Scotland 30, and in Wales none. The only figures in his possession as regards Ireland were those for 1895; in that year the number of licences was six, of whom one held a certificate dispensing with anæsthetics. In giving the hon. Member these figures he might remind him that the certificate in question was never given for operations involving serious pain, but only for such operations as inoculations or hypodermic injections.

Dog Muzzling.

Mr. A. Drucker asked the President of the Board of Agriculture whether he was aware of the fact that the majority of local bodies had not adopted the system of muzzling dogs recommended by the Departmental Committee, and also that many recognised authorities were against such compulsory muzzling; whether the said Committee took steps to ascertain the views of well-known breeders before making their report; and if, considering the fact that muzzling entailed serious inconvenience upon the owners of dogs and grave injury to the health of the animals, he would facilitate further inquiry.—Mr. Walter Long said, in reply, that he found it somewhat difficult to understand what his hon. friend meant by his first question, inasmuch as the Departmental Committee recommended that muzzling orders should be made in future, not by local, but by central authorities. He was aware, of course, that compulsory muzzling did not commend itself to everyone, but the question was fully discussed from all points of view before the Committee, who also took evidence from breeders. This being the case, he could not assent to the suggestion that further inquiry was necessary.

Death from a Bite of a Cat.

Mr. Duncombe asked the President of the Board of Agriculture whether his attention had been called to the death of Mr. John Hetch, sixty years of age, who died in the Queen's Hospital, Birmingham, from the effects of a cat's bite; whether he was aware that the medical evidence proved the death to be undoubtedly the result of rabies; and whether he was prepared, either by issuing a universal muzzling order for cats, or otherwise, to guard against the danger thus shown to exist.—Mr. Walter Long said that his attention had been called to this lamentable case, which seemed undoubtedly to have been one of hydrophobia due to the bite of a cat. He did not think that any direct action against rabies in cats was either practicable or necessary. The information in his possession went to show that the disease was usually conveyed from dogs to cats, not *vice versâ*, and, in fact, no cases under the latter head were known to him. If, therefore, they succeeded in their efforts to stamp out rabies amongst dogs in this country the disease was not at all likely to be kept alive by means of cats. He might, perhaps, add for the assurance of owners of cats that out of 1075 persons treated for hydrophobia at the Pasteur Institute during the first nine months of 1895 1039 had been bitten by dogs and only 36 by cats.

London Water Question.

Mr. Chaplin announced that the names of the members of the Royal Commission on the Water-Supply of London are as follows:—The Right Hon. Lord Llandaff, chairman; the Right Hon. J. W. Mellor, M.P., Sir John Dorington, M.P., Sir G. B. Bruce, C.B., Major-General A. de Courcy Scott, R.E., Mr. A. de Bock Porter, C.B., Mr. H. W. Cripps, Q.C., and Mr. Robert Lewis. The right hon. gentleman added that he hopes to bring in the promised Bill dealing with the water question as soon as he sees any prospect of making progress with it.—Mr. Broadhurst asked Mr. Chaplin whether he would consider the desirability of taking such action as might be necessary to prevent any one local authority monopolising the sources of water-supply from the great watershed of the country in order to ensure equal opportunity for all communities to avail themselves of a share in this great and natural necessity of the people.—Mr. Chaplin said he was not aware that any local authority was seeking to monopolise the sources of water-supply from the great watershed of the country, nor was he quite clear as to what watershed it was that the hon. Member referred to; but such a scheme as that suggested would require express Parliamentary powers, and he had no doubt that Parliament would give any such scheme very careful consideration before assenting to it, and would have due regard to the interests of communities other than those of the authority by whom it was proposed that the water-supply should be appropriated.

Mr. Woods asked Mr. Chaplin, in view of his promise to introduce a measure this session for the purpose of strengthening and improving the position of the water consumers of the metropolis, whether he was aware that the East London Waterworks Company had introduced a

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new condition in their latest demand notes—viz., that it will be unlawful to use water in the future for garden use except through meters; whether in his promised measure he would make provision protecting the consumers against this prohibition of the use of water in gardens; and if he was aware that the company in question had admitted that no reliable water meter had yet been invented.—Mr. Chaplin said he was informed by the company that, owing to the excessive use and waste of water by reason of garden hose and other apparatus being employed and frequently left running day and night, the directors had given notice for determining the arrangements entered into for garden supply. The fixed charge had been abolished, and the supply for garden purposes would be furnished through meters. He must defer any statement as to the provisions of the proposed measure until it was introduced by him. As regards the last question, the company stated that they were not aware that they had ever "admitted that no reliable meter has yet been invented." They also stated that it was physically impossible for more water to be registered than passed through the meter, although it might happen that the whole of the water passing through the meter was not registered.

FRIDAY, APRIL 30TH.

Vaccination Commission.

Mr. T. W. Russell, in reply to a question addressed to him by General Laurie, said he was informed that the appendices to the report of the Royal Commission on Vaccination were now in the printer's hands, and would be issued as soon as the lithographs accompanying them were ready.

Salt for the Navy.

Sir Charles Cameron asked the First Lord of the Admiralty whether it was the case that salt was not included among the condiments issued by the Admiralty for use on board ship; and whether, considering the importance of salt as a dietetic ingredient, and the fact that the use of salt meat as the principal form of food on board ship had long been superseded, he would consider the propriety of issuing salt as well as mustard and pepper for use on board Her Majesty's ships.—Mr. Macartney, Financial Secretary to the Admiralty, replying to the question, said that salt had hitherto been issued as a ration only in the case of boys in training ships and troops on passage where the "savings" system did not exist. His attention was only drawn to this after the Estimates for the current year were framed, but arrangements were now being made which would meet the views expressed in the hon. Member's question.

Plague on Board Ship.

Sir Walter Foster asked the President of the Local Government Board whether the Indian transport, *Dilwara*, which arrived at Southampton on April 6th, had had a fatal case of plague on board during her voyage; whether the local authorities found their sanitary powers sufficient to protect the local health interests; and whether this was the second occasion within the last few months on which the infection of plague on board ship had been successfully dealt with in this country without any resort to quarantine detention of vessels and persons.—Mr. T. W. Russell, replying for Mr. Chaplin, said that a fatal case of plague occurred on board the Indian transport, *Dilwara*, after the vessel had left Bombay. The body was buried at sea, and under the recent Venice Convention only the two actual attendants on the sick person were detained at Suez (Moses' Wells), the vessel at once passing through the canal in quarantine. On reaching Southampton on April 6th the *Dilwara* was met by a medical inspector of the Board, who acted in concert with the military and local port authorities. No further case had occurred, and under the excellent arrangements organised by the port medical officer all the 1235 persons on board were allowed to land, and the existing powers were found to be fully sufficient to protect all health interests concerned. The hon. Member was quite correct in his assumption; this was the second occasion within the last few months on which the infection of plague on board ships had been successfully dealt with without resort to any quarantine detention of either vessels or persons.

Overcrowding on Railways.

Mr. Ritchie, President of the Board of Trade, said, in reply to Mr. Weir, that he saw no reason to appoint a committee to inquire into the means to be adopted to prevent the overcrowding of railway carriages.—Mr. Weir thereupon intimated that he would call attention to the matter on the Estimates.

MONDAY, MAY 3RD.

The Stamping Out of Rabies.

Mr. Walter Long, President of the Board of Agriculture, replying to a question by Mr. Lough, said it was not proposed to apply muzzling orders to the whole country, but only to areas in which rabies undoubtedly existed or to which there was reasonable fear that it might have been conveyed. A series of orders for this purpose would be issued in the course of the next few days. No particular pattern of wire muzzle was compulsory, but with a view to assist dog-owners in the selection of a muzzle specimens of a muzzle which the Board believed to be both efficient and humane would be deposited at the principal police stations in districts to which muzzling orders were applied. An order regulating the importation of dogs would be issued almost immediately. It would be premature for him to forecast the time during which it would be necessary for muzzling orders to be kept in force. Rabies was, unfortunately, a disease which might be dormant for a considerable period after an animal had been bitten, and much would depend upon the support the Board received from local authorities and dog-owners generally in their efforts to stamp out the disease in this country.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

Traité de Chirurgie Clinique et Opératoire. Von A. le Dentu et P. Delbet. Tome quatrième. 1897.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

Atlas of Human Histology. By Dr. Arnold Brass, Gottingen. Authorised translation from the German, with additions, by R. A. Young, M.D., B.Sc., London. Illustrated. 1897. Price 31s. 6d. net.

BLACK, A. AND C., Soho-square, London.

Fads of an Old Physician: a Sequel to "Plea for a Simpler Life." By G. S. Keith, M.D., LL.D., F.R.C.P. Edin. 1897. Price 2s. 6d.

BLAKISTON, P., SON AND CO., Philadelphia.

A Clinical, Pathological, and Experimental Study of Fracture of the Lower End of the Radius. By J. B. Roberts, A.M., M.D. Illustrated. 1897.

CHURCHILL, J. & A., Great Marlborough-street, London.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. H. White, M.D., F.R.C.P. Second edition. 1897. Price 7s. 6d.

Antiseptic Principles for Nurses. By C. E. Richmond, F.R.C.S. 1897. Price 1s.

CLARK, T. AND T., George-street, Edinburgh.

The Procedure in Accident Inquiries and Investigations according to the Law of Scotland. By Henry H. Brown. 1897. Price 7s. 6d.

CONSTABLE, T. AND A., Edinburgh.

Atlas of Clinical Medicine. By Byrom Bramwell, M.D., F.R.C.P., F.R.S. Edin. Vols. I., II., and III.

CROSBY, LOCKWOOD, AND SON, Stationers' Hall-court, Ludgate-hill, London.

Plumbing, with supplementary chapters upon House Drainage. By W. P. Buchan, R.P. Seventh edition. Illustrated. 1897. Price 3s. 6d.

GOVERNMENT PRINTING OFFICE, Washington.

Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for the Fiscal Year 1896.

KEENER, W. T., Co, Chicago, Ill.

Lectures on the Treatment of Fibroid Tumours of the Uterus, Medical, Electrical, and Surgical. By F. H. Martin, M.D. 1897.

LEA BROTHERS AND CO., Philadelphia and New York.

Clinical Lessons on Nervous Diseases. By S. Weir Mitchell, M.D., LL.D. Edin. 1897.

LEHMANN, J. F., Munchen.

Lehmann's Medicin-Handatlanten. Band 15. Interne Medicin. Von Dr. C. Jakob. 1897.

Lehmann's Medicin-Handatlanten. Band 1. Von Dr. O. Schaeffer. 1897.

LEWIS, H. K., Gower-street, London.

Aphasia and the Cerebral Speech Mechanism. By Wm. Elder, M.D., F.R.C.P. Edin. Illustrated. 1897. Price 10s. 6d.

The Disorders of Digestion in Infancy and Childhood. By W. S. Fenwick, M.D, B.S. Lond. Illustrated. 1897. Price 10s. 6d.

A Treatise on the Medical and Surgical Diseases of Infancy and Childhood. By J. Lewis Smith, M.D. Eighth edition. Illustrated. 1897. Price 21s.

Influenza, with special reference to some Peculiar Symptoms. By William Gray, M.D. Edin. 1897. Price 3s. 6d.

LONGMANS, GREEN, AND CO., Paternoster-row, London.

History of Intellectual Development, on the Lines of Modern Evolution. By J. Beattie Crozier. Vol. I. 1897.

MASSON ET CIE, Paris.

Revue de Gynécologie. Tome i., No. 2, Mars—Avril, 1897.

PENTLAND, YOUNG J., Edinburgh and London.

Diseases of the Liver, Gall Bladder, and Biliary System: their Pathology, Diagnosis, and Surgical Treatment. By H. J. Waring, M.S., B.Sc. Lond., F.R.C.S. 1897.

SMITH, ELDER, AND CO., Waterloo-place, London.

A Course of Practical Histology. By E. A. Schäfer, LL.D., F.R.S. Second edition. 1897. Price 7s. 6d.

SPRINGER, JULIUS, Berlin.

Schmerzlose Operationen. Von Dr. C. L. Schleich. 1897.

THE REDMAN PUBLISHING CO., Adam-street, Strand, London.

The American Year-book of Medicine and Surgery. Edited by G. W. Gould, M.D. Illustrated. 1897. Price 38s.

WATTS AND CO., Johnson's-court, Fleet-street, London, E.C.

A Plea for the Unborn. By Henry Smith. 1897.

Leans Royal Navy List, April, 1897 (Witherby and Co., High Holborn, London; price 7s. 6d.).—Revue des Sciences Medicales en France et a l'Étranger; No. 98, 15th Avril, 1897 (Masson et Cie, Paris).—A Plea for the Canine Race: On Hydrophobia and Distemper Madness; by the Editor of "Health News" (The Savoy Press, 115, Strand, London, W.C; price 1d.).—The Municipal Year Book for 1897 (published at the offices of "London," 125, Fleet-street, London; price 2s.).—The Ophthalmic Review, March, 1897 (J. and A. Churchill, London; price 1s.).—Institutional Buildings Completed or Commenced during the Diamond Jubilee of Queen Victoria; by Passmore Edwards, 1897 (Jas. Akerman, printer, London, W.C.).—The Cyclist's Pocket-book and useful Memoranda, 1897 (H. W. Peabody and Co., 5, East India-avenue, London, E.C.).—The Quarterly Journal of Microscopical Science, April, 1897 (J. and A. Churchill, Great Marlborough-street, London; price 10s.).—Journal of the American Public Health Association; April, 1897 (published quarterly by the American Public Health Association Concord, N.H.)—Magazines, &c., for May: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowledge, and Humanitarian.—The South African Medical Directory for 1897 (Cape Times Printing Works, St. George's-street, Cape Town).

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Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMS, JAMES, M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Barnes Urban District Council.

BENNET, M.R.C.S., L.R.C.P., has been appointed Resident House Surgeon to the Lock Hospital and Assistant House Surgeon to the Throat and Ear and Eye Departments of the Royal Infirmary, Liverpool.

BUTLER, G. H., L.R.C.P. Irel., L.R.C.S. Edin., has been re-appointed Medical Officer of Health by the Wealdstone Urban District Council.

CASTLE, R. F., M.B., B.S. Camb., M.R.C.S., has been re-appointed Medical Officer of Health for the Darfield Urban Sanitary District.

COOMBS, M. L. B., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Newport (Isle of Wight) Borough.

COUNCELL, R. W., M.R.C.S., has been appointed Medical Officer for the Sixth Sanitary District of the St. Saviour's Union, London.

COWPER, J., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Shanklin Urban District Council.

COX, R. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Teme Rural District Council.

CRAWFURD, R. H. P., M.D. Oxon., M.R.C.P. Lond., has been appointed Pathologist to the Royal Free Hospital.

DAVIES, J. EDGAR P., M.B., B.Sc. Lond., M.R.C.S. Eng., L.R.C.P., has been appointed Medical Officer to the South Wales Steel and Tin-plate Works, Llanelly, vice J. A. Jones.

DE'ATH, G. H., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Buckingham Town Council.

DE CLIVE-LOWE, G. T. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for Hokiangu, New Zealand.

DOCHARD, A. T., M.B., C.M. Edin., has been re-appointed Medical Officer of Health for the Whitefield Urban Sanitary District.

DODD, E. J. A., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the General Infirmary, Leeds.

EVERS, CHAS. J., M.D. Durh., M.R.C.S., has been re-appointed Medical Officer of Health by the Faversham Town Council.

FAGGE, C. H., M.R.C.S., L.R.C.P., has been appointed Surgical Registrar and Tutor to Guy's Hospital.

FAWCETT, JOHN, M.D., B.S., M.R.C.S. Lond., F.R.C.S. Eng., has been appointed Assistant Physician to the Royal Free Hospital.

FENTEM, P. S., M.D. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Baston and Burnell Urban District Council.

FERGUSON, JAS. M., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Third Sanitary District of Burnley Union.

FISHER, J. B., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Whitehaven Rural District Council.

FORSYTH, ROBERT, M.D. Glasg., C.M., has been re-appointed Medical Officer of Health by the Drighlington Urban District Council.

FRANEY, A. B., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Hadleigh Urban District Council.

GROOM, H., M.D. Camb., M.R.C.S., has been appointed Medical Officer for the first, second, A, and eighth sanitary districts of the Wisbech Union, vice W. Groom, resigned.

GOODFELLOW, JAS. A., M.B., C.M. Glasg., has been re-appointed Medical Officer of Health by the Brampton and Walton Urban District Council.

HADOW, G. E., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon to the Swansea Hospital.

HARPER, H. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Stowmarket Urban District Council.

HARRIS, S. C., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Ely Urban District Council.

HARRISON, JAMES, M.R.C.S. Eng., L.R.C.P. Edin., has been appointed Medical Officer to the East Grinstead General Dispensary, vice John Magrath, deceased.

HARTLEY, J. V., M.R.C.S., L.R.C.P., has been appointed Medical Officer at Ida Hospital, Leeds.

HAY, JOHN, M.B., Ch.B. Vict., M.R.C.S., L.R.C.P. Lond., has been appointed Resident House Physician to the Royal Infirmary, Liverpool.

HODGES, A. E., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the First Sanitary District of the Burnley Union.

HOFFMEISTER, H. E., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the East Cowes Urban District Council.

JEFFERY, H. F., M.B., Ch.B. Vict., has been appointed Senior House Surgeon to the Bury Infirmary.

JOHNSTONE, G. W., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Upholland District Council.

LAWSON, GARNET G., M.B., Ch.B. Vict., has been appointed Resident House Physician to the Royal Infirmary, Liverpool.

LOWNDS, JAS. R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health by the Brixworth Rural District Council.

LUMB, E. J., M.R.C.S., L.R.C.P., has been appointed House Physician to the General Infirmary, Leeds.

MACDONALD, J. S., L.R.C.S., L.R.C.P. Edin., has been appointed Resident House Physician to the Royal Infirmary, Liverpool.

MARSHALL, F. E., M.B., Ch.B. Vict., L.S.A., has been appointed Resident House Surgeon to the Royal Infirmary, Liverpool.

MARTIN, A. A., M.B., B.S. Lond., M.R.C.S., L.R.C.P., M.P.C., has been appointed House Physician to St. Mary's Hospital, London, vice Cheadle.

MARTIN, FRED. W., L.R.C.P., L.R.C.S. Edin., M.R.C.S., has been appointed Medical Officer by Brighouse Town Council.

METCALFE, R., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Leyburn Rural District Council.

MONSARRAT, K. W., M.B., C.M. Edin., has been appointed Assistant Surgeon to the Hospital for Cancer and Skin Diseases, Liverpool.

NUNN, P. W. G., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Bournemouth Town Council.

PRICE, ARTHUR, M.R.C.S., has been appointed Medical Officer of H. M. Prison, Liverpool, vice G. Beamish.

PROSSER, FRANK, M.B., C.M. Glasg., has been re-appointed Medical Officer of Health by the Rainford District Council.

RENNET, D., M.D. Aberd., D.P.H., has been appointed Medical Officer by the Burton Town Council.

RONALDSON, JAS. B., M.D. St. And., L.R.C.P., F.R.C.S. Edin., D.P.H., has been appointed Medical Officer of Health by the Dunbar Town Council.

SEATON, DOUGLAS, M.B., Ch.B., has been appointed Resident Surgical Officer to the General Infirmary, Leeds.

SILVER, HUGH, L.S.A., has been appointed Clinical Assistant to Out-patients at the Chelsea Hospital for Women, Fulham-road, S.W.

SIMPSON, HENRY, M.B., B.C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Market Weighton Second Sanitary District of the Pocklington Union.

SMITH, J. ECKERSLEY, M.B., Ch.B. Vict., has been appointed Resident House Surgeon to the Royal Infirmary, Liverpool.

SPRAKELING, R. J., M.R.C.S., has been re-appointed Medical Officer of Health by the Bootle Town Council.

TAYLOR, ALFRED SEYMOUR, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., and L.M., has been re-appointed Medical Officer of Health by the Tynemouth Rural District Council.

TAYLOR, F. E., M.A., B.Ch., M.B., has been appointed House Surgeon to the General Infirmary, Leeds.

TIPLADY, WM., L.R.C.P.; L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Tow Law Sanitary District of the Weardale Union.

WARD, ALBAN, M.B., C.M. Edin., has been appointed Medical Officer for the Codford St. Peter Sanitary District of the Warminster Union.

WATSON, A. E., M.B., C.M. Edin., has been appointed Medical Officer for the Wemyss Sanitary District.

WEBSTER, J. CLARENCE, M.D., F.R.C.P., F.R.S. Edin., late Senior Assistant to the Professor of Midwifery and Diseases of Women in the University, has been appointed Assistant Gynecologist to the Royal Victoria Hospital, Montreal.

WILLIAMS, R. P., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed House Physician to the Royal Free Hospital.

WILLIAMS, STANLEY W., M.R.C.S., L.R.C.P., has been appointed Resident House Surgeon to the Royal Infirmary, Liverpool.

WOODFORD, E. R., M.D. Aberd., M.R.C.S., has been re-appointed Medical Officer of Health by the Ventnor Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BURY INFIRMARY, Lancashire.—Junior House Surgeon. Salary £60 per annum, with board, residence, and attendance.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House Surgeon. Salary £50 per year, with board, apartments, and laundress.

CITY OF COVENTRY.—Medical Officer of Health for five years. Salary £500 per annum. Applications to the Town Clerk, Coventry.

COUNTY LUNATIC ASYLUM, Lancaster.—Assistant Medical Officer for five months. Salary at the rate of £100 per annum, with board, &c.

HARTISMERE UNION, Suffolk.—Medical Officers and Public Vaccinators for Botesdale District, Mendlesham District, and Wortham Separate School. Salary for the Botesdale district at the rate of £65 per annum, and for the Wendlesham district £70 per annum, exclusive of fees as are allowed under the consolidated orders of the Local Government Board. Salary for the School at Wortham, near Diss, at the rate of £20 per annum, with fees similar to those paid in the districts. Applications to the Clerk, Guardians' Office, Eye, Suffolk.

HARTLEPOOLS HOSPITAL, Hartlepool.—House Surgeon. Salary £80 per annum, with board, washing, and lodging in the institution.

HOSPITAL FOR WOMEN, Soho-square, London.—House Physician for six months. Salary for that period £30. Also Registrar for twelve months. Honorarium 25 guineas.

KESWICK URBAN DISTRICT COUNCIL.—Medical Officer of Health for the Urban District of Keswick. Salary £33 per annum. Applications to the Clerk, Council Offices, Keswick.

LIVERPOOL EYE AND EAR INFIRMARY.—House Surgeon. Salary £80, with residence and maintenance.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Eastern Fever Hospital, the Grove, Homerton, N.E., unmarried. Salary £160 the first year, £180 the second year, and £200 the third and subsequent years of service, with board, lodging, attendance, and washing, subject to statutory deduction under the Poor-law Officers Superannuation Act, 1896. Applications to the Clerk to the Board, Norfolk-street, Strand, W.C.

NORFOLK COUNTY ASYLUM, Thorpe, near Norwich.—Junior Assistant Medical Officer, unmarried. Salary, £110 per annum, with £10 annual increase to £160, board (no liquors), lodging, and washing provided.

NOTTINGHAM GENERAL DISPENSARY.—Clinical Assistant for six months. Salary at the rate of £120 per annum, with rooms and attendance.

ROYAL EYE HOSPITAL, Southwark, or ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—House Surgeonship. Salary £50 per annum, with free board and lodging in the hospital.

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VICTORIA HOSPITAL FOR SICK CHILDREN, Park-street, Hull.—Lady House Surgeon. Salary £50 per annum, with board and laundry.
WARNEFORD LUNATIC ASYLUM, Oxford.—Medical Superintendent and Secretary. Salary £500 a year, with furnished house, coals, gas, garden produce, milk, laundry, and keep for one horse.
WESTERN OPHTHALMIC HOSPITAL, 155, Marylebone-road, London, W.—Assistant Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

ATKINSON.—On May 1st, at Holloway-road, N., the wife of Robert Atkinson, M.R.C.S. Eng., of a son.
BLOOD.—On April 30th, at Devonshire-road, Birkenhead, the wife of Surgeon-Major Joseph Fitz-Gerald Blood, Bengal army (retired), of a son.
FOSTER.—On April 21st, at San Remo, Italy, the wife of Michael George Foster, M.D., of a son.
GABRIEL.—On May 1st, at Pembridge-villas, W., the wife of Wm. M. Gabriel, M.R.C.S., L.D.S. Eng., of a son.
HALLIWELL.—On April 27th, at Irwell, Winchcombe, Glos., the wife of John Halliwell, L.R.C.P. Lond., M.R.C.S. Eng., of a daughter.
HEARNDEN.—On April 29th, at Rose Cottage, Leatherhead, the wife of Walter C. Hearnden, M.R.C.S., of a daughter.
LEES.—On April 24th, at Somersham, Hunts, the wife of Charles Archibald Lees, M.R.C.S., L.R.C.P., of a daughter.
MOTT.—On May 4th, at Wimpole-street, Cavendish-square, W., the wife of Frederick W. Mott, M.D., F.R.S., of a daughter.
OPENSHAW.—On April 29th, at Wimpole-street, Cavendish-square, the wife of T. H. Openshaw, M.S., F.R.C.S. Eng., of a daughter.
QUILL.—On May 4th, at Fort Pitt House, Rochester, the wife of Brigade Surgeon-Colonel R. H. Quill, Army Medical Staff, of a son.
WAGGETT.—On May 4th, at 45, Upper Brook-street, the wife of Ernest Waggett, M.B., B.C. Camb., of a daughter.

MARRIAGES.

BELL—HASLEWOOD.—On April 28th, at the parish church, Oswaldtwistle, Fred Bell, F.R.C.S., second son of the late Dr. Bell, of Preston, to Maude Earl, eighth daughter of the Rev. Boulby Haslewood, Vicar of Oswaldtwistle.
BOULTON—HOLLAND.—On April 28th, at St. George's Church, Hanover-square, Percy Boulton, M.D., of Seymour-street, Portman-square, W., to Charlotte Frederica, widow of J. Harris Holland, Esq., late of Greville House, London.
DIACK—NUTTALL.—On April 29th, at Holy Trinity Church, Sloane-square, Patrick William Diack, M.A., M.B., C.M., to Jessie, only daughter of the late Dr. Francis Nuttall, of Bury, Lancashire.
FRANCIS—AGATE.—On April 30th, at Sydney, New South Wales, Henry Alexander Francis, of Sherwood, Brisbane, B.A., M.B., of St. John's College, Cambridge, to Lillian, youngest daughter of the late Joseph Agate, of Ashtead, Emsworth, Hants.
MACNAMARA—MAHONY.—On April 29th, at Ardfoil, co. Cork, Surgeon-Major W. J. Macnamara, Royal Hospital, Chelsea, to Lily, second daughter of the late Martin Francis Mahoney, Lotamore, co. Cork.
OSBORN—PARSONS.—On April 28th, at St. Bartholomew's Church, Dover, Francis Arthur Osborn, M.R.C.S. and L.R.C.P., youngest son of Ashby G. Osborn, M.R.C.S., L.S.A., to Hilda Venetia, eldest daughter of C. Parsons, M.D., Dover.
PATERSON—JUDD.—On May 3rd, at Cape Town, John Paterson, M.A., M.B., C.M., to Ethel Maud, third daughter of the late Henry Ke ridge Judd, of Lyndhurst, Hornsey.
STERRY—ALLEN.—On the 29th ult., at St. Edward's Church, Leek, John Sterry, M.R.C.S., L.R.C.P., of Riverhead, Kent, to Beatrice, youngest daughter of William Allen, solicitor, Leek.
WALTER—COOK.—On April 28th, at the parish church, Shirley, Edwin Charles Walter, M.R.C.S. Eng., L.R.C.P. Lond., of Market-place, Wallingford, to Mary Ellen, only daughter of the late J. Cook, Esq., of Canning-road, Croydon.
WARKE—VAUGHAN.—On April 28th, at Christ Church, Linnet-lane, Liverpool, Charles Lyle Warke, L.R.C.P. Lond., M.R.C.S. Eng., of Upper Parliament-street, to Margaret Muriel Tilden, third daughter of James Vaughan, of St. John's, N.B., Canada.
WEARING—TOWNSEND.—On the 28th inst., at St. Mary's Church, Rawtenstall, by the Rev. J. Jolly, B.A., William Thomas Wearing, M.B., C.M. Edin., of the Beeches, Clapham, Yorkshire, second son of the late Richard Wearing, of Hipping Hall, Kirkby-Lonsdale, to Ada Louisa, third daughter of the late Joshua Townsend, of The Holme, Rawtenstall.

DEATHS.

CARTER.—On May 4th, at Belgrave-crescent, Scarborough, Henry Vandyke Carter, M.D. Lond., Deputy-Surgeon-General, I.M.S., Hon. Surgeon to the Queen, aged 65.
FERNANDEZ.—On May 4th, at Brookfield, Ross, Herefordshire, Thomas Francis Fernandez, M.D., F.R.C.S., in his 83rd year.
HUBERT.—On April 22nd, suddenly, at Billinghurst, Sussex, Edgar Hamilton, youngest son of William Henry and Sarah Isabel Hubert, aged 21.
PERKINS.—On May 2nd, at Snaith, East Yorks, Thomas Perkins, M.R.C.S., L.S.A.
RICHARDSON.—On May 2nd, at Rock Hall, Uckfield, of tetanus, following a bicycle accident, Adolphus Joseph Richardson, M.D. Cantab., M.R.C.P. Lond., &c., of 45, St. John's-terrace, West Brighton.
WHITE.—On April 21st, at Boscombe, Bournemouth, Robert Godfrey White, M.R.C.S.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (12th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (15th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (10th).—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting for the Election of Officers and Council for Session 1897-98. 8.30 P.M. Ordinary Meeting. Dr. A. E. Garrod will open the Adjourned Discussion on Mr. W. Armstrong's paper on the Value of an Exclusively Red Meat Diet in certain Cases of Chronic Gout.—Mr. S. Edwards: On the Removal of High-lying Cancer of the Rectum by Kraske's Method, with a series of Fourteen Cases.

TUESDAY (11th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. F. Warner: On the Relations between Bodily Development, Nutrition, and Brain Conditions in their Pathological Aspects.—Mr. H. H. Clutton: (1) Case of Subclavian Aneurysm successfully treated by Ligature; (2) Case of Pharyngeal Abscess, Hæmorrhage, Ligature of Carotid Arteries.

WEDNESDAY (12th).—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Dr. D. Grant will open a General Discussion on Turbinotomy as applied to the Inferior Turbinal.

THURSDAY (13th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Specimens:—Mr. Jessett: (1) Pan-hysterectomy; (2) Subperitoneal Hysterectomy; (3) Subperitoneal Hysterectomy for Myoma complicated by Pregnancy.—(4) Subperitoneal Hysterectomy for Myoma complicated by Double Pyo-salpinx.—Dr. Macnaughton-Jones: Some Microscopic Sections of Rare Pathological Conditions. Papers: Dr. Snow: On the Value in Abdominal Malignant Disease of Exploratory Laparotomy *per se*.—Dr. R. T. Smith: Notes of a Case of Puerperal Septicæmia treated by the Antistreptococcus Serum.

HARVEIAN SOCIETY.—Dr. Cagney: Some Resources in the Diagnosis of Nervous Diseases.

FRIDAY (14th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Dr. F. Taylor: A Case of Chronic Hydrocephalus, Fatal at the age of Sixteen Years.—Mr. C. B. Lockwood: A Case of Wound of the Mesentery, with subsequent Gangrene of the Intestine.—Mr. H. Marsh: A Case of Free Incision and Evacuation of the Intestine in the course of an Operation for Strangulated Hernia.—Mr. L. A. Bidwell: Two Cases of Irreducible Femoral Hernia in which the Vermiform Appendix alone occupied the Sac.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (10th).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Tropical Fevers.

TUESDAY (11th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—Dr. Beevor: Demonstration of Cases.

WEDNESDAY (12th).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Dysentery.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Dunn: Ophthalmic Surgery during the Queen's Reign.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Arkle: Pleural Effusion.

THURSDAY (13th).—ROYAL INSTITUTION.—3 P.M. Prof. Dewar: Liquid Air as an Agent of Research.

FRIDAY (14th).—EAST LONDON HOSPITAL FOR CHILDREN.—3 P.M. Dr. A. Chaplin: Chronic Pulmonary Induration.

ROYAL INSTITUTION.—9 P.M. Prof. H. Dixon: Explosion—Flames.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—Dr. Colman: General Symptomatology.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 6th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
April 30	29·80	S.W.	56	52	98	59	47	0·20	Fine
May 1	29·86	N.W.	48	45	105	62	41	...	Cloudy
,, 2	29·99	S.W.	56	48	108	63	43	0·02	Fine
,, 3	29·86	N.W.	54	50	110	61	50	...	Cloudy
,, 4	30·17	N.	49	44	103	63	41	0·15	Fine
,, 5	29·90	S.W.	51	50	108	60	48	0·02	Raining
,, 6	30·05	N.W.	48	43	95	52	40	...	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

TRICHOMONAS VAGINALIS.

Dr. N. S. DAVIS, of Chicago, describes a case in which the urine of a female patient was found on many occasions to contain moving amœboid bodies, mostly of oval shape. When in motion the forward end was generally narrowest, and from it projected several rapidly moving cilia. When dead these objects were occasionally oval but were more often round. They were clear and homogeneous in appearance, and might easily be mistaken for unusually clear, oval or round epithelial cells. They were found in large numbers in scrapings from the vagina, from the labia minora, and from the meatus urinarius; in these scrapings they retained life much longer than in the urine. They could be readily stained by aniline dyes, especially methyl-blue, and an oval nucleus could then be seen in many, but not in all. They had on an average about two-thirds the length of a squamous epithelial cell from the external genitals, but they were not so broad. The cilia were from one to one and a half times the length of the amœboid body. The patient suffered from nephritis and mild glycosuria; no symptoms were observed which could be ascribed to the trichomonas; the vulva was moist, clean, not reddened, and not in any way abnormal; the urine contained epithelial cells in unusual numbers.

M.R.C.S.—No final decision has been come to with respect to the reproduction of Lord Lister's portrait. Nothing can be done until the picture returns from the Royal Academy to the Royal College of Surgeons of England in August.

X. Y. Z.—We do not know whether the Red Cross Society needs any medical officers for Greece at the present time. Our correspondent might address the Greek Legation, 58, Scarsdale-villas, Kensington, W.

Mr. W. G. Earle is thanked for his communication.

"WANTED A HOME FOR AN IMBECILE BOY."

A CORRESPONDENT writes: "In reply to Mr. Barnley's query as to a training home for a boy of deficient mental condition, may I suggest that if certifiably imbecile he might be received at the Midland Counties' Idiot Asylum, Knowle, near Birmingham, on a moderate annual payment, the amount of which could be learned from the secretary, Mr. W. G. Blatch. If the mental deficiency be of but slight character, application might be made to Miss Paul, 27, Percy-street, London, W., secretary of the National Association for Promoting the Welfare of the Feeble-minded, which is about to start a home for boys."

F. W.—An occasional occurrence of the kind our correspondent mentions need give him no uneasiness whatever, and the step he is about to take is quite justifiable.

"DR. RENTOUL'S EXPENSES FUND."—SIXTH LIST.

To the Editors of THE LANCET.

SIRS,—I enclose the final list of subscriptions to the above fund. It will be seen that the net result falls short of the sum asked for (£109 18*s.* 5½*d.*) by about £6. I beg to thank the subscribers to the fund, especially those who by their helpful letters proved to me that Dr. Rentoul has at his back a considerable number of practitioners who are willing to work and give for the cause of professional reform. I wish also to thank Mr. Colin Campbell, of Saddleworth, Yorks, and Dr. J. L. Speirs, of Gateshead, who have examined my accounts and certify them to be correct. With thanks also to yourselves, who have enabled me to give publicity to this fund.

I am, Sirs, yours faithfully,

ALFRED COX, M.B. Durh., Hon. Sec. and Treasurer.

Gateshead, May 4th, 1897.

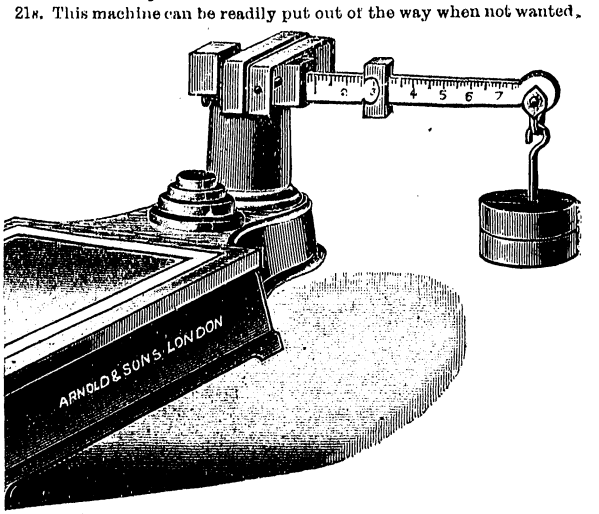
	£	*s.*	*d.*		£	*s.*	*d.*
J. Atkinson, Crewe	0	10	0	Gainsborough and District Medico-Ethical Society, per J. E. S. Passmore ...	1	1	0
Morris Griffith Davies, Penygroes	0	5	0	J. E. S. Passmore	0	5	0
L. A. B....	0	10	6				

	£	*s.*	*d.*
Total sum received and acknowledged	109	1	6
Expenses (printing, circulars, postage, &c.)	5	16	9
Net total	103	4	9

Nemo.—In such cases as that mentioned by our correspondent, where the pelvis is normal, any difficulty that may arise in the way of prolongation of the labour is more likely to be due to rigidity of the soft parts. Even if any drug could be relied upon to relax the pelvic articulations the possibility of rigidity of the soft parts would still remain. In many elderly primiparæ, however, the accoucheur is agreeably surprised to find that labour progresses favourably and that the patients' forebodings are not justified by the event.

THE "RELIANCE" PERSONAL WEIGHING MACHINE.

THE illustration shows a new and cheap form of personal weighing machine sold by Messrs. Arnold and Sons of West Smithfield for 21*s.* This machine can be readily put out of the way when not wanted,



as it can be placed under a chair or in a cupboard. Hitherto these personal weighing machines have taken up too much space in a consulting room and the expense has been too great. This machine weighs up to 24 st., and being very light and portable can be used upon the floor or placed on a chair. It is very simple in construction and not likely to get out of order. The size of the platform is 10½ in. by 13½ in., with brass steelyard slide and weights. The whole machine is neatly japanned.

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"MR. DAVENPORT AT PORTSMOUTH."

The above is the title of an article which has been sent to us by a correspondent, who says that it was cut from the *Portsmouth Times*, of May 1st. We think that our contemporary deals hardly by its readers in devoting space to the glorification of a quack; but the article contains passages which reveal so clearly the true nature of the man whom it purports to puff that the whole thing may be a piece of journalistic irony. "In the course of his (Mr. Davenport's) studies," it runs, "he devoted special attention to typhoid fever, and during the alarming illness of the Prince of Wales from that terrible disease in 1871, Mr. Davenport laid before the physicians in attendance on his Royal Highness suggestions and remedies for the distinguished patient's cure. The receipt of these was duly acknowledged in a letter forwarded from Sandringham, which our representative saw." It would have been more honest if "our representative" had pointed out to the readers of the *Portsmouth Times* what was certainly the case—that the formal act of acknowledgment of a communication does not imply any interest in the communication. All sorts of troublesome persons pestered the Prince's attendants with foolish suggestions at that time, but Mr. Davenport is, as far as we are aware, singular in attempting to make money out of the courtesy which preferred not to allow him, however meddlesome his act, to remain unanswered. In another place the article states that Mr. Davenport's "principal letters of thanks from patients are preserved in a large book which he carefully treasures. Among these are communications from and on behalf of such illustrious personages as Her Majesty the Queen, the Prince and Princess of Wales, the Empress Frederick of Germany, the Queen Regent of Holland, the Queen of Denmark, Prince and Princess Christian." Evidently Mr. Davenport has made to these royalties communications of some sort, to which unfortunate secretaries have given the usual formal replies, and Mr. Davenport now tries to humbug the public through the medium of the *Portsmouth Times* into believing that Her Majesty the Queen and the others have as patients sent him "letters of thanks." Having read so much of the article, we instinctively looked lower in the column to find the religious tag which such persons as Mr. Davenport very usually add to their manifestoes. And we found it, the representative of the *Portsmouth Times* having duly reported it. Mr. Davenport, we are informed, "claims that the power to cure various diseases is with him a gift—'A gift from God.' He was induced to go out curing the sick as he is now doing by hearing a sermon preached on the Parable of the Talents some years ago." Faugh!

T. J. W. should consult a solicitor on the actual wording of the agreement. We are not aware of any custom in the matter, but if a radius is to be dealt with it surely must be calculated as the crow flies from the nearest point of the respective premises.

WANTED A SURGICAL PHIDIAS!

To the Editors of THE LANCET.

SIRS,—I would be deeply indebted to you were you to give me the benefit of your advice on the following. I am particularly dissatisfied with my personal appearance and am seriously considering whether it would not be feasible to have some operation performed with regard to three points. Firstly, my nose at the tip is thick and round, instead of being constructed of planes; now, were the nostrils slit vertically at the end and joined closer together and a horizontal section taken out a great deal of the awkwardness would disappear; also, though young, my nose has in parts distended blood-vessels, giving a red appearance whenever I feel cold; now, would it not be practicable to cover it with skin from the arm or elsewhere? Secondly, my lips are unfortunately thick and clumsy; would it not be possible to take off a layer from the inside, even at the expense of their becoming rather shapeless? Lastly, my chin is very receding and rather dragged to one side; could not the introduction be effected of some extraneous living bone, say of the leg of a dog? A triangular piece of bone placed at each angle of the jaw would increase the length and breadth of the jaw, supposing sufficient room for operation could be procured by slitting the skin under the chin and pushing it up; the muscular tissue at the bottom of the tongue might be slit at intervals to allow it to adapt itself to the necessarily increased area. The bone might be held in place, till it grew together, by being wired, and a silver horse-shoe plate placed on the inside of the curve would be absorbed in the system eventually. What would be the probability of gangrene or similar disease? I will be deeply grateful if you will give me your genuine opinion on the above, and tell me of some one whom I might consult on such fantastic surgery when I come up to town in two or three weeks, and suggest the possible cost, as in addition to these disadvantages my complexion has always been an ugly, ashy-grey, sallow colour, such as I have never seen anywhere. I am quite ready to run a fair amount of risk to have these, as far as possible, obviated. Thanking you beforehand.

I am, Sirs, yours truly,

May 4th, 1896. SWALLOW.

*** We make an exception to our usual rule of not publishing letters from patients in favour of our correspondent, who seeks the aid of what he truly denominates "fantastic surgery," because his letter appeals to our sense of humour.—ED. L.

DUTIES OF MEDICAL OFFICERS OF HEALTH.

J. A. R.—There is no book on the subject so far as we know; but in vol. ii. of "A Treatise on Hygiene and Public Health," edited by Stevenson and Murphy, and published by Messrs. J. and A. Churchill, our correspondent will find an article by Dr. Alfred Ashby giving the information he requires. "Difficulties under the Notification Act," published at the office of THE LANCET, price 6*d.*, will also be found useful.

Clerk.—It is impossible to decide positively either for or against a miscarriage having occurred at two months if no product of conception, recognisable either by the naked eye or the microscope, can be found. As regards probability, if the patient was perfectly regular before and then missed two months pregnancy would naturally be thought of. On the other hand, a woman aged forty-four years may easily miss two months and then have a severe hæmorrhage with clots, some of which may temporarily lodge in the uterus owing to the approach of the menopause.

Mr. F. J. Boehm.—We are unable to review the work mentioned, but any preparations sent for analytical report will receive attention.

W. N. H.—We never recommend individual practitioners. Our correspondent must consult his own medical man.

TRAINING OF A MALE NURSE.

To the Editors of THE LANCET.

SIRS,—Could you or any of your readers oblige me by informing me of any hospital where a suitable lad could be trained as a sick attendant? I am, Sirs, yours faithfully,

A. W. LEMARCHAND, L.R.C.P. Lond., M.R.C.S. Eng.

Barnstaple, May 5th, 1897.

Mr. Pugin Thornton's surmise is quite incorrect. We have tested the salt carefully, with absolutely negative results as to the presence of iodine.

NECROPSY, AUTOPSY, OR NECROTOMY.

A WRITER in the *Journal of the American Medical Association* is of opinion that the words "autopsy" and "necropsy" do not sufficiently define a post-mortem examination, for he says that the former simply means "seeing for one's self," and the latter need not imply more than a superficial inspection. He therefore suggests the word "necrotomy" as being preferable.

M.B., C.M.—The medical gentleman's name does not appear in the current 1897 Register. He died in 1896.

Mr. Brindley James.—One of the books has already been reviewed in our columns and the other has not been submitted to us.

H. W. T. (Bath).—We never recommend individual practitioners. Our correspondent must consult his own medical man.

Leeds Student should consult a medical man.

ERRATA.—In the pass-list of the University of Edinburgh which appeared in THE LANCET of May 1st, the name in the list of those passing the Second Professional Examination (old regulations) printed as "E. B. Anderson" should have been *E. B. Anderton.*—In the report of the Hunterian Society supplied to us, and published in our issue of April 24th, the remarks attributed to Dr. Butler Harris gave a false impression. Dr. Harris really said that ozone used in an inhalation of more than 10 per cent. strength would be too irritating in pneumonia, but might be useful in phthisis and bronchiectasis.

During the week marked copies of the following newspapers have been received:—*Todmorden News, Huddersfield Chronicle, Chatham News, Cambs Times, Banffshire Advertiser, Durham Advertiser, North Devon Herald, Cheltenham Examiner, Newcastle Journal, Loughborough Monitor, Wolverhampton Chronicle, Times of India, Pioneer Mail, Worcestershire Advertiser, Boston Herald, Yorkshire Post, Dudley Herald, Herts Reporter, Rochester Journal, Leicester Post, Bristol Mercury, Scotsman, Ripley News, Lowestoft Standard, Maryport News, South-Eastern Gazette, Builder, Liverpool Daily Post, Tonbridge Telegraph, Bournemouth Directory, Kendal Mercury, Leeds Mercury, Newport Advertiser, Birmingham Gazette, Architect, Manchester Courier, Salisbury Times, Ilfracombe Gazette, Sheffield Telegraph, Bradford Observer, East Anglian Daily Times, Isle of Wight Observer, Hampshire Post, Royal Cornwall Gazette, Brighton Gazette, Richmond and Twickenham Times, Radnor County Times, Reading Mercury, Local Government Chronicle, City Press, Hertfordshire Mercury, Mining Journal, Weekly Free Press and Aberdeen Herald, Sanitary Record, Weekly Times and Echo, Glasgow Evening News, Public Health, Surrey Advertiser, General Advertiser (Dublin), Glasgow Herald, Local Government Journal, Derbyshire Times, Australasian Medical Gazette, Taunton Echo, Drogheda Advertiser, Kidderminster Shuttle, Kidderminster Sun, The World, Le Gaulois (Paris), Kelso Mail, Echo, West Middlesex Herald, Ossett Observer, Mirfield Herald, Keble's Margate and Ramsgate Gazette, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Mr. E. B. Anderton, Ormskirk; Mons. A. Alberti, Paris; Messrs. Armour and Co., Lond.; Mons. J. Astier, Paris; Rev. A. Aitkens, Stowupland; Mr. G. Amy, Nice; Messrs. Arnold and Sons, Lond.

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THE initiation of the hypodermic system of medicine occurred early in the present century; but much appreciated as it was from the moment of its introduction, its development was for long impeded by the unreliability of the readily deteriorating stock solutions of necessity generally used in the early days. It is not until towards the close of the century that the introduction of Hypodermic "Tabloids" brought with it possibilities hitherto unhoped for.

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Digitalin	1-100 gr.
Ergotinine Citrate	1-200 & 1-100 gr.
Ergotinine Citrate	1-100 gr.
Strychnine Sulphate	1-20 gr.
Eserine Salicylate	1-100 gr.
†*Eucaine Hydrochloride	1-3 & 1 gr.
Homatropine Hydrochlorate	1-250 gr.
Hyoscine Hydrobromate	1-200 & *1-75 gr.
*Hyoscyamine Sulphate	1-80 & 1-20 gr.
Mercuric Chloride	1-60 & 1-30 gr.
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*Sclerotic Acid	1-2 & 1 gr.
*Sparteine Sulphate	1-2 gr.
Strophanthin	1-500 gr.
Strychnine Nitrate	1-15 & 1-10 gr.
Strychnine Sulphate	1-150, 1-100, & 1-60 & 1-30 gr.
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"APENTA"

IN THE TREATMENT OF **OBESITY,** AND ITS INFLUENCE ON CHANGE OF TISSUE.

Observations in **Professor Gerhardt's** *Clinic in the Charité Hospital, Berlin.*

THE *Berliner Klinische Wochenschrift* of March 22nd, 1897, publishes a Report upon some experiments that have been made under the direction of **Professor Gerhardt,** in his clinic in the Charité Hospital at Berlin, demonstrating the value of **Apenta** Water in the **treatment of obesity** and **its influence on change of tissue.**

"Such experiments," it is observed, "could not be carried out until quite recently on account of the inconstant composition of the bitter waters coming into the market. In this respect the **Apenta** Water is favourably circumstanced," and **it was chosen for these observations because of its constancy of composition.**

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A Clinical Lecture
ON
THE BALL-VALVE GALL-STONE IN THE COMMON DUCT.

Delivered at the Johns Hopkins Hospital on Jan. 22nd, 1897,

BY WILLIAM OSLER, M.D., F.R.C.P.,
PROFESSOR OF MEDICINE AT THE JOHNS HOPKINS UNIVERSITY.

GENTLEMEN,—I will begin this lecture by showing you two interesting specimens. The first consists of the stomach, duodenum, and liver. Even from a distance you can see a nodular projection beneath the mucosa of the duodenum. On closer inspection this is seen to correspond to the papilla biliaria, the orifice of which lies a little to the side of the most prominent part of the projection. This nodular body is a hard, firm mass which can be moved up and down, and as I make it appear at the orifice of the duct you see that it is a rounded, dark gall-stone much too large to escape. On moving it up and down it cannot be passed out of the duodenal portion of the duct, but in this it has considerable play. On examining from the side of the duct the stone is seen to lie in a greatly distended diverticulum of Vater. The common duct is of about the size of my index finger, and the main hepatic ducts are also dilated. The cystic duct is wide, and the gall-bladder is perhaps a little enlarged. It did not at the time of the necropsy contain any stones. The dilated bile-ducts and the gall-bladder contained bile-stained mucus. There was neither erosion nor ulceration in the bile passages. I have kept this specimen carefully for nearly ten years, and have frequently demonstrated it to classes of students. The history of the case is very instructive, particularly in connexion with the patient whom you will see in a few minutes.

In September, 1887, when I took charge of certain of the medical wards in the Philadelphia Hospital, there was a woman, aged forty years. It was the third or fourth time she had been admitted, each time with chills, fever, and jaundice. The attacks had recurred on and off for two years, during which period she had not passed two months without some tinge of icterus. The case had excited a good deal of attention, and I remember that in 1886 Dr. Bruen brought to me some of her blood to examine for the malarial parasites. The diagnosis of abscess of the liver had been made on several occasions, and the liver had been twice aspirated. When she first came under my care she was up and about in the ward, and showed only the slightest lemon tint of the skin and of the conjunctivæ. The stools were dark coloured. The liver appeared to be a little enlarged; the gall-bladder could not be felt. Early in October she had an attack of violent pain with vomiting and a moderately severe rigor, after which the temperature rose to nearly 104° F., with ephidrosis, the entire paroxysm lasting for more than twelve hours. The following day she was much more jaundiced, the urine was very dark in colour, and the stools were putty-like. The liver was sensitive on pressure; the gall-bladder could not be felt. The jaundice deepened for three or four days and then gradually became less marked. Throughout the winter at intervals of a few weeks she had four or five attacks of a similar character. I lectured upon the case as one of Charcot's hepatic intermittent fever, due probably to a gall-stone lodged in the common duct, to which opinion I was led from the study of cases which I had seen in Montreal. Early in February I asked Dr. White to see the patient, and she consented to an operation. Perihepatitis was found at the margin of the liver, the gall-bladder was not enlarged, and no gall-stones could be felt in the gall-bladder or in the duct. Three days subsequently she died from peritonitis.

Naturally I was much chagrined at the negative result of the operation. A necropsy was refused, and the friends removed the body to the country, but a personal interview enabled me to procure an examination, and I was allowed to remove the organs which you see before you for careful dissection. This patient had had for a period of nearly two and a half years attacks of jaundice with chills and fever—a very characteristic picture of the intermittent hepatic fever which Charcot and others have so fully described.

The second specimen is an almost exact counterpart. Projecting from beneath the mucous membrane of the duodenum close to the papilla biliaria is a nodular body of the size of an almond which can be pushed down to the orifice of the duct, when it is seen to be an oval gall-stone lying in the diverticulum of Vater, in which it has a certain degree of mobility. At the necropsy in this case it was very interesting indeed to note that on firm pressure on the gall-bladder bile could be forced past the stone into the duodenum. Both cystic and the common ducts are dilated to about the size of the little finger. The gall-bladder is of the size of a small pear. There is no other gall-stone. The contents of the common and cystic ducts were thin, yellow bile containing some dark granular matter. The colon was adherent to the gall-bladder and to the under surface of the liver. The liver weighed 1570 grammes; the surface was a little roughened. The cut section was bile-stained and showed moderate dilatation of the smaller ducts. The consistence of the organ was increased. It may be mentioned also in connexion with the case that there was a chronic diffuse nephritis. The further details of the necropsy, which is No. 758 in the Johns Hopkins Hospital Records, do not concern us. The history of this case has not quite the same interest as the other, but it presents identical features.

The patient was a man, aged sixty years, who was admitted to the hospital on Dec. 22nd, 1895. I had seen him on Nov. 23rd previously and had learned that he had been ill for rather more than three months with recurring attacks of slight jaundice and paroxysmal pain in the right side, which were sometimes accompanied by chills and fever. When I saw him he was slightly jaundiced, there was much irritability of the stomach, the liver was not enlarged, and the gall-bladder could not be felt. The condition had varied very much from time to time, being sometimes better and sometimes worse. He had had numerous attacks of chills and fever, following which the jaundice would become more intense. He had been actively treated for malaria. He grew progressively weaker, and when admitted to the hospital on Dec. 22nd he was very feeble and apathetic. He had a sallow, slightly jaundiced colour, with distinctly jaundiced conjunctivæ. The pulse was 106; he had no fever. His temperature at 4 A.M. on the 23rd was normal. He shortly afterwards had a chill, and by noon his temperature had risen to nearly 103° F. He had a great deal of pain in the right side of sufficient severity to require morphia. Ephidrosis followed the fever, and the patient seemed to be somewhat more jaundiced. There was a small amount of albumin in the urine with granular casts and a distinct reaction for bile pigment. He became much more prostrated after this attack, had a good deal of pain at intervals, and was drowsy and apathetic. On the night of the 30th he had a severe attack of general convulsive twitching, and a slight rise in the temperature with ephidrosis occurred on the 31st. On Jan. 2nd he had Cheyne-Stokes respiration, became unconscious, and died on Jan. 4th. In this case the attacks of pain and intermittent paroxysms of fever enabled me to make a very positive diagnosis of a gall-stone in the common duct.

The consideration of these two cases and the inspection of the specimens will enable you to appreciate better the symptoms presented by the case which I will now ask to have brought into the lecture-room. The history of this patient, as taken by Dr. Gwyn, is as follows:—

A married woman, aged twenty-eight years, was admitted to the hospital on Nov. 28th, 1896, complaining of pain in the epigastrium. She had been a very healthy woman and had had two children. In July, 1894, she had a miscarriage. The first attack of her present trouble (in September, 1894) came on with vomiting, headache, and pain in the abdomen. The skin at this time was very sallow, but she did not think she became jaundiced. The urine was of a dark colour. She had distinct chills, severe and shaking. After an illness of three weeks she recovered and remained quite well until June, 1895. In this second attack she had nausea and vomiting, itching of the skin, jaundice, chills and fever, and pain in the epigastrium. It lasted about four weeks. The third attack was in September, 1895. She had, however, no paroxysm of pain, but she had chills at intervals, and there was slight tinging of the whites of the eyes. Recurring attacks of chills and fever persisted until Christmas. The fourth attack came on in March, 1896. It began with nausea, vomiting, and pain in the epigastrium and under the right costal margin

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passing back to the right shoulder. She became very jaundiced and had much itching of the skin. The pain was much more intense than in any previous attack, and she had to have morphia. She had recurring chills and fever, and the jaundice persisted for nearly three months. The fifth attack, for which the patient came to the hospital, began on Sept. 1st with nausea, occasional vomiting, headache, itching of the skin, deep-coloured urine, and slight tinging of the conjunctivæ. She had no pain in this attack, but frequent chills recurred until a week before admission to the hospital. The jaundice had been very slight. The chills had been the same in all the attacks. They came on every few days, sometimes quite regularly every other day, lasting fifteen or twenty minutes, and were followed by high fever and occasional ephidrosis. On admission the patient was found to be a well-nourished, healthy-looking woman. The skin was a little sallow, not distinctly jaundiced, and the conjunctivæ were slightly tinged. There was nothing abnormal on examination of the chest. The abdomen was a little full, tympanitic, with no areas of abnormal resistance. The liver dulness began at the sixth rib in the nipple line and barely reached the costal margin. The edge of the liver could not be felt. There was no tenderness on deep pressure in the epigastric region. The gall-bladder was not palpable. The spleen could not be felt. On Nov. 30th the yellow colour of the skin was more marked, and there was bile reaction in the urine. The stools were light in colour. On Dec. 4th there was a little tenderness in the right hypochondriac region, and the patient had had slight pain in this region on the previous day. She remained in hospital until Dec. 6th. She had no chills, and the temperature was under 100° F. The jaundice had almost disappeared and she had gained in weight. She felt well until the day before Christmas, when she became nauseated and was sick at her stomach. On Christmas eve she had a violent chill with high fever and pain of such severity in the region of the liver as to require a hypodermic injection of morphia. The jaundice was intensified the following day and increased considerably. She returned to-day (Jan. 22nd, 1897) to report upon her condition. You see that she is a healthy-looking woman, well nourished, and were it not for the very slight jaundice persisting nothing special would be noted about her. The abdomen is full, a little large, and the panniculus is well preserved. Palpation in the liver region is negative. There is no pain on deep pressure. The edge of the liver cannot be felt, and the gall-bladder is not palpable. Within two years and four months this patient has had at least six attacks of pain in the region of the liver, with chills, fever, and jaundice. The latter has been a variable symptom, sometimes very intense, but if we may judge from her condition on admission on Nov. 28th, 1896, even in the intervals the jaundice does not entirely disappear.

You notice the remarkable similarity in the history of these three cases: jaundice, usually of slight grade but increasing at times in intensity, attacks of pain in the region of the liver, and paroxysms of intermittent fever. The duration of the illness in the first case was two years and a half, in the second between four and five months, and in the woman you have just seen two years and four months. I have no hesitation in making the diagnosis of ball-valve stone in the common duct in the case before you, but before I proceed to speak fully of this condition and of its symptomatology, let me refer for a moment to two anatomical points of special interest in connexion with cholelithiasis.

We do not know what starts a stone on its migrations. In a large proportion of all cases so long as the calculi remain in the gall-bladder they do little or no harm. This statement is borne out by the frequency with which gall-stones are found post mortem in persons who have presented no symptoms whatever and whose gall-bladders show little or no change. Once started, a stone has two main obstacles to overcome. The cystic duct is not a simple tubular structure, but has a very remarkable reduplication of its mucosa known as the Heisterian valve. If you attempt to pass a probe or a pair of probe-pointed scissors into the cystic duct you will find that the point is interrupted by valvular folds which sometimes encircle the entire tube and are very much like the valvulæ conniventes. Sometimes the arrangement is that of a spiral valve. In other cases there is no symmetry whatever, and the valves may have the free edges directed upwards towards the gall-bladder, or downwards towards the common duct. Both at the neck of the gall-bladder and at the junction of the cystic with the hepatic duct the folds may be unusually prominent. No possible arrangement could be more unfavourable for the passage of a gall-stone; a small one may get lodged beneath the valvular folds, indeed I have seen one tucked in beneath the strong fold sometimes present at the neck of the gall-bladder. Biliary colic is probably an expression of the difficulties a stone has in passing through the valvular folds in the cystic duct. Once in the common duct a stone of medium size has little or no difficulty until it reaches the duodenal portion, the anatomical relations of which may for a moment engage our attention. The bile and pancreatic ducts open by an orifice which is smaller than the lumen of the conjoint ducts, and the opening is usually on a prominent papilla on the mucosa of the duodenum. Between the point of junction of the two ducts and the orifice in the papilla biliaria there is a dilatation, the diverticulum or ampulla of Vater. In this part of the duct the ball-valve stone often lodges. The intermittent filling of the gall-bladder almost assumes the existence of a sphincter choledochi, yet no mention is made of such a structure in the text-books (Quain or Henle). Oddi[1] has demonstrated this sphincter in different animals and in man, and Dr. L. F. Barker has been kind enough to prepare for me several specimens by his method which show the fibres very clearly. Doyon[2] claims to have determined the biliary reflex—the afferent fibres pass in the vagus, and the efferent in the splanchnic—and states that stimulation of the central end of the vagus causes contraction of the gall-bladder and at the same time relaxation of the sphincter choledochi. Upon the importance of this sphincter choledochi in the history of gall-stones very little stress has been laid, except by Leichtenstern in his recent section on Diseases of the Bile Passages in Penzoldt and Stintzing's "Handbuch."[3] He states that sometimes macroscopically, as well as microscopically, hypertrophy of this sphincter can be seen in old cases of gall-stone impaction. To another point he refers (of great importance in connexion with the condition of the gall-bladder in these cases)—viz, that the physiological filling of the gall-bladder with bile is a function of this sphincter. It is in this duodenal portion that the typical ball-valve stone is most frequently found, as in the two specimens which I have demonstrated to you, though it may lie loose in the duct. Let me call to your remembrance the fact that pressure on the gall-bladder in the second specimen could make the bile flow past the obstructing stone. My attention was first called to this condition many years ago, and in a lecture which I published in 1881,[4] on Some of the Effects of Chronic Impaction of Gall-stones I remarked "that a gall-stone may remain permanently lodged in the pars intestinalis and yet not be impacted. In such instances it may still permit the passage of bile past it, or it may act as a ball valve, only permitting of the flow when the distension behind has reached a certain point." In several cases the stone in the diverticulum of Vater was so placed that it could be moved up and down to act as a sort of ball valve; and clinically I had had an opportunity of studying two cases (Nos. 11 and 12 of those reported in the lecture) in which the remarkable train of symptoms seemed best explained by this ball-valve action of a stone in the common duct. Subsequently, in a paper on Fever of Hepatic Origin,[5] particularly the intermittent pyrexia associated with gall-stones, I called attention especially to the importance of recognising a group of cases of obstruction of the common duct characterised by the following symptoms: "First, jaundice of varying intensity, deepening after each paroxysm, and which may persist for months or even for years; second, ague-like paroxysms characterised by chill, fever, and sweating, after which the jaundice usually becomes more intense; and, third, at the time of the paroxysms pains in the region of the liver, with gastric disturbance." In this paper I considered at length the question of the hepatic intermittent fever which the French physicians, particularly Charcot, had so carefully described, and emphasised the following points: that recovery might follow even, as shown by the cases, after duration of the chills and fever and jaundice for several years; that this condition could be differentiated from suppurative cholangitis; and that the symptoms were probably caused by the ball-valve action of the stone. I added the following statement: "In all of these

[1] Di una Speciale Disposizione a Sfintere Allo Sbocco del Coledoco, Perugia, 1887.
[2] Archives de Physiologie, January, 1894.
[3] Band 4, 1896.
[4] Medical Times and Gazette, July 31st, 1881.
[5] Johns Hopkins Hospital Reports, vol. ii., 1890.

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cases the obstruction is not complete, as shown by the presence of bile in the stools for long periods at a time. The association of the chills and fever with intensification of the jaundice must be more than accidental. The two must be correlated in some way, in all probability through a transient impaction of the stone in the duct. Such a condition might induce the chill, either through reflex irritation, as held by Murchison, or by preventing the escape from the bile passages of toxic ingredients—ferments produced by the action of micro-organisms—which are absorbed into the blood instead of escaping freely into the bowel. The impaction is probably overcome by a gradual increase in the *vis a tergo* until the duct is stretched to a point which permits the calculus to fall back into a wider portion. The pressure may reach such a grade that the stone is forced out, as happened in Case 2, and very likely in the other cases in which recovery followed." In both editions of my "Text-book of Medicine" I recognised the possibility of diagnosing the presence of the stone in the common duct and of differentiating the catarrhal from the suppurative cholangitis. I had seen many cases which seemed to bear out these statements, and had been in the habit in my classes and at meetings of societies of speaking of the ball-valve action of certain gall-stones. Not having seen my papers, Christian Fenger of Chicago, in the February and March numbers of the *American Journal of the Medical Sciences*, 1896, made the statement that "neither Courvoisier nor any other author seems to have observed the ball-valve action of floating stones in the common duct."

Symptoms.—What are the symptoms of gall-stones in the common duct? They are very variable. There may be none; it may be dilated and full of stones so arranged that the bile can flow past them without much, if any, obstruction. I have twice seen a single small stone in the common duct which had apparently caused no disturbance. No one has laid down more clearly the symptoms of stone in the common duct than Naunyn:[6] "(1) The continuous or occasional presence of bile in the fæces; (2) distinct variations in the intensity of the jaundice; (3) normal size or only slight enlargement of the liver; (4) absence of distension of the gall-bladder; (5) enlargement of the spleen; (6) absence of ascites; (7) presence of febrile disturbance; and (8) duration of the jaundice for more than a year." Now what I wish to bring out in connexion with the case you have just seen is the probable association of the intermittent features—pain, rigors, fever, and jaundice—with the ball-valve action of a stone in the common duct or its diverticulum—a view which offers a reasonable explanation of the remarkable phenomena of the case. This patient when you saw her in the ward looked a well-nourished, healthy woman with only the slightest trace of jaundice, chiefly noticeable in the conjunctivæ. Some of you may remember that I predicted another attack as very probable within a few months. In these protracted intervals I take it the gall-stone lies loose in the duct or its ampulla, and the pressure is sufficient to force the bile past it, though the persistence of the slight jaundice for weeks or months shows that the flow is not quite free. The onset of the paroxysms may be due to an acute infection with swelling of the mucosa about the stone and transient complete blocking of the duct, or the stone may be jammed tightly against the orifice of the duct. Impaction would account for the pain and the jaundice; the intermittent paroxysms of fever are probably due, as I suggested in the extract read a few minutes ago, to the absorption by the blood of the toxins produced by the micro-organisms which in the intervals of impaction pass into the bowel. The impaction is followed, of course, by stasis of the bile, a condition very favourable to the growth of the micro-organisms. I have recently had occasion to discuss with you the question of infection of the bile passages in a case of typhoid fever with colic and jaundice. Various organisms may be present without doing damage. Thus typhoid bacilli were present in the bile passages of seven persons who died from typhoid fever (seven of fourteen examined) not one of whom had during life given any signs of liver trouble. A stone in the common duct with stasis of the bile and catarrhal cholangitis favours the growth of organisms, which are always seeking entrance—in healthy persons in vain—at the portals of the ducts. Unfortunately in the necropsy upon the case from which the second specimen was obtained, though cultures were made from many parts—as is the custom in the post-mortem room—which were sterile, there is no specific note in the report about the bile passages. Infective cholangitis is present in all these cases, and to it the febrile phenomena are due. The large experience which we are daily receiving from the surgeons should very soon give us positive data as to the varieties of micro-organisms associated with this condition. To one point I would here direct your particular attention—viz., that this infective cholangitis may persist for years without causing suppuration in the ducts or ulceration of their walls. A knowledge of this fact has a very direct bearing on the prognosis and diagnosis of these cases.

Diagnosis.—The diagnosis of a stone in the common duct may often be made with reasonable probability, and while the rules laid down by Naunyn could not be bettered I am anxious to go further and to urge the possibility of recognising as a special variety the ball-valve stone. The group of symptoms to which I have referred (and which were shown so graphically in the case of the patient whom you have just seen as well as in those from which the specimens were taken) have not been sufficiently recognised by authors, and when recognised have been too often misinterpreted. Let me again recall them. They are chronic jaundice, rarely deep, varying in intensity, at times almost or entirely disappearing to deepen invariably after a paroxysm (the icterus may be of maximum grade and associated with intolerable itching); pain, often a constant sense of discomfort, sometimes only an obscure gastric distress, and at others agonising, griping, and like ordinary liver colic; fever, occurring in paroxysms, usually preceded by a chill and followed by sweats, but there may be pyrexia alone; the chills may be quotidian or tertian in type or they may recur for weeks in succession on the same day; the spleen usually enlarges during the febrile paroxysms. Though persisting for months or even for years, the general health may be little, if at all, impaired, and in the intervals between the paroxysms a person may be able to work as usual. The cases are usually diagnosed as chronic malaria, abscess of the liver, or suppuration of the bile passages.

The regularity of the chills and the slight jaundice naturally suggest malaria. In almost every one of my cases the diagnosis of malaria had been made and the patient had been dosed with quinine for weeks or months. In Case 7, a man, aged sixty-four years, who had had jaundice with the intermittent fever, &c., for eleven months, was treated by a well-known Carlsbad physician for malaria, which opinion was concurred in by at least half a dozen physicians in Europe and in this country. The mistake is a very natural one, particularly if the patient has not very intense jaundice. The paroxysm is almost identical in its features with that of simple intermittent malarial fever. The periodicity may be striking, the chills recurring like a tertian or a quartan fever. The good condition in the interval, the absence of great enlargement of the liver or of enlargement of the gall-bladder, and the presence of enlarged spleen are all points which strongly suggest malarial fever. On the other hand, the absence of plasmodia in the blood, the occurrence of pain at the onset of the paroxysm, and the deepening of the jaundice, which is usually of a grade more intense and quite different from the slight sub-icteroid hue of chronic malaria, should be sufficient to differentiate a case. Cases of simple intermittent fever do not resist the action of quinine. Chronic paludism also as a rule is associated with much more pronounced enlargement of the spleen.

Abscess of the liver can usually be excluded by the absence of tenderness and enlargement, local or general, the variable character of the jaundice, the good condition of the patient in the intervals of the paroxysms, the very chronic course in many cases, and the absence of progressive deterioration of health and strength. In the case from which the first specimen was taken the diagnosis of abscess of the liver had been made by several physicians, and exploratory punctures had been made on two or three occasions. Her general condition at the end of two years' illness seemed to me to exclude abscess.

As regards suppurative cholangitis, infective processes in the bile passages are very prone to end in pus formation, an only too common sequence of chronic impaction of stone in the common duct. I show you here a coloured drawing of a case of this sort in which you see the stone in the ampulla of Vater; the ducts were enormously dilated, even to the surface of the liver; the gall-bladder was greatly enlarged, full of pus, and the walls ulcerated. Now a majority of writers have

[6] Klinik der Cholelithiasis, and New Sydenham Society's edition, 1896, p. 107.

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regarded the hepatic intermittent fever as an indication, not simply of infective, but of suppurative cholangitis. In the present case, though the condition has persisted for more than two years, purulent inflammation of the bile-ducts can be positively excluded. When this serious complication is present the symptoms are those of pyæmia of a severe grade. Among the points to be considered are the following: (1) increased tenderness in the hepatic region with possibly enlargement of the gall-bladder, as this is a more common event in suppurative cholangitis than in simple obstruction of the duct; (2) the more frequent return of the paroxysms and, in some instances, the irregularly remittent character of the fever; (3) the jaundice is not so intense in suppurative cholangitis, and we do not see the remarkable deepening in colour after the paroxysms; and (4) the general condition of the patient in the intervals is very different in the two conditions. When suppuration exists there are rarely the prolonged periods of apyrexia, the freedom from distress, and the general betterment which are so well illustrated in the case before you. And, lastly, the time element comes in as an important aid in diagnosis. As I mentioned a few moments ago, the good condition when she was in the ward of the patient in the present case was quite inconsistent with the idea of a purulent inflammation in the bile-ducts.

The ball-valve action is more likely to occur with a single stone, but the group of intermittent symptoms are not necessarily present. I have reported a case of a man, aged seventy years, who had been jaundiced for several years, but who had not had, so far as could be gathered, attacks of chills and fever. There was a gall-stone in the diverticulum of Vater which could not be pushed into the common duct. There was not, however, complete obstruction, as on squeezing the duct bile-stained mucus flowed from the orifice. A second stone of the size of an olive lay free in the common duct. I cannot speak positively about the clinical features of this case, which I did not see during life. The common duct may be full of calculi and, as is well known, there may be no suspicion of any trouble during life; the bile may flow, as water does in a rocky stream, between the stones. On the other hand, these cases of multiple calculi in the common duct may present marked intermittency in the symptoms. One of the first cases admitted to this hospital was a man, aged sixty-eight years, who had had jaundice of great intensity of three years duration, during which time he had scarcely passed three weeks without a chill of great severity. He died from cholæmia two days after admission. The common duct was distended into a sac and filled with gall-stones. The gall-bladder was shrunken to a small sac tightly contracted around several gall-stones. There was a small ulceration between the duodenum and the common duct. The walls of the ducts were thickened, not ulcerated, and the contents were a viscid, yellowish, non-purulent material. There was an acute ulcerative endocarditis in this case. Other causes of chronic jaundice do not, so far as I know, give this clinical picture. In the pressure of a new growth, as from the pancreas, the jaundice is deeper, more enduring, as a rule, and there are not these singular intermittent features; pain is not so constant a symptom; infection of the bile passages is less frequent; there are often signs of secondary disease; the gall-bladder is enlarged (Courvoisier's rule) and palpable; there is progressive deterioration of health and strength; and, lastly, there are sometimes the special features of pancreatic diseases—fatty stools, &c.

The presence of the ball-valve stone in the diverticulum of Vater gives a possible clue to the absence of enlargement of the gall-bladder in these cases of obstruction from stone, a point to which a good deal of attention has been paid recently. This interesting observation we owe to Courvoisier, and it is of a good deal of diagnostic significance. Ecklin[7] has recently reviewed the question, and finds that of 172 cases of obstruction of the common duct by calculus in 34 the gall-bladder was normal, in 110 it was contracted, and in 28 it was dilated. Of 139 cases of occlusion of the common duct from other causes the gall-bladder was normal in 9, shrunken in 9, and dilated in 121. It seems quite possible that this absence of dilatation in obstruction by stone is associated with the disturbance in the normal reflex of the sphincter choledochi, an important function of which is, as Leichtenstern states, filling of the gall-bladder.

[7] Annales Suisses des Sciences Médicales, Series iv., Part 3.

Prognosis.—What is the outlook in these cases? Let me give you briefly my personal experience.

CASE 1.—This was that of a woman, aged thirty years, in whom for eight months there were recurring attacks of pain with ague-like paroxysms and intensification of the jaundice. The gall-stone passed and the patient recovered.

CASE 2.—A woman, aged fifty-five years, from July, 1879, until August, 1882, had jaundice of varying intensity with recurring attacks of pain and intermittent fever. This case was one of unusual severity. Recovery was complete. The patient was in good health in 1888 when last heard from.

CASE 3.—A woman, aged forty years, had variable jaundice of two and a half years' duration; there were recurring attacks of intermittent fever with pain; an operation was performed, death ensued, and post-mortem a ball-valve stone was found in the diverticulum of Vater.

CASE 4.—A man, aged seventy years, had had jaundice of varying intensity for eleven months; there were repeated paroxysms of pain and intermittent fever; death followed from cholæmia.

CASE 5.—A woman, aged forty-six years, had been under observation for three years with attacks of pain and intermittent fever with intensification of the jaundice. The patient has been lost sight of.

CASE 6.—A woman, aged twenty-three years, suffered from jaundice of ten months' duration varying in intensity; there were paroxysms of hepatic intermittent fever, but the patient recovered.[8]

CASE 7.—This was that of a man, aged sixty-four years, who had had jaundice for two and a half years (May, 1890, to November, 1892), with recurring chills and fever with intensification of the jaundice; there was very little pain but great loss of weight. The patient has been in perfect health up to date (January, 1897) since recovery.

CASE 8.—A man, aged forty-four years, suffered from intermittent jaundice of many years' (fifteen?) duration; there were innumerable attacks of chills and fever recurring at intervals of from six weeks to six months. Several attacks occurred while under observation in 1892. The patient recovered and has been in perfect health since the spring of 1892.

CASE 9.—A man, aged sixty years, had jaundice varying in intensity for nearly six months; there were recurring attacks of pain with chills and fever; death occurred from cholæmia.

CASE 10.—A woman, aged twenty-eight years, for two and a half years has had intermittent attacks of jaundice with chills and fever. Her general health has been well maintained. This patient is the one now under observation.

Recovery followed spontaneously in five cases (in one after an indefinite period of years, in one after three years, in one after two and a half years, and in two cases after eight and ten months respectively), two died from cholæmia, one case was operated on and died, and one was lost sight of. The dangers are suppurative cholangitis, perforation of the duct, diffuse hepatitis, and remotely the development of cancer.

What shall we advise in the present case? The patient's life has been miserable for more than two years; all sorts of measures have been employed and the Pharmacopœia has been exhausted. The two remedies which are in vogue at present—phosphate of soda in large doses and olive oil—have been tried in vain. The medicinal treatment of gall-stones is a chapter in our therapeutics the leaves of which are best turned very rapidly. The man who believes he can dissolve gall-stones will probably tell you that he can abort an attack of pneumonia and that he can cure locomotor ataxia. So soon as they give serious trouble their removal by operation is the only rational method of treatment. When they are in the gall-bladder the operation in skilled hands has a minimum of risk. Kehr's recent statistics give one hundred and seven cholecystotomies with only one death. The question is a very different one in the common duct cases. The operation is much more severe, the risks infinitely greater, and the results, even in the best hands, not nearly so good. Kehr has, however, had thirty cases with only two deaths—a remarkable record. In the present case the attacks are recurring with greater intensity and greater frequency, the bile passages have stood the irritation long enough, and I have urged her strongly to submit to an operation at an early date.

A knowledge of the significance of the group of symptoms

[8] These cases have been reported in full in an article on Hepatic Intermittent Fever, Johns Hopkins Hospital Reports, vol. ii.

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to which I have called your attention will suggest to surgeons the advisability of seeking the obstruction in the terminal portion of the duct. In the specimens before you the stones lie in reality within the duodenum, projecting beneath its mucosa, and would be more accessible through an incision in the gut than by a choledochotomy.

EIGHTEEN CONSECUTIVE CASES OF INTRA-ABDOMINAL HYSTERECTOMY FOR FIBROIDS.

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THE accompanying table comprises every case (up to the date of writing this article) of intra-abdominal hysterectomy that I have performed. Prior to May 1st, 1896, the extra-abdominal method by means of a clamp (which method some operators still advocate) was that which I always used, with a more or less high mortality; but the advantages of the intra-abdominal method are so great that it seems to me they should be widely known. The steps of the operation being nearly the same in all the cases, it will be sufficient for my purpose if I describe in detail one case only, give a short tabular summary of the rest, and finally make some remarks on hysterectomy.

A woman, aged thirty-eight years, was sent to me by a medical friend. The catamenia, which began at the age of fourteen years, were perfectly regular, and lasted five days without clots or pain. The last period ended on June 15th, 1896. She married on July 4th, 1896, and continued well without morning sickness until Aug. 3rd, when she could not pass her urine, so my friend was called in. He drew off a large quantity of urine by catheter, and then found she had an abdominal tumour reaching above the umbilicus and also filling the pelvic cavity, so he advised the patient's husband to bring her up to me. I saw her on Aug. 12th. She was a thin, healthy-looking woman. The breasts were somewhat tense with blue veins coursing over them, and the areolæ were rather large and dark; no secretion could be squeezed out. On examining the abdomen a large, hard, irregular, and bossy mass could be felt, reaching two inches above the umbilicus. It was somewhat mobile, dull on percussion, but both flanks were resonant. No uterine souffle could be heard over it. On introducing the finger within the vagina it at once impinged on a hard, smooth mass, which filled up Douglas's fossa, pushed down the posterior vaginal wall to near the vaginal orifice, and displaced the os uteri upwards and forwards to such an extent that it was with great difficulty the cervix could be reached at all. Movement of the abdominal tumour bimanually caused movement of that in the pelvic cavity. The case was clearly one of multiple fibroids, and, considering that the patient had "seen nothing" for three weeks before her marriage (which took place thirty-nine days before I examined her), together with the condition of her breasts, I concluded that she had become pregnant immediately after marriage, although coitus was difficult and it was impossible for the penis to reach within some inches of the os uteri. As the patient had felt perfectly well up to the date of her marriage and the fibroids had caused no inconvenience, I advised that, under an anæsthetic, an endeavour should be made to reach and dilate the cervix and empty the uterine cavity of its contents; then it would be seen whether the pelvic mass (which doubtless had increased under the stimulus of pregnancy) would subsequently diminish in size and cause no further pressure trouble and thus obviate the necessity for hysterectomy, to which both the patient and her husband were greatly averse. On the 14th, the patient being anæsthetised and in the lithotomy position, I was able after some trouble to seize the cervix with a volsellum forceps and to just bring the os uteri into view. The cervical canal was next dilated up to No. 14 Hegar, and an early embryo with its decidua curetted away; the uterine cavity was washed out with a 1 in 2000 perchloride of mercury solution, and an iodoform pencil was introduced. After the curettage there was no loss of any kind, and the patient went home on Sept. 1st, the pelvic tumour being *in statu quo*. On Oct. 3rd her condition was practically the same; the patient was very anxious to have the tumours removed, but I advised waiting another month. Between this visit and the following one the patient again had retention of urine. On examination on the 24th I found the mass in the pelvis distinctly larger, so it was agreed to perform hysterectomy without delay. On the 27th, gas and ether having been administered by Mr. George Rowell, I proceeded (with the kind help of Mr. W. H. Battle) to operate. An incision was made extending from the umbilicus to the symphysis pubis, and an opening was made in the parietal peritoneum of this extent. Next the broad ligament on each side was transfixed by means of a long pedicle needle armed with a double silk ligature and passed as near the pelvic wall as possible. One of the ligatures was now tied well outside the ovary and tube, and the ends were cut short. The ends of the other ligature were seized, one in each hand, and by a sawing movement towards the uterus the broad ligament was torn to the extent of an inch or more, and then the ligature was tied. Next, the broad ligament was cut between the two ligatures, leaving the ovary and tube attached to the uterus. After this had been done on both sides the ovarian vessels were, of course, secured, and the uterus was freed; but, owing to the mass in the pelvis, it could not be lifted out of the abdominal cavity. Next, an incision was made (through the peritoneal coat only) across the front and back of the uterus; its upper limit was about two inches above the attachment of the bladder, and laterally the incisions met where the broad ligament was cut. These anterior and posterior flaps were now stripped down until the uterine arteries on each side were exposed. A semicircular needle armed with rather fine silk was now passed well under the vessels on the left side and the ligature securely tied; the same was done to the vessels on the right side. By pulling the tumour well forward the posterior flap was now completely stripped off the growth, which gradually rose out of the pelvis. Then the tumour was cut across just above the level at which the uterine arteries were tied, and removed. There was no bleeding from the stump, out of which a V-shaped piece was now cut. Next the flaps of the stump were carefully brought together by a continuous silk suture, and lastly the two flaps of peritoneum were united over the stump by a continuous silk Lembert suture, beginning at the stump of the broad ligament on one side and ending at the stump on the other side, so that when completed nothing whatever was to be seen in the pelvis except a crescent-shaped line of suture (with the concavity backward) uniting peritoneum to peritoneum. After carefully sponging the pelvic cavity of any blood, the sponges which up to now held the intestines in the upper part of the abdomen were removed, the omentum was drawn down so as to lie against the line of suture, and, lastly, the abdominal incision was sutured in three layers—viz. (*a*), the peritoneal edges with a continuous catgut suture; (*b*) the sheaths of the recti with interrupted fine silkworm gut; and (*c*) the superficial structures in a similar manner to the last. The wound was dressed with iodoform gauze and blue wool, with a flannel bandage over all. The operation lasted one hour and ten minutes. The further progress of the case resembled precisely that of a simple ovariotomy. There was no sickness, the temperature never reached 99·5° F., or the pulse 100. Urine was passed naturally after the third day, the bowels were relieved by an enema on the seventh, the dressings were removed on the same day, and the superficial stitches then removed, the wound having united perfectly. The patient was allowed out of bed in the third week, and went home well in the fourth. On March 19th, 1897, she continued to be in robust health.

Remarks.—It must be admitted by every unprejudiced person who reads the foregoing that the operation as described is incomparably superior both to the extra-abdominal method and also to total removal of the uterus (pan-hysterectomy), for although one of the patients died on the eighteenth day from embolism, this was an unfortunate accident, which could not on post-mortem examination be found to have any direct connexion with the operation; and the whole series of cases might be classed as "successful." It would have been absolutely impossible to remove the tumour by the extra-abdominal method in Cases 5 (described in detail), 13, or 15. Moreover, by the extra-abdominal

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method there is more danger of hæmorrhage from the stump, death has occurred from dragging of the stump causing intestinal obstruction, recovery is always prolonged, and until the clamp has safely come away after sloughing of the stump the operator never feels happy; whereas after the method I have described there are none of these disadvantages. Lastly, the extra-abdominal method leaves a weak place in the abdominal wall which in not a few cases later gives rise to hernia. It requires no prophet to foretell that in a few years the method of removing uterine fibroids by bringing the fleshy stump outside the abdominal wall and there clamping it will lapse into oblivion as completely as the use of a clamp has done in the performance of ovariotomy. With regard to total removal of the uterus through the abdomen (so-called pan-hysterectomy), I am not in a position to speak so dogmatically, as I have only performed it in one case. I fail, however, to see that total removal (either per abdomen or per vaginam) can have a single advantage over the intra-abdominal method, whereas there are the great disadvantages of laying open the vagina and also having to leave the ligatures on the uterine vessels hanging into the vagina until they come away by sloughing after two or three weeks.

I turn now to the details of the intra-abdominal method: 1. It is well to begin by at once making the external opening sufficiently large to permit the tumour being brought out without the necessity of enlarging the incision later. 2. If the tumour can be brought outside before tying and dividing the broad ligaments, it is best to do so. 3. The flaps of peritoneum should be cut large, so that after removal of the tumour they can be doubled in over the stump (after Lembert's method). In some cases they strip down easily; in others they are rather firmly adherent and require care so as not to be torn or button-holed. I generally use a raspatory for this purpose. 4. The uterine vessels are now exposed on each side and the arteries can be seen and felt pulsating; they are ligatured in the manner already mentioned and, of course, inside the flaps of peritoneum. 5. The tumour, having been rapidly cut across about an inch above the ligatures on the uterine vessels, is removed, when only a slight oozing from the stump will be seen—from small anastomotic vessels probably. If there be

EIGHTEEN CONSECUTIVE INTRA-ABDOMINAL HYSTERECTOMIES.

No.	Age.	Date of operation.	Where performed.	Nature of tumour.	Indication for operation.	Result.	Remarks.
		1896					
1	34	May 1st	Chelsea Hospital	Multiple myomata reaching up to umbilicus	Profuse metrorrhagia	Cured	Ether; bronchitis after operation, otherwise recovery was uninterrupted.
2	40	June 23rd	Private	Multiple myomata reaching above umbilicus	Increasing growth; no hæmorrhage	Ditto	Recovery uninterrupted.
3	44	Oct. 22nd	Middlesex Hospital	Ditto	Profuse metrorrhagia with increasing growth	Ditto	Ditto.
4	40	Oct. 23rd	Chelsea Hospital	Single soft myoma, size of pine-apple	Increasing rather rapidly; no hæmorrhage	Ditto	Ditto.
5	38	Oct. 27th	Private	Multiple myomata filling pelvis and reaching above umbilicus	Retention of urine; no hæmorrhage	Ditto	Ditto.
6	39	Dec. 31st	Middlesex Hospital	Multiple myomata up to umbilicus	Progressive growth; no hæmorrhage	Ditto	Ditto.
		1897.					
7	41	Jan. 8th	Chelsea Hospital	Ditto	Profuse metrorrhagia	Ditto	Ditto.
8	34	Jan. 22nd	Middlesex Hospital	Cystic myoma; size of fœtal head	Ditto	Ditto	Ditto.
9	40	Feb. 12th	Middlesex Hospital	Multiple myomata reaching nearly up to umbilicus	Ditto	Ditto	Ditto.
10	39	Feb. 19th	Chelsea Hospital	Ditto	Ditto	Ditto	Ditto.
11	48	March 12th	Chelsea Hospital	Multiple myomata reaching up to umbilicus	Increasing in size for the last year, causing numbness in left leg and difficult defecation	Ditto	Ditto.
12	49	March 15th	Middlesex Hospital	Multiple myomata filling abdomen reaching nearly to xiphoid cartilage	Increasing growth and metrorrhagia	Died	Pulmonary embolism on eighteenth day.*
13	44	March 18th	Middlesex Hospital	Multiple myomata reaching up to umbilicus, expanding the whole cervix and filling Douglas's pouch	Pressure symptoms; frequent retention of urine	Cured	Recovery uninterrupted.
14	37	March 19th	Chelsea Hospital	Multiple myomata size of small fœtal head	Profuse metrorrhagia and retention of urine	Ditto	Ditto.
15	50	March 19th	Chelsea Hospital	Multiple myomata filling abdomen below umbilicus, filling the right broad ligament and expanding cervix	Progressive growth and metrorrhagia	Ditto	Secondary hæmorrhage on fourteenth day.†
16	40	March 22nd	Private	Single myoma reaching one inch above umbilicus	Metrorrhagia	Ditto	Recovery uninterrupted.
17	35	April 1st	Middlesex Hospital	Multiple myomata extending nearly up to umbilicus	Metrorrhagia	Ditto	Ditto.‡
18	40	April 1st	Middlesex Hospital	Myoma filling pelvis and expanding both broad ligaments	Retention of urine	Ditto	Ditto.

* This patient (Case 12) had not a single bad symptom for eighteen days after the operation, the temperature continued normal the whole time, and she was considered convalescent. On the eighteenth day she ate a hearty dinner; an hour later, whilst using the bedpan, she suddenly fell back and died in a few moments. The post-mortem examination showed death to be due to a large pulmonary embolus which had its origin in the internal iliac vein on the left side. The uterine stump appeared perfectly healthy and the peritoneal flaps over it had become firmly united There was not a trace of any peritonitis.

† This patient (Case 15) was a very pale, unhealthy-looking woman. On the fourteenth day after operation she had a rather profuse hæmorrhage from the vagina, and a tumour formed in the left side of the abdomen reaching up to the umbilicus. The woman was somewhat collapsed. She was put under ether. I then transfused her with four pints of saline fluid, after which I opened the abdomen, cleared out the blood and clots from between the layers of the left broad ligament, put three large and long forceps on some bleeding vessels deep down by the side of the uterine stump, packed round the forceps and the cavity left after the blood was removed with iodoform gauze, and closed the abdominal incision. The gauze was removed and the forceps were taken off after forty-eight hours, and an india-rubber drainage-tube was inserted. An uninterrupted recovery followed.

‡ This case (No. 17) was an unusually difficult one as the myoma was complicated by a suppurating cyst, the size of a fist, between the layers of each broad ligament; both cysts ruptured during removal and the pus escaped into the pelvis. The posterior layers of the broad ligaments were sutured together in the middle line from below upwards, the broad ligaments thus forming one cavity in which was the uterine stump. The cavity was packed with iodoform gauze and its upper margin carefully united to the parietal peritoneum at the lower end of the abdominal incision, leaving of course an opening through which the gauze passed. The rest of the abdominal opening was then closed in the usual way. The patient convalesced without a single unfavourable symptom and the cavity rapidly filled up from the bottom.

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free oozing or any vessel be seen spouting, then the uterine vessels have not been properly secured, so a second ligature should be passed more deeply on one or both sides. 6. The next step (and one to which I attach great importance) is to cut out a V-shaped piece of the cervix and then to bring the flaps of the stump accurately and firmly together by means of a continuous deep silk suture, thus not only completely arresting any oozing from the stump, but also effectively shutting off any danger of sepsis from the vagina through the cervical canal, which is enclosed between the flaps. 7. Doubling in the peritoneal flaps (according to Lembert's method in suturing intestine) is important; it can be readily done, provided care be taken to cut the flaps, and especially the posterior one, long. Very often the stumps of the broad ligaments can be turned inside the peritoneal flaps, so that at the completion of sewing up no raw surface of any kind whatever can be seen on looking into the abdominal cavity. 8. The most difficult cases are those in which the tumours burrow into one or both broad ligaments, for in these cases after the growths are shelled out a more or less large cavity, or cavities, is, or are, left, in which blood is liable to collect, with danger to the patient. In Cases 15 and 18 the tumours burrowed between the layers of the broad ligaments, so that after I had removed the mass a cavity (into which an ordinary sized glass tumbler would have fitted) was left. This I treated in the following manner. Having tied all oozing points, I whipped the sides of the cavity together by means of a continuous fine silk suture, commencing at the deepest part and proceeding upwards until the sac was obliterated effectually. Then the peritoneal flaps were brought together in the usual way. 9. In not a single instance was there the slightest necessity for the use of a drainage-tube. 10. It will be noted that in Cases Nos. 8 and 14 the tumours were comparatively small, and many operators would have been content with removal of the uterine appendages in order to stop the hæmorrhage and arrest growth; but I considered that having opened the abdomen I was not materially exposing the patient to more risk by performing hysterectomy as described; whereas, on the other hand, it is well known that in not a few cases removal of the uterine appendages has failed to bring about the desired results just mentioned. It was fortunate that I adopted the more radical treatment in Case 8. This patient was sent in under my care by my colleague Mr. Henry Morris. The uterus being symmetrically enlarged and the hæmorrhage profuse, I thought she might have a fibroid polypus in the uterine cavity, so under an anæsthetic I dilated the cervical canal, and on exploring with my finger I found there was no polypus present, but a fibroid the size of a large orange embedded in the anterior uterine wall and pushing inwards the endometrium. A week later I performed intra-abdominal hysterectomy, and on laying open the tumour after its removal found *in its centre a cyst the size of a Tangerine orange*, so that had I been contented with removing the uterine appendages I have little doubt that the tumour would have continued to grow and thus have necessitated a second operation at some future date. 11. Suturing the abdominal walls in three layers is, I think, of sufficient importance to justify the extra time it takes. Since adopting it I have not had a single case in which the scar has subsequently yielded, giving rise to a ventral hernia. 12. Lastly, it seems to me that in the operation herein described we possess a means by which almost every class of cases of uterine fibroids can be effectively and safely dealt with; not only those which threaten life from excessive hæmorrhage or dangerous pressure upon important organs such as the bladder or the bowels, but also those which give rise to discomfort by reason of their large size and compel those who are the subjects of them to lead more or less the lives of invalids.

Harley-street, W.

RAILWAY MEN'S CONVALESCENT HOME AT ST. LEONARDS.—On May 4th the Countess of Chichester opened the convalescent home which has just been erected at St. Leonards in connexion with the Railway Mission. The building is of red brick with stone dressing, and is in an excellent situation overlooking the sea. The total outlay has been about £7000, not including the value of the site. The site was purchased for £600 or £700 by Miss Dolby, who was in charge of the old convalescent home at Hastings, and was presented by her to the committee.

ACUTE PANCREATITIS.

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With a Pathological Note by
DOUGLAS STANLEY, M.D. EDIN., M.R.C.P. LOND.,
LATE PATHOLOGIST TO THE HOSPITAL.

IT is possible that the subject of this paper is as great a novelty to many as it was to myself until I was brought into contact with a case in March, 1896. The most recent text-books do not refer to it, and there have been from time to time references to isolated cases in British journals, but prior to 1889, when Dr. Fitz published the Middleton Goldsmith lecture in the *New York Medical Record*, there has been no attempt to collate cases or to systematise knowledge. It is to Dr. Fitz, therefore, that recent writers make reference, and to him that all credit for substantiating the existence of the disease should be given. It is possible, or even probable, that his classifications and conclusions need not be accepted in their entirety, but nevertheless his lecture will always remain as a classic and furnish the basis for further investigation. It would be well before discussing the pathology of the disease to give an account of the case which drew my attention to the subject.

CASE 1.—About midday on March 25th I was asked to see a man suffering from persistent vomiting of three days' duration. He had suddenly been seized with a most intense pain a little to the right of the middle line in the epigastrium. The pain quite disabled him and he had to give up his work, that of a night watchman, immediately, and take to his bed. He began to vomit and continued to do so almost without cessation until the time I saw him. I found him lying in bed with a bucketful of vomit by his side. He was a well-made but fat man of about forty years of age, and had, I believe, enjoyed very good health, but when I saw him he looked just like a man dying from unrelieved intestinal obstruction, or perforation of some abdominal viscus. His eyes were sunk and his face was pale and slightly jaundiced. His pulse was quick and feeble; the tongue was dry; and, above all, he had that terrible expression of anxiety that we are accustomed to associate with acute abdominal disease. The bowels had been confined from the first, and the urine was scanty. I turned down the bed-clothes with the confident expectation of finding the abdomen distended and tympanitic, but to my great astonishment there was no distension. The large intestine was obviously empty, and beyond a slight fulness in the epigastrium, which was not tender, there was no abnormality. It seemed a paradox that a man should present all the symptoms of intestinal obstruction and yet none of the signs. I could only conclude that the obstruction did exist but was very high up in the duodenum, or possibly the jejunum. There seemed only one possible explanation—viz., that a gall-stone had become impacted and was giving rise to the trouble. To this view some colour was given by the very sudden onset of the pain and by the slight jaundice. His friends were warned of the probable fatal result of all treatment, but were advised that the only hope lay in immediate operation. With this in view he was removed to the hospital, and Mr. W. F. Haslam, to whose kindness I am indebted for the following notes taken at the time of operation, opened the abdomen about four hours after admission. "The abdomen was opened by an incision in the middle line above the umbilicus, and coils of pale and very contracted small intestine were seen. On following the small intestine upwards this appearance was found to be present almost as far as the commencement of the jejunum. Here the intestine gradually increased in size and its colour changed from a pale slate colour to a redness that suggested inflammatory effusion into its walls, and the last piece of intestine that could be seen was of rather more than normal diameter, and its walls felt thickened. There were no signs of the intestine having been subjected to pressure by any constricting band, nor was anything found that could have pressed upon it. The lymphatic glands in the mesentery were greatly enlarged and in places calcareous, but they were not causing any pressure on the

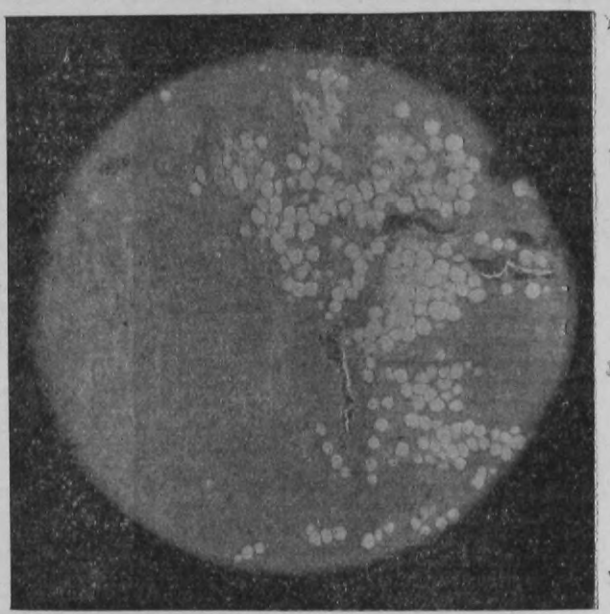
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intestine. As the lumen of the intestine was found free from obstruction, and there was evidence of the duodenum being also free, the abdomen was closed. Operation gave no relief, and he died in a few hours."

Necropsy.—The body was found to be very fat, but bore no other morbid appearance. There was an operation in the mid-abdominal line. The thoracic organs showed no lesion of importance. There was peritonitis affecting the third part of the duodenum, there being much injection with deposit of lymph in a thin granular layer. There was some dark, opaque, greenish fluid in the cavity. The stomach was slightly distended. The mucous membrane was very catarrhal and showed ecchymoses in places and even acute gastritis in patches. Microscopic examination showed very marked catarrh of the mucous membrane, with considerable cellular infiltration of the sub-mucous and muscular coats. This infiltration was not evenly distributed, being more marked in some places, so that areas were seen under the microscope which contained great numbers of leucocytic cells and even fibrin. There was great engorgement of the vessels, with cell exudation in their neighbourhood. There was some dilatation of the duodenum and the wall was very much thickened. There was intense engorgement of the vessels and inflammation of the peritoneal surface, the mucous surface showing many ecchymoses. There was no obstruction of the duct, which was found to be quite pervious. In the cellular tissue (extra-peritoneal) there was some infiltration with opaque grey fluid. Microscopic examination showed intense inflammation of all the coats of the duodenum, consisting of fibrinous exudation into their tissues with a very marked amount of cellular infiltration as well. These cells were of various characters and sizes and very many of them showed karyokinesis. All the vessels were greatly engorged, and round them was a very marked cellular exudation. There was marked catarrh of the mucous membrane, and the cell infiltration mentioned above extended as far as the bases of the villi, and in some places seemed to have quite obliterated Brunner's glands; in others these glands could be seen lying in a mass of exudation and their epithelium appeared extremely catarrhal. A section was made showing the passage of the pancreatic duct through the wall of the duodenum, and its examination showed marked catarrh of the epithelial coat. The jejunum and ileum showed no lesion. There was nothing suggestive of intestinal obstruction. The iliac mesentery contained a cretaceous nodule of considerable size. All the mesentery seemed loaded to an abnormal extent with fat. The large intestine showed no lesion. The liver weighed 68 oz. The organ was enlarged, brown-red in colour, and the lobules were very distinct. There was no abscess formation or other lesion. The gall-bladder contained a single large cholesterine calculus and encysted cholesterine was found in the mucous membrane. Microscopic examination of the liver showed some fatty degeneration of the cells. The pancreas weighed 8½ oz. The organ was enlarged, soft, and of a peculiar greasy feeling at the head; towards the tail it seemed unaltered. The surrounding cellular tissue was infiltrated by an opaque grey fluid similar to that found outside the duodenum. This infiltration seemed to penetrate the pancreas, passing into the interstitial tissue, but forming a soft, almost putty-like exudation, which gave to the head the peculiar greasy feeling and swollen appearance already mentioned. Almost all the lobules of the head portion were surrounded by this substance. The glandular portion also appeared to be swollen and slightly translucent. Microscopic examination of the head of the pancreas showed that all the interlobular septa were infiltrated by fibrinous exudation in which were cells in greater or less proportion showing proliferative or destructive changes. In some places these cells were extremely granular and stained badly, in others their nuclei were more distinct. In more affected portions these cells appeared to have invaded the gland acini, and the glandular epithelium showed necrotic characters. Beyond this it seemed merely swollen. In the less severely affected parts there was no infiltration of the gland tissue by the cells, the exudation being confined to the interstitial portions of the pancreas. In many places this connective tissue showed, not infiltration by exudation, but marked proliferation, and the walls of the ducts and even those of the vessels were much thickened. The duct epithelium showed distinct catarrhal change in these situations. On passing towards the middle of the pancreas these changes became much less marked and examination of the tail end failed to show any morbid condition, there being no exudation into the connective tissue or even proliferation of its cells. The gland tissue also appeared to be quite healthy. The right kidney weighed 6½ oz. and the left 6¾ oz. The organs were very mottled and the vessels very engorged. The cortex was swollen. The capsule stripped fairly well. The pelves were healthy. Microscopic examination showed some catarrh of the tubules. The suprarenals were small, flabby, and very pigmented. On microscopic examination they showed fatty degeneration. The spleen weighed 9 oz., was soft and pultaceous. Microscopic examination showed no special characters.

CASE 2.—The second case, which I have the kind permission of Dr. E. Rickards to make use of, was almost identical in its history and similar in its treatment and result.

Necropsy.—The body was also found to be very fat. The peritoneum showed some inflammation over the anterior surface of the liver and round the pylorus, being slightly opaque and dull. This seemed to be due to extensive infiltration of the retro-peritoneal tissue by opaque brown-grey fluid, there being at the same time considerable cellulitis with deposit of greasy, pultaceous material similar to that found in the first case. There were areas of "fat necrosis" on the great omentum and other parts of the peritoneal surface in the neighbourhood of the pancreas. The pancreas was much enlarged (8½ oz.), and showed appearances very similar to those found in the first case, only in a more marked degree, the same pultaceous infiltration being found. There were, however, areas showing necrosis in the most affected portions of the head, together with small hæmorrhages (see illustration). As in the first case, the head of the pancreas was the



Section of pancreas near head, showing inflammatory infiltration, hæmorrhages, and small patches of necrosis.

portion showing the most intense changes, the tail being comparatively unaffected. The microscopic appearances were also the same, except for the presence of necrosis and hæmorrhages. The duct also showed considerable catarrhal change of its epithelium. The stomach showed much more severe changes than in the first case, being more hæmorrhagic, and there even seemed to be actual necrosis of the mucosa. The microscope confirmed these changes. The duodenum also was acutely inflamed and showed much swelling of its coats, and the same intense infiltration as described in the first case was found. The spleen, liver, suprarenals, and semilunar ganglia showed no important changes, the latter even appearing quite healthy.

CASE 3.—The third case was that of a stout woman, aged sixty-three years, under Mr. Heaton's care in the General Hospital, Birmingham. When admitted she complained of pain and distension of the abdomen, with constipation and vomiting. The duration was five days. Five days ago the patient had pain in the right loin and iliac fossa, spreading across the abdomen. Her bowels were opened on that day. Later in the day she began to vomit. Since then she had

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had constipation with increasing distension of the abdomen and pain. The pain, however, had been rather less than at the onset. She had passed urine normally. Notwithstanding the stoutness of the patient, the tissues were firm and not flabby to the feel. The skin was slightly yellow. The face was drawn and rather anxious in expression. She looked ill. The tongue was large, moist, and furred in the middle. The temperature was 99° F. The pulse was fairly good. The abdomen was large, distended and soft; there was no tenderness. On percussion, it was tympanitic anteriorly, duller in the flanks, more expecially on the right side. There was no fluid. There was discolouration of skin round the umbilicus, but no signs of hernia, or anything abnormal on palpation. The patient had vomited more or less continuously since the first onset. The vomit, said to have been ordinary at first, was now a fæcal and dark brown fluid. The patient stated that she had had a somewhat similar attack two years previously, but not so severe. She had not suffered from chronic constipation. On examination per rectum nothing abnormal could be felt. The patient was put under an anæsthetic. An incision was made in the middle line, the peritoneum opened, and the bowels exposed. The intestines were not much distended, and appeared rather redder than normal. There was no sign of inflammation in the right iliac fossa. No strangulation or obstruction was found. The patient got weaker and weaker during the operation, with fæcal vomiting, and died soon after its completion.

Necropsy.—The body was extremely fat. On the peritoneal surface were scattered patches of a grey colour, about ⅛ in. in diameter, and evidently areas of fat necrosis. There was some fibrous thickening round the pancreas as from some former inflammation. The pancreas was enormously enlarged and contained large extravasations of blood, there being patches of well-marked necrosis outside the areas of hæmorrhage as well. This condition involved the whole organ, and outside the pancreas there was also hæmorrhage, this appearing to extend down in the retro-peritoneal tissue almost into the pelvis. There was a cystic cavity at the upper margin of the pancreas containing about an ounce of bloody, brownish fluid. The duodenum, though compressed, was not inflamed. The other organs showed no special change.

In the three cases bacteriological examination of the tissues of the pancreas and the fluid contained in the surrounding cellular tissue showed the presence of micro-organisms of different character. One of the most distinctive was a bacillus somewhat slender, with rounded ends, and which does not stain by Gram's method. Bacterium coli commune was also obtained by culture, especially from the fluid surrounding the pancreas and extending down behind the colon. These cases are, therefore, almost identical in their morbid anatomy, the only difference being of degree. Taking into consideration the manner in which the stomach and duodenum showed intense inflammation with involvement of the head of the pancreas—i.e., the adjacent portion—the tail practically escaping, the question may be raised as to whether we may not have to deal with an infective gastro-duodenitis, extending into the surrounding tissues. The manner in which the retro-peritoneal connective tissue showed infiltration and inflammation obviously from extension downwards by gravitation from the seat of the most severe lesion round the duodenum at once suggests some infective condition, and the abundance of micro-organisms in all the affected parts is of great importance. That the pancreas is not necessarily the primary organ affected is very probable, and from its situation and texture it would be readily affected by any infecting organism, either from the pancreatic tissue or by way of the duct. As this latter opens directly into the duodenum it is plain that any infecting organism could find a way into the organ. On the other hand, in many cases the pancreas seems to be the only organ affected, as in Case 3.

Here, then, we have a group of three cases which during life were thought to be characteristic of intestinal obstruction, or at least so nearly characteristic that, though the condition of the patients was clearly desperate, it was felt not to be right to withhold from them the chance that laparotomy might give. In my own case there was no general distension; this was present in Mr. Heaton's case, and the abdomen was tympanitic; but as a rule in recorded cases no general distension is present, and it may be possible that this distinction will help us in arriving at a diagnosis in the difficulty such a case presents. Fitz divided his cases into the following groups: (1) pancreatic hæmorrhage; (2) hæmorrhagic pancreatitis; and (3) acute pancreatitis which might stop short of or reach a gangrenous condition. Pathologically our cases correspond in inverse order to these divisions, but clinically no such division is possible, as it is only when the shock becomes very great or symptoms of intestinal obstruction occur that the case, as a rule, comes under medical observation. There are, I believe, no pathognomonic symptoms which can lead one in the present state of knowledge to diagnose or even suspect the presence of pancreatitis before the changes become pronounced and the condition hopeless.

In the case of very great hæmorrhage (Case 3) there were evidences of old adhesions at the back of the pancreas, and therefore our ignorance of the earlier stages of the disease may be only temporary, and we may argue from a fact like this that there had been an abortive or slight attack of the disease five years before the fatal attack. It would be the greatest unwisdom to disturb ourselves and alarm our patients by the suggestion that pain in the epigastrium and vomiting might mean a rapidly fatal disease, but the persistence of these symptoms without adequate cause should certainly in some cases excite very great apprehension. When we ask ourselves what all the fatal cases of pancreatitis have in common besides the pancreatic lesion, we find that it is neither sex, occupation, nor previous history of illness. It is not even, as we might expect, recent gastro-duodenitis, for there are several cases of large pancreatic hæmorrhage recorded in which death occurred suddenly and without warning by symptoms. In every case, however, the patient has been fat, and in a large proportion of the cases has become rapidly fat, and showed on post-mortem examination a heavy, fat omentum. In addition, every case in which proper examination has been made has shown the presence of numbers of differing kinds of bacteria. It is probable that in these two conditions we have both a predisposing and an efficient cause for the disease. Anything which delays the products of digestion in the duodenum, especially if these be decomposing, will increase the liability of infection of the pancreas, and according to the virulence of the infection will be the acuteness of the disease and inversely the duration of life. One cannot look at the duodenum without thinking that its shape, while necessary for delay in the passage of food in order to get due admixture of bile and pancreatic secretion, may become a source of danger if any addition to the delay in the passage of the products of digestion or decomposition arises, as must result from the presence of a large amount of omental and mesenteric fat, and therefore it is that epigastric pain in fat people, or those who are somewhat rapidly becoming fat, assumes an importance both from the view of treatment and from that of prognosis. No one can see a case of acute pancreatitis without being oppressed by the horror of its suddenness, of its severity, and its hopelessness. A sudden but sometimes fearful pain in the upper part of the abdomen, shock which may be so great as to kill the patient with the rapidity of cerebral hæmorrhage, and vomiting which continues unrelieved until stopped by death—these constitute a trio of symptoms before which we are hopeless. But is there nothing we can do to prevent their occurrence? I fear not if, as seems most likely, the disease is due to infection by a pathogenic organism. It is possible that by treating vigorously gastro-duodenal catarrh, and by means of salol and other disinfectants rendering the duodenum an unsuitable habitat for bacilli, we may diminish the likelihood of pancreatic infection, but until the symptoms of pancreatitis occur we can only guess at its existence, and its non-occurrence cannot furnish an argument that our treatment has averted it. When once the disease has commenced, no treatment has been effectual. In common with nearly all recorded cases, those in the General Hospital, Birmingham, were treated by laparotomy, and to my thinking properly so. There must be an element of doubt, even if pancreatitis be suspected, and the doubt that must exist in every case as to whether or not we have to deal with intestinal obstruction from the impaction of a gall-stone or from other causes will justify operative interference when relief by drugs has been despaired of.

Birmingham.

THE USE OF CALF LYMPH.—The Horsham board of guardians has decided to supply its medical officers with calf lymph for the public vaccination of children subject to the consent of the Local Government Board. Most of the medical officers of the board wrote in favour of such a plan.

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THE MALIGNANT TUMOURS OF INFANCY, CHILDHOOD, AND YOUTH.

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(*Concluded from p. 1263.*)

RECTUM.

THE rectum is remarkable for the comparatively large number of cancers that arise from it during early life. Moreover, the earliest duly authenticated case of cancer hitherto recorded has been met with in the rectum. This is the case described by Stern,[193] in which an annular cancerous stricture of the rectum, causing obstruction, was met with in a girl only eleven years old. Right lumbar colotomy was performed, but she died six months later. At the necropsy a cylinder-celled cancerous growth was found, constricting the bowel, at 10 centimetres above the anus. More than a score of cases of rectal cancer, originating under twenty years of age, might easily be collected. I have notes of the following examples: Allingham[194] in a youth aged twelve years; Michaud[195] in a youth aged thirteen years; at fifteen years of age by Godin[196]; in a youth aged sixteen years by Quain and Busk[197]; in girls aged sixteen years by Pillon[198] and Schoening[199]; in a youth aged seventeen years by Cripps[200]; and in a girl of the same age by Schoening. The earliest age at onset within my own experience occurred in a woman aged twenty-one and three-quarter years: this was the youngest of 32 consecutive cases of rectal cancer in females. Of 32 similar cases in males the youngest was twenty-four and a quarter years. A few instances of rectal sarcoma have recently been published. In children fibro-cellular polypi, which often contain glandular structures, are of common occurrence in the rectum. These sometimes manifest sarcomatous properties, but much less frequently than do the somewhat similar growths in the vagina. Probably only a small minority of these rectal polypi are the outcome of embryonic aberrations similar to those that originate the vaginal polypi, and this may account for their comparatively innocent nature.

LIVER.

The number of cases of primary malignant disease of the liver that have been recorded as occurring in early life is very considerable. Such cases are much more numerous than I was aware of, until I specially studied the literature of the subject; and many of them are of congenital origin. These tumours are often described as "cancer," but I think there can be no doubt that this is a mistake. Birch-Hirschfeld reports that of 400 necropsies on newly born children primary malignant disease of the liver was met with in 2, and that in both these cases the disease was diffuse. The following example of hepatic myxo-sarcoma has come under my notice.

CASE 8.—The patient was a small, well-nourished girl, eight years old, with a large intra-abdominal tumour of three and a half months' duration. Laparotomy was performed. Incision into the tumour revealed a large cavity full of blood-stained fluid and gelatinous material; and on examination the disease proved to be a large, softening myxo-sarcoma of the liver. The morbid tissue was freely scraped away and the cavity drained. The patient made a good recovery; but some months later when I last saw her there was obvious recurrence. Histological examination of the substance removed revealed stellate anastomosing cells in a fibro-gelatinous matrix, with areas of small round cells in many places.

I have seen an almost exactly similar case in a young adult. Other examples of this form of malignant disease have been repeated by Meisenbach[201] in an infant aged four months, and by Cornil[202] at eight months. In some of the congenital cases the intra-abdominal tumour has been so large that it has caused difficulty in delivery. Instances of so-called cancerous tumours of this nature have been recorded by Noeggerath,[203] Kilian,[204] and Wedl.[205] In the two first-named cases the diseased liver weighed over 2 lb., the weight of the infant without the tumour being under 6 lb. De Ruyter[206] has met with congenital lympho-sarcoma in an infant ten days old, Parker[207] at three weeks, Lendruf[208] at four months, and West[209] at eight months. Pepper[210] reports "cancer" in an infant eight weeks old, Gross[211] "scirrhus cancer" in a male coloured infant aged three months, Gee[212] "alveolar sarcoma" at four months, Bahn[213] cancer at six months, Ollivier[214] "encephaloid cancer" at eighteen months, Weichselbaum[215] "malignant adenoma" at twenty months, Henoch[216] "medullary sarcoma" at two and a half years, Wolff[217] "encephaloid cancer" at three years, Tooth[218] "diffuse lympho-sarcoma" at five years, Leichtenstern[219] "cancer" at seven years, Kottmann[220] "cancer" at nine years, Deschamps[221] "encephaloid cancer" at eleven years, Pye-Smith[222] and Birch-Hirschfeld[223] "cancer" at twelve years, Roberts[224] "medullary sarcoma" at twelve years, Lewis[225] "encephaloid cancer" at thirteen years, and Henschen[226] "telangiectasic cystic cancer" at fourteen years.

PANCREAS.

Malignant disease of the pancreas is decidedly rare, and it is much rarer still to meet with such affections in early life. However, instances of congenital malignant disease—so-called "cancer"—have been reported by Arnozan[227] and Rokitansky,[228] and Kühn[229] has met with "cancer" in a two-year-old infant. Litten[230] has described an enormous sarcomatous tumour that arose from the pancreas of a male infant four years old and disseminated in the retro-peritoneal lymph glands, kidneys, mesentery, and intestines. The author claims that this is the first case of sarcoma of the pancreas ever recorded as such. Israel[231] has found "cancer" at thirteen years and Battersby[232] at fourteen years. According to my ideas the carcinomatous nature of the disease has not been clearly established in any of the foregoing cases. Of 15 cases of cancer of the pancreas collected by N. Moore[233] the youngest was aged thirty-one years.

SPLEEN.

When we consider the great functional activity of the spleen, its abundant blood-supply, and the unusually large proportion of cellular elements which it contains, it is not a little surprising that it so very seldom originates any form of neoplasm, malignant or otherwise. This immunity extends also, to a certain extent, to secondary neoplasms; for although the spleen is just as much exposed as the liver to the incidence of malignant dissemination, yet it very much less frequently originates secondary new formations. It seems not unreasonable to suppose that this comparative immunity of the spleen is in some way connected with its functional activity, which enables it to destroy and make away with cells manifesting malignant properties, whether these are derived from its own constituents or *ab extrâ*. I can cite only the following examples of malignant splenic disease in early life. Collier[234] in a child six years old found a peculiar tumour of this kind which Picou and Ramond[235] think arose from pancreatic "rests," such as they have shown to exist in this organ in a three months' human embryo, and to which they ascribe the origin of a case of primary malignant disease of the spleen investigated by them. Gaucher had previously reported a similar case. To this category the multilocular cystic tumour for which Thornton[236] extirpated the spleen of a young woman, aged nineteen years, probably belongs. Notta's[237] case of "cancer" of the spleen in a young infant may also be mentioned here; but we must remember that multiple cysts may arise in the spleen from included sequestrations of the peritoneal epithelium, of which Ribbert[238] has described an interesting case.

LYMPH GLANDS.

The lymph glands, like the spleen, seldom originate any form of malignant disease. Their relative immunity is, however, much less complete than that of the spleen. A considerable proportion of sarcomata of the lymph glands arise during early life—the retro-peritoneal, mesenteric, mediastinal, and cervical regions being the localities in which most cases arise. Examples of retro-peritoneal and mesenteric lympho-sarcomata have been reported by Bensuade[239] in an infant aged two and a half years, by Silcock[240] and Doernberger[241] in infants aged four years, by Guinon[242] and Gyrus[243] at five years, by McNab,[244] Morton,[245] and Stern[246] in children at various ages. Of 55 mediastinal lympho-sarcomata, Eger found 6 began under the age of twenty years, one of these being under ten years. Tumours of this kind have been met with in the posterior mediastinum by Money[247] in a male infant fifteen months old, and by Davies[248] in a youth aged eighteen years; in the anterior mediastinum by West[249] in a youth aged seventeen years; by N. Moore[250] in a youth aged eighteen years; and by Mott[251] in a young woman aged twenty-one years. Cases of cervical lymph-gland-sarcoma have been recorded by

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Dalziel[252] in an infant of between two and three years of age; by Pughe[253] in a boy aged ten years; and I know of an instance in a boy aged eight years.[254] I have seen lympho-sarcoma of the parotid region in a woman aged nineteen years; and I know of an instance in which the sub-maxillary glands were affected in a youth aged nineteen years.[255] Maas[256] has met with sarcoma of the axillary glands in an infant; and O. Schmidt[257] with chloroma of the same glands in a young woman aged twenty years. An example of Hodgkin's disease in an infant, aged three and a half years, has been described by Allen[258]; and Hobson[259] has seen a similar case at four years.

LARYNX, THYROID, LUNG, &c.

Of 50 cases of cancer of the larynx collected by Butlin[260] only one originated under twenty years of age, and of 23 cases of sarcoma there was also only one under twenty years. The case of so-called cancer above referred to occurred in a three-year-old infant, and the case of sarcoma in a child aged seven years. Paul[261] has met with intrinsic sarcoma of the larynx in a boy aged twelve years, and with extrinsic sarcoma in a woman aged twenty years. Multiple papillomata of the larynx are very common in young infants, and they occasionally manifest malignant properties. Recurrence after removal is exceedingly common. These growths are often congenital. McAldowie[262] has reported a case of malignant disease of the lung—which he calls "cancer"—in an infant five and a half years old; West[263] has seen sarcoma in a boy aged eleven years; Hofmokl[264] sarcoma of the pleura in a boy aged three years; and Lepine[265] "cancer" of the pleura in a child aged ten years. An example of cylinder-celled cancer of the lung in a youth aged seventeen years has been described by Coats.[266] With regard to the thyroid, Zahn[267] has met with a chondro-rhabdo-myosarcoma in a fœtus. In a girl aged fifteen years Brindel and Liares[268] have demonstrated "epithelióme pavimenteux lobulé" of the thyroid, and Busachi[269] has found a similar affection in a youth aged eighteen years. The heterotopic epithelial elements in these cases probably originated from "rests" of the branchial clefts. In Kroenlein's[270] case of congenital "cancer" of the neck the disease most likely had a similar origin.

SKIN.

There are on record quite a considerable number of cases of malignant disease of the skin in early infancy, and even at birth. In a newly-born child Ritter[271] met with what he calls "a congenital cancerous polypus" of the tip of the nose; there were enlarged lymph glands in the sub-maxillary and parotid regions, which increased and caused death by asphyxia three weeks later. Although Ritter calls the tumour "cancer" his own description of its structure is much more like that of sarcoma. It is likely that the malignant disease in this case supervened in connexion with a congenital polypoid lipoma, such as Lannelongue[272] has described as occurring in this situation. Jolly[273] has met with angio-sarcoma of the base of the nose in a male infant seven months old. Selberg[274] has lately described an example of "cancer" of the skin of the scapular region in an infant aged six months, which was first noticed four weeks post-partum. The disease presented as a slightly ulcerated, knobby, walnut-sized tumour. The microscopical examination revealed in-growing inter-papillary processes and nests; and this was thought to justify the diagnosis of cancer, although none of the clinical signs of this disease were present. Holmes[275] had previously reported a somewhat similar case in an infant aged fourteen days (the part affected being the skin of the back of the neck), and Lukasiewig[276] in a child three and a half years old. The "sarco carcinomatous nodes" observed by Kaposi[277] on the faces of two girls, aged respectively seven and ten years, were evidently sarcomatous; and the same is true of very similar cases in children aged eleven and twelve years old that Esmarch[278] has described. Rüder[279] has met with analogous instances. In all these cases the malignant disease supervened on xeroderma. Neuhaus has lately reported an example of congenital sarcoma of the skin of the leg in a child two months old. Karewski and others have met with similar cases. Earle[280] mentions a case of "soot cancer" in a child aged eight years; and Curling[281] cites a case at fifteen years. As previously mentioned, I have met with rodent ulcer in a girl aged fourteen years; Bleck[282] and Hutchinson[283] have since reported analogous cases at about the same age. Braun,[284] in a girl of fourteen years has seen cancer develop in the scar of a burn of the scalp; the disease proved fatal by perforating the cranium. Curtis[285] has noticed a similar case in a child aged eight years. Sangster[286] has described an instance of malignant disease of the scalp in a youth aged sixteen years; Conner[287] sarcoma of the same part in a young woman; and Frerichs[288] cancer in a youth aged nineteen years. Examples of "calcifying epithelioma" of the skin have been published by Stieda and Malherbe; "adenoma" would be a more appropriate term for this disease. Janisch[289] has seen "hæmangio-endothelioma tuberosum multiplex" in a girl aged seventeen years, in whom the disease began in the skin over the sternum at the age of seven years; Nasse,[290] in a boy aged eleven years, met with multiple cheloid with contraction, the disease being of four and a half years' duration; instances of congenital cheloid have been reported by Volkmann, Bryant, and others. A congenital sarcomatous tumour of the right side of the face has been described by Charbon,[291] and Davies-Colley[292] has removed a fibro-sarcomatous tumour from the skin of the back of a youth aged sixteen years, which appeared to have started from a congenital lymphangioma. Instances of melanotic sarcoma of the skin have been met with by Gussenbauer, Denzler, and others.

BRAIN AND SPINAL CORD.

Of 34 primary malignant intracranial tumours, tabulated by a committee of the Pathological Society,[293] in 9 the patients were under twenty years of age; 1 case belongs to the first quinquenniad, 4 cases to the second, 3 to the third, and 1 to the fourth. The great majority of malignant brain tumours of early life are gliomata, most cases arising from the pons and its vicinity. Ziegler and Stræbe maintain that their formation is determined by developmental irregularities. Instances of this kind have been recorded by Pilliet at twenty-one months, Cayley[294] at two and a half years, by Chaffey[295] and Kidd[296] at six and a half years, by Goodhart[297] at nine years, by Chaffey[298] and Money[299] at eleven years, and by Beevor[300] at twelve years. Examples of cortical gliatoma have been described by Money[301] at five years, by Albertoni and Osler[302] at fifteen years, and by Keen at seventeen years. In the cerebellum sarcomatous tumours have been noted by Peabody[303] at three years, by D'Arcy Power[304] at five years, by Butlin[305] at eight years, and by Taylor[306] at nine years, &c. Of 17 intracranial tumours in early life tabulated by Mariage, 8 were cerebellar. Psammoma of the cerebellum has been met with by Beevor[307] in a boy aged eleven years, and of the choroid plexus by Ashby[308] in a boy aged three and a half years, and by Eve[309] in a youth aged nineteen years. Allbutt[310] has described villous papilloma of the choroid plexus in a girl aged nine years, and Douty[311] a similar tumour of the fourth ventricle in a youth aged seventeen years. Lancereaux,[312] in a girl aged fifteen years, found a large polypoid myxoma growing from the lining membrane of the fourth ventricle, which caused coma and death. An instance of small, round-celled sarcoma of the pia mater of the fourth ventricle in a girl aged fifteen years has been reported by Turner.[313] In a youth aged nineteen years Ransom[314] has demonstrated large, oval-celled sarcoma of the corpora quadrigemina, and Westphal[315] met with multiple sarcomata of the brain and meninges, in a girl aged fifteen years. An interesting case of adeno-sarcoma of the pineal gland has been recorded by Coats[316] in a youth aged thirteen years; the tumour contained cartilage, &c., and the author suggests that it may have sprung from the rudiments of the pineal eye. In the spinal cord Bastian[317] has found diffuse sarcoma of the pia mater in a girl four and a half years old, and Schultz[318] in a girl aged sixteen years met with a similar condition. Instances of chloroma of the dura mater, &c., in children, have been reported by Lang and Aran.

EAR.

Very few cases of malignant diseases of the ear are met with in early life. The following interesting case of melanotic sarcoma has come under my notice.

CASE 9.—The patient was a rather pale, fair, red-haired youth, aged fifteen years, with a small, hard, shotty, black lump on the back of the edge of the left auricle at the junction of the lobule with the helix. In the course of eight years this lump increased to the size of a horse-bean; and shortly before this a second small black lump formed on the external surface of the ear, at the junction of the lobule with the tragus. There was then no obvious enlargement of the adjacent lymph glands. No wart, mole, or other congenital blemish of the

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part previously existed. The disease supervened spontaneously, without any injury or other known cause. It was freely excised, and the wound healed quickly. Shortly afterwards, however, a lymph gland below the ear became slightly enlarged. I saw him again eighteen months later, when the gland below the ear was of the size of a walnut, and there was a pea-sized nodule of recurrent black growth in the scar at the margin of the helix. The recurrent nodule was extirpated, as well as the enlarged gland, and both proved to be melanotic sarcoma. Histological examination of the primary growth showed a delicate, fibrillar, reticular structure, in the meshes of which were embedded small rounded cells, charged with pigment granules. I failed to ascertain what ultimately became of him.

An instance of fibro-myxo-sarcoma of the left auricle in a young boy has been reported by Agnew.[319]

CASE 10.—In this patient the tumour was first noticed at the age of two years. It was excised one and a half years later, but recurred almost immediately. A further operation, two years later, was followed by equally speedy recurrence. In the course of two years the tumour, having attained the size of a walnut, was again extirpated, but there was recurrence soon afterwards. By the time the boy had attained the age of eleven years the tumour was much larger than ever. It was then freely extirpated, together with the whole auricle; but a small recurrent nodule appeared in the scar six months later. After this the patient was lost sight of.

Cases of sarcoma of the tympanum have been described by Schwartze[320] in a male infant aged three and a half years, by Milligan[321] in a girl aged eighteen years; and by Bryant in a girl ten and a half years old.

MISCELLANEOUS.

In a boy, aged fourteen years, subject to phimosis and warts from infancy, Pemberton[322] reports having seen "cancer" develop, but the diagnosis was not verified by histological examination and the adjacent lymph glands were not enlarged. Weir[323] has published an instance of sarcoma of the penis in a youth aged eighteen years; the glands of the groin were enlarged, but no microscopical examination of the tumour was made.

Sarcoma of the thigh has been noted by Dawson[324] at birth, and by Lunn[325] in a girl aged sixteen years; of the buttock in a lad, aged eighteen years, by Treves[326]; and of the lumbar region[327] in a girl aged eighteen and a half years.

In a six months' fœtus Zahn met with myxo-sarcoma of the cheek, which started from the "sucking-pad." Heymann,[328] in a girl aged seven years, saw a malignant bleeding polyp of the septum nasi.

Kramer[329] has described a fibro-sarcomatous "desmoid tumour" of the abdominal wall in a female child four and a half years old, which was of congenital origin; and Senger[330] in a male infant, has seen a large congenital sarcoma of the foot.

Malignant tumours of the salivary glands are occasionally met with in early life. A case of sarcoma of the parotid has come under my notice in a boy aged seven years, in whom the disease was of three months' duration. Prudden[331] has described a similar case in a boy of the same age, in which the tumour contained glandular elements and striped muscle. In a girl aged twelve years[332] and a boy aged fifteen years[333] examples of adeno-myxo-sarcoma of the parotid have also been reported. Isoner has described a case of congenital sarcoma of the parotid in a male child three months old, and he cites two similar cases.

Congenital spindle-celled sarcoma of the shoulder has been observed by Mandillon[334] and of the leg by King.[335] Kaufman[336] has described a case of congenital sarcoma of the umbilical cord.

SUPERIOR AND INFERIOR MAXILLA.

A considerable number of cases of malignant disease arise during early life in connexion with these bones, most of them being myeloid sarcomata. I have collected notes of 25 cases arising under the age of twenty years; 7 of them originated from the superior maxilla and 14 from the inferior. Of the former group 2 were congenital, 1 occurred in an infant three and a half years old, 2 were between the ages of ten and fifteen years, and 2 between fifteen and twenty years. Of the latter group, 3 were congenital, 2 occurred in the first year, 5 in the age period five to ten years, 5 between ten and fifteen years, and 4 between fifteen and twenty years. This list includes 3 odontomes—1 in a boy aged ten years, and the other 2 in women aged eighteen years. It also includes 4 cases of round-celled sarcoma, 1 of round- and spindle-celled sarcoma, and 1 myxoma. Massin has not met with a malignant "enamel-organ tumour" of congenital origin.

BONES.

The skeletal bones rarely originate malignant tumours until the third quinquenniad, when a large number of cases arise. To this rule the scapula is an exception, for sarcomatous tumours not unfrequently spring from it at much earlier periods. Of 25 bone sarcomata in infants collected by Poinsot,[337] in 11 the scapula was the part affected. Instances have been published lately by Jacobi[338] (congenital), Targett[339] (at the age of six months), Morgan[340] (infant), Doll,[341] and Clark[342] (at the age of thirteen years). Sarcomata of the long bones are rarely met with in infancy. Of Gross's[343] 147 cases, only 3 arose during the first quinquenniad and 3 during the second; of 119 cases tabulated by Butlin and Colby[344] 3 belong to the first quinquenniad and 3 to the second; of 25 cases collected by myself, 2 belong to the first quinquenniad, 2 to the second, 15 to the third, and 6 to the fourth. The femur, tibia, humerus, and fibula are the bones most frequently affected, in the order stated. More than half the cases arise from the femur. Of 11 sarcomata of the femur collected by me the youngest occurred in a boy aged nine years, 5 belonged to the third quinquenniad, and 5 to the fourth. The lower end of the bone is the usual starting-point of the disease, which is generally of periosteal origin. Jacobi[345] has cited an instance of congenital sarcoma of the femur. I have met with sarcoma of the fibula in a girl thirteen and a half years old and in a boy aged fourteen years. Butlin[346] has described a myeloid sarcoma of the upper part of the tibia in a female child only four years old. A case of round-celled sarcoma of the radius has been reported by Lockwood[347] in a female infant aged eleven months. Bryant[348] has met with sarcoma of the hand in male infants fifteen and twenty months old; but it is not clear from his description whether the disease started from the bones or the soft parts. An instance of myo-sarcoma of the tuber ischii in a boy four years old has been described by Marchand[349]; and I know of a case of spindle-celled sarcoma of the acromion[350] in a youth aged fourteen years. Oppenheim,[351] in a male child three years old, found sarcoma of the seventh cervical and first dorsal vertebræ; and Riskorski,[352] in a girl aged fourteen years, has also met with a sarcomatous tumour of the spine.

MUSCLES.

Malignant tumours of the muscles in early life are almost unknown. I can cite only the following cases:—Marshall,[353] in an infant five months old, has seen a spindle-celled sarcoma of the calf muscles that was probably congenital; Bórard,[354] in a girl aged twelve years, met with sarcoma of the pectoralis major muscle; Barling[355] has reported alveolar sarcoma of the triceps in a young woman aged twenty years; and in a boy aged seven years Broca[356] found sarcoma of the sheath of the peroneal muscles.

Preston.

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MEDICAL MAGISTRATE.—His Excellency the Governor of the Cape of Good Hope has appointed Mr. Charles William Browne, additional Visiting Surgeon Aliwal North at Jamestown, Justice of the Peace for the District of Aliwal North.

THE NEW PORTSMOUTH HOSPITAL.—Mr. Keith Young has just prepared the plans suggested for the replacing of the present Royal Portsmouth, Portsea and Gosport Hospital by a more modern institution. The out-patients' department and the administrative block face the street, the latter connected with a ward of ten separate bedrooms. At the rear, and of course amply connected are four parallel wards of twenty beds each. The laundry is practically a block to itself. Two of the last-mentioned wards are first to be built on vacant sites, the remainder of the land being gradually cleared, and the present buildings replaced.

THE

PROGNOSIS OF PNEUMOTHORAX, WITH SOME STATISTICS AS TO MORTALITY AND DURATION, AND AN ACCOUNT OF A SERIES OF CASES OF RECOVERY.[1]

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(*Concluded from page 1267.*)

B.—CASES OF RECOVERY AFTER SEROUS OR SERO-PURULENT EFFUSION.

CASE 6. *Pneumothorax with sero-purulent effusion of three months' duration.*—The patient, a man, aged twenty-two years, was quite well till three months previously, when he was attacked at night with sudden dyspnœa, so that he fainted. He got gradually worse, had some cough and expectoration, spat a little blood a few times, but only about an ounce at the most, began to sweat at night and to lose flesh. After a few days he got better, but was never well enough to go out. He remained in the same condition till a pain in the right side set in, which gave him a great deal of distress, so that after a few days' suffering he applied for admission to the hospital and was taken in, three months after the original attack. He was then found to be suffering from hydro-pneumothorax of the right side; the heart's apex was 1½ in. outside the left nipple line. As he lay in bed the whole of the front of the right side was resonant down to the margin of the ribs, the liver was displaced in the usual way, and the breath sounds were completely absent. The bell sound was well marked and so was succussion, which had a metallic character. There was a considerable amount of fluid in the chest, the level rising on the patient sitting forward up to the sixth rib in the nipple line. The temperature was slightly raised, reaching 100° or 101° F. every evening, but dropping to 99° at other times of the day. The patient was admitted on May 4th, and by the 22nd the side had become much more distended. The superficial veins on the right side of the thorax were greatly dilated, the course of the blood being from above downwards; so were also the veins of the right arm and the right side of the neck. It was evident that there was considerable intra-pleural pressure, although but little dyspnœa was experienced when the patient was lying still. The displacement of organs was extreme. On the 25th the side was aspirated. Air was allowed to escape as long as it would. The gas was analysed roughly and appeared to contain about 12 per cent. of carbonic acid. There were removed by the aspirator 41 oz. of a sero-purulent fluid with thick flakes, which was faintly alkaline, had a specific gravity of 1020, and became almost solid on boiling. The whole of the effusion could not be removed, as the patient began to cough and feel faint. The heart's apex returned after the operation nearly three inches in linear measurement and beat nearly under the nipple. The intra-pleural pressure was estimated and found to be on expiration + 13¼ in. of water, on inspiration + 6⅝ in. of water, so that there was a respiratory oscillation of nearly 6½ in. On examining the patient four days later it was found that no succussion could be obtained and that the bell sound was audible only over the upper part of the lung posteriorly as far down as the spine of the scapula; in the interscapular space some distant amphoric breathing was heard, but elsewhere, as before, no breath or voice sounds were to be detected. In the course of the next few days the fluid evidently was accumulating again; succussion, which was absent, returned, and the veins on the chest became more dilated, much as they had been before the paracentesis. On June 16th a second paracentesis was performed. The pleural pressure showed 8 in. of water with a respiratory variation of not more than 1½ in. No air escaped, but fluid came at once, and 22 oz. of sero-purulent fluid were removed, which, however, contained much less pus than on the previous occasion. On the 22nd the patient felt and looked better, and breathing

[1] A paper read before the Medical Society of London on Jan. 11th, 1897.

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was greatly relieved. Succussion was absent. The amphoric breathing and bell sound were heard only about the upper part of the right interscapular space. By the 29th the apex of the heart had returned almost to its normal place. The bell sound was heard only in the supraspinous fossa, and in the upper part of the interscapular space. There was no succussion. The breath sounds were hardly different in character from those on the opposite side. Although there was a little dulness on sitting up it was evident that the fluid had almost entirely disappeared. One month later the following notes were taken: "The right side is a little contracted, but the movements are free, especially in the lower parts, though not quite so free as on the opposite side. Percussion is somewhat impaired over the whole side except at the apex back and front, where it is still somewhat hyper-resonant. Over this area the vocal vibrations, vocal resonance, and breath sounds are less than in other parts, and the bell sound is still audible. Elsewhere the voice and breath sounds are fairly normal. The heart's apex is hardly half an inch outside its normal place. The veins of the right arm, neck, and chest are still somewhat dilated." The conclusion was drawn that the pneumothorax had become limited to a very small area at the apex, and, although the percussion was a little impaired in the lower part of the chest, that the lung had expanded freely and was performing its functions normally. On Aug. 24th recovery seemed to be almost complete, except that the side was a little flattened and its movements slightly restricted as compared with the other. The voice and breath sounds, though somewhat rougher than on the left side, were otherwise not abnormal. The apex of the heart was in its normal place; the superficial veins were still a little dilated. The breathing was not in the slightest degree short even on going up and down stairs. The patient had gained flesh and, in fact, seemed to be perfectly well. This case was under observation in the year 1883. I saw the patient this year (1897), fourteen years later. The chest appeared to be absolutely healthy, and it was quite impossible to say that there had ever been anything the matter with it.

CASE 7. *Case of phthisis under tuberculin treatment; left pneumothorax; serous effusion; paracentesis; recovery; recurrence three weeks later without effusion; recovery.*—A man, aged twenty-four years, had suffered from phthisis for about nine months, and came into the hospital for the purpose of having Koch's treatment applied. He presented well-marked signs of phthisis at the left apex. The disease did not appear to be active, for the temperature was normal on admission, and though the injections of tuberculin were followed by the usual rise the temperature soon returned to normal and remained so. On May 5th the patient suddenly woke up in the night with a violent pain in the left side of his chest, but it extended, he said, from the left ear down to the margin of the ribs. The patient had a rigor and the temperature rose to 102° F.; the dyspnœa was considerable, so that the patient could hardly speak a word. Pneumothorax was found on the left side on May 14th. The following note was taken. The whole left side was tympanitic to percussion and the heart displaced far on to the right side. The bell sound was heard. At the base there was dulness, which in the recumbent position rose high into the axilla. Succussion was easily elicited. It was evident that besides the pneumothorax there was a large effusion, and on account of its rapid formation its nature was probably serous. Paracentesis was performed; a quantity of air escaped and 22 oz. of serum were drawn off. The specific gravity was 1018. The intra-pleural pressure on inspiration was + 4 in. of water, and on expiration + 5, with a respiratory oscillation of 1 in. The patient stood the operation well, but towards the end of it complained of pain in the precordial region, and on auscultation here pleuro-pericardial friction was heard. The heart returned nearly to its normal position. On June 1st, nearly a fortnight later, the following note was taken: "The heart's apex is now only about an inch from its normal position; the stomach resonance is distinct; the voice and breath sounds are heard everywhere, even down to the base behind, so that there can be but little fluid left. There is no succussion, and the bell sound is gone. It is evident that the air has completely disappeared and the fluid nearly." On June 8th the patient, after a violent attack of coughing, was seized again with pain in his left side. His breath became short and his temperature, which had been for some days normal, rose again to about 102°, and the bell sound returned in the middle part of the chest; that is to say, it was not obtained over the apex in front or at the base behind. On June 25th the following note was taken: "There is no succussion. From the physical signs it is evident that the impaired percussion behind is due to thickened pleura, and that the irregularity of the area in which the air is contained is due to the irregular adhesion of a partly expanded lung. Gradually the air was absorbed and the lung expanded as before, so that by July 10th the condition was very much that which the patient presented at the time of his admission into the hospital, with the exception that there was a little dulness at the base due to a thickened pleura." On July 24th the patient was discharged from the hospital in much the same condition as he had been on his entry.

CASE 8. *Pneumothorax of the left side in an apparently healthy person, without marked symptoms; considerable effusion spontaneously absorbed; complete recovery; six months later pneumothorax of the right side with much dyspnœa, without effusion, also with complete recovery.*—A well-developed, healthy-looking man, aged twenty-one years, was seized on Nov. 6th with sharp pain between his shoulders. Later in the day he complained of tightness in his chest and pain on breathing. These symptoms continued, so that he felt obliged to remain at home, though not in bed. He did during the succeeding fortnight actually go to work on two days in the week. The pain was worse at night, when he often felt hot and sweated, so that sleep was broken. He had lost flesh and strength rapidly, and, feeling ill, came to the hospital. With the exception of a little rheumatism now and then he had been in perfectly good health all his life, but a few days before the onset of the present illness he had got very wet and worked all day afterwards in his damp clothes. It transpired subsequently that on one occasion, one and a half years ago, the patient had once spat up a little blood, about two teaspoonfuls only. The patient came under observation eighteen days after the onset of his illness—viz., on Nov. 23rd. He was then found to have pneumothorax of the left side. The whole front of the side was tympanitic, with well-marked bell sound and succussion. A good deal of fluid was present, the level reaching up to the mid-axilla as the patient lay upon his back. The vocal vibration, vocal resonance, and breath sounds were almost absent over the whole side, but had a somewhat amphoric character on coughing. The temperature was 102° F. at its maximum, but for the greater part of the day a good deal below that. A needle was inserted and clear serous fluid obtained. As there were no urgent symptoms the patient was not interfered with, was kept in bed quietly, and treated on general lines. By Dec. 6th it was evident that the fluid was being absorbed and that there was great improvement taking place in the side, and on the 12th the following note was taken: "Outside but following the line of cardiac dulness, which is in its normal place, is an area of hyper-resonance about two inches in width. Elsewhere the percussion is somewhat impaired, but not anywhere dull. The vocal vibrations are heard and felt over the whole side, though not quite as distinctly on the right, but the breath sounds are hardly audible except in the upper part, and there is a little crepitation, probably friction, on deep respiration. There is now no longer any bell-sound or succession. The fluid has been almost entirely re-absorbed, the lung has expanded to a great extent above, though it is possible that in the hyper-resonant area a small amount of air still remains in the pleura. At any rate, over this area the bell sound was obtained a few days ago, though it is absent now." In a few days more even this hyper-resonant area disappeared and became practically normal over the whole side. On Jan. 19th the patient was discharged in all respects well, and except that the left side of the chest moved a little less freely than the right there was nothing to show that the chest had been affected.

About five months later, June 15th, the patient having in the interval been in good health, was seized in the night suddenly with severe dyspnœa and pain in the right side. He was admitted the next day and found to have pneumothorax of the right side. The dyspnœa, though urgent, was not extreme. General measures were adopted with relief, and on June 23rd it was obvious that the air was being absorbed, for the heart's apex was one inch nearer the sternum. On the 27th the liver had risen so that its upper border was at the sixth rib in the nipple line. On the 30th succussion was obtained, though only with difficulty, but there were no other signs of fluid. On July 4th succussion could no longer be obtained. On Aug. 1st the lung was in contact with the chest walls everywhere, and some friction

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was heard at the base behind. Recovery was now complete. I have seen the patient lately—i.e., six years from his last attack—and he is perfectly well and the chest shows no signs of abnormality.

CASE 9. *Pneumothorax with serous effusion; paracentesis; absorption of air; partial recovery.*—The patient, a man, aged thirty-one years, was in good health except for a slight cough for six months, till eleven weeks before admission, when on rising one morning he found that he could not draw his breath freely and that he had a little pain in his right side. He tried to go on with his work, but found that he was unable to do so and had to take to bed, where he remained for a fortnight. After six weeks he was able to go back to work and do light work up to the time of his admission to hospital, though for the last three or four weeks he had found his breathing getting gradually more and more short. On admission he was found to have pneumothorax of the right side with a considerable amount of effusion. Percussion and bell sounds were well marked and there was well marked ægophony at the angle of the scapula. There was the usual displacement of the heart and liver. The fluid in the recumbent position reached up to the level of the fifth rib and on sitting up as high as the third rib. The temperature rose to 100° or 101° for three or four days after admission and subsequently fell to normal. Three weeks later paracentesis was performed and 80 oz. of clear serum were removed with great relief. The intrapleural pressure was zero. The organs returned nearly to their normal places. The patient was quite comfortable and suffered no distress from the operation. Gradually, however, the fluid re-accumulated, and when the patient decided to leave the hospital a month later his condition was much the same as on admission. After the patient had been out of the hospital for a month he returned to show himself. The lines of dulness were much as before, but there was no succussion and the breath sounds were audible all over the resonant upper part. The lower part of the chest contained a good deal of fluid, but no succussion could be elicited. The patient said that he had heard the splashing sound in his right side on leaving the hospital, but that it gradually decreased and had been absent for the last three weeks. The patient passed from observation, and his subsequent career is not known. The air had been all absorbed, and the case had become one of simple pleuritic effusion. However, as he felt well enough to do some work and would not submit to operation nothing further was to be done.

C.—CASES OF RECOVERY WITH PURULENT EFFUSION.

CASE 10. *Left pneumothorax; serous effusion; paracentesis; suppuration of puncture; empyema; sinus left; death from phthisis some months later.*—The patient, a man, aged forty-six years, had been ailing for twelve months with indefinite symptoms, when he was seized suddenly one night with very severe dyspnœa, with cough and pain in the left side. A fortnight later he was admitted into the hospital. He was suffering from very considerable dyspnœa, was cyanosed, and bathed in sweat; but after being in the hospital for a few hours he rallied. He was found to have pneumothorax of the left side with a large amount of fluid. Ten days after admission he was tapped and 74 oz. of clear, serous fluid were removed. The pressure was 9 in. of water. After the operation subcutaneous emphysema developed. Fourteen days later he was tapped a second time; the pressure then was + 4½ in. on expiration, + 1 in. on inspiration, with a respiratory oscillation of 3½ in. This time no fluid could be obtained. A short time afterwards the puncture suppurated and ultimately a communication was formed with the pleura, through which a discharge of thin sero-purulent fluid took place. From this time the patient slowly improved, the lung re-expanded, and after four months the patient left the hospital in a fairly good state of health with a discharging sinus in his left side. The lung had expanded fairly well over the whole side, but there were obvious signs of phthisis at the left apex. Some three or four months later he was re-admitted into the hospital because his health had been failing. The condition in the side was much as it was before; the lung had expanded over the greater part of the chest and the empyema cavity was quite a small one. As the discharge did not seem to be quite free the opening was somewhat extended with the knife and a drainage-tube put in. The phthisis made rapid strides, and a few months later, about twelve months from the commencement of the pneumothorax, it had involved both sides. Ultimately the patient died from phthisis.

CASE 11. *Left pyo-pneumothorax; discharge through the lung; partial recovery.*—The patient, a man, aged twenty-nine years, came under observation with left pyo-pneumothorax. No definite history of its onset could be obtained. The patient had been ailing for three years with a cough, which had been much worse during the last twelve months. He had occasionally spat a little blood and had suffered from night sweats and loss of flesh recently. The signs of pneumothorax were obvious, but succussion was not easy to obtain and the amount of fluid was not large. The left lung was adherent at the apex, where there were the signs of early phthisis. The symptoms were not in any way urgent and did not call for any active treatment. In a fortnight both the air and the fluid were reduced in amount, and the patient had gained 3 lb. in weight. Succussion also was less easy to elicit. The patient then began to spit up pus and this soon increased in amount. With the free expectoration of the pus the condition of the patient improved. Nothing further was done, and in six weeks' time the patient left the hospital greatly improved in general health. The signs of pyo-pneumothorax still persisted, though not quite to the same degree, and some ounces of pus were being expectorated daily. It would, I think, have been well to have operated on this case and laid the side freely open, but this was prevented by the patient's leaving the hospital.

I think we may fairly claim that pneumothorax is sharing in the diminished mortality of diseases of the pleura, and this I attribute to the better comprehension of the true nature and dangers of the disease and to its better treatment, especially during the early days of the attack, when the risk to life is greatest.

Wimpole-street, W.

ON

STENOSIS OF THE EXTERNAL AUDITORY MEATUS AFTER OPERATIONS FOR MIDDLE-EAR DISEASE.

BY A. G. MILLER, M.D., F.R.C.S. EDIN.,
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IN many of the earlier cases on which I have had to operate for septic middle-ear disease and its complications I have noticed that, after free drainage has been established from the wound behind the ear, there was a tendency to contraction of the meatus. In July, 1894, I showed to the Edinburgh Medico-Chirurgical Society a patient on whom I had operated for thrombosis of the lateral sinus, and in whom the meatus had contracted so much, during the period that the wound behind the ear was open, that it would hardly admit an ordinary probe. Looking at the circumstances of the case from the point of view that one adopts in the somewhat analogous case of stricture of the urethra complicated with perineal urinary fistula, it occurred to me that tying a tube in the meatus would cure the stenosis, drain the tympanic cavity, and hasten the closure of the wound behind the ear. Accordingly I got a tube made of flexible metal so that it could be bent to the normal curve of the meatus, and tied it in. When I showed the patient to the society the meatus was widely dilated, the cavity of the tympanum was clean and dry, and a sinus that had existed for some time behind the ear was permanently closed. The same method of treatment has been adopted with success in several other cases.

The treatment seems to me to be rational and on the lines of surgical principles. First, there is contraction of a normal canal, partly due to inflammatory thickening, partly to non-use, the discharge being drained from the tympanum mainly if not solely (at first) by the free wound behind the ear. Secondly, a perfect cure cannot be effected so long as the meatus remains stenosed. I take it that one of the most important principles in the treatment of septic middle-ear disease is a permanent free drain—permanent as well as free, the appropriate permanent opening being necessarily the normal external auditory meatus. Thirdly, an abnormal fistulous opening will not close permanently so long as the normal canal is constricted. I have seen many cases in proof of this in which the establishment of a free drain from the meatus has brought about the closure of a mastoid fistula even when it was neither expected nor

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specially sought for. Fourthly, the best route by which to examine and treat the middle ear must always be the normal opening. So long, therefore, as it is stenosed it will be impossible to perform either of these procedures properly. Consequently, given a case of middle-ear disease in which there is stenosis of the external auditory meatus it must be dilated before the case can be properly treated or permanently cured, and the lodgment of a metal tube is an appropriate way of dilating the meatus.

How does this contraction of the external auditory meatus occur? In my experience there are two classes of cases in which contraction is met with and in which treatment with the tube is advisable and appropriate. 1. Cases in which from neglect the meatus is choked with discharge, and also contracted in consequence of thickening of the walls from inflammatory changes. In such cases syringing is impossible, there not being a sufficiently large channel for the lotion to flow both in and out, and an operation may be necessary to obtain a sufficient opening for syringing and for drainage; but in others, if operative interference be not otherwise indicated, dilatation of the meatus may be sufficient. For these latter the tube is appropriate. 2. Contraction of the meatus occurs also in quite another way. An operation has been performed to obtain access from behind the ear to the mastoid antrum or tympanum. The opening is made very free, and both syringing and drainage are better conducted through it at first. The meatus is forgotten, and as it is not used it contracts, and when the time comes when it ought to resume its function of being the main, or rather sole, medium of communication with the middle ear it is found to be contracted and therefore inefficient.[1] This result occurred not infrequently in my earlier operations; hence my devising the method of draining by the tube. For the last year or two I have not been troubled with contraction of the meatus, for I have always made packing of the meatus an essential part of the treatment of each case from the day of the operation.

There is another class of cases — perhaps the most common of all—in which the tube will be found useful. I allude to those that are treated at a hospital till they are almost well and are then sent or taken home with instructions to carry on the treatment, syringing or otherwise, but are brought back after a time much worse than when they went out.[2] The explanation is the common and usual one—viz., that the parents being ignorant and careless do not carry out their instructions properly, or neglect them altogether. In consequence one has a condition of matters very similar to that which I have described in the first class of cases. The special advantages of the tube in these last are that it is visible and so attracts attention, and therefore is not likely to be forgotten; besides, it is easily removed, cleaned, and re-inserted.

Some objections may be brought forward. 1. Why should not syringing of the tympanic cavity be sufficient? My answer is this: In the first place, if the meatus be stenosed efficient syringing by it is not possible. Again, the tympanic cavity may certainly be kept clean and clear by syringing from an opening behind the ear, but permanent relief cannot be secured so long as the meatus is not the principal medium of drainage. In other words, if there be stenosis of the meatus, syringing or draining by the meatus cannot be brought about, and inability to drain freely by the meatus precludes the possibility of effecting a permanent or satisfactory result. 2. Some have told me that the tube is difficult to clean, becomes choked, or causes pain, and therefore has to be removed. To these objections I answer that the tube is easily cleaned and manipulated being of metal, consequently it ought never to become choked. If it causes pain, that must be because it is too long, too large, or not of the proper curve; but these defects are easily remedied because the tube is of soft, flexible metal.[3]

The manner in which I employ the tube is as follows: The tube is about one and a quarter inches in length, with a flange which has two perforations to which tapes are fastened, so that it can be tied in. The diameter of the tube is from one-sixteenth to one-eighth of an inch, according to circumstances. The bore is made as large as possible so as to aid drainage. A small strip of gauze or thread of worsted is lodged in the tube, and this by its capillary suction acts as a syphon and aids in the drainage of the tympanum if the discharge be watery enough. I have seen the pus falling drop by drop from the gauze in some cases. This strip of gauze should be taken out and renewed daily or twice a day, which makes certain that the tube does not become choked. Each time that the tube is removed the tympanum may be syringed, but in many cases this is hardly necessary, the tube being sufficient to keep the middle ear dry. The gauze or worsted should project slightly from each end of the tube, and should not fit it too tightly.

Edinburgh.

[1] I have seen this occur even when there was free communication and lotion could be injected from the opening behind the ear to the meatus.

[2] In a hospital such as the Edinburgh Royal Infirmary, where there is a great demand for beds, it is impossible to keep patients in long enough (often many months would be necessary) to ensure perfect cure.

[3] Rubber tubing is not suitable, because it very quickly becomes septic and irritating, and because it cannot be tied in.

ON THE ANÆSTHETISATION OF CHILDREN.[1]

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THE interest and importance of this subject is such as to need no emphasis, and I am the more encouraged since I believe that the particular method which it is the chief object of this paper to describe possesses such advantages over the ordinary employment of chloroform on children as to render it worthy of a trial. Comparatively little literature upon the use of anæsthetics on children exists, doubtless because such patients take anæsthetics very well. It was early found that children were easier to manage under chloroform, and less likely to die than adults; hence chloroform has to a large extent kept its place as the usual anæsthetic for children. As the most remarkable instance with which I am acquainted of the marked tolerance of children to anæsthetics, I may perhaps mention the case of a strong boy, aged seventeen months, whom I once kept anæsthetised for six consecutive hours, while a Macewen's long intubation tube was kept in position. It was necessary to keep him well under, for if the laryngeal reflexes were allowed to return, his breathing would become seriously interfered with. He had chloroform for an hour or two down the tube, and for the remainder of the time a mixture of chloroform and ether. He was fed twice with nutrient enemata, and in less than half an hour after I left he was playing. After-effects were absent.

It is well-known that the percentage mortality of chloroform in children is much below that in older patients; but there is at the present time no reason for supposing that symptoms dangerous to life do not occur as often in children as in adults under its use. It is, however, a well-recognised fact that children displaying such symptoms are far more amenable to the ordinary methods of restoration than are adults. Dr. Leonard Guthrie, in a valuable series of papers published a few weeks ago in the *Clinical Journal*, alludes to the greater proportional vitality of young children as compared with adults, to the natural elasticity of a child's chest walls, and to the stronger condition of the heart as probable explanations of the reason why this is so. Another difference between children and adults is, that in the latter one-half or more of the recorded chloroform fatalities have occurred during imperfect anæsthesia. Children are not so liable to depression of the circulation from the causes that operate in imperfect conditions of anæsthesia, and I believe that the cause of death from chloroform in children is almost invariably an overdose. One cannot feel that in experienced hands chloroform is an improper anæsthetic for routine use in children. But this is not enough. The question is, Is there a better method for general purposes? To recall some facts against chloroform. THE LANCET Commission on Anæsthetics recorded 33 deaths[2] in children under ten years of age; Dr. Hewitt quotes Comte's deaths—21 in children out of 232 collected; and Dr. Guthrie, although he records no death in 6000 cases, yet says that even with the greatest care dangerous symptoms will occasionally happen. In 260 of these cases, of which he preserved full

[1] Abstract of a paper read before the Harveian Society on April 29th, 1897.

[2] Report of THE LANCET Commission appointed to Investigate the Subject of the Administration of Chloroform from a Clinical Standpoint, THE LANCET, March 18th, 1893.

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notes, 20 showed signs of danger, in 14 the danger was slight, but in no less than 6 "the symptoms were most grave, necessitating prolonged artificial respiration and other restorative measures."

Let us now briefly consider the other means at our disposal for anæsthetising children. Pure nitrous oxide gas is impracticable save for very short operations, such as the extraction of one or two temporary teeth. Gas given with small quantities of air is, however, a valuable agent in certain operations. For opening superficial abscesses, manipulations of joints, and more especially for tenotomies and divisions of fasciæ, this method is all that is required. In such cases the face-piece is kept applied, and inspirations of air are admitted occasionally through the stop-cock in just sufficient quantity to prevent the development of asphyxial symptoms. One cannot attain flaccidity by this method, but it possesses the advantages of safety and freedom from after-effects. I have often kept children anæsthetised with gas and air for five or six minutes for short orthopædic operations. Gas with oxygen is the most suitable anæsthetic for children in dental cases, and it possesses the advantage over gas and air, in the short operations alluded to, that asphyxial symptoms are extremely unlikely to happen, and that a greater degree of muscular relaxation results. It is an ideal anæsthetic for the removal of tonsils with a guillotine. One troublesome symptom that I have observed with gas and oxygen, in four or five cases amongst some thousands, is the occurrence of vomiting while the administration is proceeding. This is unlikely to occur before three or four minutes have elapsed, but when it does it is very troublesome, as it necessitates the withdrawal of the anæsthetic for a time. I have used gas and oxygen for as long as ten minutes for moving stiff joints in the case of a boy aged thirteen years. So far as I know, Mr. Woodhouse Braine was the first advocate of ether as an anæsthetic for children, given upon cones of lint. Dr. Hewitt, in his book on the subject, alludes to this, and states that he had used the method himself, the youngest of his patients being fourteen days old—a circumcision. When I first paid particular attention to the subject I used this method several times, but was not satisfied with the results. Ether is a much more irritating vapour than chloroform, and one either had to spend a considerable time in inducing sufficient anæsthesia for the operation, or, by giving it in larger quantities, to risk the production of an unpleasant amount of straining, holding the breath, swallowing, coughing, and struggling—disagreeable reflexes excited by the strong vapour. When gas is used to induce anæsthesia this difficulty is overcome, and, speaking generally, the combination of gas and ether is the most desirable means of anæsthetising children above the age of five or six years. The advantages of rapidity of action, safety, and the minimum amount of unpleasantness to the patient can hardly be over-estimated; but the drawback of this method is that it requires considerable experience to attain the best success, chiefly because children taking gas develop asphyxial symptoms rather suddenly, which may make it necessary to discontinue the administration for the time. The A.C.E. mixture is well taken by children. Its administration need not differ from that of chloroform, except that if the child is strong the vapour given off from a single fold of material is not powerful enough for ease in managing the patient. Its advantages over choloroform are that the breathing is more audible, that one is better able to estimate the degree of anæsthesia of the patient at any particular moment, and that there is less likelihood of dangerous symptoms occurring. Compared with ether, its disadvantage lies in the fact that occasional depression of the circulation takes place under its use. The A.C.E. mixture is always to be regarded as diluted chloroform, and while it is more stimulating than pure chloroform, yet it is more likely to excite interference with respiration; an undesirable state of things with chloroform in the blood. Dr. Hewitt recommends the A.C.E. mixture for inducing anæsthesia, and ether to maintain it, given by means of a Clover's small inhaler. This method I have found to answer very well; but I do not think it is so good, either in theory or in practice, as the method I shall shortly describe, of the A.C.E. mixture followed by ether given by the open method throughout. Nevertheless, a change to the closed method, either using a Clover's or an Ormsby's bag, can be made with advantage whenever difficulty is experienced in maintaining proper anæsthesia with ether by the open method.

The difficulties of inducing anæsthesia by ether have already been alluded to. But anæsthesia being once established, it is much easier to maintain it at its proper depth with ether than is the case with chloroform. Mr. Braine's test of this depth, published in the *Practitioner* for October, 1896, lies in the fact that a child is able to grasp the administrator's finger until well under, so that, keeping his finger in the patient's palm, when he finds the patient's fingers become quite flaccid he considers that a proper degree of narcosis has been induced. Now a well known difficulty in the administration of chloroform is to distinguish a condition of relaxation, quiet breathing, small pupils, fixed globes, and absence of lid reflex, which is allied to deep sleep, from a similar group of symptoms which indicate a considerable depth of anæsthesia. Mr. Braine's test would be valueless in this difficulty. There is, however, no such doubt as this with ether, for the ether vapour tends to awaken the patient from such conditions. When a fresh amount of ether is applied, the sudden partial return of certain reflexes is often seen, and therefore without hesitation it may be said that flaccidity of muscles indicates a considerable depth of ether anæsthesia if the patient is breathing an ether vapour at the time. But I am bound to say that I find in practice that such a degree of flaccidity as Mr. Braine describes often exists while the child is able to move when the incision is made. The lid reflex is also notoriously unreliable in children. However, there is one test of the depth of anæsthesia under ether which is certain and invariable. I allude to the absence of reflexes connected with the act of respiration when a fresh ether vapour is applied. If at any time during anæsthesia, however produced, a fairly strong ether vapour be suddenly applied, and neither coughing, swallowing, straining, phonation, nor held expiration takes place during the next few respirations—in short, if the rhythm of breathing is unaltered, it can be regarded as absolutely certain that the child is ready for any operation. It is upon the recognition of this fact that the method advocated is based.

When I first held a teaching appointment at Guy's Hospital I spent one afternoon a week in the out-patient department, where many cases of children requiring operation, usually for phimosis, nævus, or abscess, attended on each occasion. The anæsthetics were administered by students, and it was our practice at first to rely mainly upon the A.C.E. mixture. In order to demonstrate the degree of anæsthesia existing at different times, I would often pour a drachm or so of ether upon the sponge, and we soon found that children who had breathed ether after the A.C.E. mixture displayed favourable symptoms. Their colour was bright; their breathing was audible, regular, frequent, and deep, more than counteracting the stertor and mucus that they sometimes exhibited; and (a most important consideration) they emerged slowly from the anæsthesia when the inhaler was removed for half a minute or so. In this way was gradually evolved the method to be described, which I have used extensively myself, and have watched students use many hundreds of times. The apparatus required is a Skinner's mask, or for small children a mask made from the corner of a towel, and a Rendle's cone with two sponges. To begin with the patient is lying down, if possible in the lateral position, at any rate with the head slightly turned to one side and only a little raised. The A.C.E. mixture is added from a drop bottle to the Skinner's mask or towel gradually, so that, beginning with one drop, by the end of about one minute the whole surface is made wet. The rapidity with which this can be accomplished depends mainly upon the character of the child's breathing. If the vapour causes inconvenient embarrassment of this, I proceed more gradually. If there be crying and free breathing the process is more rapid, the inhaler always being removed from the face for two full inspirations of air as soon as the crying ceases and respiration becomes quiet. Should the breathing be much interrupted, or held, it would indicate that the vapour is too strong. Much swallowing also indicates this. In that case the inhaler is removed an inch or two from the face without taking it completely away. The inhaler being visibly wet is kept so by frequent drops until respiration becomes fairly free. Rendle's mask is then rapidly substituted, containing a sponge upon which from half a drachm to two drachms of the A.C.E. mixture has just been poured. This vapour is stronger than the former, and the child will consequently strain and swallow a little in many instances; it may even wake up and cry again. The former precautions are now observed. If respiration be inefficient the Rendle's mask is

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withdrawn half an inch or so from the face—never quite removed; but while respiration continues good in frequency and volume and not much interrupted by coughing, straining, or swallowing, the mask is kept closely applied. After perhaps from a minute and a quarter to a minute and a half from the change, respiration will again become fairly free and regular, without embarrassment or interference by the action of the reflexes, to which allusion has been made. When this happens I pour upon the sponge from one to three drachms of ether, according to the age and strength of the patient. This is done rapidly, the child only obtaining about one breath of air. The ether vapour wakes the child up again to some slight extent; swallowing and straining during inspiration probably reappear; but after a very little time, twenty or thirty seconds usually, the child becomes able to breathe the vapour as if it were ordinary air. When this sign occurs I pour upon a fresh, dry sponge, kept by my side, from two to three or even four drachms of ether. This sponge is then substituted for the sponge in use, and from that time onward the child only receives pure ether vapour. It is possible, if the vapour be very strong, that the child may be again partially awakened; but in a very little time—from ten to twenty breaths—respiration again becomes free and regular, and the child will then be ready for any operation. Nearly every child can be thus rendered ready for operation in four minutes or a few seconds over that time, and that without trouble, and with certain guides as to actions. The only guides to the changes of procedure are the symptoms connected with the respiration, but the time commonly taken is about one and a half minutes with the Skinner's mask, the same for the A.C.E. mixture upon the Rendle's mask, and thirty to forty-five seconds from the first addition of ether until the change to a pure ether vapour can be made. Having found that the child breathes the fairly strong vapour of pure ether without embarrassment, the operator is at once told that he may proceed. There is never under these circumstances any movement when the operation commences. Also the child is far enough removed from an overdose, as the variable or small pupil commonly present, often accompanied by slight nystagmus, testifies. Even weakly children require a continuous application of this strong vapour for from one or two minutes to produce stoppage of respiration from an overdose; and should this unfortunate event occur, even in weakly children, compression of the chest for a very few expirations will certainly restore the child to its former condition, the circulation, although the child may be pale when respiration ceases, being easily recoverable. But there is no need even for inexperienced administrators to produce this paralysis of respiration from an overdose of ether. The very fact that the child is able to breathe strong ether vapour leads one to intersperse breaths of air with the breaths of ether by removing the mask entirely from the face for one or two inspirations at a time. In this way, in the majority of cases, as soon as the operation has commenced the Rendle's mask is removed for eight or ten breaths. The vapour is withheld until some reflex change in respiration becomes excitable by its momentary reapplication. After this, unless the child is very strong, the application of the mask for about two-thirds of the time will be found sufficient to maintain the desired degree of narcosis. Indeed, in very feeble infants it is often only necessary to keep the mask applied for less than half the time. In a minute or two it is desirable to smell the mask, as the ether soon evaporates, and whenever the smell is not powerful a fresh supply is freely added. The quantity is not to be considered, for the patient's symptoms are the only guide, and the use of a strong vapour not only renders it unnecessary to keep the mask continually applied, but keeps one constantly informed as to the exact depth of anæsthesia present. During the use of any anæsthetic the only signs of the depth of narcosis are provided by the degrees to which, at any one moment, various reflex actions are annulled. With ether in children, when the reflexes upon which I rely are at the point of abolition, the vapour may always be withheld for some time without the slightest risk of any movement or of such interference with respiration as would make it difficult to continue the administration. As time proceeds still more evidence of reflex action on applying a fresh ether vapour may be allowed. After half an hour, for example, a weakly child may only require the vapour for one-fourth of the time. The gradual way in which children emerge from ether anæsthesia is one of the chief advantages and safeguards of the method, as it allows of a very nice gradation in the degree of narcosis produced.

A modification of the method, which I adopt in the case of very fractious children who scream and fight, is to dispense with the Skinner's mask. The Rendle's mask is used from the start, firmly held in position. This is the kindest way in such cases, as well as the easiest; but the precaution of removing the inhaler completely from the face for two or three breaths of pure air when the crying has ceased and the respiration is quite quiet must be rigidly observed. The after-effects of the method are not nearly so severe as might at first sight be imagined. Out-patients are usually sick three or four times in the first ten minutes after the discontinuance of the administration; they then sleep for a variable time, usually awake crying, and go off to sleep again. Prolonged crying is rare, so is prolonged sickness. With in-patients, even after operations lasting as long as an hour, vomiting is rarely observed for more than an hour or so after the administration. The occurrence of lung trouble after ether in children I believe to be almost absolutely preventable. In some hundreds of cases anæsthetised by students in the out-patient department by the method described, cases often lasting half an hour, inquiries were made as to the occurrence of cough and other troubles when they came to be dressed subsequently. Many of these patients were brought by their mothers in cold weather from considerable distances. We always kept them warm for an hour or two after the administration, especially in winter; but they then had to be taken home. Under such unfavourable conditions I could only hear of one case of bronchitis, and that was discounted by the fact that the child had a cold previously. With in-patients and in private, after a considerable experience of ether in children, I entirely agree with Mr. Braine that the risk of bronchial trouble is to be completely disregarded if the child be kept in a thoroughly warm room for some hours after the operation.

The dangers of the method, so far as can be judged after an experience of nearly 800 cases—the anæsthetic in many of them given by students—practically resolve themselves into the administration of an overdose. This contrasts strongly with the numerous ways in which dangerous symptoms may arise under chloroform. The symptoms of an overdose would be that the child, having been previously able to breathe a strong ether vapour, breathes probably in a more feeble manner two or three times, and then, more or less suddenly, ceases to breathe altogether. At the same time it becomes gradually pale and the pupil becomes widely dilated and fixed. It has been my lot to observe as many as three cases of this kind. The first case was that of a rather puny infant about to be operated upon for hare-lip. Wishing to do with as little chloroform afterwards as possible I instructed the student to press the ether after he had attained the point at which I have said any operation may begin. The child was breathing a strong vapour for perhaps one minute after this point, and then, while the surgeon was looking at the lips before making the incision, the inhaler having been removed, the child's breathing became shallow and soon ceased, and it became pale. The incision was now made and apparently caused the re-commencement of breathing, for that and the colour returned simultaneously within a few seconds after the incision. No other treatment was used and no further trouble arose. The second case arose through carelessness. I left a student giving the anæsthetic while I went to wash my hands at the other end of the room, where, however, I could hear the child's breathing. It was a pale baby aged seven months and a circumcision was proceeding. In a little time I no longer heard the breathing, and I walked to the table and remarked that the child had ceased to breathe while the student was still holding the inhaler over the face. This was at once removed, and I compressed the chest from the front with my two hands some eight or ten times, when respiration recommenced, and no further treatment was necessary. In this case, also, there was dilated pupil and pallor, which at once became a fair colour as soon as the breathing was re-established. In the third case, a child aged three years with a large tumour of the forehead, knowing that during the operation I would perhaps be hampered by being in the operator's way, I was pressing the ether after the child had lost all reflexes, the pupil not being very large. I was running a risk knowingly, and had just remarked to the onlookers that the breathing would become shallow if the vapour were pressed for too long a time. The breathing died away in a long-continued expiration without warning, and the child became rather pale with dilated pupils. With a

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little artificial help to respiration he rapidly recovered, and his behaviour during a long operation was normal. In neither of these three cases did I feel any anxiety for the ultimate result; also, in all three cases the symptoms might have been prevented.

The advantages over chloroform of the method advocated are, I think, the shorter period of induction of anæsthesia, the greater certainty of the administrator's knowledge of the depth of narcosis, the freedom from movement which can be invariably attained during the operation, and—most important of all—the entire absence of dangerous symptoms, provided that one is only sufficiently observant to avoid an overdose, in reality an easy matter. In the following brief abstracts of a few of the cases, of which full notes were taken to illustrate the method, the time counts from the commencement of the inhalation.

CASE 2.—The patient was a baby aged four weeks, in fair condition. The operation to be performed was for extreme degree of cleft palate. A.C.E. mixture was commenced by the drop method; there were both straining and swallowing. At two minutes Rendle's mask was substituted with one drachm of A.C.E. mixture on sponge; straining and swallowing were present; the pupils 1 mm. At three minutes one and a half drachms of ether were added to the sponge; the patient was still straining. At four minutes a fresh sponge was substituted containing two drachms of ether. There was very slight alteration in the rhythm of breathing, the child relaxed, and therefore was ready. But as ether must be stopped when operation begins, it was continued for three minutes longer, the mask being removed about every fourth breath for one full inspiration of air. At seven minutes respiration was moist, regular, and free; the pupils were from 1½ mm. to 2 mm., and the globes were fixed. Mr. Lane's gag was inserted and operation begun. No more anæsthetic was given till eight minutes thirty seconds, when very slight movement in one hand was observed. From this time a little chloroform was given with Junker's inhaler. Nothing of note occurred until administration ceased at thirty-five minutes thirty seconds. The patient was put back to bed at forty-eight minutes, with good colour and pulse. There was no after sickness.

CASE 4.—This patient was aged three and a half years and weakly looking. The operation to be performed was to wrench a stiff ankle with a large wrench. A.C.E. mixture was administered by the drop method on a towel; there were two or three slight cries at first. At one minute thirty seconds Rendle's mask was substituted with half a drachm of A.C.E. mixture; the patient was quiet; respiration was regular. At two minutes forty seconds two drachms of ether were added. At three minutes thirty seconds fresh sponge with two drachms of ether; there was slight straining, culminating in one or two slight coughs at four minutes. The cough soon stopped; the pupils were 3½ mm.; the patient relaxed, and at four minutes ten seconds the operation began. Respiration was regular, but inspiration became crowing, and the wrenching was very severe. There was no other change. Up till six minutes thirty seconds the patient was breathing vapour for about two-thirds of the time; then operation over and administration ceased. From seven minutes thirty seconds to nine minutes thirty seconds there were one or two coughs and an occasional swallow. From eleven minutes thirty seconds to twelve minutes a little mucus was coughed up; then quiet sleep lasting till I left at fourteen minutes.

CASE 8.—This patient was aged nine years and well nourished. The operation was erasion of the knee. A.C.E. mixture was administered by a Skinner's inhaler, the patient resisting. At thirty seconds there was quiet breathing, with an occasional swallow. At one minute thirty seconds Rendle's mask with two drachms of the A.C.E. mixture was substituted. There was slight movement of the head and attempts to remove the mask. At two minutes thirty seconds the patient was quiet, but respiration was interrupted by frequent swallowing. At three minutes fifteen seconds two drachms of ether were added to the sponge; breathing was held, so the mask was raised occasionally a little distance from the face. At four minutes respiration was free; a fresh sponge was applied with four drachms of ether; respiration was fairly free, but frequent swallowing had returned. At four minutes thirty seconds the patient was quite flaccid; there was a strong lid reflex, the pupils being 5 mm.; the globes were moving; there was inspiratory stridor in breathing in response to the scrubbing, application of tourniquet, &c., then proceeding. At five minutes there was no lid reflex, the pupils were from 3½ to 4 mm., respiration was regular, but there was an occasional interruption in expiration. At seven minutes the mask had been kept almost constantly applied, and respiration was free, but the lid reflex had returned. The child was rather old for this method. Two drachms of ether were added, although the sponge was fairly wet. This vapour was breathed without difficulty, therefore the patient was enough under. At eight minutes the pupils were 3½ mm. with strong lid reflex. At ten minutes fifteen seconds there was one slight cough. Three drachms of ether were added, causing slight holding of the breath, which reflex was soon overcome. He had been quite flaccid the whole time. At twelve minutes the pupils were from 2 to 2½ mm., with no lid reflex. From fourteen minutes a strong vapour was given for two-thirds of the time. The pupil was kept small and respiration regular, with corneal reflex present. At twenty minutes sewing up was going on. At twenty-five minutes one drachm of ether was added, which caused slight stridor, the splint being applied. At twenty-seven minutes administration was stopped. At thirty-four minutes there were cough and retching. At thirty-four minutes thirty seconds the patient was put back to bed and vomited half an ounce of yellow mucus. Two hours later there had been no further sickness; he was sleeping; the pulse was 108; the respiration was shallow and regular. An hour later he was restless and crying for a short time. There were no further after-effects.

In summarising the sphere of usefulness of the method, I have no wish to deny that ether preceded by gas must still be considered the best anæsthetic for most children above the age of five or six years, when the anæsthetist is accustomed to its use. But the particular means that I have described is indicated alike in children for whom gas and ether is undesirable, and for routine use in children of all ages by those whose experience is not large. The absence of cyanosis and of undue congestion of the mucous membranes render this method peculiarly suitable for post-nasal cases where much obstruction exists, even up to twelve or fourteen years of age. In such cases the patient is allowed to breathe the ether vapour for two or three minutes, with occasional breaths of air, after he can first respire it freely. When a child is first able to do this the pupil is often of medium size, but as the inhalation continues it almost invariably becomes small. This is a useful guide in such cases, for one can then count upon three to five minutes of perfect anæsthesia and relaxation. Chloroform from a Junker's apparatus can always be resorted to at the end of this time if the operation is not finished. The youngest child in whom I have used the method was a few hours old, the operation for imperforate anus being somewhat prolonged, and the method proving all that could be wished.

Cavendish-place, W.

VAGINAL DOUCHING.

BY ARTHUR E. GILES, M.D., B.SC., M.R.C.P. LOND., F.R.C.S. EDIN.

ASSISTANT SURGEON, CHELSEA HOSPITAL FOR WOMEN.

VAGINAL douching has become such a universal practice, both in the hands of the public and under the supervision of medical men and nurses, that it may be well to review briefly some of the circumstances when it is required, and the most suitable solutions under varying conditions. At the outset it is necessary to raise a protest against unnecessary and too frequent douching. The researches of Winter, Döderlein, and others have shown that the vagina is normally inhabited by a benign bacillus, to which, through the formation of lactic acid, the acidity of the vaginal secretion is due, and the special *rôle* of which appears to be to antagonise and disarm of virulence any pathogenic organisms that may enter the canal. Frequent douching of the normal vagina, especially with soapy and other alkaline solutions, tends to hinder or arrest this beneficent action and to destroy the guardian bacillus. Hence, under the circumstances, morbid conditions are provoked rather than prevented. The same argument applies to the practice of giving a vaginal douche before or during labour, for when this is normal the uterine and vaginal secretions, followed by the rush of liquor amnii, tend to sweep the passages in the most effective way—namely,

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from within outwards. Secondly, it is necessary to protest against a long-continued use of very hot douches, whether in health or otherwise. Frequently, in inflammatory and other conditions of the pelvic organs, the medical attendant orders douches "as hot as they can be borne." These have their place, and an important one, for their effect in relieving pain and pelvic congestion is often most marked; but this is provided they be used only as a temporary measure; not infrequently no later directions are given, with the result that patients continue these hot irrigations, perhaps twice a day, for months, and the means intended for cure become instrumental in prolonging and emphasising the complaint, by inducing chronic pelvic congestion with its consequent leucorrhœa. The remedy is simple—namely, that patients should be instructed to regard a hot douche as a temporary expedient, to be replaced as symptoms improve by tepid, cool, and even cold irrigations.

Indications for vaginal douching.—The use of a douche for purposes of comfort and cleanliness must be left in large measure to the discretion of patients, but they should be warned of the harm that may result from its too frequent use, as stated above. Therapeutically, the douche is indicated in three sets of conditions: (1) after labour; (2) after vaginal operations; and (3) in the treatment of inflammatory conditions of the vagina, uterus, and appendages. 1. After labour. When the labcur has been normal, with little or no intervention on the part of the attendant, and when the puerperium is also normal, it is open to question whether any form of douche should be used. In skilled hands no harm can result, and in lying-in institutions it is probably an advisable routine procedure; otherwise it is probably better omitted. In cases of post-partum uterine atony or hæmorrhage a hot douche is indicated, and when there is reason to fear septic developments a course of douching with mild antiseptics is desirable. In actual septic conditions one or repeated injections of stronger antiseptics may be required. 2. After vaginal operations. Here it is usually necessary to resort to vaginal douches for one or several weeks, either to keep the passages clear of blood, which would tend to decompose and so hinder the healing of wounds, or because there has been much manipulative interference. An aseptic or mild antiseptic solution generally suffices; at times, in septic conditions, a strong antiseptic is needed. 3. In inflammatory conditions. In these cases the douching is generally performed, not by the medical attendant or nurse as in the previous conditions, but by the patient herself or a lay friend. Hence more discrimination is required in prescribing potent solutions. Usually a bland solution is all that is necessary; in a few cases, as in gonorrhœa, some stronger antiseptic may be temporarily required.

The choice of a solution.—The fluids to be used for vaginal douching fall into three categories—(1) neutral or aseptic; (2) mild antiseptic; and (3) powerful antiseptic. 1. Neutral or aseptic solutions. Of these, the first is plain or sterilised water. For the relief of pelvic pain and congestion this answers perfectly. If a more astringent solution be required we may use alum, 1 to 2 drachms to the pint; acetate of lead, 1 ounce to the pint; chloride of lead, saturated solution; and permanganate of potash (Condy's fluid) in weak solutions. This is one of the most generally convenient on account of its portability and ready solubility. 2. Mild antiseptic solutions. Among these we may mention: boracic acid or borax, 2 drachms to the pint; sulpho-carbolate of zinc, 2 to 3 drachms to the pint; carbolic acid, 1 in 80 to 1 in 40; tincture of iodine, 1 drachm to the pint; Condy's fluid, 2 drachms to the pint; creosol, 1 in 250; lysol, 1 in 250; corrosive sublimate or the biniodide of mercury, 1 in 5000; or chinosol, 1 in 8000. Of these, boracic acid, sulpho-carbolate of zinc, and Condy's fluid are perhaps the favourites when prescribing a douche to be used by the patient. Chinosol is a comparatively new comer, but answers very well. I shall discuss it further among the stronger antiseptics. Carbolic acid and iodine are useful for hospital administration. The poisonous character of corrosive sublimate is a contra-indication to its indiscriminate use. For milder purposes other things answer as well, and in stronger solutions it should not be used except by the medical attendant. Lysol has the disadvantage of not being readily portable. 3. Powerful antiseptics. These are required after operations, and in obstetric practice, under septic conditions, and in the treatment of gonorrhœa and of septic conditions of the vagina and uterus. The most important are: carbolic acid, 1 in 40 to 1 in 20; iodine liniment, 1 to 2 drachms to the pint; corrosive sublimate, 1 in 1000 to 1 in 4000; and chinosol, 1 in 1000 to 1 in 8000. Of the first three we need not speak in detail, as their merits and demerits are well known. The desideratum is a material that shall be portable, readily soluble, non-toxic, and, at the same time, a powerful antiseptic. From this point of view a few words may be said about chinosol, which answers these requirements, and which, being a comparatively new drug, may possibly not be familiar to practitioners in this country, though used a good deal on the Continent. (For a recent account of bacteriological experiments I may refer to an article by Bonnema in the *Therapeutische Monatsschrift* for December, 1896.) It is a light-yellow powder which belongs to the quinoline group, and is readily soluble in all proportions of water. It is non-poisonous, and for this reason it is specially suitable for use by patients themselves and for douching after childbirth. Being put up in tablets, it is as convenient for carrying about as corrosive sublimate, and its antiseptic action appears to be considerable, being at least equal to that of corrosive sublimate. Where albuminous fluids are concerned, chinosol appears to be superior to the sublimate, inasmuch as it does not coagulate albumin; corrosive sublimate, on the other hand, forms an insoluble albuminate of mercury, whereby the antiseptic action is interfered with. Chinosol resembles iodoform in appearance; and this leads me to remark that if intended to be used in dressings or on tampons, as a substitute for iodoform, the chinosol powder requires to be diluted with boracic acid in the proportion of 1 part of chinosol to 5 or 10 parts of boracic acid.

When strong antiseptic solutions are required for vaginal douching, corrosive sublimate, carbolic acid, and iodine should be used only by the medical attendant; chinosol, for the reasons above stated, may safely be ordered for use by the patients themselves.

Harley-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON "NEUROTIC" SYMPTOMS OF URIC-ACIDÆMIA IN THE YOUNG.

BY DAVID DRUMMOND, M.A., M.D. DUB., D.C.L. DURH.,
SENIOR PHYSICIAN TO THE ROYAL INFIRMARY, NEWCASTLE-ON-TYNE, ETC.

I WISH in the following short communication to call attention to a special group of symptoms, chiefly nervous and affecting the young of both sexes, which would seem to depend upon uricacidæmia. At first I considered neurotic or hysterical disturbance of function a sufficient explanation of these cases and treated my patients from this point of view, but with unsatisfactory results. My attention was called to the uric acid factor in connexion with the case of a young person in whom the symptoms in question developed, in the opinion of his friends, in consequence of the consumption of an excessive quantity of butcher's meat. This patient was put upon a milk diet and made a speedy recovery, but relapsed when restraint was removed and he was once more allowed to consult his own tastes. This led to an analysis of the urine in subsequent cases, with the result that the uric acid was found to be greatly in excess of the normal amount, and that even when the patients' diet was properly regulated. The symptoms are usually insidious in their origin and develop slowly, but in some cases a comparatively trifling indisposition has in a few days been transformed into a somewhat alarming illness. Headache is generally complained of from the beginning, and the chief characteristics are its persistency and its preference for the vertical and frontal regions. The appetite fails, and there is constipation along with other digestive disturbances, whilst anæmia and loss of flesh give the patient the appearance of illness. The temperature of the body is generally low, and in one case a night and morning observation, extending over three weeks, furnished a line that did not once reach the

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normal point. The heart is peculiar and varies much in rate; at times it is rapid, but more often slow; indeed, this (slow pulse) is one of the most striking features of the complaint and will serve to arrest attention in a case that might readily be passed by with the diagnosis of simple dyspepsia, for it is not uncommon to find the pulse-rate 45 or 50 in the minute, which is all the more remarkable in face of the fact that the patient's manner is nervous. The pulse tension is raised, though it is seldom very high. The hands and feet are generally cold, and the fingers are white at times and possibly suggestive of Raynaud's disease. In some cases sudden attacks of giddiness occur which are difficult to distinguish from slight epileptiform seizures. The knee-jerk, as a rule, is distinctly lessened and may be absent, and a peculiar sluggish habit of mind and body may be noticeable along with other character traits foreign to the patient. In young women the menstrual functions are often in abeyance for months at a time.

The following case is fairly illustrative. A girl, aged sixteen years, experienced an illness of six months' duration which commenced with loss of appetite, constant headache, and constipation. She was taken from school and coaxed to eat considerably beyond her inclination, chiefly meat extracts and animal broths, but without improvement, as she grew weaker and lost flesh, and suffered from sleeplessness and a feeling of prostration in the morning. On examination the patient was found to be thin; she had lost half a stone in weight. The face was pale and muddy and the tongue furred and flabby. She was constipated, had constant headache limited to the frontal region, and was sleepless during the early part of the night. The pulse was rapid, over 100, and the tension high; the heart apex was prominent and a little to the left of the normal position. The knee-jerk was practically absent. The urine contained a trace of albumin; the specific gravity was 1030 and the amount of uric acid was 0·106 per cent. The total amount of uric acid excreted in twenty-four hours was 25 gr., or upwards of three times the normal amount.

In another case, that of a girl, aged fifteen years, the illness had lasted twelve months before she came under my observation. Loss of the knee-jerk, slow pulse (averaging 60 in the minute), constant headache, and dyspepsia were the most striking symptoms. In this case 13·8 gr. of uric acid were passed daily, about 0·061 per cent., or nearly double the normal amount.

My note-books contain a number of similar records which might be adduced, were it necessary, to illustrate further the connexion between uric acid and impairment of function in young people amounting to disease. The difficulty seems to lie in diagnosing between the hysterical or neurotic abeyance of function and that depending upon uricacidæmia, but in typical cases the slow pulse and the loss of the knee-jerk will point clearly towards the latter. I may mention that dietetic restrictions have produced excellent results in the majority of these cases. I am indebted to Dr. Robert Bolam for the analyses of the urine.

Newcastle-on-Tyne.

DELAYED DESCENSUS TESTICULORUM WITH SYMPTOMS OF INGUINAL INCARCERATION.

BY H. OPPENHEIMER, M.D. HEIDELB., M.R.C.P. LOND.

ON March 26th I was sent for to see a boy, five years of age, who had been quite well till two days previously, when, without any apparent cause, he was suddenly taken ill with violent vomiting, which had persisted and prevented his keeping down even the smallest amount of food. All this time he had been in a dazed condition; the bowels had not acted since the morning of the 24th. When I first saw the patient he appeared to be in a semi-conscious state from which he was easily roused so as to answer any question addressed to him, but he fell back into his dreamy condition immediately after having done so. The lips and finger nails were livid. The temperature was 101·2° F., and the pulse at the wrist was 125, feeble, and intermittent; but auscultation proved that the irregularity was apparent rather than real, the heart's action being so feeble that not every pulse-wave reached the wrist. On examination I found that both sides of the scrotum were empty, and in the left inguinal region I detected a tender swelling about the size of a smal pigeon's egg which was dull on percussion and resistant to the touch. Both inguinal rings were open; the left inguinal canal contained a hard tumour corresponding with the external swelling, while the right one was empty. I ordered an ice-bag to be applied locally, ice to be sucked, and sips of iced milk to be taken, and being doubtful as to whether there was not a strangulated bowel behind the enlarged testis I prescribed small doses of laudanum at frequent intervals. The next morning I was informed that the patient was decidedly better and that he had not been sick during the previous twenty-four hours. On inspection, however, I found that the cyanosis had deepened and spread; the heart was even weaker than it had been the day before, and locally there was very little change. I ordered brandy to be given in large doses and three leeches to be applied over the tumour. Free bleeding having taken place the size of the tumour diminished considerably. But now I discovered in the right inguinal canal a small mass presenting all the characters of a normal testis. Under appropriate treatment the orchitis rapidly disappeared, and by April 11th the patient had completely recovered and both testes lay outside the inguinal rings.

No doubt the above case was one of late descensus; the left testis had become strangulated during its passage through the inguinal canal, while the right one apparently descended without giving rise to any symptoms. But what is to my mind a most striking feature in this case is the peculiar bilateral synchronism of a fœtal process in extra-uterine life.

Crossfield-road, Belsize-park, N.W.

A FATAL CASE OF TETANUS ARISING FROM INJURY TO THE LEFT THUMB.

BY W. GORDON, L.R.C.P. & S. EDIN., L.F.P.S. GLASG.,
HOUSE SURGEON TO THE SALISBURY INFIRMARY.

A MARRIED woman, aged forty-two years, fell on April 1st on the stalk of a chrysanthemum from which the flower had been cut; a piece of the stalk entered the ball of the left thumb. She poulticed the hand, not being aware of the presence of the splinter. On the 6th she was taken very ill, with pain in the back of the neck and shoulders, and she was at once sent to the Salisbury Infirmary, where she was admitted about eight o'clock on the 7th suffering from tetanus, convulsions occurring hourly and getting more frequent after admission. An abscess was pointing at the back of the left thumb. This was opened under chloroform and there was removed a large splinter, evidently part of a stalk of a plant. It was an inch long and about a quarter of an inch broad, with jagged edges. The abscess cavity was wiped out with strong carbolic acid and fomentations were applied. Nutrient enemata were given every four hours, together with large doses of chloral and bromide. Anti-tetanic serum was telegraphed for and arrived from London within three hours, but she was dying on its arrival. The convulsions, which had quieted under the chloroform, became more frequent, and she died about four o'clock in the afternoon. She was in bad health at the time of the injury. An inquest was held, a verdict of "Accidental death" being returned.

Salisbury.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY.—The annual meeting of the Devonshire Hospital and Buxton Bath Charity was held at the hospital on May 1st, Dr. Robertson being in the chair. The report showed that during the year ended April 30th there were 2770 in-patients under treatment, of whom 2472 were discharged as "improved," 6 died, and 172 remained on the books on April 30th. There were also 210 out-patients received during the year, of whom 161 were "improved." Of the 2770 cases 2184 were classed as rheumatism, arthritis, and gout; 179 were classed as diseases of the nervous system; and 850 suffered from heart disease connected with rheumatism and other morbid conditions. In the course of his address the chairman said that the effect of the Buxton water when used as baths is conditional upon its absorption through the surface of the body, and that the baths of the natural temperature are far more reliable than those which have been raised to higher degrees of warmth.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

A CASE OF RIGHT OVARIAN HERNIA WITH TWISTED PEDICLE; OPERATION; RECOVERY.

(Under the care of Mr. JOHN H. MORGAN)

THE persistence of the canal of Nuck, the great mobility of the ovary, and its comparatively high position in young children, sufficiently account for the fact that the presence of an ovary in a hernia is decidedly more frequent during the first twelve months than in the whole of the rest of life. The following case, however, is chiefly noteworthy from the partial strangulation from torsion which the herniated ovary had undergone. The condition is very rare and undoubtedly difficult to diagnose. We are indebted for the notes of the case to Mr. G. Templeton, surgical registrar.

An infant, aged eight months, was admitted to the hospital on March 9th, 1897, with a lump in the right groin. There was no history of hereditable disease, but it was of interest to note that a brother had died from strangulated hernia. The infant had always been delicate, and ever since she was four days old a small swelling had been observed in the right groin. Four days before admission this swelling underwent great increase in size, the skin over it became red, and the parts appeared to be very painful, the child screaming constantly and drawing up the right leg. She was convulsed on two occasions, but had not vomited, and the bowels were quite regular. A medical man was consulted, who advised removal to the hospital. On admission the child appeared to be very happy and peculiarly free from symptoms. The temperature was normal. On the right side of the upper part of the mons Veneris, extending over the right external abdominal ring, there was a rounded semi-elastic, non-fluctuating swelling, which was not altered in size when the child cried. On attempting to elicit fluctuation pain was produced, and very faint pitting of the skin could be made out on pressure. The child was very fat, but on further manipulation an indistinct, rounded, irreducible body, about the size of a cherry, could be felt and could be freely moved about, having, as it seemed, no connexion with the interior of the abdomen. The bowels had acted naturally and there was no sickness. She remained in the same condition until the 12th, when Mr. Morgan decided to operate, and having made an oblique incision over the swelling, he exposed a thin-walled sac in which some dark fluid was seen to be contained. A small incision through this membrane allowed the escape of about one drachm of blood-stained fluid, leaving exposed a smooth, rounded, plum-coloured body about the size and shape of a small damson. Attached to the upper end of this, which on closer inspection proved to be the ovary, was a slender pedicle twisted upon itself to the extent of two and a half turns. This stalk was found to consist of the right Fallopian tube and the broad ligament, and upon pulling them further outwards the fundus of the uterus entered the wound. The portion of the twisted pedicle, almost to its attachment to the uterus, was in a congested condition similar to that of the ovary. A fine silk ligature was passed round the pedicle beyond the congested part and tied, and the ovary and pedicle were cut off, and the uterus was dropped back into the abdomen. A suture was passed through the external abdominal ring and tied, and the surface wound was closed with a continuous horse-hair suture. The child recovered without a bad symptom and was discharged with the wound perfectly healed on March 24th.

Remarks by Mr. MORGAN.—Two cases almost identical with the above have been recorded during the past twelve months, with the variation that in both instances the condition had produced vomiting, thus giving rise to a closer analogy to a strangulated hernia of the intestine. In both cases the onset and symptoms, with the addition of vomiting, were similar to those in the case above described. The first was related by Mr. Lockwood as occurring in a child aged six months, and the second by Mr. Owen[1] in a child aged eleven weeks Both children recovered. A further resemblance is found to cases of testis retained in the inguinal canal where the spermatic cord is found to be twisted.

NORTH DEVON INFIRMARY, BARNSTAPLE.

A CASE OF MALIGNANT PUSTULE TREATED BY INCISION AND APPLICATION OF CARBOLIC ACID.

(Under the care of Dr. MARK JACKSON.)

THE following case demonstrates well the liability of contracting anthrax to which all are subject who have to do with hides even if only occasionally. A case resembling in some respects Dr. Jackson's was brought before the Brighton and Sussex Medico-Chirurgical Society by Dr. Black;[2] the disease attacked a man a few days after he had been employed in carting hay from railway trucks in which some hides had been carried a short time previously. Anthrax is decidedly less rare than was thought at first, and excision is not so necessary as it was formerly considered to be, local antiseptic treatment having in part replaced it; but excision is still the most certain method of removing the materies morbi and should be adopted whenever the position of the pustule permits. Should, however, excision be impossible from any cause the careful and thorough application of suitable antiseptics locally after incision offers the best chance of effecting a cure. For the notes of this case we are indebted to Mr. F. Penny, house surgeon.

On the evening of Oct. 30th, 1895, a railway porter, aged thirty-two years, was admitted into the infirmary. The patient was then suffering from extensive swelling of the left side of the neck, he was very feverish, the temperature was 103° F., the pulse was 86, and he was otherwise ill. He was sent to bed and a purge of calomel and jalap was administered. During the week previously the patient had been loading some skins, some of which were "high," and also some wool and sheep. Of the skins, one came from the neighbouring kennels and others from Ilfracombe. On Oct. 26th the patient felt a pimple on the left side of the neck, and in the evening, while being shaved by a barber, the top was taken off. He felt no inconvenience on the day following, but on rising about 7.30 A.M. on the 28th his neck seemed to be somewhat stiff and was swollen, and a scab had formed at the site of the pimple. During the day he became worse and he consulted a local practitioner, and on the next day there being no improvement, he was advised to go to the infirmary. Dr. Jackson first saw the patient on the afternoon of the 30th, at about 4 P.M. There was then a hard œdematous swelling of the left side of the neck, extending above over the left ramus of the jaw, downwards to the clavicle, and anteriorly beyond the middle line of the neck. In the centre of the swelling was a small purple spot about three lines in diameter surrounded by three large bullæ of a yellowish-brown colour. The patient complained of some difficulty in swallowing, apparently due to the extensive œdema. The axillary glands were slightly enlarged. On palpating the swelling, it was found to be somewhat elastic, and fluctuation was thought to be felt. It was determined to make an incision, which was done under chloroform A director was used, as the line of incision lay parallel to the course of the carotid vessels, but was introduced only by considerable force, so great was the induration of the tissues. An incision from one and three-quarters to two inches long was made, and as no pus was discovered a pair of forceps was introduced into the deep tissues to make sure there was no accumulation of pus beneath the deep fascia. Only serum and a little blood came through the incision. During the same evening Mr. F. Penny examined microscopically the fluid taken from the bullæ, and well-marked specimens of the anthrax bacillus were easily seen. On the 31st, on Dr. Jackson's advice, in consequence of

[1] THE LANCET, March 21st, 1896, p. 766.
[2] THE LANCET, Nov. 10th, 1894, p. 1098.

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finding the bacilli, Mr. Penny swabbed out the incised tissue thoroughly with pure carbolic acid, and dressed the wound with carbolic oil and poultices. On the previous night the patient had been restless; he had had little sleep, and was sick after a draught of chloral and bromide. There was a scarlet, erythematous rash on the neck and chest. The temperature was 105° and the pulse was 96. On Nov. 1st the patient had passed a very restless night; there was much pain at the back of the head; the tongue was dry in the centre; the erythema on the chest extended to the level of both nipples. Albumin was abundant in the urine. The pulse was steady and regular. More bullæ were present near to the site of the inoculation, but no bacilli were found in their contents. The swelling of the neck was not so extensive. Four ounces of brandy were given. The patient had a bad night, was restless and delirious—for which a draught of chloral and bromide was given—and he vomited and perspired freely. On the following day (the 2nd) the erythema was not so vivid, but extended three inches below the level of both nipples. The patient wandered at times, but could easily be roused to talk sense. On the 3rd the sore was drying up; there was a gangrenous black edge, three-sixteenths of an inch in width around the upper part of the incision; the swelling was less, more moveable, and less indurated. The albumin in the urine was less and he had a more comfortable night, although he wandered a little at times and perspired freely. On the 4th the tongue was moist. The pulse was steady, regular, and of good volume. There was only a trace of albumin in the urine. The patient slept a good deal, but appeared to be all right when awake. On and after the 6th the temperature did not exceed 99°, having gradually fallen since the last observation. Up to the 20th progress was continuous. The swelling at that time was about the size of a duck's egg; the incision looked healthy, but there was a black slough in the centre. This was dressed with iodoform and wool dressing. The albumin had cleared from the urine. Although the patient had lost about 7 lb. in weight and looked pallid he was still growing in strength daily, and had been up about a week. He ate and slept well.

Remarks by Dr. JACKSON.—Perhaps I may be allowed to call attention to one or two points of interest in this case. As regards the diagnosis I think there can scarcely be a doubt in anyone's mind after seeing the case or examining the slide showing the bacilli. It is true that specimens of blood and of serum from some of the vesicles were sent to the Local Government Board, and their officers reported that they did not find any anthrax bacilli in the specimens. I may state that these specimens were taken after the application of pure carbolic acid to the tissues as mentioned above. According to Erichsen, "the anthrax bacillus shows a marked predilection for the most superficial parts of the papillary layer of the cutis immediately beneath the rete Malpighii," and it is possible that to the early destruction of these organisms at the site of inoculation by the carbolic acid may be due the favourable termination of this case. Another point of interest is the patient's occupation. Most cases of malignant pustule have occurred amongst those trades dealing either in hides or skins of cattle, in certain classes of foreign wools, in manure stores, or amongst slaughterers of animals or constables having to dispose of the carcases of animals dead from anthrax, or, again, amongst those having to nurse cases of malignant pustule, as nurses and medical men, where they have been inoculated through the surgical dressings, &c. I find from an annotation in THE LANCET of July 28th, 1894, p. 207, that of 118 cases treated in London since 1873 the occupations were thus classified: Of 118 cases, 90 were engaged in skin and hide trades; 5 in slaughtering animals; 7 in persons engaged in the manipulation of horsehair or in the manufacture of brushes; and in 15 instances the source of contagion was unknown. I have not been able to find at present any case before mine of malignant pustule in a railway porter. Now it happens that on Oct. 25th and 26th certain hides passed through the Torrington Station, one of which came from the neighbouring kennels, where the flesh had been given to the hounds, and presumably was diseased, and others came from Ilfracombe. Locally it is well known that a very serious outbreak of anthrax occurred in the latter district early in the spring, and that a herd of cattle was practically destroyed in a few days. At the present time I have not been able to trace any direct connexion between these events, excepting that the patient was on duty and helped to load these skins when they passed through the Torrington station. Another point of practical interest is this. How long is it after inoculation of the poison before the symptoms supervene? I have just mentioned that in this case the date of inoculation was either Oct. 25th or 26th and that the patient complained of illness on the morning of the 28th, so that there was an interval of from two to three days. I have looked up other published cases and find in one that the time was indefinitely stated to have been a "few weeks." In another a constable was inoculated through a scratch of the hand on July 24th, 1893, and was dead by July 26th. In another case the man died on the fourth day after a slight abrasion of the arm. Mr. Pagan Lowe of Bath described a case in THE LANCET of Jan. 23rd, 1892, of a woman who had nursed her husband with malignant pustule and was attacked on the fourteenth day afterwards. In another remarkable instance where three men were exposed simultaneously to the same contagium one showed symptoms four days after inoculation, the second six days, and the third ten days. Of these three only the first died. The last point to which I would draw attention is the treatment in this case. Perhaps I ought to say this was not intentionally adopted in the first instance. In almost all published cases the greatest emphasis is laid on the duty of the surgeon to remove without delay the area of diseased skin at the site of inoculation. Erichsen is no less emphatic in the same direction. Of a series of fourteen cases treated by Mr. Davies-Colley at Guy's Hospital all were excised, but in eight cases external application of chloride of zinc was made in addition, of which two died; of the six remaining cases treatment by ipecacuanha, both locally and internally, was added, and of these none died. This latter treatment was advocated by Dr. Muskett in THE LANCET of 1888, p. 269, I have only discovered one case treated in the same manner as my own and this was in Victoria and is said to have been the first in that colony—here the case also recovered, but, it is added, "without constitutional symptoms" I have mentioned the statement by Erichsen and others that the special habitat of the anthrax bacillus in malignant pustle is in the superficial layers of the cutis, and it is perfectly reasonable therefore that the earlier these bacilli are removed by way of incision or destroyed by chemical agents the more probable is it that the disease may be confined to a merely local affection. But I may mention that, according to Dr. Sidney Martin, whose Goulstonian Lectures for 1895 dealt with this and other infective bacilli, the danger in this and other allied affections is the "presence of specific poisons in the system, the products of the primary infective agent." In the case of anthrax these poisons are of two classes—(1) certain albumoses, to which are due largely the fever and its concomitant symptoms, and (2) an alkaloid acting chiefly on the nervous system and responsible for the prostration and coma in fatal cases. It seems to me, therefore, that we have here the *rationale* of successful treatment by incision. The exudation from the tissues through the incised wound practically carries with it the poisons as well as the bacilli which may have accumulated in the tissues, whilst the application of pure carbolic acid or strong tincture of iodine would destroy what other bacilli may still be lurking behind. I may add also that the ipecacuanha treatment has been based on the destructive action of ipecacuanha on the anthrax bacilli as determined by experiments made by Mr. F. C Evans. I believe it will be admitted that the case here related was one of exceptional severity, as shown by the temperature, by the extent of the œdema, the albumin in the urine, and the delirium present, and I think the result as seen in this patient would encourage me to pursue the same line of treatment should any other case ever come under my care.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND. — The next general meeting of this association will be held at 11, Chandos-street, London, W., on Tuesday, May 18th, at 4 P.M., under the presidency of Dr. Julius Mickle. Dr. F. W. Mott, F.R.S., will read a paper on Some Points concerning the Degeneration of the Neuron, with a lantern demonstration. Dr. E. Goodall will describe an Exact Method for Recording Deformities of the Hard Palate. Dr. T. Seymour Tuke will contribute a medico-legal note on Stay of Action by application to a Judge of the High Court, under Section 330 of the Lunacy Act, 1890. The members will dine together after the meeting at the Café Royal, Regent-street, at 6 30 P.M.

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Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Relations between Bodily Development, Nutrition, and Brain Conditions in their Pathological Aspects.

A MEETING of this society was held on April 27th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

Dr. FRANCIS WARNER read a paper on the Relations between Bodily Development, Nutrition, and Brain Conditions in their Pathological Aspects. The purpose of the paper was to show, as the result of extended observation among children, that: 1. Points of abnormal development in the body are very common and have important signification. 2. Abnormal nerve signs, or points in balance and movement, have been defined; they are much associated with defective development as well as with the causes of mental dulness, and are of clinical importance. 3. There is a close empirical relation between (*a*) defective development of the body, (*b*) abnormal nerve signs, (*c*) low nutrition of the body and its tissues, and (*d*) mental dulness and backwardness. Some explanations of the relations among the classes of defect were offered. After referring to his paper on Postures of the Hand as Indications of the Condition of the Brain, read before the society in 1882, Dr. Warner said that in that investigation and a subsequent one he was enabled to examine between 1888 and 1894 100,000 children individually, in conjunction with other medical men, the results of which had been published in a report;[1] notes of 18,127 cases in some respect below normal were taken. After briefly describing the method of the statistical examination of facts four main classes of defect observed were described: (*a*) Defect in development in size, form, proportion of parts of the body, principally in cranium, palate, ears, and features, as well as more gross deformities; such signs were disproportions in ratios of growth. (*b*) Abnormal nerve signs in balance and action or reaction in movement and coördination as seen in the face and eyes, the upper extremities, the hands, digits, and balance of the body. (*c*) Low nutrition; cases pale, thin, or delicate. (*d*) Cases dull or backward mentally, as reported by the teachers. The developmental signs were disproportions in growth; the nerve signs were abnormal in the time of action or in the ratios of action among the nerve centres. Movements were classified as: 1. Uniformly repeated series of movements, the same parts moving in similar combinations and series of acts on successive occasions. Athetosis and athetoid movement of the frontal and corrugator muscles, with grinning, were types of this class. 2. Augmenting series of movements, the area of movement spreading from part to part. The expression of mental excitement and emotion, awaking from deep sleep to activity, the extra movements of fidgetiness, the march of the spasm in epilepsy, and convulsions afforded illustrations. 3. Diminishing series of movements, as seen when excitement subsided, as sleepiness came on, and as the convulsion subsided or chorea passed away. 4. Coördinated movements, such as were adapted in their relations in time and in quantity of action by the environment, and therefore in harmony with it. It was shown that in each class the character of the movement depended upon the attributes of time and quantity of action in nerve centres. The inference from the observed co-relation of development defect with abnormal nerve signs was that when proportional growth in body was abnormal, as a sequence of inheritance or otherwise, the nerve centres were commonly so built up that in subsequent action they did not work in the normal relations of time and quantity under the influence of the environment. It was shown that disproportion in growth and development of the body was commonly accompanied by a status of the tissues prone to atrophy under adverse circumstances. This was especially the case with girls, who were, therefore, liable to fall into permanent ill-health with neuroses. Incoördinated nerve action, such as fidgetiness, awkward habits, or chorea, commonly occured with a lowered status of nutrition, and suggested the hypothesis of a reversion of spontaneity in action, which was characteristic of the normal infant brain (microkinesis) Dr. Warner submitted the following propositions: 1. Disproportioned bodily development is very common; it is co-related with low nutrition of body and incoördinated brain action. The co-relation with low nutrition is highest with girls of all ages and is specially marked among children seven years of age and under; it is much lower at eleven years of age and over. The co-relation with nerve signs increases with age for girls, and less so with boys. Finally, the proportion of the developmental cases that have not acquired either low nutrition or nerve signs is highest for boys in the oldest group, while for girls it remains about the same in each age group. It seems that the environment is apt to produce more harm and less good in girls than in boys of imperfect development. 2. Incoördinated brain action is much associated with mal-development, and the presence of nerve signs is more co-related with the causes of mental dulness than are the signs of defective development. The co-relation of nerve signs with mal-development is highest for children seven years of age and under and lowest in the oldest group of cases; while the proportion of nerve cases that have nerve signs only without low nutrition is highest with the oldest group. The environment appears to favour the occurrence of simple cases of nerve incoördination and weakness, which in many instances might be removed by training; such signs are much associated with mental dulness. 3. Delicate children are in a large proportion of cases ill-developed in some part of the body. Among children without developmental defect there does not seem to be a larger number of delicate girls than boys; it is the girl who has some defect that is delicate, not all girls. Developmental cases tend to remain thin and delicate in all social classes, least so in resident institutions.

Dr. NORMAN MOORE said that he could not pretend to be fully acquainted with the methods of investigation adopted by Dr. Warner, but speaking as an outsider it seemed to him that there were some flaws in the argument. Everyone who worked much in the post-mortem room wished to find some law of correlation between defects of different parts of the body, but had to abandon the hope. It was only exceptionally, for instance, that abnormalities of other organs were found in cases of congenital disease of the heart, and he thought it by no means proved that there was any regular correlation between mental and structural defect. Antics and abnormal gestures might, as in the case of Dr. Johnson, be accompanied with mental qualities of an unusually high order. He did not think that a child should be put down as dull merely because he had difficulty with his lessons; the fault might lie with the teacher. Large ears, again, were not necessarily signs of mental defect, as they were often seen in those of high capacity. From post-mortem observations on such variable arrangements as the number and attachment of the cords of the mitral and tricuspid valves he could not confirm Dr. Warner's statement that variations were more common in males than in females. The "uniformly repeated series of movements" on which Dr. Warner laid such stress he should regard as merely habits, and as often associated with high as with defective mental development. It would be important to know what was the ultimate mental development of the children described as dull, as Johnson, Pope, and many others had been classed as dullards when young. He thought that there was an insufficient basis of observed facts to enable dogmatic conclusions to be drawn at present with regard to the painstaking investigations of Dr. Warner.

Dr. FLETCHER BEACH expressed his general agreement with the criticisms of Dr. Norman Moore. The abnormal mental development could not be ascertained by any simple test, but by the weighing of a host of separate observations which were of very unequal value, but taken together of great importance. Nerve signs alone were insufficient to enable one to form a dogmatic opinion. Many of these signs were prominent in children with marked neurotic heredity, but who were bright and quick. Before accurate conclusions could be drawn it would be necessary to follow up the cases and also to extend the scope of the inquiry to other parts of the country besides London, and especially to agricultural districts, where the children were presumably less highly nervous.

Dr. SHUTTLEWORTH said that he could testify to the conscientious and accurate way in which Dr. Warner had

[1] Report on the Scientific Study of the Mental and Physical Conditions of Childhood, with particular reference to Children of Defective Constitution, and with Recommendations as to Education and Training, based on the Examination of 100,000 children, 1888-94. Published by the Committee, Parkes Museum, London, W.

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conducted his observations, although he might not be able to follow him in all his conclusions. His experience had been chiefly among imbecile children, and there was no doubt that in them there was associated physical defect, both as regards weight and stature and also as regards the skin, viscera, and bony parts. The same arrestive cause was probably operative in both mental and physical conditions. Twenty-eight of the cases had a tuberculous family history, and the mortality was eight or ten times as great among imbeciles in asylums as in the outside population. Pope and Johnson could not be taken as healthy types. They illustrated Dryden's lines:—

"Great wits are sure to madness near allied,
And thin partitions do their bounds divide."

Dr. WARNER, in reply, said that in his paper he had purposely left out any consideration of the abnormal signs to mental states, but he might say that out of 1900 boys and 1000 girls who showed well-marked nerve signs 40 per cent. of the boys and 52 per cent. of the girls were found to be dull. He believed that anatomical defects were often associated with these abnormal mental cases, and mentioned one in which there was an abnormal arrangement of the cerebral convolutions, a congenital deficiency in the size of one eye, a defective septum ventriculorum, and a horseshoe kidney. It was only by the multiplication of observations of signs that it was possible to say that a person was abnormal. Uniform repetition of one set of movements was certainly more common in defective children, and it passed off when the mental condition was improved.

MEDICAL SOCIETY OF LONDON.

Election of Officers.—Exclusive Red Meat Treatment of Certain Cases of Gout.—Excision of Rectum.

THE annual general meeting of this society was held on May 10th, the President, Mr. REGINALD HARRISON, being in the chair.

The reports of the council and treasurer were adopted, and the following gentlemen were appointed to hold office during the ensuing year:—President: Dr. A. Ernest Sansom. Vice-presidents: Dr. Constantine Holman, Mr. A. Pearce Gould, Dr. J. Kingston Fowler, and Mr. John H. Morgan. Treasurer: Mr. David H. Goodsall. Librarian: Dr. William Henry Allchin. Honorary Secretaries: Dr. Robert Maguire and Mr. William H. Battle. Honorary Secretary for Foreign Correspondence: Mr. Alban H. G. Doran. Council: Dr. Theodore D. Acland, Dr. John Anderson, Dr. E. Clifford Beale, Dr. Frederick L. Benham, Dr. Robert L. Bowles, Dr. William Ewart, Mr. Reginald Harrison, Mr. Henry E. Juler, Dr. Norman Kerr, Mr. Charles B. Lockwood, Mr. Jonathan F. C. H. Macready, Dr. James W. J. Oswald, Mr. C. J. Rayley Owen, Dr. Amand Routh, Mr. Morton Smale, Dr. John C. Thorowgood, Mr. George R. Turner, Mr. W. Dakin Waterhouse, LL.D., Mr. Joseph White, and Mr. Arthur K. Willis.

The adjourned discussion of the paper by Mr. W. Armstrong on the value of an Exclusive Red Meat Diet in certain cases of Gout, was resumed by Dr. ARCHIBALD GARROD, who said that he had met with many cases of chronic rheumatic arthritis which had been treated in this way, in some instances with advantage, in most without result. It was really carrying to an extreme degree the plan of feeding up these patients, who were often harmed by a too restricted diet. Probably no single explanation would be adequate to account for the improvement in all the cases. Very few of the successful methods of treatment, such as the relief afforded by colchicum during the acute paroxysms, had yet been explained on scientific grounds It was obvious that there was a fundamental difference between the cases in which there was acute gouty arthritis with a deposit of urate of soda around and in the joint, and cases of chronic articular gout in which there was an alteration of the nutrition of the joint leading to extensive changes in its whole structure. In the case of uric acid calculi there was another process, the decomposition of the quadri-urate, the occurrence of which depended on many variable conditions, such as the amount of saline constituents in the urine, or even the amount of pigment. The line of treatment recommended by Mr. Armstrong was calculated to increase the amount of uric acid produced and was therefore unsuitable in cases in which there was any evidence of kidney disorder, which he thought was the rule, at any rate to a slight extent, in cases of gout. The improvement in many cases was probably due to the fact that many of the digestive organs obtained an almost complete rest, and the sudden change appeared often to be beneficial. In true gout he thought that the applicability of this mode of treatment was limited, and that it was by no means free from risk.—Dr. A. P. LUFF said that he had shown that there was no difference between the metabolism of animal proteids and that of vegetable proteids. Probably their different effects as articles of diet depended on the accompanying saline constituents. The mistaken idea that a meat diet caused the introduction of increased quantities of uric acid into the blood was responsible for the objection to meat as an article of diet for the gouty that many held. He believed that in healthy people uric acid was formed in the kidney only from urea and glycocin which came from the liver. In morbid states of the kidney, structural or functional, the uric acid was absorbed from the kidney, and it might be derived from the breaking down of nuclein in leucocythæmia. A person on animal diet excreted more urea, but not more uric acid than when he was taking purely vegetable diet. At the previous discussion Dr. Haig had abandoned his former contention that meat diet introduced uric acid into the blood, but said that xanthin, which he considered as physiologically equivalent, was so introduced. He appeared to rely on Haycraft's process for detecting this, but in 1891 Dr. Haig himself showed that Haycraft's method was unsuitable for detecting xanthin, and there was no proof that xanthin if introduced would contribute to the production of gout. He agreed with Dr. Garrod that there was almost always some renal disability in cases of gout, and that this plan of treatment could only be safely carried out in a few carefully selected cases.—Dr. P. J. FREYER said it was impossible to accuse a meat diet of being the cause of the deposit of uric acid in the face of the fact that the people most subject to manifestations of gout were the vegetarian inhabitants of North-West India.—Dr. R MAGUIRE said that the question was not one of chemistry, of diet, or of microbes, but of vitality. In the carnivorous serpent uric acid was passed practically in the form of a calculus; the graminivorous bird passed it in the form of urates, and the most highly evolved man in health passed it in solution in the urine. But when his vitality was lowered there was a process of devolution, and uric acid was deposited. The Hindoo was a man of very low vitality, and deposition of uric acid readily occurred even on a purely vegetable diet.—Mr. ARMSTRONG in reply, took exception to Dr. Haig's view that the meat acted only as a stimulant, or that its action was the same as that of the Carlsbad waters. The effect of these Mr. Armstrong believed to be due to increased elimination of uric acid by the kidneys and the skin. The influence of the nervous system in deranging the normal chemical processes in the body was a very potent one, and he had seen worry repeatedly produce a deposition of uric acid in a woman who never touched meat. He thought that much of the benefit was due to the sudden cleavage in the habits of diet. Several of his patients had previously suffered much from amylaceous dyspepsia. He wished to insist that this mode of treatment was not a panacea. The cases had to be carefully selected, and only about 3 per cent. proved to be suitable.

Mr. F. SWINFORD EDWARDS read a paper on Fourteen Consecutive Cases of Removal of High-lying Cancer of the Rectum by Kraske's Method. The object of the paper was to show that many cases of rectal cancer hitherto deemed beyond the reach of operation are by the sacro-coccygeal or coccygeal route quite capable of removal without undue risk to life, and that after the resection in certain cases rectorraphy may be successfully carried out, with restoration of the part. Cases were quoted in which patients were alive and well, with no signs of recurrence, after periods varying from one and a half to six years. Mr. Edwards thought that a preliminary colotomy was usually unnecessary, as it involves a waste of time and may prevent a rectal anastomosis by fixing the colon, and so make it impossible to pull down the upper rectum; and it is the more unnecessary since there is little liability to subsequent stricture after operations by this method. Besides, if patients have to submit to the formation of an artificial anus, they prefer to have it in the perineum, in the neighbourhood of the original outlet. Mr. Edwards considered that if a rectorraphy is to be successfully carried out the peritoneum and sub-peritoneal tissue should be freely incised to allow the upper rectum to be approximated to the lower. Out of fourteen cases

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in which he had operated there had been only two deaths (the mortality on the Continent appears to vary from 18 to 34 per cent.). Recurrence occurred in two cases, in one in two years and in the other in four months. Ten are living and well, one of these after five years, two after nearly three years, one after nearly two years, three after one year, one after six months, and one after three months; one patient operated upon eighteen months ago has been lost sight of. Mr. Edwards anticipated that by attention to details and judicious selection of cases still better results would be obtained.—Dr. SNOW thought that, if possible, the removal of bone should be avoided. Mr. Edwards had reported one of the cases as one of scirrhus of the rectum, but it was doubtful if that form of cancer ever arose there.—Mr. BIDWELL said that the chance of complete cure was so considerable that probably patients would be willing to run the risk of a 20 per cent. mortality.—Mr. EDWARDS, in reply, said that Dr. Abraham, who examined the growth microscopically, reported that it was undoubtedly a scirrhus.

OBSTETRICAL SOCIETY OF LONDON.

Chronic Axial Rotation of an Ovarian Cyst.—Abdominal Pregnancy at Full Term; Operation at the Twelfth Month; Recovery.—Lantern Demonstrations.

A MEETING of this society was held on May 5th, the President, Dr. C. J. CULLINGWORTH, being in the chair.

Dr. THOMAS WILSON read a paper on a case of Chronic Axial Rotation of an Ovarian Cyst giving rise to Extreme Twisting of the Elongated Uterus. The patient was a multipara, aged fifty-five years, whose abdomen had been gradually increasing in size for four years; for two years there had been frequent attacks of pain and vomiting, many of which were caused by lifting a heavy invalid husband. By operation a tumour was removed after tapping, by tying and dividing a pedicle as thick as the thumb and two inches long. The tumour was a strangulated, multilocular glandular cyst of the left ovary, weighing about five pounds. To the lower part of the cyst were attached the fundus uteri and the right ovary, tube, and broad ligament, all strangulated. The cyst had a very broad and thick attachment to the left side of the uterus, and the latter organ had been twisted almost through in a direction from right to left. Both tubes were occluded and adherent, the right forming a distinct hydrosalpinx; the left was nine inches long. The patient made an excellent recovery and has continued well.—Dr. HORROCKS pointed out that in most cases of axial rotation there had been effort or exertion whilst in a bent position. He quoted a case where it occurred suddenly when a woman was pulling on a boot which was rather tight. He thought that great force must be exerted upon a tumour in the direction of axial rotation when an effort was made while the body was in a bent position.—Mr. DORAN was surprised to hear that in Dr. Wilson's three cases where the uterus was involved in the rotation the cyst was of the multilocular, glandular type. In twisting of the pedicle alone the tumour was dermoid in a considerable proportion of cases. Much remained to be learned about axial rotation. He had operated on patients where all the clinical symptoms pointed to twisted pedicle, yet nothing was found except soft parietal and, perhaps, omental adhesions. He had found the pedicle short and slightly twisted in cases where the patient had nothing to complain of except the presence of an abdominal tumour; on the other hand, he had found a long pedicle moderately twisted in cases where there were typical symptoms including severe pain.—Dr. WILSON replied.

Mr. JOHN W. TAYLOR then read a paper on a case illustrating the Treatment of (so-called) Abdominal Pregnancy at Full Term; Operation at the Twelfth Month; Recovery. He gave a detailed account of the previous history of the case and of the condition of the abdomen and pelvis at the time of examination. The patient believed that she became pregnant twelve months before the operation. She felt exactly as she had done in former pregnancies, but the movements of the child were unusually distinct and painful. Except for an attack of hæmatemesis the patient was up and about during the whole time. At no period was there any acute pain, sudden illness, or fainting. A description was given of the operation of abdominal section for the removal of the child and placenta. The placenta was of ordinary size and covered the pelvic inlet "like the lid of a saucepan incompletely closed," the edge of the placenta being exposed and free on the left side of the pelvis, but closely applied to the abdominal wall on the right side where the cord was situated. Its attachments were: (1) a thick band or rope of omentum, firmly attached to the upper or serous edge of the placenta on the left side; (2) several thin attachments or adhesions of small intestine and cæcum to the same surface; and (3) the deep pelvic attachments of the under-surface of the placenta. Mr. Taylor described his bloodless method of removing the placenta. The paper concluded with a short commentary on the origin, growth, and history of the case.—After remarks by Dr. LEA, Dr. HEYWOOD SMITH asked whether the medical man who first saw the case when labour pains came on had made any examination, as the condition might have been recognised and the child's life saved by an earlier operation.—Mr. DORAN thought this case seemed an argument in favour of postponing operation when ectopic gestation was advanced till some time after term. The removal, or the leaving behind, of a nine months' placenta was a more serious matter than the removal of the degenerate structure which represented it several months later. Operation seemed more urgent at term, however, in a class of cases, first distinguished by Freund, where continuous intestinal catarrh denoted the intimate attachment of the placenta to the intestine. This histological union involved immediate danger from sepsis as well as from hæmorrhage.—Remarks were also made by Mr. BLAND SUTTON, Dr. AMAND ROUTH, Dr. WILSON, and the PRESIDENT.—Mr. TAYLOR, in reply, said that the attachments of the placenta were very vascular and that the vessels could be felt pulsating before the forceps were applied. The main point, however, was, that as each vascular connexion was controlled before separation, the same operation might have been performed at any previous period of the pregnancy, and if the patient had come to the hospital at the time of the supposed labour, it might have been quite possible to save the life of the child as well as that of the mother. The collection of caseous masses found below the placenta was at the extreme lower pole of the pregnancy sac. This reached to the bottom of the pelvis on the right side, and the reflexion of the sac could be traced upwards from the floor of the pelvis along the broad ligament to the under surface of the placenta, and it was in this lower pocket of the sac that the caseous masses had accumulated. In reply to Mr. Doran, he would always prefer to operate at term, and under no circumstances would he purposely wait for the death of the child before opening the abdomen.

Mr. BLAND SUTTON gave a lantern demonstration on Myoma of the Cervix Uteri.

Mr. TARGETT gave a lantern demonstration on Accessory Adrenal Bodies in the Broad Ligaments.

OPHTHALMOLOGICAL SOCIETY.

New Method of Mounting Museum Specimens.—Unusual (congenital) Defect of Centre of the Cornea.—Three Specimens of Detachment of the Retina.—Sarcoma of the Iris.—Symmetrical Disease of the Macula.—Obstruction of the Cavernous Sinus.—Translucency of the Cornea after application of the Galvano-cautery.—Congenital Absence of the Puncta Lacrymalia.—Proptosis occurring on Stooping or Compressing the Jugular Vein.—New Growth in the Yellow Spot Region.—Retinitis Punctata Albescens.

A CLINICAL evening of this society was held on May 6th, Mr. E. NETTLESHIP, the President, being in the chair.

Mr. PRIESTLEY SMITH showed specimens illustrating a New Method of Mounting Eyes in Formol, which could be completed in forty-eight hours. The preparations were permanent and exhibited clearer definition than those preserved in glycerine jelly.

Mr. HARTRIDGE showed a patient who exhibited a remarkable Congenital Deformity of the Cornea, whereby the central portion was hypermetropic to the extent of 6 D, whereas the periphery was emmetropic. There was a slight nebula.

Mr. ERNEST CLARKE exhibited three mounted specimens of Detachment of the Retina in Different Stages. In the first there was no inflammatory thickening; in the two others there had been inflammation, and in one of these there had

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been in addition the formation of cysts in the detached portion.

Mr. C. DEVEREUX MARSHALL described and exhibited sections of a case of Sarcoma of the Iris. There was a solid unpigmented mass occupying the position of the lens and growing from the posterior surface of the iris; it proved microscopically to be a small round- and spindle-celled sarcoma. Mr. Lawford, who removed the globe, said the eye was glaucomatous. There was no anterior chamber, and a white mass occupied the centre of the pupil simulating opaque swollen lens substance. It was while operating for the relief of this supposed condition that the real nature of the case became apparent and the eye was excised.

Dr. BATTEN brought forward cases illustrating Symmetrical Disease of the Macular Region in two brothers due to hereditary syphilis and arising at the age of fourteen years. Vision was greatly reduced in both instances. Failure of sight had been gradual and one other member of the family—a girl—was unaffected.—Mr. JESSOP mentioned a somewhat similar case in which vision failed at the age of twenty-one years; it began with œdema at the macula, followed by pigmentary change. Disturbance of vision had been sudden, first in the left and then in the right eye. This was also in a male, but there was no evidence of hereditary syphilis, though the patient was improving slowly on Donovan's solution.—Mr. LAWFORD referred to a case of a girl in whom vision had failed suddenly at the age of fifteen years, that of the right eye failing from $\frac{6}{6}$ to $\frac{6}{60}$. Minute light dots appeared at the macular region and persisted three weeks later. There was then no pigmentation. The case was still under treatment.

Mr. F. EVE and Dr. F. J. SMITH communicated particulars of a case of Obstruction of the Cavernous Sinus. After rheumatic fever, three years before, proptosis and double papillitis had come on, with headache and vomiting. There was, in addition, tenderness of the scalp and turgidity of the veins in the lids, with irregular general oculomotor paralysis, congestion of the fundi, and contraction of the fields of vision in both eyes. The obstruction may have been due to malignant disease of the pituitary body or to tubercle. Syphilis was excluded. Vision amounted to $\frac{6}{24}$ and $\frac{6}{12}$ in the right and left eye respectively.

Mr. DOYNE showed:—1. The effect of the Galvano-cautery in Conical Cornea. The instrument had been employed deeply three times and the resulting nebula was very faint. The operation had been performed at the age of eighteen years, and the patient, a young woman, was now aged twenty-six years. Vision was $\frac{6}{18}$. 2. Congenital Absence or Abnormality of the Puncta Lacrymalia without Epiphora.

Mr. LANG exhibited a peculiar case of Exophthalmos Proptosis occurring on Stooping or Compressing the Jugular Vein. Sometimes the proptosis occurred spontaneously; it then lasted some hours or days, was more painful, and was attended with disturbance of vision. There was now some post-neuritic atrophy.—Mr. THOMPSON, under whose care the girl had been, said the condition had commenced at the age of eleven years.—Mr. PRIESTLEY SMITH reported the case of a man in whom the left eye was sunken, but protruded when he bent forward; the condition had existed many years and had followed an injury to the head in boyhood. It was probably due to a varicose state of the ophthalmic vein.—Mr. TREACHER COLLINS mentioned the case of a young man he had recently seen whose sight failed on stooping. The eye projected and the lid also dropped, the deformity disappearing when the patient straightened himself.—Dr. HABERSHON referred the phenomenon to periodic turgescence of the orbital vessels.—The PRESIDENT referred to a case recently reported in an American journal.

Mr. C. H. WALKER showed a case of New Growth in the Yellow Spot Region in a middle-aged man whose sight had become defective two months ago. There had been no change since. The vision only amounted to "fingers" at thirty inches; there was a central scotoma, but no peripheral contraction of the field. The swelling at the macula was half as large again as the disc, and was raised 2 D above that of the rest of the fundus; it might either be a new growth or an inflammatory or cystic swelling.—Mr. ADAMS FROST thought the condition was one of central senile choroiditis.—Mr. HOLMES SPICER suggested that the doubt as to the cystic nature of the swelling might be settled by a puncture of the protrusion under ophthalmoscopic observation.—The PRESIDENT said he had seen cases exhibiting a similar appearance; he thought they were instances of senile choroiditis. One case at least was followed by atrophy and it would be interesting to know the sequel of the present one.

Mr. JOHN GRIFFITH showed a case of Retinitis Punctata Albescens. A man, aged forty-eight years, had had night blindness all his life. His parents were first cousins. One sister had a similar condition. The vision equalled $\frac{6}{24}$; the colour vision was normal; the optic disc was pale and waxy; the central region was crowded with very small, white, discrete dots; and the pigmentary changes were very slight.—Mr. TREACHER COLLINS had had a similar case in a young lady whose parents were first cousins and two of whose grandparents were first cousins. She had night blindness; there were also white spots in the fundus, as in this case.—The PRESIDENT said that the point about these cases was that they did not get worse, as the pigmentary ones did.

EPIDEMIOLOGICAL SOCIETY.

Diphtheria.

A MEETING of this society was held on April 30th, Professor J. LANE NOTTER, President, being in the chair.

Dr. LOUIS PARKES read a paper on the Infectivity of Diphtheria and the Relation of Diphtheria Prevalence to School Closure. In his parish of Chelsea, having a nearly stationary population of 75,000 persons, diphtheria had been present from January, 1890, to the end of September, 1895, though not as an epidemic, the cases ranging from 150 to 200 per annum, but in the following fifteen months two distinct epidemics, of three and six months' duration respectively, occurred, in which no fewer than 421 cases were notified. He did not attempt to distinguish between primary and secondary cases, preferring to class them as single and multiple, the latter comprising all occurring in a house within a month or usually within a week of the first case. In the non-epidemic period of five and three-quarter years there were 1153 cases, of which 209 (= 18·1 per cent.) were multiple, and in the epidemic period of nine months 421 cases, of which 168 (= 39·9 per cent.) were multiple, showing a greater degree of infectivity in the latter period. So, too, as regards the fatality, the deaths in the non-epidemic period were 222 (= 19 3 per cent.), and in the epidemic period 96 (= 22 8 per cent.), or, distinguishing between single and multiple cases in each period, the case mortality of these in the former period was 18 6 per cent. and 22·0 per cent., and in the latter period 21·3 per cent. and 25·0 per cent., diphtheria differing in this respect from scarlet fever, which was less fatal when most prevalent. As to age incidence, it appeared that in the non-epidemic years 56·7 per cent. were under ten years of age, but in the epidemic years 74·3 per cent. In both periods the case mortality among the multiple cases was higher under five years and lower above that age than among the single cases. Diphtheria epidemics were more localised than those of scarlet fever, persisting in each locality for three or four years and not spreading to adjacent districts until about two years from their commencement in the former. This epidemic, originating in Hammersmith, had thus slowly involved successively Fulham and Chelsea, but whether it would extend thence to Kensington remained to be seen. The closure of schools for the summer vacation of four weeks from the end of July was followed by a notable fall in the notifications in the thirty-third to the thirty-sixth week of the year, especially marked among children of school age. The influence of school attendance was well seen last year in June and July, when of 50 cases of children of school age 20 were among the girls and infants attending one of the Board Schools, the boys, who had a separate playground, with an entrance in another street, remaining exempt.

Mr. SHIRLEY MURPHY criticised Dr. Parkes's division of cases into single and multiple, which was likely to obscure important issues, and he differed from him as to closure of schools, which he believed to be most effective just when the disease was increasing in virulence.

Dr. HAMER maintained that many of Dr. Parkes's multiple cases were really primary, and derived from a common source with the first. In the epidemic at Lewisham he had no difficulty in distinguishing between primary and secondary cases, there having been in 66 of 68 houses an interval of over 48 hours between the first and following cases, and to have substituted 25 single and 60 multiple

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cases for his 48 primary and 27 secondary cases would have deprived his inquiry of all value.

Dr. NEWSHOLME said that he believed strongly in school closure, and thought that several of Dr. Parkes's facts were capable of other explanations. Dr. Parkes laid too great weight on personal infection, ignoring the important factor of fomites and other external sources of infection, thus underestimating the number of primary cases.

Dr. R. DUDFIELD remarked that unfortunately the medical officer of the London School Board was opposed to the closure of schools.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

The Value and Safety of Abdominal Exploration in Obscure Cases.—The Principle of Anticipatory Gland Excision in Cancer Surgery.

A MEETING of this society was held on May 7th, Mr. W. BRUCE CLARKE, President, being in the chair.

Mr. L. A. BIDWELL read a paper on the Value and Safety of Abdominal Exploration in Obscure Cases. He brought forward a series of thirty laparotomies for diseases of the intestine, liver, stomach and kidney. In one case of gastro-enterostomy the patient died on the tenth day from bronchopneumonia, but all the others recovered. He had excluded cases of acute obstruction and diseases of the pelvic organs. The list included six operations for chronic intestinal obstruction, nine cases of exploration of the stomach, in three of which gastro-enterostomy was performed, eight cases of exploration of the liver, and seven cases of exploration of the kidney, in five of which nephrectomy was performed. He drew attention to the benefit which followed simple abdominal exploration in advanced malignant disease of the peritoneum where no curative operation was possible.—Mr. DORAN said he had found Langenbuch's incision very useful for exploring doubtful swellings in the region of the liver. It allowed the operator to explore both kidneys, which was always advisable, as he knew of a case where both were found diseased, so that the operator refrained from removing a tumour apparently omental. Mr. Doran pointed out the good results obtained by exploration in cases of tuberculous peritonitis. He inquired as to the method of suturing the abdominal incision adopted by Mr. Bidwell.—Mr. MCADAM ECCLES urged the necessity of informing the patient or his friends of the risks and advantages of an exploratory operation where the case was obscure. He dwelt on the occurrence of ventral hernia and intestinal adhesions following abdominal operations.—Dr. SNOW pointed out the occasional improvement which results after abdominal section in cases of malignant disease, even although the disease is not eradicated. He compared this with the recovery resulting from abdominal section in tuberculous peritonitis.—Mr. KEETLEY insisted on the importance of early diagnosis in abdominal cases, as so many were seen when the disease was too advanced for radical surgical treatment. Wholesale exploratory operations could not be advised. Many would be quite fruitless as it is precisely in the cases where nothing was to be found that the viscera would be most disturbed in trying to find something. Although septic peritonitis ought never to follow adbominal sections, extreme illness without peritonitis might be observed in hypochondriacal patients after abdominal exploration. There were other obvious objections to thinking as lightly of a laparotomy as of a laryngoscopic examination.—Mr. BIDWELL, in reply, said that as the cases narrated extended over a period of six years he had employed many methods of suturing the abdominal incision. He now generally united the peritoneum with a continuous silk suture, the remaining layers and skin being brought together by a single row of silkworm gut sutures. He had observed improvement in two cases of malignant disease after laparotomy where radical treatment was impossible.

Dr. HERBERT SNOW read a paper on the Principle of Anticipatory Gland Excision in Cancer Surgery.

PLYMOUTH MEDICAL SOCIETY.

The Case of Mr. R. B. Anderson.

A GENERAL meeting of this society was held on May 3rd to receive Mr. R. B. Anderson, F.R.C.S. Eng., Mr. J. H. MAY being in the chair.

After a few words of introduction from the Chairman Mr. ANDERSON gave a concise statement of the injuries done to him and the violations of his professional and civil rights; the circumstances of the case have already been fully set out in our columns. Mr. Anderson also gave details of the action of the Civil Rights Defence Committee and its efforts to obtain redress.

The CHAIRMAN said that all present had some acquaintance with the facts and the subjects dealt with, but he thought the cordial thanks of the meeting were due to Mr. Anderson for his clear, interesting, and eloquent address, and for the new light thrown upon the subjects. He was sure that the method of appealing to the great corporations for advice and help in maintaining the honour and true interests of the profession would have the approval of the meeting.

Mr. JACKSON said he could not but feel that this was a case of mutual interest to all medical men. They might say such a fate could not happen to them. Patients often said they had never thought, till it came, that the disease they suffered from would ever happen to them. If such things could take place there could be no greater security in the one respect than the other, and the sense of security was mistaken and dangerous. It was far better to take measures to prevent such possibilities. He begged to move the following motion as an expression of the views of the meeting:—

"This society, having heard Mr. R. B. Anderson's statement of his case, and of its important relations to other medical interests, desires to express the view that it concerns the honour and interests of the medical profession to support Mr. Anderson in his defence of rights essential to the practice of the profession; that their obligation to coöperate, and interest in coöperating, in this defence should be strongly pressed upon the General Medical Council, the Royal College of Surgeons of England, British Medical Association, and other great professional bodies, in pursuance of the policy adopted by the Select Medical Committee of the Civil Rights Defence Committee; and that this society and its members should actively coöperate in these representations by the appointment of a select committee to frame and present suitable memorials to the several bodies, by inviting subscriptions to a local fund in aid of the work of the Civil Rights Defence Committee, and by a suitable donation to head such fund."

This was seconded by Dr. LEWIS and carried unanimously.

Mr. Anderson and Dr. Smith were elected members of the society.

A committee, consisting of the chairman, honorary secretary (Mr. Woollcombe), the mover and seconder of the resolution, and Mr. Anderson, was appointed to give effect to the resolution, with power to add to their number. The meeting adjourned *sine die*.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Recovery after a Very Large Dose of Nitrate of Silver.—Complications following Operation for Varicocele.—Exhibition of Cases and Specimens.

A MEETING of this society was held on April 9th, Dr. BRAITHWAITE being in the chair.

Dr. ARTHUR DRURY (Halifax) gave an account of a misadventure which occurred to himself personally on March 21st, 1896. During the whole of the week previously he had been in bed with symptoms of tonsillitis, his temperature remaining at 101° or 102°F. On the above date it was decided to apply nitrate of silver locally. A new pencil was used, the weight of which was about 25 grains. This was put into a crayon holder, such as is supplied for the purpose in many surgical cases, but which did not happen to be in good order. Almost immediately the whole pencil slipped down the œsophagus. His feelings were absolutely indescribable. There was localised pain in the gastric region and a strong conviction that death must soon follow. Immediately a frothy foam welled up in large quantities forcing its way through the mouth and nostrils, staining handkerchiefs and the bed linen. There was an irresistible feeling that the pencil was lying impacted in the gullet. This seemed such a terrible source of danger that he insisted—against the wishes of those present—on having a probang passed. Mustard was given in large quantities and free vomiting induced. Some time afterwards common salt was given. A very careful search was made in the vomited matter for any of the

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pencil which might have remained undissolved, but none was found. Collapse and great exhaustion followed. For some days afterwards a milk diet was carefully followed. Everything, especially if sweetened, had a very salty taste. There was no further vomiting, but there was very pronounced constipation. The temperature at once became subnormal and all the symptoms of the previous week's illness disappeared. During the next fortnight there was well-marked desquamation over the whole of the skin, though to the best of his knowledge there had been no exposure to scarlet fever and certainly no rash; and further, a child, not three years of age, was in and about the same room during the whole of the time without developing any symptoms. During the twelve months since the accident there have been many indications of dyspepsia; some of these symptoms, however, were present in a much less aggravated form prior to this. The pencil was composed of 4 per cent. nitrate of potash and the rest nitrate of silver. There was very little food or fluid present in the stomach at the time of administration. It was, therefore, a matter of surprise and interest that in this instance the recovery was so good. As, however, the cases in which so large a dose had been accidentally administered included many instances in which the death of the patient had resulted, a strong word of caution against the use of such a powerful corrosive poison in the solid form in throat affections was surely not out of place.

Mr. W. H. BROWN read notes of a case of Operation for Varicocele attended by Unusual Complications. The patient, a man, aged forty-two years, sought advice, about twelve weeks previously, complaining of pains in the left testicle. Upon examination a large varicocele and a shrunken testis were found. The history showed that his ailment was distressing him mentally very much. The patient was informed that his condition was not a dangerous one and he was advised to wear a suspensory bandage. A few days later his wife stated that for weeks past he had been constantly worrying himself about his condition, lying awake at night and at times talking very wildly, and that she feared that he was disappointed because something more had not been done for him. Eventually Mr. Brown excised and ligatured three or four enlarged veins. Ether was given as the anæsthetic, and the operation was without accident. In the evening the patient was comfortable, but his mental condition was most unsatisfactory, as he was rambling in his talk and extremely happy. That night he had no sleep, but was out of bed and walking about. Next morning the scrotum was as large as the head of a child at birth and was black, but there was no pain. Evidently his struggles had caused the ligatures on the veins to give way and a large hæmorrhage had taken place into the scrotum. His temperature was 103° F., and he was quite insane. Matters now went from bad to worse. Pneumonia attacked the right lung and caused additional anxiety. The body was covered with a rubeolar rash. Eventually the integuments of the scrotum with the greater part of the testicle sloughed, leaving a large granulating wound which completely exposed the right testicle. After this matters began to mend. The mental condition gradually began to clear and became quite natural. The parts affected were healthy, but some plastic operation would be necessary to protect and cover the exposed testicle. The treatment was directed towards the prominent symptoms, especially the insomnia, and the sloughing tissues were disinfected three or four times daily. Stimulants were given freely. Before operation all the usual investigations as to the urine, heart, digestion, &c, were made, and nothing to contra-indicate operative measures was found.—In the discussion which ensued Mr. JESSOP mentioned two cases of insanity following operations for varicocele.—Mr. LITTLEWOOD considered that varicocele might be a disorder likely to produce mania after operation; he related a case in which the whole scrotum had been torn off by an indignant wife, and recovery followed without operation.—Mr. PRIDGIN TEALE thought that the insanity was produced by the operation aggravating instead of soothing an already abnormal and irritable condition of the nerve centres.—Dr. DRURY suggested that the insanity might be partially due to the anæsthesia necessary for the operation.—Mr. MORTON considered that the pneumonia might be responsible for it.

Dr. CHURTON described a case in which Adherent Pericardium was diagnosed during life by the presence of Sir W. Broadbent's sign. He also showed the heart, which weighed fourteen ounces. The patient was a child, aged ten years. Old adhesions existed between the lower part of the left ventricle and the diaphragm. Death had followed recent pericarditis over the right ventricle, &c. The eleventh rib on the left side had been very clearly felt to be drawn in at each systole a few days before death. How long this sign had existed could not be ascertained.

Dr. CHURTON then showed the Lungs from a boy, aged twelve years, in whom a loud roaring pulmonary systolic bruit and very highly accentuated second sound were present during life, with hæmoptysis, epistaxis, and dropsy. The case was one of multiple aneurysm of the pulmonary artery, four of the secondary branches in one lung and three in the other leading into aneurysms as large as walnuts and filled with blood-clot.

Dr. CHURTON also showed an Appendix from a woman, aged twenty-three years, admitted with a history of two attacks of (supposed) appendicitis and complaining of inability to work on account of constant discomfort in the cæcal region. A fortnight in bed caused no improvement, and the appendix was removed by Mr. Mayo Robson. It was then found to be thickened at the end, and upon being opened showed a pellucid shining tumour, sessile, of the size of a small bean, obstructing the lumen three-quarters of an inch from the distal end, which was slightly distended by clear mucus and thickened. In water the growth swelled up to nearly three times its original size. There were no peritoneal adhesions or other signs of peri-appendicitis. The case was therefore one of myxoma of the vermiform appendix simulating recurrent appendicitis. No record of a similar specimen had been found.

Dr. R. H. HALL showed an unmarried woman, aged fifty years, with a perforation of the Nasal Septum the size of a two-shilling piece. It was first noticed four years ago and had steadily increased to its present size. There was no history of syphilis. He thought it might possibly be a rodent ulcer.

Reviews and Notices of Books.

The Life and Times of Thomas Wakley, Founder and First Editor of "The Lancet," Member of Parliament for Finsbury, and Coroner for West Middlesex. By S. SQUIRE SPRIGGE, M.B. Cantab., &c. With Two Portraits. London: Longmans, Green, and Co. 1897. Pp. 502. Price 18*s*.

IT would be obviously unseemly to review this book in the columns of THE LANCET. We are, however, desirous to make known to our readers the fact of its publication, and venture to do so by reproducing the prefatory note by ourselves which introduces the volume:—

"The occurrence in 1895 of the centenary of the birth of the Founder of THE LANCET seemed to us to afford a suitable opportunity of giving in the columns of the journal which he originated an extended record of his life and work. We placed the materials, some of which were easily accessible whilst some were obtainable only from senior members of our profession and others (to all of whom we wish to tender our sincere thanks), in the hands of our friend and colleague, Dr. S. Squire Sprigge, who is responsible for the biography, both in its serial and in its present form. For the great interest and pains which he has taken in the work we may express our gratitude to him. To venture any opinion on the quality of that work is not, we think, under the circumstances, within our province—the unprejudiced reader can judge for himself. We, the eldest son and grandson respectively of Thomas Wakley, cannot, in the ordinary course of human nature, be looked upon as free from bias. Indeed, such a thing would be impossible, for the senior of us was his constant companion until his death, and was associated with

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him in his struggles and his work during the greater part of his public career. We have been anxious in two respects—firstly, that the services rendered to the cause of medical reform (and may we say to humanity?) by the subject of this biography should not, owing to the lapse of years, be lost sight of; and secondly, that the story of his life and work should be told by a biographer who would not view them through the imperfect lens of family affection. One word more. This biography of a man, most of whose work was done more than fifty years ago, may be considered belated, but whoever had written the life of Thomas Wakley much sooner would have incurred the chance of causing pain to many people."

The first of the two portraits is reproduced from a bust, a replica of one executed by John Bell, which stands in the hall of THE LANCET Offices; the second from an engraving by W. H. Egleton, from a painting by K. Meadows. To the latter is appended Thomas Wakley's autograph. The publishers have produced a volume which is handsome in appearance and well and clearly printed.

Compressed Air Illness. By E. H. SNELL, M.D. Lond., London County Council Medical Officer to the Blackwall Tunnel. London: H. K. Lewis. 1896. Pp. 251. Price 10*s.* 6*d.*

COMPRESSED air illness has only been recently investigated, but some of the symptoms were recognised soon after the invention of the diving bell in the sixteenth century. Hitherto no book has yet appeared in this country dealing with the subject, although with modern engineering exploits the disease has assumed considerable importance. Dr. Snell's appointment as medical officer to take charge solely of the compressed air work carried on at the Blackwall Tunnel has given him exceptional opportunities of studying the phenomena produced by a too long immersion in compressed air, and he has taken full advantage of such opportunities, and has done good service in publishing the result of his experiences. The matter has been approached from a purely clinical standpoint, and this is certainly wise, for, as he himself says, the physiological problems concerned are better dealt with in the midst of the quiet and resource of the physiological laboratory; any serious attempt to solve them in the rush and roar of a large engineering undertaking would indeed be futile.

The first chapter of the book is occupied with an interesting historical account of the disease and an excellent *résumé* of the physiological and pathological observations of previous observers. The second chapter gives a brief sketch of the description of work carried on in the tunnel, whilst the third contains a selection of cases of illness that occurred during the progress of work at the tunnel. The cases are very well described. Dr. Snell is a keen observer and from a perusal of them a good idea is obtained of the principal clinical features. True compressed air illness occurs during or after the decompression; it may commence immediately the exit air tap is turned, or may be postponed until some hours after coming out. By far the most common symptom is pain in the extremities, known by the men as "bends." A full description of this phenomenon is given. The injuries which may be sustained by the ear during the process of entry Dr. Snell regards as so obviously mechanical in their origin that he places them in a distinct class, not only on account of their time of onset, but also because of their distinctive pathology.

The causation of this illness is by no means as simple and uncomplicated as we might anticipate. The author lays stress on three etiological factors: the pressure itself, the length of stay in the compressed air, and the ventilation. Some previous observers laid much stress on a short exit process—that is, allowing a very short time for the reduction of the pressure in the air locks, but Dr. Snell is not of this opinion. He also shows that the amount of illness varies directly with the lack of ventilation of the compressed air chamber. The effect of age, too, is interesting, younger men being much less liable to be attacked than older men.

In regard to the pathology, favour is given to a set of theories which attempt to explain the symptoms by the increased solution by the blood of the gases contained in the compressed air. The chapter on Pathology is a most interesting one, and to anyone who wishes for information on the subject we cordially recommend it.

The treatment is naturally in a great measure a preventive one. The length of immersion is a most important detail and varies with the nature of the works, and the length of the shifts must be reduced until the desirable freedom from illness is met with. The maximum air pressure which can be endured with impunity has not been settled, but with our increased medical knowledge we are able to deal with pressures of 30 lb. and 35 lb. with far less harm than formerly. A large supply of fresh air is of course indispensable. With regard to curative treatment, if the case comes under notice soon after its commencement, there is one treatment that should immediately be resorted to—namely, recompression. At Blackwall this was carried out by means of a "medial air lock," of which a full description is given.

Taking the work as a whole, we congratulate the author on the result of his investigations. The book is a very readable one and one which ought to be studied not only by medical men who are likely to be brought into contact with such cases, but also by engineers and others who have the management and erection of works where labour in compressed air is necessary.

Lectures on Pharmacology. Vol. II. By Dr. C. BINZ. Translated from the Second German Edition by PETER W. LATHAM, M.A., M.D. Cantab. London: The New Sydenham Society. 1897.

THE appearance of the second volume of these lectures will without doubt be welcomed by all members of the medical profession, for it is a book which will appeal equally to the practitioner and to the student. Pharmacology is not a subject which usually makes pleasant reading, but in these lectures Dr. Binz has been most successful in producing not only a readable but at the same time a most interesting volume. The amount of information contained in the book is very great. The drugs are dealt with systematically as to their origin, preparations, properties, and actions. The actions are treated from the physiological rather than the pathological side, and full accounts of the experiments are given on which the conclusions of the therapeutic actions have been based. The action of quinine upon the lower organisms is fully described, especially with regard to malaria, and diagrams are also given which illustrate the inhibitory power which quinine possesses over inflammatory processes. Dr. Binz also carefully sums up the evidence as to the mode of action of iron in chlorosis, and his conclusions upon this point are as follow:—"It is probable (1) that the functional activity of the blood-forming organs, which is lowered or suppressed in chlorosis, requires a stimulus or impulse; (2) that iron, when carried in the circulation to these organs in increased quantity, acts as a chemical stimulus and, not being an entirely foreign constituent, is less injurious in its action than other stimulants." As evidence in support of this view Dr. Binz refers to the fact that chlorosis may be also cured by other substances, such as arsenic, phosphorus, and mercury, although these drugs are not constituents of hæmoglobin.

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The concluding chapter deals with the methods in which the science of pharmacology may be best advanced, both experimentally and clinically, and the author gives his views as to the different lines which should be followed.

Archiv für Schiffs- und Tropen-Hygiene, unter besonderer Berücksichtigung der Pathologie und Therapie. Herausgegeben von Dr. C. MENSE, Cassel. Band I., Heft 1. (*Archives of Maritime and Tropical Hygiene.* Edited by Dr. C. MENSE, Cassel. Vol. I., Part 1.) January, 1897. Cassel: Th. G. Fisher and Co. 1897. Price 12*s.*, annual subscription.

NOT a year passes without many new additions being made to the list of periodicals devoted to one or another branch of medical science. The journal before us has been established to disseminate information concerning subjects of importance to those concerned in maritime travel and colonial enterprise. The editor in his prefatory remarks points out how essential such knowledge is becoming for a state like Germany which is aiming at extension in these directions. The number contains a study of malarial fevers in the tropics by Dr. A. Plehn, a military medical officer in the Cameroons, especially in regard to the practical importance of examination of the blood. As supplementing this article, there is an editorial appeal to readers in tropical countries to collect material for despatch to the mother-country, full directions being given on the mode of preservation of the specimens asked for. Dr. Nocht of Hamburg contributes an article upon Sanitary Police Measures in vogue for preventing the importation of infectious disease by sea, in the course of which he describes the quarantine and other regulations adopted by various countries. A description of Coolie hospitals in Sumatra by Dr. L. Martin and a paper on Beri-beri by Dr. Max Glogner complete the original articles, the number also containing several reviews and abstracts of recent writings on subjects within the special domain covered by the *Archiv*. The journal is to appear every two months.

An Account of the Life and Works of Dr. Robert Watt. By JAMES FINLAYSON, M.D. Glasg. London: Smith, Elder, and Co. 1897. Price 3*s.* 6*d.*

WE heartily commend this biographical sketch of a remarkable man to the notice of our readers, for the author of the "Bibliotheca Britannica" deserves to be remembered, although we venture to say that to many who have had reason to be grateful to him for his self-imposed labours his personality is quite unknown. He died at the early age of forty-five years, just as his *magnum opus* was on the eve of publication, and for more than half a century that work remained without a rival as the most compendious bibliography of British literature. We learn from this memoir that Robert Watt was born in 1774, the youngest son of a farmer in Stewarton in Ayrshire, that his early love of literary pursuits led him from the carpenter's shop to the university, and that after a brief experience of the scholastic profession he turned his attention to medicine, and entered on general practice at Paisley. In 1808 he published a monograph on Diabetes, which attracted some attention, and in 1810, having obtained the M.D. degree from King's College, Aberdeen, he established himself as a physician in Glasgow, where he lectured on the Theory and Practice of Medicine. The preparation of a catalogue of his medical library for the use of his students seems to have been the nucleus of his greatest literary achievement, which began with the endeavour to frame a catalogue of medical works by British writers, and subsequently embraced other subjects. To the preparation of this work he devoted all his leisure time for many years, and it is interesting to read that long after his death his MSS. were collected and placed in the Free Library at Paisley. Amongst other work that he accomplished, that which has perhaps attracted most attention was his statistical enquiry into child mortality at Glasgow during a period of thirty years, published in 1812 in an appendix to a "Treatise on Chincough." This inquiry was based on a laborious investigation of the death registers of the Glasgow parishes, and embraced the years prior to, and subsequent to, the introduction of vaccination. Himself strongly impressed with the value of vaccination, which was borne out by his research showing a remarkable decrease in child mortality from small-pox, he found that the total deaths at this period of life had not fallen off, the diminution in small-pox being largely counterbalanced by a rise in the numbers dying from measles. The publication of these statistics was deprecated by Jenner as tending to discredit vaccination, and they have often been quoted in the same sense by Jenner's opponents; and yet it is clear that they indicate only the increase of another zymotic disease, which as a cause of infantile mortality may be said to have taken the place of small-pox. Dr. Watt founded a medical society in Glasgow, became physician to the Royal Infirmary, president of the Faculty of Physicians and Surgeons, and of the Glasgow Philosophical Society. The list of his writings appended to the memoir (which also contains his portrait) shows that in addition to his great bibliotheca he contributed much to professional literature.

LIBRARY TABLE.

Sprachführer für die Ärztliche und Pharmaceutische Praxis. Deutsch-Englisch und Englisch-Deutsch. (German and English Vocabularies of Words used in Medicine, Surgery, and Pharmacy, together with Dialogues in both Languages between Patient and Medical Attendant). Von GISBERT VON SUDTHAUSEN. Leipzig: Eduard Besold. 1896. Two vols. Pp. 132 and 134. Price 4.80 marks.—These little volumes can be well recommended as explaining a large number of technical terms which are not to be found in the ordinary dictionaries, whether English or German. The work might, however, have been considerably improved if it had been finally revised by some English person conversant with the subjects, who would no doubt have suggested several minor emendations, and would have corrected such inelegancies as "the blind-gut" (der Blinddarm—i.e., the cæcum), "the chin-beard," "the ear-shell" (die Ohrmuschel—i.e., the external ear or auricle), and "the great-gut" (der Dickdarm—i.e., the colon). These occur on the first three pages of the English-German part, and there are others of a like kind, such as on pp. 6 and 7, "the phlegm" (der Schleim—i.e., mucus), "the pituitous tunic" (die Schleimhaut—i.e., mucous membrane), and "the strait-gut" (der Mastdarm—i.e., the rectum). The lists of surgical requisites and of pharmaceutical appliances and preparations are tolerably full. The anatomical and pathological part is also well selected as far as it goes; but in consequence of the space taken up by the dialogues this section is not so copious as that given in the German-English Medical Thesaurus, by the Rev. Henry Losch, M.D., of Philadelphia, which was reviewed in THE LANCET of Feb. 1st, 1896, p. 300.

Atlas der Klinischen Untersuchungsmethoden nebst Grundriss der Klinischen Diagnostik und der Speziellen Pathologie und Therapie der Inneren Krankheiten. (*Atlas of Clinical Methods of Investigation, with Elements of Clinical Diagnosis and the Special Pathology and Therapy of Internal Diseases.*) By Dr. CHRISTFRIED JAKOB. München: F. J. Lehmann. 1897. Price 10 marks.—As the name indicates, this is an atlas illustrating the methods of physical diagnosis. The plates are small, but their

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execution is excellent. The student can see at a glance how an examination ought to be conducted. The contractions used in the text are numerous, but when once understood are easily followed. We have never seen better illustrations of the urinary sediments and of the objects met with in the examination of sputum. It is a work which would prove very useful to the practitioner and to the student, and for those who have a knowledge of German we can cordially recommend it. It forms one of Lehmann's "hand atlases"—a truly wonderful series of books. The number now under consideration is the fifteenth volume, and contains no less than 182 beautifully coloured illustrations engraved on 68 plates, and in addition there are 64 diagrams in the text.

JOURNALS AND REVIEWS.

The Journal of Anatomy and Physiology. Conducted by Sir WM. TURNER and Dr. J. E. M'KENDRICK. Vol. XXXI. New Series, Vol. XI., Part 3. April, 1897. London: Charles Griffin and Co. Price 6*s*.—The first article in this number is an important one by Professor Rutherford on the Histology of Muscle, in which he gives the results of his researches on this difficult subject, with many illustrations. He dissents from the views of Professor Schäfer, and inclines to those of Dobie, to whom Professor Rutherford dedicates his communication. Professor Bertram Windle, of Mason College, Birmingham, supplies a few notes on the Myology of Dolichotis Patagonica and Dasyprocta Isthmica. Dr. A. A. Gray, of Glasgow, continues his investigation into some of the Principles of Auscultation. Dr. David Fraser Harris, of Glasgow, has a note on the Reducing Power of the Tissues, and also one on Hæmatoporphyrinuria and its Relations to the Source of Urobilin. Mr. Peter Thompson of Owens College, describes a case of Polypus of the Pylorus with Intussusception. Dr. Robert A. Fleming supplies an article on the Histology of Medullated Nerve Fibres in Man and Rabbits derived from a study of their pathological anatomy. Mr. W. M'Dougall contributes an article on the Structure of Cross-striated Muscle and a Suggestion as to the Nature of its Contraction. Dr. Francis Dixon, of Trinity College, Dublin, describes a Rare Condition of the Vermiform Appendix. Dr. Caton of Liverpool describes a Case of Complete Transposition of Viscera. An abstract of a paper by Dr. Robert Kennedy on the Regeneration of Nerves is supplied by Professor M'Kendrick. And lastly, Professor Bertram Windle gives his Seventh Report on recent Teratological Literature. Four sheets of the index to Vols. XXI.–XXX. are appended to this number of the Journal.

The *Nineteenth Century* for this month, among several interesting articles, contains one from the pen of Mr. Malcolm Morris which will specially appeal to medical readers, entitled The Progress of Medicine during the Queen's Reign. Taking as a text the words of H.R.H. the Duke of Cambridge[1] on the occasion of the opening of the new operating theatre in St. George's Hospital, "I do not believe that amid all the improvements, the advantages, and the additions that have occurred during the long reign of Her Majesty, anything has made so much progress as medical and surgical science," Mr. Malcolm Morris shows the main directions in which that progress has occurred. Improvements in surgery have been due to the discovery of anæsthesia or the artificial suppression of pain, and antisepsis or the prevention of septic processes in wounds, and of the history of these two marvellous developments a readable and attractive summary is made. Passing from surgery to medicine, Mr. Morris says that he has to chronicle "an advance in knowledge if less striking than in surgery ..... not less real," while it must be remembered that the progress had to commence from much further back. For even if we cannot quite endorse the author's opinion that "when the Queen came to the throne in 1837 it is hardly too much to say that the average medical practitioner knew little more about the diseases of the heart, lungs, stomach, liver, and kidneys than was known to Hippocrates," there is no doubt that in the thirties surgery was incomparably ahead of medicine. Mr. Morris attributes the more obvious improvements in our medical treatment to the invention of the ophthalmoscope and the laryngoscope and the perfection of microscopic and stethoscopic procedure. The article is very opportune at the present moment when so vehement an appeal is being made to the public for the support of the London Hospitals. All who read it will see that the science of medicine, under which term we include not only surgery and midwifery, but all the ancillary sciences, has deserved well of the people during Her Majesty's reign.

[1] THE LANCET, Dec. 26th, 1896.

The Monist.—Professor Rudolph Eucken of Jena contributes a long and learned essay on Hegel. It seems that "just as his [i.e., Hegel's] system of the absolute intellectual process, by positing a formal reason, a conformity to law, and a progressive movement in the All, totally converts reality into reason, so also it cherishes the belief that it has cleared up by the world's movement itself everything that is dark." Dr. Paul Carus, the editor, writes on the Mythology of Buddhism. He considers that Buddhism "offers a complete philosophy, which is an outspoken positivism with decidedly anti-metaphysical tendencies. It propounds a psychology which is worked out in its most important details, and is quite up to date. ..... In addition to all this, Buddhism has developed an exuberant mythology." This article is profusely illustrated with grotesque engravings. Dr. James Cappie of Edinburgh has a lengthy paper on Intracranial Physics, in the course of which he endeavours to explain the phenomena of sleep by changes in the venous circulation of the pia mater.

Knowledge for May contains two contributions to the series of articles appearing in that magazine on the Science of the Queen's Reign. The first article is by Mr. R. Lydekker, F.R.S., and deals with Biological Progress; the second, by Mr. A. J. Cole, F.G.S, deals with Sixty Years of Geological Research. These articles are illustrated with portraits of Charles Darwin and Sir Charles Lyell.

Mercy and Truth.—Dr. T. L. Pennell describes the Afghan Medical Mission at Bannu, and there are also articles dealing with the experiences of medical missionaries at Gaza and in Persia.

THE BRITISH INSTITUTE OF PUBLIC HEALTH.—The council of the institute have made arrangements to hold a meeting in the Guildhall of the City of London on Wednesday, June 16th, at 3 P.M., at which an address will be moved to Her Majesty in connexion with the great progress made in Public Health matters during the past sixty years. The Right Hon. the Lord Mayor of London (who will preside) and the Sheriffs will attend in state. In the evening the annual dinner will be held in the Carpenters' Hall, London-wall, tickets for which, inclusive of wine, are 25*s*. In view of the limited accommodation it is desirable that those who wish to be present should make application at once to the Secretary, Mr. C. A. James, at 20, Hanover-square, W. The Harben Lectures will be delivered in King's College, London, by Dr. G. Sims Woodhead, Harben Lecturer for 1897, Director of the Research Laboratories of the Royal Colleges of Physicians and Surgeons of London, on "The Bearing of Recent Bacteriological Investigations on Public Health Work, especially in connexion with (*a*) the Diagnosis and Treatment of Diphtheria; (*b*) the 'Stamping out' of Tuberculosis; and (*c*) Biological 'Filtration'" at 4 P.M., on the following Wednesdays: June 23rd and 30th, July 7th and 14th.

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THE LANCET.

LONDON: SATURDAY, MAY 15, 1897.

IF the profession is to be kept a profession and if its members are to be protected and delivered from the manifold evils which threaten their peace and prosperity it seems more and more essential that everything should be done by each member in his personal or official capacity to promote union within our ranks. If this can be procured and preserved we should be the strongest profession of the three, instead of which we often appear the weakest and the least coherent. The other professions are essentially more public in their relations and have opportunities of asserting themselves which ours has not. But it is a fact that if we could but be true to one another and to the duties which we have to perform we could make ourselves more indispensable than men of other callings and put ourselves in a position to command the full respect of the public and reasonable terms for our services. This is so obvious that we are driven to ask: What are the circumstances of the medical profession that hinder its prosperity and break it up into weak and inefficient sections? Answers to this question will vary somewhat according to the point of view of him who tries to answer it. We may indicate the principal ones that occur to ourselves from a point of view that is a fairly broad one. First, it is undeniable that specialisation of professional work is a dividing influence. The specialist, without always intending it, is apt to act apart and view a particular case through his own special glasses, so to speak. The specialists intensify this tendency by organising their specialties to a high degree and cutting themselves off from the general life and society of the profession. They come to be a class apart and are more apt than the general consultant to lose sight of the general practitioner, who is responsible for the general health of the patient and has the right to be regarded when any special evil arises. We do not deny for a moment that there are many specialists who are scrupulously courteous and considerate in this matter. We admit it cheerfully. But we indicate a tendency in specialism to divide the profession into sections marring its oneness and its strength.

Another cause of division is the question of hospital abuse. A certain proportion of the profession, an ever-increasing proportion, are connected with hospitals in the capacity of honorary medical officers, and often also as clinical teachers. Men in this privileged position naturally look at the hospital in a somewhat different light from that of the general practitioner: it is a vantage ground to them, it brings them position, it brings them patients, it supplies a field for their labours in medical education, and it is often the road to practice and even to fame. That there should be a few thousand patients, more or less, going unfitly and unworthily to hospitals to swell their *clientèle* and to afford the raw material of clinical education or of fame does not matter much to hospital consultants as a class, or, at least, to the leaders among them, who are safe in the enjoyment of reputation and of good fees. It is otherwise with the struggling general practitioner. He sees in these unfit and unworthy thousands the materials of general practice, for which he has been trained by the very teachers who now treat gratuitously the people who should be his patients and pay such sums as would meet the modest wants of his early professional life. As he gets older he sees more respectable patients demoralised by the same facilities and attractions, and he comes to regard the hospital consultant not indeed as his natural enemy, but as one whose interests are different from his own. This is not really the case, but it seems so, and the two classes come to think of each other, and sometimes speak of each other, as if in rival camps.

A third cause of division in the very rank and file of the profession is the excessive number of its members and the unprecedented competition involved. This competition has been intensified by pernicious forms and methods of practice which contemplate crowds of patients and the smallest pittance of remuneration—conditions which are inconsistent with care in the investigation of cases and with anything like that consideration for sick persons which humanity and the medical art alike require. Sometimes these forms of practice are conducted by individuals in a purely private way and on their own responsibility. In other cases huge associations are formed on a commercial basis, either by friendly societies or by purely commercial companies, the agents of which canvass districts in a wholesale manner and take away the patients of resident practitioners. The gentlemen who serve these societies or companies would not individually canvass the patients of other medical men; but in accepting office they endorse canvassing methods and accept responsibility for them. Hence arise much discord and division in the profession.

The call to union which we venture to utter is, it will be seen, spoken in no ignorance of the elements of division in the profession; but it is spoken with a deep conviction that with a little forbearance and patience these elements will be overruled by the consideration of members in every branch of practice. We are all of one profession. We are dependent one on another. The consultant and the specialist (at least in some departments of practice) and the general practitioner are all necessary to the patient and can all be helpful to each other. They can all contribute to the solution of this scandal, hospital abuse. And there are many proofs that all are trying their very best to do so. What is wanted is some friendly consultation and, let us add, some mutual concession; in other words union. The remarkable communication last week of our Special Commissioner shows us that in France and in Belgium there is more organisation than with us—though that this is not an invariable case may be seen from the letter of our Paris Correspondent this week. Our very excess of freedom as a nation makes the assertion of individual opinion a little excessive for practical and professional purposes. Let us control it and work towards the common end of making medicine in all its branches a dignified, efficient, and united profession.

The man who, sitting on a branch, proceeds to saw it through between himself and the tree has not been

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deemed wise any more than his immediate relative who kills the goose that lays the golden eggs. But both of them may be glad to find that they are not without kinsmen in the Italian kingdom if a Bill now before its Chamber of Deputies should pass into law. That Bill proposes to make it illegal—in other words, impossible—for a non-Italian medical man to practise in Italy unless he holds an Italian qualification, virtually compelling the foreign resident or visitor (who in ninety-nine cases out of a hundred is of English-speaking nationality) to rely in case of illness on the native practitioner. Now, as we have already pointed out,[1] this is a suicidal step on Italy's part. From twelvemonth to twelvemonth there are rather less than half a million—say, 450,000—citizens of the English-speaking world within her borders, some of them resident, but the vast proportion of them migratory, whose stay is limited by months or even weeks. Taking the estimate of the British and American consuls that these foreigners spend £50 apiece during their stay—a very safe estimate, if avowedly an approximate one—we get a total of £20,000,000 sterling annually poured into the coffers of Italy—replenishing the flaccid circulatory system every "season" and keeping her in what financial well-being she enjoys for the rest of the year. A very large proportion of these "paying guests" come for health; many others, owing to various causes, incur illness grave enough to require medical advice; and all of them are sustained by the confidence that in the great central resorts, at least, if not at every marine sun-trap, they have a well-qualified compatriot practitioner within hail. Is it for a moment to be imagined that they would arrive in such numbers if there were no English-speaking medical men with a sound qualification from the home country to call in? Can a greater deterrent to their visits be conceived than their compulsory recourse to the Italian-bred practitioner in case of illness or even accident? The said practitioner may be a MORGAGNI in the laboratory or a BAGLIVI by the bedside, but the very fact that he is Italian—rarely speaking English or even the French which EDMOND ABOUT found so "comical"—is quite enough to impair the confidence which, particularly in a foreign country, the patient (small blame to him) requires. Impose it as a condition on sojourning in Italy that no English-speaking practitioner shall in any case of illness be available, and the 450,000 annual "paying guests" of the same tongue will shrink to less than a third of that total. The Italian revenue is not so flourishing that it can afford to lose annually some £14,000,000 of gold.

An attempt is being made by the proposers of the Bill just introduced to vindicate its provisions on the ground that in England no Italian physician can practise without a British qualification. We do not know that the Italian colony in London, for example, is debarred from consulting a compatriot practitioner, unplaced though he be on the British Medical Register. But the parallel sought to be established between the two countries does not exist. If English-speaking practitioners in Italy attended Italian patients, or if Italian practitioners in the British Isles attended English-speaking patients the "argumentum ad hominem" might hold. But no such "poaching on each other's preserves" prevails. All the English-speaking sojourner in Italy requires is that he shall have the power to call in a practitioner of his own nationality, and the numerous "colonies" of such sojourners make it eminently reasonable. On the Riviera Levante and Ponente every winter there are sun-traps which are virtually "suburbs of London," and in the great centres — Venice, Florence, Rome, and Naples—the English-speaking community is always a considerable proportion of the population. It is numerous enough to maintain several chaplaincies or churches—Anglican and dissenting; it has its own isolated and characteristic life as much as in the country of its origin. The watchword of "L'Italia ai Medici Italiani" may have practical effect, and the *clientèle* of Italian physicians may remain unencroached upon by any outsider without depriving these "suburbs of London" on Italian soil of the right to consult the practitioners they import. There, indeed, lies the whole case for the *status quo* which Italian legislation is seeking to subvert. The members of the English-speaking colony in Rome or in Florence do not lose their nationality because they live on Italian soil; nor do they forfeit their right to employ compatriot practitioners any more than to attend compatriot places of worship, or to recruit their domestic *personnel* from compatriot service. If they sojourn in Italy as guests they do so as "paying guests," amply rewarding the hospitality vouchsafed them not only by the money they bring freely and spend handsomely, but (as Italians themselves admit) by importing and maintaining a higher standard of civilisation, from hygiene downwards, than the mediæval traditions prevalent around them.

Yes, it would be a black day for Italy if she alienated from her soil and her social life the English-speaking element to which she owes so much; and we look to sensible, right-feeling, and patriotic Italians for that exposure and rejection of the "anti-English-practitioners" Bill which the DI RUDINI Government, we are sorry to see, is disposed to consider favourably. The hotel-keeping and commercial interests are sufficiently strong in political representation to make effective fight against a measure so disastrous to their prosperity; and if they succeed in preventing its becoming law they will have done more for their country than the "patriotti da piazza" (patriots of the city square) and the "politici da caffè" (coffee-house politicians), whose narrow Chauvinism, to judge from their organs, is so gratified by the Bill.

A SUBJECT of perennial interest has recently been under discussion in Liverpool. It appears from a report made to the Local Government Board by Mr. FULLER, the inspector to the Board, that a large proportion of the children in the Workhouse Schools, the Kirkdale Industrial Schools, and the Leyfield Poor-law Schools had been suffering from severe ophthalmia and from granular lids, and he further stated that in his opinion both forms of the disease were infectious. Dr. ALEXANDER, the medical officer to the Workhouse, so far as we can gather from the somewhat meagre account

[1] THE LANCET, Dec. 19th, 1896, p. 1774.

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that has reached us, wrote a reply to Mr. FULLER, in which he protested against the assumptions and allegations made in the report; and at a conference of the members of the Select Vestry, the Workhouse Committee, and of the Industrial Schools Committee, when Dr. ALEXANDER had the opportunity of meeting Mr. FULLER, he elicited from Mr. FULLER the statement that he considered granular lids in all stages were contagious or infectious, even when no discharge was visible. To this statement Dr. ALEXANDER took exception and went so far as to say that Mr. NETTLESHIP, Mr. SWANZY, and all the other experts held a contrary opinion. Dr. ALEXANDER was supported by Dr. MCMURRAY, the medical officer of the Kirkdale Industrial Schools, and by Dr. MAHONY, the medical officer of the Leyfield Poor-law Schools, both of whom maintained that granular lids were not contagious, and that when they developed into acute ophthalmia the children were isolated and subjected to special treatment so far as the space at disposal and other circumstances permitted. Making allowance for the meagreness of our authority, which does not, perhaps, render justice to the opinions expressed by medical men upon a technical subject, it appears to us that Mr. FULLER is in all points right in the view he has taken in his report. All recent evidence tends to show that trachoma (granular lids) is a disease attributable to some form of micrococcus, not improbably the gonococcus of Neissen, and that it is contagious in its nature both in the acute and in the chronic stages even when no discharge is visible. We fail to find in the authorities quoted by Dr. ALEXANDER any statement to the effect that in either stage, acute or chronic, the disease is non-contagious. There is, indeed, another form of conjunctivitis, known as follicular conjunctivitis, which chiefly affects the mucous membrane of the lower sinus of the conjunctiva and often undergoes spontaneous cure without leaving any cicatrix; but even this disease is generally held to be contagious. In any case where several children in a school presented granulations on the inner surface of the lids whilst some of them developed acute ophthalmia, we should consider that either true contagious ophthalmia or that follicular conjunctivitis was present, and that not only those who presented the acute stage with free purulent discharge, but those in whom the presence of granulations was only discovered by eversion of the lids, and those, also, in whom the disease was on the decline, should one and all be separated from those who were free from any sign of disease; and further, that unless there was clear evidence of its introduction from some infected individual a thorough inspection of the whole building in regard to the adequacy of ventilation both by day and night, the arrangements for washing and the use of towels, and the system of diet and exercise in force should be carefully considered, and such improvements made as might be thought advisable. In a large proportion of cases there can be little doubt that overcrowding, dark and ill-ventilated rooms, damp soil, and insufficient diet are very efficient agents in developing and in promoting the extension of the disease. How far these conditions obtain in the institutions referred to in Mr. FULLER'S report we have no means at hand to determine.

Annotations.

"Ne quid nimis."

THE PUBLIC HEALTH (SCOTLAND) BILL.

LAST week we pointed out that the House of Commons Committee sitting on this Bill had agreed by a small majority, including the Lord Advocate, that in future Scotch towns might, with the sanction of the Local Government Board, appoint medical officers of health without any qualification in public health. We added that any further tendency to sanitary retrogression would have an opportunity of showing itself with regard to the question of the powers of sanitary inspectors, of whom the law requires no qualification of any sort. The inspectors had issued a document in which they asked to be invested with the statutory duty of certifying whether any manufactories or trade premises or processes within the district of the local authority might be injurious or dangerous to health. The proposal that certification of this sort should be permitted by statute to unqualified persons we ventured to characterise as preposterous. Nor have we changed our opinion. But in the view of the Committee and the Lord Advocate the proposal was distinguished not by audacity but by blushing modesty. The suggestion referred to only a single one of eleven classes of nuisances specified in the 16th Section of the Bill. The Committee are of opinion that it should apply to *all* the classes of nuisance—premises of any sort dangerous or injurious to health; wells or water-supplies similarly injurious or dangerous; accumulations or deposits of every sort; school-houses; factories or workshops, &c., not under the Factory Acts; fireplaces or furnaces; chimneys; and churchyards so situated or crowded or conducted as to be offensive or injurious or dangerous to health. That a man who was one day a tinker or a tailor and the next day a sanitary inspector would at once be endowed with powers enabling him to protect the community to this wide-reaching extent was very obvious to the Lord Advocate we presume, for no printed notice of the amendment was given. A member of Committee rose and made the proposal, and the representative of the Government forthwith accepted it. It is perfectly clear that the universities and corporations have been all wrong as to what constitutes a qualification in public health. The General Medical Council has been insisting on a longer curriculum and more difficult examinations in sanitary science. They have been utterly at sea. No curriculum and no examinations are necessary. They have added a requirement that apprenticeship to a medical officer is an essential preliminary. In the opinion of the Government, as voiced by the Lord Advocate, an apprenticeship to a shoemaker or a barber would be quite sufficient. The medical officer of health with his double and triple qualifications and his knowledge of the causes of danger and injury to health and of chemistry and bacteriology is in future, in the eye of the law in Scotland, to be placed in the same position with the man who, having perhaps been a failure as a tradesman or a shopkeeper, has been able, through some remote relationship to some member of the local board, to get himself appointed as the sanitary inspector of a petty borough. May we venture to suggest to the Lord Advocate that he should go a little further and try to get Parliament to set the town scavenger at the head of the public health service, or, carrying the same principle into the profession of law, should resign his own post as Lord Advocate in favour of the boy who sweeps the steps of Dover House? Meanwhile, to that part of the population in Scotland which is so unfortunate as to ow

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"premises" of any sort, or wells, or water-supplies, or animals, or manufactories, or trades, or fireplaces, or furnaces, the prospects of wholesale certification by such officials must be nothing less than alarming. We commend the printed proceedings of the Committee to the attention of all concerned, and look forward with whetted curiosity to their doings with regard to the 150 clauses which yet remain.

LORD LISTER AND HIS ASSISTANTS.

WE have already announced that a complimentary dinner is to be given to Lord Lister by his former house surgeons, clinical clerks, and dressers. It is now decided that the dinner will be held at the Café Royal, Regent-street, on May 26th, and we are informed that the arrangements are so well advanced that it promises to be one of the most interesting tokens of regard which have been offered to the President of the Royal Society during the year made memorable to the medical profession by the gratifying recognition of his splendid work. Much difficulty, however, has been experienced by the committee in obtaining correct lists of those who have held subordinate office under Lord Lister. In some cases it has been impossible to trace their addresses. The committee, therefore, hope that all who have worked under Lord Lister as house surgeon, clinical clerk, or dresser, whether in Glasgow, Edinburgh, or London, will consider themselves invited to join in the movement, and will not wait for a personal request to do so. If, unfortunately, they should not be able to attend the dinner they are requested to intimate the dates of their offices, as it is proposed to draw up and print as a souvenir of the occasion a complete list of all who have been intimately associated with the father of antiseptic surgery since Lord Lister's first tenure of hospital office in 1861. All particulars concerning the dinner can be obtained from the honorary secretary, Dr. St. Clair Thomson, 28, Queen Anne-street, W.

CLAIM TO BE REGISTERED UNDER THE DENTISTS ACT.—THE QUEEN *v.* THE GENERAL MEDICAL COUNCIL.

AN important question has been raised in the High Court of Justice before Mr. Justice Hawkins and Mr. Justice Wright, and decided in favour of the view of the General Medical Council.[1] The case was that of Mr. Isidore Spero, who had obtained a rule *nisi* for a *mandamus* against the General Medical Council commanding them to show cause why they should not place the name of the applicant on the Dentists' Register. Under Clause C of Section 6 of the Dentists Act a person is entitled to be registered who "is at the passing of the Act (1878) *bonâ fide* engaged in the practice of dentistry or dental surgery, either separately or in conjunction with the practice of medicine, surgery, or pharmacy." By Section 7 information of the facts of the case of persons claiming to be registered under Clause C of Section 6 must have been sent before Aug. 1st, 1879. Section 37 provides that "any person who has been articled as a pupil, and has paid a premium to a dental practitioner entitled to be registered under the Act in consideration of receiving from such practitioner a complete dental education, shall, if his articles expire before Jan. 1st, 1880, be entitled to be registered under the Act as though he had been in *bonâ-fide* practice before the passing of the Act." It was argued by Mr. Walter Chitty in support of the rule that Section 7 could not have been intended to apply to persons claiming to be registered under Section 37. But Mr. Justice Hawkins, in discharging the rule, pointed out that the person entitled to be registered under Section 37 was entitled to be registered "as though he had been in *bonâ fide* practice before the passing of the Act." There was no reason, therefore, why such a person should not be under the same obligation to make a declaration under Section 7. A point was made of the wording of the schedule giving the form of declaration to be signed by a person claiming to be registered on the ground that he was engaged in the practice of dentistry at the time of the passing of the Act. But Mr. Justice Hawkins did not think it a good one, as the declaration was to be made in the form provided or "to the like effect." The form could easily have been varied to suit the pupil in question, who did not apply for registration before August, 1888. His term of pupilage, three and a half years, commenced in April, 1875. Mr. Justice Wright was of the same opinion, but he reserved the point as to the obligation of pupils whose articles did not expire till after Aug. 1st, 1879.

[1] See the *Times*, May 8th, 1897.

THE VITALITY OF THE TURKS.

AMONG the many services done to the Turks by Greece in the last few weeks not the least is to have given them an opportunity of showing how and what they can endure. The *Times* correspondent is much struck with their eagerness to fight and with the difficulty of killing them. He mentions one man whose abdomen was penetrated by a bullet, and who not only kept his place in the ranks till the battle ended but marched ten miles afterwards. Another man with three wounds—two in the legs and one in the shoulder—continued on duty twenty-four hours until an officer noticed his condition and sent him to hospital. Sometimes our alcoholism has been associated with our daring and our endurance as cause and effect, but here are qualities of the same sort in a non-alcoholic nation. Our contemporary's correspondent remarks further on the rapidity with which wounds heal, and says that medical men attribute it to the abstemiousness of the Turks. Here we should scarcely be able to match the race whose soldiers are ill clad, ill fed, and who take no alcoholic stimulants.

ATROPHY OF THE OPTIC NERVE FOLLOWING EXPOSURE OF THE EYE TO DIRECT SUNLIGHT.

IN the lately issued number of the Royal London Ophthalmic Hospital Reports Mr. Treacher Collins publishes a case of considerable interest, in which impaired vision and central scotoma followed somewhat prolonged examination of the sun with the unshaded eye. The patient was a schoolmistress, aged forty-nine years, who one day early in May, 1889, about four or five o'clock in the afternoon, on casually glancing at the sun noticed that it was surrounded by a halo of rainbow-coloured rings of light. This phenomenon was also observed by others and was a subject which was afterwards discussed in a journal. She continued to look at the sun for from five to ten minutes, only shading the eyes occasionally with the hand. On turning away she saw two yellow discs on the grass before her, the one on the right being a complete circle, and that on the left being a circle with a notch in it. The yellow discs became blue when she went into a shaded room and looked at a white table-cloth. These discs had entirely disappeared on the third day, but her vision in both eyes was then impaired. By the seventh day "the sight of her left eye had gone." In a few weeks the right eye had entirely recovered, but two months after the onset of the affection an object still appeared enveloped in a fog when looked at with the left eye alone, and it appeared to have irregular blanks in it. Only slight improvement in the left eye took place subsequently, and she states definitely that so far as she was aware there was no affection of her eyes before the time at which she looked at the sun. When she came under observation at the Royal Ophthalmic Hospital, Moorfields, five months after she first had trouble with her eyes, her vision in the right eye was $\frac{6}{18}$, while with the left she could

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only see fingers at a distance of three feet. In the left eye also there was a large central scotoma which could not be mapped out. In the centre of this eye white objects could only be seen with difficulty, and red and green were quite invisible. Six years later vision in the right eye with correction was $\frac{6}{9}$; with the left, fingers could be counted at three feet, and there was a well-marked scotoma for red. The left disc was found distinctly pale in colour, but the vessels did not seem to be diminished in size. The vessels and disc in the right eye appeared normal. The chief points of interest in this case are, Mr. Treacher Collins points out, the great defect in vision which resulted and the prolonged exposure to the sun which brought about this great impairment of vision. He also points out that so far as he is aware no instance has been recorded in which atrophy of the optic nerve has followed blinding by exposure to sunlight. Reference is made to the recently recorded experiments of Usher and Dean, in which it was shown that retinal wounds were followed by partial atrophy of the optic nerve. These observers found that degeneration always corresponded to the part of the retina that had been wounded, and that in a monkey's eye, when the lesion was made between the optic disc and yellow spot, the degenerated area lay in the outer part of the nerve anteriorly. Mr. Treacher Collins suggests that in his patient the exposure may have caused destruction of some of the retinal elements in the macular region and consequently atrophy of nerve fibres supplying it. Although there was general pallor of the disc the outer part was decidedly the whiter.

OPENING OF A NEW HOME AT THE CHALFONT EPILEPTIC COLONY.

ON May 6th the foundation-stone of the fourth Home for Epileptics, presented to the National Society for the Employment of Epileptics by Mr. Passmore Edwards, was laid by Mr. Bayard, the retiring Ambassador of the United States. A large company travelled to Chalfont by special train. In addition to Dr. Buzzard, Dr. Ferrier, Dr. Tooth, Dr. Fletcher Beach, Dr. Aldren Turner, and Dr. Colman, who form the medical staff of the colony, many well-known medical men were present, including Sir James Crichton Browne, Dr. Mitchell Bruce, Dr. James Taylor, Dr. Shuttleworth, Dr. Outterson Wood, Mr. Arthur Willis, Dr. Abrahams, and Dr. Brooks. After a brief religious service Mr. Bayard declared the stone to be "fairly and squarely laid," and spoke eloquently on the philanthropic and altruistic spirit which had been such a distinctive characteristic of the Victorian reign. Sir James Crichton Browne, in proposing a vote of thanks to Mr. and Mrs. Bayard, said that it was fitting that Mr. Bayard should take part in this ceremony at an epileptic colony, as he was a distinguished specialist whose province was, by skilful sedative treatment, to avert disastrous convulsions in the body politic. He spoke of the frequency of nervous disorders at the present time, when the "so-called march of civilisation had often a tendency to degenerate into a wild stampede from poverty and hunger." Mr. Passmore Edwards, who was very cordially greeted, spoke of the friendly feeling between this country and the United States, which would render a war between the two countries an impossibility in future. Mrs. Bayard subsequently opened the new Home for Women, the foundation-stone of which was laid by Lord Addington last year. This home will accommodate twenty women, who will be employed in the laundry (which is now being constructed) and in the dairy. Up to the present there has been no resident medical officer, there being no accommodation for one. With the admission of women to the colony, however, the need for adequate supervision of the colony becomes doubled, and it is very satisfactory to learn that Colonel Montefiore has induced an anonymous donor to give £5000 for the erection of a suitable house for a resident physician. It is intended, we believe, that there shall be accommodation in this house for eight or ten patients of a superior class, whose payments on a higher scale will cover the cost of the services of the medical officer to the whole colony. The colony so far has been an unqualified success. Although from the fact that only very severe cases have been taken there have been few "cures," yet in nearly all instances there has been remarkable improvement in the general condition. A glance at the carefully kept market garden and at the large amount of work turned out from the carpenter's shop gave an idea of the useful work which is being done, though there appears room for more variety of occupation, particularly in-door industries, during continued bad weather. Provision of these is, no doubt, only postponed owing to the lack of the necessary funds.

PARALYSIS OF THE FOREARM FROM BICYCLING.

DR. DESTOT has published in the *Gazette des Hôpitaux* an account of his own experiences. An abstract of the paper appears in a recently published number of the *Neurologisches Centralblatt*. After a long ride he experienced paræsthesiæ in the fourth and fifth fingers, with impaired sensibility and paresis in the interossei, lumbricales, and the adductor pollicis. This paresis was followed by distinct atrophy in the affected muscles. He considers the affection to be the result of pressure upon the branches of the ulnar nerve, aggravated, doubtless, by the vibration occasioned by bad roads. He also considers that predisposing factors existed in the softness of the skin of the hand and in the exhaustion of the muscles and the consequent loss of protection to the nerves lying in or under them.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

THE Anatomical Society of Great Britain and Ireland will hold its annual summer meeting at Dublin on June 10th and 11th. In addition to the scientific meetings on each of those days the society will be entertained at the Zoological Gardens in Phœnix Park on one of the afternoons. On the evening of June 10th Dr. James Little, President of the Irish Academy of Medicine, will give a dinner, and on that of June 11th there will be a dinner in Trinity College. Professor His of Leipzig will give an address on the evening of June 9th. After the meetings an excursion will if possible be organised to Killarney. As well as Professor His the following continental anatomists are expected to be present: Professors Merkel, Stieda, Spalteholz, Lebouc, Bardeleben, Van de Stricht, and Disse.

HOSPITAL PROVISION FOR MEDICAL CASES IN CHESTERFIELD.

THE town of Chesterfield has, in common with many other places, been of late considering how it shall most worthily celebrate the completion of the sixtieth year of Her Majesty's reign. We gather from the newspaper reports that three schemes commend themselves to the citizens of Chesterfield—namely: (1) the building of a drill-hall, (2) the building of a medical as opposed to a surgical hospital, and (3) the straightening of the celebrated crooked steeple. At a recent meeting to consider the matter the Mayor is reported as saying that "it would be unfair to have any element of religion about that jubilee gift." Why this should be so we are unable to see, but the drill-hall scheme seemed to be the one which met with the most favour. There is certainly not much religion about a drill-hall, and neither is there about straightening a crooked steeple; in fact, as a rule, church restoration, to quote a well-known saying, is "worse than wicked, it's vulgar;" but there is a good deal of religion about a hospital. In the end

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it was agreed that the drill-hall should be built, and that any surplus should be devoted towards a fund for the building of a medical hospital. In our opinion provision for medical cases should have been a first charge on the commemoration fund. It is simply absurd that in a town like Chesterfield, with a population of nearly 120,000, there should be no hospital accommodation for medical cases other than the workhouse, and everyone will agree with what Dr. Rose says in his letter, published in another column, that a "man suffering from pneumonia is in more need of hospital treatment than his fellow workman who is admitted for a simple fracture." A hospital, though a work of religion, is at least undenominational in the best sense, and so would meet the Mayor's views, and to our minds it ought to be put in hand at once.

LONDON POST-GRADUATE COURSE.

THE arrangements of the London Post-graduate Course for the summer session, 1897, include lectures and demonstrations on the following subjects:—Diseases of the Skin (on Tuesdays at the Hospital for Diseases of the Skin, Blackfriars); Bacteriology of Anthrax, Tuberculosis, Typhoid Fever, Diphtheria, Erysipelas, &c. (on Fridays at the Bacteriological Laboratory, King's College); Chemistry and Bacteriology of Urine for clinical use (on Thursdays at the British Institute of Preventive Medicine); Clinical Lectures and Demonstrations at the Central London Sick Asylum; Diseases of the Nose and Throat (on Mondays at the London Throat Hospital, Great Portland-street); House Drainage, Water-supply, Infectious Diseases, &c. (on Wednesdays at the Parkes Museum, Margaret-street). A prospectus and any further information may be obtained from the secretary, Dr. J. Fletcher Little, 32, Harley-street, W.

ARSENICAL (?) SOAP.

WE are glad to see that condign justice has at last overtaken not only a retailer but a manufacturer of "arsenical soap." A druggist in Kingston was recently fined in the amount of 10*s.* for selling this stuff, and he, therefore, brought an action against the soap manufacturers for £50 damages. The soap contained no arsenic whatever, and the defence was that "arsenical" was a fancy name, like, say, "Sunlight." We do not call this defence any defence at all. The British public does not really believe that "sunlight" soap contains sunlight, but arsenic is a thing which can be put into soap. The manufacturers' travellers were instructed to say that the soap contained no arsenic, but this does not do away with the incorrect name. "Arsenical" is evidently meant to imply that the soap does contain arsenic. Judge Lushington decided that the druggist had been rightly fined and that the manufacturers were liable for damages. Judgment was accordingly given for £32, a result we are very glad to see. Practices of this kind are far too common and must be suppressed with a firm hand.

THE NATIONAL SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN.

IT is hardly possible that a society operating on a scale which is nothing less than gigantic, and dependent entirely on public subscription, should not at some stage of its history be assailed by the breath of adverse criticism. That stage has been reached by the National Society for the Prevention of Cruelty to Children, and its critic is one of its numerous offspring of local committees. As usual the question in dispute is the management of the society's revenue. The cause of the objecting committee has been espoused by the Charity Organisation Society, and arrangements are in progress for an exhaustive inquiry to be held by Lord Herschell. It would clearly be premature and prejudicial under these circumstances for us or any other outside parties to anticipate the results of that inquiry by a statement of opinion on the merits of the case. We may, however, note as favourable omens the facts that the schism in the society's ranks has not spread beyond the place of its origin; that public confidence in the society, as judged by a marked increase of funds, appears little if at all abated; and that its officials themselves appear rather to court than to shun the pending investigation. It is possible that errors of administration may have crept into so large a scheme of work as that of the society. On this subject we, in common with the public generally, are without information. We may rest assured that any such as may exist will not be overlooked in the approaching inquiry. In the meantime any correct judgment is, of course, impossible, and a truce in the warfare of accusation carried on by the objectors against the society is therefore no more than common sense and good feeling demand.

THE CASE OF MR. R. B. ANDERSON.

A NUMBER of the Fellows and Members of the Royal College of Surgeons of England practising in Plymouth, Devonport, and Stonehouse, and in the neighbouring districts, have addressed a memorial to the President and Council of the College, in which they state that, having observed with a sense of the highest satisfaction the consistent sympathy and moral support which for more than two years have been extended by the College to Mr. R. B. Anderson, they observe with concern that in reply to a resolution of the electorate of the College at the general meeting in 1896 it was stated that the Council did not see its way to vote a sum of money in defence of the rights of a Fellow and Member. Learning also that Mr. Anderson has received no definite reply to his direct application to the College in January last to be protected and defended according to No. 15 of the College By-laws the memorialists desire to lay stress upon the great satisfaction that would be afforded to all Fellows and Members of the College by an active, practical, and consistent defence of Mr. Anderson by a subscription from the collegiate funds to the Civil Rights Defence Committee, and they would like to be heard by way of deputation in support of Mr. Anderson's application.

ASTIGMATISM IN SCHOOL CHILDREN.

A PAPER by Dr. William Carhart in the *New York Medical Journal* of April 17th deals exhaustively with the errors of refraction, especially astigmatism, exhibited by 1000 school children under his observation. The Javal ophthalmometer was used in this investigation, in the course of which astigmatism received particular attention. The age of the children examined varied between five and eighteen years. Few pathological changes were noticed, except those connected with asthenopia, many cases of which were due to mismanagement by ignorant "opticians" of a refractive defect. It is noteworthy that 48·5 per cent. of the children examined were astigmatic and that cases of hypermetropic (44 per cent.) and myopic (3·5 per cent.) astigmatism greatly outnumbered the cases of either hypermetropia or myopia. The low degrees of astigmatism were much more usual than the higher (34·4 per cent. as compared with 10·3 per cent. for moderate and 3·8 per cent. for high degrees). Other tables tend to show that in many cases, especially when aided by a congestive or other morbid process, the undeveloped hypermetropic eye of childhood undergoes a slow distension progressing towards myopia. In such cases emmetropia, which is shown to be most common in the middle part of the school period (from nine to twelve years of age), is merely a stage on the road which leads to myopia. Hypermetropia also shows a tendency to decrease rapidly in consequence of alteration of the corneal

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curve developing compound hypermetropic astigmatism. The myopic analogue of this condition, where present, develops later. The conclusions at which Dr. Carhart arrives are, (1) that changes in refraction in childhood and adolescence are due to slow distension of the eyeball, either by ocular strain in the healthy eye or by ordinary physiological use of an eye weakened by disease; (2) that such distension is accompanied by change in the corneal curve; (3) that many cases of hypermetropia, and all of myopic and mixed astigmatism, are thus explained; and (4) that consequently early correction of the refractive error and especially of the astigmatic element is of great preventive value. The paper contains practical suggestions as to the prevalence of visual defects in childhood and the necessity for their treatment which parents and school teachers will do well to note and act upon.

A HOME FOR CONVALESCENTS FROM SCARLET FEVER.

IT is generally recognised that the infective stage of scarlet fever continues for several weeks, and that the mere fact of a convalescent feeling himself to be in good health and fit for any kind of out-door exercise is no guarantee that he may safely mingle with the public at large. The requisite long-continued isolation being extremely difficult under the ordinary conditions of family life, Miss Mary Wardell in 1884 opened a home for convalescents from scarlet fever at Brockley-hill, Stanmore, Middlesex, and from that date to the present time 2663 patients have been received. During 1896 there were 273 admissions, classified according to age as follows: seven years old and under, 72; twelve years old and under, 74; twenty years old and under, 42; and above twenty years old, 85. On May 17th, at 3 45 P.M., a meeting will be held at Grosvenor House, by permission of the Duke of Westminster, its object being to give some account of the work done during the last twelve years, and to raise a sum of £2000 which is required to clear the home from all debt and to provide for the carrying out of some very necessary repairs.

THE POOR-LAW OFFICERS SUPERANNUATION ACT AT WISBECH.

THE Wisbech board of guardians have evidently been slow to realise the scope and intention of the Poor-law Officers Superannuation Act. At their meeting held in the middle of last month, a letter was read from Mr. William Groom, medical officer and public vaccinator, in which he tendered his resignation, mentioning at the same time that it was more than forty years since the board appointed him deputy to his predecessor, and that he had been medical officer for thirty-seven years. Thereupon, according to the *Wisbech Advertiser* of April 14th, the chairman (the Rev. J. Young), addressing the guardians, said that this resignation "meant £70 per annum in superannuation. They were legally bound to pay it, and had no alternative. As he had told them some time ago, it was never anticipated that Dr. Groom or any other medical officer would come under the superannuation scheme. With regard to the officers who had been established in the Union House for a number of years it was quite a different matter. The outside officers had never anticipated or thought of superannuation, and it seemed very hard upon the ratepayers that in such cases they should have to pay it. The only alteration he could suggest, and he made it without hesitation, was that they should not give the same salary, but considerably reduce it. The present salary was £105, being £80 for Wisbech, £10 for Wisbech St. Mary, and £15 for Leverington. He would suggest that the salary for Wisbech be £50, making £75 in all." Mr. Howard seconded the proposition. The position taken up by the reverend gentleman is obviously open to a good deal of criticism, and any candidate for the vacancy who may be willing to accept the greatly reduced salary should keep in mind that it is subject to a statutory deduction on account of the superannuation grant in question.

THE INTERNATIONAL MEDICAL CONGRESS AT MOSCOW.

THE following is a convenient route for medical men from Scotland intending to be present at the International Medical Congress at Moscow. Leaving Leith by one of Messrs. James Currie and Company's steamers, Hamburg is reached about forty hours later, and the train can be taken at once to Berlin. Here a day or two might be spent, and the journey then continued to Moscow. After the Congress has finished its sittings the return journey might be taken by the same route. It would be more interesting, however, to vary it by returning by St. Petersburg, Stockholm, and Copenhagen, from which latter place a steamer leaves every Thursday for Leith. A return ticket should be taken on the Hamburg steamer; this is available from Copenhagen on payment of one guinea. The total cost of this tour would be £18 6*s*. 10*d*. if travelling first class by rail, or £14 19*s*. 2*d*. second class. To this have to be added, say, 12*s*. per day while on shore for board and lodging; the fares on the steamers mentioned include provisions. Instead of travelling by railway from Stockholm to Copenhagen the following alternatives are available: (1) by canal to Gothenburg and by steamer to Copenhagen; (2) by canal to Gothenburg, by steamer to Christiania, and thence by steamer to Christiansand; and (3) by railway to Christiania and by steamer to Christiansand. The additional cost would be £1 0*s*. 2*d*., £2 1*s*. 11*d*., and 11*s*. 4*d*. respectively.

THE PLAGUE IN BOMBAY.

THERE is nothing very new to report about the plague, except that the spread of the disease is slowly diminishing owing to the Government some two months ago having at last made up its mind to enforce the regulations for isolation and segregation which it instituted at the end of last year and then allowed the municipality to disregard. Native medical men are badly wanted, for the native patient will not allow himself to be attended by a European, but the supply of nurses is ample. Yersin's serum treatment is apparently not successful, the mortality in a series of selected cases—i.e., cases inoculated within forty-eight hours of attack—being about 50 per cent., the same as the hospital mortality. In one case, although the symptoms due to the plague abated after the inoculation, cardiac failure supervened, and the patient died. It will be remembered that a somewhat similar coincidence has been reported as following the injection of diphtheria antitoxin. If, however, the appalling mortality and the loss of trade which Bombay has experienced lead to a reconstruction of the insanitary tenement houses and impress on the authorities, both municipal and imperial, that disease is not to be trifled with, that if not met and fought with at the very outset it will some day slay its ten thousands, the lesson of the present epidemic, though a bitter one to learn, will not have been altogether useless.

THE REMOVAL OF EMBEDDED POWDER GRAINS.

DR. EDWARD JACKSON, of Philadelphia, contributes a very useful paper on this subject.[1] On the face the operation is of most importance in consequence of the disfigurement. If any grains are situated superficially a good deal of spontaneous improvement will occur, as they will be thrown

[1] Albany Medical Annals, May, 1897.

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off with the epithelium. To favour this poulticing or blistering may be tried. But the deeper particles will not be affected. At first they are massed in small areas which give the appearance of black grains capable of removal singly. But even at this stage they are so incorporated with the tissues that this is impossible. A recognition of this fact will save the patient unnecessary pain and the surgeon disappointment. The problem is really the removal of the tissue in which they are diffused with the least possible destruction. After failure of many methods Dr. Jackson used a fine-pointed galvano-cautery, with which he destroys each spot. The earlier it is applied the less is the tissue which has to be destroyed, for as time goes on the stain becomes diffused In old cases where the whole skin of the part is involved the method cannot be employed. As repeated applications are often necessary (in one case he made 300 at a single sitting) an anæsthetic is required. Ether is inadmissible, therefore he uses chloroform. Where the number of grains is small, local anæsthesia in the form of Schleich's infiltration method may be employed. The tip of the cautery at a white heat is quickly introduced to the necessary depth and quickly withdrawn. In severe cases it is impossible to judge correctly the depth, so that repetition may be necessary. For grains embedded in the cornea the operation is precisely that of cauterising for ulcer.

THIRTY-FIRST ANNUAL REPORT OF THE CITY OF LONDON LUNATIC ASYLUM, STONE, NEAR DARTFORD, 1896.

THE history of this institution during the past year has been uneventful. One hundred and thirteen patients were admitted, forty-six recovered, and twenty-three died; one-half of the admissions were acute and recent cases of insanity. The percentages, both for recoveries and deaths, compare very favourably with the latest average returns of the English county and borough asylums. In commenting upon the fact that only one death was due to pulmonary phthisis, Dr. White points out that this disease is a rare cause of death at the Dartford Asylum. Phthisis, as a rule, figures largely in the mortality tables of lunatic asylums, and its comparative infrequency at the City of London Asylum must be regarded as a satisfactory feature. Heredity and alcoholic intemperance figure as the most potent causes of insanity. The department for paying patients continues to meet with deserved success, and there can be no doubt that this asylum in providing accommodation for private patients at a moderate rate of board is engaged in doing good work. The high recovery-rate, the low death-rate, and the remarkable freedom from casualties of a serious nature all tend to show that the institution is ably and carefully managed.

THE Eighth International Congress of Pharmacy will be held at Brussels from Aug. 14th to 19th inclusive. The proceedings of the Congress are designed to interest all working in pharmacy or such allied branches of knowledge as toxicology, pharmaceutical chemistry, bacteriology in relation to pharmacy, and the legal position of the dispenser and the prescribing physician. There will be prizes given for essays contributing to scientific or practical knowledge on any of these points. All information can be obtained from the secretary-general, M. Duyk, 102, Chaussée de Wavre, Ixelles, Bruxelles, Belge.

HER ROYAL HIGHNESS PRINCESS CHRISTIAN will present certificates of appointment and badges to the members of the Army Nursing Service Reserve at the Royal United Service Institution, Whitehall, on Wednesday, May 19th, at 5 P.M. The Marquis of Lansdowne, Secretary of State for War, will preside.

THE examination of the Medico-Psychological Association of Great Britain and Ireland for the certificate of Psychological Medicine will be held in London, Edinburgh, Glasgow, Aberdeen, and Dublin in July, upon dates which we shall notify in due course. The examination for the Gaskell Prize will be held in London in July, and is open to all who possess the certificate of the association. Candidates intending to present themselves should give at least fourteen days' notice to the Registrar, Dr. Spence, Burntwood Asylum, near Lichfield, to whom all inquiries should be addressed.

SURGEON-MAJOR-GENERAL JOHN BY COLE READE has been appointed a Knight of Grace of the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England, and George Sampson Elliston, M.R.C.S. Eng., and Christopher Childs, M.D. Oxon., have been promoted from Honorary Associates of the Order to the same dignity. Deputy-Surgeon-General George Sterling Ryerson, M.D., has been promoted from Honorary Associate to the dignity of an Esquire.

THE annual meeting and May dinner of the Aberdeen University Club, London, will be held at the Holborn Restaurant on Wednesday, May 19th, at 7 P.M. Mr. John W. Crombie, M.P., will take the chair, and intending diners should communicate with the honorary secretaries, Mr. J. Gerard Laing and Dr. James Galloway, at 54, Harley-street, W.

THE vacancies on the staff of the Middlesex Hospital caused by the death of Mr. Leopold Hudson were filled up at a meeting of the election committee, held on Wednesday last, when Mr. T. H. Kellock, F.R.C.S. Eng., was appointed assistant surgeon, and Mr. Stephen Paget, F.R.C.S. Eng., surgeon to the Throat and Ear Department.

DR. WILLIAM ALLEN STURGE of Nice has been appointed by the Queen to be a Member of the Fourth Class of the Royal Victorian Order, which was instituted last year with the object of recognising personal services to Her Majesty.

THE meeting of the Hospital Reform Association announced to be held at Manchester on May 24th will be held on May 25th instead.

HIS ROYAL HIGHNESS THE PRINCE OF WALES has fixed Wednesday, May 26th, as the date of his visit to Guy's Hospital to open the new medical school buildings.

THE QUEEN has forwarded through Sir Fleetwood Edwards her annual subscription of £105 to the funds of the Middlesex Hospital.

THE next session of the General Medical Council will commence on Tuesday, May 25th, 1897.

THE SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.—The annual report of this institution, which has lately been issued, shows that during 1896 1211 in-patients were admitted, being 59 in excess of the previous year. 2660 out-patients were treated, as against 2274 in 1895. The average stay of each patient was 31·79 days, and the total average cost was £5 0*s.* 1¼*d.* per patient, or 3*s.* 1¾*d.* per day. The average number of daily occupied beds was 105·42. The total expenditure for 1896 amounted to £6128 10*s.* 10*d.* The treasurer states that although during the past year the income exceeded the expenditure by £6, yet there is still outstanding against the hospital a deficit of £200 18*s.*, the adverse balance of the previous year, and also the sum of £465 1*s.* 7*d.*, the cost of improving the operating theatre in 1895.

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The Lancet Special Commission ON THE METROPOLITAN WATER-SUPPLY.

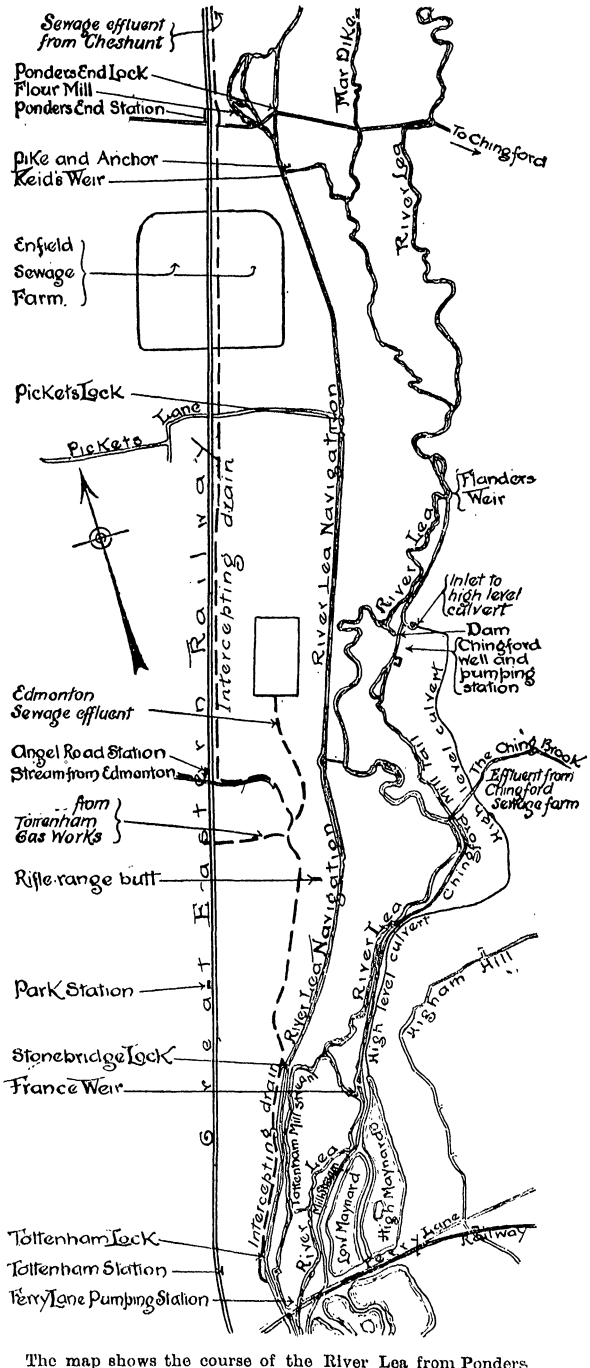
XII.[1]

EAST LONDON WATERWORKS COMPANY (*Continued*).

Water from the Lea.—The greater part of the water supplied by the East London Waterworks Company is taken from the river Lea. The rights which the company possess of taking water from the Lea are somewhat peculiar. The Lea Conservancy Board is empowered to use as much of the river Lea water as is necessary for filling the locks for the use of the barges which pass up and down the Lea Conservancy stream, and the New River Company and the East London Waterworks Company are allowed to take the whole of the water which is in excess of that used for purposes of navigation.

From a very early period the Lea has suffered very much from pollution by sewage and surface drainage. In the year 1852 an Act was passed to enable the East London Waterworks Company to make an artificial cut to intercept some of the sewage, which up to that time, had contaminated the intake of the Company. This intercepting drain will be first described, and then an account will be given of the sources of the water which is taken at Chingford for the supply of the reservoirs of the Company.

The Ponders End intercepting drain.—The accompanying map shows the course of the drain, which is marked by a dotted line. The map is drawn to scale, but the two sewage farms which are shown are diagrammatically represented. The drain passes from Ponders End through the valley to a point in the Lea Navigation Canal which is just below the Tottenham Lock, a distance of about four miles. It was provided by an Act of Parliament that the East London Waterworks Company should be at the expense of keeping up this intercepting canal. At the present time, therefore, the East London Waterworks Company differs from all the companies which have been previously described in the fact that the Company has at its own expense to keep up an intercepting drain made to prevent the pollution of the water which is taken by the Company. And this drain forms part of the property of the Company. The cut begins at a point within a few yards of the Ponders End railway station on the Great Eastern Railway line. The intercepting drain first receives the effluent of the sewage farm of the Cheshunt Urban District Council, and it receives near this point some drains which carry surface water down. The amount of water passing down varies very much. After a very heavy rain it is estimated that as much as 4 000,000 gallons a day may be conveyed. When visited on May 6th, about midday, the amount at the commencement of the cut was very small and consisted entirely of the sewage effluent from the Cheshunt district sewage farm, and the flow was roughly estimated as being at the rate of about 750,000 gallons a day. The amount, however, which passes from the sewage effluent of course varies at different times in the day. On May 6th this sewage effluent was very foul. There was a great quantity of solid matter in suspension. Just before the effluent flows into the ditch there is an arrangement put up by the Cheshunt urban authorities by which the effluent passes through four wire gratings, which remove a good deal of the solid matter. A man is employed to constantly remove the débris and cleanse the gratings. A considerable amount of solid matter is, however, allowed to pass through into the ditch. The intercepting drain passes in a southerly course near the Great Eastern Railway line for a distance of about half a mile, when it receives the effluent of the sewage farm of the Enfield sanitary authority. On May 6th this effluent was turbid and extremely foul. The ditch continues in a southerly course,[1] close to the Great Eastern Railway, and passes under a public road called Picket's-lane close to the signal-box of that name on the railway. The smell at Picket's-lane was, on May 6th, very offensive. At this point, and at several others in the course of the ditch, it receives surface-water drains which brings the flood water from the higher ground on the west side of the line. At Angel-road the drain passes under the public high road and takes a turn to the east. At this point it receives a stream called Pymme's brook from Edmonton. Having gone in an easterly direction for about 200 yards the drain again takes a southerly course. About half a mile further the ditch receives the sewage effluent of the Edmonton sewage farm, the position of which is diagrammatically given in the



The map shows the course of the River Lea from Ponders End to Ferry-lane, the intakes of the East London Water Company at Chingford, the course of the aqueducts which convey the water to the reservoirs of the Company, and the intercepting drain which receives various sewage effluents and prevents them from contaminating the Lea above the intake of the Company. The map is drawn to scale with the exception of the Enfield and Edmonton Sewage Farm.

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., and XI. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, 24th, May 1st, and 8th, 1897, respectively.

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map. This effluent on May 6th contained extremely foul smelling, dark-coloured stuff. The point at which the effluent reaches the drain is nearly a mile from the sewage farm, but in spite of the fact that this effluent had been flowing for that distance through an open ditch it was still extremely foul, although it must have deposited a considerable amount of its feculence in its passage through so long a course. A little further on there is an open ditch which flows in from the direction of the Tottenham and Edmonton Gasworks. A little south of this point the drain passes close to the Stone Bridge lock; and about 200 yards south of this point it receives a stream named Carbuncle ditch which flows from Tottenham. The ditch continues its course just to the west of the River Lea Navigation Canal, passes under the road close to Tottenham Lock, and is conducted through four stone arches for a distance of about 120 yards, when it discharges itself into the Lea Navigation Canal just below the Tottenham Lock. The ditch from the beginning to the end is a foul open sewer. The East London Waterworks Company have no direct authority over the sanitary authorities who discharge their sewage effluents into the stream. The control of this matter is in the hands of the Lea Conservancy Board. The duty of the East London Waterworks Company is to keep the ditch clear. The work that is actually done is that in the spring or early summer, and again in the autumn, about six men are employed to clear out the course of the stream "from below upwards," if it be permissible to employ an expression rendered classical by the late Mr. Gray. The work takes about five or six weeks, and the way in which the grass grows on the banks of the ditch bears witness to the high manurial value of the matter removed from the drain.

Course of the water to the Chingford intake.—The water which is taken at Chingford by the East London Waterworks Company comes by more than one channel. This will be seen by a glance at the map (p. 1359). From Chingford to Ponders End the road crosses the River Lea, Mar Dyke, the River Lea Navigation Canal, and Ponders End Mill tail. Water from all these sources passes to the intake at Chingford. Some water comes down the River Lea Navigation Canal Cut from Ponders End Lock and some by the flour mills which are situated at Ponders End, and the water passes just to the west of a public house called the Pike and Anchor. Here on the east side of the Lea Navigation Cut there is a sluice (Keid's weir). From this point to the reservoirs the East London Waterworks Company takes charge of the bed of the stream. A short distance from the Keid's weir the stream is joined by the stream or ditch called Mar Dyke, it then proceeds in a southerly direction for about a mile, when it is joined by the River Lea, which here runs in its ancient course from a point not far from Waltham Abbey. Roughly speaking, half the water comes down this old course of the River Lea and Mar Dyke and half from the Lea Navigation Cut near the Pike and Anchor. Over the River Lea, down which about half the water comes, the East London Waterworks Company have no authority. From the point of junction of the Lea and the cut from the Pike and Anchor the stream flows in a more or less southerly direction to Chingford Mill. In the latter part of its course, below Flander's Weir, the water is conveyed through an artificial cut, and the surplus water, if there be any, and the rest flows over the weir into the natural course of the old River Lea. The weir is kept up by the Lea Valley Drainage Commissioners. During the flood time a considerable amount of water flows over at this point. During the summer the whole of the water is taken by the East London Waterworks Company. The water is conveyed to the station at Chingford, from whence it proceeds in two separate channels, a high-level culvert which supplies the high-level reservoirs and an open stream which was formerly the mill tail of the Chingford Mill. These aqueducts must be separately described.

Chingford (See G on Map, THE LANCET, May 8th, p. 1291).—At Chingford there is a deep well; the upper part of it is brick and the lower part is lined with 10-ft. iron cylinders. The depth of the well is 200 ft. At the bottom of the well there is a heading which passes in a northerly and southerly direction for a distance of about 200 ft. From this well water is pumped (1) to the low level aqueduct, by which it is conveyed to Walthamstow; (2) to Buckhurst-hill reservoir. Buckhurst-hill is entirely supplied from this well. There is a second well 60 ft. in depth. This is lined with iron cylinders for about 15 ft., and the lower part is brick. It is from the bottom of this that the bore hole goes down to a depth of 451 ft. from the surface. The width of the bore hole is 2 ft. From this well water is pumped by turbines; it all goes to Backhurst-hill.

Engine-house.—There is a quadruple expansion engine which has cylinders with the respective diameters of 12 in., 17 in., 24 in., and 30 in. The stroke is 2 ft. 6 in. The engine works two cranks which are keeled at right angles to each other. It works two pumps, of which the buckets are 21 in. in diameter. The disc to which the bell cranks are fixed is so arranged that the crank can be put in any one of three positions. The stroke is thus regulated. During the week ending May 1st an average amount of half a million of gallons daily was pumped. The steam for working the engines is generated by two Lancashire boilers, which are provided with a feeding conveyor and automatic stoker. This is worked by a small engine.

Turbines.—The turbines are situated in a house close to the stream, and the fall which was formerly used for the Chingford Corn Mills works them. These turbines pump water from the well last described to Buckhurst-hill. They pump also water which is raised from the other well by a steam engine which has been described. The engine-house is light in structure and possesses a tower fitted with a sliding roof. This arrangement makes it possible to remove the well rods without trouble. There are two cottages at this station. This station is in telegraphic communication with Walthamstow and with Lea Bridge.

(To be continued.)

THE SANITARY CONVENTION OF VENICE, 1897.

No. II.[1]

ONE of the first important acts of the British Government at the Venice Conference was to announce that they had decided to ratify the Paris Convention subject to three conditions. They maintained their refusal to assent to the quarantine restrictions concerning the traffic in the Persian Gulf; they declined to assent to the requirement as to the possession by every pilgrim of means to cover his journey to and from the Hedjaz except and until the local circumstances should admit of this; but they consented to raise the surface per pilgrim on the main deck to 16 square feet, instead of the 12 square feet which is at present required under the existing Indian Regulations. The second important step was to announce through their delegates that the pilgrimage from British India had been entirely prohibited for this year. These two announcements met with a most favourable reception, and they probably had a distinct influence in leading the conference to adopt conclusions more favourable to British views than any heretofore embodied in any international sanitary convention. The consistent attitude maintained by this country as to the Persian Gulf must also be credited with the more advanced conclusions assented to as to traffic up the Gulf for the purposes of the control of plague than those which form part of the Paris Convention.

These conclusions, as also those relating to the traffic through the Suez Canal into the Mediterranean are on lines which call for special notice. Hitherto all conventions have been based on the requirement that entrance into the Shat-el-Arab at the head of the Persian Gulf, and into the Suez Canal, shall be preceeded by a voyage, after leaving an infected port, which shall be of sufficient duration to cover the period of incubation of the disease to be controlled. Five days had been decided on for the purposes of cholera; but the application of the same principle to the ten days period of incubation deemed necessary in the case of plague, would have meant detentions of a most serious and costly character for all vessels sailing from Bombay and Kurachee both at the mouth of the Shat-el-Arab and above all at the entrance of the Suez Canal. Indeed all healthy vessels would have been compelled to lie idle for a period of from three to four days merely to complete these ten days, and this on a mere assumption that perhaps someone on board might be incubating the disease. The British delegates were successful in combating the need for any such action,

[1] No. I. was published in THE LANCET of May 1st, 1897.

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and they secured the passage of the canal and of the Shat-el-Arab "in quarantine," that is to say with guards on board to prevent communication with the shores of these comparatively narrow sea channels. This will enable healthy vessels to ascend directly up to Bassorah, the commercial capital of lower Mesopotamia, and directly into the Mediterranean without any quarantine detention. The gain is a very great one; and its acceptance will secure the free admission of all such vessels into any port as soon as the ten days are completed. In the case of vessels leaving Bombay for Europe this period will, in all cases be completed before Brindisi is reached, and the presence of a medical officer and of means of disinfection on board will relieve the vessel from all restrictions. All our Indian passenger ships and troopships have a medical officer on board; and, with steam always available, it ought to be a very simple matter to arrange also for the provision of adequate means of disinfection. It is further provided in the Convention that if plague has occurred on board vessels not provided with a medical officer, they shall be accorded the same freedom of passage as soon as twelve days have elapsed since the last case; and even in the case of vessels actually infected with the disease, but having a medical officer on board, they may likewise pass on at once "in quarantine" provided they land the sick and those who have been in actual contact with them.

An example of the working of these new rules occurred a few days after the Convention was signed. The Indian troopship *Dilwara* had a fatal case of plague on board, and the body having been buried in the Red Sea, the only requirement before the passage of the Suez Canal in quarantine was accorded, was the disembarkation at the hospital at Moses's Wells of the father and mother of the patient, who had acted as sick attendants, and the disinfection of that part of the vessel occupied by the patient. Had the Convention not been signed, it would have been competent for the Maritime and Sanitary Board of Egypt to have required the landing of all the 1,235 persons on board or their detention until twelve days had elapsed since the burial of the body before they could have entered the canal. The cost of this, and the grave inconvenience it would have caused, would probably have ended in the troopship returning down the Red Sea, and sailing for Southampton by the Cape Route.

Continuing our account of the maritime regulations, in so far as they relate to arrivals in European ports, we again find a great advance on previous Conventions. Under the guise of the maintenance of a so-called "period of observation" the most stringent quarantine is still permissible, though not obligatory, in the case of cholera under the Dresden Convention; but England's ratification of that Convention was dependent on the condition that we would not, in our ports, detain people in quarantine who were healthy, even though we were asked to do so because a new name had been given to the detention. This attitude probably led to a very important change in the recent Venice Convention. It is true that, as regards actually infected vessels, detention "in observation", otherwise in quarantine, for ten days is still permissible; but for other vessels, and notably those which have recently sailed from an infected port but which have thus far had no plague on board, the Convention only allows "supervision" for a sufficient term of days to complete the ten days incubation period since the vessel sailed from the last infected port; and this supervision is clearly defined as meaning that, whilst all persons are to be allowed at once to land, supervision shall only be maintained over them at the residences to which they may choose to go in the country of arrival. In other words the English practice, which has so long been adopted with regard to cholera, and which came into operation as regards plague last year, has been accepted for suspected vessels by such of the European and other countries as have signed the Convention of Venice. This is a very striking result; it was secured at the time when panic-stricken regulations of the most absurd and trivial character were being imposed at southern ports of Europe; and it is generally admitted that the adoption of our reasonable and sufficient regulations was in the main due to the record of the success attained in this country which was expounded by the British delegates, and to the conviction which came home to many of the delegates that the English system was the only one which could give to the inhabitants of any country a real sense of security, and thus prevent the occurrence of panic where there was absolutely no need for any such exaggerated fears as had been expressed. To give an example of the application of this principle, we may once again refer to the case of the *Dilwara*. She arrived at Southampton on April 6th, with a record of fatal plague. All the 1,200 people on board were medically examined, they were found free from plague; the troops were conveyed to their barracks, &c., and the discharged soldiers with their wives and children were free to go to their homes. But the addresses of all were known, and the local health officers or military surgeons were advised as to the necessity of watching them for a few days in their own residences. As to the vessel, a few extra precautions were taken as to the part of the vessel occupied by the sick, and disinfection of certain suspected articles was carried out, after which the vessel was at once berthed in dock.

It is notorious that the adoption by the Conference of these modern and reasonable views was to a considerable extent due to the support which the British delegates received from other delegations, notably the French and the Dutch. On this subject we would call attention to an able statement made by Professor Brouardel in the *Journal Officiel de la République Française* of April 8th. The distinguished professor, whose advanced and liberal views are much ahead of those of some of his countrymen, notably those of southern France, announces that England can with some impunity act, as regards imported diseases, on her principal of avoiding restrictions, because of the pecuniary sacrifices which we have accepted in order to place our country in a condition to resist the spread of any chance infections from without. We acknowledge the courtesy of Professor Brouardel in this matter. But where he seems to imply that similar action may not be possible for other countries because their peoples cannot imitate us in our expenditure, we think that some fallacy underlies this view. We adopted this attitude some fifty years ago; that is to say a generation before we had commenced our systematic heavy expenses and public health improvements; and it was because the English people knew that they would not, even if they could, be protected by quarantine restrictions, that they set themselves to work and to pay for the improvements in the sanitary condition of their towns and villages. Had we pretended to afford protection by quarantine, pending the adoption of sanitary measures, we should have failed to secure these improvements; and we cannot too strongly urge on other countries that the pretence to prevent disease entering a country by quarantine restrictions gives the people of that country a ready and a perfectly reasonable excuse for avoiding expenditure in promoting public health measures. Happily we know that France does not, officially at least, adopt any such line of argument; and under the advice of a number of the most eminent members, including the president, Mons. Brouardel, of the Comité Consultatif d'Hygiène Publique, that country is doing much to put sanitation first, and to avoid needless restrictions on the movement of vessels and of persons. The French delegation were admittedly prominent amongst the supporters of this modern system at the Conference which recently assembled at Venice.

THE PRINCE OF WALES'S HOSPITAL FUND.

THE TOTAL OF CONTRIBUTIONS.

THE Prince of Wales's Hospital Fund had received up to Wednesday last £76,805 13*s.* 9*d.* in donations, £18,401 14*s.* 3*d.* in annual subscriptions, and £19,133 12*s.* in commuted subscription.

THE ISSUE OF STAMPS.

The Jubilee Stamps issued for the benefit of this Fund will be on sale to the public on Tuesday next, May 18th. They are issued to give small subscribers a handy and convenient form of receipt and one which they can retain as a memento of the Diamond Jubilee and of that increasing interest in hospital support and management shown during Her Majesty's reign, not only by the Royal Family, but by all classes throughout the country, and culminating in this effort to set the hospitals of London on a sound financial basis. It is also evident that stamp collectors are largely interested,

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and spaces for these stamps are being made in many new albums, in addition to the issue of specially prepared pages for insertion in existing albums. The basis of the design selected by the Prince of Wales is taken from no less an authority in art than Sir Joshua Reynolds, whose well-



The shilling stamp, reproduced in black and white, and enlarged by one-third to show the details. The colour of the shilling stamp is indigo blue, and that of the half-crown stamp, which is identical in design, is Venetian red.

known picture of "Charity," executed for one of the Virtues, in New College Chapel, Oxford, is the most appropriate design that could have been selected, embodying as it does a beautiful picture with Mrs. Sheridan as the chief figure.

Valuable assistance has been rendered by Mr. De la Rue and by Mr. Purcell, C.B., the Controller of Stamps at Somerset House, who have taken the greatest interest in the undertaking from its commencement.

After His Royal Highness had approved of the design the engraving was begun and proved a very much more serious affair than any one unversed in these details would have anticipated. Such an engraving could only be executed by the most skilled hand. After the matrix had been produced and hardened it had to be rolled into the steel plate under a pressure of twenty tons given by a lever set in motion by the foot of the operator, and each impression had to be rolled in separately, the greatest care being taken to adjust the proper distances and a magnifying glass being constantly in use. Each plate contains a double sheet of eighty, in which one false impression would spoil the whole, and great liability to cracking arises from the weight of the pressure. Every sheet has to be accounted for as carefully as a bank-note, and this again entails still greater surveillance.

It is needless to say that the fact of His Royal Highness the Duke of York being President of the Philatelic Society insures the greatest interest being taken in these stamps by collectors in all portions of the globe, and as a work of art there will be nothing wanting in them. A large quantity of the issue has already been secured for insertion in the Queen's Commemoration Bible and also in the Queen's Commemoration Prayer and Hymn Book, which are to be published as soon as the stamps are ready, and each of which will contain a stamp; we are informed by the publisher that the greatest interest has been shown all over the country, inquiries having arrived from many places abroad and telegraphic orders having been received even from South Africa.

His Royal Highness the President of the Fund has graciously signified that he will, if possible, personally witness the destruction of the plates from which the stamps are printed; but in any case they will be destroyed as soon as the printing of the limited number of the issue is completed in the presence of the official representatives of the Fund, and of Mr. Purcell, C.B., Controller of Stamps. A certificate to this effect will be duly published in accordance with the usual regulations.

Our readers will remember that in the case of the Rowland Hill Postcard in 1890 so great was the demand that the value of the postcard advanced no less than 2500 per cent.

The trade will be supplied by Messrs. Simpkin, Marshall, Hamilton, Kent, and Co., Limited, Stationers' Hall-court, London, E.C., and the stamps can be obtained from all stationers and booksellers with the exception of railway bookstalls.

THE GRECO-TURKISH WAR.

THAT which most people, and especially all military people, foresaw has come to pass. Greece, in rejecting the advice of the European powers and the counsel of all her real friends, and in yielding to the popular clamour of her own population backed by the irresponsible support of others outside her own territory, has done herself as a nation great, and it may be irretrievable, injury. Neither in the extent of her population, the character and strength of her army, the ability and enterprise of her generals, nor in her preparedness for war, was she ever really equal to the work she took in hand. Her action has had exactly the reverse effect of that she intended, for Greece has rehabilitated the political power and influence of Turkey to her own grave injury and to the prejudice of civilisation and good government in Europe generally. The Greek navy, of which so much was expected, has done nothing; the Greek army is threatened with immediate dissolution. None of the engagements that have taken place have really been battles, and it is no doubt a very good thing for Greece that no pitched battle on a large scale occurred. The Turks are known to be splendid soldiers in grit and quality — resolute and brave, patient and temperate, possessed of a fine physique, amenable to discipline, and always exhibiting, when called upon, great powers of physical endurance. It seems clear that the order had gone forth on this occasion to the Turkish army that there were to be no massacres, that the eyes of Europe were upon them, and that a punctilious regard was to be paid to the rules of civilised warfare. The consequence has been that the discipline and moderation of the Turk in the present war has been made known and manifested to all men. From all sides it has been reported that their conduct in this campaign has been admirable. The trained and disciplined Greek troops have, by all accounts fought well, but their army was to too great an extent made up of excitable and unreliable bodies of men, and wanted cohesion. They were both outnumbered and outgeneralled, and, disheartened by want of success, they seem to have more readily given way to panic than better trained and disciplined troops would have done. It is no longer a question of the realisation of Greek aspirations, for Greece has already had to relinquish the avowed object of her rash enterprise. The feeling of the Christian nations is one of pity and regret for all the misery and misfortunes which she has brought on herself, and Greece has now to appeal to the European Powers, whose advice she previously rejected, to intervene in her behalf.

The Turks have not only spared no pains to improve their whole military system and to bring their army up to the standard of modern warfare, but they have also taken great care to render their hospital service efficient in the field. According to all accounts their hospitals have been well provided for and managed, and the sick and wounded have been well looked after. In addition to their regularly-established hospitals and ambulance transport they have received a good deal of aid from outside sources. The Czar has informed the Sultan of the despatch of an ambulance, with surgeons and nurses for 500 beds and all requisites. The Turks do not appear to have suffered so much from exposure and climate as their opponents, and the amount of sickness among them is not large. The Greek troops who took part in the fighting at Velestino have suffered greatly from the almost tropical heat during the day and the cold nights The hospital at Lamia is full of sick. According to the *Times* correspondent the Greek casualties in the Epirus army during the campaign have been about 500; of this number 180 were killed and missing in the last Pentapigadia fight. Of the losses that occurred in and about Pharsala and in the retreats from Larissa, Pentepigardia, and Pharsala we know very little at present. The town of Arta, which is crowded with troops and refugees, is reported to be in a most insanitary state and is becoming very unhealthy. Typhoid fever and dysentery have broken out and threaten to become epidemic. The climatic conditions of the hills commanding the plain of

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Pharsala are very severe: great heat, followed by unusual cold and heavy rains, drenching the unsheltered lines. Several men of the Foreign Legion, the *Times* correspondent states, are suffering from dysentery. Supplies are sufficient in quantity, but consist of only mutton and bread from Lamia. The commissariat, transport, and medical service at Domoko are inadequate, and there is a want of stretchers and ambulance for the transport of the wounded. There is said to be a good deal of sickness among the troops. Efforts are being made by English agencies for procuring medical stores from Athens and for making temporary hospital arrangements. Happily there is every reason to hope now that peace will be established, and that there will be an end to this very lamentable and unequal contest.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Portsmouth Urban Sanitary District.—In the annual report for the borough of Portsmouth for 1895 we have the last report made by Dr. Mumby in his capacity of medical officer of health. The population of Portsmouth in the middle of 1895 was estimated at 174,751, the mean density of the population being 39·1 persons per acre; the density, however, varies very materially in different parts of the borough. The corrected death-rate of Portsmouth during 1895 was 18·2 per 1000, a rate which placed Portsmouth in the position of possessing the lowest death-rate but one amongst the thirty-three large towns. In regard to the specific infectious diseases it is gratifying to learn that diphtheria is decreasing both in prevalence and severity in Portsmouth, and Dr. Mumby furnished a table showing that during the years in which notification has been in force the notifiable diseases have markedly decreased, while the non-notifiable diseases have hardly diminished at all. In an appendix to the report Dr. Mumby has bequeathed, as it were, a sort of legacy to Portsmouth in the shape of life tables for the borough based upon the figures for the years 1881 to 1890. The compilation of these tables must obviously have cost Dr. Mumby much labour, but they will prove of the greatest value for purposes of comparison in the future. One of the results of the Portsmouth tables is to show, in the words of Dr. Mumby, "that while the conditions of life in Portsmouth are slightly inferior to those enjoyed by the inhabitants of Brighton, a little superior to those of Londoners, and remarkably similar to those enjoyed by the inhabitants of England and Wales as a whole, they are markedly superior to those under which the inhabitants of Manchester, Liverpool, and Glasgow spend their existence," and the tables furnished in the appendix illustrate these points.

Lowestoft Urban Sanitary District.—Mr. J. T. Thomas furnishes in his current annual report the following figures relative to the death-rates per 1000 from phthisis in some of the English health resorts:—

Eastbourne (four years' average)	1·05
Southport (five years' average)...	1 49
Brighton (five years' average)	1·54
Bournemouth (four years' average)...	3·27
Hastings (last year)	1 97
Scarborough (five years' average)	1 44
Lowestoft (six years' average)	0 92

These figures are of some interest, but clearly it would be useless to attempt to infer anything from them unless definite information were given both as to whether in all cases the deaths taken account of included those of visitors, and as to the number of visitors suffering from phthisis in each place. During 1896 Mr. Thomas closed certain schools owing to the prevalence of scarlet fever amongst the scholars, and he speaks highly of the good results of closure. Enteric fever and diphtheria are stated to be practically endemic in Lowestoft, and Mr. Thomas, as also does Dr. Copeman, who recently inspected the district, considers that the pollution of the subsoil caused by the privy middens is an important factor in the causation and perpetuation of this endemicity. In advising the conversion of privies into water closets Mr. Thomas points out that if the expense is considered to preclude the general adoption of proper water closets, "waste water closets" might under certain conditions be introduced, and he observes that it has been decided that no water-rates can be charged for such closets. Instances are recorded in the report before us of diphtheria having been introduced into lodging houses by children from London who had recently recovered from the disease, and in these cases the bacillus of diphtheria was discovered in the throats of the London children. The sewage disposal arrangements at Lowestoft appear to be far from satisfactory, and we read that the beach outlet of the main sewer has been a complete wreck during the year, its mouth having been buried in sand for some seventeen hours out of every twenty-four and having to be dug out every day. We are not surprised, under these circumstances, to hear that there have been complaints of foul smells from the street gullies.

Kingston-upon-Thames Urban Sanitary District.—In considering the health of school children Mr. Beale Collins suggests that if the seeing and hearing powers were tested in quite early childhood any defects discovered might, in many cases at least, be materially improved, if not entirely cured. He thinks that the cost in relation to the benefit would be in Kingston quite infinitesimal. The examination of the teeth of school children is also urged by Mr. Collins. There has recently been a heavy mortality from measles in Kingston, and Mr. Collins thinks that the notification of the first case of the disease in a house would afford very valuable information and enable a correct idea to be formed as to the desirability, in any given outbreak, of school closure. He thinks, too, that an effort might be made to isolate some of the cases, and he suggests that the foundation of a small hospital for measles would not be an unfitting memorial of the longest reign.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6562 births and 3585 deaths were registered during the week ending May 8th. The annual rate of mortality in these towns, which had been 18·8 and 18·3 per 1000 in the two preceding weeks, further declined last week to 17·0. In London the rate was 15·5 per 1000, while it averaged 18·1 in the thirty-two provincial towns. The lowest rates in these towns were 11 8 in Norwich, 12·0 in Cardiff, 12·5 in Croydon, and 12·6 in Derby; the highest rates were 25·6 in Manchester, 25·8 in Bolton, 25·9 in Salford, and 30·4 in Preston. The 3585 deaths included 315 which were referred to the principal zymotic diseases, against 367 and 351 the two preceding weeks; of these, 20 resulted from measles, 10 from scarlet fever, 26 from diphtheria, 35 from whooping-cough, 1 from enteric fever, and 15 from diarrhœa. No death from any of these diseases was recorded last week in Croydon, in Swansea, or in Halifax, while they caused the highest death-rates in Cardiff, Burnley, Manchester, and Salford. The greatest mortality from measles occurred in Cardiff, Bolton, Manchester, and Salford; and from whooping-cough in Burnley, Gateshead, Plymouth, Bristol, Oldham, and Manchester. The mortality from "fever" showed no marked excess in any of the large towns. The 43 deaths from diphtheria included 26 in London, and 4 in Birmingham. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns. There were 11 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 8st inst., against 11, 7, and 12 at the end of the three preceding weeks; 3 new cases were admitted during the week, against 6 in the preceding week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2385, against 2406, 2442, and 2380 on the three preceding Saturdays; 231 new cases were admitted during the week, against 216, 269, and 223 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 289 and 273 in the two preceding weeks, further declined to 232 last week, and were 110 below the corrected average. The causes of 51, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of

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death were duly certified in Bristol, Cardiff, Leicester, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered Liverpool, Blackburn, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·6 and 22·0 per 1000 in the two preceding weeks, further declined to 20·7 during the week ending May 8th, but exceeded by 3·7 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·1 in Leith and 15·0 in Dundee to 22·9 in Edinburgh and 23·3 in Glasgow. The 616 deaths in these towns included 34 which were referred to whooping-cough, 29 to measles, 18 to diarrhœa, 6 to diphtheria, and 6 to "fever" (principally enteric). In all, 93 deaths resulted from these principal zymotic diseases, against 102 and 127 in the two preceding weeks. These 93 deaths were equal to an annual rate of 3·1 per 1000, which was 1·6 per 1000 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased in the four preceding weeks from 38 to 45, declined again to 34 last week, and included 21 in Glasgow and 9 in Edinburgh. The deaths referred to measles, which had been 39 and 52 in the two preceding weeks, declined to 29 last week, of which 15 occurred in Glasgow and 12 in Edinburgh. The 6 fatal cases of diphtheria corresponded with the number in the preceding week, and included 5 in Glasgow. The deaths referred to "fever," which had been 4 and 6 in the two preceding weeks, were again 6 last week, of which 3 occurred in Glasgow and 2 in Dundee. The deaths from diseases of the respiratory organs in these towns, which had been 165 and 128 in the two preceding weeks, rose again to 134 last week, and exceeded by 46 the number in the corresponding period of last year. The causes of 46, or more than 7 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 34·6 and 29·5 per 1000 in the two preceding weeks, rose again to 33·7 during the week ending May 8th. During the past five weeks of the current quarter the death-rate in the city has averaged 32·4 per 1000, the rate during the same period being 16·8 in London and 27·0 in Edinburgh. The 226 deaths registered in Dublin during the week under notice showed an increase of 28 upon the number in the preceding week, and included 35 which were referred to the principal zymotic diseases, against 41 and 36 in the two preceding weeks; of these, 16 resulted from whooping-cough, 8 from measles, 4 from scarlet fever, 3 from "fever," 2 from diphtheria, and 2 from diarrhœa. These 35 deaths were equal to an annual rate of 5·2 per 1000, the zymotic death-rate during the same period being 1·3 in London and 4·5 in Edinburgh. The fatal cases of whooping-cough, which had been 14 and 13 in the two preceding weeks, rose again to 16 last week. The deaths referred to measles, which had been 19 and 16 in the two preceding weeks, further declined to 8 last week. The 4 fatal cases of scarlet fever exceeded the number registered in any recent week, while the mortality from diphtheria and from "fever" corresponded with that recorded in the preceding week. The 226 deaths in Dublin last week included 44 of infants under one year of age and 37 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers recorded in the preceding week. Six inquest cases and 2 deaths from violence were registered; and 75, or one-third, of the deaths occurred in public institutions. The causes of 16, or more than 7 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING APRIL, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during April in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 7·2 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 9·0, 8·7, and 7·8 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Marylebone, Hampstead, St. Martin-in-the-Fields, City of London, St. George Southwark, and Lewisham; while they showed the largest excess in Bethnal Green, Whitechapel, Poplar, St. Olave Southwark, Battersea, and Greenwich. Eleven cases of small-pox were notified in London during April, against 8, 48, and 8 in the three preceding months; of these, 4 belonged to Poplar, 2 to the Port of London, and 1 each to Islington, Hackney, St. George-in-the-East, Battersea, and Camberwell sanitary areas. There were 12 small-pox patients under treatment in the Metropolitan Asylum Hospitals at the end of April, against 8, 43, and 17 at the end of the three preceding months; 8 new cases were admitted during the month, against 7, 53, and 8 in the three preceding months. The prevalence of scarlet fever in London showed a slight increase upon that recorded in the preceding month; this disease was proportionally most prevalent in Chelsea, Shoreditch, Whitechapel, St. George-in-the-East, Bermondsey, Battersea, and Greenwich sanitary areas. The Metropolitan Asylum Hospitals contained 2330 scarlet fever patients at the end of March, against 3246, 2775, and 2468 at the end of the three preceding months; the weekly admissions averaged 225, against 245, 228, and 208 in the three preceding months. The prevalence of diphtheria in London showed a slight further decline from that recorded in recent months; among the various sanitary areas this disease showed the highest proportional prevalence in Hackney, Clerkenwell, St. Luke, Bethnal Green, Whitechapel, Limehouse, Poplar, Greenwich, and Lee. There were 764 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of April, against 897, 855, and 776 at the end of the three preceding months; the weekly admissions averaged 127, against 101 in each of the two preceding months. The prevalence of enteric fever in London showed a further decline from that recorded in recent months; this disease was proportionally most prevalent in Hammersmith, Westminster, and Lee sanitary areas. Erysipelas showed the highest proportional fatality in St. Martin-in-the-Fields, Clerkenwell, Holborn, Bethnal Green, and Limehouse sanitary areas. The 21 cases of puerperal fever notified during April included 3 in Kensington, and 2 each in Hammersmith, Poplar, Lambeth, Battersea, and Greenwich sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, May 1st, the deaths of 5693 persons belonging to London were registered, equal to an annual rate of 16·6 per 1000, against 18·2, 18 5, and 17 4 in the three preceding months. The lowest death-rates during April in the various sanitary areas were 9·6 in Lee, 10·2 in St. George Hanover-square, 11·7 in Wandsworth, 12 4 in Lewisham (excluding Penge), 12·5 in Hampstead, and 12·8 in Rotherhithe; the highest rates were 22·5 in Limehouse 22·7 in St. Luke, 23·6 in St. Martin-in-the-Fields, 23 7 in City of London, 24·0 in St. George Southwark, 25·6 in St. George-in-the-East, and 29·8 in St Saviour Southwark. During the four weeks of April 511 deaths were referred to the principal zymotic diseases in London; of these, 186 resulted from whooping-cough, 130 from diphtheria, 85 from measles, 46 from diarrhœa, 41 from scarlet fever, 23 from enteric fever, and not one from small-pox. These 511 deaths were equal to an annual rate of 1·5 per 1000. The lowest zymotic death-rates last month were recorded in Kensington, St. George Hanover-square, St. James Westminster, Marylebone, Islington, Strand, and Rotherhithe; and the highest rates in Holborn, Bethnal Green, Whitechapel, Limehouse, St. George Southwark, and Bermondsey sanitary areas. The 85 fatal cases of measles were little more than a fourth of the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Bethnal Green, Whitechapel, St. George-in-the-East, Limehouse, and Greenwich sanitary areas. The 41 deaths referred to scarlet fever were 23 below the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 130 fatal cases of diphtheria exceeded by 4 the corrected average

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—APRIL, 1897.

(Specially compiled for THE LANCET.)

Sanitary Areas.	Estimated population in the middle of 1897.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,463,669	11	1205	739	—	128	2	21	373	1	2181	7·2	—	85	41	130	186	—	23	—	43	511	1·5	5693	16·6	118
West Districts.																										
Paddington	126,161	—	24	19	—	3	—	—	12	—	58	6·0	—	1	—	5	7	—	1	—	1	15	1·5	149	15·4	123
Kensington	171,427	—	31	19	—	6	—	3	22	—	81	6·2	—	—	2	1	1	—	2	—	1	7	0·5	174	13·0	127
Hammersmith	105,969	—	17	0	—	7	—	2	3	1	40	4·9	—	—	—	4	3	—	—	—	2	9	1·1	140	13·5	100
Fulham	130,040	—	39	16	—	6	—	1	11	—	73	7·9	—	1	2	3	4	—	2	—	3	15	1·6	151	16·4	106
Chelsea	96,692	—	42	22	—	2	—	—	5	—	71	8·6	—	—	—	7	7	—	—	—	1	15	2·0	132	17·8	95
St. George Hanover-square	80,330	—	20	5	—	4	1	—	3	—	33	5·4	—	—	1	—	1	—	1	—	—	3	0·5	63	10·2	80
Westminster	53,627	—	7	2	—	4	—	1	4	—	18	4·4	—	—	1	—	1	—	—	—	1	3	0·7	73	17·9	126
St. James Westminster	22,576	—	10	2	—	1	—	—	3	—	16	9·2	—	—	—	—	—	—	—	—	1	1	0·6	29	16·7	290
North Districts.																										
Marylebone	140,868	—	22	5	—	1	—	—	9	—	37	3·4	—	—	1	—	2	—	—	—	4	7	0·6	213	19·7	123
Hampstead	77,275	—	15	4	—	3	—	—	2	—	24	4·0	—	2	1	—	1	—	—	—	—	4	0·7	74	12·5	123
St. Pancras	242,265	—	48	25	—	6	—	1	19	—	99	5·3	—	3	2	5	15	—	—	—	1	26	1·4	228	17·7	118
Islington	341,164	1	87	32	—	7	1	1	24	—	153	5·8	—	1	3	1	5	—	2	—	—	12	0·5	338	14·1	97
Stoke Newington	34,136	—	8	3	—	—	—	—	1	—	12	4·6	—	1	1	1	—	—	3	—	—	6	2·3	46	17·6	109
Hackney	216,698	1	62	61	—	10	—	—	18	—	152	9·1	—	2	1	12	11	—	2	—	2	30	1·8	262	15·8	123
Central Districts.																										
St. Giles	37,240	—	8	4	—	—	—	—	3	—	15	5·2	—	—	—	—	3	—	—	—	—	3	1·0	50	17·2	101
St. Martin-in-the-Fields	12,711	—	—	—	—	—	—	—	2	—	2	2·1	—	—	—	—	1	—	—	—	—	1	1·0	23	23·6	67
Strand	23,652	—	8	2	—	—	—	—	—	—	10	5·5	—	—	—	—	—	—	—	—	1	1	0·6	35	19·4	100
Holborn	30,493	—	10	4	—	1	—	—	4	—	19	8·1	—	—	—	—	5	—	—	—	1	6	2·6	51	21·8	136
Clerkenwell	66,162	—	19	19	—	2	—	—	7	—	47	9·3	—	5	1	2	2	—	—	—	1	11	2·2	100	19·7	154
St. Luke	47,279	—	9	11	—	—	—	—	7	—	27	8·5	—	—	—	3	3	—	—	—	—	6	1·9	72	22·7	145
City of London	30,223	—	3	4	—	—	—	1	—	—	8	3·5	—	—	1	2	—	—	—	—	1	4	1·7	55	23·7	125
East Districts.																										
Shoreditch	121,883	—	52	23	—	2	—	—	15	—	92	9·8	—	5	2	5	3	—	1	—	2	17	1·8	189	20·2	140
Bethnal Green	129,098	—	35	43	—	5	—	—	21	—	107	10·8	—	17	4	5	2	—	3	—	5	36	3·6	2·9	22·1	164
Whitechapel	79,724	—	31	25	—	1	—	—	4	—	62	10·1	—	5	1	5	1	—	—	—	3	15	2·5	107	17·5	89
St. George-in-the-East	47,917	1	21	2	—	—	—	—	4	—	28	7·6	—	6	—	—	2	—	—	—	—	8	2·2	84	25·6	164
Limehouse	58,803	—	13	15	—	2	—	—	3	—	33	8·5	—	9	—	3	2	—	—	—	—	14	3·1	101	22·5	100
Mile End Old Town	111,283	—	28	16	—	2	—	1	8	—	55	6·4	—	4	1	5	2	—	—	—	—	12	1·4	155	18·1	89
Poplar	169,911	4	55	47	—	7	—	2	18	—	133	10·1	—	2	2	9	6	—	1	—	—	20	1·5	251	19·3	121
South Districts.																										
St. Saviour Southwark	24,979	—	7	3	—	—	—	—	1	—	11	5·8	—	—	—	1	3	—	—	—	—	4	2·1	57	29·8	241
St. George Southwark	60,388	—	12	7	—	—	—	—	1	—	20	4·3	—	1	—	—	9	—	—	—	1	11	2·4	111	24·0	112
Newington	122,191	—	27	16	—	3	—	—	11	—	57	6·1	—	1	2	4	7	—	—	—	—	14	1·5	161	17·2	97
St. Olave Southwark	11,420	—	4	4	—	1	—	—	1	—	10	11·3	—	—	—	—	1	—	—	—	—	1	1·1	19	21·6	207
Bermondsey	85,529	—	33	16	—	1	—	—	2	—	52	7·9	—	1	2	7	15	—	1	—	2	26	4·0	142	21·6	153
Rotherhithe	40,643	—	12	4	—	2	—	—	4	—	22	7·1	—	—	—	—	1	—	—	—	1	2	0·6	40	12·8	92
Lambeth	330,018	—	70	49	—	14	—	2	19	—	154	6·7	—	4	—	10	25	—	1	—	7	47	2·0	403	17·5	148
Battersea	168,877	1	30	35	—	7	—	2	18	—	143	11·0	—	1	1	6	9	—	—	—	—	17	1·3	204	15·7	109
Wandsworth	195,612	—	55	21	—	1	—	—	20	—	97	6·5	—	2	2	4	2	—	2	—	—	12	0·8	176	11·7	89
Camberwell	257,575	1	71	59	—	8	—	1	25	—	165	8·4	—	—	1	11	13	—	1	—	2	28	1·4	275	13·9	105
Greenwich	178,367	—	73	49	—	5	—	2	20	—	149	10·9	—	8	1	6	7	—	1	—	—	23	1·7	211	15·4	107
Lewisham (excluding Penge)	86,152	—	15	8	—	1	—	—	3	—	27	4·1	—	1	—	1	3	—	—	—	—	5	0·8	82	12·4	104
Woolwich	41,409	—	2	9	—	—	—	1	4	—	16	5·0	—	—	2	—	1	—	—	—	1	4	1·3	45	14·2	92
Lee	39,215	—	9	12	—	3	—	—	1	—	25	8·3	—	2	1	1	—	—	—	—	—	4	1·3	29	9·6	38
Plumstead	61,057	—	11	7	—	—	—	—	3	—	21	4·5	—	—	2	1	2	—	—	—	1	6	1·3	67	14·3	71
Port of London	—	2	2	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 21 cases of membranous croup.

† Including deaths from membranous croup.

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number; among the various sanitary areas this disease showed the highest proportional fatality in Chelsea, Hackney, St. Luke, Whitechapel, Poplar, and Bermondsey. The 186 deaths from whooping-cough were 99 below the corrected average number; this disease was proportionally most fatal in Chelsea, St. Giles, Holborn, St. Luke, St. George Southwark, Bermondsey, and Lambeth sanitary areas. The 23 fatal cases of enteric fever were 8 below the corrected average number; this disease showed the highest proportional fatality in Stoke Newington sanitary area. The 46 deaths from diarrhœa were 9 below the corrected average number. In conclusion, it may be stated that the mortality in London during April from these principal zymotic diseases was more than 40 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths under one year of age to registered births, was equal to 118 per 1000 during April, and was considerably below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, St. Martin-in-the-Fields, Rotherhithe, Wandsworth, Woolwich, Lee, and Plumstead; and the highest rates in St. James Westminster, Bethnal Green, St. George-in-the-East, St. Saviour Southwark, St. Olave Southwark, Bermondsey, and Lambeth.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN MOORES has been selected for appointment to the Scots Guards as an attached medical officer. Surgeon-Captain R. J. C. Cottell will shortly embark for South Africa. Surgeon-Major W. T. Johnston has proceeded from Devonport to Okehampton. Surgeon-Major H. L. Battersby and Surgeon-Captain H. E. Winter have been posted to the Station Hospital, Western Heights, Dover, for duty, Surgeon-Captain G. S. McLoughlin has been ordered to Cork for duty, and Surgeon-Major Hetherington has been posted to Dublin.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the following officers of the Army Medical Staff are placed temporarily at the disposal of the Government of the North-Western Provinces and Oudh for employment on plague duty:—Surgeon-Captain C. Dalton, Surgeon-Captain J. F. M. Kelly, Surgeon-Captain E. H. Condon, and Surgeon-Lieutenant E. B. Steel. The services of the undermentioned officers of the Army Medical Staff are placed temporarily at the disposal of the Government of Bombay for employment on plague duty:—Surgeon-Major J. C. Culling and Surgeon-Captain J. E. Brogden.

NAVAL MEDICAL SERVICE.

The undermentioned Staff Surgeons have been promoted to the rank of Fleet Surgeons in Her Majesty's Fleet:—George Sprey Smith and Leonard Henry Kellett.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain William George Creswell resigns his commission.

VOLUNTEER CORPS.

Artillery: 2nd Glamorganshire: Surgeon-Lieutenant-Colonel C. T. Vachell resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the Corps on his retirement. 1st Monmouthshire: Surgeon-Lieutenant D. T. Richards to be Surgeon-Captain. *Rifle:* 4th Volunteer Battalion (the Manchester Regiment): David Livingston Hamilton, gent., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Highland Light Infantry: George Roy Fortune, gent., to be Surgeon-Lieutenant.

CADET BATTALION.

1st Cadet Battalion the Buffs (East Kent Regiment): C. W. Scott is re-appointed Acting Surgeon.

DEATHS IN THE SERVICES.

Dr. Henry Vandyke Carter, Deputy Surgeon-General, I.M.S., and honorary surgeon to the Queen, died at his residence at Scarborough on May 4th.

THE HEALTH OF THE TROOPS IN INDIA.

In addition to the foregoing we find that our Anglo-Indian contemporary, the *Civil and Military Gazette*, contains a lengthy article under the heading of "A Social Problem in the Army," which has a direct bearing upon a subject that has occupied, and is still occupying, the attention of the Governments of India and this country. It is stated in the article in question that the space set apart for the recreation and reading-rooms for the troops quartered in India is, as a rule, miserably inadequate; and attention is called to the fact that there is an almost universal absence of any place outside the barracks to attract the men and enable them to meet their friends of other corps and spend a few hours in the evening, instead of going into the bazaars, with all their temptations and insanitary surroundings. Officers have their clubs where they can meet together, and the men require something of a similar kind, to be organised and managed by themselves. It is thought that rules might be easily framed for safeguarding such clubs against abuse and for securing social propriety of conduct. The soldier of the present day is far better educated and much more sensitive to the opinion of his comrades than was formerly the case. It is quite natural that he should desire to have some place of resort not under military management, and we have always thought that if something could be done in this direction it would be a very excellent thing. The Indian Government, now that it is considering how to limit the spread of a certain class of contagious disease, might give its attention to this subject. Military life in an Indian cantonment is very monotonous, and soldiers need some place to which they can resort and where they can amuse themselves in their own way.

INSPECTION OF FIELD SERVICE EQUIPMENT FOR INDIA.

We briefly alluded last week to an inspection of medical equipment that had recently taken place at Lahore, about which we have since been afforded a fuller and more detailed account in the *Civil and Military Gazette* of April 5th last. It appears that Surgeon-Major-General Gore, the Principal Medical Officer of Her Majesty's forces in India, was accompanied by Surgeon-Colonel Thompson in medical charge of the Lahore district, Surgeon-Colonel Calthrop, Medical Store Keeper and lately Principal Medical Officer of the Suakin Field Force, and Surgeon-Major W. A. Morris. The "Tortoise" tent, as adapted to Indian service requirements, was carefully examined. It was found to be much lighter and easier to pack and carry than what is known as the European private's tent. A tonga, with the Tortoise tent applied to it, and fitted to carry one man lying down and two men sitting, is capable of being drawn by one, two, or three ponies. Altogether the tonga is said to form an admirably constructed ambulance conveyance. In addition to the above, the newest pattern jointed stretcher, designed for mule transport, and various other articles were also inspected. The portable field-stove (adopted by the British Government) has been tried and found to give great satisfaction; it is well-contrived, and is carried on a pack animal. A very portable water carrier was also shown, as well as various field rations. We shall be glad to ascertain the result of the inspection of these inventions as regards their practical applicability to Indian field service. It is presumed that a report will soon be published on the subject.

ENTERIC FEVER AT LUCKNOW.

According to intelligence from Bombay enteric fever is prevalent in the Lucknow garrison. The Duke of Cornwall's Light Infantry are the chief sufferers. There are between twenty and thirty men in hospital, and some young officers are reported to have died from the disease. It is, as we remarked some time ago, an interesting fact in the history of enteric fever in India that its periods of seasonal prevalence usually correspond with those preceding and succeeding the rains.

THE OPERATIONS IN SOUTH AFRICA.

The Queen has given orders for the following appointments in recognition of services during the operations in South Africa, 1896:—Surgeon-Captain Charles Henry Hale, A.M.S., to be a Companion of the Distinguished Service Order; and Surgeon-Lieutenant-Colonel Joseph Andrew Gormley, M.D., A.M.S., to be Brigade-Surgeon-Lieutenant-Colonel.

H.R.H. Princess Christian will present certificates of appointment and badges to the members of the Army Nursing Service Reserve at the Royal United Service Institution, Whitehall, on Wednesday, May 19th, at 5 P.M. The Marquis of Lansdowne, Secretary of State for War, will preside.

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Correspondence.

"Audi alteram partem."

EPSOM COLLEGE.

To the Editors of THE LANCET.

SIRS,—The governing body of Epsom College have lately been confronted by a new difficulty. Boys who from their lack of means have been educated as foundationers, free of all cost, have by ability and industry worked their way to the head of the school, and have won honours at Oxford and Cambridge. In more than one instance the difficulty of the friends finding money to enable the student to take up his exhibition or scholarship has been very great; and quite lately a mathematical exhibition had to be resigned because funds could not be found for the maintenance of the winner to begin his university career. I need not point out what a bitter disappointment it is to a young man of ability, who has proved his mental worth at school and in the keener contest for university distinction, to find himself barred at the outset of his life by poverty. Our experience would lead us to believe that a very moderate amount for the first few terms would clear away all difficulties, for our boys are taught the necessity of self-help as a part of their school training, and we find they practise it. Our struggle is hard to enable us to continue to teach and to support fifty foundation scholars. That these lads are well taught and cared for is proved by their earnest work and their intellectual successes.

May we not ask the aid of those who sympathise with such lads to enable us to raise a small fund to which we might go in case of need, to help on a deserving student and to give him the opportunity of taking up well-won honours, and to enable him to start on his university career with all its untold possibilities in the future. Any money subscribed shall be most carefully expended, and shall be given only to such of our foundation scholars who have proved their worth and really need aid to secure them the advantages of university training. Within the past twelve months our students have just scored their sixth university honour. Gill, who so lately won a mathematical exhibition at Magdalen College, Cambridge, has now gained a mathematical scholarship at Jesus College, Oxford, and Wood has gained a history exhibition of £30 at Saint Catherine's, Cambridge.

We appeal with confidence for aid, and any contributions sent to me for this purpose I shall most gratefully acknowledge. I am, Sirs, your faithful servant,

May 10th, 1897. C. HOLMAN, M.D., Treasurer.

To the Editors of THE LANCET.

SIRS,—With the return of May there comes a distressing catalogue of poverty in the list of candidates for foundation scholars and pensioners in connexion with the above College. For some weeks past cards from individual cases have been arriving, and subscribers cannot be too thankful for the assistance the selection committee gives them in filling in the votes for the most deserving cases. On looking over the lists I find there are forty-two candidates for foundation scholarships (*six* vacancies), twenty-seven for the pensionership (*one* vacancy), and sixteen for the Morgan annuity (*one* vacancy); in all, sixty-five candidates for eight vacancies. On further analysing the list I find but two stated as life governors, one "subscribed a few years," one "many years," one two years, and three who had given donations—nine in all who, during their lifetime, had taken any interest in the institution.

Surely it is time that the claims of this fund should be more generally recognised by the profession, and in the spirit of the old phrase "charity begins at home," I would suggest that an appeal be made for a Jubilee donation of at least 1*s.* from every member of the profession, the sum so collected to be divided between the unsuccessful candidates. The opportunity thus created for making a strong appeal to the profession might be utilised for increasing the number of annual subscribers. It would, I think, be a strong incentive to men to subscribe if the fact of their having done so carried with it a claim to participation in the benefits of the charity proportionate with the amount of money given, the question of eligibility being, of course, gone into equally in all cases. Suppose that, among the candidates for the six vacancies for the foundation, there were two whose fathers had subscribed for ten years or upwards, I would have them elected at once, and let the remainder go to the poll. The widows of the more provident husbands would thus be spared the humiliation and expense of an election. It is no doubt true that those who subscribe are the least likely to require assistance, but the plan suggested, or some modification of it, might attract many who would not otherwise subscribe.

I am, Sirs, your faithfully,

Weymouth-street, W., May 10th, 1897. CHAS. W. CHAPMAN.

P.S.—Should the proposed collection be a success a substantial balance could be given to the College.

PSITTACOSIS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 1st I notice a report from your correspondent in Rome *re* the above, and think you will, perhaps, permit me to make a few observations thereon, as I have exceptional opportunities of observing parrots both dead and alive. Of the former, I have examined some hundreds, of all sorts and sizes, and am unable to confirm your correspondent's assertion as to their peculiar susceptibility to tuberculosis, a complaint of which I have rarely found evidence in the subjects that have been brought under my notice. The principal cause of the enormous mortality that undoubtedly exists among newly imported parrots is due to septic fever more akin to typhus than to typhoid fever; it is communicable by inoculation to pigeons, poultry, and to other domestic birds and animals, but is not by infection only. At the same time the germs of the complaint are most persistent and cling to a cage, or even to a room or part of a room, where a bird has died for months and years, so that the next bird, no matter how healthy when introduced, immediately contracts the disease and succumbs in from three to six weeks, never, as far as my experience goes, surviving the latter period.

Ordinary methods of disinfection are useless, the only reliable plan of purifying a cage being to expose it to the action of concentrated steam in a properly constructed disinfecting apparatus of the Washington Lyon type, after passing through which a previously infected cage is perfectly safe. I have no evidence of this septic fever having been communicated to human beings, or, except by direct inoculation, to any other animals but those of the parrot tribe, and of these only to the species that come from the Gold Coast and adjacent parts of Africa, which alone seem liable to contract it, the principal victims being the ordinary grey parrot, the Pœocephali, and the Agapornes; the Amazons and other American, as well as the Australian, parrots do not appear to be susceptible.

I cannot call to mind, or find any record in my notebook of, a case of tuberculosis occurring in any of the African parrots, and but a very few in parrots coming from America. The last case I met with was one the other day in a large blue-fronted Amazon parrot which had lived for two years in its owner's possession and had been, she asserted, cheerful to the last. It was greatly emaciated, but in very fair plumage, and I found deposits of tubercle, not only in the lungs, but in the liver, and more particularly in the spleen, and the meninges of the brain were also slightly affected. Bronchial trouble, generally terminating in pneumonia, is not at all uncommon among pet parrots and has its origin in the singularly injudicious manner in which the poor creatures are too often treated by their owners, who pamper them with all sorts of unnatural "delicacies" which the birds can scarcely, or not at all, digest, and expose them to draughts and to great and sudden fluctuations of temperature, so that the wonder is, not that some parrots contract pneumonia and bronchitis, but that any escape.

Another practice—very common, too—is to cover the cage of a parrot over very closely at night with a rug, or a blanket, or some thick material or other, that effectually precludes all circulation of air and necessary ventilation, forcing the bird to breathe an atmosphere not only exhausted of its oxygen, but tainted with the exhalations from the bottom of the cage, too often foul, but from the body of the bird itself, so that towards morning the poor creature is in a veritable vapour bath. Then comes the parlour-maid, sweeps, raises dust, throws doors and windows open, whips the cover off the cage, and exposes the bird to a chill. That is the explanation, in ninety-nine

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cases out of a hundred of the susceptibility of these birds to pulmonary affections, which the strongest of us would contract under similar circumstances. Rationally and naturally treated parrots are very hardy and will live for fifty, seventy, or even a hundred years in confinement. The septic fever that more than decimates newly imported African parrots would not be difficult to stamp out. Originally contracted from insanitary surroundings on board ship, the disease has become endemic in the places where these birds are landed, healthy as a rule at present, but on their introduction to the "emporiums," whence they are promptly retailed to the public, they at once contract the deadly fever, and in six weeks not one of them is alive.

I am glad to be able to report that there are some intelligent and humane dealers whose shops are in a sanitary condition, but others are the reverse of this, and what is wanted in the interest of the birds as well as of the public, who, indeed, are in no danger of contracting the fever from their purchases, is that all shops and emporiums should be periodically inspected, and such as are found to be in an unhealthy condition and a source of infection should be closed, if not permanently, at least until they have been certified to be once more clean and wholesome. With regard to the pulmonary affections of parrots, I greatly doubt their being communicable to human beings under ordinary circumstances, but, of course, if an owner is foolish enough and, I must add, disgusting enough, to kiss the bill of a sick or even of a healthy parrot, to feed it from his or her mouth, and generally coddle it in an imbecile fashion, why, it is possible such a stupid person may contract the disease, but not otherwise, and in such a case I, at least, should feel very much inclined to say "Serve her right."

I think there is not the slightest cause for alarm or that anyone need go into fits about the unhealthiness and risk of harbouring a parrot or parrots. The birds when correctly treated are perfectly hardy, and all but a few of them will live quite well all the year round out of doors in this changeable climate of ours and not be a penny the worse for the exposure, but, on the contrary, remain in robust health and a perfection of condition that is looked for in vain in the poor miserable wretches that are treated like hot-house plants in-doors. I do not mean to say, of course, that it would be possible to turn out a newly imported parrot in mid-winter, for to do so would be tantamount to signing its death warrant; but they can be acclimatised by degrees, and if either allowed their full liberty or turned into an out-door aviary about the end of May or in June there will be no occasion to house them afterwards, as was found by the late Mr. T. Buxton to be the case at Northrepps, where many kinds of parrots—including the grey African with the crimson tail—lived happily and healthily in the woods from one year's end to another, the only drawback to keeping them being that sometimes they took it into their silly heads to break bounds and visit the surrounding country, when they were incontinently shot by cockney sportsmen, who, by the by, do not all reside in the metropolis. If a parrot is rationally treated there is far less risk from its society than there is from that of the average dog or cat, and no one need be under any apprehension of contracting "psittacosis," unless, as I have said, he or she should be stupid enough and disgusting enough to become voluntarily infected by the morbid secretions from an ailing bird, and as many of these are possessed of an immense fund of courage and endurance, and show no symptom of being ill until the last, it is well that all intimate connexion with them should be strictly avoided; and if due care is taken in this respect no one need be under the slightest fear of contracting any complaint, but ordinary rules of cleanliness must not be ignored, and if they are, it is not the parrot, but its negligent owner that should be blamed for any untoward consequences that may follow. Other birds, besides parrots, are liable to epidemic disease that very readily becomes endemic, and is then transmissible by atmospheric infection to other animals, and even to human beings. I refer to the dreaded canary plague, which is a form of splenic fever, near of kin to the gaol fever of former times, that had its origin in crowding and filth, as this terrible disease most undoubtedly has.

Case after case has from time to time been brought under my notice where a canary keeper has lost his entire stock through incautiously buying a new bird at an infected shop, and once an outbreak occurs it can only be stamped out, like the pleuro-pneumonia of cattle, by instantly destroying every bird that shows the least sign of illness and burning the cages and everything connected with them; no form of disinfection is to be relied on in such a case, for even stoving has been found to fail. There is no doubt that this complaint, like the kindred disease known as chicken cholera, is due in the first instance to crowding in wooden cages saturated with the droppings of generations of birds often—too often—dieted on unnaturally stimulating food and kept at tropical heat, or above it, to ensure early broods. The spleen seems to be the principal seat of the disease, it is enormously enlarged, and studded with points of white matter which are not tubercular, but *sui generis*, and the whole system swarms with microbes.

I know of one case of canary plague where some children who lived in the room where the cages were kept contracted a feverish affection, accompanied by a rash that had a superficial resemblance to that of measles, but did not run the course of that disease, though taken for it by the medical attendant (not myself); however, the symptoms, which were not severe, the temperature not rising above 100° F., quickly subsided when the children were moved elsewhere. Every one of the birds, however, about fifty or so in number, died; and after the room had been fumigated and the cages cleansed, thoroughly, as was supposed, and disinfected, a new stock of birds was acquired, but quickly followed their predecessors, and then the fancier gave up in despair. But even the canary plague need be no bugbear for householders if only due attention is paid to ordinary sanitation; but filth always has engendered disease and always will do so, but it sounds to me irrational to condemn the innocent victims when it is really those who by neglect or ignorance of the common laws of health, and especially of the right way of managing birds, who should be blamed. There will be no psittacosis, or canary plague, or chicken cholera either, if the subjects of these diseases are treated properly by the persons who have charge of them, and other pulmonary complaints are also usually due to some breach of a natural law.

I am, Sirs, yours faithfully,

May 8th, 1897. W. T. GREENE, M.A., M.D., F.Z.S., &c.

FASHION IN THE CLIMATIC TREATMENT OF PHTHISIS.

To the Editors of THE LANCET.

SIRS,—Dr. Wm. Murrell concludes his communication on Phthisis in THE LANCET of April 10th, p. 1018, with these words: "The sleeping cars which convey large numbers of phthisical patients to the Riviera and other popular health resorts at certain periods of the year are not above suspicion, and much greater care should be taken in having them aired and disinfected than is at present the case." Equally consoling was Dr. Heron's speech at the British Balneological and Climatological Society on "The Climatic Treatment of Phthisis." THE LANCET of Feb. 27th reported from it as follows: "Patients, he thought, went to the Riviera with its delightful climate, to slide down to the grave as quietly and comfortably as they could; he did not think that life there was calculated to cure tuberculosis." After practising a whole season in Mentone, and treating many and various maladies, I find I have not had a case of phthisis. A leading medical man who has practised here for many years says the proportion of cases of phthisis he sees is not greater than in an ordinary practice in England. Where are these large numbers of phthisical patients who, Dr. Murrell considers, are rendering sleeping cars suspicious? Where are those whom Dr. Heron pictures tobogganing quietly and comfortably to the grave? In spite of receiving these imaginary crowds of invalids to put up our mortality, there have been, since the season commenced in October, but four deaths among the English and Americans from all causes, one English and one American only having died from phthisis, and Mentone has been exceptionally full of people.

Visitors are commonly warned by ignorant people, including their medical advisers, that Mentone is crowded with invalids and that it is well to at least sleep out of it. They have often told me when here, however, that there are far more invalids to be seen at Hastings, Bournemouth, and other English health resorts. At the commencement of the year four members of Guy's Hospital staff were here with their wives, and made an average stay of three weeks. Must it be presumed that this was for the purpose of

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contracting phthisis themselves or giving their wives a chance of taking it? On the contrary, Mentone is now probably safer in this respect than England, for in the event of any patient dying here from phthisis or other infectious disease his room is rigorously disinfected and left perfectly safe for any subsequent occupant. Shortly we hope to similarly have all rooms disinfected which have been occupied for any period by phthisical patients. As regards the streets, Cornet of Berlin[1] has shown that "the dust in streets obtained from places where consumptives were wont to spit might be neglected so far as any risk of tuberculous infection is concerned." The majority of phthisical patients one meets here are French, and they generally avoid the hotels frequented by the English or take private lodgings. One laments, as one sees the great improvement many of them make, that the fashion for Switzerland, now almost a mania, deprives many English patients for whom the Riviera may be specially suited of their best chance of recovery. When the fashion again sets this way it is to be hoped for the patients' sake it will not take the indiscriminate form for Mentone which it now does for Switzerland, or that the fear of contracting phthisis in Switzerland may not commence there when all the patients again come here.

I am, Sirs, yours truly,

Mentone, France, April 24th, 1897. D. W. SAMWAYS.

"SENILE DECAY: ITS CAUSES AND TREATMENT."

To the Editors of THE LANCET.

SIRS,—Professor Allbutt, in his letter on the above subject,[1] touches upon one of the most fascinating problems in biology—Why do organisms become senile? Every organism tends at a certain period of its existence to pass into a phase of decay whose natural termination is death. We are too much in the habit of thinking we have explained this fact by referring it to "wear and tear," by assuming that the body wears out much as a locomotive does. Such an analogy is fallacious. Wear and tear operate as much during the years of growth and development as afterwards—during those years, in fact, when the organism, far from wearing out, is actually perfecting itself. Again, if the limit of life were essentially determined by wear and tear we should expect to find the various species of a class becoming senile at much the same age; but such is not the case. A man is no older physiologically at fifty than is a dog at ten, and this would surely not be the case if the length of the vital span were fundamentally determined by wear and tear. It is possible that an immortal organism might under certain conditions evolve—one, namely, which should never pass into the phase of senile decay. Inasmuch, however, as physical immortality would not be beneficial to species, a limit has been put upon the life of every organism, this limit differing with various species, and being determined by the exigencies of each species as a whole. Thus we may assume that it is of advantage to the human species for its members to live for a comparatively long period, and to the canine species for its members to live a comparatively short time. These considerations suggest that every organism is endowed with specially acquired mechanisms for ensuring the occurrence of senility, and that if such mechanisms had not evolved, there would be a tendency for every organism to be immortal.

Assuming the correctness of this view, we have to inquire into the nature of these mechanisms. I fancy I see manifold processes at work tending to induce senility. It does not seem improbable that modifications in "internal secretions," whose influence on nutrition we now know to be considerable, may help to initiate senile decay. Another causative factor is probably furnished by the vascular system. It has been well said that a man is as old as his arteries. May we not modify this statement and say that the physiological age of an individual is largely determined by the condition of his arteries—that the arterial system takes a large part in initiating and sustaining the process of senile decay? Thus an extremely high peripheral resistance in the shape of narrowed arteries causes the heart to give way and the arteries to degenerate, and with narrow arteries and a weak heart the tissues are imperfectly supplied with blood; whereupon there ensues a struggle for existence among the tissue elements, the hardy and lowly organised connective elements surviving at the expense of the delicate and more highly organised parenchyma: senile fibrosis occurs. We thus see how the vascular system may help to initiate and set the pace of senile decay, and in this connexion the observations of Professor Allbutt and Dr. Savill are of great interest. Trusting you will excuse the incompleteness of these remarks, which I cannot in the limits of a letter hope to make more than suggestive,

I am, Sirs, yours faithfully,

Wimpole-street, May 9th, 1897. HARRY CAMPBELL.

[1] Brit. Med. Jour., Feb. 6th, 1897, p. 351.
[1] THE LANCET, May 1st, 1897.

"NOTES ON ONE YEAR'S SURGICAL WORK."

To the Editors of THE LANCET.

SIRS,—Mr. Symonds will agree that the "practical result" at which the surgeon should aim is a cure. John Hunter wrote: "For what I call a cure is an alteration of the disposition and of the effect of that disposition, and not the destruction of the cancerous parts."[1] For "cancerous" let us read "painful" and apply this to the cases of flat-foot with hallux flexus reported by Mr. Symonds. He resects the first metatarso-phalangeal joint, the wound heals, and the pain ceases. He has altered an effect, but this has involved destruction of an important joint. What has he done to alter the disposition which caused the trouble with which he was called upon to deal?

Permit me now to offer some "theoretical considerations." The plantar arch, like other parts of the body, is maintained in position by the muscles acting upon it; the agency which moves, in moving sustains. Here an important agent is the long flexor, acting on the great toe and serving as a bow-string or tie-rod to the arch. This toe has its plane of movement obliquely upwards and outwards, downwards and inwards, its position of rest tending in the former direction. If in the median-pointed boot it be unfortunately packed beneath the second toe and it becomes so fixed, it is never in a position of rest, and, so far as it can move at all, movement must be in a plane for which the joint at its base is not adapted. A condition known either as hallux flexus, hallux rigidus, or hallux dolorosus results, the several features giving these alternative names being easily explained. Action of the long flexor giving pain it is suspended, and the plantar arch sinks for want of the bow-string or tie-rod influence which action of this muscle affords. Thus we get flat-foot "complicated," as Mr. Symonds would say, with hallux flexus. I prefer to say associated, for both are the effects of a common cause, defect of function. The indication, as I see it, is to restore functional activity as soon as conditions permit, and this under the best physiological conditions. I see such cases recover so as very soon to permit of active life, the feet ultimately attaining a functional excellence hopelessly impossible after resection of the metatarso-phalangeal joint.

This operation, even in cases of flat-foot with hallux flexus, is, as I find, unnecessary, and therefore, in my view, unwarrantable; that it should be chosen in "uncomplicated" cases is to me distressing. Mr. Symonds does not explain how his operation restores the flattened arch, or whether he bases his prediction of permanence on results of operations in former years. For myself, I am not afraid of being called theoretical, but in this matter I can appeal to "practical results." It is more than thirteen years since I published[2] cases of flat-foot treated by renewal of function which even then had stood the test of ten years of active life. I am ready to show others where the patients and their friends can be interrogated as to whether published descriptions are in accord with facts. I never in these cases fear a relapse, being assured of an "alteration of the disposition" and that the Hunterian definition of a cure has been completely fulfilled. I am, Sirs, yours faithfully,

Gloucester, May 8th, 1897. T. S. ELLIS.

[1] Quoted from Sir Spencer Wells. The passage occurs in Hunter's Lectures on the Principles of Surgery, vol. i., p. 625, Palmer's edition, 1835. For the reference I am indebted to Mr. Stephen Paget.
[2] THE LANCET, Feb. 9th, 1884, p. 273.

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—Dr. H. Charlton Bastian quotes the following from me:—"Every man individually *acquires* the faculty of

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language and of bi-pedal progression in an erect posture: neither of these is instructive or inborn and therefore transmissible, and both result from the fact that the one generation acquires them by imitation from the preceding generation." He adds: "This is a very dogmatic statement against which much may be said." Put simply the statement to which Dr. Bastian takes exception amounts to this: that every child *learns* to speak and walk, and it carries the implication that except men did so learn no man could speak or walk. Such is the statement which in the light of every-day experience Dr. Bastian thinks "very dogmatic." He himself is apparently of opinion that men do not *learn* to speak and walk—i.e., that they do not *acquire* the faculties of language and of bi-pedal progression, but that these arise, or would arise, in the individual in the absence of all experience. He declares that he is in agreement with Mr. Herbert Spencer in so far as a belief in the transmissibility of acquired traits goes, and quotes his own Lumleian Lectures and his well-known and most admirable book, "The Brain as an Organ of Mind," in which, after referring to certain instances of what he calls "deferred and untaught" speech and of "untaught" walking, he says: "No explanation of such a fact seems possible except on the supposition that speech has now become a truly automatic act for human beings, and that if children do not speak at birth this is in the main due to the circumstance that their nervous systems are still too immature."[1] I cannot do better than preface my reply to Dr. Bastian by again quoting some wise advice which Mr. Spencer has given, but not always followed. "Clearer conceptions of these matters would be reached if, instead of thinking in abstract terms, the physiological processes concerned were brought into the foreground."

A language consists of words—nouns, verbs, conjunctions, &c.—all of which are different in different languages. To possess the power of articulate speech it is essential to have a knowledge of a set of these words, of their inflections, of their meanings, and of their proper arrangement in sentences. Now let me appeal to your readers—nay, to Dr. Bastian himself—and ask, How did this knowledge of words, &c., arise in his mind? Did he learn it? Did it arise in him as a result of experience? In other words, was it acquired? Or was it congenital? In other words, did it arise in his mind spontaneously and apart from all experience? For instance, did he, in his childhood, learn that the arbitrary sound "brick" designated a certain object, and the arbitrary sound "elephant" another object, or did the knowledge arise spontaneously in his mind? I think the great majority of your readers would reply that in their own cases they learned (i e, acquired) all these things; but Dr. Bastian, to judge by his writings, would say, "No. My knowledge of these things is congenital, not acquired. If I had never heard of bricks and elephants I would yet have applied those particular sounds to those particular objects. If I had never heard a spoken word yet would I have discoursed in good set terms of the objects around me. In the absence of all experience I would have had a knowledge of words, of their inflections, of their meanings, of their arrangements in sentences." Presumably Dr. Bastian would also have had a congenital knowledge of the objects to which words are applied, since to know the names of things implies some knowledge of the things themselves; presumably, also, he would have used spontaneously that set of arbitrary sounds which in the aggregate constitute the English language, for he speaks of an "untaught" English child who said, "What a pity,"[2] and of a Greek boy, likewise "untaught," who said "Αηθρωπε μὴ κτεινε Κροισον."[3]

Dr. Bastian forgets that infants of one race—e.g., negro—reared by individuals of another race—e g., British—speak solely the language of their educators, not their progenitors, whereby is supplied convincing proof that language is acquired, not inborn; for, of course, the negro's ancestors did not apply the sounds "brick," "elephant," &c., to the objects to which the English apply them, and to which the negro child taught by the English applies them. But even more convincing proof is supplied by Dr. Bastian's own writings. He says: "The most important of these congenital defects is deafness, which of itself entails mutism, the individuals thus afflicted being known as 'deaf-mutes.' It must be borne in mind, however, that this mutism or dumbness may also be brought about by absolute deafness occurring from any cause after birth, but before the child has begun to talk, or even after it has learned to talk, up to the fifth or the seventh year."[4] Thus, when the channel (hearing) through which the child acquires a knowledge of speech is closed, the child remains for ever mute, even though the organs of speech, including the nervous mechanism, be perfect; whereas were Dr. Bastian's hypothesis correct congenital deafness ought not to entail mutism. He himself actually uses the word "learned" which, of course, implies acquirement. We must conclude, therefore, that though the *power of acquiring* language, like the power of acquiring a knowledge of letters or of mathematics, or of architecture, or of geology, &c., is inborn, yet language itself, like a knowledge of letters, &c., is never inborn, but always acquired. Indeed, I think that if Dr. Bastian will consider the matter a little he will find reason to conclude that this power of acquiring mental traits, this mental receptivity, is that which constitutes man's special pre-eminence over lower animals, from which, on the other hand, he is also distinguished by the meagreness of that which is mentally inborn or instinctive in him. I think he will further conclude that thus, also, is every higher animal distinguished, to a greater or lesser extent, from a lower animal. Just as regards language, so it is as regards bi-pedal progression. The child is born with little or no power of coördinating its muscles, but gradually *through use and after long practice it acquires* such perfect powers of coördination that it is able to stand and walk. Without use (i.e., exercise) the very limbs of the child do not develop, as is the case in infantile paralysis. I think Dr. Bastian will agree with me that all that arises as a result of use is to be regarded as acquired. Therefore that very degree of muscular development which enables the child to walk is acquired. I have not space to go into this and other kindred matters here; but if Dr. Bastian will so far honour me he will find them discussed at length in my work, "The Present Evolution of Man" (pp 88–93, 108–121).

As regards the instances which Dr. Bastian gives of "deferred and untaught" speech and bi-pedal locomotion, I confess I am puzzled, for I do not follow his line of argument. He says that certain children within his knowledge did not speak or walk till a later period than the common, and then manifested their powers somewhat suddenly. But had not these children the same opportunities of learning as other children? It seems they had more It appears to me merely that they were somewhat slower than other children. I can cap his anecdote of the English boy who said "What a pity," when his toy was broken. A child of English parentage that I knew in New Zealand crawled to the top of a little heap of firewood and then suddenly said as his first words, "Capitenni now," which, as I understand, is an expression of triumph in the Maori language[5] and which, though frequently used by his brothers and sisters was, of course, never used by his ancestors, and therefore could not have been inborn in him.

I am, Sirs, yours faithfully,

Southsea, May 3rd, 1897. G. ARCHIDALL REID.

A CASE OF ABDOMINAL OBSTRUCTION.

To the Editors of THE LANCET.

SIRS,—The following case seems to me of interest in connexion with the case of intestinal obstruction under my care, an account of which was published in THE LANCET of May 1st, 1897:—

A small, undersized boy of sixteen, was admitted to the Stratford-on-Avon Hospital on Feb. 21st, 1897, having suffered from symptoms of obstruction for seven days previously. No hernia could be detected at either ring. The left testicle was in the inguinal canal; the right was undescended. There was considerable distension of the abdomen. As the boy's state was critical laparotomy was performed shortly after his admission, and immediately after consultation with other members of the staff. The usual median incision gave vent to a considerable quantity of blood-stained serum. No hernia was found in the pelvis. The incision was then extended up to the umbilicus, when a coil of distended and injected intestine was found passing through a hole in the mesentery in the neighbourhood of the

[1] THE LANCET, April 3rd, 1897, p. 933.
[2] The Brain as an Organ of Mind, p. 606.
[3] The Brain as an Organ of Mind, p 608.
[4] THE LANCET, April 3rd, 1897, p. 933.
[5] I cannot pledge myself to this. The expression was used by the child's companions, and I was told it was from the Maori.

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cæcum. The constricted intestine was reduced with very little difficulty; and the case admits of very little further description, as its progress to recovery was uninterrupted. A glass drainage-tube was inserted for the first twenty-four hours, and then removed. He left the hospital, with the wound soundly healed and wearing a belt, on March 22nd. This case is of interest in connexion with the one previously published. Again I found an obvious constriction of the bowel, released it, and had the patient removed to a warm bed as rapidly as possible. Writing this some months after the occurrence of the case above referred to, I am still of opinion that I should not have been justified, in either case, in turning out the whole of the intestines to search for further possible obstructions.

I am, Sirs, yours faithfully,

HARRY LUPTON, L.R.C.P. LOND., M.R.C.S. ENG.

Stratford-on-Avon, May 10th, 1897.

"THE HOSPITAL REFORM ASSOCIATION: REPORT OF THE COMMITTEE APPOINTED TO INQUIRE INTO THE WORKING OF THE SPECIAL HOSPITALS OF LONDON."

To the Editors of THE LANCET.

SIRS,—Your sense of justice will, I am sure, permit me to reply to the letter signed by Dr. Sibley and Dr. Snape. It is no fault of mine that they called at the hospital three times without finding me at home, but rather theirs for not making an appointment by which their fruitless journeys might have been obviated. But, perhaps they had an object in making surprise visits. However, this point is irrelevant and it offers no excuse for the shortness of their visit to this or any other hospital, while the hasty character of the inquiry affords the reason for the report being no more thorough, and of no greater value, than that of any that have gone before. Dr. Sibley and Dr. Snape imply that I volunteered additional information. On the contrary, I received a letter from one of them, enclosing me the notes they had made on this hospital, with a request that I would correct any mistakes and make any additions necessary. Thereupon I made one or two corrections in their figures and to their "Remarks" I added the following words:—"That the majority of these patients sent by doctors are in a much better position of life than the patients not so recommended. The patients are not merely sent for a diagnosis but for treatment." These words were omitted from their published "Remarks." It was this omission that I complained of, and your leading article of April 24th justifies me in the belief that the omission was an important one.

Indeed, I feel so strongly on this point that I am making inquiry as to the number of patients sent by medical men to those hospitals upon which Dr. Sibley and Dr. Snape have reported. Already I find that at nine alone no less than 17,000 patients, out of a total of 54,000 treated in a year, were recommended by medical practitioners. At seven of the institutions the evidence is very clear that the majority of the patients sent by medical men were in a better position of life than those not hailing from such a source. Therefore the assertion so often made and repeated that special hospitals injure the general practitioner must be admitted to lose much of its supposed force, whilst the source of hospital abuse is proportionately diverted.

I am, Sirs, your obedient servant,

RICHARD KERSHAW, Secretary.

Central London Throat and Ear Hospital,
Gray's-inn-road, May 10th, 1897.

THE SKIAGRAPHY OF THORACIC ANEURYSMS.

To the Editors of THE LANCET.

SIRS,—Dr. Dalgarno and Dr. Galloway are to be congratulated on the successful skiagraph of a thoracic aneurysm which was printed in THE LANCET of May 8th. It is especially interesting and valuable inasmuch as it verifies the fluorescent screen work, which will naturally be the method most usually employed on account of its simplicity and rapidity and also, in most cases, its greater certainty; for a photograph of an aneurysm which requires a long exposure may very easily be spoilt by a slight movement. Since I first showed that thoracic aneurysms could be diagnosed by means of the fluorescent screen,[1] I have examined a great many more cases, and have always been able to see the outline of the tumour quite plainly, and am now quite convinced that in these cases an examination by the Roentgen rays will often prove a valuable addition to the other methods of examination usually employed. In some cases a doubtful condition may be made clear, and in others the diagnosis is still further confirmed.

I am, Sirs, yours faithfully,

H. CAMPBELL THOMSON.

Queen Anne-street, W., May 10th, 1897.

URIC ACID IN THE BLOOD.

To the Editors of THE LANCET.

SIRS,—Dr. Luff's statement that blood contains no uric acid does not appear to be justified by his experiments. One would imagine that blood contained just enough uric acid to supply the necessary eight to ten grains daily. An average proportion of 1 in 1,000,000 would more than suffice for this; hence in 500 c.c. of blood it is necessary to show that not even half a milligramme of uric acid is present. I fail to see how this can be proved by a process in which the error of estimation is from one to two milligrammes, apart from the difficulty in extraction.

I am, Sirs, yours faithfully,

Norwood, May 8th, 1897. DONALD F. SHEARER.

THE GENERAL MEDICAL COUNCIL AND THE MIDWIVES QUESTION.

To the Editors of THE LANCET.

SIRS,—As I owe it to my constituents to let them know why there is no practical use in my attending the May Session of the General Medical Council with the view of trying to settle the above vexed question, will you kindly insert the enclosed copy of correspondence which has passed between myself and Sir R. Quain.

I am, Sirs, yours truly,

Liverpool, May 11th, 1897. ROBERT R. RENTOUL.

78, Hartington-road, Liverpool, S.,
May 8th, '97.

Sir R. Quain, Bart.,
Pres. G. M. Council.

DEAR SIR,—On April 26th, '97, I sent to you a Notice of Motion requesting that such be placed upon the agenda paper for the May Session of the G. M. Council. The following is a copy of that motion: "Draft Bill to Provide for the Compulsory Registration of Midwifery Nurses and existing Midwives as Midwifery Nurses, and for the recognition of existing midwives as such. It will be moved by R. R. Rentoul and seconded by W. Thomson. That the following Midwifery Nurses Training and Supervision Draft Bill be now adopted by the General Medical Council. That a copy of such Draft Bill be now forwarded by the Registrar to the Privy Council, the Local Government Board, and to the medical journals." I also sent you a copy of my Draft Bill.

On April 29th you acknowledged the receipt of the above Motion and Draft Bill, and you refer me to the resolution of the G. M. Council of Nov. 29th, '89, which states that the Council "would not be able to discharge, and would therefore not be prepared to undertake, any duties of detail as to the registration of midwives or as to the local arrangements for licensing and controlling them," but that the Medical Council "would, if the Government so wished, be willing to advise as to the general rules of education, examination, and discipline which ought to be established." You also wrote that as "this resolution was re-affirmed by the Executive Committee and transmitted to the Privy Council on Feb. 22nd, 1897, in answer to a communication seeking the opinion of the General Medical Council on the Midwives Registration Bill introduced into the House of Commons on Feb. 9th, it would not be competent for any member to enter upon a discussion of this question until the decision arrived at on that date and transmitted to the Privy Council has been rescinded."

On April 30th I replied to yours and stated that my Draft Bill is drawn up and based upon the Resolution of Nov. 29th, '89; that it proposes to place no work whatsoever upon the G. M. Council except to approve or otherwise of the Regulations to be drawn up as provided by the Bill. On May 3rd you replied "that all the Resolutions passed by the General Council on Nov. 29th, '89, on the subject of the registration of midwives had reference to the relation of the Council to the Government, so that while in the Resolution to which you have been already referred the Council speaks of being willing to advise any department of Her Majesty's Government on the subject, so in the Resolution to which you probably refer as the basis of your notice of motion it is the Government upon whom the Council urges the importance of passing into law some measure for the education and registration of midwives." On May 4th I replied to yours and pointed out that as the G. M. Council is "willing to advise" I contend that "no practical person can expect a Government to draft a sensible Bill upon a question *re* midwifery nurses registration." I also stated to you that my object was "to *show* the Government that the G. M. Council is not content merely

[1] THE LANCET, Dec. 12th, 1896.

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with passing resolutions." At the same time I returned my Draft Bill to you, and again asked you to agree to my above notice being placed upon the agenda paper. On May 5th you replied "that the notice of motion you have forwarded is *so entirely opposed* to the views entertained by the G. M. Council and its Resolutions expressing its opinions, it cannot be placed on the agenda paper, and that the only notice of motion that could be entered on it, if you so wished, on the subject would be one to rescind the Resolutions previously adopted."

I cannot adopt your suggestion, coming as it does from one who has publicly offered the greatest opposition to my efforts when opposing midwives registration, to the proposed increase in the number of Direct Representatives upon the G. M. Council, and from one who is opposed to the very principle of such representation. To your assertion that my notice of motion is "so entirely opposed" to the views of the G. M. Council I take direct objection. The above Resolution of 1889 is one which I accept as having been passed with the view of registering midwives with the duties of midwifery nurse, or nurse tender, and not of an inferior order of midwifery practitioners. It has been said that the Midwives Bill of Feb., 1890, was passed upon this Resolution. Clause 5 of that Bill proposed that a midwife should be empowered to recover any fee or charge in court "for the performance of *any* midwifery operation." I feel certain no Member of the G. M. Council could affirm that the Resolution of '89 encourages any such proposed ghastly legislation. Again, when in 1895 the Midwives Bill of that year was before the G. M. Council, it was moved by Sir W. Turner, and seconded by Sir W. Foster—"That the word 'midwife' should be struck out of the title of the Bill and out of the several clauses, and that the term 'midwifery nurse' be substituted for it." This amendment was defeated only by two votes—14 voting against it, 12 for it, 2 not voting, and 2 being absent. This fact shows that the G. M. Council would not be opposed to discussing, and perhaps adopting, my notice of motion and draft Bill, and also that you are in error in stating that my notice is "so entirely opposed" to the views of the Council.

Again, I need not refer you to the result of the 1896 election of Direct Representatives to the G. M. Council, when the Direct Representatives of Scotland and Ireland stated they would oppose the so-called registration of midwives; and also when the Practitioners of England and Wales elected two Representatives because they opposed the so-called registration of midwives, and when the Representative who had been elected in 1891 at the head of the poll was placed at the foot in 1896. All these facts compel me to enter the gravest objection to your suppressing my notice of motion, and to your studied insult to my constituents—actions which I contend are absolutely unjustifiable, and which will reflect the greatest discredit upon a Public Medical Authority established by Act of Parliament. This I shall leave each Practitioner to judge for himself. Personally I feel your action will give a greater vitality to the opposition to midwives' registration. Had you placed my notice of motion upon the agenda paper I would have asked that a day be named to discuss it, as I could not well attend the May Session of the Council for more than one day.

I am, Sir, yours truly,

ROBERT R. RENTOUL,
Senior Direct Representative, G. M. Council.

THE LAW OF, AND PRACTICE IN, LUNACY.

To the Editors of THE LANCET.

SIRS,—While I have certainly no reason to complain of the courteous and favourable, if discriminating, review of the above work in your issue of the 1st inst., I shall be glad if you will kindly allow me to point out that all the reported cases of actions or proceedings against medical men in connexion with the detention of lunatics are dealt with under Sections 315 and 330 of the Acts of 1890 and 1891—the only place in which, according to the scheme of the book, they could be introduced.

I am, Sirs, yours truly,

Garden-court, Temple, May 10th, 1897. A. WOOD RENTON.

HOSPITAL PROVISION FOR MEDICAL CASES IN CHESTERFIELD.

To the Editors of THE LANCET.

SIRS,—We have a population of about 120,000, and yearly increasing, without any provision for medical cases nearer than Sheffield or Derby except the union hospital. For the last quarter of a century I have been advocating the necessity for a medical infirmary, but hitherto without success. We have an excellent surgical hospital for sixty patients, admirable in all its arrangements, quite up to date, and second to none in the provinces. By the rules and original constitution of the hospital medical cases are excluded, and a majority of the governors are against taking any steps to alter this rule although efforts have from time to time been made in this direction. We had a town's meeting this week, convened by the Mayor, and I said that this Diamond Jubilee year was a fit and proper time for endeavouring to supply this great and urgent want. A Volunteer drill-hall was almost unanimously selected to commemorate the Diamond Jubilee, and it was agreed that any sum remaining after entertaining the aged poor and children should form the nucleus of a fund for the medical infirmary. I am of opinion that the infirmary should have taken the first place on the ground of humanity in accordance with the known wish of Her Most Gracious Majesty the Queen and His Royal Highness the Prince of Wales. I have often said that a poor man suffering, say, from pneumonia or acute rheumatism, is in more need of hospital treatment than his fellow workman who is admitted for a simple fracture. I think you will agree with me that it is a scandal and a disgrace that such an institution has not long ago been provided for this town. I think I am correct in stating that it is the only place in England with such a large population where such a state of things exists.

I am, Sirs, yours faithfully,

JOHN ROSE, M.D.,
Honorary Consulting Surgeon, Chesterfield and North Derbyshire Hospital; Staff Surgeon, Royal Navy (Retired List).

Chesterfield, April 24th, 1897.

MERCER'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—I write for your advice under the following circumstances. The governors of Mercer's Hospital of this city (Dublin) dismissed the whole medical and surgical staff of the institution without assigning any cause; they then notify to these dismissed honorary officials that they are eligible for re-election and request them to continue to discharge their duties until the fresh appointments are made. The power of the governors to dismiss their honorary medical staff will be the subject of a lawsuit ere long I may further add that the governors are co-opted, and it may fairly be said that their conduct towards the medical staff has not the approval of the subscribers to the funds of the hospital. Now I wish to know, Is it in accordance with the traditions of the medical profession that gentlemen should apply for the vacancies, if any, thus created? Am I justified in the sight of my professional brethren in assisting the governors to insult our profession by treating its members as messenger boys by dismissing them without showing cause and thus degrading them, as far as in their power lies, in public opinion? That these gentlemen who have been thus summarily dismissed are fully capable of discharging the duties of the position they occupied is shown by the governors notifying to them that they are eligible for re-election. To me the duty of supporting my professional brethren appears plain; but when I learn that already candidates are in the field—men holding good positions professionally and socially—I begin to question my judgment in the matter and I naturally appeal to THE LANCET for guidance. Of course, it is just possible that the governors are acting *ultra vires;* but even if they are, and the present staff of Mercer's is honourably re-instated (?), what are we to think of those who assist to discredit the medical profession in the eyes of the public?

I am, Sirs, yours truly,

May 11th, 1897. F.R.C.S.I.

*** These vacancies should not be applied for save by the late staff, who are thoroughly conversant with the details of an extraordinary situation.—ED. L.

"ON CERTAIN SYMPTOMS OF SPINAL CORD AFFECTION IN BICYCLE RIDERS."

To the Editors of THE LANCET.

SIRS,—The article on the above subject in THE LANCET of April 17th has called forcibly to my mind several cases of retention of urine and numbness in the penis and perineum brought to my notice during the cycling season, and in every instance I traced the cause, not to cycling *per se*, but to the dangerous wedge-shaped article usually supplied with the machine and called a saddle.

In each case I, instead of ordering a discontinuance of cycling, suggested a trial first of the Henson anatomical or peakless pneumatic saddle, the invention of a medical man, who is also an experienced cyclist. In every instance the result has proved most satisfactory. I feel that this subject deserves far more attention from the profession than it has hitherto received, and I should like to learn the experience of others in this direction.

I am, Sirs, yours faithfully,

May 11th, 1897. CYCLING SURGEON.

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HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

X.—LEICESTER.[1]

Recent but Ineffectual Attempts to deal with Abuse.—Some Flagrant Cases.—Preponderating Influence of the Working-class Subscribers.

AT Leicester the question of hospital abuse holds only a secondary place in the list of grievances affecting the medical profession; the clubs, and more especially the Provident Dispensary, have a far greater effect in reducing the number of patients who should consult the general practitioner. Nevertheless, it is freely acknowledged that there is some hospital abuse which should, and could, be prevented. The formation of a medical union by the Leicester practitioners and the discussions in the medical and local press concerning the grievances of medical men have awakened the attention of the board which manages the Leicester Infirmary. This proves the utility of organisation and of agitation. In interviewing various medical men at Leicester I was much impressed by the difference of the tone of those who had not been to the infirmary for some years and of those who were actually on the visiting staff. Thus a former member of the visiting staff told me that he had seen and prescribed for some 17,000 patients at the infirmary. Many of these patients could well have afforded to pay a medical attendant. He remembered notably the wife of a tradesman who was in a large way of business. He remonstrated with her for coming to the hospital, but she replied that the gentleman who had subscribed two guineas to the hospital and had given her a letter of recommendation had the right to send whom he liked. It seemed to her preposterous that the medical man should interfere and ask questions when the gentleman who had given two guineas had asked no questions at all; and what business had the medical men to interfere with so reasonable and fair a bargain? That the members of the honorary staff of a hospital are by reason of their gratuitous services donors of what is equivalent to far more than two guineas is not realised by many persons; indeed, any number of patients imagine that the medical staff at the hospitals are paid, and handsomely paid, for their work. Thus the patient in effect says to the medical man: "The gentleman who gave me this recommendation has paid you two guineas to attend to me, therefore why do you ask impertinent or inquisitorial questions before giving me the advice and the medicine I need." It is quite a revelation to such persons to hear that the medical man has not been paid at all and only consents to work gratuitously on the express condition that his services shall be considered as a deed of charity done for the exclusive benefit of the poor, who are not in a position to pay. To make matters worse, the person in question was a member of a club and only paid 4*s.* 4*d.* a year for medical attendance; yet when she wanted a second opinion she came to the infirmary so as to get that second opinion for nothing. There were hundreds of other tradesmen and people well enough off not to need the charitable services either of a club or hospital medical officer who flocked to the infirmary. Also the impression that the members of the infirmary staff are well paid for their services engenders the idea that they must be very rich and would therefore charge their private patients very high fees; consequently the patients try to see them at the infirmary, where there is nothing to pay.

Some eight or ten years ago the infirmary physician who gave me this information brought before the board of management some flagrant cases of abuse. He was, however, rebuked and told that it was not his business to inquire into the status of the patients. He mentioned, among other such cases of abuse, that of the son of a person who was earning about £500 a year and yet sent his son to the infirmary. The boy was suffering from typhoid fever. The son of another well-to-do professional man was likewise taken to the infirmary. Then there had been a notable change in the behaviour of the large county families in regard to their servants. Formerly the nobility and the landed gentry always sent for their family medical man to attend their servants, but of late years the people who have bought many of the estates that used to belong to the ancient families find that it is at once cheaper and much less trouble to subscribe to the infirmary and send their servants there when ill. Like their predecessors they give to the charities; but unlike their predecessors they make the utmost use of these charities. Unfortunately, this example has been followed by some of the older families; thus the custom introduced by the newcomers proves doubly disadvantageous to the medical profession.

There has, however, been some awakening of late, and the infirmary board now feels that efforts must be made to prevent abuse. The rule is that all subscribers of two guineas annually are governors of the infirmary during payment and may recommend two in-patients and four out-patients every year. Those who subscribe one guinea can recommend one in-patient and two out-patients. There is, however, a rule that "no patient can be admitted who is able to pay for medical treatment," and Rule 72 states: "Persons who are able to pay for medical or surgical treatment are disqualified for admission to the infirmary. If any person recommended for admission shall appear to the physician or surgeon admitting patients to be clearly disqualified under this rule, the physician or surgeon shall report the case to the weekly board for their decision." This is a distinct improvement on the attitude of the old board, which some years ago told a member of the staff that it was not his business to inquire into the status of the patients. Nevertheless, through carelessness, if through no other reason, hospital abuse still prevails. Thus the other day a lady was admitted for an important operation. A fee of £100 might have been charged for this operation, and as the lady's husband is well off there is no reason why this fee should not have been paid. Nevertheless, the operation was performed gratuitously at the infirmary. Then two other quite recent cases were mentioned to me. The patients were together in the same ward. One of them was the wife of the owner of a large business, and the father of the other patient was earning £300 a year. Nevertheless the ticket of recommendation by which such patients gain admission contains the following declaration which the subscriber must sign: "The circumstances have been carefully enquired into, and I believe it to be a suitable case for admission for an in-patient." A similar declaration is signed on the recommendation paper for out-patients; yet the impression prevails that the abuse is even greater in the out-patient department than among the in-patients. Nor is this altogether the fault of the subscribers. Undoubtedly they are very careless in distributing recommendations, but no instructions are given as to what constitutes an abuse of the hospital, and each subscriber is left to define abuse according to his own particular fancy or ideas. There is no wage limit whatsoever; there is not even a hint given as to what might possibly constitute a fair wage limit. The bulk of the subscribers know little or nothing concerning the economic position of the medical profession and how it is affected by hospital abuse; therefore they often sign the declaration quoted above without making any inquiry worthy of the name. Hence the whole burden of preventing abuse falls on the medical staff, and it is scarcely necessary to repeat yet once again that this is in no way their business. It forms no part of a medical man's education to be able to detect what are the financial means of hospital patients. Nor is it fair to call upon him to render himself unpopular in the town by asking inquisitive questions which have nothing to do with medical treatment. This work should be done by a disinterested officer specially appointed for that purpose by the infirmary board. An efficient inspector could probably be obtained for a salary of about £75. This outlay would be more than compensated by the economy realised in reducing the total number of patients treated, as many persons who can afford to pay private medical practitioners would thus be kept away.

The number of patients treated at the Leicester Infirmary in 1896 amounted to 16,941, of whom 2892 were in-patients. This is practically the same as in the previous

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; (8) May 1st, 1897, The Royal London Ophthalmic Hospital; and (9) May 8th, 1897, France, United Action and Legislative Action.

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year. The daily average number of in-patients was 190, and their average treatment amounted to twenty-four days, the cost being 19*s.* 1½*d.* per week, or £3 5*s.* 7½*d.* for each patient. The income from all sources was £10,921 15*s.* 3*d.*, as compared with £11,075 4*s.* 10*d.* for the year 1895. A difference of £593 in legacies is the principal cause of this decrease. But what deserves especial notice is that the annual subscriptions only amounted to £2649 9*s.* 6*d.*, showing an increase on the previous year of £109 9*s.* 6*d.*, whereas the donations from the workpeople amounted to £3187 2*s.* 9*d.* and showed an increase of £320 13*s.* 11*d.* The last annual report says that "this is the largest sum ever yet received in one year from this source, and it is most gratifying to observe the generous support given to the infirmary by those for whose benefit it is maintained." Of course, in one sense this is very satisfactory, but the medical men at Leicester, as elsewhere, are beginning to feel its inconvenience. More than once I heard the familiar complaint that workpeople had claimed to be treated at the infirmary as a matter of right because they subscribed. The hospital is governed by a general board of governors, which meets four times a year, and by a weekly board and council. Now "every congregation, society, or association of persons (and these words shall include the employés of mercantile or other establishments) which shall have contributed the sum of five guineas or upwards in two or more successive years, shall have the privilege of nominating one person, being a member of such congregation, society, or association, to act as a governor in respect of such contribution, after the second year's payment, and to continue as such governor for one year." Thus workmen must subscribe five guineas to appoint a governor, whereas middle-class men can constitute themselves governors by paying only two guineas. It is difficult to see on what logical grounds this fancy franchise can be maintained. If money is to be the basis of representation the workmen might well claim that the qualification should be raised to five guineas all round or else lowered to two guineas. This claim they could easily enforce by simply refusing to pay in their £3000 till it had been admitted. What then would be the position of the infirmary? On the two-guinea franchise basis the workpeople could nominate about 1500 governors, while the annual subscribers—admitting that those who give less than two guineas took the trouble to club together so as to appoint governors—could only appoint about 1300 governors. But such combination is not likely to be effective, for the greater part of the annual subscribers are notoriously supine in such matters. Then there are fifty-seven life governors, and the collections last year amounted to £1354. Even if every penny given was utilised in acquiring the franchise still it will be seen that the workmen governors would constitute a very large minority, if not an actual majority. Also it is quite possible that many of the governors who were not direct representatives of the working classes might vote in favour of the proposals brought forward by the working classes. Thus we are brought face to face with the possibility of the working classes becoming the masters of the infirmary. It will be of no use dealing with this question when this end is realised. Its occurrence can only be prevented if the question is taken up in time, and it is perhaps already too late. The workmen do not yet fully realise their strength and have not given very much attention to the subject; but the matter has been taken up by the Leicester Trades Council, and one of the best-known physicians in the town, in mentioning this fact, expressed his opinion that they were going straight towards the municipalisation of the infirmary. There is consequently no time to lose. The probable effect of the working-class support now so largely given to hospitals must be faced.

THE CONGRESS OF THE GERMAN SURGICAL ASSOCIATION.

(FROM OUR BERLIN CORRESPONDENT.)

(Concluded from p. 1306.)

Acute Intestinal Obstruction.

PROFESSOR HEIDENHAIN of Greifswald read a paper on the Pathology and Treatment of Acute Intestinal Obstruction. He said that intestinal spasm was sometimes due to abnormal conditions in some part of the bowel, such as stricture of the rectum, ascarides, &c., and might sometimes be caused by impaction of a testicle in the inguinal canal or by twisting of the pedicle of an ovarian cyst. The effect in these cases is brought about by reflex action, and the symptoms may, of course, be removed by appropriate remedial measures. Incomplete stenosis arising from chronic peritonitis is also sometimes successfully treated by irrigation of the stomach. The same may happen when the intestine is obstructed by a gall-stone and in invagination or incomplete volvulus. But in many instances the symptoms recur, and the patient may die after repeated attacks of ileus. Operation should therefore be the rule. Professor Heidenhain suggested that before the obstacle is sought for an incision should be made into the distended intestine in order to remove its contents, as he is of opinion that the severe symptoms in acute obstruction are not due to primary peritonitis, but to toxic effects of virulent substances produced in the stagnant contents of the bowel. After the intestinal incision has been closed by sutures the search for the obstacle may be commenced, and for this purpose it will be necessary to withdraw the bowel to some extent from the abdominal cavity. After the operation castor oil should be administered; it generally causes very fetid motions, and the patients, as a rule, feel very much relieved. In this way it is possible to prevent peritonitis, which, in Professor Heidenhain's opinion, is caused by the immigration of pathogenic bacteria through the intestinal walls into the peritoneal cavity.

Puncture of the Spinal Canal.

Professor Braun of Göttingen read a paper on Puncture of the Spinal Canal. In suppurative meningitis following otitis media or traumatic lesion of the skull he found the fluid in two out of eight cases to be completely limpid, so that suppurative meningitis is not negatived by the absence of pus from the fluid. The increase of leucocytes is, however, very important from a diagnostic point of view. If blood is obtained from the puncture compression of the medulla is very likely to be present, and by the withdrawal of the blood the compression is relieved. Professor Braun argued that puncture of the spinal canal is valuable as a means both of diagnosis and of treatment, and that though it has hitherto been used almost exclusively in medical cases, it is, nevertheless, applicable in surgical practice as well.

Collective Investigation on Anæsthetics.

Professor Gurlt, the secretary of the association, gave an account of the collective investigation on anæsthetics begun by the Association in 1891 and continued ever since. The returns comprised two years—1895, with 19,596, and 1896, with 23,173, cases. Of this number chloroform was given 27,025 times, with 29 deaths, and ether 19,856 times, with 3 deaths. On the other hand, there was no death among 996 cases of anæsthesia produced by Billroth's mixture, 4927 by a mixture of ether and chloroform, and 1489 by bromide of ethylene. When all the 327,500 cases recorded since 1891 are summarised, the general death-rate is 1 in 2444, and that for each of the anæsthetics is as follows:—Chloroform, 1 in 2039; ether, 1 in 5090; Billroth's mixture, 1 in 3807; bromide of ethylene, 1 in 5228; chloroform and ether mixture, 1 in 7594, and pental 1 in 213. The latter anæsthetic no longer appears in the returns and therefore seems to be abandoned. In the first three years no death from ether was recorded; afterwards its death-rate varied from 1 in 2300 to 1 in 6700, and that of chloroform from 1 in 1100 to 1 in 4200. It was decided to continue the collective investigation, and the thanks of the association were given to Professor Gurlt for his work.

Laryngeal Carcinoma.

Dr. Graf of Berlin discussed the Results of Operations for Laryngeal Carcinoma performed in Professor von Bergmann's clinic. From 1883 to 1896 there were forty-eight cases operated on, of which forty-seven were carcinoma and one was malignant enchondroma. Tracheotomy was always performed first, Hahn's cannula was inserted into the tracheal wound, the larynx was then opened in order to ascertain the extent of the growth, and after the extirpation sutures were applied. An artificial larynx was used in only seven cases. Of the patients with total extirpation two have been free from recurrence for seven and three years respectively; four patients with unilateral extirpation and four with partial extirpation are still alive.

Pharyngeal Carcinoma.

Professor Krönlein of Zürich then delivered an address on

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Pharyngeal Carcinoma, a condition which, in his experience, is not so rare as is usually believed. He has seen in Zürich sixty-one cases, of which fifty-six occurred in males and five in females. He classified the growths according to their localisation, as naso-pharyngeal, oro-pharyngeal, and laryngo-pharyngeal. The first are very rare, but instances of the second and third kind are more frequently observed. Naso-pharyngeal carcinoma has not yet been operated on. Of the oro-pharyngeal cases he has operated on fifteen with few relapses; of the eight laryngo-pharyngeal cases six died from the operation, one from a relapse, and only one survives. Of all the sixty-one cases of pharyngeal carcinoma, twenty-nine only were operable, eleven died from the operation, two were cured, and the others died from relapses.

Considerations of space permit only a passing reference to other papers read at the Congress, the principal of them being those by Dr. Koerte on the Surgical Treatment of Diffuse Peritonitis, Dr. Marwedell (Heidelberg) on the Value of the Murphy Button, Dr. Sonnenburg on Operations for Rectal Stricture, Professor Kuster (Marburg) on Fibrous Ostitis, Dr. Bencke on Gonorrhœal Arthritis, and Dr. Halbau (Vienna) on the Absorption of Bacteria.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Ingleby Lectures.

THE President and Council of Mason College have issued cards of invitation for the Ingleby lectures for the present year, which are to be given on Wednesdays, May 19th and 26th, by Mr. Bennett May, the subject being the Operative Treatment of Cancer of the Breast.

Hospital Reform.

The Birmingham Trades Council have expressed their opinion strongly on this vexed subject. The following resolution was proposed at a recent meeting of the body: "That this council respectfully declines to accept the view expressed at the meeting lately held, and is of opinion that all cases of injury caused by accident and requiring medical or surgical treatment should be admitted without demur. Further, this council protests against the practice of men and women being called upon to pay the shilling fee if they have occasion to attend the hospital for medical aid or advice when they are already paying weekly subscriptions through their factories and workshops for the same institutions." It was stated by subsequent speakers that the resolution was a protest against the statements made at a meeting of the Hospital Reform Association. The question, it was averred, was, Were the hospitals merely to treat cases approved by the medical officers or were the subscribers to the Hospital Saturday Fund to be entitled to first aid? The chairman said that the discussion tended to show that the hospitals were not the institutions people thought they were. They had been taught to believe that they were charitable institutions, but it had been proved that a man who paid a penny a week could practically demand treatment for nothing, whereas a man who did not pay to a hospital direct could not have direct treatment. If that were true it destroyed the whole idea of hospitals as charities. He did not see why a man who earned £100 a week if he paid to the hospital was not as equally entitled to treatment as the man who earned £1 a week. Such and similar opinions expressed by a representative body of workmen go to show the trend of public opinion in the present day on hospital administration questions.

Accident at the New General Hospital.

A lamentable accident happened on the 3rd inst. to Mr. Philip Osler, aged twenty-one years, which resulted in his death in a short time. Mr. Osler was engaged in testing the electrical communications, and it is supposed that during an interval in this duty he attempted to pass through a trap-door on to the roof of the building. Below the door, which is reached by a small ladder, is a glass skylight window, through which Mr. Osler fell, and was found on the floor beneath in an unconscious condition. He was at once taken to the Birmingham General Hospital where it was found that his skull was fractured and where he soon expired. Mr. Osler was a young man of exceptional ability and promise, and his death cast a gloom upon the staff engaged on the building. Much sympathy has been expressed with his parents in this sad calamity.

Midland Counties Idiot Asylum.

Lord Leigh, chairman of the committee, moved the adoption of the thirtieth annual report at a meeting of this institution held on the 5th inst. at Walsall. It was shown that the total expenditure for 1896 was £1954 1*s.* 9*d.* and that there was an adverse balance of £144 19*s.* 8*d.* The progress had been satisfactory and the amount of good done very great. It was pointed out that the founder of the institution was Dr. Bell Fletcher, one of the physicians for many years to the Birmingham General Hospital. Dr. Fletcher is still living at Leamington, having attained to the great age of nearly ninety years.

Birmingham.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Difficulties of the Rivers Committee.

AT the meeting of the City Council on May 5th the Rivers Committee asked the council to sanction the expenditure of a large sum for the building of two additional filtration tanks of an acre each in extent for the purpose of testing a system of filtration recommended by Sir Henry Roscoe on a much larger scale than had hitherto been possible. Councillor Bradley objected that neither the filters nor the experiments were necessary, and the matter was referred back to the committee for further consideration. This leaves matters much as they were, for it may be remembered that the culvert scheme for taking the sewage effluent from Davyhulme to the estuary of the Mersey was rejected by a town's meeting. It will be necessary to arrange something before long, as the council will have to appear before the stipendiary magistrate in September with a complete scheme of sewage treatment in obedience to an order of the court, in default of which the corporation will be liable to heavy daily penalties.

Muzzling v. Registration of Dogs.

At a recent meeting of the City Council, Alderman Mark stated that the present muzzling order existing in Manchester was made by the local authority on Feb 20th, 1895. After a period of fifteen months it was decided to try the alternative of "registration with name and address, collars, and a brass badge," and this came into effect on June 1st, 1896. During the fifteen months fourteen dogs had been captured reported as suffering from rabies, while, during the eleven months of registration five cases had occurred, but the report as to the last case had not yet been received. The Watch Committee had registered for this year 7088 dogs, and if the new muzzling order were issued it would put the committee in a difficulty with 7088 owners. A deputation introduced by Sir W. H. Houldsworth laid the matter before the President of the Board of Agriculture, who admitted that there was a strong case for their application that the local regulations might be allowed at any rate to exist for the present and that the contracts should be allowed to lapse by the efluxion of time. The final answer to their request had not yet been received. In the meantime orders had been given to the police to be more active than hitherto in the capture of vagrant dogs.

Insanitary Cowsheds.

The medical officer of health has issued an important report on the Manchester cowsheds. Powers have been given to the City Council to deal with the matter, and the Sanitary Committee is seeking to enforce these powers, and to compel cow-keepers to keep their sheds clean. The cows in the city it appears are largely affected with tuberculosis.

Manchester Medical Cricket Club.

The fifth annual general meeting of this club was held at 98, Mosley-street, on the 6th inst. The honorary secretaries' report stated that the number of members was exactly 100—twenty-seven being life and seventy-three ordinary—members, consisting of both medical men and students. Seven matches had been played during the last season, of which two—Liverpool Medicals and the Law—had been won, those against Cheadle and Prestwich Asylums and Worsley drawn, and one lost—that against Heywood. The honorary treasurer's report was favourable, showing several pounds to their credit at the bank, although

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many members had forgotten to send in their subscriptions, which omission can easily be rectified when they see this notice. It was decided that about six definite fixtures should be made for the coming season—Past *v.* Present Students, Liverpool Medicals, Cheadle Asylum, Clergy, Law, and Prestwich Asylum. Other matches will probably be played as occasions offer, such as Married *v.* Single, Veterans *v.* Novices, Town *v.* Country, &c. It was felt that if medical men and students were only made aware of how pleasant these *réunions* are many would avail themselves of being enrolled members, which only entails an annual tax of 2*s.* 6*d.* It was resolved unanimously to abolish the rule as to the election of any further life members. The president of the club has promised to present a bat for the best batting average in four matches, one vice-president a ball for the best bowling average, and the other vice-president one for the best all-round man, batting and fielding. The following office-bearers were unanimously elected for the ensuing season:—President: T. Harris. Vice-Presidents: G. H. Broadbent and W. Scowcroft. Committee: E. M. Ashcroft, J. Bradley, H. H. Hitchon, C. Iliffe, A. Lomas, and T. Rothwell. Hon. Treasurer: H. W. Boddy, Cheetham-hill. Hon. Secretaries: G. W. Beesley, 226, Lower Broughton-road, Salford, and T. L. Fennell.

May 11th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Workhouse, Newcastle-on-Tyne.

OWING to the rapid increase of the population of Newcastle the present accommodation at the workhouse has become inadequate, and the question of increasing the size of the present building is under the consideration of the guardians. Mr. Gordon Smith, architect to the Local Government Board, told the guardians at their last meeting that the present buildings were obsolete. He further pointed out that in any re-arrangement of the building it would be necessary that the infirmary should be kept separate from the workhouse proper, and that the children must be provided for in a distinct building. After discussion the three following questions were raised for further consideration: (1) Should the children be removed from the workhouse; (2) should the present building be extended; and (3) should the site be changed.

Election of Assistant Surgeon at the Royal Infirmary, Newcastle-on-Tyne.

On May 6th Dr. John Rutherford was elected an honorary assistant surgeon in place of Mr. Rutherford Morison, who lately succeeded to the post vacant by the retirement of Professor Arnison. There were five candidates for the assistant surgeoncy.

Increase of the Salary of the Medical Officer of Health of the County of Durham.

Dr. T. E. Hill, the medical officer of health of the county of Durham, has had his salary increased from £500 to £700 a year on the recommendation of the health committee of the Durham County Council.

Complimentary Dinner to Professor Arnison.

On the evening of May 7th a dinner was given to Professor Arnison by his colleagues on his retirement from the post of surgeon to the Royal Infirmary, Newcastle-on-Tyne. Dr. Hume occupied the chair, and during the evening proposed Professor Arnison's health, alluding in kindly terms to his long and honourable connexion with the infirmary, and expressing the feelings of all his colleagues for Professor Arnison's future welfare.

Grange over-Sands Convalescent Home.

This institution, promoted by the Friendly Societies of Northumberland and Durham on the suggestion of Dr. William Robinson of Sunderland, has just been declared open by Sir James Laing. It is likely to be an immense boon to the north of England.

Lieutenant-Colonel Jeaffreson.

Dr. C. Jeaffreson, the well-known Newcastle ophthalmic surgeon, has been granted the honorary rank of Lieutenant-Colonel in the 3rd V.B. Northumberland Fusiliers, in which corps he had served as a combatant officer since 1878. He will also receive the Volunteer decoration for twenty years' service, having joined the Birmingham Rifles as an officer in 1866.

May 11th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

University of Edinburgh.

ON Tuesday of last week Sir Henry Littlejohn delivered his opening lecture as Professor of Forensic Medicine in the University of Edinburgh, before a crowded audience of students and members of the medical faculty. The new Professor was introduced by Principal Sir William Muir, who at the same time expressed his sense of the loss sustained by the University in the retirement of Sir Douglas Maclagan. Sir Henry Littlejohn, who was enthusiastically received, then delivered his opening lecture. He referred to the reception given him as a sign that he required no introduction to the students of that medical school with which he had been connected for forty years. In the large number of extra mural lecturers working in connection with it, the University had an important adjunct. With that number he had been closely connected, and he felt that, while within the precincts of the University there might be a "purer ether, a diviner air," his intercourse with young and enthusiastic workers in the extra-mural school had been an admirable training for the duties of a professor in the University. He then explained the lines he intended to follow in conducting his lectures, and pointed out the great necessity for teaching the subject of forensic medicine in a practical manner. In his capacity of surgeon to the police he would constantly have cases under his notice which he would consider it his duty to discuss with his students, and he also would wish them occasionally to attend criminal trials in the Court of Justice. Sir Henry Littlejohn went on to allude to his predecessors in the chair—to Dr. Duncan, the first Professor of Medical Jurisprudence in the United Kingdom, and to Sir Robert Christison, described by Orfila as "the leading medical jurist of the day." His immediate predecessor he referred to last, speaking in high terms of the character and attainments of Sir Douglas Maclagan, who, he said, reminded one of the days of Arbuthnot, Armstrong, Pitcairn, and Radcliffe. He was a man who had conversed familiarly with Goethe, been the friend of Lord Macaulay, and had seen Sir Walter Scott, while he had held the position of President of the Royal Society, of the Royal College of Surgeons, and of the Royal College of Physicians. Sir Henry Littlejohn concluded by stating his intention of walking in the footsteps of Sir Douglas Maclagan, and of placing at the disposal of the University whatever advantages his official position in the City might give him in the conduct of the chair, while he would endeavour to communicate to his students the enthusiasm with which he himself had prosecuted the study of the science.

Glasgow Medical Societies.

THE meeting of the Glasgow Medico-Chirurgical Society on the 7th inst. was presided over by Dr. Walker Downie. Dr. Barr showed a fresh specimen from a case of Cerebellar Abscess. The specimen included the brain and the temporal bone and was of special interest as illustrating how in middle-ear disease the path by which extension to the brain occurs may be through the labyrinth and the internal auditory meatus. Dr. Edington showed a girl, aged eight years, on whom excision of the Scapula for Sarcoma was performed four months ago. The tumour was shown to involve the infra-spinatus muscle, whilst the bone itself was unaffected. It was pointed out that this fact and the large proportion of spindle cells of which the tumour consisted made the outlook with regard to the prospect of recurrence comparatively good. Mr. Clark and Dr. Dalziel expressed their agreement with the procedure adopted and related particulars of similar cases. Dr. Barr and Dr. J. H. Nicoll read a communication on a case of Cerebral Tumour and showed the specimen. The patient, a young lad, first came under observation with what looked like a simple polypus of the external auditory meatus. This was removed, but recurred on two occasions. Subsequently the boy developed symptoms which suggested cerebral abscess, but on opening the skull a tumour was found. This was removed as far as possible, and the boy lived for two and a half months, but then died. The tumour, both in its macroscopic and microscopic characters, presented features which led to much difference of opinion as to its nature; and whilst Dr. Barr suggested that the intra-cranial tumour was an extension from a growth

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in the middle ear, others were inclined to regard the intracranial growth as the primary event. Another feature of interest was that the patient when under chloroform passed into a condition of apnœa, for which artificial respiration was required for a prolonged period, the breathing, however, becoming at once re-established when the skull was opened.—The Pathological and Clinical Society held a meeting on the 10th inst., the chair being taken by Dr. W. J. Fleming. Professor Gairdner read notes of a case of Mitral Stenosis and showed the Heart. The patient was a young woman, who complained of hæmoptysis and who on physical examination showed a typical auricular-systolic murmur. After some months in hospital, during which time there were periods of high fever and signs of pulmonary disease, suggesting phthisis pulmonalis she died, but a few days before death the auricular-systolic murmur disappeared and a soft blowing ventricular-systolic murmur developed. The post-mortem examination showed a narrowed mitral orifice, and on the anterior curtain of the valve was a large thrombus of recent date, and the suggestion was that it was the development of this thrombus which was the cause of the appearance of the systolic murmur. Professor Gairdner also read a communication on the subject of Thoracic Aneurysm. He showed a number of preparations to illustrate how such aneurysms may press upon, and even open into, the vena cava superior, the pulmonary artery, or one of the cavities of the heart. Professor Gairdner commented upon the facts demonstrated by the specimens, and connected these with the clinical histories for the purpose especially of arriving if possible at definite conclusions in view of the diagnostic difficulties of the cases. More particularly he alluded to the auscultatory signs to be expected when a communication is established between an aneurysm and a neighbouring vein.—Dr. Hector Cameron showed a man in whom he had Ligatured the First Part of the Axillary Artery in consequence of the existence of an aneurysm in the third part of the subclavian artery. The case had been quite successful, but some weeks after the operation the patient became hemiplegic on the right side. From this, however, he had now recovered.—Dr. W. L. Reid showed a case of Hæmatosalpinx, and Dr. L. R. Sutherland reported on the case.

May 10th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

THE annual election of the Court of Examiners of the College took place on the 4th inst., when with few exceptions the same gentlemen who filled the office last year were re-elected. Dr. R. Glasgow Patteson of the Meath Hospital was, however, elected for the first time an examiner in surgery.

Mercer's Hospital, Dublin.

A special meeting of the Board of Mercer's Hospital is called for Tuesday next, May 18th, 1897, to elect a new medical staff, the services of the old staff having been dispensed with.

The Longford Board of Guardians.

According to a statement in the *Freeman's Journal* of May 5th Dr. Robert Cochrane of Longford has recently served a writ for £500 on one of the Longford guardians, who had accused him of having left a patient until he was in a dying state and then ordered him to be removed in the inefficient workhouse ambulance.

Urban Sanitary Districts around Dublin.

Mr. T. J. Stafford, medical inspector of the Local Government Board, held an inquiry on the 4th inst. in the board-room of the South Dublin Union in connexion with an application of the guardians of the union to be constituted an urban sanitary authority for the electoral divisions of Rathfarnham and Palmerstown. The minutes of the inquiry have been laid before the Local Government Board, who have not communicated their decision on the matter.

The Medical Benevolent Society.

The annual meeting of the Belfast branch of this society was held on May 5th, the President of Queen's College occupying the chair. In the report it was mentioned that the subscriptions have increased this year. Special reference was made to the loss sustained by the society by the death of Mr. F. E. Beck, who had been for twelve years treasurer. The following office-bearers were elected for the ensuing year: President, Dr. Whitaker; Secretary, Dr. M'Caw; Treasurer, Dr. R. J. Purdon; Committee: Professor Cuming, Professor Whitla, Professor Byers, Mr. Payne J P., Dr. Brice Smyth, Dr. Merrick, Mr. McDonnell, J.P. (Randalstown), Dr. M'Keown, Dr. James Graham, Dr. Gibson, Dr. Bolton, J P. (Bangor), Mr. James Smith, Mr. M'Connell, Dr. H. O'Neill, Dr. Gaussen (Dunmurry), and Dr. Munn.

Queen's College, Belfast.

The following is the prize list in the class examinations of the medical faculty at the close of the winter session, 1896-97:—Systematic Anatomy—Seniors: Robert Alister Little Graham, B.A., and John Edmund Clements. Juniors: John Elder MacIlwaine, Hugh Barkley Steen, and John Hope Reford, B.A. Practical Anatomy—Third Year: William Matthew Hunter. Second Year: Robert Alister Little Graham, B.A., and Galbraith Hamilton Grills, equal; and John Elder MacIlwaine. First Year: Samuel M'Clure and John Alexander Douglas Radcliffe. Physiology and Histology—Senior Division: William Matthew Hunter. Junior Division: David M'Mordie, John Campbell Rankin, and Archibald George Heron. Practical Physiology and Histology: David M'Mordie and Howard Stevenson. Surgery—Second Year: Arthur Berry M'Master and George Adams Hicks, equal; Charles Edmund M'Dade, B.A. First Year: Henry Stewart Anderson, George Jefferson. Materia Medica: Robert Alister Little Graham, B.A.; William Matthew Hunter. Midwifery, Gynæcology, and Diseases of Children: Arthur Berry M'Master, Henry Stewart Anderson, and William Boyd. Practical Chemistry—Senior Division: Wm. Alexander Stoops. Junior Division: Robert George Campbell. Zoology—Senior: David M'Mordie. Junior: Walter Phillips, Charles James Ross, B.A., Frederick William Stewart, and John Armstrong. Ophthalmology and Otology: George Adams Hicks, George Casement Reid Harbinson, and Charles Edmund M'Dade, B.A. Sanitary Science: George Adams Hicks and George Casement Reid Harbinson.

The Belfast Asylum.

It was reported at the last meeting of the governors, held on May 10th, that a scheme has been arranged by the architect which would be sufficient to complete and perfect the purification works at Purdysburn so as to secure a clear and pure effluent from the sewage system. This discharge will not flow into the Purdysburn River (to which the adjacent inhabitants objected), but will be absorbed by the land. This scheme was passed, although Dr. O'Neill (one of the governors) thought it was complicated and that a simpler plan which he had seen in use in London would have done—that is, passing the effluent through coke before entering the river. The object of the architect's plan is to protect the interests of the inhabitants of the district around the new asylum. Dissatisfaction was expressed at the action of the Board of Control in Dublin in accepting a tender for the erection of a new gate lodge without having in the first instance (as is usual) sent the tenders to the board of governors in Belfast for their consideration.

May 11th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Fire at the Charity Bazaar.

IN the lamentable catastrophe of May 4th no less than 170 persons were killed and the number of the injured is as yet unknown, although it is probably about 300. The burns are of two kinds—those produced directly by contact with burning draperies or clothing or the drops of flaming tar which fell from the roof, and those due entirely to scorching from the excessive heat which penetrated through the clothing. Most of the injured show large burns on the back and limbs, burns of the second degree, produced by radiation through the clothes, although the clothes themselves are unharmed. Many deaths have occurred from pneumonia following the inspiration of superheated air, and others have died from the pneumonia so often observed to follow extensive burns under any circumstances. The number of those showing more or less defined mental disturbances is very considerable; some, for instance, cannot bear to be in an enclosed or crowded place—for instance, a full church—

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without being seized with a nervous crisis. Some of these sufferers exhibit definite injuries other than burns—namely, bruises, fractures, marks of blows from fists or sticks received in the panic-stricken rush to the doors in which some 1400 people managed to escape by two narrow doors in about seven minutes. As to the dead, all the bodies show injuries to the head, probably caused by the fall of the flaming tarred roof, and to this and the strength of the masculine hat is perhaps due the fact that of 150 bodies only 3 were those of males. The bodies presented a heart-rending spectacle: the head was either completely destroyed or in some cases only as far as the base of the skull or the teeth, the cranial cavity was laid open either by the excessive heat having scorched the bones or from the burning tar having calcined them so that they crumbled at the first shake upon moving the body. This latter theory is probably the correct one, for in many cases the brain lay by the side of the body, fresh, pink, and barely touched by fire. The abdomen in some cases was burst open by the pressure of heated gas; in nearly all the hands had disappeared and in many the very arms themselves; the feet, with their coverings, were in most cases untouched. The recognition of the bodies by their relatives was most difficult, and could only be carried out in most instances by peculiarities of dentition, and in a certain number of bodies any identification was impossible. The medical men of Paris have suffered severely by this catastrophe; two of the stalls were presided over by the wives of Dr. Péan and Dr. Feulard, and many ladies connected with the medical world were assisting them. Among the dead is Dr. Feulard himself. He had managed to get out with his wife, who was only slightly burned, but went back to look for his daughter who had been unable to follow them and was crushed by the fall of the burning roof. Dr. Feulard was a noted dermatologist, quite young, and physician to the hospital of St. Lazare. He was the organiser of the magnificent dermatological collection in the museum of the hospital of St. Louis. Another medical man among the dead was Dr. Rochet, a homœopath. Among the women who were killed were the wife and daughter of Dr. Nitot, the sister of M. Picquet the surgeon, the mother and wife of Dr. Vimont, the daughter of Dr. Simon, the daughter of Dr. Le Sourd, and the sister and niece of M. Nélaton, and many other wives of medical men were burned more or less severely.

The Recent Trial for Abortion.

The Court of Cassation has rejected the appeal of the two defendants in the recent abortion case, and has confirmed the sentence passed by the Court of Assize, a decision which has greatly astonished the medical men of Paris, who knew the numerous irregularities in the process of indictment, and how certain witnesses favourable to the accused had been prevented from giving evidence. Dr. Boisleux has gone out of his mind and has been transferred from prison to an asylum.

The Medical Associations.

There are in Paris two medical associations; to the older one belong the greater part of the medical men of the capital, and its president is the Dean of the Faculty. Its title is, "The Association of Medical Men of the Seine," but within the last four years some of the members have founded another association under the somewhat similar title of "The General Association of the Medical Men of Paris, and the Department of the Seine." The split arose upon the question of "clinics," which the older association considered should be paying institutions, but which the younger body thought should be free to open gratuitously or to demand payment at the will of the medical man in charge. The new association comprises all those specialists who are the owners of clinics, which they conduct without payment, particularly at the International Hospital, where they are at the head of affairs. A bitter newspaper war has been going on for the last four years between the two associations, all the more bitter because the members of the new association have not ceased to belong to the old one, and claim the right to be present at the meetings, and to propose revolutionary motions, and so the old association has just decided to demand the resignation of these members. But this course of action is surrounded with difficulties. The laws of the association are modelled upon those of workmen's associations which were drawn up to prevent a minority being tyrannised over by a despotic majority, which would naturally wish to free itself from hostile members by the method of expulsion. Therefore, as the law stands, no member of an association can be expelled except by the unanimous vote of the rest, unless under very exceptional circumstances, such as being a convicted felon. It has frequently happened that workmen's clubs have wished to expel the minority, and every time they have been fined and had to pay damages. Therefore, as the general law of associations governs the medical bodies it follows that the expulsion of the members of the new association would be illegal. The debate on the subject was very heated, many members tried in vain to get a hearing and bring about a reconciliation, but the majority of the old association gave a vote that after the lapse of a month the members of the new association should be considered as dismissed. It is reported that the expelled members are going to bring the matter into court.

The Medical Congress.

The annual meeting of the Ophthalmological Society and the Society of Laryngology, Otology, and Rhinology takes place this week. In the last department M. Castex read a remarkable paper on some cases from a medico-legal point of view—a subject which has received but little attention, but which is, nevertheless, important. The sittings of the Society of Ophthalmology were disturbed by the professional discussions which come up every year as to the "clinic" at the hospital of the Quinze-Vingt (Blind). This hospital was founded twenty years ago by Gambetta as an office for his friend Fienzal, and it has since become little by little an establishment under official protection to which come patients from all parts of France, both rich and poor, their expenses being defrayed by their commune. The ophthalmic surgeons, especially those in the provinces, protest against this abuse, but the public is, of course, delighted to be treated gratuitously, and the Government dare not put a stop to the abuse for fear of losing the votes of the provincial deputy. The ophthalmic surgeons who are not on the staff wish the four who are to resign their posts by way of showing a true fraternal spirit. But it is more probable that they will continue to hold their position.

May 10th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Report of the German Commission on Plague.

THE German Commission on Plague in Bombay has issued a report which is dated March 19th, and has appeared in the *Deutsche Medicinische Wochenschrift*. Professor Gaffky acted temporarily as the head of the Commission until the arrival of Professor Koch from the Cape. It reached Bombay on March 8th and immediately began work in the Municipal Buildings, where a laboratory had been already provided by Dr. Bitter, the Egyptian Commissioner. There was some difficulty in obtaining an adequate supply of subjects owing partly to the religious prejudices of the natives against post-mortem examination and partly to the number of bodies taken by the Commissions of the various foreign nations; but by the courtesy of the authorities and of Dr. Bitter, a pupil of Professor Koch, arrangements satisfactory to the German Commission were eventually made. It was very soon found that the bubonic virus in the great majority of cases penetrated into the human body through small lesions of the skin. The glands of the neighbourhood then began to swell and, when the quantity of virus absorbed was not too large, they were able to retain and to destroy it. When the bacilli were present in large quantities they made their way through the lymphatic glands and were then found everywhere in the blood and in the internal organs. This was the typical form of bubonic septicæmia. When a gland suppurated the bacilli might be removed from the body, but a dangerous septicæmia caused by streptococci might result. The bubonic bacilli were present in large quantity in the patient's urine and fæces, and in this way the virus might become spread everywhere. In another group of cases the virus was apparently absorbed by the lungs, and under these circumstances primary pneumonia was commonly found, the lungs containing plague bacilli together with diplococci and streptococci. It is obvious how dangerous the sputum of such patients must necessarily be. Primary infection from the intestinal canal was not observed in any instance, but sometimes it appeared to arise from the tonsils. The low standard of living of the native population, their dirty habits, and their objection

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to hospital treatment, were very favourable to the great spread of the epidemic, but the Europeans were almost entirely exempt. After the new Epidemic Diseases Act of 1897 came into operation the authorities took more active measures, and the special Commission under the presidency of General Gatacre displayed praiseworthy energy in providing for the compulsory removal of patients to the hospitals and for the isolation of suspicious cases in the so-called segregation camps. The report states that for the purposes of a bacteriological examination it was not sufficient to take a single drop of blood from the finger, as this method gave a satisfactory result only when the bacilli were present in very large quantity. An agar culture must be made in doubtful cases; the colonies were usually developed after forty-eight hours. The bubonic glands should not be punctured for diagnostic purposes, because of the risk of admitting the virus into the bloodvessels. The Commission found that if blood serum obtained from either persons or animals convalescent from plague was mixed in a test tube with a culture of plague bacilli it had a specific influence on them. Cultures of other bacteria treated in this way became opalescent throughout their whole extent, but the plague bacilli formed small coagula which, in course of time, fell to the bottom of the test-tube, leaving the supernatant fluid clear. This so-called "paralysis" of the bacilli was identical with that observed in the case of enteric fever and cholera, and led to the inference that artificial immunisation against plague might be possible, but the Commission has not yet finished its researches on this subject. The Commissioners state that they were unable to express a definite opinion as to the efficacy of the immunisation methods of M. Haffkine and Dr. Yersin.

ROME.

(FROM OUR OWN CORRESPONDENT.)

English-speaking Medical Practitioners in Italy.

A VERY grave measure threatens to become law in the Italian kingdom—grave as regards the English-speaking practitioner and not less grave as regards the English-speaking world. It is neither less nor more than the adoption by Italy of the exclusive legislation in which Switzerland led the way and France followed, so that no British qualification will entitle its holder to practise even among his compatriots resident on Italian soil. Yesterday in the Chamber of Deputies Dr. Santini, member for one of the electoral divisions of Rome, asked the Ministers of the Interior and of Public Instruction "if, in presence of the constant and increasing professional abuse on the part of foreign practitioners, while their Governments do not admit Italians practising abroad to reciprocity, but exact from them examination-tests and every other academic title without recognising those of Italy, their Excellencies do not think it time to modify Article 23 of the existing medical law?" Replying for the Government, Signor Serena said that a "modification in the medical law to regulate foreign practitioners exercising their profession in Italy will shortly be laid before the Chamber"—in other words, that the first step will be taken to assimilate Italian law to Swiss and French in regard to foreign practitioners. A movement in this direction has long been contemplated in Italy, but it was not till the close of last year that (as reported in THE LANCET, Dec. 19th, 1896, p. 1796) it took definite shape and course. Its promoters are not, as may well be supposed, recruited from the commercial, the railway, or the hotel-keeping interests—from the classes, that is, whose income so largely depends on the attraction of the English-speaking world to Italian soil—but (I am sorry to say) from the profession in Italy herself, represented by the "Consiglio dell' Ordine dei Medici." The innovation projected is not likely to become law without a stormy discussion first in the Chamber of Deputies and then in the higher atmosphere of the Senate, in both of which bodies there are statesmen enough to see and press home the folly of any legislation calculated to affect injuriously Italy's best customer and steadiest source of revenue. I shall keep THE LANCET informed of the progress of the measure through either House.

The Treatment of Tabes Dorsalis.

Mechanical intervention in this malady has lingered longer in continental than in British practice. Indeed, we have the high authority of Dr. W. R. Gowers for regarding suspension and nerve-stretching, "although recently fashionable," as "probably valueless." In Italy, however, the profession seems loth to resign all hope of effecting improvement at least by such or cognate means, and "flessione forzata delle gambe" (enforced flexion of the lower limbs) has rather been gaining than losing ground in treatment during the last few years. Recently adopted and recommended by the French, the Italian schools are claiming this practice as having originated with themselves, and the distinguished professor of psychiatry, neuro-pathology, and electro-therapeutics in the University of Genoa (Dr. Enrico Morselli) comes forward with an "apologia," in which the treatment itself and Italy's priority in devising it are strenuously vindicated. The following passage will interest your readers:—"Before this announcement of a 'French discovery' is repeated elsewhere, I hasten to put on record that the method alluded to is already quite familiar in Italy and, indeed, relatively old. From 1888 it was conceived and put in practice by my excellent friend Professor Bonuzzi of Verona, described by him and explained by illustrative figures in 1889, and slightly modified thereafter by Professor Benedikt of Vienna. There is no longer any neuropathologist who respects himself who has not adopted and practised it in place of the often useless and sometimes dangerous suspension. From 1892 I have practised and taught it here in Genoa in my clinique for nervous maladies, and this, not only in tabes dorsalis, but also in sciatica, in which at this very moment Professor Bonuzzi is demonstrating its advantages—advantages which I, too, have had the most recent occasion to confirm. I am waiting, indeed, till these are announced as a 'discovery' and vaunted as such by some non-Italian clinician."

Destruction of Captain Bóttego and his Column.

Yet another disaster to an Italian exploring expedition in the doubly "Dark" Continent. Yesterday, in the Chamber of Deputies, on the part of the Government, Signor Bonin gave official details of the destruction of Captain Bóttego and his expeditionary force. The importance of the expedition from a geographical and commercial point of view was immense. The "objective" was Lug on the Juba River, there to found a station in Italian Somalia, at which the rich products of the Borana and Galla countries might be made to converge for transmission to the Benadir; to explore the basins of the Gava and of the Omo, resolving the problem of the downward flow of the Juba, and to examine the regions between the Nile and Lake Rodolfo. Captain Bóttego left Brava in the Benadir on Oct. 12th, 1895; reached Lug on Nov. 18th, founded the station, started on Dec. 27th with 180 men along the Ganane and the Gava, and kept the Geographical Society informed of his successes till April 22nd, 1896, when it forwarded him news of the disasters in Abyssinia. The bearer of this reached Lug in May and started in quest of the expedition. Meanwhile indirect news of Captain Bóttego and his column as late as October last represented him as having gained the south shore of Lake Rodolfo on his return journey, and further tidings reached London that he was making for the coast of the Indian Ocean, till on April 23rd King Menelik received a despatch announcing that on the Ethiopian frontier towards Baro Captain Bóttego had come into conflict with a native tribe and had been killed, that two other Italians were made prisoners, and that the fourth Italian member of the expedition had not been heard of. Whether this is the medical officer Professor Maurizio Sacchi, whose high accomplishments in nature-study were expected to find a precious field in the explorations, is not yet known; he may possibly be one of the two prisoners. And this is all that is yet ascertained to relieve the agony of suspense in which Italy is condemned to remain, for who knows how long a period. Signor Bonin's narrative, of which I give the merest sketch, was heard with breathless interest by the Chamber, which passed a resolution expressing heartfelt condolence with the octogenarian father of the bright and brave Captain Bóttego.

May 7th.

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AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Infectious Diseases Hospital for Melbourne.

THE necessity of establishing in Melbourne a hospital for the isolation and treatment of infectious diseases has long been felt to be urgent, and it has been now decided to erect such an institution as a memorial of Her Majesty's Diamond Jubilee. A large public meeting was held in the Melbourne Town Hall on March 27th, His Excellency the Governor presiding, at which it was resolved that the best means of commemorating the long and glorious reign of Queen Victoria was by the establishment of an Infectious Fever Hospital. It is proposed to raise about £20,000 for the building and equipment of the institution, the maintenance of which will devolve upon the municipalities in accordance with the Health Act. A very large and influential central committee has been formed to collect the necessary funds, and local committees are to be formed throughout the colony. A large sum has already been given, including a donation of £1000 from the proprietors of the *Melbourne Argus*, and the Government has promised to give a suitable piece of ground as a site for the building.

The Quarantine Arrangements for Melbourne.

The Board of Health of Victoria has forwarded to the Minister of Health a lengthy report on the quarantine arrangements. The Board states that the sanatorium for small-pox patients is in a most unsatisfactory condition. The land is undrained, and there is no proper method for disposing of waste and fouled water. The huts which serve as wards are cold, draughty, improperly ventilated—the in-door air being contaminated by soil emanations—and most inadequately lighted. There are no proper arrangements for cooking, bathing, or disinfecting, and the wood and felt construction of the buildings make it impossible to thoroughly disinfect the wards. No appliances have been provided for extinguishing fire, and the want of a well-drained exercise-ground has a depressing effect upon convalescents. Finally, the accommodation is wholly inadequate. The board also urges that the salary of each of the two port health officers at Williamstown should be raised to £300 per annum, and that the salary of the health officer at "The Heads" should be £600 per annum, and that he should not be allowed to engage in private practice, but might occasionally exchange positions with the medical inspector of the board. The Government has decided to give only £500 a year for the last position, and is considering the other matters in the report.

Sanitary Conditions of State Schools and Railway Stations in Victoria.

At the last meeting of the newly-formed Society of Medical Officers of Health of Victoria a report was submitted on the Sanitary Condition of the State Schools and Railway Stations in Country Districts. The supply of drinking water especially was bad. Hardly any of the schools were provided with filters; in many cases the supply was from underground tanks adjacent to urinals, and the same occurred at railway stations. At one station "the water-supply is obtained from the river, and the drainage from the urinal at the station enters the river within a couple of yards above where the water is pumped for the station supply," which is not filtered. The local health officer had reported the matter to the local board of health without avail. The report also stated that as a rule the schools were imperfectly ventilated, and in many instances had not proper drainage. The walls of many of the class-rooms wanted cleaning, having gone without lime-washing for four or five years. Cases of ringworm and ophthalmia were frequent among the scholars, and it could readily be understood how they were transmitted under such conditions, especially in a school where, with an average daily attendance of 800 pupils, a single towel was in use.

Proposed Sanatoria for Consumptives in Queensland.

In reply to a deputation from the Queensland Medical Society asking that sanatoria for consumptives should be established in several suitable country districts, the Home Secretary said he would do what he could in the matter and that he sympathised with the views of the deputation. Arrangements have been made for the establishment of a ward for consumption at the hospital at Roma and also at Dalby. In a paper on the Climatic Treatment of Consumption in Queensland Dr. D. Hardie points out that Dalby, Roma, and Charleville, in South-western Queensland, are admirably suited for the treatment of phthisis during the hot months from October to April, as also a high altitude station, Stanthorpe on the Dividing Range, and that Mount Tambourine, in South-eastern Queensland, is *par excellence* the station best suited for early cases during the cooler months from May to September.

Cold Bath Treatment of Typhoid Fever.

Dr. F. E. Hare has published the statistics of ten years' experience of Brand's system of the cold-bath treatment of typhoid fever at the Brisbane Hospital. The results for five years previously to the introduction of the system gave a mortality of 14·8 per cent.; for the ten years under review a mortality of 7·5 per cent. The reduction was in cases dying from other causes than perforation and hæmorrhage, the percentage mortality from these two causes remaining practically unaltered, and the same as that given by Murchison. The series of 1902 cases included every case admitted, and consequently many cases that were not bathed at all, either because it was contra-indicated, or because they were moribund on admission, or because the pyrexia was not sufficiently high; it was therefore essentially a hospital typhoid death-rate.

Obituary.

WALTER RIVINGTON, M.B., M.S. LOND., F.R.C.S. ENG.,

FELLOW OF THE UNIVERSITY OF LONDON, MEMBER OF THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND, AND CONSULTING SURGEON TO THE LONDON HOSPITAL.

BY the death of Mr. Walter Rivington, which occurred on Saturday evening last at his country house at Epping, the medical world has lost a prominent figure, and all the causes which can be generically implied by the term "medical reform" an ardent advocate.

Walter Rivington was born in December, 1835, at Highgate, and had consequently reached the age of sixty-one at his death. His father, Mr. George Rivington, was a member of the well-known publishing firm of Rivington and Co. He was educated at Sheffield Collegiate School under the late Dr. G. A. Jacob, afterwards head-master of Christ's Hospital, and proceeded thence to London University, where he had a distinguished career, being an indefatigable prize-winner. He graduated in 1858 in Arts, and five years later proceeded to the degree of Bachelor of Medicine, which he took with honours, being awarded the Gold Medal. In the following year—that is, in 1864—he took the degree of Master of Surgery, again obtaining the gold medal of the University. In the meantime he was walking the wards of the London Hospital, his choice of a medical school being determined by the fact that his cousin, T. B. Curling, was surgeon to the great Whitechapel hospital. At the same time, in accordance with the very commonly followed custom of the day, he was serving his indentures with a general practitioner at Stepney. While a student at the London Hospital he shared rooms with the late Sir Morell Mackenzie, for whom he always entertained a sincere regard, and both young men were frequent speakers at the London Hospital Debating Society. At the hospital Walter Rivington showed exceptional brilliancy as a student, and upon becoming qualified as M.R.C.S. in 1859, he was appointed house surgeon. In 1863, having taken the Fellowship of the College, after a brief service with the Peninsular and Oriental Steam Navigation Company, he was elected to fill the posts of assistant surgeon and demonstrator of anatomy, succeeding to the vacancy caused by the promotion of Mr. Jonathan Hutchinson to the full staff. During the tenure of these posts he displayed great energy, and his services as a teacher in the latter capacity were so much appreciated by the students that they presented him with a testimonial. In 1865 he was appointed lecturer on anatomy in succession to John Adams, a post he held until 1884, when he resigned upon taking up the lectureship on surgery. He could have received this appointment earlier, but preferred the lectureship in anatomy.

In 1870 he was appointed full surgeon, and held the post for the regulation period of twenty years, when he was made consulting surgeon; and with his retirement from the active staff his lectureship in surgery came to an end in 1890. At one time he devoted himself to the study of aural surgery

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and was the first aural surgeon with a special department; but after a time he discontinued the practice of aural surgery as a special study. He succeeded John Adams as secretary to the London Hospital Club, a body of which he was the moving spirit up to the time of his death, having held the secretaryship for some thirty years. He was thus a bond between various generations of students, keeping alive the hospital traditions; and his eminent services to the club and the hospital were, a few years ago, recognised by a dinner given in his honour, at which a present was made to him of a handsome service of plate. For several years, also, he was dean of the medical school, and made great efforts to promote its success by the institution of entrance scholarships. As a lecturer he was able, impressive, and humorous, and exceedingly popular with the students. He was gifted with an extraordinary memory, and upon several occasions—notably that of his introductory address at the opening of the Medical College and his oration at the Hunterian Society—he committed his addresses to memory, after carefully writing them out, and delivered the whole from beginning to end without hesitation. The former oration will be remembered by some of the older students of the hospital as one of the most strong and eloquent addresses to which they ever listened.

As an operating surgeon it must be allowed that Mr. Rivington made no decided mark, though he could be on occasions very brilliant; and a certain absent-mindedness, which was very characteristic, made him an unequal teacher at the bedside. His enormous experience made him, when his interest was aroused, most instructive, but there were times when he did not seem called upon to exert his undoubtedly high gifts of exposition and lucid description. His professional writings, which were fairly numerous, were characterised by extreme care and thoroughness; and his essays on "Rupture of the Urinary Bladder" and "Tumours of the Orbit," which were reprinted, formed exhaustive digests of their subjects at the time of their publication. His most important, in one sense, and voluminous writings were the two Carmichael Prize essays of the Royal College of Surgeons in Ireland, the one published in 1879 and the other in 1887. The subject of both was the same—namely, "The Medical Profession," and they dealt with the history of the profession from the earliest times until the date of publication. They form perhaps the only complete account of the history, development, character, and laws relating to the medical profession in existence, and the essay bearing the date 1887 is characterised by the most extreme historical and verbal accuracy.

From 1879 to 1883 Mr. Rivington was an examiner to the Royal College of Surgeons of England, and in 1891 he was elected to the Council of the College, standing as the candidate of the reform party. On the Council he was faithful to his pledges, his voice and vote being immediately exercised in behalf of obtaining for the Members of the College a share in the management of their own collegiate affairs. Last year it will be remembered that Mr. Rivington came forward as a candidate for a seat upon the General Medical Council as a direct representative of the profession, and he used his known views on the subject of corporate representation on the Council of the Royal College of Surgeons of England as an admirable argument why he should be supported by one very large class of the profession in England. He considered that the representative of the Royal College of Surgeons of England upon the General Medical Council was no true representative of the College because he was selected by a Council not itself chosen by the corporation but only by a select class of the corporation, and his election literature addressed to the Members of the College seeking their suffrages was excellently clear and outspoken. Had Mr. Rivington been earlier in the field he would perhaps have obtained a seat.

Mr. Rivington's love of justice and his pertinacity against opposition were never better shown than in his ardent espousal of the cause of Mr. R. B. Anderson, as put forward by the Civil Rights Defence Committee. Appointed by the Royal College of Surgeons of England as one of their representatives on that body Mr. Rivington never ceased to urge upon the College the necessity of granting something more than academic support to a movement which used as the main justification for its existence the necessity of defending the professional well-being of one of the Fellows of the College.

Mr. Rivington was for the past three or four years a member of the Annual Committee of Convocation of the University of London, and was a consistent opponent of the scheme for altering its constitution as recommended by the Cowper Commission. He held that by this scheme the real governing body would be a small Academic Council; that the powers of Convocation would be altogether taken away; that there was danger that the standard of examinations would be lowered and that the Imperial character of the University would be forfeited. In June, 1896, he was nominated for the Fellowship of the University in opposition to Sir Joseph Lister, who strongly supported the scheme for the re-constitution of the University into a teaching body. Mr. Rivington was elected by 963 votes against 846.

From the foregoing short memoir it will be seen that Mr. Rivington was a man of marked and generous character. An exceedingly determined man he ran the risk of appearing over-pertinacious and even obstinate; but his efforts were always directed towards effecting what he believed to be reforms and were singularly free from all taint of selfishness. He was deeply aware of the necessity for the amelioration of many of the conditions now existent in the professional life of his poorer brethren, and he spared himself no trouble to make his beliefs shared by others.

HENRY VANDYKE CARTER, M.D. LOND., M.R.C.S. ENG.

DR. HENRY VANDYKE CARTER, Deputy Surgeon-General, I.M.S., and honorary surgeon to the Queen, died at his residence at Scarborough on May 4th. Born on May 22nd, 1831, he was the son of the late Mr. Henry Barlow Carter and brother of the late Mr. Joseph Newington Carter, both well-known artists. He received his early education at the Hull Grammar School under his uncle, the late Mr. John Dawson Sollitt, the friend of Lindley Murray, the grammarian, and himself a man of considerable literary and scientific attainments. While at this school Dr. Carter is said to have received that bent in science in which he afterwards became so distinguished. After leaving the grammar school Mr. Carter studied for some time at St. George's Hospital, London, and became a Member of the Royal College of Surgeons of England and Licentiate of the Society of Apothecaries of London. in 1852 Four years afterwards he graduated M.D. at the University of London. On Jan. 27th, 1858, he was appointed Assistant Surgeon in Her Majesty's Indian Medical Service.

In India he was appointed professor of anatomy and physiology at the Grant Medical College, and it was here that the principal part of his life's work was done. The part which he played in the scheme, approved by Lord Reay, of appointing honorary physicians and surgeons to the Sir Jamsetjee Jeejeebhoy Hospital was an important one, and Lord Reay found in him a warm supporter of medical reform. His interest in the spread of medical education in India is shown by the fact that on his retirement he made a donation of 10,000 rupees to the Grant Medical College to found a lectureship in physiology to be named after Lord Reay. During the Indian famine of 1876–80 large numbers of starving people came to Bombay in search of food and work, and a disease which at that time appeared to be quite new to the medical profession of this country broke out among them, and was recognised by Dr. Carter as relapsing fever. After repeated investigations he published "Spirillum Fever—Synonyms, Famine or Relapsing Fever, as seen in Western India," with plates (London, 1882, 8vo.), for which work he gained the Stewart Pathological Prize of £500 awarded by the British Medical Association. Among his other published works may be mentioned "On Microscopic Structure, &c., of Calculi," "Mycetoma; or, the Fungus Disease of India," and "Leprosy and Elephantiasis." The value of his researches in leprosy was recognised by the British Government and he was officially sent to Norway to inquire into the cause of leprosy in that country.

Dr. Carter inherited some of the talent of his father and was an artist as well as a medical man. The merits of his work as an illustrator of Gray's Anatomy will be known to most medical men.

Medical News.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS.—The following candidates have passed the fourth professional examination in the subjects indicated:—

Completed the Examination.—H. E. V. Blake, J. J. F. Bourke, J. G. Cookman, H. E. Eardley, J. R. Hewetson, J. O'M. Irwin, W. J.

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Keane, G. G. H. Moorhead, J. D. Murdoch, Thos. J. Potter, C. J. Powell, A. W. Sampey, and V. B. Taylor.
Medicine.—W. M. Jones, J.M. Longford and B. R. Phillipson.
Surgery.—J. M. Longford.
Midwifery.—W. C. W. Glenny.
Ophthalmology.—D. F. Clarke, W. M. Jones, C. J. D. Odevaine and B. R. Phillipson.
Hygiene, &c.—L. E. Fannin.

The following candidate has passed the examination for the Diploma in State Medicine :—

Thomas Carr, M.D. Durh., M.R.C.S. Eng., &c.

UNIVERSITY OF CAMBRIDGE.—At the third examination for the degrees of M.B. and B.C., Part II. (Medicine, &c.), the following were examined and approved (all the candidates being Bachelors of Arts) :—

Barraclough, Christ's; Bumsted, St. John's; Cayley, Trinity; Cooper, Emmanuel; Delbruck, King's; Dove, Christ's; Heywood, Emmanuel; Houseman, Clare; Hughes, Caius; Hutchinson, Trinity; McDougall, St. John's; Mackenzie, Caius; Muir, Emmanuel; Myers, Caius; Pendlebury, Pembroke; Porter, Emmanuel; Robinson, Caius; Stead, Caius; Turner, Emmanuel; Twigg, Christ's; Ward, Selwyn; and Watson, Peterhouse.

On May 7th twenty-five new students were admitted to the University, making the total entry for the year 949. Examinations for science scholarships and exhibitions for candidates not yet in residence will this year be held by St. John's, Trinity, Pembroke, Gonville and Caius, King's, Jesus, Christ's, and Emmanuel Colleges on Nov. 2nd. The examinations at St. Peter's and Sidney Colleges will begin on Nov. 30th, and at Clare and Trinity Hall on Dec. 7th. Details may be learned on application to the tutors of these Colleges. The deputy Professor of Pathology, Dr. A. A. Kanthack, M.A., of St. John's College, has been appointed Pathologist to Addenbrooke's Hospital. The agitation with regard to women's degrees is being conducted with increasing zeal. The Vice-Chancellor has received a memorial signed by 2100 resident "persons *in statu pupillari*," protesting against the grant, and a counter memorial signed by 298 in its favour. A notice of *non placet* in the name of some 280 resident masters and doctors has been issued; the list appears to include most of the medical teachers, and about 110 tutors and lecturers. Entirely new arrangements for the recording of the votes, which are expected to number 3000, are being made at the Senate House, where the decision will be taken on May 21st between 1 and 3 P.M.

ROYAL COLLEGE OF SURGEONS IN IRELAND. At a meeting of the President, Vice-President, and Council, held on May 4th, the following examiners were elected for one year:—Anatomy: John Barton, F.R.C.S., and Alexander Fraser, F.R.C.S. Surgery: Arthur Chance, F.R.C.S., and R. Glasgow Patteson, F.R.C.S. Physiology and Histology: J. Alfred Scott, F.R.C.S., and Charles Coppinger, F.R.C.S. Biology: J. Alfred Scott, F.R.C.S., and George Burbridge White, F.R.C.S. Pathology: Edward H. Taylor, F.R.C.S., and John J. Burgess, F.R.C.S. Midwifery and Gynæcology: Richard T. Hearn, F.R.C.S. Ophthalmology: Patrick Wm. Maxwell, F.R.C.S., and John Benjamin Story, F.R.C.S. Sanitary Law and Vital Statistics: D. Edgar Flinn, F.R.C.S. Bacteriology: J. Alfred Scott, F.R.C.S. Engineering and Architecture: J. Charles Wilmot, C.E. Dental Surgery and Pathology: Arthur W. W. Baker, F.R.C.S., and R. Theodore Stack, F.R.C.S. Mechanical Dentistry: Shenstone J. Bishop, L.D.S. R.C.S., and George W. Yeates, L.D.S. R.C.S. Chemistry and Physics: J. Dallas Pratt, F.R.C.S., and Edwin Lapper, F.R.C.P. Languages: L. J. Woodroffe, M.A. Mathematics, Physics, Dictation, and English Essay: J. W. Tristram M.A.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Krocker, the chief medical officer of the garrison, and Dr. D. Hansemann, *privat-docent* of Gynæcology, have been granted the title of Professor.—Dr. Paul Strassmann has qualified as *privat-docent* in Gynæcology.—*Bonn:* Dr. Kruse, *privat-docent*, has been granted the title of Professor.—*Budapest:* Dr. Alexander Korányi, *privat-docent* of internal medicine, has been appointed Extraordinary Professor.—*Cracow:* Dr. Julian Nowak, of Vienna, has qualified as a *privat-docent* of Pathological Anatomy.—*Halle:* Dr. Sobernheim has qualified as *privat-docent* of Hygiene.—*Geneva:* Dr. J. L. Prevost, Professor of Therapeutics, has been appointed Professor of Physiology, in succession to the late Dr. Schiff.—*Kazan:* Prince Argutinski-Dolgoruki, Extraordinary Professor of Pediatrics, has been promoted to the rank of Ordinary Professor.—*Lemberg:* Dr. Louis Rydygier, of Cracow, has been appointed Professor of Clinical Surgery.—*Philadelphia Polyclinic:* Dr. Addinell Hewson and Dr. Joseph S. Gibb have been appointed Professors of Anatomy and Laryngology respectively.—*Strasburg:* Dr. Ernst Levy, *privat-docent* of Internal Medicine and Bacteriology, has been promoted to an Extraordinary Professorship of those subjects.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting on May 7th, the President, Dr. R. Sydney Marsden, being in the chair, the following cases were shown:—Dr. Blood: (1) Cases of Squint; (2) Cataract Extractions; (3) Congenital Absence of Iris in Mother and Child. Mr. Shears: (1) Two Cases of Interstitial Keratitis; (2) Case of Hereditary Optic Atrophy; (3) Case of Specific Choroido-retinitis; (4) Extreme Hyperæmia of Both Discs due to hypermetropic astigmatism and closely simulating optic neuritis of disease. Mr. Stansfield: (1) Ligature of Internal Saphenous Vein for intractable Varicose Ulcer; (2) Skiagraph of Cranium; (3) Case of Umbilical Hernia. Dr. Carden Pearson: (1) Varicose Veins of Thorax; (2) Successful Case of Ligature of Innominate Artery for Subclavian Aneurysm. Mr. Stewart: (1) Rodent Ulcer of Eyelid; (2) Ulceration of Tonsil; (3) Chronic Hydrocephalus in a boy aged eleven years. Mr. Laird Pearson: Plastic Operation for Repair of Hare-lip in a grown-up child.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Owens College, Manchester, on April 23rd, Mr. H. Briggs, President, being in the chair.—Dr. T. B. Grimsdale (Liverpool) narrated a case of Atresia Vaginæ together with Double Hæmatometra and Double Hæmatocolpos. The patient was sixteen years of age. She complained of pain in the lower abdomen and sacral region and had never menstruated. She had passed "yellow jelly" from the bowel. She was well nourished and well developed. The external genitals were well formed. An opening which had the appearance of the vaginal orifice admitted one finger into the bladder. This was really a cul-de-sac about half an inch deep, into which the urethra opened. An operation was performed and the condition relieved by a central perineal incision. The condition found at the operation was atresia of the lower portion of the vagina—about two-thirds; above this the vagina was double and each vagina led into a separate uterus, all these cavities being distended with blood. At a subsequent date the condition was verified to be uterus didelphys and vagina duplex.—Dr. Gemmell (Liverpool) related a case of Puerperal Septicæmia from an unusual cause. On the ninth day after delivery the patient's temperature went up to 104° F. The interior of the uterus was quite clean and smooth, but there was an abscess cavity in the pouch of Douglas from which sloughs came away. There was no pelvic cellulitis.

BRITISH ORTHOPÆDIC SOCIETY.—A meeting of this society wes held on March 12th at the West London Hospital, Mr. C. B. Keetley being in the chair.—Mr. Jackson Clarke showed a case of Spontaneous Inward Displacement of the Scaphoid Bone unaccompanied by Flat-foot, but attended with a good deal of pain. There was also a distinct depression externally to the scaphoid bone.—Mr. Tubby described a similar case in which he had, after failure of other means, chiselled off the prominence of the scaphoid.—Mr. Muirhead Little thought that the condition was similar to that described by Schäffer under the title of "non-deforming flat-foot."—Mr. Noble Smith drew attention to the accounts of the immediate reduction of the deformity arising from Pott's disease as practised by Dr. Calot, and he questioned if it were possible that such a procedure had been followed by the results described. As showing the possibility of a very large gap in the spinal column becoming filled by bone, he alluded to a specimen of his own which had been filled up with soft new bone.—Mr. Robert Jones mentioned certain cases in which attempts at forcible straightening had been followed by disastrous results.—Mr. Luke Freer described a simple instrument for cases of Hallux Valgus.—Mr. Keetley showed a girl, aged thirteen years, on whom he had operated for Congenital Dislocation of the Hip three months previously. After extension and division of the contracted muscles he had opened the capsule of the joint and gouged out a new acetabulum. There was now shortening of an inch and a quarter, with a good deal of flexion movement, but no upward displacement of the femur could be obtained.

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Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Duty on Tea.

IN the House of Commons on Monday, May 10th, a proposal was made to reduce the duty on tea from 4*d.* to 2*d.* per lb., but the Chancellor of the Exchequer and the Government opposed it, and it was rejected by a very large majority. In the course of his speech the Chancellor of the Exchequer called attention to the fall in the price of tea in recent years, and with regard to the quantity consumed by the population of the United Kingdom he said it had increased from 4·51 lb. per head in 1875-76 to 5·24 lb. per head last year.

HOUSE OF COMMONS.

THURSDAY, MAY 6TH.

London Hospital Medical School.

Mr. MacNeill asked the Secretary of State for the Home Department whether the London Hospital Medical School was registered under 39 and 40 Vic., cap. 77, in the years 1895 and 1896 for the performance of experiments on living animals; whether the Government inspector in his report, dated July 5th, 1896, stated "that the names of all those 'licensed places' to which licensees were accredited were given in the tables"; and whether, having regard to the fact that the London Hospital had been omitted from the tables of the Government inspector's report for the year 1895, the Home Secretary would order an amended report of the experiments on living animals to be issued which should be accurate.—Sir Matthew White Ridley said that the answer to the first two paragraphs of the question was in the affirmative. There had been no inaccuracy, however, in the return. The hon. member would find the London Hospital mentioned in the footnotes to Table I. on pages 13 and 15. He must certainly decline to issue an amended table, but to meet what he imagined were the hon. member's wishes he had directed that in future returns all registered premises should appear in the body of the table, whether or not any experiments were performed in them.

Marching Powers of the Guards.

Mr. Arnold Forster asked the Under Secretary of State for War whether it was a fact that after six days' route marching undertaken by battalions in the Brigade of Guards 220 men of the 2nd Grenadiers were reported sick and 12 men of the 2nd Coldstream Guards; what was the total marching-out strength of the battalions referred to; and how many of the men in each were respectively long-service men, short-service men, or men enlisted for three years.—Mr. Brodrick replied that the facts were not as stated. The 220 men of the Grenadiers were the total number who during the six days in question were for any cause seen by the medical officer. No record of such men was kept by the Coldstream Guards. The number who fell out was 22 in the Grenadiers and 6 in the Coldstreams, and the admissions to hospital were severally 17 and 6. The marching-out strength was 1460 Grenadiers and 980 Coldstreams. The three-year men numbered 576, the seven-year men 789, and there were 145 men of more than seven years' service, but these only referred to the 1st and 2nd Battalions of the Grenadier Guards and to the 2nd Battalion of the Coldstream Guards. The similar returns of the 3rd Grenadiers and 1st Coldstreams had not been received.

Pulmonary Complaints in the Navy.

Captain Phillpotts asked the First Lord of the Admiralty whether, out of a batch of 80 men surveyed at Haslar Hospital and found unfit for further service in Her Majesty's navy, the majority were young stokers with less than six months' service who were incapacitated by pulmonary complaints; and if the Government had any plan to check the development of such diseases among this class.—Mr. Goschen said he had seen a statement to the effect of the hon. and gallant member's question, but it was entirely incorrect, and he regretted its publication as tending to create apprehensions for which there was no foundation. The statement suggested that out of 80 men surveyed the majority were young stokers with less than six months' service incapacitated by pulmonary complaints. As a matter of fact, out of 76 men and boys who were invalided at Haslar last month on the occasion in question only 18 were stokers, and of these both young and old only 8 were found unfit on account of pulmonary disease. Of these 8, 5 were twenty-two years of age and upwards.

Nursing in Scottish Prisons.

Mr. Hedderwick asked the Lord Advocate whether, under the present Scots prison system, prisoners on the sick list were dependent for nursing solely upon the offices of any two fellow criminals (without test of knowledge or capacity) who might happen to be placed in the same cell; and if so, whether, having regard to the fact that this system had been condemned and abolished both in England and Ireland, he would take steps to secure its abolition in Scotland also, and the substitution in lieu thereof of adequate provision for the proper nursing of sick prisoners by trained infirmary warders or otherwise.—The Lord Advocate replied that the hon. member had been misinformed. Special "nurse" warders were appointed where necessary. In other cases nursing duties were performed either by the ordinary warder staff or by specially selected prisoners. When prisoners were very ill there was power to send them to a hospital with the assent of the sheriff. The existing system worked satisfactorily, and he saw no reason for altering it.

Precautions against Fire.

Mr. Aird asked the Secretary of State for the Home Department if, having regard to the terrible calamity in Paris, he would be willing to appoint a committee or a commission to consider the desirability of some further measures being taken for the safety of the public in this country, not only for theatres but for public meetings and bazaars.—Sir Matthew White Ridley replied that he believed this important question had already been considered by more than one committee, including the Select Committee of 1892, and he could not say that at present it seemed to him to be necessary to have a fresh inquiry. He would carefully consider, however, the question of whether any, or what, legislation could be introduced further on with the view of securing the public so far as might be possible against the occurrence of any such terrible disaster as had happened in Paris.—Mr. Aird asked whether the Home Secretary was aware that at the present time there was no control whatsoever as regards inspection of bazaars against fires.—Sir Matthew White Ridley said he was quite aware that there was no control except over places which happen to be licensed for other purposes, when it was possible to attach to the licence a condition which ensured some security for life against fire. But it was a very difficult question upon which to legislate, and he could not see at present that as far as regards the information he had, which had been supplied by the various committees of inquiry, there was any necessity for further investigation. That there ought to be some legislation he thought was very possible, and to that he was prepared to give his most earnest attention.

TUESDAY, MAY 11TH.

Sanitation at Aldershot.

Sir Walter Foster asked the Under Secretary of State for War, whether he was aware that the Aldershot Camp Sewage Farm, although much improved in its general condition, was still unsatisfactory as regards the character of the effluent; and, whether it was the intention of the authorities to expend the extra money necessary to render the present farm successful; or whether it was intended to remove the operations to another site at a greater distance from the camp.—Mr. Brodrick said that this subject, which was a very difficult one, and had been discussed with reference to the treatment of the sewage of the town as well as of the camp, was still under consideration, and there were some points which were not yet cleared up, but the Secretary of State hoped to arrive at a decision very shortly.

WEDNESDAY, MAY 12TH.

Sunday Closing in Ireland.

At this sitting the House gave a second reading to a Bill to extend Sunday closing of public-houses to the five exempted towns in Ireland of Dublin, Belfast, Cork, Waterford, and Limerick, and to increase the *bonâ fide* qualification from three to six miles.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ALLPORT, WILFRID, M.B., B.S. Lond., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Surgeon to the Queen's Hospital, Birmingham.

ASHE, C. S., M.B., B.S. Vict., has been appointed Junior Resident Assistant Medical Officer for the Crumpsall Workhouse, Manchester Township.

BADOCK A., M.B, B.S. Durh., has been appointed a Resident Medical Officer for the Williams District, Western Australia.

BEESTON, JAS. L, L.K.Q.C.P. Irel., M.R.C.S., has been appointed an Honorary Medical Officer to the Newcastle Hospital, New South Wales.

BREMNER, D. C., M.B., C.M. Edin., has been appointed Medical Officer for the Workhouse and the Bishop's Castle No. 1 Sanitary District of the Clun Union.

CLARKE, WM., M.R.C.S. Eng., has been appointed an Honorary Medical Officer to the Newcastle Hospital, New South Wales.

COWIE, R. M., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to King's College Hospital.

DAVIES, H. A. B., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed a Public Vaccinator for South Australia.

DENNIS, G. E., M.B., Ch.B. Melb., has been appointed a Resident Medical Officer for Esperance, Western Australia.

DICK, JAS. A., M.D. Edin., has been re-appointed an Honorary Visiting Medical Officer to the Asylum at Randwick, New South Wales.

DIXSON, T. S., M.B., Ch.M. Edin., has been re-appointed an Honorary Consulting Physician to the Asylum at Randwick, New South Wales.

EAMES, W. L., M.B., Ch.B. Dubl., has been appointed an Honorary Medical Officer to the Newcastle Hospital, New South Wales.

ERHARDT, C. C. J., M.R.C.S., L.R.C.P. Lond., has been appointed House Accoucheur to King's College Hospital.

EVANS, THOS., M.R.C.S. Eng., has been re-appointed an Honorary Consulting Surgeon to the Asylum at Randwick, New South Wales.

FLUX, GEORGE, M.D. Brux., M.R.C.S., L.R.C.P., L.S.A., has been appointed Anæsthetist to the British Lying-in-Hospital, Endell-street, Long-acre, London.

FOX, R. A., M.B., M.S. Edin., has been appointed an Assistant Medical Officer for the Lunatic Asylum at Auckland, New Zealand.

GALLOWAY, A. RUDOLF, M.A., M.B., C.M. Aberd., has been appointed Surgeon to the Aberdeen Ophthalmic Institution, vice Jas. McKenzie Davidson, resigned.

GLADSTONE, HOWARD B., M.B., M.S. Edin., has been appointed House Physician to the Bradford Infirmary, vice C. Carew Webb, resigned.

GREENWOOD, FRANK R., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed House Physician to the Queen's Hospital, Birmingham.

HARRISON, WM. H., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer of Health for Gladstone, South Australia.

HASSLACHER, F. J., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to King's College Hospital.

HESTOR, J. W., M.B., Ch.M. Syd., has been appointed an Honorary Medical Officer to the Newcastle Hospital, New South Wales.

HUMPHRY, ERNEST, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Health and Medical Officer for Townsville, Queensland.

IRWIN, WM., M.B., M.S. Glasg., has been appointed an Honorary Medical Officer to the Newcastle Hospital, New South Wales.

JACOB, F. H., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to King's College Hospital.

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JAMES, M. B., M.B., Ch.B. Vict., has been appointed an Assistant Medical Officer for the Highgate Infirmary, vice S. C. Smith, resigned.

JOYCE, J. F., L.R.C.P., L.R.C.S. Edin., has been appointed Officer of Health for the Shire of Poowong and Jeetho, Victoria, Australia.

KELLOCK, T. H., M.A., F.R.C.S., has been appointed Assistant Surgeon to the Hospital for Sick Children, Great Ormond-street, Bloomsbury.

KELLOCK, T. H., F.R.C.S., has been appointed Assistant Surgeon to the Middlesex Hospital, vice L. Hudson, deceased.

LUDLOW, V. E., L.K.Q.C.P., L.R.C.S. Irel., has been appointed an Honorary Medical Officer to the Newcastle Hospital, New South Wales.

LYNCH, F. S., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Physician to King's College Hospital.

MACDONNELL, L. G., M.B., Ch.B. Dubl., has been appointed a Visiting Surgeon to the Herberton Gaol, Queensland.

MACMAHON, J. ROSS, M.B., C.M. Aberd., has been appointed Clinical Assistant to the St. John's Hospital for Diseases of the Skin.

MARGAREY, S. J., M.D. Melb., has been appointed a Public Vaccinator for South Australia.

MARTIN, JAMES S., M.B., C.M. Edin., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed a Junior House Surgeon to the Sheffield General Infirmary.

MEGGS, THEODORE HUGH EGBERT, M.R.C.S., L.R.C.P., has been appointed Medical Officer to the Eton Union Workhouse and the Upton-cum-Chalvey District, vice W. W. Buée, retired.

MONIER-WILLIAMS, M., M.R.C.S., M.R.C.P. Lond., has been appointed Clinical Assistant to the St. John's Hospital for Diseases of the Skin.

MORTON, JAS. C., M.B. Melb., has been appointed Officer of Health for Broadford Shire, Victoria, Australia.

NICKSON, W. J. R., M.D. Dubl., Ch.B., has been appointed an Honorary Medical Officer to the Newcastle Hospital, New South Wales.

PAGET, STEPHEN, F.R.C.S., has been appointed Surgeon to the Throat and Ear Department of the Middlesex Hospital.

PARDEY, JAS. M'I., M.B., Ch.B. Melb., has been appointed (*pro tem.*) Health Officer for the Port of Launceston, Tasmania.

ROBIN, V. J. R., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Health and Medical Officer for Port Douglas, Queensland.

ROBINSON, THOMAS, M.R.C.S. Eng., L.R.C.P. Lond., D.P.H. Camb., has been appointed Medical Officer of Health for the Borough of Burton-on-Trent.

ROTH, W. E., M.R.C.S. Eng., has been appointed a Visiting Surgeon to the Normanton Prison, Queensland.

RUTHERFORD, JOHN V. W., M.B., C.M. Edin., M.R.C.S. Eng., has been appointed Assistant Surgeon to the Royal Infirmary, Newcastle-on-Tyne.

SALTER, G. H., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed Officer of Health for Ballan Shire, Central Riding, Victoria, Australia.

SHUTER, R. E., M.B., Ch.B. Melb., has been appointed Health Officer for Port Augusta, South Australia.

SMITH, A. G., M.D. Aberd., C.M., has been appointed Medical Officer to the boarded-out patients belonging to Dundee Parish in the Newtyle District, Coupar Angus, vice D. M. Mills, resigned.

SMITH, E. TEMPLE, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Obstetric and Ophthalmic House Surgeon to the Queen's Hospital, Birmingham.

SMITH, WILLIAM E., M.B., C.M. Edin., has been appointed Junior House Surgeon to the Royal Eye Hospital, Manchester.

SMITH, G. U., M.B. Lond., has been appointed House Physician to King's College Hospital.

SQUIRE, M. F., M.B., B.S. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Paddington Workhouse and Assistant to the Medical Superintendent of the Infirmary.

STAMPER, G. C., M.R.C.S., has been appointed Medical Officer for the No. 4 Sanitary District of the Pembroke Union.

SUTTON, T. S., M.R.C.S., has been appointed Medical Officer for the Norbury Sanitary District of the Clun Union.

THOMAS, JOHN T., L.R.C.P., D.P.H., M.O.H., has been appointed Medical Officer to the Lowestoft School Board.

THOMAS, C. E., M.R.C.S. Eng., has been appointed a Public Vaccinator for Timaru, New Zealand.

THOMSON, JOHN, M.B., Ch.M. Edin., has been appointed an Examiner of Members of the Police Force, Queensland.

TRELOAR, R. H., M.D. U.S.A., L.K.Q.C.P. Irel., has been appointed an Honorary Medical Officer to the Newcastle Hospital, New South Wales.

TURNER, B. R., L.S.A., has been appointed Assistant House Accoucheur to King's College Hospital.

WALKER, S. R., M.R.C.S., L.R.C.P., has been appointed Assistant House Surgeon to the Westminster Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BATH GENERAL OR ROYAL MINERAL WATER HOSPITAL.—Resident Medical Officer.

BIRMINGHAM CITY ASYLUM.—Resident Clinical Assistant. Board and Apartments provided.

BRADFORD INFIRMARY.—Junior House Surgeon, single. Salary £50 per annum, with board and residence.

BRISTOL GENERAL HOSPITAL.—Casualty Officer. Salary at the rate of £50 per annum, with board and lodging.

BURY INFIRMARY, Lancashire.—Junior House Surgeon. Salary £60 per annum, with board, residence, and attendance.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Junior House Surgeon. Salary £50 per year, with board, apartments, and laundress.

COUNTY ASYLUM, Whittingham, Preston.—Locum Tenens for about six months. Two guineas a week.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Physician for six months. Board, residence, &c., provided, and an honorium of £15 15*s.* will be granted on the completion of six months' approved service.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thoro'fare, Ipswich.—Honorary Medical Officer.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—Resident Medical Superintendent for one year. Salary £105 a year, with board and residence in the Hospital. Also House Surgeon to the Out-patients (non-resident) for six months. Salary, 25 guineas.

HOSPITAL FOR WOMEN, Soho-square, London.—Registrar for twelve months. Honorarium 25 guineas.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, lodging and washing.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho-square, London.—Resident Medical Officer for six months. Board, residence, and laundry provided, and an honorarium of £10 10*s.* given.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Two qualified Medical Women as House Surgeons; also qualified Woman as Clinical Assistant in the Out-patient Ophthalmic Department, for one year; also Second Assistant Anæsthetist, for one year.

NORTH EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Surgeon. Applications to the Secretary, Offices, 27, Clement's-lane, E.C.

NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Mount Vernon, Hampstead, N.—Surgeon Laryngologist.

ROYAL BERKSHIRE HOSPITAL, Reading.—House Surgeon. Salary £60 per annum, with board, lodging, and washing; also Assistant Medical Officer. Board, lodging, and washing provided, and an honorarium of £10 10*s.* awarded conditionally. The appointments will be for six months from Midsummer next.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—King William-street, Strand.—House Surgeon; also Clinical Assistants, for six months.

SUNDERLAND INFIRMARY.—House Surgeon. Salary £80, rising £10 annually up to £100, with board and residence; also House Physician. Salary £80, rising £10 annually to £100, with board and residence.

VICTORIA HOSPITAL FOR SICK CHILDREN, Park-street, Hull.—Lady House Surgeon. Salary £50 per annum, with board and laundry.

WARNEFORD LUNATIC ASYLUM, Oxford.—Medical Superintendent and Secretary. Salary £500 a year, with furnished house, coals, gas, garden produce, milk, laundry, and keep for one horse.

WELLINGTON (SALOP) URBAN DISTRICT COUNCIL.—Medical Officer of Health. Salary £50 a year. Applications to the Clerk to the Council, Wellington, Salop.

Births, Marriages, and Deaths.

BIRTHS.

PENNELL.—At Buenos Aires, on May 12th, the wife of G. H. Pennell, M.D., F.R.C.S., of a daughter.

THOMSON—On May 7th, at 243, Queen's-road, New-cross-gate, S.E., the wife of David Thomson, L.R.C.P. Edin., L.R.C.S. Edin., L.F.P.S. Glasg., of a son.

TIDEY.—On May 10th, 1897, at 10, Via Panzani, Florence, the wife of Stuart Tidey, M.D. Lond., M.R.C.P., of a daughter.

WATERHOUSE.—On May 9th, at Wimpole street, W., the wife of Herbert F. Waterhouse, F.R.C.S., of a daughter.

MARRIAGES.

ADAM—ELMORE.—On May 12th, at St. Stephen's Church, Westminster, by the Rev. W. H. Manning, Dr. John Law Adam, son of John Adam, Esq., of Tullochvenus, Aberdeenshire, to Edith Constance Elmore, daughter of the late Sir Francis Wood, Bart., of Barcombe House, Lewes.

EALES—HUNTER.—On May 5th, at St. Stephen's, Gloucester-road, George Young Eales, L.R.C.P. and L.M. Edin., M.R.C.L. Eng., of 1, Matlock-terrace, Torquay, son of the late Rev. W. T. H. Eales, Vicar of Yealmpton, to Bertha Jane, second daughter of the late Henry Frotheringham Hunter, of Kilbourne Hall, Derby.

FIDO—TREACHER.—On May 13th, at Christ Church, North Brixton, by the Rev. W. R. Mowll, M.A., H. Adamson Fido, M.R.C.S., L.R.C.P. Lond., of Raleigh, Arodene-road, Brixton-hill, S.W., to Ethel May, eldest daughter of George Treacher, Esq., of Wierfield, Loughborough-park, Brixton, S.W.

GARRAD—RIDLEY.—On May 5th, at Reading, Francis William Garrad, M.B., of Starbeck, Harrogate, to Muriel Maud, eldest daughter of Owen Ridley, Esq., J.P., of Orwell House, Reading.

SUMPTER—ROBINSON.—On April 21st, at St. Mary's Church, Hunstaton, Berners George Sumpter, M.B. Durh., M.R.C.S., second son of W. Sumpter, M.D., Oley-next-Sea, Norfolk, to Amy Elizabeth, youngest daughter of C. T. Robinson, Esq., J.P., of Hunstanton, Norfolk.

DEATHS.

BRIGGS.—On May 5th, at Gothic House, Harrow-on-the-Hill, George Chapman Briggs, M.B. Lond., aged 49 years.

CREAM.—On May 6th, at Brighton, Robert Chevallier Cream, M.D., late of Melford House, Putney, aged 83 years.

RIVINGTON.—On May 8th, at Epping, Walter Rivington, M.S., F.R.C.S., of Wimpole-street, W., and Coniston, Epping, aged 61 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (17th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (19th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (20th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (22nd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (17th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Annual Conversazione. Reception by the President. 8.45 P.M. Oration by Mr. E. Owen: The Medical Society of London in the Eighteenth Century.

TUESDAY (18th).—PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Annual General Meeting for Election of Officers. Papers:—Mr. D. Drew: Teratoma of Scalp.—Mr. Targett: Trophic Foot. Card Specimens:—Dr. Allchin: Ulcerative Colitis.—Mr. Tubby: Fracture Dislocation of Spine.—Dr. Hebb: (1) Hydronephrosis; (2) Rodent Ulcer; (3) Tuberculosis of Tongue.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND (11, Chandos-street, W.).—4 P.M. Dr. W. Mott: Some Points concerning the Degeneration of the Neuron (with lantern demonstration).—Dr. E. Goodall: An Exact Method for Recording Deformities of the Hard Palate.—Mr. T. S. Tuke: Note on Stay of Action by application to a Judge of the High Court under Section 330 of the Lunacy Act, 1890. 6.30 P.M. Dinner at Café Royal, Regent-street.

WEDNESDAY (19th).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—7.30 P.M. Mr. E. Hinton: Exhibition of Specimens of Injections and other Objects.

ROYAL METEOROLOGICAL SOCIETY (Royal Astronomical Society's Rooms, Burlington House, Piccadilly, W.).—4.30 P.M. Mr. C. V. Bellamy: The Rainfall of Dominica, West Indies.—Mr. R. H. Scott and F. Gaster: On the Mean Monthly Temperature of the British Isles, 1871-95.

NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Demonstration of Clinical Cases.

FRIDAY (21st).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, W.).—8 P.M.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (17th).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Abscess of the Liver.

LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. O. Wilkin: Nasal Polypi.

TUESDAY (18th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Buzzard: Lecture.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Seborrhœa.

ROYAL INSTITUTION.—3 P.M. Dr. T. Anderson: Volcanoes (Tyndall Lectures).

WEDNESDAY (19th).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Beri-beri.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.)—5 P.M. Dr. S. Taylor: Surface Anatomy of the Thorax and Abdomen.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: House Drainage.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Wethered: Cases of Dilated Heart and their Treatment.

SOCIETY OF ARTS.—8 P.M. Dr. P. F. Frankland: London Water-Supply.

THURSDAY (20th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Separation of Proteid Substances occurring in Urine.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Hutchinson: Clinical Lecture.

THE HOSPITAL FOR SICK CHILDREN (Medical School, Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow: Lecture

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. S. Taylor: Surface Anatomy of the Upper Extremity.

FRIDAY (21st).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.)—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. J. Taylor: Electrical Testing and Treatment.

EAST LONDON HOSPITAL FOR CHILDREN.—3 P.M. Dr. J. A. Coutts: On the Treatment of Croupous Pneumonia in Young Children.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Anthrax and Malignant Œdema.

ROYAL INSTITUTION.—9 P.M. Rt. Hon. Lord Kelvin: Contact Electricity of Metals.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

THE SPREAD OF PLAGUE.

THE following is an extract from the memoir of Sir John Drummond Hay, P.C., K.C.B., G.C.M.G., sometime Minister at the Court of Morocco (John Murray, 1896), p. 24:—

"The danger from plague by contagion cannot, however, to my mind be called in question. That dire disease was introduced into Morocco about the year 1826 by an English frigate, which our Government had dispatched to Alexandria, where the plague was then raging, to convey from that port to Tangier two sons of the Sultan, returning from a pilgrimage to Mecca. No case of plague or other illness had occurred on board the frigate during the voyage, and the Sultan's sons and other passengers were allowed to land at Tangier.

"The Custom's officers, being suspicious that in the numerous boxes, brought by pilgrims who had been permitted to embark with the Moorish princes, contraband goods were being smuggled, caused some of the cases to be opened. One contained Egyptain wearing apparel, which the owner said he had bought second-hand, and subsequently confessed had belonged to a person who had died of the plague at Alexandria. The two Moorish officials who opened the boxes were attacked with the plague that night and died in a few hours. The disease spread rapidly throughout Morocco, carrying off eighty per cent. of those who were attacked."

There is probably more truth in the above narrative than in that repeated by Mead (Discourse on the Plague, ninth edition, p. 89), which he says was "communicated to me by a person of undoubted credit," viz.:—

"In the year 1726 an English ship took in Goods at *Grand Cairo*, in the time of the *Plague's* raging there, and carried them to *Alexandria*. Upon opening one of the Bales of Wool in a Field, two *Turks* employed in the *Work* were immediately killed, and some *Birds*, which happened to fly over the place, dropp'd down dead."

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GRESHAM LIFE ASSURANCE SOCIETY.

THE forty-eighth ordinary general meeting of the Gresham Life Assurance Society was held on April 27th at the offices, St. Mildred's House, Poultry, E.C. The report showed that the number of policies issued during 1896 was 8654, assuring the amount of £3,223,118. The new premiums amount to £137,768. The result of the operations of the year was to increase the society's funds by £409,961. In seconding the adoption of the report Mr. A. H. Smee, the deputy-chairman and chief medical adviser of the society, said that when visiting their continental branches last year he was very much struck with the great advancement in sanitation and the improvement in the public health that have taken place during the the last quarter of a century. Governments and municipalities have paid great attention to water-supplies and drainage, and since the Franco-German War vaccination and re-vaccination have become compulsory in the German Empire, the result being that small-pox has been practically stamped out, and when a supply of small-pox lymph was required last year for the pathological laboratories of Berlin it was obtained from England. On investigation of 27,000 sets of proposal papers he found that small-pox attacked persons who had not been previously vaccinated in the following ratios: In England, 3 per 10,000 living; France, 27; Belgium, 48; Hungary, 17; Italy, 29; Holland, 86; Austria, 37; Germany, 0; Spain, 81; and Scandinavia, 11. Diphtheria affects life assurance business in an indirect manner, because in certain countries it is a custom for parents to take out endowment assurance policies on their lives to provide dowries for their daughters and education for their sons, and when the child dies there is no longer any object for keeping the policy in force. In the first quarter of the present year London had a mortality from diphtheria of 639 per 1,000,000; Munich, 459; Amsterdam, 373; Berlin, 346; Dresden, 362; Vienna, 324; Copenhagen, 243; Paris, 188; The Hague, 172; Christiania, 150; Stockholm, 118; and Brussels, 43.

X. Y. Z.—There is no rule with regard to purchasing partnerships. When we hear of a practice being sold "at a two or three years' purchase," the gross receipts are implied. Our correspondent's remedy depends upon how far he can show that he has been induced to purchase by incorrect representations. Upon this point his solicitor will advise him, and there is no necessity for the intervention of any society.

"YOUR VERSION OF THE MATTER."

To the Editors of THE LANCET.

SIRS,—I should be glad if you would kindly advise me what course to adopt under the following circumstances. I received yesterday (May 7th) a notice from the secretary of a local club asking me to attend a meeting to be held at an hotel in this town, convened for the purpose of arbitrating on the case of a member who has sued the same club to recover fees paid by him to an outside medical man after I—as the club medical officer—had refused to attend him.

At the time of my throwing up the case I wrote to the secretary of this patient's club, giving a circumstantial account of my professional conduct of the case, together with medical details of the patient's condition and my reasons for refusing to attend him any longer. This letter the club committee still possess, and containing, as it does, all information cognate to the matter, it should serve every purpose as official evidence. But instead of so viewing it I am requested by the secretary to attend a club meeting on the 18th inst. at a public-house to "give your version of the matter" in the presence of the aggrieved member; or, in other words, to be cross-examined by laymen on a point of medical ethics. I have thought it best before replying to obtain the aid of your valuable advice.—I remain, yours faithfully,

May 8th, 1897. FABRICIUS.

*** It is clear to us that our correspondent will do perfectly right not to attend the club meeting in the public-house. He has explained his position to the secretary of the club, and the club must now deal with their member.—ED. L.

C. M. M.—Presumably the change of address has been sent to our correspondent by error. It is not usual for consultant practitioners to notify a change of address to other than their acquaintances, either in business or private capacity.

THE DANGER OF CELLULOID WEARING APPAREL.

A SINGULAR demonstration of the danger of celluloid collars and cuffs under certain conditions comes from Farnham, Surrey. A boy, aged ten years, wore celluloid collars and one day lost his shirt-button whereupon he tied the ends together with string. At bedtime he could not untie the knot, and taking a light placed it against the string to burn it. The collar lighted up immediately and flared all around the poor boy's neck, burning his face and head, while the composition began to run and fall in lighted drops on to his clothing. The throat, we are informed, was badly injured.

A DANGEROUS PERFORMANCE.

DURING the past week a "Professor Morritt" has been exhibiting a hypnotised man at a hall in Cardiff. On May 8th a local publican essayed to win a bet of £50 by awakening the subject. This he proposed to effect by suddenly precipitating the sleeping man into a tank of water six feet deep. After being immersed three times in the presence of a large number of people he showed no signs of vitality, although the "Professor" soon awakened him by a "few magnetic passes." When these playful experiments with the vital centres have ended in some terrible fatality, we suppose public indignation will be aroused against them. Until then, these degrading and dangerous shows will enjoy popularity in spite of all revelations of chicanery and collusion.

M.D.—It is not easy to make the kind of practice desired. If a man desires to pick and choose his cases that he may have just so much occupation as will pleasantly fill his day and add to his private income he must refuse to see many patients. The result will be that he will get the reputation of not being quite in earnest, and medical men more determined to take whatever they can get will gain his practice from him. There are exceptions, of course, but this is the rule in our experience. Probably our correspondent would find Los Angeles as pleasant a place as any. The climate is genial, and the scenery is notoriously beautiful. The rate of living is expensive.

"KNIFE FOR SLITTING OPEN THE TONSILS IN CASES OF LACUNAR TONSILLITIS."

To the Editors of THE LANCET.

SIRS,—Should any of your readers wish to put into practice the suggestion made by Dr. Adolph Bronner in THE LANCET of April 17th, it will be necessary to have the knife he recommends made for the purpose. The pattern has been figured in Messrs. Maw, Son, and Thompson's catalogue for many years, together with others selected from a large number of knives and other instruments made by that firm from my designs. Having informed Dr. Bronner of the fact he was good enough to say that he had overlooked it, the chief object of his communication being to recommend the plan of slitting open the tonsils.

I am, Sirs, yours faithfully,

May 10th, 1897. PROSSER JAMES.

Mr. F. J. Richardson.—Our correspondent might consult Letheby's Cantor Lectures, published in a book entitled "On Food: its Varieties, Chemical Composition, Nutritive Value, Comparative Digestibility, Physiological Functions and Uses, Preparation, Culinary Treatment, Preservation, Adulteration, &c." He might also find what he requires in the works of Pereira, Moleschott, Pavy, Vogel, and Voit.

A FATAL BELL-MAN.

WE extract the following from our contemporary, the *Birmingham Owl*:—

> "We are sorry to say it, but it really seems as if the profession of medicine renders those who follow it peculiarly ungrateful. They are educated for the most part in colleges supported by the charity of the benevolent, and obtain their experience in hospitals maintained by the public, but once they are licensed they cry out because a few people attend the hospitals with ailments a chemist might cure if they had the money to pay him, and a few more who could afford to pay the general practitioner prefer to submit themselves to the specialist whose fees would be beyond them if they consulted him in his own lair.
>
> "The question of fees is of course at the root of the complaint. If there were no hospitals the doctors would earn more, and it irks them to see people obtaining for nothing what they are prepared to sell to them at a big price. It is as though journalists should grumble at people reading papers in a free library instead of purchasing them.
>
> "The matter is one, after all, for the public to decide. The doctors could end their share in it to-morrow if they choose by refusing to act in an honorary capacity. Not that there is any likelihood of their doing so; they know the advantages of an advertisement as well as most men, and the few hours a week many of them give to the hospitals are well repaid by the reputation contact with their numerous patients there gains for them."

We, in our turn, are sorry to say it, but this description of the agitation for hospital reform is as untruthful as it is ungrammatical. Medical men are not educated in colleges supported by the charity of the benevolent; they do not obtain their experience in hospitals maintained by the public, but in hospital schools to which they are compelled to pay large fees; they could not "end their share" in the matter "to-morrow if they choose by refusing to act in an honorary capacity" to hospitals, for it is not the honorary staffs of hospitals who are complaining of the excess of patients so much as those medical men who do not hold these distinguished appointments. It seems to us regrettable that a journal should pillory those who follow the profession of medicine as "peculiarly ungrateful" on grounds that are absolutely false.

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THE QUEEN'S JUBILEE INSTITUTE FOR NURSES.

AMID the various philanthropic undertakings on behalf of which appeals are just now being made, special interest attaches to the Queen's Jubilee Institute for Nurses. The institute has an income of £2100 a year, derived from the Queen's gift of £70,000 taken from the Women's Jubilee Offering, but the necessary expenses have far exceeded the income, and a sum of £11,000 contributed by friends during the last seven years for the extension of the work has now been expended, so that the institute has no funds at its disposal to enable it to keep pace with the growing demands for the services of its nurses. In 1896 the number of nurses whose training was completed at the expense of the institute amounted to sixty-six, at an outlay of about £3,000. Their work is to nurse the sick poor in their homes, visiting each patient once or oftener every day, according to the necessity of the case. It is found that one Queen's nurse is about sufficient for every 10,000 of the inhabitants in a town. To the local association which employs her the cost of maintenance is from £80 to £90, which includes all expenses—salary, board, lodging, &c. Promises of support and subscriptions should be sent to the honorary secretaries, Mr. Harold Boulton and Mr. Ernest Flower, M.P., Queen's Commemoration Fund, 64, Cannon-street, E.C.

"*Ubrigin.*"—Samples should be sent to our laboratory for examination.

THE PUBLIC HEALTH EXAMINATION AT CAMBRIDGE.

To the Editors of THE LANCET.

SIRS,—I am one (of whom I dare say there are, or have been, many) of those unfortunates who, at a late stage of their career, have been beguiled by the seductiveness of the study to go in for this examination. I put in an appearance a year ago with the result that I scored enough marks in one subject only, viz., bacteriology, when there was no written paper. This year I scored sufficient marks in everything but bacteriology when there was a paper on that subject, and made a lower percentage in the paper than in the practical work. Among other things we had to stain sections for tubercle, and you may imagine it was no easy matter to see the bacilli even if not much decolourised, when I say that the microscope with the oil immersion seemed to work on a pivot in the centre, and it rested on a table covered with zinc which was so dinted in that there were not four square inches of level surface that I could see. The microscope, thus, on the slightest touch skidded along as if greased. I noticed some of the candidates took the precaution to bring their own microscopes and so had the advantage over others who were foolish enough to expect that everything would be done to facilitate the work given us to do. Perhaps the proper authorities will kindly give this matter their attention. I think in fairness I should have been allowed to present myself under the same conditions as last year—viz., without a special paper on bacteriology. As it is, although in the two examinations taken together I have satisfied the examiners in all, I am no nearer being a D.P.H. than I was a year ago.

I am, Sirs, yours truly,

May, 10th, 1897. N. D.

E. J. B.—Our correspondent will find the information he requires in "A Code of Medical Ethics," by Jukes de Styrap (London: H. K. Lewis).

A NEW FORM OF ADJUSTABLE INVALID CARRIAGE.

MR. JOHN CARTER, of New Cavendish-street, Portland-place, has just constructed for H.R.H. Prince George William of Cumberland a special invalid carriage which embodies several novel features and improvements. A couch was required that could be used in-doors and could also be adapted to wheels for out-door exercise, and in no case was it to appear as an ordinary room couch. Mr. Carter combined all these conditions, and succeeded in designing and producing a carriage which after more than a week's use has proved eminently satisfactory in every respect. The couch or carriage has a removeable side to permit the easy lifting on and off of the occupant. It is upholstered with spring stuffing and fine cloth, is fitted with a back capable of being adjusted to any slope, and has moveable arms which turn back out of the way as may be found necessary. For in-door use the couch is placed on an under frame which supports it at a convenient and comfortable height; for out-door exercise it is transferred to an under carriage, on which it is entirely suspended on four Cee springs with leather braces. The under carriage has four wheels provided with pneumatic bicycle tyres, thereby avoiding all jar and vibration, and has a handle in front by which an attendant can draw it. The couch with the occupant is lifted by two attendants from one of these supports to the other by means of moveable sliding poles, which also enable it to be taken through the doorway of a railway carriage. The great advantage of Mr. Carter's invention is that, although much shorter than the ordinary invalid carriage—a feature which is in several respects a great convenience—it can be used either in a recumbent position or as a chair with the back-rest in a raised position, or as an in-door couch. The carriage is handsome in appearance and design; it can be made of any size.

A MEMORIAL TO HENRY VAUGHAN.

HENRY VAUGHAN the "Silurist" was a notable member of our profession whose memory has been shamefully neglected. Few people have ever heard of him, and fewer still have read his poems. He died on April 23rd, 1695, and was buried in the churchyard of Llansantffraid. For years his grave was dilapidated and uncared for, but recently, we learn from the *Westminster Gazette*, it has been cared for and restored. A memorial tablet has also been put up in the church fixed upon the south wall of the nave. One thing more remains to be done—namely, to enclose the grave with a plain iron railing, and for this some £7 are required. If any medical man should desire to send a subscription towards this object the secretary of the memorial fund is Miss Philip Morgan, Buckingham-place, Brecon. Vaughan was a poet of whom any profession might be proud, and although his works will never, we fear, attain to the height of popularity reached by those of the late Mr. Tupper, they are many of them singularly beautiful and well worth the attention of lovers of true poetry.

PROFESSIONAL CONFIDENCE.

A CORRESPONDENT sends us the subjoined letter, asking us whether we think that such a request should be made to a medical man:—

HEARTS OF OAK BENEFIT SOCIETY.

17, Charlotte-street, Fitzroy-square,
London, W., 30th April, 1897.

DEAR SIR,

EXAMINATION OF CANDIDATES.

The Committee of Management has had under consideration the existing mode of dealing with the applications of candidates who had been rejected on examination for admission to the Society, and I have been instructed to request you, in the general interests of the Society, to be good enough in future cases of rejection to send the Form of Application direct to me marked rejected, with the cause of such rejection, so that we may record such cases.

For this purpose I enclose a few stamped directed envelopes, and thanking you in anticipation,

I am, yours faithfully,
THOS. W. GALLOWAY, Secretary.

It seems to us that it would be a breach of professional confidence to communicate to the secretary the medical reasons why an applicant had been rejected. The case of a medical officer to a life assurance office is, of course, not comparable.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 13th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 7	30·09	N.W.	52	47	96	59	44	...	Cloudy
" 8	30·10	S.W.	55	51	99	66	50	...	Overcast
" 9	30·19	N.	55	50	104	66	50	...	Fine
" 10	30·10	N.	52	46	103	59	45	...	Cloudy
" 11	29·89	NNW	44	38	100	56	38	...	Cloudy
" 12	30·04	N.	44	38	98	51	38	...	Cloudy
" 13	30·24	N.W.	47	42	69	50	40	...	Cloudy

During the week marked copies of the following newspapers have been received:—*Somerset County Herald, Hereford Times, Bridgwater Independent, South Wales Daily News, Leicester Post, Kent County Standard, Glasgow Record, Dover Standard, Times of India, Birmingham Argus, Pioneer Mail, Sheffield Telegraph, Accrington Observer, Eastbourne Chronicle, Woodford Times, Bradford Observer, Hastings Observer, Architect, Chester Chronicle, Derbyshire Courier, Liverpool Daily Post, Sussex Courier, Auckland Times, Bury Free Press, Builder, Leeds Mercury, Manchester Courier, Sussex Daily News, Peterborough Advertiser, Salisbury Journal, Bristol Mercury, Citizen, Scotsman, Carlisle Journal, Cambs Chronicle, Portsmouth Times, East Anglian Times, Southampton Observer, Brighton Gazette, Yorkshire Post, Newcastle Journal, Western Times, Huddersfield Examiner, Le Gaulois (Paris), Sanitary Record, Mining Journal, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Reading Mercury, City Press, Local Government Chronicle, Surrey Advertiser, Manx Sun (Douglas, Isle of Man), Birmingham Daily Mail, Fairplay, Edinburgh Evening Dispatch, Bournemouth Visitors' Directory, Argus (Melbourne), Durham Chronicle, Ryde News, Midhurst Times, Dover Express, Halifax Courier, Port of Spain Gazette, West Middlesex Herald, Keighley Herald, Surrey County Herald, &c., &c.*

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Communications, Letters, &c., have been received from—

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AN AID TO MEDICAL AND SURGICAL SCIENCE.

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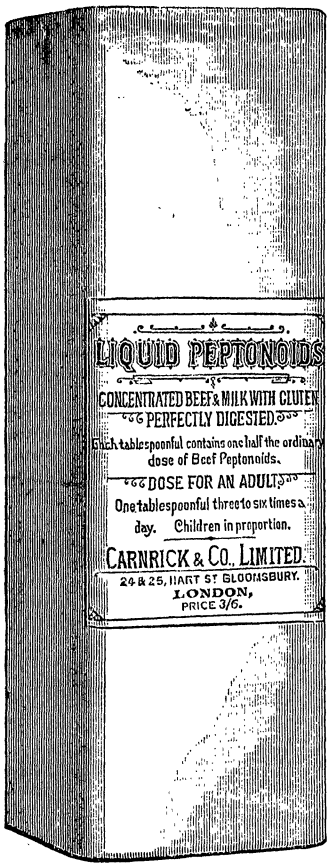
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"Liquid Peptonoids" has further been found to stimulate the action of the digestive organs. While a food and an aid to digestion, it is also a valuable stimulant and tonic.

"Liquid Peptonoids" has the stimulating property of a pleasantly mild cordial, and so renders useful service in conditions of debility, exhaustion, brain fag, and general and nervous depression. It possesses this great advantage over other stimulants: that, containing nourishing, easily-digested food, the stimulation it affords is not followed by any reaction. *The system is fed at the same time that it is toned and braced up.*

"Readily taken and well borne even by a very delicate stomach."
—BRITISH MEDICAL JOURNAL.

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This well-known food-product consists of the nutritive portion of choice lean Beef, the solids of Milk, and Gluten. It is partially peptonised and thoroughly asepticised. Beef Peptonoids Powder is a Concentrated, Assimilable, and Palatable Nutrient, whose sustaining and recuperative properties have been proved by wide clinical experience extending now over many years.

"It is by far the most nutritious and concentrated food I have ever met with."—PROF. ATTFIELD.

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Is recognised as the best food that has yet been prepared for infants. It requires no milk, is very Nutritious, Palatable, and Assimilable, and in composition closely imitates Mothers' Milk.

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An Oration

ON

THE MEDICAL SOCIETY OF LONDON IN THE EIGHTEENTH CENTURY.

Delivered before the Society on May 17th, 1897,

BY EDMUND OWEN, M.B.LOND., F.R.C.S.ENG.

SENIOR SURGEON TO ST. MARY'S HOSPITAL, LONDON.

MR. PRESIDENT AND GENTLEMEN,—On Wednesday next, May 19th, the Medical Society of London will be entering upon the 125th year of its existence. The first meeting was held on Wednesday, May 19th, 1773. Our illustrious Lettsom attended it, his name appearing second upon the list of those who had the honour of being present at its birth. At that first meeting the rules of the society were read and considered. Happy the nation, we are told, that has no history. Happy the society, I would rejoin, that has no rules. If the rules of our society have in subsequent times kept us from dangers and extricated us from difficulties, they were in the eighteenth century the cause of much bitterness and unhappiness, and very nearly brought about the wreckage of the Institution whose interests they were intended to protect. The name that stands in the minute-book of the society in front of Lettsom's is that of Dr. Hulme, who, at the next meeting of the society, which was held on the following Wednesday, May 26th, was elected librarian, Edward Ford being appointed secretary. It was, moreover, then arranged that Lettsom should take the chair at the ensuing meeting.

You will think it proper, I am sure, that I should say something in passing about the man whose name is found in our minute books in front of that of Lettsom—the man who was picked out to watch over the establishment of the Library, which, as was always intended, should constitute a very important element in our Society. Nathaniel Hulme was a Yorkshireman, who, at the age of twenty-three years, entered the Royal Navy as a surgeon's mate. Eventually, he took his degree in Medicine at the University of Edinburgh, sending in as his thesis an account of a disease which, unfortunately, he must have had ample opportunities of studying—scurvy. In connexion with this, he showed the benefits of lime-juice in long sea voyages. When he retired from the navy, Lord Sandhurst, who was then the First Lord of the Admiralty, secured for him the appointment of Physician to the Charter House. He went to live, therefore, in Charter House-square, where he enjoyed an extensive and an honourable practice. Unfortunately, in March 1807, an equinoctial gale blew over, or, as I suppose, he, in nautical language would have expressed it, "carried away" one of his chimney pots. It was nothing phenomenal as a gale, nothing like one of those gales to which he had been accustomed when afloat, and I can find no mention of it in the meteorological records of the time in the *Gentleman's Magazine*, but the illustrious physician and Fellow of the Royal Society thought it necessary to go aloft to see exactly what damage had been done. Getting up to the roof, he lost his balance and fell, receiving such serious injuries that he survived his fall only a few days. He had served the Medical Society well, as he had served his country; and we read in a contemporary biographical notice of him that he did "valuable work." He proved himself worthy of the place which he holds in our records, but from his calamitous fall we may, I think, enforce this obvious precept—that a physician should content himself with his proper sphere of practice.

A Society with a chairman, a librarian, and a secretary must needs find a home, and with this important business Lettsom was intrusted. The meeting-room was to be "as nearly central to the respective members as possible," so the Queen's Arms Tavern in Newgate-street was suggested. A good many members of our profession at the present day make their start in active life anxious, because they hamper themselves with a needlessly heavy house-rent. There was to be no mistake of that sort with our budding Society. Lettsom was to hire a room for a sum "not exceeding ten guineas a year." The "Queen's Arms" business fell through, for at the next meeting, Hulme and Lettsom were authorised to try to secure a vacant room in Wardrobe-court; and because a good many new men were joining the Society, the amount to be allowed for the annual rent went up with a bound to £15. With so much money at stake they thought it expedient to appoint a treasurer. And in choosing Lettsom for this office our founders made—as doubtless they knew they were making—an excellent selection. For the "Accompts book" and the minute books show that his purse as well as his hearty and efficient services were always at the disposal of the society.

From May 31st the Members did not come together again until nearly the middle of July, probably because they had not acquired a place for meeting in; but when they then met we find their minds exercised by the same three questions—the acquisition of a room, the formation of a library, and the drawing up of the rules. The Society was not two months old when Lettsom, the treasurer, laid the foundation of our library by giving "Percivall's Medical Observations" and the "Medicinal Education of Children." The title of the latter book is equivocal. Probably the "medicinal education" of children referred to the fact that, as people in those days had to swallow an enormous amount of filthy physic, they could not expect to survive unless their medicinal education were begun in very early life. I have not seen the book, for had I asked Mr. Hall to look it up for me, I might have been deprived of the opportunity of speculating as to the real meaning of its title. At this same July meeting twenty-nine new members were elected, amongst whom were Dr. James Sims, who a short time afterwards began his reign of twenty-two years in the presidential chair, and Dr. John Millar, who, at the next meeting of the Society was elected its first President. This selection, however, did not prove a happy one. Lettsom was not appointed the first President for, I think, two reasons—first, because he did not want to have himself thrust forwards in the society which he had done so much to establish, and secondly, because he already held the very important post of treasurer.

On Aug. 10th the sixth meeting of the society took place, and as Millar's name is at the top of the list of those present he doubtless occupied for the first time our presidential chair. Lettsom at once reported that he had set to work buying books for the library, for which the society thanked him and ordered his re-imbursement. The "Accompts book" shows that he had already spent £16 14*s.* in books. At this time the primary cleavage of the society into three parts was established by the appointment of three standing committees of reference—one of three physicians, one of three surgeons, and one of three apothecaries. And by way of further emphasis, as applications for membership were coming in at a great pace, the society resolved that for the present the number of its members should be limited to thirty physicians, thirty surgeons, and thirty general practitioners or, in the language of the time, apothecaries. It can scarcely be altogether a matter of surprise, though it may be of regret, if with the vast increase of learning which has taken place in our profession—without, I suppose, a proportionate increase of mental vigour and power of endurance—secondary and tertiary cleavages have since appeared in our midst. Thus, every region, organ, and tissue in the body has in turn been "specialised," from epiblast to hypoblast, and back again. But this process has surely now gone far enough—some would think too far. For it frequently happens that the practitioner who is cultivating his little allotment of epiblast, for instance, deems himself unable or unwise to look through a mere basement membrane to see what morbid changes may by chance be taking place in the adjacent, but not less important, plot, which his neighbour is cultivating in the mesoblast. So it has come about that one practitioner has been daily and diligently dealing with a tuberculous patch in a larynx, and refusing all the while to recognise the fact that his trusting and hopeful patient was dying of pulmonary consumption. And that another practitioner has been lumbering up the weak back of a growing girl with what he was pleased to call a "spinal support," when all that she needed was sunlight, fresh air, exercise, and freedom. Everybody here must feel that I am not erring upon the side of exaggeration in making these remarks. And if such things have happened in the past, what is going to happen in the future? A large proportion of special practitioners of the present time are fortunately under the inhibitory influence of broad principles which they have acquired in the useful preliminary work of general

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medicine, general surgery, or general practice. But henceforth, it seems, the youthful practitioner is to embark in the cultivation of some speciality before the ink on his diploma is actually dry—at any rate, before blue ink has had time to turn black. We hear it urged that the public like this sort of thing. I must not stay to discuss that statement, or even to deny its truth. But supposing that the public do like it, is that a reason why we should stand quietly by whilst our profession, as practised by Hulme and Lettsom, is brought down to the level of persons who try to nourish their children upon patent foods and themselves upon quack medicines?

As I have said, our society was originally designed to secure the collective experience of the three primary divisions of the profession. As a result of this arrangement it would be impossible, I think, to name any other society in which the discussions and debates are more generally instructive; and I make no empty boast when I say that though our society is well advanced in its second century, its work is still abreast with the times. Though it occupies itself with micro-organisms of all sorts it is not consumed by them, and though it investigates antiseptics it does not smell of them. It discusses drugs without exciting nausea, and it enters into pathological problems without becoming morbid. It is scientific without overbearance, and it is never dull. At least, not often. Our founders wished us to be cheerful; and so we are, without effort.

JOHN FOTHERGILL.

Though John Fothergill is one of the Patron Saints of the Medical Society of London, he was never one of its Fellows. He was not, as has been erroneously stated, "one of our founders." The veneration in which he is held by us is chiefly due to the fact that he was the dear friend of our Lettsom, and, during the first ten years of his professional life in London, his guardian angel. Lettsom said of him: "My medical creation was his, and my success in life the result." We esteem him also because he was "one of the first physicians of the age." This was Lettsom's estimate of his professional position, and, looking through contemporary medical literature, it seemed to be a just one. He was, moreover, a man of immense learning and information. He apparently knew all that was known at that time in the natural sciences. His botanical garden at Upton, near Stratford, was celebrated throughout Europe and America. He had fifteen men constantly at work in it and there were other persons employed in making drawings for him of its trees, plants, flowers, and fruits. He was a Fellow of the Linnean Society, and was reckoned to be one of the chief authorities of the day upon shells and corals. He was a considerable chemist, and he was a judge in matters of Art, and it is not unlikely that his young friend Lettsom acquired from him the insatiable thirst for collecting. John Fothergill was a member of the Medical Society of Edinburgh, and in 1776, when a medical society was being founded in Paris by the King of France, he was one of a select number of foreign physicians whom the society thought proper to honour with their diploma. Feeling as we do towards Fothergill, we cannot but regret, as we look back, that he was not a Fellow of our Society. But Fothergill was not a man to do things by halves, and probably Lettsom deemed it unkind to attempt to enlist his help at the foundation of the society, busy man that he was. It must be remembered that as at that time, 1773, Fothergill was in his sixty-second year and overburdened with private practice, that as he had a mansion as well as that enormous garden at Upton and a country seat near Warrington, and that as his hands were full of, and running over with, philanthropic schemes of all sorts, he could hardly have had any time to devote to launching a medical society. As a matter of fact, he could rarely steal away to his house and grounds at Upton, and often, when he did get there, it was so late at night that the only way which he could obtain enjoyment and profit out of the garden was with the help of a lantern. Lettsom, however, was at that time under thirty years of age. He was full of energy, and he had, it is to be surmised, sufficient leisure.

Doubtless Lettsom told his friend of all that was going on in connexion with the beginnings of our society, seeking and obtaining his advice and, I think, acting upon it. There was no better man to go to for advice in the matter than Fothergill, as he had great practical experience in the working of a society of physicians of which he and William Hunter were the leading spirits. (Of this society I shall have a good deal to say shortly.) But here Fothergill's interest in the Medical Society of London must have ended. In the "Cash-Accompts Book" of the society from its foundation to the beginning of the nineteen century, in which are found the names of all those paying their entrance fees and subscriptions, the name of John Fothergill is conspicuously absent. The circumstantial evidence which this book supplies in support of my statement that he was never a Fellow of our society is incapable of refutation. For the unearthing of this valuable book, as for much else in the preparation of this Oration, I am indebted to Mr. Hall, the Registrar of our society. In the early minute books of the society and of the council the name of John Fothergill does not appear as a Fellow, nor can I find that he ever attended as a visitor. Fothergill had an enlarged prostate, to which, as I learn from the pages of the *Gentleman's Magazine*, he gave neither attention nor consideration. But nature is jealous; and in the year 1772, when he was only sixty-one years old, he began to break up. He had just lost his younger brother, Samuel, the celebrated preacher, and he said, in his bodily distress and in his sorrow, "Our health is no more at our command than length of days. Mine seems drawing fast to a conclusion. Though painful my nights and wearisome my days, yet I am preserved in patience and resignation." Next year—the year of the foundation of our society—he was "much oppressed"; but he said that he hoped to follow in the steps of his dear brother through what he called "the remains of this life." It would not, therefore, have been a friendly act had Lettsom tried to induce him even to lend his name to the new society.

There is another matter in connexion with Fothergill to which I wish to refer. Some of his biographers state that he died from "suppression of urine." Lettsom himself says it, but the statement is incorrect. Alluding to the fatal illness of December, 1780, he says: "He was again seized with a suppression of urine, which no art could remove." But in that he speaks of his being on that occasion "as serene as in perfect health," he obviously could not have meant that Fothergill was the subject of what we understand by "suppression of urine." Alluding to a similar attack which the patient had undergone just two years previously, Lettsom wrote that on waking out of a short sleep his illustrious friend was attacked with a forcible inclination to make water, but without the power. "At length," he writes, "a total suppression came on that required manual assistance for two weeks, which was sometimes accompanied with excruciating pain. ..... In the height of his distress I visited him and found him calm and collected." Without doubt someone (not Lettsom) was trying to relieve him from time to time with a catheter, and with greater vigour than success. There was some "suppression" in connexion with Fothergill's fatal illness—not of urine, but of an important clinical detail. Somehow or other Lettsom omitted to say in his memoir that after death two quarts of urine were found in the poor physician's bladder. This interesting piece of information I discovered in the *Gentleman's Magazine* for 1781.

How has it come about, in spite of the absence of any evidence in that direction, that John Fothergill has so generally been considered to have been one of the fathers of our society? If we turn to the "Memoirs of Fothergill," by Lettsom, we find a heading to the effect that they were "read before the Medical Society of London, July 17th, and October 23rd, 1782." Why, it might well be asked, should Lettsom have read those Memoirs before our society if Fothergill had no connexion with it? The answer is that though Lettsom read the well-known Memoirs "before the Medical Society of London," he did not read them before *our society*, which was then meeting on the first Tuesday of every month, as recommended in February, 1781. In 1782 our society met on July 2nd and Oct. 1st. July 17th and Oct. 23rd, the days when Lettsom read the Memoirs, were Wednesdays. About the middle of the eighteenth century some physicians in London agreed to meet together for their mutual improvement in the practice of their profession. They were either such as had the care of hospitals, or, to quote their own words, "were otherwise in some degree of repute in their profession." When these meetings had continued a considerable time, some of the members (Fothergill amongst them) decided to publish their proceedings. So, "with some other physicians," they formed themselves into a society for collecting and publishing "Medical Observations and Inquiries." They regarded it as a reflection on the Faculty that no attempts of that kind had hitherto been

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made in London. The first volume appeared in 1757.[1] These eighteenth century physicians were not only persons "in some degree of repute," but also of prosaic common sense, for they said in their preface that they did not want papers the chief tendency of which was "to show the parts and erudition of the writer." They also said that they did not intend to publish all the papers which might be sent in to them, but that useful observations, described with clearness and candour, would be "thankfully received." They particularly asked for notes of unsuccessful cases, and for "accounts of errors in the cure of diseases." Concerning the question of "errors in the cure of diseases" I will not venture to make any remarks, my practice being confined entirely to surgery; but I cannot refrain from expressing my strong approval of their desire to have notes of unsuccessful cases. A hundred years hence, or in less time than that, when the practitioner in the few diseases which are left for him to treat takes down from their dusty shelves the volumes containing the reports of our societies, and the records of our treatment, he will say, "These men at the end of the nineteenth century were not void of dishonesty. They wrote and talked as if all their patients got well, but we know that they did not. They seem to have carved the records of their successful cases upon the rocks, but if ever they thought of their failures, the utmost that they did was to scratch them upon the sands of the sea at low-water mark." Would it not be a good thing if our society set apart one or two evenings in each session for the discussion of unsuccessful cases and of those which have ended in disaster? They should be called "confessional evenings," and I am sure that they would be well attended. There should be no reporters present, and I believe that a good many of our Fellows would take part in the debates, even though their remarks would not appear in the forthcoming number of THE LANCET. What pleasant evenings could be spent in discussing the hideous mistakes of other people! If anyone asks if I would contribute to such "confessional evenings," I would venture to remind the society that a few years ago I thought it my duty to bring forward the report of a case in which, to my extreme sorrow, a misadventure on my part brought a simple operation to a fatal conclusion I am speaking, therefore, from sad experience when I say that such a course is right and proper. And I will also say this, that there is no society in London where the candid confession of practical error would be more faithfully or sympathetically received. The venerable age of the Medical Society of London has happily brought with it a kindly and paternal spirit which has come down as a precious heritage from Lettsom, and through him from Fothergill, so that we, its children, are able to look up to it not only with respect but affection. I cannot but think that it would be well for the aggressive spirit of modern methods to wrap itself in a sheet from time to time, to acknowledge that it is not yet infallible, and here to be shriven. That our founders intended to have authority amongst the Fellows and to exercise it, sometimes with severity and sometimes with gentleness, but always with impartiality, is evident to any one who reads the records of their early doings. And it is not without significance that *the very first disbursement* which they made on behalf of the society, on May 27th, 1773, was a sum of five shillings for a hammer.

Let me now return to the Society of Hospital Physicians—of physicians in some degree of repute, and of "others," who were to receive, consider, and possibly publish the medical observations which might be sent in to them. They worked diligently and, happily, without ostentation—two excellent qualifications for solidity and success. It was on behalf of this society that Fothergill burdened himself with collective investigation concerning the epidemic of influenza as it appeared in various parts of the country towards the end of the year 1775. This labour was duly acknowledged in the sixth volume of their "Observations," which they published in 1784. They say that from the materials collected by Fothergill from the faculty at large, and from his own sketch, he had intended to form a complete history of the disease, but that that which his sudden decease in 1780 prevented him performing the society "endeavoured to accomplish." "Indeed," continues the preface, "considering the not unfrequent return of this epidemic, how troublesome it was to most, how it affected many with lasting debility, and, though not dangerous in itself, how it accelerated the fatality of dangerous distempers, it deservedly becomes an object of serious inquiry to the faculty." Within two years of Fothergill's death—namely, in 1782—this pestilence was again upon them with unabated vigour; and as it concerned "the Medical Society of London in the eighteenth century" I shall have occasion to refer to it later. Just now, however, I am, or ought to be, explaining how it is that Fothergill has so generally been considered a Fellow of our society.

Fothergill had sent printed circulars to medical men in town and country with the view of working out a better understanding of the disease, and the replies to it, which are published in the volume, show that in many respects it closely resembled the influenza of the present time. I personally have had a greater experience of influenza than most medical men. But lest I might be considered by this statement to have wandered out of the narrow paths of surgical practice, and even into the realms of boastfulness and arrogance, I hasten to explain that what I mean is that I have been attacked by the disease far more often than I desired, and I think, speaking at any rate from an actuarial point of view, than I deserved. Justice was, indeed, blind in wasting upon me, a surgeon, a personal experience in influenza which might have been useful in the establishment of a physician. However, my experience of the disease has rendered my study of it in these old volumes of more than an antiquarian interest. The replies which Fothergill received gave a graphic description of the suddenness of the onset of the disease; of the pains in the head, back and limbs; of the foul tongue, the loss of taste, and of appetite and of sleep; of the soreness of the wind-pipe; of the dejection of spirits, and of the terrible debility. The well-known Dr. Cuming said that in Dorsetshire, in many gentlemen's families, not one servant was free from the disorder. Horses and dogs, moreover, were affected by it. Worse than all, the horrors of the influenza of the eighteenth century must have been actually increased by treatment, for physicians and patients seemed alike under the influence of a blind faith in venesection and nauseating drugs.

The Society of Physicians met every month, and Elliott tells us that Fothergill was rarely absent from the meetings. As I have already said, John Fothergill and William Hunter were prominent members of this mutual improvement society, to which in 1756, in the ordinary course of business, Fothergill read a paper which, in the table of contents which followed the preface to this volume, is described as being "communicated to the Medical Society." This Society of Physicians was, of course, a medical society but it was not The Medical Society of London. No, Fothergill's medical society was twenty years older than Lettsom's. Lettsom was a member of Fothergill's society; but Fothergill was not a Fellow of Lettsom's society.

Fothergill was president of his society at the time of his death, 1780, and the members naturally called upon his intimate friend and their fellow-member, Lettsom, for a memoir of him. It will be noticed in the bold heading of this memoir that though Fothergill's society is called the Medical Society of London, the words "the" and "of" are not spelt with capital letters as they should have been if they had referred to The Medical Society of London, which obviously they did not do.

There is a verse in the First Book of Kings which might almost have been written of Fothergill: "And he spake of trees, from the cedar tree that is in Lebanon even to the hyssop that springeth out of the wall. He also spake of beasts, and of fowl, and of creeping things, and of fishes." But Fothergill did not regard the vegetable and animal kingdom merely from the point of view of the biologist. Though his interest in them was certainly scientific it was also strongly utilitarian—and particularly with reference to materia medica and foods. Thus, in 1767 he spent a considerable sum of money in connexion with a scheme which should enable the poor and the middle ranks of housekeepers to purchase fish at a low rate in London. In the same manner he set to work to have potatoes which had been bought cheap in Lancashire brought up to town by water. It would take a stronger man than the gentle Fothergill, I fear, to break up the "fish ring." We are told—I know not with what truth—that at the present time wholesale dealers would at times rather destroy fish at the seaside than send it to the great cities where it could be sold at a cheap rate. Such a monstrous act would

[1] Medical Observations and Inquiries, by a Society of Physicians in London, 1757.

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be to rob the poor; and the day may not be far distant when it will be punished as a crime.

I suppose that one great cause of the spread of the erroneous belief that Fothergill was a Fellow of our society, is due to a sentence which occurs in Pettigrew's "Life of Lettsom"—a work to which anyone would naturally refer who was specially interested in the early doings of this society. On pages 86 and 87 of the first volume he writes: "Dr. Fothergill was, at the time of his decease, the President of the Medical Society of London, at whose meetings papers and other communications on medical subjects were read or made. Many of these were furnished by Dr. Fothergill, and the members felt desirous of having some account of his life submitted to them. Accordingly, Dr. Lettsom was requested to draw up the memoir." I cannot understand how Pettigrew came to make such a slip. It seems the more inexcusable in him as he was not only a Fellow, but also the Registrar of our old society. Although he was writing a life of Lettsom, and not of Fothergill, his mention of Fothergill ought to have been made with accuracy. And though the date of his writing was in the thirty-seventh year after Fothergill's death, it would have been quite easy for him to verify the truth of his statement. Probably he had been misled by the wording which appeared at the head of Lettsom's memoir. But if we cannot hold Pettigrew excused for the error of making John Fothergill a Fellow of our society, what is to be said when Dr. Munk, a Fellow of the Royal College of Physicians and the illustrious medical biographer, falls into it? In his account of the life of William Hunter, in the "Roll of the Royal College of Physicians," he says: "On the death of Dr. Fothergill, Dr. Hunter was unanimously elected president of the Medical Society of London." Dr. Munk also failed to distinguish the Society of Physicians, of which John Fothergill and William Hunter were the leading spirits, from the Medical Society of London.

DR. LETTSOM.

For every Fellow of this society the name of Lettsom has a charm, and although he may not be acquainted with the details of the private and professional life of this gentle Quaker practitioner he cannot be much within these walls without becoming influenced—he may not know exactly how or why—by unconscious memory of him.

> "The evil that men do lives after them;
> The good is oft interred with their bones."

But so was it not with Lettsom. The more closely his history is studied the stronger does the feeling grow that he was a man to be revered. He certainly has left no evil influences behind him, and it was not possible that all the good he did could be interred with his hallowed bones. It is no empty phrase to say that the world is all the better for the fact of Lettsom having lived. Certain is it, moreover, that our profession has benefited by his life and example. And as for the Medical Society of London, if it is not wholly indebted to him for its conception and creation, it is at least greatly indebted to him for its preservation and for much of the success and respect which has attended it throughout its long and eventful life. There was no self-seeking about Lettsom—no vaulting ambition; his chief thought was for the happiness of others, and wherever he went he was doing good. Pettigrew truly said of him that to detail his useful career is to pronounce his highest eulogy.

John Coakley Lettsom was born in the West Indies in 1774. He was one of twin boys, and, previous to his birth, his mother had six times had twin boys. He was educated in Lancashire, and soon after his sixteenth birthday he was sent as an apprentice to Abraham Sutcliff, a surgeon apothecary at Settle, a dull little town at the top of Ribblesdale. About the second year of his apprenticeship Lettsom began to visit patients. Pettigrew says, with a sigh as it were, that he doubts if he was then quite fitted for that particular work, as he had never attended a lecture or seen any anatomical figure except a skeleton. The old apprenticeship system encouraged this sort of thing, and it proved the ruin of many a would-be medical man, casting him adrift with a thin veneer of practical information upon a foundation of solid ignorance. But it did not spoil young Lettsom, who kept on steadily working at natural science and languages as well as at his profession. At the end of his five years' apprenticeship he came to London, where he did not know a soul. But he brought letters to Fothergill, who was then fifty-four years old, Lettsom being his junior by thirty-two years. It is well to keep in mind the fact that Fothergill was thirty-two years older than Lettsom, for as the acquaintance between these men ripens into deepest friendship, and we see them side by side, this is practically the only difference that we find between them.

Probably the chief object of Lettsom's journey southwards was that he might advance his professional knowledge by practical work in the wards of a hospital, for London was then, as it still is, the finest field for clinical work in the British Isles. Then, as now, however, by some absurd miscarriage, the well-skilled practitioner who desired to obtain a degree in medicine had to go elsewhere for it. Lettsom went to Leyden for his. Had he lived at the present day he might possibly have gone to another friendly kingdom and secured for himself a Doctorate with dispatch and "with distinction." I do not mean by this that the medical man who has been educated in London acts unwisely in going abroad for a degree in medicine. On the contrary, I commend his prudence, for a degree in medicine—no matter whence it comes—is of real practical value. What I wish to emphasise is the strange anomaly that in this vast metropolis, second to none in clinical wealth and educational advantages, there should not be a degree in medicine obtainable by the general run of students. The result is that London as a teaching centre is being deserted and its clinical advantages ignored, in order that students may undergo their medical training in other cities, and in towns, where they are able to secure the title of M.D. as a fitting reward for diligent work.

Young Lettsom saw a great deal of Fothergill, whose professional position and success fired him with the ambition to establish himself in London. But he had no money. In twelve months the small store that he had brought was exhausted, so he packed his ambition in his trunk and set sail for Tortola in order to take possession of the little property left him by his father. This consisted of a small portion of land and about fifty slaves. At that time, says his friend Pettigrew, he was not possessed of £50 in the world; but he at once set his slaves free, and by so doing became a voluntary pauper at the age of twenty-three years. He did not take this step because he was so advised or because it seemed "advisable," but because he could not tolerate the idea of trafficking in human blood and because, as Pettigrew says, he thought it right to do unto others as we would wish they should do unto us. This, in brief, was Lettsom's religion, as also it was the sum and substance of the teaching of the Great Physician in whose step he humbly tried to walk.

Gentlemen, at the present moment we have urgent need of another Lettsom to set free slaves; and I say with sorrow that these slaves are members of our profession—medical brethren who, unable or unwilling to engage successfully in its honourable practice, have sold their birthright, their art, and their independence to trading clubs, called medical aid societies. It is not for me to enter with ungenerous detail into the actions of brethren thus enslaved. Possibly, indeed, had I been placed in similar circumstances I might have entered into the same servitude. But of this I am certain, that, had I done so, I should long to be released from it! And so, surely, do they. The question is, How is their freedom to be secured at the earliest possible moment? Many years ago there lived in Mantua a family medical attendant who found it difficult to make both ends meet. What his name and qualifications were we have not been told; he is simply called "an apothecary," which, as I just now remarked, was in former days the title of the general practitioner. Nor does it transpire why he had proved a failure in practice; but from representations which we have had of him upon the stage I think that he must have been lacking in that essential for success in family work, "a good bedside manner." A broken-hearted lover wanted to buy some poison from him, but he had qualms about selling it. Qualms are conscientious objections which yield to opportunism, so, without needless waste of time, the apothecary handed over the poison, remarking, as he did so, that his poverty but not his will consented. I suppose that the medical men who have entered into the slavery of the trading medical associations would make the same unctuous remark. At least, I understand that when one of them is asked by a brother practitioner, whom by the acts of his association he is helping to ruin, if he approves of such acts, he rejoins, in shame and degradation, "What am I to do?" And at the same time he shrugs his shoulders, as if to imply that, though a slave, he has not lost all sense of honour—that at least his will did not consent. All the same, he is in the pay of those who are sending round male and female touts—agents they are called—whose business it is

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to undermine the practice and steal the patients of his brother practitioner. If, when doing this, they smirch his reputation and reduce to the level of paupers those who had hitherto been able and willing to pay him adequately for professional services, what is that to them? Let the galled jade wince, their withers are unwrung.

These trading medical associations are sometimes also life-insurance companies, which endeavour to attract insurers by offering the collateral advantage of gratuitous medical attendance by the practitioners whom they are "sweating." Probably the directors of these companies have already found that plan to give good results in their daily work, when, as pushing grocers, they throw in a present of sugar to each purchaser of a pound of tea.

Note how skilfully the immortal playwright managed that scene in Mantua. He has got rid of Balthasar, who had brought the love-stricken Romeo the news of the supposed death of the lady, as his presence might possibly have interfered with the conclusion of the nefarious bargain by the apothecary. Certainly if Friar Laurence, or any other strong man, had been about, the lover would never have dared to make the tempting proposal to the pliable practitioner. It would not have been necessary to say to the apothecary that such an act would be unworthy "in a professional sense"; a mere shake of the head would have been enough to stop it altogether. Anything more discreditable to the honour of our profession than this commercial compact with medical associations it would, I should think, be difficult to imagine. It is disgraceful in a professional sense, and should have been stopped long since. A mere gesture of disapproval on the part of the head of our profession would have checked its inception. And where, it is asked, is our stern though paternal Friar Laurance, the guardian of the registered practitioner and the keeper of our professional honour? Where, all this time, is the General Medical Council? It may be that though individual members of that Council have possibly heard rumours of the existence of the discreditable alliance between Art and trade, their attention has never been officially called to it, or their powerful and much needed aid invoked. Here, therefore, from the chair of the Orator of the Medical Society of London, a chair which Lettsom the Liberator occupied on no less than three occasions, I beg leave to proclaim to the General Medical Council the existence of the abuse and to appeal to them to "come over and help us."

The West Indies must have been more prosperous one hundred and thirty years ago than they are to-day, for, starting in practice in the small island of Tortola, Lettsom made nearly £2000 in five months. Half of this he gave to his mother; the rest he placed with his ambition and came back to London with the view of following in the wake of Fothergill. Even at the present time a young man who is fired with an ambition to practise as a consultant in London might do worse than follow the example of Lettsom with respect to a certain delicate matter. He had probably thought it well out, for Pettigrew says: "He determined upon forming a matrimonial connexion with an amiable young lady, the daughter of a wealthy tin-plate worker." The union turned out an extremely happy one, so that we may assume that though the gentle Quaker happened to marry where money was he did not marry for money. Such an act, indeed, would have been entirely foreign to his nature.

A few words about the death of Lettsom shall close this short notice of him. The manner of his death should act as a warning to us; it was as follows. For some time he had been attending a gentleman whose case proved fatal and he was desirous that the body should be examined. The necropsy was chiefly made by himself on Oct. 22nd, 1815. He remained in the cold room for two hours, and on the next day he felt chilly and unwell. Then strong rigors came on, with fever and with severe pains in the arms. He suffered intensely and, becoming delirious, sank exhausted on Nov. 1st. Making a post-mortem examination in a private house is usually a depressing and chilling business. The window is partly open and there is no fire in the grate. And when on a late October day a man seventy-one years of age, probably with his coat off, spends two hours in the cold room, what wonder if he contracts a "chill"? He probably absorbed a large dose of septic material. Lettsom diagnosed his fatal illness as "rheumatic." Septic diseases were not as well understood then as they are now, and even at the present time they are not infrequently regarded as "rheumatic." Probably the patient whose body the earnest physician was examining had died from some obscure septic disease. That Lettsom was not clear as to its nature is evident, I think, from his spending so much time at the necropsy.

A LOYAL ADDRESS.

A Resolution of the Council of the Medical Society of April 3rd, 1789, is especially interesting to us to-day in that it expressed the desire of presenting an Address to His Majesty on his happy recovery. For carrying out this resolution special meetings of the Council and the society were held, the Address was duly sent up, and at a subsequent meeting it was resolved that Lord Sydney's reply on behalf of His Majesty be inserted on the minutes. To say that this summer of rejoicing, 1897, finds the Medical Society of London still loyal is feebly to express the feeling of its Fellows, for "that fierce light" which has beat upon the Throne throughout the last sixty years has been reflected straight into the hearts of Her Majesty's subjects, turning *loyalty* into *love*.

THE MEDALS.

John Fothergill died when the Medical Society of London was seven years old, he being then in his sixty-ninth year. Lettsom, as we know, felt his loss very keenly, and four years after his death he wrote to the society as follows:—

> "GENTLEMEN,—To preserve the memory of illustrious characters by some permanent memorial is not only grateful to the friends of the deceased, but excites in the living that commendable emulation which leads to great and virtuous actions. Such were those which will render dear to distant posterity the name of Dr. John Fothergill, in memory of whom I have ordered a medal to be struck, under the patronage and at the disposal of the Medical Society of London, held in Crane Court, Fleet Street. It will be in gold, of ten guineas' value, to be called the Fothergillian Medal, and to be given annually on the 8th day of March[a] to the author of the best Essay upon a Prize-Question proposed by the Society," &c., &c.
>
> "JOHN COAKLEY LETTSOM."

The date of the letter, May 25th, 1784, is interesting from the fact that on that very day Lettsom had been reading to the society a clinical report of the case of Dr. Fothergill, for which he had received the usual thanks. The preparation, or the reading of this paper, or the reception which it got at the society, had doubtless filled his heart with recollections of his dear friend, and with a burning desire that time should not be allowed to completely efface the fading memory of so good a man. The letter was read at a general meeting on Thursday, June 4th, 1784 (although Tuesday was the proper meeting day), and a vote of thanks was unanimously passed to Lettsom for his generous offer. In the following week the society again met, and a committee was appointed to consider the design, and a plan for the distribution of the medal.

Within a fortnight the committee brought in their report; they proposed that the obverse of the medal should contain the head of Dr. Fothergill with this legend: "Fothergillius, Medicus, Amicus, Homo," together with the date of his birth and death, and that the reverse should exhibit Hygeia, holding in her right hand a wreath to crown the successful candidate, who is presented by Esculapius, together with certain letters which briefly indicated that the medal was the gift of the Medical Society of London, which was instituted in 1773. This design seems somewhat ambitious; and I think that when it was shown to Louis Pingo, the artist who was to engrave the die, he must have told the committee that the order was rather too extensive for satisfactory execution. I should think that even Benvenuto Cellini himself would have stood aghast at the proposal. It is to be noticed that Lettsom said nothing in his letter about investing a sum of money to defray the annual expense of the medal, and the society raised no question upon that point. He simply said: "I have ordered a medal to be struck." But inasmuch as the details were subsequently to be arranged by a committee, he could not then have actually given the order for the striking of the medal. Indeed, the design which he and the other members of the medal committee proposed was not in the end adopted. The medal, as eventually struck, is thus described by Mr. Grueber from the specimen in the British Museum:—Obverse: Bust of Fothergill to right, in wig and close-buttoned coat. Legend,

[a] The birthday of Fothergill.

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Johannes Fothergill, Medicus Egregius, Amicis Carus, Omnium Amicus. Reverse: Within laurel leaves, in which are entwined two serpents, *Medicinæ et Scientiæ Naturalis incremento.* Above, *Don. Soc Med. An. Salut. 1773. Instit.*

Thus the design proposed by the committee had been considerably tamed down and, I think, improved, before the die was engraved. I have the pleasure of showing a replica of the original John Fothergill medal. Mr. Grueber's description omits to state that the dates of the birth and of the death of Fothergill are given upon the rim of the medal. So far as I can ascertain, only seven examples of this medal were ever struck in gold, one of which was presented to King George the Third as a specimen; this is now in the British Museum. One was awarded in 1787 to Dr. Falconer of Bath, and three years later one to Dr. Willan, the dermatologist. In 1791 Lettsom himself had the pleasure of receiving one for his prize dissertation. Mason Good and Bouttatz received medals in 1795 and 1801 respectively, and in 1803 Edward Jenner was awarded the seventh and last.

It is the custom, I believe, in certain societies (not medical) for each individual to break into a thousand pieces the glass out of which some toast has been drunk which is specially dear to the hearts of those present, so that by no possibility can the glass which has been thus honoured be submitted to desecration. Extravagant as the custom may seem, there is a beautiful sentiment underlying it. As we look back it is with considerable satisfaction that we learn that our illustrious colleague, Edward Jenner, was the last recipient of Lettsom's Fothergillian gold medal—Jenner the greatest benefactor of the human race that ever lived. After this it is well that we hear nothing of medals subsequently struck from that die. By honouring Jenner it had fully honoured the society, and had brought its work to a splendid close. But, gentlemen, if that die were yet in existence we could show upon our roll of Fellows the name of one for whom it might still be struck upon purest gold—of one who, second only to Jenner, has been a benefactor of the human race. Need I say that I refer to Joseph Lister?

The first gold medal, then, was obtained by Dr. Falconer in 1787, and at the society's meeting on April 9th of that year a letter was read from him saying that he would be up in London in the following June in order to receive it. Thereupon, "Dr. Lettsom was appointed to deliver him the Fothergillian Medal in form." On Friday, June 1st, there was a small meeting of the society, at which Falconer took his seat as a corresponding member, but the only business recorded is the decision that the presentation of the medal should be postponed for eight days—namely, until Saturday, the 9th. There was a very good reason for delaying the presentation of the medal—the society had not yet received it from the unbusiness-like artist. On Monday evening, June 4th, a meeting of the society was held in the ordinary way, and a good deal of business was done at it. Falconer, who was present, must have been impressed with the energy and prosperity of the society. But he and everyone else must have felt sympathy with Lettsom in that the Fothergillian business was hanging fire. Here is an extract from the minutes for that night:—

> "Dr. Lettsom informed the society that as, through the neglect of Pingo, who was entrusted with the execution of the Fothergillian medal, and has had it in his hands for upwards of a twelvemonth, there can be no probability of getting the medal out of his hands so soon as might be expected, so that it could be presented to Doctor Falconer on Saturday night, and Dr. Falconer having signified that his staying in town would be attended with inconvenience, it was proposed that Wednesday evening should be fixed on for the delivery of a *model* of the Fothergillian medal to Doctor Falconer, which proposal, being moved and seconded, was agreed to *nem. con.*, and the messenger was ordered to summon the members for Wednesday evening at the usual hour."

I make no apology for going into detail in connexion with the delivery, or rather the non-delivery of the first Fothergillian medal, for the account cannot fail to be of interest to every Fellow of this society. In accordance with the resolution just read, an extraordinary meeting was held on Wednesday, June 6th, 1787, one of the last meetings held at the society's house in Crane-court. There was a large attendance of members, and the meeting was honoured by the presence of upwards of fifty visitors. Dr. Sims duly stated from the chair the business for which the society was convened for that evening, and although it was an extraordinary meeting the minutes of the last meeting were read and confirmed, and also various other minutes which had reference to the institution of, and to regulations concerning, the Fothergillian medal. After signing the minutes the president left the chair in favour of Lettsom, who delivered an elaborate address, which at the beginning was metaphysical, and then, turning into a eulogium of Fothergill, ended with the apotheosis of Falconer. After this "he delivered publickly a model of the Fothergillian medal." Falconer replied, and then Sims resumed the presidential chair and moved a vote of thanks to Lettsom, not only for his address of that evening, but for the great interest, liberality, and assistance which he had always extended to the society. Falconer must have had plenty to think about as the stage-coach was taking him and his dummy medal down to Bath.

On March 12th, 1787, Dr. Sims moved a resolution to the effect that a silver medal bearing the same device with the Fothergillian medal "should be given annually by the Medical Society to the author of the best dissertation on any other medical subject." This was unanimously agreed to, "with a proviso that the ordinary members of this society shall not be allowed to be candidates for the said silver medal." Lettsom was at this meeting; doubtless he and Sims had talked it over beforehand. But I suppose that the members of the society objected to being cut out from all possibility of acquiring the silver medal; so we are informed in the preface to the second volume of the *Memoirs*, published in 1789, that there should be two silver medals adjudged annually, one to the author of the best essay read before the society within the year, written by a Fellow; the second for the best essay by any other person. A Fellow, I might remark, was any member of the society who resided within seven miles of London. Thus at the end of the eighteenth century our society was prepared to present annually one gold medal and two silver medals in the interests of the advancement of medical science.

THE MEMOIRS.

The volumes of memoirs which our society published in the eighteenth century are a mine of wealth, and many of the articles are written in a forcible and picturesque style which greatly adds to the pleasure of perusing them. Towards the end of the second volume, for instance, there is a long letter from Dr. Hamilton to Lettsom on the influenza which occurred in 1782. Here is a small piece of it. "Few diseases ever produced loss of strength more suddenly. The crew of the *Fly*, sloop-of-war, was an instance of this. The captain affirmed that forty of his men fell ill in less than eight hours, several of whom dropped down at the wheel as they steered the vessel. This circumstance obliged him to put back and stand again for the Yarmouth Roads, which he had left only a few hours before (with all hands apparently well), merely for want of hands to navigate her." In that terrible epidemic, as at the present day, influenza knocked down medical men with as little discrimination as it did their patients. Hamilton himself took it severely, dropping down at the "wheel, as it were." "But," said he, "the nature of my situation and the number I was obliged to visit prevented me from taking that care of myself which I recommended to others." There was no chance for him of "putting the ship back"; he was compelled to stand at the wheel even if he had to be lashed to it. And so it is with many a practitioner to-day. From no sordid motive, but from a sheer sense of duty, he goes his daily rounds attending people, many of whom are not feeling half as ill and miserable as he is himself. "It happened frequently in that epidemic," continues Hamilton, "that patients insisted on being bled; 'many were bled by my young man,' says a surgeon, without advice." The young man was, of course, the unqualified assistant of that day. In the advertisements of more recent times he called himself "a gentleman of experience, *sine diploma*"—as if that were actually a qualification for practice. He usually considered himself perfectly competent to treat a case of heart disease, though he might never have seen a mitral valve; to deal with an obscure injury to an elbow, though he had never dissected a joint; or to look after a man with Bright's disease, though he had never handled a test-tube or looked down a microscope. He plumed himself all the while on the fact that he was a "practical" man, and, strange to say, there were many patients who shared with him the good opinion which he had of himself. There was apparently only one professional act which he could not do, and that was to sign the death

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certificates which considerable practice and familiarity enabled him to fill up with speculative precision. Fortunately, he is now a thing of the past, the General Council of Medical Education having sent him on a mission to minister to the necessities of the dodo and the great auk.

It is interesting to learn that when Dr. Hamilton took the influenza he declined to be bled. The grounds on which he excused himself from submitting to so orthodox a measure are worthy of study. "Besides," says he, "I am apt to think our constitutions are considerably changed this last century in Great Britain. Luxury, and its enervating effects," and so on, and so on. We hear the same croak at the present day. "Our constitutions are changed," and of course for the worse. "Men are not what they were; it was just the same in Ancient Rome," and stuff of this sort. Before we need pay any heed to such rubbish we must forget what Britishers and Irishmen have done in recent years; how they were tried by, but triumphed over, the severities of Crimean cold; the scorching horrors of a mutinous India; the fatigues of forced marching in wild Afghanistan; and, yet later, the difficulties which nature herself had strewed in the pathless route that brought them to the glorious relief of Chitral.

Reading, or merely glancing through, the early records of this society one cannot but be struck with the earnest and practical nature of the communications, with the width of the range which they cover, and with the fact that they were made in almost equal share by the three classes of its Fellows. From the first this has been to the great and manifest advantage of our society, and may this arrangement long continue. During the time that, in various ways, I have been concerned in the affairs of the society I have noticed, I am glad to say, but little indication of a desire to leave the old and the good for the sake of the new, but not necessarily the better. I must confess, however, that it was lately a bitter grief to me to see our ancient presidential chair of mahogany replaced by a modern one of maple. But this our meeting-room has been rendered so increasingly attractive and comfortable by a somewhat rapid evolution that I am quite willing to admit that those who differed from me on that occasion were not irrational. Further than this, however, I will not go. But while I am upon the question of our furniture, I would like to ask how it is that our worthy president is not wearing the cocked hat, without which our early presidents did not consider themselves respectfully attired? The first "Accompts book" shows that for a "hat for the president" we paid £2 10*s*. Why, I would ask, is that hat not in evidence to-night? In Medley's great picture of a meeting of the society the old cocked hat is duly represented.

The shortness of the time allotted for an oration has prevented my touching upon many important incidents in the history of the Medical Society of London in the eighteenth century. I have not been able, for instance, to refer to the battles which took place over the drawing up of the rules or to the exciting occasion when the society found itself locked out of its own rooms. Nor to the gentleness and wisdom which Lettsom showed as he helped—to use the words in the minute book—to establish the society upon a basis of permanence and dignity. But all these things, and how Lettsom came into possession of a turtle and instead of regarding it as a subject for comparative anatomy presented it to the society, together with an invitation to each member requesting the favour of his company at the King's Head Tavern in the Poultry on a June afternoon in 1775, where they made merry, feasting on its fat and its fins; and the house in Bolt-court which he gave for their meetings, and the many kind acts which he did—are they not written in the books of the chronicles of the eighteeth century? These books are of priceless value to this society, though they have not always been treated with becoming respect. But this Oration—to which you have listened with so much patient indulgence—will not have been in vain if it have the effect of obtaining for those old volumes appropriate bindings and a secure custody in a fire-proof safe. They contain the Log of our *Mayflower*, and they are well worthy, not only of our occasional study, but of our continuous and reverential care.

THE DISPERSION OF LUNATICS.—As illustrating the difficulty of finding asylum accommodation, the report of the West Sussex County Asylum Committee shows that 356 county patients are distributed as follows: Salisbury, 211; Haywards Heath, 1; Berry Wood, Northampton, 6; Portsmouth, 18; Camberwell House, London, 30; Grove Hall, London, 44; Hatton, Warwick, 36; Isle of Wight, 10.

The Ingleby Lectures

ON

THE OPERATIVE TREATMENT OF CANCER OF THE BREAST.

Delivered at Mason College, Birmingham, on May 19th and 26th,

BY BENNETT MAY, F.R.C.S. ENG.,

PROFESSOR OF SURGERY IN MASON COLLEGE, BIRMINGHAM.

LECTURE I.

GENTLEMEN,—When I accepted the invitation to give the Ingleby Lecture for this year I am afraid I did not sufficiently consider the difficulty I should find in selecting a suitable subject for the occasion, as the conditions of the Ingleby Trust and the objects of its generous founder necessarily limited me in my choice. It is true that all reasonable latitude is allowed by the council, to whom I have to express my sense of the honourable distinction conferred by their invitation. After some consideration I selected that of the Operative Treatment of Cancer of the Breast as being in a high degree germane to the benevolent purposes of the founder, as well as one on which I might claim to speak with some measure of observation and experience.

It may, however, be needful to say something in the way of an apology for its selection, as it has already been the subject of an Ingleby Lecture. The first of these lectures, given by Mr. Oliver Pemberton in 1884, was on the Treatment of Mammary Cancer. Since that period, however, much has happened in the surgical world; in particular, the great revolution in wound treatment, which set in about twenty years ago, has opened up quite a new and wider field for operative treatment. I believe I may say that practically it is only within the last fifteen years that any important advances have been made in our practice. It will be my chief purpose to review these advances and the results which have been obtained from them, and to endeavour to form an estimate of their value for future guidance. Mr. Pemberton's lecture was a very interesting and important one, and as he gave a very candid exposition of his experience it may be taken as representative of the best opinions of that date and of the surgical epoch over which his long and busy life extended. He quite endorsed the opinion prevailing among the profession, that no cases were less favourable for operation than these. The disease was regarded as practically incurable, and the most that was hoped for was a prolongation of the life and some amelioration of the sufferings of the patient. Most of us, indeed, remember the almost uniformly bad results; but for those whose memories do not go back so far reference to the surgical hand-books of the date is instructive and will serve as a basis of comparison with present-day results. Statistical tables *circâ* 1878–80 authorise me in stating that in about 50 per cent., or one-half, the cases operated on, local or regional recurrence—that is, external visible re-appearance of the disease—took place within three months, and in 85 per cent. within twelve months of operation; 90 per cent. of all cases were dead within two years, and the average addition to the life was variously estimated at from eight months to two years, but about thirteen months seems to have been considered the average. These results greatly influenced the theory of the disease and almost authorised the current and accepted views of the pathology of cancer and its incurability. But we now know that these views were, to a considerable extent at least, deduced from operations quite inadequate for the complete removal of the disease. The operation was a most inefficient one, only a small ellipse of the skin with the tumour and part of the breast being removed, and the axilla rarely emptied of its infected contents. This theory of cancer has been considerably modified by our more recent operations. I am not competent to discuss it, but I believe pathologists consider that, whatever may be the inherited or predisposing condition, cancer of the breast is primarily local and limited in its origin and not part of a general cancerous infiltration. Moreover, the channels of infection have been more carefully investigated, and we may follow the disease from its origin

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into the various tissues is understood, and it is believed that a certain though varying interval intervenes before this local and general infection takes place.

I cannot discuss the parasitic theory of cancer, but so far I believe it is quite unproved. Possibly some micro-organisms may yet be discovered, and perhaps an antidote in the form of an antitoxin may follow; indeed, that prospect seems more hopeful than a purely therapeutic one; but at present the only lines on which we can successfully treat the disease at all are those of operation. As a result of the revolution in wound treatment, which I have referred to, the operative field has been greatly extended. We now ensure immediate union of the most extensive incisions, and operative mortality has been almost abolished. Consequently the operation has been continuously developed in thoroughness and completeness. The question is whether commensurate results have attended these wider operations, or are we pursuing a "will o' the wisp" which must continually elude our grasp? Further, what are the limits to which the operation may usefully be extended? The subject, it is to be hoped, will not now rest until some ultimate decision has been reached and a standard or minimum uniform operation has been settled upon. It probably can hardly be decided yet by appeals to statistics and percentages, as it will take several years to adjudicate upon the merits of different procedures. There is sufficient body of evidence, however, to leave little doubt upon the main point—viz., that there has been very substantial improvement in our results. Before going on to discuss this standard operation and the mode in which it should be carried out I will shortly indicate the steps of its development and the researches on which it is based. I think it was in 1867 that Mr. Moore, of the Middlesex Hospital, first enunciated the doctrine that the entire mamma, all adjacent structure, skin, fat, lymphatic glands, and more or less of the pectoral muscle must be extirpated. This view, however, was never acted upon, and seems to have been entirely lost sight of until Volkmann, in 1875, drew attention to the necessity of exploring the axilla in all cases, and soon after this Kuster advocated its systematic clearing out, whether the glands can be felt or not. Then Volkmann demonstrated how the pectoral fascia, whilst itself early becoming infected, acts as a barrier to the spreading growth of the carcinoma and seems for a time to bring it to a halt. His investigations were confirmed by Haidenhain, who observes that carcinomata invariably send their outposts to the surface of the muscle, no matter what the thickness of the fat may be. The muscle itself may remain healthy for some time. This is due to the fact that the direction of the lymphatic current is from muscle to fascia, and not in the inverse direction. But when the disease has extended into the muscle itself, which may be known by the tumour being adherent to subjacent parts and not moving in the direction of the fibres of the muscle when they are made tense, then the cells are swept along the lymphatic current by the action of the muscle, and the whole muscle must then be considered as involved.

That the lymphatics play the essential *rôle* in the dissemination and spread or the disease is established beyond controversy. They are the highways along which the cancer cells are conveyed. Stiles, in a valuable contribution to the anatomy and pathology of the breast in the Transactions of the Edinburgh Medical and Chirurgical Society, 1892, states that in cancerous breasts the lymphatics may frequently be seen injected with cancer cells. Recurrence or re-appearance of the disease after removal is due to the non-removal of microscopic foci or larger masses, more or less remote from the main tumour. Hence the importance of removing all the tissues which the lymphatics traverse as well as the glands themselves. The lymphatic vessels of the breast are described as being arranged in two layers. The superficial is close under the areola and round the nipple, and from this two or three trunks finally issue to pierce the deep fascia and join the deeper trunks. The deeper layer issues from the under surface of the gland and follows the fascia of the pectoralis major, receiving branches from that muscle. Hence the retro-mammary tissue and fascia are regarded as infected soil. The larger trunks accompany the bloodvessels of the gland, those from the inner, sternal periphery accompany perforating branches of the intercostals and join sternal glands within the chest. The greater number accompany the long thoracic, external mammary, and acromio-thoracic, to open into the axillary glands. Some from the upper periphery pass direct into other parts. The chronological order of the advance to the supra- and infra-clavicular glands above or beneath that bone. Stiles, however, states that the anastomosis and intersection of the lymphatics is so free that it is impossible to say to which set of glands the lymph from any given part of the breast may be conveyed. This statement, I believe, accords with clinical facts. We see the axillary glands infected with almost equal uniformity in whatever quadrant of the breast the growth is situated. Gross states that the seat of the primary disease exerts no influence on the date or frequency of the appearance of the lymphatic tumours in the axilla. Snow, however, finds that in cancer appearing close to the sternum the axilla is much more slowly infected than from other regions, and therefore considers this may be an exception to the routine practice of clearing the axilla. It is apparent that the supra-clavicular glands are more early infected in cancers of the upper periphery, and we may suppose that the sternal or mediastinal glands are early infected in those of the inner periphery. Hence the prognosis is, *cæteris paribus*, less favourable in these situations. The axillary glands, however, are commonly involved as well. The arrangement of the axillary glands is too well known to need description further than to add that they are probably much more numerous than the twelve or fourteen commonly given. The importance of the axilla as a resting place for the disease has always been recognised. It is the almost invariable seat of reappearance unless the glands are removed. It is believed that for a period the onward march is there arrested and the metastatic deposits delayed. It is doubtful whether general infection ever occurs without antecedent glandular infection. Gross says that it does in 3 per cent. of all cases running their course to a fatal end. This occurs only in the case of soft medullary tumours, the general infection taking place through the blood. It seems not unlikely that these may be cases of sarcoma. The region of gland infection may perhaps show wider latitude. Gross states that the axillary glands are infected in 90 per cent. of all cases running their course to a fatal end (without operation), and that in 7 per cent. glands other than the axillary—such as the mediastinal and suprascapular—become diseased without the axillary. But I do not think the axillary glands escape in 10 per cent., whatever others may be involved. I have never seen an advanced case without the axilla showing it.

The chronological stage at which the glands become infected is variously estimated and no doubt varies widely. Gross gives fifteen months after the inception of the disease as the average, but this is obviously fallacious, and six months is the more usual estimate of the time at which the glands can be felt by external palpation. As a matter of fact, it is very rare not to find them obviously diseased on opening the axilla at any stage at which patients come under operation. From the axilla the infection passes to the supra-clavicular glands in the posterior triangle of the neck. It is quite possible for these glands to become infected through more direct channels—viz., the lymphatics which pass above and beneath the clavicle. A long time may elapse before these glands show signs of enlargement on account of the loose fatty and areolar tissue among which they lie and the large space they occupy. The battle ground of controversy has now shifted from the axilla to this region, and there are numerous operators who attack the disease here as a routine procedure. The area of the breast has recently been shown to occupy a much larger extent than has commonly been supposed. Stiles in particular, by his nitric acid process, has demonstrated that the peripheral outlying processes extend far beyond the corpus. According to him the vertical diameter extends from the second rib to the lower border of the seventh costal cartilage or beyond; the horizontal from the edge of the sternum to the mid-axillary line. It sends peripheral processes into the retro-mammary tissue and fat, on to the pectoral fascia, so that no separation can there be made with the knife. To remove the whole breast it is necessary to keep outside the limits given. This must be done either by very wide skin incisions or dissecting the skin off the breast, to which it is closely attached by fibrous septa. Usually Stiles finds that the whole organ has not been removed by the surgeon's incisions, a fact which every surgeon must acknowledge. The significance and importance of this depends upon the part which may be played by the parenchyma of the breast, when not entirely removed, in the production of recurrence after operation. This is a question on which there is a good deal of diversity of opinion, but

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nothing conclusive is known. Some have considered the whole gland as necessarily the subject of general cancerous infiltration, but I think this view is now generally abandoned. The German view, headed by Haidenhain, is that the whole parenchyma is liable to become cancerous from proliferative changes, and that there is a pre-cancerous condition the direct forerunner of cancer, into which it will sooner or later pass. The evidence in favour of this view, however, is rather hypothetical, and the gulf which separates them has not yet been bridged. The opinion of Creighton, supported by Jacobson, is that cancer in the breast is a disease due to the organ becoming obsolete, whereby the atrophying acini become so disordered as to allow the epithelium to escape and infect the surrounding connective tissue. Hence the connective tissue should be removed very widely beyond the breast. Others, with Stiles, contend that the special danger lies in the fact that the parenchyma of the breast and the surrounding tissues include the lymphatic spaces and highways along which the disease is liable to spread, and that it is impossible to say to what extent this has taken place in any case. Watson Cheyne also upholds the view that the special source of danger is the arrangement of the lymphatics and not the supposed pre-cancerous state of the breast. Butlin, again, does not consider that the new growth often arises in the outlying lobules, and therefore does not regard it as essential to remove the whole of the breast in every case when the tumour is small. What is certain is that occasionally on dissecting a breast after removal we find separate and independent nodules of which there was not the slightest indication beforehand. I have met with this twice, and its occasional, even if rare, occurrence is of itself sufficient to justify the removal of the whole breast in every case.

There is no positive evidence to uphold the view of the infectiveness of cancerous tissue itself if cut into. Indeed, if this were so we should expect to hear of the accidental inoculation of operators and others—a thing I believe absolutely unknown. This view, however, is strongly advocated by Halstead and Meyer in America and supported by Stiles, Watson Cheyne, and others here. It is believed that infection takes place either from direct inoculation by the knife or the liberation of cancer cells from their alveoli or the lymphatic vessels. The successful inoculation of cancerous tissue in animals has been accomplished and experimental grafting in man has also succeeded. Hence the importance of working outside the infected area and not cutting into infected tissues without adequate precaution. We should at least give the patient the benefit of the doubt by avoiding this.

Haidenhain and Volkmann about 1875 appear to have been the first to systematise a radical operation based on the preceding researches. The method of operating which they adopted has become classical and is the basis of our present procedures. It included the removal of the entire breast as believed, a liberal piece of skin, a clean dissection of the pectoral muscles, and in some cases removal of the axillary glands. This method of operating soon became universal in Germany, but it was much more slow to gain acceptance here. In 1880 Gross, of Philadelphia, and in 1883 Mitchell Banks here, did much to popularise by their writings thorough and extensive operations. Their operative mortality was high from septic diseases, which were then still rife, but their results were good. With aseptic wound treatment this high mortality has ceased and individual operators have been able to go on developing their operations in extent and thoroughness. The one which I adopt as the standard or minimum necessary to meet the conditions for cure I shall now proceed to describe. It includes the removal of the entire breast gland, the integuments over the area of the tumour and for some distance around, all the para-mammary fatty and areolar tissue extending upwards nearly to the clavicle, a clean dissection of the pectoralis major, or, what is better, the removal of the costo-sternal portion of the muscle, and, lastly, a clean dissection of the axilla, thus including all the tissues likely to contain the lymphatic channels. The suspected tissues are always to be removed entire in one piece, never cut into. This operation is frequently spoken of as the complete or classical operation, but as completeness in this matter appears to have no finality it is perhaps better spoken of as a wide or standard operation.

With regard to operation, the usual preparations for carrying out an aseptic operation are supposed, but no antiseptics or chemicals of any kind are to be introduced into the wound. I attach considerable importance to the proper planning of the incisions, which should be carefully outlined and marked on the surface. The incision usually conforms to the oval type or ellipse, a widely open oval, from four to eight inches wide at its widest part, according to the size and place of the tumour and the size of the breast; and ordinarily the long axis of the ellipse is in the direction of the pectoral fibres. The difficulty occurs in the case of outlying peripheral tumours, especially those lying near the sternum. In these some modification is necessary. The axis of the ellipse may be changed, but I now commonly adopt the suggestion, I think, of Bell—viz., to make a smaller second oval, including a triangular piece, the base of which joins the main ellipse at right angles, the result being a T-shaped incision. As a minimum distance two inches from the apparent margin of the tumour is advised, but I should take as much more as possible. The ellipse is to be carried out well over the axillary vessels. The incision extends down to the subcutaneous fat, and the integuments, with a sufficient layer of subcutaneous tissue but no more are retracted, so as to allow of a free dissection of the para-mammary tissue extending upwards nearly to the clavicle, inwards to the sternum, and outwards to the latissimus dorsi. The mass thus included is to be lifted up and thrown outwards, and in doing this one of two courses may be followed. Either the pectoral muscle must be scrupulously cleaned of every trace of its fascia and fat, or the costo-sternal portion of the muscle should be removed with the breast, &c. I think the latter is far the best way and should usually be done. The inner or sternal attachment is severed, and the separation may be made by the finger or handle of the scalpel working in the interval between the two parts of the muscle, and finally the outer attachment is divided near the humerus. This is really easier and quicker than an elaborate dissection of the fascia, which is nearly sure to be imperfect. It has the further advantage of a more thorough exposure of the axilla, especially the dangerous region between the two pectorals, and it also allows more easy approximation of the flaps of skin in case they are deficient, and thus permits of wider removal of the integuments. Of course, if the tumour is adherent to the muscle, this much is necessary as a minimum. As the dissection proceeds the breast with surrounding tissues, &c., is cleared from the chest wall and thrown outwards towards the axilla. The vessels, which have been taken up with catch forceps, may now be tied off and the dissection of the axilla proceeded with. In doing this it is well to expose the axillary vein where it is superficial at the outer angle early in the procedure. The fascia over it is to be divided, and the vein can then be safeguarded by the finger used as a director while the fascia is further laid open. For the most part the dissection is to be made clean with the knife, but the vein may be quite sufficiently and more safely cleared with flat, blunt-pointed scissors and the finger, unless it is positively adherent to the growth. All large vessels, such as the subscapular vein, should be clamped before division and tied at once. It is usually a fairly easy matter to follow and detach the axillary contents quite up to the apex and reach the clavicle, the pectoral muscles being relaxed and strongly retracted for the purpose. If any difficulty is encountered in doing this the great pectoral muscle should be cut across and the ends thrown apart. The muscle can be afterwards fully restored by buried catgut stitches. This is especially indicated where there are fulness and large veins in the pectoral and infra-scapular region, as if the muscles were lifted up by glands beneath them. Many contend that it is not possible to clean the axilla without division of both muscles or even their complete removal. If an absolute cleaning of the space and subclavicular region is implied this is correct. It cannot be done without dividing the muscles, but under ordinary favourable conditions, when the glands are small and non-adherent, simple cleaning in the way indicated is quite sufficient. We never find the disease reappear in the axilla in these circumstances. As a matter of fact, it is remarkable how efficient the clearing of the axilla is in preventing recurrence in this situation. If the glands are large and adherent the dissection is more difficult and must be more thorough. Muscles may be freely sacrificed, and if the tumour is adherent to the vein it must be very carefully dissected off its coats. In a few cases the vessel will be inseparable from, or will be flattened out and entangled in, the growth, so that no separation can be made with the knife. In these circumstances any necessary length of the vein may be removed between two ligatures, as I have done on two occasions. There is not, however, any hope of a permanent

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cure if it has advanced as far as this, still less if it involves the large trunks of the brachial plexus.

Having cleared the vessels, we may next proceed to detach the axillary contents from the lateral wall of the chest by quickly stripping up the thin fascia which attaches them to the serratus magnus and the ribs, avoiding injury to that muscle's nerve in doing so. The posterior wall is then to be cleaned, and this is frequently the most troublesome part of the procedure, on account of the hæmorrhage from the subscapular vessels. These should be exposed and caught before they are divided. The nerves, however, may nearly always be spared uninjured. The cutaneous nerves which cross the axilla may be sacrificed without much inconvenience. The whole mass, including the breast, contents of the axilla, and other intervening tissue, is to be removed entire by working outside it, so that it is not cut into. The external wound may be most quickly and easily closed by a continuous stitch of fine wire. If there is great tension I think the ordinary interrupted stitches serve best, starting from the angles towards the centre. They should be inserted near the edges and close together, about three or four to the inch, so as to distribute the tension equally. It is surprising how large a gap may safely be approximated in this way if the flaps have been well separated by the dissection. I have given up all kinds of button or deep stitches. I have not been able to give up the drainage-tube entirely. I drain the axilla by a tube perforating the posterior flap to carry away the blood and lymph, which are sometimes rather abundant and which may otherwise distend the flaps.

The proper putting up of a breast is important and not easy. Firm, smooth compression is required over a voluminous dressing. I use nothing but dry absorbent wool with a protection of gauze over the incision. As a rule two dressings suffice—one in forty-eight hours to remove the tube, and the other on the ninth or tenth day to remove the stitches. The axillary portion invariably heals by the first intention, and the remainder also if care be taken in the putting up. Objections to this operation have been taken in the stiffness, œdema, numbness, and neuralgic pains which are said to follow it. In my experience inconvenience from these is not considerable and need not weigh in the slightest degree against the operation. Any œdema will be due to over-pressure in the axilla and soon passes away. Passive movements of the shoulder and elbow should be begun early and the movements of the arm become nearly perfect again with time and use.

The mortality from this operation is remarkably low. I do not think it should ever exceed 2 per cent. from causes proper to the operation. I have not had a death in seventy-six consecutive cases, but one of my patients died from intestinal obstruction three weeks after operation. The old high death-rate was almost wholly due to septic diseases. I think shock is the principal danger to be feared, but by preventing loss of blood and unnecessary exposure to cold this is rarely formidable. The operation should be done as quickly as is consistent with thoroughness, and facility in doing it is to be acquired by practice. Occasionally some intercurrent disorder, such as bronchitis, may carry off a patient, but in every case the patient's fitness to bear the procedure must be considered on general surgical principles. There are a few other points to be noted. In planning the incisions regard must be had primarily for the efficient removal of the growth without reference to the subsequent approximation of the skin. But if the case is suitable for operation this can generally be accomplished. A small gap may be relied on to fill up quickly without suppuration if the wound be kept dry and aseptic. I have had some success in primary skin grafting, but it is uncertain. I have on occasions used a piece of the redundant skin which is cut away near the axilla. It is to be stripped of all fat and tissue and kept in warm boracic lotion till wanted. It may then be shaped to the gap, which it should nearly fill, and should be pressed down firmly so as to maintain close apposition of the raw surfaces. It is more certain of success, however, if the large piece is cut into small portions about a quarter of an inch square and planted near the edges. Operative grafting after eight or ten days is the most successful, a strip being taken from the inner side of the arm or thigh, but on many grounds it is objectionable. It is useless to operate in cases of wide skin infiltration or with scattered tubercles, as the most extensive sacrifice of skin cannot cure these. Regionary recurrence in the skin and internal metastasis are to be expected.

If we find during an operation that the highest axillary gland is involved so that it is not possible to pass beyond the limits of the disease, what are we to do? I have no doubt, under these circumstances, the posterior triangle of the neck should be opened and cleared of its glands as an addition to the ordinary operation. There is a reasonable chance of getting beyond the limits of the disease. The incision may be prolonged upwards over the clavicle, but it is not necessary to divide or resect that bone, as has been done by some operators. I have on two occasions cleared the supra-clavicular fossa of its glands in this way, though, as they were rather advanced cases, the results were not very satisfactory, and the disease returned *in osco*.

CASE OF SOLID FIBROID TUMOUR OF THE OVARY.

BY C. E. PURSLOW, M.D., M.R.C.P. LOND.,

HONORARY OBSTETRIC OFFICER, QUEEN'S HOSPITAL, BIRMINGHAM; ASSISTANT TO THE PROFESSORS OF MIDWIFERY AND GYNÆCOLOGY, MASON COLLEGE, BIRMINGHAM.

AN unmarried woman, aged twenty-six years, was admitted to the Queen's Hospital, Birmingham, on Dec. 10th, 1895, complaining of swelling of the abdomen. She had felt some pain and discomfort on the right side of the abdomen for five months, but the enlargement had been noticed only a few days previously. Menstruation had been regular, but for the last six months the amount had been less than previously. She had had pain on defecation for four months, and for some weeks before admission had complained of frequent desire to micturate. On examination the abdomen was found to be considerably distended. A hard, nodular, irregular tumour could be felt in the lower part of the abdomen reaching up to the umbilicus. The tumour moved freely under the hand and appeared to float in some fluid, and gave a sensation of "ballottement" when pressure was made with one hand, the other hand being applied to the opposite side of the abdomen. The physical sign obtained in this way resembled in a very marked degree that due to a fœtus in utero. Bimanual examination, however, at once made it clear that the tumour was independent of the uterus. Percussion proved that the fluid in which the tumour floated was free in the peritoneal cavity. On Dec. 16th the abdomen was opened in the middle line. The incision was extended up to the umbilicus. About three pints of free ascitic fluid escaped. The tumour was then manipulated through the wound, and the pedicle, which proved to be a long one, was transfixed and tied with silk. The parietal peritoneum was seen to be injected, and its cut edge bled freely, but no adhesions had formed. The tumour grew from the right ovary and the left ovary was normal. No washing out or drainage was used, and the wound was closed by silkworm gut sutures. The wound healed by first intention. The patient made an uninterrupted recovery and left the hospital on the twenty-fourth day after the operation. The tumour, which was irregular and nodular in shape, weighed forty-one ounces; it was solid throughout. Sections of it were kindly examined under the microscope by Dr. Kauffman, pathologist to the hospital, and he reported that it was composed entirely of fibroid tissue, which in some places was undergoing fatty degeneration.

All writers on gynæcology agree in stating that solid non-malignant tumours of the ovary are rare, and in most of the text-books the subject is dismissed in a few lines. A full account of them is given in Pozzi's work on Gynæcology, and he mentions one or two characteristics which were present also in this case; he states that they are almost invariably associated with the presence of free ascitic fluid and as a rule are free from adhesions. The Fallopian tube is usually quite free and is not adherent to the surface of the tumour, as is the case with cysts of the ovary; that is well seen in this specimen. He also states that they most often occur in comparatively young women. The presence of free ascitic fluid excites the suspicion of cancer, but in this case the fact that there was little pain and no loss of flesh was against that idea. For many of the notes and for valuable assistance in the treatment of the case I am indebted to Mr. F. G. Messiter, obstetric house surgeon.

Birmingham.

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THE REPRESENTATION OF THE FUNCTION OF VISION IN THE CEREBRAL CORTEX OF MAN.[1]

BY SEYMOUR J. SHARKEY, M.D. OXON., F.R.C.P. LOND.

ON May 8th, 1883, I read a paper before the Royal Medical and Chirurgical Society on "A Case of Asymmetry of the Brain presenting peculiarities which bear upon the Question of the Connexion between the Optic Nerves and certain Definite Areæ of the Cerebral Cortex."[2] The case was one of congenital spastic hemiplegia, and the most striking peculiarities of the malformed half of the brain were as follows:—(1) The general arrest of development of the left hemisphere; (2) the small size of the corresponding crus cerebri and anterior pyramid; (3) the absence of the angular gyrus and superior temporo-sphenoidal convolution, together with fusion of some of the other convolutions of the left temporo-sphenoidal lobe; and (4) the small size of the optic tract, optic thalamus, and corpora geniculata on the same side. I might have added, I now think, that the angular gyrus in the healthy hemisphere appeared to be unusually large. In commenting on this case I wrote as follows: "Some physiologists have concluded from their experiments that the occipital lobe contains visual centres, and of late Ferrier himself has inclined to this view. The present specimen tells neither for nor against such a theory, for the slight reduction in the size of this lobe cannot be made responsible for the extreme atrophy of the optic tract, though it is possible that the remnant of the latter which still exists may owe its survival to the presence of the occipital lobe. The case is different, however, with the angular gyrus and temporo-sphenoidal lobe. Ferrier's experiments have raised a very strong presumption in favour of the theory that the angular gyrus has some special function in relation with sight, some intimate connexion with the optic tract. And we hold that the specimen under consideration affords anatomical confirmation of this view. Setting aside the central convolutions and the degenerate motor strands in relation with them, the rest of the left hemisphere, with the striking exception already mentioned, presents only such general slight diminution in size as will explain any inequality which may exist between the nerves proceeding from the two sides. But the angular gyrus and temporo-sphenoidal lobe on the one hand, and the optic tract, optic thalamus, and corpora geniculata on the other, are so exceptionally malformed and deficient that some interdependence between them is at once suggested. And although from a consideration of this single anatomical specimen we are not justified in making any more precise assertion, still, we can scarcely avoid looking upon it as confirmative of those physiological experiments which point to the angular gyrus as in some way bound up with the function of vision."

On June 10th, 1884, I read another paper before the Royal Medical and Chirurgical Society on "Embolism of the Right Middle Cerebral Artery producing Left Hemiplegia and Hemianæsthesia; Absorption of a Large Portion of the Right Hemisphere; Death Seven Years Later."[3] In this case the patient had been suddenly attacked, seven years before her death, with embolism of the right middle cerebral artery, which resulted finally in the destruction of a large part of the right hemisphere. At the time of her attack she was in Guy's Hospital, where careful notes were taken. From these it appeared that after being unconscious for four days she was found to have, in addition to left hemiplegia and hemianæsthesia, dimness of vision in the left eye almost amounting to complete blindness, though the patient said that she saw perfectly before the attack. Hearing was good in the right ear, but almost absent in the left. Six and a half weeks after the commencement of her illness sight and hearing were completely restored. Seven years after this attack I performed a post-mortem examination on this patient and found that the following convolutions had been destroyed on the right side: the inferior frontal, the external portion of the orbital, the lower half of the two central convolutions, the inferior parietal lobule, the convolutions of the island of Reil, the angular gyrus, the superior and middle temporo-sphenoidal, and part of the inferior occipito-temporal convolutions. The conclusions I drew from this case are as follows:—1. That if the angular gyrus and superior temporo-sphenoidal convolutions be respectively connected with sight and hearing on the opposite side of the body their destruction does not involve permanent loss of these special senses. Such an inference agrees with the results of experimental removal of the angular gyrus, an operation which has been found to produce crossed amblyopia, from which the animal soon recovers. 2. That each hemisphere is specially connected with the sight of the opposite eye. In a recent paper by Dr. Allen Starr on the Visual Area in the Brain the writer adopts the statement of Mauthner, made in 1881, that "there is no case well authenticated in which lesion of one hemisphere has produced blindness in the opposite eye"; and he concludes that "when a lesion of one hemisphere involves the optic fibres at any point partial blindness of both eyes, and not blindness of the opposite eye, is produced." Although I have seen cases where hemiplegia with hemianæsthesia, including loss of sight and other special senses, occurred on the same side of the body, and where a lesion of the opposite hemisphere appeared to be the cause of all, I have never before had the opportunity of verifying the fact at a post-mortem examination. As very careful notes of this case were made at Guy's, Hospital and on examination the left eye was found to be amblyopic and the right not, the conclusion that each hemisphere has a more special connexion with the opposite retina than with that on the same side seems to me to be legitimate.

During the early part of last year Dr. Wainwright, senior resident medical officer of the Evelina Hospital, brought a brain to Mr. Shattock, and the latter very kindly handed it over to me to make what I could of it. I saw at once that the specimen might prove to be of great interest, and I accordingly examined it carefully after due preparation. I found that there were bilateral softening and atrophy of a very marked kind involving the brain in the region of the Sylvian fissure symmetrically, but in unequal degrees on the two sides. The area involved was most entensive in the left hemisphere (Fig. 1). The ascending frontal and ascending parietal convolutions, the inferior parietal lobule, the angular gyrus, and the greater part of the temporo-sphenoidal lobe were practically gone, being atrophied and shrunken to the last degree, and presenting the rich brown tints so often present in cerebral softening. On the right side (Fig. 2) the ascending frontal and the greater part of the ascending parietal convolutions were intact, as were the two annectant convolutions forming the superior parietal lobule. The inferior parietal lobule, the angular gyrus, the superior temporo-sphenoidal, and the neighbouring parts of the middle temporo-sphenoidal convolutions were much atrophied, discoloured, and degenerate. The left crus cerebri was much smaller than the right. On both right and left side the occipital lobe was quite intact. The central ganglia on the left side were atrophied and much smaller than those on the right, which appeared to be normal. The softening in the left hemisphere was evidently extensive both in superficial area and in depth, while that on the right appeared to be very superficial and confined to the cortex. On both sides the occipital lobes were quite natural in appearance. In order to see whether the fibres which pass from the occipital lobe to the internal capsule were diseased or intact a horizontal section was made which passed through the middle of the softened area and into the central ganglia, displaying the whole course of fibres in question (Fig. 3). This was done on both sides of the brain and very successfully brought to view the radiating fibres of the occipital lobe and the long bundle formed by them on their way to the internal capsule. The softening in the right hemisphere proved to be quite superficial; it had not reached or altered in the least degree the occipital fibres. In the left hemisphere these fibres appeared also to be quite healthy; only at one spot in the section did the orange yellow colour of the softening reach them, and even there the fibres appeared to pass along without any alteration. Mr. Shattock, who made the sections in my presence, confirmed these observations. The result of the examination therefore amounted to this, that in the left hemisphere there was a wide area of destruction affecting the parietal lobe and the angular and temporo-sphenoidal convolutions; in the right there were softening and shrinking of the inferior parietal lobule and of the angular and temporo-sphenoidal convolutions only, while

[1] A paper read before the Neurological Society
[2] THE LANCET, May 12th, 1883.
[3] THE LANCET, June 14th, 1884.

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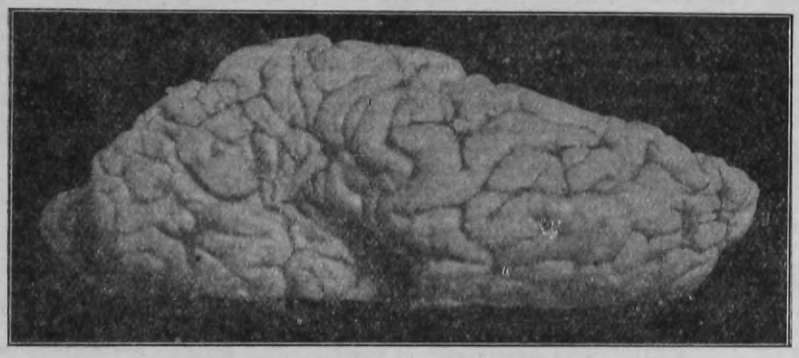
on both sides the occipital lobe was intact. The symmetrical lesion in this child's brain suggested that it might have originated in instrumental delivery. The atrophied convolutions included these which have been bilaterally removed in animals for the purpose of investigating the localisation of sight and hearing in the hemispheres. Just such an experiment as this by disease is what has long been wanted, and on seeing this specimen great hopes were awakened in me as to its probable value. I wrote therefore to Dr. Wainwright and asked him to be kind enough to send me the child's history. He replied that the child was two and a half years of age and had been quite well until six years old, when he had a fit and lost power in the right arm and leg. After that these limbs gradually got rigid. The general health, however, was pretty good until fourteen days before admission, when cough and wasting set in. Advanced tuberculous disease of the lungs was then found, and the child was miserably wasted. The right arm and leg were contracted, and the contraction could only be overcome with difficulty and with the production of much pain. The right knee-jerk was absent; the left was active. The fundi of the eyes were healthy; there was neither optic neuritis nor atrophy. The child appeared to be stone deaf. He died gradually after some weeks. His birth had been perfectly easy and natural and no instruments were used. As I wanted to get the facts as regards deafness I wrote again to Dr. Wainwright and also inquired as to vision. He replied: "As regards deafness, I found it impossible to rouse the child by any amount of noise; it would not even look round, though it answered quickly to touch. The nurses also failed entirely to find any evidence of hearing. At one time it was put in a bed with another child who was screaming in a most frantic manner; though quite awake it did not even turn towards it. The child was always considered to be quite blind, but it had some sensation to light in the left eye, I think, as it used to get worried if one focussed light on it for some time." I wrote again to Dr. Wainwright asking him to give me the facts which convinced him that the child was blind. He replied: "I spent a good deal of time on several occasions examining the child's eyes for optic changes and tubercles and it never took the least notice of the light, never showing the least tendency to object or even to blink except in the case of the left eye, which sometimes after a while seemed to be irritated, and it would rub it. It was very

FIG. 1.



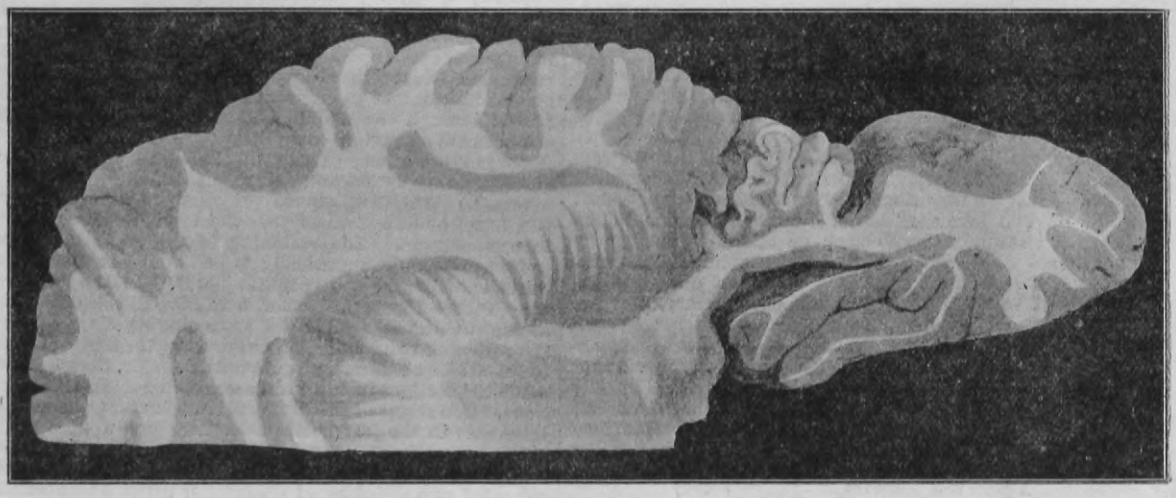
Left cerebral hemisphere showing extensive destruction of the convolutions of the parietal lobe and of the angulo-temporal region.

FIG. 2.



Right hemisphere showing softening of angulo-temporal region only.

FIG. 3.



Horizontal section of right hemisphere showing the shrunken angulo-temporal convolutions and the intact occipital lobe and its fibres going to the internal capsule.

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keen about its food, but unless its lips were touched it made no effort to get at it when a spoonful of anything was offered it. As circumstantial evidence, I may mention that the nurses say they always thought that everyone acknowledged that it was blind. As to your question about mental dulness and apathy, I may say it was not exactly lively, but it was quite sensible, and it never until quite the end showed any sign of coma, and it was in the hospital sixty days" The evidence as to blindness and deafness being satisfactory, I wrote again to Dr. Wainwright asking him to question the parents as to whether the child had ever seen and heard. Great difficulty was experienced in finding their whereabouts, as they had moved, and when they were at last traced they evinced considerable annoyance, as they had done before, at being bothered about the child, as they could not understand what good reason we could have for the trouble we were taking. However, both mother and father asserted that they were quite positive that the child used to see and hear well. Such are the anatomical and physiological facts which I have to record in this case. What gave rise to the superficial atrophy and softening of the right inferior parietal lobule and angulo-temporal convolutions I cannot say. If we disregard the hemiplegia on the right side of the body which was produced by the disease of the convolutions of the parietal lobe on the left, we have remaining a bilateral destruction of the inferior parietal lobule and angular and temporo-sphenoidal convolutions on both sides, while the occipital lobe and its radiations are intact. As far as one can see, that is so on both sides; even if this be doubtful in the left hemisphere it seems free from doubt as far as the right is concerned. Granting, then, that the original lesion in the left hemisphere which gave rise to the hemiplegia may have produced temporary blindness and deafness in the opposite side, which soon recovered, the facts of the case seem to indicate that when the inferior parietal lobule and angulo-temporal convolutions of the right hemisphere also became diseased the patient's sight and hearing were abolished.

The three cases which I have brought forward supply important evidence, each in its own way, of the relation of the region of the angular gyrus to vision. The first or anatomical specimen, though very suggestive, is lacking on the physiological side. In the other two cases we have both the anatomical appearances and the physiological changes which accompanied them, and I think they deserve the title of striking cases. But they have the defects which almost all such cases must have; anatomically it is difficult to state the precise limitations of disease; and physiologically we would like to have some further details. But it must, I fear, generally be so with our observations on man. In experiments on animals, however, even if the difficulties of correctly estimating physiological changes be surmounted, which are more than ordinarily great in experiments relating to the functions of the brain, and if the exact limit of the injuries inflicted can be determined there still remains the fact that the knowledge gained of cerebral physiology in animals cannot be directly transferred to man. It serves as a beacon to guide our observations at the bedside and in the post-mortem room, but it still lacks that confirmation which alone can justify us in accepting it as a part of human physiology. Therefore, defective as the three cases may be, they appear to be worthy of forming links in the chain of evidence which finally leads to the solution of such questions. I suppose most clinical observers will admit, as I do, that the occipital lobes are very intimately connected with vision, and are, in fact, "half vision" centres. But it would be interesting to know whether the members of the society are inclined to limit the visual area in them to their internal or central aspect. To me it seems that the facts of disease do not warrant such a conclusion, but that hemianopsia results from destruction of the cortex on the external aspect as well. Hemianopsia is so persistent when once developed that it must be allowed that one occipital lobe cannot make amends for disease in the other, whereas one angular convolution can speedily enough make up for the temporary blindness produced by destruction of the other. How is it, then, that although each angular region seems to be able to subserve vision in both eyes it cannot make up for hemianopic defect produced by disease of the occipital lobe? The only explanation I can see is that the occipital lobe is a lower centre through which visual impulses must pass on their way to the higher centres in the region of the angular gyrus, and that disease of the lower centre or of the fibres in connexion with it intercepts the visual impulses on their way to the higher centres. But each higher centre being connected with the whole of both occipital lower centres, destruction of one does not interfere permanently with vision in either eye. Considering the important part which is played by mental vision in the higher intellectual processes in man it is not to be wondered at if he is found to possess high visual centres in an advanced state of development, although such centres may be non-existent or only rudimentary in animals below him in the scale of existence; indeed, clinical experience seems to show that mental blindness, and especially that variety of it which is called "verbal blindness," is associated with disease of the inferior parietal lobule which lies in front of the termination of the fissure of Sylvius. This convolution is continuous above and behind with the angular gyrus. The conclusion to which my cases seem to point is that the convolutions surrounding the posterior extremity of the fissure of Sylvius are specially concerned with the vision of the opposite eye, and in such a direct manner that destruction of them in one hemisphere produces transitory blindness of the opposite eye, while bilateral destruction of them causes permanent blindness in both eyes.

Harley-street, W.

ON VARIOUS FORMS OF TALIPES AS DEPICTED BY X RAYS.

BY RICHARD BARWELL, F.R.C.S. ENG.,
CONSULTING SURGEON TO CHARING-CROSS HOSPITAL.

(Concluded from page 909.)

AT first, and while those changes in the position of bones depicted in my last paper are still recent, acquired valgus and flat foot may be temporarily re-dressed by comparatively slight pressure with the hands. Herein it differs from the congenital form, which is stiff and unyielding from the very first.[1] The post-natal acquisition of valgus was traced in my last paper, and was shown to be due to insufficient, rather than to exaggerated, action of certain muscles, especially and primarily to weakness or sluggishness of the flexor longus hallucis permitting the os calcis to roll over on to its inner side, thus allowing the sustentaculum tali to droop and causing the head of the astragalus to fall into the sole. Such fall of necessity entails abduction on each other of the two halves, anterior and posterior, of the tarsus. When this false position has lasted a certain time the fasciæ and ligaments on the inner side of the foot become loose and thin, the tibial muscles weak and lengthened, while the fibrous structures on the outer side as also the peronei contract and adapt themselves to the acquired shortness. Thus after a certain period the foot is so firmly fixed in malposture that it cannot without certain adjuvants be rectified or much improved in shape by the use of any moderate manual force, thus in that matter of fixity simulating very much more the congenital type of the deformity. We have then, in formulating methods of treatment to deal with very different degrees of the evil, the slightest of which requires very little more than certain modifications of the foot-gear and better regulation of walking. Hence, though some of the details here mentioned may seem mere trivialities, they are not really so; their intelligent and persevering use will cure a large proportion of all but the more severe class of cases. Many young people, more commonly girls, are brought to me with lengthened feet almost devoid of instep, with straight or concave outer border, the internal malleolus almost effaced, and the head of the astragalus quite visible and projecting (see Fig. 13[2]). Such patients in walking turn the feet too much out, and a large proportion of them have the great toe forced outwards, the second toe either lying upon it or less commonly beneath it. This posture of the big toe may be, indeed is, very frequently the starting point and cause of the whole trouble,

[1] It has been already pointed out that congenital valgus is always, or very nearly always, combined with calcaneus, or less commonly with equinus. These conditions are not our subject just now (see THE LANCET, Jan. 30th, 1897). In future the one word "valgus" will be used to include also flat foot.

[2] THE LANCET, Jan. 30th, 1897.

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for it cannot do its proper work of propelling the body forward when the foot is behind and just previously to being lifted from the ground. This work that ought to be, but cannot be, done by the second phalanx of the hallux, thus misplaced, is taken up by the head of the first metatarsal bone. Such deleterious position is generally the result of bad foot-gear coming to a point in the mid-line and frequently too short. Another error is generally overlooked, because the shoe measures as long or even a little longer than the foot, but looked at from the side may be seen to have the front part of the upper leather so closely sewn to the sole that there is no room for the toe, which having to find space further back is pressed outward into the same position as though the shoe were actually short. The result of this improper shape is frequently still further aggravated by high narrow heels, which not only cause the foot to slide forward into the already overcrowded toe of the boot, but by increasing the height of the foot from the ground and decreasing the size of the supporting surface greatly aggravate the tendency to turn over on the inner side. It is very difficult for surgical advice to contend against the tyrannies of fashion; but, if the patient can be induced to adopt common sense as a guide, much way towards cure will have been made. Nevertheless, he must usually go further and cause the foot-gear to be not merely harmless, but actually remedial by throwing the foot somewhat over on to the outer margin. A wedge of leather fastened with brads under the inner margin of the heel and one of a semicircular shape under the ball of the great toe will effect this object. According to the severity of the case these should be at the thickest part a little under $\frac{1}{4}$ in. or $\frac{3}{8}$ in. in thickness at the margin in the one locality and at what would be the centre of the circle if completed in the other. By this means station and progression, instead of augmenting the faulty posture, tend to reduce it. I must, in this connexion, strongly animadvert upon those unsurgical contrivances called "valgus pads" and "surgical soles," that is to say, lumps of slightly varying shapes placed inside the boot so as to press on the inner side of the sole. Now, one important factor, part of nature's mechanism, for keeping up the arch is the tie-beams stretched from one to the other buttress—namely, the plantar fascia and the abductor pollucis. Pressure upon them by those pads and lumps must, and does, cause their atrophy and relaxation, and then by pressing on the internal plantar nerve leads to paresis of all the muscles of the sole thereby supplied. There is the more reason for condemning these inside lumps since the outside wedges above described, by turning the foot sufficiently, secure all the advantages without the injurious effects of those contrivances.

To return to the position of the great toe. When this is abducted only to a moderate degree it will generally, when clothed in properly made foot-gear, regain its proper posture; but a greater degree of distortion requires some extraneous aid, and in all but the severest forms a toe-stall of some thin material, butter-cloth for instance, can very easily be cut to fit and stitched. It must have a tongue or lappel at the inner side to which a loop of flat elastic is sewn, which, hitched under and behind the heel, makes quite sufficient traction to rectify the malposture. The "toe-post," a piece of thin metal projecting from the sole of the boot between the first and second toe, is very often painful; it acts with too rigid coercion, and if the hallux be much abducted it is generally impossible to introduce it on the proper side of the post unless the shoe laces quite down to the toes. But by one or other of the above methods, or, as some like to do it, by means of strapping plaster, the toe must be restored to the proper line. In the meantime, and more especially after this has been effected, exercises such as are fitted to strengthen the long flexor of the toe and also the tibial muscles, are to be sedulously employed. Space forbids a full description of more than a few of these. One of the most important is to make the patient walk on the outer margins of nude or merely stocking-clothed feet, or, if they be too feeble to allow of locomotion in that posture, then to lift them and let them fall into the usual plantar attitude alternately. In sitting, too, they should be so kept as a more or less constant habit, and frequently exercised by placing them fairly on the floor and turning them on the outside in pretty rapid alternation for some minutes at a time. These exercises are directed to the two tibial muscles, and Faradaisation of them is often desirable. The most important object, however, is to restore activity and power to the flexor longus hallucis; the digit should be restored, even if only temporarily by the toe-stall (*vide supra*) or by plaster. The patient, if the part has been long thrown out of gear, must first learn again to use the muscle by so placing the sole on a book or block of wood that the toes project beyond the edge, and then must continue to bend the last phalanx at rapid intervals over that edge till fatigue comes on. A nut or hook can be fastened to the corner of the block, and an elastic band so attached and hitched over the toe as to draw it into position while it is being thus exercised. When sufficient power has been regained, or *ab initio* in slighter cases, the patient should two or three times a day exercise the part by rising on the toes first of both feet then of only one foot; but some watchfulness is required to see that the great toe is really used, and not merely the head of the metatarsal bone. These exercises may of course be varied in manifold ways; by their judicious use many cases of nascent and of older but not very severe valgus may be cured. But when the deformity is further advanced, when the foot is quite rigid, so that little or no change of form can be produced by manual pressure without additional aid, the condition requires more cogent treatment. As a general rule tenotomy is unnecessary and undesirable. 1. Unless valgus be combined with equinus, when such addition is pretty well marked division of the Achilles' tendon is desirable, as saving much time, as also discomfort and pain. 2. When considerable abduction of the anterior on the posterior tarsus cannot be completely rectified by the surgeon's hand, even though methods of annulling muscular contraction are employed, section of the peroneus brevis tendon is under such circumstances desirable. The best place for this is a little behind the base of the fifth metatarsal bone, which makes an easily found prominence. The tendon lies rather on the upper margin of the rounded outer border of the foot; the tenotome should be introduced superficially and the division take place towards and down to the cuboid. Only in quite exceptional cases is the peroneus longus to be divided; if done at all the proper point of section is on the os calcis, in front of the peroneal tubercle. When both tendons are to be severed (in very exceptional cases only) the selected point should be below and in front of the malleolus. On no account should section be made behind the fibula. The tendons overlie each other, hence impossibility of securing division of either separately; they are also very closely packed, therefore in healing they always adhere together, and nearly always also to the fibrous sheath, thus confusing, embarassing, or entirely annulling their action.

One of my reasons for deprecating section of tendons in most cases of valgus is the fact that by eliminating muscular and ligamentous resistance, by means that will be described immediately, the foot can, as a general rule, be brought into good position, in which it must be retained by plaster-of-Paris. The mode of procedure is thus: the extremity having been rendered passive, the surgeon, holding the anterior tarsus in one hand and the posterior in the other, overcomes the abduction of those parts; if there be much difficulty in this he will find assistance by placing a loop of bandage on the inner side of the mid-tarsus where the head of the astragalus projects; the ends of this passing over the instep and under the sole respectively are confided to an assistant holding them firmly on the outer side of the foot, making thus counter-extension. After overcoming abduction, the rotation is to be corrected. I find it best to achieve this by first plantar flexing the tarsus with some little force, and then turning the foot, more especially the anterior half, so that the sole looks somewhat inward. While the extremity is in this posture, a cotton-wool bandage is to be applied.[3] It often is desirable to supply a heel for the patient to walk on more comfortably. Pieces of rather stout, fine felt, previously cut to the shape required, are to be placed below the natural heel until the requisite thickness is attained—i.e., until the last piece lies on a level rather lower than the rest of the foot; they can be retained in place by the wool roller while the plaster bandage is being adapted. The bandages must be put on from without inward—i.e., the start being made from the outer margin of the foot, the bandage passes from that border under the sole to the inner border; this choice of direction for bandaging is by no means a trivial matter. When the plaster bandage is properly in place the position of the great toe must be attended to; the valgous condition

[3] Several of these should be at hand; they are easily made by unwinding a fresh sheet of the wool, and cutting the strip of proper width with long-bladed sharp scissors.

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being corrected with the hand, the centre position of a narrow piece of bandage is to make one, or at most two, turns round the ungual phalanx; the further edge, somewhat projecting, must be gathered together by a few stitches; the ends of the bandage are then brought down along the inner margin of the foot, and there secured either by a few more turns of the plaster bandage or with wet, loose plaster, care being taken to hold the toe in good position and with the other hand to keep the ends of the bandage, which for the present project behind the foot, tight. During the application of the bandage the surgeon must continually verify the posture, taking care that the three faults are all corrected; there must be a good arch, the outer border must be convex, and there must be such considerable inward rotation that the outer border of the sole lies on a level considerably lower than the inner. There is no occasion whatever for making that border of the appliance thick and heavy with additional plaster. If the plaster bandage be properly applied the foot cannot turn; it is impossible for the patient to stand otherwise than on the outer border of the sole; the felt used for making a heel is far lighter and more elastic than a heavy lump made in that situation with plaster. The appliance should be worn for about a month, during which the patient is to walk about and, above all, to sedulously practise bending the last phalanx of the great toe, the bandage on which may have to be renewed two or three times during the specified period. It is rare that the plaster-of-Paris bandage requires renewal; the foot is by that time cured of deformity, but is weak. The wedge-shaped soles as above described must be used; the shoes must have broad, flat heels; and the exercises already specified should be persevered with. In some of the severer cases a poroplastic splint, easily removed and replaced, should be moulded to the foot, rather strongly rotated inwards, and used only during the night.

A few words must be said about the means of procuring passivity of the foot while it is being forced into good position and bandaged. The influence of nitrous oxide gas is too evanescent; even if the appliance could be completed the plaster would not harden while anæsthesia lasted, and if the patient struggled during recovery—a very probable event—it would crack. Ether, of course, gives ample time and opportunity, but it is well when possible to avoid the risk, the subsequent sickness, and the discomfort. Keeping the foot for thirty or forty minutes in hot, dry air has the effect of rendering the ligaments and muscles singularly limp and flaccid. The method is not altogether new, though my arrangements are so, and I carry out the object thus. A square box, properly made of semi-steel and of commensurate size, and having the metal well protected by thick felt, is placed on a tripod over a Fletcher gas-burner; within it a sling of four-inch webbing permits the patient's foot and about half the leg to rest at ease; a thermometer ranging up to 350° F. is secured, so that the temperature is easily verifiable. The patient is seated; he places his foot in the box at a temperature of about 80°; the thermometer slowly rises, the limb sweats, the air soon becomes much charged with moisture, and the heat would very soon become unbearable, for damp air cannot be tolerated when heated. Therefore the patient is warned that as soon as the heat causes the least unpleasantness he is to mention the fact. The air is then pretty rapidly but gradually changed by means of a powerful pneumatic pump. This change affects but slightly the temperature, which can thus be kept up to between 250° and 300° for, as I have said, from thirty to forty minutes, at the end of which time—very rarely is a longer time required—the foot is quite flaccid and may be twisted or kneaded into good form, and the cure completed by the plaster bandage, followed by exercise as above described.

Wimpole-street, W.

A METHOD OF UNITING THE DIVIDED INTESTINE.

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THIS operation has been planned upon experiments performed on the dead, and upon one in a living, animal. Therefore I venture to hope that the present publication will be regarded only as a preliminary note, and not as the result of matured investigations. For, although the single operation upon a living animal was perfectly satisfactory, there are many points of importance that require full elucidation; and until further investigations into the matter are completed I would not care to say that the method here suggested is likely to emerge from a post-mortem and experimental success into a definite surgical procedure. This want of completeness will be manifest in the following description.

After the removal of the affected segment of the intestine by a section exactly transverse to the longitudinal direction of the bowel[1] and its V-shaped piece of attached mesentery the open ends of the gut lie requiring suture. Through all the coats forming the wall of each free end a longitudinal incision is made and in each case it should be situated exactly opposite that part of the bowel to which the mesentery is attached (Fig. 1). The length of each incision must

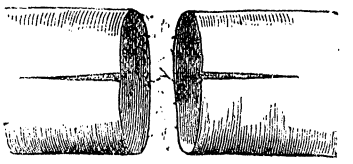


FIG. 1.

vary as convenience and necessity demand, but speaking generally it should at least be equal to the diameter of the tube at the seat of resection. These incisions allow the open ends of the intestine to be spread out in the shape of a fan and while in this state the separated serous surfaces can be exactly apposed as it were back to back (Fig. 2). An

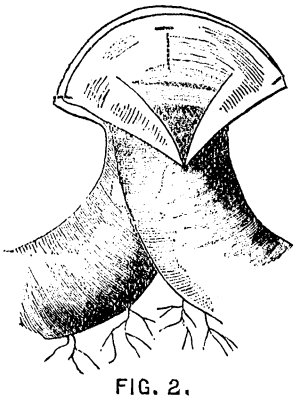


FIG. 2.

assistant should now gently keep the intestinal extremities in this accurately adjusted position during their final fixation. The first suture should fix in apposition the mesenteric attachments; the two next should likewise accurately join the respective extremities of the edge of the fan-shaped expansion (see Fig. 2). The rest of

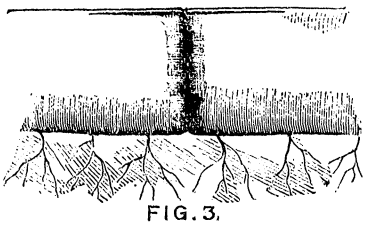


FIG. 3.

the stitches may now be inserted with greater exactitude. Each must be well tightened at the first knot, all coats of both ends must be transfixed by the silk bearing needles, and the needles and silk employed must be the finest that are compatible with safety. The ends are thus firmly joined and all that remains

[1] Subsequent experiments upon living animals may prove the necessity of making the actual section rather oblique or semicircular. In speaking to an authority upon this matter he thought this kind of section had been suggested before, but as I cannot find it I should be glad of the reference.

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to be done is to suture the longitudinal incision by any of the well-known methods which the operator may prefer. Care must be taken that its edge be well sequestrated by the approximation of its serous surfaces, thereby placing the site of meeting of the four corners out of the realms of surgical importance, the site of the four corners obviously being at the centre of the longitudinal incision (see Fig. 3).

This method, besides allowing the possibility of joining intestinal tubes of the same diameter can also permit the union of the small to the large gut. Therefore, should it ever be necessary to remove the ileo-cæcal portion in cases of malignant disease, intussusception, strangulation, and so forth, this additional attribute may prove to be of some value. The only addition necessary to accomplish the junction occurs after the small intestine has been sutured to the colon by the method described above. Then there will be on each side of the joined intestines two equal sized superfluous flaps of the large intestine, A portion of each of these flaps can be cut away in a V-shape, so that the apex of the V is exactly in a line with the preliminary incision into the free end of the small intestine—in other words it should be opposite the meso-colic attachment. The remaining superfluous part of these two edges can be inverted by the Lembert's suture that is employed while sewing up the resulting longitudinal incision. The result will be that the colon tapers to its union with the ileum.

Harley-street, W.

ILLUSTRATIVE CASES OF APHASIA.

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(*Concluded from page 1259.*)

CASE 12. *Sudden cerebral seizure due to embolic infarction in a man aged twenty five years; temporary loss of power in the right side of the face, right arm, and right leg; complete motor vocal aphasia; some, but comparatively speaking much less, agraphia; no word-deafness; no word-blindness; complete recovery of the power of writing; gradual but slight improvement as regards vocal speech; second embolic attack four months afterwards; increased paralysis of the right side of the face, of the right arm, and of the right leg; no increase of the motor vocal aphasia; marked increase in the agraphia; some word blindness; no word-deafness; death four years after the original seizure; necropsy*—This case is a typical example of motor vocal aphasia due to softening, the result of embolic infarction of Broca's convolution. There were two embolic attacks. As the result of the first attack, which occurred on Nov. 21st, 1892, there was temporary loss of power in the right side of the face, right arm and right leg, complete motor vocal aphasia, and some agraphia. When I saw the patient, on Dec. 6th, 1892, the paralysis of the face, arm, and leg had almost entirely disappeared. He could understand everything that was said to him. He could understand written questions. He could not express himself by spoken speech. He could not repeat what he was asked to repeat. He could not read aloud. But—and this is a very interesting and important point—he could express himself, though somewhat imperfectly, in writing; in short, his power of expressing himself in writing was very much less impaired than his power of expressing himself in spoken language. Between Dec. 6th, 1892, and March 1st, 1893 (the date of the second seizure), gradual improvement took place. The paralysis of the face, arm, and leg completely, or almost completely, disappeared. The patient regained the power of speaking in some (a very limited) degree, presumably by compensation, the right motor vocal speech centre taking on the function of the left motor speech centre (Broca's convolution), which had been destroyed. The power of writing was perfectly, or almost perfectly, restored (see letter written on Dec. 20th, 1893). On March 1st, 1893, a second embolic attack occurred. The paralysis of the right side of the face, right arm, and right leg was much more marked after this attack. The lower part of the face remained completely paralysed until the date of the patient's death (June 10th, 1896). After this second attack the motor vocal aphasia was not materially aggravated. I presume that this was due to the facts that Broca's convolution had been entirely destroyed as the result of the first embolic attack, and that the motor vocal speech which had been regained was being carried on by the motor vocal speech centre in the right hemisphere of the brain. After the second embolic attack the power of writing was much more markedly impaired, and the power of reading also became impaired. This was probably due to softening of the supra-marginal convolution, the angular gyrus, and the subjacent white tissue. The post-mortem examination showed:—1. That the patient was suffering from mitral stenosis and very free aortic regurgitation. The heart was very large, being both hypertrophied and dilated. 2. That there was an extensive old softening, evidently due to embolism of the left middle cerebral artery in the left hemisphere of the brain. The following parts in particular were affected: (*a*) Broca's convolution—this was completely destroyed; (*b*) a small portion of the posterior end of the second left frontal convolution; (*c*) the inferior end (about a fourth of the whole extent) of the left ascending frontal and ascending parietal convolutions—these parts were completely destroyed; (*d*) the anterior two-thirds at least of the upper (first) left temporo-sphenoidal convolution—this was completely destroyed; (*e*) the upper part of the anterior two-thirds of the second left temporo-sphenoidal convolution; (*f*) a portion of the anterior and inferior end of the left supra-marginal convolution—the softening of the cortex in this situation was much less extensive; and (*g*) a very localised area (on the surface) of the left angular gyrus. The extent of the softening in the subcortical white matter and the extent of the secondary degenerations which were present were not determined, for, as is stated in Dr. Muir's report, the brain, after being most carefully prepared (injected with Müller's fluid), was completely destroyed by an unfortunate accident. I have in the course of my career lost many interesting pathological specimens through the failure to obtain post-mortem examinations, but I have rarely, if ever, regretted the loss of any specimen so much as the loss of the brain in this most interesting and important case. In the absence of exact information regarding the extent of the lesion I shall not attempt to discuss the case in further detail. The more important points are:—1. The complete destruction of the motor vocal speech centre (Broca's convolution). There can, I think, be no reasonable doubt that Broca's convolution was completely destroyed at the time of the first embolic attack; the lesion was embolic; there was complete motor vocal aphasia after the first attack; and the defect in vocal speech was no worse after the second attack. 2. The fact that after the first attack (when, as I have just stated, Broca's convolution was presumably completely destroyed and complete motor vocal aphasia was established) writing was, compared with motor vocal speech, only slightly affected. Further, the power of writing was perfectly regained, while the power of speaking was only very imperfectly regained. These facts undoubtedly seem to show that the motor impulses connected with the initiation of the act of writing do not *necessarily* (and presumably, therefore, not *usually*) pass through Broca's convolution (the vocal speech centre as most authorities suppose).[1] 3. The absence of word-deafness notwithstanding the extensive destruction of the first temporo-sphenoidal convolution and of a portion of the second left temporo-sphenoidal convolution. Although the posterior end of the first left temporo-sphenoidal convolution was not destroyed one would have expected (if the auditory speech centre was entirely located in the left hemisphere) that the function of the auditory speech centre would have been at least temporarily disturbed—i.e., that there would have been some temporary word-deafness. 4. The complete and lasting paralysis of the right side of the face which presumably was due to destruction of the lower end of the left ascending frontal and ascending parietal convolutions. This is exceptional. 5. The partial word-blindness and agraphia which were developed after the second embolic attack. These were probably due to extension of the softening to the left supra-marginal convolution and (?) angular gyrus. 6. The constriction of the fields

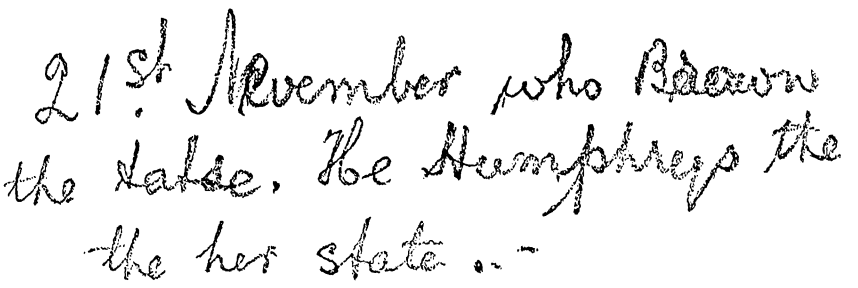
[1] I do not say the writing *speech* centre, for I agree with Déjerine and Mirallié in thinking that the balance of evidence is against the existence of a separate centre for written *speech*. The terms *writing centre* and *writing speech centre* are not, in my opinion, synonymous.

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of vision. This is a point of some interest. I have observed the same condition in some other cases of word-blindness in which there was no hemianopsia. 7. The impairment of hearing in the right ear. This was presumably due to destruction of the first and second left temporo-sphenoidal convolutions. It seems to support the view that the anterior portion of the first and second temporo-sphenoidal convolutions is *the lower* auditory centre (centre for sounds and noises as distinct from speech sounds), while the posterior portion of the same convolutions is *the higher* auditory centre (the auditory *speech* centre). 8. That notwithstanding the complete motor vocal aphasia due to complete destruction of Broca's convolution, there was, up to the date of the second attack, absolutely no evidence of any intellectual or mental impairment.

The notes of the case are as follows. A man, aged twenty-five years, was sent to me by Dr. —— on Dec. 6th, 1892, suffering from motor aphasia. The attack had come on suddenly on Nov. 21st, 1892. For some time previously the patient had suffered from shortness of breath on going uphill, and other symptoms of heart disease. His mother stated that he had not had rheumatic fever or scarlet fever, but when eight years old he suffered from chorea, which was not, however, very severe or of long duration. He himself indicated that he has been short of breath for the last five years, but his mother doubted this. Two years previously he was refused by an insurance company. Until two or three years before he had been very active and strong. The family history is unimportant. The following history of the attack was partly ascertained from the friend of the patient, who was with him at the time when the attack occurred, and partly from the patient himself as soon as he was able to express himself in writing and by vocal speech. On Saturday, Nov. 18th, he got a chill whilst watching a football match. He remained at home on Sunday and the greater part of Monday. On Monday afternoon he went out and, his mother says, did not return till after twelve o'clock at night. (The patient strongly dissented from this statement, shaking his head and attempting to say "No." He indicated on his fingers that he came home at half-past ten.) On the evening of Tuesday, Nov. 21st, he went out with a friend with the object of seeing the stage manager at the Lyceum Theatre, Edinburgh. He waited with his friend in the street for about half an hour, feeling very cold. Just before the seizure (11 P.M.) he said to his friend, "He is taking a long time to come out"; he then staggered back to the theatre wall, his feet seemed to twist under him, his hat fell off, but he did not fall. His friend, seeing his face screwed up, thought he was laughing. He did not lose consciousness, but he was unable to speak. He sat down, waited for a few minutes, and was then taken home to his lodgings in a cab. Dr. —— was sent for and came to see him shortly afterwards. On examination it was found that he had lost the power in his right arm, right leg, and the right side of the face, and that he was unable to speak. He was right-handed. Next morning his mother found him quite conscious, but speechless. He was able to understand everything that was said to him. He wrote his initials, but could not fill in the full names. During this, the first day after the attack, his mother states that he said the words "no," "chronicle," and "conscience." His speech had not improved since, but the paralysis of the face, arm, and leg had almost disappeared. On Dec. 6th, when I first saw the patient, I found him to be a tall, big, well-made man. The heart was very large, the apex being situated in the sixth and seventh interspaces, two and a half inches beyond the nipple line. A loud diastolic murmur was heard in the aortic area and all up and down the sternum. At the apex there was a presystolic murmur which appeared to be independent of the aortic diastolic murmur. The pulse, which was quick (120 per minute), was jerking and collapsing in character, but less markedly so than one would expect in an uncomplicated case of very free aortic regurgitation. The characters of the pulse and of the sphygmographic and cardiographic tracings (which were taken at a subsequent visit) were suggestive of a double lesion—mitral stenosis as well as aortic regurgitation. The paralysis of the right side of the face, arm, and leg had almost entirely disappeared. The pupils were widely dilated. The patient's intelligence was obviously intact. He looked sharp and alert. He seemed to be able to understand perfectly everything that was said to him. There was no derangement of the auditory speech centre. The patient was carefully tested in a variety of ways so as to elicit this point. He was almost totally unable to express himself in spoken language. The only words which he was able to make use of at this, my first, examination—and they were expressed with great effort and difficulty—were "yes" and "no." He used these words quite correctly—i.e., in a propositional sense and not merely reflexly or automatically. He could not repeat anything which he was asked to repeat. He could not read aloud. He apparently understood written language perfectly. When asked in writing to put out his tongue and perform similar acts he immediately did so. He could write very much better than he could speak. *He carried a note-book about with him for this purpose;* but his mother said that he could not always write what he wanted to say. He made mistakes in writing. Sometimes he wrote letters which did not make a word at all, and then he got irritated if they could not be read. His power of writing varied, his mother said, very much from time to time. If he was agitated or excited—and since his illness he had been very excitable and emotional—he could hardly express himself in writing at all; at other times he could write well. She volunteered this statement when she saw the following account (which she stated was very much worse than his writing when unagitated), which I asked him to write of the mode of onset of the attack. I asked him his name, his age, and the day of the week. He could not answer these questions in spoken language, but when asked to write the answers he produced his notebook and immediately wrote down the answers quite correctly. The letters were perfectly formed. I then asked him to write an account of what took place at the time of the seizure. He said, "No, no," shaking his head emphatically as a sign of dissent and at the same time pointing to his right hand and leg, apparently meaning to indicate that he could not do so because he was paralysed. I then pressed him to do the best he could. He wrote the following: "21st November who Brown the tatse. He Humphreys the the her state" (see Fig. 22). His mother explained that Brown was the name of the friend with whom he went to the theatre to see the manager named Humphreys. Iodide of potassium, mercury, and digitalis were prescribed. On Dec. 14th the patient was much *in statu quo*. He did not say anything more; but was writing a little better. On the 21st he looked better. His mother said he was not so blue. She also said that before he started to come to see me on this date he said the word "ten." This was the only word except "yes" and "no" which he had uttered since I first saw him. He was anxious about catching the car in order to keep his appointment with me. He knew he must get the car at two o'clock in order to be in time; it was ten minutes to two before his mother was ready to start—it was then that he said the word "ten." On Jan. 14th, 1893, his mother said that since the last visit he had spoken more, but was only able to say individual words, never sentences; he had said the words "despatch," "Mid-Calder," "Newcastle," "morning," and "good afternoon." He looked much better. On Feb. 2nd he was distinctly better; he could say a few short sentences, but very imperfectly, and could write much better. The heart was much *in statu quo*. On the 20th he wrote the letter

FIG. 22.



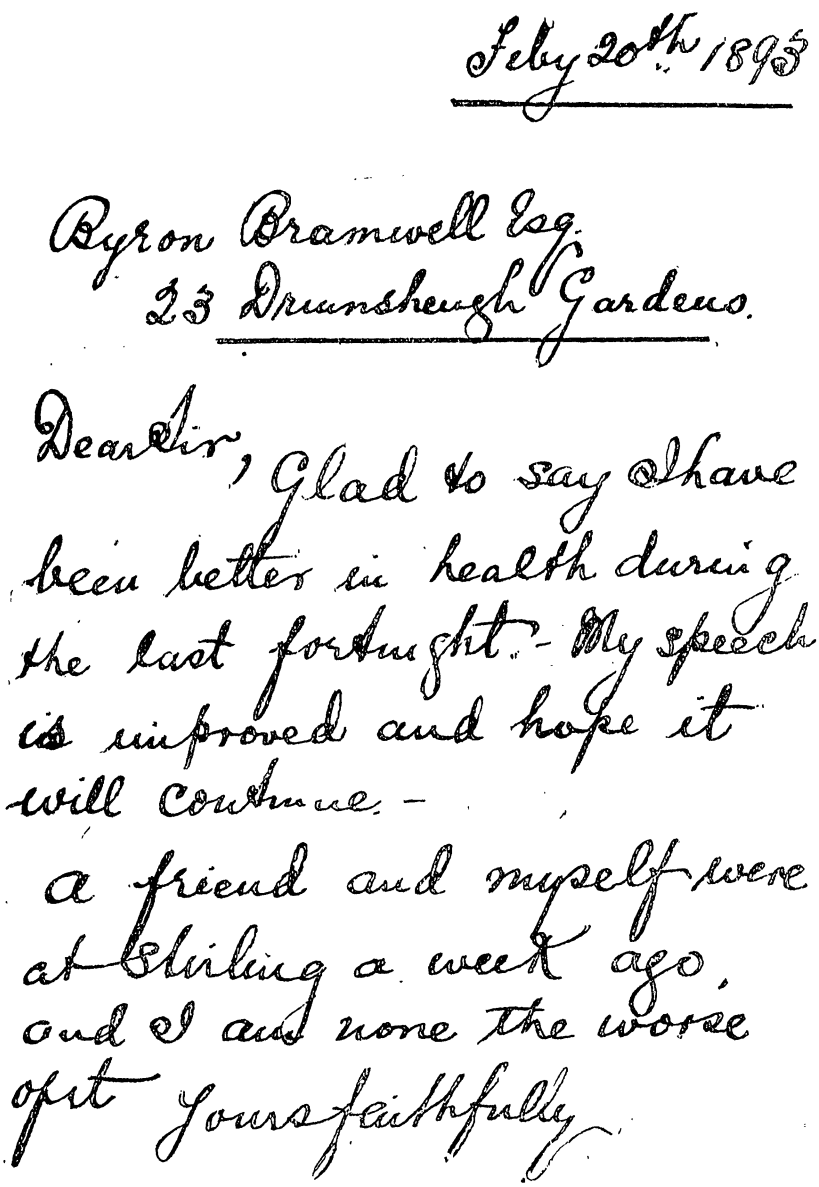
Facsimile of patient's written statement describing the onset of his illness.

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which is reproduced in Fig. 23; it will be seen that the writing and expression were practically as good as they could be. His speaking had improved to some slight extent, but the motor vocal aphasia was still very marked (the slight improvement which had occurred was not greater than might reasonably be accounted for by substitution and compensation, the motor vocal speech centre in the right hemisphere taking on the action of the motor vocal speech centre in the left hemisphere—Broca's convolution—which had been entirely destroyed).

The facts that the writing was from the first so much less affected than speaking and that the power of writing was regained so much more quickly than the power of speaking are of great interest and importance, for in most cases of motor aphasia due to destruction of Broca's convolution the writing is as much affected as (proportionately to) the speaking. This case seems to disprove the view that the nerve impulses concerned in the act of writing necessarily pass from or through the motor vocal speech centre in order to reach the writing centre; for if the nerve impulses which put the writing centre into action necessarily pass through the motor vocal speech centre (Broca's convolution) one would expect that in a case such as this, in which the motor aphasia, evidently due to complete destruction of Broca's convolution, was complete, there would have been complete agraphia. There is no reason to suppose that in this case the motor aphasia was due to a lesion situated in the conducting fibres passing from Broca's convolution to the bulbar nuclei. The lesion was evidently embolic; Broca's convolution was completely destroyed at the time of the necropsy, and there is every reason to suppose that it was completely destroyed after the first seizure. In cases of motor aphasia impairment of writing may theoretically be due: (*a*) to the fact that the lesion of the vocal speech centre deranges the action of the visual speech and writing centres, which are themselves unaffected by the lesion; or (*b*) to the fact that the lesion involves the writing centre (I do not say writing *speech* centre) as well as the motor vocal speech centre; or (*c*) involves the fibres connecting the motor vocal speech centre and the writing centre; or (*d*) the commissural fibres connecting the visual speech centre with the writing centre (through which I presume the nerve impulses which put the writing centre into action usually pass).

FIG. 23.



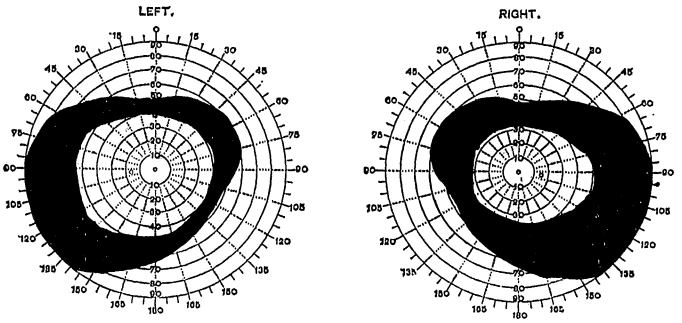
Letter written without assistance by the patient (Case 12) on Feb. 20th, 1896. (Facsimile.)

On March 1st, 1893, he had a second seizure; it came on through the night; he felt, he says, a numb, powerless feeling in the right side. When the landlady went into his room to call him at 7.30 next morning he held up his right arm to show her that he had had another attack. Dr. —— and his mother were immediately sent for. The right side of the face, the right arm, and, to a less extent, the right leg were affected. He was quite conscious when his mother saw him. She said that his speech did not seem to be more affected than it had previously been. On April 7th the patient came to my consulting room again. There was then complete paralysis of the lower part of the right side of the face. (This persisted up to the date of the patient's death—three years afterwards.) The paralysis of the right arm and leg was distinctly increased, but much less so than the paralysis of the face. The grasping power as tested by the dynamometer was in the left hand 110 and in the right 25. He dragged the right leg a little. He said that he did not feel a touch on the right side of the face or on the right arm, but that he did feel it in the right leg, though less distinctly than in the left. He also said that his hearing was less distinct in the right than in the left ear. (This is interesting, since the anterior two-thirds of the first temporo-sphenoidal convolution and part of the second temporo-sphenoidal convolution were found to be completely destroyed at the necropsy.) Smell was equal on the two sides. His heart was worse. The pulse, after undressing, numbered 132 pulsations per minute; before undressing it was 96; some beats did not reach the wrist. The motor vocal aphasia did not appear to be in any way worse than it was before this second embolic attack, but there was now very considerable word-blindness and very decided agraphia. The power of writing had, it must be remembered, been entirely regained before the second embolic seizure. At this visit the fields of vision were

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carefully mapped out. The perimeter chart shows that they were constricted in both eyes (see Fig. 24), the right field being more constricted than the left. Further, the patient was very much quicker in his answers when the left field was being taken. He was advised to continue the strychnine and digitalis, which he had been taking. By May 16th there had been little change in the patient's condition. The paralysis of the right side of the face remained complete; the paralysis of the right arm and right leg was decidedly better; the aphasic symptoms were unchanged. On March 27th, 1894, soon after the last note (May, 1893), the patient caught cold looking on at a football match and had a severe attack of bronchitis; for some days he was very ill. Since recovering from this attack he had been wonderfully well. He was now very blue in the face. The heart seemed even larger than it was before. The valvular lesions appeared to be unchanged. The action was very quick. He had been speaking a little better since the date of the last note, but his writing was bad because, he said, he was not able to use the arm at the wrist. The face was still drawn to the left side. The right arm and leg were less paralysed. The grasping power as tested by the dynamometer was in the right hand from 65 to 70 and in the left hand 150. He read the following sentence from a telegraph form with only two mistakes — "transmission" and "regulations":— "Notice. — This telegram will be accepted for transmission subject to the regulations made pursuant to the 2nd Section of the Telegraph Act, 1885, and to the notice printed at the back thereof." The word "regulations" he said was "heretofore." He wrote his name correctly. On Nov. 19th, 1894, and June 5th, 1895, he sent me the following letters:—

FIG. 24.



Perimeter chart showing the fields of vision in the patient (Case 12) on April 7th, 1893.

"BYROM BRAMWELL, Esq.

"November 19th, 1894.

"DEAR SIR,—Dr. —— asked me to write you a letter. Two years have elapsed, I am no better, and little worse. The heart beats quickly and slowly, and when I laugh my face goes to the side. It is very kind of you to enquire for me.

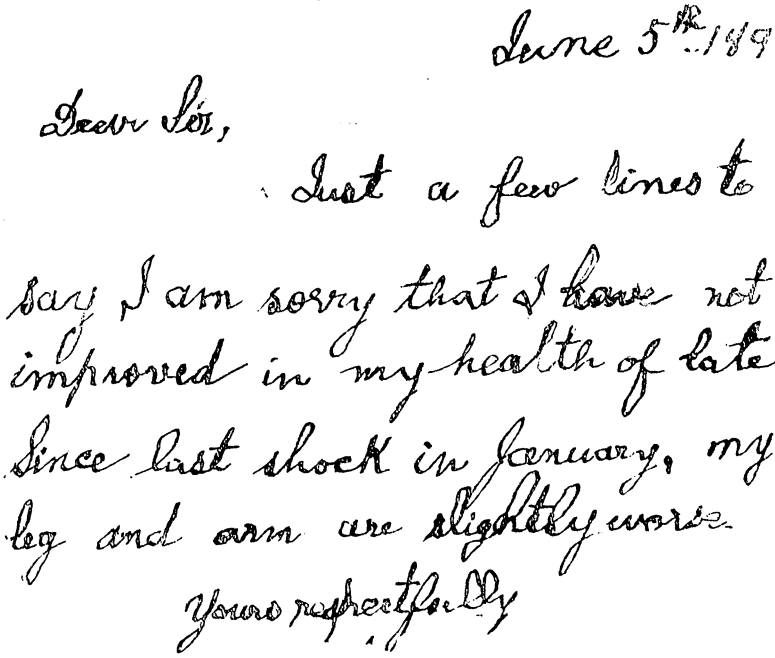
"Yours sincerely,

"————."

On June 5th, 1895, the patient wrote the letter reproduced in Fig. 25.

His mother afterwards told me that he had not written these letters entirely by himself. He asked her to help him with them; she refused, knowing that I wanted to see exactly what he could do for himself. He subsequently admitted that a friend (Mr. B.) had helped him. As the point was of great importance I made a point of seeing and cross-examining the friend (Mr. B.) who had helped the patient. Mr. B. told me that they concocted these letters together, that he (Mr. B.) then wrote them down, and that the patient then copied them. Mr. B., the patient's mother, and the patient himself all state definitely and positively that the letter written on Feb. 20th, 1893 (prior to the second seizure), was entirely and spontaneously written by the patient himself. I have no doubt whatever that this was so, for in addition to this letter written to me the patient, prior to the second attack, frequently wrote memoranda, &c. On April 9th, 1896, the patient was seen at his own house. He had not been at all well since the beginning of the year. The legs were very œdematous. His colour was bad, yellow, and somewhat blue. He was thin. The tongue was clean. The heart's action was very irregular, the enlargement being greater than ever. The pulse was weak, quick, and less bounding than it used to be. The urine was dark coloured. He spoke perhaps a little better than when I saw him last. The right side of the face was still markedly paralysed; when he smiled the face was drawn right over to the left side. The grasping power of the right hand was good, but he seemed to have difficulty in making fine movements, such as writing with the right hand; he could hold a pencil securely, but he wrote very badly. He usually wrote with the left hand. When I went into his room he was copying some business particulars out of his note-book. The condition of the speech functions, which were carefully tested on this visit, were as follows. He seemed to understand perfectly everything that was said to him. He was able to read fairly well, but his mother thought he did not always understand what he read. She said that he soon got tired and exhausted. At this visit he made some curious mistakes in reading. The individual words were, for the most part, read correctly, but not always, and he seemed to have special difficulty in reading some of the short words. For example, in reading the following sentence: "Read the verdict of our patrons on our efforts to please," he read everything correctly except the words "the," "on," and "patrons"— "the," he said, was "and," twice over; "on," he said, was "and," and then corrected himself, saying, "no, no," but he could not suggest the right word; "patrons," he said, was "patronage"; and the word "on," he said, was "to." When asked to read the individual letters composing the word "in" he was unable to do so. He could not suggest anything for "i"; he obviously knew "n," because he traced it on his thigh with his finger—in other words, his mental conception of the form of the letter "n" was perfectly retained, and yet he could not name it. He said, "I will write it down; I cannot explain it." He wrote it down. I asked him what it was; he could

FIG. 25.



Facsimile reproduction of letter written (with assistance) by the patient on June 5th, 1895.

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not name it. He said, "I cannot explain it." He was then asked to write the words "the," "in," and "on," and he wrote them quite correctly both with the right and also with the left hand. He also wrote the words "the," "in," and "on" (which he had not been able to name in reading) quite correctly to dictation without any hesitation. He was then told to ask me a question in writing. He thought some time, and then said, "How do you do?" I asked him to write it down; he said, "I cannot." He was pressed to write it, but said again and again, "I cannot." I then asked him, "Can you write your name down?" He said, "Yes." I said, "Let me see." He wrote it correctly with the right hand. I then asked him how it was that he was able to write his name and not other words, and he said, "Oh! ——, common name." I then asked him to try to write with the left hand, "How do you do?" He wrote "the" and then stopped; he said he could not manage it. I then asked him to suggest another sentence, and he said, "—— is a good man," naming the practitioner who sent him to me. I told him to write it down. He said, "I cannot." He tried, but could not. I then wrote it down, and he at once was able to read it. He then copied it readily enough. He then said, "You are a good man." I asked him to write it down. He wrote, "Bramwell is a ——" (he was beginning to write "good," and I told him to write "nice doctor" instead of "good man," and he wrote the words "nice doctor" down quite correctly). When he was asked to write down, "How are you?" he wrote the words, "You are is." Asked to write, "Mad dog," he did so correctly. He was next asked to write "24" in figures; he did so without any hesitation quite correctly. I asked him how it was that he could not write many of the things that he could read. He said, "The mind—there it is," making a circle with the forefinger of his left hand on the top of his head.

The patient died on June 10th, 1896. The post-mortem examination was made by Dr. Muir on June 11th, 1896, Dr. —— and myself being present. Dr. Muir's report is as follows:—

"*Notes of Post-mortem Examination, June 11th, 1896.*—*Brain:* On removing the dura mater a large softening was found on the left side involving the region around the commencement of the Sylvian and Rolandic fissures. It had the usual appearances of a softening of very long standing and implicated the following parts. The posterior third of the inferior frontal convolution was completely destroyed. The adjacent part of the posterior end of the second frontal was slightly softened. The lower fourth of the ascending frontal and ascending parietal convolutions was destroyed, the line of softening running sharply across them. There was also partial softening of the supra-marginal convolution in its lower anterior part, especially immediately behind the ascending parietal, where the softening reached a higher level than in the latter; but the greater part of the supra-marginal appeared to be well preserved. The superior and middle temporo-sphenoidal convolutions were extensively affected, being completely destroyed in their anterior two-thirds, with the exception of the lower margin of the middle temporo-sphenoidal. There was also a small patch of softening about a third of an inch in diameter in the postero-inferior part of the angular gyrus, otherwise this convolution appeared healthy. The convolutions of the island of Reil were also more or less softened. The left middle cerebral artery was closed and converted into a firm fibrous cord. The brain was injected with Müller's fluid and kept for further examination, but, unfortunately, during alterations in the pathological department of the infirmary the jar containing it was broken by workmen and the brain destroyed.

"*Heart.*—The heart was enormously enlarged, both sides being affected. It measured almost eight inches in greatest diameter from the apex to the border of the right auricle and nearly six inches at right angles to this. The aortic valve was incompetent and somewhat stenosed, its diameter being eight inches. The segments showed chronic endocarditis with nodular thickening of their margins and some adhesion at their extremities. The mitral valve was markedly stenosed. Its margins were irregularly thickened and much indurated, and there was extensive calcareous deposit, especially in the form of a large irregular plate at the left side. Another irregular calcareous bar ran across from the side of the valve to the interventricular septum. The margins of the orifice were thus very rigid and irregular. The chordæ tendineæ were thickened and shortened and partly adherent. The pulmonary orifice was normal, as was also the tricuspid, with the exception of being dilated, measuring 1·85 inches. The left ventricle was greatly dilated, measuring 4½ inches in length, and being proportionately widened; its wall measured in thickness from five-eighths to one-quarter of an inch, being comparatively thin in the lower part. The columnæ carneæ were considerably atrophied at places and the endocardium somewhat thickened. The right ventricle was also much dilated, measuring four and three-quarter inches in length, and was also hypertrophied, the greatest thickness of the wall being a quarter of an inch. Its columnæ carneæ were large and comparatively well nourished. Both auricles were extremely dilated and the endocardium of the left was thickened. The weight of the heart was 21b. 3oz. The right side was enormously distended with masses of dark clot and there was a thrombus in the right auricular appendix. A few degenerative patches were present in the aorta immediately above the cusps, but beyond that the intima was healthy."

Concluding remarks.—I possess detailed notes of several other cases of aphasia in addition to the twelve cases which I have now recorded. Some of these are still under observation and may, perhaps (provided that the clinical details are supplemented by post-mortem examination), be published at some future date; others, in which there has been no necropsy, have been omitted, since they do not present any points of novelty or special interest. One of my chief objects in publishing the twelve illustrative cases recorded above is to support the view that the right hemisphere must be regarded as forming an active part of the nervous speech mechanism; in other words, that the so-called speech centres and speech faculties are bilaterally represented. This bilateral representation seems to me most obvious in the case of the auditory speech centre; but there is, I think, every reason to suppose that it also holds good in the case of the visual speech centre and the motor vocal speech centre. I say most *obvious*, for it must be remembered that because complete aphasia of whatever kind (word-blindness, word-deafness, or motor vocal aphasia) results from destruction of one of the speech centres (upper temporo-sphenoidal convolution, angular gyrus, or Broca's convolution) in the left hemisphere, it does not necessarily follow that in a condition of health the corresponding centre in the right hemisphere is inert and inactive so far as all speech function is concerned. Such a result—the production of complete word-deafness, word-blindness, or motor vocal aphasia after destruction of the auditory speech centre, the visual speech centre, or the motor vocal speech centre in the left hemisphere—merely shows (*a*) that the speech centre in the left hemisphere which was destroyed, and in consequence of the destruction of which word-deafness, word-blindness, or motor vocal aphasia (as the case may be) has resulted, was (while the patient was in a condition of health) the active, "leading," or "driving" speech centre; and (*b*) that the corresponding centre in the right hemisphere was in that particular case (and this, of course, is the usual condition) unable of itself to immediately carry on the speech function, which was lost when the driving centre was destroyed. It does not show that the corresponding centre in the right hemisphere is inert and altogether inactive—i.e., has no speech function. It is true that in the present position of our knowledge and with our present methods of observation it is rarely possible to demonstrate this activity; but the facts that in certain cases of disease the apparently inactive centre in the right hemisphere is capable of being trained to take up and carry on the function of the "driving" centre in the left hemisphere which was destroyed, and (as Dr. Bastian has pointed out) that the corresponding centres in the right hemisphere are structurally as well developed, or for all practical purposes as well developed, as the "driving" speech centres in the left hemisphere, in my opinion strongly suggest that the corresponding centres in the right hemisphere must perform some sort of speech function (which is usually no doubt carried on in conjunction with and, as it were, in subordination to—i e., in other words, in the case of voluntary or intellectual speech, at all events, not independently of—the function of the "driving" centres in the left hemisphere). And further, I have tried to show that this view is actually supported by the facts of disease. I have argued that, in some cases at all events, the auditory speech centre in particular, and probably also the other

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speech centres (visual speech centre and motor vocal speech centre), are sufficiently educated and active to take up and independently carry on the speech function when (immediately) the (usually) driving speech centre in the left hemisphere is destroyed—i.e., without further education and training. I have further elaborated this view as to the bilateral action and representation of the speech functions (which has also been so ably argued by Dr. Charlton Bastian in his recently published Lumleian Lectures) in my Systematic Lectures on Aphasia, which have been typewritten for many months, and which will I hope before long be published. On some other points I have also independently arrived at some of the same conclusions which Dr. Bastian has advanced. Thus I have argued, contrary to the usually accepted opinion, that the nervous impulses which excite the act of writing pass directly from the visual speech centre to the writing centre, and not, as is usually supposed, indirectly through the motor vocal speech centre (Broca's convolution). Cases 1 and 12 seem to show this, and Case 12 seems to prove that complete destruction of Broca's convolution does not, as most authorities believe, necessarily entail agraphia. Further, in commenting on Case 11 I have suggested the novel and important view, which has been more fully elaborated by Dr. Bastian in his recent lectures, that under certain circumstances the auditory speech centre in the right hemisphere may act upon, and through, the motor vocal speech centre (Broca's convolution) in the left hemisphere. I presume that if the right auditory speech centre is able to take up and carry on the function of the left auditory speech centre (the usually driving auditory speech centre) immediately after the left auditory speech centre has been destroyed, that the nerve impulses, in the great majority of cases at all events, probably pass out through the *left* motor vocal speech centre (Broca's convolution), and not through the *right* or motor vocal speech centre, since in most persons, at all events, the right motor vocal speech centre can only "drive" after it has been slowly and laboriously educated to do so. In my Systematic Lectures I have pointed out in more detail than it was possible to do in commenting on individual cases the fundamental importance of this bilateral representation of the speech centres and speech faculties, and of these round-about modes of action, so to speak, for the purpose of compensation and the restoration of the speech functions in the various forms of aphasia produced by disease.

Edinburgh.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The eighth meeting of the session was held on May 12th, in the Medical Library of University College, Bristol, Dr. Harrison being in the chair. Mr. Ewens showed a case of Congenital Deficiency of both Fibulæ with extreme calcaneo-valgus, remedied by tenotomy and instrumental appliances, and Professor Fawcett and Mr. Rigg remarked on the case.—Mr. Morton showed a patient from whom the Head of the Tibia had been excised for Myeloid Sarcoma and the Shaft screwed to the Lower End of the Femur, and Mr. Ewens and Dr. Swain made remarks on the case.—Dr. Fyffe read notes on some of the Infectious Diseases of Public Schools, Dr. Harrison, Dr. Shingleton Smith, Dr. Symes, Mr. Taylor, Dr. Skerritt, Dr. Parker, Dr. Edgeworth, and Mr. Morton joining in the discussion.—Dr. Shaw made some remarks on a case of Hæmophilia with Joint Lesions, and Dr. Swain, Mr. Ewens, Mr. Fendick, and Dr. Parker discussed the case.—Dr. Parker described a case of Lead Poisoning presenting Hæmato-porphyrin in the Urine.

A DAY OF REST IN THE COUNTRY FOR NURSES OF LONDON HOSPITALS AND METROPOLITAN INSTITUTIONS.—In the summer of last year an opportunity was provided for such of the nurses of the metropolis as could be spared and were so disposed to spend a quiet day at Hertingfordbury. Three short services were arranged at intervals during the day, allowing the nurses full opportunity for enjoying the country. Hospitality was offered so that the actual expense to each nurse did not exceed a few shillings, being the cost of the return fare from King's-cross. A similar invitation has been given for Thursday, June 3rd, when the Bishop of Wakefield has kindly promised to give the address at each service. Any information as to details may be obtained from the secretary of the Hospital Chaplains' Union, the Rev. A. G. Locke, St. George's Hospital, who is acting officially in carrying out the arrangements, or communication may be made to Canon Burnside, rector of Hertingfordbury, Hertford.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

FEVER ON THE WEST COAST OF AFRICA.

BY DUNCAN J. CADDY, M.D. DURH.,
H.M. COLONIAL MEDICAL SERVICE (RETIRED).

ON Oct. 6th, 1896, the captain of a steamship then lying at Akassa, River Niger, West Coast of Africa, sent for me at 2 P.M. complaining of feeling hot and feverish and of a severe headache, and upon examination I found his temperature registered 104° F., so I at once ordered him to bed and had him well wrapped up in blankets and covered with an eiderdown quilt to produce diaphoresis, at the same time prescribing three grains of subchloride of mercury and a mixture of half a drachm each of bromide of potassium and carbonate of ammonia, one drachm of ipecacuanha wine, one drachm of phenazone, with water to six ounces; dose, one ounce every three hours; with an evaporating lotion for his head, which was kept well fanned, no ice being available. At 4 P.M. his condition was easier and less restless, diaphoresis having commenced and the temperature having fallen to 101°. I then administered one drachm of spirit of nitrous ether in one ounce of water, and at 5 P.M. he was perspiring profusely, and he drank a cup of hot tea; his temperature still, however, remaining at 101°. I remained up with him during the night, and he appeared to become much better, taking his mixture at regular intervals, his temperature sinking to 99 5° until the following day (the 7th) at 9 A.M., when it was 99°, and his bowels acted freely. At 12 noon his temperature registered 99·5°, and this continued the same until 3 P.M., when I gave him twenty grains of sulphate of quinine. At 4 P.M. his temperature was 100° and he was quite cheerful and expressed himself as feeling greatly improved and took another dose (five grains) of sulphate of quinine, when he slept until 8 P.M., at which hour he awoke and was given a further ten grains. His temperature did not vary until midnight, when it rose to 100 5°, and another ten grains of the sulphate of quinine and some hot beef-tea were given. At 3 A.M. on the 8th his temperature had risen to 102° and he took some more beef-tea, and I surrounded him with hot-water bottles and placed more wraps over him, when he perspired profusely. At 3.30 A.M. his temperature was 103 5°, and he drank some soda water and milk and took beef-tea at intervals. At 3 45 I gave him a hypodermic injection of ten grains of sulphate of quinine dissolved in a sufficient quantity of diluted hydrobromic acid and water, this being injected into four different places. At 4.30 A.M. the temperature rose to 105 5°, the pulse being 110, quick, and full, and he took two ounces of champagne with soda water, his breathing at this time being short and very hot. At 4.45 A.M. his temperature was 106° and he vomited half an ounce of dark blood and became anxious, saying he was convinced he would die; his face became congested and flushed, his skin swollen, cyanotic, burning hot, and dry. The conjunctivæ were injected and the dyspnœa increased. He was now rubbed all over with dry mustard, and hot beef-tea was administered, which caused the skin to act again, and he perspired freely. At 5 A.M. his temperature was 107°, at 5.15 A.M. 107·6°, at 5.20 A.M. 107·9°, and he became delirious and struggled violently, having to be held down in his berth, while the dyspnœa became intensified, and he presented a very cyanotic appearance, his lips becoming much swollen. At 6 A.M. his temperature registered 109°, at 6 15 A.M. 110·5°, and at 6.40 A.M. 111°, when he had a severe rigor, dying at 6 45 A.M., at which time his temperature rose to 111·5°, rigor mortis setting in ten minutes after death. His urine was rather scanty during the last few hours, but otherwise it was normal.

The points in this case which appear worthy of notice are the fact that the patient was quite free from delirium up to the time his temperature became 107 9°, and the rapidity with which his temperature rose between the hours of midnight and 6.45 A.M.—i.e., from 100·5° to 111·5°—and the height which it attained. I have to thank Mr. Edward

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Caddy of King's College Hospital for the help he rendered me throughout the case by his watching and careful attention to the patient during his illness.

Earl's-court-gardens, S.W.

CASE OF RASH RESEMBLING SCARLET FEVER.

By LOUIS E. STEVENSON, M.B., B.C. CANTAB.

ON Oct. 18th, 1894 I was called to see a child said to be suffering from scarlet fever. Neither pyrexia nor angina was present. There was a rash covering the neck, the chest, most of the back, and the abdomen down to the level of two inches or so below the umbilicus. It had a remarkable resemblance to the rash of scarlet fever, showing a uniform pink ground dotted thickly over with scarlet points. At the upper and lower edges of the eruption there were isolated scarlet points. There was no rash anywhere else. The limited area of rash and its almost sharply defined upper and lower edges were suspicious, and I asked the mother if the child was wearing new flannel. She said not, but she informed me that she had washed the child's woollen under-vest with water to which some paraffin oil had been added, and on examination the garment in question had a strong odour of that oil. The rash quickly faded away, there was no desquamation, and although there were two or three more children in the house who had never had scarlet fever, no more cases of rash occurred. The house was also a very insanitary one, so that I think there can be little doubt that this was a case of artificial rash caused by irritation from paraffin oil.

Temple Sowerby, Penrith.

CASE OF PURPURA HÆMORRHAGICA FOLLOWING "MALTA FEVER" OR "MEDITERRANEAN FEVER."

By G. E. MACLEOD, L.R.C.P. & S. EDIN., L.F.P.S. GLASG.,
LATE ASSISTANT PHYSICIAN, DISTRICT ASYLUM, INVERNESS.

THE following account of a rapidly fatal case of purpura hæmorrhagica occurring during an early period of convalescence from an acute attack of "Malta fever" or "Mediterranean fever," which came under my notice a few months ago, may be of interest to some of the readers of THE LANCET. The patient, a naval officer, while stationed at Malta, contracted a sharp attack of so-called "Mediterranean fever," for which he was under treatment on the island for about seven weeks, being invalided home at a very early period of convalescence by his medical attendants. When I first saw him he was in an extremely emaciated and very weak condition, having to be carried on board the steamer, and being quite unable to raise himself from the horizontal position without assistance. He spoke with difficulty and seemed to be in great mental distress, constantly brooding over his troubles, and taking a very gloomy view of his condition. His face was pale and exsanguine, the tongue was thickly coated and tremulous, and the bowels were obstinately constipated. The radial pulse was very weak and rapid and the temperature was slightly subnormal. On his arrival on board he was immediately given a little stimulant and placed on a nutritious liquid diet of beef tea and milk, administered alternately at short intervals, and a mixture containing iron and arsenic was prescribed, the bowels being freely opened by enema. Under this treatment the patient improved considerably, and when seen early the next morning was found to be much brighter and more cheerful, having had a good night's rest. The pulse was now much stronger and less rapid and the temperature normal (98·4° F.). His face was less anæmic in appearance and his hands less tremulous, and he seemed to take much more interest in his surroundings, remarking how much better he felt, and that he thought the voyage was already doing him good. This improvement continued for two days, during which time there were no particular symptoms needing attention, the patient going on satisfactorily. On the morning of the third day, however, it was noticed for the first time that several small purpuric spots had made their appearance on his legs and forearms, and although he did not complain of feeling any worse he was decidedly weaker and less cheerful than on the previous day. The temperature was 99° and the pulse 80. Towards evening the patient had a slight attack of epistaxis, followed in about three hours' time by a much more severe one, the blood escaping freely in spite of the usual milder treatment, and finally necessitating plugging of the anterior nares, which succeeded in stopping it for a time. (The posterior nares were also carefully examined, but no blood could be seen escaping through them.) Shortly after this a general sanguineous oozing commenced from the mucous lining of the mouth, the blood collecting round the bases of the teeth and then being swallowed and vomited, thus simulating hæmatemesis. The patient was kept absolutely at rest in the horizontal position in a cool room, and liquid extract of ergot was administered in thirty-minim doses, astringent mouth washes being used frequently, which, however, seemed to have merely a temporary styptic effect. As there was no hæmatemesis excepting the spurious form of it above alluded to, liquid nourishment was still given by the stomach in small quantities and iced as a precautionary measure. An interval of about two hours now elapsed, during which there was practically no bleeding at all, but after this it recommenced with redoubled severity, hæmaturia being now noticed for the first time, the blood (which was of a bright red colour) being passed towards the end of micturition, pointing to vesical hæmorrhage. Ergotin was now injected hypodermically and other astringents freely administered, but in spite of all treatment the patient rapidly grew weaker and weaker, passing into an extremely anæmic state, and finally sinking from loss of blood and exhaustion. The exceptionally malignant form of the disease as exemplified by this case makes it not devoid of interest, resembling as it does so closely a rapidly fatal type of hæmorrhagic purpura (purpura fulminans) alluded to by Roberts in the ninth edition of his "Theory and Practice of Medicine." The pathology of the purpura, which occurs during convalescence from fever, is interesting; thus Immermann, as quoted by Fagge, in the third edition of his "Text-book on the Principles and Practice of Medicine," suggests that "it is possibly due to the circumstance that the recovery of the minute vessels is sometimes retarded beyond the time at which the volume of the blood is restored and the heart regains its vigour." It would be extremely interesting to know in this connexion whether the definite micrococcus which, according to Dr. David Bruce, is to be found in the organs in every fatal case of "Malta fever" is capable of producing those changes in the blood and small vessels to which morbus maculosus is generally attributed.

Guilford-street, W.C.

ARREST OF DEVELOPMENT OF THE CRANIAL BONES

By HENRY GEORGE DIXON, M.R.C.S. ENG.,
L.R.C.P. IREL.

ON the evening of June 30th, 1895, a primipara was delivered without assistance of a seven months' female child, who was found dead in bed attached to the placenta, which was in the vagina. The trunk and lower extremities presented no peculiarites. There appeared to be no neck, the absence of several cervical vertebræ giving the face the appearance of being sessile on the thorax. The eyes, which were very prominent, had the appearance of being placed on the summit of the cranium, which sloped away backwards immediately behind them. There were no upper orbital plates, the frontal bone being absent, as were also both parietals and the greater part of the occipital and temporal bones. At the back of the eyes and nose was a bony mass requiring the use of the saw to divide it; it was about three-quarters of an inch thick and contained a small cavity in which there was about half a drachm of dark-red matter of the consistence of marrow. It appeared as though the basilar processes of the occipital and sphenoid and the petrous portions of both temporals had coalesced and grown together. The spinal canal was patulous at its upper extremity; there the skin ceased, the bony mass being covered by a dark-red grumous substance. Both lungs floated in water. The mother asserted that the child, whose length was twelve inches and three-quarters and weight one and three-quarter pounds, was stillborn. I presume that the development of the bones forming the vault of the cranium did not advance beyond the membranous stage, and that the membrane gave way during birth

Gibson-square, N.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

A CASE OF CHRONIC INTUSSUSCEPTION; RESECTION; RECOVERY.

(Under the care of Mr. BOYCE BARROW.)

THE following case is a very typical instance of chronic intussusception, and is of interest not merely because it was the result of tuberculous ulceration, though that is by no means common, but also on account of the use of Murphy's button. At the present time a great deal of difference of opinion exists as to the value of the button, some surgeons look upon it as the quickest and one of the safest methods of uniting two portions of bowel, while others consider the button to be a most dangerous instrument. There is probably much truth in both views. It cannot be disputed that by means of the button two pieces of bowel can be very rapidly united, and that in many cases the patient recovers without any untoward symptoms; but it is equally certain that cases have occurred where the button has itself led to a fatal result either by ulcerating through the bowel wall or by causing intestinal obstruction. And in many other cases the button remains so long within the bowel as to give rise to anxiety. In the present case the union must have been speedy and perfect in spite of the protrusion of some mucous membrane. For the notes of the case we are indebted to Mr. William Turner, surgical registrar.

A boy, eleven years of age, was admitted into King's College Hospital on Feb. 24th, 1897, complaining of attacks of pain in the abdomen, accompanied by vomiting. His family history was good, his father and mother being healthy, and no history of the occurrence of phthisis in any member of the family could be obtained. The patient himself had never had any illness of importance. The following history of his present illness was obtained. Rather more than two months before admission he had complained of pains on the right side of the abdomen; these pains were griping in character and lasted for about a minute. At first they recurred about once a week, but the intervals of freedom from pain diminished in length, and the pains lasted a longer time. For the last day or two before admission they had recurred as frequently as every twenty minutes, and lasted quite three minutes. The patient had noticed that during an attack of pain a swelling appeared on the right side of the abdomen, and that as the pain grew less the swelling gradually diminished. For a few days before admission solid food seemed to increase the severity of the symptoms, and attacks of vomiting occurred, followed by some relief of the pain. He had had no diarrhœa or melæna at any time. On admission the patient was seen to be a thin, typically "strumous" boy; the thoracic organs proved to be healthy. No enlarged glands were present. On examining the abdomen a slight prominence was visible in the right hypochondriac region just beneath the outer margin of the rectus muscle, and moving with the diaphragm on respiration. This swelling was found to be caused by an ill-defined mass of about the size of a hen's egg, deep but not apparently attached to the abdominal walls; it was slightly moveable, and also moved with respiration; it was dull on percussion, and on palpation it was found to be irregular in outline and soft; no fluctuation could be detected. The dulness was continuous with that of the liver and the position of the swelling corresponded very closely with that of the gall-bladder. There was no general distension of the abdomen and no tenderness over McBurney's point. The urine was normal. After admission it was found that there was no rise of temperature even at night. For the first two or three days the patient was fed on milk and beef-tea only, and at once the attacks of pain became less severe, though the physical signs did not alter. The bowels were kept regular by doses of castor-oil and there was nothing abnormal in the motions. On Feb. 28th some solid food was given, and in the evening he had a severe attack of pain and vomiting, and then it was noticed that the swelling had moved more to the left side of the middle line, and that the right side of the abdomen was distended and tympanitic. The swelling itself also was not so dull on percussion. Gradually, as the pain and vomiting diminished, the swelling returned to its former position and the abdominal distension disappeared. During the following week the symptoms remained much the same, but some blood and mucus appeared in the motions. No change having taken place in the physical signs it was decided to perform an exploratory laparotomy. Accordingly on March 18th the patient was anæsthetised with the A.C.E. mixture, and Mr. Barrow made an incision about four inches long in the middle line above the umbilicus. This incision was deepened, and when the peritoneal cavity was opened a mass immediately presented itself. With some difficulty this mass was brought out of the opening and examined; it proved to be an intussusception occurring at the ileo-cœcal valve. It was about five inches in length and was surrounded by a mass of inflammatory adhesions; amongst these was found the vermiform appendix, which was easily freed. Mr. Barrow then attempted to withdraw the intussuscepted bowel; but finding that this was impossible he decided to remove the whole of the affected portion of the intestine, so the ileum as it entered the mass and the colon as it left it were isolated and clamped three inches or so from the intussusception. During this manipulation it was noticed that many of the mesenteric glands were enlarged, apparently from tuberculous disease. The bowel was then divided above and below, the peritoneal cavity being shut off by sponges, and the mesentery having been ligatured to control the hæmorrhage, the mass was removed. The ends of the bowel were then brought together and united by means of a Murphy's button; but when the button was closed it was found that a portion of the mucous membrane was projecting. This was cut off close to the button with scissors, and a few catgut sutures were put in to cover in the free edge. The bowel was then replaced in the abdominal cavity and the wound completely closed. For the first four days after the operation the patient complained of a good deal of abdominal pain, and a considerable quantity of mucus was passed per rectum, but there was no vomiting or distension of the abdomen. The temperature remained almost normal, only once reaching 100° F. On March 29th the stitches were removed, as the wound had completely healed. The patient was apparently well. On April 10th (twenty-three days after the operation) the button was passed with a motion. For five weeks he was fed on liquid food, and after this he was allowed light, solid food. No fresh symptoms appeared, and he was discharged quite well seven weeks after the operation.

The specimen after removal was found to consist of a portion of the ileum intussuscepted into the cæcum. At the apex of the intussusception there was a large tuberculous ulcer surrounded by much swelling; a second circular ulcer was found a little higher up. The peritoneal surfaces of the included portions of bowel were firmly adherent. There was apparently no obstruction, as the finger could be easily passed through the narrowed apex of the intussuscepted bowel. The symptoms of obstruction (vomiting and distension) were apparently due to impaction of fæcal matter above the stricture.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.

A CASE OF REMOVAL OF A LARGE SACRAL TUMOUR IN AN INFANT TWO HOURS OLD; RECOVERY; HISTOLOGICAL EXAMINATION.

(Under the care of Mr. C. E. RUSSEL RENDLE.)

CONGENITAL sacral and coccygeal tumours are by no means common, and are of great interest from an embryological point of view. They were first fully described by W. Braune in 1862.[1] Similar cases were described subsequently

[1] Die Doppelbildungen und angeboren geschwülste der Kreuzbe'ngegend, p. 52.

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by Ahlfeld,[2] von Bergmann,[3] and many others, but the correct explanation of this variety of tumour was given by K. Middeldorpf,[4] who showed that they are due to a persistence of the post-anal gut. The tumour in section resembles more or less the thyroid gland, and so it has been given, somewhat unfortunately, the misleading name of "thyroid dermoid." Another feature of interest in the following case is the very early age—namely, two hours—at which the operation for the removal of the tumour was performed. As a rule, infants only a few hours or days old do not stand operation well; their tissues are very lacerable, and an amount of hæmorrhage which in anyone else would be of no importance is sufficient to cause a dangerous degree of collapse.

On April 11th, 1896, while the late Mr. W. Square and Mr. C. E. R. Rendle were operating at the South Devon and East Cornwall Hospital, a female child two hours old was brought in by a practitioner in the town as she had a large tumour growing in the region of the anus; it had not, he stated, interfered with labour, the child being born naturally, without the aid of instruments. On examination there was found to be a large, semi-solid swelling attached to the coccygeal region by a broad base, apparently of loose connective tissue; the anus was a good deal pulled upon, but was not occluded, and the other parts seemed normal. It was decided to remove it at once. Chloroform was given, and, the skin being divided all round the base of the tumour, a very little dissection with the handle of the scalpel sufficed to separate the attachments, which were nowhere firm, save that a thin fibrous cord appeared to run from the coccyx into the growth. The wound was sutured with horsehair, and despite considerable difficulty in maintaining asepsis, owing to its situation, it healed practically by first intention, the child thriving well. She weighed just 6 lb. ten days after the operation. The tumour itself weighed 26 oz. immediately after removal, and was seven inches long by five inches across. The child recovered perfectly from the operation, and appeared likely to grow up quite healthy. Six months after the operation the scar had markedly shrunk, and she had never had any bowel trouble. Unfortunately in January, 1897, while suffering from whooping-cough, she succumbed to an intercurrent attack of bronchitis. The case seemed worthy of record from the comparative infrequency of these thyroid-dermoid tumours, and the very tender age of the patient.

Histological examination.—Dr. H. W. Webber kindly undertook the histological examination of the tumour. He reported that it was composed of numerous cysts, varying in size from a Tangerine orange to a pin's head, the amount of solid inter-cystic substance being very small. The smaller cysts contained a glairy fluid, which showed under the microscope red blood corpuscles in varying proportions, granular débris, and developing epithelium; the larger ones contained a similar fluid, with some blood-clots, their walls being composed of fibro-areolar tissue (the spaces of which were densely packed with large nucleated cells, which could hardly be differentiated from those in the inter-cystic substance) and lined with columnar epithelium. In the larger cysts were also found nodules of cartilage, and two irregular masses of bone, one as big as a small hazelnut. It was evidently one of the thyroid-dermoid tumours described by Mr. Bland Sutton.

[2] Archiv für Gynäkologie, Band xii.
[3] Berliner Klinische Wochenschrift, 1884, Nos. 48 and 49.
[4] Virchow's Archiv, Band 101, S. iv., p. 37.

FREEMASONRY.—*Rahere Lodge, No. 2546.*—A regular meeting of this lodge was held at Frascati's Restaurant on May 11th, Brother Alfred Cooper, W.M., F.R.C.S. Eng., being in the chair. Brother Worthington was raised to the third degree. Messrs. Sargant, Haines, Bill, Ellis, and Christopherson were elected members of the lodge, and Messrs. Sargant, Haines, and Bill being in attendance were duly initiated into Freemasonry. Brother W. J. Walsham, F.R.C.S. Eng., was duly elected Worshipful Master for the ensuing year. Brother W. Gripper, M.B. Cantab., M.R.C.S. Eng., was elected treasurer, and Brother Madden tyler. Messrs. Matthews and Miles were proposed as members. A donation was voted in aid of the restoration of St. Saviour's Church, Southwark. Sixty members and their friends subsequently dined together.—*Raymond Thrupp Lodge.*—On May 5th Bro. Francis Taylor Simson, L.R.C.P. Lond., L.S.A., was duly installed Worshipful Master.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Teratoma of the Scalp.—Trophic Affections of the Joints.—Impacted Gall-stone.—Acromegaly.—Card Specimens.—Election of Officers.

A MEETING of this society was held on May 18th, the President, Mr. BUTLIN, being in the chair.

Dr. DOUGLAS DREW exhibited a specimen of Teratoma of the Scalp removed from the head of a man, thirty-six years of age, who had noticed it for seven years and thought that during that time it had slowly increased in size. It formed a hard nodular mass over the upper and posterior part of the right parietal region, the skin being thinned over it. When an incision was made it shelled out readily, and was found to be superficial to the tendon of the occipito-frontalis muscle. The tumour measured about one and a quarter inches in its longest diameter, its surface was somewhat nodular, and on section it appeared to be composed of cartilage, with a small amount of bone forming incomplete septa. A microscopical examination after the specimen had been decalcified showed the main mass of the growth to be cartilaginous, with some foci of ossification. But in addition to this a great diversity of elementary tissues was present. At one part there was a glandular structure, the spaces of which contained columnar and spheroidal epithelium, at another there were bands of fibrous tissue embracing lobules of fat, and also enclosing spaces lined by cells closely resembling stratified squamous epithelium, the interior of the spaces being filled with granular material.

Mr. TARGETT read a paper on the so-called Trophic Foot, which was illustrated by numerous specimens, drawings, and lantern slides. After indicating the main anatomical features of Charcot's joint disease in its different forms, two preparations were described in which the ankle-joint was chiefly affected, the lesions exhibited being those of the hypertrophic form of osteo-arthropathy, with great deformity produced by displacement of the foot. The second series of specimens illustrated absorption of parts of the tarsus and metatarsus, ankylosis of the remaining fragments and joints, and dorsal displacement of the metatarsus upon the row of cuneiform bones. In these instances there was complete absence of the usual signs of past suppuration or ulceration, and it seemed fair to assume that the destruction of bones and joints was not the result of septic infection. In the third class of cases it was impossible to eliminate the influence of septic infection, for in each instance the foot had been infected with one or more perforating ulcers of long standing. Some of these ulcers communicated directly with the carious bones; in others, the medium of infection was less obvious; but in all of them the foot presented the clinical signs of chronic hard œdema and cellulitis with varying degrees of deformity depending on the loss of bone and displacement of parts. A precisely similar condition of foot associated with trophic ulcers was shown from a case of well-marked syringomyelia. Hence the lesions described by Professor Charcot as characteristic of the "tabetic foot" occurred also in syringomyelia, and perhaps in other rare conditions; therefore, the more comprehensive term "trophic foot" had been adopted. Among the rarer conditions were mentioned arthropathy, due to peripheral neuritis, and that following severe woundsof the nerves. Lastly, it was pointed out that the remarkable deformities of the foot in Friedreich's disease, and in certain cases of ataxy (Joffroy's deformity), were due to entirely different causes, and must not be included among the various forms of "trophic foot."

Dr. NORMAN MOORE showed a Gall-stone which was found impacted in the Small Intestine, about fourteen feet away from the ileo-cæcal valve. The patient was a man, fifty years of age, who was suddenly seized with abdominal pain and vomiting on May 7th last. The next day he had stercoraceous vomiting, and three days later he was admitted into St. Bartholomew's Hospital in an almost moribund condition, and died before surgical exploration could be carried out. At the necropsy the stone was found to be firmly impacted in the position mentioned. The bile-duct was dilated and ulcerated, but there was no perforation and no peritonitis. Dr. Moore referred to similar cases which had been recorded by Mr. Bryant and by Dr. Gray of

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Oxford. All three cases had a sudden onset, and vomiting, at first bilious and afterwards fæcal, had been persistent.

Dr. NORMAN DALTON showed recent specimens from a case of Acromegaly. The patient was a man, twenty-three years of age, who was quite well till 1893, when he had an attack of typhoid fever, after which his feet and hands began to increase in size, his features became coarse, and he became rather stupid. In addition he developed symptoms of diabetes, and it was for this complaint that he was admitted to hospital. When admitted he showed the characteristic symptoms of acromegaly, except that there was no great enlargement of the lower jaw. He died soon after admission from diabetic coma. At the necropsy, in addition to the external signs of acromegaly, there was found to be a general enlargement of the viscera, without in most cases any naked-eye alteration of structure. Thus the liver weighed 90 oz., the spleen 9¾ oz., the heart 13 oz., and the kidneys weighed 9 oz., but in their case there was probably some nephritis. The pancreas was very large, elongated, and soft, the thyroid was moderately enlarged, the thymus was very large, and the pituitary was enlarged so much as to distend the sella Turcica, and contained several drops of a fluid resembling pus. It did not appear to have compressed the commissure, and there was no optic atrophy. The suprarenal bodies appeared to be quite normal. There were signs of inflammation along the whole course of the alimentary canal, there being follicular tonsillitis, and the mucous membrane throughout was congested, and the lymphoid follicles were much swollen. The lymphatic glands in the neighbourhood of the fauces and also the mesenteric glands were much enlarged, but there was no enlargement of the glands in the axillæ and groins. There was some pigmentation over the fibrous nodules in the abdominal walls, and the skin in the axillæ was thrown into folds, thickened, and pigmented. In addition to the changes in the skeleton that could be observed during life, there were some spines of bone projecting from the basilar process, and there was a boss projecting from the middle fossa which indented the brain. With this exception the brain appeared healthy. Dr. Dalton referred to a similar case recorded by a Brussels physician, in which diabetes, ending in diabetic coma, and general enlargement of the viscera were associated with acromegaly in a man forty years of age. He hoped to report on the present case in more detail when a careful microscopic investigation had been made.—Dr. H. D. ROLLESTON remarked on the occurrence of pigmentation, although the suprarenal bodies appeared to be normal, and suggested that it might be due to an abnormal condition of the thyroid gland, and that the pigmentation was of the same kind as that met with in some cases of exophthalmic goitre. There was much evidence that the thyroid was partly responsible for the symptoms of acromegaly. The disease had been known to occur after goitre and exophthalmic goitre, and it had been benefited in others by thyroid treatment.

The following card specimens were exhibited:—

Dr. ALLCHIN: Ulcerative Colitis.

Dr. HERR: (1) Tuberculosis of the Tongue; (2) Hydronephrosis; and (3) Cirrhosis of the Liver in Congenital Syphilis.

Mr. A. H. TUBBY: Fracture-dislocation of the Cervical Vertebra.

The annual general meeting was then held. The report showed that there was some falling off in the admissions of new members. The balance at the bank showed a great shrinkage, but this was accounted for by the extra expenditure incurred by the Jubilee meeting of the society at the beginning of the session and by the purchase of microscopes by the society to avoid the heavy expense hitherto incurred in hiring them. The usual votes of thanks were passed to the retiring officers, and the following gentlemen were appointed to hold office in the next session:—President: Dr. Joseph Frank Payne. Vice-Presidents: Dr. Radcliffe Crocker, Dr. William Richard Gowers, Dr. Frederick Taylor, Dr. Samuel West, Mr. Arthur E. J. Barker, Mr. Stanley Boyd, Mr. Robert William Parker, and Mr. Samuel G. Shattock. Treasurer: Dr. Sidney Coupland. Honorary secretaries: Dr. Richard G. Hebb and Mr. D'Arcy Power. Council: Dr. John Abercrombie, Dr. J. Rose Bradford, Dr. Julius Dreschfeld, Dr. William Hunter, Dr. Hector Mackenzie, Dr. Hubert Montague Murray, Dr. G. Newton Pitt, Dr. F. Charlewood Turner, Dr. A. F. Voelcker, Dr. J. W. Washbourn, Mr. James Berry, Mr. Anthony Bowlby, Mr. Raymond Johnson, Dr. H. A. Lediard, Mr. John R. Lunn, Mr. Bilton Pollard, Mr. H. Betham Robinson, Mr. W. G. Spencer, Mr. J. H. Targett, and Mr. Edgar W. Willett.

CLINICAL SOCIETY OF LONDON.

Chronic Hydrocephalus.—Wound of the Mesentery.—Strangulated Hernia.—Femoral Hernia.

A MEETING of this society was held on May 14th, the President, Dr. BUZZARD, being in the chair.

Dr. FREDERICK TAYLOR read a paper on a case of Chronic Hydrocephalus, which was fatal at the age of sixteen years. The boy was admitted into Guy's Hospital with acute cerebral symptoms on Sept. 11th, 1895. He had had a large head from early infancy. At the age of eight months he suffered from bronchitis and had a number of fits, but he afterwards grew up strong and well, went to school, and at twelve years of age learned to play the violin. At the age of thirteen and a half years he became a compositor, and continued in that employment until his last illness, which commenced on Sept. 2nd with headache and vomiting. On the 6th he became giddy, vomiting was frequent, and there was constant severe headache, so that he gave up work. On the 11th, when he first came to to the hospital, the principal symptoms were constant headache—chiefly frontal, but sometimes occipital—vomiting, and unsteady gait. The head measured 23 inches in circumference. A few days later his head was retracted, and the vomiting and headache persisted. On the 19th there was loss of power in the legs, and pain was felt in the back of the neck. On the next day the paralysis extended, there was weakness of the arms and to a less extent of the face, and the diaphragm became paralysed. He died on the same day, with increasing embarrassment of respiration, but with preservation of consciousness to within three hours of his death. The necropsy showed that the bones of the skull were much thinned. The cerebral hemispheres were much distended, the ventricles containing thirty ounces of fluid. The pia mater was thickened at the base of the cerebellum, especially near the foramen of Majendie, but it was not certain that this was occluded. There were firm adhesions at the margin of the foramen magnum. Dr. Taylor called attention to the rarity of hydrocephalus existing till the age of sixteen years without impairment of the intellectual faculties or other symptoms. The short terminal illness of three weeks' duration could only be explained by a spontaneous increase in the quantity of fluid.—The PRESIDENT said that the retention of mental powers was very remarkable. He noticed that Dr. Taylor described an atrophic condition of the thenar muscles. Was this regarded as a sign of involvement of the spinal centres or was it part of the general atrophy?—Dr. TAYLOR, in reply, said that there was not much general emaciation. He imagined that the symptom indicated spinal involvement, but, unfortunately, he was not present at the necropsy and the spinal cord was not examined.

Mr. C. B. LOCKWOOD related a case of Wound of the Mesentery with subsequent Gangrene of the Intestine. The patient was a man, aged sixty-four, who had endeavoured to commit suicide by stabbing himself in the left side of the abdomen with a carving knife. He was found unconscious lying in a pool of blood, with coils of intestine protruding from the wound. As soon as he had partially recovered from the shock the abdomen was opened to stop the hæmorrhage. It was found that the bleeding came from several rents in the mesentery. The bleeding points were secured and the rents closed. Most of these were parallel to the large vessels; but one, three-quarters of an inch long, was parallel to the bowel and only half an inch from it. This was sewn like the others, and it was hoped that there was room for anastomosis in the mesentery between the wound and the bowel; but when the man died two days afterwards the bowel opposite the wound was either dead or on the point of dying. Mr. Lockwood had since carefully examined the vascular supply of the mesentery and bowel in the dissecting-room, and no anastomotic loops were found less than half an inch from the bowel. He had no doubt now that the proper plan would have been to have resected the intestine.—Mr. SPENCER said that the statements in anatomical books about the free anastomosis in the mesentery were erroneous as shown by Litten and illustrated by Mr. Lockwood's case. He thought that possibly the branch ligatured by Mr. Lockwood was a larger one than he had imagined at the time.—Mr.

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HOWARD MARSH related a case of a man who was thrown from his horse while hunting, and fell on a heap of stones. There were no symptoms for the next twenty-nine hours, and the patient went into the City on business the next day. He then rather suddenly became collapsed. The abdomen was explored, and several feet of the intestine were found to be in a condition of gangrene. At the necropsy a large rent was found in the mesentery, which had severed a large branch of the superior mesenteric artery, from which, however, not much hæmorrhage had occurred. The latency of symptoms was very remarkable.—Mr. MCADAM ECCLES asked what was the explanation why the other rents had not caused gangrene. Was it possible that this part had protruded from the wound during the operation, and had been nipped by the contraction of the rectus.—Dr. FREDERICK TAYLOR mentioned the case of a child who was taken suddenly ill with symptoms of peritonitis. At the necropsy there was a good deal of blood in the peritoneal cavity, and a foot of the intestine was gangrenous and full of blood. The cause was apparently thrombosis of a large branch of the superior mesenteric artery, which was calcareous. A previous case of the kind had been recorded by Fagge.—Mr. LOCKWOOD, in reply, said that it was obvious that the gangrene corresponded to the slit that he had described, the large vessel, which had been suggested by Mr. Spencer as responsible, was some distance away. The cases mentioned by Mr. Marsh and Dr. Taylor showed that anastomosis was not to be relied on.

Mr. HOWARD MARSH related a case of Strangulated Hernia in which he had been obliged to incise the intestine freely in order to return the bowel, with a good result. A man, thirty-eight years of age, who had had a reducible hernia for some years found on getting up one morning that he could not return it. Twelve hours later he was admitted into St. Bartholomew's Hospital. The symptoms were severe and he was becoming collapsed. On opening the sac it was found that there was no fluid in its cavity, but that the contained coils of the small intestine were so distended that there seemed danger that they would burst. They were at once freely incised in three places, and were found to contain about a pint of blood-stained fluid. The incisions were closed by Lembert's sutures and the coils returned, the patient recovering without any drawback. He (Mr. Marsh) suggested that the practical explanation was that the peritoneal coat of the gut had by paralytic distension of the coils been so firmly pressed against the interior of the sac that exudation from the serous surface had been prevented, and that it had thus occurred from the mucus membrane, so as to collect in the canal of the intestine.—Mr. LANGTON did not think that effusion of blood and mucus was so very rare. Sometimes the constriction was entirely external, the mucous membrane being last involved, and in these cases effusion took place into the sac. In other cases the process was more complicated, and swelling first took place in the mucous membrane, there being often an antecedent enteritis, and the peritoneum was last affected. In these cases the intestine became distended with fluid, and he had several times adopted the procedure described by Mr. Marsh, and incised the sac, evacuating it and then returning the bowel.—Mr. LOCKWOOD asked what part of the intestine was involved. He had seen much blood effused into the lumen of the intestine in a strangulated umbilical hernia. In that case the jejunum, the thickest and most vascular part of the bowel, was affected.—Mr. SPENCER suggested that the fluid in Mr. Marsh's case was a "paralytic secretion," similar to that obtained experimentally by isolating a loop of intestine, and dividing its nerves of supply.—Mr. EASTES inquired if there was any previous enteritis in this case.—Mr. MARSH, in reply, said that he quite agreed with Mr. Spencer's view that the fluid was a paralytic exudation.

Mr. L. A. BIDWELL read a paper on two cases of Femoral Hernia in which the vermiform appendix alone was found in the sac. Both the cases occurred in females, and the hernia, though irreducible, had given rise to no symptoms of strangulation. In both his cases he had reduced the vermiform appendix after notching Gimbernat's ligament, and he recommended this treatment instead of excision in all cases where the appendix was not diseased. Very few cases of this condition had been recorded, but in most of them the appendix had been excised.—Mr. LANGTON mentioned the case of a woman, forty-six years of age, in whom he found a similar condition and remarked that the symptoms of strangulation were seldom marked in these cases, which were not rare in the inguinal region, practically always on the right side, but which were very rare in the femoral region. If the appendix was not ulcerated or adherent it might be returned, but if it were altered it any way it should be excised. In order to return the hernia he should incise the sac freely, but he would prefer to notch Hey's ligament rather than Gimbernat's, as causing less subsequent weakness of the abdominal wall.—Mr. MCADAM ECCLES referred to a case which he showed last year at the Pathological Society in which an appendix was found in a femoral hernia. The vermiform process in this case was unusually long, and he thought that it had been fixed at the extremity and that stretching had occurred. He suggested that some of the supposed cases of strangulation were cases of appendicitis within the femoral sac. The appendix had a great tendency to become adherent, and it was often easier to remove it than to separate the adhesions. The existence of an appendix in a hernia was one of the causes of hydrocele of the sac.

HARVEIAN SOCIETY OF LONDON.

Some Resources in the Diagnosis of Nervous Diseases.

A MEETING of this society was held on May 13th, the President, Dr. R. H. MILSON, being in the chair.

Dr. CAGNEY read a paper on Some Resources in the Diagnosis of Nervous Diseases, illustrating it by a series of clinical cases of peripheral nervous disorders. These he investigated before the society and took occasion to demonstrate practically the use of electric currents in diagnosis. He dwelt upon the importance of this one element of certainty amongst what is so often complex and ambiguous, and defined the limits within which the result obtained by noting the electrical reactions of muscles was absolutely to be depended upon. Amongst the cases which he exhibited was a middle-aged woman, the subject of alcoholic neuritis, showing at the same time general muscular tenderness with total analgesia of the skin all over the body, this and other symptoms being obviously hysterical; and he also related the history of other cases within his experience, urging the necessity of a departure from the usual mental attitude, by which it was assumed that if a patient was hysterical therefore he was not the subject of organic disease, the fact being in his opinion that the unstable nervous system of the hysterical was more likely than another to suffer from coarser lesions. The discrimination of the two elements, the functional and the organic, occurring in the same person seemed to him to be a task of the first importance—a task which could not be satisfactorily performed without a knowledge of the electrical reactions. *Apropos* of certain cases of anterior poliomyelitis, he called attention to clinical appearances tending to modify the usual conception regarding the pathology of these affections.

Mr. GRIFFITH desired to know if electricity could be utilised in the diagnosis of ocular paralysis and so assist the prognosis of such cases. He had met with a number of cases in which the cause had been obscure, and though many had yielded to iodide of potassium, others had been most obstinate to treatment.

Dr. CAGNEY, in reply, said that the ocular muscles were not amenable to the ordinary method of examination.

ÆSCULAPIAN SOCIETY OF LONDON.

Cancer of the Rectum.—Exhibition of Cases.

A MEETING of this Society was held on May 7th, 1897, the President, Mr. STEPHEN PAGET, being in the chair.

Mr. D. H. GOODSALL read notes of six cases of Cancer of the Rectum. A family history of cancer was discovered in one case only. The patients came under treatment at periods varying from three to eighteen months after the onset of symptoms suggesting rectal mischief. The tumour mass could be felt in most of the cases from two to three inches above the anus, but in one instance it was placed as high as five inches. Left inguinal colotomy was performed in four of the cases. The rectal growth was removed in three cases. In one case the latter operation alone was done, the coccyx also being taken away, and a preliminary colotomy was not resorted to. The results in all the cases had so far been satisfactory. The ages in these cases gave an average of fifty-nine years for the males and of sixty-six years for the females. The

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previous health had as a rule been good, the only ailment being constipation. Mr. Goodsall observed that men were on the whole more liable to cancer of the rectum than women. The usual progression of symptoms was diarrhœa—first without, but afterwards with, blood; later, a lack of control over flatus, and pain over the sacrum and coccyx and sometimes in the penis; and after six to nine months loss of weight. He insisted on the necessity of a rectal examination in any case of persistent and unexplained diarrhœa. Sometimes, however, obstruction was an early symptom. As to treatment he advocated free removal of the growth, care being taken to excise freely the skin towards the front of the wound where a recurrence was usually noticed. If this operation were refused left inguinal colotomy should be done and would arrest the diarrhœa, discharge of blood and mucus, and tenesmus.

Mr. GOODSALL also showed:—1. A case of Fistula in Ano following Rectal Stricture. Sinuses had burrowed towards the scrotum and even for several inches along the thigh. These having been opened up the patient had become convalescent. 2. A case of Early Epithelioma of the Tongue.

Dr. CONNER showed a case of Extensive Morphœa in a girl aged thirteen years. Characteristic pale patches of various sizes were scattered over the arms, legs, abdomen, and shoulders. Some were slightly indurated.

Mr. M'DONNELL showed a case of Mitral Stenosis in the initial stage. No rheumatic or other constitutional cause was discoverable.

POOR-LAW MEDICAL OFFICERS ASSOCIATION.

Poor-law Officers Superannuation Act.

AT a meeting of the Council, held at 9, Copthall-avenue, E.C., on May 11th, Mr. W. D. BALDING being in the chair, Messrs. Beckingsale, the solicitors to the association, reported that, in answer to the questions propounded to Sir Robert Reid, Q.C., M.P., *re* the Poor-law Officers Superannuation Act, 1896—viz., (1) Are public vaccinators officers under this Act, and, as such, entitled to superannuation under the Act of 1896? (2) Has the Local Government Board sole power to decide whether public vaccinators are officers or not? (3) If public vaccinators are officers, are they entitled to superannuation under the Act? (4) Whether medical officers who are entitled under the Act to superannuation as such are also entitled to a further allowance in respect of the office of public vaccinator where they hold such an appointment?—they had received the following reply:—

1, Temple-gardens, E.C., May 7th, 1897.

1. Reading the different portions of the Poor-law Officers Superannuation Act together, the only persons [except those specially mentioned in the definition clause] entitled to superannuation are persons between whom and the guardians there is a relation of service or employment. The Act does not confer superannuation upon persons whose relation to the guardians is that they merely contract with them to do specified work.

In the case of district medical officers they are, according to the term of the statutes, "appointed" to an "office," and paid a salary. So they are "officers" employed by the guardians.

Now the position of public vaccinators is required by 30 and 31 Vict., c. 84, under which the guardians do not "appoint," nor is the position called therein an "office" nor is a salary paid. The guardians are required to enter into a contract with some duly registered medical practitioner, called the public vaccinator, which is to contain stipulations and conditions to secure the due vaccination of persons, &c.

We do not consider that this statute creates a relation of service or employment, nor is such relation created by the terms of the contract itself set out in Glen's Poor-law Orders, p. 525, though it might be. And we assume that the contract is always in those terms.

We think, therefore, there is no title to superannuation on such a contract. It is true that superintendent registrars and registrars of births and deaths are, by Section 19 of the Act of 1896, deemed to be in the service of the guardians. The reason is that by the Acts creating their officers they are not in the service of the guardians, though they are "officers," and so styled in the Acts.

This, therefore, does not effect the question here raised, and a similar reason exists for the mention of "school attendance officer" in Section 19.

2. The Local Government Board have no power to determine this question. They can only determine differences between the guardians and persons who in fact are officers.

3. This has been already answered.

4. Medical officers of the guardians who are entitled to superannuation under this Act are not entitled to a further allowance in respect of the office of public vaccinator, if they hold such, as Section 19 of the Act lays down that only those emoluments are to be included that accrue to the officer in virtue of the office for which he claims superannuation.

It was unanimously resolved that a copy of the above be sent to the medical press.

PATHOLOGICAL SOCIETY OF MANCHESTER.

Solid Tumours of the Ovary.—Cystic Sarcoma of Muscle.—Intra-hepatic Thrombosis.—Intra-ocular Hydatid Cyst.—Exhibition of Specimens.

A MEETING of this society was held on May 12th, Dr. T. HARRIS, President, being in the chair.

Dr. DONALD showed some Solid Tumours of the Ovary removed by abdominal section. The specimens included: 1. A solid tumour about the size of a fœtal head, removed in 1893 from a child aged six years and one month. On microscopical evidence the growth was pronounced to be a spindle-celled sarcoma, but there had been no recurrence after operation. 2. Three cases of fibromata of the ovary, removed from patients aged twenty-six, thirty-nine, and fifty-two years respectively. In the third case the tumour weighed 19 lb. 3. A fibro-myxoma of the ovary. 4. A fibro-adenoma of the ovary. Microscopical sections of the various tumours were also exhibited.

Mr. E. STANMORE BISHOP showed a Cystic Sarcoma of the Semi-tendinous muscle. The whole muscle was converted into a fluid sac, and it was entirely removed. The patient recovered and could walk well. Sections of the wall of the growth, for which he was indebted to Dr. Kelynack, were shown. They exhibited a small spindle-celled structure with some myeloid cells.

Dr. FOX EDWARDS made some remarks on the Leucocytes in Leukæmia, and showed specimens of Blood from cases of Lymphatic and Myelo-splenic Leukæmia. The essential differences between the two varieties were pointed out: the increase in leucocytes in the lymphatic form affecting almost entirely the lymphocytes, but in the myelo splenic form affecting both varieties of oxyphile cells; and, in addition, in the latter form myelocytes were present. Specimens showed every stage between ordinary finely granular oxyphile cells and myelocytes with oxyphile granules, which fact led him to suggest that certain of the myelocytes might be abnormally developed and finely granular oxyphile cells.

Dr. KELYNACK showed a specimen from a case of Stenosis of the Hepatic Vein, with extensive thrombosis of its branches in the liver. The patient was a woman aged thirty-two years. The chief symptoms were enlargement of the liver, ascites, and jaundice. The illness lasted six weeks, death resulting apparently from cholæmia.

Dr. HILL GRIFFITH mentioned a case of Intra-ocular Hydatid Cyst and remarked on its extreme rarity.

The following Card Specimens were exhibited:—

Dr. BRINDLEY: Biliary Cirrhosis.

Dr. MOORE: Microscopic Preparations from "Alcoholic Heart."

Dr. WOODCOCK: Foreign Body from the Pharynx.

Mr. WOLSTENHOLME: (1) Lung from a case of Glanders in a Horse; and (2) Cultures of Bacillus Mallei.

Dr. YONGE: Singer's "Node" of the Vocal Chord.

Dr. KELYNACK: Malignant Growth of the Heart.

Dr. MACNEILAGE: Anencephalic Fœtus.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

Acute Nephritis.—Invaccinated Erysipelas.—Myxœdema.—Recurrent Appendicitis.—Transposition of the Viscera.

A MEETING of this society was held on May 4th, the President, Mr. GODFREY CARTER, being in the chair.

Dr. WEBB related a case of Acute Nephritis complicating Pregnancy. The patient was a woman, eighteen years of age; she was five months pregnant when admitted to hospital on Sept. 4th, 1896, and had enjoyed good health until three months previously, when she noticed that her legs were swollen. On admission all the signs of acute nephritis were present, the urine was smoky, loaded with albumin, and the quantity 21 oz. No change was present in the fundus oculi. The patient was dull and drowsy and complained of headache. Her condition improved till Oct. 17th, when she had a convulsion and her breathing became stertorous. Venesection was performed, 12 oz. of blood being withdrawn, and one and a half pints of normal saline solution were then transfused; after this the patient seemed much better. A sound was introduced into the uterus and passed round

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between the membranes and the uterine walls, and a catheter was then passed into the uterus and left in. On Oct. 23rd the patient was delivered of a living child, which survived twenty-four hours. On Nov. 18th the patient complained of dimness of vision, and on examination optic neuritis, together with old and recent hæmorrhages into the retina, were seen. On Feb. 13th she was sent home apparently in a convalescent state, but several convulsions occurred, and next day she was re-admitted in a semi-comatose state, her pulse being 76 and weak. She had passed urine, but the bowels had not acted. A simple enema was administered, and after this a pint of saline solution was introduced into the rectum through a long tube; part of this was retained. She was wrapped in a blanket wrung out of hot water and perspired freely. On Feb. 16th her condition was rather better; she had no more convulsions, but was still semi-conscious; her urine was loaded with albumin. On Feb. 20th she was much better, the albumin was greatly diminished in amount, and the optic discs were natural. On March 6th she left the hospital in a very satisfactory condition, with only a trace of albumin in the urine, and three weeks later she was found to be still in good health.

Dr. BELL related a group of cases of Invaccinated Erysipelas. He pointed out that if the disease is inoculated at the time of vaccination the erysipelas will show itself about the fourth day. Nine children were vaccinated from an apparently healthy child. Cases 1, 2, and 3 ran a normal course. Cases 4, 5, and 7 developed erysipelas of the arm in the first week, but the vaccination pocks ran a normal course. Case 6 had an axillary abscess, and the development of the pocks was more rapid than natural. In Cases 8 and 9 the pocks developed more rapidly than natural, but there was no other inflammation. The vaccinifer in these cases was apparently normal at the end of the second week; at the end of the third week there was enlargement of the axillary glands, which subsided without suppuration.

Mr. MIALL related a case of Myxœdema in which treatment by thyroid gland and extract was followed by complete relief of all the symptoms.

Mr. HORROCKS related a case of Recurrent Appendicitis successfully treated by abdominal section and removal of the Vermiform Appendix.

Dr. JASON WOOD showed a patient with Transposition of the Viscera.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Renal Tumour.—Congenital Hypertrophy and Stenosis of the Pylorus.—Removal of a Fragment of Steel from the Vitreous Humour.—Intestinal Obstruction.—Catgut and Silk Rolled in Balls.

THE first meeting of the summer session of this society was held on May 5th, Dr. WILLIAM CRAIG, Vice-President, being in the chair.

Mr. F. M. CAIRD read a paper on a case of Renal Tumour. The patient was a man, aged fifty-six years, who had come under his care early in March complaining of hæmaturia, general weakness, and loss of weight. He first noticed blood in his urine in October, 1895. The bleeding had become practically continuous, and after exertion clots were passed. There was no acute pain, but a general heaviness and dull pain, usually referred to the left lumbar region, but more recently to the right were experienced. On March 20th the patient was put under chloroform and the bladder examined with the cystoscope, when granular detritus was seen issuing from the left ureter, while the bladder itself was healthy. The usual incision was made from a point between the last rib and the erector spinæ, forward and parallel to the twelfth rib. A tumour was found as large as a man's head. The patient suffered severely from shock during the efforts made to enucleate the tumour, and it was impossible to define a pedicle, or pass a ligature over the mass. It then occurred to Mr. Caird that the mass might be eviscerated. The posterior border of the kidney was laid open, and the soft, pulpy contents were scooped out with the right hand, while the left compressed the position of the vessels and ureter. The upper end of the kidney could then be detached, and a pedicle was felt, which was divided and ligatured. The patient was apparently moribund, but he gradually rallied towards evening. No urine was passed until the second day. Beyond a copious discharge from the wound the future history was uneventful. He rapidly improved in colour and in strength, gained weight, and was on a couch twenty-one days after the operation.

Dr. JOHN THOMSON read a paper on Congenital Gastric Spasm (Congenital Hypertrophy and Stenosis of the Pylorus). He has already recorded two cases of this condition, and the present communication was based upon a third case which he had seen in April of last year. The patient was a female infant, twenty-seven days old, suffering from constant vomiting and somewhat emaciated, but otherwise healthy. On careful palpation a small hard moveable tumour could sometimes be felt in the epigastrium. At birth the infant appeared to be normal. The mother not having enough milk the child was fed artificially, but vomiting began almost at once and rapidly became worse. The child steadily became emaciated and died. The post-mortem examination showed the stomach to be enlarged and its wall to be thickened towards the pylorus, the thickening being due to an increase in the muscular coat. At the pylorus the muscle was much thickened and the orifice was contracted so that the stomach contents could not be squeezed through it. The hypertrophy was mainly in the inner circular layer. The sub-mucous connective tissue was also greatly increased in amount. In these cases there was usually a period of apparently perfect health until the vomiting commenced. The vomiting at first occurred at long intervals, these diminishing until it followed each ingestion of food. The duration of life varied from three weeks to a little over six months. As regarded treatment the possibility of surgical interference was referred to. It was argued that the condition was a congenital one, originating in utero, and that it was the result of a functional disorder of the nerves of the stomach and pylorus, leading to antagonistic action of their muscular arrangements. This antagonistic action, he thought, must be connected with the swallowing of large quantities of the liquor amnii during intra-uterine life.

Mr. W. G. SYM read notes of a case in which a Fragment of Steel was removed from the Vitreous Humour. There was a traumatic cataract in the eye in which the steel was lodged. The usual cataract operation was performed, and the fragment of steel was removed with an electro-magnet, the result being very satisfactory.

Dr. ALEXIS THOMSON showed a male patient upon whom he had operated for Strangulated Hernia. Some months after the operation the patient suffered from complete intestinal obstruction, with fæcal vomiting, his general condition being one of extreme gravity. Stricture had occurred at the site of the strangulation, the intestine being much distended above this point and collapsed below it. It was necessary to remove about a foot and a half of intestine in order to obtain a satisfactory anastomosis. Murphy's button was employed. The patient made an excellent recovery and the Murphy's button was passed in about a fortnight.

Mr. CATHCART showed an ingenious method which he had devised of rolling Catgut and Silk in Balls to obviate the use of spools. The balls were put into a bottle, the ends being taken up through a plug of antiseptic wool with which the mouth of the bottle was closed. The catgut or silk readily unrolled, and the smearing of the hands of the surgeon was avoided.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

The Dissemination of Micro-organisms from Sewer Air.—The Report of the Vaccination Commission.

A MEETING of this section was held on April 30th, Dr. J. M. REDMOND, President, being in the chair.

Professor CHARLES TICHBORNE read a paper on the Dissemination of Micro-organisms and on the Best Method of Destroying Germ Emanations from Sewer Gas. He remarked that sewer gas was stated, with considerable force of evidence, to be a fertile source of spreading enteric fever and allied diseases, and in spite of some recent researches, he was still of opinion that the weight of evidence almost proved this to be the fact. But there was something wanted to explain the theory. Even the smallest germs had a certain weight. This fact is shown by the absence of germs at high altitudes, as for instance on Mont Blanc, or in very still atmospheres, such as that in the vaults of

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St. Michan's Church. He had demonstrated this as far back as 1870 in an afternoon lecture delivered at the Royal Dublin Society. The microbes of enteric fever, when carried in water or brought mechanically to a receptive surface, were capable of producing disease, and they were also capable of rising in sewer gas. Professor Frankland had shown that liquid sewage matter was not likely to be scattered into the air except by gas generated in it. He experimented with lithia—a non-volatile chemical substance, which was easily detected and might be said to represent micro-organisms. He found that no ordinary agitation of the sewer water would produce indications of lithia in the air, but directly gas began to be generated in the sewage by decomposition, the bursting of the gas bubbles carried lithia into the air. Professor Tichborne was of opinion that here lay the clue to the dissemination of microbes, but his views did not take exactly the direction which Professor Frankland indicated, for he conceived that they could be carried by a condensed vapour exactly represented by ordinary dew. At certain hours of the night, just as the rising vapour settled as dew in a valley, he explained that the temperature of the water-laden vapour of the sewer was lowered by being met with the layer of cold night air through the open traps, which determined a dew point in the sewers themselves. He had found from actual experiment that the temperature of the sewer water as it flowed from the large sewers was generally two or three degrees above the temperature of the night air. Each particle of dew became a "raft" which would carry microbes upon its surface, perhaps for miles, as long as the condition lasted, and as the sun's warmth dissipated the morning dew the "raft" disappeared, leaving the microbe suspended in the air. He therefore recommended that sewers should be disinfected with insoluble disinfectants, having a specific gravity of from 0 850 to 0·950, so that they would float on the surface of the sewer water. Carbolic acid and disinfectants which were heavier than water were perfectly useless, because the unaffected stream of sewage passes over their surface.—SIR CHARLES CAMERON said that he had been much startled by recent papers which appeared to show that the air from sewers in London, Aberdeen, and other places contained a very small number of micro-organisms, much smaller, indeed, than the air above the sewers. He was much interested in Professor Tichborne's statement that the bubbles of vapour came up containing the germs contained in the liquid. It has been proved that sea water on the calmest day carries up salt into the air derived from the placid evaporation of the sea water, and therefore he could not accept the theory that liquids were unable to disengage the pathogenic bacilli which happened to be present in them. He had made many experiments, which consisted in placing dejecta of typhoid patients in an open vessel, at a little distance from some milk in vessels, and covering the whole with glass; examination revealed swarms of bacilli in the milk. He concluded that during the fermentation of fæces containing the bacilli there was an actual evolution, and that they escaped in gases. Perhaps this accounted for the fact that perfectly fresh fæces were not infective, but that putrefaction was necessary for gases to be evolved and to carry the germs into the air.

The Secretary read Dr. ALFRED E. BOYD'S paper on the Report of the Vaccination Commission for 1896. It dealt with the history of small-pox and the history of inoculation and vaccination, and then with the Commission, its scope and its recommendations. The recognition of "honest objections" was described as a dangerous principle, for it would put a premium on the endeavours of busybodies to convert the ignorant to anti-vaccination principles.

THE FRENCH HOSPITAL.—The twenty-ninth annual dinner of the French Hospital and Dispensary was held on May 15th at the Hôtel Cecil, Baron de Courcel, the French Ambassador, presiding. There was a numerous company, including the Italian Ambassador, the Lord Mayor, and the Under-Sheriffs. Sympathetic references were made by various speakers to the lamentable loss of life occasioned by the fire at the charity bazaar in Paris. Subscriptions and donations amounting to about £2500 were announced by the honorary treasurer, including £25 from the French Ambassador, £10 10*s.* from the Lord Mayor, £50 from the Italian Government, £100 from the late Duc d'Aumale, £10 from the Duc d'Orleans, and £10 from the Duc de Chartres.

Rebiews and Notices of Books.

A System of Medicine, by Many Writers. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., LL.D., F.R.C.P., &c., Vol. II. London: Macmillan & Co. 1897. Price 25*s.*

WE gladly welcome the appearance of a second instalment of a work which must undoubtedly rank as a foremost treatise on the scientific medicine of to-day. It contains contributions from those whose qualifications for the task imposed on them are of the highest order, so that the reader can feel certain to find in its pages the most recent as well as the most valuable information that exists on these matters. It is indicative of the wide area embraced by British medicine that a large part of the volume deals with diseases of tropical climates, concerning which knowledge has so much advanced of recent years, although at the same time there are many lacunæ to be filled. As to the growth of knowledge upon the intimate nature of diseases, we need only to glance at the opening article upon Tuberculosis, by Dr. Sidney Martin, to realise how widely different is the standpoint from which we now regard this and other morbid processes from that obtaining less than twenty years ago. This is owing in great measure to the recognition of the part played in infective diseases by bacterial organisms, and it thus comes to pass that bacteriology occupies a prominent place in the volume. Dr. Martin's article is in the main devoted to the general facts of tuberculosis, especially as to its etiology and pathology, and he has succeeded well in presenting a clear and harmonious description of the characteristic manifestations of the disease, which in all its varied forms can be referred to the introduction into the body of the bacillus tuberculosis. Dr. P. S. Abraham, in his article on Leprosy, deprecates the use of the term "tubercular" to the most characteristic variety of elephantiasis, rightly preferring to call it "nodular." It is remarkable how much there is still to be learnt concerning this disease, especially in regard to its etiology, for although there can be no question as to the specific and pathogenic character of the bacillus lepræ, it is yet uncertain how this organism gains entrance into the body. Dr. T. D. Acland's article on Actinomycosis gives a faithful description of this remarkable affection, the recognition of which is of comparatively recent date. Its rarity in the human subject may possibly not be so great as we think owing to the diagnostic fallacies that may be encountered. The discovery of the pathognomonic and quite characteristic organism in the discharges is of course conclusive. Next in order in the volume are articles on diseases which are familiar enough to the English practitioner. That on Measles is written by Dr. Dawson Williams, who gives an excellent account of the typical course of the malady, followed by a sketch of the chief departures from that type. In speaking of its complications it is to be noted that the writer attributes the most dreaded of these—broncho-pneumonia—to a secondary infection; for, as he says, "the catarrh determined by the primary infection of measles appears to favour the growth of certain pathogenetic organisms, chief among which are the pneumococcus, the streptococcus pyogenes, and the staphylococcus pyogenes aureus." The number of complications described is considerable, the most interesting of which are those connected with the nervous system. It is instructive to note that the toxin of measles would seem to have more affinity for the central than for the peripheral nerve-tissues, the conditions which have been met with including hemiplegia attributable to encephalitis or meningitis, muscular atrophy, "ascending paralysis," and disseminated myelitis. However, such sequels are all very rare. The same author contributes

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a brief article on Rubella, the diagnosis of which from scarlet fever and from measles is facilitated by an instructive table. Dr. F. Foord Caiger's article on Scarlet Fever is of an exhaustive character. He has adopted, too, a systematic method of treatment of the subject which is of material assistance to the reader. The analysis of the symptoms of the disease indicates a wide acquaintance with its features, and is obviously the summarised exposition of careful clinical observation. It is interesting to learn that Dr. Caiger has not, and that others have not, been able to confirm the observation of the late Dr. Mahomed that the albuminuria of scarlet fever is preceded by a stage of hæmoglobinuria. A section on aberrant cases is of practical value, and the remarks on diagnosis are clear and concise. The subject of the complications of scarlet fever is one which demands a wide experience for its adequate treatment, and we may therefore take it that the statements here made are authoritative. It is satisfactory to find from the statistics which Dr. Caiger gives that the incidence of complication is not, on the whole, very high, and it may be a surprise to some to learn that acute nephritis did not occur amongst the patients of the Stockwell Fever Hospital in the years 1892 and 1893 in more than 3·4 per cent. Rheumatism is more common—namely, 4·5 per cent. Dr. Caiger believes that "scarlatinal rheumatism" is akin to ordinary acute rheumatism, but notes the greater tendency for the inflamed joints to suppurate. As regards post-scarlatinal diphtheria, to which much attention is given, we are told that "there is nothing, either clinically or bacteriologically, to distinguish post-scarlatinal diphtheria from the independent disease except in respect to its high mortality." It is pointed out that it mainly occurs in hospitals and that its appearance seems to be related to local conditions of soil and ventilation, for often any exposure to infection is out of the question. In discussing the pathology of the disease the well-known investigations of Dr. Klein in the Hendon milk-epidemic are detailed, and the grounds stated by that observer for considering the streptococcus then discovered to be pathogenetically distinct from the streptococcus pyogenes, which it morphologically resembles. We gather that Dr. Caiger is himself inclined to limit the operation of this microbe to the secondary "septic" phenomena which accompany all well-marked cases. The section on treatment is satisfactory, but the reader will fail to find in it any reference, critical or other, to the eucalyptol inunctions which a short time since were in vogue in some quarters. The method could not fail to have been tried in a large fever hospital, so we may perhaps conclude that it was found wanting in the merits claimed for it. Dr. J. MacCombie writes on Chicken-pox, and the vastly more important subject of Small-pox, upon which he has produced a most able essay. The recent epidemic wave that has been passing over this country has awakened an interest in this disease which to some of our Continental *confrères* is becoming as little known as typhus fever is to the majority of English medical men. An especially valuable part of an article which is throughout most exact and detailed is the consideration devoted to the subject of diagnosis. Here Dr. MacCombie has been careful to enter fully into a description of the numerous conditions liable to be mistaken for small-pox in its initial as well as in its developed stages. For whereas in its natural features variola is unmistakeable, in its modified form, it may readily pass unrecognised, so that it is not surprising that the earliest cases in an outbreak are mostly to be found amongst the vaccinated. In view of the importance of prompt isolation of the infected the necessity for accurate diagnosis is obvious. Dr. Eustace Smith writes on Mumps and Whooping-cough, subjects upon which his long experience of the maladies of children entitles him to speak with authority, and everyone will be glad to peruse the article on Constitutional Syphilis contributed by Mr. Jonathan Hutchinson. To Dr. Caiger has been assigned the treatment of a highly interesting subject—namely, that of the Co-existence of Infectious Diseases. He relates the following singular experience:—"A child once came under my care in whom scarlet fever, diphtheria, measles, and whooping-cough were all present at the same time, the only disease amongst them in which the diagnosis was doubtful being diphtheria, for the bacteriological test was not applied. In another case the eruptions of measles and chicken-pox were mingled with the early desquamation of scarlet fever in a child who at the time was suffering from whooping-cough. In both cases the combined attack was fatal."

The next division of the volume is devoted almost entirely to the description of tropical diseases, and is introduced by an article by Sir Joseph Fayrer on the Climate and Some of the Fevers of India. Amongst the latter he describes the various forms of malarial fever, and devotes several pages to the consideration of Indian enteric fever, the etiology of which is held by those who have had most experience of it to be dissimilar from the disease with which we are so familiar in temperate climates. For our own part we find much difficulty in harmonising our present knowledge of the specificity of the lesions of enteric fever with the statements as to the conditions under which that disease prevails in the tropics. Is it possible or conceivable that more than one pathogenic agent can produce the same effects? Dr. J. W. Moore gives a good account of Typhus Fever, which, owing to its "uncertain" bacteriology finds itself widely separated in this work from the disease with which it was for long wont to be confounded. Dengue is claimed by Dr. P. Manson in his account of this affection to belong to the class of exanthemata, whilst its resemblance in many aspects to influenza is well brought out. Yellow Fever is decribed by Dr. Andrew Davidson, to whom also is assigned the article on Dysentery. In another part of the volume there is an article upon Amœbic Dysentery by Dr. Lafleur, and this reduplication suggests not only the possibility of more than one causative influence productive of practically similar effects, but also goes to show that our knowledge of the pathogeny of this disease is in a state of transition. The remarkable affection, Beri-beri, upon which much fresh knowledge has been obtained of late is dealt with by Dr. P. Manson, who considers that its neuritic nature is amply proved, no satisfactory evidence having been adduced in favour of its homology with ankylostomiasis or anæmic dropsy, the dropsical character of the "wet" form of the disorder being obviously a superadded phenomenon. But the essential cause of beri-beri has not yet been discovered. The other articles in this part of the work are those on Malta Fever, by Dr. Lane Notter; Epidemic Dropsy, by Dr. Kenneth MacLeod; Negro Lethargy or Sleeping Sickness, by Dr. Manson; whilst Mr. R. H. Firth contributes those on Oriental Sore, Verruga, and Frambœsia. Next in order come the diseases which are communicable to man from animals, and of these glanders and anthrax, which have been proved to depend on specific micro-organisms, are taken first. Dr. Sims Woodhead writes on Glanders, first describing the affection in the horse, and then as it affects man, where it mostly appears in the form of farcy. The pathological lesions in the lungs and the bacteriology of the disease receive full attention. Dr. J. H. Bell writes upon anthrax, the elucidation of which disease marks the starting-point of the modern study of bacteriology as a factor in disease. The clinical descriptions of malignant pustule and of woolsorters' disease are excellent, and the importance of measures of prophylaxis in trades having to do with skins and hides is strongly urged. The articles which deal with the subject of Vaccination are amongst the most important in the book, embodying as they do the results of the extended inquiries which have been conducted at the

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instance of the Royal Commission on Vaccination. To Dr. T. D. Acland we are indebted for an essay entitled "Vaccinia in Man: a Clinical Study," for which we venture to think there is no equivalent in previous writings on the subject. For the amount of detail, in the method of discussion of the facts, and the impartial as well as thorough manner in which the subject has been treated by Dr. Acland, he deserves all praise. The amount of painstaking labour which must have been expended in the investigation of cases of alleged injurious effects cannot be known until the long delayed Blue Book which forms one of the appendices to the Commission's Report is published, but we can form some estimate of it in the perusal of this article. The distinction drawn between invaccinated erysipelas and erysipelas obviously secondary to the operation is clearly shown, the greater number of this and other inflammatory complications obviously falling under the latter category. But it is not possible here to review adequately the contents of this essay. It must suffice to observe that after dealing with the phenomena of vaccination, the author describes the rashes incidental to it, the injuries which may be produced by it and the relationships between vaccination and syphilis and other inoculable diseases. It is abundantly clear from the facts adduced by Dr. Acland that vaccinal syphilis is the rarest possible accident, and that the risk of conveyance of leprosy or tubercle is almost, if not quite, as problematical as is that of cancer. Dr. Acland's contribution is followed by one by Dr. S. M. Copeman on the Pathology of Vaccinia. The interesting studies by Dr. Copeman make this exposition of the vexed question of the precise connexion between variola and vaccinia very valuable. The subject is one of great difficulty and it would appear as if it would never advance beyond the region of theoretical argument until the bacteriologist succeeds in demonstrating the organism which analogy suggests must be the cause of these affections. The value of Vaccination as a Branch of Preventive Medicine is once more exemplified by Mr. Ernest Hart, who introduces into the argument the additional statistical evidence supplied by the Final Report of the Royal Commission on Vaccination. It is incomprehensible to the ordinary mind that the accumulated facts of the efficacy of vaccination as a prophylactic and as a mitigating measure should still be disputed. Mr. Hart writes temperately, but strongly, in his exposure of the fallacies of the opponents of vaccination, and his demonstration of the inadequacy, not to speak of the cost, of alternative preventive measures is convincing. Dr. McFadyean writes on Foot-and-mouth Disease, and Dr. Sims Woodhead gives a most detailed account of Pasteur's work in his article on Rabies. This article is followed by a short account of Glandular Fever by Dr. Dawson Williams. Malarial Fever is described by Dr. W. Osler, the subject being treated in the light of the discovery of Laveran, so that it comes under the section of the work devoted to diseases due to protozoa. It is perhaps because of the close connexion between malaria and hæmoglobinuric fever, of which Dr. Copeman writes, that this latter affection is also placed in this category. Of Amœbic Dysentery no one can dispute the right to a place here, and the account given by Dr. Lafleur is valuable as coming from one whose researches have done so much to demonstrate the parasitic nature of the disease.

The next articles treat of subjects that bear more closely upon personal life and work, and will therefore perhaps be read with more interest. They deal with the intoxications, and embrace an account of Ptomaine Poisoning by Dr. Sidney Martin; articles on Grain Poisoning, Mushroom Poisoning, Opium Poisoning, &c., by the Editor; on Alcoholism, by Dr. H. D. Rolleston; on Snake-bite by Dr. C. J. Martin; and on Metallic and Other Forms of Poisoning by Dr. T. Oliver. Dr. Sidney Martin's account of ptomaine poisoning is useful, as suggesting a wide conception of the dangers of food that has undergone putrefactive or other change; for the reader is naturally led to think of the various symptoms and affections that have been ascribed to intestinal auto-intoxication as being in close alliance with these mysterious toxins, not to mention the so-called idiosyncracies which exemplify the truth of the proverb that "one man's meat is another's poison." In Professor Clifford Allbutt's article on grain poisoning we learn that Dr. Ehlers, a recent writer upon ergotism, has raised the question whether Raynaud's disease may not be of this nature. Professor Allbutt, however whilst admitting that there is room for criticism of Raynaud's work from this point of view is inclined to think that Raynaud himself "did not overlook the possibility of ergotism in his cases and decided against this poison." The article on snake poison and snake-bite is full of information, and comprises an account of the important researches of Professor Calmette and Profesor Fraser upon anti-venomous serum, Professor Calmette himself contributing an appendix to the article descriptive of his work. Of the article on alcoholism by Dr. H. D. Rolleston, it is impossible to speak too highly, and no one can read either this article or those from the pen of Professor Clifford Allbutt on Morphinism and Cocainism, without deriving much information and being gratified by the outspoken manner in which they are treated. Nor is it necessary to say anything in commendation of Dr. Oliver's work. He is a recognised authority on trade poisons and he gives the profession here the fruits of his experience and knowledge. The volume closes with descriptions of Parasitic Worms by Dr. Manson, Psorospermosis by Dr. J. Griffiths, and separate articles on Bilharzia by Dr. Guillemard and on Hydatid Disease by Dr. Verco and Dr. Stirling. In this cursory review of a volume of great and varied interest we have, we trust, said enough to show our appreciation of the amount of scientific information that it imparts. The work is one which reflects great credit upon British medicine. We venture to think that when completed it will take a prominent position in the ranks of treatises of similar scope, and that indeed it will be found to be of more enduring value than some that are more pretentious in their encyclopædic character. The editor is to be congratulated on having secured for his staff of contributors so goodly an array of writers, and these, too, deserve thanks for the evident pains that have been taken to ensure accuracy of treatment, fulness of knowledge, and clearness of exposition.

OPENING OF A NEW CONVALESCENT HOME OF THE NORTH-EASTERN COUNTIES' FRIENDLY SOCIETIES AT GRANGE-OVER-SANDS, LANCASHIRE.—This home was opened by Sir James Laing on the 9th inst., and is the realisation of a scheme, propounded in 1888 by Dr. William Robinson of Sunderland, by which the members of the various friendly societies have combined to procure a home on the West Coast for themselves by each contributing a small annual sum (sixpence or a shilling) for its maintenance. Grange-over-Sands was recommended for the site because of its beauty and of its being sheltered on the north and east by hills, and because there the home can be used all the year round and for all kinds of diseases, especially those of the chest in the winter months. The home is an elegant structure, situated amongst most lovely scenery and overlooking Morecambe Bay. It has accommodation for thirty-eight males, but can hold fifty, and is capable of great extension with its two acres of land. The cost of erection has been £3600, of which sum there remain £1300 still to be raised. A feature of the home is that when not filled by subscribing members outsiders are admitted at the rate of sixteen shillings per week. The secretary is Mr. W. C. Hetherington, 12, Vicarage-terrace, Sunderland.

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Analytical Records
FROM
THE LANCET LABORATORY.

TABLOIDS—(1) RED GUM, (2) "SAXIN."

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL BUILDINGS, E.C.)

THE effective astringent properties of the red-coloured exudation of the *Eucalyptus rostrata* are now well recognised. As a local and general astringent, especially for relaxed throat, the drug may be favourably administered in tabloid form, since in this conglomerate state the astringent principles dissolve slowly in the mouth, thus ensuring a continuous and uniform application to the mucous surfaces. While distinctly astringent the red gum tabloid is by no means unpleasant in the mouth. "Saxin" is the name now applied to a sweetening agent the sweetening power of which is said to be 600 times greater than that of sugar, so that a tabloid weighing only a quarter of a grain may be substituted, for sweetening purposes, for an ordinary-sized lump of sugar. Thus in this form the equivalent of 100 or even 200 lumps of sugar may be carried in the waistcoat pocket.

COCA WINE—(1) ALCOHOLIC, (2) NON-ALCOHOLIC.

(BEAUFOY AND CO., SOUTH LAMBETH-ROAD, LONDON, S.E.)

The important feature of both these wines is that they are prepared with the extract of coca leaf, and not with the separated alkaloid. Proof of this was evident from the delicate leafy flavour of the wine and from the fact that both contained chlorophyll. The analysis of the alcoholic wine, the basis of which is a British wine, was as follows: Alcohol by weight, 12·77 per cent.; by volume, 15·77 per cent.; extractives, 13·80 per cent.; mineral matter, 0·31 per cent. The mineral residue was of a brown tinge from the presence of iron. The non-alcoholic sample was a sweet, somewhat syrupy, liquid with a pronounced taste of coca leaf, the basis being raisin wine. It is somewhat heavily preserved with salicylic acid, as was proved by extraction with ether in the acidified liquid. As with the previous specimen, cocaine in important quantity was successfully extracted. Both wines are genuine preparations and well adapted for the administration of the tonic and stimulating principles of the coca leaf. The non-alcoholic wine is a good substitute for, and suited to, those who prefer a non-alcoholic liquor, but in the absence of alcohol the preparation requires a preservative.

(1) BEEF JUICE; (2) GLYCERINE EXTRACT OF RED BONE MARROW.

(ARMOUR AND CO., 59, TOOLEY-STREET, LONDON, S.E.)

As our analysis shows, this beef juice is a powerful nutrient, since it contains not only the unaltered albumin of fresh, uncooked beef, but also a definite proportion of easily assimilable peptones as well as an important amount of the stimulating meat extractives. The proximate results of analysis were as follows:—Organic matter 19·32 per cent.; mineral matter (salt and soluble phosphate), 6·26 per cent.; water, 74·42 per cent. The organic (nitrogenous) matters (19·32 per cent.) proved to contain 5·74 parts of albumin (dried) coagulable in boiling water, 4·46 per cent. peptonic matter, and 9·12 parts of meat extractives. The flavour of the juice is good and pleasantly "beefy." As a rapid restorative and nutrient it is clearly on these data reliable. The glycerine extract of red bone marrow is a brownish-red syrupy liquid, possessing the peculiar faint and somewhat disagreeable smell of marrow extract. On the addition of dilute ammonia it turns to a bright blood red, and then exhibits the very marked absorption spectra characteristic of hæmoglobin. Its employment in anæmia and leucocythæmia has been attended with excellent results, as shown in a series of clinical records submitted to our notice.

NON-SACCHARINE PALE ALE.

HARVEY AND CO., PELLON BREWERY, HALIFAX. LONDON: BURGOYNE, BURBIDGES AND CO., 12 AND 16, COLEMAN-STREET, E.C.)

IT is quite true, according to our examination, that this beer is free from sugar. It is also practically free from any important amount of extractives, and in this particular therefore differs from the composition of ordinary malt liquor. It is, however, an alcoholic beverage, as the following analysis which we have made, shows:—Alcohol by weight 5·87 per cent., by volume 7·32 per cent., equal to 12·84 per cent. proof spirit; extractives, 0·73 per cent.; mineral matter, 0·05 per cent.; volatile acid equal to acetic acid, 0·04 per cent. The merit of this beer as a wholesome beverage is based upon its freedom from sugar. The question whether sugar has anything to do with gout is still a much debated point. Recent contributions on the subject refer more to the acidity of wines and beers as the more probable predisposing cause or as tending to produce acidity within the system. In any case this beer is practically free from both sugar and acidity. It posseses an agreeable, light, bitter flavour, and forms an acceptable beverage. The bitter is undoubtedly derived from the hop, but according to our analysis there is only a trifling proportion of extractive matters derived from malt. In view, however, of the class of consumers for whom this beer is primarily intended it is correctly offered as a drink without any pretence of direct nutritive properties, although obviously it may serve as an agreeable stomachic and tonic, and thus favourably influence the processes of nutrition.

MANHU CEREAL FOODS.

(IRVING, SON, AND JONES, 5, CHAPEL-STREET, LIVERPOOL.)

The list of Manhu foods embraces an excellent series of cereal preparations, and judging from certain specimens we have examined it clearly includes cereal foods in their entirety—that is to say, those which are not impoverished by any process of manufacture, but, on the contrary, those in which the processes of manufacture are such as to secure the maximum retention of the vital food principles. The faith of the public has too long been given to the idea that the whiter the loaf the purer the ingredients, and this has led largely to the supply of anæmic-looking flour and bread. Ignorance, however, in this matter is happily steadily declining, and it is satisfactory to notice the increasing demand for cereal foods, including bread, which do not bear the appearance of any important food substance having been abstracted, and which present a composition lacking nothing in the proportion of nourishing elements. The preparations before us include certain foods which have been granulated or flaked. This process does not detract from the nutritive value of the preparation, but, on the contrary, renders the constituents easier of digestion. Manhu wheat, oats, and barley (flaked) are excellent types of this order. Lastly, we have examined Manhu Infants' Food, which is partly digested by malting and by careful cooking; it therefore contains a high proportion of soluble carbohydrates, the indigestible starch being reduced to a minimum. The cold water solution responds freely to the dextrine reaction, while the proportion of glutinous material is excellent. The microscope reveals a mixture of flours, each contributing food value of its own specific kind. Not the least excellent result secured by this admixture is the high proportion of mineral matters, chief amongst which is to be reckoned the important soluble salt—potassium phosphate. The addition of milk to the preparation brings it nearer the ideal as a food specially adapted to the requirements of infants.

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THE LANCET.

LONDON: SATURDAY, MAY 22, 1897.

THE session of the General Medical Council will commence at two P.M. on Tuesday next, and is likely to be in many ways interesting to the profession. The questions that must engage the attention of the Council are numerous and important. The whole of these cannot be anticipated till after the meeting of the Executive Committee on Monday next, at which the final form of the first programme of business will be prepared, for it is one of the functions of this committee to prepare, before each meeting of the General Council, the business for the consideration of the Council. But it is always possible by a reference to current events and to the business deferred at the last meeting to forecast in a great degree the more important subjects that will claim the attention of the Council. The unfortunate breakdown in the health of the Registrar during the last session of the General Medical Council will doubtless be reported on with a view to the future. The office is one of the greatest importance, alike in its responsibilities and in respect of the qualities required in the holder of it. There will be important changes in the *personnel* of the Council. The retirement of Mr. WHEELHOUSE and Sir WALTER FOSTER will be regretted by all their former colleagues. Their places will be taken by Dr. RENTOUL and Mr. GEORGE BROWN, unless, indeed, as suggested in his letter to Sir RICHARD QUAIN (published in THE LANCET of last week), Dr. RENTOUL'S engagements should only allow him to give one day to the May proceedings of the General Medical Council, and this only for the purpose of discussing one subject. It is to be hoped that Dr. RENTOUL will find himself more free to attend to the whole business of the Council than he suggests. Direct Representation will suffer discredit if it concerns itself with only one subject, however important that may be in the mind of any particular member. There would be curious results if each member of the Council bargained for a special day for the discussion of one subject and absented himself on other occasions. There is some difference between Dr. RENTOUL and the President as to the particular form and way in which Dr. RENTOUL will be in order in bringing the subject of Midwives' Bills before the Council. But this is a matter of detail on which there should be no difficulty in finding a solution. The many-sidedness of the question and the large part it played in the recent election of Direct Representatives make it reasonable that Dr. RENTOUL should have as full an opportunity as possible, consistently with the other duties of the Council, of submitting his views to the consideration of the members. There is another change in the membership to be noted, the replacement of Dr. ANGUS FRASER by Dr. ROBERT WILLIAM REID, Professor of Anatomy in the University of Aberdeen. It is impossible not to regret the absence of Dr. FRASER, who was a most useful member of the Education Committee, but it is a consolation that he is to be succeeded by a distinguished representative of anatomical knowledge. Sir RICHARD QUAIN'S unrivalled health has suffered impairment in recent months, but he is still showing evidence of the energy and interest in the affairs of the Council and the profession which have been so conspicuous for a generation, and he hopes to be able to discharge his duties as President in the coming session.

Among the chief questions that will occupy the time of the Council are the following:—The Order of the Privy Council in the matter of the Apothecaries' Hall, Dublin; the Reports of the Inspector of the Dental Examinations; a further Report of the Executive Committee on the Disciplinary Powers of the Medical Authorities; an interim Report of the Education Committee on the Best Means of Increasing the Stringency of Preliminary Examinations; a Report from the Examining Committee on the Need for Revision of the Regulations of Bodies Granting Dental Diplomas. The decision of the Privy Council in the appeal of the Apothecaries' Hall of Dublin from the General Medical Council, which it will be remembered refused to appoint surgical examiners to the Hall, is the first instance of anything like collision between the General Medical Council and the Privy Council. We do not anticipate any difficulty or hesitation on the part of the Council in accepting the ruling of the Privy Council. The authority of the Privy Council is supreme and its action towards the General Medical Council has always been friendly and respectful. The General Medical Council has discharged its own duty according to its lights on this question, but its lights and legal lights are not always synonymous and in the last result legal decisions must stand. Such collision must occasionally happen. It is creditable that it happens so seldom and does not frequently interfere with the harmonious working of the profession and the State for the public good. The reports on the Qualifying Examinations in Dentistry, or such of them as have not been already discussed, will form an early, if not the first, subject of the Council's attention. It is fit that they should, whether we regard the expense of the inspections, the importance of the subject, or the high qualifications of the inspector—Mr. CHARLES S. TOMES, F.R.S. It is too soon to expect any report of consequence from the Education Committee on increased stringency of preliminary examinations. But it is to be hoped that the Education Committee realises that there is no subject which the profession watches with more interest and unanimity. If the holocaust of medical failures cannot be mitigated in any other way, let it it be diminished by kindly severity at this early stage, disclosing to men, while it is time, their unfitness for medical study.

Sir RICHARD QUAIN may be expected to give us some account of the deputation appointed to wait on the President of the Local Government Board in response to the loose evidence on which local registrars are allowed to register the causes of death. This evil is a crying one and it is one which lies at the very root of much irregular practice disastrous to the health of HER MAJESTY'S subjects; moreover, it has its bearings on the system of employment of unqualified assistants which is now out of date, and in regard to which many

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members of the Medical Council think that the time has come for more determined action. As regards penal cases there is little on the surface to report.

WE have no reason to complain of the long and instructive debate which has taken place in the House of Lords on the very important subject of the health of our troops in India. The Earl of DUNRAVEN introduced the motion that led to this debate, which we rejoice to observe was conducted in an eminently fair and excellent spirit throughout. A great change has taken place in public and political feeling since 1888, when the House of Commons passed what we regard as their ill-advised resolution, to the effect that "any mere suppression of measures for compulsory examination of women, or for lessening and regulating prostitution in India, is insufficient, and the legislation which enjoins, authorises, or permits such measures ought to be repealed." All that has since taken place has served to enlighten the public mind and to convince reasonable people that the result of the Parliamentary action then taken has been most unfortunate. The Earl of KIMBERLEY, who was Secretary of State for India at the time, fully recognises that it is our absolute duty to take any measures we can devise for diminishing the frightful amount of sexual disease that has been shown to exist in the Army in India. Holding as we do with the Earl of ONSLOW that the time for further inquiry—which cannot, after all, alter the broad and established facts of the case—is past, and the time for action has arrived, we are not sorry that Lord DUNRAVEN asked leave to withdraw his motion. The last thing he wished for, he declared, was that action should be delayed.

The Government occupy a safe and firm foothold in regarding this class of disease as belonging to the category of contagious diseases and as one to be dealt with accordingly. The facts that have been brought to light demand that prompt action of some kind should be taken. If the safeguards that were formerly in force failed, either from inherent defects or from improper working, to effect all that was expected of them, as has been alleged, it has at any rate been demonstrated that they nevertheless exercised a material restraining influence. The views of THE LANCET on this question are too well known to need any repetition of them now. We have always contended that, in the interest of public health and in the cause of humanity alike, restrictive measures of some kind were both necessary and benevolent—and especially as far as the unfortunate women are concerned; that there was logically no reason why a contagious and hereditary disease like syphilis should be made a privileged disease, and allowed to contract itself out of the Act dealing with other contagious, but less insidious, far-reaching, and dangerous maladies, such as typhoid fever and small-pox for example; that it was a national question, and not at all one of any political party; and that its treatment needed to be approached and proceeded with on two lines of action—the physical and hygienic as well as the religious and ethical—its scientific and moral sides. We have never shut our eyes to the difficulties that had to be encountered and overcome in the application of any proposed remedial measures, or to the need that exists for the Government proceeding warily in a matter about which so much ignorance, prejudice, and false sentiment prevail. We might truthfully go even further, and say that the main difficulty in dealing with this subject arises from a false reticence and cowardly indisposition to face the facts which are practically in the experience of all of us. We must regard human nature as it actually is and not as it should be. The sexual instinct is the strongest and most dominating instinct implanted in man, especially imperious at a time when his will-power and moral force are weakest. As the Duke of CAMBRIDGE with an outspoken frankness expressed it, "You must change human nature before you can get rid of the vice altogether." We know that of late years great efforts have been made to improve the social, educational, sanitary, and moral conditions of the Army in India with, unhappily however, but little immediate effect in this respect on our young soldiers in that country. By all means let those efforts be continued and developed, but that is surely no reason why we should neglect those physical means for restricting the spread of contagion which are direct and practical and of ascertained efficacy. In regard to these and the subject generally we have but little to add to what we have already said in previous articles, having so lately as April 10th last detailed the methods by which the evil might be practically dealt with in the way least offensive or objectionable to religious and ethical considerations.

The despatch of the Secretary of State for India, Lord GEORGE HAMILTON, is now in the hands of the Indian Government, and we shall soon learn what their proposals are. The debate in the House of Lords will strengthen their hands and indicate to them the lines on which these proposals should be based. The speeches in that debate were, in our opinion, excellent, and the subject was thoroughly threshed out from various points of view. Lord LISTER made his first speech as a member of the House of Peers, and he was, very naturally, listened to with marked attention and did good service to the subject and the State by what he said. The speeches of Lord ROBERTS, the Earl of ONSLOW, the ARCHBISHOP of CANTERBURY, Lord REAY, Lord PLAYFAIR, and the Earl of KIMBERLEY were all excellent in their way, and the statesmanlike, well-considered address of the Marquis of LANSDOWNE struck us as being especially good. We think the present Government are to be congratulated on the courage they have shown in honestly confronting this very difficult and important question and on the moderation and ability with which they have dealt with it. But the most encouraging and striking feature in the debate is the new and enlightened spirit in which it was conducted.

THE Metropolitan Police Court Bill now before the House of Commons, under the charge of Mr. JESSE COLLINGS, affords a rare opportunity of redressing a grievance of which the General Medical Council has long and sorely complained, and the continuance of which is, in fact, highly injurious to the public interest. Under the Medical Act of 1858 certain fines

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are authorised for false pretences of qualification. Clause 42 enacts "that any sum or sums of money arising from conviction and recovery of penalties as aforesaid shall be paid to the treasurer of the General Council." This is a very clear indication of the intention of Parliament that the General Medical Council should have the fines so accruing. Our readers will be surprised to learn that in the metropolitan area these fines never reach the General Medical Council, and that under the Metropolitan Police Acts they are appropriated by the Government for the expenses of the Police-courts. In all other parts of the country but the metropolitan area the fines go, as the Medical Act directs, to the General Medical Council. If the Council is not itself the prosecuting body it hands over the fines to any persons who, or association which, may have had the trouble and expense of the prosecution. This grievance has been complained of by the General Medical Council for over twenty years. In May, 1891, a motion on the subject was proposed by Dr. GLOVER, and seconded by Sir JOHN SIMON, setting forth the grievance, and a deputation was appointed, on the motion of Sir WALTER FOSTER, seconded by Dr. HERON WATSON, to wait on the Home Secretary, Mr. MATTHEWS, to seek redress. Mr. MATTHEWS evinced much sympathy with the deputation and admitted the grievance, but said that it was then quite impracticable to alter the arrangement, as in London the courts were maintained at great cost by the Treasury, whereas in other parts the expenses were paid out of the rates. He promised further consideration of the evil and held out hope that eventually the charges of the metropolitan police-courts would, as in the provinces, fall on the local authority, when there would be no excuse for the retention of the penalties by the police-courts.

The Bill of Mr. JESSE COLLINGS, now referred to the Standing Committee on Law, seems to afford a favourable opportunity for effecting the removal of this long-felt grievance. Accordingly, Sir RICHARD QUAIN and Dr. GLOVER have been using their best endeavours, though the General Medical Council is not sitting, to utilise the occasion. They have met, we understand, with much assistance from Sir WALTER FOSTER, Sir WILLIAM PRIESTLEY, and Dr. FARQUHARSON, and also from Mr. BUCKNILL, Q.C., who is a member of the Committee on Law. There is, therefore, some hope that the intention of the Legislature in the 42nd Clause of the Act of 1858 may not further be frustrated. For frustrated it effectually is by the present state of the law, the judges having ruled that as the Medical Act did not specially repeal the Metropolitan Police Act in this respect the latter holds good as against the later Act. The consequence is obvious. Such bodies as the Medical Defence Union and the London and Counties Medical Protection Society are discouraged from undertaking prosecutions against offenders in the metropolitan area. Here the worst offenders thrive with impunity and with disastrous results to the health and morals of the people of all classes.

It is devoutly to be hoped that Her Majesty's Government will see the reasonableness of accepting a clause in this Police Finance Bill which will give validity to the 42nd Clause of the Medical Act (1858) within the metropolitan area. All attempts to get the Public Prosecutor or the police to undertake the prosecution of offenders under the Medical Acts have failed and are likely to fail. The least the Government can do in these circumstances is to help to secure for the General Medical Council the fines which the law contemplated being used for the payment of those who do the duty which the Government declines. On the very same day that this Bill was under discussion the Government heartily accepted a proposal that the Incorporated Law Society should receive about £5000 per annum as a portion of the expenses incurred by the Society in the discharge of its disciplinary duties, recognising that in the discharge of such duties it is acting in the public interest. *A fortiori*, the prosecution of the worst and most fraudulent quacks is work done in the public interest and intended to be paid for out of the penalties imposed in the Medical Act. No such charge on the Treasury will be involved in the insertion of a clause in Mr. JESSE COLLINGS'S Bill. The operation of the present law is to prevent all prosecutions. We trust Mr. COLLINGS will see his way to accept a clause remedying such an absurd state of affairs.

Annotations.

"Ne quid nimis."

THE PRINCESS OF WALES AND THE POOR.

AMONG the many charitable schemes which have been started and carried to a successful conclusion as memorials of the sixty years' reign there is, perhaps, none the apparent benefit of which will be more immediately realised than that provided for by the Princess of Wales's Fund. An anonymous donor has just subscribed £25,000 to make up the required sum, and it is hoped that the whole of the poor in London will get at least one good meal at the Jubilee season. We have no details at present as to how the scheme of feeding these poor people is to be carried out, and in our opinion a vast amount of careful organisation will be required if the project is not to end in failure. That there is a terrible depth of bitter poverty in London no one can doubt, but as a rule it is just the most deserving who hide their misery and prefer to suffer in silence. Will any steps be taken to seek out the really deserving, and, more important still, will there be any attempt to confine the dole to the poor of London alone? If something of this kind is not attempted every scoundrel and loafer—all those who have never done any work and never mean to do any—will come from all parts of the kingdom and batten on the charity provided. This was the case some years ago when the Mansion House famine fund was started, the metropolis was inundated with provincial tramps and there was great doubt as to whether the really needy profited at all. Another matter of vital importance is the likelihood of the spread of infection by the gathering together of those who, owing to their mode of life, are most prone to contract and disseminate infection. The revelations made some year or so ago by Dr. Waldo about Salvation Army shelters showed that even under ordinary circumstances the crowding together of the homeless was anything but free from danger, and such danger will be multiplied a thousandfold in the coming month. The most careful watch should be kept upon all lodging-houses and workhouses on the roads leading into London as well as in that city itself and we think that some attempt should be made to see that the food supplied does not go to fill the bellies of those who make a trade of

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poverty. Unless something of this kind is done the distribution may do more harm than good. In the meantime all we can do is to await the publication of details as to the management of the fund.

THE DISASTER AT SNAEFELL AND A REMARKABLE SEQUEL.

A SADDER disaster than that which occurred in the lead mine at Snaefell last week, by which some twenty persons lost their lives, can hardly be imagined. They simply descended into a lethal chamber, so to speak, and were overtaken by a deadly gas. The occurrence of so highly poisonous an atmosphere in a lead mine is a revelation, and only accentuates the extreme desirability of completely and continuously ventilating all sunken shafts and their ramifications. The origin, and to some extent the nature, of the poisonous emanation is still involved in some mystery; but by an alarming incident which occurred to a gallant party intent on the recovery of bodies some further light has been thrown upon the intensely insidious properties of the gas in the mine. This party, consisting of Dr. Foster, Her Majesty's Inspector of Metalliferous Mines, with his assistant, Mr. G. J. Williams, Captain Reddicliffe, and Captain Kewley, of the Snaefell mine, and eight others, proceeded to make a descent to recover the only body remaining in the mine. Pilot candles were lowered to ascertain the condition of the air, and it was shown that they burned brightly at 115 fathoms, but were extinguished at 130. In this way the explorers were able with due caution to arrive at within twelve feet of the body, but the air immediately below proved to be highly poisonous. One of the party, however, Captain Kewley, ventured to lower himself further with a view of catching the clothing of the body with grappling irons; but the deadly gas was stirred up by this procedure, and Captain Kewley was at once overcome and was hauled back to the landing. This venture very nearly cost the lives of the rest of the party, for the gas began to seriously affect them also, and so they vigorously rang the bells for assistance and as a signal to hoist the travelling box to the surface again. For some reason or other the box got stuck on its journey up with Captain Kewley in it, and the party below were threatened with entombment. All this time Dr. Foster made notes. In these he wrote a "Good-bye" to all his friends, and added, "I fear we are all dying. No help coming. The box does not come. In spite of all our ringing for help it will not come. Captain Reddicliffe is struggling. No real pain. Good-bye. I feel as if I was sleeping. Again good-bye all. 2.15 P.M., we are all done. Oh, for the box. It is held in the shaft." He added a further note to his wife saying good-bye to her and their children, concluding with: "It is really like a bad dream. No pain. No pain. For the benefit of others, no pain." At length there were indications that the box had gone up and Captain Kewley was hauled to the surface, and in due course the rest, after a most painful period of suspense, were likewise released. When Dr. Foster arrived with note-book in hand he was very weak and staggering, despite which he made an entry recording the time of his release. It is a beautiful and touching story, and is eloquent testimony that heroism is still with us. There would appear to be strong evidence in favour of the view that the deadly poison was carbon monoxide, probably associated with the much less deadly, but still distinctly toxic, carbonic acid gas. The fact that the gas readily ascended on being merely disturbed with grappling irons indicates, however, that it was not of the heavy character of carbonic acid, which is one and a half times heavier than air, whereas carbon monoxide has about the same density as air. The bodies of the poor fellows brought to the surface presented that pink appearance so characteristic of carbonic oxide poisoning. Again, Dr. Foster appears to have murmured, as it were, in his notes, "No pain, no pain." There was apparently no distress due to panting — a symptom distinctly connected with carbonic acid poisoning; while, on the contrary, with carbon monoxide the senses are gradually more and more benumbed, as Dr. Haldane has shown, as by a gentle anæsthetic, very little actual distress accompanying the action. Later we learn that Dr. Haldane has proved the gas to be carbon monoxide. Here is one consoling reflection; the poor miners who succumbed probably died a painless death, passing gradually into stupor and to sleep, and from sleep to death. The origin of the carbon monoxide in this instance is most obscure, but it has been suggested that it may have been due to the comparatively slow combustion which had by some means been started of certain explosives used in the mine for blasting purposes. Possibly the gas had its origin in a volcanic disturbance. As regards this point we can only wait until a rigid exploration of the mine—as soon as its channels are safe—has been conducted. In the meantime the suggestion contained in the *Isle of Man Daily Times* that the money available for the local Diamond Jubilee Fund should be directed to the relief of the distress occasioned by this awful calamity is a most admirable one, and we are quite sure that it would meet with the strongest approval of our Gracious Sovereign, whose sympathies in the alleviation of distress are well recognised and appreciated.

ANOTHER "PLAGUE AT ATHENS."

HISTORY repeats itself, and if the correspondents of our lay contemporaries are right we are in imminent danger of witnessing another "plague at Athens" similar in cause, if not in symptoms, to that depicted for all time by Thucydides. Whatever the origin of that fearful visitation (whether from Ethiopia, and thence through Egypt and Libya), one most powerful cause of its effecting a foothold in Athens was the overcrowding of the city with fugitives from before the advancing Peloponnesians. "The extraordinary accumulation of people within the city and long walls was but too favourable to every form of contagion. Families crowded together in close cabins and places of temporary shelter throughout a city constructed with little regard to the conditions of salubrity, and in a state of mental chagrin from the forced abandonment and sacrifice of their properties in the country, transmitted the disorder with fatal facility from one to the other. Beginning about the middle of April, the increasing heat of the summer further aided the disorder, the symptoms of which, alike violent and sudden, made themselves the more remarked because the year was particularly exempt from maladies of every other description." As above narrated, the conditions of Athens 430 B.C. are curiously similar to those of the same city A.D. 1897; these are the flight from a victorious enemy, the poverty, the panic, the overcrowding, the depressing emotions so favourable to the inroads of epidemic disease, and the unpreparedness of the civic authorities for such a strain on their resources, in a city, moreover, if less insanitary than it was in the fifth century before Christ, still very backward as compared with other European capitals. The outbreak of such another plague would be the culmination of the misfortunes and the miseries under which the Hellenic kingdom is now labouring, and the Powers would do well to add to their pacific intervention a hardly less required series of measures for keeping at bay the threatened invasion of disease. If the visitation, as described by Thucydides (on which, by the way, medical historians are not agreed—Littré, for instance, calling it variola and Hirsch "ein Gemisch verschiedener Krankheiten"—a combination of different diseases), will find no parallel in the contemporary one now dreaded, the forecast is sufficiently

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grave to justify the most energetic precautions. Communication, moreover, between Greece and the Mediterranean ports is infinitely more frequent and extensive than in the days of Pericles, and localisation of disease is correspondingly difficult. On every ground—on that of solicitude for the Hellenic capital in its deplorable condition as well as on that of common self-interest—the Powers are called upon to exercise hygienic as well as diplomatic vigilance, and we hope the response will be such as the situation suggests and humanity indicates.

THE MEDICAL OFFICER OF HEALTH OF THE COUNTY OF DURHAM.

THE annual meeting of the Durham County Council was held at the Shire Hall, Durham, on May 5th, Alderman Arthur Pease presiding. The health committee's report mentioned that Dr. Hill, the county medical officer, had made an application for an increase of his salary, and the report went on to say that Dr. Hill had held the office for five years, that his duties had been most satisfactorily performed, and that the committee recommended that his salary be increased from £500 to £700 per annum. Alderman Livingstone, in moving the adoption of the report, eulogised Dr. Hill's work, and stated that other county councils paid their medical officers as follows—Essex £800, Derbyshire £600 and £200, Shropshire £750, Staffordshire £800, Surrey £1000, and Worcester £785. An amendment having been moved and seconded to the effect that the increase should be to £600 instead of £700, Alderman Storey pointed out that the difference between £600 and £700 a year for a county with a population of 720,000 and a rateable value of £3,250,000 was not large, and that the payment of the smaller sum put a premium on Dr. Hill's leaving them and thereby disturbing the health arrangements of the county. In the result the amendment was lost by a large majority, and the committee's recommendation that the salary should be £700 was consequently carried.

THE EFFECT OF THE ROENTGEN RAYS ON THE TUBERCLE BACILLUS AND ON DIPHTHERIA TOXIN.

THE question whether the Roentgen rays exert any influence on bacterial life is of considerable interest, and conclusive evidence on at least a part of the subject seems to have been arrived at by Dr. J. Brunton Blaikie, President of the Edinburgh Royal Medical Society. His experiments, published in the current number of the *Scottish Medical and Surgical Journal*, were as follows. Portions of glycerine agar having been placed in small boxes of aluminium, which is more transparent to the rays than glass is, they were sterilised and inoculated with streak cultures of the tubercle bacillus. At the same time four healthy guinea-pigs were inoculated with twice the minimum lethal dose of diphtheria toxin, and the remainder of the diphtheria toxin was placed in another aluminium box. Three of the boxes containing tubercle cultures, two of the guinea-pigs, and the box with the toxin, were placed under the full influence of the rays generated by a 4-in. spark coil and a good focus Crookes's tube. It was necessary to stop the current occasionally, as otherwise there would have been danger of injuring the tube, and on this account, although the subjects of experiment were placed immediately under the Crookes's tube for a working day of about thirteen hours, they received only eight hours of actual exposure to the rays. Next morning two more guinea-pigs were inoculated with the toxin which had been subjected to the rays. The following was the result of the action of the rays on these guinea-pigs: two that were exposed to the rays after inoculation with twice a lethal dose of toxin lived respectively for 101 and 55 hours after inoculation. Two that were inoculated with twice a lethal dose of toxin, but not exposed to the rays, lived respectively for 120 and 76 hours after inoculation. Two that were inoculated with five times a lethal dose of toxin which had been subjected to the rays lived respectively 45 and 60 hours. From the above results it is seen that the guinea-pigs subjected to the rays lived actually a shorter time than the others, and that the toxin through which the rays passed did not lose its lethal properties. All the guinea-pigs showed the ordinary signs of death from diphtheria toxin, the only difference among them being that the hair of those through which the rays had passed could be pulled out with unusual ease. The cultivations of tubercle bacillus all grew in the ordinary manner, so that they were evidently not affected by the rays.

A CURIOUS POINT OF LAW.

A SOMEWHAT novel action was recently tried in the Supreme Court, Melbourne, before Mr. Justice A'Beckett. A lady wished to have a marriage settlement set aside. The property was left upon trust after the lady's death for her children. It was sought to do away with the trust on the ground that it was impossible for children to be borne. Two lady practitioners gave evidence that it was a physical impossibility that children could be borne. His Honour, after reserving judgment, called in Dr. Balls-Headley as a medical assessor to determine the medical questions involved, who reported that, "while the birth of a child which might attain the age of twenty-one years was not probable, it was not impossible." His Honour accordingly adopted the view of the evidence taken by the medical assessor, and would not set aside the settlement. At a later period, should the plaintiff continue childless, the Court might be able to do what it could not do now, and leave was reserved to the plaintiff to apply to have the funds transferred to her hereafter.

EDINBURGH UNIVERSITY CLUB.

ON May 12th the Edinburgh University Club held its usual quarterly dinner in the Holborn Restaurant, under the presidency of Lord Lister. The fact that this was his lordship's first appearance in the club since his elevation to the peerage accounted for the large company of over 200 who were present to do honour to the distinguished chairman. Among the guests were Sir John Evans, Dr. Michael Foster, Dr. Clifford Allbutt, Mr. Bryant, and Mr. MacWhirter, R.A. In proposing the toast of "Alma Mater and Prosperity to the Edinburgh University Club," Lord Lister referred to the annotation in THE LANCET of May 1st and the subsequent correspondence on the Decline of the Scottish Universities. He said that he did not entertain such gloomy feelings as were manifested in some quarters, for there must always be, as there have been in the past, ups and downs in the number of students in the Scottish universities. This fluctuation was due to various causes, some not easy to explain. Thus, for instance, he referred to the diminution about the time when Professor Allen Thomson left the Physiological Chair in Edinburgh to take up the position of professor of anatomy in Glasgow University. He also pointed out that the increase of medical students a few years ago was so great that a student had difficulty in getting a dressership, and sometimes had to be content with one-sixth of a bed. Such extremes as these were not easily explained. He admitted that the increase in secondary education of late years had its influence on the number of arts students, and possibly also the five years' curriculum and the corresponding increased expense might have recently influenced the number of medical students. As to the effect of the lecture system, he said that as a student at University College, London, which

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was founded in imitation of Edinburgh, he had himself benefited by the system, but he was willing to admit that it might be overdone in some quarters. He emphatically declared that a point of extreme importance in the Scottish system is that the universities are true teaching ones in which the teaching and examinations are combined—a state of things incomparably superior to the mere examining universities, both as regards justice to the student in the examination, and still more in regard to the encouragement of legitimate study as compared with cramming. "The Guests" was proposed by Mr. McMorrine and acknowleged by Sir John Evans, Dr. Clifford Allbutt, and Mr. Bryant. Sir Joseph Fayrer proposed the health of Lord Lister, a toast which was received with great enthusiasm.

MEDICAL SOLIDARITY IN SPAIN.

THE spirit of union, to the somewhat lamentable lack of which in the ranks of the medical profession in this country we devoted a leading article last week, is said by a writer in a Bordeaux contemporary[1] to be the ruling power amongst the confraternity in Spain; and not only do practitioners of every degree unite in that happy land to repel all attacks on the dignity or the interests of their calling, but the magistrates, being likewise duly imbued with a sense of responsibility, are wont to collaborate effectively with them in the pursuit and suppression of charlatans. In support of his thesis the reporter refers to the medical college at Barcelona, where, in addition to watching over the material and moral well-being of their alumni, the authorities also strive in every possible way to elevate and sustain medical prestige. Included among their most cherished institutions there is a special committee which is charged with the detection of fraud and the submission of suspicious cases to the legal tribunals. This body sits in permanent session, and so gentle has been its spiriting that both the governor of the province and the Royal procurator afford it their countenance and take an official interest in its proceedings. The special committee is, moreover, in possession of an unlimited credit and, besides maintaining a trained corps of investigators, is empowered to add to its *personnel* whenever such a measure may seem to be desirable. The fulminations of this liberally endowed board of control are directed against all persons, male or female, whose acts may seem to infringe upon the medical or the pharmaceutical prerogatives, the offenders for the most part being masseurs and masseuses, herbalists, hypnotists, bone-setters, faith healers, &c. Priests, too, are not unfrequently included in the black list of irregular practitioners of medicine, which last year is said to have contained seventy names. But it is not against empirics alone that the Barcelona College wages war, for, as the following public notice shows, qualified men who commit ethical sins are equally liable to reproof: "The special committee, duly authorised by the College, finds itself under the painful necessity of drawing attention to the fact that Drs. X, X, and X, forgetful of their social and professional obligations and wilfully ignoring the dignity and the moral interests of their respective corporations, assist and encourage charlatanism and illegal practice by placing themselves nominally at the head of the institutes, dispensaries, or clinics situated at such and such addresses, while these establishments are, in reality, conducted by the individuals named Z, Z, and Z, pretenders devoid of all knowledge and legally incapacitated from exercising the healing art. The special committee further declares that before the publication of the present notice attempts were vainly made by courteous representations to divert the medical gentlemen concerned from their dangerous courses. The authorities of the college unanimously invite the public, thus enlightened, to avoid these disreputable establishments, and they moreover beg their honourable *confrères* to suspend all professional relations with the incriminated practitioners." The colleges of Madrid and Navarre, which go hand in hand with their congener of Barcelona, are seeking to modify the penal code with a view to increasing the punishment for practising medicine irregularly. They also recommend the appointment of a Secretary of State for Medical and Sanitary Affairs, who shall act as public prosecutor, and they strenuously urge the obligatory attachment of all practising medical men to colleges for disciplinary purposes.

[1] Gazette Hebdomadaire des Sciences Médicales, May 9th, 1897.

THE INTERNATIONAL CONGRESS OF PHARMACY.

THE Eighth International Congress of Pharmacy, as we announced last week, will be held at Brussels from Aug. 14th to the 19th. Three prizes will be given for the three best papers upon Pharmacy from a Practical and Scientific Point of View. Three others will be given for the three best papers dealing with professional subjects. Pharmacists, medical men, and chemists are eligible to compete. Further information will be given by the Secretary, M. Duyk, 102, Chaussée de Wavre, Ixelles, Brussels.

THE DEATH FROM ANTHRAX AT SALTAIRE.

AN inquest was recently held by Mr. Barstow upon the body of a wool-sorter's labourer, aged sixty-two years, who died from anthrax, contracted while following his employment at Saltaire Mills. There is nothing very remarkable about the case, which was one of a nature only too common and rapidly fatal. The disease was apparently contracted from the dust of a warehouse which the deceased had to sweep out, and the wool stored therein came from Van. Fans were in use in the mill to carry away the dust, in accordance with the regulations of the Board of Trade. The jury, in returning their verdict, made a recommendation that the floor should be sprinkled with a disinfectant solution both before and after sweeping. It surely ought to be possible to disinfect the bales of wool in some apparatus before opening them, and thus reduce the dangers to a minimum. We do not pretend to be experts in the processes necessary for converting wool into cloth; but we should say that some sort of apparatus, like that described in THE LANCET of Jan. 11th, 1896, could be employed, and would not injure the finest quality of wool. Anthrax is so deadly a disease that it is only right that every means of keeping it in check should be employed.

NON-INFLAMMABLE FABRICS.

A PRACTICAL experiment recently made on the site of the old Millbank Prison before a number of distinguished people would seem to have demonstrated that it is possible to make wood non-inflammable. The process appears to consist in injecting certain chemicals into the wood after the removal of the sappy constituents. We assume that the *rationale* of this process is probably that by the impregnation of wood with easily fusible salts it is rendered hard to ignite, because on the approach of heat these salts would become fused and enclosing the woody fibre, protect it from igniting. If success has been attained on these lines cheaply and without difficulty, it is of far reaching importance in connexion with the sad losses of life incurred every year in the conflagration of dwelling-houses. The recent calamitous disaster at Paris is still fresh in our minds, and the shocking deaths, at least from burning, might, to a very large extent, have been averted had the building been constructed of comparatively non-inflammable material. But previously to the disaster there were materials employed in the interior of the building of far higher inflammability than the wood of the building itself or even the tarred roofing. We refer to the long lengths

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of celluloid films used for depicting the photographs in the kinematograph. Cannot something be done to make the viciously inflammable celluloid non-inflammable without impairment of its transparency? Celluloid, which, by the way, is a nitro-compound, is being largely employed as a substitute for ivory, horn, &c., in the manufacture of many articles of every-day use, and the record of accidents, and even fatalities, arising from its exceeding tendency, not only to flame, but to burn with almost explosive violence is increasing day by day. The usefulness of this substance cannot be doubted, but some endeavour should be strenuously made to render it in the interests of the public safety less inflammable.

THE LIMITATIONS OF CHARITY.

A LETTER which appears in the *Times* of May 17th from the Duke of Westminster reminds us that the river of charity is not inexhaustible. His Grace says "that owing to other claims the ordinary streams of benevolence have left their usual channels" and that the Metropolitan Drinking Fountain and Cattle Trough Association, of which he is president, is accordingly suffering so from want of funds that it will have to close a number of troughs if aid is not forthcoming. We do not doubt that this association is not the only one to suffer from the same causes. While on the subject of kindness to animals we should like to say a few words upon the abominable way in which those who ought to know better treat their horses in the matter of bearing-reins. Even supposing that a bearing-rein is a necessity in London, as some say, there can be no possible reason for having them so tight as they often are, or for keeping horses standing for long spaces of time without allowing them freedom. We frequently see an instance of abuse of this kind exemplified by a carriage and pair which waits near the Strand for an hour or so at a time, with the two unfortunate horses tightly reined up and obviously in discomfort. We shall not at present divulge the name of the noble owner, but only express a wish that some steps will be taken to remedy an unnecessary evil. If everyone who used a bearing-rein were compelled to pay a tax to be handed over to the society the poverty of which the Duke of Westminster deplores, either an abuse would be stopped or a deserving body would be freed from the curse of narrow means.

EXCISION OF PAROVARIAN CYSTS WITHOUT REMOVAL OF THE OVARY OR TUBE.

DR. HOWARD KELLY recently brought this procedure before the Johns Hopkins Medical Society.[1] In the past few years the tendency has been towards more conservative methods in disease of the uterus and appendages. Ovaries are no longer removed for enlarged Graafian follicles, and it is generally recognised that no one should remove a Graafian follicle unless it is so much enlarged as to have become a small ovarian cyst. The follicle is simply excised and the ovary sewn up. Accumulations of pus in tubes or ovaries are treated by vaginal puncture and drainage. The removal of parovarian cysts without tube or ovary is one of the latest procedures in this conservative line. Dr. Kelly's first case was that of a woman on whom he operated in November, 1895. There was one parovarian cyst the size of a hen's egg before the uterus and another behind it which displaced the ovaries from the tubes. He treated the tumours in different ways. In one, after ligaturing the vessels at a little distance from the tumour, he made an incision through the peritoneum, and easily shelled the tumour out of its bed and then sewed up the peritoneum. In the other he excised a portion of redundant peritoneum whilst the circulation was controlled by the finger of an assistant, turned the tumour out, and stitched up the wound with catgut. The uterus, which was retroflexed, was suspended by two silk sutures after his method. The patient recovered and is in good health. Dr. Kelly regards the operation as of particular importance to young women and women in the prime of life.

[1] Bulletin, March, 1897.

CHARING-CROSS HOSPITAL.

WE understand that a cheque for £1000 has been received from the Sir Augustus Harris Memorial Committee, through the treasurer, Mr. Alderman Frank Green, for the endowment in perpetuity of a bed at Charing-cross Hospital in memory of the late Sir Augustus Harris. The bed is very properly to be reserved for patients connected with the dramatic, musical, and music-hall professions.

MANIACAL CHOREA IN A MALE.

IN the last number of the *Journal of Mental Science* Dr. Thomas P. Cowen relates a case of an interesting and somewhat unusual character. The patient was a man aged twenty-one years, who had shown no symptoms of mental disorder until a fortnight before his admission to the asylum. His natural dull reticence then became more distinct, and at the end of a week a well-marked condition of mental stupor resulted. Four days later he emerged from this condition, becoming acutely maniacal, shouting and raving incoherently, and presenting the usual tendencies to destructiveness and impulsiveness. On admission to the asylum there was no obvious sign of nervous disease and his bodily organs were found to be healthy. There was no tremor or abnormal movement and the reflexes were present. He could give no coherent account of himself, and he was dirty in his habits. During the first month of his time in the asylum he remained acutely maniacal, but about the end of this time choreiform movements were visible in the hands and in the facial muscles. These became gradually more marked, and as they did so the mental symptoms became less distinct and obtrusive. There was no pyrexia, and no evidence of cardiac disease was discovered. In the course of the next month the spasms became much less marked, but there was a fresh temporary outbreak of the maniacal excitement. This soon disappeared and his general condition rapidly improved, so that in less than four months after his admission he was practically well. No cardiac complication developed during the attack. The writer points out that the interest of the case consists in the occurrence of the condition in a male adolescent (*chorea insaniens* being described as occurring as a rule in women), the precedence of the attack of typical chorea by mania, the absence of pyrexia, and the rapid recovery after the cessation of the movements.

THE HOUSING OF COWS.

NOTHING has been more clearly established than that milk is frequently an important factor in the transmission of disease, and this emphasises the extreme importance of providing a sanitary environment for the cow. The medical officer of health of Manchester has recently presented an interesting report on this subject, and the necessity of making inquiry in this direction is evident from the summary of his results. He found:—1. The state of the cow-sheds bad as regards crowding, ventilation, and lighting. The floors also are often bad. 2. The cows are not infrequently dirty. 3. The milk in a considerable proportion of selected instances has been shown to be highly dangerous, to young children especially. Dr. Niven points out as a moral reminder that steps have been taken elsewhere as in London, Liverpool, Glasgow,

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Edinburgh, and Sheffield, to deal with these conditions. Attached to the report are the results of an interesting bacteriological investigation by Professor Délepine. The conclusions arrived at are in strong confirmation of the views already held by many well-known authorities. These are as follows:—1. That the milk of tuberculous cows of which the udder is not diseased is rarely infectious (though it must be remembered that the udder may become tuberculous at any time). 2. That in tuberculous cows, when the udder is diseased, this may be due to tuberculosis or other diseases. In half the cases examined the disease of the udder was due to tuberculosis. 3. That when the udder is tuberculous the milk is generally infectious and is a source of great danger to young children. We trust that the requirements as to cleanliness of the sheds where cows are kept will be, in view of this clear summary, rigidly enforced in every town in the kingdom.

THE MEDICAL SOCIETY OF LONDON.

THE annual conversazione of the Medical Society of London took place on May 17th, and a large and distinguished gathering of Fellows and visitors assembled to hear the annual oration, which was delivered by Mr. Edmund Owen. He chose for his subject "The Medical Society of London in the Eighteenth Century," and the address will be found in full in another part of our present issue. The orator did not adhere with too rigid pertinacity to his text, and witty and often caustic allusions to many present-day abuses were interwoven with a very graphic account of the times of Lettsom and Fothergill, drawn largely from the old minute and cash books of the early years of the society. It is to be hoped that the Council will adopt Mr. Owen's suggestion and see that these books, which contain priceless records of other times, are carefully bound, and secured in a fireproof case. The enthusiasm with which the vote of thanks was adopted showed how thoroughly the oration had been appreciated by an overflowing meeting. The subsequent Presidential reception was largely attended, and the rooms of the society were crowded till a late hour, the conversazione being one of the most successful of recent years.

A SCHEME FOR AN INTERNATIONAL LANGUAGE.

WE have received from Mr. L. Samenhof, of Grodno, Russia, a little pamphlet concerning the desirableness of there being a universal language. That this is a most desirable (if unattainable) end everyone is agreed. Mr. Samenhof mentions the efforts already made in this direction and instances two attempts, the one "Volapuk," and the other the language "Esperanto" of which he himself was the founder. The first of these languages was founded upon living tongues; the latter, so far as we remember, was a modified Latin and so a dead language. Besides these proposals there was a third made by a certain party who argued that the international language should be an entirely new one. Mr. Samenhof's idea is to have an international conference on the subject and he proposes to bring this about in the following fashion. Those interested in the subject are requested to write to him at the above address in any language they please, sending an article setting forth their views on the matter. All essays must be signed with the name of the writer and will be published in a work of 960 pages to be issued in three volumes. When the book has been published subscribers will be requested to read all the opinions and then to fill up a paper saying (1) whether they think that the universal language should be an existing language, living, dead, or "artificial," or (2) an entirely new one. We wish Mr. Samenhof every success in his well-meant efforts, but one initial difficulty that strikes us is the following — How are the subscribers to read all the essays written in languages they do not know? We English are, perhaps, the worst linguists in the world; most of us could read the French and German, some perhaps the Italian and Spanish in addition; as for Oriental tongues, although we are the greatest Oriental power, very few of us can even read Arabic, Turkish, Persian, or any of the various dialects and tongues spoken in Hindustan. We shall, however, watch with interest the result of Mr. Samenhof's experiment.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS AT MOSCOW.

GUESTS of the Congress, including ladies, will pay no admission fee, but they will not be entitled to the free railway passes from the frontier stations on the Russian lines accorded to members. They will, however, enjoy the privileges accorded by other foreign railway and navigation companies, and may take part in the excursion to the Caucasus organised by the Executive of the Congress. They will also probably be able to avail themselves of the advantages of cheap circular tickets, the arrangements for which are still under discussion. A special committee has been formed in Moscow to arrange for hotel and lodging accommodation for visitors, under the presidency of Professor Chervinsky, of Moscow, to whom applications may be made for information. Rooms may be retained in advance, and, in addition, offices will be established at each of the railway stations in Moscow, where applications may be made on arrival. The cost of rooms will average about 4*s.* 6*d.* (two roubles) per diem. A committee of ladies of Moscow has also been formed with the object of insuring the comfort and convenience of ladies belonging to the families of members of the Congress who may attend. This committee will have a central office, at which visitors on their arrival may obtain any information they require and also learn the most satisfactory way of employing their time in visiting places of interest in Moscow during the sittings of the Congress. This committee wishes to be apprised in advance of the names of all ladies who will be present, and notice should at once be given to Professor Savelieff, the secretary of the ladies' committee, through Professor W. K. Roth, the general secretary. A general prospectus of the arrangements for the Congress will shortly be ready and will be obtainable on application to Professor W. K. Roth, Secretary-General, Twelfth International Medical Congress, Moscow.

THOSE who were privileged to hear the maiden speech of Lord Lister in the House of Lords report that he made a very good beginning. He spoke without undue nervousness, was well received by the House and well dealt with by the reporters. It is a new sphere for medical men; but the result is such as to justify their translation in yet greater numbers.

H.R.H. THE DUKE OF CAMBRIDGE, who is next in seniority to Mr. Gladstone as a Governor of Guy's Hospital, has intimated his intention of taking part in the reception of H R H. the Prince of Wales on the occasion of the Royal visit to open the New Medical School Buildings on the 26th inst.

H.R H. THE PRINCE OF WALES'S first visit to Cheltenham, which occurred last week, passed off in every way most satisfactorily, no little credit being due to the efforts of the reception committee, the chairman of which, Mr. Ward-Humphreys, M R.C.S. Eng., L.R C.P. Lond., had the honour of being introduced to His Royal Highness.

THE annual dinner of old students of King's College, London, will be held at the Holborn Restaurant, on Monday,

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June 28th. Lord Kelvin will preside, and H.R.H. the Duke of Cambridge, has intimated his intention of being present.

PRINCESS CHRISTIAN, the President of the newly formed Army Nursing Service Reserve, upon May 19th presented badges and certificates to fifty enrolled nurses at the United Service Institution.

THE University of Toronto has decided to confer the degree of LL.D. upon Lord Lister, Lord Kelvin, Lord Rayleigh, and Sir John Evans.

The Lancet Special Commission ON THE METROPOLITAN WATER-SUPPLY.

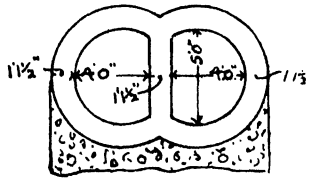
XIII.[1]

EAST LONDON WATERWORKS COMPANY (*Continued*).

Conveyance of water from Chingford to Walthamstow.—The high level culvert derives its water from the east side of the artificial cut which was formerly the mill head of Chingford mill. The low level aqueduct was formerly the Chingford mill tail; it is an open stream throughout the whole of its course. The water which flows down it is always principally, and often entirely, supplied from the Lea, but occasionally some water is pumped into it from the well at Chingford. It supplies the low level reservoirs at Walthamstow.

The high level aqueduct.—The water taken by the high level reservoirs comes from the east bank of the canal. There is here a floating boom to keep back the weeds. The water flows into a circular bay, from which it passes through two sluices into an oval pool, which is about 160 ft in length and 80 ft. in breadth. The sides of the pool are concreted and the upper part is lined with blue Staffordshire bricks. On the east side are the openings of two D-shaped culverts. (See Fig. 1.) The water passes into the culverts

FIG. 1.

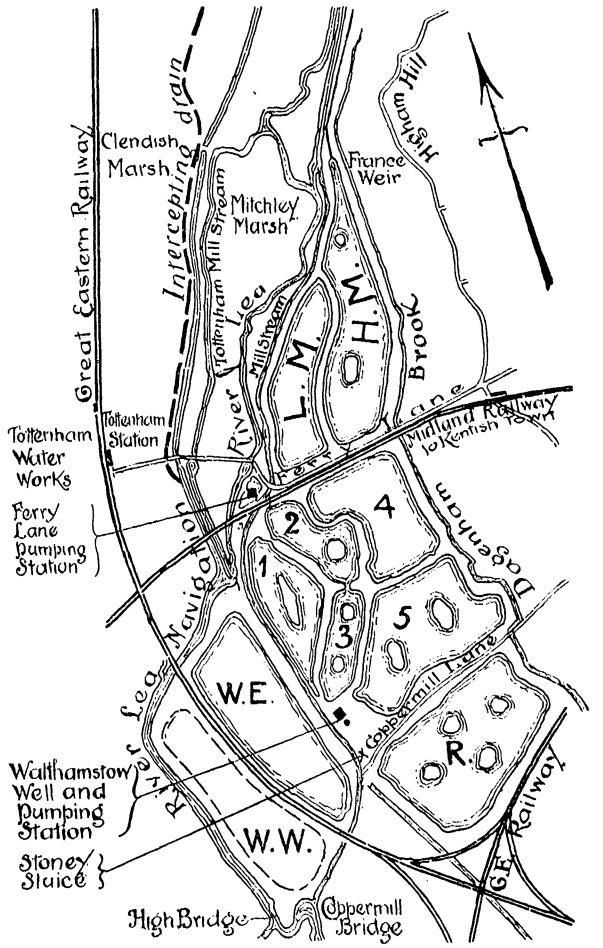


The diagram shows a section of the high level culverts. These are built of brick and bedded in concrete.

through iron gratings which have bars about ⅜ in. in thickness and 1¾ in. spaces. The culverts are built of brick and rest on a foundation of concrete. The distance from Chingford to the reservoirs at Walthamstow is about two miles, and there is an available fall of 2 ft. when the receiving reservoir is full. In the whole of its course the culvert is below the level of the ground, but there are a number of brick shafts which rise above the surface of the ground and which are connected below with the culvert. These shafts are about eight in number and are situated at pretty regular intervals. With the exception of one all the shafts are covered at the top either with paving-stones or with iron traps. The shafts facilitate the examination of the culverts, and would be of use in case it became stopped up or in any way defective. From the intake the water passes at first in a south-easterly direction under the high road, it then goes in a southerly direction across a meadow to the west of the road, and later again goes under the road at a place called Folly-lane. For the latter half of its course the culvert passes on the property of the Company, except where it crosses a public footpath near Higham Ferry. The part which runs in private ground is fenced in, and for the last half mile or so the culvert runs close to the low-level aqueduct. In its course the culvert is protected from two foul streams. Of these the first is the Ching brook, which contains the sewage effluent from the Chingford sewage farm. This brook passes under the culvert about three quarters of a mile south of the Chingford Station, it then runs for about three hundred yards between the high and low level culverts, and is finally conducted in a westerly direction under the latter by means of iron pipes, which conduct it into the River Lea below all the intakes of the Company. The Ching brook on May 2nd was a small stream, dark in colour, and of offensive smell. After heavy rains it contains much flood water, but during the summer it is nearly dry and is said to be extremely offensive. The other foul stream which is near the culvert is Dagenham brook. This arises on the slope of Higham Hill, and is polluted by a farm. It passes to the east of the Company's property, and in part forms its eastern boundary. It need only be added that after receiving much surface drainage it finally goes into the Thames at Bow Creek, and that it is under the care of specially appointed Commissioners.

Walthamstow reservoirs.—Before describing these reservoirs in detail it may be best to give a brief description of their general arrangement and situation. It will be readily seen by studying the accompanying map (Fig. 2). At the

FIG. 2.



The map shows the Reservoirs at Walthamstow. H. M., High Maynard. L. M., Low Maynard. R., Racecourse. W. E., Warwick East. W. W., the part included in the dotted line, shows the position of the Warwick West, now in course of construction.

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., and XII. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, 24th, May 1st, 8th, and 15th, 1897, respectively.

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western boundary of the reservoirs will be seen the Copper Mill Stream, the river Lea, and the River Lea Navigation Cut. On the eastern side the reservoirs are bounded by Dagenham Brook. Two reservoirs are situated to the north of Ferry-lane, the High and Low Maynard (see H.M. and L.M. in map). Between Ferry-lane and Copper Mill lane are situated Reservoirs Nos. 1, 2, 3, 4, and 5. Between Copper Mill lane and the Chingford branch of the Great Eastern Railway the Racecourse Reservoir is situated (see R. on Map). The other reservoir is the Warwick East (see W.E. on Map). To the south-west of this, next to the Lea Navigation Cut, is a reservoir now in course of construction, Warwick West (W.W. on Map). These reservoirs have not the same water level. There is a series of high-level reservoirs and a series of low-level reservoirs. The high-level reservoirs are the High Maynard, Nos. 4 and 5, the Racecourse, and the Warwick East; the top water level of these reservoirs is 35·60 above ordnance datum. The low-level reservoirs are the Low Maynard and Nos. 1, 2, and 3; their top water level is 26·60 above ordnance datum.

High Maynard reservoir (see Fig. 2, H.M.).—This reservoir is supplied by a high level culvert which brings water from Chingford and opens into it at its northern extremity. It has an area of rather over thirty-six acres and is estimated as being capable of holding 150,000,000 gallons. The reservoir is surrounded by a puddle trench of clay, which goes down to the London clay. There are gravel walks all round, and the banks are covered with grass. There are two islands which are planted with trees. The sides of the reservoir have concrete walls in some places, but not all round. The walls have been put up only where the wash of the water caused by the wind has rendered it necessary to do so for the protection of the banks. Near the boundaries of the Company's property there is a belt of lime and poplar trees, and these do much to break the force of the wind. The islands were made chiefly because their formation was the readiest method of getting rid of the earth which was excavated in forming the reservoirs, but they also do much to check the ravages of the wind. They are planted with furze, lilac, lime and willows, and they add very greatly to the beauty of the place.

Reservoir No. 4 (see Fig. 2-4).—The water from the High Maynard reservoir passes to this reservoir which is situated to the south of it, and is divided from it by Ferry-lane, and by the branch of the Midland Railway which runs from Kentish Town to Tilbury. The north and east sides of this reservoir are concreted. The greatest depth is about 25 ft. As will be seen by reference to the map, the reservoir has a somewhat irregular shape and it has no island. Its area is rather over twenty-nine acres, and its capacity is stated to be 129,670,000 gallons. The water passes from No. 4 to No. 5.

Reservoir No. 5 (see Fig. 2-5).—The area of this reservoir is over thirty-nine acres, and its capacity is stated to be 170,320,000 gallons. There are two islands in it. There is a concrete wall of 6 ft. or 7 ft. in height round the bank. After passing through this reservoir the water goes either to the Racecourse reservoir or to the Warwick East reservoir, which it entirely supplies. The water is conveyed to the Warwick East through a tunnel which passes through the London clay, and which is built of brick and concreted. The culvert is of circular form 5 ft. in diameter. A brick shaft, which comes 6 ft. above the surface of the ground, passes down to this tunnel, so that when the water is pumped out it is possible to examine its whole length.

The Racecourse reservoir (see Fig. 2, R.), is situated just at the north of the Chingford and Liverpool-street branch of the Great Eastern Company's line, and is separated from No. 5 by Copper Mill lane. The area of the reservoir is fifty-nine acres, and is capable of holding 270,000,000 gallons. It has four islands. The sides of the reservoir are partly supported by a sloping concrete wall. The top of the water level is 15 10 ft. above the outlet, which opens into the aqueduct which conducts the water to Lea Bridge. At the north-west corner of the reservoir there is a brick shaft into which water could be conveyed from the ballast. In case of drought if the reservoir were empty this arrangement might be used for obtaining the last water from the ballast; for if all the water were taken from the reservoir a considerable amount of residual water would be left in the ballast above the London clay. The Racecourse reservoir is supplied with water from No. 5. Between the Racecourse reservoir and the Warwick East reservoir a meter-house is being erected to measure the water which passes to the Aqueduct to Lea Bridge.

Warwick East reservoir (see Fig. 2, W.E.).—This reservoir has only been finished about three weeks. The area of the reservoir at the top of the water level is forty-five acres. The top of the water level is 35·60 ft. above ordnance datum, and it is capable of holding 210,248,000 gallons. The puddle trench which surrounds the reservoir is some feet higher than the top water level. It is not at present proposed to store more than the amount of water given—that is to say, the reservoir will not be filled to a higher level than 35·60 ft. above ordnance datum, and, indeed, this could not be done without pumping. The puddle walls are, however, raised to such a height that it would be possible for the reservoir to be filled to a height of 38 ft. above ordnance datum.

Low Maynard reservoir (see Fig. 2, L. M.).—This is the first of the low level series of reservoirs. The water which supplies it comes from Chingford mill by the low level aqueduct. The area of the reservoir is twenty-five acres and it has a capacity of over 62,000,000 gallons. The water from this reservoir supplies Nos. 2 and 3. The inlet to the reservoir is guarded by a sluice, which is shut as soon as the water becomes turbid. This is the duty of one man, who does nothing else but that and minor gardening operations, which ensure his presence in the neighbourhood. The water passes through an iron grating of which the bars are 1 in. in thickness and the spaces 1 in. The size of the inlet is 8 ft. by 10 ft.

Reservoir No. 1 (see Fig. 2-1).—This reservoir is situated near the Ferry Lane pumping station. It has an area of a little over nineteen acres and a capacity estimated at something over 45,000,000 gallons. It has one island. The supply of water is derived from the low level culvert and is discharged into the aqueduct which goes to Lea Bridge.

Reservoirs No. 2 and No. 3 (see Fig. 2-2, 3).—These reservoirs are really continuous; the opening connecting them is a narrow strait and the two parts are separated by a peninsula. The part to the south is called No. 3, and in this part there are two islands. In the part called No. 2 there is one island. The area of No. 2 is about thirteen acres and its capacity 31,000,000 gallons, and the area of No. 3 is rather over 11 acres and its capacity 25,220,000 gallons.

From reservoirs Nos. 2 and 3 the water goes through a culvert, and some of it passes through a circular receptacle to the aqueduct which takes it to the Lea Bridge station. Into this receptacle four channels pass: one from reservoir No. 1 on the north; on the east side there is a conduit from reservoirs No. 2 and No. 3; on the west side a culvert which passes to the Coppermill stream; and on the south a conduit which passes to the aqueduct to Lea Bridge.

Aqueduct to Lea Bridge.—The water from the Walthamstow reservoirs is conducted to Lea Bridge through an open aqueduct; the distance is about a mile and a half. The banks of the stream are grass slopes and there is a gravel walk on each side. The aqueduct is fenced in throughout the whole of its course. The water taken by the aqueduct is derived from: (1) Lea water which has been allowed to subside in (*a*) the high level, and (*b*) the low level reservoirs; (2) well water from Ferry-lane; and (3) water from the well at Walthamstow. This water is all filtered at the chief pumping-station at Lea Bridge.

Ferry-lane Works (see Fig. 2).—The pumping station at Ferry-lane is situated just to the south of Ferry-lane and to the north of reservoirs No. 1 and No. 2.

Filter beds.—There are at Ferry-lane three filter beds which together occupy an area of about one acre. The walls are built of brick. The bed of the filter is constructed as follows. A layer of large stones 9 in. in thickness, above this a layer of hoggin 9 in. in depth, and at the top 2 ft. of sand. Each filter bed has one central culvert, no lateral ones. The water used to supply the filter beds is drawn from reservoir No. 4 or from the Coppermill stream. The water pumped from Ferry-lane is obtained also from the deep well at Walthamstow.

Well.—The water is pumped by a triple expansion engine which has cylinders with a diameter of 21½ in., 33 in., and 55 in. respectively, and a stroke of 3 ft. 3 in.; this works three plunger pumps each 26 in. in diameter. The quantity raised is 224 gallons at each stroke. Steam is generated by three Lancashire boilers and the engine is worked at a pressure of 135 pounds. An automatic stoker is used. The water is pumped to Hornsey Wood reservoir and to Haggar-lane, Woodford. The head of water worked against in pumping to Hornsey Wood is 125 ft., and in pumping to Haggar-lane it is 176 ft. The station is lighted by electricity

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which is generated by a turbine worked from the high-pressure mains.

Walthamstow Well and Pumping Station (See Fig. 2). There is a well 199 ft. in depth, which has fourteen bore holes. The water is pumped by an engine, with cylinders 27 in., 40 in., and 57 in. respectively in diameter, which has a stroke of 5 ft. and works a pump of which the bucket is 26 in. in diameter and the stroke is 5 ft. Each stroke raises 230 gallons of water. The engines work at a pressure of 95 lbs. The pump rods are worked by means of a disc. There is another engine with cylinders 24 in. and 44 in. respectively in diameter and a stroke of 6 ft. This works a pump which has a stroke of 6 ft. and buckets of which the diameters are 22½ in. The quantity of water pumped is 206 gallons per stroke. The steam for working the engines is generated by four double flue boilers of marine type. The water raised from this well flows by gravitation to Ferry-lane or to Lea Bridge through the aqueduct.

(To be continued.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on May 13th, the President, Sir WILLIAM MACCORMAC, being in the chair.

The Secretary having reported the death of Mr. Walter Rivington, member of the Council, the Council expressed their deep regret at the death of their colleague, and their very sincere sympathy with the members of his family. The Council also recorded their great esteem for the energy and devotion displayed by Mr. Rivington in all matters affecting the interests of the College and the medical profession.

The President stated that the vacancy on the Council occasioned by Mr. Rivington's death would be filled up at the annual election of members of the Council in July next.

The following resolution was carried:—

"That the Council hereby express their deep regret at the death of Mr. James Blake Bailey, and their very sincere sympathy with Mrs. Bailey in her bereavement. The Council do also record their great appreciation of the very able manner in which Mr. Bailey during the past ten years fulfilled the duties pertaining to the office of librarian, and are assured that his unfailing courtesy and willingness to render assistance to all seeking information from the books and records under his care will cause his loss to be widely felt throughout the profession."

It was referred to the Library Committee to consider and report to the Council upon the steps to be taken with the object of filling up the vacant office of librarian.

Mr. W. A. Meredith was introduced and was admitted a Fellow of the College under the rules applying to the election to the Fellowship of Members of twenty years' standing.

Mr. Robert Cozens Bailey, F.R.C.S., was introduced, and was handed the Jacksonian Prize.

The following address of congratulation to the Queen was carried unanimously:—

THE HUMBLE ADDRESS OF THE PRESIDENT, VICE-PRESIDENTS, AND COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

TO

HER MOST EXCELLENT MAJESTY

VICTORIA,

QUEEN OF GREAT BRITAIN AND IRELAND.

MAY IT PLEASE YOUR MAJESTY,—

We, the President, Vice-Presidents, and Council of the Royal College of Surgeons of England, humbly desire to express to Your Majesty, in this the sixtieth year of Your Majesty's Reign, our grateful sense of the blessings enjoyed under Your Majesty's wise and beneficent rule.

We also desire to record our grateful recognition of the many and great advantages that have been secured by Science, by the Arts, and by Legislation during the past sixty years, and we venture to think that not least among these may be reckoned the progress which has been made in the Science and Art of Surgery, for the promotion of which this College was founded.

But we are conscious that, however much the happiness of Your Majesty's subjects may be due to the general advancement of knowledge, very much also is due to the great personal influence for good which Your Majesty never fails to exercise on all occasions affecting the welfare of this country and people, and we pray that Your Majesty may long be spared to reign over us, and that we may continue to be blessed by Your Majesty's life and example.

In witness whereof We, Your Majesty's loyal and dutiful subjects, have caused the Common Seal of the College to be hereunto affixed this 13th day of May, 1897.

The Museum Committee recommended, and the Council appointed, Mr. S. George Shattock, F.R.C.S., as Pathological Curator of the Museum, the appointment to date from next Midsummer.

"Hydrophobia" was selected as the subject for the Jacksonian Prize for the year 1898.

The consideration of the report from the committee on the Norwich Memorial and Medical Aid Associations was postponed.

The annual meeting of Fellows of the College for the election of members of the Council was appointed for Thursday, July 1st, at 1.30 P.M., and the meeting of Fellows was appointed for the same day at 5 o'clock P.M.

A memorial was read, which had been signed by thirty-two Fellows and Members practising in and about Plymouth, Devonport, and Stonehouse, in favour of Mr. R. B. Anderson's application for protection under Section 15 of the By-laws and of a contribution from the funds of the College towards the objects of his defence, and asking the Council if they should not favour the view entertained in the memorial, to hear them by deputation in support of Mr. Anderson's application.

It was resolved that they should be informed that the Council were unable to accede to the request.

A memorial was read, which was signed by twenty-seven Fellows and Members of the College practising in and about Plymouth, Devonport, and Stonehouse, asking whether the Council, on the submission of proper evidence, would be prepared to restrain Fellows and Members of the College by means of the disciplinary powers provided by the By-laws from practising as medical officers of medical aid associations under certain conditions specified in the memorial, and asking the advice of the Council in reference to a resolution adopted by the memorialists on the subject of their relations with the medical officers of the "Three Towns Friendly Societies Medical Institution." It was resolved that the memorialists should be informed that the matter was still under consideration.

A letter was read from the Earl of Stamford, dated May 6th, asking the Council to contribute, either in their corporate capacity or otherwise, the sum of £30 or any larger sum to the payment of the debt of £150 incurred by the Civil Rights Defence Committee. The Council, in reply, declined to contribute anything from College funds.

THE GRECO-TURKISH WAR.

THOSE of our readers who have kept themselves *au courant* with the march of events will have learned already of the success of the Turks in driving back the right wing of the Greek army at Domoko after fierce fighting and of the retreat of the Crown Prince from that no longer tenable position. Hostilities are now suspended, and there is, we hope and believe, every prospect of an end to this unequal and lamentable struggle. Greece has paid a heavy penalty for her grave mistake and vanity in having entered on this war, and she has only added to her difficulties by her late advance in Epirus; still, it must be borne in mind that the war was the outcome of Turkish oppression and misrule in the past. Greece is not only prostrate, but she has unfortunately injured and retarded the progress of civilisation and good government in Europe. Turkey has apparently taken the bit between her teeth and her great military successes have led the Porte to make arrogant claims. Happily for the cause of peace and progress, the European Powers acting in concert are still masters of the situation, and in a position to protect Greece against exorbitant claims and a purely aggressive policy on the part of her strong and successful opponent. Edhem Pasha has, without doubt, conducted the campaign in a masterly way; having carefully matured his plan of operations beforehand, he has slowly but surely pursued it to a successful issue. We do not know how far military had to yield to political considerations, but had Edhem Pasha energetically followed up his successes he might probably have even reached Athens itself. We shall learn hereafter what were the medical arrangements on the part of the two belligerents. Those of the Turks are generally reported as having been good, but they have never been exposed to the great strain to which an unsuccessful and retreating army must necessarily be

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subjected. The nature of the country and the extended sphere of military operations in which the troops of both armies were engaged have probably thrown greater difficulties in the way of medical, hospital, and transport administration than the number of wounded, for the losses in various engagements in the field do not seem to have been very great, although the sum total was probably large. What the amount of sickness has been we can only surmise. The sufferings on the part of the Greek army and of the civil population, especially within the sphere of warfare, must have been considerable.

The Sultan has ordered two hospitals, one with 600 beds and the other with 100 beds, to be built near Yildiz Kiosk, since His Majesty desires to have the men wounded in the war under his eyes.

THE ROYAL SOCIETY CONVERSAZIONE.

FROM the point of view of display the annual exhibit of the Royal Society on Wednesday was decidedly dull There was, however, no lack of material for scientific thought. The exhibits, in fact, were of a scientific rather than of a popular or sensational kind. The new process (Dansac-Chassagne) of producing photographs in colour, about which so much incredulity has been expressed, was illustrated in a series of prints in the various stages of treatment by Sir H. Trueman Wood. The details of the method are not known. In regard to recent work with the x rays Mr. A. A. C. Swinton showed his new focus tubes, in which the distance between the cathode and anti-cathode may be adjusted so as to enable the production of rays of a maximum penetrative value. The new tube was described at length in THE LANCET of May 8th. An interesting application of the x rays was shown in the exhibit of Mr. Heycock and Mr. Neville. The x rays had been allowed to pass through a sodium gold alloy, the resulting photographs showing separately the crystals of gold (opaque) and of sodium (transparent) existing in the alloys which otherwise appear to be homogeneous. Interesting results of the application of photography were shown in a somewhat similar line of research by Professor Roberts-Austen, who by means of a microscope and camera and a highly magnifying apparatus demonstrated the existence of minute diamonds (carbon crystals) in steel. A most instructive series of photographs was shown by Professor Norman Lockyer, the diagrams affording abundant testimony of the value of the spectroscope and photography in enabling a simple classification of the stars to be made based upon their ascertained chemical composition. Close by were some magnificent photographs of the moon exhibited by the Astronomer Royal. M. Guillaume performed a simple experiment showing the practically non-dilatable character of nickel steel on heating; its application to pendulums is thus suggested. The diffraction kaleidoscope exhibited by Mr. C. P. Butler is a pretty modification of the ordinary instrument. Instead of providing various coloured glasses the pure spectrum of white light is employed, the pure colours being reflected at a great number of angles with a very entertaining and pretty effect. The Marine Biological Association's exhibit was of more than ordinary interest, the chief subject of attraction being certain marine animals illustrating "commensalism," a term used to indicate the constant association of animals with one another often for mutual advantages. They are not, however, "parasites." Thus, for example, an anemone for convenience of transport often fixes itself on the whelk shell of the hermit crab, and when the crab obtains food bends down so that its mouth is brought immediately under that of the crab, the anemone thus securing what the crab lets fall. Similarly, a worm frequently dwells in the upper galleries of the whelk shell, descending from time to time to take from the crab such food as it requires. Professor Oliver Lodge gave a very interesting demonstration of Zeeman's discovery of the broadening of spectrum lines by the action of a magnetic field on the source of light. A sodium flame was placed between the terminals of a powerful magnet. On turning on the current the normal bands become double, triple, or even quadruple. The experiment is of exceeding interest in regard to the relations of magnetism and light. Some excellently mounted preparations shown by Dr. Kanthack illustrated the mode of action of the Tsetse fly. As is well known, this fly creates a scourge by communicating the micro-organisms from infected to healthy animals. The disease is due, as was shown by Surgeon-Major Bruce, to the presence in the blood and serous fluids of a parasitic protozoon. In the secretary's room the chief exhibits of interest were a telegraphic type-writer and an instrument for controlling the electric arc light in its application to photomicography. Lastly, demonstrations were given in the lantern room by Professor Ayrton and Professor Farmer, the latter illustrating "Nuclear Division in Animal and Vegetable Cells," and the former "Some Electric and Mechanical Analogues."

The President (Lord Lister) received the Fellows and their friends, and there was a large company present.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary meeting of the Comitia of Fellows was held on the 13th inst., Dr. WILKS, President, in the chair. Dr. J. A. Coutts, Dr. J. Galloway, Dr. W. Essex Wynter, Dr. W. S. Colman, Dr. A. F. Voelcker, Dr. J. Taylor, Dr. G. Schorstein, Dr. E. H. Starling, Dr. J. S. Risien Russell, Dr. A. A. Kanthack, and Dr. J. R. Bradford were admitted to the Fellowship of the College.

The President was authorised to attach the seal of the College to a loyal address to Her Majesty the Queen on the completion of the sixtieth year of her reign.

A memorial was read from the members of the Hospital Reform Association and others, with especial reference to the abuse of out-patient medical relief, asking the College to investigate the subject and suggesting remedies. A discussion took place, in the course of which it was contended by some that the matter was one which did not come under the purview of the College, but it was eventually agreed to refer the memorial to the Council for consideration.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6332 births and 3469 deaths were registered during the week ending May 15th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 18·8 to 17·0 per 1000, further fell last week to 16·5. The lowest rates in these towns were 10·4 in Swansea, 11·3 in Huddersfield, 11·6 in Croydon, and 12·0 in Brighton and in Leicester; the highest rates were 21·2 in Derby and in Liverpool, 22·0 in Sunderland, 22·3 in Manchester, and 23·0 in Salford. The 3469 deaths included 340 which were referred to the principal zymotic diseases, against 350 and 315 in the two preceding weeks; of these, 102 resulted from whooping-cough, 96 from measles, 56 from diphtheria, 32 from scarlet fever, 32 from diarrhœa, and 22 from "fever" (principally enteric). No death from any of these diseases was recorded last week in Norwich, in Huddersfield, or in Gateshead; in the other towns they caused the highest death-rates in Sunderland, Manchester, Burnley, and Salford. The greatest mortality from measles occurred in Sunderland, Bolton, Burnley, Manchester, and Salford; and from whooping-cough in Sunderland, Blackburn, Oldham, Burnley, and Plymouth. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 56 deaths from diphtheria included 42 in London and 2 each in West Ham, Cardiff, Birmingham, Liverpool, and Sheffield. No fatal case of small-pox was registered during the week under notice either in London or in any other of the thirty-three large towns. There were 15 small-pox patients under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 15th inst., against 7, 12, and 11, at the end of the three preceding weeks; 6 new cases were admitted during the week, against 6 and 3 in the two preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2416, against 2442, 2380, and 2385 on the three preceding Saturdays; 239 new cases were admitted during

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the week, against 269, 223, and 231 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 273 and 232 in the two preceding weeks, further fell to 198 last week, and were 126 below the corrected average. The causes of 54, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Cardiff, Leicester, Bradford, Leeds, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Liverpool, Sheffield, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 22·6 to 20·7 per 1000, rose again to 20 8 during the week ending May 15th, and was 4·3 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·6 in Perth and 16 6 in Aberdeen to 21·4 in Leith and in Glasgow, and 23·7 in Edinburgh. The 620 deaths in these towns included 41 which were referred to measles, 29 to whooping-cough, 20 to diarrhœa, 6 to scarlet fever, 5 to diphtheria, and 1 to "fever." In all, 102 deaths resulted from these principal zymotic diseases, against 127 and 93 in the two preceding weeks. These 102 deaths were equal to an annual rate of 3·4 per 1000, which exceeded by 1·8 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 52 and 29 in the two preceding weeks, rose again last week to 41, and included 21 in Edinburgh, 16 in Glasgow, and 4 in Leith. The deaths referred to whooping-cough, which had been 45 to 34 in the two preceding weeks, further declined to 29 last week, of which 13 occurred in Edinburgh, 12 in Glasgow, and 3 in Leith. The 6 fatal cases of scarlet fever exceeded the number recorded in any recent week, and included 4 in Glasgow. The deaths from diphtheria, which had been 6 in each of the two preceding weeks, were 5 last week, of which 4 occurred in Glasgow. The deaths refered to diseases of the respiratory organs in these towns, which had been 128 and 134 in the two preceding weeks, declined again to 108 last week, and were slghtly below the number in the corresponding period of last year. The causes of 41, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29·5 and 33·7 per 1000 in the two preceding weeks, declined again to 28·3 during the week ending May 15th. During the past six weeks of the current quarter the death-rate in the city has averaged 31·6 per 1000, the rate during the same period being 16·6 in London and 26·5 in Edinburgh. The 190 deaths registered in Dublin during the week under notice showed a decline of 36 from the number in the preceding week, and included 19 which were referred to the principal zymotic diseases, against numbers declining from 41 to 35 in the three preceding weeks; of these, 6 resulted from measles, 6 from whooping-cough, 3 from scarlet fever, 2 from "fever," 1 from diphtheria, and 1 from diarrhœa. These 19 deaths were equal to an annual rate of 2·8 per 1000, the zymotic death-rate during the same period being 1·5 in London and 6·2 in Edinburgh. The fatal cases of measles, which had declined from 19 to 8 in the three preceding weeks, further fell to 6 last week. The deaths referred to whooping-cough, which had been 13 and 16 in the three preceding weeks, declined again to 6 last week. The 3 fatal cases of scarlet fever were within one of the number registered in the preceding week, and the mortality from diphtheria and from enteric fever also showed a decline from that recorded in the previous week. The 190 deaths in Dublin last week included 30 of infants under one year of age and 48 of persons aged upwards of sixty years; the deaths of infants showed a decline, while those of elderly persons exceeded those recorded in the preceding week. Eleven inquest cases and 10 deaths from violence were registered; and 62, or nearly a third, of the deaths occurred in public institutions. The causes of 12, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN R. H. HALL has been ordered to the Curragh and Brigade-Surgeon-Lieutenant-Colonel Martin to Aldershot for duty. Surgeon-Major S. F. Lougheed has joined at Woolwich. Surgeon-Captain R. C. Cottell has embarked on the transport *Dilwara* for Natal. Surgeon-Major White has been transferred to the South-Eastern District for duty. Brigade-Surgeon-Lieutenant-Colonel Keys has been ordered to Belfast for duty. Surgeon-Captain S. G. Moores has been appointed as an attached medical officer to the Scots Guards.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Colonel Hendley, C.I E., Officiating Inspector-General of Civil Hospitals, North-Western Provinces and Oudh, are replaced at the disposal of the Foreign Department. The services of the under-mentioned officers are placed temporarily at the disposal of the Government of Bombay for employment on plague duty:—Surgeon-Captain M. Boyle, A.M.S , and Surgeon-Captain E. S. Clark, A.M.S. The services of Surgeon-Captain L. Rogers (Bengal) are replaced at the disposal of the Military Department. The services of Surgeon-Captain Browning, A.M.S., are placed temporarily at the disposal of the Foreign Department for employment on plague duty. The services of the under-mentioned officers are placed temporarily at the disposal of the Government of Bombay for employment on plague duty:—Surgeon-Captain Cleveland, Surgeon-Captain Bray, A.M.S., Surgeon-Captain Taylor, A.M.S., and Surgeon-Captain Rivers, A.M.S.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Fleet Surgeons: Arthur W. Russell to the *Mars* and Evelyn R. H. Pollard to the *Renown*. Staff Surgeons: Thomas E. H. Williams to the *Jupiter;* Arthur W. May to the *Empress of India;* James C. Dow to the *Powerful;* John Ottley and Richard E. Biddulph to the *Royal Sovereign;* Charles W. Buchanan-Hamilton to the *Monarch*, additional, for Ascension Hospital; and John P. J. Coolican to the *Wildfire*, additional, for the *Sans Pareil*. Surgeons: George H. Foott to Haslar Hospital; Richard A. Ross to the *Jupiter;* Harold Huskinson to the *Empress of India;* John F. Hall to the *Mars;* Charles M. Beadnell to the *Powerful;* and Arthur R. H. Skey to the *Alexandria*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major George Hastings, having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve.

VOLUNTEER CORPS.

Artillery: 1st Glamorganshire: Surgeon-Lieutenant D. R. Bowen resigns his commission. *Rifle:* 1st Volunteer Battalion the Gordon Highlanders: Surgeon-Lieutenant G. Williamson to be Surgeon-Captain.

VOLUNTEER MEDICAL STAFF CORPS.

The Aberdeen Company: Surgeon-Captain A. MacGregor resigns his commission.

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the under-mentioned officers of the Volunteer Force:—*North-Eastern District: Engineers:* 2nd West Riding of Yorkshire (Leeds) Royal Engineers (Volunteers): Surgeon-Major Charles Richardson, retired. *North-Western District: Rifle:* 5th Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant-Colonel William Richard Dambrill-Davies. *Eastern District: Rifle:* 2nd Volunteer Battalion the Essex Regiment: Brigade-Surgeon-Lieutenant-Colonel Ebenezer Shedd. *South-Eastern District: Rifle:* 2nd Volunteer Battalion the Royal Sussex Regiment: Surgeon-Lieutenant Giles Lockwood L. Hawken, retired. *Home District: Volunteer Medical Staff Corps:* The London Companies: Surgeon-Major John Edward Squire, M.D. *Scottish District: Rifle:* 1st Lanarkshire Volunteer Rifle Corps: Surgeon-Major James Alexander Adams, M.D.; 2nd (Angus) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon-Lieutenant Robert Grant.

THE NEW ARMY ORDERS.

The new issue of the Army List contains the announcement

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of two important concessions to the Army Medical Staff. One of these concessions also affects all departmental officers. The following are the announcements:—1. Army Medical Staff.—Mess allowance to officers attached to Militia Units: "This allowance will also be granted on the same conditions to officers of the Army Medical Staff attached to a militia unit during preliminary drill and training." The allowance amounts to 4s. a day. 2. Precedence of Departmental Officers—Presidents of Boards: The Queen's Regulations and Orders for the Army will be amended as under:—The following will be substituted for paragraphs 126 and 127 of Section VI., 126. "The officer assembling a court of inquiry, committee, or board will appoint a president by name, or, failing such appointment, the senior member will preside." "When the convening officer has so appointed a president no officer senior in rank to the president will be detailed to serve as a member of the court of inquiry, committee, or board." In the second order we see a loophole for the military authorities to stultify what appears to be a move in the right direction. We hope, however, that the order is not merely a giving with one hand and a taking away with the other, and that it is not intended only as a paper concession to satisfy the public.

THE NEW REGULATIONS FOR NAVAL CADETS.

As the sons of medical officers of the Navy and Army are often desirous of entering these services, it may be well to call attention to the new Regulations respecting naval cadets which are to come into force for the examination to be held in December next. The appointments to naval cadetships, with certain exceptions that are enumerated, will be by competition, the examinations being conducted by the Civil Service Commissioners. Candidates must not be below fourteen or above fifteen and a half years of age at the date of entry, and they must be in good health and free from any physical defect. The payment on board the *Britannia* will be at the rate of £71 per annum, the Lords of the Admiralty reserving to themselves the power of selecting a certain number of cadets for whom the annual rate of payment will be £40. The alteration that has been made in respect of the increased age of candidates for cadetships is intended to encourage the admission of lads direct from public schools, but it is questionable whether it will altogether effect this, for, as the headmaster of Harrow points out, boys do not usually proceed to public schools till they are about fourteen years of age, and there is consequently not much time left for their preparatory education at such institutions.

ENTERIC FEVER IN INDIA.

It is at this season and in that succeeding the rains in India that enteric fever so often prevails. The total number of cases that have occurred in the Black Watch at Subathu is fourteen. The patients under treatment are doing well. Brigadier-General Symons has proceeded to Subathu to inquire into the cause of the outbreak, with authority to take whatever measures may seem desirable. Some cases of enteric fever have also occurred at Agra among the men of the York and Lancaster Regiment. If the medical history of Subathu be inquired into it will, we believe, be found that it has proved an unhealthy station, and that for many years past there have been occasional outbreaks of enteric fever there.

ARMY MEDICAL SCHOOL, NETLEY.

It is now definitely decided that Deputy-Surgeon-General Henry Cayley, I.M.S. (retired pay), will retire from his appointment as Professor of Military Medicine in the Army Medical School at Netley on July 31st.

Surgeon-Major-General Cleghorn, Director-General of the Indian Medical Service, has arrived at headquarters, Simla, relieving Surgeon-Colonel Warburton, who has returned to his post in the North-Western Provinces.

KING'S COLLEGE HOSPITAL.—The annual dinner in aid of the funds of King's College Hospital was held at the Hôtel Métropole on May 15th. Lord Glenesk, who was in the chair, said that the Prince of Wales's Hospital Fund would no doubt be of great assistance to them; they would, however, none the less rely on the liberality of their ordinary supporters. Subscriptions and donations amounting to £2760 were announced in the room, including £250 from Lord Glenesk, £500 from Messrs. W. H. Smith and Sons, and £100 from Mr. W. F. Smith, M.P.

Correspondence.

"Audi alteram partem."

"THE DECLINE OF THE SCOTTISH UNIVERSITIES."

To the Editors of THE LANCET.

SIRS,—If you think it worth while to continue the discussion on the decadence of the Scottish universities I would like as a graduate of one of them, and as having bestowed some consideration on this subject, to add a very few words. Before doing so I wish to say that I agree with almost every sentiment in the able and trenchant letter of Dr. McVail in THE LANCET of May 8th. No doubt, also, as Dr. Milroy remarks, the introduction of the five years' system has had a decided effect, as has the increased—nay, excessive—stringency of the preliminary medical examinations, in reducing the number of entrants. I wish I could believe that the manifest overcrowding of the profession has as yet told to any appreciable extent on the young men seeking admission. But I suspect he is wrong as to the comparative falling off in arts and medicine. I rather think the falling off is most marked in arts students, and with your leave I wish to state very shortly why this is so. A commission has been now sitting for many years and has published many—too many—ordinances regulating the courses of study in our Scotch universities. It has been a cumbrous and weak body. On the one hand, it has been afraid to touch the time-honoured fabric of old-world education, and, on the other hand, it has opened the doors wide to a heterogeneous assortment of studies. A student may at his own sweet will take his classes in at least one hundred different ways. The real prizes—what are known as bursaries—are given on the old lines of Latin and Greek, with a little English mathematics thrown in, while modern languages are nowhere. Can it be wondered that parents doubt the good of all this jumbling and bungling and do not send their sons to waste their precious time on so ill-considered a hash of subjects?

Let the Scottish universities march with the times. Put modern languages at least on a par with dead tongues as instruments of culture; try to encourage science of the right kind; but, above all, let there be a director of studies—why not the principal?—whose duty it will be to examine each student systematically and carefully and to advise the parents and guardians of pupils what would be the course of study best suited for each individual case. Scottish students have benefited greatly by their independence of tutors and masters; but license is something more than liberty, and a few words spoken wisely and sympathetically may change (and has changed) the whole current of a young man's life and character into higher and nobler channels.

I am, Sirs, yours truly,

May 9th, 1897. WILLIAM BRUCE.

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—Dr. G. Archdall Reid has strangely misunderstood me, and has consequently been led to tell me many things which I knew quite well and never questioned. The acquirement of language is a twofold process, comprising what may be termed a *receptive* and an *expressive* side. If he will read my letter again he will see that I was clearly speaking of the expressive side of the process only. The case I cited was that of a boy whose hearing and mental powers were good, in whom consequently language on its receptive side could be acquired in the usual manner. The use of the expressive side, however, was altogether deferred till after the fifth year, and then, when his nervous system was more matured, he suddenly spoke certain words quite distinctly, though there had been no previous trials and failures. This boy did not learn to speak (expressive side) in any ordinary sense of the term, and my point was that he would never have been able at once to execute all the complex muscular movements needed for the utterance of words if he had not inherited the necessary nervous arrangements by which, in part, these motor acts were brought about. The same reasoning applied to the child who walked across the room at two years of age, but

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who, up to that period, had never even tried to walk. In spite of my having told him of this exceptional circumstance (upon the authority of Sir Richard Quain) Dr. Reid now complacently tells me and your readers generally that a child can only do this "through use and after long practice." The fact I have cited is certainly hostile to Dr. Reid's theories, and tends to show that when walking is delayed much beyond the usual time, such complicated motor acts may be exercised, independently of previous trials and failures, simply because in the mean time the motor mechanisms concerned with these acts which the child has inherited have had time to develop.

I am, Sirs, faithfully yours,

Manchester-square, May 17th, 1897. H. CHARLTON BASTIAN.

DR. RENTOUL AND THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—From the letter of my colleague, Dr. R. R. Rentoul, published in THE LANCET of May 15th, it would appear that he only imperfectly realises his position as a Direct Representative. Having undertaken to act as representatives of the profession on the Council it appears to me that it is incumbent upon us, at whatever personal sacrifice, to attend the meetings of the Council and to do all we can to promote the interests of our constituents. The Direct Representatives are so few in number that for one to drop out of the ranks is to weaken the influence of the others. I trust, therefore, that Dr. Rentoul will, nothwithstanding what he has said, take his seat at all the meetings during the forthcoming session of the Council.

I remain, Sirs, yours faithfully,

GEORGE BROWN,
Direct Representative for England and Wales.

Hart-street, Bloomsbury-square, W.C., May 18th, 1897.

OPHTHALMIA IN LIVERPOOL.

To the Editors of THE LANCET.

SIRS,—I am surprised to find a leading article in a journal like THE LANCET, that has for a motto "Audi alteram partem," supporting, upon what is admittedly scant evidence, the opinions of one medical man against three others.

Before replying to the leading article in detail allow me to say that I am visiting surgeon to the Liverpool Workhouse Hospital and have nothing to do with the Kirkdale or Sheffield schools and that my remarks below only apply to the workhouse. In the first place there is no question of severe ophthalmia. Mr. Fuller never used such words with reference to the workhouse. A second mistake is made at the very beginning of the article in reference to the "workhouse schools." We have no "schools" at the workhouse. The so-called "schools" are receiving or probationary wards, where children are temporarily placed until their condition and destination are accurately determined. For instance, cases of granular lids so slight as to be considered latent are sent there from the wards under medical observation to ascertain how they will do without treatment. Cases admitted from town at all hours of the day and night, apparently in good health or with such trifling complaints as not to require hospital treatment are also sent there. The "ins-and-outs" rarely get beyond this place, and its entire population is a floating one, varying in number from a dozen to fifty. Nearly every day cases are being sent to it from the wards and *vice versâ*, and every fortnight it is cleared out as far as possible, the healthy sent to Kirkdale, and the residuum to hospital or to the country homes, according to circumstances. This is the only place in the workhouse where any real fault was found by the inspector. On Nov. 25th, 1896, Mr. Fuller visited these probationary wards, which on that day contained forty-four boys and girls, and next day, on going round the ophthalmic wards, I found eleven new cases that had been sent there through Mr. Fuller's influence. I examined these cases carefully and two had absolutely nothing the matter with their eyes, one had a congested eye, and the others showed signs of having had granular lids in scars and congestions, but there were no granulations and no discharge. Some were sent back at once and others were kept for a few days under treatment, and I thought no more about the matter till February, 1897, when Mr. Fuller's report was received. Fortunately for us the state of the eyes of every case that passes through the ophthalmic wards is recorded, and I was thus able to join issue with him to the effect that his diagnosis was incorrect and that he had exaggerated the symptoms. Had it been otherwise we would have been helpless, for when his report came down only two cases out of the eleven were under the care of the vestry and the habitation of the others was quite unknown.

Now it was, with these doubtful cases in my mind, that I put the question to Mr. Fuller as to the value of the absence of discharge as a diagnostic sign of the latency of granular lids and of the danger of contagion, and, in fact, as a sign of the temporary cure of the cases. I agree that it takes years often to ensure that a permanent cure has been effected. Mr. Fuller's reply was that granular lids were always contagious in all stages, because when there was no apparent discharge the lids were found sticking together in the morning, so that there really was discharge. This sticking together of the lids in the morning would to me be evidence of discharge, and I always ask the nurse in such cases whether the children wake up with their eyes bright and clear and free from stickiness; and this is my most important sign that the disease is latent and that active treatment should stop. I have not heard Mr. Fuller's opinion as to this condition. Bacteriology may help us in the future, but the importation of the gonococcus into the discussion seems to me to show that we know very little about this phase of the question as yet and may leave it on one side. And now allow me to enlighten the writer of the leading article about the authorities quoted by me.

Mr. Nettleship says in his "Diseases of the Eye," p. 968, where he is writing of chronic granular disease, "When accompanied by discharge the disease is contagious, otherwise not." Is not that explicit? Mr. Swanzy, in his "Handbook of Diseases of the Eye," p. 87, says in reference to acute and chronic granular ophthalmia, "Both forms are contagious, and probably the infection occurs only by transference of the secretion from one eye to the other by means of fingers, towels, handkerchiefs," &c. If the writer of your leading article will go through all the other authorities within his reach he will find that they are of opinion that the discharge of the eyes is the chief factor in spreading the infection, and consequently the less the discharge or secretion the less danger of infection. I think all of us will agree that distinct granulations should be treated and isolated, whether there is apparent discharge or not; but it is in the intermediate cases between healthy lids and distinct disease where disagreement will be found. For instance, before the Poor-law Schools Committee one medical inspector said that 90 per cent. of pauper children had "unhealthy eyes"; and another examiner will find 30 per cent.; another, perhaps, 20 per cent. of unhealthy eyes in the same school. At Liverpool we adopt a common-sense and practical view of the matter—neither an ultra-scientific nor a faddist one. We have separate wards for acute and chronic cases, and convalescent homes for those convalescent. Our supply of granular lids comes to us from town and affects mostly the younger children. As the children grow older the disease disappears, and only some of the "ins-and-outs" present any injury to the eyes. We cannot quite understand the reports of frequent serious eye disease in granular lids that come to us from the metropolis, and half suspected these to be due to nimia diligentia medicorum.

The small lecture at the end of the article on granular ophthalmia is, I assure the writer, not necessary. I know all about eversion of the lids, follicular conjunctivitis, towels, damp soil, &c., for have we not read it before? and although not an oculist, my experience of granular lids exceeds that of most ophthalmic surgeons of my day, and I have always looked the disease fairly and squarely in the face. I therefore repeat that complete absence of discharge, with, of course, the unavoidable concurrent subsidence of other symptoms and signs, is one of the best practical tests of latency or cure of granular lids, and a sign that active and severe treatment should give place to freedom, fresh air, or school, provided that care and medical supervision is still exercised to detect relapse.

I am, Sirs, your obedient servant,

May 16th, 1897. W. ALEXANDER, F.R.C.S. Eng.

"VAGINAL DOUCHING."

To the Editors of THE LANCET.

SIRS,—Having to deal with many cases of gonorrhœa, I should like to make two brief comments on Dr. Giles's paper in THE LANCET of May 15th.

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In the first place vaginal douching with any drug whatsoever is bad treatment for purulent vaginitis, simply because the solution cannot come in contact with the whole of the diseased surface; and if the patient douches herself, only the lower half of the vagina is douched. The best treatment is the wool tampon method; pledgets of wool, soaked in the drug it is wished to apply, are packed in the vagina through a Ferguson's speculum, and changed every day. Cases treated in this way do well if the disease has not spread to the uterine cavity.

With regard to the drugs best to use, Dr. Giles only mentions lysol and chinosol among the "new-comers." These are fairly good, but others are much better. The best in my experience, and, curiously enough, one that has not yet been advertised as a certain cure for gonorrhœa, is naphthol. I am, Sirs, yours faithfully,

London Lock Hospital, May 17th, 1897. C. F. MARSHALL.

THE CENTRAL LONDON OPHTHALMIC HOSPITAL AND THE REPORT OF THE HOSPITAL REFORM ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—I am requested by my committee to ask you to kindly allow me space to correct the mis-statements in the above report as regards the Central London Ophthalmic Hospital. The tabular statement states:—

Subscribers' letters.—"Out-patients: Yes, about half. In-patients: Yes."—No subscribers' letters are required, and less than 2 per cent. of the out-patients come with them. The same remark applies to the in-patients, as they are admitted from the out-patients.

Payment by patients.—"Out-patients: 2*d.* a visit to 2*s.* 6*d.* per month; £426 a year. In-patients: all expected to pay 1*s.* a day; occasionally, £1 a week; £30 a year."—No charge is compulsory to out-patients, but some pay 2*d.* a visit, some 2*s.* 6*d.* a month in aid of the funds of the hospital. In the way in-patients are admitted free, but such as are able are expected to pay 1*s.* a day for their maintenance. As a matter of fact, the payment is very exceptional. Since the abolition of a private ward in 1890 no in-patient has paid more than 7*s.* per week.

Inquiry officer.—"Inquiry officer fills in forms, &c., and if he thinks proper brings the patients up to the secretary to be inquired into; has no power himself to question." "Inquiry officer only in name."—There is a proper inquiry officer, appointed in 1894, who is empowered to question patients as to their means, and who rejects those whose position does not entitle them to hospital relief.

I am, Sirs, yours faithfully,

JOHN GRIGGS BRYANT, Secretary.

Gray's-inn-road, May 17th, 1897.

"THE SUCCESSFUL TREATMENT OF A WOUND OF THE HEART."

To the Editors of THE LANCET.

SIRS,—In your Berlin Correspondent's notice of the German Surgical Association a very interesting notice of Dr. Rehn's case of wound of the heart and of his opening the pericardium is given, and without in the least wishing to detract from the credit justly due to Dr. Rehn for his bold and sound surgery I write to remind your younger readers that the opening of the pericardium, the removal of foreign bodies from it, and the washing of the sac was practised and taught by John Bell—that great surgeon who anticipated so many of our modern surgical methods.

I am, Sirs, yours truly,

Dublin, May 11th, 1897. GEORGE FOY.

URIC ACID IN THE BLOOD.

To the Editors of THE LANCET.

SIRS,—With reference to the statement of Mr. D. F. Shearer in THE LANCET of May 15th that my experiments do not appear to justify the statement that blood contains no uric acid, it is evident that Mr. Shearer does not quite appreciate the extreme delicacy of the murexide test for uric acid. Not only can half a milligramme of uric acid be detected with ease by that test, but I find that the one-hundredth part of a milligramme gives a very evident murexide reaction. Mr. Shearer has wrongly appreciated the extraction process employed by me when he refers to it as "a process in which the error of estimation is from one to two milligrammes." What I stated in my Goulstonian Lectures was that when I added known quantities of uric acid to blood I could only extract from 80 to 87 per cent. of it, so that if a given bulk of blood contained one milligramme of uric acid, the process would enable four-fifths of that milligramme to be extracted. Permit me to remind Mr. Shearer that if the uric acid contained in the urinary excretion is derived from the blood, the blood of birds should contain an abundant quantity of it, since their urinary excretion consists entirely of a compound of uric acid. As Sir Alfred Garrod originally showed, no uric acid is present in the blood of birds, an observation which was confirmed by my experiments, in which pints of birds' blood were operated upon at a time.

I am, Sirs, yours very truly,

Weymouth-street, W., May 19th, 1897. ARTHUR P. LUFF.

"POST-PARTUM HÆMORRHAGE AND ITS TREATMENT."

To the Editors of THE LANCET.

SIRS,—In his letter in THE LANCET of Jan. 16th last under the above heading Mr. E. Stanmore Bishop amongst other things indicates that he does not clearly comprehend my method of treatment as described in THE LANCET of Dec. 19th, 1896, and asserts that I speak with some doubt, &c., as to the efficacy of the procedure. I would crave of you a little space to make clear what may seem ambiguous, to show that there was little doubt in my mind, and also to make a few remarks on the position Mr. Bishop has taken up. I would state that when I wrote no one was more ready to rejoice with Mr. Bishop on his being able to point to some method of a definite nature to be pursued on being called upon to render help when a person's life is at stake—a means of freedom from, and a getting rid of, the confusion of the text-books, for I must say that with Mr. Bishop's beautiful description of the state of affairs found therein I am in the most perfect accord; but I wrote with a profound conviction that however effective in preventing the blood flow compression of the aorta may be, he was placing it entirely in the wrong position. I hope Mr. Bishop will be kind enough not to think that I wished to press his analogy too severely, and I really do not consider that I did so. I might have gone on and pointed out that in dealing with post-partum hæmorrhage we are assisting at a physiological function, but in dealing with a cut leg it is a different thing, &c., but that might have seemed unkind, and, as I thought, unnecessary. This reminds me that the simile of the plumber is also, I am sorry to say, a very unhappy one, for if a pipe is spouting and injuring valuable property a plumber is called and simply covers the aperture with his thumb instead of putty; I am inclined to think we would not consider him the kind of gentleman Mr. Bishop indicates. Now, in regard to the closing of the bloodvessels with one hand inside and the other one outside let me hasten to assure Mr. Bishop that his assumption that I meant what I said is quite correct. I meant it in all seriousness. The difficulty of compressing the two arteries and accompanying veins with the thumb need not be any annoyance to anyone, for on being reminded that uteri vary in size and condition and that men's hands are not equal in magnitude and power of grasp, and that it cannot be called a step from this to pressing one set of vessels against the pelvic wall and setting the left hand free to close the vessels of the other side—I say, on being reminded of this, we may safely assume that a moment's reflection on the great law of adaptability will settle the whole matter.

Let us look now at compression of the aorta as put forward by Mr. Bishop. As already stated, I hold he has placed it entirely in the wrong position; its fatal feature is that it does not meet the great requirement—a good working method. Let me quote his words: "From first to last, however, in every case, whether complicated by retained placental fragments, torn cervix, or any other condition, the one and only measure of primary importance in the treatment of post-partum hæmorrhage is compression of the aorta." This is a sweeping statement and requires a deal of reading. Let us see where it leads us, and let us suppose that there is

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no objection to the process, such as may arise from pressure on the nerves, shutting off the blood-supply to important structures, the danger of not being able to compress the aorta above the origin of the ovarian arteries, especially when abnormally high at their origin, the difficulty, as your correspondent "Rinaldo" very properly points out, of extreme obesity, the danger of shutting the vena cava, the danger of closing the left renal vein, and that even the danger of regurgitation is absent—let us suppose these objections are all removed, and see what happens. Called to a case of bleeding, we are first of all to close the aorta, and keep it closed till the womb contracts and shuts the bloodvessels, and this too whether there are pieces of placenta present or not. Indeed, we are not to stop to find what is the cause of the bleeding. If it should be a piece of placenta, then I suppose it is to remain there, and our duty is to hold fast by the aorta. The womb is to be left to take care of itself and expel the placental fragments, clots, &c., or retain them, as the case may be—it is to fight out its own battle and strive against the difficulties nature has put in its way, and to do this in spite of the disadvantage we put it to by cutting off the blood-supply, and may I ask if it is to follow that we may then claim the gratitude of the patient for having saved her life? I would not that I should be understood to say that the aorta cannot be closed effectually, nor, indeed, should I say that it would not be a valuable method for staying post-partum hæmorrhage if a better were not at hand; but I do say that to put it forward as the first thing to be done in all cases is utterly and entirely wrong, and were this practice to be generally adopted it would lead us into following the most ridiculous and foolish procedure. It is difficult to conceive of a case where we need resort to this roundabout and rather clumsy practice — a practice which, as is shown above, requires two skilled persons to be present. Really the only case one can conceive of where this plan can claim any advantage is when there is no disinfecting material at command, and thus the only case where it may be useful is when we have unwashed hands, and even here there remains much room to doubt whether it is not inferior to the intelligent application of external pressure on the uterine surface directed so as to compress the arteries and veins as formerly described.

Regarding the important question of regurgitation I would like to say a few words, but I feel it may appear too great a presumption on my part, for if Mr. Bishop gives such short shrift to the opinions of men whose names we all revere what is likely to befall mine? However, if he will kindly accompany me for a little I will make bold enough to undertake to show that it is quite possible that these authorities may be right after all. When labour has been completed and the muscular tissue of the womb entirely fails to contract we have a condition in which there are four patent passages from the vena cava to the bleeding uterine surface except in those cases where there are valves in the ovarian veins. Should those veins be valved there remain the two uterine veins. Thus we have always at least two open channels. Now physiology tells us that the negative endocardial pressure or sucking power of the right auricle assisted by the respiratory act is about - 12 mm. to - 7 mm. of mercury in ordinary health, and let us suppose that this is reduced by weakness and loss of blood to say - 3 mm. or - 4 mm.—a little less than half. This is equal to about 0·118 inch of mercury in the first case and 0·157 inch in the latter. And if mercury be about thirteen times as heavy as blood, it means that the uterine surface requires to be from 1½ to 2 inches lower than the auricle to establish equilibrium, or in other words that the auricle, even with the help of the inspiratory suction power, is just able to prevent the blood flowing backwards towards the womb by the action of gravity; and it must be noted too that we have to grant that those flaccid and extremely feeble venous structures are able to sustain this pressure. Here, then, we have a very delicately balanced apparatus, and what is to happen when the abdominal muscles or the limbs are put in action? What can happen but blood will flow towards the open ends of the tubes, and so also should there be a frequent cough? What is to occur but that there shall be four streams carrying blood from the vena cava into the womb upon every movement of the chest? and the same must be the case with retching, vomiting, sneezing, or pressure with the hand or otherwise on the abdominal wall; each of these things must upset the equilibrium, and I should add upset it very completely too. We cannot make any pretence of assisting the heart to any appreciable degree by taking advantage of the force of gravity, for it must be borne in mind that when we raise the foot of the bed we only raise the part where the pelvis is situated by about one-half the distance which we raise the foot, and the part with which the auricle corresponds also partakes of the rise, though to a less degree; thus the assistance is extremely little, and cannot be for a moment placed in opposition to the force brought to bear on the vessels by the movement of a limb, and much less the pressure produced by a cough.

In conclusion, I would express a hope that Mr. Bishop will see his way to fall into line with me, and lend his valuable help in elucidating and making known a method suited to meet all cases, from the most trivial to the most severe, which is hardly a step removed from the routine practice of every practitioner, which comes natural to us and which we might almost call the natural method, which is immediate in its application, causes little or no pain or discomfort, and which, to put it shortly, is a good working method.

I am, Sirs, yours truly,

Heywood, Lancashire. THOMAS LAIRD.

To the Editors of THE LANCET.

SIRS,—As a reader of your most valuable journal I have been greatly interested in the controversy on the above subject, which was some time ago carried on in THE LANCET between Mr. Stanmore Bishop of Manchester and Dr. T. Laird of Heywood. Now that such a lenghtened interval has elapsed since your last published communication on the subject appeared I begin to fear the controversy has been concluded, and in so assuming I feel a keen sense of disappointment at what appears to my mind to be a premature closing of a correspondence on a matter of so high importance to all general practitioners. As one who has had an extremely limited experience among patients suffering from post-partum hæmorrhage, having been brought into contact with some three or four cases only, I feel it would be an act of great presumption to introduce myself into the arena of this debate. Still, doubtless along with many other interested young medical men, I should like to see this important question thrashed out a little more completely than it has been up to this stage, and I am yet loath to believe that Dr. Laird has said his last word on the subject; for although in his last communication Mr. Stanmore Bishop defended his own position most vigorously, his defence, even in my humble judgment, is not impregnable, nor does it bear the stamp of finality as regards the question at issue.

There is a method of arresting post-partum hæmorrhage described in the work of Dr. King, Professor of Obstretrics in the Columbian University, Washington, which has recently attracted my attention, upon the merits of which I should much esteem an expression of opinion from either of the gentlemen above named. I give the author's own words:—"A special mode of grasping the uterus—bi-manual manipulation—may be tried as follows: Press the finger-ends of the outside hand deep in between the umbilicus and the uterus, so that the latter resting in the palm may be pushed down and forward against the pubes, while the other hand (or two fingers of it), passed high up along the posterior vaginal wall, presses the lower segment of the womb—in fact, its cervix—forward towards the symphysis pubis; thus by a sort of temporary anteflexion the canal of the neck is closed and no blood can come out, while the pressure above prevents enlargement of cavity and accumulation within. It also stimulates contractions."

The foregoing method has commended itself to me all the more fascinatingly since a conversation I had on this subject a few weeks ago with a very intimate medical friend, whose obstetric experience covers over 3000 cases of labour, including fully twenty cases in which serious after-bleeding was exhibited, who stated to me that the method just described is the one he always adopts, and that he has never yet lost a case from this complication. From a theoretical point of view most of the disadvantages cited against aortic compression could not be adduced in connexion with the plan just given, whilst on the ground of the latter's practicability and efficiency the experience I have quoted greatly enhances, I think, its inherent value.

I am, Sirs, yours faithfully,

JOSEPH M. THORNLEY, M.B., C.M. Glasg.

Bolton, Lancashire, May 10th, 1897.

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"PROFESSIONAL EXCLUSIVENESS IN ITALY."

To the Editors of THE LANCET.

SIRS,—I have no doubt that you are aware of an agitation which has arisen amongst some of the Italian medical men living in Rome and Florence in reference to the prohibition of foreign medical men practising in Italy without first having obtained an Italian diploma. This agitation has found expression in a circular letter sent by the President of the Accademia Medico-Fisica Fiorentina to the Italian practitioners throughout Italy. This circular states that "it has been decided to present a petition to the Minister of the Interior, in order that by legal means professional practice in Italy should be forbidden to those foreign doctors who have not an Italian degree, as is required by the other nations in Europe (Germany, Austria, France, England, &c.), in which countries not only is the national diploma required, but in some cases also citizenship." The Council of the Ordine dei Medici della Provincia di Roma have also been active in promoting this object, and they have had a special audience with the Minister of the Interior, who, it is said, gave them a favourable answer. On the 6th inst., in the Italian House of Parliament, the Under-Secretary of State, in reply to the question by Dr. Santini, one of the medical deputies, as to whether the Government did not intend to modify Article 23 of the Sanitary Law, considering the different treatment afforded to the Italian doctors who desire to practise abroad from that which Italy gives to the foreign doctors who desire to practise there, stated that the Government had already considered the question, and within a few days would place some proposals before the Superior Council of Health (now sitting in Rome), which will afterwards serve as a basis for drawing up a project of law.

This is the present position of this question which came to our knowledge on the 9th of this month. On the 10th inst. a meeting of the English medical men practising in Rome was held at the house of Dr. Charles, he being in the chair, for the purpose of considering the most desirable steps to be taken in reference to the proposed Bill to safeguard the interests, not only of the English and American medical men now practising in Italy, but also the interests of those who in the future may desire to practise in this country. It was pointed out at the meeting that the statement made in the above-mentioned circular as to foreign medical men not being allowed to practise in England was not according to the facts. On the contrary, foreign medical men can practise in the United Kingdom without restriction, but unless they are registered they cannot recover their fees by legal process, or give medical evidence in courts of law, or hold public medical offices. Moreover, under the Medical Act of 1886 the General Medical Council may recognise equivalent qualifications obtained in countries which treat the United Kingdom with reciprocity. The formalities for registration are as follows: A person who desires to be registered as a foreign practitioner must prove to the registrar that he holds a recognised foreign diploma granted in such a foreign country, and that he is of good character and entitled to practise medicine, surgery, and midwifery in such foreign country, and also that he is not a British subject, or that the diploma was not granted while he was domiciled in the United Kingdom, or was granted in course of a period not less than five years during which he was resident out of the country, or that he was practising in the United Kingdom on the said date and had been practising there or elsewhere for not less than ten years immediately preceding. He will then, on the payment of a fee not exceeding £5, be entitled to be registered without further examination. A recognised colonial or foreign diploma is one which is recognised for the time being by the General Medical Council as furnishing a sufficient guarantee of the possession of the required knowledge and skill for efficient practice, but the Privy Council have power to recognise a diploma which they have refused to recognise. In Italy, as you are aware, foreign medical men are permitted to practise only amongst foreigners unless they possess an Italian diploma, or excepting the cases in which foreign physicians and surgeons are expressly called for special cases. This is the substance of Article 23, which Dr. Santini wishes to have modified.

After a full discussion the meeting unanimously agreed: (1) that a deputation consisting of Dr. Brock and Mr. Eyre should call upon the English and American ambassadors in Rome to request their powerful support and aid; (2) that they should endeavour to obtain an audience with the Minister of the Interior for the purpose of placing the above facts before him; and (3) that they should also act for the other English and American members of the profession practising in Italy, if the audience with the Minister of the Interior was granted before these members had time to reply to this letter. The meeting, I may add, requested me to write to all the English and American practitioners in Italy, giving them an account of the above facts, and requesting their adhesion to these resolutions.

I am, Sirs, yours faithfully,

6, Via delle Finanze, Rome, May 14th, 1897. JOHN J. EYRE.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

An Unusual Case of Death from Asphyxia.

A CASE involving points of medico-legal interest was investigated by Mr. S. Brighouse, county coroner of Lancashire, at the town-hall of St. Helens, on the 4th inst. It appeared from the evidence that a Miss M. J. M'Levey, the manageress of a café at St. Helens, was found lying dead on the floor of the café at a late hour on the night of the 27th ult., a glass of water being close by. The deceased's appearance suggested that death was due to suffocation. A young man named Heath, who was paying his addresses to the deceased, was arrested on suspicion of having caused her death in consequence of having been seen near the premises on the night in question. Heath made three statements in connexion with the affair, the last statement being that he "went into the café knowing that Miss M'Levey was there putting the key in, but as soon as I got in and she heard footsteps coming in after her she turned round all of a sudden, and when she saw me she just managed to get the words out, 'Oh, how——' and then she dropped on the floor, seeming very much frightened at my appearance. Then when I saw that she had either fainted or was in a fit I did not know what to do properly. The next thing I did was to fetch some water in a glass out of the tap in the bar, but when I raised her head to give her the water I found that I could not get the water down her because of her teeth being clenched together, so when I saw that I could not apply the water down her throat I placed my fingers in the glass and sprinkled her face with it, thinking it would take effect and rouse her up. After that I raised her head again, but when I had raised it I was terrified to find water running from her mouth, but the teeth were still clenched. Then I laid her head down again, took the fur from round her neck which she was wearing, and placed it on the table, thinking that would enable her to breathe more freely. Then I raised her head again and called out, 'Maggie, speak to me.'" Heath, finding she was dead, then went home, and in the remainder of his statement said "that if anybody was to find her there I could tell them the whole truth of the matter, as she must have died from natural causes.', The post-mortem examination revealed the fact that death was due to suffocation. Dr. Rose, one of the medical witnesses, said that death was due to suffocation caused by a fit. Mr. F. Knowles agreed that death was due to suffocation, due to natural or other means. Dr. Jackson said he came to the conclusion that the girl died from asphyxia the result of an epileptic fit. He had known a case of epilepsy causing death in exactly the same manner. Mr. Challenor said that, in his opinion, the deceased first had an epileptic seizure, and his impression from hearing the evidence was that the man raised her head up and poured water down either her mouth or nose, and that produced the heart failure. If he had let the woman alone he believed she might have recovered. The jury returned a verdict of "Death from natural causes" in accordance with the medical evidence. On the following day the case again came before the magistrates at the St. Helens police-court. The charge against the prisoner was then withdrawn by the police and he was thereupon discharged from custody.

Health of Lancashire.

Mr. E. Sergeant (county medical officer of health) reported that during the three months ending March 31st the deaths recorded within the urban and rural sanitary districts of the administrative county gave a rate equal to 17·7 per 1000 of

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the population, as compared with 18·3 in the previous quarter and 17·3 in the corresponding quarter of 1896.

University College, Liverpool.

The half-yearly meeting of the governors of University College, held on the 15th inst., under the presidency of Mr. William Rathbone, elicited some interesting facts. Allusion was made in the course of the proceedings to the liberality of Mr. Henry Tate, the Earl of Derby, Mr. Samuel Rathbone, Mr. William Rathbone, the late Mr. George Holt, Mr. Thompson Yates, and others. Professor Paterson (Dean of the Medical Faculty) said that several obstacles had been met with which had delayed the completion of the Thompson Yates Laboratory, which would be extremely well adapted for its purposes, as no pains had been spared to make the building complete. The formal opening of the laboratory had been postponed until next spring, when Lord Lister will perform the opening ceremony. Mr. Thompson Yates had promised two further donations—one of £6000 for providing interior fittings, and the other for providing the delicate apparatus which the department required to carry on its work efficiently. The total amount given by Mr. Thompson Yates to the laboratory was little short of £25,000. The treasurer stated that the Sustentation Fund of the College now reached £1400; to meet requirements a sustentation fund of £2000 was indispensable.

New Medical Officer at Walton Gaol.

Mr. Arthur Price, medical officer, H. M. Prison, Birmingham, has been appointed medical officer to H. M. Prison, Liverpool, in the room of Mr. George Beamish, who has been promoted to Wandsworth. Mr. Arthur Price was for five years assistant medical officer at H. M. Convict Prison, Parkhurst, Isle of Wight, prior to his appointment to the Birmingham Prison in 1887.

Hospital for Women, Shaw-street.

Dr. T. B. Grimsdale has been elected honorary acting medical officer to the above hospital, the vacancy having arisen by the retirement of Mr. J. B. Edis. Dr. Grimsdale has served on the junior staff for upwards of ten years, and is the secretary of the Liverpool Medical Institution.

Gift to the Woolton Convalescent Home.

Mrs. J. A. Willox, the wife of the Member of Parliament for the Everton division of Liverpool, has given a donation of £500 to the Liverpool Convalescent Institution, Woolton, for the endowment of a bed to be called the "Queen Victoria Commemoration Bed."

May 19th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle Eye Infirmary.

THE annual meeting of this institution was held last week, the Lord Mayor presiding. Dr. Jeaffreson read the report, which showed that 3750 out-door and 250 in-door patients had been treated during the year. The income had been exceeded by £312 and the financial position of the hospital is now very serious. Dr. Jeaffreson expressed the opinion that the charity was abused, and in support of his statement instanced two cases. A man attended for six weeks with his son, and not being satisfied with the progress made by the boy proposed to bring down an ophthalmic surgeon from London at a cost of £150. The second case was that of a young man under treatment as an in-door patient in whose purse £25 was found. A good deal has been heard lately of the abuse of the Royal Infirmary from Dr. Jeaffreson, and it is to be hoped that he now sees how difficult it is to check abuse at special as well as at general hospitals.

Stockton Hospital.

Mr. Hind, who has been connected with the Stockton Hospital for some twenty years as pupil and honorary surgeon, upon resigning the latter position, was on Wednesday last elected consulting surgeon. For the vacancy caused by Mr. Hind's resignation there were two applicants, Mr. A. Dale and Mr. Rudolph Smith. Mr. Dale is a son of an old and much respected medical man in Stockton, and Mr. Smith has taken Mr. Hind's practice. Mr. Dale was elected by a large majority.

Newcastle Infirmary.

Two surgical registrars have just been appointed—Dr. Clay, the present senior resident physician, who is leaving the institution to practise in the town; and Dr. Wardale, an old student who has for some years been in practice in Newcastle.—The Building Committee has determined to adopt the principle of limited competition as the best in the choice of an architect for the new infirmary. At first it was decided to limit the competitors to the architects of Newcastle, Northumberland, and Durham, but upon further consideration it was determined that eighteen well-known architects should be asked to compete—twelve local men and six from a distance.

University of Durham College of Medicine: Heath Scholarship.

The title of the essay in connexion with the above scholarship, which was originally stated to be on "Deformities, Congenital and Acquired," has been limited to "Congenital Deformities."

Presentation to Dr. Mackay.

Dr. Mackay, of Wardley, has just been the recipient of a purse of gold as a mark of respect from his patients and friends. After the presentation he was entertained at dinner

May 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Diamond Jubilee Memorial.

A GENERAL committee of citizens of Edinburgh was formed some time ago for the purpose of raising a fund to be devoted to a permanent memorial of the Queen's Diamond Jubilee. The committee met last week and decided that a fund of £60,000 should be raised. Three schemes were before the committee—(1) a fund for the Scottish Branch of the Jubilee Institute for Nurses; (2) the establishment of a hospital for phthisical patients for Edinburgh; and (3) the erection of a special pavilion in connexion with the Royal Infirmary for the treatment of diseases peculiar to women. Each of these schemes had their claims fully laid before the meeting. The result was that one-tenth of the sum raised should be devoted to the Nursing Institute and that the remainder should be devoted to the erection of a pavilion in connexion with the Royal Infirmary for the treatment of diseases peculiar to women. The corporation of the city head the list of subscriptions with 1000 guineas.

The New Fever Hospital for Edinburgh.

At the end of last week the interesting ceremony of cutting the first turf in connexion with the erection of this hospital was performed by the wife of the Lord Provost in the presence of a large and representative gathering. A history of the work which the Public Health Committee had done in connexion with infectious diseases was given by Bailie Pollard, the energetic chairman of the committee. The cost of the new buildings, &c., will be nearly £250,000.

Appointment of an Assistant Physician to the Edinburgh Royal Infirmary.

The managers of the Edinburgh Royal Infirmary at their meeting on the 17th inst. appointed Dr. R. F. C. Leith to the vacant assistant physiciancy. There were six candidates and much interest was taken in the appointment. Dr. Leith has been for several years one of the pathologists to the infirmary.

Glasgow University.

It is intimated that the Right Honourable Joseph Chamberlain, M.P., Lord Rector of the University, has arranged with the Senatus to deliver his address to the students in the second week of November. Mr. James F. Gemmill, M.A., M.B. Glasg., has been appointed to a Lectureship on Embryology in the University. Dr. Lewis R. Sutherland has been appointed Lecturer on Pathology for the summer season. Professor Coats has so far regained his health as to be able to appear as a witness for the Crown in a case tried in Edinburgh during the current week.

Glasgow Royal Infirmary.

The annual election of the medical staff is announced for June 3rd, and it is intimated that Mr. Charles Workman, M.D. R.U.I., and Mr. R. T. Kent, F.R.C.S. Eng., have resigned their appointments as dispensary physician and assistant dispensary surgeon respectively.

Medical Appointments.

Mr. Donald Munro, M.D. Edin., has been appointed medical officer to the Weem Parish Council, Perthshire, *vice*

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Mr. John Thomson, L.R.C.S. Edin., resigned. A special vote of thanks was awarded to Mr. Thomson for his long and efficient services. The position of surgeon to the Glasgow Dental Hospital is advertised as vacant. At the Glasgow Maternity Hospital there are vacancies for an indoor and outdoor house surgeon.

Medical Presentation.

Mr. John Kennedy has been presented with a handsome set of flower stands in recognition of his services as lecturer to the ambulance class organised in connexion with the goods department of the Caledonian Railway, Glasgow.

Dundee Hospital for Incurables.

The committee having for its object the erection of a Hospital for Incurables in Dundee met on the 14th inst., and received from the Lord Provost a report to the effect that there was a general feeling in favour of the scheme and that a number of subscriptions towards the £50,000 aimed at had been received. These included £10,000 from the trustees of the late Miss Thow, £2000 each from Mr. A. D. Grimmond and Miss Symers, and a similar sum from the Dundee town council.

The Diamond Jubilee and Aberdeen Hospitals.

The subscriptions to the special jubilee fund for the Royal Infirmary, Royal Hospital for Sick Children, Morningfield Hospital (Incurable Diseases), and Aberdeen District Nursing Association, now amounts to £3113 12*s*. But for recent exceptional demands on public generosity in respect of loss of life at sea and other objects the sum would have been much larger. Hospital Saturday, organised by the amalgamated friendly societies, will be on June 19th. There will be a great procession along some of the principal streets, and a popular gala in Duthie-park. It is expected to raise £1500, and arrangements will be made to prevent overlapping of the two movements.

Glasgow University Club, London.

The spring dinner of this club will take place at the Café Royal (68, Regent-street) on Friday, May 28th, at 7.30 P.M. Lord Lister will be a special guest on this occasion. Members intending to be present are requested to give immediate notice either to Mr. N. M. MacLehose, 13, Queen Anne-street, W., or to Mr. James M. Dodds, Dover House, Whitehall, S.W., hon. secs.

May 18th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Nurses in the Union Hospital, Belfast.

AT the meeting of the Belfast board of guardians, held on May 1st, Dr. Bigger reported that there were 50 per cent. more cases in the hospital than there were a month ago, so that it is totally impossible for the present staff of nurses to do the work they should. During the past week 51 patients were admitted, and a large proportion of them were delirious, so that the patients cannot receive that care and attention which their condition demands. He asked for three temporary additional nurses, and the board eventually allowed three of the senior probationer nurses in the infirmary to go to the fever hospital if they wished to do so.

Typhoid Fever in Belfast.

Typhoid fever seems very prevalent in Belfast at present, and an outbreak has taken place in the Newtownbreda district. A very promising medical student died in the Royal Hospital last week from this disease.

Death of Mr. J. C. Davidson, L.R.C.P. & S. Edin.

Mr. J. C. Davidson died very suddenly at his residence, 6, Carlisle-terrace, Belfast, on May 14th. He went to bed the previous night apparently in his ordinary health, but on his sister going to awake him on the morning of the 14th she found him dead. Two medical men saw him (one of them being his next-door neighbour) at once, and came to the conclusion that his death was due to heart disease, from which it was known he had suffered, so that the coroner did not think it necessary to hold an inquest. Mr. Davidson, who was unmarried, was a young man who had for several years been in practice in Belfast, where he was much respected, and his death is very much regretted. The funeral was very largely attended.

Hospital Saturday in Belfast.

Next Saturday (May 22nd) has been appointed as Hospital Saturday, when arrangements will be carried out to make the collection for the Royal Hospital as large as possible. The fund for the new hospital amounts now to over £84,000.

Lisburn Infirmary.

At a public meeting of the inhabitants of Lisburn, held on May 17th, a resolution was unanimously passed to raise a fund commemorative of Her Majesty's Diamond Jubilee, and it was decided that the money should be applied for the benefit of the County Antrim Infirmary (in Lisburn) for the purpose of purchasing a house adjoining the present infirmary and furnishing it so as to admit a larger number of patients. Part of the money raised is for illuminations.

The Royal University of Ireland.

At the recent M.B. examinations of the Royal University of Ireland, held in May, there were sixty candidates, of whom two retired during the ordeal. When the results were declared it was found that thirty-three had passed and twenty-five were rejected; eight were placed in the upper pass division, and four were recommended to proceed to the honour examination.

The Situation at Mercer's Hospital.

Twenty-one governors of this charity met on Tuesday last, and resolved that the election to fill the vacancies caused by the dismissal of the medical staff should not take place until July 6th.

May 19th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Medical Men at the Paris Fire.

A SOLEMN service has been held at the Madeleine, the expenses being borne by the medical faculty of Paris, in memory of those medical men and their relations who met their death at the recent disaster in the Rue Jean-Gougon. The impressive ceremony, to which medical men alone were admitted, brought together a large crowd, so that the church was quite filled. The relatives of the victims occupied the choir, and all the officials of the Parisian Faculty were present save only the dean, M. Brouardel, who is abroad. The medical journals continue to assert that of all the men present at the fire the members of the medical profession alone did their duty. Official statistics show a tale of 121 deaths, out of which six only were males, two were children, two old men whose feebleness incapacitated them for flight, and two adults, *both medical men*—Dr. Feulard and Dr. Rochet. The former of these, having emerged, went back to try to save someone, and the latter refused to try to get out, saying "Women first." All the other adult men but one fled, so it is stated, knocking down the unfortunate women, so as to get out the quicker, and making a shameful abuse of their strength. One adult man alone was seriously wounded—namely, Dr. Recamier, who saved many people, and who, having lost his hat, was severely burned on the back of the neck. Such professional devotion stands out in strong contrast with the abominable behaviour of certain of the men of fashion, who had no thought but to save themselves, and who actually increased the number of victims by their mad rushes and the blows which they struck. One of the dead is reported to have succumbed not to the effect of the burns but to a fracture of the skull produced by a heavy blow with a walking-stick.

The Treatment of Pott's Disease.

The forcible straightening of the spinal column in cases of curvature due to Pott's disease has become a common method of treatment with surgeons since the communication made by M. Calot. M. Menard, surgeon to the hospital at Berck, where M. Calot is also surgeon, has presented a report to the Academy of Medicine in which he lays stress upon the dangers and defects of the operation devised by his colleague. He has made some experiments upon the dead body and finds that in straightening the vertebral column in subjects affected with spinal curvature a separation of the bones occurs at the tuberculous spots, especially when the stretching is extreme, and that a communication is thus laid open with the meninges and the cord behind and the mediastinum and pleura in front. Further, it is well known

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that the diseased foci in the bones are incapable of taking on a process of bony healing. M. Menard considers that curvatures treated by the method of M. Calot will tend to reproduce themselves. M. Menard has just read a second paper on the subject at the Society of Surgery, where M. Brun stated that his experiments on the dead body had been attended with similar results—a wide gap was produced between the vertebral bodies owing to their being pulled apart by the straightening. He had performed the operation on the living subject twice, and in these two cases the results after intervals of two and four months respectively were excellent, neither was there any relapse. MM. Michaux, Poirier, and Broca had all performed the operation many times, and found it easy and unattended with grave risks, but they agreed that more observations were needed before any definite conclusions as to its value could be arrived at.

The New Tariff for Night Visits.

A disagreement has recently arisen between the Prefect of Police and the surgeons attached to the Service Médical de Nuit of the Sixteenth Arrondissement with reference to the payment of fees for which the police are liable, the services having been rendered at the request of their officers. By a new regulation the prefecture bases its calculations upon the amount allotted for fees to each quarter, an average for three years being taken and every three months the whole sum should be divided among those to whom it may be owing. In the Passy quarter, however, the sanitary conditions for the three months, January, February, and March, were particularly favourable and accordingly the fee worked out at a sum of 23 fr. 50 c. for each visit The administration considered this too high, and one medical man sent in his resignation. With a view of healing the breach the prefecture proposed as a way out of the difficulty that visits made during the first three months of the year in the Passy quarter should be paid for at the rate of ten francs for every night call.

The Asylum for Lunatics.

To avoid the crowding of the infirmaries attached to lunatic asylums with cases of senile dementia—that is to say, with harmless lunatics who show no other signs of mental weakness than the mental feebleness common to the aged—the Prefect of the Seine has just invited the Assistance Publique to take measures to provide that only real lunatics shall be admitted into lunatic asylums. The Prefect of Police has accordingly addressed an important communication to all the police commissaries under him, in which he requests them to give no heed to applications made by hospital authorities for assistance in removing patients to a lunatic asylum, except when the hospital authorities can state that they have definitely decided that the patient is really mad. No one can be placed in an asylum by French law unless his mental state is such as to be a menace to public order or to other people. But the question of the disturbing of a hospital ward by a lunatic does not seem to have entered into the ken of this police notice. The Prefect requests his commissaries every time that they are applied to by a hospital for a removal order to demand the most explicit and accurate certificates from the medical men in charge of the patient. In cases where these certificates are not deemed sufficiently clear and full the commissaries are to decide for themselves as to the state of the patient from the point of view of public safety and to make every inquiry necessary for this purpose.

Appointments.

M. Chantemesse has been nominated Professor of Experimental Pathology at the Paris Faculty of Medicine in place of M. Strauss, deceased.—M. Rendu has been nominated a member of the Academy of Medicine.

May 18th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A New Antitoxin for Tuberculosis.

PROFESSOR HIRSCHFELDER, of San Francisco, U.S.A., has published in the *Deutsche Medicinische Wochenschrift* a new method of treating tuberculosis. He considers that the cases in which tuberculous disease has been recovered from as shown by the healed lesions frequently found in post-mortem examinations may be explained on the supposition that the human organism is able to produce an antitoxin. The results hitherto obtained by artificial preparations of antitoxin have not been very satisfactory because sufficient attention has not been paid to the natural conditions. It is admitted that tuberculous peritonitis is sometimes cured by a simple laparotomy, and this fact supplies a valuable suggestion, for it is very probable that the entrance of air into the peritoneal cavity causes the bacilli of tuberculosis to disappear, in consequence of the tuberculin present in the abdomen becoming transformed by the atmospheric oxygen into oxy-tuberculin. Following up his theory that recovery from tuberculosis depends essentially on an oxidation process, Dr. Hirschfelder was led to the conclusion that by oxidation of tuberculin outside the body it might be possible to produce a powerful antitoxin in an unlimited quantity, and he has succeeded in satisfying himself that tuberculin treated with peroxide of hydrogen (H_2O_2) is deprived of its virulence, so that it may be administered in very large doses. The details of his process are as follows: 60 c.c. of tuberculin are mixed with 240 c.c. of a 10 per cent. solution of peroxide of hydrogen (H_2O_2) in a well-closed bottle, and the mixture is sterilised by exposure to the heat of steam for ninety-six hours. The fluid thus becomes opaque and has an acid reaction. It is now cleared by a solution of caustic soda, 5 per cent. of boric acid is then added, and after filtration the fluid is ready for use. The tuberculin used for this process is not that which was discovered by Professor Koch, but is prepared after Dr. Hirschfelder's own method. It is made of bacilli of high virulence, cultivated on a mixture of veal broth with 4 per cent. of glycerine, 1 per cent. of Witte's peptone, 0 5 per cent. of chloride of potassium, and 0 3 per cent. of carbonate of potassium. Advanced cases of pulmonary tuberculosis with extensive cavities are due to an infection by other bacteria as well as by the bacilli of tuberculosis. Under these circumstances oxy-tuberculin used alone is not capable of destroying the bacteria, and it is necessary to have recourse to another antitoxin made from the sputum of phthisical patients in a way similar to that in which oxy-tuberculin is prepared. Large quantities of this "oxy-sepsin" may be administered without any harm to the patient. As a rule, 20 grammes of oxy-tuberculin and 10 grammes of oxy-sepsin are to be injected. The lymph must be quite fresh, and if it has become opalescent it must be again sterilised for fifteen minutes. Ordinary antitoxin syringes were used for the injection of oxy-tuberculin. At first only oxy-tuberculin was employed, but eventually it was in advanced cases always combined with oxy-sepsin, and better results were thereby obtained. The administration does not cause any pain, and there is no inflammation at the place of the injection, the fluid being absorbed in a few minutes; no rise of temperature or other undesirable symptom was observed. In the course of a few days the cough and expectoration decreased, the appetite improved, and the patient felt better. Fever, as a rule, very soon disappeared, and physical examination of the lung showed a marked amelioration of the tuberculous infiltration. The first patients were treated in November, 1895, and the good effect produced has been maintained ever since. The most suitable cases for treatment are those in which cavities have not yet formed, and especially those of laryngeal tuberculosis, where the improvement may be directly observed with the laryngoscope. A tuberculous ulcer on the back of a medical man's hand healed in a short time under the local application of oxy-tuberculin, after all other remedies had proved useless. Dr. Hirschfelder gives a detailed account of eight cases of pulmonary tuberculosis where the bacilli disappeared and the patient's general health improved in the course of the treatment. He states that he has also cured cases in a more advanced stage, and promises to publish his results at some future time, the object of the present communication being only to demonstrate that the antitoxin is practically an oxidised toxin. According to him, pneumonia, empyema, and streptococcus infection are also capable of being treated by their respective oxy-toxins, and the same is probably the case in all infectious diseases. He has also made experiments with carcinoma, but the number of cases is too small to, as yet, justify a definite expression of opinion.

The Radical Cure of Hernia.

Professor Kocher, of Berne, Switzerland, has recently published in the *Centralblatt für Chirurgie* the results of the

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operations performed by him for the radical cure of hernia. He operates by a method in which the sac, after being isolated from its surroundings, is drawn through an incision in the internal oblique muscle, and without being opened is fastened there by a series of sutures. In contradiction of a statement made by Dr. Coley, of New York, he points out that his results were at least as satisfactory as those obtained by Bassini's method. From 1894 to 1896 he performed 197 operations, of which 103 were inguinal herniæ. In 91·3 per cent. healing by primary intention took place, so that the patient could be discharged in from ten to eleven days. In 8·7 per cent. the wound healed more slowly, owing to the presence of secretion. The average duration of a case was between thirty-two and thirty-three days. In eighty-eight cases of the present series and in twenty-three of a former series the condition of the patients was examined a considerable time after the operation. Of these 111 cases of inguinal hernia, four cases (= 3·6 per cent.) suffered from relapses. Of the cases that were positively cured, twenty-six were operated on in 1896, thirty-five in 1895, twenty-four in 1894, and twenty-three in 1893. The mortality of the operation was, in fact, *nil*. Compared with the figures given by Dr. Coley for Bassini's method, the results seem to be a little less favourable. But of the 360 patients mentioned by Dr. Coley, no fewer than 250 were children, in whom the results of operation are invariably better than in adults. Professor Kocher finally suggests a modification of the above-described method of operating.

May 19th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

A Step in the Right Direction.

THE conflict between medicine and law when, in criminal trials, the line has to be drawn between organic lesion (hereditary or acquired) and moral responsibility is of longer standing and of more embittered tenour in Italy than in any other State. To bring about, if not an *entente cordiale*, at least a *modus vivendi*, between the two interests, scientific and legal, has for some time been under serious consideration by leading minds in both professions, and, as a first step towards the desired consummation, the University of Siena has begun a series of inter-professional conferences between the students of the two faculties, culminating in visits to the penitentiaries, or criminal asylums, where the relations between organisation and crime can best be studied in the concrete. On Saturday, the 8th inst., Dr. Salvatore Ottolenghi, Professor of Legal Medicine in the Siena school, and Dr. Ugo Rossi, an expert in psychiatry, conducted forty students drawn in about equal numbers from the medical and juristic classes on a visit to Volterra, there to profit by the object-lessons in its famous penitentiary. The conversazione held that evening in the civic "Accademia," at which ideas on the subject of common interest were pleasantly exchanged, was followed next day by a prolonged inspection of the penitentiary itself—its laboratories, and its special wards and cells. Professor Ottolenghi, with the aid of the director of the institution, Signor Querci, and its resident physician, Dr. Verdiani, selected three typical specimens of the kind and degree in which physical or physiological deterioration may affect moral activity. The demonstrations were carried through three stages: (1) the "esame somatico" (examination of the bodily condition as a whole, (2) the "esame antropometrico" (the response to anthropometric tests), and (3) the "esame psichico" (the psychological examination). The findings under each of these heads were compared with the history, intellectual and moral, of the subject, and the conclusions, diagnostic and clinical, drawn with equal care, the whole exposition being effected with that method and lucidity of diction characteristic of the Sienese professor. At the banquet which followed Dr. Ottolenghi dwelt on the objects of the inter-professional excursion, auguring its successful imitation by other schools and anticipating the best results in practice from the experience conjointly shared by the future physician and the future barrister.

May 17th.

Obituary.

ADOLPHUS JOSEPH RICHARDSON, M.A., M.D. CANTAB., M.R.C.P. LOND.,

ASSISTANT PHYSICIAN TO THE SUSSEX COUNTY HOSPITAL.

BY the sudden death of Dr. Adolphus Joseph Richardson, at the age of forty-one years, the staff of the Sussex County Hospital and the medical profession in Brighton have lost one of their most able colleagues. Dr. Richardson, familiarly known by his friends and at the London Hospital as "Doctor Dolly," received his early education at the City of London School, where he gained the Mortimer Medal, and on leaving this school in 1875 he obtained an entrance exhibition, and afterwards a natural science scholarship at King's College, Cambridge. He graduated B.A. in the mathematical and also in the Natural Science Tripos in 1878; subsequently he took the degree of M.A. At the London Hospital he gained the Entrance Natural Science Scholarship, and subsequently the Letheby Chemical Scholarship. He held the resident appointments of house physician (under the late Sir Andrew Clark), house surgeon, and resident accoucheur. He also studied medicine in the University of Vienna. He was admitted a Licentiate of the Society of Apothecaries in 1881, a Member of the Royal College of Surgeons of England in 1882, and took the M.B. at Cambridge and became a Member of the Royal College of Physicians of London in 1883. He obtained the D.P.H. Eng. in 1888, and in 1889 proceeded to the M.D. degree at Cambridge. On a vacancy for assistant obstetric physician occurring at the London Hospital Dr. Richardson, though cordially supported by the professional staff of the hospital, failed to obtain the appointment. Hereupon he left the London Hospital and settled in practice at Hove, Brighton. In November, 1887, he was elected an assistant physician of the Sussex County Hospital. To the welfare of this institution he devoted much time, and he took a prominent part in the hospital extension scheme. He was appointed an Examiner in Medicine to the Society of Apothecaries of London, being at that time the only member of the board of examiners who was unconnected with one of the leading London hospitals, and it is within the knowledge of the writer that Dr. Richardson might have become a Fellow of the Royal College of Physicians of London but for the circumstance that he was not yet prepared to relinquish altogether general practice in favour of consulting work.

It is to be regretted that Dr. Richardson's early death has put an end to certain researches which he pursued through a course of several years—notably, the causation and the treatment of the anæmia and chlorosis so prevalent in and around Brighton. In this connexion he contributed a letter to THE LANCET on "Bruit de Diable in Chlorosis" in June, 1891, criticising a paper read before the Royal Academy of Medicine in Ireland, an abstract of which was published in THE LANCET the previous May, and dissenting from the conclusions arrived at by the writer. He also contributed articles to THE LANCET on Infantile Spastic Paralysis in 1888, on Antipyrin in 1889, and on a case of Tuberculosis with Jaundice and Ascites in 1894. He was a prominent member of the South-eastern Branch of the British Medical Association, at the meetings of which he read several important papers. His study of mathematics and natural science did not cease when he had taken his degree, and his constant endeavour was to keep himself thoroughly acquainted with the progress of science, with a view to bringing the knowledge thus acquired to bear on the practice of his profession—a profession he had chosen for himself and which he loved with an unselfish love.

At the time of his death he was president of the Hove Camera Club. With the application of the Roentgen rays to photography a new era opened for him; he at once adopted the principle and applied his photographic knowledge to the diagnosis and treatment of disease. But among those who knew him best Dr. Richardson will not be remembered solely for his intellectual attainments. He was a man of commanding physical presence, and believed in the necessity of training the body as well as the mind, he himself being no mean proficient in many sports. At Cambridge he was captain and stroke of his College boat and was one of the crew of the London Hospital Rowing Club in the first inter-hospital boat race. At one time he was well known in the

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hunting field with the South Down Fox-hounds, but through pressure of professional work he was obliged to relinquish this form of sport. Realising, however, that he needed some form of exercise he spent the few hours of leisure at his command in bicycling, generally accompanied by his wife, and carrying a camera. His photographic pictures of some of the most charming spots in the county of Sussex are among the results of these expeditions.

Dr. Richardson had only returned a few days from a holiday spent in Egypt when he considered it his duty to visit gratuitously a patient at Buxted, and he rode thither on his bicycle on Friday, April 23rd. He had travelled down Buxted Hill with his feet on the foot-rests and had proceeded some distance along the level road, when on attempting to take his pedals he was thrown violently to the ground. He sustained concussion of the brain, cuts over the bridge of the nose, and some laceration of the lips. A gentleman passing the spot in his carriage drove him to the house of Mr. Birt, of Uckfield, where he was hospitably received and professionally attended to. On the Saturday he was removed to a private house in the village, and on the next day he stated his belief that he would be attacked by tetanus, and that he should die on the following Sunday or Monday. Dr. Black, assistant surgeon of the Sussex County Hospital, who had come to Uckfield to attend his colleague in conjunction with Mr. Thomas (Mr. Birt's representative), endeavoured to dispossess him of this idea, but nevertheless procured the serum necessary for the antitoxic treatment of tetanus. On Thursday (the 29th) Dr. Richardson stated that he experienced some stiffness in moving his jaw, and though his medical attendants could discover no symptoms of tetanus Dr. Black yielded to the entreaty of his colleague and commenced the serum injection. From that time until Dr. Richardson's death Dr. Black practically never left his friend's side. Symptoms of tetanus were well marked on the Friday, and Dr. Richardson succumbed to the disease on Sunday, May 2nd. Dr. Richardson leaves a widow and one daughter.

The first part of the funeral service took place in Hove Parish Church, and the large attendance of mourners spoke eloquently for the esteem and respect in which Dr. Richardson was held by those amongst whom he had lived and worked. Practically the whole of the medical profession of Brighton, including the staff of the Sussex County Hospital, the chairman, the vice-chairman, and the committee, the matron, and many of the nursing staff of the hospital, and numerous friends and patients, were present. The interment took place at Portsmouth; Dr. Hollis and Dr. Black, as representing the Sussex County Hospital, attended at the grave side, where also were collected numerous friends who had travelled from London and elsewhere. The service at the Parish Church, Hove, was conducted by the Vicar of Hove (the Rev. Prebendary Peacey) and the Rev. A. D. M. Gowie (Curate of St. Patrick's, Hove), a personal friend of the deceased; that at Portsmouth by the Rev. E. Lunt, of Bath, and the Rev. A. D. M. Gowie.

JOHN ROBERTSON, M.B., C.M., B.Sc. EDIN.

ON April 6th Dr. John Robertson died quite suddenly at his residence, 30, Lauriston-place, Edinburgh, aged forty-seven years. The deceased was a native of Forfarshire and studied at the Universities of St. Andrews and Edinburgh, graduating at the latter as Bachelor of Medicine, Master of Surgery, and Bachelor of Science in 1876. His career as a student was exceptionally brilliant so much so, that he was known to his fellows as "the great medalist." After he qualified he practised for a short time at Langholme in Dumfriesshire, but soon removed to Edinburgh, where he was appointed district medical officer of the city of Edinburgh parish. For some time also he held the post of Lecturer on Diseases of the Eye at the Minto House School of Medicine, but relinquished the appointment as his time began to be more occupied by the increasing demands of a growing practice. He was popular and a hard worker, and his comparatively early death will be a source of sorrow to his many friends.

THOMAS FRANCIS FERNANDEZ, M.D. GLASG., F.R.C.S. ENG.

DR. FERNANDEZ died at his residence, Brookfield, Ross, Herefordshire, on May 4th, after a short illness. The deceased was born in London in 1815 and graduated M.D. Glasg. in 1837, taking the M.R.C.S. Eng. in the following year. He was admitted F.R.C.S. Eng. in 1852. Dr. Fernandez entered the Indian Medical Department in 1838, and after having seen twenty-five years' service retired in 1863. In 1867 he settled in practice at Ross. He held, among other appointments, that of medical officer of health for the district for several years and was highly respected in the neighbourhood.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination for the diploma of Fellow at a meeting of the Board of Examiners on Monday, the 10th inst.:—

Alex. Wathen Nuthall, M.R.C.S. Eng., L.R.C.P. Lond., Mason College, Birmingham, and St. Bartholomew's Hospital; Joseph Moreton, B.Sc., Vict. Univ., Owens College, Manchester; William Billington and Harry Ellis Brawn, Mason College, Birmingham; and Hubert Middlecott Fletcher, University College, Liverpool.

Fifteen gentlemen were referred back to their professional studies for six months.

Tuesday, 11th inst.:

Whitley Bland Stokes, M.R.C.P. Lond., M.D. T.C.D., Trinity College, Dublin, and St. George's Hospital; Herbert John Paterson, M.R.C.S. Eng., L.R.C.P. Lond., M.B., B.C. Cantab.; Llewellyn Caractacus Powell Phillips, M.R.C.S. Eng., L.R.C.P. Lond., M.B., B.C. Cantab., Cambridge University and St. Bartholomew's Hospital; George Constable Hayes, M.R.C.S. Eng., L.R.C.P. Lond., Melbourne University and King's College Hospital; Dudley D'Auvergne Wright, M.R.C.S. Eng., L.R.C.P. Lond., University College Hospital; Ernest Harding Freeland, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., Middlesex Hospital; Frank Barnes and John Bradley, Mason College, Birmingham; and William George Porter, Charing-cross Hospital.

Seven gentlemen were referred back to their professional studies for six months.

Wednesday, 12th inst.:

Graham Scales Simpson, L.D.S. Eng., Guy's Hospital; Frederick Fen Elwes, Middlesex Hospital; and Ernest Lewis Lilley, Charing-cross Hospital.

Thirteen gentlemen were referred back to their professional studies for six months.

Thursday, 13th inst.:

Ambrose John Rodocanachi, M.D., B.S. Lond., M.R.C.S. Eng., L.R.C.P. Lond., University College Hospital; Archibald Robert John Douglas, M.R.C.S. Eng., L.R.C.P. Lond., M.B., B.S Lond., and Frederick Charles Borrow, St. Bartholomew's Hospital; Herbert James Phillips, St. Thomas's Hospital; and Caleb Thomas Hilton, Guy's Hospital.

Eleven gentlemen were referred back to their professional studies for six months.

Friday, 14th inst.:

John James Evans, M.B. Edin., M.R.C.S. Eng., L.R.C.P. Lond., Edinburgh University and Mason College, Birmingham; Thomas Alfred Mayo, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; and Walter Bernard Secretan, Guy's Hospital.

Thirteen gentlemen were referred back to their professional studies for six months.

Monday, 17th inst.:

John Ford Northcott, B.A. Cantab., Cambridge University and Guy's Hospital; Peter Lewis Daniel, Charing-cross Hospital; and Sydney Richard Scott, St. Bartholomew's Hospital.

Thirteen gentlemen were referred back to their professional studies for six months.

Tuesday, 18th inst.:

James Morrison, M.D. Lond., M.R.C.S. Eng., L.R.C.P. Lond., St. Bartholomew's Hospital; Brennan Dyball, M.R.C.S. Eng., L.R.C.P. Lond., Walter Andrew Bowring, M.R.C.S. Eng., L.R.C.P. Lond., and John Leay Prain, M.R.C.S. Eng., L.R.C.P. Lond., St. Thomas's Hospital; and Douglas Phillimore Gabell, M.R.C.S. Eng., L.R.C.P. Lond., L.D.S. Eng., Charing-cross Hospital.

Eight gentlemen were referred back to their professional studies for six months. Of the total number of candidates at this examination—viz., 113—thirty-three passed and eighty were referred—i.e., nearly 71 per cent.

The following are the arrangements for the Final Examinations for the diploma of Fellow, for which forty-six gentlemen have entered their names:—

Monday, 24th inst.—Written Examination at the Examination Hall, 1.30 to 5.30 P.M.

Tuesday, 25th inst.—Clinical Examination, written and *vivâ-voce*, at the Examination Hall, 2.30 to about 6.30 P.M.

Wednesday, 26th inst.—Operations at the Examination Hall, 1.30 to about 6 P.M.

Thursday, 27th inst.—Surgical Anatomy at the Examination Hall, 2 to 4.15 P.M.

Friday, 28th inst.—Pathology, *vivâ-voce*, at the Royal College of Surgeons, 5 to about 7.30 P.M.

Saturday, 29th inst.—Pathology, *vivâ-voce*, at the Royal College of Surgeons, 5 to about 7 P.M.

All candidates will be required to attend on the first four days and on Friday or Saturday.

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ENLARGEMENT OF THE BRISTOL LUNATIC ASYLUM AT FISHPONDS.—At the quarterly meeting of the Bristol town council, held on May 11th, it was decided to erect four new wards at the Bristol Lunatic Asylum, Fishponds, to accommodate 150 additional female patients, also a nurses' annexe, a dining and recreation hall, and an isolation hospital. With these additions the asylum will afford accommodation for 391 males and 550 females. It is estimated that the improvements will cost £31,000. With these alterations Bristol will still have an economically constructed asylum, as the cost will be less than £210 per bed.

BRITISH HOME FOR INCURABLES.—The annual meeting of the British Home for Incurables was held at the City Terminus Hotel on May 18th, Earl Amherst presiding. The report showed that the work of the institution was being carried on satisfactorily, the subscriptions, donations, patients admitted, and annuitants in receipt of pensions all exceeding those of the preceding year. The annual subscriptions amounted to £3072, donations to £3988, and legacies to nearly £5000; the number of pensioners receiving £20 a year each was 300. There were sixty-five patients in the home at Streatham, and the home at Margate was well filled during the summer.

THE PLAGUE IN BOMBAY.—The Secretary of State for India has received the following telegram from the Governor of Bombay on the subject of the plague:—"Deaths from all causes in Bombay city for week ended May 14th, 543; reported plague deaths, 81. Poona city, for week ended May 14th, deaths from all causes, 31; reported plague deaths, 13; fresh attacks, 13. Total of Haffkine's inoculations: Bombay, 7775; elsewhere, 4184. Local cases for week ended May 14th: Surat district, 26 cases, 21 deaths; Thana district, 61 cases, 54 deaths; Kolaba district, 113 cases, 94 deaths; Kathiawar, 11 cases, 10 deaths; Cutch, 840 cases, 811 deaths; Kolhapur, 2 cases, 3 deaths; Baroda, 23 cases, 18 deaths; Palanpur, 2 cases, 3 deaths; no cases Ratnagiri, Poona, and Ahmedabad districts or Ahmedabad city during week. Two attacks, one death, amongst English people. Arrangements being made for plague hospitals and observation places suitable for the rainy season. During week plague deaths: Karachi, 44; Haldarabad, 11; Sukkur, 5; Rohri, 18."

LITERARY INTELLIGENCE.—The Rebman Publishing Company announce as in press and to be issued forthwith a new work on heart disease, entitled "Cardiac Failure and its Treatment, with especial reference to the use of Baths and Exercises," by Dr. Alexander Morison, physician to the Great Northern Central Hospital, London. The book will include an appendix by Medicinalrat Dr. Groedel of Bad Nauheim.—Messrs. Baillière, Tindall, and Cox, announce that Sir William Broadbent's new work on "The Heart" will be ready in a few days, and that they will also publish during the present month a new "Clinical Manual of Mental Diseases," by Dr. Clark, superintendent of the Lanark County Asylum; a work on "Disease of the Gall-bladder and Bile Ducts," by Mr. Mayo Robson, Hunterian professor at the Royal College of Surgeons; a translation of Professor Landau's work, "The History and Technique of Vaginal Operations," by Dr. Giles and Dr. Eastman; and a third edition of Dr. Ball's manual, "Diseases of the Nose and Pharynx."

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—A meeting of this society was held on the 18th inst. The following resolution was moved by Mr. Joseph Smith, seconded by Dr. Alderson, and carried unanimously: "That the committee of this society has heard with the deepest regret of the death of Mr. Walter Rivington, F.R.C.S., and begs to tender to the family its sincere sympathy and condolence. The committee feel that by the death of Mr. Rivington the Members of the College have lost one of their staunchest friends and one who for years was willing to assist them in every way, even to the sacrifice of his own personal interests." In moving the above resolution Mr. Smith said that Mr. Rivington's singular modesty of character and entire self-abnegation endeared him to all with whom he came into contact. Knowing how near to the heart of Mr. Rivington the reform of the College was, the Members ought to work with renewed vigour in the cause he loved so well, and not to cease from their labours until their object was attained. Let us all remember Mr. Rivington's motto, "Every man is a debtor to his profession."

CHURCH SANITARY ASSOCIATION.—At the fifth annual meeting of the Church Sanitary Association, held last week at 1, Hamilton-terrace, London, a motion recommending the substitution of the Scottish method of swearing with uplifted hand in place of the present system of kissing the Book, was proposed by Dr. Walsh, seconded by the Rev. J. V. Mason, and carried.

UNIVERSITY OF CAMBRIDGE.—The feeling against the proposal to admit women to titular degrees is growing in intensity, and is so strong among the resident teachers that Dr. Ryle, President of Queen's, Mr. J. W. Clark, Registrar, and the senior tutors of Caius and Clare Colleges, have felt constrained to withdraw their support and to urge the rejection of the Graces. Others on the Women's Committee are understood to be contemplating a like step. It is felt that the redress of a nominal grievance might be too dearly purchased if a majority of those who carry on the work of the University were forced by the non-resident voters into a position of embittered hostility to the cause of women's education. It is they who would be concerned with the practical realisation of any plan which might be imposed on the University by the vote of the Senate at large, and the present facilities for the real education of women, which rest solely on a basis of personal acquiescence on the part of the professors and other heads of departments, are in danger of serious curtailment if, as many think, the titular recognition accorded to women students should result in a serious diminution in the number of male undergraduates, who have the first claim on the resources of the University. The result of the voting will be made known about 4 P.M. on Friday afternoon.—Mr. W. N. Shaw, F.R.S., has been appointed University Lecturer in Experimental Physics.—At the congregation on May 13th Mr. T. A. Bowes, B.A., B.C., of Caius, was admitted to the degree of M.D.; Mr. C. F. Lillie, B.A., B.C., of St. John's, to the degree of M.B.; and Mr. F. H. Blatchford, B.A., of Sidney Sussex, to the degrees of M.B. and B.C.

DIPHTHERIA IN LONDON.—In the four weeks ended on March 27th last there had been notified in London 902 cases of diphtheria, yielding a weekly average of 226 cases, every sanitary area having been invaded. Not only so, but in five areas 335 cases had been notified, and the per case mortality rate for diphtheria in London, as judged by the registered deaths in the period, was 19 5 per cent. of notifications. The deaths had numbered 176, or 44 weekly. But these data were generally very favourable when placed beside those for earlier periods of the present year and of the closing months of 1896. In the four weeks ended on April 24th the improvement has been more than maintained. There were only 730 notified cases in London, although all save one of the sanitary districts were invaded. But only two of the districts had upwards of 50 cases each—these two having an aggregate of 127 notifications—whilst seven of the districts contributed upwards of one-third of the total notifications. In other nine districts only 25 notified cases were recorded in all. The average weekly number of notifications in London fell to 182. The registered deaths numbered 134, or 33 weekly, and the per case mortality, reckoned on these deaths, was 18 4 per cent. of notifications.—In the three several weeks completed on May 1st, 8th, and 15th the registered deaths from diphtheria in London have been 40, 26, and 42 respectively. The 26 deaths in the middle of the three weeks were 6 below the corrected decennial average for the eighteenth registration week of the period 1887-96, and all of them were of young persons aged under twenty years, only 1 being an infant and 8 over five years of age. In Paddington, Islington, and Lambeth severally 4 deaths occurred. But if the deaths in London from diphtheria were few, so also were those in the outer ring, only 2 being recorded in the suburban districts—namely, 1 in Chiswick and 1 in East Ham. Last week the registered deaths from the disease in London rose to 42, a number which was 9 in excess of the corrected decennial average for the particular week, 2 being of infants and 10 of young persons aged from five to twenty years, only 3 being of persons over the latter age. In both Islington and Bethnal-green sanitary areas 4 deaths occurred. Last Saturday left 761 diphtheria patients under treatment in hospital, the fresh admissions during the week having been 94 in number. In the outer ring there were 7 deaths in the week, single deaths belonging to Mitcham, Hillingdon, Acton, Willesdon, Stratford, and Plaistow sub-districts.

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PRESENTATIONS TO MEDICAL MEN.—Mr. William H. Davis, L.S.A., of Low Fell, Gateshead-on-Tyne, has received as an acknowledgment of his services the gift of a silver cake dish from the members of the Low Fell ambulance classes.—His Worship the Mayor of Southport (Dr. G. H. Pollard), distributed, in the Mayor's parlour, on the 5th inst. the certificates to successful members of the class held under the auspices of the Southport Centre of the St. John Ambulance Association, and after the distribution presented, on behalf of the locomotive department of the Lancashire and Yorkshire Railway Company at Southport, to Mr. Stanley Melville, L.R.C.P. Lond., M.R.C.S. Eng., a dressing case, in recognition of his gratuitous instruction.—On May 5th Mr. F. Charles Berry, B.A., M.D., B.Ch. Dub., of Burnham, Somerset, the honorary lecturer to the Technical Committee, was presented by the Rev. Gerald Pippin, on behalf of the members of the St. John Ambulance Class, with a handsome copy of Crookshank's "Bacteriology." Subsequently a corps of the St. John Ambulance Association was formed with Dr. Berry as president.—Mr. Walter Dickson, M.B. Edin., of Hungerford, has received a present of a case of pipes from the Hungerford Ambulance class, as a thank-offering for his honorary instructions on ambulance aid.—Mr. Meredith Young, M.B. Edin., D.P.H. Vict., on his leaving Brighouse, has been presented by the Hipperholme and Lightcliffe Ambulance Classes, in connexion with the St. John Ambulance Association, in recognition of his valuable services as their instructor, with a large Gladstone bag, bearing the following inscription: "Presented to Dr. Young by the Hipperholme and Lightcliffe Ambulance Classes, April 29th, 1897."

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Infant Life Protection Bill.

IN its passage through Committee in the House of Lords the Infant Life Protection Bill was considerably strengthened. It now provides not only that the person who keeps more than one child for hire or reward shall give notice of the fact to the local authority, but that the local authority shall from time to time make inquiry as to the state of things in this connexion within its jurisdiction. Further, it is laid down that the local authority shall see to the enforcement of the Act "by appointing inspectors, or arranging for the infants being visited by ladies nominated by the local authority and authorised by it in writing to enforce the provisions of this Act." Another change made was to substitute the board of guardians for the borough or district council as the local authority under the Act.

Venereal Disease amongst the Troops in India.

This subject was debated in the House of Lords on Friday, May 14th, and on Monday, May 17th. The debate was introduced by the Earl of Dunraven, who moved for the institution of an inquiry into the effect of venereal diseases "upon the forces of the Crown, the civil population and the native races within her Majesty's dominions and into the nature and results of the measures which are, or have been, in force in this and other countries for the prevention of such diseases." Among those who took part in the debate were the Archbishop of Canterbury, Lord Roberts of Kandahar, Lord Lister, who on this occasion delivered his "maiden speech," Lord Playfair, the Marquis of Lansdowne, and the Earl of Kimberley. The position taken by the Government was that the time is past for such an inquiry, that immediate action is imperative, and that the Government of India has the matter in hand, and is doing its best to grapple with it. In view of this, Lord Dunraven withdrew his motion at the close of the debate.

HOUSE OF COMMONS.

THURSDAY, MAY 13TH.

Midwives Registration Bill.

Mr. Lough, on behalf of Mr. Hazell, asked the First Lord of the Treasury whether his attention had been called to the Midwives Registration Bill now waiting its second reading in this House; whether he was aware that the Bill carried out the unanimous recommendations of the Select Committee of the House of Commons on the subject, and that Bills with this object had been introduced time after time into Parliament, but that they had been dropped through failure to secure Parliamentary time; and whether, in view of the large amount of mortality and widespread suffering both of mothers and of infants which the Committee reported, the Government would give time during the present session for the discussion of the Bill now before the House, and, if this were not possible, whether they could hold out hope of its being made a Government measure next session.—Mr. Balfour replied: The hon. gentleman asks me to give special facilities for the discussion of a private Member's Bill. Without expressing an opinion upon the merits of the Bill I think the House will see that it is a course to which the Government cannot consent.

The Salt Tax in India.

Sir William Wedderburn asked the Secretary of State for India, whether he was aware that there was a very general feeling in India that the high duty on salt should be reduced for this year at least, in view of the sufferings of the poorer classes from famine, the loss of revenue caused thereby being included in the cost of famine relief; whether he was aware that such reduction could be effected by an executive order of the Government of India; and whether he would direct the Government of India to issue such an order.—Lord George Hamilton, in reply, said he was not aware that there was any general feeling in India that the salt duty should be reduced for one year. He might, on the contrary, point out that any such limitations of the period of reduction would be practically impossible, because, if an abatement for one year only were announced, enough salt for consumption during a very much longer period would undoubtedly be drawn out of bond or otherwise passed into stock within the year. The price of salt was now for the majority of people in India lower than it was twenty, thirty, or forty years ago, and the incidence of the duty was about 4½*d.* per head per annum. In these circumstances, although he felt most deeply for the sufferings which a large number of Her Majesty's Indian subjects had been and were undergoing, he did not purpose to issue any orders with regard to the salt duty.

The Notification of Infectious Diseases.

Sir John Brunner asked the President of the Local Government Board how many local authorities had adopted the Notification of Infectious Diseases Act, and what proportion that number was of the whole number empowered to adopt it.—Mr. Chaplin replied: Excluding London, where the notification of infectious disease is compulsory under the Public Health (London) Act, 1891, the Local Government Board have up to May 11th, 1897, received information of the adoption of the Infectious Diseases (Notification) Act, 1889, in 654 rural districts out of a total of 671 rural districts, and in 904 urban districts out of 1088 urban districts. But in 49 of the 184 urban districts where the Act of 1889 has not been adopted the notification of infectious disease is compulsory under provisions in local Acts.

The Adulteration of Food and Drugs.

In reply to a question on the subject of the introduction of the promised Bill to amend the Sale of Food and Drugs Act, Mr. Balfour said he had been in consultation with the President of the Local Government Board, but he was not yet able to fix a day.

East London Water-supply.

Mr. Gray moved an instruction to the Committee on the East London Water Bill, giving them power to insert a clause providing that the term "the annual rateable value of the tenement supplied with water" shall have the same meaning in the districts outside the metropolis supplied by the Company as the term now has within the metropolitan area. Mr. Gray argued that people getting the same supply and living in the same neighbourhood should be charged the same rates for the water. Objection was taken to the motion on the ground that if carried, and this provision were inserted in the Bill, it would put the East London Company in a different and less favourable position than other water companies. Mr. Chaplin, in particular, argued that such a matter as this, if dealt with at all, should be dealt with in relation to all water companies. As the outcome of the debate, the motion was withdrawn.

Poor-law Officers Superannuation Act.

The Bill to amend the Poor Law Officers Superannuation Act of last year was, without debate, read a second time at this sitting.

FRIDAY, MAY 14TH.

Reformatories for Inebriates.

Mr. Balfour, replying to Dr. Farquharson, said he did not think that there was any probability of the Bill for the establishment of reformatories for inebriates being introduced during the present session.

The British Troops in India.

Mr. Stuart-Wortley asked the Secretary of State for India whether he had received any representative memorials or petitions from the general public on the subject of the proposals contained in his despatch of March 26th, 1897, for improving the health of the British troops in India, and if so whether he had any objection to make them public.—Lord George Hamilton said he had received only two memorials which could be held to be representative of general public opinion on the subject of his despatch regarding the health of the British troops in India, and he had no objection to making them public. A few memorials had also been received from local meetings and societies embodying protests against the action taken by Her Majesty's Government.

MONDAY, MAY 17TH.

Medical Establishment of the Foot Guards.

Dr. Farquharson asked the Under Secretary of State for War whether he was aware that the medical department of the Brigade of Foot Guards was short-handed, and that much difficulty was experienced in filling vacancies in consequence of insecurity of tenure and the expense of living in London; whether an official application was lately made by the commanding officers of the three regiments of Foot Guards for a return to the regimental system; and whether the War Office was prepared to give sympathetic consideration to this request.—Mr. Brodrick replied that there was at present one vacancy on the medical establishment of the Foot Guards. Appointments were made from medical officers who volunteered for the service, and as the appointments were for a fixed term of five years there was no insecurity of tenure. The officers commanding the regiments did recently suggest a return to the old regimental system, but under the existing system no difficulty had hitherto been experienced in finding candidates for the appointments.

University of London Bill.

Mr. Balfour, answering a question addressed to him by Mr. Brynmor Jones, said that the President of the Council hoped to introduce this Bill shortly in the House of Lords. There was some reason to expect that the difficulties which prevented it from passing last year would be removed and certain negotiations were going on with that object.

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TUESDAY, MAY 18TH.

Suggested Royal Corps of Army Surgeons.

Dr. Farquharson asked the Under Secretary of State for War, in view of the fact that in 1879 the War Office agreed to the issue of a warrant sanctioning the formation of a Royal Corps of Army Surgeons, whether he could state the reasons why legislative effect was not given to this recommendation: and, whether the present War Office was prepared to follow the example of its predecessor.—Mr. Brodrick said that a proposal to constitute the medical officers a corps of Royal Army Surgeons was made and considered in 1879, but was not adopted. He had explained already the reasons which make the Secretary of State unwilling to re-open the question.

Lock Hospital Patients.

Mr. Jeffreys asked the Under Secretary of State for War, whether he had received a copy of the unanimous resolution lately passed by the Committee of the Aldershot Lock Hospital to the effect that the attention of the Government should be called to the advisability of insisting on the patients in home lock hospitals being detained until free from infection, as in other dangerous infectious or contagious diseases; and whether he could take steps to carry out this resolution.—Mr. Brodrick replied that there was not now at Aldershot a lock hospital under military control, but the Government subscribed to a certain number of beds in the Hartley-Wintney and Farnham Union. A resolution from the committee of the hospital of the union had been received by the Secretary of State. While sympathising with the object of the resolution, the Secretary of State had no power to make regulations for the treatment of patients in union hospitals.

Water-supply in Rural Districts.

At this sitting Colonel Jo)rell introduced a Bill for giving facilities for a pure water-supply in rural districts.

WEDNESDAY, MAY 19TH.

Poor-law Officers Superannuation.

At this sitting an attempt was made to pass through the Committee stage the Poor-law Officers Superannuation Act (1896) Amendment Bill. When several members moved to report progress, Mr. T. W. Russell, Parliamentary Secretary to the Local Government Board, explained that last session the Government entered into an arrangement that nurses should not be included in the scheme of superannuation, but a mistake was made and they were included, and the whole object of the Bill was to remedy this mistake. The Bill, therefore, did not extend, but limited, superannuation, and in these circumstances he hoped the stage would not be opposed. This appeal was not, however, successful, and the stage had to be postponed.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ARMSTRONG, JOHN RICHARDSON, M.D. Edin., M.B, C.M., has been appointed Surgeon to the Cwm Park and Cwm Dare Pits, Ocean Collieries, Treorchy R.S.O., Glamorganshire, vice James Rowland James, deceased.

ARNISON, W. C., M.D. Durh., M.R.C.S., has been appointed an Honorary Consulting Surgeon to the Newcastle Royal Infirmary.

BLACKER, E., M.D. Durh., L.R.C.P. Edin., M.R.C.S., has been appointed a Physician to the Southampton Dispensary.

BRIGGS, R. W., M.B., C.M. Edin., L.R.C.P., M.R.C.S., has been appointed Resident Surgical Officer to the Birmingham and Midland Free Hospital for Sick Children.

BRUNYATE, T. T., M.D. Oxon, has been appointed Clinical Assistant to Out-patients at the Chelsea Hospital for Women.

BURTON, R. G., M.D. Edin., L.R.C.S., has been appointed Medical Officer of Health by the Greenford Urban District Council.

BYFORD, WILLIAM F., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior House Surgeon to the Chesterfield and North Derbyshire Hospital.

COX, R. F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Knighton Rural District Council.

CRONE, JOHN S., L.K.Q.C.P. Irel., and L.S.A., has been appointed Public Vaccinator for No. 1 District of the Parish of Willesden.

DALE, ARTHUR J., M.B., B.S. Durh., has been appointed an Honorary Medical Officer to the Stockton Hospital, vice H. Hind.

DAWSON, C. R., has been appointed a Dentist to the Southampton Dispensary, vice T. P. Payne.

DILLON, L. C., L.S.A., has been appointed an Assistant Medical Officer to the Bracebridge Asylum, Lincolnshire.

DURRANT, CHARLES E., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Assistant House Surgeon to the Taunton and Somerset Hospital, Taunton.

DYKE, THOMAS JONES, F.R.C.S. Eng., L.S.A., has been re appointed Medical Officer by the Gelligaer Rural District Council, South Wales.

FERNANDES, R. W. L., M.B., C.M. Edin., has been appointed Medical Officer for the Second Sanitary District of the Hemsworth Union.

FORBES, T. D., M.B., M.S. Edin, has been appointed First Assistant Medical Officer for the Workhouse Parish of Bethnal-green.

GENGE, G. G., M.B., B.S. Lond., D.P.H. Camb., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer for the Croydon Borough Hospital.

GOULD, J. E., M.D. Lond., L.R.C.P., M.R.C.S., D.P.H. Camb., has been appointed Medical Officer of Health by the Sheffield City Council.

GREEN, T. CAROLINE, M.D. Brux., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed a Medical Officer to the Lincoln County Asylum.

GRIMSDALE, T. B., M.D. Cantab., M.R.C.S., has been appointed an Honorary Medical Officer to the Liverpool Hospital for Women, vice J. B. Edis.

HIND, HENRY, F.R.C.S., M.R.C.S., has been appointed an Honorary Consulting Physician and Surgeon to the Stockton and Thornaby Hospital.

JEKYLL, L. N., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Leytonstone and Wanstead Sanitary District, vice C. R. Walker.

JONES, G. D. E., F.R.C.S. Eng., L.R.C.P., has been appointed Assistant Medical Officer for the Workhouse of the Township of Toxteth-park.

KELLY, BRUCE C., M.B. Edin., M.R.C.S. Eng., has been appointed Senior Resident Medical Officer to the Liverpool Hospital for Sick Children.

KISBY, GEO., L.R.C.P. Irel., L.F.P.S. Glasg., has been appointed Medical Officer for the Borough of Hyde, Cheshire, vice G. W. Sidebotham, resigned.

LLOYD, JORDAN, M.B., M.S. Durh., F.R.C.S. Eng., has been appointed an Honorary Consulting Surgeon to the Birmingham General Hospital, vice C. Pemberton, deceased.

MACFARLANE-AYLMER, A., L.R.C.P., L.R.C.S., has been appointed Honorary Medical Officer to the St. Mary's Hospital, Brighton, vice A. J. Richardson, deceased.

NICHOLSON, T. D., M.B., C.M. Edin., has been appointed Medical Officer for the Bolton and Thurnscoe Sanitary District.

PIRIE, W. R., M.B., C.M., M.A. Aberd., has been appointed Clinical Registrar in the Royal Infirmary, Aberdeen.

PRATT, ELDON, M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Assistant Resident Medical Officer at the Cardiff Infirmary.

READ, A., L.D.S. R.C.S., has been appointed an Honorary Dental Surgeon to the Western Branch of the Brighton, Hove, and Preston Dispensary.

ROWLANDS, WM. H., L.R.C.P., M.R.C.S., has been appointed Resident Medical Officer to the Birmingham and Midland Free Hospital for Sick Children.

SHARPE, S. H., M.B., B.S. Dubl., has been appointed a Medical Officer for the Jervis-street Hospital, Dublin.

SKINNER, D. S., M.D., M.R.C.S., has been re-appointed Medical Officer of Health for Willesden.

STEEN, R. H., M.B. Lond., has been appointed Senior Assistant Medical Officer to the Chichester Asylum.

STOTT, HUGH, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for East Sussex, vice E. F. Fussell.

SWEETEN, B., M.B., C.M. Edin., has been appointed Medical Officer for the Mexborough Sanitary District.

SWORDER, E. G., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Royal Sea Bathing Infirmary, Margate.

THOMAS, D. W., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior Assistant House Surgeon to the Huddersfield Infirmary, vice M. B. James, resigned.

THOMAS, J. T., L.R.C.P. Irel., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Counties of Leicestershire and Rutland.

THORNE, A., L.R.C.P. Lond., M.R.C.S., has been appointed Surgical Registrar to the Central London Throat and Ear Hospital.

TEBBITT, E. R., L.D.S. R.C.S., has been appointed Honorary Dental Surgeon to the Middlesex Hospital Convalescent Home, Clacton-on-Sea.

TREADWELL, O. F. N., M.R.C.S., has been appointed Medical Officer of H.M. Convict Prison at Portland, vice G. H. Lilley.

WADDY, F. H., M.D. Glasg., has been appointed a Junior Resident Assistant Medical Officer for the Workhouse, Glossop.

YOUNG, C. W., L.R.C.P. Lond., M.R.C.S., has been appointed a House Surgeon to the Stockton Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BRADFORD INFIRMARY.—Junior House Surgeon, single. Salary £50 per annum, with board and residence.

BRENTFORD UNION.—Assistant Medical Officer for the New Infirmary, single. Salary £100 per annum, with furnished apartments in the Infirmary, rations, washing, &c. Applications to the Clerk to the Guardians, Isleworth, Middlesex.

BRISTOL GENERAL HOSPITAL.—Casualty Officer. Salary at the rate of £50 per annum, with board and lodging.

BUCKINGHAMSHIRE GENERAL INFIRMARY, Aylesbury.—Resident Surgeon and Apothecary, unmarried. Salary £80 for the first year, with an advance of £10 per annum until it amounts to £100, with board, lodging, washing, coals and candles, and furnished apartments.

BURY INFIRMARY, Lancashire.—Junior House Surgeon. Salary £60 per annum, with board, residence, and attendance.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer to act as Locum Tenens for two or three months during the summer. Salary £2 2s. per week, with furnished apartments and board.

COUNTY ASYLUM, Whittingham, Preston.—Locum Tenens for about six months. Two guineas a week.

COUNTY LUNATIC ASYLUM, Lancaster.—Holiday Assistant Medical Officer for five or six months. Salary 2 guineas per week, with board, &c.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.—Medical Tutor. Salary £40 a year.

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EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Physician for six months. Board, residence, &c., provided, and an honorarium of 15 guineas granted conditionally.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon to the Out-patients (non-resident) for six months. Salary 25 guineas.

LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Honorary Assistant Physician.

LIVERPOOL NORTHERN HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with residence and maintenance in the house.

MERCER'S HOSPITAL, Dublin.—Vacancies on the Surgical and Medical Staff.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £60 per annum. Also Junior House Physician for six months. Board and lodging, including washing, provided. Applications to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Surgeon. Applications to the Secretary, Offices, 27, Clement's-lane, E.C.

ROYAL BERKSHIRE HOSPITAL, Reading.—House Surgeon. Salary £60 per annum, with board, lodging, and washing; also Assistant Medical Officer. Board, lodging, and washing provided, and an honorarium of £10 10s. awarded conditionally. The appointments will be for six months from Midsummer next.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Election of Professors and Lecturers.

ROYAL EAR HOSPITAL, Soho, London.—House Surgeon (non-resident) for six months. Honorarium 12 guineas.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at the rate of £40 per annum, with board, lodging, and washing.

ROYAL VICTORIA HOSPITAL, Bournemouth.—Ophthalmic Surgeon.

ST. PETER'S HOSPITAL, Henrietta-street, Covent-garden, London.—House Surgeon for six months. Salary at the rate of £100 a year, with board, lodging, and washing.

SUNDERLAND INFIRMARY.—House Surgeon. Salary £80, rising £10 annually up to £100, with board and residence. Also House Physician. Salary £80, rising £10 annually to £100, with board and residence.

SUSSEX COUNTY HOSPITAL, Brighton.—Assistant Physician.

WOOLWICH UNION.—Resident Assistant Medical Officer at the Infirmary, Plumstead, single. Salary £90 per annum, with apartments, rations, and washing. The appointment subject to deductions under the Poor-law Officers Superannuation Act. Applications to the Clerk to the Board, Union Offices, Woolwich.

Births, Marriages, and Deaths.

BIRTHS.

CARLESS.—On May 11th, at Welbeck-street, W., the wife of Albert Carless, M.S., F.R.C.S., of a son.

COX-MOORE.—On May 15th, the wife of Edward W. Cox-Moore, L.D.S., of Bloomsbury-square, W.C., and Sevenoaks, of a son.

CROKE.—On May 13th, at Welford House, Victoria-avenue, Harrogate, the wife of T. J. Croke, L.R.C.P. Irel., of a son.

DICKINSON.—On May 14th, at 33, Sloane-street, S.W., the wife of T. Vincent Dickinson, M.D., M.R.C.P. Lond., of a daughter.

FERGUSON.—On May 12th, at 51, Moffatt-road, Thornton Heath, Surrey, the wife of Robert J. Ferguson, M.D., of a son.

GORDON.—On May 16th, at Union-street, Aberdeen, the wife of John Gordon, M.D., of a daughter.

PITT.—On May 11th, at Portland-place, W., the wife of G. Newton Pitt, M.D., F.R.C.P., of a daughter.

TRAVERS-SMITH.—On May 15th, at Elmhurst, Copers Cope-road, Beckenham, the wife of V. H. Travers-Smith, M.D., of a son.

WILKINSON.—On May 16th, at Harcourt-road, Sheffield, the wife of George Wilkinson, B.A., F.R.C.S., of a daughter.

MARRIAGES.

COLLINS—NETTELFIELD.—On May 12th, at St. Augustine's, Kilburn, George Fletcher Collins, M.R.C.S., L.R.C.P., D.P.H., late Surgeon Royal Navy, to Fanny, only daughter of the late Richard Clark Nettelfield, of Stamford-hill.

WESLEY—WATKINSON.—On May 15th, at Hinde-street Chapel, Manchester-square, London, Frank William Wesley, M.D., B.S. Lond., of West Bridgford, Nottingham, to Florence, daughter of the Rev. W. L. Watkinson, of Brondesbury.

DEATHS.

BOYD.—On May 9th, at Westbourne-grove, Bayswater, Robert Boyd, M.D., aged 91 years.

KELLY.—On May 10th, at Raleigh-gardens, Brixton-hill, S.W., Frederick Kelly, F.R.C.S.

MAPLESON.—On May 12th, at Nottingham-place, W., Horsley Thomas Mapleson, M.R.C.S. Eng., L.S.A., aged 63 years.

ROBERTSON.—On May 18th, at Exmouth, Charles Alexander Lockhart Robertson, M.D. Cantab., F.R.C.P.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (24th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (26th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (27th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (29th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (25th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Mr. H. H. Clutton: (1) Case of Subclavian Aneurysm successfully treated by Ligature; (2) Case of Pharyngeal Abscess, Hæmorrhage, Ligature of Carotid Arteries.—Mr. W. Haward: On Irreducible Hernia.

WEDNESDAY (26th).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4.30 P.M. Annual Meeting and Conference. Discussion on the Influence of Light and other Forms of Radiant Energy on the Skin and Tissues, to be introduced by Dr. R. L. Bowles. Exhibition of Cases, Drawings, and Specimens.

FRIDAY (28th).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Annual General Meeting. Election of Officers for Session 1897-1898. Mr. A. P. Gould: A Case of Pancreatic Calculus.—Dr. W. Ewart and Dr. H. D. Rolleston: A Case of Intra-Cardiac Thrombus, arising from the Fossa Ovalis, projecting through the Mitral Orifice, and giving rise to signs of Mitral Stenosis.—Dr. G. B. Hunt: A Case of Dissecting Aneurysm. Rupture into both Pleural Cavities.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (24th).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Sprue.

LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. McNeill Whistler: Demonstration of Cases.

TUESDAY (25th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Ringworm and Favus.

ROYAL INSTITUTION.—3 P.M. Dr. E. H. Starling: The Heart and its Work.

WEDNESDAY (26th).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Filariasis.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Sources of Water.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Maguire: Physical Signs of Excavation of the Lungs.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. S. Taylor: Surface Anatomy of the Lower Extremity.

BANQUET to be given to Lord Lister by his former House-Surgeons, Clerks, and Dressers at the Café Royal, Regent-street, at 7.30 P.M.

THURSDAY (27th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: On Sugar and other Reducing Substances found in the Urine of Disease.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. S. Mackenzie: Clinical Lecture.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. S. Taylor: Surface Anatomy of the Head and Neck.

EAST LONDON HOSPITAL FOR CHILDREN.—3 P.M. Mr. L. A. Dunn: Tuberculous Inflammation of the Joints in Children.

FRIDAY (28th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Tuberculosis and Leprosy.

ROYAL INSTITUTION.—9 P.M. Prof. H. Moissan: The Isolation of Fluorine (with Experiments).

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 20th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 14	30·28	N.W.	50	44	96	59	43	...	Cloudy
" 15	30·39	E.	56	50	99	64	50	...	Hazy
" 16	30·47	N.E.	58	50	108	68	43	...	Fine
" 17	30·11	E.	57	52	114	76	49	...	Cloudy
" 18	30·05	N.E.	60	55	120	77	52	...	Fine
" 19	30·12	N.E.	53	48	112	69	47	...	Fine
" 20	30·03	N.E.	51	47	112	67	43	...	Fine

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

VICARIOUS RESPECT.

WE have received a copy of a Georgetown paper from which it would seem that the impending presence of the "Rev. Dr. John E. London, M.R.C.S.E., L.R.C.P.E., F.C.S., &c.," at the dinner to be given to Lord Lister by his junior colleagues has created a totally unnecessary excitement in the British Guiana Congregational Union. Mr. London will, we hope, point out to the somewhat fulsome gentlemen who have recently presented him with addresses that the occasion has been designed to honour Lord Lister, and not to honour his clinical clerks and dressers. The Union is wrong in supposing that the presence of Mr. London at the complimentary dinner to the President of the Royal Society has been sought because of any remarkable scientific lustre that would so accrue to a "great gathering of the learned medical fraternity." To allow such bosh to be circulated by the press without contradiction is to sanction gross advertisement at the expense indirectly of brother practitioners, the sooner the Rev. Mr. London repudiates the vicarious respect he has been receiving the more entirely will he be conforming with professional nicety.

C. M.—We do not recommend medical practitioners, specialists or others. The matter is one requiring no assistance from any specialist; our correspondent's usual medical attendant can advise him quite adequately.

THE ADULTERATION OF CONDENSED MILK.

DR. F. W. FORBES ROSS states, in the current number of *Treatment*, that a vegetable product, known commercially as the "tiger nut," is being largely imported for the purpose of adulterating the cheaper brands of condensed milk. It has the appearance of a rhizome, is no larger than the last joint of the little finger, resembles a diminutive root artichoke, and is not unpleasant to taste, the flavour being strongly suggestive of condensed milk.

"IS YOUR DOCTOR SOUND?"

THIS is the question at the head of a letter addressed to the readers of a little monthly paper called the *Animal's Friend*. The query does not refer to the medical man's constitution or morals—these are altogether subsidiary matters to the *Animal's Friend*—it refers to his attitude on the vivisection question. The writer, who dates his letter from a clergyman's house, makes a proposal which would, we are told, "be of great use," that the readers of the *Animal's Friend* should not "call in any medical man known to be a vivisectionist or a pro-vivisectionist, and if the doctor we have been employing is such" we should "dispense with his services, telling him the reason," and "summon another who is an anti-vivisectionist in his place." Knowledge, experience, and practical skill, observe, are to be quite secondary, and the issues of life and death are to be confided to anyone who will declare himself an anti-vivisectionist! If ever a writer has let his zeal run away with his pen (and the pronoun "his" includes "her"), it is the uncharitable idiot who has written propounding this question. But we wish him no worse than this, that, being laid upon a bed of sickness—a thing which happens even to those hysterical persons who believe that medical men experiment with animals out of wanton delight in torture—he may, for conscience' sake, dismiss an able attendant who understands his constitution and summon to his bedside a hysterical herbalist.

M.D.—All foreign practitioners in Brazil have to pass the examinations of the whole programme of studies adopted in the School of Medicine.

A REMARKABLE STUDENT.

WE quote the following from the *Indian Medical Record*:—

> "A student, named Borysik, has just passed the final examination at Warsaw University qualifying him to practise as a doctor of medicine in Russia. Borysik was born in 1822, and was educated at Suvalk Higher Grade School with a view to becoming a medical man. After passing his matriculation lack of funds prevented him from at once proceeding to the university, and he was compelled to work as a tutor for twenty years in order to save enough money to enable him to continue his studies. At the end of that time he presented himself at Warsaw Medical Academy, and passed the entrance examination with distinction. Before he could begin his studies the Polish rebellion of 1863 broke out, and Borysik, who was now forty-one years of age, threw himself into the movement with all the enthusiasm of a youthful revolutionist. The revolt was suppressed, and Borysik was exiled to Siberia, where for thirty-two years he underwent hard labour in the silver mines. In 1895 he received a free pardon and returned to Warsaw. In spite of his age and the hardships he had endured Borysik had lost none of his enthusiasm for medical work, and took up his studies where he had left them off in 1863. After a two years' course this remarkable man has now, at the age of seventy-five years, passed the final medical examination with honours and will begin to practise in Warsaw."

Mr. Lyon Falkener will find that we have commented adversely upon this identical circular.

A NEW TREATMENT FOR SPINAL CURVATURE.

DR. A. CHIPAULT, in the *Journal de Clinique et de Therapeutique Infantile*, April 29th, 1897, claims to have devised a new and effective form of back-splint for the treatment of spinal curvature. It consists of a plank of stout oak perforated by an aperture to allow of the passage of fæces and fixed on the back of the patient by means of bands at the level of the thorax, below the axillæ, above the pelvic bones, below the knees, and over the arch of the foot. Along the sides of the boards are two rails, upon which a cylinder is fixed sufficiently movable to allow two concave padded metallic plates to be adjusted where needed to the sides of the trunk of the body Once applied these are locked and thus retained in position. The apparatus is said to be easily constructed, cheap, and capable of adjustment to any bed. It can, when fitted with handles, be carried about without jolting the patient. The inventor advises its employment as a gentle and gradual corrective of the less extreme degree of Pott's curvature and of scoliosis, three metallic plates corresponding to the extremities of the concavity and to the convexity being used in the latter case. Manual pressure under chloroform is advised in some cases as a precursor to the splint, with a view to reduction at one time, if possible, of the curve. It is admitted, however, that the measures above described are useless in the more advanced cases associated with ankylosis. This new therapeutic method is still on its trial, and its practical value will probably continue for some time to be an unknown quantity. Its utility may possibly come to be confirmed by other observers besides its originator. If so, another gain will have been registered in the domain of surgery. Meanwhile, we must express a hope that operators will always be inspired by a wisely conservative regard for those important structures which are placed within the curved spine and contorted ribs.

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"POPULUS VULT DECIPI."

A BORDEAUX medical journal is responsible for the following amusing if not instructive anecdote: "A certain individual who called himself Alexis, having been accused of signing prescriptions, besides otherwise trespassing on the prerogatives of the medical fraternity, the police commissary of the district—which is described as one of the most *selected* in the French capital—received instructions to investigate the charge and, should he find cause, arrest the delinquent. The official accordingly proceeded to the house where it was said that the medical canons were habitually violated, and a single glance sufficed to satisfy him that he had surprised his quarry *in flagrante delicto*. Magnificently installed in a suite of sumptuously-furnished apartments, with three spacious waiting-rooms filled to overflowing by well-dressed and evidently moneyed crowds of patients, the reputed quack submitted to the intrusion of his inauspicious visitor with dignified calmness. 'You will continue to admit callers,' he observed to his janitor as he was preparing to accompany the commissary to the police station, 'for I shall be back in a few minutes.' The officer did not actually smile when he heard this remark, for while on duty the smiles of an *agent de police* are as rare as black swans, but the case was as clear as daylight, and a close observer might have detected some indications of incredulous merriment near the corners of his mouth. 'You will do me a very great favour, sir,' said the accused when they had reached their destination, 'by according me a moment's private audience.' 'For what purpose?' inquired the man of law. 'There is something most important that I wish to communicate to your ear alone,' replied the other. The commissary, for all his apparent sternness, had an obliging disposition. 'Clear the room,' he exclaimed, and the pair were left free from witnesses. Upon this M. Alexis drew forth his pocket-book, and extracting therefrom a parchment diploma he spread the document out before the eyes of his astonished interlocutor. 'I beg of you,' he cried in imploring accents, 'not to betray me. I should lose every single patient I have got if they knew that I was a properly qualified practitioner. When first I obtained my degree I set up in the Faubourg Saint-Antoine, fixing a fine brass plate on my door and carrying out all details *secundum artem*, but in six months I had spent all my money and was starving. I consequently removed the plate, suppressed my surname, and established myself yonder as a bone-setter. Since then my affairs have gone on wheels, and I am in a fair way of making my fortune. I can advertise freely now, and knowing something about the business have succeeded in avoiding fatal mistakes. I implore you again to be merciful.' For a little while the commissary felt perplexed, but his doubts did not last long. When a *rebouteur* posed as a medical man it was his duty to pursue him, but the converse did not hold good. There was no law to prevent a practitioner turning bone-setter if he liked; and so M. Alexis, the qualified quack, continues to flourish."

We manage things better than this in England in some ways, though worse in others. With us the qualified quack would soon cease to enjoy any immunity conferred by his qualifications, as the General Medical Council would remove him from the register. But, alas, with us a quack requires no diplomas or degrees to protect him. He enjoys perfect freedom to swindle to his heart's content.

X. Y. Z.—In emergencies it has often to be done.

MEMENTOES OF GENERAL GRANT'S LAST ILLNESS.

"DR. GEORGE F. SHRADY, the editor of the *New York Medical Record*, who was Grant's medical attendant during his last illness as well as his close personal friend, has in his possession some interesting mementoes of the dead soldier, which," writes a correspondent, "I have been privileged to see. Amongst these are the hypodermic syringe made expressly for use in the General's treatment, and the pen with which he wrote the copy of most of his memoirs, and the original sheet of paper on which was written the 'famous Easter message' sent out by General Grant on the last Easter day of his life. This message was taken down in shorthand by Dr. Shrady from General Grant's dictation and runs as follows: 'Say that I am very comfortable. I am grateful for the sympathy that has been expressed for me. I wish you would say to the people that I am very much touched by, and very grateful for, the sympathy and interest manifested for me by my friends. You may also say—and by those who heretofore have not been regarded as such. Well, say this for me. I desire the goodwill of all, whether heretofore friends or not. Is that enough?' This letter was afterwards revised and sent out in the form of a bulletin, thus: General Grant has just awakened from a short nap and expresses himself as being very comfortable. He wishes it stated that he is very much touched by, and very grateful for, the sympathy and interest manifested for him by his friends and by those who have not heretofore been regarded as such. He says, 'I desire the goodwill of all, whether heretofore friends or not.'"

THE "LANOID" BANDAGE.

MR. T. I. WALLAS, of 491, Oxford-street, W., has forwarded to us a new kind of elastic bandage, which evidently possesses some novel and advantageous features. Unlike the ordinary pattern of elastic goods, it contains no indiarubber, but is a pure wool web bandage with "stretch" woven across the width, so that it yields only very little in the direction of its length, but can be easily pulled out to more than double its width, resuming its original form when released. It therefore adapts itself easily to the varying contour of the limb to which it may be applied, as in cases of varicose veins, rheumatism, sprains, &c., and is less liable to slip than ordinary roller bandages are. It is also easily washed. It is made in lengths of three yards and six yards, three inches wide for ordinary purposes and six inches wide for abdominal use.

Inquirer.—We cannot trace any such article. If our correspondent will consult THE LANCET of Aug. 1st, p. 309, Oct. 31st, p. 1248, and Dec. 12th, p. 1727, all in 1896, he may find what he is seeking.

"A MEDICAL OFFICER'S CHALLENGE."

WE quote the following from the *Birmingham Gazette* of May 12th:—

"On Wednesday night, at the Stone Urban Council meeting, the question of the medical officer's salary was re-considered. The council had re-appointed Mr. E. Fernie at an annual salary of £25, but the Local Government Board had written saying they did not consider this adequate remuneration for the discharge of the important duties.—A smart verbal passage-at-arms ensued between the medical officer and Councillor Smith. The latter urged that the outworkers in the local factories had decreased, whereas Mr. Fernie clearly proved that they had increased, and said that this was a ground on which he based his application for an increase of salary.—Councillor Smith continued to criticise, when the medical officer said, 'Well, I will make you a challenge, I can afford it. I'll give a guinea to the North Stafford Infirmary for every name wrong in the list (for 1896) if you'll give half-a-crown.' Councillor Smith did not accept the challenge. The Council passed a resolution increasing the medical officer's salary to £35 per annum."

Cantab.—It appears that there is no body "concerned in sending out medical men to the leper islands in the South Sea," neither has there been any recent literature published dealing with the condition of the lepers in these places. It is, of course, well known that leprosy is abundant in many of the islands, and it is feared that it is increasing in some of them.

A VERY QUESTIONABLE JUBILEE PROPOSAL.

A WRITER in the *Morning Post*, not content with the Prince of Wales's fund for hospitals and the Princess of Wales's fund for the poor in slums, proposes the establishment of another Jubilee hospital for poor gentlemen, and also a home for chronic invalids of this class—to wit, members of the professional classes. Surely this writer has a vein of humour in his composition and aims a sly blow at the overdone charity of the day. If this is not the true theory of his letter let us remind him that Jubilee hospitals have not been an unmixed success, and that we are a long way off the time when the classes he names require to be treated as if they were paupers. To read such letters we should think that all natural affection was dying out of the whole classes of the population hitherto independent, and that it was to be replaced by a new and doubtful charity.

M.B. (113, Grove-road, Walthamstow) would be glad to hear of an institution where a mentally deficient child could be received for treatment at a moderate cost.

During the week marked copies of the following newspapers have been received:—*Doncaster Chronicle, Liverpool Courier, Folkestone Chronicle, Durham Advertiser, Bristol Times, Brighton Gazette, Bradford Observer, Leicester Post, Accrington Observer, Chatham News, Architect, South Wales Daily News, Kentish Express, Barnet Press, Times of India, Pioneer Mail, Manchester Guardian, Builder, Derby Express, Birmingham Post, Bristol Mercury, Huddersfield Chronicle, East Anglian Daily Times, Wigan Examiner, Liverpool Daily Post, Newcastle Chronicle, Leeds Mercury, Scotsman, Sussex Daily News, Eastern Morning News, Sheffield Telegraph, Yorkshire Post, Citizen, Sanitary Record, Glasgow Herald, Worthing Intelligencer, Mining Journal, Reading Mercury, Local Government Chronicle, Hertfordshire Mercury, Weekly Free Press and Aberdeen Herald, Gazette (Montreal), Family Herald and Weekly Star (Montreal), City Press, Daily Free Press (Easton, Pa.), Public Health Journal (New York), Citizen (Gloucester), Surrey Advertiser, Local Government Journal, Banffshire Journal, Penrith Observer, Inverness Courier, Perth Constitutional, Falkirk Herald, Clifton Society, Nairnshire Telegraph, Isle of Man Daily Times, The Bailie, Midland Evening News, West Middlesex Herald, City of Ely Standard, Long Eaton Pioneer, Gloucester Journal Prescot Reporter, &c., &c.*

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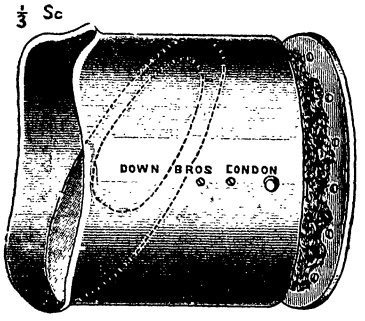
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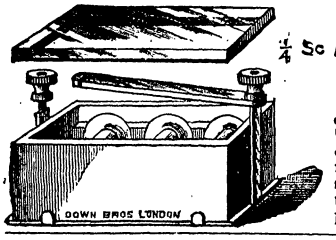
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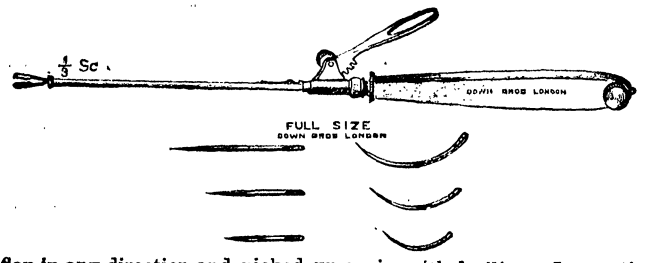
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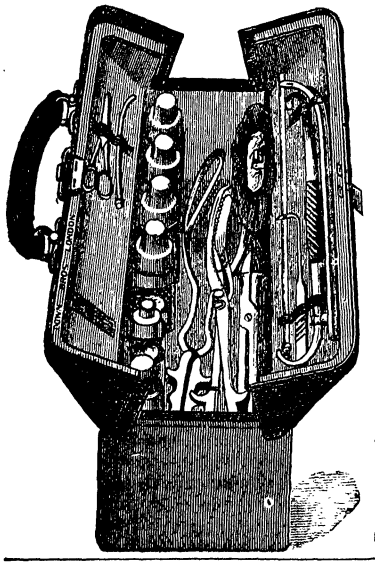


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ABSTRACT OF

Lectures

ON

DISEASES OF THE GALL-BLADDER AND BILE-DUCTS.[1]

Delivered at the Royal College of Surgeons of England on March 8th, 10th, and 12th, 1897,

BY A. W. MAYO ROBSON, F.R.C.S. ENG.,

HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY, ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LECTURE I.

Delivered on March 8th.

MR. PRESIDENT AND GENTLEMEN,—Had time permitted the anatomy of the gall-bladder and bile-ducts would have formed a subject of sufficient interest for my first lecture but the number and importance of the matters I propose to consider clearly demonstrate this to be an impossibility, some of the more important anatomical points, however, I must not omit.

Congenital malformations.—There is apparently no part of the biliary apparatus, except the liver, which may not be absent. While it is not to be wondered at in the case of the gall-bladder and cystic duct since they are normally wanting in certain animals and are frequently obliterated by disease in the human subject, it affords serious food for thought to find that life has been possible for six months where even the hepatic and common ducts are represented by mere fibrous cords. Hour-glass shaped gall bladder is probably not uncommon, for though I have found only one specimen in the museums, and that at Middlesex Hospital, I have myself operated on two cases in which the distal part of the gall-bladder contained calculi and was connected with the gall-bladder proper by a narrow neck. On numerous occasions I have found the ordinary position of the gall-bladder vacant, and the shrunken viscus to be situated near the transverse fissure of the liver under cover of the pylorus, with the transverse colon adherent over it. On two occasions I have found the gall-bladder, containing gall-stones, displaced very much to the right; in one instance the liver was almost bifid, the left lobe predominating and pushing the right, and with it the gall-bladder, so far round as to make it project into the lumbar region. In palpating the common duct for gall-stones the surgeon frequently feels several more or less hard nodules within the free border of the lesser omentum, by the side or in front of the common duct, and unless it be borne in mind that three or four lymphatic glands normally exist here they may be apt to mislead, especially as they are not unusually considerably enlarged where there is gall-stone irritation. The large peritoneal pouch bounded above by the right lobe of the liver, below by the ascending layer of the transverse meso-colon covering the duodenum internally, externally by the peritoneum lining the parietes, posteriorly by the ascending meso-colon covering the kidney, and internally by the peritoneum covering the spine, has been long recognised, but perhaps not sufficiently appreciated, in gall-bladder surgery. Mr. Rutherford Morison drew attention to it in 1894.[2] He places such reliance on the ease and safety with which it can be drained that he does not advocate much time being spent in suturing incisions in the gall-bladder or bile-ducts. It is interesting to note that it is capable of holding nearly a pint of fluid before it overflows into the general peritoneal cavity. A deformity of the liver, congenital or acquired, may at times lead to a difficulty in diagnosis, or in treatment. I refer to a tongue-shaped prolongation of the right lobe, which may project below the costal margin for several inches and simulate a tumour of the liver or an enlarged gall-bladder. Professor Riedel has described it, and the projection is sometimes known as Riedel's lobe. It is said to be uniformly due to cholelithiasis, but in one case at least in my experience i was not associated with gall-stones.

I propose to consider my subject under four headings: (1) inflammatory affections; (2) tumours; (3) the surgical treatment of gall-stones; and (4) intestinal obstruction dependent on gall-stones.

Catarrh of the gall-bladder and bile-ducts.—The larger bile-ducts and the gall-bladder, being lined with mucous membrane, are, like other mucous passages, subject to catarrh, which may be acute or chronic. As, however, acute and chronic catarrhal jaundice are subjects of medical rather than surgical interest, I can only briefly consider them on account of want of time. Acute catarrh is supposed to give rise to the evanescent form of icterus known as catarrhal jaundice, which, more frequently occurring in young persons, usually comes on as a sequence of dyspepsia or as a result of exposure to cold, and is ordinarily unaccompanied by pain or serious illness. When it is borne in mind that the bile-ducts have only a limited calibre, that the mucous lining is capable of swelling so as to occlude the passage, and that the secretion of bile takes place under very low blood tension (according to Naunyn 110 to 220 mm. of water), and is, therefore, arrested by slight backward pressure, it is easy to comprehend how catarrh in this situation should lead to jaundice, though absolute proof of the correctness of the theory is wanting, since simple catarrhal jaundice furnishes no post-mortem subjects. With regard to its etiology, an extension from the duodenum is probably the usual cause of acute catarrhal jaundice, but exposure to cold, extension of inflammation from the liver, carcinoma of the liver, gall-stones, hydatids, pneumonia, and other acute inflammations must be mentioned as causes of catarrh, direct or indirect. Dr. Murchison gives gout and syphilis as causes, and Dr. Fagge includes under this heading jaundice due to fright and that occurring in epidemics. Although it is well known that in cancer of the liver jaundice is a very variable sign, it is not always recognised that the icterus is at times dependent on the associated catarrh, which may be relieved by treatment, though the original disease persists.

Chronic cholangitis or chronic catarrh of the bile-ducts may be simply a sequel to the acute form, and may then give rise to a more or less persistent jaundice leading to a suspicion of serious organic disease. Although there are dyspeptic symptoms due to the associated gastro-intestinal catarrh, with jaundice and some loss of weight, the retention of strength and the absence of serious sequelæ, such as ascites and hæmorrhage, generally enable a good prognosis to be given, especially as the symptoms usually yield to proper treatment. Catarrh of the bile-ducts probably always accompanies jaundice from whatever cause, and as Dr. Moxon has pointed out, a colourless mucus is always found in the bile-ducts when an obstruction in the common duct is complete. A search through the pathological records of Guy's Hospital for twenty years failed to discover any exception to this rule. When the obstruction is only partial, the mucus may be well charged with bile, as the backward pressure is not sufficient to stop the secretion and pouring out of bile into the ducts. Gall-stones are probably always accompanied by catarrh, which, giving rise to the formation of thick ropy mucus, leads to attacks of pain when passing, and it seems not unlikely that some of the minor seizures of pain are of this nature. Although the jaundice in cholelithiasis is usually produced by a gall-stone obstructing the common or hepatic ducts, I am convinced that in many cases jaundice is present when the concretion is in the gall-bladder or in the cystic duct, the obstruction to the flow of bile being caused by an inflammatory swelling of the mucous membrane of the bile channels caused by extension from the seat of obstruction. Riedel[3] states that about two-fifths of the causes of jaundice in cholelithiasis arise in this way. The treatment of chronic catarrhal jaundice is at first medical, and if the disease prove obstinate a course at Harrogate or Carlsbad will be likely to do good if the ailment be functional, but that failing, the question of some organic cause that may be removable by surgical treatment should be considered. Dr. Thudichum, describes a catarrh of the finest ramifications of the bile ducts which causes their lining to be shed in the shape of biliary casts. He considers that these often form the nucleus of gall-stones where the catarrh is associated with decomposition of bile. This has been termed by Meckel "lithiatic catarrh"; perhaps a better term is desquamating anglo-cholitis or stone-forming catarrh

[1] Mr. Mayo Robson circulated at his lectures a table of 170 operations on the gall-bladder and bile ducts, performed by himself, in which the particulars of each case were recorded. We regret that want of space prevents its reproduction in our columns.

[2] Brit. Med. Journ., March 3rd, 1894.

[3] Gumprecht, Deutsche Medicinische Wochenschrift, 1895, No. 15.

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of the bile-ducts. It doubtless has great etiological importance in reference to gallstones, especially when associated with decomposition due to the presence of micro-organism in the stagnant fluid in the ducts.

Catarrhal cholecystitis, or chronic catarrh of the gall-bladder without jaundice, forms a distinct and definite disease, and I have seen several cases in which cholelithiasis has been diagnosed and operation advised; but where neither the gall-bladder nor ducts contained anything firmer than thick, ropy mucus, which was apparently the cause of painful contractions of the gall-bladder simulating gall-stone seizures. In one case of this kind, in a woman, aged sixty years, on whom I operated with Mr. Clifton of Sheffield, the gall-bladder contained bile mixed with thick, ropy mucus. There were no other signs of disease, but the gall-bladder was very large and pouched and the mucous membrane thickened. Cholecystotomy was performed and the drainage was continued for a fortnight, after which the wound was allowed to close. The patient after two years continues well. Dr. Byron Robinson[4] describes a case in which there were attacks of pain like cholelithic seizures, which he thought were dependent on kinking of the common bile duct producing obstruction to the flow of bile into the duodenum, but which I think may be more easily explained on the hypothesis that it was a case of chronic catarrhal cholecystitis. It came on six months after the removal of gall-stones from the gall-bladder. On opening the abdomen the gall-bladder, though free from stones, was found to be considerably enlarged, although the duct was patent, as proved by syringing water through it into the duodenum. Cholecystotomy resulted in recovery. In these cases the gall-bladder is usually distended, but it rarely forms a distinct tumour, and there is an absence of pain on pressure over it. Unless gall-stones have been present at some time there are usually no adhesions of the gall-bladder or ducts to the neighbouring viscera, proving that the inflammation has not extended through to the peritoneal coat, as it usually does when dependent on cholelithiasis. The benefit derived from a systematic course of treatment in these cases renders it advisable that medical should always precede surgical treatment. The diagnosis from cholelithiasis may usually be made by observing that the attacks are less severe and less prolonged than in true gall-stone seizures; that no gall-stones are found in the evacuations after an attack; that jaundice seldom supervenes, and, if it does, is only very slight; that there is no tenderness on pressure between the ninth costal cartilage and the umbilicus; and that the affection will usually completely yield to treatment. In chronic catarrh of the gall-bladder regular exercise, massage over the hepatic region, the avoidance of anything tight around the waist, careful regulation of the diet, and the judicious employment of saline aperients should be in all cases adopted. The spasmodic attacks may require the administration of a sedative, and in some cases, like those referred to, nothing short of a subcutaneous injection of morphia will do any good. If after a few weeks of general treatment the symptoms are not relieved the case will probably be thought to be one of gall-stones, and operative treatment will be considered advisable. If the gall-bladder and ducts be found free from gall-stones cholecystotomy and drainage should nevertheless be performed, and it will be found useful after the third day to syringe gently a little warm water through the drainage-tube daily so as to wash out the ducts, and after a fortnight or more the tube may be left out and the wound allowed to close. General treatment directed to the cause should be continued for some time afterwards. My proposal, in fact, is to treat obstinate catarrh of the gall-bladder as we do catarrh of the urinary bladder—first by medical and general remedies, and, those failing, to secure physiological rest by means of drainage.

Suppurative inflammation of the bile passages.—At first sight suppurative inflammation of the gall-bladder and bile ducts would seem to be capable of description under one heading, but the subject is by no means as simple as it would appear. Simple empyema or suppurative catarrh of the gall-bladder differs *in toto* from phlegmonous cholecystitis, which, however, is also associated with pus in the gall-bladder, but which is one of the most fatal of diseases if not operated on expeditiously, as not only is there a tendency to gangrene, but to a rapidly spreading lethal peritonitis. The different clinical characters of suppurative inflammation can probably be accounted for by the presence or absence of certain organisms, and although the bacteriology of this region is still in its infancy sufficient good work has been done to make a review of it well worth considering. It has been supposed that the bile is an antiseptic fluid which tends to prevent decomposition in the alimentary canal, but in a series of observations which I published some years ago[5] on a case of biliary fistula I found that the absence of bile from the intestine of a woman during a period of fifteen months did not lead to any irregular fermentative process, showing that the alleged antiseptic effect of bile on the fæces is probably imaginary. Normal bile is, however, generally sterile. This was proved by Netter in 1884,[6] who experimented on dogs, and the fact has been confirmed by Gilbert and Girode,[7] and later by Naunyn[8] who found it sterile in two cases within a few hours of death. Frequent inoculative experiments on animals have confirmed these observations, thus explaining a well-known fact that in many cases bile has been extensively poured out into the peritoneal cavity without setting up peritonitis; but in disease of the gall-bladder or bile-ducts the bile is seldom or never sterile, and is capable of producing severe peritonitis. Bloch has demonstrated that the bile in cases of disease of the gall-bladder or bile-ducts always contains micro-organisms, hence he thinks it advisable to perform cholecystotomy in two stages, in order to avoid soiling the peritoneum and producing infective peritonitis. When the flow of bile along the ducts is arrested, micro-organisms often invade the gall-bladder either from the blood or the intestine. Charcot and Gombault[9] demonstrated the presence of organisms within it after ligaturing the common duct in dogs. This was confirmed by Netter in 1886,[10] who found that twenty-four hours after aseptic ligature of the common duct in dogs, organisms, both staphylococcus and bacillus coli communis, could be cultivated from the bile. The bacillus coli communis exists normally in the human body, and is said to be the most abundant and most constant of the bacteria found in man in health. At one time, as shown by Escherich,[11] it may act as an ordinary pyogenic organism producing local abscesses, at another as an active pathogenic germ producing fatal septicæmia. Mr. C. B. Lockwood[12] found streptococci and other organisms, but no amœbæ coli in an empyema of the gall-bladder. Netter[13] found staphylococci and streptococci present in pathological human bile, and Martin,[14] Gilbert and Girode[15] and Bouchard[16] have found the bacillus coli communis in the bile in cases of inflammation of the biliary passages. In acute or phlegmonous cholecystitis the walls of the gall-bladder are swollen and œdematous, and may be infiltrated with pus. In three out of five of such cases Naunyn found the bacillus coli communis in the pus. Barbacci and others have shown that peritoneal sepsis may occur without perforation of the gut. The spread of infection through the walls of the gall-bladder can readily be explained, on the same hypothesis, showing how virulent peritonitis may arise in these cases, though there be no perforation. Gilbert and Girode[17] found typhoid baccilli in the pus from a case of empyema of the gall-bladder which came on as a sequence of enteric fever. Gilbert and Dominici[18] also assert that they produced suppuration in the gall-bladder and liver of rabbits by injecting a culture of typhoid bacilli into the common duct. These biological facts are borne out by the clinical observations of Dr. Murchison and of Dr. Hale White, who have found evidence of inflammation and ulceration in the gall-bladder in well-marked and fatal cases of typhoid fever, there being no other cause than the specific disease to account for the trouble. Chiari[19] investigated systematically a series of 22 cases of typhoid fever. With the exception of 3 cases, one of which was in the infiltrating and two were in the necrotic stage, he obtained typhoid bacilli invariably out of the gall-bladder, and in 15 cases they were obtained in pure culture. In 13 of the 19 cases in which a positive result was obtained

[4] American Medico-Surgical Bulletin, April 18th, 1896.

[5] Proceedings of the Royal Society, vol. xlvii.
[6] Le Progrès Médical, 1886.
[7] Comptes Rendus, Société de Biologie de Paris, 1890, No. 39.
[8] Klinik der Cholelithiasis, 1892.
[9] Archives de Physiologie Normale et Pathologique, 1876, p. 453.
[10] Le Progrès Médical, 1886, p. 992.
[11] Fortschritte der Medicin, 1885. [12] THE LANCET, March 2nd, 1895.
[13] Archives de Physiologie Normale et Pathologique, 1886, p. 7.
[14] Ibid.
[15] Comptes Rendus, Société de Biologie de Paris, Nos. 90 and 91.
[16] Ibid., 1890.
[17] Société de Biologie de Paris, Dec. 2nd, 1893.
[18] Ibid., Dec. 23rd, 1893
[19] Zeitschrift für Heilkunde, Band xv., p. 199.

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there was inflammation of the gall-bladder with small-celled infiltration, œdema, and hyperæmia. In all 22 cases the diagnosis of typhoid fever was confirmed by cultivations from the spleen, mesenteric glands, or liver, or from the larger bile-ducts. How do they reach the gall-bladder? There are three possibilities; either they enter by the bile-ducts, or from the blood, or directly through the wall of the gall-bladder. The last mentioned manner must be very exceptional. Their entrance from the blood has been apparently disproved, and it is therefore probable that they enter by the bile-ducts. There is no doubt that the bacilli multiply in the gall-bladder, and it is possible that they may be responsible for post-typhoidal cholecystitis, for gall-stones, and also for relapses of the disease.

Simple empyema.—Suppurative catarrh or simple empyema of the gall-bladder or suppurative cholecystitis is as a rule associated with gall-stones, but tumours of the bile-ducts, typhoid and other fevers, and other unexplained conditions may also be the predisposing factors, though infection by pyogenic organisms is probably in every case the true exciting cause. Empyema of the gall-bladder must always be looked on as a serious affection, both on account of its causes and its sequelæ, but from a clinical standpoint there is one form which is decidedly less serious than the other. The less serious I prefer to discuss first under the term simple empyema of the gall-bladder; the more serious form I shall consider as a distinct and special disease under the name of phlegmonous cholecystitis. When we bear in mind Charcot's and Gombault's experiments on ligature of the common duct in dogs just referred to, the wonder is that all impacted gall-stones are not associated with empyema; yet such is not the case, and it is only in a certain small percentage that the catarrh passes on to suppuration. When there is an obstruction or any irritation in the cystic duct a simple empyema may result, but when the obstruction is in the common duct it may be associated with suppurative cholangitis, the former being a local suppurative process, the latter an extremely serious disease, rapidly followed by general symptoms, and unless treated by operation often ending fatally. In simple empyema the symptoms will at first depend on the cause; and as this is, in the great majority of cases, cholelithiasis (Courvoisier found empyema to be caused by gall-stones in forty-one out of fifty-five cases) there will be the usual history of gall-stone seizures, followed by a swelling under the right lobe of the liver, and by a continued instead of an intermittent pain. At first the constitutional symptoms may be only slightly marked, and there may be no increase of temperature, though in other cases rigors or chills with fever will point to the formation of pus. The loss of appetite, fever, and general malaise usually lead to loss of flesh and weight. As a rule there is no jaundice or only a slight icteric tinge dependent on associated catarrh of the bile-ducts. Tenderness is nearly always present in consequence of local adhesive peritonitis. The tumour, if seen at an early stage, will move with respiration, descending with the liver and being felt as a rounded swelling. After a time the swelling may become more diffused and general, and the movements during respiration will be less marked or may cease owing to the inflammation extending to the abdominal walls. If the suppuration extends beyond the gall-bladder the pus may make its way through the parietes, and an abscess may form under the ribs. The pus usually, however, selects a more tortuous passage, and following the suspensory ligament of the liver it reaches the umbilicus. The abscess may even burst at a distance from its origin—for instance, over the pubes or over the cæcum. There are generally peritoneal adhesions which prevent extravasation into the general peritoneal cavity, but the pus may make its way into neighbouring organs. If we bear in mind the pouch of peritoneum I have described, it is not to be wondered at that a collection of pus should at times form in that region resembling a peri-renal abscess, though inside the peritoneum and limited by adhesions. Needless to say, an abscess of the gall-bladder only requires treating on general surgical principles by opening and drainage, but at the same time the cause must not be overlooked, as it may often be removed at the same time that the abscess is evacuated. Where the pus is in the gall-bladder cholecystostomy will be advisable. After exposing the gall-bladder it will be wise to aspirate before opening it, in order to avoid soiling the tissues with pus. The walls of the gall-bladder may be found so rotten as to be incapable of holding sutures, or, as in a case lately recorded by Dr. Willie Meyer, there may be small abscesses in the inflamed wall of the gall-bladder itself. In such cases cholecystectomy may be required. In two cases of empyema of the gall-bladder I simply evacuated the pus, removed the gall-stones, and packed the cavity with iodoform gauze, and although the peritoneal cavity was widely opened no harm resulted, as a lymph barrier was soon thrown out limiting the only partly disinfected area. In abscess due to empyema of the gall-bladder forming at a distance from the seat of origin, it may be wise at first simply to open and drain the abscess and on some future occasion to perform cholecystostomy. In some cases of empyema the patient may not be in a fit condition to bear a prolonged operation, and it may, therefore, be wiser to perform a simple cholecystostomy and to defer the removal of the cause until an examination of the discharge shows it to be sterile, or nearly so.

Acute phlegmonous cholecystitis and gangrene of the gall-bladder.—Acute or phlegmonous inflammation of the gall-bladder was described by Courvoisier in 1890, under the name of acute progressive empyema of the gall-bladder, and he states that it usually terminates fatally in a few days from diffuse peritonitis. Only seven cases are recorded in Courvoisier's statistics. Potain[20] also mentions that in addition to the ordinary variety of empyema of the gall-bladder there is a very grave condition of acute empyema, which is followed by rapid peritonitis and death. In one case which he describes death occurred on the second day after the onset of the attack, and although there was no perforation of the walls of the viscus infection had spread through the coats to the general peritoneal cavity. Osler[21] refers to it as an extremely rare disease. As to the symptoms, although the condition is usually associated with gall-stones, acute cholecystitis may arise quite independently—in this way resembling appendicitis, which may occur without the presence of foreign bodies. Typhoid fever and typhus fever, cholera, malaria, sepsis after operation, puerperal fever, and other unknown conditions may give rise to it. Whatever be the cause, the disease usually manifests itself somewhat suddenly with pain on the right side of the abdomen, rapidly becoming general. A rapid and feeble pulse, quick thoracic breathing, fever, intense depression, marked tenderness on pressure, especially over the right side of the abdomen, rapidly developing tympanites, persistent vomiting, and an extremely anxious expression of countenance are usually present. The acute peritonitis, which is significant of the disease, may be localised at first, but later becomes general. Jaundice may or may not be present, and although an elevation of temperature is usual, it is by no means constant and affords only slight assistance in the diagnosis or prognosis. If the disease be of the very acute or gangrenous variety death speedily occurs, but if of the sub-acute form an abscess may develop around the gall-bladder and the peritonitis may become localised, the disease then resembling a perityphlitic abscess in its course.

Diagnosis.—The diagnosis of phlegmonous cholecystitis practically resolves itself into the diagnosis of the cause of acute peritonitis, starting on the right side of the abdomen. Although this may be due to perforation of the stomach at or near the pylorus, to perforation of the duodenum or the ascending colon, to perforation of the gall-bladder or the bile-ducts, and to other such-like peritoneal catastrophes, the chief affection for which it is likely to be mistaken is acute appendicitis. In appendicitis the pain begins at a lower point in the abdomen and passes towards the umbilicus, whereas in gall-bladder trouble it begins below the right costal margin and passes towards the epigastrium and back to the right scapular region. In all gall-bladder inflammations there is almost invariably a tender spot a little above and to the right of the umbilicus, or, to be more exact, at the junction of the upper two-thirds with the lower third of a line drawn from the ninth rib to the umbilicus. In appendicitis there is in the same way a tender spot at the junction of the outer third with the inner two-thirds of a line drawn from the umbilicus to the anterior superior spine of the ilium, known as McBurney's point. The symptoms of acute peritonitis and paralytic obstruction of the bowels are common to both. Fortunately, the treatment by exploratory incision is appropriate to the various conditions mentioned, so that no serious error is likely to arise in case of mistaken diagnosis.

Treatment.—Relief of pain by subcutaneous injections of

[20] Journal de Médecine et Chirurgie, November, 1882.
[21] Principles and Practice of Medicine.

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morphia, will probably always be demanded as a primary measure, and as it is clearly impossible to make a diagnosis of the serious condition within the first few hours, warm applications, absolute rest, the stoppage of feeding by the mouth except in small quantities, and the relief of symptoms as they arise must be followed out; but as soon as the diagnosis of phlegmonous cholecystitis can be established, and it is found that the patient is getting worse, an exploratory incision should be made and the gall-bladder incised and drained, the cause if found being removed. If, however, gangrene be discovered the gall-bladder should be removed, the indications for that measure being as distinct as in the case of a gangrenous vermiform appendix. If, in the subacute cases the inflammation becomes localised and a swelling with tenderness be found beneath the right costal margin, incision and drainage are called for, when at the same time cholecystotomy may be performed, and if gall-stones be present in the gall-bladder or ducts they may be removed. If the patient be too ill to bear a prolonged operation the latter procedure may be left to a subsequent occasion.

Gangrene of the gall-bladder is probably only an extreme degree of phlegmonous cholecystitis. The comparative frequency of gangrene in the vermiform appendix might lead one to suppose that gangrenous inflammation of the gall-bladder would not be uncommon, yet it is extremely rare, and, so far as I know, the case reported by Dr. L. W. Hotchkiss is the only one recently recorded. In order to explain the occurrence of gangrene three factors have to be borne in mind: (*a*) Thrombosis of the nutrient vessels; (*b*) bacterial infection; and (*c*) absence of drainage, and therefore tension. The two latter are present in both gall-bladder and appendix inflammation, but the first factor is more frequent in the vermiform appendix, which is only supplied by one nutrient artery, whereas the gall-bladder has a very free blood supply, not only through the branches of the cystic artery, but also through their anastomosis with the hepatic vessels, where the gall-bladder is fixed to the liver In Dr. Hotchkiss's case there was an abnormal circular constriction of the gall-bladder with lymph infiltration, which was apparently sufficient to cut off the blood supply from the extremity of the gall-bladder.

Infective and suppurative cholangitis.—Infective and suppurative cholangitis, or suppurative catarrh of the bile-ducts, are subjects of deep interest to the surgeon, since the medical treatment of these ailments is somewhat limited. Cholelithiasis is by far the most common cause, and in the museums there are several cases illustrating it. Other causes are hydatid disease, malignant disease of the liver, and typhoid fever. The causes mentioned may be truly termed predisposing, since the true exciting cause is the presence of pyogenic organisms. The bacillus coli communis produces an exudative inflammation of the ducts, and may actually cause abscesses within the walls of the biliary passages. Hepatitis and liver abscess frequently follow on cholangitis, and this is usually followed by general and fatal infection of the system. *Endocarditis* is at times set up, and as it has been known to follow cholangitis without hepatitis,[22] and cholangitis without abscess, this cause should never be lost sight of in any case of ulcerative endocarditis. The bacillus in these cases in the vegetations on the inflamed endocardium has been found to be identical with the one found in the bile. As to the symptoms in suppurative cholangitis there is progressive enlargement of the whole liver, which may descend as low as the umbilicus, the swelling being uniform, smooth, and tender to pressure. If the cause be in the common duct, and the gall-bladder has not previously become contracted, there will be the additional enlargement caused by its distension; but when contraction has taken place, and also when the obstruction is in the hepatic duct, there will be an absence of the signs of empyema of the gall-bladder. Pain may be entirely absent, as in one case on which I operated, where the disease was dependent on cancer of the common duct; but where it is dependent on gall-stones the pain may be severe and paroxysmal, each attack being accompanied by ague-like seizures and an intensification of the jaundice. Jaundice is always present and is usually both persistent and intense. Continued fever, with occasional rigors and profuse perspiration, forms a feature of the disease, and with this there is rapid loss of flesh and strength. Pneumonia and pleurisy, ending in empyema, are sufficiently common to be characterised as distinct concomitants of suppurative cholangitis. The disease is an extremely serious one and may prove fatal, though if the cause can be removed at an early stage recovery may occur. If the disease be less acute the inflammation may concentrate itself in some part of the liver leading to abscess, which may form a distinct tender swelling and give rise to the usual symptoms and signs of hepatic abscess. As to treatment, unless evacuation and drainage of the infected contents of the bile passages can be accomplished treatment is practically useless. Cholecystotomy should, therefore, be performed, and free drainage established and continued until the bile is sterile or nearly so. Although good results cannot be expected in all cases, an amelioration of the symptoms may be looked for in a fair proportion, and complete relief in others. If a localised abscess be discovered in the liver it should be opened and drained, and though it is scarcely to be expected that operation can be always successful in these serious cases the chances of permanent benefit is worth snatching at, even in the most desperate conditions. Of general means, warm applications to the hepatic regions, an initial mercurial purge followed by milder laxatives, intestinal antisepsis by administering bismuth and salol, the relief of pain by sedatives if called for, and the treatment of symptoms as they arise, will afford some amelioration, though they will probably only give temporary relief. Although surgeons have been performing cholecystostomy for infective cholecystitis and for gall-stones producing infective cholangitis for some years, I think it is only right to give the chief credit of specially operating for cholangitis to M. Terrier. He writes in the *Revue de Chirurgie* for 1895, p. 966:—"Thanks to the opening in the gall-bladder a certain number of important therapeutic results follow: (1) the septic contents of the gall-bladder are evacuated; (2) calculi which are most frequently present there are removed; (3) the other biliary passages more or less obstructed, either by calculi or by swelling of their walls, are rendered as free as possible; (4) the septic bile is allowed to escape and mechanically washes out the lower passages carrying away through the drainage-tube many of the infectious ailments; (5) the relief of pressure prevents absorption of the septic elements; and (6) the relief to the kidneys by allowing the bile to escape freely is also of importance, as they are thus enabled to perform their function more freely in relieving the system of septic and other materials." In the paper referred to M. Terrier relates several cases with the utmost detail, especially interesting on account of the bacteriological examination of the discharge from the fistula at different dates, conclusively showing the gradual diminution in the virulence of the discharge after the drainage has been proceeding for some days, and pointing to the need of rather more prolonged drainage than some of us have been wont to employ—i.e., until a bacteriological examination of the discharge shows it to be sterile, or nearly so.

Ulceration.—Ulcers of the gall-bladder or bile-ducts vary greatly in number, size, and depth, and also in clinical importance. They may be quite superficial, being mere abrasions of the epithelial lining of the mucous membrane, then being as a rule numerous and widespread, or they may be single and deep, extending into or through the muscular and serous coats. Between these extremes every variety may be found. Although cholelithiasis is the most frequent, typhoid fever and cancer are quite common causes. Cholera and tubercle are said to produce ulceration of the bile passages, but I have been unable to find any specimens in illustration. The slighter cases of erosion are seldom seen, though doubtless they frequently exist in cases operated on for gall-stones, and in others where the concretions are passed naturally, but the severer forms of ulceration are more frequently met with as the immediate cause of death. Ulceration is chiefly of importance on account of the serious sequelæ—stricture, perforation, fistula, peritonitis (local or general), hæmorrhage, septicæmia, and pyæmia. The inflammation accompanying ulceration usually extends to the peritoneal coat at the site of the ulcer and leads to a plastic peritonitis, which causes the adjoining organs to adhere to the inflamed surface; thus in the greater number of cases keeping the peritonitis local. Some years ago I pointed out that in nearly every case of gall-stones there are adhesions of the gall-bladder or ducts to neighbouring organs showing that peritonitis is a frequent or nearly constant accompaniment of cholelithiasis. It is doubtless a salutary phenomenon, as otherwise general peritonitis would be much more common, especially in the many cases where the adhesions permit of fistulæ quietly

[22] Netter and Martin, Archives de Physiologie, vol. ix., 1886.

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forming between the contiguous viscera and where localised abscesses form without general peritonitis. The adhesions may, either by the anchoring of normally mobile organs or by subsequent contraction, themselves become sources of inconvenience or danger; as in the case of a woman, aged thirty-four years, under my care, who, besides suffering from severe spasmodic pain due to chronic catarrhal cholecystitis, had dilatation of the stomach owing to kinking of the pylorus caused by adhesions passing between it and the gall-bladder. After separation of the adhesions and drainage of the gall-bladder complete recovery ensued. The peritonitis may, however, become general, either from perforation or by extension to the peritoneum through the non-perforated walls. Under such circumstances prompt surgical treatment will be required or death will speedily follow. With regard to hæmorrhage, as the ulcer extends the vessels usually become thrombosed, but occasionally severe hæmorrhage results, leading either to hæmatemesis or melæna. The notes of the following fatal case were furnished me by my friend Dr. Peter McGregor of Huddersfield. "A temperate man, aged forty-eight years, had suffered from gall-stone attacks since the age of twenty-six years, but for a year had had no seizure and had gained two stones in weight. Without pain or other localising sign he began to vomit blood, and continued to do so two or three times a day until his death, which resulted from exhaustion in the third week. A necropsy revealed contraction of the liver with numerous gall-stones in the gall-bladder. One, the size of a large filbert, had ulcerated through the walls of the gall-bladder and was projecting into the peritoneal cavity. There was no peritonitis, and death was due to hæmorrhage from the margin of the ulcerated opening." It is to be borne in mind that hæmorrhage is predisposed to in these cases by the aplastic condition of blood occurring in long-standing jaundice. As ulceration is always associated with the presence of pyogenic organisms, septic absorption frequently occurs, leading to constitutional disturbances in the shape of septicæmia and pyæmia. Although cancer may lead to ulceration it seems probable that long-standing ulceration of the gall-bladder or bile-ducts may predispose to malignant disease as they are so frequently associated.

Stricture.—Stricture of the bile-ducts is one of the rarer sequelæ of ulceration, by which it is probably always preceded, except in those cases dependent on malignant disease, which I do not propose to consider under this heading. Though there is no reason why stricture should not be a sequence of typhoid ulceration, such has yet to be proved, and the only cases with which I am acquainted, or concerning which I can glean information, have followed on cholelithiasis or new growth. Stricture may only render itself evident after the original cause has passed away, as in three cases of stricture of the cystic duct and one of the common duct, where I myself removed the cause in the shape of gall-stones, and subsequently had to treat the strictures which afterwards developed, and in another case of stricture of the common duct, where the history of gall-stones was indubitable, though none were found when the abdomen was explored. With regard to the symptoms, stricture, if in the cystic duct, leads to a gradual enlargement of the gall-bladder, which may be quite painless or which may give rise to considerable distress; if in the common duct jaundice supervenes, at first being only slight, but ultimately becoming severe, and being associated with all the usual distressing and dangerous symptoms of chronic icterus. The liver enlarges and may descend to the level of the umbilicus; the gall-bladder may also enlarge, though if gall-stones have been the cause the gall-bladder may have become contracted and so be incapable of distension. Stricture of the hepatic duct is probably extremely rare, for I can only find an account of one case. Needless to say, stricture of the bile passages will scarcely call for diagnosis apart from its cause, though different treatment will be demanded when the disease is recognised at the time of operation. In stricture of the cystic duct the gall-bladder should be removed, as either a recurrence of the symptoms will occur when the wound closes or there will be a permanent mucous fistula. As an alternative the gall-bladder may be short circuited into the intestine. In stricture of the common duct cholecystenterostomy must be performed, otherwise a permanent biliary fistula will certainly follow; at times, however, this may be impracticable, and in such cases drainage alone may be feasible.

Perforation of the gall-bladder and bile-duct.—Perforation of the gall-bladder or bile-ducts must always be serious on account of an escape of the visceral contents into the peritoneal cavity, the imminence of the danger, however, depending on two factors—first, the nature of the extravasated fluid, and, secondly, the time allowed to elapse before surgical relief is afforded. The presence of healthy bile in the peritoneum, as might occur from an injury such as a stab, a bullet wound, or a blow, in a healthy individual may be tolerated for some time without serious damage, as in a case recorded by Thiersch, who successfully removed over forty pints of bile from the abdominal cavity after the gall-bladder had been ruptured by a blow. The experiments of Schuppel and Bosbrom apparently prove that the peritoneum can absorb extravasated bile without serious trouble, and there have also been several cases reported, in which extravasated bile has been successfully evacuated, either by tapping or by incision and drainage. Such a fortunate result cannot, however, always be looked for, as is shown by the specimens in some of the museums. In all the cases where the history is appended the fact of the long survival after so serious an accident is at once borne home, and the lesson is manifest that operations would in each case have given good hopes of success.

Rupture of bile duct due to injury.—Mr. Battle has reported the case of a boy who had been run over by a cab. At first there were no definite signs of visceral injury; by the seventh day, however, he was deeply jaundiced, with symptoms of acute peritonitis. Abdominal section was done on the eighth day, and a large quantity of almost pure bile evacuated, but no injury to the bile apparatus could be detected. He died on the ninth day, and post mortem the liver and gall-bladder were found intact, but the common gall-bladder was found completely torn through. This is apparently the first recorded case of such an accident, but I found in Guy's Hospital museum a specimen from a case of Mr. Bryant's, where there is a laceration of the hepatic duct near its origin, in which death occurred from peritonitis after a week's illness, two pints of bile-stained fluid mixed with blood clots being found in the peritoneal cavity. Gunshot wounds of the gall-bladder are rare. Courvoisier has mentioned six cases, in two of which the patients died within a few hours, in a third in six weeks from pyæmia, and in a fourth from septicæmia. The case related by Hans Kehr is, therefore, of considerable interest, as immediate laparotomy with suture of a bullet wound in the gall-bladder of a man aged thirty years was followed by recovery. It is of far more serious moment when the extravasated bile is diseased, as it for the most part is where there is distension of the gall bladder or any disease of the bile ducts; for in such cases the bile is infective and rapidly sets up a diffuse peritonitis, which, unless speedily operated upon, ends fatally. Even in such cases if the diagnosis be made at once and early operation done the prognosis is good, as in the case of a patient, aged forty-five years, who had suffered from gall-stone seizures for twenty-nine years, and whom I saw with my friend and colleague, Dr. Braithwaite. After symptoms of inflammation in the hepatic region extending over several weeks he suddenly became worse and showed signs of general peritonitis. I opened the abdomen in the right linea semilunaris, several pints of bile and pus being evacuated. The abdomen was washed out and drainage-tubes were passed between the liver and diaphragm into the right kidney pouch, and downwards towards the pelvis, with the result that the patient recovered and is now in perfect health. One of the most remarkable cases of perforation of the gall-bladder following typhoid ulceration successfully treated by abdominal section is reported by Dr. Monier Williams and Mr. Marmaduke Sheild in THE LANCET of March 2nd, 1895. The case occurred in a married woman, aged thirty-one years, who was operated on on the fifty-first day of the disease, when the gall-bladder was found to be rigid, thickened, and of a dark plum colour, with a sharply circular ulcer the size of a threepenny-piece near its neck, the gall-bladder containing about one and a half ounces of thick offensive pus; the abdomen was washed out; the distended intestines were emptied by puncture, and gauze packing with drainage adopted, the result being a complete cure. In cases of rupture of the gall-bladder from sudden pressure induced by straining at stool, by vomiting, sneezing, efforts in parturition, and even by blows over the hepatic region, there is in all probability in the greater number of such cases a predisposition to rupture in the shape of

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thinning by ulceration or by long-continued distension; otherwise the accident would be much more common. Such cases show conclusively to my mind that it is folly to permit patients with distended gall-bladders, even though symptoms be only occasionally present, to go unoperated on. I know of several such cases where patients are living in a "fool's paradise" owing to such unsound advice. A careful operation in these cases is almost devoid of risk, but rupture is hazardous in the extreme. Massage in cases of distended gall-bladder I look on as the height of folly, though it has been advised by those who should know better. Attempts to force impacted calculi onward by pressure are well calculated to rupture the thinned wall of the gall-bladder or bile-ducts or to cause perforation through the base of an ulcer, leading to extravasation of germ-containing fluid into the general peritoneal cavity and probably to fatal peritonitis. In some cases the primary perforation may lead to the formation of a second cavity bounded by plastic lymph, which may again rupture and lead to a fatal peritonitis. The perforation of the gall-bladder may occur into adjoining parenchymatous organs, and on several occasions I have removed numbers of gall-stones from cavities in the liver produced by ulceration and perforation of the gall-bladder or bile-ducts and direct passage of the contents into the liver tissue. In such cases there are the usual signs of liver abscess following on the ordinary symptoms of gall-stones, which may have been present for years. If the ulceration and perforation occur from the common duct into the substance of the pancreas, acute pancreatitis may follow. If the ulceration advances towards the adjoining hollow viscera—stomach, duodenum, or colon—adhesions as a rule form and the perforation is effected quietly. In one case of this kind which I saw with Dr. Stewart, after a history of cholelithiasis followed by severe stomach symptoms, the gall-stones were vomited and complete recovery followed. In several cases I have seen large gall-stones ulcerate their way quietly into the intestine, only producing serious symptoms from mechanical intestinal obstruction. Rarely gall-stones have perforated into the pelvis of the right kidney, producing symptoms of renal calculus. Not infrequently the perforation may occur after adhesion to the parietal peritoneum, when the events described under simple empyema of a superficial abscess discharging gall-stones may follow. The symptoms of perforation of the bile passages are those of perforative peritonitis from other causes, but there will usually have been premonitory symptoms pointing to the origin of the disease. A sudden pain beneath the right ribs, often followed by collapse and usually succeeded by vomiting, general distension of the abdomen, and a rapid pulse form the prominent features of the disease. If the extravasation is extensive there will be signs of free fluid in the peritoneal cavity. Jaundice, if not present before the accident, usually comes on from absorption of biliary pigment by the peritoneum, and if the bowels can be moved the motions will usually be clay-coloured. If the case be not operated on, death will probably ensue within a few days from toxæmia and paralysis of the bowels, though in some of the cases I have quoted life was prolonged into the second or third week. As to treatment, in these cases medical treatment is useless, and giving opium for the relief of pain so disguises the symptoms that a fatal sense of security is given for a time, and when the mistake is discovered it is too late to operate. As soon as it is clearly made out that perforation has occurred, or even if it be suspected that such is the case, the abdomen should be opened in the right semilunar line. If pus and bile be found they should be rapidly wiped away with gauze or wool sponges, and if the extravasation has gone beyond the local area of disease the abdomen should be flushed with hot boracic lotion. The patient may be too ill to bear a prolonged operation, and if so free drainage, as in the case I have related, will probably do all that is necessary. In draining it may be borne in mind that the right kidney pouch forms a distinct peritoneal pocket, and that a drainage tube applied through a stab opening in the right loin affords a free exit for extravasated fluids coming from the neighbourhood of the gall-bladder. If the whole peritoneal cavity has been soiled a puncture above the pubes large enough for a tube to be passed into Douglas's pouch may be an advantage. If the patient be in sufficiently good condition to permit a search for the rupture, and it can be found, it may be closed by fine silk or catgut sutures, but as a rule it will be wise to open and drain the gall-bladder at the same time. Should marked cholecystitis be found the question of cholecystectomy may be worth considering, but when the patient is in a critical condition it is a mistake to attempt too much; and as a rule cleansing and free drainage will be all that are necessary or advisable at the time, the removal of the cause being left until the patient is better able to bear a prolonged operation.

The Ingleby Lectures

ON

THE OPERATIVE TREATMENT OF CANCER OF THE BREAST.

Delivered at Mason College, Birmingham, on May 19th and 26th,

BY BENNETT MAY, F.R.C.S. ENG.,

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LECTURE II.[1]

Delivered on May 26th.

GENTLEMEN,—I shall now proceed to consider the results which have been obtained from this method of operating, adopting Volkmann's three years limit as the standard of a cure for comparison with former methods. This means that the patient shall have had a full period of three years or longer after operation without local or internal recurrrence. Experience shows that the prospect of permanent immunity is then considerable. At the same time I do not accept this—or, indeed, any other period—as at all absolute, owing to the way in which minute deposits may temporarily remain quiescent and latent. I have seen external recurrence after an interval of eleven years, and not infrequently a patient dies from the disease five, six, or more years after operation, though in these cases I think some sign might have been detected within the three years limit. However, in this limited and provisional sense, I accept it as a cure. Then a distinction is to be drawn between local external recurrence and internal metastatic deposit as evidence of completeness of operation. The efficiency of the operation is more correctly measured by freedom from local recurrence than internal deposit, as the former is evidence that the operative limits were reached and nothing further could have been done. Moreover, it is supposed that cases are taken without special selection so long as they are operable. I believe the following is an exposition of the best work which has been done in the treatment of cancer of the breast on the lines of the radical operation described. The following table shows the recently published returns of three operators:—

TABLE A.—*Cases operated on by the Radical Method and observed for at least three years.*

Surgeon.	No. of cases.	No local recurrence.		Local recurrence.	Percentage of cures.	Date.
		Cured.	Died.			
Rotter	10	6	2	2	60·0	1896
Helferich	35	10	11	14	30·5	1896
Watson Cheyne ...	21	12	4	5	57·0	1896
Total	66	28	17	21	42·1	—

Percentage of cures (average) 42·1; percentage with no local recurrence 68; operative mortality 0.

Von Bergmann does a bold operation on ordinary lines, removing the breast widely with the paramammary tissues, systematically clearing the axilla, and in some cases removes the sternal portion of the pectoralis major. His latest statistics, however, do not come down later than 1885, when he was less careful about clearing the fascia, &c., than now, and I have not included them in this table. Rotter (Berlin) does a wide operation. He removes the whole of the pectoralis major and the pectoralis minor. He also removes the

[1] Lecture I. appeared in THE LANCET, May 22nd, 1897.

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clavicular part of the major when the infra-clavicular glands are enlarged. In some cases he removes the supra-clavicular glands, but does not resect the clavicle. Helferich (Griefswald) does a similar operation, but without removing the pectoralis minor. Watson Cheyne does a wide, clean operation on ordinary lines, occasionally removing the sternal portion of the pectoralis major. He does not ordinarily remove the supra-clavicular glands. His results seem to be the best recorded, viz., 21 cases with 12 cures—57 per cent.

TABLE B.—*Statistics showing Gradual Improvement in Results.*

Operator.	Date.	Percentage of cures.
Billroth	1876	4·7
Esmarch	1876	11·8
Volkmann	1880	17·8
Kuster	1885	21·0
Konig	1885	23·0
Von Bergmann	1885	32·0
Average of Rotter, Helferich, and Watson Cheyne	1896	42·5

Looking to my own results I have seen that the effect of thorough removal is very marked indeed. I find it almost impossible to present these in a complete tabular form principally owing to the difficulty of tracing the hospital patients. I commenced to clear out the axilla as an addition to the ordinary operation in selected cases about 1887. These earlier ones, though not available in statisticial form, were of great value to me, and were largely instrumental in forming my opinion. Thus a woman whose breast and axilla I cleared in May, 1888, for a small scirrhous tumour, microscopically verified, is now alive and perfectly well. Another, operated on in April, 1889, in the same way is perfectly well to-day.

From the commencement of 1891 I have cleared out the axilla in every case of cancer that I have operated on with one exception, viz., a very feeble old lady, aged seventy years, with a small hard scirrhous nodule who presented anæsthetic difficulties. This has been the only exception. Since that date I have performed the complete operation more or less perfectly on seventy-eight patients, forty-four in private practice, and thirty-four in hospital. The ages ranged from twenty-eight to seventy-five years. There was not one death from operation, nor one even seriously ill so as to give anxiety. It is right to say that I have had one death from breast excision for a simple tumour, due to acute septic infiltration in hospital. I have found it impossible to trace the subsequent histories of a sufficient number of the hospital cases dated three years back to make them of any value for statistical purposes so they must be put aside altogether. Of the forty-four private cases I have a report up to date in every one. These cases are divisible into two periods, the first prior to May, 1894, and the second subsequent to that date. Those in the first group only are available for the three years limit, and they are 20 in number. Of these 7 are now alive and free from any sign of the disease, 11 have died from it, and 2 are alive, but show signs. Of the 13 in whom the disease has re-appeared it was solely internal in 7. I should state that this epoch contained an unusual proportion of bad cases, of complete failures and very early recurrences. I have no doubt the 24 in the second epoch will show much better results. In the first place I have continuously improved upon my method of operating, particularly in respect of wider removal of muscle and paramammary tissue. Then the selection of cases was more careful and judicious. Thus of 9 operations (private) in 1896 only 1 shows any sign of re-appearance, of 7 in 1895, 1 died within eight months, and 1 shows signs of internal deposit. All the others are quite well.

The advantages which have followed thorough and systematic operations are, I think, sufficiently apparent, and have fully established their superiority over the older methods. An important dissentient is to be noted in Mr. Frederick Treves, who considers that practically the results are no better than by the older methods while being more tedious and dangerous, but as he allows an average mortality of 5 per cent. for these older ones, and an average re-appearance within twenty months, it is clear that he does not do justice to the possibilities of the newer method while he considerably exaggerates its dangers and drawbacks, its average mortality being below 5 per cent., and immunity from return far more than twenty months.

I think it is more difficult to decide upon the merits of some of the more extensive operations which have recently been introduced, especially by our Transatlantic brethren. Halstead and Meyer do not consider the operation complete unless it includes also the whole of both pectoral muscles, every trace of fatty and connective tissue in the axilla and sub-pectoral region, and the supra-clavicular glands in the posterior triangle of the neck. Halstead's operation is rather startling in its extent and magnitude. The technique is not quite easy to understand, but it is fully explained in his article in the "Annals of Surgery,"[2] and also described by Jacobson in the last edition of his admirable work on "Operative Surgery." Suffice it to say that Halstead encircles the breast by a very wide incision which is carried below the clavicle on to the arm. A flap of skin is reflected down from the axilla and chest-wall, and is subsequently slid up to form a lining for the fornix of the axilla. Another incision bisecting the main one is carried over the clavicle to the neck and the flaps of skin are reflected. Both pectoral muscles are detached from the ribs and clavicle and the humerus and the cleaning of the axillary contents is commenced and carried from above downwards. The whole of the tissues are dissected away with scrupulous care, not a trace being left behind, and the whole mass is removed in one piece so that cancerous tissue is never cut into. He now also adds to this a dissection of the supra-clavicular glands from the posterior triangle of the neck. It is described as a bloodless operation, as many as 100 or more ligatures being required, and the time occupied is said to be three or four hours. He claims for it but little shock, as he allows no loss of blood, and as he has done it fifty-one times without a death he is entitled to do this. Halstead distinguishes between local and regionary recurrence. By the former he means return of the disease in the field of operation, in the scar, or in the glands above the clavicle. By regionary recurrence he means skin metastasis at a distance from the scar, and which he believes appear as independent formation being against the lymph current. The distinction, however, cannot well be maintained and seems superfluous. Of his 51 operations Halstead claims that there has been true local recurrence only in 3, but 8 have shown regionary recurrence, or 11 in all. In 5 the result was not known. The remainder, 34 in number, showed no external recurrence. Of these 10 had died presumably from internal metastasis, so that 24 or 50 per cent. may be considered as cured. The weak point in these statistics is that they are not based upon the three years or any limit—in fact, it does not appear that the three years' limit has been passed in more than three or four of them, a large number being within a few months of the publication. In any case they do not show better results than by the ordinary complete operation such as Watson Cheyne's. It is clear that in both cases the majority that die do so from internal metastasis without local recurrence. The operation seems to be one which may well be reserved for advanced cases where the muscles are infiltrated and the infra-scapular and cervical glands are enlarged, if, indeed, it is thought advisable to touch such cases at all. I believe it was not Halstead's intention to publish any more results till the three years had passed, so that a further and more valuable record should shortly be due.

Meyer's operation goes even further. He makes the usual oval incisions on a wide scale and bisects the upper by a vertical one carried up over the clavicle to the neck. The integumental flaps are dissected well back. Both the pectoral muscles are then removed entire, commencing at the humeral attachment of the major and throwing both inwards. These with all the infra-clavicular and axillary fat and lymphatics are carefully cleaned away with the knife absolutely and continuously working round the seat of disease, and never trespassing even on the belly of the muscle. The supra-clavicular glands are also dissected out of the posterior triangle of the neck through the vertical incision. Any defect of skin is made up by grafting in eight or ten days. This operation, he claims, adds only twenty minutes to the ordinary one, and the disability afterwards is not great. At the time of publication he appears to have done it only in one case, a few months previously, so that no

[2] Annals of Surgery, vol. xx., 1894.

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opinion can be formed of its special merits. Further than this it is scarcely possible to go without amputating the entire upper extremity with the shoulder girdle. I believe this has been done a few times, though with indifferent success. It is clearly inadmissable, and can only be condemned as a dangerous and useless mutilation without corresponding advantage. Then at least one operator has removed the sternal glands from within the chest, a procedure which is not likely to be frequently followed. Heidenhain also includes the periosteum in stripping the muscles from their bony attachments.

There is diversity of view as to the treatment of the supra-clavicular glands. This is certainly our weakest point, and the most common seat of external recurrence, just as the axilla used to be. My own opinion is that if enlarged glands can be felt above the clavicle there is no hope of cure and the case is not suitable for operation. It is to be noted that these supra-clavicular growths often appear to grow very slowly, and that owing to the roomy space and fat in which they lie a long time may elapse before they show any sign of enlarging. Consequently by the time this has taken place the chain of glands beyond them, which is close to the lymphatic duct and passes into the chest, will be extensively infected, and the disease will have passed into a region where it cannot be followed. How far it should be carried as an addition to the ordinary operation is as yet somewhat doubtful. To clear out the posterior triangle of the neck means a considerable addition to the operation and is frequently unnecessary. If, however, it is found during the operation that the highest axillary glands are infected it is clearly necessary to follow them into the neck, unless the case is to be forthwith abandoned as hopeless. There is then a reasonable prospect of getting beyond the limits of the disease. It is not considered that divison or resection of the clavicle materially helps the exposure and removal.

I think it is very doubtful whether some of these more extensive operative procedures confer any additional immunity from recurrence at all commensurate with their severity. It is clear that in both classes of operation the majority of the fatal cases die from the internal metastasis without external recurrence, and against internal metatasis no operation can protect. It is very certain that but little good can result from these extensive measures if there exists some deep-seated nidus of infection which is beyond the reach of the knife. That such a source of infection exists is in many cases only too certain, though not apparent. Herbert Snow finds it in the bone marrow. He claims that this is the great obstacle to radical cure in breast cancer. This infection, he states, takes place in all ordinary cases within six months of the inception of the disease. The typical indication is a prominence of the sternum, though there may not be any more visible evidence for many years, the disease remaining quiet and latent. There is considerable force in his views, though probably much too sweeping. I have on several occasions recognised this enlargement of the sternum as an unfavourable prognostic sign, indicating bone infection.

So far there is no conclusive evidence that any corresponding advantage accrues from some of the more recent developments of the operation, and I am of opinion that the utmost benefit of which it is capable may be conferred in a large majority of cases by the one I have described as the standard. The cases for which this will not suffice are probably unsuited for operation. At the same time, final judgment must be suspended till we receive further reports of these procedures.

The clinical varieties of cancer of the breast vary, as is well known, within wide limits, and appear to me to depend very much on the age, habit of body, and constitution of individual patients. At one extreme is the large, soft, rapidly growing and vascular tumour known as medullary cancer, which occurs in robust, healthy young women, and in stout women of more mature years. These cases are most unfavourable for operation and, except in their earliest stages, are quite unsuitable. They furnish a large proportion of the early recurrences and failures, as the disease sometimes re-appears before the healing of the wound and spreads with great rapidity. Of all the unfavourably modifying conditions I think rapidity of growth is the worst. The actual duration is by no means the only criterion of the stage of the disease. A large tumour of the tuberous forms, of slow growth and unattached, has a much more favourable prognosis than an infiltrating medullary one in its earliest stages. At the other extreme is the small chronic dry infiltration of shrivelled and aged women, though not confined to old women. Opinions differ as to the propriety of operating in atrophic cancer. In my own opinion, it is a question of the stage of the disease. In an early stage they are the most favourable of all and should certainly be removed. Later, when there is any notable skin infiltration or attachment to the muscles, the most radical operation is not only ineffectual, but harmful. It is not only that an early reappearance may be expected, but the type of the disease is thereby changed and the recurrent malady may run its course in as many months as it would have occupied years if undisturbed. I have known a case extend over thirteen years of fairly comfortable life. Atrophic cancer has a remarkable faculty of attaching itself to surrounding parts, and of reproducing fibroid indurations in its recurrences, both regionary and metastatic.

On Paget's disease.—I have had four cases of this peculiar cancerous dermatitis of the nipple. I should advise immediate operation in every case of chronic eczema or ulcer of the nipple, even though no tumour is perceptible, as the relationship between this and cancer is constant. In all my cases the ulceration preceded the tumour by several years. In two of them the tumour was limited to the nipple, and of the kind known as duct cancer, and preceded by a bloody discharge from the nipple—a symptom of very grave significance.

On secondary operation.—Secondary operations are advisable only when the growths are small, solitary, and freely movable. I think these operable cases generally imply an imperfect primary operation, and should get rarer as we make this more efficient. In two of my cases only have I thought it advisable to remove recurrent nodules by secondary operation, and in neither was the result very satisfactory, as general infiltration soon showed itself. I have seen but one case, and that in the practice of a predecessor, which was greatly benefited by repeated operations, two small nodules being removed from the scar at intervals of four and three years respectively.

On the complete operation.—All cases should be subjected to the complete operation even in their earliest stages. Except as a palliative in a few rare cases and for benign tumours the incomplete operation—that is, of the breast alone—should be abandoned. The additional risk to life is scarcely appreciable, and the advantage of clearing the axilla, the next resting place of the disease, is obvious. After incomplete operations re-appearance takes place in at least 80 per cent. within six months. Even as a palliative the complete operation is much more effective, in particular in preventing that very distressing feature, œdema of the upper extremity. It is occasionally necessary to perform a palliative operation on a patient past hope of cure for the sake of the moral effect. To some women the verdict "too late" comes as a crushing blow, and it is more humane to yield to their request if this can be done with any prospect of relief. For instance, we may get rid of a foul and bleeding ulcer while the patient's spirits are maintained by hopefulness.

On the limits of the operation for cure and non-operable cases.—A judicious and careful selection of cases should be exercised and involves consideration of the constitutional state of the patient as well as the local conditions. Among non-operable cases I class: (1) large medullary cancers; (2) scattered tubercles in the skin and œdema; (3) internal metastasis of all kinds; and (4) œdema and solid enlargement of the upper limb. This I regard as an emphatic "Noli me tangere" and contra-indication. This waxy œdema is one of the most distressing features of the disease. I am sorry to say I know no means of relieving it. I have tried puncture, but it is worthless. Amputation at the shoulder girdle has been practised on a few occasions, and I have been asked by patients to do this; but even this heroic remedy does not arrest the progress. Among debatable cases I include:—1. Enlargement of supra-clavicular glands. I have hitherto regarded this as an absolute contra-indication, but I am inclined now to extend the field of operation to some of these cases. I would limit it, however, to small and movable tumours or to the condition I previously indicated of the highest axillary gland being found infected. Fixed and painful enlargements, with œdema of the limb, should not be touched. Before long we may expect some further evidence of the merit of this addition to the operation, as it is being extensively practised by some surgeons. 2. Cancer in both breasts. The appearance of the disease in the other breast is now commonly regarded as a late general infection

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and not as an independent growth. It is explained by the free anastomosis and intersection between the lymphatics of the two breasts. It is rarely desirable to operate, but Jacobson records a satisfactory case. The surgeon must consider the probabilities in each case with the interval that has elapsed and the conditions of the re-appearance. It happened in two of my patients. In one of them I operated on the second breast with unsatisfactory results. In the other I did not operate on the second breast; the disease reappeared in this case two years after removal of the first, and, very curiously, it was preceded by enlargement of the axillary glands on the corresponding side.

Diagnosis.—The importance of early operation, obvious as it is, cannot be too strongly enforced. It is unfortunate that the disease is frequently so insidious in its onset that considerable advance has been made before the patient is aware of its existence. Another great hindrance to early operation is the difficulty of diagnosis in the incipient stages. The first care should be to place the patient in favourable circumstances for the examination. The chest should be quite undressed, so as to admit of easy examination of the pectoral region and axilla as well as of both breasts. In a matter of this urgency and importance accuracy of diagnosis should be subsidiary to promptitude in treatment, as there are cases in which it is impossible to be accurate without exploratory incision. The two conditions which give the greatest trouble are chronic inflammatory hyperplasia, and the case of a tense cyst situated deeply in the breast. The latter is distinguished by its mobility, globular outline, and verified by the exploring needle, which should never be overlooked as an aid to diagnosis. Chronic mastitis is often much more difficult to discriminate, and some experience in handling and exploring these indurations is needed. Students are taught to recognise cancer by the well-known evidences in a developed stage, when the malignant characters are patent to observation; and we are all more or less under the influence of these teachings. In the simple disease which often follows lactation or weaning the thickening is sensitive to the touch, firm, and elastic, but the outlines are more diffused than in cancer. On pressing the mass against the chest wall the induration and sense of tumour disappear. Then, again, the area of breast occupied is more diffuse and larger, or both breasts may be similarly affected. The same sort of dimpling of the skin may occur as in cancer, but this is quickly followed by fluctuation and suppuration.

It is prudent to come to a decision at the first interview—that is to say, if the surgeon is unable to convince himself of the non-malignant nature of the neoplasm it is better to take action at once. I deprecate the practice of keeping cases under prolonged observation to see how they will develop. Patients either get restive and will not consent to remain long in doubt, or, what is more common, if told to report themselves in a month they turn up in six months, when the mischief is done. Moreover, the sequel in about five cases out of six shows the delay to have been unwise.

A very important question arises as to the existence of any direct etiological relationship between chronic mastitis and cancer. It is generally assumed that such a relationship exists, that chronic hyperphasia is likely to become cancer, but the stages of development from this supposed pre-cancerous state have not been traced. There seems distinct clinical proof that cancer may be grafted on to it if prolonged. I believe this did take place in the case of one of my patients. This woman, aged forty-eight years, had chronic mastitis, and after an interval of three and a half years from its first incidence a small scirrhous nodule appeared on the site. This made me regret being too precise and nice in my diagnosis. There can be no doubt that before proceeding to do one of these wide operations we must first positively satisfy ourselves that the disease is malignant. In a large proportion—too many, indeed—this is only too obvious. In doubtful cases a preliminary exploratory incision is to be made, and precaution is to be taken against auto-infection. The knife should be changed and the hands of the operator as well as the surface of the breast washed and the incision plugged with sterile gauze. Can we rely upon the naked eye appearance of the cut surface? I think so. The fresh cut section of cancer is unmistakeable, quite different from the leathery toughness of chronic mammitis. Some contend that the surgeon, if not an experienced pathologist himself, should always be accompanied by one with his freezing microtome. This, however, is a luxury which cannot always be had, unless he is to be an official provided at State expense, as suggested in America. One is very glad of the opinion of a skilled pathologist, but in case of a conflict of opinion the responsibility of deciding and acting would remain with the operator.

In closing, let me summarise by saying that so far as is at present known our only hope of advancement lies in the direction of more thorough and more early operation. The limit of what is possible in the former direction will soon be, if it is not already, reached. The result must carry conviction that we may hopefully anticipate a real cure in at least 30 or 40 per cent. or, some would say, 50 per cent. of our cases. I would not like to place 30 per cent. as a limit, but it is with somewhat chastened hope that I look for anything beyond. Longer observation is required, particularly as to the future development of those cases which pass the three years limit. Even now, however, the operation in too many cases is not practised to the best advantage and is not used for all it is worth. Certainly some of the disrepute and prejudice which have surrounded it may fairly be ascribed to the incomplete and inadequate manner in which it is too often done by men who have had no proper surgical training, and whose ill results serve to injure the cause as a whole, and to reflect prejudicially on the work of others. The fact is it has been everyone's operation because it is thought to be easy, but now that surgery is specialised to such an extent these easy happy-go-lucky methods should be abolished in this as in other branches of surgery.

In respect to the second point—more early operation—much has yet to be accomplished. I think, however, that I observe some improvement in this direction and that we now operate at a somewhat earlier average stage than was customary fifteen or twenty years ago. I gladly testify to the alertness of the profession in this respect. When undue delay occurs it is usually the fault of the patient who has concealed it from herself, her friends, and her medical attendant till too late. For this the well known want of success of the operation is partly responsible. If we can show better results women will probably be less reluctant to undergo treatment. I think in lay circles as well as medical there is an increasing recognition of the value of early and complete operation as offering the only hope of cure. For the present all pretensions to influence the course of the disease by other measures seem to have subsided, and one after another the worthless cancer cures have ceased to distract the public mind.

In thanking you for your kind attention I am too well aware that I have added nothing of novelty or weight to what has already been better said by others, but I hope some service may have been done by showing that the operation deserves more careful study and attention than it commonly receives. British surgery has been rather lax in its treatment of breast cancer, and in particular in our own district I think we have much leeway to make up.

TYPHOID SERUM REACTION.

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ALTHOUGH the typhoid serum reaction has been very generally viewed with favour by most observers as a test for enteric fever, some do not consider it to be of such value. There seems to be a tendency on the part of nearly all to admit that the reaction must be accepted with certain reservations, particularly when a negative result is obtained. It was in order to study the conditions which may be responsible for the different and somewhat anomalous results that I began a series of observations, during the course of which I have examined the sera of sixty different subjects. A brief *résumé* of the methods and conclusions of some of the different observers will help to explain why I adopted a particular technique.

Grünbaum,[1] who appears to have been the first to study

[1] THE LANCET, Sept. 19th and Dec. 19th, 1896.

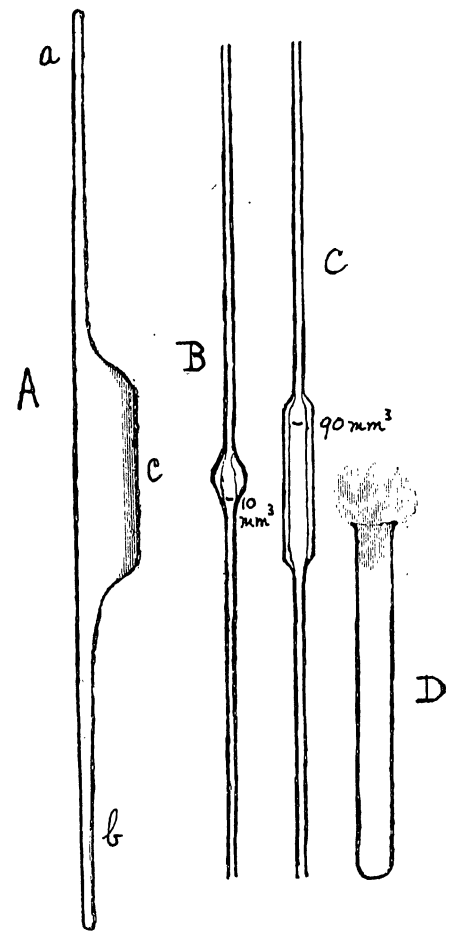
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the question systematically, uses serum which he dilutes with broth in strengths varying from 1 in 4 to 1 in 32. He considers that the test is of value when a positive reaction is obtained within a definite time; he adopts the half-hour time limit which was suggested by Gruber and Durham. Durham,[2] who uses a similar technique, failed to get a reaction in three undoubted cases of enterica as late as the sixteenth day of illness. He looks upon the reaction with favour if a positive result is obtained, but does not consider a negative result to be of much value. Widal[3] dilutes the serum with nine times (approximately) the amount of an actual broth culture of the bacillus, and makes observations as long as twenty-four hours after the mixing. He—with Catrin, Chantemesse, and Sicard, who adopt his methods—views the test with great favour, although he has found that a 50 per cent. serum from a normal person may give a positive reaction. Wyatt Johnston and MacTaggart,[4] who use dried blood subsequently diluted with water, constantly use the reaction as a test for enteric fever. Block,[5] Biggs, and Park[6] use diluted serum and, with certain reservations, think the test is of value. Von Jez,[7] who uses twenty drops of serum in 10 c.c. of broth and makes observations during as long a period as twenty-four hours, maintains that the reaction is not characteristic of enteric serum and has no specificity, The differences in the results obtained by these observers appear to bear some relation to the differences in technique, and until some generally accepted dilution and "reaction time" are adopted, different results will continue to be obtained.

Regarding the dilution, Widal and others dilute the serum with the actual broth cultivation of the bacillus typhi abdominalis. There is the objection to this method that the first portions of the serum which come into contact with the bacilli may be as strong as from 80 per cent. to 50 per cent. As, therefore, the serum of some normal people will give a decided and quick reaction, possible fallacies may occur. Wyatt-Johnston, moistening the dried blood with water, is quite unable to determine the amount of the dilution. He uses a small dilution and speaks of "partial reaction." Although this method has been attended with consistent results in his hands, other observers have not obtained such good results. Biggs and Park raise another objection to the method—viz., the formation of what they term a "pseudo-reaction." Consistent results would hardly be expected from an observer like von Jez, who is content to "drop" the serum into a measured quantity of broth. The "reaction time," or interval during which the observations are continued, has been more variable even than the amount and method of dilution. Grünbaum limits the time to half an hour, whilst Widal, von Jez, and others limit it only to twenty-four hours.

Early in December, 1896, I began a series of observations upon this reaction. Having some of the results of previous observers before me, I decided to make a comparison of the effects of 5 per cent. and 50 per cent. serum upon the bacilli during the first half-hour and after twenty-four hours respectively. I also made observations regarding the delicacy of the reaction of 5 per cent. serum microscopically as compared with that of the same dilution macroscopically. The five columns of reactions in the table are therefore as follows:—Column I., 5 per cent. serum microscopically within half an hour; Column II., 5 per cent. serum microscopically at the end of twenty-four hours; Column III., 5 per cent. serum macroscopically at varying periods; Column IV., 50 per cent. serum microscopically within half an hour; and Column V., 50 per cent. serum microscopically at the end of twenty-four hours. The serum was taken from three classes of subjects: (1) those who were suffering from, or who had suffered from, enteric fever; (2) those suffering or convalescent from other diseases; and (3) normal people. I have taken every precaution I could to satisfy myself that all those in classes 2 and 3 had never suffered from any disease resembling enteric fever during their lives. All the normal people, and those who had enterica several years ago, were either medical men, members of their families, or nurses.

Collection of the blood.—Fig. A of the diagram represents the pipette I have used throughout, with the blood-clot (darkly shaded) in the barrel, and the serum (lightly shaded) collected in the lower end. The shape is sufficiently indicated in the diagram. The diameter of the barrel—i.e., the tubing from which it is made—is about half an inch; the pipette ends are fine, but not of capillary dimensions, and are not sealed before use; the total length is five inches. Several are made at one time, put into seven inch test-tubes and sterilised in the usual manner. The lobe of the ear is cleaned with lysol, or other antiseptic; this is washed off with alcohol which is allowed to evaporate. The lobe is pricked with a sharp hare-lip pin or bayonet-pointed needle, and the ear gently squeezed. As the blood issues the end (*a*) of the pipette is held to the drop whilst the other end is depressed; the blood will now run down without any suction. When four or five drops, which is quite sufficient, have been collected the



mouth is applied to the end (*b*) of the pipette and very gentle suction exerted, the side (*a*) of the barrel being dependent. If the suction is gentle the blood will run into the barrel and will remain in a layer at the bottom without the formation of bubbles. If the suction is too great, or the diameter of the barrel too small, a bubble will probably form across the barrel, in which event the amount of available serum is diminished. The open ends are now quickly sealed and the pipette rested on a tumbler or other convenient stand, so that the part (*c*) is dependent. In this position it is allowed to remain until the blood is perfectly coagulated; from twenty minutes to half an hour is generally necessary. The pipette is then replaced in the test-tube and fixed in a vertical position. After a few hours the serum will be found free from corpuscles in the lower end.

I consider that the ear as a source of blood is in every way preferable to the finger. As much, if not more, blood can be abstracted without causing any pain. Several of my cases were small children and not one of them cried during the operation, although on a few occasions I had to squeeze the ear well, owing to the small size of the lobe. One of the chief advantages which Wyatt-Johnston claims

[2] THE LANCET, Dec. 19th, 1896.
[3] La Semaine Médicale, July, 1896.
[4] Montreal Medical Journal, vol. xxv.
[5] Johns Hopkins Hospital Bulletin, November, 1896.
[6] American Journal of the Medical Sciences, March, 1897.
[7] Wiener Medicinische Wochenschrift, January, 1897.

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TABLE OF REACTIONS.

No.	Date of observation.	Lapse of time since onset of disease.	Reaction. (I.) 5 per cent. serum microscopically within half hour.	(II.) 5 per cent. serum after twenty-four hours.	(III.) 5 per cent. macroscopic.	(IV.) 50 per cent. serum microscopically within half hour.	(V.) 50 per cent. serum after twenty-four hours.	Remarks.
1	Feb. 18th, 1897	5 days	+	—	+	=	—	Enteric fever. Urine gives Erlich's re-action.
2	Dec. 23rd, 1896	6 ,,	0	—	0	0	—	,, ,,
	Jan. 2nd, 1897	16 ,,	+	—	+	=	—	,, ,,
3	March 30th, 1897	14 ,,	=	—	+	=	—	,, ,,
4	Feb. 18th, 1897	16 ,,	+	—	+	=	—	,, ,,
5	Jan. 25th, 1897	17 ,,	+	—	+	=	—	,, ,,
6	Feb. 24th, 1897	3 weeks	=	—	+	=	—	,,
7	Dec. 23rd, 1896	4 ,,	+	—	+	—	—	,,
8	Dec. 23rd, 1896	4 ,,	+	—	+	=	—	,,
9	Dec. 16th, 1896	5 ,,	+	—	+	—	—	,,
10	March 24th, 1897	5 ,,	+	+	—	=	—	,, One relapse.
11	Dec. 16th, 1896	5 ,,	+	—	+	=	—	,,
12	March 24th, 1897	6 ,,	+	+	+	=	+	,,
13	Jan. 6th, 1897	6 ,,	=	—	+	=	—	,,
14	Jan. 6th, 1897	8 ,,	=	—	+	=	—	,, Convalescent.
15	March 26th, 1897	8 ,,	=	+	+	=	+	,, Prolonged attack, no relapse.
16	March 24th, 1897	8 ,,	=	—	+	=	—	,, Convalescent.
17	Dec. 16th, 1896	10 ,,	=	—	+	—	—	,, ,,
18	Dec. 31st, 1896	14 ,,	+	—	+	—	—	,, One relapse, convalescent.
19	Jan. 26th, 1897	1 year	=	+	+	=	+	,,
20	Jan. 24th, 1897	2 ,,	+	+	+	=	+	,,
21	March 26th, 1897	3½ ,,	0	0	0	+	—	,,
22	Feb. 3rd, 1897	3½ ,,	0	0	0	+	—	,,
23	Feb. 3rd, 1897	3½ ,,	0	0	0	+	—	,,
24	Dec. 18th, 1896	6 ,,	+	—	+	—	—	,, One relapse.
25	Jan. 24th, 1897	6 ,,	=	+	+	=	—	,, Two relapses.
26	Dec. 20th, 1896	8 ,,	0	—	0	+	—	,, has phthisis now.
27	Dec. 31st, 1896	18 ,,	0	—	0	—	—	,, Two relapses.
28	Feb. 10th, 1897	20 ,,	0	0	0	0	—	,,
29	Feb. 10th, 1897	24 ,,	0	0	0	0	0	,, convalescent from diphtheria.
30	Jan. 26th, 1897	30 ,,	0	0	0	+	—	,,
31	Dec. 18th, 1896	—	0	—	0	—	—	Normal subject.
32	Dec. 18th, 1896	—	0	—	0	0	—	,,
33	Feb. 3rd, 1897	—	0	0	0	+	—	,,
34	Feb. 3rd, 1897	—	0	0	0	0	0	,,
35	Feb. 4th, 1897	—	0	0	0	0	+	,,
36	March 30th, 1897	—	0	+	0	+	+	,,
37	March 30th, 1897	—	0	0	0	0	0	,,
38	March 30th, 1897	—	0	0	0	+	+	,,
39	Dec. 26th, 1896	8 weeks	0	—	0	0	—	Appendicitis, convalescent.
40	March 14th, 1897	4 ,,	0	0	0	0	0	Colitis.
41	March 24th, 1897	3 ,,	0	0	0	0	0	Pneumonia.
42	March 14th, 1897	4 ,,	0	0	0	+	+	Influenza, bronchitis.
43	Jan. 25th, 1897	4 ,,	0	—	0	+	—	Pyrexia.
44	Jan. 25th, 1897	4 ,,	0	—	0	0	—	Influenza.
45	Jan. 25th, 1897	—	0	+	0	0	+	Purpura hæmorrhagica.
46	Feb. 14th, 1897	14 days	0	0	0	0	0	Scarlet fever, convalescent.
47	March 17th, 1897	5 weeks	0	0	0	+	+	,, ,,
48	March 17th, 1897	4 ,,	0	0	0	0	0	,, ,,
49	Feb. 14th, 1897	6 ,,	0	0	0	+	+	,, ,,
50	Feb. 14th, 1897	6 ,,	0	0	0	0	0	,, adenitis, convalescent.
51	Feb. 14th, 1897	5 ,,	0	0	0	0	0	,, ,, ,,
52	March 17th, 1897	10 ,,	0	0	0	+	+	,, ,, ,,
53	March 17th, 1897	6 ,,	0	0	0	0	+	,, ,, ,,
54	March 18th, 1897	2 ,,	0	0	0	+	+	,, ,, ,,
55	March 17th, 1897	3 ,,	0	—	0	=	—	,, tonsillitis ,,
56	March 15th, 1897	10 days		0	0	0	0	,, sloughing throat, convalescent.
57	Feb. 15th, 1897	5 weeks	0	0	0	0	0	,, chicken-pox ,,
58	March 26th, 1897	14 days	0	0	0	+	+	,, diphtheria, broncho-pneumonia.
59	March 26th, 1897	17 ,,	0	0	0	0	0	,, ,, otorrhœa.
60	March 26th, 1897	3 weeks	—	—	—	0	0	,, ,, measles, broncho-pneumonia.

+ signifies gives a reaction; = signifies reaction in less than two minutes; and 0 signifies no reaction.

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for his method is that no skill is required for the collection of the blood. As it might have been urged that my method required a certain amount of skill or previous experience, I gave my pipettes to several medical men who had never collected blood for examination, together with an account of the method of collection which I have detailed above, and in every case I have had the pipette returned to me with the blood collected excellently. I consider that the method is easier because the ends are cut off square, instead of having to be broken off with sterile forceps, as is the case when the ends are sealed.

Dilution of the serum.—In order to dilute the serum I have used two capillary pipettes, represented by B and C in the diagram (B is graduated at 10 mm.^{3} and C at 90 mm.^{3}), and a small test-tube three-eighths of an inch in diameter and two inches long, similar to those used by Durham.[8] The end (*b*) of the blood pipette is filed and broken off just above the level of the serum. The end of the pipette B is inserted into the open end, and 10 mm.^{3} of the serum are drawn up into it. (If the calibre of the pipette B is not sufficiently small to allow this, the bottom end of the serum-containing tube is broken off and the serum is allowed to run into the pipette by capillary attraction.) The 10 mm.^{3} of serum are now introduced into the test-tube D and 90 mm.^{3} of sterile broth or salt solution are added by means of the pipette C and well mixed with it. In order to make the 5 per cent. dilution a loopful of this diluted serum is placed on a coverslip and the same loopful of an eighteen-hour broth culture of the bacillus typhi abdominalis is mixed with it. The coverslip is inverted on a hanging-drop slide and at once examined. To make the 50 per cent. dilution a loopful of the broth culture is placed on a coverslip and a drop (of equal size) of the serum is placed near it by means of the pipette B. The two drops are then well mixed, inverted on the hanging-drop slide, and examined. For the macroscopic sedimentation test 90 mm.^{3} of the broth culture are added to the diluted serum in the test-tube. Until Wright[9] published the account of his technique I had followed Durham's method and allowed the sedimentation to take place in the test-tube, but since that publication I have sucked the prepared emulsion from the test-tube into a sedimentation-tube after Wright's pattern. The massing and sedimentation are certainly more easily seen than in the test-tube and after a shorter interval. Even after adopting Wright's method I have not found that human serum, however well it reacts microscopically, will give such quick reactions as Durham[10] describes with the sera of artificially immunised animals. Wright's method of diluting I do not consider so desirable as that by means of capillary pipettes in a test-tube.

A glance at the table on p. 1461 shows several interesting facts. Cases 1 to 20 were either suffering from enteric fever or had suffered from the disease within two years. Of these all gave a reaction with 5 per cent. serum in less than half an hour except Case 2. As will be seen, I made two examinations of this patient—the first six days after the onset of the disease and the second sixteen days after the onset. At the first examination I got no reaction within half an hour. I was unfortunately not able to examine the slides after twenty-four hours, but there was no sign of reaction after the lapse of four hours with either the 5 per cent. or 50 per cent. serum. There was, however, no sign of sedimentation in the test-tube after twenty-four hours. Eleven days later, when I made a further examination, I obtained a marked reaction with the 5 per cent. serum within half an hour, and a reaction with 50 per cent. serum in less than two minutes. There was also a macroscopic reaction in three hours. Cases 21 to 30 had suffered from enteric fever from three and a half to thirty years previously to the examination. Cases 21, 22, and 23 gave no reaction with 5 per cent. serum even after twenty-four hours, but each gave the reaction with 50 per cent. serum within half an hour. Cases 24 and 25, however, who had suffered from enteric fever six years before, gave a very marked reaction with 5 per cent. serum within the half hour. One of these two cases had one and the other two relapses. Of the remainder Cases 26 and 30 alone gave a reaction, and that with 50 per cent. serum only. Cases 30 to 60 had never suffered from enteric fever. Of these not a single one gave the reaction with 5 per cent. serum within half an hour; two gave a reaction after twenty-four hours. Eleven gave a reaction with 50 per cent. serum within half an hour, and three gave a reaction after twenty-four hours that did not show it within the half hour.

The results of my observations lead me to the following conclusions: 1. As a quantitative reaction (when the serum is sufficiently dilute and the "reaction time" short) the test is of great value when the result is positive. 2. If a sufficiently long interval has elapsed since the onset of the disease a negative result is of value. When a large number of observations have been made during the earlier periods of the disease, to determine the average time of the appearance of the reaction in the serum, the negative results will be of still greater value. 3. The microscopic reaction is more speedy and more delicate than the macroscopic reaction. 4. The results of von Jez and others who have used a technique similar to his only show that too strong a serum, acting for as long a time as twenty-four hours, may give a reaction when it is obtained from a normal subject. They bear out the statement of Grünbaum that the reaction must be considered as a quantitative, and not as a merely qualitative, one.

In conclusion, I must express my indebtedness to Dr. Goodall, Dr. Goodhart, Dr. L. E. Shaw, Dr. F. Taylor, and Dr. Washbourn for their kindness in allowing me to examine patients under their care and to Dr. Washbourn for much valuable assistance.

Since writing the above, I have read the account which Professor Delépine[11] gives of his technique. It will be seen that with the manner of collecting the blood in sterile pipettes I am in accord, and I think that he will agree with me that the method which I have described is not beyond the capacity of medical men, as Wyatt-Johnston maintains. With regard to the difficulty of making exact dilutions by means of graduated pipettes, "when eight or ten observations have to be made in a short time," I do not agree. On one occasion I made six observations in half an hour; each observation included making the 5 per cent. and 50 per cent. dilutions for the hanging-drop specimens and the addition of the 90 mm.^{3} of the broth culture to the dilute serum. With a good blow-pipe at hand thirty or forty of the pipettes I have described can be made in an hour, and graduated in another hour, by any capable laboratory assistant. Directly the pipettes have been used they are dropped into a cylinder containing 5 per cent. lysol, and subsequently cleaned and sterilised as required. Professor Delépine also objects to exact measurements by graduated pipettes, because it is not always easy to get a small drop of serum out of the blood. I do not think that he will find any difficulty in obtaining 20 mm.^{3} (one-third drop), which is all that I require.

[8] Journal of Pathology and Bacteriology, July, 1896.
[9] Brit. Med. Jour., Jan. 16th, 1897.
[10] Journal of Pathology and Bacteriology, July, 1896.

A PLEA FOR THE LARGER USE OF ERGOT IN OBSTETRICS.[1]

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THE position of the practitioner who, after somewhat extended obstetric experience, finds himself returning to a question such as the use of ergot in obstetrics, in the discussion of which he has formerly more than once taken part, and which long before he had entered either the profession or the world was fully debated and apparently decided, may possibly serve to recall the task of Sisyphus as described by the poet:—

> "With useless endeavour,
> For ever, for ever,
> Is Sisyphus rolling
> His stone up the mountain."

Nevertheless, that it is not quite so superfluous to reconsider this subject at the present time as it might thus seem can, I think, be easily proved. In few respects are the changes

[11] Brit. Med. Jour., April 17th, 1897.
[1] A paper read before the Section of Obstetrics of the Royal Academy of Medicine in Ireland on April 23rd, 1897.

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that have been effected in midwifery practice since my student days more marked than with regard to the views then and now generally adopted in reference to the employment of ergot. At that time this drug was very commonly resorted to, and often with little discrimination, in labour cases. A few years subsequently the reaction which was inevitable against that malpractice set in, and has continued to operate and increase up to this period, when, the pendulum of professional opinion having been swung back to the opposite extreme, comparative desuetude has replaced the former abuse of the most potent agent at our command in many cases of powerless labour and impending post-partum hæmorrhage. This result has, I think, been fostered by the teachings of some recent authorities, by whose writings[2] a trend of modern opinion distinctly adverse to the general employment of ergot during labour has become established.

In the following remarks I therefore propose to consider very briefly whether the radical change thus effected is altogether correct in theory and advantageous in practice or not. On the former point it may be observed that some of the objections now urged in obstetric text-books against the general use of ergot are apparently founded on the recent investigations of scientists, who, in the laboratory, have examined the chemical constituents of this drug and their action in the case of some of the lower animals, rather than on actual experience of their effects in the lying-in room. It should therefore be borne in mind that, as Mr. Squire has pointed out, "neither the chemistry of ergot nor the physiological actions of its constituents have yet been definitely determined," and that, moreover, no abstract dicta, however authoritative on these points, can outweigh the testimony to the contrary effect of the countless number of obstetric practitioners who have long used preparations, such as the fluid extract of ergot or Bonjean's ergotine (which are stated to contain a toxic agent of deadly potency in the case of the animals experimented on by Kubert), without any injurious results, when judiciously employed, in the cases of parturient women.

The dangers ascribed to the administration of ergot during labour by the writers referred to include, firstly, its possible fœticidical effects; secondly, the probability of giving rise to such irregular uterine action as may occasion subsequent retention of the placenta; and, thirdly, the direct toxic effect on the maternal system that has been attributed to this drug. With regard to the first of these objections, I need not here occupy any time, as it was disposed of long since by the observations of Dr. Denham, and more recently and conclusively by the experience of our distinguished President, Dr. Atthill, whose views on this subject have been too freshly impressed on us to need any recapitulation. As to the second and third of the reasons, which, as just mentioned, are assigned for the general non-employment of ergot during parturition, I know not how I can deal with them more readily than by a short reference to my own clinical notes. Having, however, employed ergot in a very large number of instances in hospital and private practice during the last twenty-six years, within which, for some time, I occupied the position of master of one lying-in hospital and assistant master of another, it would involve more labour and occupy more space than might now be desirable, were I to refer to the record of all the occasions on which I have administered this ecbolic. I shall therefore submit merely a brief statement of the circumstances under which, in a series of 150 cases, ergot or its preparations were resorted to in midwifery practice, together with the results of its exhibition in each instance.

Abstract of 150 obstetric cases in which ergot was used.—In 70 of these cases the patients were primiparæ; in 80 they were multiparæ. In 148 cases the maternal result was favourable; in 2 instances the cases terminated fatally—viz., in 1 from septicæmia and another from typhoid fever which had commenced before parturition. In 95 cases the drug was given before the birth of the child—viz., in 15 cases for delay from inertia in the first stage of labour, and in 80 cases for delay similarly occasioned in the second stage or for the prophylaxis of hæmorrhage or for other complications then. In 92 of these instances the children were delivered alive either by uterine action or by the forceps; in 3 they were stillborn; and in 2 of the latter cases, the child being then putrid, no toxic effect could be ascribed to the ecbolic. Of the 95 cases in which ergot was given before the birth of the child in 86 the placenta was normally expelled, and in 9 its removal had to be assisted or effected—viz., in 4 for morbid adhesions, in 4 for persistent uterine inertia, and in 1 for irregular or hour-glass contraction. In 55 cases ergot was given after the birth of the child—viz., in 25 during the third stage to hasten expulsion of the placenta or prevent hæmorrhage, and in 30 after completion of labour for the arrest of post-partum flooding or, for some other reasons, to stimulate and secure tonic contraction of the uterus.

My own experience, as just summarised, points to the conclusion that many of the evil effects that have been ascribed to ergot are the result of its abuse, and therefore afford no reason against its judicious employment. Thus, for instance, if ergot be given in unsuitable cases and at unsuitable periods of parturition or in those small, inefficient, and frequently repeated doses that are now advocated, the results that may follow should, I think, be accredited to the practitioner rather than to the agent he has so resorted to. At the same time, I need hardly disclaim any desire to minimise in the least the necessity for all due caution in the use of this potent drug, or the dangers to mother or child which may be consequent on its misuse, and which are too obvious to need any detailed reference here. I may, however, on the latter point at least repeat that, as I long since elsewhere observed, "under no circumstances should ergot or ergotine be given during labour until the os uteri is fully dilated or so dilatable as to allow of delivery by the forceps if the child be not expelled by uterine action within an hour of its administration or at any time sooner that this may become necessary, as otherwise the fœtal circulation might very probably become arrested by the protracted tonic or unremitting uterine action which is the characteristic effect of this drug." That effect was also brought under notice in a former paper of mine, in which I instanced the fact that in a series of cases that came within my cognisance in which ergot had been given too early before forceps delivery, in rather more than one-fourth of these instances the children were stillborn. And hence for my own part I would almost as soon entrust a case of instrumental delivery to a student just commencing his midwifery as allow him or the nurse to administer ergot until thoroughly conversant with the principles which should direct its employment and the evils that may result from its improper exhibition.

The conditions and circumstances under which ergot may be employed in obstetrics.—These may be here briefly stated, although, as will be seen, I ascribe a wider range of utility to ergot in midwifery practice than is generally conceded. Nevertheless, I would presume to observe that my views are the result of actual clinical experience which it may not be easy to disprove by any merely theoretical objections, however strongly expressed. Judging from the recent literature of this subject it apparently is not superfluous to premise that to use any preparation of ergot safely and effectively in the labour cases referred to it is essential, (1) that the presentation should be natural or cranial, except in some instances of breech presentation, in which it may possibly be necessary to deal at once with uterine inertia; (2) that there should be no marked disproportion between the fœtus and mother or any other physical impediment in the genital tract to delivery; (3) that the os uteri, if not previously fully dilated, should be so dilatable as to allow of speedy extraction by the forceps when necessary; and (4) that the preparation selected, the dose, and the method in which it is employed should be well calculated to produce the required effect.

Subject to the foregoing conditions, ergot may with utility be employed when actually indicated and judiciously administered either before, during, or after the second stage of labour. That is to say, it may be given before the full dilatation of a dilatable os—(1) in some instances of long delay from uterine inertia in which there is imminent danger to mother or child; or (2) risk of subsequent flooding from further protraction of the case. During the second stage it may be employed (3) in labour rendered abnormally tedious by deficiency of uterine action or otherwise complicated, and in which the presentation is natural and no other impediments to delivery exist; or (4) for the prophylaxis of apparently impending flooding. During the third stage ergot may be resorted to (5) for the expulsion of the placenta when retained by inertia; or (6) for the arrest of loss of blood. After delivery this ecbolic may be employed either immediately (7) to check or prevent hæmorrhage, or, subsequently (8), to produce tonic

[2] Vide Lusk: Science and Art of Midwifery, p. 461, 1896. Playfair: Science and Art of Midwifery, vol. ii., p. 10. Winkell: Text-book of Obstetrics, 1890, p. 513.

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or permanent contraction, and, by sealing up the uterine vessels, thus lessen the liability to bacteriological invasion or sepsis; or else at the same time it may be exhibited (9) for the purpose of expelling clots from the womb and so arresting after pains. Lastly (10), in the majority of multiparous patients ergot may be administered during the puerperal period with the object of stimulating the muscular tonicity of the uterus, accelerating the process by which its return to a normal condition after parturition is effected, and thus obviating the future possibility of chronic subinvolution.

Method of employing ergot in obstetric cases.—To produce the desired effects in the cases above referred to it is obviously necessary, as I may repeat, that ergot should be administered in the form, dose, and method best calculated to secure speedy and permanent contraction of the muscular tissues. Under no circumstances, therefore, should ergot be given in obstetric practice in those small, utterly inefficient, and frequently repeated doses that have been recommended by several modern authorities, but which, in my opinion, are calculated to do more harm than good by producing irregular and evanescent waves of muscular contractility instead of that firm, regular, and tonic uterine contraction by which alone persistent inertia may be overcome, the fœtus or the placenta expelled, post-partum hæmorrhage prevented or arrested, retained clots and membranous or placental débris dislodged, and subsequent sepsis or still later subinvolution may be obviated. With these objects in my early days an extemporaneous infusion of the crude, freshly powdered drug was most generally employed, and though troublesome to prepare and, nauseous to take, was of unquestionable ecbolic activity. This in turn was replaced by the no less efficacious liquor ergotæ of the British Pharmacopœia or by a glycerine solution, such as Long's, which, when I was assistant physician to the Rotunda Hospital, was as largely and usefully employed as any of the more recent preparations of ergot have since been. Amongst the later I may more especially mention Bonjean's ergotine, Oppenheimer's ergol, and Burroughs, Wellcome, and Co.'s tabloids of ergotin and of its citrate, each of which I have with advantage employed in many instances. At the same time, however, I may confess my possibly antiquated predilection for the fresh liquid extract of the Pharmacopœia, which I have found, when, as I think, properly administered—that is to say, in suitable cases and in doses of from two to three drachms by the mouth, together with the simultaneous exhibition of another drachm, or even two, by deep hypodermic injection in the gluteal region—generally most reliable as a safe and efficient ecbolic. To act thus, however, ergot—whatever preparation be selected—like all other potent drugs, must be judiciously employed, or, in other words, should be given only in suitable cases and conditions, at the proper time, in an effective manner, and with due precautions.

Dublin.

THE BACTERIOLOGICAL DIAGNOSIS OF TYPHOID FEVER.

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THE examination of sputum for tubercle bacilli and of the membrane from suspected cases of diphtheria by the preparation of cultures has in each case proved to be such a valuable aid to diagnosis that the wish has often been expressed that a similar bacteriological test for the presence of typhoid fever was available. We have now good reason to believe that such a want has been supplied by Widal's method, which bids fair to be of great assistance in determining the true nature of doubtful cases of typhoid fever at an early stage of the disease. As the new method is still on its trial I venture to record my own experience of it. The gradual development of the test and the various ways in which it may be applied have been so recently described by Professor Delépine[1] in this country that a short description only will be given of the method adopted in the cases which I have examined.

[1] THE LANCET, Dec. 5th, 1896, p. 1589; Brit. Med. Jour., April 17th, 1897.

It is well to recognise that this test can be rapidly made at the bedside, and in many cases a positive result can be thus obtained earlier than when a specimen of the blood has to be sent to a laboratory for examination. In order to apply the test in this manner it is necessary to be provided with a pure broth culture of the typhoid bacillus which has been grown for from eighteen to twenty-four hours in an incubator at 37° C., a microscope fitted with a lens having a magnification of from 200 to 300 diameters, or, still better, with a $\frac{1}{12}$th in. oil immersion lens, a platinum loop, a pair of forceps, a spirit lamp, slides and cover-glasses. These can be carried in a handbag, so that the test can be applied in a private house as well as in a hospital ward by anyone who has the requisite knowledge of bacteriological methods. Before carrying out the test a specimen of the broth culture must be examined under the microscope so as to make sure the bacilli in it are actively motile and show no agglomeration. Thirty-four cases have been examined. In twenty-two freshly-drawn blood, in eight dried blood, and in four serum has been used. The test has been applied in the manner recommended by Professor Delépine as follows. The lobule of the ear or the tip of a finger is pricked with a clean needle, and of the blood thus obtained one platinum loopful is placed on one corner of a clean cover-slip. Nine loopfuls of the broth culture of the typhoid bacillus are then put separately on the same cover-glass and uniformly mixed with the blood by means of the platinum loop. The cover-glass is at once turned over, placed on a glass slide, and examined under the microscope. By this method the reaction is rapidly developed.

Of fourteen cases of typhoid fever in which the reaction was obtained with fresh blood it was immediate in eight, well marked agglomeration of the bacilli being seen directly the specimen was put under the microscope. In the remaining six the agglomeration was quite distinct within fifteen minutes of the first examination of the specimen. When the reaction was not observed within a few minutes it was found to be advisable to run a little melted paraffin round the edge of the cover-glass so as to prevent evaporation from the edges of the specimen and so preserve it for more prolonged examination.

In twenty-four cases in which a clinical diagnosis of typhoid fever had been made at the time of the examination the reaction was obtained. Some of the cases were convalescent, but in none had the temperature been normal for more than three weeks. These cases are arranged in the following table:—

Table of Twenty-four Cases of Typhoid Fever in which Widal's Reaction was obtained.

Sex.	Age.	Date of examination from onset of illness.	Method of testing.	Result.
M.	11	5th day.	Dried blood.	Immediate reaction.
F.*	—	6th ,,	,, ,,	Reaction.
M.*	—	7th ,,	,, ,,	,,
—	—	8th ,,	Fresh blood.	Immediate reaction.
M.†	11	14th ,,	,, ,,	,, ,,
M.†	19	14th ,,	,, ,,	Reaction in five minutes.
M.†	12	19th ,,	,, ,,	,, ,, ,,
F.	13	19th ,,	,, ,,	Immediate reaction.
M.	20	20th ,,	Serum.	Reaction.
F.	8	3rd week.	Dried blood.	Reaction in thirty minutes.
M.*	—	3rd ,,	Fresh blood.	Immediate reaction.
M.	16	3rd ,,	Serum.	Reaction.
F.	13	24th day.	Dried blood.	Immediate reaction.
F.†	3	25th ,,	Fresh blood.	Reaction in fifteen minutes.
M.	10	27th ,,	,, ,,	Immediate reaction.
M.	9	28th ,,	Dried blood.	Reaction.
—	6	30th ,,	Serum.	Immediate reaction.
M.	19	35th ,,	Fresh blood.	Reaction in ten minutes.
F.	14	43rd ,,	Dried blood.	Reaction.
M.	21	44th ,,	Fresh blood.	Immediate reaction.
M.	21	55th ,,	,, ,,	,, ,,
M.	22	60th ,,	,, ,,	Reaction in a few minutes.
M.	14	71st ,,	,, ,,	Immediate reaction.
M.	13	?	,, ,,	Reaction in fifteen minutes.

* Members of one family. † Members of one family.

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In one case there had been a typical severe attack of enteric fever, but the temperature had been normal for six weeks at the time the blood was examined, and no reaction was obtained, although the specimen was kept under observation for two hours. In another case which had been admitted to the hospital as a doubtful case of enteric fever of five days' duration the temperature became normal on the seventh day. The blood was examined on the twenty-seventh day, but no reaction was observed, so that the case cannot be considered as one of enteric fever at all.

From this it will be seen that in no case did the reaction fail to occur when the blood or serum was examined during the febrile stage or during the first three weeks of convalescence. The only case in which it was not obtained was that in which convalescence had already lasted for six weeks. In one case of acute pulmonary tuberculosis a very slight agglomeration of the bacilli was observed, but the patient was a Chilian who could not speak English and we were unable to ascertain whether he had suffered from typhoid fever previously or not. The blood of two normal persons gave no reaction, nor was any agglomeration of the bacilli observed in the following cases: ulcerative endocarditis with subsequent peritonitis and pleurisy due to a diplococcus, acute rheumatism followed by exophthalmic goitre, scarlet fever with middle-ear disease and meningitis, influenza with severe gastro-intestinal symptoms, and measles. In some of these cases the result of the test was of much assistance in excluding typhoid fever at an earlier date than was possible by the clinical symptoms alone.

In conclusion, I wish to express my best thanks to those who have so kindly allowed me to examine their cases, and especially to Dr. H. E. Armstrong, the medical superintendent of the Newcastle City Hospital for Infectious Diseases, and Dr. C. V. Dingle, the resident medical officer, for much valuable assistance.

Newcastle-on-Tyne.

A NOTE ON THE BACTERIOLOGICAL CONDITIONS PRESENT IN ULCERS TREATED BY OXYGEN GAS.

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IN a very interesting paper read before the British Medical Association at Carlisle in July last,[1] Mr. George Stoker described in detail his method of the surgical uses of oxygen gas, and gave a series of cases of chronic ulcers and burns successfully treated by this method. In the same paper he also gave, in conjunction with Mr. George Dineen, a short bacteriological account of the cases so treated, and a summary of conclusions.

With a view to testing the accuracy of these conclusions, advantage was taken of the opportunity of making cultivations from a series of cases of chronic ulcers undergoing the oxygen treatment at the Royal Victoria Hospital, Netley. The methods pursued were in the main the same as described by Mr. Stoker in his paper—viz., cultivations were made from the ulcers before the application of oxygen and at intervals during the treatment. In all cases the cultivations were made on agar-agar tubes and incubated at 37° C. for periods varying from twenty-four to forty-eight hours. Special notice was taken as to whether the favourable progress of healing corresponded with the disappearance of "rod bacteria" in cases where they were present at the outset, and a plentiful growth of staphylococci. It is to be noted that Mr. Stoker in his paper mentions that staphylococci are favourable and "rod bacteria" unfavourable micro-organisms when present in a wound undergoing oxygen treatment. He also mentions that soon after the application of oxygen, and when healing sets in, that it is accompanied by a disappearance of the "rods," but not of the staphylococci, which continue to grow until healing is complete. No attempt was made to classify these "rod bacteria." The majority were short motile rods with rounded ends, growing well on any ordinary medium, and producing liquefaction in gelatin.

[1] Brit. Med. Jour., Oct. 24th, 1896.

Between February 19th and April 3rd seven cases of chronic ulcers, all specific except one, were put under the oxygen treatment. The surfaces of the ulcers were attended to in the manner described by Mr. Stoker in his paper. All the patients were men under the age of thirty years, and most of them were in a feeble state of health, emaciated, and broken down from the effects of constitutional disease and service in India, and were not good subjects to respond to any treatment. Notwithstanding the inferiority of the material to work upon, marked improvement took place in all at an early stage; pain was diminished, the discharge became less, "rod bacteria" disappeared, and staphylococci flourished all the time.

CASE 1.—This patient suffered from a specific ulcer of the leg of four months' standing. On Feb. 19th treatment was commenced with half oxygen and half air. Improvement was noted on the third day and continued until March 13th, when the ulcer had quite healed. In this case all the cultivations showed the staphylococcus pyogenes citreus only.

CASE 2.—The patient was affected by rupial ulcerations on the arms and legs of five months' standing. On Feb. 19th treatment by half oxygen and half air was applied to the left arm only, the legs and right arm having other treatment. Improvement was noticed on the second day, and on Feb. 27th all the ulcers on the left arm had healed, while for the most part those on the right arm and legs remained open. The first cultivation consisted of the staphylococcus pyogenes citreus and short "rods," and the second cultivation, taken four days after the first, showed staphylococcus pyogenes citreus only.

CASE 3.—This was a case of specific ulcer on the scalp of thirteen months' duration. On Feb. 20th pure oxygen was applied, and on the 25th half oxygen and half air were applied. The first cultivation showed staphylococci only. Healing progressed satisfactorily for the first week when it came to a standstill. After this it was noticed that a new gummatous ulcer had formed close to the old one, a circumstance which interfered considerably with its healing. On March 5th the cultivation showed a copious growth of short "rods" and only a few staphylococci. The ulcer was then sown with a pure culture of staphylococcus pyogenes citreus. On the 14th, owing to the predominance of short "rods" in the cultivations, the ulcer was again sown with a pure culture of staphylococcus pyogenes citreus. On the 20th the improvement began and the cultivations at this time showed a plentiful growth of staphylococci and a few "rods" only. On the 28th improvement was again at a standstill and the cultivations showed "rods" only. On April 1st improvement again set in and continued up to April 18th, the date of the last observation. All the cultivations after April 1st showed staphylococci only. In this case delay in healing was accompanied by the presence of "rods" in the cultivations, and when progress set in these diminished and at last disappeared.

CASE 4.—In this patient several syphilitic ulcers were present on the arms, the legs, and the face, of ten months' duration, those on the legs being the worst. The patient was in a very feeble state of health and greatly emaciated. On Feb. 28th treatment by half oxygen and half air was applied to a large ulcer on the right instep. Cultivations showed a mixture of short "rods" and staphylococci. Cultivations from another ulcer on the right knee which was being treated in the ordinary way showed a mixture of short "rods" and staphylococci. By March 6th both sides had improved. Cultivations from the ulcer on the instep showed staphylococci only, and from the ulcer on the knee a mixture of "rods" and staphylococci. On the 13th oxygen was applied to the ulcer of the knee. On the 18th both ulcers were improving and the cultivations from both showed staphylococci only. The oxygen was then stopped on account of the patient being so weak and irritable that he could not bear the necessary restraint for the continuous application of the treatment.

CASE 5.—This patient suffered from three ulcers on the shin of four weeks' standing, over a large cicatrix and caused by a fall. On March 13th, half oxygen and half air were applied. Cultivations showed a plentiful growth of "rods" and a few staphylococci. On the 16th, the ulcers had healed. Cultivations were made on the 15th and showed a plentiful growth of staphylococci and a few "rods" only.

CASE 6.—This case was one of gummatous ulcerations on the right shin and instep of four months' duration. On March 1st, half oxygen and half air were applied. No cultivations were made before the oxygen treatment.

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Improvement set in after two days' oxygen, and on April 18th the ulcers had almost healed. Cultivations all showed staphylococci only, all having been taken after exhibition of the oxygen.

CASE 7.—This patient had lupus of the nose and face of nearly three years' standing. Scraping was done two days before the oxygen was commenced. On March 28th, half oxygen and half air were applied. No cultivation was made before the use of oxygen. By April 3rd there was marked improvement in the ulcers. Cultivations showed a plentiful growth of staphylococci only. By the 5th all the ulcers had closed.

In all the foregoing, with the exception of Case 5, the ulcers were of a very chronic character and had shown great resistance to other methods of treatment. In all the cases improvement was noted in from two to four days after the application of the oxygen gas, and with the exception of Case 3 the improvement was uninterrupted.

A complete explanation as to how this improvement was brought about is at present difficult to give. Possibly the oxygen acts in one or more of the following ways: (*a*) diminution of irritation—any dressing applied to an open sore causes more irritation than a mixture of oxygen and pure air; (*b*) direct stimulation without irritation; (*c*) the oxygen may oxidise the toxins produced by micro-organisms in the surface of the ulcer—this may apply more especially to the toxins produced by bacilli when present; and (*d*) as stated by Mr. Stoker, the oxygen has possibly a selective power in its action on micro-organisms present in the ulcer, encouraging staphylococci, which then outgrow the bacilli. Some of the foregoing points are at present under investigation. Here, as yet, we have only the practical results of a few cases to go by, all of which are in favour of the oxygen treatment.

Netley.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ON HOLOCAINE IN OPHTHALMIC SURGERY.

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CONSULTING OPHTHALMIC SURGEON TO ST. GEORGE'S HOSPITAL.

A FEW months ago I recorded in THE LANCET a trial of eucaine as an anæsthetic in ophthalmic surgery, but I found on further use that it was not free from certain disadvantages. The first application to the conjunctiva was apt to be acutely painful, the smarting continuing with some severity for several minutes in some persons, while different specimens of the drug appeared to differ in their power of producing it. I have been told that a modified preparation which has since come into the market, and is sold as "Eucaine B," is not painful, but I have no personal experience of its effects.

On March 27th in the present year a paper was read before the Belgian Academy of Medicine by Dr. Deneffe of Ghent on a new alkaloid called holocaine, which he described as an effective anæsthetic for ophthalmic purposes, and for which he claimed many advantages over cocaine. He said that by applying a drop of a 1 per cent. solution to the eye three times, at intervals of fifteen seconds, complete anæsthesia would be established in three minutes, without pain, without change in the diameter of the superficial vessels, without dilatation of the pupil, and without paralysis of the accommodation. These results were described as constant. As soon as I read Dr. Deneffe's paper I made an endeavour to procure the holocaine, but there seemed to be none in London. Ultimately, Mr. Rogers, of 327, Oxford-street, obtained for me a supply, and last week I was enabled to use it. In the meanwhile Dr. Gutmann had contributed a paper on the new alkaloid to the *Berliner Klinische Wochenschrift*, and, while confirming what had been said by Dr. Deneffe, he mentioned as an additional advantage that it did not act injuriously upon the corneal epithelium. But he also mentioned that the solution could only be used as an application to the conjunctiva, being actively poisonous if injected under the skin (*die subkutane Injektion zu starke Giftwirkung bedingt*), and that it could not be sterilised in vessels of alkaline glass, as it became turbid when heated in them. He advised that it should only be heated in porcelain vessels.

I received a supply of holocaine last week, and used a 1 per cent. solution in the manner described by Dr. Deneffe, having first applied some to my own eye and found that it gave no pain. Four applications were made to the patient in the course of a minute; and at the end of four minutes from the first of them I performed cataract extraction with iridectomy. The patient was unconscious of the first incision, and was barely conscious of the iridectomy, not flinching or moving the eye on account of it. The section healed perfectly by the first intention. A day or two later I used the same solution before slitting up the lacrymal canaliculus, and rendered the little operation absolutely painless. As asserted by Dr. Deneffe, there was no action upon either the conjunctival bloodvessels, the pupil, or the accommodation; and I cannot but think that the new agent will be found highly useful in ophthalmic practice. The promptitude of its action is alone of no inconsiderable advantage.

Harley-street, W.

FUNCTIONAL ACTIVITY OF MAMMARY GLAND IN AN INFANT.

BY ERNEST S. HAWTHORNE, L.R.C.P., L.R.C.S. IREL.

THE following case may prove to be of interest to readers of THE LANCET. A woman consulted me on March 11th about her baby girl and stated that when the child was six days old she observed her to be very peevish and difficult to pacify, and that when she touched the child's breasts she would scream piteously. She examined the breasts and found them to be enlarged and painful. She then squeezed them, when about two teaspoonfuls of whitish fluid oozed out from each nipple. The child then became quite quiet, and continued so until the evening, when once more she showed evidence of pain. The mother again examined the breasts and found them in a similar condition to that of the morning, so she again applied pressure and with a like result. Thus, she continued (to use her own words) "milking the breasts" every day for five days, when she consulted me. I examined the child's breasts and found them enlarged to about the size of an orange cut in half; the nipples were prominent, and on squeezing them a fluid resembling the mother's milk in appearance escaped. The child did not seem to be in any pain whilst applying the pressure, and I was able to obtain about three drachms of fluid from both nipples. I applied a small belladonna plaster over both breasts, with the result that they are now in a normal condition.

Georgetown, Queensland.

NOTE ON AN UNUSUALLY HEAVY HEART.[1]

BY G. A. REID, M.B. ABERD.,
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THE weight of the heart in the following case merits, in my opinion, its being put on record. A man, aged thirty-one years, was admitted into the Cumberland and Westmorland Asylum in December, 1896. He was 68 in. in height and 148 lb. in weight. He was known to have suffered from heart disease for nearly three years. He had been a heavy drinker, and was said to have contracted syphilis, but had never had rheumatism. At one time he competed frequently in foot-races. On admission he showed all the symptoms of marked cardiac disease; his face was pale and anxious-looking, he suffered from orthopnœa, and he had severe anginal attacks, which were alleviated by the inhalation of nitrite of amyl; his pulse was 132, and of the "water-hammer" variety; the apex beat, which was diffused and heaving, was markedly displaced downwards and to the left, and was in the seventh interspace one and a half inches outside the nipple line; the area of cardiac dulness extended from the third rib downwards and from the right sternal margin outwards to the

[1] A paper read at a meeting of the Border Counties Branch of the British Medical Association at Kendal on April 30th, 1897. The heart was exhibited.

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apex beat; a mitral systolic and double aortic murmurs were present; there was no dropsy. The mental symptoms were excessive nervousness, vague anxiety, irritability, and sleeplessness, and, in reality, were greatly the result of the heart disease. He remained in very weak health, and died rather suddenly in bed on April 28th, sixteen weeks after admission. It is unnecessary for my purpose to give a detailed account of the post-mortem appearances, but a complete examination was made, as in each case of death in the asylum since 1867. The heart was free in the pericardial sac and all its cavities were distended with blood. The whole organ was dilated and hypertrophied, especially the left ventricle, its walls measuring from three-quarters to one inch in thickness. The aortic valve was incompetent; the other valves were healthy. The cone diameters were: T 1·6, P 1·25, M 1·6, A 1 35. The base of the aorta was dilated and atheromatous, and the coronary orifices were much narrowed. The heart muscle was pale and there was a considerable external deposit of fat. The organ weighed 41 ounces. The lungs were free in the pleural cavities and healthy. The liver was much congested and weighed 69 ounces. The kidneys were large and pale, weighing 6½ ounces and 7 ounces respectively, and showed no cortical atrophy. The other organs were healthy. There were a few ounces of clear fluid in each serous cavity.

In the records of necropsies performed in this asylum since 1863, now embracing nearly 1400 cases, the two heaviest hearts previously noted weighed 31 ounces and 31½ ounces. Delafield and Prudden have placed on record one heart weighing 50 ounces, and Dulles another weighing 48 ounces. So far as I can ascertain from the literature on the subject at my disposal, no other heart over 40 ounces in weight has been recorded. It should be borne in mind that the size of the heart is said to bear a relationship to the size of the individual. In this case the heart was immense in proportion.

Carlisle.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procœmium.

GUY'S HOSPITAL.

CHRONIC OSTEITIS OF THE TIBIA TREATED BY DRILLING THE BONE.

(Under the care of Mr. DAVIES-COLLEY.)

MEDICINAL treatment for the pain of osteosclerosis is frequently extremely unsatisfactory, and trephining, which has been employed, is for such an ailment an unnecessarily severe procedure. "Linear osteotomy" has been performed for the condition, having been introduced by Erichsen. This consists in sawing the bone with a Hey's saw in the line of a skin incision; it gives great relief to the tension; but the method employed in the following case is certainly more simple than either trephining or linear osteotomy, as no skin incision is required, and it has the additional advantage of assisting greatly in the diagnosis of more deeply-seated mischief should it be present. For the notes of this case we are indebted to Mr. H. W. Dudgeon, clinical assistant.

A woman, aged twenty-six years, married, was admitted into Guy's Hospital on March 31st, 1897, complaining of pain in the lower and inner part of the right leg. In her family history the only fact of importance which could be elicited was that one of her brothers had died from pulmonary phthisis. She herself had had no illness previously to the present one. When seventeen years old (nine years previously) she was troubled with pain in the lower and inner side of the right leg, and this pain was especially severe at her menstrual periods. It had continued up to the time of her admission, but with varying severity. Four years previously she married, and a year and a half later, after the birth of her first child, it was noticed that the right leg, especially in the lower part, was swollen. As time went on this swelling did not diminish, but rather increased, and when her second child was born it was more marked still. On examination there was no sign of disease elsewhere than in the right leg, all the organs being healthy. The urine was normal. There was no evidence of congenital syphilis. Occupying the lower third of the right leg on the inner aspect was an obvious swelling. Its margins were ill defined, as it blended gradually with the unaffected bone above; its surface was smooth, and although the enlargement was obvious the prominence was not great. The circumference of the right leg taken over the most raised part of the swelling was seven and three-quarter inches; on the left side the circumference taken at the same level was six and three-quarter inches. The swelling was firm, and evidently due to enlargement of the tibia. Tenderness on pressure was complained of over the whole extent of the swelling. As the patient had been lying in bed there was then no œdema, but she said that it returned immediately she got about, and that if she did much walking it became very marked. She complained very much of pain, which was especially severe at night, and was not at all relieved by the rest in bed. On April 2nd, the skin over the lower third of the tibia having been carefully cleansed, Mr. Davies-Colley drilled holes through the skin into every part of the thickened bone. The drill was used thirteen times in all. No pus escaped by any of the openings, and no cavity was found in any part of the thickened bone. The wounds were dressed with sal-alembroth gauze and the limb was placed in a Bavarian splint. During the following night the patient complained of some pain in the leg, but by the help of a hypodermic injection of morphia she obtained a fair night's rest. On the 5th she had at intervals a good deal of pain. The splint was cut open. On the 11th the pain at times was still severe, but on the whole it was better. The temperature had on several occasions been a little above normal, but the highest point reached had been 100 6° F. On the 12th the pain was decidedly better, being both less frequent and less severe.

Remarks by Mr. DAVIES-COLLEY.—This case of chronic osteitis of the lower third of the tibia I suspect to be due to inherited syphilis. Before operating I was uncertain whether the chronic inflammation was around a central sequestrum or abscess, or whether it was a case of sclerosing osteitis. In such cases I think the best plan is to explore the whole of the thickened bone by means of a brad-awl or Archimedean drill without making any preliminary incision through the skin. If at any point pus escapes, or a cavity is found in the bone, it is easy to make an incision, and to open up the abscess or sequestrum cavity with a gouge or trephine. Should no such cavity be found the case is probably one of osteosclerosis, and much benefit is usually obtained from the relief of tension, and possibly also from the admission of healthy granulation tissue into the interior of the bone through the drill holes. Although the thickening of the bone still remains, the patient is now free from the severe nocturnal pain from which she had suffered.

THE name of Mr. Richard Rogers, L.D.S. R.C.S.I., dental surgeon to the Cheltenham General Hospital, has been added by the Lord Chancellor to the Commission of the Peace for Gloucestershire, on the recommendation of the Lord-Lieutenant (the Earl of Ducie).

MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.—With the object of showing the progress that has been made during the sixty years' reign of the Queen in the "manufacture of chemical preparations for medical purposes, surgical instruments and appliances, food products, sanitary compounds and apparatus, and the literature bearing on the science and art of medicine and surgery," an exhibition is to be held in the Queen's Hall, Langham-place, W., from the 26th to the 30th July next, under the auspices of the Medical, Surgical, and Hygienic Exhibitors' Association. A pathological and anatomical museum is to be a feature of the exhibition, and only those exhibits that "either directly or accessorily appeal to medical men as being of necessity or utility to them in the pursuit of their profession" will be admitted. Invitations and admission cards will be sent to members of the profession throughout the United Kingdom whose names appear in the Medical Register for the current year. An orchestra has been engaged to give selections of instrumental music in the afternoons and evenings during the period of the exhibition.

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Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Ligature of the Subclavian Artery for Aneurysm.—Ligature of the Carotid Arteries for Tonsillar Hæmorrhage.—Irreducible Hernia.

A MEETING of this society was held on May 26th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

At the commencement of the meeting the President proposed that a loyal address should be drawn up and forwarded to Her Majesty conveying the congratulations of the Royal Medical and Chirurgical Society on the celebration of her Diamond Jubilee. He remarked that in 1840 the Queen as patron signed the book of the society, following the precedent set by her predecessor, William IV. The motion was carried by acclamation, and the book containing the Royal signature was handed round for the inspection of the Fellows.

Mr. H. H. CLUTTON read a paper on a case of Subclavian Aneurysm successfully treated by Ligature. The case was one of an aneurysm of the third part of the right subclavian artery, for which the first part of the artery was ligatured twice, and a few days after the second occasion a distal ligature was also applied to the first part of the axillary artery. The patient, a spare, healthy man, fifty-four years of age, was seen by Dr. Sharkey in February, 1896, and sent to him (Mr. Clutton) with the statement that the heart and aorta were free from any obvious signs of disease. There was a small sacculated aneurysm in the third part of the right subclavian artery reaching from the outer border of the scalenus anticus to the clavicle. On March 18th, 1896, a ligature prepared from goldbeaters' skin was applied on the proximal side at the junction of the first and second part of the subclavian artery. The ligature was tied by means of the "stay-knot" recommended by Ballance and Edmunds with sufficient tightness to arrest the circulation, but without rupturing the coats. The superior intercostal artery was also tied at the same time and in the same manner. At the end of five or six weeks the aneurysm and the radial artery were pulsating as they did before the operation. This was probably due to the ligature becoming absorbed. On June 10th the first part of the subclavian artery was exposed and tied with floss silk on the proximal side of the first ligature. The internal mammary and thyroid axis were also tied at the same time. The stay-knot was employed for each ligature, and the walls of the vessels were approximated without sufficient tightness to rupture the coats. Pulsation in the aneurysm and in the radial artery ceased as the ligature on the main vessel was being tightened. On June 17th the aneurysm was again pulsating. The first part of the axillary artery was therefore immediately tied in the same manner with floss silk, so as to cut off all the collateral vessels from the intercostals in the axilla. After this operation the aneurysm ceased to pulsate and gradually disappeared, so that the patient left the hospital on Aug. 8th without any swelling above the clavicle. Mr. Clutton considered it probable that if the first ligature had been of silk instead of an animal material the subsequent operations would have been unnecessary.—Mr. BARWELL remarked that until the last few years ligature of the subclavian artery had only rarely been undertaken. He was glad to see that Mr. Clutton supported the view which he (Mr. Barwell) had advanced fifteen years ago, that it was dangerous to rupture the coats of a vessel so near the heart as the subclavian artery, as it was not safe to trust the vessel with only part of its coats exposed to the strong pulsation unavoidable in that position. For even if the ligature held there was great risk that, if the middle coat was torn and retracted, an aneurysm might form at the seat of the ligature. He had seen the ligatures of goldbeaters' skin, but had no personal experience of their use and would not expect that they would be sufficiently firm to ensure occlusion of the artery. It was a difficult matter, requiring experience and delicacy of touch to judge the exact amount of force necessary to completely arrest the pulsation without rupturing the coats. He agreed with Mr. Clutton that, owing to the short length of artery available and the high arterial pressure, it was not safe to ligature the artery in two places and divide it.—Mr. BERNARD PITTS said that he had met with a similar case, and had operated on it at St. Thomas's Hospital a short time ago. The man had an aneurysm involving the second and third part of the right subclavian artery and also a cardiac lesion. He cut down on the first part of the subclavian artery and had no difficulty in exposing and ligaturing it with a floss silk ligature. He endeavoured, unsuccessfully as it proved, to avoid rupturing the coats. Owing to the encroachment of the tumour it was not possible to find and ligature the branches of the vessel. The pulsation and pain returned after a short time, and Mr. Ballance, in his absence, explored the site of the ligature and found a swelling, which afterwards proved to be an aneurysm, at the proximal side of the seat of the ligature. Mr. Ballance ligatured the first part of the axillary artery, but hæmorrhage occurred a few weeks later from the site of the exploration, and it was found that at the first operation the coats of the artery had been ruptured owing to their being unusually soft, and that an aneurysm had formed on the proximal side of the ligature. There was no suppuration after the operation in this case.

Mr. CLUTTON also read a paper on a case of Pharyngeal Abscess followed by Hæmorrhage, and treated by Ligature of the Carotid Arteries. The case was one of very severe hæmorrhage from an abscess in the roof of the pharynx above the right tonsil, which was eventually successfully arrested by the ligature of the common external and internal carotid arteries. A man, aged twenty-eight years, a victualler by trade, was admitted into St. Thomas's Hospital, under Dr. Sharkey, on June 20th, 1896, for a "sore-throat" and general pains. The day after admission he bled rather profusely from an abscess in the pharynx above the right tonsil. On the 24th the soft palate was divided for the purpose of a complete examination of the abscess. A hole was then found passing through the wall of the pharynx into the tissues of the neck, from which rapid oozing took place. This opening was enlarged and the cavity plugged with cyanide gauze, as it was thought from the character of the hæmorrhage that the bleeding might be from the internal jugular vein. During the night following this operation he bled so profusely that no doubt could be entertained as to the hæmorrhage being from a large artery, probably the internal carotid. The next day, the 25th, the bifurcation of the common carotid on the right side was exposed, and a goldbeaters' skin ligature applied by means of a "stay-knot" to the common carotid and its two branches. A saline infusion of two pints was given whilst the wound was being closed with sutures. The wound in the neck healed by first intention, and the abscess cavity in the pharynx was found by digital examination to have closed on July 16th. He had no further hæmorrhage after the ligature of the carotid arteries, and left the hospital for a convalescent home on July 25th. Considering the difficulties in determining the exact source of hæmorrhage when it occurred from a pharyngeal abscess, Mr. Clutton considered it to be the safest practice to tie both the external and internal carotid arteries, as well as the common carotid, for all three arteries were reached through the same incision at the bifurcation. The necessity for tying two of them had been well shown by Mr. Pitts' paper in the "St. Thomas's Hospital Reports," vol. xii., and the addition of the third scarcely increased the length of the operation.—Mr. PITTS said that fifteen years ago a patient was admitted into St. Thomas's Hospital, in whom a discharge of pus suddenly occurred from the right tonsil. A few days afterwards there was considerable hæmorrhage, which soon stopped, but a few nights later the patient brought up about a pint of blood, and ligature of the common carotid artery was hastily performed. Twenty-four hours later profuse hæmorrhage recurred and proved rapidly fatal. This showed that ligature of the common carotid alone could not be relied on. He made experiments on the cadaver, and found that if glass tubes were put in the internal and external carotid arteries of one side and coloured fluid were injected from the opposite common carotid artery the fluid appeared almost immediately in the external artery, and also, though much later, in the internal artery. In his case the source of hæmorrhage had proved to be the internal carotid, and he had been led from his experience in this case to insist on the ligature of at least the common and external carotid arteries in such a case.—Mr. HARRISON CRIPPS

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said that some years ago, being dissatisfied with the plan of ligaturing the common carotid, he also had been led to experiment by injections on the cadaver. He found, however, that if he divided a branch of the facial branch of the external carotid and injected from the opposite common carotid that the fluid escaped from the proximal end of the cut artery, and he attributed this to regurgitation along the internal carotid by way of the circle of Willis. He had collected sixty-eight cases of ligature of the common carotid and had been struck with the high mortality, largely from brain symptoms, occurring immediately or a few days after ligature, or from secondary hæmorrhage, in most cases due to regurgitation down the internal carotid, so that ligature of the common carotid was a very formidable operation. Out of all the cases that he had collected there was clear evidence only in one that the internal carotid was the source of the hæmorrhage, and when that occurred death would probably take place at once, so that the question of operation did not arise. He thought that in most cases ligature of the external carotid would suffice and was much less dangerous than ligature of the common trunk.

Mr. WARRINGTON HAWARD read a paper on Irreducible Hernia. The paper was based upon an analysis of eighty-five cases in which an operation was performed for irreducible hernia. The cases were tabulated so as to show the sex and age of the patients, the situation of the hernia, the duration of the hernia and of its irreducibility, the occurrence of strangulation, the contents of the sac, the cause of irreducibility, the treatment adopted, and the result. The dangers of irreducible herniæ were described and illustrative cases quoted. The conditions on which irreducibility depended were then considered and arranged as follows: thickened and adherent omentum, 31 cases; adhesion of omentum to sac, 34 cases; twisting of omentum, 1 case; cysts in omentum, 1 case; adhesion of intestine to sac, 12 cases; adhesion of coils of intestine, 4 cases; large amount of intestine, 3 cases; and other causes, 5 cases. In a few cases more than one of the above causes of irreducibility were present. It was shown that in nearly every case these conditions are such as are remediable only by operation. From the facts and arguments adduced the following conclusions were drawn:—1. That irreducible hernia is a condition of serious danger, the gravity of which increases with its duration or neglect. 2. That the application of a truss upon an irreducible hernia is not only useless, but harmful. 3. That irreducible herniæ which consist wholly or in part of bowel are very apt to become strangulated. 4. That herniæ consisting wholly of bowel, upon which no truss has been worn, may (even when of large size and of considerable duration) generally be returned by appropriate treatment. 5. That of the cases of hernia in which proper treatment fails to obtain reduction the great majority are irreducible because of adhesions of, or changes in, the protruded viscera—conditions which are remediable only by operation. 6. That the most common cause of irreducibility is the presence in the sac of adherent omentum. 7. That the presence of irreducible omentum in the sac of a hernia is a source of constant danger, which can, nevertheless, be remedied by an operation of extremely small risk. 8. That herniæ containing irreducible bowel are more dangerous than those containing only omentum, and that as the danger of operation increases with the magnitude of the hernia and with the occurrence of adhesions these herniæ should be operated upon as soon as they are proved by the failure of proper treatment to be irreducible.—Mr. A. E. BARKER endorsed all the conclusions at which Mr. Haward had arrived. There was one form of irreducible hernia with which he had met three times in about 200 operations for the radical cure of hernia—viz., a hernia of the sigmoid flexure. The bowel in these cases had been extremely difficult to reduce, and he found that the best procedure was to strip the sac bodily off with the intestine and return it.—Mr. MACREADY was hardly able to assent to the conclusion that operation was always indicated in these cases. He thought that properly applied pressure by means of a truss would succeed in many instances in reducing the hernia. Two-thirds of the inguinal and half of the femoral herniæ that he had treated in this way had been reduced. He thought that there was unnecessary fear lest the pressure of a truss should cause adhesions, and held, on the contrary, that it favoured the absorption of adhesions.—Mr. HAWARD, in reply, said that he had not met with the cases of hernia of the sigmoid flexure described by Mr. Barker. He thought that the pressure of a truss had often done harm in these cases, and that had induced him to bring forward this paper. He had used elastic pressure, combined with purgation, low diet, and elevation of the end of the bed, and had found it successful chiefly in patients who had not previously worn a truss, which he believed to be responsible in many cases for the formation of adhesions.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—The Value of Exploratory Laparotomy.

A MEETING of this society was held on May 13th, Mr. MAYO ROBSON, President, being in the chair.

Mr. F. BOWREMAN JESSETT showed:—(1) Fibro-myoma of the Uterus—sub-peritoneal hysterectomy; (2) Fibro-myoma of the Uterus—oöphorectomy; (3) Myoma of the Uterus—double pyosalpinx, sub-peritoneal hysterectomy; and (4) Large Fibro-myoma of the Uterus, complicated with pregnancy.—The PRESIDENT, Dr. PURCELL, Dr. C. H. F. ROUTH, Dr. GODSON, and Dr. HEYWOOD SMITH made some observations, and Mr. JESSETT replied.

Dr. HERBERT SNOW read a paper on the Value of Exploratory Laparotomy *per se* in (*a*) Real and (*b*) Supposed Malignant Disease of the Abdominal Organs. Dr. Snow had been struck by the remarkable improvement in certain cases of indubitable malignant disease which followed a simple incision without any further operative procedures, and thought if future explorations were scanned in the light of expected amelioration it would be found that the peritoneum thus stimulated behaves to a certain extent as in tuberculosis. A small part of the tuberculous deposit only is removed, yet the remainder somehow disappears, and the patient becomes and continues well. In malignancy the resulting benefit has hitherto been overlooked through the common practice of sending patients home as incurable directly the wound has healed. In Case 1 a woman, aged forty-nine years, with advanced carcinoma of the sigmoid flexure, gained flesh and lost all bad symptoms, though the favourable change lasted only six weeks. Case 2 was that of a woman, aged fifty-three years, with a rapidly advancing, very vascular deposit in the omentum, secondary to scirrhus of the breast. After incision the advance was materially checked, the mass diminished in size, there was no ascitic trouble, and the woman lived eighteen months. Case 3 was that of a man, aged fifty-eight years, with extensive deposit of carcinoma along the whole posterior surface and most of the greater curvature of the stomach; great improvement took place after incision, but the patient was soon lost sight of. Case 4 was that of a man, aged sixty-four years, with a large sarcomatous mass infiltrating both recti; exploration was made in June, 1896. The growth had diminished in size, the man had no bad symptom, and was now able to work regularly as a sawyer. Case 5 was that of renal exploration for a growth thought to be cancerous and infiltrating the lumbar muscles. All bad symptoms had subsequently vanished. Case 6 was that of a woman, aged forty-eight years, with cancer of the gall-bladder. After exploration she stated that she "felt better and more free from pain than she had done for months." She went home and has since succumbed. From a recent paper by Mr. Leonard Bidwell two cases of diffused peritoneal cancer were quoted in which very pronounced benefit similarly followed laparotomy. Others were cited in which the diagnosis of abdominal "lumps" was shown to contain, in even the ablest hands, a strong element of uncertainty. Dr. Snow concluded that routine exploration should be resorted to in every case of supposed abdominal cancer for two reasons: (*a*) the possibility of error; and (*b*) the fact that as a mere matter of treatment this step always improves, and often materially checks, the advance of the disease, permitting scope for the administration, on which he placed the greatest reliance, of opium with cocaine.—The PRESIDENT said that he had himself operated on cases where, on opening the abdomen, he believed that he had to do with ineradicable malignant disease and had closed the abdomen without proceeding further, yet the patients had got quite well. In one case the operation was in the region of the gall-bladder; before she left hospital the patient was already much better; and now, several years after the operation, she remained quite well. Last week he had a somewhat similar

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case; but remembering the previous case he proceeded with the operation and found an enormous gall-bladder, from which he removed eighty stones. In another case, with ascites, on opening the abdomen he thought the patient had malignant disease. The patient got well; it was probably tuberculous. Increased experience would, he thought, show that many of these cases were not malignant.—Dr. CLEMENT GODSON related a case seen by the late Sir Spencer Wells which he diagnosed a tumour of the spleen, and wished to remove. Later the patient was seen by Mr. Meredith in consultation with Dr. Godson, who agreed that it was more probably an enlarged kidney. An exploratory incision was made, and it was found to be such, but so adherent to the surrounding parts that its removal was impossible, so the wound was closed. From that time the patient's condition improved, and she now, several years after, complains of nothing.—Dr. MACNAUGHTON-JONES thought the main point was that most of the cases were not malignant. He saw a case with ascites; some said it was ovarian and some said not. The patient was tapped, but the fluid returned. On making an exploratory incision a hard, enlarged lobe of the liver was found and the abdomen was closed. The patient had since married and borne children.—Dr. PURCELL had a case in which there was a mass in the left iliac region and ascites (which he believed always occurred with malignant disease involving the peritoneum). On opening the abdomen a tumour of the bowel was found, not occluding it, but adherent to everything. He closed the abdomen, and the patient was now, eighteen months later, in good health.—Mr. BOWREMAN JESSETT thought the title of the paper was somewhat a misnomer, since Dr. Snow had not the opportunity in all the cases of saying whether the tumour was malignant or not. In one case he saw a woman with a large tumour; she had vomiting and watery motions. Her medical man diagnosed cancer of the liver, and Sir William Jenner and Dr. Ramskill, who saw her, confirmed the diagnosis. A copious sweet-oil enema caused that tumour to come down into the bedpan. In one or two other cases he had had a similar experience, and in such cases a similar improvement would have followed abdominal section. Dr. Snow had suggested that in many cases gastro-enterostomy might be supplanted by a simple cœliotomy, but he did think that equally good results would follow.—Dr. C. H. F. ROUTH thought that there was often no harm in making an exploratory incision, for in tuberculous cases especially a cure might follow. They did not know how this was brought about, but it might be due to the action of the air.—Mr. J. WALKER SMYTH had had two cases similar to those of Mr. Jessett; in one an enema was given, with the same result. The other was a man with a lump over the pubes; with the catheter a quantity of urine containing pus was drawn off; the tumour disappeared and the man got well.—Dr. HERBERT SNOW, in reply, said that his paper involved two points: (*a*) the advisability of an exploratory incision in cases of doubt; and (*b*) the undoubted improvement that followed this in some cases of genuine cancer. The President's cases fell into the first category. In cases of the second class, the point he wanted to raise was whether they might not count on an improvement for some weeks or months. He had cited no cases which got ultimately well; but in all there was improvement for a time.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Bacteriological Diagnosis of Enteric Fever.—Mesenteric Cysts. — Triplet Placentæ. — Transposition of the Heart.

A MEETING of this society was held on April 30th, Dr. BRAITHWAITE being in the chair.

Dr. TREVELYAN read a paper on the Bacteriological Diagnosis of Enteric Fever, including the examination of the fæces, urine, and blood. The technical difficulties, and especially the time required, were serious disadvantages in the examination of the fæces. The presence of the enteric fever bacillus in the urine from two cases of enteric fever was demonstrated, and the importance of dealing efficiently with the urine from the point of view of preventing the spread of the disease was emphasised. Widal's serum test for the examination of the blood was exhibited, and the methods recommended by Delépine and by A. Fraenkel were described as being easy to carry out.

Mr. MOYNIHAN read a paper on Mesenteric Cysts, describing two cases upon which he had operated. The first patient was a female, eighteen years of age, who suffered from acute intestinal obstruction. There was an ill-defined swelling to the right of the linea alba. A chylous mesenteric cyst which caused kinking of the gut was opened, stitched to the parietal peritoneum, and drained, the recovery being uneventful. The second case was a boy, aged seven years, who presented symptoms of acute intestinal obstruction. On opening the abdomen a very large mesenteric cyst containing forty-two ounces of pure chyle was exposed. The pedicle of the cyst was cut through, the peritoneal edges inverted and stitched, the cyst being removed. The boy died about two hours after the operation. An excessive amount of indican was present in the urine. The diagnostic signs were pointed out to be:—(1) the presence of a cyst in the abdomen, at first laterally placed, but becoming with increasing size more and more central; (2) resonance above, below, and across the tumour (the three "diagnostic signs" of Tillaux), the latter being due to the portion of gut attached to the mesentery involved; and (3) extreme mobility in all directions. The methods of treatment mentioned were:—(1) opening and drainage of the cyst; (2) removal of the cyst by cutting through the layers of peritoneum in the pedicle; and (3) enucleation.

Mr. C. J. WRIGHT showed the Placentæ from a case of Triplets. There was one large placenta with two cords and a second smaller one with one œdematous cord. The amniotic bags were separate. This was the mother's second confinement; she was twenty-five years of age, and was one of a family of thirteen, amongst whom there had been twins on three occasions. Her mother was a twin, and also her grandmother, so that there were multiple births through four generations. The presentations in this case were vertex for No. 1, transverse (delivered by podalic version) for No. 2, and face for No. 3. No. 1 was alive on the fifteenth day; the others died on the eleventh and twelfth days respectively.

Dr. WARDROP GRIFFITH showed a girl, aged seven years, with Transposition of the Heart. There was no transposition of the liver. Cyanosis and dyspnœa had been present from the age of three years. There was cardiac hypertrophy with a loud bruit, with its maximum in the pulmonary area—in this case the third right costal cartilage. Pulmonary stenosis was diagnosed, with possibly a deficiency of the cardiac septum.

EDINBURGH OBSTETRICAL SOCIETY.

Vaginal Hysterectomy.—Interstitial Pregnancy.

A MEETING of this society was held on May 12th. In the absence of the President Dr. JAMES RITCHIE occupied the chair.

Dr. FREELAND BARBOUR read a paper on Vaginal Hysterectomy by Doyen's Method. He said that the first extirpation of the prolapsed uterus for cancer was performed in 1560 by Andreas A. Cruce. The non-prolapsed uterus was removed per vaginam for the first time in 1822 by Santer, of Constance; this patient recovered, but died four months later from pneumonia. In 1828 Blundell also extirpated the cancerous uterus successfully per vaginam; the patient died one year afterwards from cancer of the rectum. A year later Recamier placed the operation on a scientific footing by ligaturing the base of the broad ligaments. The next fifty years were occupied by attention to hysterectomy for fibroids. Extirpation of the uterus for malignant disease was revived in 1878 by Freund, who used the combined abdominal and vaginal operation. In two years, out of ninety-three cases there was a mortality of 73 per cent., which condemned the operation. Czerny, Schrœder, and some others were developing the technique of the vaginal method, and out of thirty-two cases they showed a mortality of only 25 per cent. The vaginal method does not exhaust the patient so much as the abdominal. Even when the ovaries are removed as well as the uterus the patient looks no worse than when a repair of the perineum has been performed. There is no risk of handling the bowels as in the abdominal method, less risk of sepsis, and free drainage is secured. A drawback is the difficulty of reaching the broad ligaments so as to control

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the blood-supply. The ligature method is tedious, and, according to Hegar and Kaltenbach, the accompanying hæmorrhage is the chief cause of the mortality in this operation. The clamp method has distinct advantages. It was suggested by M. B. Freund for use in the combined operation. Spencer Wells in 1882 proposed its use in the vaginal operation, and this was put into practice by Jennings a year later. The honour of making the clamp a practical success belongs to Péan and Richelot. Doyen, of Rheims, has used it with great success, introducing new methods, if not also new principles. Péan used the clamp as a temporary or preventive measure, Doyen as a permanent means of arrest. The method of application is also different. Doyen emphasised the advantage of splitting the uterus anteriorly and showed the possibility of temporarily controlling the hæmorrhage by traction on it. The patient is prepared by repeated vaginal douching and packing with iodoform gauze. The cancerous surface should be cleansed as far as possible; some scrape the surface and apply alcohol, so as to lessen the risk of inoculation by cancer cells on fresh-cut surfaces. When the vagina is narrow, as in a nullipara, Doyen previously inserts a dilating bag. The instruments are spatulæ, scissors, strong volsellæ (like bullet forceps), and clamps. The clamps have elastic concave blades, which only meet in their entire length by the use of firm compression. This gives an effective control of all vessels in the broad ligament. Each blade is grooved to prevent slipping. The cervix is caught laterally and drawn down, and a circular incision is made with scissors through the vaginal mucous membrane. Ségend makes a lateral incision in the former, so as to facilitate the separation of the bladder, and in 400 cases has not once injured the ureter. The pouch of Douglas is now cut into by clipping with scissors, carefully guided by the finger, until the peritoneal cavity is reached. If the pouch is obliterated by adhesions the separation of the uterus anteriorly is proceeded with. As soon as the cervix is so far free the uterus is split with the scissors in the middle line anteriorly, the cut margins are caught by volsellæ and more of the uterus pulled down, and the anterior wall still further split until the utero-vesical peritoneum is reached. This is cut through, the scissors inserted, and the opening enlarged by separating the blades. The fundus is seized and pulled out and the clamps are applied. The broad ligament is caught between the finger and thumb or between the index fingers of both hands, the finger tips meeting beyond the base of the ligament, thus ensuring that no intestine is caught in the clamp. The clamp is introduced from the upper margin of the ligament downwards, so that the points of the clamp are at the wound in the fornices. It can be applied alongside of the uterus, or if the appendages are to be removed as well it is placed external to these. A smaller clamp is passed on the inner side of the large one—that is, between it and the uterus for safety. The uterus is then cut away. The handle of the clamp is now turned down so that it is in line with the axis of the vagina; this causes some twisting of the broad ligaments. Iodoform gauze is inserted between the clamps and the ends thrown round the handles of the clamps when these might injuriously press on the vulva. In the after-treatment the bladder should be emptied by the catheter for two days to prevent soiling of the vaginal tampon. Considerable pain is sometimes complained of, much more than after the ligature method has been employed, and can be met by morphia. The large clamp is removed in forty-eight hours, the smaller one twelve hours later. The iodoform gauze is extracted on the following day. A gentle douche can then be given. Usually there is not much discharge, though sloughs may come away, and considerable serous oozing may occur. The vaginal roof is well cicatrised in three weeks, and the patient is then able to go about. This method of operating has several advantages. It allows more rapid operating; the bleeding is all controlled by the traction, and no hæmorrhage is to be attended to until the final stage, when the clamp is applied; the splitting of the uterus allows it to collapse and gives a fresh hold for the forceps; the rotation of the uterus and the application of the clamp from above downwards enable the operator to more certainly get the whole ligament within the bite; the weight of the clamp keeps the broad ligament pedicles down in the vagina, preventing their retraction; the layers of the peritoneum thus become opposed and are adherent above the clamps; and the presence of the clamps favour drainage per vaginam. As compared with the ligature it has a longer convalescence, but this is more than compensated for by the greater rapidity in operating. Dr. Barbour then gave details of six cases upon which he had operated. All recovered. Five of the cases were of malignant disease of the cervix or body; one showed recurrence in three months and another in nine months; one was for prolapsus uteri. Jessett has recorded seventy cases of malignant disease with six deaths. Purcell, who performed the first vaginal hysterectomy in England for cancer, has had sixty-three operations with twelve deaths. In Germany, Fehling has collected the statistics of thirteen operators and found the mortality to be 9·1 per cent. Kaltenbach has operated on 138 cases with a mortality of 3 per cent. Cases suitable for operation only exceptionally present themselves in this country. This is in remarkable contrast to the experience of German operators. The statistics vary as regards non-recurrence. Leopold's statistics show immunity in the case of more than one-half and are very encouraging. Against this is Perri's rather pessimistic estimate that the operation is rather a palliative treatment for a longer or shorter time, the average being one year. The lymphatics play the chief part in the dissemination of cancer. The lymphatics of the uterine body pass through the upper part of the broad ligament to the lumbar glands, receiving on their way those of the ovary and tube. Those from the cervix and upper part of the vagina pass through the lower part of the ligament to the iliac or ileo-pelvic glands. Another chain runs down the round ligament to the inguinal glands. The lumbar glands cannot be palpated; the ileo-pelvic can be examined per vaginam. The inguinal glands are very rarely affected in uterine cancer. Nodules of cancer may be found separate from the original focus, which have grown within the lymphatic vessel from some epithelium carried there by the lymph stream. Mr. Stiles states that the endothelium is not affected by these cancer plugs, and says that a knife once used to cut cancerous tissue should not be used again at the same operation.

Dr. J. C. KYNOCH (Dundee) read notes of a case of Interstitial Pregnancy. The uterus was shown and was submitted to a committee for examination and report.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Exhibition of Specimens.—Strangulation of an Intraligamentous Fibro-myoma.—Ergot in Obstetrics.

A MEETING of this section was held on April 23rd, the President, Dr. LOMBE ATTHILL, being in the chair.

Mr. E. HASTINGS TWEEDY showed an Ovarian Cyst with Adhesions.

Dr. ALFRED SMITH showed a large Hæmatosalpinx with hæmatoma of the ovary which he removed from a girl aged twenty years. The external examination, taken with the history of pain, rise of temperature, &c., pointed to an appendicitis. This was negatived by finding on the bimanual examination a large tumour filling the right side of the pelvis. But it was found, while removing the tumour, that the vermiform appendix was adherent to it and lay right across the surface of it. The adhesions were numerous and rather troublesome. Recovery ensued.

Dr. W. J. SMYLY showed an Ovarian Tumour and Carcinomatous Uterus.

Dr. ALFRED SMITH and Mr. M'ARDLE read notes on a case of Broad-ligament Myoma Strangulated by Protrusion through the Inguinal Canal, and exhibited the specimen. Dr. Alfred Smith saw the case in consultation with Mr. M'Ardle, who demonstrated the large hernial opening and the tumour. The history of pregnancy, the appearance of the tumour, and its elastic feel gave the impression that the case was one of ectopic gestation, probably in the cornua of a uterus bicornis; and accordingly Dr. Smith, by permission of Mr. M'Ardle, performed abdominal section. He noticed that the handling of the tumour did not cause any rhythmic contractions. On closer inspection he found that he could differentiate two masses; one was more or less pedunculated, and was evidently the portion that had descended into the hernial sac, and the other filled the right side of the pelvis and was firmly wedged there. The two

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masses were united together by a broad base. He incised the capsule to determine the nature of the contents, and found it was not a cyst, but a soft œdematous tumour, the tissue of which tore easily with the finger; he then removed the pedunculated lobe, and rapidly enucleated the remaining portion out of the fold of the broad ligament. Professor McWeeney reported the specimen as an intra-ligamentous fibroid undergoing mucoid degeneration. The points of interest were as follows: (1) the difficulty in diagnosing the tumour; and (2) the presence of an intra-ligamentous uterine fibroid in an inguinal hernial sac. The patient's recovery was rapid.—Dr. E. WINIFRED DICKSON asked if there was any bowel down together with the tumour, or if only the tumour was strangulated.—Dr. SMYLY asked if the tumour was connected with the round ligament. It would appear to him to be a likely origin of growth. He also asked why a new opening was made in the abdominal wall instead of enlarging the existing one.—Mr. M'ARDLE, in reply, said that there was no bowel down along with the tumour. It was the second time that stercoraceous vomiting had come under his notice in connexion with troubles in close proximity to the end of the ileum. He referred to a case where an œdematous ovarian tumour had pressed on the ileum causing spasm, which produced obstruction. With regard to Dr. Smyly's question about the second opening, he (Mr. M'Ardle) said that he had avoided any incision which would endanger the deep epigastric artery as well as the arteries of the rectus muscle, the patient having been for a considerable time under chloroform. Also, it was impossible to get inwards because the tumour was so large, crushing the uterus to the left side.—Dr. SMITH, in reply, said that he thought at first he had to deal with a uterus bicornis. He found that the round ligament was apparently quite right on each side.

Dr. T. MORE MADDEN read a paper on the use and abuse of ergot in obstetrics, which will be found on page 1462 of this issue.

Reviews and Notices of Books.

Atlas of Human Histology. By Dr. ARNOLD BRASS (Göttingen). With Explanatory Notes. Translated from the German by R. A. YOUNG, M.D., B.Sc. London: Baillière, Tindall, and Cox. 1897. Sixty plates engraved and printed in colours. Large 4to. Price 31*s.* 6*d.* nett.

WE have much pleasure in calling attention to this most beautiful and artistic atlas, in the production of which no pains seem to have been spared. The sixty plates contain nearly 500 coloured drawings of the various tissues and organs of the body, which could hardly be surpassed for clearness and fidelity. The sections from which they have been taken have been lent by many of the most eminent Continental pathologists, and, being obtained chiefly from newly-born infants and recently executed criminals, give a more accurate representation of human histology than most current works in this country, where the histologist has to rely largely on the lower animals for fresh specimens. The reproduction has been most efficiently done, the process having been carried out by Dr. Brass himself. Very fine plates are given showing the structure of the cell and of the principal tissues, and then the various systems of organs are taken up in their order. The sections on which most labour has been expended are those on the Sense Organs and on the Central Nervous System, and we know of no work in which such complete illustration of these organs is given. The beautiful effects obtained by the gold chloride method in the case of the cutaneous sense organs and by the Golgi silver process and by Nissl's aniline method in the central nervous organs are most faithfully reproduced. The intimate structures of the internal ear, of the eye, and of the medulla oblongata are most artistically and faithfully reproduced. The section on the Alimentary Canal is also very good and complete, but the section on the Structure of the Lung is very inadequate, and the section on the Blood is disappointing in view of the great advances that have been made in that department in recent years. But with these exceptions it is impossible to speak except in terms of the highest praise of the work. The plates are accompanied by concise descriptions of the drawings, which have been translated into excellent English by Dr. Young; the book is portable and well bound, is produced at a reasonable price, and will no doubt have a large sale among both teachers and students.

A Course of Practical Histology. By E. A. SCHÄFER, LL.D., F.R.S. Second Edition. London: Smith, Elder, and Co. 1897. 290 pp. Price 7*s.* 6*d.*

THIS book contains in a concise and portable form a vast amount of accurate information presented in a clear and well-arranged manner. After a short but adequate account of the methods of embedding, cutting sections, and drawing the appearances seen under the microscope, the devices for observing the blood under varying conditions of temperature are very fully described. A consideration of the methods for exhibiting the details of structure of the elementary tissues and of the organs of the body occupies the rest of the book. Professor Schäfer wisely avoids giving a heterogeneous jumble of methods which are multiplying daily, but selects those which he has found to give the best results, or which are of the most general applicability. The standard of excellence is throughout very high, and this is especially conspicuous in the important sections dealing with the blood and with the peripheral and central sense organs. No description of the histological appearances is given, the whole book being devoted to practical directions for the student's own investigations. The work can be very strongly recommended as being thoroughly up to date, accurate, and so clearly written that no difficulty should be experienced in following out the instructions given.

LIBRARY TABLE.

Aids to Bacteriology. By T. H. PEARMAIN and C. G. MOOR, M.A. London: Baillière, Tindall, and Cox. 150 pp. Price 3*s.* 6*d.* 1897.—This is an admirable presentation of the outlines of bacteriology. The necessary apparatus is fully described, although unfortunately not illustrated, and the methods of cultivation and staining are clearly given, the authors wisely giving only a limited number of methods, but giving those in such detail as to make it easy for anyone to follow out the processes. There is an excellent account of disinfection, of immunity, and of the preparation of diphtheria antitoxin and of Haffkine's cholera vaccine. The characters of the chief pathogenic and non-pathogenic organisms, both under the microscope, and when growing on various culture media are systematically described. The little work is well up to date, and the authors have succeeded in giving the most clear and useful account of this important subject in brief form with which we are acquainted.

Life in West London. By ARTHUR SHERWELL. Second Edition; with a supplementary chapter. London: Methuen and Co. 1897. Pp. 202, price 2*s.* 6*d.*—In our review of the first edition of this book we remarked that Mr. Sherwell did not suggest any remedies for the state of matters he described, but in the supplementary chapter to the second edition he repairs this omission. What is imperatively needed, he says, "is not fresh charitable enterprise, but enthusiastic and intelligent personal service, working ..... along the lines of existing agencies, but supplementing these, where necessary, by other careful and well-approved forms of social help." More voluntary workers is the cry of a great number of those who are set over their fellows in one capacity or another, and voluntary workers are just the hardest class

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of workers to procure owing to the exigencies of modern life. If we had some kind of organisation analogous to the Florentine Brothers of Mercy, or the association described by Mr. Adderley in "Stephen Remarx" we should be a long way towards the solution of the problem, but at present we are far from the goal. Mr. Sherwell suggests the formation of a small but expert "watch committee" to report upon cases of overcrowding; this is a measure which might easily be brought about. His second suggestion he owns is a most difficult one to carry out—namely, that "fashion" with regard to its malign influence upon seasonable trade should be resisted, but how this point is to be gained we must confess we do not see. Thirdly, he wishes for the establishment of well-conducted and rational places of amusement. That it will be a long time before any of these suggestions are got into working order we have no doubt, but the mere fact that some one has formulated the kind of thing wanted is no small step towards such a desirable end.

The Climate of Bournemouth in Relation to Disease, especially Phthisis. By A. KINSEY-MORGAN, M.D. Durh., Honorary Medical Officer, Royal Victoria Hospital, Bournemouth. Bristol: John Wright and Co. London: Simpkin, Marshall, and Co. 1897. Pp. 51.—The dryness of its sandy soil and the mildness of its climate give Bournemouth a prominent position among English health resorts, especially among those recommended for the residence of sufferers from pulmonary complaints. The sea frontage, the luxuriant pine woods in the immediate vicinity, and the care which has been bestowed on the drainage, all conduce to the salubrity of the atmosphere, while the anxiety of the townspeople to meet the requirements of invalid visitors is shown by the facts that the "Mont Dore cure" can be applied all the year round, that every form of "water cure" is obtainable, and that the open-air treatment of phthisis, as practised at Falkenstein and elsewhere on the continent, is being systematically put in force, With respect to the cure of phthisis in its early stages Dr. Kinsey-Morgan writes quite hopefully.

Several Selected Remedies against Plague and Suggestions for its Treatment. By A. PEREIRA. Bombay: Printed at the "Tatvavivechaka" Press. 1897. Pp. 31. Price 8 annas.—The Materia Medica described by Mr. Pereira in this pamphlet differ considerably from that which was recognised by his celebrated namesake, Dr. Jonathan Pereira. The work is not original, but is a translation from a Portuguese book entitled "Remedios contra Peste," published by Dr. Helvecio in 1747. The remedy from which most is expected is the "tincture of gold," made by dissolving 48 grains of chloride of gold in 1 oz. of rectified spirit; the dose is from six to ten minims. Many other medicines, however, are mentioned, pig's gall and viper broth included.

A Manual of Medical Exercises. By PERCY G. LEWIS, M.D. London: John Bale and Sons. 1897. Pp. 50. Price 2*s.*—This little book was written for the use of Dr. Lewis's patients who attend the Folkestone Medical Gymnasium. It can be recommended as giving clearly expressed and ample directions for the performance of a number of gymnastic exercises, some of them without any apparatus, and others with the aid of such gymnasium appliances as Dowd's machines, ladders, dumb-bells, the trapeze, &c.

Year-book of the Scientific and Learned Societies of Great Britain and Ireland. London: Charles Griffin and Co 1897. Pp. 270. Price 7*s.* 6*d.*—This useful and, to many persons, indispensable work of reference has now reached its fourteenth year of issue. The societies treated of are classified according to their various objects in fourteen departments, some of which are "Science Generally," "Chemistry and Photography," "Biology, Microscopy, and Anthropology," "Psychology," "Medicine," &c. The names of the officers, the places and dates of meeting, the terms of membership, and lists of the papers read during 1896 are given, together with the names of their authors. The total number of societies included in the volume is upwards of a thousand; the medical societies occupy forty-five pages.

JOURNALS AND REVIEWS.

The Journal of Physiology. Edited by MICHAEL FOSTER, M.D. Lond., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. XXI. Nos. 4 and 5. London: C. J. Clay and Sons. Price 13*s.*—The articles contained in this part are thirteen in number. The first is by Arthur Cushny and S A. Matthews on the Effects of Electrical Stimulation of the Mammalian Heart, with fifteen figures in the text. The authors give tracings showing the effects of stimulation of the heart at different periods of its action and when applied to different parts. 2. G. J. Burch: A Description of an Inductor Alternator for Physiological Experiments, with two figures in the text. 3. M. I. Newbigin: The Pigments of the Decapod Crustacea. 4. Herbert S. Jennings: Studies on Reactions to Stimuli in Unicellular Organisms especially dealing with Reactions to Chemical, Osmotic, and Mechanical Stimuli in the Ciliate Infusoria, with twenty-two figures in the text. 5. L. Hill and H. Barnard: On the Influence of Gravity on the Circulation. 6. T. G. Brodie and S. W. F. Richardson: On the Changes in Length of Striated Muscle under varying Loads brought about by the Influence of Heat, with thirty-eight figures in the text. 7. B. Moore and D. P. Rockwood: On the Reaction of the Intestine in Relationship to Intestinal Digestion. 8. B. Moore: On the Chromogen and on the Active Physiological Substance of the Suprarenal Gland. 9. T. G. Brodie and A. E. Russell: The Enumeration of Blood Platelets. They give the number 635,300 per cubic millimetres, or an average of 1: 8·5 of red corpuscles. 10. O. F. F. Grünbaum: On Intermittent Stimulation of the Retina, Part I., with three figures in the text. 11. T. G. Brodie and A. E. Russell: The Determination of the Coagulation-time of Blood, with one figure in the text. 12. E. Waymouth Reid: A Comparison of the Diffusion into Serum and Absorption by the Intestine of Peptone and Glucose, with one figure in the text. 13. E. J. Burch: An account of Certain Phenomena of Colour Vision with Intermittent Light.

Revue Philanthropique.—This is a new monthly journal of 160 pages, conducted by M. Paul Strauss, and published by Masson et Cie., Boulevard Saint-Germain, Paris. Among the twelve original articles an important one on the protection of children is contributed by M. Theophile Roussel, who has already been mentioned in our columns[1] as the promoter of the French law by which Government officials are appointed to look after persons having the care of young children not their own. Dr. Pierre Budin writes on the feeding of infants, recommending, first, suckling by the mother; secondly, suckling by a wet nurse; and failing either of these, feeding with sterilised cow's milk, generally without addition of water. Dr. H. Thulié discusses the methods of dealing with juveniles who have more or less bias towards evil courses and are in danger of becoming criminals. He considers that such persons, although not by any means imbecile, are the subject of mental infirmity, due, among other causes, to one or both of the parents being intoxicated at the time of conception.

Birmingham Medical Review.—The opening paper is by Mr. D C. Lloyd Owen, the subject being Pain in Eye Disease. It contains many useful practical hints. Mr. Lawson Tait

[1] THE LANCET, Oct. 24th, 1896, p. 1191, and Oct. 31st, 1896, p. 1263.

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discusses the question, Was Robert Houston of Glasgow the first Ovariotomist? His opinion is "that Robert Houston's case (1701) was an ovariotomy in every sense of the term, and that (be it of interest and importance or not) it is the first case of that operation of which we have any record." He has occasionally met with ovarian cysts corresponding exactly to the description given by Houston of the one on which he operated; their contents are gelatinous or viscous, "will not flow through any trochar, and can be induced to get out of any sized wound only with the greatest difficulty. ..... When the abdomen is cleared, and the process is a long one, the cyst is found to be a movable bundle of shreds with a vague pelvic attachment ..... in some six or eight cases, so far as my memory serves me, there was nothing left to tie." This explains why Houston did not tie the pedicle, and Mr. Tait takes the opportunity of correcting the opinion he expressed in 1883 to the effect that he (Houston) must have seen it and tied it.

Edinburgh Medical Journal.—The opening article is a lecture on Endocarditis, delivered by Dr. Lauder Brunton. The diagnosis of this disease is based mainly on the temperature chart; when the temperature resembles that of quotidian ague, without there being any evidence of either malaria or suppuration, the case is probably endocarditis, even though there is no cardiac murmur. Dr. P. McBride and Dr. A. Logan Turner continue their papers on Naso-pharyngeal Adenoids. Altogether there are ten original contributions.

Dublin Journal of Medical Science.—An interesting and very detailed account of a case of Angina Pectoris is given by Dr. John Knott. Dr. T. P. C. Kirkpatrick has a paper on the Spread of Tuberculosis by the Milk-supply, in the course of which he refers to Professor McFadyean's observation that tuberculin is not a reliable test in the case of cattle standing in open sheds, in the slaughter-houses, and exposed to excitement.

Scottish Medical and Surgical Journal.—The principal paper is by Dr. Byrom Bramwell, being a clinical lecture on a case of Chronic Pneumonia due to the Pressure of a Small Aneurysm on the Left Bronchus. Mr. David Wallace writes on the importance of Asepsis in Urinary Surgery, giving a history of the development of opinion on the subject and an account of a case of Septic Infection which terminated in recovery. He considers that purification of instruments is insufficient to prevent sepsis. Dr. William Russell, the editor, contributes two cases of Pleural Effusion without characteristic symptoms and two of chest pain, one of which was attended by extreme surface tenderness.

New Inventions.

AN AUTOMATIC DISINFECTOR.

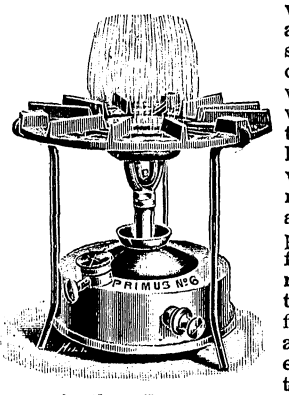
THIS is an ingenious and simple arrangement for attaching to the pipe down which the water travels from the cistern to the closet for flushing purposes. A hole is first made in the wall of the pipe with a drill that is provided. Next, a brass tube provided with a screw clamp and washers is inserted into the hole so made. A brass collar is then placed round the waterpipe, which holds the brass tube in position. It is then screwed up and clamped firmly. The tube thus inserted into the flush-pipe then takes a right angle ending in a brass tube about 7 in. long, which is immersed in a disinfecting fluid. The fluid recommended for this purpose is Esset's fluid, which is a cresylic resinous compound, giving with water a milky emulsion. By means of a tap attached to the tube which dips into the bottle the amount of fluid sucked into the water as it descends from the cistern into the closet-pan may be adjusted to a nicety. Once the tube is attached to the pipe and placed in position no further attention is needed. All that is necessary is to replace the bottle when empty with one that is full or to fill the empty one with fresh disinfectant. Other disinfecting agents might, of course, be substituted. We regard this apparatus as a useful and handy sanitary adjunct. It possesses the distinct advantage that it is always possible to see whether it is acting properly or not. The specimen we examined was submitted to us by Messrs. A. Granville and Co., 102, High-street, Battersea, London, S.W.

THE PERFECTION ENVELOPE.

WE have frequently animadverted upon the objectionable practice of moistening with the tongue the gum of stamps and of envelopes. This objectionable method in regard to the latter may to some extent be overcome by the use of the "Perfection Envelope," on which the gum is stuck, not on the flap itself, but on the portion of the envelope to which it becomes attached. Thus the flap contains no gum. It seems to us that the same end might be attained if the person decided to lick that part of the envelope where the flap falls, instead of the flap. On the whole, however, it is, perhaps, more convenient (if the tongue must be employed) to moisten the flap, and the gumless flap, but gummed envelope, which Messrs. J. Walker and Co., Limited, Farringdon House, Warwick-lane, E.C., have recently introduced will secure this advantage.

A WICKLESS OIL STOVE WITH SMOKELESS FLAME.

THE production of a practically colourless and smokeless flame from ordinary paraffin oil is an attainment of some importance. Considering the enormous amount of carbon in ordinary petroleum as compared with the amount in coal gas, the fact that the flame may be converted from a white sooty flame into a flame possessing the exact characteristics of the ordinary Bunsen gas flame is somewhat surprising. Still, it has been done with complete success in the oil stove which is represented in the accompanying illustration. The stove, as will be seen, consists of a large reservoir provided with an opening for filling, which can be closed quite air-tight, and, if need be, opened a little by means of a screw valve. At another part of the reservoir is attached a small air-pump for creating a slight pressure upon the oil. At the foot of the burner will be noticed a small cup. To start the lamp working, this cup is filled with methylated spirit and ignited. This creates expansion, and causes pressure to act upon the oil in the reservoir, the oil thus ascending by means of a dip pipe up the central tube, where, arriving at the heated portion, it is vapourised. At the same time air is sucked in by injection action, so producing a true Bunsen oil flame. When the spirit has burnt out a few strokes of the pump are made to increase the size of the flame as may be desired. Similarly the flame may be lowered by opening the air screw attached to the filling valve, any excessive pressure being thus relieved at will. Once, however, the size of the flame is regulated, it proceeds to burn regularly with little noise and requiring little further attention. The flame has an inner strong blue cone and is quite free from smoke; it is very hot and will boil a pint of water in a remarkably short space of time. Except at the start it is free from smell. It is admirably adapted for all cooking purposes, and particularly grilling. The stove is known as the Primu No. 6, and may be obtained from Messrs. Moeller and Condrup, of 78, Fore-street, London, E.C.



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THE LANCET.

LONDON: SATURDAY, MAY 29, 1897.

A REPORT issued a short time since by the Local Government Board has to do with the question of restricting attendances in elementary schools on the occurrence of diphtheria. It is compiled by Dr. SWEETING, and it shows, perhaps more clearly than any other recent document, how little is known and understood as to the circumstances under which local authorities and their officers have the right and power to intervene in matters of local school attendances for the purpose of preventing the spread of infectious disease. Diphtheria was prevalent at Gillingham to the north-east of Rochester; the population was about 31,000, and in two quarters of the year 144 cases and 51 deaths from that disease had occurred. It is not our purpose on this occasion to deal with the etiology of the disease or with its relations to Chatham and Rochester which are near by; but it seems clear that, as is so commonly the case, the spread of the disease was favoured by attendance at elementary schools, and it is interesting to note how this was dealt with, especially in the case of one school which seemed to be primarily concerned with the diffusion of the infection.

First came a verbal intimation by the medical officer of health to the chairman of the School Board to the effect that the closure of the school was necessary. The grounds on which this advice was given cannot be questioned; the advice was complied with for a period of a fortnight, and further extension of the closure was made for a third week. Then the School Board moved a resolution that the closure was "unreasonable," and what was regarded as a "vote of censure" on the medical officer of health was passed. Soon after the school was re-opened. The first stage of mismanagement which brought about the results referred to relates to the method of procedure adopted. No one can maintain that it is not proper for a medical officer of health to give advice to the parties primarily concerned with a view of checking the spread of an infectious disease, and the method adopted by the health officer in this case was probably the one which was likely to bring about the school closure in the most speedy way. It is also one that is very commonly adopted. But at the same time it is desirable for health officers to remember that such advice is in no way binding upon those to whom it is given; and, even when the advice is acted on, it is important that the matter should at once be placed on a legal footing. The law as it stands is embodied in the Education Code, and the clause in question runs as follows: "The managers must at once comply with any notice of the sanitary authority of the district in which the school is situated, or any two members thereof, acting on the advice of the medical officer of health, requiring them for a specified time, with a view to preventing the spread of disease, or any danger to health likely to arise from the condition of the school, either to close the school or to exclude any scholars from attendance, but after complying they may appeal to the department if they consider the notice to be unreasonable." Thus it will be seen that mere advice from the health officer to the school authorities is in no sense binding; indeed, it finds no place in the enactment or code: and even in cases where the health officer thinks it desirable to give such advice to the school authorities he should always proceed to advise the sanitary authority or any two of their number, in order that they, not he, should order the closure of the school for a specified time. Closure under those circumstances is binding and must be carried out, even if appeal is made to the Education Department. The actual duty and power of the medical officer of health is limited to advising his authority, and in most cases of school closure it is best that he should limit himself to it. If he does not, and the school authorities close their school on his verbal advice alone, they have no authorised certificate enabling them to claim the Government grant, notwithstanding the suspension of school operations. And not only so, but the moment the health officer begins to advise school authorities and officials, these latter come to think that they have a right to seek his advice and even to demand it in matters relating to the health of their school and even of their scholars. In fact, in this Gillingham case the School Board next went on to ask for lists of persons suffering from infectious disease, and the fact that they did not get this information had doubtless something, at least, to do with the so-called vote of censure passed on the medical officer of health, an officer with whom they had no official concern whatever. In other cases of a somewhat similar character the School Board have claimed to be advised by the health officer individually not only as to when their school or schools may be re-opened, but also as to the health of particular scholars, so that they might know whether, in the interests of the school, these scholars should or should not be allowed to resume attendance at school. All this is quite irregular; the School Boards have no more claim to the private medical advice of the medical officer of health than they have to that of any other medical practitioner. If they, for educational purposes, need such advice and counsel, they should pay for it just as any other body would do. But it is the irregular action of medical officers of health themselves which has led, in the main, to the existing unsatisfactory state of affairs; and it is most important that in the matter of school closure their advice should always be given to the sanitary authorities who, in turn, should order the school to be closed for a specified time, after which it would naturally be re-opened provided no fresh closure were enforced on the advice of the health officer.

A similar remark applies to the question of excluding children from certain houses or localities in place of entirely closing the school. School authorities often prefer closure under a certificate of the sanitary authority to the exclusion of scholars; because they think it more difficult to get the grant under the exclusion system. In one sense it is, for they so often exclude scholars on the mere verbal advice of the health officer; whereas the Education Department will take no verbal statement when the question of grant arises. In the case of exclusion the certificate of a medical practitioner is enough; but when the medical practitioner in

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question is the medical officer of health it is always better that he should get the order for exclusion issued under the section we have quoted, and it can be so worded that it will serve for any house or locality in which the disease exists or may appear, thus avoiding multiple notices in case the malady extends. Much trouble has arisen from failure to comply with the precise terms of the Education Code. As a rule the simpler, but irregular, plan is adopted to please the schoolmaster or some school manager; but when these school officials find that their grant is at stake by reason of the irregular action, they do not hesitate to complain that it is the fault of the medical officer of health, and they make unreasonable demands on him for documents and for action which they have no right to claim. It may at times be inconvenient not to advise the managers directly, but if a medical officer of health feels this and does advise them he should forthwith proceed to get his advice endorsed and legalised by action through the sanitary authority.

IT may be affirmed without fear of contradiction that the value of prompt surgical intervention in acute abdominal disease can hardly be more clearly shown than in the treatment of perityphlitis, now universally admitted to depend on inflammation and ulceration of the appendix vermiformis. It has been proved in numberless instances that by such intervention peritonitis has been averted, or checked in its spread, and there can be no question that lives have been saved by this means. On the other hand, it is equally certain that lives have been sacrificed by unavoidable delay in having recourse to this radical measure. In spite of this general feeling of the necessity for resort to surgical aid, and the frequency with which it is sought, it is yet surely true that in the days before there was any idea of invoking the aid of surgery the disease was not characterised by any very great mortality. The lines of treatment were simple, and under their adoption the acute manifestations passed gradually away, in the majority of cases perhaps never to return, though in a certain proportion of cases symptoms recurred at intervals under slight provocation. It is true, however, that this fortunate result was varied by cases where peritoneal or extra-peritoneal suppurations placed life in jeopardy or were responsible for a long and weary illness that only ended in death, and there were also the cases of perforative peritonitis which hardly come under the category that we are now considering, but fatalities from which may certainly be obviated by surgical procedure.

The impunity with which the surgeon can now fearlessly lay open the abdomen, and the satisfaction felt at the discovery of a gangrenous appendix and its removal has, perhaps, rather led us to despise the *vis medicatrix* that must in past days have often effected a radical cure. It all turns on the old question whether the slow and somewhat hazardous processes of nature are not better replaced by the rapid measures of the art of surgery, the whole aim and purpose of which is to anticipate the development of greater ill, which may eventuate if the disease is left to itself. We have no intention here to discuss the indications for interference; we might even admit that the operation can be justified in every case, even the mildest. But as exhibiting the other side of the question, we would draw attention to a paper by Dr. KLEINWÄCHTER, of Breslau, a former clinical assistant of the late Professor BIERMER, who relates the experiences of the medical treatment of perityphlitis in that physician's wards in the years 1874 to 1889[1]—that is, in the pre-chirurgical days of the treatment of this affection. Dr. KLEINWÄCHTER observes that in spite of the gratitude owing to surgeons for their researches on the subject, and the striking results that often ensue from their operations, it is difficult for the physician to admit that a disease which can, in the majority of cases, resolve without the aid of surgery should come to be considered as falling exclusively into its domain. He suggests that the only way to prove the necessity for this transference is by comparative statistics, and for that reason he has collected and tabulated details of the cases in Professor BIERMER'S clinic during the period named, none of which were treated otherwise than on medical principles. These principles aim at obtaining complete rest of the intestinal canal by the strictest attention to rest of body and to diet, as well as by the administration of opium. In more detail he describes the treatment as consisting in keeping the patient absolutely at rest in bed and the relief of the pain and fever by the application of iced water compresses or an ice-bag to the abdomen, the cold being replaced by warm applications as soon as the fever subsides and signs of exudation appear. From the outset opium or morphia is administered, no matter whether there be diarrhœa or constipation. Professor BIERMER took as guides for the continuance of the opium treatment the presence of pain and tenderness and of abdominal distension, for whenever the colic recurred the patient was allowed to have another dose. Dr. KLEINWÄCHTER has known the administration of opium to have been continued for fourteen and even twenty-five days, and states that the resulting constipation was well borne, whilst other disagreeable symptoms, as hiccough, vomiting, and cough, were mostly controlled by the drug. Restriction to a fluid diet of minimal proportions is a necessity; where there is a tendency to vomit and much thirst only ice is allowed, and gradually rice-water, lemonade, diluted red wine, then thin broth, and finally milk. The opium can be omitted when pain no longer recurs and the abdominal tension does not increase, but it must be resumed on the slightest return of pain. The bowels usually begin to act spontaneously from the fourth to the ninth day, and after two or three such actions they must be assisted by enemata or mild saline aperients, as Bilin, Tarasp, or Carlsbad water. Much care is to be observed in the diet subsequently to the attack, and the patient should always be able to have recourse to a dose of opium, if at any time afterwards there is a return of colic. Should there remain any resistance in the ileo-cæcal region, due probably to adhesions or residues of exudation, it is recommended to continue the use of wet compresses and of warm baths. If the condition of the patient grow worse, the abdominal distension increase, the breathing quicken, and the pulse become more rapid, then the opium is still further pushed or replaced by morphia, the force of the heart being maintained. Professor BIERMER was careful

[1] Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie. Erster Band, Fünftes Heft. Jena: G. Fischer, 1896.

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to refrain from large injections or lavage of the stomach or intestinal puncture to relieve distension.

If the foregoing be a correct account of Professor BIERMER'S practice, it will be seen to have mainly relied upon the prescription of opium, carried to an extent now rarely considered advisable, and that, too, manifestly when the case was assuming the features of general peritonitis. At the present day in most acute inflammatory abdominal diseases the free use of opium is rather deprecated, as tending to mask the symptoms and delay the intervention of surgery until all reasonable prospect of relief by this latter means is passed. It will, therefore, come as a surprise to many to learn that out of a total of 112 perityphlitic cases (3 of which relapsed) so treated in Professor BIERMER'S clinic, only 2 died—a case-mortality of 1·78 per cent. One of these fatal cases had the ordinary characteristics of perityphlitis and had progressed so far that the opium was left off, when, on the following day, after a sudden evacuation, a fatal coma supervened. The other, severe from the first, succumbed on the ninth day to diffuse peritonitis. All the rest recovered. Particulars were obtained of the after-history (up to 1889–90) of 70 of those patients who left the hospital—namely, of 61 out of 98 who left it "well" and 9 out of twelve who were discharged "relieved." Relapses had occurred in 17, or 24·3 per cent., and 2 of these were fatal. In 5 cases many recurrences had taken place, but in not a single one had the relapse supervened later than two years from the date of the primary attack.

These figures, which, it must be remembered, are culled from the practice of one hospital physician, and therefore may be taken as being based on a consistent line of treatment, are surely deserving of attention; for, although there is, even amongst the most successful operators, a commendable recognition of the fact that in the majority of cases of appendicitis resolution may occur, there is still great uncertainty as to how far it is either right or justifiable to pursue purely medical treatment. The position is one of great delicacy and difficulty; for, in contrast to these figures, we have the statistics of St. Thomas's Hospital, given by Dr. HAWKINS in his excellent monograph, which show that the general mortality from appendicitis amongst 264 cases was 14 per cent., or 26 per cent. of those terminating in abscess and 75 per cent. of those ending in general peritonitis. It is possible that had Dr. KLEINWÄCHTER been able to trace out all Professor BIERMER'S patients that the mortality from recurrence would have been found to have risen, and each such case may be reckoned as one that might have been saved by a primary operation. But then, as in many the primary attack might not have been of the severity held to justify such interference, no comparative conclusion regarding medical and surgical treatment can be drawn from them. Nor since few, if any, advocate the removal of the appendix as a routine measure do we seem to be able to institute any comparison—at least, a statistical one—between the surgical and the medical method of dealing with the disease. The claim for the treatment adopted by Professor BIERMER must then rest, not merely on its being followed by a diminished mortality, but in its favouring resolution and averting suppuration, which is, in some cases, the inevitable outcome of the lesion of the appendix. It requires more courage to act up to this belief than most of us possess now that we have become more intimately acquainted with the nature of the underlying lesion, and the possible risk entailed by delay in having recourse to surgery. Therefore, although we cannot but admire the remarkable results which we owe to the industry of Dr. KLEINWÄCHTER, we the more incline to the opinion expressed in a recent text-book[2]: "As soon as the diagnosis of appendicitis is established, indeed, pending its settlement, a competent surgeon should be associated with the physician, for the reason that in the vast majority of cases operative treatment is sooner or later demanded, while the hour for such treatment is best settled by daily conference."

A CONFERENCE was held last week at St. Martin's Town Hall, at the instance of the British Committee for the abolition of the State Regulation of Vice, for the purpose of devising measures to prevent the revival of any such regulations. It was largely attended, a considerable number of ladies being present. Mr. WALTER S. B. M'LAREN presided, Mr. JAMES STUART, M.P., being the principal speaker, and Sir JAMES STANSFELD and several ladies also taking part in the discussion. We can quite understand that the opponents of all useful and practical attempts to deal with the existing condition of things are uneasy at the great change which has of late been taking place in the state of public feeling, but we do not see how any amount of talk can alter the facts. The report of the Departmental Committee, of which the Earl of ONSLOW was the President, still remains unshaken in the contentious storm. Is there any reason to suppose that moral methods of dealing with the causes of immorality are, or need be, neglected, or that chaplains and officers (medical or otherwise) are utterly unconcerned with the moral welfare of soldiers under their charge and so neglectful of any attempt to impress on them that it is the duty of a soldier of the QUEEN to lead a good life, as was tacitly assumed to be the case by some of the speakers at the conference? How many of those who took part in the meeting have any practical acquaintance with the army or with soldiers? How many of them have really considered the history of the past and present time in regard to the subject of which they were speaking? But it is as futile to argue with people who will not face the facts as it is to attempt to stop the rising tide. Of course, Lady HENRY SOMERSET is regarded as having "given herself away," and her line of action—apparently because it was an independent one—has been emphatically repudiated. But what have they to say with regard to the influentially signed women's memorial, which expressed an earnest hope that the Government would take such steps as may be necessary to prevent the spread of disease in our army in India? The first three signatories are Princess CHRISTIAN, the Duchess of CONNAUGHT, and Princess MARY of TECK, and associated with them are many ladies of distinction, and the matrons of every large hospital in the metropolis. Miss FLORENCE NIGHTINGALE and Mrs. HUMPHRY WARD are also amongst those who have signed the document.

[2] The Practice of Medicine, by James Tyson, M.D. Manchester J. K. King and Son, 1896, p. 506.

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The women's memorial respecting the health of the army, the text of which was published in the *Times* of the 25th instant, strikes us—as it must, we think strike everyone who reads it—as a well-considered document. We applaud the courage which the signatories have exhibited in taking any part in so distasteful a subject, and we believe that their motives and reasons for doing so, as set forth in their memorial, will be gratefully recognised by all sensible people.

Lord GEORGE HAMILTON and Lord LANSDOWNE have been studiously moderate and guarded in their proposals, and in the statement of their reasons for making them; indeed, many people think that they have, on this very account, rendered the task imposed upon the Indian Government a most difficult one. It is, however, we fear, hopeless to expect that even the most fastidious regard for the moral and ethical side of the question will satisfy those whose opposition to all practical attempts to limit contagion in respect of these diseases is fanatical. We are almost tempted to ask whether it has ever occurred to some of these enthusiastic persons that they are practically bringing an indictment against the Creator for having constituted men and animals with a reproductive system, seeing the evils that are chargeable to it.

Annotations.

"Ne quid nimis."

A NEW METROPOLITAN WATER COMPANIES' BILL.

IT is true that London must wait until another Royal Commission has delivered its pronouncement upon certain subjects of controversy in connexion with the London water-supply before any definite solution of the whole question in its bearing upon municipal administration can be hoped for. But the Bill which Mr. Chaplin introduced on Tuesday last, and which was read for the first time, is a step in the right direction. Briefly, it helps the consumer so far as to enable him to secure the aid of a constituted body in the event of a grievance or unjust treatment at the hands of the water company. As matters now stand the consumer can only appeal when he finds himself in conflict with the water company to a magistrate or to the Local Government Board. In either case considerable trouble besides expense is involved, and very frequently the consumer's action is absolutely without fruit because of objections which are raised, and successfully so, as technically valid. Mr. Chaplin now proposes, pending the result of the labours of the Commission, to appoint as a tribunal in these matters the Railway and Canal Commissioners. This is rather a neat expedient, since this body is not, as it was remarked, overburdened with work, while it is clearly not desirable to create an entirely new board of reference for the purpose of giving effect to what must be only a temporary measure until the Royal Commission has drawn up its conclusions. We see in this Bill promise of the fulfilment of an undertaking, tentative though it may be, which Mr. Chaplin gave soon after the assembling of Parliament in the present session.

THE ARMY MEDICAL SERVICE.

WE would call attention to the announcement that appeared in the naval and military intelligence column of the *Times* of the 25th inst. in regard to the Army Medical Service and medical officers of the militia. The changes about to take place have an important bearing on the future of the medical service. The Army Medical Staff—and, it may be added, the army generally—are, we think, to be congratulated on the material advantages that have been gained, and on the disposition which the concessions indicate of a desire on the part of the War Office authorities to redress the grievances of which medical officers complain. It cannot be for the good of the army or the medical service that frequent changes of medical officers should take place, and that those in the administrative ranks should not remain for some time in the military districts of which they have medical charge. It may add to the difficulties of direction at headquarters, but continuity of army medical administration is most desirable on the score alike of service efficiency and individual comfort. The reduction of the length of tours on foreign service, special leave for the purpose of professional studies, and greater facilities for obtaining private leave on the part of medical officers, as well as their taking their proper position according to their army rank on all boards, committees, &c., where their presence is required, are changes so obviously right and fair that they should not stand in need of any advocacy. The announcement in the *Times* is as follows: "The continuity of army medical administration in military districts will in future be placed upon a stronger basis by the retention of surgeon-major-generals and surgeon-colonels in their staff appointments as principal medical officers until they vacate that position by promotion or retirement. The length of a tour of service in India, the Mediterranean, and Canada will in the case of officers of the Army Medical Staff be reduced from six to five years. Special leave for professional studies will be granted, and a paid substitute will also be provided for medical officers proceeding on private leave in all cases when their effective strength is below the authorised establishment. An officer of the A.M. Staff detailed to act as president or member of a mixed board, court of inquiry, or committee will take his place thereon according to his seniority as compared with that of the other members, thus clearly defining his *status* in matters unconnected with general command. The pecuniary allowance now issued to officers of militia regiments during their periods of annual training will in future be granted to medical officers when attached to these units."

NEXT MONTH.

LONDON is at present given up to the carpenters; wooden scaffolding and other signs of preparation for the coming event are already a feature that strikes the eye. We need not dwell upon the amount of good that arises from the affectionate loyalty of a people to the Queen and Royal Family. It would not be easy to form a correct estimate of it, but it is nevertheless impossible to avoid seeing that side of it which lends itself to the manifestations of benevolence and charity. The extremes of society are the rich and the poor, and they are strikingly present in a vast city like London, and it is not so much the duty as the privilege of one to help the other. It is fitting that something should be done to sweeten the memory and impart a pleasant aroma of gladness to the minds of the poorest of Her Majesty's subjects in connexion with the coming commemoration, and, thanks to the Princess of Wales's Fund, the outcast and the needy will not be forgotten on that occasion. During the sixty years that the Queen has reigned the events and changes that have taken place would fill a volume, and they have mainly been for the good and happiness of the people of this country. The greater diffusion of wealth that has taken place in those years has led to the material prosperity and comfort of the working classes and

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the poor. The Queen has been young and now is old. Her life has, like those of her subjects, been one of joy and sorrow—in addition to the responsibilities appertaining to her position. The Queen has known the great bitterness of losses among those she loved, and the real loneliness of the position and sorrow of a Sovereign under such circumstances. But in the sixty years of her reign Her Majesty has shown by many acts that in joy, sorrow, or sickness she has counted upon the loyal sympathy of the people who are looking forward to next month to do her homage. It is a proud position to fill. The people of this country, whatever faults they may possess, are among the bravest, most generous, and most law-abiding people in the world, and the Queen must many times during the sixty years of her reign have been comforted by the assurance that their hopes, fears, and interests were identified with those of their ruler. It is the womanly qualities—the pity and compassion and the sympathy with all who suffer—that appeal to our people when they think of their Queen.

ICE ON BOARD OUR SHIPS OF WAR.

WE are surprised to learn from a letter in the *Times* of the 24th inst. that the vessels of our fleet are not provided with ice-making machinery. For the sick in tropical waters ice, we should have thought, was an absolute necessity. Yet it appears that it is not usual to find ice-making apparatus provided on our war-ships. If this be true, it can only be regarded as a standing reproach to the Admiralty. With all the available steam power and machinery on board these vessels, of the equipment of which we are well proud, there surely is left space enough, be it ever so small, for an ice-making apparatus. The space required would by no means be large, and the cost would certainly be very trifling, especially when compared with other machinery on board. We hope the matter will be brought to the notice of the Admiralty and that they will see their way to remove a very serious omission in the equipment of our men-of-war. It appears, however, from a letter from a firm of manufacturers in Wednesday's *Times*, that certain ships in the navy have recently been fitted up with ice-making apparatus, and that orders have been received to equip other ships of the fleet in a similar way. This is as it should be, but at the same time it indicates that not very long ago no such provision was made, so that the statements of the correspondent who first drew attention to the subject were probably right.

THE SELECTED CANDIDATES FOR THE FELLOWSHIP OF THE ROYAL SOCIETY.

OF the fifteen candidates selected by the Council of the Royal Society for election this year three are distinguished medical men—namely, Sir William Henry Broadbent, Dr. Haldane, and Dr. H. Alleyne Nicholson of the University of Aberdeen and formerly of Toronto. The work which fully qualifies these candidates in their separate fields of inquiry is well known. There is no need to dwell on the services which Sir William Broadbent has rendered to medicine—they are well known to our readers—while only recently Dr. Haldane, as will be very generally remembered, has added considerably to his credentials by his recent and most able report to the Home Secretary on the Causes of Death in Colliery Explosions. In addition to medicine, Dr. Nicholson represents also natural history and palæontology, of which subjects he is a distinguished student. Chemistry is somewhat fully represented by three candidates; of these, perhaps, the name of Dr. Kipping is most widely known amongst chemists as a distinguished worker in the field of original inquiry. He has contributed a very valuable series of papers bearing chiefly upon the synthetical formation of organic compounds. Mr. John Millar Thomson is the popular secretary of the Chemical Society and professor of chemistry at King's College. He has written some interesting papers on the phenomena of solution and crystallisation. Mr. Francis Henry Neville has been engaged chiefly in the teaching of natural science at Sidney Sussex, Cambridge. He was fifteenth wrangler in 1871. His work has been directed chiefly to the composition and behaviour of alloys. Geology is represented ably by Dr. Robert Bell, the assistant director of the Geological Survey of Canada. Dr. Bell has published an enormous amount of work based chiefly upon the geological and topographical exploration of a large tract north of Lake Huron. Dr. Charles Chree is the superintendent of Kew Conservatory; he is the author of several mathematical papers, contributed to various scientific societies, on heat, magnetism, and stress. Ornithology is represented by Mr. Henry John Elwes, who was president of the Entomological Society two years ago, and at an earlier date vice-president of the Horticultural Society. It is pleasing to see that our colonies will be represented at the Royal Society in the branch of zoology and comparative anatomy by Dr. William A. Haswell of the University of Sydney. Zoology is again represented in the person of Mr. George Bond Howes, assistant professor in the Royal College of Science. His connexion with literary work will be remembered in the "Atlas of Elementary Biology," and the enlarged edition of "Huxley and Martin's Practical Biology." He has also done some valuable original work. Mathematics is represented by Mr. George Ballard Mathews, professor of mathematics in the University College of North Wales; Botany by Mr. George Robert Milne Murray, of the British Museum; astronomy by Mr. Herbert Hall Turner, the Savilian professor of astronomy, Oxford, while natural philosophy has found an able representative from the University of Dublin in the person of Dr. Frederick Thomas Trouton, who has contributed a number of papers on various physical subjects to the *Philosophical Magazine* and to *Nature*, and many of them are published in the transactions of various learned societies.

THE ABUSE OF DISPENSARIES IN NEW YORK CITY.

FOR some time past there has been much dissatisfaction existing amongst the medical men of New York city with regard to the abuses said to be prevalent in the management of its charitable dispensaries. The subject has been thoroughly looked into and discussed, and it appears after this threshing-out process to have been proved most conclusively that charity has been imposed upon in a wholesale manner. At meetings of the Medical Society of the county of New York several medical officers of dispensaries gave evidence testifying to the shameless way in which persons who were well able to afford a substantial fee obtained advice under the plea of poverty. Instances were given of persons driving to a dispensary in a carriage to seek relief. In one case when the medical man advised the patient to be much in the fresh air and suggested trips on the ferry-boats as a cheap mode of attaining that object, he was somewhat taken aback by the invalid asking whether a voyage to Europe would not answer the purpose equally well. It was, in fact, clearly shown that these charities were extensively used by a class for whose benefit they were most certainly not intended. The New York Medical Society for advancing the Practice of Medicine, representing the sentiments and wishes of the majority of the medical practitioners in New York City, has introduced a Bill into the State Legislature to regulate dispensary relief in that city and to protect the interests of the private practitioner. By Section 5 of this Bill "all persons wishing to be treated at a dispensary shall be compelled to produce to the persons

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carrying on said dispensary a certificate from the owners of the premises wherein such persons reside, or from the police captain or person in charge of the police in the district in which he or she resides, or from the alderman of the district, or from any charity organisation, that the said applicant is a poor person and unable to pay for medical treatment." Section 6 states "that any person applying to a dispensary to be treated and not fulfilling these provisions, or any person aiding anyone so applying to be treated or signing such certificate knowing that such a person so applying is not a poor person, shall be guilty of a misdemeanour." "The Bill if passed will also do away with any kind of payment, as one of its provisions stipulates that all persons who can show themselves to be entitled to treatment shall receive that treatment free in addition to being supplied with medicine and appliances, and further provides that no one conducting a dispensary shall receive any pay whatever." The last section of this Act reads that "the husband and wife shall be jointly and severally liable to pay for professional services of a physician rendered to them, or either of them, or any member of their family, and the joint or several property of the husband and wife shall be liable to levy and sale under an execution upon such judgment, except such property as may by law be exempt from levy and sale under an execution." This clause is of great importance to the medical profession in New York, for as the law stands now a man can evade the payment of his just debts by having his property made over to his wife. The principal medical societies of New York city are given the power each to appoint one person to form a board for the purpose of supervising the conduct of dispensaries, and it is proposed that any person or persons violating this law shall be liable to a large fine or six months' imprisonment. The *New York Medical Journal* criticises the Bill as crude and exacting in its requirements and faulty in its form.

SECONDARY RASHES IN SCARLET FEVER.

SECONDARY rashes during the convalescent stage of scarlet fever, though not very uncommon, are unnoticed by most writers. They must not be confounded with true relapse. Some time ago we published an article by Mr. Manning entitled, "The Skin Eruptions which occur in Septicæmia following Scarlet Fever and Diphtheria."[1] In 2·1 per cent. of nearly 6000 cases of scarlet fever and diphtheria under his care in the City Hospital, Birmingham, he found a condition to supervene characterised by wasting, pyrexia, a peculiar erythematous eruption, and high mortality. It usually supervened in the second week of the attack of scarlet fever, and was almost invariably attended with sloughing in the throat. He therefore attributes it to septic poisoning from this source. Dr. J. O. Symes[2] has recently described a secondary rash, observed in a series of cases of scarlet fever in the London Fever Hospital, apparently of a different nature. The eruption appeared about the third week, almost invariably in patients in whom the throat symptoms had been severe, and frequently coincided with a recrudescence of tonsillitis. Its character varied in different cases, being either erythematous, urticarial, eczematous, papular, or hæmorrhagic. It does not appear to have been caused by septic absorption from the throat, because tonsillitis was absent in some cases, in others it preceded the eruption, and in none was there ulceration or sloughing. Complications such as diarrhœa, vomiting, and nephritis sometimes occurred, which leads the writer to suggest that all the symptoms may be due to a critical elimination of the disease products in the third week. Mahomed observed certain changes between the eighteenth and twenty-second day—a rise of arterial tension, a diminished excretion of urine, pyrexia, albuminuria, otorrhœa, adenitis, and diarrhœa; but he does not mention secondary rashes. As an indication of these complications the detection of the rash is important. The writer states that similar eruptions are frequently seen in scarlatinal "rheumatism," but that it was only present in two out of the nine cases. This suggests to us the conclusion that the eruption and other symptoms are of the same nature as the "rheumatism" and due to a common cause which produces varying effects.

[1] THE LANCET, Aug. 13th, 1892.
[2] Bristol Med. Jour., March, 1897.

MILK AND TUBERCULOSIS.

ALMOST day by day fresh evidence accrues of the extreme necessity of placing cows under the best possible sanitary environment, since darkness, filth, and defective ventilation are favourable conditions for the development of tuberculosis, and the milk of tuberculous cows, especially when the disease affects the udder, is an undoubted source of infection. In a recently published report on tuberculosis as affecting the milk supply of the city of Liverpool the medical officer of health, Dr. Hope, states that the investigation of the bacteriologists showed that 2·8 per cent. of the samples of milk taken from the city shippons contained the tubercle bacillus. As he points out, and as we emphasised only last week, this doubles the need for strictly applying the by-laws. Dr. Hope very properly observes that, important as this result is, it sinks into insignificance compared with the large proportion of milk infected with tubercle which is sent in from the country, this proportion amounting to no less than 29·1 per cent. In the same way what guarantee, we may ask, have we that milk imported in a frozen state from foreign countries is free from infection?

THE MANCHESTER SEWAGE PROBLEM.

WE have received from Mr. Bradley, a member of the Manchester City Council, a paper read before the Manchester Statistical Society, entitled "Manchester Sewage Problem, with Suggestions for its Solution and Suggested Amendments of the Rivers Pollution Prevention Act." The great difficulty is so to deal with the immense volume of 26,000,000 gallons of sewage per day, that the sewage effluent shall be pure enough to be discharged into "a nearly stagnant portion of the Ship Canal." The question of filtration through land is thus dismissed as impracticable:—"First, because we cannot obtain the necessary quantity of land, and, secondly, if we could the land would be of a kind that would be unworkable and probably a source of infection to the whole neighbourhood." He then considers the methods of chemical precipitation and subsequent treatment by artificial filters. "At Davyhulme the precipitation is effected by the addition of milk of lime, and subsequently by the addition of copperas (protosulphate of iron), about seven grains of each being added to every gallon of sewage." As a rule the effluent does not come up to the standard of the joint committee, which, by the way, comes in for some of Mr. Bradley's severest strictures. He says it "apparently exists only to harass and command." This standard, which Mr. Bradley considers unreasonable for Manchester, is that any effluent entering the canal shall not absorb in four hours more than one grain of oxygen in a gallon, and that it shall not contain more than 0·1 of a grain of albuminoid ammonia per gallon, or by weight one-tenth of a grain of albuminoid ammonia in 70,000 grains of effluent. Such an effluent can be produced at Manchester, but at such a cost, and requiring such constant supervision that Mr. Bradley considers it impracticable. Nor does he hope much from invoking bacterial energy. He advocates the discharge of the sewage by a culvert carried to Randall sluices below Warrington, in the estuary of the Mersey, where what he now calls the "effluent water" can be discharged directly into the receding tide. In

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order to supply the canal with an equivalent for the 26,000,000 gallons of sewage effluent sent down the culvert he would provide a pumping station at Latchford to raise any required quantity of water from the tidal level to the higher level above the locks. If the pumping station or an "occasional discharge of the Manchester effluent water into the canal" were considered objectionable he would flush the docks at Pomona with 10,000,000 gallons of Thirlmere water. Mr. Bradley is really advocating the plan proposed by the Rivers Committee and emanating from the City Surveyor. It is a confession of failure over which Mr. Bradley becomes rather eloquent. "When they had the culvert they would be done with the difficulty, they would not be constantly harassed by law, they would be perfectly free, and it would be as grand a thing for Manchester" (to pour their filthy effluent into the estuary of the Mersey) "as was the bringing of pure water from Thirlmere." He evidently looks with regret on the loss of the ancient privilege of pollution, and speaking of the river, says: "It is the same stream that has for centuries conveyed the drainage of Manchester to the sea, and it is especially unreasonable on the part of the majority of the Mersey and Irwell Committee to oppose in Parliament and prevent one of the most important trading centres in the world from exercising her ancient privileges." He would do away with the present Mersey and Irwell Committee, and proposes "a new form of board constituted more in accordance with the requirements of Manchester."

CEREBELLAR FUNCTIONS.

IN a recent number of the Proceedings of the Royal Society a preliminary account appears of some interesting experiments by Dr. Max Löwenthal and Mr. Victor Horsley on the relations between the cerebellar and other centres, especially with reference to the action of antagonistic muscles. These experiments were undertaken because of an observation that when both cerebral hemispheres were removed, and as a result active extension tonus of the limbs was obtained; faradaic excitation of the upper surface of the cerebellum caused immediate relaxation of such tonus so long as the current was applied, but as soon as the latter was shut off the tonus was immediately re-established. Such an observation, indicating, as it did, a distinct connexion between the cerebellum and the lower centres, made careful examination necessary, and it was found that such an effect was constant provided the tonus was well established, and the effect was not merely an actual relaxation of the triceps, but also a marked contraction of the biceps. Experiments were arranged in which the effect could be graphically recorded, and in the dog and cat it was found that excitation of the left motor cortex and of the left corona radiata produced invariably symmetrical and synchronous contraction of the prepared muscles, biceps and triceps of the right side. Excitation of the crusta on the cut surface before the general tonus was established produced invariably contraction of both biceps and triceps; excitation after it was established, of the left crusta produced in thirteen cases contraction of the biceps and contraction of the triceps, in two contraction of the biceps and relaxation of the triceps, and in one relaxation of the biceps and contraction of the triceps. Excitation of the cerebellum produced very constant effects. After the tonus established by removal of the cerebellar hemispheres was present excitation of the cerebellum caused a striking and active relaxation of the triceps and an active contraction of the biceps on the same side as that stimulated. In twenty-nine experiments it was found that the muscles of the right arm could be influenced by excitation of both halves of the cerebellum, but the effect was greater on the same side as that stimulated. In five experiments excitation of the left half of the cerebellum evoked relaxation of the biceps on the opposite side. When the tonus produced by removing the cerebral hemispheres was not yet established excitation of the surface of the cerebellum constantly produced atonic contraction of either the triceps or biceps, or of both together. Synchronous excitation of the cerebral area for the forelimb and of the cerebellar focus produced, in cases in which the cerebellum is definitely excitable, an addition to the tonus previously elicited from the cortex cerebri. The inquiry is very interesting, and seems likely to throw light upon some of the functions of the cerebellum hitherto so obscure.

OXFORD GRADUATES' MEDICAL CLUB.

THE summer dinner of this club was held at Limmer's Hotel on May 20th, Dr. Whipham being in the chair. About a hundred members and guests were present, among the latter being Dr. Wilks and Mr. Clinton Dent. The toasts, which, according to the unwritten law of the club, were as few as possible in number and proposed in the fewest possible words, were given by Dr. Whipham, and consisted of "The Queen" and "The Club and its Guests." In proposing the latter Dr. Whipham referred to the losses the club had sustained by the deaths of Mr. George Child, of Oxford, and Dr. James Andrew.

THE DANGERS OF CELLULOID.

WE drew attention last week to the extreme inflammability of the substance called celluloid, and we pointed out that though the celluloid films of the kinematograph employed on the occasion of a demonstration at the Bazaar in Paris, where such an awful disaster happened, might not have been the primary cause of the fire yet doubtless the presence of long sheets of this highly inflammable material accentuated the rapidity and fierceness of the conflagration. Could nothing be done, we urged, to make celluloid less inflammable without impairing its transparency. We believe that by interposing a bath of alum solution between the source of light and the pictures a great proportion of the heat rays would be filtered out so that little heat would be concentrated upon the inflammable screen. The danger is no imaginary one, and all such public demonstrations should, we consider, be subjected to rigid inspection and control. Another fire at Paris was reported in the papers on Tuesday last arising from the probably careless handling of a kinematograph. It so happened that there were only thirty spectators present, which considerably lessened the chance of a serious panic. The kinematograph as a source of amusement and, we may add, of instruction is being very largely employed in crowded places of public resort, and it is imperative, we think, that some action should be taken to provide as far as possible for the safest possible conditions of carrying out this kind of entertainment.

THE BECKENHAM AND PENGE MEDICAL SOCIETY: THE BATTLE OF THE CLUBS.

A VERY useful and sensible discussion followed the annual dinner of the United Beckenham and Penge Medical Society, at which Mr. Frank Sturges presided. The health of the society was proposed by the Rev. Charles Green, vicar of St. Paul's, Beckenham, in a speech which showed great appreciation of the profession and the value of local medical societies in promoting good fellowship and professional harmony. He alluded to what seems to have been a somewhat warm newspaper discussion on medical clubs and the objections of the profession to unfit persons as members. He rightly observed that mere temper would not solve such questions, unless, indeed, it is that

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good temper which comes of a good cause and a generous disposition to be reasonably accommodating to those who need our services. Mr. Sturges, in his reply, stoutly maintained the duty of the medical profession to defend itself against a small minority who are ready to accept any terms in medical aid associations, even in those which work by paid canvassers canvassing the patients of private practitioners. A gentleman had lately been imported from such an association to the neighbourhood full of sympathy with clubs in their wrongs at the hands of a cruel-hearted profession, and willing to accept all their appointments on their own terms. This was most unsatisfactory just when the principal clubs of the district had come to terms with a very united profession. Mr. Sturges sees the difficulty of legislation in this matter and suggests that Universities and qualifying bodies should insert a clause in their degrees or diplomas under which no one could accept an appointment which in the opinion of the profession is derogatory without risk of losing his degree or diploma. Already most of the qualifying bodies —not universities—have power to censure or punish behaviour or methods of practice inconsistent with the dignity of the profession. They need to be stimulated to action by such societies as that of Beckenham and Penge. Meantime the public opinion of the district must find expression—dignified and calm, as Mr. Green suggested, but clear and decided, as Mr. Sturges, representing thirty-five medical men, exemplified.

PULMONARY TUBERCULOSIS AND ATMOSPHERIC IMPURITY.

THERE has just been issued by Dr. A. K. Chalmers, the medical officer of health of Glasgow, a report upon the distribution of turberculous diseases in that city. Glasgow, with its wide area, its numerous sanitary districts, and excellent sanitary organisation, is just the place for an inquiry of this kind, since the various districts exhibit marked contrasts in respect to density of population, social status of their inhabitants, and in the class of dwellings. Dr. Chalmers deals with all forms of tuberculous disease, grouping its varieties in the categories of pulmonary phthisis, tabes mesenterica, tuberculous meningitis, and "other forms," including "scrofula." He shows that the mortality from all these affections has very markedly diminished of late years, the average annual death-rate per million living having been for phthisis 2849 in 1883-88, and 2318 in 1889-94, a reduction of 18·6 per cent. Similarly there has been a fall in the death-rates from all the other forms of tuberculous disease, amounting in the aggregate to 18·7 per cent., the reduction being most marked in the class of tabes mesenterica and least in that of meningitis. The main part of his report, however, deals with the incidence of fatal cases of pulmonary tuberculosis in the various districts, in comparison with the liability of the communities to the inhalation of atmospheric air rendered impure by respiratory exhalations. He arrives at this approximately by determining, not only the population density of each district, but also what he terms the "room density"—that is, the average number of persons per room in the houses of the district. This calculation cannot, of course, take account of the actual cubic space of the dwellings, or of the greater or less facilities for ventilation; but neglecting these and other modifying circumstances it yet comes out very clearly that the amount of phthisis does vary proportionately to the room-density. This is well shown by his conclusions, which we cannot do better than quote. They are:—

1. The room-density of the whole city fell from 2·040 in 1881 to 2·033 in 1891, or a decrease of 7 persons per 1000 rooms, and its phthisis-rate from 268 to 230 per 100,000 living.

2. All districts, save one, having a phthisis death-rate above the mean have a room-density also above the mean. St. Enoch-square district is the only exception to this.

3. In all these districts, save St. Andrew's-square, the room-density was greater in 1881 than in 1891.

4. Eleven districts have a phthisis death-rate below the mean; five of them have a room-density in excess of the mean, which is tending toward increase in three of them.

5. These exceptions are sufficiently large to show that the relationship between room-density and phthisis is not a simple one, and that excessive density is not at once responded to by an increased phthisis-rate; but in nine districts where the room-density increased between 1881 and 1891 the phthisis death-rate fell 13·5 per cent., whereas in fourteen districts where the room-density was reduced the phthisis-rate fell 16 per cent.

Thus, as Dr. Chalmers says, the death-rate from phthisis is decreasing more rapidly in those districts which have a concurrent decrease in room-density. His report is amply furnished with statistical information that bears out the conclusions at which he has arrived. The practical lesson is of the greatest importance. It is that which we fear is never considered in the building of great towns, where the tendency is to encroach upon air-space, and if not to cause an increase in the actual density of the population, to at any rate diminish the opportunities for that thorough permeation of pure air in and around dwellings which is the main element in all the prophylaxis of pulmonary tuberculosis.

THE ALDERSGATE-STREET EXPLOSION.

THE evidence adduced at the inquest held upon the body of Henry Pitts, who lost his life in the mysterious explosion on the underground railway on April 26th, confirms unfortunately the views which we expressed in our issue of May 1st in regard to the origin of this occurrence. We feared then that everything tended to show that a dastardly and cowardly miscreant was at large amongst us, and that he had employed a powerful explosive, adjusted to explode at a certain time, for his hellish and insane purpose. The same conclusion has been arrived at by Sir Vivian Majendie, Her Majesty's Inspector of Explosives. At the inquest he said that "he had no doubt in his mind that the explosion was due to a high explosive, which had exploded on the floor of the carriage, and which high explosive was not contained in a metal case, but was fitted with a fuse and put into the train." Further evidence given by railway officials appeared to distinctly confirm this view. Sir Vivian Majendie remarked that this was the fourth explosion on the underground railway, and all that remained was to find the perpetrator of the outrage. The only consolation to be derived from the issue of the occurrence is that not more lives than one were lost, and considerable praise is due to that engine-driver who, as soon as he was aware of what had happened, turned on his whistle, and so warned other trains not to enter the station. In the confusion that prevailed the results of a train entering upon the scene of the explosion at that moment might have been disastrous indeed.

ENLARGEMENT OF FUNCTIONS OF THE METROPOLITAN ASYLUMS BOARD.

No student of disease, or even of sociology, can fail to watch the work of the Metropolitan Asylums Board. There is not much new to report in respect of its ordinary work in the fortnight ending on May 20th. The cases notified to the Board and the cases admitted were both a little more numerous than in the preceding fortnight. Of the 1429 cases notified to the Board, as against 1341 in the preceding fortnight, 749 were received into the hospitals of the Board. The meeting had unusual interest on two grounds. First, the presentation of the annual report by the chairman; and,

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secondly, the adoption of a report of a special committee on steps necessary for accommodating certain classes of diseased pauper children. The most important part of the chairman's statement was that for six months of the year the managers had to refuse admissions, which would have filled 500 more beds than they had. At one time, with a normal accommodation for 3900, they had 4996 cases, or an excess of nearly 1100 cases. The expenditure meantime proceeds by leaps and bounds, the liabilities on loans on Sept. 30th last being £1,741,991, as against £1,563,844 at Michaelmas, 1895. No attention seems to be given either by the Board or by the Local Government Board to the question how far this ever-enlarging expenditure might be met by excluding unfit cases or cases which might be treated at home. It is noticeable that of the 3400 servants in the employment of the managers when the Poor-law Officers Superannuation Act passed (1896) 2444, or more than two-thirds, declined to take advantage of its provisions. The Board, undaunted by its present responsibilities, adopted a report formulating plans for the accommodation of 800 cases of contagious ophthalmia, 400 cases of ringworm of the scalp, besides accommodation for weak-minded and physically infirm children who cannot well be trained in ordinary schools, and for remand cases under the Industrial Schools Act. It will be interesting to see how far an essentially medical treatment of such classes of unfortunate children will tend to eradicate the physical taints of pauperism and to place them on a fairer level of health for the race of life. We have great faith in the far-reaching effects of a sound medical treatment, not restricted by the considerations that too often weigh with guardians.

PUBLIC VACCINATORS AND THE SUPERANNUATION ACT.

WE have on previous occasions[1] drawn attention to the absence of any provisions being made in the Poor-law Superannuation Act for public vaccinators, an omission which was due to the fact that they did not look after their own interests when the Act was being framed in the same manner as the clerks to guardians did, who stand, as regards their offices of registrars of births and deaths, exactly in the same position as district medical officers do as regards their posts of public vaccinators. The Poor-law Medical Officers Association has very properly been considering the matter, and submitted a series of questions to Sir Robert Reid as to the construction of the new Act—namely, if public vaccinators can be regarded as coming within the scope of the Act, whether they hold no other post under the Poor-law or that of district medical officer in addition. His opinion on all these questions is virtually that a public vaccinator, whether he holds the post of district medical officer or not, is not, in his capacity of public vaccinator, *an officer* employed by the guardians, and therefore cannot count the vaccination fees as part of the emoluments on which a pension can be based. To the uninitiated and to the unlegal mind these quibbles seem very curious, but Sir Robert Reid's opinion only confirms that of the Local Government Board, and, therefore, the only thing that remains is to test the matter in one of the courts. But in all probability the money so expended would be better devoted to getting an alteration of the law. The nurses have also been rather hardly dealt with in the Superannuation Act, and from much the same reasons. Why should not the public vaccinators coöperate with the nurses? The latter have been promised some valuable help to obtain a short amending Act this session, which will enable them to have the option of excluding themselves from the provisions of the Act if they choose. It would be only fair if a clause could also be inserted in the proposed amending Act setting forth in the wording of Section 19 of the Act of 1896 a provision that "for purposes of this Act" public vaccinators "are deemed to be in the service of the guardians of the union or parish" with whom they have a contract for the performance of vaccinations. Many things in this world may be done by coöperation which cannot be done single-handed, and we commend the idea to the notice of the public vaccinators, who certainly have grounds for feeling aggrieved at their exclusion. The Workhouse Infirmary Nursing Association (6, Adam-street, Strand), always mindful of the interests of Poor-law nurses, could doubtless give information as to how matters now stand as regards the proposed amending Act; or perhaps Mr. Rutherglen, the clerk to the guardians of Kensington, who took an active part in promoting the existing statute, would aid the public vaccinators in getting their disabilities removed.

[1] THE LANCET, Nov. 7th and 28th, 1896.

THE JENNER MEMORIAL MEDAL OF THE EPIDEMIOLOGICAL SOCIETY.

THE support which the profession has given to the Jenner Memorial Medal Fund has, we are glad to hear, enabled the Epidemiological Society to found a medal, and at the annual meeting of the society which was recently held it was announced that the design and execution of the medal had been entrusted to Mr. Allan Wyon, F.S.A. On the obverse of the medal is to be the head of Edward Jenner, while on the reverse is a representation of the globe similar to that shown on the diploma of the society. It was announced at the same meeting that Lord Lister had accepted the office of Honorary Vice-President, also that the society had determined to published in pamphlet form the extremely able paper in which Dr. McVail dealt with the Dissentients' Statement in the report of the Royal Commission on Vaccination.

VESTRIES AND QUACK ADVERTISEMENTS.

A CORRESPONDENT writes: "I should like to call your attention to the following circumstance: I think that your opinion about it will coincide with mine, and you may be able to get the abuse removed, or suggest a means for doing so. In the handsome and commodious new public urinal in Hyde Park, close to the Marble Arch, there is a clock in a conspicuous position disfigured by an advertisement in large letters round its face of Beecham's Pills, &c., and round the pendulum below is added 'Sale 7 (or some such number) every second.' The Vestry of St. George, Hanover-square, is, of course, responsible for this monstrosity. I drew the attention of a member of the Vestry to the matter some time ago, and he promised to bring the matter before the Vestry; but I observe that nothing whatever has been done." Now a urinal may be a very good place in which to advertis quack medicines, and it is, in fact, a place often used by the bill-posters of persons who may be termed irregular practitioners; but the bill-poster and the vestry of St. George, Hanover-square, stand in somewhat different relations towards the public. Indeed, we believe that some vestries propose to prosecute the bill-stickers for a proceeding similar to that of which the vestry of St. George, Hanover-square, has been guilty. For a vestry itself to advertise in this extremely conspicuous manner a quack remedy is, to put it mildly, an indiscretion. To us, moreover, viewed from a commercial aspect, it would seem to be an extremely bad stroke of business unless the vestry obtained from the proprietors a great deal more than a clock. Suppose we estimate the value of the clock, for argument's sake, at £50, the annual value of £50 is not more than £2, and in the case of a clock would decrease with the

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wear and tear of time. The annual value to the proprietors of these pills of a permanent advertisement in a public place with sitting and standing accommodation during the long hours that it is open for many hundred persons would, at the ordinary scale of English advertisements, be many hundred times £50.

THE BLACKWALL TUNNEL.

THE new tunnel under the Thames, which was opened on May 22nd, must prove of immense value to the inhabitants of the East-end of London, who hitherto have had no free river crossing between London-bridge and Woolwich. Great praise is due to the London County Council for having successfully carried the work through, and as Lord Rosebery humorously remarked at the dinner given in celebration of the opening of the tunnel, "if a political Cromwell from one or other of the Governments which succeed each other in Downing-street should step forward and say: 'Remove that bauble' (the London County Council) and sweep them out of existence, they would always live, if only by the memory of the Blackwall Tunnel." From an engineering point of view the work must rank among the more remarkable triumphs of the Victorian era, and from a medical point of view it must also be regarded as a remarkable performance. In all great building works there are generally a number of serious accidents, and in the present instance the probability of an increase in the proportion of casualties was enhanced as the men had to work in compressed air, which is now generally used in excavations beneath water. Notwithstanding the fact that the tunnel has taken five years to complete, Dr. Collins was able to inform His Royal Highness that the operations had been carried out with unusual freedom from serious accidents—a fact which speaks volumes for the great care which had been taken to protect the operatives.

THE IODINE TEST FOR SEMEN.

THE difficulty of identifying spermatozoa by the microscope in the case of old stains is admitted. Florence of Lyons has introduced a chemical test which appears to be valuable,[1] judging by recent reports. The reagent is one used in testing alkaloids, known as the tri-iodide of potassium (KI_3). The formula is: iodide of potassium, 1·65 grammes; iodine, 2·54 grammes; and distilled water, 30 c.c. When a drop of the liquid obtained by moistening a seminal stain is placed side by side with a drop of this solution on a slide large numbers of peculiar brownish red, pointed crystals appear. They are rhomboidal and closely resemble hæmin crystals. Dr. Wyatt Johnson states[2] that he readily obtained the reaction with stains a year old. He also confirms Florence's statement that other secretions of the body, such as blood, urine, sweat, saliva, tears, bile, milk, pus, nasal or vaginal mucus, will not give the reaction. With the semen of animals in some cases he obtained a doubtful reaction. Dr. W. F. Whitney[3] also obtained the reaction readily. But as alkaloids give a precipitate with the reagent, its value, like the guaiacum test for blood, is chiefly negative. The last writer has found the following method of examining a seminal stain even as old as two and a half years successful. A drop of fluid obtained from the moistened stain is evaporated and fixed by a flame. The film is stained with eosin and methyl green and mounted. At the base of the head of the spermatozoa is a hemispherical portion which stains a deep green, whilst the anterior part and tail stain red. This serves at once to identify them, as there is no other oval spore or cell which has an eccentric hemispherical nucleus. He furthermore claims that the test proves them to be human, as in no other animal is there a deep staining. When this test is combined with Florence's there ought to be no difficulty in coming to a conclusion.

[1] Archives d'Anthropologie Criminelle, January, February, and March, 1896.
[2] Boston Medical and Surgical Journal, April 8th, 1897.
[3] Ibid.

THE SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE annual general meeting of this society was held on Wednesday, May 19th, at 5 P.M., Sir James Paget, President, being in the chair. From the report read by the secretary it appeared that thirteen new members had been elected in 1896, thirteen had died, and four had resigned, leaving 292 on the books. Four widows and four orphans had been added to those already in receipt of grants, four widows had died or become ineligible, and one orphan had ceased through age to be eligible for further assistance, and fifty-three widows and eleven orphans had received £2893 10*s.* during the year. The total receipts available for the payment of grants and expenses had been £3291 11*s.* 5*d.*, and the grants and expenses had amounted to £3136 13*s.* 9*d.*, leaving a balance of £154 17*s.* 8*d.* The funded property of the society, now £97,300, had been increased by the investment of the residue of Miss Emma Carpue's legacy of £1600. A vote of thanks to the editors of the medical journals for their kind assistance in making known the work and objects of the society was proposed by Dr. Wilks, seconded by Mr. Milburn, and carried unanimously. A special grant of £26 was made to a widow. Dr. Wilks, Dr. Pollock, and Mr. Felce were elected vice-presidents, Dr. Brodie, Dr. Ogle, Dr. Blandford, Dr. Slight, Dr. de Havilland Hall, Dr. James Miller, Mr. Lovett, and Mr. Day were elected directors to fill the vacancies in the list of officers for 1897–98 caused by death and the retirement of the six senior directors. The acting treasurer, Dr. Potter, proposed a vote of thanks to the President, Sir James Paget, for presiding at the meeting. The vote was passed with great cordiality.

THE first annual meeting of the National Association for Promoting the Welfare of the Feeble-minded (secretary, Miss Paul; temporary office, 27, Percy-street, W.) will be held at 36, Lancaster-gate, W., on June 2nd, at 4 P.M. Dr. Savage, Dr. Frederick Needham, and Mr. G. T. Pilcher, of the Charity Organisation Society, are announced to speak.

WE have received the report of the medical superintendents upon the use of antitoxin serum in the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board during the year 1896. The report is an exhaustive statistical study of its subject, an analysis of which we shall place before our readers next week.

H.R.H. PRINCESS HENRY OF BATTENBERG has fixed Saturday, July 31st, as the date for the ceremony of laying the foundation stone of the eleventh block of houses of the Royal National Hospital for Consumption, Ventnor, to increase the accommodation to 155 beds.

H.R.H. PRINCESS LOUISE, Marchioness of Lorne, has graciously promised to open, some time in July, the Convalescent Home at Cranbrook, Kent, given by Mr. Passmore Edwards to the Metropolitan Hospital.

FIELD-MARSHAL SIR JOHN LINTORN SIMMONS, G.C.B., G.C.M.G., will distribute the prizes to the students of Charing-cross Hospital on Wednesday, June 2nd, 1897, at 4 o'clock precisely.

GUY'S HOSPITAL has received £1000 from Mr. Charles Gassiot towards the cost of building a nursing home in connexion with the hospital.

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Pharmacology and Therapeutics.

RADIANT HEAT IN ULCERS OF THE LEG.

DR. COLLEVILLE, professor of Internal Pathology in the Rheims School of Medicine, treats ulcers of the leg by exposure to heat in a simple way without any very elaborate apparatus. All that is required is a square plate of metal which will stand heating and a Bunsen burner. The blue flame of the latter impinges on the metal so as to bring it to a dull red heat, and the ulcer is exposed to the action of this at a distance of about ten inches, the rest of the limb being protected by bandages. The temperature is about 45° C. which is easily borne, and the flame is regulated so as to maintain this temperature at the wound during the whole of the sitting which lasts for from twenty minutes to an hour. At the conclusion the surface is found to be glazed over, large granulations being visible through the semi-transparent coating. It is best to leave the ulcer exposed to the air for some time, and when it is dressed care should be taken that its surface is not touched by the aseptic gauze or other material used. Some improvement is generally experienced by the patient even after the first sitting, and cicatrisation is completed in from five to twenty-five applications. In the later sittings, when the ulcer is nearly healed, a more moderate degree of heat may be employed. Where gas is not available the heat of the sun or that of a fire may be utilised. Dr. Colleville attributes the beneficial effect of this method to the combined action of heat, light, and ventilation.

PARALYSIS FROM THE MEDICINAL ADMINISTRATION OF ARSENIC.

In a recent number of the *Glasgow Medical Journal* Dr. Middleton has published an interesting case of a boy, aged eleven years, who, on account of a skin affection, had Fowler's solution of arsenic administered to him in increasing doses. The administration was commenced in January and the first symptoms of paralysis appeared in March. Examination in the following June revealed complete flaccid paralysis in all four extremities, with atrophy and loss of knee-jerks. There was considerable pain on pressure of the muscles and nerves, but no obvious impairment of sensibility.

OIL OF WINTERGREEN AS AN EXTERNAL APPLICATION IN RHEUMATISM.

According to M. Lemoine local applications of oil of wintergreen are valuable in rheumatic fever, acting more rapidly in relieving pain than salicylate of soda and being free from the liability to produce tinnitus or giddiness, which sometimes follow the use of the latter drug. He soaks a piece of lint in two or three drachms of the essential oil, and applies it to the skin; the whole is then completely covered by oiled silk, which well overlaps the lint, and carefully bandaged so as to prevent external evaporation. The application is made over the painful spot if this is conveniently situated. If otherwise the thigh or arm is chosen. In this case the oiled silk should be long enough to encircle the limb, and the absorption of the salicylate of methyl which forms some forty per cent. of the oil produces almost as good a result as if applied to the seat of the pain. This method of treatment answers very well also in some cases of sciatica and, according to M. Siredey, in chronic rheumatic affections, where it may be used for a considerable time without any ill effects, either local or general. Here it acts better when applied directly to the affected joints than when the dressing is placed round the shaft of the bone. The strong smell of the oil is the only inconvenience. The same application has proved useful in relieving the lightning pains in a case of locomotor ataxy. The use of oil of wintergreen as an external application in chronic and subacute rheumatism is of course not anything novel, though the particular method of its employment may perhaps be so. Mr. J. D. Staple, however, used it in the Stockport Infirmary several years ago as a liniment combined with an equal quantity of olive oil, and reported[1] that in only two out of a hundred cases of chronic rheumatism did it fail to relieve the pain.

[1] THE LANCET, Aug. 30th, 1890, p. 444.

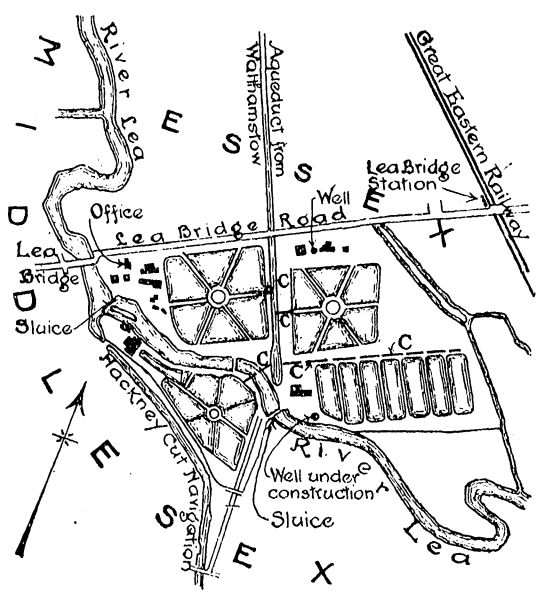
The Lancet Special Commission ON THE METROPOLITAN WATER-SUPPLY.

XIV.[1]

EAST LONDON WATERWORKS COMPANY (*Concluded*).

Lea Bridge (see L on Map, THE LANCET, May 8th, p. 1291, and Fig. 1).—The station at Lea Bridge is situated partly in the county of Middlesex and partly in Essex. It is bounded on the north by Lea Bridge-road, on the west by the Hackney Cut of the Lea Navigation, and on the south and east by the Hackney marshes. The station is divided into two parts by the River Lea, which is the county boundary. The Middlesex part of the station contains filter beds, a pumping engine, and turbines. The water which flows down the old course of the River Lea is regulated by sluices, one of which is situated at its juncture with the Hackney Navigation Cut, and the other at the point at which the river leaves the Company's property. The sluices are in charge of the Lee Conservancy Board. The part of the station which is situated in the county of Essex is divided into two by the aqueduct which brings the water from the Company's reservoirs at Walthamstow. The part of the station which is situated to the west of the aqueduct contains the offices of the Company, engine houses, and one set of filter beds. It is the custom of this Company to name their engines. Those which are situated here are the "Victoria," "Triples," "Prince," and "Princess." To the east of the aqueduct there are two sets of filter beds and an engine house for the "Duke" and "Duchess," the "Prince Consort" and horizontal engines. The well is also situated here. At the southern part of the station near the Lea a well is being sunk. The bulk of the water pumped from Lea Bridge comes from the Walthamstow reservoirs through the aqueduct (see Fig. 1), but a small quantity is

FIG. 1.



The Map shows the station at Lea Bridge. The letters C C C show the course of the culverts which pass from the aqueduct to the filter beds.

obtained from the deep well at this station. No water is taken from the River Lea at this point. The water from the aqueduct passes both to the Essex and Middlesex filter beds through culverts guarded by copper wire gratings of which the meshes are about $\frac{1}{10}$ in. in diameter. These gratings are

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., and XIII. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, 24th, May 1st, 8th, 15th, and 22nd, 1897, respectively.

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cleansed twice every day and sometimes more frequently. The water to the Middlesex beds passes in an aqueduct under the Lea, and that for the Essex beds in the course marked in the map (see Fig. 1, C. C. C.).

Middlesex part of the station: Filter Beds.—There are six beds, which occupy six acres. The sides of the filter beds are built of brick at a slope of 1½ to 1. Each has a central and two lateral culverts to receive the filtered water. Water passes into these channels through perforated bricks. The filtered water well is 100 ft. in diameter, and is situated at the point marked by a circle in the centre of the nest of beds. The composition of the beds is the same as that of those at the Essex part of the station, and will be given with the description of them.

Pumping arrangements: "Victoria."—This is a Cornish pumping engine having a cylinder 100 in. in diameter and stroke of 11 ft. which works a pump of which the diameter is 50 in. This engine is used for pumping water through a stand pipe 48 in. in diameter and 120 ft. in height for the supply of the middle level district which embraces Mile End, Stratford, West Ham, Hackney and Bethnal Green. The head of water worked against is about 100 ft. The pump raises 150 cubic feet per stroke and works at a rate of 10 strokes per minute. The engine is therefore capable of pumping over 13,000,000 gallons daily. The steam is generated by eight Cornish boilers worked at the pressure of 35-40 lb. Some of the water used by the boiler is softened by the Porter-Clarke process.

Turbine house.—Near the "Victoria" engine house there is a house which contains two turbines which make use of the water power of the River Lea in flood time. The turbines are of the Girard type and work three plunger pumps 10 in. in diameter, which have a stroke of 2 ft. The pumping capacity is 20·4 gallons per revolution. In the same house a small turbine is worked by pressure from the water mains for the generation of electricity for lighting the station; the water thus used is returned again to the filter bed.

Water which was filtered at this station was formerly conducted by a culvert to the Company's station at Old Ford which has since been given up. The part of the aqueduct which is situated at the Lea Bridge station still remains and is used for another purpose. Into it the water from some of the filter beds is allowed to flow when they are emptied for cleansing purposes. In time of drought, when all the available water is required, this is pumped back on to the filter beds. The machinery used for this purpose is a portable steam-engine and two small hydraulic engines. There is an arrangement by which the hydraulic engines are set to work by means of a float; by this means the pressure of the water from the mains is used when necessary for pumping the water out of the old aqueduct back to the filter beds, and as the float arrangement works automatically no supervision is necessary.

The Essex part of the station.—There are three sets of filter beds on the Essex part of the station. Of these two sets are arranged round a central wall and, like the Middlesex beds are of somewhat peculiar form (see Fig. 1). The beds, forming the third set are more or less rectangular in form.

Old Essex Beds.—These six filter beds have a total area of six acres. The sides are built of brick with a slope of 2½ to 1. A channel for the filtered water runs in the centre of each and there are two lateral channels which conduct the water into the central one. The air ventilators in connexion with the filtered water channels pass through the side walls of the filter beds. There is no central ventilating shaft. The composition of the filter bed is as follows: Rough ballast, 9 in.; hoggin, 9 in.; sand 2 ft. When the sand is scraped off for cleansing purposes the total thickness is not denuded to a greater extent than six inches before the washed sand is replaced. The thickness of the sand used for filtration is not reduced to a depth of less than 1 ft. 6 in. The filter beds are during the summer cleansed about once a month, and once in six weeks during the winter months. The rate of filtration averages 1,000,000 gallons per acre in twenty-four hours. Another set of beds similar in all respects is situated to the east of the aqueduct.

New Essex Beds.—This series of filter beds consists of six, which occupy an area of about six acres. All these beds are oblong with rounded corners, excepting one which has an irregular form. The beds have concrete walls and are lined with Staffordshire bricks at the upper part. Each bed has one central air shaft as well as shafts in the side walls.

Cleansing sand.—At this station three methods are adopted: (1) sometimes the sand is washed by the water at a pressure of 100 ft.; (2) sometimes it is washed by water at low pressure "hand washing"; and (3) sometimes a special apparatus is used.

The pumping engines on the Essex side, to the west of the aqueduct, are the "Triples," the "Prince" and "Princess," and a set of turbines.

The "Triples."—The engine house is a light structure lined with white tiles. It contains three vertical triple expansion engines of which two are generally kept working, the engines are fitted with Corliss valve gear. The diameter of the cylinders is as follows:—high pressure 20 in., intermediate 34 in., low 57 in.; the stroke is 4 ft., and the diameter of the pump is 30 in. Each engine is capable of pumping 357 gallons per stroke and the rate at which the engines work is from sixteen to twenty-four revolutions per minute. The head of water worked against is about 100 ft., and the engines are used for pumping to the district. The amount which can be pumped daily by each of these engines is 12,000,000 gallons. Steam is generated by six Lancashire boilers which work at a pressure of about 120 lb.

"Prince" and "Princess."—The house containing these engines is situated just at the east of the offices. The engines are of the Cornish type; the diameter of the cylinders is 84 in., and the stroke 11 ft. They pump water into a stand-pipe 140 ft. high, which is situated in the chimney. The head of water worked against is generally about 140 ft. The steam is generated by ten Cornish boilers, which work at a pressure of from 38 to 40 lb. These engines work two pumps, of which the plungers are 45 in. in diameter and the stroke 9 ft., the rate being generally nine or ten strokes per minute. The amount of water pumped is 623 gallons a stroke. The engine house contains an electric indicator for recording the height of water in the reservoir at Finsbury Park.

Turbines.—Two Hercules turbines actuate two sets of double-acting pumps, which deliver 26 gallons of water per revolution into the mains supplying the Essex district. The head of water worked against is generally about 180 ft.

At the part of the station to the east of the aqueduct are situated the well, the "Duke" and "Duchess" (horizontal) and "Prince Consort" engines. There is also a residence for the foreman of the Lea works.

"Duke" and "Duchess."—These are two compound engines of which the diameters of the cylinders are 23 in. and 39 in., the length of the stroke being 4 ft. 6 in. and 6 ft. 6 in. These engines work bucket and plunger pumps. The diameter of the buckets is 2 ft. 3 in. and of the plunger 1 ft. 7 in.; the stroke is 5 ft. 7 in. Each delivery therefore amounts to about 139 gallons. The head of water worked against is 174 ft., and the water is pumped to Haggar-lane, Woodford, and Forest Gate. In an adjoining house there is a compound horizontal tandem engine having cylinders with the respective diameters of 23 in. and 40 in. and a stroke of 3 ft. This engine works pumps of which the diameters are 22 in. and the stroke 3 ft. The amount pumped per revolution is 99 gallons. The engine is used as an auxiliary for pumping to Haggar-lane.

Well.—The well is 200 ft. in depth. It has two series of headings—one series at a depth of 200 ft. from the surface and the other at a depth of 140 ft. Altogether there are 7000 ft. of headings. One canal goes in the direction of Walthamstow, the second in an easterly direction, and the third towards the south-west. This well is only used when there is a scarcity of river water. The amount of water pumped from it has been as great as 3,000,000 gallons per day. The engine used for raising the water is a compound tandem well engine, which has cylinders of 24 in. and 44 in. in diameter respectively and a stroke of 6 ft. The pump is worked through bell cranks. The diameter of the bucket is 22½ in. and the length of the stroke 6 ft. The capacity per stroke for the pumps is 206·6 gallons. This engine, the "Duke" and "Duchess," and the tandem engine are worked by steam generated by two Lancashire and three Cornish boilers worked at a pressure of 70 lb.

"Prince Consort."—This engine received its name from the fact that it assists the "Victoria." It is of marine type, with cylinders of 21 in., 33 in., and 56 in. respectively in diameter, it has a stroke of 3 ft. 3 in., and works three plunger pumps which have strokes of 3 ft. 3 in. and a capacity of 361 gallons per revolution. The steam for working the engine is generated by three Lancashire boilers, one of which is fitted with an automatic stoker. The steam-pressure used for working the engine is 125 lb. The head of water worked against is 107 ft. and the water supplies the district

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directly without the intervention of any reservoir or standpipe.

The works at Lea Bridge are fitted with an apparatus for carrying coal from the Lea Navigation Canal. The arrangement, which works well, is that a continuous chain provided with lateral arms runs in a cast-iron channel; in this way the coal is conveyed from the barges to elevators which are situated at the engine house. At the eastern extremity of the Company's premises there is a line of rail which joins the Great Eastern Railway; some coal comes in this way by trucks.

Meter house.—There is a house at this station fitted up for testing taps and meters. It was found by the engineer of the Company that a very large amount of water was wasted in the districts supplied because the taps which were fixed in the dwellings of the poor were of very inferior quality and soon got out of order. When this was the case there was, of course, a continual loss of water. The Company tests any taps which are sent for that purpose. They are re-leathered without expense to the customers.

Offices.—The office of the chief engineer and the draughtsman's room are situated at Lea Bridge, and the station is in electric communication with the City offices and the stations at Walthamstow, Chingford, and Haggar-lane.

Waltham Abbey (see D on Map, THE LANCET, May 8th, p. 1291).—The station at Waltham Abbey is situated just at the west of the Lea Navigation Canal and opposite the Government Cordite Factory and about half a mile to the south of the Abbey Church. Here there is a well 200 ft. in depth, with about 600 ft. of headings running in various directions under the property of the Company. There are ten bore holes which pass from 90 ft. to 150 ft. below the level of the heading. The upper part of the wall is lined with iron cylinders 10 ft. in diameter. Chalk occurs at 123 ft. below the surface of the ground which is here 65·5 ft. above ordnance datum. The upper 80 ft. of the well has outside the cylinders an external lining of brick and cast-iron cylinders, of which the diameter is 11 ft. Water is pumped by a triple expansion engine of marine type, which has cylinders with diameters of 18 in., 30½ in., and 51 in. respectively, and a stroke of 3 ft. The deep well pumps are worked off the main shaft by bell-cranks. There are two pairs of buckets of which the diameters are 18 in. It may be of interest to note that this is the first triple expansion engine which was ever erected for pumping water. The steam for working the engine is generated by four water-tube boilers. The amount of water raised daily is about 750,000 gallons, and it is pumped to the districts of Waltham Abbey, Loughton, Woodford, Buckhurst Hill, and Chigwell. The head of water worked against is about 330 ft. On May 12th the engine was being overhauled and was not at work. The engine house is very well lighted by large windows and is lined with white tiles. For artificial lighting electricity is generated by a small vertical high-speed engine. A cottage for the foreman is situated here.

High Beech (see H on Map, THE LANCET, May 8th, p. 1291).—Here is a reservoir capable of holding 2,500,000 gallons of water. It is covered with brick arches and turfed over. The top water line is 371 ft. above ordnance datum. Water is pumped here from Waltham Abbey and from Haggar-lane, and it goes to supply the Essex high-level district.

Buckhurst Hill (see I on Map, THE LANCET, May 8th, p. 1291).—There is a reservoir at Buckhurst Hill capable of holding 800,000 gallons of water. It is covered with brick arches and turfed over. The top water level is 271 ft. above ordnance datum.

Hornsey Wood (see C on Map, THE LANCET, May 8th, p. 1291).—This station consists of a covered reservoir situated in the south-east part of Finsbury-park, near the Seven Sisters-road. It is of oblong form and covered by brick arches. It is capable of holding 5,000,000 gallons. The top water-level is 141 ft. above ordnance datum. The Thames water is pumped here from the Hanworth station through a 36-in. main, and the Lea water from Lea Bridge through a 30-in. main. It serves for the supply of the western part of the Company's district. There is an electric indicator which shows the height of the water in the reservoir, the index is at the station at Lea Bridge. The communicating wire passes underground to Harringay Station, then along the Midland Railway to the Lea Navigation Canal and down the towing path. The reservoir is turfed over, and there are tennis courts over it. The surface of the ground is in the possession of the London County Council.

Haggar-lane (see J on Map, THE LANCET, May 8th, p. 1291).—At this station there are two reservoirs, and machinery for pumping to High Beech. The older of the reservoirs is capable of holding 3,000,000 gallons the top water-level is 171 ft. above ordnance datum. It is covered with brick arches which have a layer of earth, with a little grass growing on it. The newer reservoir has a capacity of 7,000,000 gallons and the top water-level is 181 ft. above ordnance datum. It is covered with arches built of concrete and supported by steel girders. A layer of burnt clay has been placed on the top. The reservoirs are supplied with water from Lea Bridge, and from Walthamstow.

Pumping arrangements.—There are two horizontal condensing engines with 24-in. cylinders which work plunger pumps. The steam is generated by five Cornish boilers working at a pressure of 50 lb. The water is pumped for the supply of the High Beech reservoir and district, and occasionally to Buckhurst Hill reservoir. The head of water worked against in pumping to High Beech is 205 ft. As a rule one engine only is used. It is worked night and day and pumps about 500,000 gallons of water. The grounds of this station are about five acres in extent; they are fenced in and planted with trees. There are two cottages for employés of the Company, and a small workshop.

Communications with other companies' mains.—There are two communications with the mains of the Grand Junction Water Company: (1) at Kew; (2) at Campden Hill. The company can also, if necessary, supply the New River Company with water at Stoke Newington. If this were done the filtered water used by the East London Waterworks Company would pass into the New River and would be filtered again in the ordinary course by that company. This communication has, however, never been used. The New River Company have indirectly supplied the East London Company with unfiltered water when there has been a lack of it. The arrangement made simply was that the New River Company did not take the whole of the amount of water they were authorised to take at Ware, and so the water was allowed to flow down the Lea and was received at the ordinary intake of the East London Waterworks Company at Chingford. Last year during the drought the New River Company supplied water to a considerable amount in this way.

Length of new pipes.—The length of new pipes ranging from 3 in. to 24 in. laid in 1895 was 24¼ miles and during the year 1896 was 21¼ miles.

Hydrants.—The number of hydrants erected during the year 1895 was 15 and during the year 1896 it was 1406.

Houses under constant supply.—The number of houses under constant supply on Dec. 31st, 1894, was 179,167; on Dec. 31st, 1895, 180,500; and on Dec. 31st, 1896, 186,364.

Percentage of houses under constant supply.—On Dec. 31st, 1896, the percentage of houses under constant supply was 99.

Highest supply given.—The highest supply given is at High Beach, 370 ft. above ordnance datum.

Average daily supply per head.—The average daily supply per head for the year 1896 was 33 gallons. These figures are arrived at by the engineer of the Company, as follows. The amount of water supplied is estimated from the known volume delivered by the pumps. The population is estimated from the figures given at the last census, with an addition for the new houses supplied. It is generally known that in different districts the average number of people per house differs very widely. As a rule, however, this fact is not allowed for by water companies in estimating the amount of their water-supply—that is to say, a general average figure is taken to represent the whole district under supply. In the case of the East London Company an attempt is made to find the average of the population per house in each district which is supplied by the Company. In this way a factor is found which is used in the calculation of the increase in each separate district. The population is worked out for each month in the case of each district supplied by the Company and the mean population is obtained by adding together the numbers arrived at for each month and dividing the whole sum by twelve.[2] This method of calculation of course involves a very large amount of clerical work.

Dates of the maximum and minimum supply.—The following

[2] The average population per house in different districts supplied by the Company is found to be: Shoreditch 8·90, West Ham 6·39, East Ham 5·95, Wanstead 5·68, and Leyton 5·83.

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table give the date of the maximum and minimum supplies and the average daily quantities supplied.

—	Year 1895. Month.	Year 1895. Quantity in gallons.	Year 1896. Month.	Year 1896. Quantity in gallons.
Maximum ...	February	59,160,000	June	46,870,000
Minimum ...	August	40,750,000*	August	32,760,000*

*Intermittent supply during drought. *Intermittent supply during drought.

Table of Statistical Details given by the East London Waterworks Company for the Year 1896.

SUPPLY.	Average daily supply in gallons...	40,000,000 gallons*
	Percentage delivered for other than domestic purposes, exclusive of waste	About 23 gallons
	Number of houses supplied	138,435
	Number of houses on constant supply	186,798
	Estimated population supplied	1,251,000
RESERVOIRS. Subsiding and storage unfiltered water	Number	9
	Area in acres...	238
	Available capacity in gallons	815,000,000
Storage filtered water reservoirs	Number	7
	Capacity in gallons	13,800,000
ENGINES.	Number	31
	Horsepower	5590
	Greatest lift	500
	Head of pressure in the district supplied	40 ft. to 350 ft.
WATER-PIPES.	Total number of miles of water-pipes	897
	Number of miles of water-pipes in the metropolis...	456
	Number of miles of streets with water-pipes constantly charged in the metropolis	185
	Number of hydrants erected within the metropolis...	3628 public; 2761 private; and 7076 fire plugs
FILTERS.	Number of beds	34
	Area in acres...	31
	Depth of sand and other materials	2·0 ft. sand, 0·6 in. hoggin, and 1·0 foot coarse gravel

* This figure is lessened by reason of the drought causing the interruption to the constant supply in July, August, and the beginning of September.

East London Company.—The Act of 1853 authorises the East London Company to supply the following places:—

Supplied.—Artillery Ground, Bethnal Green, Bow, Bromley, Chigwell, Chingford, Clapton, West Ham, East Ham, Homerton, Leyton, Leyton (Low), Leytonstone, Limehouse, Loughton, Mile End (Old Town), Mile End (New Town), Old Ford, Poplar, Ratcliff, St. George-in-the-East, Shadwell, Spitalfields, Stamford Hill, Stepney, Stratford-le-Bow, Walthamstow, Waltham Abbey, Waltham Holy Cross, Wanstead, Wapping, and Woodford.

Partly supplied.—Hackney, Whitechapel, Bishopsgate, Ilford, St. Botolph Aldgate, Shoreditch, Tottenham, and Woolwich (north of the Thames).

Not supplied.—Islington, Newington, St. Luke Old-street, Barking, Dagenham, Dalston, Holloway, Kingsland, Romford, Shacklewell.

The Company occasionally supplies a small amount of water in bulk to the Cheshunt Urban District Council, Hertfordshire.

NEW WORKS IN PROGRESS.

Walthamstow (see K on Map, THE LANCET, May 8th, p. 1291).—A reservoir which will be called Warwick West is approaching completion at Walthamstow. It will have an area of thirty-seven acres and be capable of holding about 200,000,000 gallons. It will be supplied with water from No. 5, the Racecourse, and the East Warwick.

Lea Bridge.—Near the "Prince Consort" engine house a well is in course of construction. The depth at present is about 145 ft., and the chalk was reached at 85 ft. The diameter of the well is 12 ft., and iron cylinders have been sunk to the level of the chalk.

Rammey Marsh (see E on Map, THE LANCET, May 8th, p. 1291).—A well is being sunk at Rammey Marsh. The ground level here is 53 ft. above ordnance datum. The well has reached a depth of 66 ft. from the surface, and at this depth the work is still being carried on in the London clay. There was about a foot of surface soil, and 18 ft. of ballast above the London clay. The upper 25 ft. of the well is surrounded by iron cylinders, of which the diameters are 15 ft., and brickwork, of which the internal diameter is 14 ft.; the lower part is lined with iron cylinders, of which the outside diameters are 12 ft.

Ponder's End (see F on map, THE LANCET, May 8th, p. 1291).—The new station here is situated at a level of 40 ft. above ordnance datum. A new well is being sunk here; the depth reached is 109 ft., at which level chalk has been reached.

Barking (see M on map, THE LANCET, May 8th, p. 1291).—This place is situated at 10 ft. above ordnance datum. A new well is being sunk here. The depth reached is 200 ft. Some headings have been driven at the bottom of the shaft. Chalk was reached at a level of 145 ft.

Ferry-lane.—At this station a new well is being sunk; the depth now reached is about 140 ft., and at this depth the upper level of the chalk is situated.

THE LANCET SPECIAL COMMISSION ON SICILY AS A HEALTH RESORT.

IN the year 1895 a number of Sicilian gentlemen of high rank and social position formed themselves into an association with the object of promoting the progress of their country, and more especially with the view of developing it as a health resort. This body entitled itself the "Associazione pel Bene Economico," and its members were as follows: Count Mazzarino (President), Mr. Joshua Whitaker, Commendatore Ignazio Florio, Signor Giovanni Guccia, Prince Scalea, Count Caltanissetta, Commendatore Ignazoi Greco, Cavaliere Alberto Ahrens, Prince St. Elia, Count Ferdinand Monroy, Signor Guglielmo Helg, Commendatore Eugenio Oliveri, Cavaliere Michelangelo Siciliano, Cavaliere Napoleone La Farina, Cavaliere Carlo Albanese (secretary), and Signor Lo Presti (vice-secretary).

It seemed to the members of this influential association that one of the most effective means of accomplishing the ends which they had in view would be to have a thorough inquiry instituted by some independent and competent authority into the climatic, hygienic, sanitary, and other conditions prevailing in the Island of Sicily, and that the results of this inquiry should be made public through some authoritative channel. With this purpose the association approached the Editors of THE LANCET and invited them to send a Special Commissioner to Sicily for the above object. Believing that such a Commission would not only be likely to benefit the Island of Sicily, but also to advance the interests of medical science, we willingly acceded to this request of the "Associazione pel Bene Economico." Our Special Commissioner in due course arrived in Palermo, where he was most kindly received by the representatives of the Association, who took instructions from him regarding the objects and methods of his Commission and who facilitated his investigations and inquiries by every means in their power. We feel specially indebted to Mr. Joshua Whitaker and Cavaliere Carlo Albanese for the great amount of time and labour which they devoted to forwarding the work of this Commission. The method pursued by our Special Commissioner was as follows:—

1. The collection of all the available data bearing upon the meteorology and climatology of Sicily. For this purpose the admirable records of the various

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meteorological observatories in the country were found to be of great value. Several of these observatories were visited personally by our Special Commissioner and all records were freely put at his disposal. To Professor De Lisa of Palermo he is specially indebted. Full particulars will hereafter be given regarding meteorological observations at the following places: Palermo, Catania, Syracuse, Girgenti, Termini, and Taormina.

2. The collection of information relating to the flora and geology of Sicily, in so far as such information would be likely to throw light upon the climatic and hygienic condition of the island. The various botanical collections were inspected, and our Special Commissioner feels particularly indebted to Professor Borzì, Director of the Orto Botanico of Palermo, both for his personal courtesy, and for the valuable memorandum which he has furnished regarding the special features of the Sicilian flora and the remarkable results of experiments in acclimatisation made at Palermo.
3. The collection of statistics relating to the state of public health in the various localities, drainage, sanitation, prevalent diseases, and the results of treatment in the case of invalids wintering in Sicily.

The medical profession in Sicily responded most kindly to the inquiries of our Special Commissioner, who owes valuable information especially to the following gentlemen: Professor Giuffrè (Palermo), Professor Cervello (Palermo), Professor Ughetti (Catania), Professor Lancetta (Girgenti), Professor Perez (Palermo), Dr. Migneca (Catania), Dr. Menzalora (Termini), Dr. Formica (Girgenti), Dr. Palumbo (Castelbuono), Dr. Marchesano (Palermo), Dr. Berlin (Palermo), Professor Mattei (Catania), Professor Manfredi (Palermo), Dr. Martinez (Girgenti), Dr. Cacciola (Taormina), Professor Ciofalo (Termini), Dr. Corselli (Palermo), and others.

4. Inquiries into the mineral springs of Sicily, the various sources of water-supply, methods of distribution, &c. The results of the examination in THE LANCET laboratory of the chief potable and mineral waters of Sicily, specially forwarded for the purpose, will form portion of the reports of our Special Commissioner.
5. An inquiry into the nature of the accommodation available for invalids and other travellers.

Our Special Commissioner personally visited the principal localities in Sicily in addition to Palermo—viz., Catania, Girgenti, Syracuse, Messina, Taormina, Castelvetrano, and many others.

His reports are in a forward state of preparation, and we hope to commence their publication in an early issue. We believe they will be found to comprise the most complete account of Sicily—from the climatic and hygienic point of view—which has hitherto been published.

In addition to the gentlemen already mentioned we desire on behalf of our representative to acknowledge his indebtedness for information and assistance of various kinds to the following:—Count Mazzarino, Dr. W. W. Baldwin (Florence), Professor Zona (Palermo), Professor Gemmellaro (Palermo), the Marchese di Gallidoro, the Marchese Antonio di Gregorio, Signor Emmanuele Calcagno (Palermo), Ingeniere Ignazio Greco, Ingeniere Enrico Bottone D'Anna (Palermo), Mr. Sammuele Hamnett (Palermo), and Signor Cipollina (Girgenti).

THE SANITARY CONVENTION OF VENICE, 1897.

No. III.[1]

BESIDES the general maritime regulations which are framed with the view of preventing the importation of plague into Europe and of controlling that disease, should it unhappily make its way into the basin of the Mediterranean, the Venice Conference arrived at a large number of conclusions which aim at preventing any spread of the disease through the agency of the pilgrimage to Mecca. In view of the immense Mussulman population under British rule, and of the fact that ports on the west coast of India are largely resorted to as starting-points by pilgrims from countries north and north-west of British India, these conclusions have an important concern for this country. They are, in the main, based upon the conclusions of the Paris Convention of 1894, which aimed at controlling the spread of cholera by the pilgrimage, but they are to some extent modified by reason of the fact that the period of incubation for plague is deemed to be twice as long as that for cholera.

Roughly speaking, the measures embodied in the Convention may be divided into action taken at ports of departure, during the voyage, and on the return journey. In the first place, pilgrim vessels are defined, their construction and sanitary arrangements are strictly controlled; the upper deck must be kept clear for pilgrims, and on the main covered deck every pilgrim is to have at least sixteen square feet of surface. Every one going on board has to pass a medical examination; female medical practitioners are to be employed in the case of women pilgrims; no sick person, or person suspected of infectious sickness, may go on board; the number for which the vessel is licensed is set out, and the names of all passengers are inscribed on board. Provision is made as to the quality and cost of food supplies and also as to the wholesomeness of water, of which a proper quantity must be gratuitously provided. A portion of the vessel has also to be set apart for cases of sickness needing isolation. Every pilgrim vessel must carry one medical man or more and a disinfecting stove on board. Many details are set out as to the medical inspection, disinfection, and measures of cleanliness to be maintained during the voyage; and then come the regulations as to landing of all the pilgrims at the island of Camaran in the Red Sea before proceeding on the last stage of the voyage to Jeddah. Much discussion has taken place during recent years as to Camaran, many holding that this so-called sanitary station has been little better than a hotbed of disease and a source of danger to pilgrims, who are besides subjected to many extortions there by Turkish officials. Hitherto all pilgrims have had to stay there ten days under supervision, but that is now reduced under the Venice Convention to three days; and the detention of pilgrims from healthy vessels is only intended to cover sufficient time for cleansing the persons and linen of the pilgrims once more by baths and otherwise before they continue their voyage. But nearly everything at Camaran depends on the action to be taken by Turkey, the Government of which has, subject to certain reservations, now intimated its acceptance both of the Paris and the Venice Conventions. It must be admitted that the Turkish administration is at last making a move at Camaran, but much pressure will probably have to be exercised before all is done that will make the stay of large bodies of pilgrims at that station even safe.

But assuming that no disease appears during the three days' stay there, then the pilgrims embark again and go straight to Jeddah. If disease has appeared either before or after landing at Camaran, the pilgrims are detained for at least ten days from the date of the last case. At Jeddah matters pass beyond the influence of international conventions, for from that point forward the pilgrims are on Turkish territory and must submit to Turkish rules and demands. But having regard to the notorious sanitary defects at Jeddah, Mecca, and elsewhere, and to the cruel loss of life which is a necessary result of the land stages of the pilgrimage, urgent recommendations have been made to the Sultan to use some at least of the large sums taken from the pilgrims as sanitary dues and in other ways in providing somewhat better for their obvious needs.

The convention deals with a large number of other sanitary stations in the Red Sea. But since these have to do either with the Mussulman pilgrims from the Dutch Indies, or with those coming from countries bordering on the Mediterranean, they have only a very indirect interest for this country. As regards the return journey of our Indian pilgrims no restrictions are necessary, for the Indian Government desire, in the pilgrims own interests, to let them go on board again as soon as practicable. But the restrictions on pilgrims returning north, or into Egypt, are numerous and severe.

Whether plague or cholera is in question one of the greatest dangers that has to be faced lies in the land routes across Mesopotamia and the Arabian Desert, and in the resulting caravans. Rules are laid down as to the control of

[1] Nos. I. and II. were published in THE LANCET of May 1st and 15th, 1897.

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these at frontiers and other places; but having regard to the uncivilised nature of the countries and peoples in question it is hardly likely that anything material will be done along many of these routes for the prevention of disease and for the maintenance of proper sanitary conditions amongst the pilgrims. The conclusions relating to land traffic and land frontiers and to the practices of disinfection which are advocated in the Convention have a somewhat closer concern and interest for us. The frontier between European and Asiatic Russia has always been a source of anxiety when cholera has travelled northward and westward from British India, and it has become still more so since the railway was laid down from Turkestan to the shores of the Caspian. Should plague move in that direction, the danger will be much the same, and though we may think some of the regulations as to land frontiers excessive in their requirements, we must remember that there are none that we are obliged to impose ourselves, and that as regards some land frontiers great public health interests are involved. But it has fortunately been decided that there are to be no more land quarantines. When exotic disease is prevailing, the worst thing that can be done is to aggregate people together under conditions which alone are available on most land frontiers. Hence it is laid down by the Convention that whilst land quarantines are abolished, their place should be taken by modern methods, such as medical inspection, disinfection of infected and suspected articles, &c. Where railways run across frontiers this will be practicable, but there are other frontiers where it would be impossible to establish the necessary organisation at the several points where land traffic and movements of people take place. Hence the Convention meets such a case by permitting any country to close its land frontier either at specified points, or altogether, when plague is prevalent in an adjoining state. This, in our opinion, is preferable to resorting to the antiquated and often cruel system of land quarantine.

The principles of disinfection laid down by the Convention are fairly modern ones. But in their application they are largely permissive, and it is quite possible that action that *may* be taken by one or another country goes beyond anything that we deem necessary or shall ever take in this country. The fear of infected linen as a vehicle of disease is great on the continent, and since every article that has been worn is looked upon as soiled and hence possibly infective, very harassing restrictions may come to be imposed on travellers. But whilst this country cannot impose its views on other ones in this matter, we have at least the satisfaction of knowing that, with very few exceptions, disinfection is purely permissive and not obligatory, and that we, though adhering to the Convention, can have none of these excessive measures forced on us to be adopted in our own country. Indeed, almost the only articles the disinfection of which on admission to a country is compulsory on the contracting Governments are articles of clothing travelling by parcel post. With us these are often the clothes of English soldiers and sailors who have died in India, and they are admittedly so dangerous when plague is about that our Post-office regulations for the moment altogether prohibit their dispatch from India. The question of merchandise may also be regarded as satisfactory. Contracting Governments are not obliged to prohibit the importation of any single article; but there are certain things that any country may prohibit if it chooses, such as rags, sacks, carpets, &c. that have been in actual use, fresh and untanned leather, and the débris of animals, such as hair, hoofs, &c. In this country we have very little belief in danger even from these articles, and we have as yet placed no prohibition upon their importation. But we cannot force this view on others, although we may deplore that Indian merchandise of the sort referred to should be refused entry into other countries, even though plague may prevail in the port of shipment or in the country whence the articles are derived. Happily it is laid down that all letters and postal correspondence are to be altogether unhindered, and thus we avoid the silly practice of fumigating sacks which hold letters and which have in advance been made impenetrable to any fumigating material by reason of their having been coated with tar. Many similar trivial practices are condemned by the Convention which exhibits a very distinct stage of advance in the direction of modern opinion based on increasing scientific knowledge.

With the results of the Convention, in brief, the British public health administration has distinct reason to be satisfied. It, of course, contains provisions, the application of which is permissible, which we in this country have long since discarded; but it imposes on us nothing that we hold to be undesirable or unnecessary. Some countries can, under the Convention, take action which we shall regret, and which, whilst affording them no real protection, will tend to hinder new commerce; but it is clear that previous Conferences have done much to educate retrograde advisers of other States up to a standard which approaches much nearer to our own than we could have anticipated; and we may reasonably look forward to a time when the repeal or further ratification of existing Conventions comes round, at which even further advance will be made in the only direction that has an intelligibly scientific and practical basis on which to rest.

THE USE OF INCUBATORS FOR INFANTS.

THE employment of incubators as a means of saving the lives of prematurely born or of very weakly infants has not yet become general in England. Yet it is notorious and obvious that the best, almost the only, means of saving such infants is to protect them absolutely from change of temperature and from cold. For such purposes children used to be wrapped up in wadding or in a sheep skin with the wool adhering. The peasants of Silesia and Westphalia sometimes placed infants in a jar full of feathers. In England the cot or cradle was put close to the hearth, and it was necessary to watch the fire day and night so that the temperature might not vary. The use of hardware hot-water bottles inserted in the bedding of the cot is also a very general practice, and this method is adopted in many maternity and other hospitals. But such devices are not uniformly reliable; their success depends upon the intelligence and assiduous care of the attendant, and the accidental opening of doors or windows, an unexpected and sudden gale, or a fall of temperature may defeat the effect even of the most elaborate precautions. Some sixty years ago, however, Dr. Crédé, of the University of Leipzig, sought to effect an improvement on these primitive and unreliable methods. He constructed a sort of box with double metallic sides; the space between these walls could be filled with hot water so as to maintain the desired temperature within the box. The infant, covered with blankets and resting in a basket or cradle, was placed inside. Incubators of this description are still employed at the Charity Hospital, Berlin. In 1878 Dr. Tarnier, when visiting the artificial couveuses installed by M. Odile Martin at the Jardin d'Acclimatation for the rearing of poultry, thought that he might utilise a similar apparatus in the case of prematurely born children. M. Odile Martin was therefore requested to construct a couveuse sufficiently ventilated and large enough to hold one or two infants. This was done, and the first couveuses were introduced at the Paris Maternity Hospital in 1880. They constituted a noteworthy step forward in the right direction, but the apparatus had to be warmed anew three or four times a day, and its successful employment depended on the care and watchfulness of the attendant. Good results nevertheless ensued and many lives were saved. Dr. Vallin, in a report presented to the Academy of Medicine of France (Nov. 12th, 1895), said: "We are obliged to regard as prematurely born all infants who do not weigh at birth 2 kilogrammes 500 grammes (5 lb. 9 oz.), and they are numerous, for the proportion is set down at from 15 to 30 per cent. of the births. The minute and delicate care which these weakly infants require, especially in winter, to protect them from cold is so great that till now most of them have died"; but Dr. Vallin added that "since Dr. Tarnier introduced at the Paris Maternity Hospital the ingenious contrivance called a 'couveuse,' a large number of these infants have been saved. This apparatus, however, cannot be readily employed. It is necessary that a number of experienced persons shall be always in attendance, for a delay of twenty-four to forty-eight hours might result in the death of the new-born infant." Dr. Jules Rouvier, of Beyrouth, in his interesting paper on Infant Mortality, read at the International Congress of Hygiene held at Budapest in 1894, estimates that among the newly born debilitated infants are in the proportion of 5 per cent. Of these infants born in a state of enfeeblement

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only 20 per cent., according to Uffelmann, live twelve months, and 11 per cent. two years. The greater number die during the first day or the first week of their existence. Of 1961 children born at the Paris Maternity Hospital, in 1881—that is, before the introduction of the couveuse—641 were premature births. The mortality during the first two weeks of the prematurely born amounted to 32 per cent.; that of the other infants was equal to 8·62 per cent.

In England the question of incubators is of particular interest, for though the general death-rate of infants has decreased considerably of late years, the death-rate due to premature births has, on the contrary, greatly increased. This increase has been set down by some authorities as equal to 40 per cent. The London tables of mortality show that whereas the deaths registered as due to premature birth amounted to 1930 in 1886, this figure rose to 2534 in 1896. To this we should also add that a large though unknown number of deaths attributed to various diseases are indirectly caused by premature birth. Under these circumstances any successful attempt to improve the construction of incubators and to render this life-saving apparatus available to the general public must be welcome. That this has been achieved will, we are informed, shortly be rendered evident by a remarkable exhibit at Earl's Court. A structure is now in the course of erection just opposite the Welcome Club, where infants prematurely born will be nursed and kept in new and model couveuses. The main feature of this new incubator is the fact that it requires no constant and skilled care. It works automatically; both ventilation and heat are maintained without any fluctuations whatsoever, not only for hours, but even for days. The incubator need not be touched for these purposes, and the only attendance necessary is that needed for feeding and washing the infant. The heating is produced by hot water, which circulates in copper piping placed at the bottom of the incubator under the cradle or hammock. This pipe is fed by a water boiler, which stands outside the incubator, and may be heated by an oil lamp, by gas, or by electricity. The temperature is automatically maintained at the required heat by a specially constructed thermostat. This is made in the shape of a W composed of two metals, the one being quick to expand and the other to contract. One side of the W is fastened to the wall of the incubator. The W, thus standing out from the wall, widens with heat and contracts with cold. The loose end of the metallic W is connected with a system of levers. On the outside a very light chain hangs to the lever that comes through the wall of the incubator. When the temperature inside the incubator is beginning to exceed the limit for which the apparatus has been set—and this limit can be varied according to circumstances—the W thermostat expands and so works on the levers that the chain is drawn upwards, and by this action the gas or the lamp is turned down and the supply of heat to the boiler is decreased. The temperature within the incubator consequently begins to go down. The thermostat then contracts, the chain falls, and the gas or lamp is turned on again to the full. Thus whatever changes may occur outside the incubator the temperature within regulates itself. So delicate is the construction of this thermostat and the levers attached that the slightest variation of temperature suffices to set it in motion. Thus the heat within the incubator never varies more than two degrees Fahrenheit. Another system consists in having a hollow centre passing through the boiler, and the burner is placed in this aperture. The opening is closed at the top by a cone-shaped lid attached to the chain. When the thermostat expands it lifts this lid, so that the heat passes through and the water begins to cool.

To ventilate the incubator there is a pipe, which is conducted through the wall or window of the house or hospital. Only air taken outside the building is supplied to the infant within the incubator. When we consider how often private houses, and even hospital wards, are inefficiently ventilated, it is not necessary to insist on the advantage of deriving the air-supply direct from the street or garden. This pipe, about four inches in diameter, delivers the outside air into a box fastened to the side of the incubator. The air is first moistened and washed by being passed through a layer of absorbent wool suspended over a saucer containing water or an antiseptic solution. A little further on there is another sheet of wool, which, however, is dry and serves to retain the soot and other particles floating in the air. From this filtering box a second pipe delivers the air into the bottom and centre of the incubator. Just above this inlet a disc is suspended, which breaks up the current of air and diffuses it in all directions and over the surface of the hot-water coils. Thus, the air is washed, filtered, and warmed before it reaches the infant lying above in the upper part of the incubator, and is uniformly distributed so that there is no sudden current in any one direction. On the top of the incubator a chimney about three feet long forms the outlet, and so that this should not accidentally become an ilnet, admitting a downward draught, a revolving screw-fan is placed within this flue, which only turns to allow the outward passage of an upward current. Thus it will be seen that, so long as the lamp or the gas burns, the temperature and the ventilation within the incubator will be automatically maintained. The incubator is made of glass and metal, and, therefore, it can be washed and disinfected with the greatest promptitude and facility. It is so portable that it can be readily carried from room to room, or placed in a cab, and taken to any house wherever required. As no skilled attendance is needed it can be used in private families as well as in hospitals. So far incubators have been available only for the rich or the poor. For the great middle class, persons who are not rich, but who are not poor enough to go to the hospital, there are as yet no incubators available. It is proposed, however, to meet this difficulty. In London and in other large centres incubator stations will be established. In response to a message or a telegram incubators will be despatched immediately wherever they are required. This will not occasion any great expense, for the incubators need not be bought nor will it be necessary to pay for skilled attendants. The incubators will be let out on hire for the number of days they may be required, and thus it may be possible to save the lives of many prematurely born or particularly delicate infants.

HISTORICAL NOTES ON MEDICINE, SURGERY, AND QUACKERY.

IV.[1]

AT the commencement of the present century St. Anne-street was the most distinguished thoroughfare in Liverpool, and was looked upon as a rival to Rodney-street. It so continued until 1835, when the tide of fashion began to sweep southward and afterwards extend towards Aigburth. In St. Anne-street resided Thomas Stewart Traill, M.D., an eminent physician and a ripe scholar, as did his brother-in-law, Mr. Sandbach, the merchant prince, who was mayor in 1831, and whose house was the first erected in the street. Dr. Traill was professor of chemistry in the Liverpool Royal Institution and lecturer in different branches of natural philosophy. He was physician to the Liverpool Ophthalmic Infirmary. Several valuable papers by him appeared in the memoirs of the Wernerian Society, in the *Edinburgh Philosophical Journal* and in other works. On leaving Liverpool he went to Edinburgh, where he became professor of medical jurisprudence and edited an edition of the "Encyclopædia Britannica." There is a fine portrait of this gentleman in the Royal Institution, Liverpool. There is also a bust of him extant. At a public meeting, convened with the concurrence of the leading men of all parties, held in the music hall, Bold-street, on June 8th, 1825, the subject of establishing a Mechanics' Institute in Liverpool was introduced by Dr. Traill in a clear and lucid speech. Other speakers addressed the crowded and enthusiastic assembly. An influential committee was formed, Messrs. John Gladstone, M.P., and John Moss, with Dr. Traill, being appointed vice-presidents. The institution was immediately organised, and flourishes to-day as the Liverpool Institute in Mount-street. The name of Dr. Traill appears among those of the gentlemen who cordially supported Mr. Sandars, when he projected the Liverpool and Manchester Railway.

At a public meeting, held in Liverpool on Dec. 14th, 1830, for promoting the cause of Reform in Parliament, Mr. Thomas Blackburn, surgeon, opposed the ballot, observing that a "man ought to vote openly and boldly, and if the right of voting were given to the wealthy and intelligent members of

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the community the vote by ballot would be quite unnecessary. No reform of the House of Commons would have any good effect which did not render the vote by ballot absolutely unnecessary." The last election in Liverpool had cost the two candidates about £115,000.

Rodney-street has always been a favourite locality of the medical profession. Towards the close of the last century the district of Rodney-street, Upper Duke-street, and Hope-street was all unbuilt upon, being in some parts cultivated land and in others growing nothing but furze and heather. Rodney-street was projected about 1780. It is a current tradition that it was first proposed to call the new street "Schlink-street," to perpetuate the name of a Dutchman who had purchased a considerable portion of land. The name, however, being very objectionable, as one that was suggestive of prematurely and newly born calves converted into veal, it was changed in 1782 to Rodney-street, the gallant Admiral Rodney having in that year defeated a fleet of French line-of-battle ships off Guadaloupe. This, no doubt, changed the destiny of the street, for there is a good deal in a name after all. We cannot imagine the great Dr. Parker Pepps living in Schlink-street, but "Dr. Parker Pepps of Rodney-street" impresses us at once as being according to the "eternal fitness of things" professional. In 1807 there were many portions of Rodney-street unbuilt upon on which grew heather and furze about the sandpits abounding in the vicinity. Dr. Gouldie, a celebrated physician of his time, lived in this street, as did Dr. Scott, the celebrated lecturer, and Dr. Brandreth. This was Dr. Brandreth the second, who married Miss Harper, one of "the lasses of Ashbourn," whose father, William Harper (one of the wealthiest men of his day and Mayor of Liverpool), never forgot to "toast" them at his own table. Old Dr. Brandreth lived in School-lane at one time, and in the year 1774, at 7, Church-street. Dr. Manifold, a highly esteemed physician, had a house in Rodney-street. Mr. Bickersteth, who dwelt near Mount Pleasant, was considered as skilful and dexterous in the conducting of an operation as Sir Astley Cooper. Thirty years ago that clever, kindly, dapper, but peppery little man, Dr. Seaton Smyth, lived in Rodney-street. Every other morning his coach-house in Roscoe-street, at the back, was filled with non-paying cancer and other patients; on other days they attended at the house in Rodney-street. The unpardonable sin which these people learned to avoid committing was treading on the pet dogs which surrounded the doctor. The doctor's carriage was generally drawn by cream-coloured ponies, which attracted considerable attention. The death of Dr. Seaton Smyth in the prime of life was a great loss to the poor of Liverpool.

To go back to an earlier period in the history of Rodney-street, mention must not be omitted of a personage who lived there and who played pranks on two or three Liverpudlian medical men. Allusion is made to Mr. D'Altera, or "little Joe," as he was called by his familiar friends. Joe was chairman of a celebrated society called the "Committee of Taste" or "Minions of the Moon," the members of which were fast young men who objected to the shape of their neighbour's knockers, signs, and so forth. Joe himself was one of the merriest, wittiest, and most thirsty souls in the town. The "Committee of Taste" carried on a long war with Mr. Parke, the famous surgeon, touching the shape of his knocker, which, in a fit of waggish displeasure, they had excommunicated. It was no light thing to cross these gentry, and though the surgeon kept putting up the knocker with commendable regularity and courage, the "Minions of the Moon" were equally diligent in wrenching it off. It is probable that the committee won in the end. Mr. Parke, when a very young man, attended in his professional capacity the French prisoners confined in the Tower in Water-street during the war with France which broke out in 1756. He was a man of great talents and extensive practice. In the year 1776 he went to reside in Basnett-street, which was then considered so much in the outskirts of the town that his friends thought him indiscreet in establishing himself in a situation where his patients would have to follow him to so great a distance. This fact alone speaks volumes for the marvellous development of Liverpool during the last 120 years. Mr. Joe D'Altera and his "Committee of Taste" once played a trick on Mr. William Wallace Currie, the eldest son and biographer of the great Dr. Currie, who wrote the life of Robert Burns. Mr. W. W. Currie was a notable man in his day, and filled the Mayoral Chair in Liverpool in 1836. He was not a man to take kindly to a practical joke; indeed, few people do, except the perpetrators. Imagine, then, the feelings of this grave and cultured namesake of Scotia's darling hero on his arrival at his office one morning when he saw his name on the door transformed into "William Wallace, Currier"! On another occasion the "Committee of Taste" fell foul of a certain Dr. Solomon, who then lived in a large house at the top of Low Hill. His grounds were studded over with statues, which he was not a little proud. They were voted to be not of classical by the committee, and the decree went forth for their removal and was carried out on the appointed night, when they were all taken from their pedestals, the "Old Charley" of the beat being either asleep or feed or frightened into silence. This Dr. Solomon was a remarkable character. He was the inventor and proprietor of the celebrated "Balm of Gilead." In 1816 he resided at the junction of Great Newton-street and Dansie-street, where the latter runs into Brownlow-hill. His house was at the corner of the street, his gardens extending into Brownlow-street. This part of the street was then called Solomon's place. From this place Dr. Solomon removed to Gilead House, Kensington, where he hospitably entertained his friends. He drove four horses in a dashing carriage. On one occasion he followed the coach of Lord Sefton (who was one of the most expert whips of his day) to Heywood's Bank, where the two vehicles pulled up together. Dr. Solomon in flourishing his long whip contrived to get the thong so inextricably entangled round his body that he was obliged to call his groom to assist him out of the predicament. On one occasion a guest, when the bottle had circulated freely, and "all went merry as a marriage bell," asked the doctor why he did not treat them to the celebrated "Balm of Gilead." Dr. Solomon replied that he should be happy to do so if those present wished it. The price of the "Balm" was a guinea a bottle. The party expressing a desire to taste the famous compound, half-a-dozen bottles were ordered in, which were duly consumed and highly relished. On the party breaking up each guest was favoured with a little bill of his share of the expense of the "Balm." On Dr. Solomon being taunted with wishing to make his company pay for their entertainment, he reminded those present that it was by the sale of his "Balm of Gilead" that he was able to treat them so hospitably and to make them welcome to his well-spread board. He therefore insisted upon being paid for his "Balm" as specified in the "bills delivered." When the fact oozed out Dr. Solomon's conduct was highly applauded, while the guests at the feast were heartily laughed at. Dr. Solomon once played a trick on a Custom House officer. The doctor, having shipped a case of "Balm of Gilead" to go abroad, the Custom House officer, finding the value declared so much below the usual selling price of the article, seized the package. On Dr. Solomon finding his "Balm" had been detained he became very wrath and determined on revenge. He thereupon sent another package to the docks for shipment, which was made up precisely like the former, with the same description of bottles, labels, and wrappers. These bottles, however, only contained common spirit, sugar, and water. Supposing that they contained the real stuff the man seized the package. Dr. Solomon refusing to release it, it was thrown on the officer's hands, who found afterwards to his cost of what the contents of the bottles consisted. Dr. Solomon chuckled gaily at the success of his scheme, declaring that he "vood teach dem to seize his goots." Dr. Solomon started Lord Sefton in the election of 1818. The flags were all painted at Gilead House, and cost at least £1000. Such a quantity of ribbons of his lordship's colours was given away by Dr. Solomon that there was one family in the town who had, many years after, quite a large stock remaining of what was then given to them. It is said that Dr. Solomon gave the land for the Wesleyan Chapel in Moss-street. A story is told of some medical students stealing a favourite broad-brimmed white hat belonging to Dr. Solomon, who, on the discovery of his loss, had the town placarded with savage bills offering a reward for the apprehension of the offenders. Dr. Solomon erected a mausoleum on the Mossley-hill Estate for the reception of his wife's and children's remains and for his own resting-place. It stood on a picturesque delf, and was for many years an object of remark. It is now entirely swept away.

"Dr. Solomon," says Sir James Picton in his "Memorials of Liverpool," "was for many years one of the institutions of Liverpool. Long before Holloway's Pills were heard of or Morrison had established his 'British College of Health,' Solomon's 'Balm of Gilead' had penetrated to the utmost

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bounds of the habitable globe. The Doctor was a gentleman of the Hebrew nation, who commenced his medical career in a very modest way in Marybone, Tithebarn-street, some time before 1796. The precise period when the Balm of Gilead first diffused its soothing influences over the ills of humanity I cannot accurately determine, but by the end of the century it had become very popular. From Marybone Dr. Solomon removed to Brownlow-street about 1800. In 1804, wealth and reputation increasing, he built himself a noble mansion at Kensington Liverpool, and called it, 'Gilead House,' where he resided until his decease. Gilead House, or Dr. Solomon's as it was familiarly called, was for many years the first house in approaching Liverpool from the eastward and attracted great attention from the beauty of the grounds and the trim style in which they were kept. The Doctor died about 1819, and was interred in a mausoleum he had erected for himself on an estate belonging to him at Garston. Many years after his decease the estate was sold by his representatives, his remains removed to one of the cemeteries, and the mausoleum pulled down. Well might the philosopher of Norwich say, 'All was vanity, feeding the wind and folly. The Egyptian mummies, which time hath spared, avarice now consumeth. Mummy is become merchandise, Mizraim cures wounds, and Pharaoh is sold for balsams.'" Gilead House was dismantled, and the land sold for building about 1846. Professional men attending patients in the streets which take their names from the great legal dignitaries—Cottenham, Denman, Coleridge, Weightman, Patteson, Rolfe, Coltman, and Pollock—will be interested in knowing that they cover the land formerly occupied by Gilead House, and its trim parterres and close-shaven lawns, which in the old coaching days were grateful to the traveller's eye as a harbinger of home after a long and tedious journey.

During the political excitement of 1818 Dr. Solomon issued the following circular:—

"WORTHY FREEMAN AND DEAR SIR,—The honour of your attendance is earnestly requested at Gilead House on Thursday morning next, the 18th inst., to proceed with the full band of music and colours to the tally, when I shall have the honour personally to accompany you as the friend of Lord Sefton, and the rest of my honest set of staunch fellows, who are in my list of Freemen, to regain for yourselves and brave companions the blessings of real freedom.—I am, Sir, your most faithful, obliged, and very humble servant,

"Gilead House, June 16th, 1818." "S. SOLOMON, M.D.

In Mr. T. B. Browne's "Survey of the History of the Newspaper Press" it is stated that the first attempt to establish a daily newspaper out of London was originated by Dr. Solomon, the patentee of the well-known "Balm of Gilead." This was the *Mercantile Gazette and Liverpool and Manchester Daily Advertiser*, the first number of which appeared on Aug. 6th, 1803. The Doctor appears to have been imbued with an advertising spirit in advance of his time, and the demise of his interesting daily paper was probably due to toxical doses of the "Balm of Gilead" administered in the form of undiluted puffs. It is regrettable to find that this "truly great man" has been dismissed in the following irreverent and unbrotherly fashion by Dr. Robert Watt in the *Bibliotheca Britannica*: "Solomon, Samuel, M.D., a Jewish quack, notorious for his 'Cordial Balm of Gilead,' died about 1818. A Guide to Health, or advice to both sexes in nervous and consumptive complaints, scurvy, leprosy, and scrofula; also on a certain disease, seminal weakness, and a destructive habit (onanism) of a private nature, &c., &c. 56th edition. West Derby, dateless, 12mo, 3*s*. A thing of shreds and patches from the author's own advertisements and Aristotle's Master-piece."

In a house in Mount-pleasant, which in after years became the Eye and Ear Infirmary, but is now a laundry, dwelt Dr. James Carson after his removal from Ranelagh-place, where he had lived from about 1817 to 1830. He had a board put up near his late residence intimating the alteration of his whereabouts. Just at that time Dr. Carson was recommending the copious use of water to his dyspeptic patients at mealtimes and was insisting upon it that it was "a perfect cure" for that complaint. One night Dr. Carson's sign-board was removed and replaced on the following morning with the addition to the address of "Take Notice, opposite the Pump," referring to the pump in the street facing Dr. Carson's house. The trick caused a good deal of joking at Dr. Carson's expense. Dr. Carson was the author of "An Inquiry into the Causes of the Motion of the Blood, with Appendix," Liverpool, 1815, and "Physiological Essays," 1822.

In the middle house in Trinity-place, behind St. Anne's Church, in 1808 resided Mr. Charles Angus, a surgeon, or at least one who was in some way connected with the medical profession. With him lived a Miss Burns, his sister-in-law, who acted as his housekeeper and governess to his children. Mr. Angus was a widower and had been to sea. Miss Burns in the month of March of the above year was taken unwell, and it was suspected that she was *enceinte*. On March 23rd she remained in the breakfast-room all day, suffering from excessive thirst and vomiting. Mr. Angus sat up with Miss Burns the night of that day, watched over her the following day, and again tended her on the next night, allowing no one to share his task. On the 25th Miss Burns told the inmates of the house that she was much better, and expressed a wish to have some Madeira wine. A servant having been sent for some, on her return found Mr. Angus asleep in a chair and Miss Burns dead in the corner of the room. Mr. Angus was taken into custody charged with the murder of the young lady. He was tried for this alleged offence at Lancaster on Sept. 2nd before Sir Allan Chambre. Sergeant Cockle, with Messrs. Holroyd, Raine, and Clark, was for the prosecution, and Messrs. Topping, Scarlett (afterwards Lord Abinger), and Cross were for the prisoner. The evidence was most conflicting, but there was evidently no case against Mr. Angus, for it was proved that during the whole period of Miss Burns's sickness the door of her chamber was open, anybody could have access to it, that no sounds of pain were heard, no cries of any description, no dead child was found on the premises, no signs of childbirth were visible, and that Mr. Angus had never quitted the house for a minute while his sister-in-law was lying ill. It was conclusively proved that Miss Burns's death was attributable to internal disease, under which she had suddenly sunk. A verdict of "Not guilty" was recorded. After the trial a hot controversy arose on the medical features of the case, in which Dr. Carson took a prominent part. His evidence at the trial completely upset the testimony of the adverse witnesses, especially that of his medical brethren. Dr. Carson wrote an admirable and masterly vindication of his own evidence, which had been attacked. He hit his opponents heavily. It was endeavoured to show that Miss Burns's death arose from an attempt to procure abortion. Mr. Angus frequently declared that he loved and respected Miss Burns too well to do her any harm. The case created immense excitement at the time, not only in Liverpool, but throughout the kingdom, especially amongst the medical profession.

Gleave-street, Everton, takes its name from Dr. Gleave, an Everton physician. On the south of Gleave-street stood the once-famous "Half Way House," which, having been converted into a cake-shop after it lost its licence, was purchased by Dr. Gleave, who erected a mansion on it. The garden adjoined the residence of the Rev. Archdeacon Brooks, senior rector of Liverpool, who, on being asked whether the necropolis which adjoined his garden was not detrimental to his health and comfort, replied "No; he had always found the inhabitants very quiet neighbours."

Some curious entries occur in the town records of Everton, as, for instance, "Paid Dr. Livesley for setting Alice Knowles' leg, 42*s*."; "Paid for a coffin for Witch Nancy's child, 1*s*. 6*d*." The little Baptists' burying-ground, now covered by the Fabius Chapel, in Everton-road, is named after "Dr." Fabius, who, about the year 1698, was a pious young apothecary named Bean, living in Low-hill. He Latinised his name to Fabius from Faber. His family gave the cemetery to the Baptists "for ever" in 1707, and "Dr. Fabius" himself was laid to rest therein, the inscription on his tombstone being: "In this dormitory reposeth the body of Daniel Fabeus, who departed this life ye 12 April, 1718, aged 37."

"A singular physiological problem kept the Liverpool public on the *qui vive* during the autumn of 1817," says Picton in his "Memorials of Liverpool." "A Miss M'Avoy, a young lady residing in St. Paul's-square, about seventeen years of age, was attacked by hydrocephalus and partial paralysis. Her eyes were affected by gutta serena, and she was pronounced by her medical attendants to be entirely blind. Shortly afterwards she was reported to possess the faculty of reading print and distinguishing colours by the touch, her eyes being so completely bandaged as to prevent the possibility of deception. The story got wind, and the house in St. Paul's-square became a centre of attraction to the wonder-loving public. There could be no mercenary object to gain by imposture, as the family were respectable and no money was ever received. Many wonderful accounts were published of

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her capacity of deciphering the smallest print and the most delicate colours in utter darkness as well as with the eyes covered. Dr. Renwick, a physician of eminence published a pamphet, in which he gave explicit credence to the new and supernatural faculty. Encouraged in this way, her pretensions assumed a higher flight. She now claimed the faculty of discerning objects at a distance by placing her fingers behind her upon the glass of the windows and was said in this way to have described the figures of persons in the churchyard opposite and the colour of their clothes. This naturally excited some suspicion, which was strengthened by other circumstances. The interposition of any substance between her face and hands deprived her of the faculty of seeing as it were by touch. This she attributed to the necessity for her breath having free and uninterrupted communication with her hands. To obviate this difficulty an ingenious gentleman (Mr. Egerton Smith) contrived a mask which whilst entirely covering the eyes and face, left the breathing free and uninterrupted, and offered to pay twenty guineas, which another gentleman doubled, if Miss M'Avoy, with this mask on, could read a single line of moderately sized print. After some equivocation the test was declined, and Miss M'Avoy's pretensions fell to zero and were soon forgotten. There is nothing new under the sun. The brothers Davenport of more recent days and the modern spiritualists with their mediums are uniformly found to fail when, as in this instance, brought to the crucial test of practical experiment and common sense."

Among the items in the accounts of Mr. Churchwarden Dennison of Liverpool for the year 1818 were £32 15*s.* 6*d.* for mourning and scarves for the parish officers attending the funeral of the parish practitioner and £11 0*s.* 6*d.* for six gold-laced hats for the constables. He was an ideal churchwarden from a workhouse point of view, his hospitality (at the parish expense) being almost unbounded. There were weekly dinners at the workhouse on Tuesdays, to which his friends were very freely invited. Sixteen dozen of port at 65*s.*, £70 worth of Vidonia, and sixteen gallons of rum had thus been consumed in the year, besides brandy, jellies, and lemons; 200 gallons of wine were given to the clergy for their private use. £1416 were paid for wine, spirits, and malt liquor within the year; and yet this liberal soul, who displayed such respect for the parish doctor, clergy, and his own friends, had his generous outlay disallowed by the quarter sessions, and in the end had to pay about £2000 for his short but glorious reign as churchwarden.

In a list of the officers who commanded the several regiments or companies raised in Liverpool for the defence of the country during the threatened invasion in 1803 are found the names of Joseph Brandreth, gentleman, who was surgeon, and James Dawson, gentleman, who was assistant surgeon, in the 1st Battalion of Liverpool Volunteers, raised at the expense of and commanded by Lieutenant-Colonel Bolton; Henry Parke, gentleman, was surgeon in the Liverpool Volunteer Artillery, commanded by Peter Whitfield Brancker; and George Catlow was surgeon of the Liverpool Independent Rifle Corps.

Dr. Peter Crompton, of Eaton House, was one of the prominent reformers and political orators of Liverpool. He came of an old Lancashire family, of which a branch was settled in Derbyshire. At the election of 1820 the Whigs in Liverpool were sadly at a loss for a candidate. Eventually Dr. Crompton and Mr. Leyland were nominated against Mr. Canning and General Gascoyne, but the contest was hopeless from the first. At the close of a seven day's poll the numbers stood: Canning, 1635; Gascoyne, 1552; Crompton, 345; Leyland, 125. Dr. Crompton was one of the class preferred by Cæsar—

> "Let me have men about me that are fat,
> Sleek-headed men, and such as sleep o' nights."

His jolly, rotund person was the incarnation of good humour, while his proposer and principal supporter, Colonel Williams, was lean, wiry, and of sour temperament. It may be surmised that the merciless wit of Canning played like lightning around such a pair. The doctor was not long before he "put his foot in it." Speaking on the hustings after his nomination he said: "A rumour has been spread abroad that my opposition to the return of our late representatives is wholly vexatious. Fool, indeed, should I be to come forward and put myself to every inconvenience in a place where I live to such a purpose; and still greater fool to expose myself thereby to the severe censures of Mr. Canning whose exquisite wit and humour can turn into ridicule everything, both sacred and human. The impartial page of history informs us that Nero fiddled while Rome burned. Mr. Canning smiled when Colonel Williams flashed his crimes in his face." The Mayor, having requested the worthy doctor not to indulge in personalities, the candidate continued:—"I thank you, Mr. Mayor, for the offer of your protection, but I fear not the face of man. I was observing, when I was interrupted, that while Rome fiddled Nero burned. (Laughter). I meant to say, that while Rome burned Nero fiddled. But I cannot smile amidst the ruins of my country, &c., &c." To this Mr. Canning replied at the close of his speech as follows:—"The honourable doctor, indeed, has tempted me somewhat high with his references to ancient history—with his allusion to the conflagration of Rome and to the Emperor Nero's musical accomplishments. Of that allusion I have not, to this moment, made out the application; but if he intended (which seems the most probable solution of it) to compare the honourable colonel's eloquence to a conflagration, and his own to a musical instrument, I have only to hope that if I offended by smiling at the colonel's fire, I may have made atonement by looking grave at the doctor's fiddling." Dr. Crompton was partner in a brewery. This, and the fact that his nomination had been decided by one of the five brothers Harvey, two of whom were brewers, gave point to the following squib:—

> "And when the doctor's sour ale's done—
> Ah! Cunning Doctor!
> He will laugh at his foes who have made his tap run,
> And the Harveys will join in the excellent fun,
> With their brewing, mixing
> Nutgall and treacle—
> Ah! Cunning Doctor!"

Dr. Crompton died Jan. 23rd, 1833, aged sixty-eight, leaving five sons and three daughters. Charles, the second son, was raised to the Bench as one of the puisne Justices of the Common Pleas. One of his daughters married the Rev. Llewellyn Davies, formerly Rector of Christ Church, Marylebone, another married Mr. R. Hutton, some time M. P. for Dublin. According to the Rev James Aspinall, M.A., who knew him, Dr. Cromptom was "a fearless, outspoken man, English all over in his bearing." He was the author of "A Letter to Robert Townley Parker, Esq., High Sheriff of the County Palatine of Lancaster," published in 1817.

During the progress of the election it had been announced that Colonel Williams was to stand for the representation of the county, to be proposed by Dr. Crompton. In his closing speech, after his election and chairing, Mr. Canning thus alludes to the circumstance: "It was surely no small presumption, especially on the part of those who are continually declaiming against the undue interference of powerful individuals and against the servile surrender of the freedom of election, it was no small presumption, I say, for any such party to think that they might with one hand grasp the representation of Liverpool and with the other indicate the representative of the county. Gentlemen, the process by which this twofold operation was to be brought about was one of a curious kind. It reminds me of what I have read in some of the political pamphlets of, I believe, the reign of Queen Anne, of an empiric who, not liking to sound his own praises but wishing to have them sounded, hit upon a notable expedient of obtaining the benefit without incurring the reproach of such a proclamation. A youth preceded him in the crowd crying with a loud voice, 'My father cures all sorts of diseases.' The doctor marched behind him with a sedate and solemn step, simply declaring, 'The youth says true.' Now, Colonel Williams appears to have acted on our hustings the part of the ingenuous youth when he proposed Dr. Crompton to you as a healer of all the diseases of the political Constitution. Dr. Crompton followed with a modest and measured pace, not singing his own praises, but admitting the truth of the praises which had been sung. But one good turn deserves another, and the operation in hand was, as I have described it, twofold. The peculiar inducement held out to you to receive Dr. Crompton as your representative was, that he was in possession of some great specific which would enable him to restore peace to the community and to heal the differences by which the nation is unfortunately distracted. What this panacea was we could never extract from the doctor on the hustings. Thus much only could we learn, that it was some cabalistic name which he was to pronounce upon the hustings at Lancaster which would still the popular storm and diffuse

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liberty and contentment throughout the country. Well, when the time arrived, and Dr. Crompton departed for Lancaster, we found that the scene exhibited a few days before at Liverpool was to be acted over again at the county town, with a change only in the order of the *dramatis personæ*. Dr. Crompton was now to be the herald of the praises of his proposer; and the name of Williams, pronounced in the shire-hall, was the charm by which the county was to be lulled into peace and exalted into glory. Colonel Williams's election for the county was the prescription by which all diseases were to be healed. Pity that the county should reject the dose; but natural enough that after that rejection, you should upon his return to you reject the doctor."

This was not the first time that Canning's wit had been pointed with medical similes. In his youth he had lampooned Lord Sidmouth (then Mr. Addington), who commonly went under the sobriquet of "the Doctor," in the following parody:—

"My name's the Doctor; on the Berkshire hills
My father purged his patients—a wise man,
Whose constant care was to increase his store,
And keep his eldest son—myself—at home.
But I had heard of politics, and longed
To sit within the Commons House, and get
A place; and luck gave what my sire denied.
Some thirteen years ago, or ere my fingers
Had learned to mix a potion, or to bleed,
I flatter'd Pitt; I cringed, and sneaked, and fawned,
And thus became the Speaker. I alone,
With pompous gait, and peruke full of wisdom,
Th' unruly members could control, or call
The House to order.
Tir'd of the Chair, I sought a bolder flight,
And grasping at his power, I struck my friend,
Who held that place that now I've made my own.
Proud of my triumph, I disdained to court
The Patron hand which fed me—or to seem
Grateful to him who raised me into notice.
And when the King had called his Parliament,
To meet him here convened in Westminster,
With all my family crowding at my heels,
My brothers, cousins, followers, and my son,
I showed myself *Prime Doctor* to the country.
My end's attained, my only aim has been
To keep my place—and gild my humble name."

Opposite the top of St. John's-lane there was at one time a capacious stall for the sale of herbs and quack medicines, the proprietors of which were Messrs. Startup and Brown, one of whom sold the drugs, while the other, dressed in a "mortar-board" cap and a stuff gown, delivered short lectures to the gaping crowds which assembled in front of the stall on the *medicamina artis*.

In 1826 a horrible disclosure took place connected with Hope-street, Liverpool, that filled the minds of the people with horror. One morning in October three barrels were carted to the pier and shipped on board the Glasgow packet as "salted hides." The captain of the packet and some of the passengers soon noticed that a disagreeable odour prevailed in the vicinity of these casks and then, as the novelists say, "a strange thing happened." The passengers, insisting upon the barrels being put on shore, in the act of doing so one of them burst open, when a human body was found closely packed in it in salt. In the other two were similar "salted hides." The carter who conveyed them to the vessel having been discovered the police were communicated with, by whom it was found that the barrels had been brought from a house in Hope-street, which on being searched was found to contain no less than thirty-three other corpses regularly salted and cured. The bodies had been taken from the parish cemetery in Cambridge-street. These subjects had been obtained for the use of medical schools, with which, it appeared, a regular trade was carried on.

One of the houses which now forms part of the East Dispensary, in Richmond-row, Liverpool, was once the scene of a laughable incident. The late Robert Crompton, watchmaker, poet, and journalist, happened to be passing one day when he heard groans and uncharitable sounds issuing from the house in question. He turned in to investigate the cause and to render assistance, if necessary. To his surprise he found an immense canvas lying on the floor, or rather tossing upon it like a vessel in distress on the angry sea, and sounds of blasphemy came up as it were from some Jonah down below. On raising the canvas, he discovered the late William Daniels, a famous local artist, lying on the floor in a very inartistic and anti-temperance condition, but able to swear most fluently. Daniels, a man of fine thirst, had been painting a large picture of Shylock, and, of course, solacing himself as usual with the flowing bowl. Then Shylock, acting up to his mean and vindictive record, had taken advantage of the artist's condition and fallen upon him, so that he was unable to rise or extricate himself without assistance.

De Quincey, the opium-eater, lodged for some time in Everton-terrace, in a little cottage to which access was obtained through a wicket and by two stone steps. During his stay in Liverpool he was in some way connected with the firm of Meritt and Wright, booksellers, Castle-street, who published in 1769 a book entitled "Liverpool Testimonial to the Departed Genius of Robert Burns, the Scottish Bard." The name of Dr. Currie (who published, according to Charles Lamb, a very silly biography of the poet) is amongst the subscribers, and Dr. Solomon and Dr. McCartney have their names down for different sums. The list of subscribers to the work is introduced by the following paragraph: "We whose names are hereunto subscribed, calling to mind the delight we have received from the immortal works of this great but unfortunate genius, offer the sums affixed after our names towards the support of his family, as a proof of the sympathy we feel in the affliction of the living, and of the honour we pay to the memory of the dead." Dr. McCartney was a celebrated Roman Catholic physician who had a large practice in Liverpool. He resided in Mount Pleasant, a thoroughfare made famous as the birthplace of William Roscoe. Dr. McCartney's house was afterwards occupied by Mr. James Dawson, who, on giving up practice, went to reside at Wray Castle, by Windermere Lake. Mr. Dawson was President of the Medical Institution in 1847, and one of the consulting surgeons to the infirmary.

At 115, Mount Pleasant resided Mr. Hugh Neill, the originator of the Eye and Ear Infirmary, then located in Harford-street, Mount Pleasant.

Dr. George Churchill Watson, of 4, Bedford-street North, a physician who practised in Liverpool about half a century ago, was the writer of some admirable letters on sanitary reform in the *Liverpool Standard*. These letters, signed "Medicus," were, in fact, the pioneers of that great movement in that town. The eccentric Joseph Williamson, who had a mania for excavations, and whose tremendous underground works at Edge Hill were declared by Robert Stevenson to be marvels of construction, once, through the intercession of one of his tenants, gave an order to inspect his works to Dr. Watson. The order ran thus: "Dr. Watson is not to be interrupted in his walks on my premises, either on the surface or under the surface. J. W., E. H. January, 1839." Dr. Watson's account of the works when they were in their prime was that they were perfect marvels, not only for their great extent but for the excellence of their construction and their inapplicability to any possible purpose. It was no small honour to be allowed to see these extraordinary works, as Williamson seemed jealous that other people should be gratified by a sight of them. It has been conjectured that he spent at least £100,000 upon them. When the tunnel was in formation from Edge Hill to Lime-street about 1834, and was passing through and under his property, Mr. Williamson actually drove a tunnel under the railway tunnel, appearing himself in the aperture made, to the amazement of the navvies, who were told that if "they wanted to know how to tunnel he could give them a lesson in that polite art."

THE PRINCE OF WALES AT GUY'S HOSPITAL.

THE OPENING OF THE NEW SCHOOL BUILDINGS.

ON Wednesday afternoon last H.R.H. the Prince of Wales, accompanied by the Duke of Cambridge, attended at Guy's Hospital to open the new medical school buildings, which have been erected at the cost of the staff of the school, and have entailed an expense of £12,000. The present buildings, moreover, are only an instalment, as it is contemplated to rebuild the whole medical school, for which purpose it is estimated that a further sum of £35,000 will be required. The buildings now opened provide an admirably arranged lecture theatre, together with two large laboratories for practical instruction in histology and physiological chemistry.

The Prince of Wales on arrival was received by Mr. Cosmo Bonsor, M.P., the treasurer of the hospital, and Dr. Perry,

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the superintendent of the medical school, and proceeded to the board-room, where he presided over a short meeting of the general court. After the members of the medical and surgical staff had been presented to His Royal Highness a financial statement was made by Mr. Bonsor showing that the total sum received up to this date in answer to the Prince's appeal for a re-endowment fund of the hospital had amounted to £194,000.

An address of welcome was then read by Mr. Howse, the senior surgeon, when the Prince proceeded to the hospital, where Dr. Pye-Smith, the senior physician, described the objects of the building and asked his Royal Highness to declare the building open. After referring to the position of the voluntary hospitals in England, and the development during the present century of the influence of the medical schools and scientific teaching, Dr. Pye-Smith went on to point out how their development must be assisted by corresponding increase of facilities for study. But the school and the hospital were separate institutions, and the school could not, of course, obtain any of the money subscribed for the hospital. In the absence of Government grants or private beneficence the staff had, therefore, only one resource to maintain their school at the proper level, and this was to find the money for themselves.

The Prince of Wales then declared the building open, and delivered a short address in which he spoke of the immense services to the community that were performed by laboratories in which the laws of life were investigated. He spoke of the heritage which the Guy's student had in the examples of such men as Astley Cooper, Bright, Addison, Hodgkin, and Gull, and laid particular stress upon the gentle and humane spirit which, not confined to any one school, is the best possession of the medical faculty. He stated, amidst cheers, that after careful inquiry he had satisfied himself *that whenever experiments upon animals were performed in the school of Guy's Hospital they were undertaken with the object of promoting advances in medicine or surgery which are likely to be of benefit to suffering humanity, and that such experiments were conducted under strict supervision by highly qualified investigators, while in practice the only operations performed upon animals not in a condition of complete anæsthesia were inoculations and hypodermic injections.* Finally, addressing the students, he exhorted them to take care that "the great profession to which you aspire to belong shall, when you leave it, stand as high in the service and in the affection of the public as it does at the present time."

The Prince of Wales's words were received, as might be expected, with the utmost enthusiasm, and all references in the speech of Dr. Pye-Smith to the aid that he had given to the endowment fund by placing himself at its head were loudly cheered, as were allusions to the Jubilee Fund for London Hospitals. Afterwards His Royal Highness re-named one of the wards, which has just been re-opened, "the Queen Victoria Ward." Subsequently tea was served to the visitors, who must have numbered over 2000, and at the end of the afternoon the prizes and medals were distributed to the successful students in the medical school by Mrs. Cosmo Bonsor.

BANQUET TO LORD LISTER BY HIS FORMER HOUSE SURGEONS AND DRESSERS.

AMONG all the manifestations of the profound satisfaction felt by every member of the medical profession at the recognition of the work of Joseph Lister shown by his elevation to the peerage by Her Majesty, none can have given such pleasure to himself as the unique gathering of thirty of his old house surgeons and over a hundred of his old dressers, who assembled on Wednesday, May 26th, at a banquet in his honour at the Café Royal. It is said that no man is a hero to his valet; it is certain that no man is surrounded by more candid and acute critics in the shape of house surgeons and dressers than a surgeon in a teaching school, and to secure and retain the affection, as well as the unqualified admiration, of those who have been most intimately associated with him is the happiest lot that can befall any man who has strenuously tried not only to advance his art, but to inspire those who shall come after him with high aims and with correct principles for practice. The gathering on Wednesday proved that Lord Lister had succeeded in both these directions. It is unnecessary to repeat what has so often been said of the far-reaching effects in saving life and diminishing suffering that have resulted from the application of Listerian principles to the every-day practice of surgery. But the speeches showed how successful he had been in exerting on his pupils a personal influence in setting before them a high ideal, insisting on minute conscientious care and humane consideration in the management of every case that was intrusted to their care. The result of his teaching was shown by the eminence to which many of those present had already arrived. Among the old pupils who had assembled to entertain him were Professor Coats, Dr. Sims Woodhead, Mr. Watson Cheyne, Mr. Francis Caird, Dr. Dundas Grant, Dr. Beatson, Sir Hugh Beevor, Dr. T. F. Chavasse, Dr. G. A. Gibson, Dr. D. Burgh Birch, Dr. Heron, Mr. Cheatle, and Dr. St. Clair Thomson.

The usual loyal toasts having been duly honoured Dr. Hector Cameron proposed the toast of "The Army, Navy, and Reserve Forces," referring particularly to the death of Surgeon Fyfe, R.N., in the Benin Expedition, who was shot through the heart while giving assistance to a wounded comrade, "dying the death of a soldier while doing the work of a surgeon," and the toast was responded to by Surgeon Thorpe, R.N., and Brigade-Surgeon-Lieutenant-Colonel Allin.

Dr. Hamilton Ramsay, as the oldest living house surgeon to Lord Lister, then presented the following address:—

To the Right Honourable Lord Lister, Surgeon Extraordinary to the Queen, Emeritus Professor of Clinical Surgery at King's College, London; late Regius Professor of Clinical Surgery in the University of Glasgow, and Regius Professor of Clinical Surgery in the University of Edinburgh.

MY LORD,—We have had the great honour and privilege of serving under your Lordship as House Surgeons, Clerks, or Dressers, and we beg leave to offer you on this occasion of your elevation to the peerage our affectionate and respectful congratulations. This memorable year of a memorable reign will to all of us be ever associated with the public recognition of your splendid work.

To you, our revered master, we can never adequately express our indebtedness for all you have taught us and for the example you have been to us. We beg leave to hand you the list of those who have had the honour of being intimately associated with your Lordship in the great work by which you have made possible the triumphs of modern surgery, and on behalf of those who have been prevented from joining us this evening we beg to subscribe ourselves your very grateful and affectionate pupils.

Signed by { JOSEPH COATS, Chairman, ST. CLAIR THOMSON, Honorary Secretary, and all the company present.

Lord Lister, in responding, spoke of the intense gratification which this spontaneous demonstration of his old pupils had given him and said that he was specially glad that the album, which he should prize highly, should have been presented by Dr. Ramsay, who was not only one of his first house surgeons, but had previously been a student of his in the extra-mural school of Edinburgh, and mentioned that Dr. Ramsay was first attracted to the study of medicine from charitably attending cases of cholera during an epidemic in a mining district.

Mr. London, an old King's College student, presented an address from the medical practitioners of British Guiana, which was suitably acknowledged.

Professor Coats, in proposing the toast of the evening in an admirable speech, said that they had not only to congratulate Lord Lister on his elevation to the peerage, but on the world-wide acceptance of the principles of antiseptic surgery which he had laid down. Even before Lord Lister had introduced antiseptic methods into surgery he had by his physiological and pathological work shown extraordinary capacity, as those who had worked with him at Glasgow would well remember People often spoke of Listerian antiseptics as if various forms of apparatus, instead of certain fundamental principles, were the essentials. Lord Lister, however, while adhering inflexibly to the principles, had always been ready to adopt new methods or to discard apparatus if he thought that asepsis could be as well or better secured by so doing, and the system had not only survived, but had been triumphant, modifying the whole modern practice of surgery. But, above all, it was the personal charm of Lord Lister which endeared him to those who worked under him, his high ideals of work, his humanity to his patients, and his gentle consideration for his juniors.

Lord Lister, in rising to reply, was greeted with long-continued cheering, and was evidently much moved by the

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warmth of his reception. He said he was touched profoundly to find that the affectionate loyalty which those who had worked under him had always shown him should have persisted for so long a time. The kind words which had been said and the way in which they had been received would always remain with him as indications that his labours had not been altogether in vain.

Dr. St. Clair Thomson said that he had received "hundreds" of letters from old pupils who were unable to attend. One of them (Dr. Aikman, of Guernsey) had sent the flowers with which the room was decorated.

A pleasant incident, showing that the feeling of the present generation is no whit behind that of their predecessors, was the receipt of a telegram from the house surgeons and house physicians of the Edinburgh Royal Infirmary conveying their congratulations.

The committee and Dr. Elder and Dr. St. Clair Thomson (the honorary secretaries) are to be congratulated on the success of this banquet, which will never be forgotten by those who were fortunate enough to be present.

THE FIRST ANNUAL DINNER OF THE INDIAN MEDICAL SERVICE.

THURSDAY, May 20th, saw the inauguration of a new and highly interesting medical dinner at the Café Monico, when the members past and present of the Indian Medical Staff dined together for the first time. The chair was taken by the man who was marked out at once by every imaginable claim for the post, Sir Joseph Fayrer, and he was supported by the Secretary of State for India, Lord George Hamilton. The occasion was in every way successful. Upwards of seventy gentlemen sat down to dinner, among whom we may mention Sir Trevor Lawrence, Sir Joseph Ewart, Dr. Playfair, Surgeon-Generals W. R. Rice, C.S.I., J. Cuningham, C.S.I., P. W. Sutherland, De Renzy, Hooper, and Colvin Smith; Deputy-Surgeon-Generals Kilkelly, McKellar, Farquhar, Raddock, and Cayley; Surgeon-Colonels Costello, Porter, G. S. Sutherland, Richardson, Roberts, Riddell, Harris, and Cates; Surgeon-Lieutenant-Colonels Holmes, Massy, Bate, Lyon, C.I.E., Eyre, Baker, Scully, Wright, Reid, Williams, Skardon, Griffiths, and Freyer (hon. sec.); Brigade-Surgeon-Lieutenant-Colonels Aitchison, Johnson, and Macleod; and Surgeon-Major Sir G. S. Robertson, K.C.S.I.; and the following guests: Lord George Hamilton, Sir William MacCormac, President of the Royal College of Surgeons of England, Sir J. Dick, K.C.B., Director-General, R.N., Surgeon-General Jameson, Director-General of the Army Medical Staff, Dr. Dickinson, President of the Royal Medical and Chirurgical Society, Mr. Reginald Harrison, President of the Medical Society, Mr. Richmond Ritchie, and Dr. S. Squire Sprigge.

Sir Joseph Fayrer made an excellent chairman, and his speech in reply to the toast of the evening, proposed by Sir William MacCormac, was full of interest for all his hearers. He showed that the pride of the members of the Indian Medical Service in their department was justifiable, inasmuch as British rule over the brightest jewel of Her Majesty's Crown might without exaggeration be considered to have had its origin in certain concessions made by the Emperor of Delhi to Gabriel Broughton, surgeon of the East India Company's ship *Hopewell*. Sir Joseph Fayrer then went on to mention the names, and in some cases the exploits, of the great men, past and present, of the Indian Medical Service in the three important and widely varying sections into which their work falls, linking the names of Hamilton and MacNeil, Falconer and Cleghorn, Keegan and Freyer, Cayley and Robertson, and many others, into one chain of scientific, administrative, and military performance.

Lord George Hamilton responded for the guests in a sympathetic and thoughtful speech. Referring to the triple trouble of cholera, plague, and famine with which our Indian Empire has been sorely tried, he had words only of the highest praise for the officers of the Indian Medical Service, upon whom so much anxious and dangerous work has fallen in consequence. He referred with emphasis to the fearless and unselfish conduct that went hand in hand in the service with medical skill, and "brought down the house" by a statement that he considered a dispensary established on the way to Chitral to be of more efficacy in the maintenance of peace than a regiment of soldiers would be.

Surgeon-Lieutenant-Colonel Freyer, upon whom the organisation of the dinner devolved, is to be congratulated on the results of his efforts. A successful *réunion* was made doubly pleasant to all by the presence and the appreciative words of the Secretary of State for India.

HOSPITAL REFORM ASSOCIATION.

A MEETING of the Hospital Reform Association was held on Wednesday afternoon last in the Victoria Hotel, Manchester. The chair was occupied by Mr. Walter Whitehead, who explained the reasons of the society's existence. Mr. T. Garrett Horder, the secretary of the Association, mentioned that it had been said twenty-two years ago that, as far as Manchester and Salford were concerned, the oft-heard cry of the abuse of medical charities was a thing of the past. It was for them to say whether this was still true. From what he had gathered in looking over the returns of the Manchester medical charities he was disposed to say they were very much abused indeed, and that the present system of investigation did not really do much towards preventing the abuse.—The Chairman then moved: "That in the opinion of this meeting the time has arrived when an inquiry should be made into the mode of administering medical relief in the Manchester and Salford hospitals and dispensaries; and it is further of opinion that such an inquiry should be conducted by a committee which should be representative of all the interests concerned."—Dr. Worswick seconded the resolution.—After the resolution was adopted the following committee was appointed: Mr. Walter Whitehead, Mr. G. A. Wright, Mr. C. Behrens, Dr. Alexander Stuart, Dr. S. Woodcock, Dr. A. Godson, Mr. F. Scott, Dr. T. Harris, Dr. W. J. Sinclair, Dr. Lloyd Roberts, and Dr. Vipont Brown (hon. sec.).

The meeting ended with the customary compliments to the chairman.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Hatley Cockayne.—The story told by Dr. G. S. Buchanan, as to diphtheria in the little village of Hatley Cockayne, in the Biggleswade rural district of Bedfordshire, is typical of an occurrence of that disease in rural areas. When investigation came to be made and obscure attacks could be interpreted in the light of subsequent events, it was found that sore-throat of an infectious character commenced in the village in June, 1896, but even when a fatal attack took place owing to laryngeal complications it was at first assumed that the malady which was being dealt with was a form of follicular tonsillitis. But suspicion being roused a more careful examination was made towards the end of July, and it was discovered that there were then eleven attacks of diphtheria. The village consisted of four detached houses, including the rectory and two outlying farms, and fifteen cottages. In all but one of these latter, in which there were children, diphtheria occurred, twenty-three attacks of sore-throat of differing degrees of severity taking place out of sixty-four residents in the cottages in question. A number of these cases were severe, in so far at least as sequelæ were concerned, some of the post-diphtherial paralysis being grave and even fatal. The beginnings of the disease seemed lost in the earlier mild and unrecognised attacks; but the diffusion of the malady was in large measure due to personal infection contracted during either work or play; and in this connexion it is noted that the day school and the Sunday school were both held in a single small room attached to one of the cottages. Unfortunately no isolation was attempted. It is stated that the hospital belonging to the rural district was being reserved for cases of enteric fever, which was at the time prevalent in the village of Moggerhanger. We hope

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this does not mean that the hospital is so contrived that cases of only one disease can be admitted at the same time; all such isolation hospitals, however small, should be designed on the assumption that at least two diseases in both sexes may be expected at any time. The concluding portion of Dr. Buchanan's report deals with the question of the water-supply of the village of Moggerhanger and also of Chalton, in both of which enteric fever had occurred. The wells seem to be fed by surface water which percolates through layers of glacial drift overlying the Oxford clay. This latter formation is one which presents considerable difficulties in connexion with water-supply; but this is no excuse for surrounding wells sunk in a surface soil with privies, cesspools, &c., in such a manner as to foul that soil. Dr. Buchanan incidentally gives a warning against any trust being placed in the "cleansing" of such wells. Where the fault lies in the fact that the surface soil through which the water flows is fouled by filth it is difficult to conceive how any one of intelligence can place reliance on the scraping and lime-whiting of the brickwork with which the well is lined. The process savours a good deal of that which is known as whitening the sepulchre.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Folkestone Urban District.—Two separate outbreaks of enteric fever occurred in Folkestone during 1896 as the result of the pollution of milk outside the borough boundary. In one instance the outbreak was due to a contaminated water supply and in the second no direct evidence of contamination could be detected. Mr. Yunge-Bateman insists that these two outbreaks furnish an admirable illustration of the manner in which one district is at the mercy of another, and he points out that it is only when illness has actually occurred as the result of a contaminated milk supply that the operations of the Infectious Diseases Prevention Act can be brought into play. Mr. Yunge-Bateman considers that a town should have the same control over dairies situated outside the borough, and which supply the town with milk, as it has over dairies within its limits.

Bournemouth Urban District.—Mr. P. W. G. Nunn reports that during 1896 there occurred at Bournemouth a case of small-pox which he thinks was not improbably contracted from a Gloucester mail bag. The patient was accustomed to handle mail bags from the infected town, and his attack occurred at a time which was consistent with this view. Mr. Nunn brought the matter to the notice of the postal authorities, and steps were taken to guard against any further introduction of infection from the suspected quarter.

Crewe Urban District.—Mr. Herbert Jones reports that the death-rate among illegitimate children in Crewe was during 1896 slightly lower than among children born in wedlock—a fact which forms an interesting exception to the general rule of a high mortality amongst illegitimate offspring. Arrangements have been made by the Crewe sanitary authority for the bacteriological examination of suspicious cases of diphtheria, and it has been decided to pay the notification fee, whether the result of the examination be positive or negative. Infantile diarrhœa is, it appears, always high in Crewe, and Mr. Jones has ascertained that incidence of the disease is highest in a certain area largely supplied with cesspools and privies. We must congratulate Crewe upon having at last adopted the Notification Act, as we have on other occasions had to express our disapproval of the attitude of the Crewe town council in this particular. Mr. Jones is, we believe, leaving Crewe for a wider field of activity, and it must be gratifying to him to feel that his successor will find the district now provided with notification and with isolation accommodation.

Stoke Newington Sanitary District.—The corrected death-rate of this district for 1896 was the lowest of the districts in the metropolis, being but 13·3 per 1000, as compared with 13·4 for Hampstead, which was the next lowest on the list. In discussing the question of isolation accommodation in the metropolis Dr. H. Kenwood doubts whether the Metropolitan Asylums Board will ever be able to provide accommodation for periods of exceptional prevalence of the disease, and he remarks that a scheme which would provide for this would necessitate a very large number of beds and persons remaining idle for many months in the year. The vestry of Stoke Newington has, we note, decided to supply the medical practitioners of their district with diphtheria antitoxin at cost price, and we can well understand that this provision will be highly appreciated. Dr. Kenwood regards it as a great waste of public funds that such a large amount should be expended on the purification of London water, and that it should afterwards be used so largely for flushing purposes. He rightly considers that sea water should be supplied to London for flushing and other purposes.

Cannock Rural District.—Dr. William Hosegood suggests that as a means of reducing the high infantile mortality of the district the county council of Staffordshire might arrange for a house-to-house distribution of leaflets setting forth in plain language the proper way of feeding babies, and drawing attention to the harm which is likely to result from improper food. Doubtless this measure would do some good—that is, if the parents could be persuaded to read the leaflets. We presume, however, that Dr. Hosegood would advocate that visits should be made more especially to houses from which births had been registered, and that the distributor of the leaflets should be capable of demonstrating to the parents the principles inculcated in the leaflets.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6119 births and 3617 deaths were registered during the week ending May 22nd. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 18·8 to 16·5 per 1000, rose again last week to 17·2. In London the rate was 15·4 per 1000, while it averaged 18·3 in the thirty-two provincial towns. The lowest death-rates in these towns were 12·9 in Croydon, 13·1 in Leicester and in Bradford, 13·7 in West Ham, and 14·0 in Swansea; the highest rates were 22·0 in Manchester, 22·1 in Burnley, 22·4 in Plymouth, and 23·3 in Liverpool. The 3617 deaths in these towns included 357 which were referred to the principal zymotic diseases, against 315 and 340 in the two preceding weeks; of these, 102 resulted from whooping-cough, 97 from measles, 43 from diarrhœa, 42 from diphtheria, 38 from scarlet fever, 34 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded last week in Gateshead; in the other towns they caused the lowest death-rates in Derby, Preston, and Huddersfield, and the highest rates in Wolverhampton, Liverpool, Salford, and Burnley. The greatest mortality from measles occurred in Manchester, Salford, Liverpool, Bolton, and Burnley; from scarlet fever in Halifax; from whooping-cough in Salford, Oldham, Burnley, Plymouth, and Bristol; and from "fever" in Croydon. The 42 from deaths from diphtheria included 33 in London, 3 in Liverpool, and 2 in Cardiff. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three towns. There were 13 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 22nd inst., against 12, 11, and 14 at the end of the three preceding weeks; one new case was admitted during the week, against 6, 3, and 6 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2508, against 2380, 2385, and 2416 on the three preceding Saturdays; 311 new cases were admitted during the week, against 223, 231, and 239 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 232 and 198 in the two preceding weeks, rose again last week to 220, but were 98 below the corrected average. The causes of 39, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Nottingham, Hull, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Salford, Preston, Sheffield, and Newcastle-upon-Tyne.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·7 and 20·8 per 1000 in the two preceding weeks, further rose to 22·3 during the week ending May 22nd, and was 5·1 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·4 in Greenock and 18·8 in Aberdeen to 25·2 in Paisley and 26·9 in Edinburgh. The 664 deaths in these towns included 49 which were referred to measles, 35 to

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whooping-cough, 14 to diarrhœa, 5 to diphtheria, 4 to scarlet fever, and 3 to "fever." In all, 110 deaths resulted from these principal zymotic diseases, against 93 and 102 in the two preceding weeks. These 110 deaths were equal to an annual rate of 3·7 per 1000, which exceeded by 2·0 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 29 and 41 in the two preceding weeks, further rose to 49 last week, and included 30 in Edinburgh, 15 in Glasgow, and 4 in Leith. The deaths referred to whooping-cough, which had declined in the three preceding weeks from 45 to 29, rose again to 35 last week, of which 16 occurred in Glasgow and 9 in Edinburgh. The 4 fatal cases of scarlet fever showed a decline of 2 from the number in the preceding week, and included 3 in Glasgow. The deaths from diphtheria, which had been 6 and 5 in the two preceding weeks, were again 5 last week, of which 2 occurred in Glasgow and 2 in Edinburgh. The deaths from diseases of the respiratory organs in these towns, which had been 134 and 108 in the two preceding weeks, rose again to 135 last week, and were 43 above the number in the corresponding period of last year. The causes of 39, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 33·7 and 28·3 per 1000 in the two preceding weeks, further declined to 27·3 during the week ending May 22nd. During the past seven weeks of the current quarter the death-rate in the city has averaged 31·1 per 1000, the rate during the same period being 16·4 in London and 26·5 in Edinburgh. The 183 deaths registered in Dublin during the week under notice showed a decline of 7 from the number in the preceding week, and included 15 which were referred to the principal zymotic diseases, against numbers declining from 41 to 19 in the four preceding weeks; of these, 6 resulted from whooping-cough, 5 from measles, 2 from diphtheria, 2 from "fever," but not one either from small-pox, measles, or diarrhœa. These 15 deaths were equal to an annual rate of 2·2 per 1000, the zymotic death-rate during the same period being 1·3 in London and 7·8 in Edinburgh. The fatal cases of whooping-cough, which had been 16 and 6 in the two preceding weeks, were again 6 last week. The deaths from measles, which had declined in the four preceding weeks from 19 to 6, further fell to 5 last week. The 2 deaths referred to "fever" corresponded with the number recorded in the preceding week, while the mortality from diphtheria showed an increase. The 183 deaths in Dublin last week included 38 of infants under one year of age and 38 of persons aged upwards of sixty years; the deaths of infants exceeded those recorded in the preceding week, while those of elderly persons showed a decline. Three inquest cases and 4 deaths from violence were registered; and 59, or nearly a third, of the deaths occurred in public institutions. The causes of 9, or nearly 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN HERBERT L. G. CHEVERS retires from the Service, receiving a gratuity. Brigade-Surgeon-Lieutenant-Colonel M. M. Gallwey has been appointed Recruiting and Embarking Medical Officer, Southern District at Portsmouth. Surgeon-Captain E. Corcoran has embarked for Sierra Leone, and Surgeon-Captain R. Holyoake for South Africa.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain G. S. Thomson (Bombay) are placed temporarily at the disposal of the Government of Bombay for employment on plague duty. The services of Surgeon-Captain W. E. Hardy, A.M.S., are placed temporarily at the disposal of the Foreign Department for plague duty. Surgeon-Major Bull to be Staff-Surgeon, Poona, vice Surgeon-Lieutenant-Colonel Young, retired. 4th Bombay Rifles: Surgeon-Captain Bennett to the Medical Charge, vice Surgeon-Major Bull, transferred. Surgeon-Captain W. H. B. Robinson (Bengal), Medical Officer of the 34th Bengal Infantry, is appointed to officiate as Civil Surgeon of Bikanir, vice Surgeon-Major W. H. Neilson, and until further orders.

NAVAL MEDICAL SERVICE.

The following appointments are announced: — Fleet-Surgeons: Edward E. Mahon, C.B., to the *Excellent;* Herbert M. Ellis to the R.M. Artillery, Eastney; Michael Fitzgerald to the *Majestic;* and Anthony Gorham, M.D., to the *President*. Staff-Surgeons: Alexander J. J. Johnston to the *Victorious*, and John Acheson, M.D., to the *President*, additional, for R.N. Rendezvous.

YEOMANRY CAVALRY.

Lanarkshire: Surgeon-Captain R. E. Wood to be Surgeon-Major.

VOLUNTEER CORPS.

Artillery: 1st Worcestershire and Warwickshire: Surgeon-Captain D. Rice resigns his commission. *Rifle:* 1st Volunteer Battalion the Buffs (East Kent Regiment); Surgeon-Lieutenant A. Murdoch resigns his commission.

Consequent upon the division of the 2nd Volunteer Battalion the Royal Welsh Fusiliers into two Battalions, designated respectively the 2nd Volunteer Battalion the Royal Welsh Fusiliers and the 3rd Volunteer Battalion the Royal Welsh Fusiliers, Her Majesty has been graciously pleased to approve of the following transfers of officers from the 2nd Volunteer Battalion to the 3rd, and are considered to have received in the new Battalion commissions of the same rank and date as those previously held by them in the 2nd Volunteer Battalions, viz.:—R. A. Prichard, Surgeon-Captain; W. J. Morris, Surgeon-Captain; T. E. Jones, Surgeon-Captain; T. L. K. Davies, Surgeon-Captain; and E. T. Hughes, Surgeon-Lieutenant.

THE ROYAL MILITARY TOURNAMENT.

The Royal Military Tournament, which was opened by the Prince of Wales on Thursday, May 27th, must be this, the eighteenth year, looked upon as an unqualified success from almost every point of view. As a spectacular entertainment the organisers of the Tournament are certainly to be congratulated, and the audience have no cause to grumble at the quantity and quality of spectacle provided. The pageant, "Our Army, 1704—1882," is representative of the growth and progress of the British standing army from early times up to the present day, and is commemorative of the four renowned victories of Blenheim, Waterloo, Inkerman, and Tel-el-Kebir. The display by the New South Wales Rifles will no doubt prove popular with the public, as will also the military cycling display by members of the 26th Middlesex (Cyclist) R.V. The latter display is distinctly good, but we think that it shows the use of the cycle in warfare as seen at the Agricultural Hall rather than on the actual battle-field. "Throwing the djerid" by the Zaptiehs, or Cyprus Military Police, and the war dance by the Aboriginal inhabitants of Borneo, the Dyaks, are interesting performances, but might, we think, be curtailed with advantage. The musical drive by the Royal Horse Artillery and the naval display form not the least noteworthy items on the programme, and the musical double ride—which will be given during the first week of the Tournament by the 3rd (Prince of Wales's) Dragoon Guards—continues to receive the applause which it so rightly deserves. The display by the Army Gymnastic Staff, of which we hope to say a word later, does great credit to those who have had charge of their training. The usual competitions will take place of course from day to day, and the combined display of all arms closes each performance. A most desirable improvement in this display is the comparative absence of the deafening noise of the machine guns and also of the smell of burnt powder which characterised previous performances.

The principal medical officer in charge of the Tournament is Surgeon-Major A. C. A. Alexander (Coldstream Guards), who is assisted by Surgeon-Major J. E. R. James, A.M.S.

THE GORDON BOYS' HOME.

The late General Charles Gordon may be said to have been the central figure of chivalry, purity of motive, and unselfish devotion to duty of his age. His death at Khartoum, on Jan. 26th, 1885, caused a feeling of deep regret in this and other countries, and it was a good idea to start as a memorial to him a home for the training and education of necessitous lads to fit them for service in the army and navy or for earning a livelihood in trade. Since the institution was started

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865 boys have passed through it, 344 of whom have joined the army, navy, and colonial forces, and 241 have been provided with civil employment. These boys have almost universally turned out well, according to the characters that have been received of them. The education at the home is of a most practical character and well fitted to make them useful, law-abiding citizens. Officers of the public medical services will be glad to have learned recently from the Duke of York that in this Jubilee year of Her Majesty's sixty years' reign the Home is making progress. It is an institution that well deserves support, and it fulfils a very useful purpose and one that Gordon had most sincerely at heart.

THE BENIN DESPATCHES.

Despatches from Admiral Rawson, Consul-General Moor, and others were published in the *London Gazette* of the 7th inst. Among the officers mentioned and specially commended by Admiral Rawson are the following: Fleet-Surgeon M. Fitzgerald, for having organised the medical department and rendered every assistance. Staff-Surgeons E. R. Dimsey, of the *Phœbe*, and J. McC. Martin, of the *Forte*, were with the flying column, and upon them fell the whole work of attending the wounded and bringing them down. Surgeon R. T. A. Levinge, of the *Alecto*, is specially mentioned in Captain MacGill's despatch. Surgeon C. S. Facey, of the *Widgeon*, is mentioned in Captain O'Callaghan's despatch. Surgeon F. H. A. Clayton, of the *St. George*, although ill himself, worked most assiduously with the sick. Dr. R. D'Arcy Irvine, of the Niger Coast Protectorate, volunteered for, and was attached to, the Sapoba force; he was also most assiduous in his attention to the sick at Warrigi when there was no naval medical officer present.

MOBILISATION OF NO. 5 FIELD HOSPITAL.

The *Irish Times* of the 21st inst. gives an account of the recent mobilisation of this field hospital at Island Bridge Barracks on the 19th inst. under the command of Surgeon-Lieutenant-Colonel Greene. Major-General Viscount Frankfort, in the absence of Lord Roberts, accompanied by several staff officers and Surgeon-Major-General Preston, Principal Medical Officer of Ireland, inspected the hospital, and expressed his warm approval of the highly satisfactory manner in which every detail was carried out. A hospital was prepared for the accommodation of 100 sick, with all necessary arrangements, in a very short space of time. The *personnel* of a field hospital consists of four medical officers, one quarter-master, one warrant officer, and thirty-nine non-commissioned officers and men. Provision is made for 100 sick, the Army Service Corps finding the waggons, &c., necessary for transport.

THE BENIN EXPEDITION AWARDS.

The Queen has given directions for the following appointment to the Most Distinguished Order of Saint Michael and Saint George in recognition of services rendered in connexion with the recent expedition to Benin:—To be Ordinary Member of the Third Class or Companion of the Most Distinguished Order: Fleet-Surgeon Michael Fitzgerald, Royal Navy. Her Majesty has also given orders for the following appointments to the Distinguished Service Order in recognition of the services of the undermentioned officers during the same expedition:—To be Companions of the Distinguished Service Order: Staff-Surgeon James McCardie Martin, Royal Navy; and Staff-Surgeon Edgar Ralph Dimsey, Royal Navy.

THE LATE GRECO-TURKISH WAR.

According to the accounts which have appeared as to the medical arrangements of the Greek Army these do not appear to have been at all satisfactory. There seems to have been an absence of organisation, and the sufferings of the sick and wounded, owing to the want of proper care, are stated to have been considerable. Owing to the heavy rainfall to which the army was exposed at Domoko there was a large amount of sickness and the hospitals are crowded.

BELGAUM.

We learn by the last mail from India that cholera has been very prevalent of late in the villages to the south-east and south-west of Belgaum, and that several cases have occurred in that city and the Sudder bazaar. There were also two fatal cases in the East Yorkshire Regiment at that station.

Two new companies (Berkshire and Kent) have been added to the Militia Medical Staff Corps. For commissions in these companies immediate application should be made to the officer commanding Militia Medical Staff Corps, Aldershot.

Correspondence.

"Audi alteram partem."

THE CALOMEL BATH.

To the Editors of THE LANCET.

SIRS,—The first experiments with regard to the action of the calomel bath were made in a small room, the air of which necessarily became impregnated with the vapour. The result was that the action on the gums was quickly produced, and ten grains of calomel was generally sufficient to produce the required effect. In an ordinary room a drachm may be used to begin with. It is well that the calomel should be pure and not contain any free hydrochloric acid, which if breathed is apt to irritate the lungs. The presence of acid is readily ascertained by holding a piece of moistened litmus paper over the fumes. Messrs. Allen and Hanbury informed me that they kept the pure calomel. Mr. Lowe of Stafford-street was in the habit of having the calomel resublimed in order to get rid of any free acid which ordinary calomel generally contains. Mr. Lowe has also a box for administration of the calomel bath; with this apparatus very little of the calomel is breathed. The principal advantages of the administration of mercury by the calomel bath over some other modes of giving it are (1) it is clean and requires little exertion on the part of the patient, and (2) it does not irritate the digestive organs; but (3) by far the most important point is that it determines any action that may be taking place to the skin, and thereby prevents the affection of the internal organs. I can scarcely recall a case in which the treatment was commenced by the calomel bath and properly carried out in which the deeper structures were affected. In one case a patient, who had previously undergone a variety of treatment and had a hole in his hard palate before he commenced the treatment, did not recover. In this case nearly the whole of the outer table of the frontal bone perished. The calomel bath has no influence upon the local or suppurating sore. With cleanliness this will heal without any specific treatment.

In the House of Lords recently Lord Lister mentioned that there was one matter which he did not like in the Act of 1866—viz., that when a woman was pronounced to be clear of disease she received a certificate which she was to carry about with her. This could be no real protection to others. It is true that after a patient has been affected with constitutional syphilis he is much less likely to take the disease again; but this does not apply to the local form of the disease—a patient supposed to be cured one day may be re-infected the next.

I am, Sirs, your obedient servant,

HENRY LEE.

Queensborough-terrace, Hyde-park, W., May 19th, 1897.

"THE QUESTION OF THE SECOND OVARY IN OVARIOTOMY."

To the Editors of THE LANCET.

SIRS,—The diverse opinions expressed by the various writers on this question show how important it is to discuss temperately and without personal bias methods of procedure that may require re-consideration if performed under new conditions and in the light of greater experience. Aseptic surgery has so revolutionised all surgery that every operation requires to be re-considered in the light of the greater safety conferred upon it by antiseptic precautions, and no statistics are of the slightest value collected before this era, or, indeed, in the earlier imperfect stages of this period.

The question which I raised was whether the age of the patient might not be regarded as a determining factor where it was necessary to remove one ovary, and the other was found in an early stage of simple cystic degeneration, not yet robbed of its function, or likely soon to cause inconvenience. The plea was put forward for a girl or young woman who might thus still be allowed the chance of becoming a mother, a natural instinct which in many women—and I would say in the best women—is stronger than the love of life itself. That this suggestion is contrary to the practice hitherto generally

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adopted renders it worthy of discussion in your columns. Its justification rests on the greater safety of all abdominal operations under modern conditions, so that a second operation need not be regarded as very formidable, if eventually necessary.

The case I gave in illustration was that of a young woman of exceptionally attractive appearance, whose diseased ovary having a long pedicle and not a single adhesion was removed without any exposure of the abdominal contents. The other, with a cyst on its anterior surface, I thought too good to remove. The abdomen was closed, and she was convalescent without any complication in a fortnight. So far as the technique of the operation was concerned it might have been performed by any assistant surgeon's dresser with a knowledge of ligatures and sutures. I have to thank Dr. Duncan for his suggestion of excising the cyst and leaving the ovary. On one occasion when I attempted this it resulted in so much damage that I excised the ovary, and my object was to leave an ovary not robbed of the function of reproduction. On questioning others of large experience I find they have met with similar difficulties in attempting to enucleate ovarian cysts. It will be seen that Mr. Doran and Dr. Duncan are in direct opposition, for whereas the former relates how in a woman aged fifty years he left a suspicious second ovary which eventually required a second operation Dr. Duncan says: "I go further, and say that in *all* cases of ovariotomy near or after the menopause the second ovary should invariably be removed, whether it looks healthy, cystic, or atrophied." The ovaries at this period being functionally either inactive or approaching inactivity, any suspicious ovary should, in my opinion, certainly be removed, but we perhaps want further experience before adopting, as a rule, Dr. Duncan's suggestion in the case of a healthy ovary, since the parallel double operation in men is sometimes followed by nervous symptoms that it is possible a single organ, though atrophied, may prevent. Dr. Thomson's communication in THE LANCET of May 8th is of great interest and importance, showing how long cases of cystic tumour of the ovary may remain quiescent without causing much inconvenience. His case, in which the patient had had two children during the four years he had recognised the existence of an ovarian tumour, has a special bearing on my argument. It would not be difficult, I think, to collect a good many cases where a cyst has been known not to increase for years or where the tumour has actually decreased or disappeared. May not the one ovary be allowed this possibility in a young person where its functional relation to the Fallopian tube remains intact?

Exception has been taken to my description of a young woman deprived of her ovaries as "an unnatural monster, cut off from the next generation." This has arisen from the confusion of two distinct ideas included in the same term—a potent cause of logical fallacy—viz., the child's bogey, meaning a huge repulsive beast—and the same term, as generally applied in medicine, meaning simply an abnormality, not necessarily in any way repulsive, large, or even obvious. The siren, with her tail immersed, is represented as a seductively beautiful woman, but her aquatic tail being abnormal to the human ideal renders her a monster. The second proposition, that if not previously a mother she is "cut off from the next generation" is so obviously correct as not to require further comment. The medico-legal question included in the sentence, "if married with this condition secreted [viz., loss of both ovaries] would, I presume, be liable to be divorced," has also been adversely commented upon, but I have taken a very good legal opinion on the subject, and am assured that as marriage is a legal contract, in which the procreation of children up to a certain age is definitely stated as one of the objects, fraudulently to conceal an absolute and artificial bar to this part of the contract would be a good ground for divorce.

I am, Sirs, yours faithfully,

R. CLEMENT LUCAS, B.S. Lond., F.R.C.S. Eng.,
Surgeon to Guy's Hospital.

Wimpole-street, W., May 15th, 1897.

THE LIABILITY TO CANCER IN OLD AGE.

To the Editors of THE LANCET.

SIRS,—A point of general interest was raised in a recent discussion at a meeting of the Life Assurance Medical Officers' Association, but time did not admit of its being followed out in detail. The age-incidence of cancer as a cause of death was well shown by a table derived from the Registrar-General's returns. During childhood and early life the mortality from cancer per million living is, of course, very small; it increases in middle life, especially in women, and becomes considerable in the decade forty-five to fifty-five, and large in subsequent decades, increasing slightly to the end of life. Now there is an impression derived from clinical experience that whilst malignant disease is common in the earlier period of old age, yet when a person safely reaches sixty-eight or seventy years (as the President put it at the meeting above) he is less likely to die from cancer. The above statistics seem to confute this. But the clinical impression has a basis of fact. For the mortality from cancer must be looked at also, as shown by Dr. J. F. Payne, whose lucid paper opened the discussion, in its relation to other causes of death. Comparing it in this way—I take the figures from the Supplement to the Registrar-General's Fifty-fifth Annual Report, giving the mortality in England and Wales for the ten years 1881-90—the deaths from cancer, which are as 1 to 59 of all deaths between the ages of twenty-five and thirty-five, increase to 1 to 20 in the decade thirty-five to forty-five, 1 to 11 between forty-five and fifty-five, and the same between fifty-five and sixty-five, but after this they decline to 1 to 16 from sixty-five to seventy-five, and are only 1 to 36 after seventy-five years of age. For females alone the proportion is throughout higher, and at the ages of prevalence is: from thirty-five to forty-five, 1 to 12; from forty-five to fifty-five, 1 to 7; from fifty-five to sixty-five, 1 to 8; and from sixty-five to seventy-five, 1 to 13.

Relatively, then, to other causes of death cancer attains its maximum soon after the middle period of life, between the ages of forty-five and sixty-five years; and although in later old age the actual liability does not diminish, but even increases a little, the relative liability, as compared with other diseases, diminishes greatly. Hence, although it is not strictly accurate to say that a man who escapes cancer up to seventy years of age is less likely to be attacked, there is this ground for the current belief, that he is much more likely to die from something else. Cancer is accountable for a much smaller proportion of deaths at these later ages.

The Registrar-General's report for the decade 1881-90 deals also with the local distribution of cancer; the mortality at ages over thirty-five years, in proportion to the population living at such ages, is taken to avoid inequalities arising from differing age conditions. London, as is well known, takes the lead with a mortality of 2250 per million; of course, the special hospitals are partly responsible for this. The higher rates are mostly found amongst the eastern and south-eastern counties, especially Huntingdonshire, Cambridgeshire, and Sussex; whilst in the southern, western, and midland counties the cancer death-rate is apt to be low. Dorset, Bucks, and Monmouth enjoy the least mortality at about 1578 per million; the rate for all England and Wales is 1844.

I am, Sirs, yours truly,

Finsbury-square, May 11th, 1897. R. HINGSTON FOX.

FOREIGN MEDICAL STUDENTS AND PRACTITIONERS IN FRANCE.

To the Editors of THE LANCET.

SIRS,—The campaign which has so long been waged against the invasion of French medical schools and practice by foreigners has made considerable progress during the past twelvemonth. During this period no legislation bearing upon the subject has been enacted, but Ministerial decrees and circulars have been issued materially modifying the regulations heretofore affecting foreigners. For those not intending to practise in France a degree of Doctor of Medicine has been created which, like that conferred by the German universities, does not entitle the holder to practise in the country where it is obtained. Aspirants to this degree may matriculate (upon approval of certificate showing the completion of studies approximately equivalent to those of the French *lycées*) and take the regular course at any French medical school except that of Paris. In these cases the candidate possessing a foreign medical degree is exempted from a portion of the course and examinations, the extent of such exemption varying with the value of the foreign diploma as determined by the French faculties. Whereas the creation of the new degree of an honorary character now enables the foreigner

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to obtain a French medical diploma somewhat more readily than of late years, the privilege of practising within the territory of the French Republic is more difficult to acquire than before. To obtain this the foreigner, whether merely a student or the possessor of a foreign medical diploma, must not only pass all of the examinations of the regular medical course, but must now matriculate upon precisely the same condition as the native student. He may do this either at the Paris or at a provincial medical school. However, the requirements for matriculation are now such that a much more intimate knowledge of the French language is necessary for these than for the more or less technical oral examinations of the regular medical course. For this reason the present conditions are practically prohibitive unless the foreigner has been educated in France or is prepared to spend a number of years in preparation. The present requirements for foreigners and natives alike are as follows.

For Matriculation.—1. The degree of Bachelier de l'Enseignement Secondaire Classique (Lettres-Philosophie). 2. A certificate from a Faculté des Sciences of satisfactory examination in Chemistry, Physics, Zoology, and Botany after a year's study in the said Faculté.

For the Medical Course.—1. Examination: (*a*) Anatomy, and (*b*) Dissection. 2. Examination: Histology, Physiology, Biological Physics, and Chemistry. 3. Examination: Part 1: (*a*) Operations (on the cadaver) and Topographical Anatomy; and (*b*) Surgery (theory), Obstetrics (theory). Part 2: (*a*) General Pathology, Animal and Vegetable Parasites, and Bacteriology; and (*b*) Practice of Medicine (theory) and Pathological Anatomy (necropsy). 4. Examination: Therapeutics, Hygiene, Forensic Medicine, Materia Medica, and Pharmacology. 5. Examination, Part 1: (*a*) Surgery (clinical) and (*b*) Obstetrical (clinical). Part 2: Medicine (clinical). 6. Thesis upon subject of student's choice.

Whereas the increased requirements demanded of aliens have given rise to adverse criticism by a portion of the foreign press, there is, in reality, no discrimination made in favour of the native. It should be remembered that the foreigner is *ipso facto* exempt from the military service required of every able-bodied Frenchman. The usual three years of obligatory service are reduced to one for students of the liberal professions, but these must lose that year when in the midst of their work. On the other hand, the foreign student in France pursues his course without interruption and prepares in all serenity for the competitive examinations admitting to the coveted post of interne in the hospitals, while his French comrade is struggling to regain the ground lost during a twelvemonth "in the ranks."

In conclusion, the present situation may be summed up as follows, viz.:—1. The foreign medical student or practitioner unable to matriculate upon the same conditions as the native student must pursue his studies at a provincial school, and although he may obtain the French doctorate degree it will not admit him to practise upon the territory of the French Republic 2. The foreign medical student or practitioner may qualify for practice in France and her colonies by matriculation and completion of the full course at any French medical faculté upon precisely the same conditions as the native student.

I am, Sirs, yours faithfully,

FREDERICK O. CHAMBERLAIN, M.D.

Avenue de l'Opéra, Paris, May 17th, 1897.

"EXCISION OF PAROVARIAN CYSTS WITHOUT REMOVAL OF THE OVARY OR TUBE."

To the Editors of THE LANCET.

SIRS,—The communication by Dr. Howard Kelly referred to by you in THE LANCET of May 22nd on page 1427 shows very clearly how difficult it is to get new facts accepted, or how readily the profession forgets established facts, and brings them up again as novelties. Still, we don't expect such proceedings from such places as the Johns Hopkins University. In 1874[1] I wrote, "The Fallopian tube was normal and had no other relation to the tumours than slight connexion by loose areolar tissue (as had also the ovary). . . . In an ovariotomy I had performed not long before I was struck by the fact that the ovary was perfectly healthy and separated from the tumour, as was also the tube, by a mesovarium of some extent; in fact, I did not do ovariotomy at all in the removal of the tumour, for in passing the chain of the ecraseur round its base I did not include either the tube or the ovary, and they were both returned into the abdominal cavity. The consideration of these facts led me to examine some tumours I had removed previously, and others removed by friends, and I have since subjected specimens to careful examination for confirmation of my accidental observation. The result has been that in every truly unilocular tumour I have found the ovary unaffected, though on several occasions I have found it stretched over the cyst wall."[2] In my fourth edition (1883) I developed these views further, and added: "In the records of ovariotomies performed these cases have, up till now, always been stated as ovariotomies, and the ovaries and tubes associated with the tumour have been removed with it. Both the record and the removal of the ovary are mistakes. The operation is not an ovariotomy at all, and nine times out of ten both ovary and tube might easily be separated from the tumour and left, and this practice I now always try to follow. It is very curious that those who are crying out most loudly against the unnecessary removal of ovaries have been in the habit of pursuing this practice in the case of parovarian tumours without compunction."

In my more recent work[3] I give a great deal more precise, and some very curious, information concerning broad ligament cysts. I have yet to publish the details of my more recent methods of operating in these and other cases, but I may here say that I have not removed an ovary or tube in one of them for at least twelve years. In the early part of April of the present year I had a run of three of these and had in each case to enucleate the whole tumour from its broad ligament bed in order to leave the healthy ovary and tube. Therefore it was that I condemned the proceedings of Mr. Clement Lucas as reported by himself in THE LANCET.

The conclusion from an immense experience going over thirty years is that such a thing as a unilocular tumour of the ovary does not exist save in one bottle which I placed in the museum of the Royal College of Surgeons as an example of an exception which proves the rule.

I am, Sirs, yours faithfully,

Birmingham, May 22nd, 1897. LAWSON TAIT.

[1] Hastings Essay on Diseases of the Ovary, p. 52.

[2] Vide Transactions of the Royal Medical and Chirurgical Society, 1890.

[3] Abdominal Surgery, 1889.

ON CERTAIN AFFECTIONS OF THE NERVOUS SYSTEM IN CYCLISTS.

To the Editors of THE LANCET.

SIRS,—I have been much interested in the facts recorded in a recent paper published in THE LANCET by Dr. James Taylor and Dr. Semple,[4] and I should like to record certain facts that have come to my notice in reference to the nervous symptoms exhibited by some people after cycle riding. My experience was practical rather than medical, for it was gained chiefly during the years 1885 and 1886, when I was an amateur champion cyclist, and knew most of the path- and road-racing cyclists in London, but when I had had no medical training to enable me to observe neurological phenomena. In the long-distance road races it was common to lose sensation in the feet, and several accidents occurred through slipping a pedal from this cause. This was one of the reasons why toe-clips were so universally used. When the men dismounted their gait was unsteady, the legs jerked out straight, and the feet stamped on the ground. I have noticed these things many times, not only in others, but in myself. Numbness in the perineum and penis and difficulty in beginning the act of micturition were quite common symptoms. I can remember the finish of one long-distance road race, when one of the competitors had involuntarily passed both urine and fæces during the race without being aware of the fact. I cannot call to mind any case in which the symptoms mentioned above did not pass off after a period of more or less prolonged rest. That severe exertion is not necessary to produce nervous symptoms is well exemplified in my own father's case. He learned to ride a bicycle when he was about sixty-two years old. A comparatively short ride produced numbness, trembling, and loss

[4] THE LANCET, April 17th, 1897.

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of muscular sensation in his arms and legs. This was so marked that the power of writing was lost for the rest of the day after a ride of a few hours. He persevered for a while, but ultimately had to give up cycling altogether. The question how these symptoms are produced is one of much interest. Three factors are evidently of the greatest importance—viz. (1) pressure; (2) vibration; (3) auto-intoxication with waste products due to overwork.

1. *Pressure.*—The pressure of a bad saddle will undoubtedly produce nervous symptoms in the perineal region; any cyclist can verify this fact for himself without much difficulty. A really perfect saddle has yet to be invented, and when it is it will be impossible to press injuriously on the perineum, whatever position the rider assumes. Leaning forward on a cycle lessens the surface of the body exposed to the wind and decreases the effort necessary to propel the machine against a head wind. For this reason it is impossible to prevent large numbers of riders from adopting this attitude. Of late years the position of the saddle in relation to the pedals has been altered. In the modern cycle the saddle is placed much further forward than it used to be. The result of this is that with the ordinary form of saddle the position which is necessarily assumed leads to the weight being wholly borne by the perineal structures.

2. *Vibration.*—That this is of some importance will be readily granted by anyone who has ridden both solid and pneumatic tyred machines. Though pneumatic tyres have done away, to a very large extent, with vibration, the jolting on a rough road giving a succession of shocks to the body must be taken into account. The difference in comfort to the feet between rubber and rat-trap pedals is also well known. Numbness in the soles of the feet would be less likely to occur with rubber than with metal pedals. That vibration alone would produce these symptoms is not probable, for none of the twenty-three railway engine-drivers and firemen whom I have questioned on this point have ever noticed any numbness or loss of power after a day's work.

3. *Auto-intoxication with waste products due to overwork.*—During severe or prolonged exercise the untrained man rapidly dissipates his reserve tissues, and his excretory organs being unable to eliminate the waste products of metabolism he suffers from an auto-intoxication, shown either by a febrile condition, sometimes of great severity, or general nervous prostration or excitability, which often prevents appetite or sleep. It is probable that all these three factors, and possibly others, are concerned in the production of the nervous symptoms that have been observed.

I am, Sirs, yours faithfully,

PERCY FURNIVALL, F.R.C.S. Eng.,
Assistant Demonstrator of Anatomy, St. Bartholomew's Hospital; Assistant Surgeon to the Metropolitan Hospital.

May 24th, 1897.

FORCED REDUCTION OF THE DEFORMITY IN CARIES OF THE SPINE.

To the Editors of THE LANCET.

SIRS,—In your short report of a meeting of the British Orthopædic Society which appeared in THE LANCET of May 15th, it is stated that in speaking of Dr. Calot's treatment of Pott's disease, I "questioned if it were possible that such a procedure had been followed by the results described." As this statement by itself must give a different impression from that which would appear from my full remarks I beg you to allow me to add to it. It is now probably well known to your readers that Dr. Calot of Berck-sur-Mer reduces the deformity in caries of the spine by forcing the parts into a straight position under chloroform and then applies a fixation apparatus in which he keeps his patients from five to six months. At the end of this time he states that the patients are absolutely cured. It was the possibility of cure in this short time which I questioned.

The practice of straightening the spine in Pott's disease is, of course, not new, and it has been objected to by various surgical authorities. Samuel Hare, however, who published a work in 1838[1] and who was looked upon as a most reliable and skilful surgeon, having great experience with this disease, was a strong advocate for reduction of deformity, and in his work (p. 91) he gives two illustrations showing the position of the carious bones (1) in their angular position, and (2) when straightened out. I think there is much to be said in support of this method, and although I have never attempted, like Dr. Calot, to separate the diseased parts by any great force I have aimed at improving the whole position of the back, chiefly by altering the curve above and below the seat of the disease. By this means in a great many cases the abnormal projection has become markedly less, as shown in many of the illustrations in my book, "Caries of the Spine." (I would especially refer to Figs. 80–81 and 87–88 in that publication.) Sometimes the projection has completely disappeared, and when this has occurred one cannot but suppose that the diseased bones have been separated at the seat of caries, and I have only seen good results from firm but gentle pressure upon the gibbosity by means of a fixation apparatus. The objection which has generally been raised against attempting to straighten out the spine has been founded upon the view that if the bones were separated the space would be so great that there would be little chance of re-formation of bone. This view I proved to be incorrect at a demonstration given at the annual meeting of the British Medical Association at Bournemouth in 1891.[2] A description of the case and specimen referred to are also given on pages 121 to 124 in "Caries of the Spine." The specimen and the history of the case show the following facts: (1) that a very large gap may occur from dissolution of several vertebræ without their usual spontaneous coalescence, the spinal cord being left exposed in the thorax and abdomen, unprotected by a bony covering; (2) that repair may take place while the undestroyed vertebræ remain separated from one another;[3] (3) that repair of this kind can progress in spite of the most adverse circumstances in respect to the general health of the patient; and (4) that in such a severe case the new bony growth requires a much longer time to become thoroughly solid than in ordinary cases.

As regards the period of repair, in the case I allude to the patient so far recovered that on Sept. 3rd, 1882, eight months after I had first seen him, he was able to walk about comfortably and his health had improved very greatly. He continued to improve apparently in every way until September, 1884, when he died from tubercular meningitis—that is to say, two years and eight months from the time I had first seen him—and it may be assumed that repair had been in active progress during at least the latter two years. Upon examination after death it was found that the gap had been filled up by bony growth, but when the affected vertebræ were being macerated all this new bone crumbled away, leaving the vertebræ as they were before the repair had taken place; therefore this case shows that two years were not sufficient to thoroughly consolidate the new bone, and, although in some patients the progress of repair may be more rapid, yet I cannot imagine that six months, as stated by Dr. Calot, would be anything like sufficient to effect a cure in any case where a considerable gap had to be filled up.

As to danger from immediate and forced reduction it may be assumed that all the cases operated upon by Dr. Calot have been in a state of active disease before repair has commenced, but should new bone have been already thrown out there would be considerable danger of producing irritation by the loosened particles of bone from the new growth, which would act as foreign bodies. A case came under my notice some few years ago which bears evidence to this effect (Case 102, page 135 in "Caries of the Spine"). It seems probable that immediate reduction may prove to be a valuable method of treatment in suitable cases, and I congratulate Dr. Calot upon his success. I question, however, if it be possible to cure such cases in six months.

I am, Sirs, yours faithfully,

Queen Anne-street, W., May 24th, 1897. NOBLE SMITH.

[1] Practical Observations on the Prevention, Causes, and Treatment of Curvatures of the Spine. London, 1838.

[2] Brit. Med. Jour., March 19th, 1892.

[3] Mr. Jackson Clarke remarks upon this fact that when the anterior common ligament remains intact at the seat of disease the periosteum will probably be attached to it and is then capable of forming new bone.

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—In discussing the question whether the "faculty of bipedal progression in an erect posture" is an acquisition it is necessary to clearly define what we mean by this latter term. May I be allowed in this connexion to quote from my work, "The Causation of Disease"? "Scientifically it is

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perfectly justifiable to distinguish sharply between the hereditary and the acquired; practically, however, it is quite impossible. Scientifically we may distinguish as follows. If an individual is exposed to as negative an environment as is compatible with life it is evident that there will be little or no acquisition. We may, for purposes of argument, assume such a negative environment, one, namely, under which an individual will pass through a series of developmental changes, which are the outcome of heredity pure and simple—i.e., altogether independent of external influences. It is, of course, impossible really to exclude altogether the influence of environment, since life is due to the inter-action of the organism and its environment ..... but we are justified in theoretically supposing an individual to pass through life under such a limited environment as that referred to, and we may speak of the individual such as he would then be as the strict and sole product of heredity. What he is capable of becoming under particular environments belongs to the region of acquisition" (pp. 140-1). Accepting this definition, it will be seen that the faculty of bipedal progression in an erect posture can scarcely be regarded as an acquisition. Certainly the view held by Dr. Reid, that the infant learns to walk by imitation, is erroneous—so erroneous, indeed, as to shake one's faith in Dr. Reid's other generalisations. No doubt the functional activity of the locomotor apparatus is needful for its full development and for the full development of the faculty of walking in man, but I imagine the majority of physiologists will agree with Dr. Bastian in regarding this faculty as essentially hereditary. Respecting Dr. Reid's lengthy argument in favour of language being a pure acquisition, I cannot think he can have properly interpreted Dr. Bastian's views on the subject.

I am, Sirs, yours faithfully,

Wimpole-street, May 17th, 1897. HARRY CAMPBELL.

"FRACTURES OF LONG BONES IN SCURVY-RICKETS."

To the Editors of THE LANCET.

SIRS,—The case brought by Dr. Guthrie before the Medical Society of London under the above title was one of extreme interest from a diagnostic point of view. He believed that the fractures were due to scurvy, and Mr. Morgan pointed out that in scurvy-rickets fractures of the long bones are usually near the epiphysis and not in the centre of the shaft. This term "scurvy-rickets" is confusing because of its loose application, and for clinical purposes it might be more precise to use the terms (1) scurvy, (2) rickets, and (3) scurvy associated with rickets. I think that this distinction has been definitely proved by Dr. Cheadle, Dr. Barlow, and others. My own experience has been that in scurvy in infants hæmorrhage may occur under any part of the periosteum, and when the shaft is completely separated from the periosteum by blood, complete transverse or oblique fracture may be caused merely by handling the limb. Such fractures may be at the epiphyses or in the centre of the shaft. In rickets the process is one of softening and bending of the long bones, with possibly greenstick fracture of the shaft. In scurvy associated with rickets the hæmorrhage is usually near the epiphysis, which becomes separated, as Mr. Morgan pointed out; and even if the effusion of blood extends along the shaft the bone does not appear to have the same brittleness as in uncomplicated scurvy, and fracture in the centre of the shaft is not common. I agree with Dr. Guthrie in his diagnosis of scurvy, and I should suggest that when these fractures occurred there was probably an absence of marked rachitic changes in the bones. As regards the other point he raises—whether the fracture leads to the hæmorrhage or the hæmorrhage to the fracture—I think the latter view is probably correct. One frequently meets with subperiosteal hæmorrhage without any fracture of the bone, but I have never heard of a case of fracture of a bone in scurvy which was not accompanied by subperiosteal hæmorrhage.

I am, Sirs, yours truly,

May 11th, 1897. G. A. SUTHERLAND.

"A QUESTION OF COURTESY."

To the Editors of THE LANCET.

SIRS,—I am not in the habit of seeing your valuable paper, nor did I ever imagine that I should be called on to ask you to publish a letter from me; but since a copy of your issue of May 8th has been shown to me, and my attention has been drawn to a letter headed "A Question of Courtesy," which deals with a case in my parish, I will ask you, in accordance with the motto which heads your correspondence columns, "*Audi alteram partem*," to insert a few words from me as to a portion only of Dr. Miller's statements. I say nothing as to the action of the lady guardian therein mentioned nor to that of "the parson's [i.e., my] sister," nor to that of Miss Annie McCall, M.D. Bern, &c. The two former are away from home and the latter is engaged in practice at some distance from here. I would not pretend to give an opinion on a question of medical etiquette. But I have little doubt but that those ladies could give a somewhat different version of the circumstances from that given by Dr. Miller, and I may venture to say that I am somewhat surprised to read your editorial comment upon what is nothing more than an *ex parte* statement. What concerns me is this, Dr. Miller alleges that my parish nurse "persuaded" the patient "not to come into the Cottage Hospital, but to go to Euston road Hospital." Had she done so she would have made a grave departure from her instructions, which are to work under and with the medical men in the various cases which she visits. I therefore asked her the facts of the case and she positively declares to me (1) that she did *not* persuade the patient not to go into the Cottage Hospital, but, on the contrary, urged her to do so; (2) that she never said a word to her about the Euston-road Hospital at all, and (3) that on being accused by Dr. Miller on these two heads she denied to him that she had done what he accused her of. I should not have troubled you with this letter but for this one reason, that Dr. Miller's statement respecting the parish nurse, if uncontradicted, might greatly impair the very valuable work she is doing among my sick poor without cost or charge to them. I beg to remain, your obedient servant,

H. R. COOPER SMITH, D.D.,

May 19th, 1897. Vicar of Basingstoke.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Medico-Chirurgical Society.

THE last meeting for the present session was held on the 14th inst., the President, Dr. W. L. Reid, being in the chair. Dr. Walker Downie showed a man, sixty-six years of age, on whom he had successfully operated for Septic Thrombosis of the Right Lateral Sinus. The condition had succeeded a catarrh of the middle ear and was regarded as a sequela of an attack of influenza from which the patient had suffered. A feature of the case which attracted some comment was the very slight disturbance of temperature manifested by the patient before operation. In the experience of the majority of the speakers septic sinus thrombosis was accompanied by considerable waves of febrile temperature.—Dr. T. K. Dalziell showed a woman who for seven years had been a victim to Severe Facial Neuralgia affecting all the branches of the fifth but always commencing with a burning sensation at the angle of the mouth, where also there was distinct and localised tenderness on pressure. These symptoms had been completely relieved by excision of the long buccal nerve. The operation performed was the external one, and though it had left a well-marked scar this result had been discounted before the operation, which had been deliberately selected in preference to the operation from the buccal cavity, with its attendant septic risks. Dr. Dalziel also showed a boy, aged three and a half years, who had been born with an Imperforate Anus, a condition easily relieved at the time by the passage of a blunt instrument, but in whom subsequently such an amount of cicatricial tissue developed as to cause stricture of the bowel. There had been considerable difficulty in dealing with the case, and in the end the stricture had been excised by Kraske's operation, and with very good results. Dr. Dalziel also showed a boy who had suffered from Gangrene of the Lung, believed to be due to the entrance of some particles of toast into the air passages, and who had been treated successfully by excision of the gangrenous tissue.—Mr. H. E. Clark showed the brain removed post mortem from the body of a man on whom he had operated for Cerebral Tumour. The case in its earlier developments had been seen by Dr. T. K. Monro and by Dr. Alexander Robertson, and these gentlemen contributed the clinical history. The earlier symptoms were very obscure, being

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limited to an occasional attack of vertigo and a sense of temporary numbness and weakness in the limbs of the left side. Subsequently twitchings were observed in the limbs, and on one occasion an attack of general convulsions. A family history of epilepsy to some extent confused the diagnosis, but in time headache, optic neuritis, Jacksonian spasms in the left limbs, taken with the other facts of the case, justified a conclusion of the existence of a tumour in the motor area of the right cerebral convolutions. It was decided to trephine the skull so as to gain access both to the arm and leg areas. This was done, but no tumour could be found. The bulging of the dura mater indicated the fact of undue intracranial pressure, but exploration of the brain tissue as far as this was possible was everywhere negative. At the post-mortem examination a considerable glio-sarcoma was found deeply situated in the superior parietal convolution. Mr. Clark doubted whether the tumour could have been removed under any circumstances, but pointed out that the practical surgical lesson from the case was that too much reliance must not be placed on the symptoms as indications of the precise seat of the tumour, and that in operating a large flap should be taken and if necessary numerous openings made in order to gain access to the whole motor region. Mr. Maylard supported this statement, and quoted his own experience where, in a patient with symptoms localising the tumour in the motor region, no tumour was found on trephining until a number of discs of bone were removed, and then a sarcoma was detected and successfully removed from the frontal lobe. The growth was entirely in front of the motor area, and the case therefore showed that motor disturbances did not necessarily mean direct pressure upon the motor convolutions.

Clinical Research Laboratory in Glasgow.

The directors of Anderson's College Medical School have adopted the proposal made by some members of the medical staff and have consented to the establishment of a clinical laboratory in the College buildings. It is intimated that the laboratory will be under the joint direction of Mr. R. M. Buchanan, M.B., C.M.Glasg., Professor of Forensic Medicine; Mr. R. Barclay Ness, M.B., C.M.Glasg., Professor of Therapeutics; and Mr. J. H. Teacher, M.B., C.M.Glasg.

Presentation to a Medical Man.

Mr. Robert Murdoch, Crown-street, Glasgow, has been presented with a number of medical books by the members of his ambulance class.

Provincial Infirmaries.

The directors of the Helensburgh Infirmary have received a communication from H.R.H. the Marchioness of Lorne intimating that Her Majesty the Queen has graciously consented to the use of the term "Victoria" as a title for the new infirmary. The Stirling Infirmary has received two separate donations, each of £1000, for the foundation of beds in the institution.

Aberdeen Ophthalmic Institution.

The resignation of Mr. J. McKenzie Davidson, M.B., C.M.Aberd., as ophthalmic surgeon at this institution led to an attempt to conjoin it with Aberdeen Royal Infirmary and Aberdeen Dispensary. The managers, however, resolved to continue it as a separate institution, and appointed Mr. A. Rudolf Galloway, M.A., M.B., C.M.Aberd., to succeed Dr. Davidson. Dr. Galloway has also been appointed medical officer to Aberdeen Asylum for the Blind, and Mr. Usher as ophthalmic surgeon at Aberdeen Royal Hospital for Sick Children, both in succession to Dr. Davidson, who is leaving Aberdeen. Dr. Davidson was, on the 18th inst., entertained by his professional brethren to a complimentary dinner in the Palace Hotel. Professor Ogston, Aberdeen University, presided, and in giving the toast of "Our Guest" paid a high tribute to the reputation which Dr. Davidson had made for himself in Aberdeen and the North of Scotland as an ophthalmic surgeon, and also as a teacher of ophthalmology in the medical school. Professor Stephenson, Aberdeen University, was croupier at the dinner.

Sanitary Inspectors' Congress.

This congress will take place in Aberdeen on June 17th and 18th. The corporation's public health committee will entertain the delegates to dinner, and has arranged for a drive to various places of interest in and near the city.

Aberdeen Hospital Jubilee Fund.

About £300 additional have been subscribed up to May 20th.

May 25th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Mercer's Hospital, Dublin.

THE governors, at their last meeting, on May 18th, decided to permit applications for positions on the medical staff of this hospital to be received on or before June 18th, the election to take place on July 6th. It is impossible to say at present in what way the sudden and lamented death of Mr. Frederick Alcock Nixon, a senior member of the medical staff at Mercer's Hospital and an influential member of the board of governors, may influence matters. There will probably be a good many candidates for the position. Mr. J. D. McFeely, F.R.C.S.Irel., the assistant master at the Maternity Hospital, Holles-street, intends to apply specifically for the vacancy caused by Mr. Nixon's death.

Royal College of Surgeons in Ireland.

The annual election of officers will take place on Monday, June 7th. Mr. William Thomson and Mr. R. L. Swan will certainly be re-elected unopposed as president and vice-president respectively of the college. The vacancies on the Council will be contested. Mr. T. Myles of the Richmond Hospital and Dr. Cranny of Jarvis-street are candidates, while Mr. Murray and Mr. Sherlock come forward as representing the dental interest.

The Irish Medical Association.

The annual banquet of this association will take place on Monday, June 7th, at the Royal College of Surgeons. Numerous invitations have been issued by the President, Vice-president, and Council of the Association.

National Consumption Hospital, County Wicklow.

Earl Fitzwilliam has recently presented a donation of £1000 to the fund being raised for the National Hospital for Consumption for Ireland. Sir Henry Cochrane, the high sheriff for the county of Wicklow, in which the hospital is situated, has just subscribed £100.

Belfast Students and the Royal University of Ireland.

As the result of the recent honours examinations for the M.B. degree of the Royal University of Ireland Mr. Andrew L. M'Cully of Queen's College, Belfast, was awarded first-class and an exhibition of £40, and Mr. Walter B. Robertson, M.A., of Queen's College, Belfast, gained second-class, and qualified for the £25 prize. These were the only honours men. At the third examination in medicine of the Royal University of Ireland the only honours men were Mr. Graham, B.A., and Mr. Megard, B.A., of Belfast. They obtained second-class and exhibitions of £20.

Belfast Royal Hospital.

At the quarterly meeting of the general committee of the Royal Hospital, held on May 24th, Professor Sinclair, F.R.C.S.Eng., was appointed staff surgeon in place of Mr. Fagan (resigned), and Dr. Kirk was elected assistant surgeon, and Dr. McCutcheon house surgeon for the extern department. Hospital Saturday was on May 22nd, when upwards of £310 were collected, which is an increase on last year. There is a balance against the hospital of £2624 13*s.* 9*d.*

May 25th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Developments in Skiagraphy in Paris.

THE results of much working in many directions with the x rays are now communicated weekly to the different learned societies of Paris. At the Academy of Science MM. Sabrazès and Rivière recently announced that these rays have no action whatever on cultures of bacillus prodigiosus, not interfering with its chromogenic or other properties. The rays also were found not to have the least influence upon the action of white blood corpuscles or upon the phenomena of phagocytosis, while a frog's heart exposed to the rays for several hours appeared to undergo no alteration in movement. At another meeting of the Academy of Science MM. Springer and Serbanesco gave the results of

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an investigation by the means of the rays into the processes of bone formation from cartilage and the pathological circumstances under which the development may be retarded. In myxœdema skiagraphy reveals that cartilage will remain a very long time without ossifying, and that when the patient is placed under the thyroid treatment development may go on up to the age of thirty-four years. In tuberculosis, hereditary or acquired, the cartilage persists and its ossification seems to be retarded. In hereditary syphilis the arrest of development appears due, on the other hand, to a precocious tendency to ossification. In the children of alcoholic subjects also the cartilage ossifies prematurely. To sum up, a great number of maladies modify the disposition of cartilage and its mode of ossification. Skiagraphy thus adds to our facilities for the study of faulty development a new and easily appreciable physical sign, and one which may be very useful for diagnosis and also from a therapeutical point of view.—At the Academy of Medicine M. Ollier showed recently by the x rays some of the results of bony repair after resections. From one patient M. Ollier had removed the astragalus and the skiagram showed that the bone had reproduced itself. In another patient operated upon for the results of acute osteo-myelitis, in which the astragalo-calcanean joint had been involved, M. Ollier removed the astragalus and gouged the calcaneus. Under the x rays it was seen that the calcaneus had reproduced itself and had formed a false joint with the lower end of the tibia. In another case the plate showed a white mark indicating a spot where bony formation had not taken place. In another case a bony graft was made in the middle of the tibia, filling a gap of eight centimetres in length which remained after a resection. The gap was shown to be nearly filled with reparative material, but to bring the approximating ends of the new tibia together a partial section of the peroneal muscles was necessary.—M. Bouchard at the same society communicated some results in the diagnosis of thoracic conditions arrived at by the new photography. He had been able to diagnose several cases of aortic disease. When the parts were normal he found that the pulsations of the aorta were not visible under skiagraphy, but when the valves were incompetent the skiagram showed clearly the systolic movement.—In a very interesting communication, also made to the Academy of Medicine, MM. Buguet and Gascard, professors at the School of Medicine of Rouen, have shown that the Roentgen rays are of great utility in the analysis of calculi, the approximate composition of which may now be ascertained without having recourse to the ordinary method of sawing or breaking them. By rendering the calculi transparent the rays reveal in their interior the foreign body, such as clots or solid fragments of some kind, constituting in most instances the nuclei upon which they are formed. In the case of calculi homogeneous in composition, the x rays have enabled their nature to be recognised according to their greater or less transparency. Biliary calculi are most transparent when they contain much cholesterine and comparatively little pigment. Uric acid calculi are in like manner most transparent when they contain only a small amount of calcium and magnesium salts, and ammoniaco-magnesium phosphate is of an opacity intermediate between the opacity of calcium salts and that of uric acid.

The Chair of Natural History at the Faculty of Medicine.

The Council of the Faculty of Medicine have deliberated concerning the chair of Natural History, which has now remained vacant for two years. Since the death of M. Baillon, the last occupant, new regulations with regard to medical study have somewhat modified the part played by ancillary science in the course of medical studies. Physics, chemistry, and natural history no longer form subjects of a compulsory course for the students at the Faculty of Medicine. Lectures in these subjects are given at the Faculty of Science, and after a preparatory examination in them the students are allowed to proceed to the Faculty of Medicine. The professorial chairs in these three sciences appeared thus destined to die out, as there were no longer any students to support them, but at the same time no one wished to suppress the existing professors. At the death of Professor Baillon it was agreed to do away with the chair of Natural History and there was a question of replacing it by a chair of "Parasitology," which chair has no place in the Faculty of Medicine. For two years the question has remained open and for two years the Faculty, economising to the extent of the salary of a professorship, made no haste to come to a decision. On the other hand, there was considerable feeling in favour of appointing M. Chantemesse as Professor of Natural History or of giving him a new chair of Micro-biology if it was founded. But the death of Professor Strauss having left vacant the chair of Experimental Pathology made an opening for Professor Chantemesse, who received the appointment some eight days ago. It is now decided that the chair of Natural History shall be maintained, and M. Blanchard will probably be nominated to the post in a few days. All parties will have their way in the end, as it is probable that M. Blanchard's course of lectures will deal entirely with Parasitology.

May 25th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The International Medical Congress in Moscow and State Recognition.

SCARCELY more than three months remain before the opening of the International Congress of Medicine and Surgery in Moscow. As the time approaches the committees entrusted with the preliminary arrangements are showing ever greater activity. The Organising Committee has just published a *résumé* of their work during the past eighteen months, and from this it may be seen that they have already obtained important results which should ensure the success of the Congress. Much of what is now published has already appeared in the columns of THE LANCET, but some is fresh and some will bear repetition. One of the most important statements the Committee is able to make is the fact that the Czar has taken the Congress under his patronage, and that he has consented to receive deputations from the various nationalities represented at the Congress. In this country that means much, and the Czar's gracious action will give the Congress an *éclat* and popularity which it could not otherwise have attained. It is probable that the reception will take place in St. Petersburg immediately after the close of the meetings in Moscow. The Russian Government has acted most liberally towards the Congress. It has increased its original grant of 50,000 roubles towards the expenses by an additional grant of 25,000. This makes the handsome total of 75,000 roubles, or about £8000 at the present exchange. In addition to this, as already announced in THE LANCET, the State has promised free railway tickets to members of the Congress from the frontier to Moscow and back. To Russian members similar free tickets will be granted from any part of the empire.

Moscow or Canada?

The Committee has made no public reference to the regrettable fact that two English scientific bodies have selected almost the same date for congresses to be held in Canada, but several members of the Committee have privately expressed their regret that this should be so, and are inclined to regard the action of these bodies as wanting in tact, if not in courtesy. It certainly is most unfortunate that the British Association and the British Medical Association in fixing the date for their meetings did not take into consideration the fact that the International Medical Congress had long ago been fixed for the latter half of August. Some Englishmen would probably have wished to go both to Moscow and to Canada, but this is impossible under the present arrangements, and it is certain that the coinciding congresses in the two countries will mutually act unfavourably in diminishing the numbers of Englishmen attending them. On the score of cost it seems probable that a visit to Moscow will be very much less expensive than one to Canada. From the description of the routes to Moscow recently published by the English Committee, and re-printed in full in THE LANCET,[1] it will be clear that, whichever of the interesting routes there described be chosen, the travelling expenses of the whole tour will be only from £10 to £15, and that the total expenses need in no case exceed £25 or £30. Few

[1] THE LANCET, April 24th, 1897, p. 1168.

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capitals are more interesting historically, and none are more beautiful than Moscow; and as, whatever route be taken, the traveller must, in addition, see one or more of the following towns—Berlin, Warsaw, Smolensk, St. Petersburg, Helsingfors, Stockholm, Gothenburg, Copenhagen (to mention only the more important), it is clear that a cheaper or more attractive month's holiday could not be conceived. It is probable, therefore, that with many who may have hesitated between the attractions of Canada and Moscow, the latter will carry the day. Already large numbers of Americans and a considerable number of Englishmen have joined the Russian Congress. The Executive Committee has requested all intending members to send in their names and subscriptions early. Forms of inscription may be obtained from the Secretary of the English Committee, Mr. G. H. Makins (47, Charles-street, Berkeley-square, W.). It is only necessary to fill up the form and enclose a foreign postal order for 1 guinea (or 25 francs or 10 roubles) and post it; the form is fully addressed. It is advisable to register the letter in case of loss.

Congress Literature.

The Executive Committee have in preparation a number of guides and *brochures* for presentation to each member of the Congress. A general guide to Moscow, a guide to its medical institutions, a description of the great University Clinique, and a full account of *Zemskaia Meditzina* (or Medicine of the *Zemstvos*—i.e., the system of free medical aid provided for the peasants throughout the country), are the most important of these. Dr. Neiding is also preparing a historical description of the Russian medical societies.

The Sectional Programmes and Transactions.

The programmes of the sections are now nearly ready and will in a very short time be issued in one pamphlet. The transactions of the Congress will, it is expected, fill from 200 to 250 "sheets" of paper. Copies will be sent free to every member of the Congress.

Orators and Orations.

The following is the list of orators selected by the Committee and the titles of their orations, which will be read in the general meetings of the Congress: Professor Danilevski (of Khartof) on "The Action of Electric Rays on the Animal Organism at a Distance"; Professor Lukianof (of St. Petersburg) on a subject not yet stated; Professor Krafft Ebing (of Vienna) on "The Etiology of Progressive Paralysis"; Professor Senn (of Chicago) on "The Diagnosis and Surgical Treatment of Acute Forms of Peritonitis"; Professor Lombroso (of Turin) on "New Horizons in Psychiatry"; Professor Leyden (of Berlin) on "The Present Modes of Treating Consumptive Patients and their State Control"; Dr. Lauder Brunton (of London) on "The Relationship between Physiology, Pharmacology, Pathology, and Clinical Medicine"; Professor Robert (of Barcelona) on a subject not yet stated; Professor Herzen (of Lausanne) on "The Significance of Physiological Psychology for Medical Education." Professor Virchow (of Berlin) and Professor Roux (of Paris) have also been invited to read papers, but their replies have not yet been received.

Accommodation for Members of the Congress.

Nothing has yet been finally arranged as to the accommodation of members of the Congress in Moscow. Some fifty medical men practising in the city have offered to receive foreign members as guests for the period of the Congress. The Committee find that they can count upon 700 beds at hotels and 1600 in furnished apartments as being available at the time. They hope to come to some arrangement with the principal hotel proprietors, who may offer special terms if a sufficient number of visitors be guaranteed It is proposed also to print tickets with plans and information about rooms and tariff, to be given to each member of the Congress as he arrives at the terminus in Moscow.

A Congress Postponed.

The Tenth Conference of Naturalists and Medical Practitioners, which was to have been held in August this year in Kief, has been postponed to August, 1898, in consequence of the first date clashing with that of the International Medical Congress in Moscow.

St. Petersburg, May 3rd (15th), 1897.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Scarlet Fever.

IT is well known that scarlet fever in the East is not only not the scourge it is in Europe, but is extremely rare both in Asia and in Africa. In Egypt there are no reliable records of its occurrence in any epidemic form, but since the English occupation there have been several times a few sporadic cases, which have not spread either to the English residents or to the native population. This winter there have been seven cases among the children of British soldiers occurring in six families. There is little doubt that the first case is responsible for the spread to the others, and it was therefore thought advisable to close the school in barracks, which was attended by fifty or sixty children, and since this was done there have been no fresh cases. The first case occurred about Christmas time, and it was thought that perhaps the infection might have arrived by post from England in a letter, doll, or clothing. But the parents of the child denied all communication with Europe even by letter post, and the introduction of the poison must remain a mystery. Equally impossible has it been on former occasions to discover whence the infection has arrived. It is worth pointing out that it is only during the winter months that sporadic scarlet fever has been observed among the English, while it is said to be quite unknown among the Egyptians.

Prison Department.

Crookshank Pasha has just issued a farewell report of his administration. It appears that the number of prisoners is on the increase, for on Dec. 31st, 1895, there were 8800 inmates, while on the last day of 1896 there were 10,500 male prisoners, besides 415 women. High praise is given to the medical officers, all of whom are Egyptians. During the late cholera 17 prisons were attacked, and there were 70 deaths from cholera, besides 131 deaths during the year from other causes. Two directors of provincial prisons died from cholera at Assiout and Mansurah, one of them being a medical officer.

Armenian Refugees.

The Egyptian Government has done what it can to prevent any great influx of Armenian exiles from the Turkish provinces, but there have been during the winter from 500 to 600 in Alexandria, besides about 300 who have found their way to Cairo. They are for the most part small shopkeepers or clerks and their families, unfitted for work anywhere, unable to talk Arabic, unwilling to take small salaries and coarse food, and afraid of the Soudanese climate. However, a few of them have been sent to work on the railway in Upper Egypt. In Cairo the Government has so far declined the responsibility of giving them shelter, and the charitable committee is unable to spend more on them than the £50 a month which their food costs, consisting chiefly of bread, soup, and vegetables. About 250 men, women, and children are crowded into some insanitary houses near the Armenian church, which is, unfortunately, in one of the densely populated quarters of the town. In one house there were at my visit thirty-five persons sleeping in a corridor with their beds touching each other, twenty-one were counted in a small room, and in another there were seven women, one of whom had recently been confined. Her baby and another were hanging in hammocks slung from the bedposts. The empty rooms were pervaded with the animal odour common to overcrowding, and the latrines were as primitive as might be expected. Some of the refugees are tuberculous and there have been a few cases of measles and chicken-pox among them, but fortunately as yet no typhus fever. Some English amateur theatrical performances lately provided over £300 for these unfortunate exiles.

Cairo, May 10th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

Objectionable Advertising.

IT is my unpleasant task to draw attention to a form of advertisement which is regarded—I may say universally—by members of the medical profession in this colony as highly

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objectionable, more especially as the medical profession in New Zealand are most anxious to preserve the distinction in this colony between the methods of a trade and those of a profession and to observe the rules of professional conduct which have been sanctioned from Linacre's down to the present time. The standard of the profession must be strictly kept up and rigidly maintained by each and every local branch in New Zealand. F. Wallace Mackenzie, M.B., M.S. (University of Edinburgh), practising in Wellington as an eye and ear specialist, has received for some years past almost the entire share of attention and courtesy (as far as his specialty is concerned at least) from, not only medical practitioners in Wellington, but also from those of his professional brethren in other parts of the colony, but more especially from those residing in Napier, Wanganui, Taranaki, and the east and west coast of the North Island generally. In this respect, having regard to his practice, Dr. Mackenzie can have no possible ground for complaint. Now the only unpleasant transaction that occurred during the Inter-colonial Medical Congress week, held at Dunedin in February, 1896—a gathering of medical men which will be remembered for years to come with the greatest satisfaction by all those who were fortunate enough to be able to be present—was a complaint by the members of the Napier Branch of the New Zealand Medical Association against Dr. F. Wallace Mackenzie, of Wellington, for advertising in their local paper by announcing himself in the following manner: "That Dr. F. Wallace Mackenzie, of Wellington, would arrive in Napier on such and such a day, and could be consulted at such and such a pharmacy." Now no notice of motion had been tabled, but in reply to Dr. Milne-Thomson (who acted as delegate for the Napier Branch) the president of the meeting stated that he was willing and able in the circumstances to give a decision on the interpretation of a rule. In this way Dr. Milne-Thomson was enabled to bring the subject up for a ruling. The delegate acting for the Napier Branch read the advertisement in the *Hawke's Bay Herald* announcing Dr. Mackenzie's intention to visit Napier on certain dates, and stated that what the Napier Branch maintained was "that any medical man practising in New Zealand should not be allowed to advertise his intention to visit a neighbouring town or district, and that this particular advertisement was contrary to the rules of the Medical Association." This rule had been passed at the previous Auckland meeting. A discussion then ensued as to whether this was or was not a rule of the Association. The President (Dr. Lindo Ferguson of Dunedin) replied: "That it was certainly a rule which had been adopted by the Auckland meeting, which had adopted a very high standard, and it seemed to him that there could be no argument about the decision. An advertisement was permissible to a person carrying on a practice for two months in the town or county in which he proposed to practise and no more. The form of the advertisement was absolutely laid down, and the practitioner was not allowed even to insert his hours of consultation or his qualification, and that it was not necessary for the Council to express any further opinion. The subject was so clear that argument was out of the question." The medical men practising in Napier felt that Dr. Mackenzie had no right to announce himself in this manner in the locality of Napier, where a specialist in diseases of the eye and ear, who has gained the confidence of his medical brethren, resides. Now, after Dr. Mackenzie's experiences in connexion with the Napier branch's strictures on his advertising methods I should have thought that he would not allow himself to be placed in such an equivocal position again. This does not appear, however, to be the case, as the following advertisement, which appeared in the *Wanganui Herald* during the end of February and the beginning of March, 1897, indicates:—

NOTICE.

DR. F. WALLACE MACKENZIE has removed from 139, Upper Willis Street to 162, Upper Willis Street, Wellington, opposite St. Peter's Church.

Dr. F. Wallace Mackenzie, the well-known specialist, of Wellington, has removed from 139, Upper Willis Street. His present address is 162, Upper Willis Street, opposite St. Peter's Church, Wellington.

Dr. Mackenzie purposes being in Wanganui on the 16th, and will stay at Chavannes' Hotel.

In nothing is the tradition of medical conduct more particular than in reference to the treatment of medical brethren. There is no sin more gross in medical ethics than the combination of medical men formed with the object of "running off the road" by disparaging and harsh statements the professional skill and personal character of a brother practitioner, and I have no desire to unduly hurt Dr. Mackenzie's feelings, but he must be taught to observe our honourable traditions and maintain them. The above advertisement having been inserted in the *Wanganui Herald* for ten days or so, it was decided to call a meeting of all the members of the profession practising in Wanganui to discuss Dr. Mackenzie's attitude. It was then unanimously decided that the following communication should be forwarded to the honorary secretary of the Wellington branch of the New Zealand Medical Association for their consideration, and a copy of it forwarded to Dr. Mackenzie.

Wanganui, March 6th, 1897.

The Hon. Secretary, Wellington Branch of the New Zealand Medical Association.

SIR,—We beg to draw your attention to a notice which is appearing in the *Wanganui Herald* and we forward you a copy of the newspaper containing the same [notice as already printed above]. We beg to submit that the insertion of the above notice in a Wanganui paper, over a hundred miles from the residence of Dr. Mackenzie, is uncalled for, and not in accordance with the best traditions of the profession.

Signed by all the members of the medical profession practising in Wanganui.

The Wanganui society's honorary secretary received the following letter in reply from Dr. Mackenzie:—

Mr. Hatherly. Wellington, March 9th, 1897.

DEAR SIR,—The Wellington branch of the association was wound up at the February meeting. The branch had a rule *re* advertising to the effect that a member on changing his address might advertise the fact in the papers in the district in which he is practising for a period of fourteen days. My advertisement is strictly in accordance with that rule; the district in which I am practising is the Wellington Provincial District, which to me for practice far exceeds the limits of the province itself. Kindly inform those who were anxious for enlightenment that, firstly, my innocent little notice was for the benefit of my patients solely; I do not require to advertise myself—my friends do that. Secondly, the advertisement was called for by a local appearing in the *N.Z. Graphic* to the effect that I was giving up practice in Wellington and going to settle in Picton, the fact being that I had merely moved into a new house without advertising the fact of my removal. Thirdly, if the mortmain of tradition is going to lay its icy grasp on the profession here, if the profession is to be guided by the traditions of the past rather than by the good sense of the present, I am sorry for it. Since you do not like the ad. it will not appear any more.

Yours faithfully,

F. WALLACE MACKENZIE.

Dr. Mackenzie's ideas concerning the "icy grasp of tradition" are unique. I trust that this will be the last occasion upon which I shall have to criticise in such a case. It is a most unpleasant task, but it is one that has to be performed when the occasion demands it.

Cancer in New Zealand.

By a recent return of the Registrar-General the deaths from cancer during the year 1896 amounted to 389, of which number 205 were males and 184 females, the rate of mortality per 10,000 living being equal to 5·50. The apparent increase, however, of the deaths shown in the table below is in all probability due to a more advanced care in diagnosis and a more accurate return as shown in the death certificates than had existed during the previous decade. The total deaths from all causes in the colony during the year 1896 totalled 6432. By these figures, then, it is shown that the percentage of deaths due to malignant disease is equivalent to 6 per cent. on the whole death-rate. The following table shows the number of deaths from cancer in every 10,000:—

Year.	New Zealand.	England.
1881	2·69	5·20
1886	3·63	5·90
1891	4·68	6·92
1896	5·50	7·13 (1894)

New Zealand Annual Medical Conference.

The 1897 Conference of the members of the medical profession was held this year at Nelson on March 9th and following days, under the able presidency of Dr. Cleghorn, who gave a most carefully prepared and practical address treating for the most part on the club question and on general matters in which the profession and the public were mutually concerned. I hope to forward a complete account of the proceedings by the next mail. The meeting was a great success from a scientific and social point of view, and the visitors from various parts of the colony were most hospitably entertained by their professional brethren practising at Nelson.

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Obituary.

GEORGE CHAPMAN BRIGGS, M.B. LOND., M.R.C.S. ENG., L.S.A.

WE regret to have to record the death of Dr. G. C. Briggs, of Harrow-on-the-Hill, which occurred on May 5th from diabetic coma. Born in 1847 at Burgh-le-Marsh, in Lincolnshire, his father farming his own land in that county, he was educated at Uppingham School under the well-known Dr. Thring, and after reaching the sixth form he left to commence his studies for the medical profession by serving an apprenticeship to his uncle, the late Mr. Frederick Fawssitt, F.R.C.S., of Wisbech. In 1867 he became a matriculated student of King's College, London, and obtained a junior scholarship, two years later the Warneford scholarship, and the senior scholarship in 1871. He was also a prizeman in obstetrics, chemistry, and other subjects. After qualifying in 1871 he held the post of resident accoucheur in King's College Hospital and graduated M.B. Lond. in 1874. In the same year he became the junior partner in the firm of Bridgwater and Tonge at Harrow-on-the-Hill, and at the time of his death was the senior member of the firm of Briggs, Bindloss, and Lambert. For the last ten years Dr. Briggs has acted as chief medical officer to Harrow School in addition to other public appointments, such as Poor-law medical officer and public vaccinator to the Harrow district. He was also a member of the Council of the Medical Officers of Schools Association. Dr. Briggs had no special pursuits or hobbies outside his profession, and may be said to have thrown the whole of his energies into his work. Possessed of great natural ability, and of a genial and kindly disposition, he was beloved and esteemed both by his patients and by all who knew him, whether rich or poor, and although for the last six years he was aware that he was the subject of a dangerous and debilitating disease, he worked on cheerfully and with an unselfish devotion, placing the interests and welfare of his patients before everything. A few weeks ago he was attacked with middle ear disease and, diabetic coma supervening, the end soon came.

He married in 1879 the daughter of Mr. H. G. Cooke, of Alverstoke, near Gosport, Hants, and the sister of Dr. Marriott Cooke, his friend and fellow-student at King's, who is now the superintendent of the Worcester County Asylum. Mrs. Briggs survives him, as do two sons, who are now studying at Harrow School. His body was laid to rest in the churchyard adjoining the old parish church at Harrow, and was followed to the grave by many sorrowing relations and friends.

EVAN DAVIES, L.R.C.P. & S. EDIN., &c.

THE neighbourhood of Maesteg, Glamorganshire heard with much regret of the death of Mr. Evan Davies, which took place on May 18th under sad circumstances. Mr. Davies was thrown from his horse on the preceding day, whilst returning from visiting a patient, and sustained a fracture of the skull, his injuries soon proving fatal. The deceased received his medical education at the Glasgow University and the Western Infirmary, Glasgow, and obtained the qualifications of L.R.C.P. & S. Edin., L.F.P.S. and L.M. Glasg., in 1892. He was surgeon to North's Navigation Collieries, and formerly held the appointment of medical officer of health for the Maesteg Urban District. He was only thirty years of age at the time of his death, and was extremely popular in the district. On May 22nd he was to have been presented with a gold pendant, bearing a suitable inscription by the members of the St. John Ambulance Class, of which he was the honorary instructor. The funeral, which was a public one, was largely attended.

DEATHS OF EMINENT FOREIGN MEDICAL MEN. — The deaths of the following eminent medical men are announced:—Dr. Charles Dubreuilh, formerly surgeon to the Bordeaux Hospitals.—Dr. Adolfo Moreno Pozo, Professor of Topographical Anatomy and of Operative Medicine in the University of Madrid.—Dr. H. Sünder y Rodiguez, a well-known Madrid surgeon.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE sixty-second session of the General Council of Medical Education and Registration was opened on Tuesday, May 25th, by the President, Sir Richard Quain.

Sir Richard Quain delivered his address with an energy surprising to those with knowledge of the grave illness through which he has lately passed and to which he alluded with some feeling. It may safely be said that scarcely any other man in London would have attempted such an undertaking in the same circumstances, and with equal certainty it may be affirmed that Sir Richard Quain would not have allowed any patient of his to do so. Either he has more indulgent advisers than his patients have, or he is, as one of his distinguished colleagues said, a law unto himself.

The new Pharmacopœia begins to loom in the distance. Large parcels in brown paper might be seen before each member of the Council on the first day of the session which turned out to be proofs of the work—in a very imperfect state, of course. It is expected, as the President said, to be completed by the November meeting. Meanwhile, its present state of forwardness must be consolatory to Sir Richard Quain, who has always taken great interest in this part of the Council's work and regards the pilotage of the new edition as his chief work for the Council.

The varied character of the business of the Council will be best gathered from the opening address of the President and the forecast in THE LANCET of last week. The most noticeable event of consequence in the proceedings up to the time of our writing is the resolution of the Council to act on the direction of the Privy Council in the matter of the appointment of Surgical Examiners for the Apothecaries' Hall of Dublin. Our readers will doubtless study for themselves the statement on this subject submitted to the General Medical Council by its legal advisers. It contains a gentle—we will not say rebuke but—reminder that the course taken by the General Medical Council was never favoured by its legal advisers. They have been throughout of opinion that in the circumstances the Council had no option but to appoint surgical examiners to a medical corporation that had failed to find in its own part of the kingdom a surgical corporation to act in conjunction with it. The General Medical Council, construing the words "if it see fit" in the common-sense way in which all men but lawyers construe them thought it had a discretion. It has been disabused, and now accepts the legal reading with a fair amount of grace and with the comforting assurance of the lawyers that whatever happens the Council is relieved of all responsibility.

The examiners whom it will now appoint will be not merely examiners but inspectors, for it will be their duty under Clause 2 of Section 5 of the Act of 1886 to secure at the examinations the maintenance of such standard of proficiency as is required by the Act. The whole incident is a very noticeable one in the profession. It not only helps the General Medical Council to realise that in the last result the Privy Council is a *superior medical* authority, having power to do that which the Council fails to do in the construction or continuance of the medical institutions of the country, but it will bring home to the medical profession its subjection to law—or, rather, to lawyers and their construction of law.

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The Privy Council has shown on the whole consideration to the General Medical Council while maintaining a strict and technically legal view of the Act. Meantime the Apothecaries' Hall of Ireland has a new lease of life and a new opportunity of showing that (as the Duke of Devonshire, with very doubtful grounds, seemed to think) it is really the gate and entrance of a considerable number of the general practitioners of Ireland. Everybody will wish and believe that in this new lease of life it may have every fair-play at the hands of the General Medical Council.

The subject of the Midwives Bill came transiently before the Council at its first sitting. A tendency to warmth on the very mention of the subject was creditably restrained, and all parties accepted a motion by Dr. McVail that inquiry be made as to whether the Government still desired the Council to consider the Bill this session. The Government, in referring all such Bills to the General Medical Council recognises the medical importance of the question and imposes on the Council the duty of attention.

The Council on Thursday, after approving the minutes of Wednesday's proceedings, engaged in the consideration of a number of penal cases. Our report of what was done will be published in next week's issue. The Council adopted the form of the address to be presented to Her Majesty the Queen on the occasion of the completion of the sixtieth year of her reign, and they received a statement from the President with regard to the deputation on the subject of death certification to the President of the Local Government Board. He said the deputation would, among other things, press upon the President the registration of undertakers and the separation of deaths from births and marriages.

It was agreed by the Council to make representations to the Privy Council with regard to a proposed law in Italy modifying the law of the country which permits foreign medical men to practise there.

The report of the Pharmacopœia Committee was also brought up on Thursday morning and adopted.

TUESDAY, MAY 25TH.

THE sixty-second session of the General Council of Medical Education and Registration was opened to-day in the offices of the Council, Oxford-street, London. To the great satisfaction of all the members Sir Richard Quain was able to take his accustomed place in the chair and to open the session as usual with a short presidential address.

The Recently Elected Direct Representatives.

Dr. R. R. Rentoul, Mr. George Brown, and Dr. Glover, the new Direct Representatives for England, attended, and Dr. Glover introduced to the President his two colleagues. Dr. Bruce, the Direct Representative of the Scottish practitioners, was also in his place.

Introduction of Professor Robert William Reid.

Sir WILLIAM TURNER introduced Professor Robert William Reid, the successor of Dr. Angus Fraser in the representation of the University of Aberdeen.

The President's Address.

The PRESIDENT commenced his address with some words of welcome to the new members and a sympathetic reference to the failing health and consequent retirement of Mr. W. J. C. Miller, the Registrar of the Council, and continuing said:—

Since our last session we have completed the purchase of the remaining (leasehold) interest of the Office of Works in our premises, and those of the tenant in Hanover-square. The purchase of the freehold and leasehold of the premises, together with all the expenses incidental thereto and to the re-building and alterations which have been undertaken, have cost the Council £22,506 13*s.* 10*d.*, an amount which has been advanced by the English Branch Council at 3 per cent. interest. We may therefore consider that we hold both the premises at a rent of £675 per annum. From this sum we have to deduct £250 per annum paid for 16, Hanover-square, leaving our rental at £425 compared with a former nominal rental of £300 which was paid to the Office of Works for the unaltered premises. Our additional rental, therefore, will amount to £125 per annum for eight years, when the whole premises in Hanover-square and Oxford-street will be at our own disposal. We have taken such action as was possible in the matter of the registration of deaths. The Council's resolution of Nov. 27th, 1896, in regard to death certification was formally communicated to the Registrar-General on Dec. 3rd, 1896. He answered to the effect that so far as the law was concerned he was unable to find any irregularity in the conduct of the registrar of Hetton-le-Hole in accepting the informal "statement from the unregistered—perhaps unqualified—attendant as part of the information of the informant." Such being the answer of the Registrar-General, we had, in accordance with the direction of the Council, to seek an interview with the President of the Local Government Board. Various circumstances, including the illness of the President of the Board, and the absence abroad on important official business of Dr. Thorne Thorne, have rendered it hitherto impossible to obtain an interview with the right honourable gentleman. In the meantime an important statement has been prepared, with the assistance of the legal advisers of the Council, for submission to him, and an early opportunity will be sought of presenting it by a deputation. The Executive Committee has prepared a Report on the Disciplinary Powers of the Licensing Bodies—a matter which was referred back to it by the General Council on Nov. 24th, 1896. It will be seen that two bodies—viz., the Victoria University and the University of Durham—have taken steps in the direction of obtaining modifications of their Charters, which would give them penal powers over their graduates. The University of Cambridge has already obtained, and exercised, such powers, and the Royal University of Ireland is said to be engaged in obtaining them. It is much to be regretted that the Scottish Universities still find difficulty in moving in the matter. I have very great satisfaction in announcing that the material for the British Pharmacopœia has been completed, and will be placed in the hands of the Council during the present session. This material has been most thoroughly revised by the eminent experts who were invited to assist in the revision, and who have done so with great care. The most hearty thanks of the Council are due to these gentlemen for their services, to the Pharmacopœia Committee of the Pharmaceutical Society, and also to the Pharmacopœia Committee of the Council. We have recently taken advantage of the introduction into Parliament of a measure for the regulation of the payment of the Metropolitan Police to propose the insertion of a clause, giving the penalties inflicted in all cases under the Medical Acts to the treasurers of the General Medical Council, so as to fulfil the intention of the provisions of the Medical Act, 1858, Section 42. It will be remembered that in London the penalties go to the police, and that claims to these penalties have arisen also—outside the Metropolis—under certain local Acts.

[Sir Richard Quain here mentioned that the business before the Council would include the decision and direction of the Privy Council with reference to the appeal of the Apothecaries' Hall of Dublin, the question of the Medical Aid Associations, a revised Standing Order Dealing with Penal Removals, and Reports by the Dental Education, the Examination, and other committees. He continued:]

A Bill for the Registration of Midwives (entitled the "Midwives Registration Bill") was forwarded from the Privy Council Office on Feb. 16th ult., with a request that the General Council would favour their lordships with an opinion thereon, and the Executive Committee, at its meeting on Feb. 22nd, directed that the resolutions passed by the Council on Nov. 29th, 1889, and June 5th, 1895, should be forwarded to the Privy Council. Dr. Rentoul has informed me that he had prepared a Bill which he was desirous of submitting to the Council on the subject of Midwives, but I pointed out to him the very decided language used by the Council on Nov. 29th, 1889, on the subject of not interfering with legislation for Midwives. The closer we keep within the paths marked out for us by our Statutory Powers, the less trouble we shall have, and the more satisfactory will be the result of our proceedings.

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Sir WILLIAM TURNER moved that the President be thanked for his address and be requested to allow it to be entered on the minutes. He ventured to say that they ought not to regard this as a mere formal motion. They all knew the very severe operation that he (the President) had to undergo not many weeks ago, and they were glad to think that he had so successfully recovered from it and that he felt able to preside over them on this occasion.

Mr. BRYANT, seconding this motion, desired to echo what Sir William Turner had said.

The PRESIDENT thanked the Council for their kindness, and said that whilst he was spared to live he would do his best for the Council.

Business Committee.

Mr. ALLEN, who, in the absence of Mr. Miller, acted as clerk, intimated that Mr. Bryant, Dr. MacAlister, Dr. Moore, and Sir William Turner had been nominated to the Business Committee.

Mr. GEORGE BROWN thought that there should be one of the Direct Representatives on this committee, seeing that there were matters coming before the Council of very great interest to general practitioners. Perhaps Mr. Bryant would see his way to retire in favour of Dr. Glover.

The PRESIDENT said that there was no order of this kind. These gentlemen were selected by reason of their knowledge of the business of the Council and their experience, and they were the best men that could be named for the purpose.

Dr. BRUCE said that, speaking as one of the Direct Representatives, he thought they could not get a better man on the committee than Dr. MacAlister.

The committee as proposed was thereupon agreed to.

The Queen's Jubilee.

The PRESIDENT moved that a committee be appointed to prepare an appropriate address to Her Majesty on the completion of the sixtieth year of her reign. He was sure it would be the spontaneous wish of the Council that they should present an address on this occasion.

The motion was at once carried with acclamation, as was also a motion to expend a suitable sum upon illuminations on Jubilee Day.

Results of Examinations.

Mr. ALLEN presented a number of tabulated statements showing the results of various examinations in 1896.

Dr. HERON WATSON moved a vote of thanks, which was seconded by Dr. THORNE THORNE, to certain officials who had supplied information for the statements.

Dr. ATTHILL said he was anxious to know whether it would be possible to obtain information which would enable them to trace the candidates who had failed in any particular subject. They had received a circular in Ireland stating that a Licentiate of his College had failed in spelling, and he thought it most desirable that they should know where such a Licentiate received his certificate of preliminary education.

Mr. ALLEN said that after the last meeting of the Executive Committee he had applied to the Navy Department asking for the names of candidates, and they wrote back expressing regret that they could not supply them.

Mr. GEORGE BROWN said it was a great scandal that men should be admitted into the medical profession who did not understand the elementary rules of the English language in regard to spelling. From these returns he found men were passed with 26·7 per cent. of marks, 28·3 per cent., 36·6 per cent. and so on, very many being under 50 per cent.

Sir DYCE DUCKWORTH said that this question had been carefully considered by the Naval Medical Examining Body, of which he was a member. As a Board they could do nothing, for they examined numbers not men, but they found abundant evidence of defective preliminary education. It was quite manifest that men were allowed to pass who were very deficient in general education, and he thought it was the duty of this Council to call upon all the examining bodies to furnish them with the means of getting information about them. It had been proposed that this might be done by insisting that every candidate for a diploma when he registered himself as a student, should put alongside his name the body before which he passed his preliminary examination. In that way it would be possible to trace him. The examining bodies appeared to wash their hands of this matter entirely. It was true, of course, that very often many of these men who could not spell and knew nothing about punctuation and could not construct a grammatical sentence were exceedingly well up in their professional work. At the same time he thought they should get at the root of this matter and find who it was who was responsible for the admission of men of inadequate education into the profession.

Dr. BATTY TUKE reminded the Council of what had been done by them last year, and said that the Education Committee was carefully considering how the standard of preliminary education could be raised and would report next November.

Dr. HERON WATSON said that this debate could have no relevance to the motion before the Council.

Dr. ATTHILL said he would be quite willing to postpone it.

Dr. MACALISTER suggested that the Council might furnish the Navy and the Army Board with a copy of the Students' Register, and they might communicate with the Council with reference to particular candidates without mentioning any names.

The motion was then adopted.

The Application of the Apothecaries' Hall of Dublin.

Mr. ALLEN read the order of the Privy Council directing this Council to appoint assistant examiners in surgery in the Medical Act of 1886 for the purpose of qualifying examinations to be held by the Apothecaries' Hall of Dublin.

Mr. ALLEN also read the following statement by the Council's legal advisers, viz. :—

Understanding that some members of the Medical Council wish for further information respecting the procedure of the Council, and the result of the decision of the Privy Council in the Apothecaries' Hall, Dublin, case, the legal advisers of the Medical Council submit the following statement:—

1. After the combination of the Royal College of Surgeons with the Apothecaries' Hall had come to an end, the Apothecaries' Hall reported to the Medical Council their inability to combine with any other Corporation, and applied to the Medical Council to appoint assistant examiners in accordance with Section 5 of the Medical Act, 1886. On the consideration by the Medical Council of the application of the Apothecaries' Hall, the opinion of the Council's legal advisers, as expressed to the Council, was that the grounds on which it was proposed to refuse the application of the Hall involved in effect an exercise by the Medical Council of a jurisdiction which properly belonged to the Privy Council alone.

2. The Medical Council having declined to accede to the application of the Hall, that body applied to the Privy Council, who referred the matter back to the Medical Council for reconsideration. The Medical Council thereupon gave the Apothecaries' Hall a further opportunity of trying to effect the necessary combination; but the Hall was unable to effect it and reported its inability to the Medical Council, and again applied for the appointment of examiners.

3. The Medical Council having again refused to appoint examiners, the hearing before the Privy Council was resumed, and the Privy Council came practically to the conclusion that the procedure adopted by the Medical Council in refusing to appoint assistant examiners for the Hall was not a regular exercise by the Medical Council of their jurisdiction, the power to deprive a body of its right to hold a qualifying examination being vested solely in the Privy Council. The Privy Council accordingly by their decision directed the Medical Council to appoint assistant examiners in surgery.

4. The direction given by the Privy Council relieves the Medical Council from all responsibility in the matter.

5. The Privy Council, besides being the highest judicial tribunal in the United Kingdom, is the tribunal on whom Parliament has conferred a special and plenary authority to act as the lords of the Council think fit in such a matter as an application by one of the medical corporations for the appointment of assistant examiners. (Act of 1886, Section 19.)

6. The legal advisers of the Medical Council are of opinion that the Privy Council has not by its direction to the Medical Council intended to interfere, or, in fact, interfered, with the Medical Council in the exercise by the Medical Council of its statutory jurisdiction, but that the view adopted by the Privy Council has been that the Medical Council had in its refusal to accede to the application of the Hall in effect taken upon itself to exercise a jurisdiction which belonged to the Privy Council alone and not to the Medical Council.

7. The legal advisers of the Medical Council respectfully suggest in these circumstances that the direction of the Privy Council should be acted on without comment.

Mr. ALLEN further read a letter from the secretary of the Apothecaries' Hall of Dublin, laying before the Council the names of two gentlemen who were proposed as assistant examiners in surgery.

Mr. TICHBORNE said that to put the matter in form he would move the following motion—

"That, subject to the orders of the Council, Messieurs—

"L. Hepenstal Ormsby, M.D., F.R.C.S., Surgeon to the Meath Hospital and County of Dublin Infirmary; Surgeon to the Children's Hospital, Dublin; and ex-Examiner in Surgery, Royal College of Surgeons, Ireland;

"Frederick Conway Dwyer, M.D., B. Ch. Univ. Dublin; Sen. Mod. and Gold Medal in Exper. Science, Ex. Med. Schol., T.C.D., Surgeon, Jervis-street Hospital; Demonstrator of Anatomy, Royal College of Surgeons, Ireland;

"be appointed by the Council to be Surgical Examiners to assist the Apothecaries' Hall of Ireland in the conduct of its qualifying examinations."

These names were the names laid before the Council in the letter of the secretary of the Hall, and were the names of gentlemen well qualified to act as examiners.

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Sir JOHN BANKS seconded the motion, saying that he knew the two gentlemen to be highly fit and proper persons to be engaged in this work.

Mr. BRYANT said that this was a subject which he thought would be better discussed by a small committee, and he begged to move as an amendment: "That the Council act on the direction of the Privy Council and appoint a committee to nominate the assistant examiners, to recommend the amount of the remuneration to be attached to the office, and to report to the Council during the present session."

Dr. BATTY TUKE seconded this amendment.

Dr. THORNE THORNE said it was important for the Council to remember that the duty of these assistant examiners would be to secure at the examinations the maintenance of such standard of proficiency in surgery as was required.

Sir DYCE DUCKWORTH said he should like to make a few remarks upon the statement of the legal advisers. For many years the Council had been doing this work of inspecting examinations, and he, as chairman of the Examination Committee, felt very keenly on the matter. As the result of these inspections the Apothecaries' Hall was reported again and again as inadequate, and the Council took definite action upon that. The Council had done its duty most carefully and prudently. Every step was taken by the direction, and under the eye, and by the advice, of their legal advisers, and therefore he found great difficulty when he read this statement which had been put before the Council. What else could they do than they had been advised to do? If they were told that everything turned upon these words, "if we see fit," and they were told that the legal interpretation of these words was that "if you see fit you shall," his reply was that they were not lawyers at that table. They were ordinary Englishmen of common sense, and the ordinary interpretation of the words entailed the exercise of discretion. The Council exercising its discretion acted as it did. The work of the members of the Council had been rudely interfered with, and the question was whether it was of any use for them to continue this work of inspection of examinations. What was the use of inspecting bodies if they had no power of action? It seemed to him that the Act would require to be altered so as to enable the Council to be of any further use, and those words would have to be removed from the Act or interpreted in some intelligible way. They were told that the Privy Council had not intended to interfere, and had not, in fact, interfered with the discretion and usefulness of the Medical Council. That, he maintained, was not the opinion of the majority of those who sat around that table. He thought it would be found that their authority had been most seriously encroached upon and their usefulness greatly impaired, and that, in fact, their action as a statutory body appointed for definite purposes was completely stultified.

The PRESIDENT said it would be the duty of the Medical Council to see that a proper standard of proficiency was required at the examinations and to report to the Privy Council.

Dr. GLOVER said he could not take the view that Sir Dyce Duckworth did. He had this advantage over Sir Dyce Duckworth, that he had heard the proceedings before the Privy Council on both occasions. He was convinced that the Privy Council acted as if they felt the greatest respect for the General Medical Council, and he saw nothing in what had happened to alter that view. He hoped the Council would clearly understand that what had been established was that there had been some error in the Council's proceedings. They did not lose any moral force as the result of the decision. They had the same rights as they ever had, and if any representation required to be made in future as to the inefficiency of one of the qualifying bodies that representation would have effect. In this case, according to the opinion of the Privy Council and according to the General Medical Council's own legal advisers, the Council had proceeded in a wrong manner. He did hope, therefore, that the Council would not adopt Sir Dyce Duckworth's opinion that there was anything disparaging to the General Medical Council in the course which the Privy Council had taken. If the examinations of the Apothecaries' Hall of Dublin did not in the new circumstances proceed to the Council's satisfaction they could make a representation to that effect to the Privy Council. In this instance he was convinced that the Privy Council had acted under a great sense of responsibility, and were only anxious to act with the General Medical Council to promote the ends that Council had in view.

Mr. TICHBORNE, who mentioned that he also had heard the whole proceedings in the appeal, endorsed all that Dr. Glover had said, and he was quite sure that the Privy Council had treated the General Medical Council with the greatest respect. To his mind that was the reason why the authorities of the Apothecaries' Hall had been sent back to the General Medical Council.

Mr. TEALE said he also could not agree with Sir Dyce Duckworth. The whole thing had arisen because the Council had got into an anomalous position. The body the General Medical Council brought before the Privy Council was not the Apothecaries' Hall, but the Conjoint Board, a body which had ceased to exist before the General Medical Council's representation could take effect. The Council had thought they were able to exercise a certain discretion, but the decision of the Privy Council showed that they could not. The decision did not alter his mind in the least. What they had to do was to appoint examiners as the Privy Council directed, and having done that if the examinations were not to the Council's satisfaction they could report to that effect.

Professor GAIRDNER pointed out that when this matter last came back to them from the Privy Council it came back in an indefinite form, and in connexion with the application by the Apothecaries' Hall to appoint, not only surgical, but also medical examiners. That was the last shape in which the matter was last before them, and all the proceedings bore on that aspect. In that aspect of it he agreed with a great deal that Sir Dyce Duckworth had said. The Council had condemned the medical side of the Apothecaries' Hall, and it was apparently a very inconsistent thing for them to help a body to get examinations which it had been conducting inefficiently. What the Privy Council asked them to do now was something quite different in principle. It was not the medical examiners, but the surgical, that they were now asked to appoint, and the reasons for their being directed to appoint these surgical examiners had no reference to the efficiency of the Apothecaries' Hall in its own department. Its reference was simply to the fact that unless the Council appointed these examiners the Apothecaries' Hall would be disabled by a side wind from conducting examinations that would qualify because the Hall could not get any of the other bodies in Ireland or elsewhere to give these examiners. While agreeing with Sir Dyce Duckworth that the position was a difficult one for the Council, he yet thought it amounted only to this, that they had simply to do now what they had statutory powers to do in order to enable the body in question to conduct examinations in legal form legally.

Sir WILLIAM TURNER pointed out that the proposals raised the question whether they should appoint examiners at once or defer the appointment till a committee had considered the matter. The amendment included the question of remuneration. That was a very important matter and one which was specially referred to in the Act. There was a specific sub-section of the Act referring to it, and it seemed to him that they could not pass such a motion as that proposed by Mr. Tichborne in the form in which it was given to them because they must specify the amount of remuneration that was to be given. The amendment, therefore, was a proposal which he thought they might well adopt at this stage of the discussion.

Mr. TICHBORNE was perfectly willing to accept the general principles just laid down. Reference to a committee would be a perfectly good way of dealing with the matter, but the Apothecaries' Hall ought to be represented on any committee appointed. The Hall would be prepared as regards any remuneration the Council might fix. When last the Council granted examiners for the Hall they fixed the remuneration at five guineas for each of the examiners at each examination.

With the consent of the seconder the motion was withdrawn and Mr. Bryant's proposal was unanimously adopted. A committee of the following seven members was then appointed—viz., Mr. Bryant, Mr. Tichborne, Dr. Heron Watson, Mr. Teale, Dr. Batty Tuke, Mr. Brudenell Carter, and Sir John Banks.

On the motion of Dr. THORNE THORNE, seconded by Dr. MACALISTER, it was agreed to print and circulate among the members of the Council the full report of the proceedings in the appeal to the Privy Council.

Midwives Registration Bill.

The next business was the consideration of a communication from the Privy Council transmitting a copy of the Midwives Registration Bill introduced into the House of

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Commons on Feb. 9th, together with a resolution thereon adopted by the Executive Committee on Feb. 22nd last. The following were the documents :—

(i.) COMMUNICATION FROM THE PRIVY COUNCIL.

"78,360. "Privy Council Office, Whitehall,
"February 16th, 1897.

"SIR,—I am directed by the Lords of the Council to transmit to you, to be laid before the General Medical Council, the accompanying copy of the 'Registration of Midwives' Bill, which has been introduced this session in the House of Commons by Mr. Tatton Egerton and others.

"I am to request you to be so good as to move the General Medical Council to favour their lordships with their opinion on the Bill in question. "I am, Sir, your obedient servant,

"C. L. PEEL.

"The Registrar of the General Medical Council."

(ii.) RESOLUTION BY THE EXECUTIVE COMMITTEE.

"*Resolved*: 'That the following be sent to the Privy Council as the answer of the Committee to this communication :—

"'That, as the meeting of the General Medical Council does not take place until May 24th, the Registration of Midwives Bill cannot be submitted for the opinion of the Council until that date; but that under these circumstances the Executive Committee, who have authority to act for the Medical Council, beg to forward for the information of the Lords of the Council the enclosed resolutions, which were adopted by the Council on Nov. 29th, 1889, and on June 5th, 1895, on the Midwives Registration Bill, transmitted by the Lord President on May 16th, 1895, with the request that the Council would favour him with observations on it.'"

The resolutions referred to in the foregoing were :—

1. Moved by Sir JOHN SIMON, and seconded by Sir WALTER FOSTER, and agreed to :—

"That, if any department of Her Majesty's Government were constituted controlling authority in relation to local arrangements made under statute for the licensing and registration of midwives, the Medical Council would, if the Government department so wished, be willing to advise as to the general rules of education, examination, and discipline which ought to be established in the matter; but the Council would not be able to discharge, and would, therefore, not be prepared to undertake, any duties of detail as to the registration of midwives or as to the local arrangements for licensing and controlling them.—Nov. 29th, 1889."

2. Moved by Sir WILLIAM TURNER, seconded by Mr. TEALE, and agreed to :—

"That it should be pointed out that the General Medical Council, as the supervising authority over the Midwives Board, will require to devote each session a portion of its sittings to the business of that Board, and will incur expenses in connexion therewith. As the funds of the Council consist solely of the fees paid by medical practitioners for admission to the Medical Register, it does not seem to be equitable that they should be expended in payment of work to be imposed by statute on the Council in connexion with the supervision of the Midwives Board. Further, the practitioners in Scotland and Ireland would be contributing to pay the expenses of an Act applying only to England and Wales. The Council would point out that as the Bill has been introduced in the interests of the public, and as the midwives are not in a position to pay large fees for purposes of registration, a grant should be made by the Treasury to meet the expenses of the Midwives Board and the additional charges imposed on the Medical Council.—June 5th, 1895."

On the motion of Sir WILLIAM TURNER these several documents were entered on the minutes.

In answer to Dr. Bruce, Sir WILLIAM TURNER stated that no further communication had been received from the Lord President on the subject.

Mr. BROWN said that the communication of the Executive Committee did not reply to the request for an opinion of the Council on Mr. Tatton Egerton's Bill. They should see that the Privy Council were furnished with an opinion, and he therefore moved that the Bill be referred to a committee to consider and report.

Dr. RENTOUL rose to a point of order. A few days ago, he said, he wrote to the President asking if he might send up amendments to the Midwives Registration Bill. The President had replied that it would be out of order to do so, and that the Council would be out of order in considering the Midwives Registration Bill. He wished to know if the President adhered to that view.

As the President did not rise to reply,

Sir W. TURNER said that Mr. Brown's motion was before the Council. Did Dr. Rentoul second it?

Dr. RENTOUL: I want a ruling.

The PRESIDENT said that the General Medical Council would have nothing to do with the Midwives Bill. They had expressed that opinion more than once, and until the former resolution was rescinded the question could not be re-opened.

Sir WILLIAM TURNER said it was usual at the meetings of the Council to put motions in writing. He had not received Mr. Brown's, and it had not been seconded. Would Mr. Brown put his motion in writing?

Mr. BROWN: Will you speak to the chair, sir? I will take my orders from the chair.

Sir WILLIAM TURNER: I am speaking in my official capacity as Chairman of the Business Committee, and I am merely telling you what is the mode of conducting business.

Mr. BROWN: I should take it much more kindly from the President. You should speak to the chair.

Dr. BRUCE seconded the motion. He thought it was the Council's duty in all courtesy to the Privy Council to take this matter into consideration.

The PRESIDENT: You must first move that the previous resolutions of the Council be rescinded.

Dr. GLOVER did not see that there would be anything improper in referring this Bill to a committee. In 1890 there was a Midwives Registration Bill sent to them for their opinion and it was referred to a committee. He had further to remind the Council that that committee went through another Bill sentence by sentence, and passed a series of resolutions which were embodied in the volume of their proceedings for 1895. If they referred Mr. Tatton Egerton's Bill to a committee very possibly the committee would come to the same conclusions as were come to in 1895, and there would be no harm if they did. If Mr. Brown and Dr. Rentoul could satisfy the Council that there was reason for altering the previous resolutions there would be nothing improper done. He hoped there was nothing inconsistent in taking that course, and he should therefore support the proposal to refer the Bill to a committee.

Dr. MACALISTER said he should be sorry if the motion was carried. He was satisfied with the existing resolution. It touched the only two points with which the Council were concerned. To again spend days and days over the subject would be waste of time. Everybody knew that the Bill in question had no chance of passing during this session or of coming up again. It was dead, and that was an additional reason for not seeking to discuss it in the Council.

Dr. MCVAIL said that as a Crown member appointed by the Privy Council he could not take the view of the matter which Dr. MacAlister took. He wished, however, to point out that the Privy Council's request was made on Feb. 16th, and, as they had now reached May 25th, did the Privy Council still desire that the General Medical Council should consider the Bill and give an opinion of it? They should inform themselves on the point before proceeding further. He moved accordingly.

Dr. THORNE THORNE seconded the motion. He was firmly convinced that it would be an absolute waste of time to consider the Bill in question so far as the present session was concerned; but they must remember this, that when the Privy Council asked their opinion on the previous Bill they had spent two whole days in formulating that opinion, and he thought that that fact afforded ample ground for complying with the present request. Still, if they went to the Privy Council now and asked if they were to consider the matter, he thought they would be told that they need not take it into consideration.

Mr. BRUDENELL CARTER agreed that it would be desirable to get the information Dr. McVail suggested, but in writing for it they should point out that the opinions of the Council on the registration of midwives had been already fully laid before the Privy Council in the minutes for 1895.

After some remarks by Dr. HERON WATSON, Mr. BROWN and Dr. BRUCE consented to withdraw their motion, and Dr. McVail's proposal was agreed to in the following form :—

"That inquiry be made as to whether the Privy Council still desires that the Midwives Registration Bill sent on Feb. 16th should be considered during the present session of the Medical Council."

The Council adjourned.

WEDNESDAY, MAY 26TH.

The Council met again to-day with a full attendance of members.

Resignation of the Registrar.

Mr. ALLEN, acting clerk, read a letter from Mr. W. J. C. Miller, intimating that on account of ill health he desired to resign the office of registrar which he had held for a period of twenty-one years.

Sir WILLIAM TURNER said that this letter was before the Executive Committee at its meeting on Monday, and with a view of facilitating the consideration of the situation they had framed the following report, viz. :—

"(*a*) The executive committee recommend the Council to accept Mr. Miller's resignation as from May 31st.

"(*b*) The committee having been advised by Mr. Muir Mackenzie that

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the Council is not empowered to grant a pension or supernumerary allowance to any of its officers, but that a gratuity may be awarded on retirement, they recommend the Council to appoint a committee consisting of the two treasurers and of additional members to bring up a report on this subject at the present meeting of the Council. Also that the same committee should report on the steps to be taken as to filling up the vacancy.

"(c) The committee recommend the following members to act together with the treasurers: Mr. Teale, Dr. Heron Watson, Sir Philip Smyly, Sir Wm. Turner."

In moving the adoption of the first recommendation he wished to say that the Council were losing the services of an officer who had been associated with them for upwards of twenty years, and who as long as he was in the full vigour of his health gave his time and his services without grudging to the work of the Council. He thought he might say that all the members held Mr. Miller in the highest respect and regard, and were extremely sorry to think that the state of his health was such that he felt it necessary to resign his appointment. The legal adviser of the Council had assured them that they had no power to confer a pension upon a retired officer, and in the case of Dr. Hawkins the course was adopted which was now suggested—namely, that a gratuity should be given.

Mr. TEALE, in seconding the motion, spoke of Mr. Miller's power as a mathematician and his literary qualities.

Sir JOHN BANKS said he agreed with all that had been said about Mr. Miller, and hoped the Council would be able to treat him with great generosity.

Dr. MACALISTER and Dr. PETTIGREW also spoke appreciatively of Mr. Miller's qualities and services.

Mr. BROWN suggested that the Council might postpone action until the November session, which would in his opinion be the highest compliment they could pay to Mr. Miller.

The recommendation was then adopted by the Council.

Sir WILLIAM TURNER, in moving the second recommendation, said that the President desired that the committee should also report on the range of the duties of the new Registrar and the remuneration to be paid him.

The recommendation thus amended was agreed to, as was also the third recommendation.

On the motion of Sir DYCE DUCKWORTH, seconded by Mr. BRYANT, it was agreed:—

"That in accepting the resignation of the Registrar, Mr. W. J. C. Miller, the Council desire to place on record its high appreciation of his services during his tenure of office for a period of over twenty years, and to express its regret that, owing to failure of health, it is to lose the benefit of his special tact, urbanity, and knowledge."

Penal Removals from the Register.

Dr. HERON WATSON, on behalf of the Executive Committee, presented a modified set of standing orders to regulate the procedure of the Council with reference to penal removals from the Medical Register. These standing orders, he said, would secure continuity and regularity in the proceedings and protect the decisions of the Council. He begged to move their adoption.

Sir DYCE DUCKWORTH, in seconding the motion, said that this would be found a very much improved edition of the standing orders.

Dr. BRUCE said he wished to suggest a small alteration. In one of the standing orders it was ordered that the complaint and the abstract and the documents which accompanied the complaint should be submitted by the General Registrar to the President, who, if the case were considered by him to be outside the jurisdiction of the General Council, might direct the General Registrar to signify the same to the applicant, but who, if the case in his opinion might come within such jurisdiction, should direct the General Registrar to refer the case to the Committee on Penal Cases. He did not think there was any subject with which this Council had to deal in regard to which they should be more careful and deliberate than the subject of penal prosecutions. This was a department of the Council's work in which the direct representatives of the profession were specially interested. They allowed freely enough that the other members of the Council had the highest regard for the honour and dignity of the profession, but the direct representatives coming into contact with the great body of the profession understood what pressure was exerted by such bodies as the Medical Defence Union in order to clear the Register of names that should not be there. He wished particularly to say that he referred to nothing which had taken place in the past. He thought the standing orders, as drawn up by Mr. Muir Mackenzie, were excellent and met their objects thoroughly, although he wished to call attention to this particular point. His desire was that every case which was brought up should be submitted to the Penal Cases Committee as it was proposed to be constituted. He had the highest respect for Sir Richard Quain, but he thought that no individual should be put in a position where he was bound to determine such nice points. He thought every case should, so to speak, go before the grand jury, and that the grand jury in this instance should be the Penal Cases Committee. He therefore proposed that the standing order should read that the complaint, &c., should be submitted to the President, who should direct the General Registrar to refer the case to the Committee on Penal Cases.

Dr. MACALISTER seconded this amendment.

The PRESIDENT said there were cases so absurd and trifling that they should not be sent to the committee.

Dr. RENTOUL said he desired to support the amendment. He thought it essential that the profession should feel the utmost confidence in the Council. Whether rightly or wrongly, he was afraid medical practitioners felt that the Council had somewhat neglected its duties in looking into these matters, and he thought it would be a good thing to have every case referred to the committee. Further than that, he thought the members of the committee should be paid, because unpaid public work was always badly done work.

Mr. BROWN also spoke in support of the amendment.

The amendment was then put to the Council and carried by a large majority, both as an amendment and as a substantive motion.

Dr. BATTY TUKE moved:

"That the Penal Cases Committee consist of five members—three from England, one from Scotland, and one from Ireland; that the committee meet four times a year if necessary; and that the President shall be empowered to summon the committee at other times if he considers that necessity has arisen."

He reminded the Council that cases from Scotland and Ireland were rare.

Dr. BRUCE thought it was not necessary to create a new committee, and suggested that the Executive Committee might take the work in hand with the assistance of the Branch Councils, who would be able to make inquiries locally.

Dr. PETTIGREW shared this view with Dr. Bruce. He thought it would be a good thing if the Scottish Branch Council met oftener.

Mr. BROWN said he should like to see the Branch Council the Penal Committee for its division of the country.

After some further discussion the motion of Dr. Batty Tuke was carried.

It was also agreed, on the motion of Dr. BATTY TUKE:

"That the President be empowered not to summon the Scottish or Irish members of the Committee unless cases forwarded from either of these countries have been presented for consideration.

"That all documents bearing on cases from Scotland or Ireland shall be submitted to their respective representatives on the Penal Cases Committee, who, in consultation with two other members of the Scottish or of the Irish Branch Council, as the case may be, to be appointed annually by the respective Councils, shall send a report to the President of the General Council to be brought before the Penal Cases Committee at the first subsequent meeting.

Some discussion elicited the opinion that the Standing Orders as modified had not been adopted, and two proposals were made—one that each section should be separately considered by the Council, and the other that the whole be gone into in committee. The former proposal was not pressed, and the motion to go into committee was rejected by 16 votes to 11.

Mr. BRUDENELL CARTER, seconded by Sir DYCE DUCKWORTH, thereupon moved that the Standing Orders as amended be adopted.

Dr. MCVAIL proposed an alteration of Article 15, which stood in the programme in the following terms: "In the event of a resolution for adjournment of the further consideration of the charge being carried the Council, on the case coming on again for consideration, may hear the accused practitioner and the complainant (if any), and receive such further evidence as it shall think fit." He moved to leave out the words "and the complainant (if any)," and that the ending of the Article should be, "and to receive such further evidence as the practitioner shall think fit to lay before the Council."

The PRESIDENT said that these were legal technicalities that ought to be discussed only when the Council's legal advisers were present.

Dr. GLOVER agreed with this view.

Mr. BROWN seconded Dr. McVail's proposal.

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Mr. BRUDENELL CARTER pointed out that the Article was word for word the same as that which they had been acting upon, and it had worked very satisfactorily, especially in the case of young practitioners who had been led into error. He should be sorry to see it altered.

Dr. CAMERON: Does "practitioner" mean convicted practitioner?

The PRESIDENT: Yes.

The proposal was rejected and the motion for the adoption of the Standing Orders was carried by 18 votes to 2.

A Deputy President.

On the return of the Council after the adjournment for tea,

Sir WILLIAM TURNER intimated that at the request of Sir Richard Quain, and subject to the approval of the Council, he had been asked to take the chair for the rest of the business.

The intimation was received with applause and Sir William Turner presided during the remainder of the sitting.

Dental Business.

Mr. BRYANT, as chairman of the Dental Education and Examination Committee, submitted reports on the qualifying examinations of the four dental licensing bodies of the United Kingdom—viz., the Royal College of Surgeons of England, the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Surgeons in Ireland. The committee reported that all these bodies now came up to the approved curriculum. The English and Irish Colleges had deviated somewhat from the original recommendations of the General Medical Council, but these deviations in no way departed from the Council's wishes, since they all tended to make the practical part of the course of study more complete. The committee failed to see the advantages of Scotland having two dental boards, and recommended that the two should unite and form one conjoint board, so that there would be but one dental licensing body in each division of the United Kingdom. The reports embodied modifications of the existing regulations as to the course of study and examinations to be gone through by candidates for licences in dental surgery.

On the motion of Mr. BRYANT, seconded by Mr. BRUDENELL CARTER, the reports were entered on the minutes. On the question whether the Council should go into committee to consider the various recommendations in detail,

Dr. HERON WATSON expressed the opinion that before they went into committee on the admirable reports that had been presented the Council should consult the licensing bodies concerned on the subject, with the view of carrying these bodies with them in the decisions they might come to. The time that would be spent in doing that would very likely ultimately prove a gain. He moved that the reports be sent down to the bodies with an invitation to them to express an opinion on the recommendations in time to have the same laid before the Council previously to decision upon them at the November session.

Dr. BRUCE seconded the motion.

Dr. MCVAIL drew attention to the recommendation that the Scotch bodies should unite. He said they had no power under the Dentists Act to do so.

Mr. BRUDENELL CARTER and Dr. RENTOUL pointed out that Section 38 of that Act empowered them to do so.

The motion was agreed to, and the Council adjourned.

PRESENTATIONS TO MEDICAL MEN.—Presentations have been made by members of the local ambulance classes in recognition of honorary instructions in First Aid as follows: to Mr. J. F. C. Hossack, F.R.C.S. Edin., of Ipswich, of a meerschaum pipe; to Mr. R. E. Brown, L.R.C.P., L.R.C.S. Edin., of Willington, Durham, of a silver-mounted walking-stick; to Mr. W. S. Anderson, M.D. Glasg., M.R.C.S. Eng., of Chapel-en-le-Frith, Derbyshire, of a medical work, and to Mr. V. J. Greenhough, M.B. Cantab., also of Chapel-en-le-Frith, of a telescope; to Mr. P. Phelps, L.R.C.P. Edin., M.R.C.S. Eng., of Loughborough, Leicestershire, of a dressing-case; to Mr. W. F. Boycott, M.B. Edin., of Manchester, of a gold medal and a walking-stick; and to Mr. S. McC. Boyd, F.R.C.S. Irel., of Manchester, of a handsome walking-stick.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the Examination in May the following candidates passed in the subjects indicated:—

Surgery.—A. Avent, St. George's Hospital; M. I. Baker, St. George's Hospital; S. R. Bhagtani, King's College Hospital; P. H. Collingwood, St. Thomas's Hospital; R. B. Greaves, Sheffield; A. J. Hull (Section I. and II.), Guy's Hospital; J. S. A. Murphy, Leeds; H. R. Rice, London Hospital; and G. Steel, Cambridge.

Medicine.—F. Adams, St. Thomas's Hospital; H. A. Ahrens, King's College Hospital; J. Ash, St. Thomas's Hospital; A. J. Hull (Section I. and II.), Guy's Hospital; R. A. Lewty, Leeds and St. Mary's Hospital; B. S. Mankar, London Hospital; and J. S. A. Murphy, Leeds.

Forensic Medicine.—T. M. Clayton, Durham; A. J. Hull, Guy's Hospital; R. A. Lewty, Leeds and St. Mary's Hospital; H. H. Monckton, King's College Hospital; C. W. Moore, Manchester; and F. M. Simmonds, Edinburgh.

Midwifery.—F. M. Aldred, Liverpool; C. H. Church, McGill; T. M. Clayton, Durham; G. J. D. Davies, Leeds; C. W. Moore, Manchester; H. R. Rice, London Hospital; and F. M. Simmonds, Edinburgh.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery.—Messrs. Avent, Baker, Church, Clayton, Greaves, Hull, Moore, Murphy, Rice, and Simmonds.

UNIVERSITY OF LONDON.—At the M.B. Pass Examination in May the following candidates were successful:—

First Division.—Richard Hamilton Ashwin, Guy's Hospital; Stanley Longhurst Box, St. Bartholomew's Hospital; Harold Merriman Cooper, St. George's Hospital; Arthur Henry Evans, Westminster Hospital; George Frederick Saunders Genge, Westminster Hospital; Cuthbert Henry Jones Lockyer, Charing-cross Hospital; Raghavendra Row, B.Sc., Grant Medical College, Bombay, and University; and Frederick Charles Sprawson, King's College Hospital.

Second Division.—Percy Crompe Barford, St. Bartholomew's Hospital; William Blair Bell, King's College Hospital; Robert Allan Bennett, Mason College and Queen's Hospital, Birmingham; John Francis Bill, St. Bartholomew's Hospital; Malcolm Cameron, London Hospital; John Samuel Chater, St. Bartholomew's Hospital; William Wheelwright Clegg, Yorkshire College and Middlesex Hospital; John Morton Sim Coutts, University College; Edmund Sprague Dukes, Guy's Hospital; Arthur Earnshaw, Guy's Hospital; Edward Fisk, Guy's Hospital; Ella Catherine Flint, London School of Medicine and Royal Free Hospital; Herbert Fox, Middlesex Hospital, Glasgow Infirmary, and University of Aberdeen; Fred Claude Bromley Gittings, Middlesex Hospital; John Crisp Griffiths, B.Sc., Mason College, Queen's Hospital, and General Hospital, Birmingham; Ernest Wm. Hey Groves, B.Sc., St. Bartholomew's Hospital; William Hardcastle, Charing-cross Hospital; Sarah Kaye, London School of Medicine and Royal Free Hospital; Urania Latham, London School of Medicine and Royal Free Hospital; William Liversidge, University College; James Laidlaw Maxwell, St. Bartholomew's Hospital; Julius Moore, Guy's Hospital; Percy Northcote, St. Thomas's Hospital; John Owen, Royal Infirmary, Liverpool; Harold Everett Pace, London Hospital; William Redpath, St. Thomas's Hospital; Francis Montgomery Seal, University College; Stanley Francis Smith, St. Bartholomew's Hospital; Harold Weeks, St. Bartholomew's Hospital; and Stanley Whicher, Guy's Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATIONS.—The following candidates having passed the necessary examination have been admitted Fellows of the College:—

H. J. Flanegan, L.R.C.S. Irel., &c.; G. W. Joyce, L.R.C.S. Irel., &c.; and J. R. Wallace, L.R.C.S. Edin., &c.

The following candidates passed the primary part of the examination:—

G. W. Little; J. M'Donald; H. G. Martin, L.R.C.S. Irel., &c.; D. P. O'Brien, L.R.C.S. Irel., &c.; and H. J. C. Wallace.

FOREIGN UNIVERSITY INTELLIGENCE.—*Amsterdam:* Dr. S. Mendes da Costa has qualified as *privat-docent* of Dermatology and Diseases of the Urinary System.—*Basle:* Dr. A. Gönner, *privat docent* in Midwifery, has been appointed Extraordinary Professor.—*Berlin:* The title of Professor has been granted to Dr. E. Grawitz, *privat-docent* of Internal Medicine.—*Beyreuth (French Faculty):* Dr. J. la Bonnardière, of Lyons, has been appointed Professor of Therapeutics and Hygiene, in succession to the late Dr. Boyer.—*Bonn:* Dr. Edmund Hummelheim has qualified as *privat-docent* of Ophthalmology.—*Breslau:* Dr. Conrad Alexander, *privat-docent* of Internal Medicine, has been appointed Extraordinary Professor.—*Budapest:* Dr. Thomas von Marschalkó has qualified as *privat-docent* of Dermatology and Syphilography.—*Erlangen:* Dr. Gustav Specht has been appointed Extraordinary Professor of Psychiatry; Dr. Ludwig

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Heim, *privat-docent* in Würzburg has been appointed Extraordinary Professor of Hygiene and Bacteriology.—*Halle:* Dr. Vahlen has qualified as *privat-docent* of Physiological Chemistry and Pharmacology.—*Kazan:* Dr. Bodbielski has qualified as *privat-docent* of Pathological Anatomy.—*Leipzig:* Dr. M. Siegfried has been appointed Extraordinary Professor of Physiological Chemistry; Dr. Dolega has qualified as *privat-docent* of Internal Medicine.—*Munich:* Dr. Hermann Dürck, Assistant in the Pathological Institute and Prosector in the City Hospital, has qualified as *privat-docent* of Pathological Anatomy.—*Rostock:* Dr. Ricker, formerly Assistant in the Pathological Institutes of the Universities of Zurich and Halle, has qualified as *privat-docent* of Pathological Anatomy and Bacteriology.—*St. Petersburg (Military Medical Academy):* Dr. B. Tarnovski, the well-known syphilologist, is retiring from his professorship after thirty-five years' service.—*Würzburg:* Dr. Wilhelm Reubold, Extraordinary Professor of Forensic Medicine, has retired, being seventy years of age.

THE HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.—The annual meeting of this hospital was held on May 19th. The Bishop of Stepney, speaking from the chair, emphasised the fact that the lease of the building at present occupied would expire in three years, and he strongly urged upon the committee the need of a new building which, according to the annual report, would cost from £10,000 to £15,000. He hoped that this difficulty would eventually prove to be a stepping-stone to a higher success. At the same time, he felt that it would be almost hopeless to commence such a fund during the present year, in which funds of all kinds and expenditure, unusual both in character and extent, were becoming almost universal. The Prince of Wales's Hospital Fund, excellent in its aims, must, he knew, cause great anxiety to hospital managers in its general effect upon the subscribing public and upon the Hospital Sunday Fund. The Rev. F. K. Povah, Honorary Chaplin to the hospital, said that according to the published figures, when construed in the most liberal manner, the Prince of Wales's Fund did not reach £40,000 a year, the total of an average Hospital Sunday collection. Mr. J. R. Diggle encouraged the committee to face the evident necessity for a new building. Mr. Pearce Gould, honorary surgeon to the hospital, reminded the meeting that it was at this hospital that the first operation for the removal of a tumour of the brain had been performed on the living subject, and asserted that a modern building was a necessity from the point of view of the staff, no less than in the interests of the patients.

ANNUAL MEETING OF THE BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The twenty-first annual meeting of this association was held on Monday last at the rooms of the Royal Medical and Chirurgical Society, Hanover-square. The newly-elected President, Dr. Sims Woodhead, took the chair. The honorary secretary, Dr. J. J. Ridge, read the annual report, which showed that there had been an addition of 31 members (abstaining practitioners) during the year, and of no less than 217 medical students, making a total of 453 members and 309 student associates. Of the new associates 79 were connected with English schools of medicine, 135 with Scottish, and 3 with Irish. The official organ of the association, the *Medical Pioneer*, had been sent gratuitously to upwards of 2000 medical men for a period of three months. The prize offered to medical students for the best essay on the Influence of Alcohol on Digestion and Nutrition had been awarded to Mr. J. R. Frost, of University College, Bristol. After other business, Dr. Sims Woodhead delivered a presidential address on the Influence of Medical Men on the Temperance Movement. He pointed out that this was exercised long before the modern extension begun by the seven men of Preston. Even Celsus in many passages spoke of the diseases produced by wine and of the advantages of forbidding it. He had found it impossible to include all the work of medical men in promotion of temperance even in modern days in the compass of an address. It was generally recognised not only that alcohol produced many diseases, but that it was a frequent cause of death by aggravating the symptoms of other diseases; it was also known that the excessive use of alcohol greatly increased mortality. It was impossible to discover any definite line of demarkation between the physiological and pathological action of alcohol. He believed that medical men could do even more than legislators to promote the cause of temperance.—Dr. Morton, Dr. Norman Kerr, Dr. Heywood Smith, Dr. Poole, Mr. W. S. Eccles, Mr. W. McAdam Eccles, and Mr. W. F. Hazel took part in the proceedings.

PROPOSED NEW HOSPITAL FOR WESTBURY.—The idea of commemorating the Diamond Jubilee by the erection of a cottage hospital at Westbury, Wiltshire, has been energetically taken up, and last week it was announced that £400 had been promised towards its erection and £70 to the maintenance fund. Mr. W. H Laverton has given a site, £100, a yearly subscription of £20, and 15,000 bricks.

THE PONTYPRIDD BOARD OF GUARDIANS AND POOR-LAW RELIEF.—At the meeting of the Pontypridd board of guardians, held on May 19th, Mr. Bircham, the Local Government Board inspector, attended, and stated that the board had spent in 1896 the sum of £22,000 in relief of the poor and £10,000 in the working of the board, making a total of £32,000. He suggested that in the future no relief should be given to any new applicant without the fullest inquiry.

DEATH OF THE FOUNDER OF THE THIRSK HOSPITAL.—Mrs. Lambert was found dead in bed at Sowerby, Thirsk, last week. She was seventy-six years of age, and founded the Cottage Hospital at Thirsk in memory of her late husband, who was for many years in practice there as a medical man. Mrs. Lambert was a well-known and much-respected lady, and her loss will be felt by a large circle of friends.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held at the vestry-room, Wandsworth, on May 12th. In the absence of the President the chair was taken by Surgeon-Major Mark Robinson.—A paper was read by Mr. T. S. Howell, entitled "The Welfare of the General Practitioner."—Having referred to the fact that this year was the diamond jubilee of his entrance into the profession, Mr. Howell dwelt upon the importance to the practitioner of retaining his proper duties in his own hands and not delegating them to others. Stress was laid upon the advantage to medical men of dispensing their own medicines and upon the evil of allowing the modern race of nurses too free a hand in dealing with patients.—A discussion followed, in which Mr. Richard Oram, Mr. Hugh Ker, Mr. M. G. Biggs, Mr. W. G. Dickinson, and others took part.

AN UNREGISTERED DENTIST FINED.—Before the Stipendiary at the Brighton Borough Bench on May 18th an adjourned summons was heard against one Moss Harris for using the title of "dentist" contrary to the provisions of the Dentists Act, 1878. The hearing of the case had been adjourned pending an application in the High Court for a *mandamus* to compel the General Medical Council to place the names of several gentlemen on the Dentists Register. A *mandamus* was refused. For the defence it was urged that Mr. Harris commenced to practise about twenty-five years ago, some years previously to the passing of the Dentists Act of 1878. Mr. Harris did not apply before Aug. 1st, 1879, to have his name put on the Register, and consequently lost his right to be registered. When he did apply the General Medical Council said in effect: "As far as we can see we should have put you on had you applied in time, but we must draw the line somewhere, we can't be putting people on for ever and ever." It was contended also that there was nothing in the Act to prevent a person practising dentistry, though unregistered, so long as he did not use words implying that he was a dental practitioner or a registered dentist. That merely applied to the theoretical portion of dentistry which was concerned with the management of teeth, and did not apply to the most important branch of defendant's work, the making of teeth. The Stipendiary said there must be a conviction. He did not wish to express any opinion as to whether the word "dentist" was or was not in the shop window as stated in evidence, but there was no doubt that other words amply and strongly calculated to cause anyone to think he did claim for himself the title of dentist and was specially qualified to practise dentistry were used. An attempt had been made to separate the functions of dentistry, but he did not think it was possible to do so. A fine of £5 was imposed, four guineas being also allowed as solicitor's costs, and £1 1s. 6d. as court fees; or in default, twenty-one days' imprisonment with hard labour.

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THE ROYAL BERKS HOSPITAL, READING.—At a special meeting of the court of governors of this institution the members of the firm of Messrs. Huntley and Palmer were elected vice-presidents of the hospital in recognition of their recent gift of £7000 for the endowment of beds. This well-known firm have always been most liberal supporters of the hospital, and the compliment which has been conferred upon them is well deserved.

MUNIFICENT GIFT TO ROCHDALE INFIRMARY AND DISPENSARY.—The proposal to celebrate the Queen's reign by increasing the endowment of this institution has been met with a most generous gift from the trustees of the late Mr. James Holden, of High Birch, Marland. A grant of £18,000 has been made to the Infirmary governors, with which to endow the new wing of the building. With the £2000 which was specifically left by Mr. Holden to the Infirmary, the additional grant now made brings the total amount by which the institution benefits up to the sum of £20,000. The total sum now promised to the Endowment Fund is not far short of £23,000.

UNIVERSITY OF DURHAM.—The present and past medical students of the University of Durham entertained Professor Philipson and Professor Arnison at a complimentary dinner last week at Newcastle-upon-Tyne. After dinner a beautiful silver bowl, suitably inscribed, was presented to each of them by one of the most recent graduates, Mr. Patterson, M.B., a distinguished student of the school. Both Dr. Philipson and Dr. Arnison replied to the kind and touching allusions made by Mr. Patterson to their long connexion with the infirmary, and expressed their regret at having to terminate their connexion with the students as clinical teachers.

THE DEVON AND EXETER HOSPITAL.—The annual meeting of this institution was held on May 20th, under the presidency of Mr. A. M. H. Walround. The report stated that during the year 1611 patients had received treatment as against 1621 in 1895-96; the number of out-patients treated during the year was 4212; 817 in-patients were discharged and became out-patients and 161 remained in the hospital on Lady Day, 1897. The average daily number of in-patients was 152 as against 160·3, the average cost of each patient being £5 17s. 9d. and the total cost per bed £40 9s. 7½d. The income for the year was £7306 2s. 7d. and the expenditure £8662 3s. 1d. leaving a deficiency of £1356 0s. 6d. The private nursing staff continued to be more than self-supporting, the earnings for the past year having exceeded those of 1895-96 by £45. The demand for the services of the nurses had even been greater, and abundant testimony of the appreciation of their work had been given.

WHITSUNTIDE HOLIDAY ARRANGEMENTS: WHITSUNTIDE ON THE CONTINENT.—For the convenience of visitors to the Brussels Exhibition cheap tickets available for a week will be issued *viâ* Harwich and Antwerp. The Great Eastern Railway Company's Brussels Service has been accelerated, and passengers leaving London in the evening and the North and Midlands in the afternoon reach Brussels next morning after a comfortable night's rest on board the steamer. For visiting the Hague, Amsterdam, and other parts of Holland, the Rhine, North and South Germany, and Basle for Switzerland, special facilities are offered *viâ* the Company's Harwich, Hook of Holland route, through corridor carriages being run to Amsterdam, Berlin, Cologne, and Basle from the Hook of Holland. The General Steam Navigation Company's fast passenger steamers *Peregrine* and *Seamew* will leave Harwich on June 2nd and 5th for Hamburg, returning on June 6th and 9th.

UNIVERSITY OF CAMBRIDGE.—The proposal to confer the title of B.A. upon women was on May 21st rejected by the unprecedented majority of 1707 to 661 votes. It is hoped that the vexed question will, after this unmistakeable expression of hostile opinion, be allowed to rest. The way is now open for a solution of another kind which will involve no interference with the present constitution of the University. The simplest plan would undoubtedly be the acquisition by Newnham and Girton Colleges of power to confer degrees on duly qualified women. The facilities for instruction and examination now freely afforded by the University might continue unchanged, but the duty of giving an academic title to women would be reserved for the institutions which are best fitted to guide and control them.—The Reade Lecture on Recent Researches in Terrestrial Magnetism will be delivered by Professor A. W. Rücker in the Senate House at noon on Wednesday, June 9th.—A special class in Practical Histology will be held in the Long Vacation by the Master of Downing (Dr. Hill) and Dr. Barclay-Smith, beginning on July 6th.—The General Board of Studies propose to establish a University lectureship in Experimental Psychology, including the Physiology of the Senses. The appointment will probably be made before the end of the present term. Dr. Rivers, of St. John's College, is already conducting two highly successful classes in the subject at the Physiological Laboratory, and will probably be appointed to the lectureship.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The London Water Question.

THE Government, in fulfilment of its promise to do something this session to strengthen the position of the ratepayers in London with reference to the Water Companies, has introduced a Bill enabling individual ratepayers and local authorities to take complaints with reference to the water-supply before the Railway and Canal Commissioners. It is not intended that this power shall interfere in any way with the existing power of making complaint to a magistrate or the Local Government Board.

Infant Life Protection Bill.

The following clause has been added to the Infant Life Protection Bill, namely:—"Any person retaining or receiving an infant under the age of two years on consideration of a sum of money not exceeding £20 paid down, and without any agreement for further payment, as value for the care and bringing up of the said infant until it is reclaimed or of an age to provide for itself, shall within forty-eight hours from the time of receiving such infant give notice of the fact to the local authority. If he does not give the notice required by this section, he shall be liable to forfeit the amount of any sum received by him in respect of such infant, or such less sum as the Court having cognizance of the case shall deem just, and the Court shall give directions as to the manner in which the sum forfeited shall be applied for the benefit of the infant, and shall, if necessary, cause the infant to be removed to a workhouse or place of safety, and the master of such workhouse shall receive such infant, which shall be maintained in the workhouse or place of safety until it can be otherwise lawfully disposed of."

Compensation for Injury to Health.

Before entering upon the Committee stage of the Workmen (Compensation for Accidents) Bill the House of Commons on Monday, May 24th, engaged in an interesting debate on the point whether the Bill should be extended so as to give compensation to workmen for injuries to health arising out of, and in the course of, their employment. Mr. Tennant, who proposed that it should be so extended, gave some account of the excessive mortality among file makers and of the frequent cases of lead-poisoning. He told how, in the case of the Newcastle Infirmary alone during the seven years since 1890 no fewer than 228 cases of lead-poisoning were admitted, of which 107 ended in death. A girl, aged seventeen years, employed for three years in the lead process, had to go to hospital for lead-poisoning, and left almost totally blind. Another girl, of the same age and in the same employment, was attacked with partial paralysis, and after twelve months in hospital was discharged, but with the loss of her sight. Representations had been made to her employers, but nothing had been done for her. Another girl, aged eighteen years, who had been employed in the lead process since January, 1896, was seized with a fit in the January of this year, and had now been discharged from hospital with the loss of sight in one eye and with her general health so impaired that she could not hope ever to be able to work again. The Government, while expressing sympathy with the proposed extension of the Bill, said it would greatly complicate the measure and make it extremely difficult to pass, and on these grounds resisted it. On a division the proposal was rejected by 233 to 144 votes.

HOUSE OF COMMONS.

THURSDAY, MAY 20TH.

Medical Examination of Letter Sorters.

Mr. Lough asked the Secretary to the Treasury, as representing the Postmaster-General, whether, whereas under the Tweedmouth Report only two medical examinations were required for men on probation for appointment to sortherships, many who had already passed two examinations were now required to pass a third; and whether, if this were so, the Postmaster-General would see his way to remove this obligation in the case of existing probationers.—Mr. Hanbury replied that the

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Tweedmouth Committee recommended that the probationary period of two years with three medical examinations should be reduced to one year with two medical examinations, one at the beginning and the other at the end of the period. Under the old system the intermediate examination was not quite so stringent as the other two, and the Postmaster-General feared that it would not be possible to regard it as satisfying the requirements which the Tweedmouth Committee had in view. All concerned would therefore still have to undergo the final examination which was necessary before the appointments could be confirmed, but the probationers who had not passed the intermediate examination would, of course, be relieved from the obligation of undergoing it.

FRIDAY, MAY 21ST.

Death in a Workhouse.

Mr. Crilly asked the President of the Local Government Board if he could now inform the House as to the result of his inquiries respecting the death of the old woman, Margaret Ross, upon whose body an inquest was held in the Hackney Coroner's Court on May 3rd, when it appeared in evidence that the deceased had been an inmate of a City union workhouse, that her age was seventy-seven years, and that she had been found dead on the previous Thursday beside the washing pail which she had been using in her work, and that the workhouse authorities had been in the habit of compelling this old woman to clean out a large ward containing twelve beds.—Mr. Chaplin replied that he had been in communication with the guardians of the City of London on this subject, and he had also obtained copies of the depositions taken at the inquest in the case. It appeared from the medical evidence and a post-mortem examination that the death of the poor woman was instantaneous—from natural causes, and due neither to syncope nor weakness. It was not the case that the workhouse authorities compelled her to clean out a ward. She had, up to some nine days before her death, been employed in the needle-room, and it was at her own special request that she was allowed to undertake the duty of keeping a dormitory clean, as she preferred this to the more sedentary work, and she was quite capable of undertaking it.

The Form of Oath Administration.

Sir Walter Foster asked the Attorney-General if his attention had been called to the growing fear of infection attaching to the ordinary form of English oath as administered in courts of justice, and whether it was the intention of the Government to introduce a Bill to alter the ordinary form of English oath, and to abolish the objectionable practice known as kissing the book in the administration of oaths of all descriptions.—The Attorney-General (Sir Richard Webster) said that his attention had been called to the question of the desirability of changing the form of oath. He thought the fear of infection had been somewhat exaggerated. Under the provisions of the Oaths Act of 1888 witnesses were now permitted to take the oath in the Scotch form in which it was unnecessary to kiss the book. He would, however, consider whether any further amendment of the law was required.

Workhouse Administration in Ireland.

In the course of a debate on the vote for the expenses of the Local Government Board in Ireland Mr. Gerald Balfour, Chief Secretary, said he was not satisfied with the workhouse system in Ireland, and he had brought in a Bill thoroughly to reform it. Unfortunately, however, it would not be possible to pass it during the present session. At the same time he hoped sooner or later to see an amalgamation of unions, which would be likely to form the best foundation for workhouse reform in other directions. He had included in his Bill the adoption of the system of boarding out pauper children.

MONDAY, MAY 24TH.

Lead Poisoning.

Mr. M'Kenna asked the Secretary of State for the Home Department whether his attention had been called to the case of James A. Garvey, aged seventeen, a lead filer, lately employed at the Electrical Power Storage Company's works, Millwall, who died recently from the effects of lead poisoning; whether he was aware that there was only one bath at the works at which from forty to fifty boys were employed, and that the regulation compelling the use of the bath was habitually disregarded; and whether he proposed to take any steps under the circumstances.—Sir Matthew White Ridley replied that his attention had been called to this case, but he was unable to find on inquiry that there had been any breach of the Factory Acts or the special rules which had been made for electric accumulator works. Employers were required by those rules to provide a bath; this was done at the works in question and a time for bathing appointed for each person employed. It was not obligatory at present, however, on the workers to use the bath, and he regretted to find that at these works bathing had often been omitted. It might become necessary to take steps to remedy this.

Death Certification.

Mr. Macdona asked the Secretary of State for the Home Deparment whether his attention had been drawn to the statement made by the London Association for the Prevention of Premature Burial in THE LANCET of April 24th [1], that in England and Wales 16,000 persons were annually buried without medical certificates of any sort; and whether the Government would take the matter into its serious consideration so as to prevent as much as possible persons being prematurely buried. Sir Matthew White Ridley said he had not seen the statement to which the honourable member alluded, but it was not the case that 16,000 persons were buried annually without medical certificates. The number of uncertified deaths in 1896 was 11,464, and there had been a steady decrease for many years past, both in the actual number of such deaths and in the proportion which they bore to the total number of deaths. No cases of premature burial had been brought to his notice, nor was he aware that it was a matter which fell within his jurisdiction, but in any case he was unable to see that the obtaining a certificate of death would be a guarantee against a premature burial taking place.—Mr. Macdona asked the right hon. gentleman whether he was not aware that a number of medical men were of opinion that a great number of people were buried prematurely.—Sir Matthew White Ridley said in reply to this that the certificates were given by members of the medical profession. Therefore it followed that in their opinion the persons in regard to whom the certificates were given were dead.

Treatment of Weak and Sick Prisoners in Scotland.

Mr. Hedderwick asked the Lord Advocate whether, under the present prison system of Scotland, imbecile or weak-minded prisoners were associated in cells with other criminals without the personal supervision either of officers or hired attendants, whose duty it should be to see that such prisoners were not maltreated; whether sick prisoners were left to the care of fellow-criminals who were wholly without experience in the treatment of invalids; whether evidence showing that these practices prevailed was given in November last by a number of medical men holding appointments in connexion with prisons in Scotland; and whether, in view of the fact that such practices had been condemned by Commissioners of Prisons and abolished both in England and Ireland, he would undertake at an early date to endeavour to assimilate the prison system of Scotland in these particulars to the more humane modes of treatment obtaining in England and Ireland.—The Lord Advocate said he was informed by the Prison Commissioners for Scotland that when weak minded prisoners were associated on medical grounds they were under the close inspection of prison officers who were responsible that no prisoner was maltreated, but that all were properly cared for, and by the rules the medical officer had to satisfy himself that the arrangements were effective; the sick prisoners were not left to the care of fellow-criminals, and that no record could be found of any evidence given by prison medical officers in November last regarding the care of the sick. The Prison Commissioners were satisfied that the treatment of the sick prisoners was humane, and they had always directed their special attention to this part of prison administration.

Irish Schools and Epidemics.

Mr. Carew asked the Chief Secretary to the Lord-Lieutenant of Ireland whether he was aware that in Ireland the sanitary authority had no power to have schools closed for the protection of public health in the case of epidemics breaking out, while in England the sanitary authority had such power conferred upon it, and would the Government extend the same salutary protective power to Ireland.—Mr. Gerald Balfour said, in reply, that the facts were correctly stated in the first part of the question, though in England the managers of a school might appeal to the Education Department if they considered the notice requiring the school to be closed unreasonable. He should not like to answer the second part of the question without having an opportunity of consulting the Commissioners of National Education and taking their views.

TUESDAY, MAY 25TH.

The Vaccination Question.

Sir William Priestley asked the President of the Local Government Board whether he was able to say what course he proposed to take in consequence of the recommendation of the Royal Commission on Vaccination as to the lymph-supply to be issued in future by the National Vaccine Establishment.—Mr. T. W. Russell made the following reply on behalf of Mr. Chaplin: Shortly after the issue of the Report of the Royal Commission on Vaccination, I issued fresh instructions to public vaccinators by which they are enabled, whenever they deem it desirable, to use calf lymph instead of humanised lymph. I have also been making inquiries abroad as to the preparation and employment of glycerinated calf lymph. The report on this subject has been delayed by reason of the fact that in some Continental countries public vaccination is practically suspended during the winter months, and is only resumed in May. But from the information already before me it is more than probable, in my opinion, that glycerinated calf lymph will be found to present distinct advantages over other forms of vaccine lymph, and one of the points which I shall have to consider will be how far it may be practicable for me to issue a gratuitous supply of vaccine lymph in this form to all registered medical practitioners applying for it. I shall also have to consider how far any considerable change, such as is indicated, in the form or the extent of the lymph-supply from the National Vaccine Establishment will be practicable pending fresh legislation on the whole question.

[1] Our words were: "It is computed that in England 15,000 persons are annually interred without medical evidence of any sort"—ED. L.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

Thérapeutique du Paludisme. Par F. Burot et M. A. Legrand. 1897.

Chirurgie des Centres Nerveux. Par Dr. L. Glantenay. 1897.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

Chlorosis: The Special Anæmia of Young Women. Its Causes, Pathology, and Treatment. By E. Lloyd Jones, M.D., B.C. Camb. 1897. Price 2s. 6d.

Excretory Irritation and the Action of Certain Internal Remedies on the Skin. By D. Walsh, M.D. Edin. 1897. Price 3s. 6d.

CARRÉ, G., ET NAUD C., Paris.

Manuel d'Ophtalmologie. Par Dr. E. Fuchs. Deuxième edition Française. Par Dr. C. Lacompte et Dr. L. Leplat. 1897.

La Technique des Rayons X. Par A. Hébert. 1897.

CHATTO AND WINDUS, Piccadilly, London.

A History of Our Own Times, from 1880 to the Diamond Jubilee. By Justin McCarthy, M.P. 1897. Price 12s.

CLAY, WM. F., Teviot-place, Edinburgh.

Practical Handbook of the Diseases of the Eye. By D. C. Watson, M.B., C.M. Illustrated. 1897.

Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by J. B. Tuke, M.D., and D. N. Paton, M.D. Vol. VI. 1897. Price 8s. 6d. net.

CHURCHILL, J. & A., Great Marlborough-street, London.

A System of Dental Surgery. By the late Sir John Tomes, F.R.S. Fourth edition. Revised by Chas. S. Tomes, M.A., F.R.S. Illustrated. 1897. Price 16s.

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A Short Practice of Midwifery. By H. Jellett, B.A., M.D., B.Ch. Dub., with a Preface by W. J. Smyly, M.D., F.R.C.P. Irel. Illustrated. 1897. Price 6s.
A Practical Treatise on Mechanical Dentistry. By Jos. Richardson, M.D., D.D.S. Seventh edition. Revised by Geo. W. Warren, D.D.S. Illustrated. 1897. Price 22s.
The Deformities of the Fingers and Toes. By William Anderson, F.R.C.S. 1897. Price 6s.

DAVIS, THE F. A., COMPANY, Philadelphia.
Diseases of the Ear, Nose, and Throat, and their Accessory Cavities. By S. S. Bishop, M.D., LL.D. Illustrated. 1897.

DOIN, O., Paris.
Leçons de Clinique Médicale, Psychoses et Affections Nerveuses. Von G. Ballet. 1897.

FISCHER, GUSTAV, Jena.
Die Serumbehandlung der Diphtherie. Von Dr. F. Ganghofner. 1897.
Handbuch der Anatomie. Von Dr. Karl von Bardeleben. 1897. 7 Band; 4 Lieferung.
Chirurgische Operationslehre. Von Dr. Th. Kocher. Dritte Auflage. 1897.
Mitteilungen aus der Grenzgebieten der Medizin und Chirurgie. Redigiert von J Mikulicz und B. Naunyn. Erster Band. Funftes Heft. 1896.
Die Schwerhörigkeit durch Starrheit der Paukenfenster. Von Dr. R. Panze. 1897.

GRIFFIN, CHAS., AND COMPANY, Exeter-street, Strand, London.
Year-book of the Scientific and Learned Societies of Great Britain and Ireland. Compiled from official sources. 1897. Fourteenth annual issue. Price 7s. 6d.

HARISON, WM. B., New York.
Manual of Static Electricity in X Ray and Therapeutic Uses. By S. H. Mouell, M.D. Illustrated. 1897.

IDEAL PUBLISHING UNION, Farringdon-street, London.
Vegetarian Jubilee Library. The Return to Nature. By J. F. Newton. 1897.

KEGAN PAUL, TRENCH, AND CO., Charing-cross-road, London.
Retinoscopy (or Shadow Test) in the Determination of Refraction at One Meter Distance with the Plane Mirror. By Jas. Thorington, M.B. Illustrated. 1897. Price 5s.

LONGMANS, GREEN, AND CO., Paternoster-row, London.
Exercises in Practical Physiology. By A. D. Waller, M.D., F.R.S. Part 3. Physiology of the Nervous System. Electro-physiology. 1897. Price 2s. 6d net.

MOHR, J. C. B., Freiburg i. B. und Leipzig.
Denkschrift zur Einweihung des hygienischen Instituts der Universität Freiburg i. B., am 9 Januar, 1897. Von Professor Dr. Max Schottelius.

PUTMAN'S SONS, G. B., Bedford-street, Strand, London.
Hypnotism and its Application to Practical Medicine. By Otto Georg Wetterstrand. Translated by H. G. Petersen, M.D. 1897. Price 10s.

RIVINGTON, PERCIVAL, AND CO., King-street, Covent-garden, London.
Some Aspects of Infantile Syphilis. Being the Hunterian Lectures delivered at the Royal College of Surgeons in 1896. By J. A. Coutts, M.B. Cantab., M.R.C.P. 1897. Price 3s. 6d.

SMITH, ELDER, AND CO., Waterloo-place, London.
Nervous Affections of the Hand and other Clinical Studies. By G. V. Poore, M.D., F.R.C.P. 1897. Price 7s. 6d.

SOCIÉTÉ D'EDITIONS SCIENTIFIQUES, Paris.
Études Épidémiologiques. Le Choléra en Europe, depuis son origine jusqu'à nos jours. Par Dr. Ph. Hauser. 1897.

STOCK, ELLIOT, Paternoster-row, London.
Natural History in Shakespeare's Time. By H. W. Seager, M.B. 1896.

UNIVERSITY PRESS, Cambridge.
Cambridge Natural Science Manuals: The Vertebrate Skeleton. By S. H. Reynolds, M.A. 1897.

UNIVERSITY PRESS, John-street, Bedford-row, London.
The Blight of Respectability: An Anatomy of the Disease and a Theory of Curative Treatment. By Geoffrey Mortimer. 1897. Price 2s. 6d.

VOGEL, F. C. W., Leipzig.
Zur Pathologie und Therapie der Kindlichen Skoliose. Par Dr. Dolega. 1897.

WILLIAMS AND NORGATE, Henrietta-street, Covent-garden, London.
Über Puerperale Psychosen. Von Dr. O. Knauer. Mit einem Vorwort von Dr. A. Martin. 1897.
Die Färbetechnik der Nerven-systems. Von Dr. B. Pollack. 1897. Price 2s.
Problems of Nature: Researches and Discoveries of Gustav Jaeger, M.D. Edited and translated by Henry G. Schlichter, D.Sc. 1897. Price 4s.

De la Voûte plantaire et du Pied creux congenital par malformations osseuses; par Dr. A. Jeanne (J. B. Baillière et Fils, Paris, 1897).—Annuaire des Eaux-Minérales, Trente-Neuvieme année, 1897 (Bureau de la Gazette des Eaux, Paris).—Report of the Registration of Births, Marriages, and Deaths in the Province of Ontario for the Year ending Dec. 31st, 1895 (Warwick Brothers and Rutter, Front-street, West Toronto, 1897).—Murray's Cyclist's Road Book, with an Atlas of the Road, 1897 (John Murray, Albemarle-street, London).—Medical and Surgical Report of the Presbyterian Hospital in the City of New York: Vol. II., January, 1897; edited by A. J. McCosh, M.D., and W. B. James, M.D.—La Revue Philanthropique; No. 1, 10 Mai, 1897 (Masson et Cie., Paris, 1897).—Suite de Monographies Cliniques sur les questions Nouvelles en Medecine, en Chirurgie, en Biologie: No. 1, de l'Appendicette; par Dr. F. Leguen (Masson et Cie, Paris, 1897).—The Journal of Physiology, Vol. XXI., Nos. 4 and 5, May 12th, 1897 (C. J. Clay and Sons, Ave Maria-lane, London); price 13s.—Boletins e Memorias da Sociedade de Medicina e Cirurgia do Rio de Janeiro, 11° Anno 1896 (Soares and Niemeyer, Rio de Janeiro, 1897).—Acta de la Sesión pública inaugural que la Real Academia de Medicina y Cirurgia de Barcelona celebro en 30 de Enero de 1897 (F. Sauchez, Barcelona, 1897).—Association of Surveyors of H.M. Service; Occasional Papers, 3rd Series; March, 1897 (King, Thorne, and Stace, Brighton); price 2s.—City of St. Louis Health Department; Nineteenth Annual Report of the Health Commissioner for the Year ending March 31st, 1896.—Archivos de Medicina, No. 3; 25 de Abril de 1897 (José Bastos, Lisbon).—Record Reign of Queen Victoria for Sixty Years: Portraits of Her Majesty, 1837 and 1897 (Marcus Ward and Co., Farringdon-street, London).—New illustrated Catalogue of GlassBottles, &c. (Kilner Brothers, G. N. Goods Station, King's-cross, London)—Magazines, &c., for June: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowlekge, and Humanitarian.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAM, JOHN, M.B., C.M. Glasg., has been appointed Parochial Medical Officer by the Parish Council of Edinkillie, vice T. H. Fyfe, resigned.

ALLEN, C. P., M.R.C.S., L.R.C.P., L.S.A., has been appointed Assistant Resident Medical Officer to the North-West London Hospital.

ARMSTRONG, WM., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer for the Boldon and Whitburn Sanitary District of the South Shields Union.

BABINGTON, S. N., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

BELBIN, H. ASHBY, L.S.A., has been appointed Junior House Surgeon to the Guest Hospital, Dudley.

BINCKES, F. W., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

BROWN, WILLIAM H., M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the General Hospital, Birmingham.

CARAHER, MORE, L.R.C.P. & S. Irel., L.M., has been appointed Medical Officer to the Children's Hospital, Temple-street, Dublin.

DAWES, W. J., M.R.C.S., has been appointed Medical Officer for the Florence and Normacott Sanitary District of the Stoke-upon-Trent Union.

DEAN, EDWIN, L.S.A., has been re-appointed Medical Officer and Public Vaccinator for the Slaithwaite Sanitary District of the Huddersfield Union.

FRAZER, W. D., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

FAIRBAIRN, J. S., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

GALLOWAY, ALEXANDER RUDOLF, M.A., M.B., C.M. Aberd., has been appointed Physician to the Aberdeen Asylum for the Blind, vice Jas. McKenzie Davidson, resigned.

GERVIS, F. H., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

GILBERT, L., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

HALL, J. SPENCER, L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

HAYWARD, J. W., M.R.C.S., has been re-appointed Medical Officer by the Whitstable Urban District Council.

IVES, W. R. Y., L.R.C.P. Lond., has been appointed Medical Officer for the Portswood Sanitary District by the South Stoneham District Council,

JONAS, H. C., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

LAUDER, R. E., L.R.C.P., L.R.C.S. Edin., D.P.H., has been appointed Medical Officer for the No. 1 Sanitary District of the Southampton Union.

MACEVOY, H. J., M.D., B.Sc. Lond., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

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MADDEN, FRANK C., M.B., B.S. Melb., L.R.C.P., M.R.C.S., F.R.C.S. Eng., has been appointed House Surgeon to the Hospital for Sick Children, Great Ormond-street, W.C.

MARRIAGE, H. J., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

MARTINEAU, A. J., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

PATERSON, W. H. J., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

RIMELL, A. T., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Long Sutton and Tydd St. Mary Districts of the Holbeach Union, vice Langton, resigned.

ROUILLARD, J. A. A., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

SCATCHARD, J. P., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

SCOTT, A. E., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the North-West London Hospital.

SELIGMANN, C. G., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

SMITH, J. A., M.D. Lond., M.R.C.S., has been appointed Medical Officer for the First Sanitary District of the Parish of Willesden.

STAINER, E., M.A., M.B., B.Ch. Oxon., has been re-appointed House Physician to St. Thomas's Hospital.

STONE, W. GREAM, M.A., M.B., B.Ch. Oxon., F.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

STRANGE, R. G., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

TAYLOR, G. E. O., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

THOMSON, ARNOLD J., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the General Hospital, Birmingham.

THORMAN, W. H., B.A. Cantab., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

TOMBLESON, J. B., B.A., M.B., B.Ch. Oxon., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

TUKE, A. W., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

USHER, C. H., M.B. Camb., F.R.C.S. Edin., has been appointed Ophthalmic Surgeon to the Royal Aberdeen Hospital for Sick Children.

WHICHER, A. H., M.R.C.S., has been re-appointed Medical Officer of Health, Midsomer Norton, by the Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

CONSUMPTIVE HOSPITAL AND ORPHAN HOMES OF SCOTLAND, Bridge-of-Weir.—Resident Medical Officer. Salary £80 per annum, with furnished apartments, board, &c. Applications to the Secretary, 194, St. Vincent-street, Glasgow.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester-square.—Demonstrator. An honorarium of £50 per annum.

DEVON COUNTY ASYLUM, Bedford-circus, Exeter.—Assistant Medical Officer, single. Salary £120 per annum, with board, lodgings, and washing.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Assistant House Surgeon for six months. An honorarium of £10, awarded conditionally, and board, residence, and washing provided.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thorofare, Ipswich.—Second House Surgeon, single, for one year. Salary £70 per annum, with board, lodging, and washing.

HEREFORD GENERAL INFIRMARY.—Honorary Physician. Also Honorary Surgeon.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon to the Out-patients (non-resident) for six months. Salary 25 guineas.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—Resident Medical Superintendent for one year. Salary £105 a year, with board and residence in the hospital.

KENSINGTON DISPENSARY.—Honorary Medical Officer. Applications to the Honorary Secretary, F. Leach, Esq., 7, Stanford-road, Kensington-square, W.

MERCER'S HOSPITAL, Dublin.—Vacancies on the Surgical and Medical Staff

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Resident Medical Officer. Salary £80 per annum, with board, lodging, and washing.

QUEEN'S HOSPITAL, Birmingham.—An Honorary Physician.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £60 per annum. Also Junior House Physician for six months. Board and lodging, including washing, provided. Applications to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Surgeon. Applications to the Secretary, Offices, 27, Clement's-lane, E.C.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at the rate of £40 per annum, with board, lodging, and washing.

ST. PETER'S HOSPITAL, Henrietta-street, Covent-garden, London.—House Surgeon for six months. Salary at the rate of £100 a year, with board, lodging, and washing.

ST. THOMAS'S HOSPITAL, Westminster-bridge.—Resident Assistant Surgeon.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon for one year. Board and lodging in the hospital, and an honorarium of £50.

WANTAGE UNION.—Medical Officer and Public Vaccinator for the Vale District. Salary £50 per annum, with the usual surgical, vaccination, and midwifery fees. Applications to the Clerk to the Guardians, Wantage.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician. Also House Surgeon for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

BROOKS.—On May 19th, at St. Felix, Felixstowe, the wife of F. A Brooks, M.D. Brux., M.R.C.S., L.R.C.P. Lond., of a son.

CARSON-SMYTH.—On May 18th, at Craven-park, Willesden, the wife of Alexander Carson-Smyth, M.B., C.M. Edin., of a daughter.

FARRAR.—On May 22nd, the wife of Dr. Reginald Farrar, of Stamford, Lincolnshire, of a daughter.

FRANCIS.—On May 25th, at St. Andrew's, Uxbridge, the wife of L. A. Francis, M.R.C.S., L.R.C.P., of a son.

NOBLE.—On May 23rd, at High-road, Leyton, Essex, the wife of Wm. G. Noble, Surgeon, of a son (Eric William).

THOMPSTONE.—On May 21st, at Marsh-parade, Newcastle-under-Lyme the wife of Sydney W Thompstone, F.R.C.S. Edin., District Medical Officer H.M.'s Niger Coast Protectorate, West Africa, of a son.

WHITFIELD.—On May 21st, at Upper Berkeley-street, Portman-square, W., the wife of Arthur Whitfield, M.D., M.R.C.P., of a daughter.

WRIGHT.—On May 16th, at 31, New-road, Rochester, the wife of Clarence A. Wright, L.R.C.P. Edin., &c., of a daughter.

MARRIAGES.

COLEMAN—HOGG.—On May 25th, at the Parish Church, Pinner, James George Blyth Coleman, M.R.C.S., eldest son of the late Michael McDowell Coleman, of Madras, to Rosa, fourth daughter of Edward Hogg, of The Lodge, Pinner, Middlesex.

EVES—TULK-HART.—On May 18th, at St. Peter's Church, Brighton, by the Rev. A. R. Buckland, morning preacher at the Foundling Hospital, London, assisted by the Rev. Jas. Hussey, Rector of Pimperne, Dorsetshire, and the Rev. D. L. Secretan, of St. Peter's, P. Stanhope Eves, M.D. Lond., of 1, St. Peter's-place, Brighton, son of W. H. Eves, Esq., of Brunswick-square, London, to Alice C. Guinevere, only daughter of Eugene J. Tulk-Hart, M.D. Durh., of 4, Gloucester-place, Brighton.

MACLEOD—RUSTON.—On May 24th, at Newland Chapel, Lincoln, MacLeod Hendrie MacLeod, M.A., M.B., C.M., of Airliebank, Dundee, to Eva Jane, daughter of Joseph Ruston, Esq., of Monks Manor, Lincoln, and St. George's-place, Hyde-park, S.W.

PHEAR—LISTER.—On May 18th, at the Friends' Meeting House, Wanstead, Arthur George Phear, M.D., to Ellen Frances, daughter of Arthur Lister, J.P., of Leytonstone, Essex, and Lyme Regis, Dorset.

TAYLOR—MOORE.—On May 24th, at St. Mark's, Southampton, Algernon Taylor, Surgeon, &c., Dunraven House, Battersea-park, to Christine, second daughter of L. G. Moore, The Glen, Southampton.

DEATHS.

BOYD.—On May 15th, at Sydney, N.S.W., Robert John Boyd, Surgeon, son of the late Robert Boyd, M.D., of Bolton-row, Mayfair, and Southall-park.

HENRY.—On May 17th, suddenly, in London, Herbert George Henry, L.D.S. Eng., of East London, South Africa, in his 31st year.

LOWE.—On May 22nd, at Tunbridge Wells, John Lowe, M.R.C.S. Irel., L.R.C.P. Edin., of 90, Preston-road, Brighton, aged 42 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 27th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 21	29·95	E.	62	54	113	69	51	...	Fine
" 22	29·84	E.	54	49	111	64	46	...	Fine
" 23	29·82	N.E.	53	48	109	67	44	...	Fine
" 24	29·87	N.E.	49	47	103	61	47	...	Overcast
" 25	29·82	S.W.	50	48	113	71	45	.	Overcast
" 26	29·52	S.W.	55	51	79	60	50	0·06	Cloudy
" 27	29·36	S.W.	53	50	108	62	50	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (2nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (3rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (5th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (2nd).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. A. Routh and others. Paper: Dr. A. Routh: Parturition during Paraplegia.

THURSDAY (3rd).—NEUROLOGICAL SOCIETY OF LONDON (Physiological Laboratory, University College, Gower-street, W.C.).—8.30 P.M. Prof. Schäfer: Is there a Direct Relationship between the Motor Paralysis Produced by Lesions of the Cortex and Loss of Sensibility, Muscular or Other? (with experiments). Communication:—Prof. Boyce and Dr. Warrington: Some of the Ascending and Descending Nerve Tracts in the Fowl.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (31st).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Leprosy.

LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. G. Stoker: Chronic Glandular Disease of the Nose and Naso-Pharynx.

TUESDAY (1st).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Black-friars, 4.30 P.M., Dr. Payne: Prurigo and Pruritus.

ROYAL INSTITUTION.—3 P.M. Dr. E. H. Starling: The Heart and its Work.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Gowers: Clinical Demonstration.

WEDNESDAY (2nd).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Animal Parasites.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Sanitary Appliances.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Schorstein: Bronchiectasis.

THURSDAY (3rd).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Quantitative Estimation of Sugar present in Urine.—Erlich's Diazo-reaction, &c.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. W. Cheyne: Clinical Lecture.

FRIDAY (4th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.)—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

EAST LONDON HOSPITAL FOR CHILDREN (Shadwell).—3 P.M. Dr. J. A. Hayward: Marasmus.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Actinomycosis and Glanders.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Tooth: Paraplegia.

ROYAL INSTITUTION.—9 P.M. Mr. W. H. Preece: Signalling through Space without Wires.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

HARTMANN'S HYGIENIC TOWELETTES FOR LADIES.

WE have received samples of a new pattern of Hartmann's towelettes which can now be supplied at a lower price than is charged for the style ordinarily in use. Both kinds, whether the low-priced or the more expensive, are made of Hartmann's patent wood-wool wadding enclosed in gauze, the only difference being in the size of the article. Wood-wool is an exceedingly soft and absorbent substance, which the manufacturers have rendered very suitable for the present purpose by means of a process of treatment which prevents it from cohering into an unserviceable mass when wetted. It has also been used as a material for surgical dressings. The towelettes are about nine inches long, two inches and three-quarters wide, and half an inch thick. The gauze with which they are covered is formed into loops at each end for the convenience of fastening. The towelettes are burned after being used. They are sold in packets of twelve for sixpence, so that the price of each is a halfpenny. The manufacturers are the Sanitary Wood-Wool Company, Limited, 26, Thavies-inn, Holborn-circus, E.C.

CHATTERIS URBAN DISTRICT COUNCIL.

The medical officer of health of this council has made remarks concerning the notification of infectious cases in his district which have caused some surprise at a recent meeting of the Council. One passage in his statement, as it appears in a local paper, strikes us as being particularly unhappy. He publishes an assumption that his private practice is twice the size of the practice of one of his neighbours, and states that in spite of that fact the notifications from his neighbour were doubly as frequent as those arising out of his own experience. The inferences that could be drawn from such a statement are clearly of an uncomplimentary character to a professional rival. The assertions of the medical officer of health have been categorically denied by his brother practitioner, but the neighbourhood will certainly desire to know who is right and who is wrong.

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AN INSTRUCTIVE CORRESPONDENCE.

OUR attention has been drawn to a correspondence which has taken place between Mr. H. C. Burdett and the Hon. Stephen Coleridge. Mr. Burdett took the same exception that we ourselves did to Mr. Coleridge's letter addressed to the Prince of Wales, and appearing in the *Times* in March last. Mr. Burdett pronounced it ridiculous nonsense for Mr. Coleridge to write to the *Times* and "describe laboratories attached to hospitals where 'hapless dumb animals daily and hourly are slowly cut up alive without even the pretence of anæsthetics,'" and asked to be supplied with the names of the laboratories referred to. Mr. Coleridge did not supply the names; no one yet has been able to extract their names from him, but he wrote some long letters in which, if he meant anything, he meant to evade the point. Mr. Burdett, however, was obstinate and insisted that it was incumbent upon Mr. Coleridge's honour either to supply the names of the laboratories where "hapless dumb animals are daily and hourly cut up alive without even the pretence of anæsthetics" or to withdraw his statement. Mr. Coleridge continued to refrain from imparting the necessary information, but appeared to think that Mr. Burdett ought to be very much obliged to him for furnishing him "with facts relating to the financial connexion between hospitals and laboratories which your thirty years of hospital study had apparently overlooked." Mr. Burdett repeated his question, which Mr. Coleridge again omitted to answer, preferring to furnish illustrations and inferences instead of facts. It was then pointed out to him that analogy is not usually accepted as proof. Mr. Coleridge replied that his analogies had been introduced "not as proofs of facts, but as aids for the formation in Mr. Burdett's mind of a due estimate of the weight of my inferences." Mr. Burdett summed up the correspondence in the *Hospital* of May 15th by stating that "all the talk about cutting animals up alive without even the pretence of anæsthetics must be looked upon as sheer nonsense." And that is exactly how all sensible people have come to regard Mr. Stephen Coleridge's vapourings. If he had any facts we are bound to suppose that he would communicate them. But he has none. He has been guessing and gassing, and has not the grace to turn off the tap when his neighbours object to the smell. We recommend to the consideration of Mr. Coleridge the speeches of the Prince of Wales and of Dr. Pye-Smith, delivered on Wednesday last at Guy's Hospital.

H. M.—To the best of our belief no such course of instruction is given either at Aix-les-Bains or at an English spa. Our correspondent's best plan would be to get an introduction to one of the medical men who are known to be authorities upon the subject and ask for his advice.

AN OBSTINATE CASE OF ECZEMA: SUGGESTIONS WANTED.

To the Editors of THE LANCET.

SIRS,—About five months ago I was consulted by a patient who has been suffering from chronic eczema on his right leg for seven years. During this time he consulted several medical men in different parts of the country, and used their prescriptions without benefit. I put him on a course of iodides and prescribed him many ointments, stimulating and soothing, such as ointment of tar, ointment of zinc, ointment of sulphur, &c., and at first he improved rapidly; but since then the disease has remained stationary. May I ask you to kindly insert this in THE LANCET in the hope that some brother practitioner will give me the benefit of his experience in the treatment of obstinate cases of eczema. I am, Sirs, yours faithfully,

Addlestone, May 13th, 1897. A. ALAMUDDIN, M.D.

Jolly-Boat-Boy has not communicated his name and address. We are therefore unable to return to him his inclosure. We do not recommend practitioners or give medical advice. Surely in all Paris our correspondent can find a medical man who will treat him on reasonable and proper terms.

THE HEALTH OF THE ARMY IN INDIA.

OUR attention has been called by a correspondent to a communication in the *Pioneer Mail* of April 29th on the above subject, in which great stress is laid on the fact that, although there has been an unquestioned increase of venereal disease in most stations in all the several commands in India, there has, nevertheless, been a striking decrease in the admission-rates of some of them. Some useful information may probably be obtained by local inquiry as to the causes of this difference, but it does not seem to us really to affect the question. The broad fact remains—viz., that the amount of these diseases has greatly increased, and is still apparently increasing, and the quality of the constitutional form of it has become much worse. It does not follow that we need return to the Acts exactly as they were in the past, but it does follow, as it seems to us, that remedial measures of some sort are most urgently required. The Indian Government is now considering what these should be.

COLLES'S FRACTURE AND THE ROENTGEN RAYS.

DR. EUGENE R. CORSON contributes an original article entitled "Some Observations on Colles's Fracture by the aid of the X Rays" to the *New York Medical Record* of May 8th, which tends to correct some notions of this troublesome and unsatisfactory injury and to suggest simple lines of treatment. He gives four figures purporting, respectively, to represent the following cases. 1. Comminuted Colles's fracture, with the styloid process of the radius broken off and tilted out, the callus being rapidly absorbed; the styloid process of the ulna broken off; and displacement of the hand and ulna. 2. Transverse fracture of the left radius one inch above the articular surface, with perfect reposition of fragments; the styloid process of the ulna broken off; and displacement of the hand and ulna. 3. Displacement of the hand and ulna (diagnosed as Colles's fracture, but only a severe sprain with displacement of the hand to the radial side due to rupture of the internal lateral ligament). 4. Displacement of the hand and ulna with the radius intact; the fractured styloid process of the ulna being the only injury to the bones. Dr. Corson finds in his observations proof of the views of Hamilton attaching importance to the rupture of ligaments, especially the internal lateral ligament, aided by rupture of the anterior and posterior ligaments, as the chief cause of the most prominent and unsightly deformity in Colles's fracture, the hand slipping toward the radial side and the ulna forwards and towards the radius. There may be considerable deformity without any fracture, and if there be only transverse fracture of the radius without tearing of the ligaments there may be little displacement and a good result with any treatment. Another of his conclusions is that, as Nelaton taught, the styloid process of the ulna is frequently broken off. The fractures are, he thinks, easily reduced by gentle and continuous extension and a certain amount of flexion, abduction, or adduction, according to the case. The more important part of the treatment is to reduce the inflammation and swelling with fomentations, to keep the forearm and hand perfectly prone and in a direct line with each other on a straight splint, slightly padded to suit the flexures of the forearm, wrist, and palm, extending from one inch below the elbow to the metacarpo-phalangeal joints, so as to admit free movement of the fingers—"a very important matter," as he well says, which tends to prevent that permanent stiffness of the wrist and hand which, more than the deformity, disappoints the patient and the surgeon.

X. Y. Z.—Poverty may be considered an emergency for the purposes of our reply. If circumstances permit of the assistance it is well to have it, but for this reason or that it has often to be dispensed with.

STARVATION PRICES.

To the Editors of THE LANCET.

SIRS,—Copies of the enclosed handbill have been distributed broadcast in this locality I am, Sirs, yours truly,

May 15th, 1897. DISGUSTED.

[ENCLOSURE.]

THE LAMBETH DISPENSARY,

39, LAMBETH WALK.

Established with a view of affording Medical and Surgical advice at the Lowest Possible Fees, and thus obviating the necessity of applying to Charitable Institutions, or being treated by quacks, chemists, &c.

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*** It is regrettable that such prices should be voluntarily accepted by medical men.—ED. L.

Mr. Frank E. Wrench (Maple Creek).—Undoubtedly the world has grown more liberal of late, but if anything is more calculated to retard the well-being of the race than undue distrust it is unjustifiable credulity.

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THE PROFESSIONAL VAGRANT.

SOME very pointed remarks were made by an emissary of the Local Government Board—Mr. Davy, one of the inspectors—at a meeting of a Sussex board of guardians the other day. Mention has been made in THE LANCET of a scheme adopted in West Sussex for weeding out the professional vagrant. Bread is supplied in every place on application to the local constable, and a pass-card is handed to the tramp which shows where he has called. At the same time the fact is advertised far and wide that there is no excuse for men to beg for either food or lodging, and *bond-fide* workmen, indeed, are helped on. During the last half-year this had the remarkable effect of thinning out the tramps by over one-third—that is to say, that number less passed through the unions. Every union but one supported this scheme, which cost but the modest sum of £13 10s. in the six months. That union is Horsham. Last week Mr. Davy said that no amount of Local Government Board orders could have produced the unanimity which the remaining unions had themselves secured, and he did not like to see one standing out. It is probable that the Horsham guardians will come into line, and the action of Mr. Davy is the more appreciated from the fact that hitherto the support the Local Government Board has accorded the scheme has been of a partial and almost unofficial character.

Mr. Edward Long.—We do not see how any development of x ray therapeutics could lead to the fortunate results suggested by our correspondent.

"THE PUBLIC HEALTH EXAMINATION AT CAMBRIDGE."

To the Editors of THE LANCET.

SIRS,—What your correspondent "M.D." has to say about the inefficiency of the apparatus in the practical bacteriology applies much more forcibly to the apparatus provided us in the gas and water analyses. The test solutions were not all of the strength ordinarily used in laboratories. The water bath supplied me was so small that it would only accommodate one evaporating dish at a time. I had only one graduated hand-burette, which had to be used for all purposes. The first stand-burette I had given me was broken off about a third of its length and the next given me had so large a diameter, and the spaces denoting tenths of a cubic centimetre were so small, that it was only with the greatest care that small additions of the standard ammon. chloride solution could be made. The two-foot tube supplied to me (after waiting a quarter of an hour for it) was closed at *both* ends and could only be filled by holding it horizontally and dribbling the water through a tiny hole in the side. Seeing this would take twenty minutes to fill I abandoned its use altogether. Time is valuable when only three hours are allowed for a complete analysis of water and a quantitative analysis of three gases. Half an hour at least must be devoted to properly writing out your report, and another half hour is wasted in remedying deficiencies of apparatus or waiting for apparatus and reagents not on your bench to be brought you when another candidate has finished with them. At least four hours should, in my opinion, be given for the practical chemistry, and even then it would be a busier time than the four hours each that are given for practical bacteriology and the practical microscopy. My experience justifies me in complaining that candidates at Cambridge D.P H. examinations are not allowed full opportunity of doing justice to their practical knowledge, but are hampered and confused either by lack of the usual reagents and apparatus or their improper condition. I am, Sirs, yours faithfully,

May 19th, 1897. W. T.

Clerk has done well, although the appearances were suspicious.

A SAPIENT TOWN COUNCIL.

THE medical officer of health of Kidwelly, South Wales, has had some remarkable experiences in connexion with his salary. At first it was fixed at £20 per annum; this was increased to £35, where it stopped for three years, when it was reduced to £12 10s. A year later it went down to £10, but the town saved nothing by this, as when the salary was £20 and over the Local Government Board paid half, but immediately it was under that amount Kidwelly had to pay it all. For this reason the council on May 11th suggested £20 again, but the proposal was lost by eight votes to seven.

THE INTERNATIONAL TROOPS IN CRETE.

CRETE is far from being a desirable station at the present time. Its towns and villages are not the most sanitary and cleanly places in the world. The troops that have been landed in the island are stated to be enjoying excellent health, but there have been two mild cases of small-pox in the Highlanders. Small-pox is rather prevalent among the Cretan population at present. The British and Italian troops, the correspondent of the *Broad Arrow* reports, fraternise a good deal together. The Turkish troops, he adds, are not well clad or equipped, but they are patient, well behaved, amenable to discipline, and good soldiers.

A FLOATING AMBULANCE AT THE SEAT OF WAR.

FROM Volo an Italian correspondent writes that on the 7th inst. he left that port at midday on board the *Albania*, a real "floating hospital," whose *personnel* included Mr. Osborn, with a number of ladies of the English Red Cross, Dr. Müller (a Swiss), and Dr. Cantas (a Greek), assisted by ladies of the Greek Red Cross. They were tending and treating a hundred wounded Greeks and volunteers, while a priest was at hand to vouchsafe the consolations of religion. Besides the cabins, the deck and "bridge" were set apart for the patients lying on stretchers. The weather he describes as "incantevole" (enchanting), in strange contrast to the "tristezza" (sadness) of the floating ambulance, whence the air was filled with the moans of the sufferers. By 5 P.M. two of these had breathed their last. Very severe was the agony of a soldier whose right leg was smashed by a "mitrailleuse." The surgeons attempted amputation, which was performed as the patient lay extended on a table on the "bridge"; but he succumbed under chloroform, so low had the powers of life run. His last words before being fully anæsthetised, uttered with a voice of anguish, were "Emanula, Emanula, piccola madre mia" (Emanula, Emanula, my little mother). By 5 30 P.M. Stylidas was reached and six more wounded, all from Pharsala, were taken on board. These were members of the foreign legion—four English and two Italians. The latter were one Alessandrini of Modena, whose right leg had been traversed by a projectile without its having touched the bone, and one Balducci of Bologna, whose right arm had been similarly perforated by a ball, the bone again remaining intact. There were thirty-three Italians in the foreign legion posted at the extreme left of the Greek lines at Triscoli, a point some ten miles from Pharsala. There, with 700 Greek infantry, the legion, without ordnance, had to face a strong Turkish force with eight cannon. Nevertheless, they pressed on till they came within three miles and a half of Pharsala, by which time the legion had twenty wounded. Nearer Pharsala they came within close range of 7000 Turks. In the encounter Alessandrini and Balducci received their wounds, and Captain Barattazzi (Greek), who commanded the legion, was himself severely wounded. By general testimony the English members of the legion and the Italians fought most courageously of all. In the Greek camp, according to the same correspondent, the medical department was very badly supported and provided. "At Pharsala itself," he adds, "not a single Red Cross ambulance was present." On the voyage of the *Albania* the two dead, accompanied by the priest, were buried at Stylidas, and the same night two more died and were landed for interment next morning at Malcis. By this time the moribund amounted to twenty, mostly with abdominal wounds. One, from a wound on the cranium, had a great part of the cerebrum carried away, but was still active and able to express his wants; another had the hip-joint smashed by a "mitrailleuse." The surgeons say that in this campaign whenever a projectile has touched a bone it has caused a comminuted fracture. One unfortunate among the wounded went raving mad and could with difficulty be kept bound to his stretcher. The wounded officers on board the *Albania* were unanimous in declaring that on the Greek side the fortunes of the campaign were compromised by the paramount blunders of the two retreats, but that the defence can be maintained along the line of the old frontier. They expressed the greatest confidence in Smolenski, who, they said, deserved to be put in supreme command.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Coleshill Chronicle, Rochester Journal, Sheffield Independent, Eastern Morning News, Birmingham Gazette, Newcastle Chronicle, Bradford Observer, South Wales News, Times of India, East Anglian Weekly Times, Pioneer Mail, Rugby Advertiser, Builder, Darwin Post, Preston Herald, Liverpool Daily Post, Kendal Mercury, Leicester Post, Walsall Advertiser, Architect, Alresford Herald, Harrow Press, Southport Visitor, Yorkshire Post, Brighton Gazette, Hastings News, Northampton Mercury, Derbyshire Courier, Dudley Herald, Worcester Advertiser, Weekly Echo (Sunderland), Chatham News, Windsor Chronicle, Maidstone Journal, Sussex Daily News, Huddersfield Examiner, Lancashire Express, Wellington News, Bristol Mercury, Kent County Examiner, Folkestone Chronicle, Kidderminster Shuttle, Portsmouth Times, Yarrow Express, Scotsman, Leeds Mercury, Hampshire Independent, Bromley Herald, Local Government Chronicle, Hertfordshire Mercury, Mining Journal, Weekly Free Press and Aberdeen Herald, City Press, Reading Mercury, Sanitary Record, Maidstone and Kentish Journal, South Africa, Surrey Advertiser, Reynolds' Newspaper, Nuneaton Observer, Local Government Journal, Leek Times, Public Health, Engineer, Isle of Man and Daily Times, Kenilworth Advertiser, West Middlesex Herald, Halifax Courier, Montrose Standard, &c., &c.*

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AWARDS.

GOLD MEDAL, International Health Exhibition, London, 1884.
FIRST ORDER OF MERIT AND MEDAL (Highest Award), Adelaide, 1887.
HIGHEST AWARD, Medical and Sanitary Exhibition, London, 1882.
FIRST ORDER OF MERIT AND MEDAL, Melbourne, 1888.

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TELEGRAPHIC ADDRESS—"Benger's, Manchester."

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ABSTRACT OF

Lectures

ON

DISEASES OF THE GALL-BLADDER AND BILE-DUCTS.

Delivered at the Royal College of Surgeons of England on March 8th, 10th, and 12th, 1897,

BY A. W. MAYO ROBSON, F.R.C.S. ENG.,
HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY, ROYAL COLLEGE OF SURGEONS OF ENGLAND.

LECTURE II.[1]

Delivered on March 10th.

Fistula.—Fistulæ in connexion with the bile passages are by no means uncommon, and their variety is considerable. They result from operation, or from disease, and in the latter case they are due to ulceration resulting from gall-stones or cancer. The fistulous channel may either be direct or indirect; in the former case being caused by an advancing ulcer setting up local peritonitis, and causing adhesion of the gall-bladder or bile-ducts to one of the neighbouring hollow viscera, or to the parietal peritoneum. The extension of the ulcer continuing, a communication is established with the contiguous channel or with the surface. In the latter case, (indirect) the perforation occurs first into an adjoining parenchymatous organ or into a localised abscess, and then into the nearest hollow viscus or on to the surface of the body at some part. A fistula may also arise from a local abscess forming outside the biliary passages around the primary focus of inflammation, and then bursting into the adjoining cavities, which are thus made to communicate. Although the establishment of a fistula is at times dangerous, and at others excessively annoying or uncomfortable, in many cases it forms one of nature's methods of cure in certain forms of disease of the gall-bladder or bile-ducts, and the surgeon in forming a permanent biliary fistula in otherwise incurable jaundice or in making an anastomosis between the bile passages and the intestine for the like purpose, is taking a leaf from nature's book. Many of the fistulæ are mere pathological curiosities, quite undiagnosable, and capable only of being discovered post mortem. Many must form and heal, leaving the patient cured, and thus never be discovered; for contrary to what one might suppose, fistulæ between the bile passages and other hollow viscera, in the majority of cases heal spontaneously, leaving only visceral adhesions; so that the fistulæ are comparatively rarely found post mortem. It would be of value if I could give statistics of the number of times that fistula follows an operation, but this I find is seldom mentioned by operators. I must, therefore, fall back on my own experience. My operations extend to 170 cases, 115 of which were cholecystotomies. I find that in 12 cases there were fistulæ following, but as 5 occurred in my first 10 operations, since which time I have altered my method of procedure, it is fairer to say that 7 fistulæ occurred in 160 cases. Several of the fistulæ were inevitable, as the ducts were strictured; in others they were intentional, as in cancerous obstruction producing jaundice. Where the patients lived—i.e., where the obstruction was due to simple and not malignant disease, they were all cured by further operative means except my first patient, and she might be, but she says the small mucous fistula gives her so little trouble that it is not worth her loss of time to have it remedied.

Biliary cutaneous fistula.—Courvoisier's statistics gathered from reported cases would seem to prove that this is the commonest form of fistula. It may be pathological or post-operative.

Pathological surface fistulæ usually open at the umbilicus, the abscess following the course of the remains of the umbilical vein, but they may form at any part of the abdominal wall, even near the pubes, or on the left side of the abdomen. Calculi of various sizes, from a single one, three inches in diameter, reported by Gutteridge,[2] to multiple small faceted ones, the size of shotcorns, may be discharged in this way, leading to recovery and permanent cure, but until all the calculi are discharged the fistula is liable to remain open. In operating on these cases it is advisable to purify the fistulæ as far as possible and to scrape away all granulations before opening the peritoneal cavity to get at, and clear, the bile-ducts. By adopting these precautions I have had no untoward results in those cases on which I have operated.

Post-operative fistulæ may be mucous or biliary.

Mucous fistulæ are occasionally seen after the operation of cholecystotomy, where the obstruction in the cystic duct has not been overcome, or where that duct is the seat of stricture. In two cases of mucous fistula dependent on stricture of the cystic duct I removed the gall-bladder, effecting a complete and permanent cure. In another case, where a muco-purulent fistula had been discharging at the umbilicus for some months, I followed the channel up to the gall-bladder and found the cystic duct occluded by calculi, which I removed, after which the fistula closed without difficulty. A mucous fistula, as a matter of fact, causes very little inconvenience, as only about 1 oz. of fluid is discharged daily; but if the opening be allowed to close the accumulation produces pain, and it is therefore necessary for a patient under these circumstances either to wear a small tube and a pad of absorbent wool or to submit to operation. The operation of cholecystotomy will not be followed by fistula if the bile-ducts have been cleared, and if the opening in the gall-bladder be sutured to the aponeurosis and not to the skin. Since I modified the operation of cholecystotomy in this way, which I did in my eleventh operation, I have never known a fistula to follow when the bile-ducts have been cleared.

Biliary fistula following on operation is quite a different matter from mucous fistula, as, although in some cases it is compatible with good health, the inconvenience caused by thirty ounces of bile flowing from the fistula daily, produces so much discomfort that in all the cases which have come under my notice the patients have preferred to accept the risks of operation rather than to retain their disability. The treatment of biliary fistula should, where possible, be effected by removing the cause; but as in certain cases this is impracticable or impossible other means have to be considered. If the ducts be clear and the fistula be small the application of the actual cautery to the margin of the fistula will frequently result in its closure. That failing, the method I adopted in Case 116 may be followed, of opening the abdomen, detaching the gall-bladder, and suturing the opening. Or the less severe method may be tried first of dissecting the fistula with its peritoneal covering intact from the skin margin, afterwards doubling in the mucous edges, suturing them accurately, and over this applying one or two layers of buried sutures before bringing together the skin. Where, however, the ducts cannot be cleared and the gall-bladder is large enough to permit it. the operation of cholecystenterostomy may be performed. I believe I was the first to carry this operation out in a case of biliary fistula on Jan. 14th, 1888, and the patient is at the present time in excellent health, doing duty as a maternity nurse. I have since performed it on four occasions for fistula, each time with success, so that in such cases I feel I can recommend it as a safe and efficient method of treatment. If the fistula be dependent on gall-stones or fragments in the ducts the ducts may be syringed through daily with olive oil or with a 0·5 per cent. solution of sapo animalis, as recommended by Dr. Brockbank; or a solution of turpentine in ether may be used. This is easily done by employing a small, flexible catheter, which is passed through the fistula as far as it will go without force. To the end of this a syringe is affixed and the medicament steadily syringed directly on to the obstruction, the syringing being repeated night and morning for a time.

Biliary intestinal fistulæ, as might be expected from the contiguity of the gall-bladder to the duodenum and colon, are the most common, and as a rule they are due to ulceration produced by gall-stones. Usually the ulceration proceeds quietly and produces very few symptoms until the gall-stone sets up obstruction in its passage down the intestinal canal. If the fistula is between the gall-bladder and duodenum, "the most common variety," the whole length of the intestinal canal has to be traversed by the concretions; hence such cases are found to be more frequently

[1] Lecture I. appeared in THE LANCET of May 29th, 1897.

[2] THE LANCET, June 8th, 1878, p. 851.

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associated with obstruction than when the fistula is between the gall-bladder and colon, for in the latter case the passage to the anus is accomplished without difficulty, though occasionally the concretions may lodge in the cæcum and cause trouble. When a gall-stone is impacted in the common duct just before entering the duodenum ulceration and perforation of the duct are apt to occur, the concretion thus escaping into the duodenum by an enlargement of the ostium of the common bile-duct from ulceration or sloughing. Roth, who has paid special attention to this condition, found it five times in twenty-five cases of biliary fistula. These gall-stones are usually smaller than those causing gall-bladder intestinal fistula, are seldom larger than filberts, and do not often cause intestinal trouble. Biliary gastric fistula is less common than might be thought, for the pylorus is not infrequently adherent to the gall-bladder. I have only one case to advance from my own experience, and in that instance the vomiting of gall-stones made the diagnosis probable, though the complete recovery of the patient, a woman of fifty, rendered it impossible to be absolutely certain that the surmise was correct. Murchison was of opinion that all vomited gall-stones must have entered the stomach through a fistula. In one case Jeaffreson [3] found such a fistula post mortem, a gall-stone having been vomited some time before.

Intestinal obstruction.—Intestinal obstruction from gall-stones is such a distinct complication of cholelithiasis, calling for special treatment, that I think it will not be beyond my province to consider it, and as the chief variety of obstruction is necessarily associated with fistula it seems to me convenient to consider it here. So much has been written about obstruction from gall-stones that at first sight it might seem to be a somewhat common ailment; such, however, is not the case, as may be gathered from the fact that on inquiring of the registrars and pathologists I found only four such cases had been treated during a period of twelve months in some of the largest hospitals in the kingdom, representing 80,000 in-patients, and several hundred thousand out-patients attended to during the same time. Again, only one case, according to Dr. Brockbank, had occurred in the Manchester Royal Infirmary between 1883 and 1893, during which time 50,000 in-patients had been treated. There are clearly four classes of obstruction of the intestines depending primarily on gall-stones, though by intestinal obstruction from gall-stones is usually understood the impaction of a large concretion in some part of the intestinal tract producing a mechanical block. The varieties are: 1. That due to local peritonitis in the gall-bladder region, leading to paralysis of the bowel. The symptoms may be so severe as to resemble strangulation by a band or acute intussusception. The diagnosis will not, as a rule, be difficult, as the history of the occurrence of previous attacks of spasms, though not of necessity followed by jaundice; the similarity to these of the commencement of the attack in question; the severe and persistent pain, at first localised to the right side of the abdomen; the absence of distension at the commencement, and then the occurrence of distension on the right side only, becoming general later; the lateness of the onset of fæcal vomiting, and only after continued retching; the existence of collapse at an early stage owing to the severity of the pain, which is usually relieved by a morphia injection; the usual absence of visible peristalsis; and, lastly, the onset of jaundice if the concretions have reached the common duct, afford so much guidance that error will not often occur, especially if the patient be a woman of middle or old age. These cases will, as a rule, yield to general and medical treatment, and it will only occasionally be necessary to resort to operation during the seizure if the symptoms are not subsiding, though subsequent surgical treatment may be required. 2. Volvulus of the small intestine, dependent on the violence of the colic caused by an attack of gall-stones, or on the contortions induced by the passage of a large concretion through the small intestine, is probably uncommon. The following are abbreviated notes of one of two cases that have come under my personal observation.

CASE 1.—Acute intestinal obstruction in a woman, aged sixty-eight years, operated on Nov. 12th, 1890, by laparotomy, on the eighth day of the obstruction, a volvulus of the small intestine being discovered and untwisted. The bowels were moved by enema on the sixteenth day after onset of obstruction and the eighth day after operation, and a large gall-stone three inches in circumference was passed, this being manifestly the cause of the obstruction, and, secondarily, of the volvulus. The patient returned home on the twenty-sixth day, and remained quite well when heard of a year subsequently.

Diagnosis.—In this class of cases (volvulus) a positive diagnosis is, probably for the most part, out of the question, except after the abdomen is opened, as volvulus of the small intestine is an extremely rare event, and we know that a large gall-stone may quietly ulcerate its way into the gut without any preliminary warning, the symptoms only arising when the concretion is passing through the small bowel.

Treatment.—In this class, operation holds out the only hope of success.

The fourth class is characterised by obstruction coming on after the original cause has disappeared and depends on adhesions left by the local peritonitis due to gall-stone attacks, or on narrowing caused by the healing of a fistulous opening through which a large gall-stone has made its way into the intestinal tract. Dr. Brockbank refers to a case in the Transactions of the Pathological Society of London, 1852, in which there was chronic inflammation and thickening of the ileum and cæcum, with destruction of the ileo-cæcal valve, these being dependent on gall-stones found in the thickened and ulcerated bowel. The bowel was dilated above the obstruction and much contracted below. The patient suffered from chronic diarrhœa for three years, which alternated with attacks of obstruction.

The third class is the most important variety of obstruction dependent on gall-stones, and is the one furnishing, not only the greatest number of cases, but a considerable number of museum specimens. It is dependent on the mechanical obstruction and damage to the bowel produced by the passage of a large concretion through the intestine.

In a paper read before the Royal Medical and Chirurgical Society in 1894 I related notes of cases illustrating this condition. It is astonishing how few unsuccessful cases are reported, yet we know that the mortality of these operations has been considerable. In making a study of the reported cases, and especially of museum specimens, one cannot help feeling astonished at finding fatal obstruction depending on quite small concretions and the comparatively easy passage of very large gall-stones. Schuller (Strasburg, 1891), in reviewing 139 published cases, found that the subjects were women in 74·3 per cent., and of these 75 per cent. occurred in women over fifty years of age, though instances were found from eighteen to ninety-four years of age. Lobstein (Heidelberg) [4] gives the most common age as between forty and sixty years. It is a curious fact that although the calculi usually produce intestinal trouble within a few days of reaching the intestine, in some cases they may remain in the bowel for long periods—e.g., in a case under the care of Mr. Eve,[5] ten years, and in one under the care of Mr. Thomas Smith [6] probably fifteen years. In Courvoisier's elaborate statistics, out of fifty-three cases examined, he gives the site of obstruction as in 21·4 per cent. in the duodenum and jejunum; in 65·4 per cent. in the ileum; in 10 per cent. at the ileo-cæcal valve; and in 2·4 per cent. in the sigmoid flexure. The disease is a peculiarly fatal one—of 280 cases collected by Schuller, Dufort, and Courvoisier 156 died, or 52 per cent. Kermisson and Rochard,[7] of 105 collected cases, gave the mortality as 50 per cent. The cases that recovered lasted on the average eight days, those that died ten days, but the duration of obstruction may vary from one to twenty-eight days. A case reported by Sargent [8] actually died apparently from the intensity of the pain, after symptoms lasting only half an hour. Lobstein [9] collected 92 cases; of the 61 not operated on 32 recovered, the remaining 29 died from peritonitis or exhaustion; of the 31 operated on 12 recovered, but as many of the 19 which died were moribund when operated on, their death cannot be charged to operation. As more than one large concretion may be present in the gut at the same time, in a few cases the symptoms of obstruction have been known to recur once, twice, or three times after the first concretion has been parted with. Dr. Maclagan [10] has described two cases of this kind, and Mr. Clutton [11] has described another in which he operated successfully within twenty-four hours of the

[3] Brit. Med. Jour., May 30th, 1868.

[4] Annals of Surgery, January, 1896.
[5] Transactions of the Clinical Society, 1895.
[6] THE LANCET, Dec. 3rd, 1887.
[7] Archives Générales de Médecine, February, 1892.
[8] Brit. Med. Jour., 1879.
[9] Annals of Surgery, January, 1896.
[10] Transactions of the Clinical Society, vol. xxi., p. 87.
[11] Ibid., p. 99.

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onset of the second seizure and manipulated the stone through the ileo-cæcal valve. The symptoms are those of acute intestinal obstruction from other causes, with early fæcal vomiting and severe abdominal pain. The higher in the gut the impaction the more violent, as a rule, will be the symptoms. The obstruction can only very rarely be felt through the abdominal walls. Although in one of my cases I was able to make a probable diagnosis from the history of previous gall-stone attacks extending over several years, yet in many cases there is absolutely no previous history to guide one, and it is quite impossible to say whether or not the attack is one dependent on the cause in question or on a volvulus, or band, or internal hernia, which, if left, must inevitably lead to death, and that speedily. The age and sex, together with the history of chronic dyspepsia and pain in the hepatic region, are, however, well worth bearing in mind as well as the early and persistent vomiting and visible peristalsis limited to the small intestines.

Treatment.—If the diagnosis could always be made with certainty I think this is a condition in which medical and expectant treatment might be fairly given a trial, since we have ample evidence of large gall-stones having safely passed without other treatment. But we must not forget that 52 per cent. of cases treated on medical and expectant lines are fatal, and although surgery has not yet shown a much greater percentage of recoveries it is because surgical means are frequently only resorted to when the case is hopeless and after all other means have been tried. When it is borne in mind that there are no symptoms peculiar to this form of obstruction, and that the course pursued by an obstruction by a band or by an internal hernia may be exactly the same as in gall-stone obstruction, the surgeon who waits beyond the period when an operation may be undertaken with every hope of success is incurring a very serious responsibility. With regard to the method of treatment after the abdomen is opened and the cause found, if the gall-stone can be easily crushed through the intestinal coats, without too much force being required, so much the better, but that failing enterotomy should be performed, as it can be done very quickly and with very little damage to the bowel. Should the patient be too ill to bear a search being made for the obstruction, enterotomy, or perhaps short circuiting, might be performed in order to give temporary relief, the cause of the obstruction being afterwards removed, if not passed naturally. As to when operation should be performed, that is part of a general question which each surgeon will have to answer for himself in every individual case, as no definite rule can possibly be formulated which will apply to all cases. The surgeon will, as a rule, not be called in before decided symptoms of intestinal obstruction have manifested themselves and until medical means have been fully tried; in such cases it would seem to me to be idle waste of time to delay surgical intervention until the patient is so exhausted that operation is only undertaken as a *dernier ressort*, when the subject is almost moribund. If, however, the case be seen at an earlier stage morphia will have to be given to relieve the pain, and I have usually recommended extract of belladonna in quarter-grain doses every four hours, the stopping of all food by the mouth, and the administration of one or more large syphon enemas, given slowly with the buttocks elevated. If relief does not speedily follow and the diagnosis is not clear, chloroform anæsthesia may assist in two ways. In the first place it enables a thorough examination of the abdomen and at times a diagnosis of the cause to be made; and, secondly, the manipulation, if made methodically, may reduce a hernia or volvulus or may possibly help onwards an obstruction. This failing and the symptoms persisting I should operate, and at this comparatively early stage I feel sure with every prospect of success.

Tumours of the gall-bladder and bile-ducts.—If by tumour be understood new growth, then tumours of the gall-bladder and bile-ducts are not common; but if we accept the usual interpretation of the term and include all enlargements as tumours we shall find them by no means rare.

Distension of the gall-bladder.—A tumour of the gall-bladder through distension with bile must be a rare phenomenon, though it is sometimes described as an accompaniment of a gall-stone attack where the concretion is impacted in the common duct; even in such a case it must be a symptom of short duration, since if the impaction be complete, the bile speedily becomes absorbed and gives place to distension by mucus. A perceptible tumour formed by distension with gall-stones is also rare, unless it happens that some have become impacted in the cystic duct, when a gradual enlargement from the retained mucus will follow. I have removed as many as 750 gall-stones from a gall-bladder during an operation, and yet that gall-bladder could not be felt as a distinct tumour. Occasionally a large single gall-stone may form a hard perceptible swelling below the liver, but such is very rare. Calcified gall-bladder, which is due to cholelithic catarrh, may lead to the formation of a hard, rounded, painless tumour, and this is evidently not very uncommon if we may judge of its frequency by specimens in the museums.

Hydrops and dropsy of the gall-bladder are terms used to denote distension of the gall-bladder by mucus. It may result from any obstruction in the cystic or common ducts, whether due to gall-stones, stricture, or growth in the ducts or to cancer of the head of the pancreas, provided that the gall-bladder has not atrophied as the result of previous gall-stone irritation. It is due to the gradual accumulation of the natural secretion of the mucous lining, and may attain such a size as to be mistaken for an ovarian cyst, as in cases reported by Mr. Lawson Tait and by Professor Kocher, though it is uncommon to find the tumour of greater size than from 15 to 20 oz. capacity. Not only may the cavity be dilated, but its walls may be enormously hypertrophied so as to form a distinct tumour. If the obstruction be associated with inflammation the contents of the gall-bladder may become purulent and an empyema of the gall-bladder result, the symptoms and complications of which I have already considered.

Signs.—Enlargements of the gall-bladder may vary from a tumour just perceptible to the touch to one of such a size as almost to fill the abdomen, though one of greater size than a large pear is exceptional. The same tumour may also vary in size at different times, this variation being frequently found in gall-stone obstruction. The symptoms of tumour of the gall-bladder depend for the most part on the cause, and in consequence vary considerably, at times being slight and unimportant, at others both urgent and serious. The gall-bladder, as a rule, enlarges downward and forward in a line which, drawn from the ninth or tenth costal cartilage, crosses the linea alba a little below the umbilicus, but the position of the tumour varies with the size of the liver. When that organ is of normal size the neck of the gall-bladder is opposite the ninth costal cartilage, whereas when the liver is enlarged the gall-bladder will be pushed down so that the neck of the tumour may be opposite to, or even below, the umbilicus. If uncomplicated it will have a smooth, rounded, and pear-shaped outline, the larger end being below, quite free, and movable from side to side, the upper end being fixed and passing under the lower margin of the liver at the fissure of the gall-bladder. A distinct sulcus between the liver and gall-bladder is nearly always perceptible to the touch if the warmed flat hand be laid over the right side of the abdomen and the patient be told to take a deep breath, when the tumour and the liver will descend together and pass under the fingers. Bimanual palpation will frequently throw additional light on the case, the right hand being placed in front of the abdomen and the left over the right loin, making gentle pressure forwards. In other cases additional information may be obtained by placing the patient in the genu-pectoral position and passing the flat hands round the abdomen from behind, when a tumour of the gall-bladder will rest distinctly on the hand, and on deep inspiration it can be felt to move just beneath the abdominal walls, the upper surface of the liver also being in this way capable of palpation. The swelling is, as a rule, far too tense and hard for fluctuation to be elicited, though at times this sign may be obtained. In some of the larger swellings a thrill almost like the hydatid fremitus may be felt on gently flicking the tumour with the finger-nail. Percussion by no means always elicits dulness coextensive with the tumour, especially if the surrounding intestines be distended, so that dulness on percussion is a very variable sign, and palpation will be found more reliable. Inspection of the abdomen with the patient recumbent will at times show the tumour descending on respiration, but this sign is usually only to be observed in thin patients and in cases uncomplicated with inflammation. When there is inflammation and matting of the adjoining viscera a fixed swelling may be seen over the right hypochondrium, with dulness on percussion and marked tenderness. Tenderness on palpation is a variable symptom, depending on the presence or absence of local peritonitis, it being, as a rule, absent in uncomplicated enlargements of the gall-bladder. Jaundice may complicate tumours of the gall-bladder, both being dependent on the same cause—a

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blocking of the common bile-duct. Although not absolutely pathognomonic of malignant disease, the combination should always raise a suspicion of cancer of the head of the pancreas or of the liver or bile-ducts, especially if it be associated with great loss of flesh and strength and with absence of characteristic gall-stone pain. I have observed in a considerable number of cases distension of the gall-bladder with jaundice to be associated with malignant disease, but much less often the combination of tumour, jaundice, and gall-stones, the explanation of this apparent anomaly being that the gall-bladder frequently becomes diminished in size and adherent as the result of gall-stone irritation, so that when the common duct becomes blocked by a calculus jaundice occurs without distension of the gall-bladder, as it is unable to expand. If, however, the common duct becomes blocked by gall-stones before the gall-bladder has contracted and formed adhesions there may be the combination of jaundice and tumour. If the common duct be blocked by tumour, the gall-bladder, not having been subjected to irritation, and therefore not having become contracted, will at once distend. Thus in malignant disease of the head of the pancreas we find the usual combination of jaundice with tumour of the gall-bladder. Gall-bladder tumours usually contain mucus, occasionally pus, rarely bile. In all cases when the cystic duct is obstructed and inflammation has not followed, mucus alone is present, though when inflammation co-exists pus or muco-pus may be found. In obstruction of the common duct by gall-stones the gall-bladder, though usually contracted, may be found distended by bile at first and mucus later; though, as a rule, the swelling subsides more or less rapidly and no tumour persists, the gall-bladder shrinking. When the obstruction becomes absolute, as in malignant disease of the head of the pancreas, the tumour formed is persistent, and although the block is in the common duct, bile soon ceases to reach the gall-bladder, and the tumour is always found to contain mucus This occurs on account of the backward pressure preventing the excretion of bile, which, though formed by the liver-cells, is immediately taken up by the lymphatics.

Diagnosis.—Tumours of the gall-bladder may have to be diagnosed from:—(1) Movable right kidney; (2) tumour of the right kidney or of the suprarenal capsule; (3) tumour of the intestine or fæcal impaction; (4) tumour of the liver; (5) pyloric tumour; and (6) abnormal projection of the liver. The diagnosis of enlargement of the gall-bladder from movable right kidney is, as a rule, easy in thin persons; but in those who are stout or have tense or strong muscular abdominal walls difficulties may and do arise, which can, however, usually be overcome by examination under an anæsthetic. In the case of renal tumour as well as in movable kidney, by distending the intestine with gas the kidney will be pressed back into the loin, but the gall-bladder will be pushed up towards the liver and made more prominent. The last test is usually also sufficient to enable a diagnosis to be made between a distended gall-bladder and a tumour of the right suprarenal body; but this is not always reliable, as in a case I saw with Mr. Kebbell, of Flaxton, Ziemmsen's test pushed the swelling upwards, and on performing abdominal section a sarcoma of the suprarenal capsule was found and removed.

In tumour of the intestine or of the pylorus the associated stomach or bowel symptoms are usually sufficient to enable a diagnosis to be made, but when in doubt distension of the stomach or bowel with gas will help to clear it up, or examination under an anæsthetic will afford assistance. Tumour of the liver itself, either cancer or hydatid disease, may be almost indistinguishable from one of the gall-bladder, though the presence of nodules in the liver, with the history and other symptoms of malignant disease, will usually be sufficiently distinctive in cancer, while the less localised and more generally fluctuating swelling, together with the longer history and absence of pain, will distinguish hydatid tumour. It should not be forgotten that the right lobe of the liver may have an abnormal projection, either in the site of the gall-bladder or to the right of that position, which may at first be mistaken for an enlarged gall-bladder; but the absence of symptoms, together with careful bimanual palpation, will usually enable a correct diagnosis to be made; and, as Professor Riedel has pointed out, the gall-bladder may frequently be felt apart from the swelling or at the top of it. Puncture with an exploring syringe would, of course, give valuable information, but this should not be lightly undertaken, as it is not devoid of risk, death having occurred on more than one occasion as a direct result of this apparently slight operative procedure. If it is decided to employ an exploring needle the aspirator should always be used, in order that the tense cyst may be completely emptied, otherwise leakage from the puncture is almost certain to occur. After the abdomen has been opened I have seen a puncture of the tumour by a small exploratory syringe to pour out fluid in a forcible stream, showing what would have occurred had the puncture been made through an unopened abdomen. In case of doubt, especially where the symptoms demand interference, exploration of the tumour through a small abdominal incision can be undertaken with very little risk and at the same time further treatment where called for can be carried out. Of the tumours dependent on new growth, cancer of the gall-bladder is the most important, innocent growth, except of inflammatory origin, being extremely rare, unless it be true, as Zenker suggests, that an adenoma first develops in the gall-bladder, and subsequently becames transformed into adeno-carcinoma. Dr. Rolleston[12] reports a case in which this sequence apparently occurred in the bile-duct of a woman from whom a papilloma was removed, the growth being in immediate contact with a gall-stone. After some months she returned with a growth in the same region, presumably malignant. Cancer of the gall-bladder is by no means frequent, and as a primary affection is somewhat rare. Musser collected all the reported cases in the *Boston Medical and Surgical Journal* of Dec. 15th, 1889, and Dr. Rolleston published an extremely interesting paper on the subject in the *Medical Chronicle* of January, 1896. It is usually secondary to gall-stones or to cancer of adjoining organs, and in the latter case is not amenable to surgical treatment. The very frequent association of cancer of the gall-bladder with gall-stones is an undoubted fact, and in all probability there is a connexion between the two diseases. Zeurkert[13] found gall-stones in 85 per cent. of cancers of the gall-bladder, and Musser, from an analysis of 100 cases, gives the proportion associated with gall-stones as 69 per cent., which may, however, be an under-estimate, as it is well known that gall-stones may produce serious irritation and then pass into the alimentary canal, so that their effects may remain, although the cause may not be discovered. According to Schroeder, 14 per cent. of all cases of gall-stone patients suffer at some time from cancer of the biliary passages, and Naunyn is of opinion that half the cases of chronic jaundice diagnosed as cholelithiasis are complicated with cancer or are due to cancer alone. This latter statement is of extreme importance, since operation in the presence of cancer and chronic jaundice is very fatal. The two theories which have been current to explain the co-existence of gall-stone with cancer of the liver are, first, the "irritation" theory, that gall-stones are formed first, and by acting as foreign bodies set up irritation which leads to malignant growth; and second, the "concentration" theory, that gall-stones arise as a secondary result from stagnation of bile in the ducts caused by their obstruction from malignant growth. Mr. C. Beadles,[14] in a paper read before the Pathological Society of London, stated that out of 100 post-mortem examinations at the Cancer Hospital 4 were cases of primary carcinoma of the liver, and all had calculi in the gall-bladder; 36 had secondary carcinomatous growths in the liver, but there were no gall-stones present in any of them. Of 9 cases of primary carcinoma of the bladder at Colney Hatch Asylum 5 were males and 4 females, and gall-stones were present in 7, being absent in 1 male and 1 female. These facts support the theory of irritation. Simple growths in the gall-bladder are not of great clinical importance except as precursors of malignant disease.

Symptoms and signs.—If the growth be primary there will be the history of a more or less rapidly growing tumour developing under the right costal margin, accompanied at first by a sense of discomfort, shortly changing to pain, which is often worse at night, and which, though at first localised to the right hypochondrium and epigastrium, usually, before great advance has been made, extends round the side to the right infra-scapular region. When the enlargement is first noticed it is felt as an egg-shaped swelling beneath the liver, descending on aspiration. The tumour is hard to the touch and very slightly or not at all tender to pressure. At a later stage it becomes more fixed and more diffused, and nodules may develop and be felt on its superficial surface. As the growth

[12] Transactions of the Royal Medical and Chirurgical Society, January, 1896.
[13] Deutsche Archiv für Klinische Medicinische, 1889.
[14] THE LANCET, March 9th, 1895.

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extends it invades the liver and sometimes the duodenum and stomach. Dissemination is rare. According to the invasion or not of the hepatic or common bile-ducts, so will be the presence or absence of jaundice, but in nearly half of the cases some degree of icterus will be found as the disease advances owing to the presence of catarrh of the bile-ducts. Interference with the action of the bowels, even to partial or complete obstruction, at times occurs. General failure of health, continued wasting, with loss of strength, ascites, and marked cachexia, characterise the later stages. Perforation may occur and hasten the end by the onset of general peritonitis. If gall-stones be present there will be the usual antecedent history of cholelithiasis. Where gall-stones with jaundice complicate cancer of the gall-bladder exacerbations of pain will usually be accompanied by rigors and fever, "ague-like attacks" with an intensification of the icterus, and in such cases petechiæ in the skin with hæmorrhage from the nose and rectum usually supervene.

Diagnosis.—Cancer of the gall-bladder may usually be diagnosed by the progressive character of the disease and by the presence of the characteristic hard tumour; but it is by no means always easy to diagnose cancer from a tumour formed by matted intestines due to local peritonitis in the neighbourhood of the gall-bladder. When in doubt exploration is probably the best method of settling it, as at the same time treatment may be carried out.

Treatment.—The alleviation of symptoms, especially of pain, by sedatives is practically all that can be done except in those rare cases where the disease is limited to the gall-bladder, when cholecystectomy may be performed. In only one case out of several on which I have operated have I found the disease sufficiently limited to permit of excision, and even in that instance I had to perform partial hepatectomy.[15]

Tumours of bile-ducts.—Tumours of the bile-ducts, *per se*, only occasionally form a projection so large as to be distinguished through the abdominal walls. Tumour, however, in such cases is as a rule present sooner or later on account of the obstruction in the ducts and secondary distension of the gall-bladder. The common duct has been found dilated to such a size as to form a cystic tumour presenting all the characteristics of a distended gall-bladder, the gall-bladder itself being atrophied. In two cases of this kind I performed, in the one choledochostomy after cholelithotrity, the patient making an excellent recovery; in the other choledochenterostomy after cholecystectomy, the patient also doing well. Although hitherto the results of choledochostomy have not always been favourable, probably in consequence of the fact that extreme distension of the bile-duct is often accompanied by infection of the biliary passages, it would be well to reserve our opinion as to the prospects of the operation until we have more experience of it. Very little information can as yet be obtained on this subject, cases of distension of the common bile-duct being very rare, and those in which surgery has intervened still more exceptional. An interesting case is reported by Mr. W. P. Swain in THE LANCET of March 23rd, 1895, in which he connected a dilated bile-duct to the jejunum by one of Murphy's buttons. The size of the tumour, which occurred in a girl aged seventeen years, and which was associated with gall-stones, may be gathered from the fact that over seven pints of fluid were withdrawn from it at the time of operation. Three months after the patient was progressing satisfactorily except for an occasional rise of temperature, and for the fact that the button had not been passed.

The new growths found in the bile ducts may be simple or malignant. Of the malignant we must take into consideration the two classes, primary and secondary, the former arising most frequently as the result of gall-stone irritation, the latter by extension from neighbouring organs. Papilloma is probably an earlier stage of cancer and is rare. These growths are usually found between the ages of fifty and sixty years, and, unlike cancer of the gall-bladder, where 75 per cent. of cases occurred among women, the disease attacks both sexes equally. If forming in the cystic duct jaundice will be absent at first, only coming on when the growth advances so far as to pass into the common duct and obstruct the passage of the bile, or if, as is not uncommon, catarrh of the bile ducts supervenes. The gall-bladder enlarges at an early stage, and this will probably be the earliest sign; pain may be absent unless gall-stones exist, when the usual spasmodic pains will occur so long as the muscular coat of the gall-bladder retains its contractile power. When the growth is in the common duct jaundice comes on at an early stage and persists throughout, the liver gradually increasing in size and the gall-bladder also enlarging ultimately. Suppurative cholangitis is apt to supervene, the case then taking on a more acute course and being accompanied by fever, ague-like attacks, and rapid loss of flesh and strength. Needless to say, the disease is uniformly fatal, though operation may delay the final catastrophe. Cancer of the ampulla of Vater has received some attention from M. Hanot,[16] M. Durand-Fardel,[17] M. Rendu, and Dr. Rolleston.[18] Two forms at least are described, one arising from the intestinal walls of the ampulla and the other from the orifice of the common bile duct and the pancreatic duct. They are characterised by intermittent jaundice, wasting, and cachexia, but as a rule pain is absent. It was probably first described by MacNeal[19] in 1835, and later by Stokes[20] in 1846.

Diagnosis.—The diagnosis of new growth in the bile-ducts from gall-stones is practically impossible, as the symptoms are the same, and in fact the two frequently co-exist. The absence of pain in some cases and the rapid deterioration of health may afford a little help, but in some cases the pain may be as acute as in cholelithiasis. Cystic dilatations of the bile ducts are often indistinguishable from enlargements of the gall-bladder, for which they are usually mistaken; but they may resemble a cyst of the pancreas or a hydatid tumour of the liver. As, however, the treatment in all these conditions is abdominal section, no harm will be done if the diagnosis is only completed when the abdomen is opened.

Treatment.—The operative treatment of these tumours is in its infancy and has thus far not proved uniformly satisfactory. Any growth should be removed if possible, but where that is impracticable the dilated gall-bladder or ducts may be opened and drained, or, better still, drained into the duodenum or jejunum by means of one of Murphy's buttons. If the cause be a removable one, such as a gall-stone, it should be taken away. Choledochostomy has not yielded good results in cystic dilatation of the bile-ducts, my own case being, I believe, the only example of recovery after the operation, whereas the experience of performing an anastomosis between the cyst and the intestine, though as yet slight, has been so satisfactory as to establish its claim to being considered the best method of treatment.

[15] Transactions of the Royal Medical and Chirurgical Society, vol. lxxix.

[16] Archives Générales de Médecine, November, 1896.
[17] La Presse Médicale, 1896.
[18] Transactions of the Royal Medical and Chirurgical Society, 1895.
[19] North American Archives, Baltimore.
[20] Dublin Quarterly Journal of Medical Science.

CRIME IN WILTSHIRE.—The report issued by the chief constable of Wiltshire and presented at the meeting of the standing joint committee last week showed that 727 persons had come under the cognisance of the police during the past quarter, of whom 26 were committed for trial, 495 summarily convicted, 71 quasi-criminal cases, and 135 discharged. There had been an increase of 36 in the numbers of persons proceeded against.

UNIVERSITY OF CAMBRIDGE.—The Vice-Chancellor for the next academical year will be a Doctor of Medicine, Dr. A Hill, Master of Downing College, and Lecturer in Advanced Human Anatomy, having been elected to the office on June 1st. The Deputy Professor of Pathology, Dr. A. A. Kanthack, announces courses in Pathology, Bacteriology, and Morbid Anatomy and Histology, during the ensuing long vacation, beginning on July 7th and 8th. Some of these will be adapted to the requirements of candidates for the Diploma in Public Health. It is proposed to confer honorary degrees on the Archbishop of Canterbury, the Marquess of Lansdowne, Lord Russell of Killowen, Chief Justice Way, a number of the colonial premiers now in England, Sir G T. D. Goldie, Sir John Kirk, Sir Arthur Arnold, and Sir W. H. White. On May 27th the following medical and surgical degrees were conferred:—M.D.: H. Walsham, M.A. Caius, and N. L. Hood, M.A., M.B. and B.C. Downing: L. T. R. Hutchinson, B A. Trinity, W. McDougall, B.A. St. John's, L. T. Giles, B.A. St. Peter's, R. D. Parker, B A. Caius, and W. B. Heywood, B.A. Emmanuel. M.B. only: W. M. Sing, M.A. Christ's.

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ABSTRACT OF

A Clinical Lecture

ON THE

PROPER TREATMENT OF CUT-THROAT WOUNDS BY IMMEDIATE SUTURING OF ALL THE DIVIDED STRUCTURES.

Delivered at the Middlesex Hospital on May 11th, 1897,

BY HENRY MORRIS, M.A., M.B. LOND., F.R.C.S. ENG.,

SENIOR SURGEON TO THE MIDDLESEX HOSPITAL.

GENTLEMEN,—I have on two occasions during the last nine years advocated in this theatre, in lectures which have been published in the medical journals, the treatment of cut-throat wounds by the application of immediate sutures to all the divided tissues. I first made the suggestion in 1888.[1] I afterwards related several cases so treated, and fully discussed the subject in a clinical lecture delivered in 1892.[2] That less attention has been paid to this treatment than its success and the benefit it affords to patients demand appears from the uncertain and indefinite way in which the use of sutures is mentioned in the latest and most consulted text-books on surgery. And that it is not yet taught in the medical schools as being the proper treatment has been impressed upon me by reading the replies to a question recently set on this subject at one of the examinations. Yet surely a method which shortens convalescence to one-third or one-quarter, or even less, of the time required by leaving the wound open; which enables the patient to talk and swallow naturally within a very few hours after the injury, instead of being fed for days, or even for a week or two, by means of the œsophageal tube; which does away with the troublesome cough and the abominable discharge of food, saliva, and bronchial secretion through the wound; which permits of a dressing being retained over the wound unchanged for days together; and which is not followed by any of the old risks of incurvation of the edges, of stricture, or of fistula, is a worthy substitute for the tedious, distressing, and disgusting open method, which was only tolerable as long as surgeons were less particular about their hæmostatics, less careful about drainage, and less punctilious about the asepticity of their dressings than nowadays.

As I stated in 1892, "I have ventured to depart from the time-honoured practice of leaving cut-throat wounds open to heal by granulation and cicatrisation, and have sought, by the liberal employment of buried and superficial aseptic sutures, to bring about immediate union." All the old objections[3] to close union of the divided structures are groundless, for why should primary union be more rare in wounds of the neck involving the larynx or trachea than elsewhere? There is no more difficulty here than elsewhere in perfectly controlling hæmorrhage and in preventing suppuration; and if this is so, wherein lies the risk of blood or pus getting into the air passages? As a matter of fact, these wounds of the throat, like wounds of the face and mouth, of the abdominal parietes and peritoneum and the abdominal viscera, heal very rapidly and securely if given a chance to do so; and we may reckon on the air passages, as we do on the parietal peritoneum in abdominal wounds, being securely closed long before suppuration, if it occurs at all, affects the cellular tissue planes outside. Of course, to obtain a rapidly favourable termination in these suicidal wounds proper care and due precautions must be exercised in the application of the sutures, and strict attention must be given to the general state of the wound before inserting them. The patient should be put under an anæsthetic, and all, even quite small, bleeding points should be secured; scrupulous cleanliness of the parts must be obtained by the usual aseptic and antiseptic means. This done the cut edges of the wind-pipe should be adjusted by fine silk sutures, which should not penetrate the mucous membrane. The sutures should be applied close enough to one another to prevent any portion of the edges of the wounded air passage from flapping or swaying backwards and forwards with the ingress and egress of air. The sutures should pass through or around the rings of cartilage if necessary. Then the divided edges of the fascia covering the trachea or larynx should be united with separate sutures. This is a very important step in the procedure, and great care should be given to it, because the close union of this fascia affords additional security to the closure of the air tube, and helps in preventing any escape of air between the sutures uniting the edges of the wind-pipe. Next, in like manner the infra-hyoid muscles, the deep fascia overlying these muscles, and the skin respectively must be properly joined. A very small drainage-tube may be inserted between the edges of the skin on each side near the outer extremities of the superficial wound, but not near the middle line of the trachea. Finally, it is very necessary to keep the head sufficiently flexed, and the head and neck very fixed, during the period requisite for firm healing of the wound. In applying the sutures it must be borne in mind that the tissues when fairly cut across have a very strong tendency to retract, but the skin less so than the muscles, fasciæ, and air tube. If, then, we have half an inch separation of the skin edges there will be a gap of an inch or more between the cut ends of the other structures. Consequently the lower ends of these structures must be sought for and drawn up from below and behind the cut edge of the skin.

Too much care cannot be given to the accurate adjustment of the edges of the wound in the air tube, and if at any point there is difficulty in completely closing it, and the surgeon doubts whether he has made the tube entirely air-tight, he should with all the more care bridge over this point of the windpipe by additionally secure union of the deep layer of fascia.

Nothing, I admit, can be more unsurgical, besides being very harmful to the patient, than to draw together the cut ends of the wounded windpipe with one or two sutures, in order to hold up the trachea, but without sufficiently closely uniting them to prevent air escaping freely from the air passage; and then, without uniting fascia and muscles, to close the skin incision by continuous suture, and hermetically seal it with collodion and cotton wool. Such a plan must necessarily be followed by dangerous emphysema, and is about as rational as it would be, in a penetrating wound of the abdomen attended with division of the bowel, to draw together the cut ends of the intestine by a few sutures insufficient to make the union watertight, and then to stitch together the skin only of the abdominal wall, and smother the wound with collodion and wool.

The occurrence of surgical emphysema from insufficient and improper suturing is no more an argument against the use of sutures in cut-throat wounds than is extravasation of fæces into the peritoneal cavity from a similar cause an argument against the complete and water-tight suturing of the two ends of recently divided intestine. The man whose case is subjoined was certainly put into a condition of very great suffering and danger by the method of suturing adopted prior to his admission into hospital; from this danger he was saved by the prompt removal of the skin sutures by my house surgeon, Mr. Myler. A few hours after the wound had been reopened, and the patient had thereby recovered from the worst effects of the emphysema, he realised the further relief afforded him by the proper readjustment and close union by sutures of each of the divided structures. He was able to talk as soon as he had recovered from the anæsthetic, he took liquid food well and freely the same evening, he enjoyed a good night's rest, and within a few days was taking an ordinary diet. Though his convalescence, on account of the emphysema, was perhaps not quite so rapid as that of other patients whom I have treated in the same way, yet he was out of bed on the twelfth day and discharged from the hospital quite well on the sixteenth day after the injury. The following is an account of the case upon which the above remarks were based, and is taken from notes made by Mr. J. W. Glenton Myler, house surgeon.

On April 10th, 1897, a man, aged forty-four years, was admitted into Broderip Ward, Middlesex Hospital, in a state of collapse. He was a well-nourished man. He was stated to have been drinking heavily lately, and in a moment of alcoholic frenzy he had made an attempt on his own life. The act was committed about 12.30 P.M. with a razor.

[1] Brit. Med. Jour., April 21st, 1888.
[2] THE LANCET, Dec. 24th, 1892.
[3] See Durham's article, Wounds of the Neck, in Holmes's System of Surgery.

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When admitted, about 1.15 P.M., he was breathing rapidly, was cyanosed, and made several disconnected remarks. He was in great pain and pointed to his chest as being its chief seat. His shoulders and thorax were covered with dried blood. The pulse was very feeble and rapid—120. The patient had been seen by a medical man outside the hospital, who (as we subsequently discovered) had partially drawn together with sutures the wound in the trachea. The skin wound he had completely closed and had covered it over with cotton wool and collodion. There was spreading surgical emphysema extending from the neck to the costal margin, round to the back, and over the shoulders as far as the insertion of the deltoids. The supra-clavicular fossæ were filled out into prominent resonant swellings. The patient was very cold and covered with clammy sweat. The cotton wool and collodion were immediately removed and an incised wound about six inches long was exposed, extending across the front of the neck below the thyroid cartilage. The wound was double at the left extremity. The skin was held together by a continuous suture. The wound was opened up and a good deal of air at once escaped. The air made a hissing noise as it rushed in and out of an opening in the trachea. The left external jugular vein was bleeding; this was immediately ligatured. The patient was propped up in bed and an injection of ether and strychnia given. An enema of beef-tea and brandy was next administered. The patient soon rallied; cyanosis became less and the breathing slower. He still, however, complained of pain across his chest. Mr. Morris saw the patient soon after admission, but decided to wait till a few hours after the removal of the collodion and skin sutures with the hope that the patient would improve from the condition caused by the emphysema. At 6.30 P.M. Mr. Morris examined the wound, the patient being anæsthetised (ether). The sterno-hyoid and sterno-thyroid muscles on both sides were completely divided; the sternal portions had greatly retracted, leaving a wide gap between the divided extremities. The trachea was cut into just below the cricoid cartilage, and the membrane between it and the first ring of the trachea was divided from side to side. Another cut had shaved off the lower edge of the cricoid cartilage, and above this was a shallow wound of the thyroid cartilage which did not penetrate the larynx. Through the lowest wound air passed freely. A few bleeding points were now ligatured and all clot removed from the wound. The lower opening was first closed with fine silk sutures. The cartilage was very brittle and broke away several times from the needle and silk. The two other wounds were successively closed. There was now no further escape of air. The neck was then held well forward and the divided ends of the fascia and muscles approximated. These were sutured with fine silk. Some iodoform was dusted into the wound. The skin was then brought together with interrupted sutures, two small drainage-tubes were put in, and a dry boric dressing applied. The patient was sent back to the ward and his head and back supported on pillows. A binder was fixed round his waist and a cap with long strings prevented his head from straining backwards. After the operation the pulse was 110 and had much increased in volume. He was able to talk on recovering from the anæsthetic. He swallowed some milk the same evening. He passed a very comfortable night and on the following morning he could swallow liquid food quite easily. Expectoration was slightly blood-stained. He was put on bromide of potassium (10 gr.) three times a day on account of great mental restlessness. On April 12th emphysema was much less over the thorax, but had travelled over the abdominal wall and into the cellular tissue of the scrotum. A small trocar was introduced into the scrotum, which was enormously distended on the left side, and some air let out. The patient spoke clearly and swallowed liquids with comfort. The expectoration was muco-purulent and the cough rather troublesome. A suitable expectorant was given. On the 13th the dressings were changed and the tubes removed. The wound looked quite healthy. On the 15th the patient expressed his desire to get better. He now swallowed without pain, and had minced meat for dinner. The cough was less and the expectoration free from blood. The temperature was 100° F. in the evening and 99° in the morning. The pulse was 88. The dressings were disturbed from the patient's restlessness and had to be changed. The extremities of the wound had nearly healed. There was no tenderness at any point. The emphysema had almost disappeared from the abdominal wall and the scrotum, but did not clear up so rapidly about the thorax. There had, however, been no fresh emphysema since the closure of the wound by Mr. Morris. The back was quite free. By the 17th the wound had quite healed. There was distinct thickening of the cicatrix at its central part. The patient slept well and took plenty of food. On the 18th the stitches at the extremities of the wound were removed, and those in the centre on the 20th. The thickening in the centre of the scar formed a distinct ridge across the middle of the neck on a level with the cricoid cartilage. He was able to call in a loud voice, though somewhat muffled. There was a mere trace of emphysema below the clavicles and in the scrotum. The patient got up for the first time on the 22nd. He was discharged from the hospital on the 26th. All the emphysema had gone, the wound had nicely healed, and the voice had become much clearer. The ridge in the centre of the scar still persisted. The patient was seen on the 29th. The thickened tissue in the centre of the neck was being absorbed, and he expressed himself as feeling quite well.

Since this lecture was delivered I have had the gratification of reading Dr. J. E. Platt's paper on the Treatment of Wounds of the Air Passages.[4] Dr. Platt has had an exceptionally large number of these cases under his care during the two years he was resident surgical officer at the Manchester Royal Infirmary. I am very glad that success in the treatment of suicidal wounds of the throat by primary suture has led him to the same conclusions which I advanced in my earlier lectures and have repeated in this. If I judge correctly, Dr. Platt began the use of sutures in these cases with some misgiving as to their safety; but experience gave him confidence, and has convinced him of the security and other advantages of the treatment. I quite agree with him that a tracheotomy tube may in many cases be dispensed with, and that if a tube is used it should be introduced through a newly made vertical incision, and not through the suicidal wound in the air passages. I go much further than this, however, and say that I have not yet seen a case where a tracheotomy tube was required, and very much doubt if it is ever really needed. Indeed, I am persuaded that if employed it will delay the recovery and detract from the excellence of the result which will be obtained without it; and that more harm will be done by introducing it through the transverse wound of the suicide than through a vertical wound freshly made for the purpose by the surgeon. I do not attach the same importance to chloroform that Dr. Platt does. Ether has been given in some of my cases with equal safety. I think the old method of keeping the head bent towards the sternum during healing of great importance as a means of preventing tension on the sutures.

[4] Brit. Med. Jour., May 8th, 1897.

SOME PRACTICAL OBSERVATIONS UPON THE BACTERIOLOGY AND TREATMENT OF CATARRHAL OPHTHALMIA.

BY SYDNEY STEPHENSON, M.B. EDIN.,
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ACUTE catarrhal ophthalmia, or muco-purulent conjunctivitis, is one of the commonest eye diseases met with in this country. Its contagiousness and epidemic tendency endow it with considerable practical importance, especially to those in charge of schools or similar institutions. Its symptoms no less than its treatment are known to every practitioner of medicine; there are, nevertheless, points in both that will repay further study. The object of the present paper (which is based upon a somewhat large experience of the malady) is to describe (1) the bacteriological diagnosis of catarrhal ophthalmia, and (2) those modes of treatment which I have found of most service. In the light of modern advances catarrhal ophthalmia must be regarded as due to a specific micro-organism. This fact was first pointed out by Koch, who, during a visit to Egypt in 1883, examined bacteriologically some fifty cases of the ophthalmia of that country. He found two microbes in the eye discharges—the one associated with severe, the other with mild, symptoms of disease. The former appeared to be identical with Neisser's gonococcus, while the latter he described as a very small bacillus. Haensell spoke in 1896 of having found an organism in catarrhal ophthalmia. In the same year John E. Weeks, of New York, published a careful memoir upon the subject. He discovered that small, well-defined bacilli were always present in the secretion of catarrhal ophthalmia. Inoculation of the eyes of rabbits and guinea pigs with the discharge gave negative results, but Weeks succeeded in setting up the disease when the specific pus was implanted on the human conjunctiva. He failed to obtain a pure culture of the organism, as he found a small, club-shaped bacillus in all his cultures. In six instances inoculation with the mixed growth gave rise to acute inflammation of the conjunctiva; the clubbed bacillus was found to possess no pathogenic properties. In 1887 Kartulis described the same orlganism in cases of Egyptian ophthalmia. Out of six inoculations of the human eye, Kartulis set up the disease twice. Morax (1894) concluded from his observations that the small bacillus was constantly present in this form of ophthalmia. Although inoculation of a pure culture failed to produce any result in animals, yet it succeeded upon his own eye. Somewhat later H. E. Juler mentioned the fact that he had met with the same organism in many, but not in all cases of catarrhal ophthalmia. But apparently he had not attempted to cultivate it. Weeks has recently reviewed the state of our knowledge concerning this microbe (1895). "Since the first observation of the micro-organism," he says, "the writer has examined between one and two thousand cases of acute contagious conjunctivitis, and has made many microscopical examinations of the secretion. Of the cases examined, the bacillus before mentioned was found to be a constant factor in the secretion." During the course of last year Morax and Beach published a full account of their experiments with this bacillus, which they managed to cultivate upon agar-agar, with or without the addition of

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human blood serum. These authors express the definite opinion that acute catarrhal ophthalmia "invariably coincides with the presence of a small specific bacillus." For some years past I have made a point of examining bacteriologically the secretion from all doubtful cases of catarrhal ophthalmia that have fallen under my notice, and can fully confirm the observations of Weeks, Morax, and Beach. As stated in a work published a short time ago,[1] I am persuaded in my own mind that the presence of certain slender bacilli may be taken as diagnostic of this form of conjunctivitis, and, further, that the number of organisms present is directly proportionate to the severity of the case. Further experience has strengthened these views, so that I have come to regard a microscopic examination of the discharge from any inflamed conjunctiva as essential to a satisfactory and scientific diagnosis.

In a case where the surgeon suspects catarrhal ophthalmia, a first step is to make preparations from the stringy secretion present in the conjunctival sinuses. This is best done by everting the lids and removing a particle of discharge by means of a platinum loop, previously heated to redness and then allowed to cool. Two perfectly clean cover-glasses are next smeared with the pus, allowed to dry, and passed slowly two or three times over the flame of a spirit lamp or a Bunsen burner. They are next floated for a couple of minutes upon a 15 per cent. solution of acetic acid, thoroughly washed, dried, and once more heated. One of the cover-glass preparations is then stained with either Löffler's alkaline or with Kühne's carbolic methylene blue for five or ten minutes. The second, after immersion in absolute alcohol for two minutes, is treated by Gram's method, and counter-stained with a 0·5 per cent. solution of eosine. The specimens thus obtained are washed with distilled water, dried, mounted in Canada balsam and xylol, and examined microscopically with the aid of a 1 in 12 oil-immersion lens and Abbé condenser. If the case be one of catarrhal ophthalmia the preparation stained with methylene blue will be found to contain many polynucleated leucocytes and some epithelial cells in addition to the pathogenic microbes. The latter are short bacilli, varying in size from 0·75μ to 1μ. They resemble rather closely the bacilli of mouse septicæmia, but are smaller, and have rounded instead of angular ends. They occasionally form short chains by juxtaposition. They evince a special tendency to become grouped in the protoplasm of the pus cells, which in some preparations are literally loaded with them. Now and again the bacilli may be noticed to cling, as it were, to certain of the epithelial elements. Often enough, too, they may be seen lying free. They nearly always stain evenly; in the fresh organism I have never observed any signs of segmentation or sporulation. It is important to note that they become decolourised by Gram's method, so that in the second preparation one often enough fails to find a single microbe answering to their description. Intermixed with the organism of catarrhal ophthalmia the clubbed bacilli described by Weeks may be sometimes found. The two forms can be scarcely confused, inasmuch as the latter retains the stain in Gram's method. I incline to agree with Cuénod in thinking that these micro-parasites are identical with the so-called pseudo-diphtheritic bacilli, which are so often found in the mouth and upon the healthy conjunctiva. Their morphological appearances and staining and cultural reactions, at all events, are wholly consistent with such a view. In severe catarrhal ophthalmia the short bacilli occur in great numbers after the lapse of the first few hours. I have seen cases of this sort where scarcely a leucocyte in the specimen was free from one or more organisms. In mild types of disease, on the other hand, they may be so scanty that a careful search has to be made to find a single one, and, as everybody is aware who has examined for scattered microbes with high powers of the microscope, this process is likely to involve no small outlay both of time and trouble. Hence negative results possess merely a negative value, and do not altogether exclude the existence of slight or commencing catarrhal ophthalmia. The pathogenic organisms become progressively fewer and fewer with subsidence of the disease, but persist to some extent as long as discharge continues to be thrown off from the conjunctiva.

There are three types of acute inflammation of the conjunctiva in which I have found the short bacillus. These are: (1) classical catarrhal ophthalmia, the symptoms of which are so well known that they need not be described in this place; (2) a form associated with large phlyctenulæ in and about the conjunctiva—the "pustular" or "aphthous" disease of the older writers; and (3) a variety in which follicular enlargement is superadded to signs of acute inflammation. Once only have I found the micro-parasite under other circumstances—namely, in a child suffering from chronic dacryo-cystitis. Secretion pressed through the canaliculi into the conjunctival sinus contained numerous organisms of the kind. In relapses of catarrhal inflammation the bacilli are usually to be found in great numbers. It seems probable that in many instances these relapses simply mean re-infection brought about by the mingling of patients in various stages of the disorder. But in other cases we must assume that the organisms, incompletely subdued by treatment, have again obtained a mastery over the natural defences of the conjunctiva. All who have worked with the bacillus of catarrhal ophthalmia agree as to the difficulty of cultivating it. Weeks, after many experiments, came to the conclusion that it grew best upon 0 5 per cent. agar-agar at incubation temperature, an observation confirmed by subsequent writers. Speaking for myself, I have failed completely with potatoes, gelatin (10 per cent. and 20 per cent), and blood serum. I have succeeded but rarely with 1 per cent. to 2 per cent. agar-agar, but have been somewhat more fortunate with the medium recommended by Weeks, especially when glycerised. In my experience, however, the bacillus grows much better on serum-agar, prepared in accordance with the directions given in THE LANCET by Dr. A. A. Kanthack and Dr. J. W. W. Stephens.[2] In tubes of this material colonies of the specific bacillus may be generally observed within forty-eight hours after inoculation from a case of marked catarrhal ophthalmia. They are round, oval, or angular in contour, greyish-white, and so transparent that they may be readily overlooked. When magnified they are found to have a dew-like appearance, more easily recognised than described. The colonies remain discrete for many days; even after long growth they seldom exceed 0·5 mm in diameter. It is to be noted that the organisms soon lose their vitality, so that it is usually a difficult matter to transplant them after the lapse of three or four days. Under such circumstances, moreover, they stain imperfectly and show signs of involution and degeneration. It is, perhaps, fortunate that cultivation is by no means essential to diagnosis. The staining of cover-glass preparations made from the eye discharges is sufficient for all clinical purposes.

The state of our knowledge as to the organism of catarrhal ophthalmia appears to me to permit of the following conclusions being drawn: (1) the bacilli are to be found at some stage in every case of catarrhal conjunctivitis, and constitute the only certain diagnostic of that disease; (2) their numbers stand in direct relationship to the severity of the symptoms; and (3) they are difficult to grow upon artificial media and are readily killed by antiseptics, drying, or perhaps by mere lapse of time. A clinical distinction is often drawn between a muco-purulent (or yellowish-white) and a purulent (or yellow) discharge from the conjunctiva. This difference possesses some practical importance from a diagnostic standpoint. It is, however, mainly quantitative, and depends upon the relative proportion of migrated leucocytes. The characters of the exudation must obviously be the resultant of two factors: (*a*) the strength of the excitant, whether mechanical, chemical, or septic; and (*b*) the reaction of the conjunctiva to that stimulant. While it is broadly true that catarrhal ophthalmia is associated with a yellowish-white and the purulent disease with a yellow discharge, yet exceptions to this general rule are by no means uncommon.[3] This element of confusion probably accounts for the views of some writers, who appear to think that the contagious ophthalmiæ form a series of closely related and interchangeable disorders, ranging from the muco-purulent to the purulent type. As a matter of fact, the diagnosis of every case should be based, not upon the naked-eye characters of the secretion, but upon the organisms contained in that fluid. Thus, if gonococci be present we are dealing with a

[1] Epidemic Ophthalmia, its Symptoms, Diagnosis, and Management, 1895, p. 20. Young J. Pentland, London and Edinburgh.

[2] THE LANCET, Jan. 25th, 1896, p. 231.

[3] The manifestations of catarrhal, like those of other forms of ophthalmia, vary somewhat according to the age of the patient. For example, in children discharge, and in adults conjunctival redness, is the most striking sign; corneal complications, although exceedingly rare in the first, are less uncommon in the second class. The specific bacillus, however, can be found in all cases, so that the clinical differences are probably due to variations in structure or function of the parts concerned.

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specific purulent ophthalmia, whereas if the bacilli described above be found we have to do with a specific muco-purulent, or catarrhal, ophthalmia. In other words, these affections of the conjunctiva are of a specific nature, and no more tend to pass into one another than scarlet fever tends to merge into German measles, or typhoid fever into diphtheria. Indeed, the time has come when the old designations might be replaced by others more in keeping with the present state of knowledge. We might now fitly speak of conjunctival inflammations as due to gonococci, to trachoma-cocci, to Weeks bacilli, to streptococci, to Klebs-Löffler bacilli, or to pneumococci—to name some of the forms only that can be identified with more or less approach to certainty.

With regard to treatment, the experience of some hundreds of cases has convinced me that nitrate of silver is the sovereign remedy for catarrhal ophthalmia. Under its influence redness and discharge subside, œdema of the lids is reduced, and the patient's discomfort is speedily abated. The acuter symptoms seldom withstand more than three or four applications. Whenever the diagnosis is assured the sooner silver is resorted to the better. In the mildest forms of disease only can we afford to dispense with it: the severer the type the more fearlessly may it be applied. The 2 per cent. solution in general use can hardly be improved upon. It is far more efficient than the 0·5 per cent. or the 1 per cent. liquid, and causes no more discomfort. It should be brushed over the everted conjunctiva, which has been first carefully freed from secretion. So far as possible its action should be limited to the mucous lining of the lids by attention to the two following points: first, the brush should be barely moistened with the lotion; secondly, any surplus silver should be soaked up from the conjunctiva by a swab of absorbent wool damped with weak corrosive sublimate. Neglect of these precautions will be likely to entail damage to the mucous membrane, and thus interfere with the regular application of our most potent remedy. According to my experience, silver is not contraindicated by corneal complications, as, for example, the small peripheral ulcers occasionally met with, especially in adults. Under no circumstances, however, should it be applied when raw or bleeding spots are present about the conjunctiva, for if that were done not only would needless pain be caused, but cicatrices also would probably result. The discomforts inseparable from a treatment applied at night are avoided at the Hanwell Ophthalmic School by using the silver in the early morning.

The following observations appear to throw some light upon the *modus operandi* of lunar caustic. A cover-glass preparation from a case of acute catarrhal ophthalmia, as already explained, will be found to contain pathogenic bacilli and polynucleated leucocytes along with epithelial cells. Now let preparations be made from such a case four, eight, thirteen, sixteen, twenty, and twenty-four hours after a 2 per cent. solution of silver nitrate has been brushed over the conjunctiva. Organisms, although plentiful before the application, will be almost or altogether absent from specimens obtained during the next twelve hours; but there will be a notable increase in the number of epithelial cells and fibrin filaments. Even sixteen hours afterwards the bacilli are few and far between and stain imperfectly. As a rule, however, after the lapse of twenty hours, there will be no great difficulty in finding them in most parts of the preparation. If the case be now left without treatment they soon multiply, so that within forty hours after silver was used almost as many will be present as in the original specimen. The same sort of thing may be shown in a different way. It has been already stated that there is considerable difficulty in growing the organism of catarrhal ophthalmia, but the difficulty becomes an impossibility if tubes be inoculated at any time within twenty hours after the employment of silver. From these facts we conclude that this agent acts by direct destruction of microbes. It is of practical interest to note that the latter in my experience are always confined to the surface layers of the conjunctiva. Silver should be continued until (*a*) swelling and redness of the palpebral conjunctiva have subsided, and (*b*) yellowish-white discharge has yielded to a scanty morning secretion containing no bacilli. From five to fifteen brushings are generally needed to attain these ends. The uneasy sensations associated with catarrhal ophthalmia are mainly due to the accumulated discharges, which act partly as a mechanical and partly as a septic irritant to the conjunctiva. Hence constant removal of secretion is almost as necessary to a speedy cure as it is grateful to the patient. As a wash for general use nothing succeeds better than one-eighth of a grain of corrosive sublimate in an ounce of water, with the addition of one grain of ammonium chloride. The latter increases the solubility of the mercuric salt and prevents the formation of an albuminate when the lotion comes into contact with the conjunctiva. This collyrium, previously warmed, may be used from three to eight times a day, and in order that discharge may be thoroughly removed the mucous membrane should be freely exposed by everting the eyelids. Furthermore, it is always well in catarrhal ophthalmia to prevent any adhesion of the lids by means of a little lanolin or other simple ointment introduced into the eyes at bedtime. When the acuter symptoms have subsided silver is to be replaced by some less stimulating eye-wash, such as 2 grains of lapis divinus and 30 minims of laudanum to the ounce of distilled water. Sulphate of zinc or alum lotion (from 1 to 3 grains to the ounce) succeeds well in some instances. I have obtained the most satisfactory results, however, from the old-fashioned yellow lotion of the Austrian Pharmacopœia, which is thus prepared: ammonium chloride 0·5 part, and zinc sulphate 1·25 parts, dissolved in 200 parts of distilled water. Next camphor 0·4 part is dissolved in 20 parts of absolute alcohol, and 0·1 part of saffron added to it. The two solutions are then mixed, allowed to stand overnight, and filtered. The undiluted lotion should be dropped over the everted eyelids twice or thrice a day. It generally gives rise to some smarting when first used, but the patient soon grows accustomed to it. My experiences with formal (1 to 2000) have, upon the whole, been disappointing. It often causes much pain, may excoriate the conjunctiva, and, to my thinking, is inferior in every way to the remedies enumerated above. In a few cases oleaginous preparations seem to suit better than watery solutions, in which event the choice will lie between the yellow oxide and ammoniated mercury. A 2 per cent. to 4 per cent. ointment of either salt is prepared with equal parts of lanoline and vaseline and used twice a day. Whichever be selected it is important that the remedy be brought into close contact with the conjunctiva, and this is best done by manipulation of the eyelids, or "massage," as it is called. The treatment of every case should be commenced by the administration of a brisk purge, after which a daily evacuation of the bowels should be secured by one or other of the methods in general use. Bandages should be employed exceptionally only. But it goes almost without saying that those with acute catarrhal ophthalmia must shade the eyes from light. They should avoid reading or other close work, live temperately, and spend as much time as possible in the open air. Under proper treatment catarrhal ophthalmia recovers speedily and completely—that is to say, not only does discharge cease, but the palpebral conjunctiva returns to its normal condition. Neglected cases, however, may drag on for months. During the whole of this time more or less secretion continues to be thrown off from the mucous lining of the lids, and since this contains the specific organism, such patients may be a fruitful source of infection to all around. It is therefore of the utmost importance that cases be taken in hand early and that treatment be persevered with until cure is complete. In conclusion, let me earnestly insist upon the inadvisability of allowing patients with catarrhal ophthalmia to be associated in the same wards with those affected with the purulent disease or with trachoma.

Those interested in catarrhal ophthalmia are recommended to consult the following among other recent publications: Koch: *Wiener Medicinische Wochenschrift*, 1883, No. 52; Weeks: *Archives of Ophthalmology*, 1886, p. 441; also Verhandlungen des Internationel Medicinischen Congresses, Berlin, 1890, Band iv., p. 38; also *New York Eye and Ear Infirmary Reports*, January, 1895, p. 24; Juler: *Brit. Med. Jour*, Sept. 15th, 1894; Cuènod: *Gazette des Hôpitaux*, 1894, p. 989; Morax: *Recherches Bacteriologiques sur l'Etiologie des Conjonctivites Aiguës*, 1894; Morax and Beach: *Archives of Ophthalmology*, January, 1896, p. 54.

Welbeck-street, W.

INFIRMARY MEDICAL SUPERINTENDENTS SOCIETY.

The annual "up-river" trip was held on May 29th. The start was made from Caversham-bridge on the steam launch *Fashion*. The gathering was largely attended, and on the motion of the president, Mr. Walter Burney, a vote of thanks was passed to Dr. F. S. Toogood for so successfully inaugurating the excursion.

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DEATHS AFTER OVARIOTOMY, WITH REMARKS ON THE VALUE OF FLUSHING WITHOUT SUBSEQUENT DRAINAGE OF THE PERITONEAL CAVITY.

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IN October, 1888, I read before the Royal Medical and Chirurgical Society a paper on the "Mortality of Abdominal Section," founded chiefly upon the results of a first series of 100 ovariotomies, of which number 10 had proved fatal.[1] In February of the present year I completed a further series of 250 operations for the removal of ovarian tumours, with 243 recoveries and but 7 deaths — a mortality of 2·8 per cent. The following details of these 7 fatal cases appear to me to be worth recording as illustrative of some of the risks and complications liable to be encountered in dealing with ovarian growths; and I venture to hope that this relation of my failures may prove of some use to others who are working in the same field as myself.

CASE 1 (145).[2]—A woman, aged fifty-six years, the mother of four children, was sent to me at the Samaritan Hospital in October, 1890, by Dr. Livingston, of Hursley. The menopause had occurred seven years before, and during this interval she had once seen a return of coloured discharge five years previously to her admission. She was greatly emaciated and both lower limbs were very œdematous; the abdomen was enormously distended by a cystic tumour displacing forwards the xiphoid cartilage, and expanding the costal arch on each side. On Oct. 24th double ovariotomy was performed. The left tumour—a practically unilocular cyst—was completely sessile, necessitating for its removal a very extensive and troublesome enucleation; the resulting rent in the left broad ligament was subsequently closed by a series of six deeply-placed interlocking ligatures for the arrest of hæmorrhage, and the peritoneal edges were then accurately united by a continuous suture of fine silk. The right tumour, consisting of a thick-walled very multilocular growth with a good deal of semi-solid material, was unadherent, and its removal entailed no difficulty. The abdomen was closed without flushing or drainage, the relaxed parietes being carefully supported by strapping and a flannel binder applied over the usual dressings augmented by a large mass of cotton wool. The aggregate weight of the tumours exceeded 50 lb. (42 pints of fluid and nearly 9 lb. of solid material). Convalescence during the first week was quite uneventful, the highest recorded temperature being 99·8° F., with a pulse-rate of 76; the bowels acted naturally from the third day onwards; and the dressings were changed on the sixth day, when the incision was found to be well united, and the sutures were consequently removed, the abdomen being subsequently carefully restrapped and supported as before by a binder. During the next forty-eight hours progress continued to be satisfactory, and on the evening of the eighth day the patient was left in excellent spirits, with a perfectly normal temperature and pulse, without cough or discomfort of any kind, and apparently well advanced on the road to complete recovery. The weather at the time was exceedingly wintry, with a biting east wind and very low temperature, and during the night she must in some way have been exposed to chill, for at my visit next morning I found her condition totally altered. She was lying propped up in bed complaining of severe dyspnœa and of pain in the left side of chest, examination of which revealed some deficiency of resonance over the base of the lung with much coarse crepitation; the left upper lobe and the right lung throughout were resonant, but the breath sounds were much obscured by râles. The abdomen was quite soft and natural, the bowels having acted without help during the early morning; per vaginam the uterus was found freely mobile, and no tenderness or fulness was detected in the pelvis. The temperature and the pulse, which were 98·4° and 72 respectively on the previous evening, had risen to 102·2° and 116 respectively; the respirations were 36, and there were no sputa, although cough was constant. During the next twenty-four hours the temperature rose gradually to 104°, with a very feeble, intermittent pulse, and a moderate amount of thin, frothy, muco-purulent secretion was brought up, but expectoration was evidently much impeded by the relaxed state of the diaphragm and abdominal muscles. The patient rapidly lost ground in spite of very free stimulation, the breathing becoming more and more laboured and the heart's action more enfeebled as the lung secretion accumulated, until death took place on the morning of the twelfth day, seventy-two hours subsequently to the onset of the lung mischief. I was unable to obtain a post-mortem examination, but there could not under the circumstances be any doubt as to the cause of death.

This unfortunate termination to a promising case was very disappointing, although on reviewing it I cannot see how recovery from such a condition could well be hoped for. The lesson to be learned from it points to the advisability, when dealing with large, old-standing ovarian cysts which exert much upward pressure on the diaphragm, of removing a portion of their fluid contents by aspiration a few days before the major operation is undertaken; by so doing one may promote the gradual expansion of the compressed lower pulmonary lobes, and thus place the patient in a better condition for withstanding the shock of a severe operation and for subsequently resisting the onset of any lung complication should such arise.

CASE 2 (212).—A single woman, fifty-eight years of age, of feeble physique and extremely emaciated, was admitted into the hospital in April, 1893. The menopause had occurred five years before, and she had known of the existence of an abdominal tumour for about a year. Four months previously to admission she had suffered from a sudden attack of abdominal pain, which confined her to bed for seven weeks. On examination the abdomen was found to contain an extremely tender, elastic tumour extending upwards on the left side to the level of the costal arch, and apparently fixed by adhesions. The history suggested a twisted pedicle. The patient was operated upon on April 25th. The tumour proved to be an ovarian cyst covered by coils of adherent intestine and connected below with the right side of a normal uterus by a very tightly twisted pedicle showing three distinct turns. The cyst wall was very rotten, of a dark-greenish hue over its upper portion, and dark purple in colour towards the base, where it was extensively adherent in the pelvis; the contained fluid measured 9 pints. The pedicle was transfixed and tied well below the lowest twist, and before closure the abdominal cavity was flushed out and a drainage-tube inserted. The operation, performed at 9.30 A.M., lasted just over one hour, and the patient soon regained consciousness. During the first twelve hours the condition was fairly satisfactory, the temperature rising slowly to 100° F., with a somewhat feeble pulse of 110. At 9 P.M. the tube dressings were changed, about ½ oz. of blood-stained fluid being withdrawn; at the same time 3 oz. of urine were obtained by the catheter, of low specific gravity and containing a small amount of albumin, of which no trace had been discovered before operation. Shortly after this the patient became restless and the temperature rose to 102°, with a very rapid intermitting pulse; no more urine was secreted and she gradually became insensible, dying quietly at 4 A.M., about seventeen hours after the removal of the tumour.

The post-mortem examination revealed nothing amiss in the peritoneal cavity; both kidneys were contracted and granular with very adherent capsules; the heart, weighing 9½ oz., was laden with fat and its substance was soft and flabby, the cavities were distended, and the valves normal. The cause of death was attributed to shock consequent on cardiac and renal disease of old standing.

CASE 3 (250).—A very feeble and emaciated woman, aged sixty-six years, was first seen in October, 1894, in consultation with Dr. Uhthoff, of Brighton. The menopause had occurred at the age of fifty-one years, but for ten years previously to the date of my visit she had been subject to occasional slight uterine hæmorrhages, although her general health had continued fairly good until about twelve months before (October, 1893), when she began to lose flesh rapidly and the abdomen enlarged. In May, 1894, she consulted Dr. Uhthoff, who tapped her, removing 25 pints of (?) free fluid. This operation was repeated in the following July, when 12½ pints were taken away. At my examination three months later I found a considerable quantity of

[1] Transactions of the Royal Medical and Chirurgical Society for 1889, vol. lxxii.

[2] The figures in parentheses refer to the total number of ovariotomies performed.

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peritoneal fluid surrounding an elastic tumour, of which the base entirely filled the pelvic cavity, displacing upwards a bulky uterus, which was easily recognisable above the pubes in close connexion with the anterior surface of the tumour. The bowels were evidently much loaded; the urine was scanty, highly coloured, and of specific gravity 1016; there was no albumin. My diagnosis was ovarian tumour, possibly malignant, with ascites, and I advised exploration. The operation was performed on Oct. 20th, 1894. The growth proved to be a semi-solid ovarian tumour composed mainly of brain-like material of extremely soft consistence and very suggestive of malignancy.[3] Adhesions were very extensive, especially in the pelvis, where a broad vascular pedicle was connected with the right side of the uterus. The left Fallopian tube was distended to the size of a large sausage (hydrosalpinx). I tapped, but did not remove it, as the corresponding ovary was quite atrophied. Finally, the abdominal cavity was well flushed and closed without drainage. The weight of the tumour, apart from the ascitic fluid, amounted to between 9 lb. and 10 lb. During the first five days progress was uneventful, with a temperature not exceeding 99·2° F., and a pulse-rate varying between 90 and 100; nourishment was well taken, the kidneys acted freely, and the abdominal condition remained satisfactory; the only trouble complained of was want of sleep. On the morning of the fifth day the bowels acted with the help of an enema, dark liquid motions with numerous small scybala, and these recurred at frequent intervals throughout the day, accompanied by the escape of large quantities of extremely offensive flatus. The patient complained for the first time of very severe headache, with a general sense of depression, and towards evening she was inclined to wander. This mental condition became aggravated during the night; she grew very restless, requiring some control to prevent her from getting out of bed, and constantly complaining of the pain in her head; there was no sickness, and she took plenty of liquid nourishment; the temperature touched 100° for the first time since the operation, with a pulse of 108. When seen in the morning of the sixth day she appeared so worn out by want of sleep that I administered one-third of a grain of morphia hypodermically. Shortly after that she fell asleep, and remained so throughout the afternoon, breathing very deeply and irregularly at the rate of only 12 respirations per minute; the face was very flushed, the eyelids were only partially closed, and the pupils moderately contracted; the temperature varied between 99·8° and 100°, with a pulse-rate of from 72 to 96. She took nourishment readily without fully awaking and passed urine at rather frequent intervals. At 9.30 P.M., after she had remained in this condition for between eight and nine hours, I roused her without any difficulty, but found her quite as excitable and wandering as before her sleep. She still complained greatly of headache, and was extremely restless until after the bowels had again acted at 11.30 P.M., when she grew quieter, the temperature meantime having risen to 101°, with a pulse of 116. She gradually passed into a comatose condition, and so remained until her death at 5 P.M. on the following day, which was preceded by two distinct convulsive seizures, each one lasting for about a minute.

• I was unable to obtain leave for an examination, and therefore cannot be certain as to the cause of death, but judging by the onset and development of the fatal symptoms I am inclined to attribute them to toxic poisoning from intestinal absorption in an aged and very feeble subject with unhealthy kidneys. The advisability of giving morphia in such a case is more than doubtful, and I certainly should not again resort to it under similar circumstances, although I hardly think that in the present instance its administration materially influenced the result.

CASE 4 (275).—A woman, aged seventy years, was first seen in consultation with Dr. Gray, of Oxford, and Mr. Garnham, of Herne-hill, in January, 1895. The abdomen contained a very mobile ovarian cyst of moderate size, and I advised early operation in view of the likelihood of the pedicle becoming twisted. Shortly after my visit the patient was laid up by a sharp attack of influenza, subsequently complicated by bronchitis, and operative treatment was consequently postponed for some months. I did not again see her till the following June, when the cyst appeared to me to be less freely moveable and decidedly more tender than before, but I failed to obtain any definite history pointing to rotation of the pedicle. On June 7th, 1895, the operation was performed. The tumour proved to be a left ovarian cyst, from 7 to 8 lb. in weight, with a very tightly twisted pedicle and universal adhesions. Its removal was a very troublesome business, necessitating the application of numerous ligatures to omental, intestinal, and mesenteric connexions. The abdominal cavity was freely flushed out at the conclusion of the operation and closed without drainage. During the first five days all went on well. The temperature once touched 100·6° with a pulse of 88 in the evening of the second day, but fell to normal in the course of the next twelve hours and did not rise again. Nourishment was well taken after the first twenty-four hours, and the abdomen remained free from distension or tenderness; the kidneys acted abundantly from the first. At 2 A.M. on the sixth day after the operation the patient woke up suddenly complaining of stomach ache, and shortly afterwards vomited some coffee-ground fluid; an hour later a small dark blood-clot was passed per anum, which was presumed to proceed from hæmorrhoids, and a soap-and-water enema, administered to promote an action of the bowel, returned almost immediately mixed with a quantity of dark fluid blood without trace of fæces. I was at once sent for, and on arriving at 5 A.M. found the patient looking pale and anxious and inclined to be somewhat restless, although quite free from pain; the abdomen was soft and not notably tender anywhere on pressure, and normally resonant, without a trace of distension; the temperature was 97·8°, with a compressible pulse of 84. Nothing was to be felt per rectum, and I came to the conclusion that the hæmorrhage must proceed from a stercoral ulcer. At 6 A.M. a further considerable quantity of dark fluid blood was voided per anum, and this same recurred at 7.30 A.M., shortly before which hour some coffee-ground fluid was again vomited. The temperature had now fallen to 97°, while the pulse had risen to 120. No more blood was passed until 9.15 A.M., when a further very copious discharge took place, after which the patient rapidly collapsed and died quietly at 9.45 A.M., within eight hours of the first manifestation of her condition. The post-mortem examination, made by Dr. Allchin, revealed no trace of peritonitis; the pelvic cavity contained two ounces of blood-stained fluid. All the tissues were markedly exsanguine. The liver, spleen, and pancreas were fairly normal, but both kidneys were small, and on section showed a very advanced condition of interstitial nephritis. The lungs were healthy, but the heart was enlarged and loaded with fat. The intestinal canal throughout showed deep purple staining of the mucosa, which was otherwise normal until within one and a half inches of the pylorus, where an irregular-shaped ulcer was discovered, evidently on the verge of perforation, and adhering to its floor was seen a small, recent blood-clot seated in close proximity to what appeared to be an ulcerated vessel. To quote Dr. Allchin's report: "I have no doubt from the general appearances that the hæmorrhage occurred from this site. The duodenal ulcer was an old one—i.e., of several years' standing. Death is amply accounted for by the hæmorrhage, which must have been very considerable, as the bloodvessels generally were quite empty. The condition of the kidneys, however, was such that I much doubt whether the patient could in any event have recovered."

This case is, I believe, unique in the annals of ovariotomy, so far as regards the cause of death. The absence of any premonitory symptoms whence the existence of a duodenal ulcer might have been deduced rendered it impossible to accurately locate the source of the hæmorrhage when the patient was first seen on the morning of her death; and although it seemed clear enough at the time that the bleeding must proceed from a stercoral ulcer I pictured this as probably situated in the large bowel. Under the circumstances, however, no operative treatment could have possibly saved her, even though undertaken with accurate knowledge as to the seat of the bowel lesion.

CASE 5 (304).—The patient, a young woman, nineteen years of age, first seen in consultation on March 17th, 1896, had apparently enjoyed good health until five days before, when, coincidently with the onset of the monthly period, she was suddenly seized with very severe abdominal pain, accompanied by vomiting and fever. On examination under an anæsthetic I found the abdomen occupied by a tense elastic swelling, rising to just above the level of the umbilicus and filling the pelvic cavity below in front of a small uterus, which was displaced backwards into the right posterior

[3] The specimen, reserved for microscopical examination, was unfortunately thrown away.

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quarter of the space. I considered the tumour to be ovarian, probably with a recently twisted pedicle; but as menstruation was persisting very freely at the time it was decided to postpone interference for a few days. During the course of the next forty-eight hours the flow gradually lessened and both pain and sickness were much relieved; the temperature, from 101° F., subsided to 99·6°, and the pulse, which had been extremely feeble and rapid, slowed down to about 100. Operation was performed at 11 A.M. on March 22nd. On exposure the cyst wall appeared of a deep plum colour. After separation of extensive recent parietal, omental, and pelvic adhesions the tumour was tapped and four pints of ordinary ovarian fluid, but slightly blood-stained, were withdrawn, and the flaccid sac which, although very soft and friable, was tolerably thick-walled, was then extracted whole without difficulty. The pedicle connected with the right side of a normal uterus was unusually short and had rotated one full half turn from left to right; it was secured by transfixion below the twisted portion previously to division. The peritoneal cavity was then flushed and closed without drainage. I saw the patient again at 6 P.M., when her condition appeared to be quite satisfactory; the temperature was 99 8° and the pulse 108; the skin was moist; there were no sickness and no unusual amount of pain; the kidneys had acted freely, and she expressed herself as feeling much more comfortable than she had expected. I heard nothing more until eight o'clock the next morning, when a telegram reached me stating that she had died at 6 A.M. On inquiry I learned that in the course of the previous evening she became somewhat restless, the temperature rising to 102°, with a pulse of 120; but her condition apparently gave no cause for alarm when she was visited by her medical attendant at 10 P.M., as there were no other unpleasant symptoms of any kind. During the next five hours, however, the restlessness increased, as the temperature gradually mounted to 103°; by 4 A.M. it had reached 104°, and the stage of excitement had passed on to actual delirium. At 4.45 A.M. a dose of morphia was administered hypodermically, and this was repeated half an hour later. Shortly after the second dose the patient became comatose and died quietly at 6 A.M., with an ante-mortem temperature of 105 4°.

As no examination was permitted one cannot feel certain as to the cause of death; but on reviewing my notes I am inclined to attribute it to hyperpyrexia induced by shock in an extremely nervous and excitable patient. The administration of morphia under the circumstances was a mistake. The proper treatment would have been to reduce the temperature at any cost, and this should have been effected by the continuous application of ice to the head, combined with cold wet packing of the extremities.

CASE 6 (314).—A married woman, aged forty-eight years, anxious-looking, spare, and very anæmic, the subject of a moderate-sized goitre, was admitted into hospital under my care at the request of Dr. Raby, of Devizes, in May, 1896. Eight years previously to her admission she noticed a small lump situated in the left iliac fossa, which was diagnosed as a uterine fibroid. The tumour grew very slowly until about nine months before I saw her, when it suddenly took on rapid increase. She was extremely emaciated, and stated that she had persistently lost flesh ever since a severe attack of diphtheria five years before. The menopause dated three years back. The urine was somewhat scanty and of low specific gravity (1015); no albumin was discoverable. The abdomen was filled by a tense cystic tumour rising to the level of the costal arch and extending deeply in the pelvis, whence the uterus was displaced upwards into the abdominal cavity, being there recognisable in close connexion with the front of the tumour somewhat to the left of the middle line. Operation was performed on May 28th, 1896. The tumour proved to be a double fused ovarian cyst containing fourteen pints of fluid laden with cholesterine. Its upper portion was unadherent, but below the level of the umbilicus its relations became very complicated; in the middle line the cyst wall was intimately connected with the posterior surface of the displaced uterus, whence the growth burrowed deeply on either side between the layers of the broad ligaments, being overlaid by the Fallopian tubes, both of which were greatly hypertrophied. The deeper portions of the tumour were very firmly embedded on the left side beneath the sigmoid flexure and upper two-thirds of the rectum, and on the right beneath and behind the cæcum, whence the vermiform appendix, thickened to the size of one's little finger, and elongated to the extent of seven or eight inches, overlay the growth, and was firmly adherent to the fundus uteri. The enucleation of these deeper portions was an exceedingly difficult and tedious business, owing to the toughness of the attachment and the close connexion with bowel on both sides; but it was at last satisfactorily accomplished. The very firm adhesion to the back of the uterus was cautiously severed by means of scissors, and finally both ovarian pedicles were ligatured and divided. The numerous pressure forceps were then removed, and the peritoneal cavity having been very freely flushed out was closed without drainage. The operation lasted two and a half hours. The patient soon recovered consciousness; the temperature, which was 98·2° F. when she was placed in bed, rose to 100·8° in the course of the next few hours, with a pulse of 120, about the same rate as before the operation. During the next twenty-four hours the temperature ranged between 100° and 101°, but the pulse beats mounted to 140; there was no sickness, and flatus escaped very freely, so much so as to interfere with the retention of nutrient enemata; the kidneys acted abundantly. On the second day the average temperature was somewhat lower, but the pulse rate increased, varying between 144 and 160; the bowels acted freely several times, and the rectal injections were subsequently better retained. During the night the patient had a few hours' sleep for the first time since the operation, and awoke somewhat refreshed, but there was no material alteration in her condition during the third day, excepting that she showed aversion to taking nourishment, which during the previous forty-eight hours she had accepted readily. Early in the morning of the fourth day she became very restless and excitable, although she had slept at intervals during the night; the temperature, which in the previous day had fallen to below 100°, rose to 102°, with a pulse of 140; the bowels acted freely with a soap-and-water enema, which was repeated in the course of the day. Her mental condition, however, continued very unsatisfactory, alternating between semi-maniacal attacks, during which she required restraint, and complete lapses of consciousness lasting for an hour or two hours at a time. She obstinately refused to swallow any nourishment, and voluntarily expelled the nutrient enemata and suppositories, the administration of which was rendered extremely difficult by her violence. After lingering on in this hopeless state for seventy-two hours she died practically from starvation early on the morning of the eighth day after the operation, no nourishment of any kind having been swallowed or retained during the last four days of life.

The following report of the post-mortem examination was furnished to me by Dr. Allchin. "Rigor mortis well marked; body extremely emaciated; no attempt at union of the incision; abdominal cavity perfectly dry, without trace of peritonitis anywhere; the hollow viscera were extremely retracted and there was a very notable absence of fat. All abdominal organs were healthy with exception of the kidneys, of which the right one was small and moderately contracted, while the left was converted into a mere sac owing to dilatation of pelvis and calyces, the renal substance being reduced to a thin shell barely a quarter of an inch in thickness; no actual obstruction of the left ureter was discovered, and it must therefore be presumed that the condition resulted from long-standing pressure (i.e., of the tumour in the left side of the pelvis)." The cause of death was entered as inanition, renal inadequacy being set down as a secondary factor.

This is the only fatal case of insanity which I have met with in my abdominal work. In but two other instances (one ovariotomy and one abdominal hysterectomy) have I seen well-marked mental trouble following upon the removal of large abdominal tumours, and both these patients recovered completely within a few months of the operation. The above three cases are the only ones met with in a series of over 700 abdominal sections, and in each instance the tumour had existed for many years before its removal—a fact worth noting with regard to prognosis under such circumstances. On the other hand, a slight degree of mental disturbance, usually characterised by moroseness, with occasional fits of irritability, is not an extremely uncommon feature of early convalescence after removal of large tumours in middle-aged women; this condition in my experience is a merely transitory one, most noticeable in patients who have long suffered from chronic constipation associated with the presence of slowly growing pelvic tumours.

CASE 7 (349).—A stout and very anæmic woman, aged forty years, the mother of one child twenty-two years old, was admitted into hospital in January, 1897, suffering from

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pelvic pain of a sufficiently severe character to incapacitate her for work. She had been in failing health for some eighteen months, and had latterly begun to lose flesh. The heart-sounds were feeble, but no murmur was detected; the urine was scanty, highly coloured, and slightly turbid, of specific gravity 1025, and there was no albumin. The abdominal parietes were loaded with fat, excepting over the seat of a large, irregular, depressed cicatrix in the right hypochondrium, said to have been caused by the bursting of an internal abscess twenty years before. The left iliac region was occupied by a firm, tense swelling rising out of the pelvis to the level of the crest of the ilium, and extending just across the middle line. Per vaginam the base of the tumour filled the left half of the pelvic cavity, being evidently closely connected with the left side of a somewhat bulky uterus. The mass was diagnosed as an intra-ligamentous ovarian cyst. Operation was performed on Feb. 10th, 1897. The abdominal wall contained a most unusual amount of fat, and the subjacent omentum was adherent to the parietal peritoneum. The right ovary, cystic and enlarged to the size of a hen's egg, was buried in old adhesions at the bottom of the pelvis, and its removal entailed a good deal of difficulty; the Fallopian tube overlying it contained a mass of cretaceous material—presumably the remains of an old pyosalpinx. The tumour on the left side, of the size of an infant's head, proved to be a sessile ovarian cyst completely encapsuled between the layers of the broad ligament, and overlaid externally by the sigmoid flexure. Its enucleation was a troublesome business owing to the extreme toughness of its connexions and the depth to which it extended; the contained fluid was laden with cholesterin. The damage inflicted on the broad ligament during the removal of the growth precluded the possibility of successfully suturing the remains of the torn capsule. I therefore freely flushed out the abdominal cavity and closed it at once. For the first twenty-four hours after the operation the patient's condition seemed satisfactory, excepting for the fact of an extremely feeble circulation. During the second night her temperature rose slowly to 101·6° F., with a pulse of 114, and both remained at or about this level for the next twenty-four hours, during which there was no sickness, the flatus passed regularly, and the kidneys acted fairly well. On the morning of the third day it was noted that the pulse-rate had increased to between 130 and 140, the temperature meanwhile having risen to 102·4°; there was no inclination to vomit, but the flatus had ceased passing, and the urine, which had become scanty, contained albumin. Towards evening the abdomen became very distended at the upper part, more especially in the left hypochondrium; a turpentine enema, administered through a long tube passed without difficulty for some eight or nine inches up the bowel, was followed by a very free escape of flatus, which afforded much relief for a time; but the distension recurred during the night and a repetition of the enema on the following morning produced no such result, and was succeeded by the vomiting of some coffee-ground fluid. From this time the patient rapidly lost ground, the heart's action becoming more and more feeble, as the distension increased, until her death, which took place before the completion of the fourth day. Post-mortem examination revealed no trace of recent peritonitis, but the following state of things was discovered: the liver, spleen, stomach, and transverse colon were matted together by extremely tough, fibrous adhesions of very old standing, of such density as to prove inseparable except by the use of the knife; the liver and spleen were further firmly adherent to the diaphragm, and the former was also closely attached to the abdominal wall down to the level of the scar in the right hypochondrium; the omentum was firmly united to the underlying intestinal coils, which were matted together by old adhesions. Both kidneys were small and pale, with very adherent capsules. The heart was laden with fat and its substance was pale and fatty; the lungs were fairly healthy; all the tissues were extremely anæmic. The pelvic pouch contained two or three ounces of blood-stained fluid; both ovarian pedicles appeared healthy; the uterus was bulky and its cavity contained a submucous fibro-myoma of the size of a duck's egg. The state of the abdominal viscera here described was amply sufficient to account for the fatal result when viewed in connexion with the condition of the heart and kidneys. There can be little doubt but that the adhesions dated from the attack which led to the discharge of pus through the abdominal wall twenty years before my operation; and the fact of the patient's survival and enjoyment of comparative good health during so many subsequent years, in spite of the existence of such a complicated condition of the abdominal viscera, is by no means the least interesting feature of the case.

Remarks.—The fact of 243 recoveries in a series of 250 major operations is satisfactory, but the comparative ease or difficulty of the individual recoveries is also worth some consideration. In the investigation of this subject a careful examination has been made of the notebooks of the cases in question, each one of which contains a complete record of the axillary temperature taken every two hours during the first two days after operation, and subsequently every four hours until the end of the first week, when the entries become less frequent as convalescence progresses. For purposes of classification I have selected in each case the highest temperature noted during the patients' stay under my care, although such record in the great majority of instances has been reached on but one, or at most two, occasions during the first forty-eight hours after the operation. By this method I have arrived at the results given in the subjoined table, which shows, in addition, the number of cases where special means were adopted for cleansing the peritoneal cavity, consisting of drainage (D.), of flushing followed by drainage (F.D.), or finally of flushing with immediate closure of the abdominal incision (F.).[4] The grouping of the cases in consecutive series of 50 serves to indicate the gradual adoption of the last-named plan of treatment as a substitute for either of the two former methods. The classification of the temperature records is that given in the article on Temperature contained in the last edition of Quain's Dictionary of Medicine.

TWO HUNDRED AND FIFTY OVARIOTOMIES WITH SEVEN DEATHS.

250 operations in series of fifty.	74 recoveries with normal temperature (98° to 99·5° F.).				131 recoveries with sub-febrile temperature (99·5° to 100·5° F.).				36 recoveries with moderate fever (100·5° to 103° F.).				Total number of recoveries in each group.				Total number of deaths in each group.			
	Number of cases.	D.	F.D.	F.	Number of cases.	D.	F.D.	F.	Number of cases.	D.	F.D.	F.	Number of cases.	D.	F.D.	F.	Number of cases.	D.	F.D.	F.
101 to 150 ...	5	1	1	—	34	8	5	2	9	1	4	—	49	10	11	2	1	—	—	—
151 to 200 ...	21	1	6	1	24	3	6	5	5	1	2	—	50	5	14	6	—	—	—	—
201 to 250 ...	12	—	2	2	24	—	4	4	11	—	4	5	48	—	11	11	2	—	1	1
251 to 300 ...	21	—	—	8	21	—	—	11	7	—	—	4	49	—	—	23	1	—	—	1
301 to 350 ...	15	—	—	5	28	—	—	16	4	1	—	3	47	1	—	24	3	—	—	3

Two recoveries with high fever (i.e., exceeding 103° F.) complete the total of 243. One of these cases occurred in the first group and the other in the third; both were flushed and drained.

It will be seen that in 205 cases (84 per cent. of the total number of recoveries) the temperature never exceeded 100·5°F., which point may, I think, be taken as the limit for what should be considered as a normal convalescence after a major abdominal operation; of the remaining 38 cases, 36

[4] The term *flushing*, as used in this connexion, is preferable to the word *irrigation*, which, although correctly applicable in the case of ordinary surgical wounds, is not accurately descriptive of the process of washing out the peritoneal cavity.

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recovered with a moderate amount of fever (not exceeding 101·5° in 24 instances); and in only 2 cases out of the total number of 243 recoveries was there a rise of temperature sufficient to constitute high fever.

Special means for cleansing the peritoneal cavity were adopted in 118 (over 48 per cent.) of the 243 successful cases in the following relative proportions: Drainage in 16 instances—about 1 in 15; flushing and drainage in 36 instances—about 1 in 7; and flushing in 66 instances—about 1 in 4. To the adoption of this last-named method of treatment in cases presenting extensive adhesions or other intra-peritoneal complications I am inclined in great measure to attribute the results obtained, not only as regards actual recovery, but also in respect to the comparative ease and shortness of convalescence, and I therefore think it worthy of brief consideration here.

The value of flushing as a convenient and efficient means of removing blood-clot or effused fluids from the peritoneal cavity has now been pretty generally recognised for some years past, the usual practice in this respect being, so far as I am aware, to subsequently remove as much as possible of the water thus introduced, and, further, to provide, by the insertion of a drainage-tube, for the escape of any remainder which might not be readily absorbed. That such absorption takes place very rapidly, however, during the first twenty-four hours after operation is amply evidenced by the comparatively small amount of fluid to be obtained through the tube in cases where a very considerable quantity has been left in the abdomen, and it was the observation of this fact that first led me to try the effect of leaving the closed peritoneal cavity filled with water in the expectation that the serous membrane would be able safely to dispose of this fluid, together with any remaining blood-clot or any other concrete substance which by solution might be rendered absorbable. The results following this treatment, which I first carried out in a case of ruptured colloid ovarian cyst with very extensive peritoneal infection in March, 1889, have fully answered my expectations. Of the 66 cases above mentioned in which the closed abdominal cavity was designedly left filled with water at the conclusion of the operation,[5] 16 recovered with a normal temperature—i.e., not exceeding 99·5°; 38 recovered with a sub-febrile temperature, varying between 99 5° and 100·5°; and 12 recovered with moderate fever, ranging in six instances between 100 5° and 101·5°, and in the remainder between 101·5° and 103°.

These results appear to me sufficient to warrant one in advocating a method of treatment which has certainly helped in promoting them, and I will therefore, in conclusion, briefly enumerate what I consider to be the advantages attainable by its adoption. 1. The enclosed water, while tending in some measure to arrest venous oozing by the hæmostatic action due to its temperature, further acts beneficially by preventing fresh formation of clot in the event of the temporary persistence of such oozing after closure of the abdomen. 2. By its solvent action on any concrete substances, such as blood-clot, colloid material, or lymph, which may have escaped removal during the process of washing out, it promotes their absorption and thus prevents the establishment of a nidus for the development of septic mischief. 3. In a similar manner, by dilution, it facilitates the absorption of any ovarian or other remaining fluids liable to provide a medium for the growth of micrococci. 4. Owing to the rapid absorption of fluid thus taking place from the peritoneal cavity during the forty-eight hours immediately succeeding operation the urinary secretion is freely promoted from the first—a fact of considerable importance in cases of renal inadequacy, whether this condition be dependent on a temporary cause such as antecedent congestion resulting from pressure, or be due to one or other of the chronic forms of renal disease so frequently to be met with in middle-aged patients. 5. Viewed as a mechanical agent, the enclosed fluid by its mere bulk assists in restoring the balance of intra-peritoneal pressure, disturbed by the removal of a large tumour, and hereby promotes recovery from shock in cases of this nature. 6. As a result of natural gravitation, the water, by displacing the intestinal coils from the pelvic cavity, certainly tends to prevent the formation of adhesions in this situation. 7. Finally, by affording a liquid medium throughout the peritoneal cavity, it diminishes friction and consequent irritation between opposed serous surfaces, intestinal or other, during the first twenty-four hours or so after operation, thereby lessening pain, averting the risk of adhesions, and generally promoting ease and smoothness of recovery.

In conclusion, I may state that my views regarding the value of the treatment in question are founded, not only upon the cases here dealt with, but, further, upon the experience of equally satisfactory results obtained in numerous operations for various abdominal conditions other than those now under consideration. It is hardly necessary to point out that the immediate closure of the abdominal cavity here advocated is, of course, contra-indicated in cases complicated by antecedent intra-peritoneal sepsis at the time of operation.

Manchester-square, W.

[5] The hot water used for this purpose has in every instance been obtained from the usual domestic boiler supply, its temperature being regulated when necessary by the addition of ordinary cold tap water.

ON THE PATHOLOGY OF RECURRENT APPENDICITIS.[1]

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OUR knowledge of the pathology of recurrent appendicitis until quite recently was very imperfect, but it is now much more complete since it has become the custom to employ operative measures for its relief, for opportunities are offered us of studying the changes which take place in the appendix at an early stage in the course of the disease. The following remarks are based on the conditions which were found to be present in twenty cases treated by operation, details of which are given in the accompanying table. Of the 20 cases, 7 occurred in females and 13 in males. The youngest patient was ten and the oldest was forty-four years of age. In 15 of the cases the patients were between fifteen and thirty years of age. In all the specimens examined the appendix showed evidences of chronic inflammatory changes, its coats — mucous, muscular, and peritoneal — being all thickened. In some cases its lumen was uniformly narrowed and almost obliterated; in others it was partially or completely occluded at some point and dilated on the distal side of the obstruction, occasionally forming when the occlusion was complete a cystic cavity of some dimensions. In many instances it was considerably shortened, measuring only from 1 in. to 1½ in. in length, instead of from 3 in. to 4 in., its normal length. It was frequently found to be bent on itself and bound down by adhesions, in one case the tip almost touching the cæcal end of the process. The contents of the appendix consisted either of clear mucus or of a muco-purulent fluid; in two cases a hard fæcal concretion was present in its interior, and in another a concretion, which had ulcerated through its wall, was found in an abscess cavity external to it. In most cases the inflammatory changes were not confined to the appendix itself, for evidences of appendicular peritonitis were generally found to be present, the peritonitis being usually of the adhesive character, the inflammatory exudation which had been poured out round the appendix having undergone organisation and forming adhesions. These were often very firm and extensive, surrounding the appendix and fixing it to the parietal peritoneum, omentum, cæcum, or small intestine. In some instances they were present after a second attack, as in Case 5; in other instances, they were absent after many attacks, as in Cases 8 and 15, where the appendix did not show the slightest trace of an adhesion. When exceptionally dense and extensive complete obstruction of the bowels may be produced from inclusion and compression of a coil of small intestine in the adhesions, and if the condition is incapable of relief by operation the result is necessarily fatal. This happened in Case 18, the attack, which was the third, being accompanied by all the symptoms of acute obstruction, which was the predominant feature in the case. On opening the abdomen the appendix and cæcum were found surrounded by an extensive mass of dense adhesions, included in which were several coils of small intestine, so firmly and so intricately matted together that it was quite impossible to liberate them. In some instances the peritonitis was of the suppurative character, pus having formed in the neighbourhood of the appendix. This complication was met with in

[1] A communication read before the Manchester Pathological Society on April 14th, 1897.

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eight of the twenty cases. In six of these the suppuration was localised, an encysted intra-peritoneal abscess being present; in two cases the suppuration was general, there being well-marked evidences of diffuse purulent peritonitis. When suppuration takes place it is often secondary to ulceration and perforation of the walls of the appendix, followed by the escape of its contents, for in one case, on evacuating a collection of pus, a large fæcal concretion came away with the discharge (Case 19). In two instances, complicated by the formation of abscess, where the appendix was exposed and removed a ragged perforation was found in its walls (Cases 8 and 11). In another instance (Case 5) the appendix, though not actually perforated, was extremely thinned at one point, which was found to correspond with an ulcer involving its mucous and muscular coats. It has been shown that without any perforation of the appendix suppuration round it may be due to micro-organisms invading its walls and passing through them into the peritoneal cavity. It is a well-known fact that in a state of health bacteria are almost constantly present in the interior of the appendix, as well as in other parts of the intestine, without causing any harm. If, however, the vitality of the walls of the appendix—as of any portion of the intestine—becomes impaired from any cause, as in the case of one which has become the seat of recurring attacks of inflammation, its resisting power is diminished. Under these circumstances the bacteria, becoming virulent, may invade and penetrate its coats, exciting peritonitis, which is often of the suppurative variety.

As regards the course of these cases, if left to themselves the attacks of appendicitis may recur at irregular intervals for years, and ultimately a cure may take place by a gradual process of obliteration of the lumen of the process and its conversion into a fibrous cord. Suppuration may, however, at any time occur; if an encysted abscess forms, after the evacuation of its contents, the appendix usually shrivels up, becoming obliterated and causing no further trouble. On the other hand, if the suppuration is diffuse—i.e., if there is general purulent peritonitis—the result will probably be fatal. Another complication which may occur, as already mentioned, is intestinal obstruction from compression of a coil of bowel by the adhesions so often present. Of the various theories advanced to account for the onset of appendicitis, the most probable is that which regards the appendix as a diverticulum which readily allows of the accumulation and stagnation of fæcal matter. This mingling with the secretion from its mucous lining and undergoing fermentative or putrefactive changes sets up a catarrhal inflammation, which may be followed by ulceration and perforation or by thickening of its walls, the latter condition being the one most commonly met with in the recurrent form of the disease. The fæcal concretions found in its interior are probably the consequence, not the cause, of the inflammation, being due to inspissation of its contents; but once formed there they no doubt tend to excite and keep up the recurrent attacks. Though foreign bodies rarely lodge in the appendix this happened in one instance (Case 1), the patient being a female, aged twenty-seven years, who for about two years had suffered from frequent attacks of appendicitis. At the end of this period an abscess formed in the right iliac fossa, and at the bottom of the cavity a pin was found, the head of which was encrusted with a deposit of calcareous matter. The appendix was surrounded by a mass of old adhesions and its lumen was obliterated almost up to its origin from the cæcum.

Manchester.

TABLE OF TWENTY CASES OF RECURRENT APPENDICITIS.

No.	Date of operation.	Sex.	Age.	Duration of symptoms.	Number of attacks.	Condition of the appendix.
1	June, 1893	F.	27	2 years	About 10	Appendix surrounded by adhesions and almost obliterated; pin found in abscess cavity adjacent to it.
2	June, 1894	M.	10	10 months	2	Small abscess in close proximity to appendix, which was not seen.
3	June, 1895	M.	18	6 months	3	Appendix surrounded by dense adhesions and difficult to recognise; lumen almost obliterated.
4	January, 1896	M.	26	12 months	3	Appendix constricted at its neck; contained a hard, fæcal concretion.
5	January, 1896	F.	29	4 months	2	Appendix occluded at its origin and distended with mucoid fluid; wall much thinned at one spot; numerous adhesions.
6	February, 1896	M.	29	6 months	2	Small abscess in close proximity to appendix, which was not seen.
7	February, 1896	M.	18	10 months	6	Appendix constricted at its origin and sharply bent on itself; distended with muco-purulent fluid.
8	March, 1896	F.	16	Several years	Numerous	Appendix perforated; diffuse purulent peritonitis; no trace of adhesions.
9	March, 1896	M.	26	3 years	Numerous	Large abscess round appendix.
10	March, 1896	F.	25	3 years	5	Appendix occluded at its origin and dilated beyond; contained muco-purulent fluid.
11	April, 1896	M.	20	2 years	Numerous	Appendix perforated; large abscess round it; numerous adhesions.
12	May, 1896	M.	25	2 years	Numerous	Appendix contained a hard concretion; surrounded by dense adhesions.
13	September, 1896	M.	16	9 months	3	Appendix occluded at its middle; dilated beyond and distended with mucoid fluid; numerous adhesions.
14	November, 1896	F.	16	10 months	3	Appendix occluded below its middle; dilated beyond and distended with mucoid fluid; a few adhesions.
15	December, 1896	F.	27	15 months	5	Condition as in No. 14, except that there were no adhesions.
16	January, 1897	M.	44	2 years	3	Small abscess in close proximity to appendix, which was not seen.
17	February, 1897	M.	32	6 years	4	Appendix surrounded by dense adhesions; lumen almost obliterated.
18	February, 1897	M.	28	9 months	3	Appendix lost in mass of dense adhesions, in which coils of small intestine were included and constricted.
19	March, 1897	M.	12	6 months	Numerous	Appendix perforated; diffuse purulent peritonitis; fæcal concretion escaped with the pus on opening abdomen.
20	March, 1897	F.	30	2 years	4	Appendix occluded below middle, bound down by adhesions, and sharply bent upon itself; contained mucoid fluid.

A CASE OF TRAUMATIC TETANUS TREATED SUCCESSFULLY BY ANTITOXIN.

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IN view of the recent progress in the antitoxin treatment of disease and the need of recorded cases of tetanus treated thereby, the following account may be of some interest.

A man, aged forty-eight years, while working a crane at the Liverpool Docks in June of last year caught the end of the middle finger of his left hand in the cogs of a wheel, and this destroyed the whole of the terminal and part of the middle phalanx of that digit. He went at once to the Royal Southern Hospital, was treated antiseptically, and this treatment was being repeated every alternate day. On the sixth

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day after the accident he complained of pain and stiffness in the jaw and throat. This gradually became worse, until he had difficulty in eating, drinking, and in opening his mouth. He then sent for his medical adviser, Mr. Campbell, of High Park-street, and was treated for eight days with chloral hydrate and bromide of potassium, but did not improve. On the contrary, his jaws became more fixed and he became quite unable to swallow solids, though still able with difficulty to manage liquids. He suffered also from spasms, which, at first few in number and slight in effect, gradually increased in frequency and violence, and were readily produced by any slight noise, movement, or excitement. At this time I was requested to see him with Mr. Campbell, and this I did on the fourteenth day of illness. He was suffering from tetanus, having spasms about once in three minutes. The muscles of his jaws, abdomen, and legs were hard and firm, but those of his arms were softer. There was marked opisthotonos. His mouth could only be opened very slightly, and there was much difficulty in deglutition, only a small quantity of fluid being swallowed at a time. The least excitement or noise immediately caused a spasm. His temperature was 98 8° F. and his pulse 120. The bowels were constipated and the urine scanty, highly coloured, and full of urates. The terminal and half the second phalanx of the middle finger of the left hand were missing, while the stump ended in an unhealthy-looking wound, through which the bone protruded for about one-eighth of an inch. There was also a cut upon the first phalanx of the same finger. I suggested that as he was suffering from a chronic form of tetanus he would be a suitable subject for the antitoxin treatment, and, considering the bad condition of the wound on the finger, together with the cut on the first phalanx, that it would not be unreasonable to remove that digit at the metacarpo-phalangeal articulation. Mr. Campbell kindly consented to this line of treatment and requested me to get some antitoxin. After some difficulty I was able to get some of Roux's antitoxin for tetanus, which was kindly given to me by Dr. Carter, of Rodney-street. I then removed the stump of the finger at the metacarpo-phalangeal articulation and then injected fifteen grains of Roux's antitoxin (which was all I possessed) into the gluteal region. Though placed fully under the influence of chloroform the stiffness did not depart from the patient's limbs or jaws. For some time after the narcosis he was free from spasms, but gradually they returned to their former frequency and strength On the next morning (Sunday) there were no marked rise in temperature and no increase in the quantity of urine, which remained as before. The slightest touch gave rise to spasm, with marked opisthotonos. The risus sardonicus was marked, while the jaws could be opened about a quarter of an inch or less, and there were sordes on the lips. On the evening of this day the patient was evidently worse, swallowing being more difficult. During the course of the next day (Monday) I was able to obtain some of Tizzoni's antitoxin from Messrs. Allen and Hanburys, Tizzoni's preparation being the one I particularly desired to use. During Sunday night and Monday the patient became rapidly worse, swallowing being almost impossible, and the spasms being even more frequent and stronger. At 6 P.M. on Monday the antitoxin arrived, and I injected at once thirty grains of the sixty grains which I had obtained into the loose subcutaneous tissue of the abdominal wall. The patient's temperature was 100·2°, and his pulse 120. On Tuesday morning the spasms were a little less frequent and not quite so violent, and the patient was able to swallow somewhat better. In the evening the spasms were only once in ten minutes on the average, and not nearly so strong; swallowing was the same as in the morning. The temperature was 99°, and the pulse 100. I then injected fifteen grains more of Tizzoni's antitoxin. On Wednesday night the patient was decidedly improving, and had had only about forty spasms in the twenty-four hours. The pulse was 96, and the temperature 98·4°. He could swallow much better, and could open his jaws wider than before. I injected about eight grains of Tizzoni's antitoxin. On Thursday night the patient was much improved, swallowing fluids without much difficulty. There had been only four attacks of spasms during the previous twenty-four hours. The pulse and temperature were normal. On Friday night his condition was very satisfactory; there had been no spasm during the previous twenty-four hours and swallowing was again better, though no solids had been given him. The muscles of the limbs and jaws were very stiff. The jaws could be opened rather better. From this time the patient gradually improved, and by means of massage the stiffness passed off from the legs, though he had difficulty in walking for quite six weeks. The stiffness in the jaws lasted much longer, being complained of two months later. In about a week he was able to swallow solids, but it was long before any strength came back to him, the wasting being marked. In fact so run down was he that the wound caused by the removal of the finger remained quite passive for over a fortnight, with no attempt at healing and no discharge. The stitches were removed and the wound rubbed with pure carbolic acid, and as the patient gradually improved in strength so the wound gradually healed in another three weeks without any further trouble except the application of pure carbolic acid at intervals.

Remarks.—The incubation in the above case appears to be very definite—viz., six days—and the antitoxin treatment was commenced upon the fourteenth day after the accident and the eighth after the first symptoms by a small injection of Roux's antitoxin. But it was not till the sixteenth day after the accident and the tenth day after the first symptoms that treatment by means of Tizzoni's antitoxin was begun. In all the patient received fifteen grains of Roux's and fifty-three grains of Tizzoni's antitoxin. No apparent effect was caused by the Roux antitoxin, as the transient improvement might be justly assigned to the chloroform. The effect of Tizzoni's antitoxin was astonishing, for the patient appeared to be rapidly sinking and all hope of curing him had been abandoned. It would be unfair to draw any inferences concerning the relative merits of the two antitoxins from the above case; but it is interesting to note that Kanthack, in a paper on the Value of Serum Treatment in Tetanus in the *Medical Chronicle*, April–September, 1895, p. 92, gives a list of 54 cases of tetanus treated by various antitoxins, and among these he finds that 31 cases were treated with Tizzoni's with a result of 23 cures and 8 deaths, or a mortality of 25·8 per cent., while with Roux's 13 cases were treated, 4 being cures and 9 deaths, or a mortality of 69 23 per cent. Further on (page 101) he says: "Of the 31 cases treated with Tizzoni's antitoxin 3 only can be considered test cases, and of these only one survived, while all of the Roux's acute cases died." I found no untoward symptom arise from the use of either antitoxin. The only drawback in the use of the antitoxins was that they were only soluble with difficulty in the sterilised water, particularly the Tizzoni. I may mention that I last saw the patient about a month ago, and he was then in good health. In conclusion, I wish to draw attention to the trouble I had in obtaining any tetanus antitoxin. During the Saturday and the Monday morning I attempted in many ways to get some, and signally failed, till some unknown person, to whom I am most grateful, wired to me to try Messrs. Allen and Hanburys', which I did with success. I think that it is a great mistake that a supply of this antitoxin is not kept in England in some way that it can readily be obtained by any medical man.

Liverpool.

A NOTE ON THE PHENOMENA OF MESCAL INTOXICATION.

BY HAVELOCK ELLIS,

EDITOR OF THE "CONTEMPORARY SCIENCE SERIES."

MESCAL buttons (the fruit of Anhalonium Lewinii) are eaten by the Kiowa and other Indians of New Mexico, and their use is connected with religious ceremonial. Recently the extraordinary vision-producing properties of this substance have been investigated in America by Prentiss and Morgan,[1] and more especially by Weir Mitchell, who has published a very interesting record of the marvellous colour visions by which he was visited when under the influence of mescal.[2] There seems, however, to be at present no record of any experiment in the use of mescal in the production of visual phenomena carried out on this side of the Atlantic. The phenomena are certainly of much interest—perhaps even more so to the psychologist than to the physician, notwithstanding remarkable results recorded in the treatment of neurasthenia, &c.—and it may therefore be worth while to record briefly my personal experience with mescal. I will refrain here from describing the visions themselves, which were, perhaps, less wonderful in my case than in that of Dr. Weir Mitchell (who, as he admits, is a

[1] Therapeutic Gazette, Sept. 16th, 1895.
[2] Brit. Med. Jour., Dec. 5th, 1896.

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favourable subject for visions, while I am not), and speak chiefly of other phenomena which were either unnoticed or unexperienced by the American observers.

On Good Friday, being entirely alone in quiet London rooms, I made an infusion of three buttons (a full dose) and took it in three portions at intervals of an hour between 2 30 and 4.30 P.M.[3] The first noteworthy result (and the only one of therapeutic interest which I have to record) was that a headache which had been present for some hours and showed a tendency to aggravation was immediately relieved and speedily dissipated. There was slight drowsiness before the third dose was taken, but this speedily passed off and gave place to a certain consciousness of unusual energy and intellectual power, which also quickly passed off, and was not marked and prolonged, as with Dr. Weir Mitchell. So far no visual phenomena had appeared, even when the eyes were closed for several minutes, and there was yet no marked increase of knee-jerk; there was, however, a certain heightening of muscular irritability, such as may be noted when one has been without sleep for an unusual period. The pulse also began to fall. After the third dose I was still feeling on the whole better than before I began the experiment. But at 5 P.M. I felt slightly faint, and it became difficult to concentrate my attention in reading; I lay down and found that the pulse had now fallen to 48, but no visual phenomena had yet appeared. At 6 P.M. I noticed while lying down (in which position I was able to read) that a pale violet shadow floated over the page. I had already noted that objects which were not in the direct line of vision showed a tendency to be heightened in colour and to appear enlarged and obtrusive, while after-images began to be marked and persistent. At 6 P.M. there was a slight feeling of faintness as well as of nausea, and the first symptoms of muscular incoördination began to appear, but there was no marked discomfort. By 7 P.M. visions had begun to appear with closed eyelids, a vague confused mass of kaleidoscopic character. The visual phenomena seen with open eyes now also became more marked, and in addition to the very distinct violet shadows there were faint green shadows. Perhaps the most pleasant moment in the experience occurred at 7.30 P.M., when for the first time the colour visions with closed eyes became vivid and distinct, while at the same time I had an olfactory hallucination, the air seeming filled with vague perfume. Meanwhile the pulse had been rising, and by 8 30 P.M. had reached its normal level (72 in the sitting posture). At the same time muscular incoördination had so far advanced that it was almost impossible to manipulate a pen, and I had to write with a pencil; this also I could soon only use for a few minutes at a time, and as I wrote a golden tone now lay over the paper, and the pencil seemed to write in gold, while my hand, seen in indirect vision as I wrote, looked bronzed, scaled, and flushed with red. Except for slight nausea I continued to feel well, and there was no loss of mental coolness or alertness. When gazing at the visions with closed eyes I occasionally experienced slight right frontal headache, but as I only noticed it at these times I attribute this mainly to the concentration of visual attention. In one very important particular my experience differs from Dr. Weir Mitchell's. He was unable to see the visions with open eyes even in the darkest room. I found it perfectly easy to see them with open eyes in a dark room, though they were less brilliant than when the eyes were closed. At 10 P.M., finding that movement distinctly aggravated the nausea and faintness, I went to bed, and as I undressed was impressed by the bronzed and pigmented appearance of my limbs. In bed the nausea entirely disappeared, not to reappear, the only discomfort that remained being the sensation of thoracic oppression, and the occasional involuntary sighing, evidently due to shallow respiration, which had appeared about the same time as the vision began. But there was not the slightest drowsiness. This insomnia seemed to be connected less with the constantly shifting visions, which were always beautiful and agreeable, than with the vague alarm caused by thoracic oppression, and more especially with the auditory hyperæsthesia. I was uncomfortably receptive to sounds of every kind, and whenever I seemed to be nearly falling asleep I was invariably startled either by the exaggerated reverberation of some distant street noise (though the neighbourhood was even quieter than usual), or, again, by the mental image (not hallucination) of a loud sound, or, again, as I was sometimes inclined to think, by actual faint hallucinatory sounds; this, however, was difficult to verify. At a later stage there was some ringing in the ear. There was slight twitching of the larger muscles of the legs, &c., and before going to bed I had ascertained that the knee-jerk was much exaggerated. The skin was hot and dry. The visions continued. After some hours, tired of watching them, I lighted the gas. Then I found myself in a position to watch a new series of vivid phenomena to which the previous investigators had not alluded. The gas—i.e., an ordinary flickering burner—seemed to burn with great brilliance, sending out waves of light which extended and contracted rhythmically in an enormously exaggerated manner. What chiefly impressed me, however, were the shadows which came in all directions, heightened by flushes of red, green, and especially violet. The whole room then became vivid and beautiful, and the tone and texture of the whitewashed but not remarkably white ceiling was immensely improved. The difference between the room as I then saw it and its usual appearance was precisely the difference one may often observe between the picture of a room and the actual room. The shadows I saw were the shadows which the artist puts in, but which are not visible under normal conditions of casual inspection. The violet shadows especially reminded me of Monet's paintings, and as I gazed at them it occurred to me that mescal doubtless reproduces the same conditions of visual hyperæsthesia, or rather exhaustion, which is certainly produced in the artist by prolonged visual attention (although this point has yet received no attention from psychologists). It seems probable that these predominantly violet shadows are to some extent conditioned by the dilatation of the pupils, which, as the American observers had already noted, always occurs in mescal intoxication. I may remark in this connexion that violet vision has been noted after eye-operations; and Dobrowolsky[4] has argued that a necessary condition for such vision is the dilatation of the pupils produced by atropine, so that the colour vision (chiefly violet, though to some extent of other colours) is really of the nature of an after-image due to bright light. Dobrowolsky's explanation seems to fit in accurately with my experiences under mescal.

I wished to ascertain how the subdued and steady electric light would influence vision and passed into the next room. Here the richly coloured shadows, evidently due to the stimulus of the flickering light, were not obtrusive; but I was able to observe that whatever I gazed at showed a tendency to wave or pulsate. The curtains waved to a marked extent. On close inspection I detected a slight amount of real movement, which doubtless increased the coarser imaginary movement; this latter showed a tendency to spread to the walls. At the same time the matting on the floor showed a very rich texture, thick and felted, and seemed to rise in little waves. These effects were clearly produced by the play of heightened shadows on the outskirts of the visual field. At 3.30 A.M I found that the phenomena were distinctly decreasing, and soon fell asleep. Sleep was apparently peaceful and dreamless, and I rose at the usual hour without any sense of fatigue, although there was a slight headache. A few of the faint visual phenomena with which the experience had commenced still persisted for a few hours.

Motor incoördination and the thoracic symptoms of cardiac and respiratory depression were in my case the only really unpleasant symptoms of the experiment. They are barely noticed by the American observers, who emphasise the gastric symptoms and headache, in Dr. Weir Mitchell's case persisting for several days. In my case there were practically no unpleasant after results. I cannot say how far the method of administration affected this result. I took the drug in infusion; previous experimenters used an extract or a tincture, or else ate the buttons.

It cannot be said (from my experience) that the pleasure of mescal intoxication lies in any resultant passive emotional state such as is produced by tea or alcohol, but strictly in the enjoyment of the colour visions produced. Attention is impaired (and one realises under the influence of mescal how largely attention is a matter of coördination), but intellectual judgment remains unimpaired. The visions, as I recall them, seem to me (unlike most dream visions) as beautiful in memory as when I experienced them. The sensory phenomena seem to be due to great and general disintegration and exhaustion of the sensory apparatus; in

[3] I first cut up the buttons into small fragments and I poured on boiling water twice; a single infusion, as I have since found in the case of other persons, is inactive.

[4] Ueber die Ursache der Erythropsie, Archiv für Ophthalmologie, vol. xxiii., p. 213.

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a slighter degree the same phenomena are found in neurasthenia, even the colour vision. I am convinced that all the senses were more or less affected. There were vague dermal sensations, and the body felt unfamiliar to touch, just as everything seemed delightfully unfamiliar to the sense of vision. I noticed, also, that any marked casual stimulation of the skin produced other sensory phenomena—a heightening of the visions or an impression of sound. This is a phenomenon which may throw an interesting light on the synæsthesiæ or "secondary sensations."

The phenomena of mescal intoxication are thus mainly a saturnalia of the specific senses, and chiefly an orgy of vision. Personally, I have found the penalty of a single dose surprisingly light, though, having learned what the experience has to teach, I have no special inclination to renew it. But I fully agree with Dr. Weir Mitchell, that there is every likelihood that mescal will become popular. It certainly has a great future before it with those who cultivate the vision-breeding drugs. At the same time it is of no little interest to the physiologist and psychologist.

Lelant, Cornwall.

IMPLICATION OF THE STERNO-CLAVICULAR JOINT OCCURRING DURING THE COURSE OF GONORRHŒA.

BY GEO. HENRY EDINGTON, M.D. GLASG., M.R.C.S. ENG.,
SURGEON TO GLASGOW CENTRAL DISPENSARY.

A MAN, aged twenty-seven years, was seen by me at the Glasgow Central Dispensary on Dec. 16th, 1896, through the kindness of my colleague, Mr. Dryden Moffat. Three weeks previously he had contracted gonorrhœa, but the discharge had ceased at the end of a week and there was none at the time he came to the dispensary. When the gonorrhœa had lasted for one week he began to complain of pain in the neighbourhood of the left shoulder. The pain shifted along the clavicle, and finally he observed a painful swelling over the left sterno-clavicular articulation. At the same time the left testicle became swollen. No other joints were affected; he thought himself to be suffering from rheumatism, but medicines which he took were without effect. He had had gonorrhœa four years previously, but it did not cause him much inconvenience. He had never had any sore on the penis nor had he ever observed any syphilitic manifestations. His condition on Dec. 16th was as follows. He was very pale and thin and looked ill. He felt weak and had no appetite. There was swelling over the left sterno-clavicular articulation, entirely obscuring the surface anatomy of the part. The swelling extended on to the sternum towards the middle line and seemed probably sub-periosteal at this part. The skin was dusky-red and great pain and tenderness were complained of in the part. Any movements of the left upper extremity were accompanied by great pain and were on that account of a limited nature. The diagnosis lay between sub-periosteal suppurating gumma over the manubrium and pyæmic affection of the articulation. Against the former was the absence of history or signs of syphilis, while in favour of the latter was the fact of the patient having contracted a gonorrhœa a week before the commencement of the joint affection. It was decided to put him on iodide of potassium on the chance of it doing good in either affection, and he accordingly received ten grains thrice daily with fifteen grains of bicarbonate of potash. The arm was supported in a sling. In three days after this (Dec. 19th) the dusky-red swollen area was white, the swelling was very much down, the pain was gone, and the patient was feeling much better generally. He was still unable to put on his coat on account of stiffness with pain on exertion. On Dec. 23rd the swelling was again present, and hot fomentations were ordered, while he was directed to continue the iodide mixture. The swelling at this date was situated definitely over the joint. On Jan. 6th, 1897, the swelling was more prominent and fluctuant. A small incision let out a few drops of reddish-yellow turbid serum, and through the wound greyish granulations prolapsed. A probe passed both outwards and inwards, along underneath the skin for an inch or so, but not into the joint. By another week the patient could move his arm freely, the swelling was very much lessened, and at the seat of incision was a small bud of granulations. At the end of January there was still a sinus leading backwards to the joint. Below the articulation there was some thickening of the sternum, while the end of the clavicle was pulled upwards, apparently from softening of the ligaments. The joint was well defined in its surface anatomy. On account of the sinus persisting he was sent into the Western Infirmary, where the granulations were scraped out under chloroform by Dr. Hector Cameron. In March of the present year (1897), when I last saw the patient, the following note was made:—The sinus had healed; there was some projection upwards of the sternal end of the clavicle, with some fixation of the joint and soft grating on movement (extra articular?). The patient was feeling quite well again.

Remarks.—The case seems to me to be of sufficient interest to warrant my publishing it, my object in so doing being to suggest the connexion between the joint affections in gonorrhœa and pyæmia. Unfortunately, the surroundings of the case prevented my investigating it bacteriologically, and thus I am unable to say what micro-organisms, if any, were present in the joint effusion. The characters of the affected part both before and at the operation resembled those seen in pyæmia, added to which is the fact of the common selection of the sterno-clavicular articulation in that constitutional condition. The effect of medicinal treatment is interesting, the exhibition of iodide being followed by very sudden improvement, and this again by gradual progression towards suppuration. The behaviour of the part after operation was very satisfactory, and the patient was left very little the worse for his illness. Without drawing conclusions from a single case I have noted the following points as being of interest:—(1) Early appearance of joint complication in the course of the disease (seventh day), associated with orchitis; (2) acute process, affecting periarticular tissues subsequently; resulting deformity of joint; (3) response to medicinal treatment and relapse; and (4) subsequent favourable termination of the case after operation.

Glasgow.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF GUNSHOT WOUND PENETRATING THE CHEST: A PATHOGNOMONIC SIGN OF HÆMOTHORAX.

BY W. J. ERNELY SUMPTER, L.R.C.P. LOND., M.R.C.S. ENG.

PENETRATING gunshot wounds of the chest are perhaps sufficiently rare in civil practice to justify a short record of the following case in the columns of THE LANCET.

On April 7th, 1897, I was called to see a man who, it was stated, had just shot himself. I found him lying on his back and evidently much collapsed. On examination a wound was found penetrating the chest wall just two inches above the left nipple in the third intercostal space. The bullet had passed out at the back in a slightly higher position, the wound being just four inches from the spine and five inches from the top of the scapula. The scapula was apparently not damaged, neither were any of the ribs. The former escaped owing to the position of the arm at the time of the injury, as was ascertained later, the left arm having then been raised to a right angle with the trunk and the forearm drawn forward slightly across the chest, to give a support to the pistol which was held in the right hand, and the trigger pulled with the thumb. The weapon was an old Enfield revolver, and the bullet, after penetrating the chest, passed through a notice-board and a wooden partition into an adjoining room, where it was found very much flattened on the floor. The shock was very pronounced, the pulse being very weak and rapid, and at times almost imperceptible. There was very little bleeding externally. On applying a stethoscope to the chest coarse râles were heard all over the left lung below and about the wound, and the breath sounds were markedly deficient. Both wounds were gently examined with the finger, and no extraneous matter being found they were carefully

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cleansed with a corrosive sublimate lotion and an antiseptic dressing applied, which was retained in position by a broad bandage placed round the chest. After a few days the left chest was strapped in place of the bandage. The progress of the case towards recovery was practically uneventful. More or less pain was felt in the neighbourhood of the wound for several weeks. There was very little cough and scarcely any expectoration. The temperature remained above the normal for nearly a month, and reached 103·6° F. The breath sounds showed a marked improvement during the first week, but after that time progress was not so rapid. The râles gradually disappeared as the effused blood was absorbed. The patient was at first allowed cool drinks freely, and ice to suck. A quarter of a grain of morphia was given hypodermically twice daily for a fortnight, and then every night for ten days longer. When the temperature rose above 101° he was given three grains of quinine in powder twice daily, and later, owing to a marked specific history, he was ordered a mixture of bark, with perchloride of mercury and iodide of potassium. About a fortnight after the accident I was interested to find a marked ecchymosis about the angles of the lower ribs, which extended down towards the loins. This sign was regarded by Valentine as pathognomonic of blood effused within the chest, and is mentioned in Guthrie's Commentaries. It was, as he says, "very dissimilar to that which occurs after a blow or wound, and which takes place shortly after an accident, being around the wound if there be one, and extending from it. The patient also complains of pain when the bruised part is pressed by the fingers, and these characters are not observed in the ecchymosis, the sign of effusion. Its colour is identical with that which appears on the abdomen of persons some time after death, a bright violet (*violet très-éclairci*) appears about ten days after the receipt of the injury, sometimes later." I last saw the patient on May 18th. Both wounds were then soundly healed, the breath sounds were scarcely as free over the base of the left lung, as over the right. No râles could be heard, but there was some increased resistance on percussion. He was able to get about well.

Sherringham, Norfolk.

A CASE FOR DIAGNOSIS.

By RAYMUND H. PHILLIMORE, M.D.

I ATTENDED a case last year which presented so many curious features that I think it may be of sufficient interest to lay before the readers of THE LANCET. Briefly, the history of the case was as follows.

On Feb. 29th, 1896, I was summoned to attend a man, aged nineteen years. He was a total abstainer, with a family history of phthisis. He complained of pain in the right side, vomiting, rigors, and constipation. He suffered from a most intense and persistent frontal headache. He said that he had not been feeling well for ten days or a fortnight. Physical examination disclosed a liver greatly enlarged. It extended from the lower border of the fifth rib to nearly the level of the umbilicus in the middle line and below that level in the right flank. It also extended three or four inches to the left of the middle line. The organ was very sensitive on palpation. The spleen was also enlarged. A herpetic eruption was present round the lips. The heart and lungs were normal. The temperature was 101·4° F., the pulse was 94, and the respiration was 20 per minute. On March 1st there occurred violent epistaxis with severe headache. On the 2nd the patient had two chills; the headache was unrelieved by ordinary treatment. The temperature was 101·5° in the morning, but it became normal in the evening. On the 3rd a few suspicious spots were observed on the abdomen. The temperature in the morning was 99° and in the evening 100·8°. On the 4th four rigors occurred. The tongue was dry, brown, and fissured. The temperature in the morning and evening was normal. On the 5th there was epistaxis. On the 6th pronounced jaundice was present. Two stools were passed. The temperature in the morning was 103·6°, but in the evening it was normal. On the 7th epistaxis occurred. On the 8th the patient suffered from distressing rigors with a flushed face, followed by profuse perspiration simulating a malarial attack. In the morning the temperature were 100° and in the evening it was 99·8°. On the 9th and 10th there were rigors. On the 11th the patient again suffered from rigors. He passed three stools on this date. On the 12th and 13th rigors again occurred. The abdomen was tympanitic. On the 14th there were hiccough, vomiting of bile, and enlargement of the superficial thoracic veins on the right side. The rigors were followed, as before, by profuse perspiration. The patient was continually drowsy. The conjunctivæ were greenish-yellow in colour. He complained of severe pain in the right side. Albumin was present in the urine, but not in excessive quantity. Delirium supervened. The morning and evening temperatures were 100° and 100·4° respectively. On the 15th at 9 A.M. the temperature was 107°, the respiration was 28 per minute, and the pulse was 116. The patient was delirious. The heart's action was feeble and intermittent. Hiccough was present. At 3 P.M. the temperature was normal; there was vomiting. At 7 P.M. the temperature was 102 and the respiration was 5 per minute. On the 16th, 17th, and 18th persistent chills occurred and there was rapid emaciation. On the 19th an attack of epistaxis occurred, with stertorous breathing (18 per minute); he was very restless and vomited. The morning and evening temperatures were 104° and 102° respectively. On the 20th at 9 A.M. the temperature was 99·5°, the pulse was 110, and the respiration was 18, and at 5 P.M. they were 101°, 132, and 28 respectively. At 7 P.M. sudden collapse and death occurred.

Was this a case of hypertrophic cirrhosis of the liver complicated with typhoid fever of an atypical form? The sudden collapse might then be attributed to perforation of the bowel with emptying of contents into the peritoneal cavity. Unfortunately no post-mortem examination was allowed. I may add that the patient received the attention of a regular hospital nurse.

Cookshire, Quebec, Canada.

AVULSION OF THE UTERUS.

By E. HICKSON SMITH, M.R.C.S. ENG., L.R.C.P. LOND.,
ASSISTANT SURGEON TO THE LONGTON HOSPITAL.

ON the morning of Dec. 29th, 1896, I was sent for in haste to go five miles into the country to see a patient who had just been confined. On my arrival at the house the midwife informed me that the child had been born two hours previously on the floor while the mother was on her hands and knees. After separating the child and getting the patient into bed she found a large lump protruding from the vagina, which she thought was the head of another child, and consequently pulled on it for three-quarters of an hour until she had dragged it away. I immediately examined this, and found it to be the inverted uterus. This I turned back again, and found it was the whole of the uterus and cervix, with its peritoneal covering, and one broad ligament and Fallopian tube, without the ovary. The broad ligament of the other side was congenitally absent. On examining the patient I perceived her to be suffering from shock. On inserting my finger into the vagina, it moved freely about among the intestines, and the absence of the uterus and cervix was distinctly apparent. The hæmorrhage was but slight, and gave no trouble. I feared that the natural result of such a catastrophe would be prolapse of the bowels and general peritonitis. I therefore kept the patient on her back, put in an antiseptic plug, and in order to quiet the peritoneum administered morphia, and ordered a strictly milk diet. Contrary to what might have been expected no serious symptoms occurred. The peritoneum closed up and the top of the vagina cicatrised over. In about three weeks the patient was able to get up and go about. On visiting her three months later she was in her usual health and the vagina was then a *cul-de-sac*. I am sure that many members of the medical profession will be interested to hear of this remarkable case and recovery.

Longton, Staffordshire.

PRESENTATIONS TO MEDICAL MEN.—Dr. Robert Fullerton, surgeon to the Throat Department of the Greenock Infirmary, has been presented with a solid silver tray by the staff of the hospital as a token of esteem.—Surgeon-Captain Forrest, of the 3rd Lanark Rifle Volunteers, has been presented with a handsome surgical case by the members of his ambulance class.

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A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ROYAL FREE HOSPITAL.

LARGE FIBRO-SARCOMA OF THE SCIATIC NERVE; REMOVAL; RECOVERY.

(Under the care of Mr. JAMES BERRY.)

PRIMARY sarcoma of the peripheral nerves is rare, and comparatively few examples of it have been recorded. G. H. Hume[1] described three cases, in two of which the great sciatic was affected, and in one the internal popliteal; the first case resembled the one recorded below in many respects; the patient was a man, aged twenty-four years, and a large portion of the sciatic nerve had to be removed, yet walking was possible, but sensation of the outer side of the leg did not return. A. G. Gerster[2] after removing a sarcoma with a portion of the peritoneal nerve, sutured the free ends of the nerve, but without return of function. G. Lawson[3] removed a sarcoma growing in the optic nerve, but recurrence rapidly took place. D. Bolding[4] removed a tumour of the great sciatic with five inches of the nerve, but recurrence rapidly took place.

A married woman, aged nineteen years, was admitted into the Royal Free Hospital on May 26th, 1896, complaining of a swelling of the left thigh. About eighteen months previously the patient noticed a swelling about as large as an egg situated on the hinder aspect of the left thigh, just above the level of the knee. It was then hard and could not be moved at all. She could assign no cause for its appearance. Ten months before admission, just after the birth of her first child, she had noticed that the swelling was distinctly larger, having extended upwards. It was not until seven months ago that she experienced any pain or inconvenience from the swelling, and even then there was only slight pain and numbness on sitting, but she could lie on that side in bed without any discomfort. A fortnight before coming to the hospital she had felt a rather sharp pain in the back of the thigh on walking. She was sure that she had lost flesh recently. Except for occasional pains and an attack of tonsillitis two years before, which resulted in some deafness, she had always been in very good health. No history indicative of syphilis could be obtained, and her child was strong and well. In the patient's family history there was nothing of importance. On admission the patient was found to be thin. The heart and lungs were normal, and no visceral disease could be detected. There was swelling of nearly the whole of the back of the left thigh, extending from one and a half inches above the knee-joint to the level of the great trochanter. It was most marked internally, especially below, and seemed to be in, or at least attached to, the hamstring muscles, but it was not adherent to the femur or to the skin. It measured twelve inches vertically and six inches from side to side; it was firm on pressure and exhibited coarse lobulation, especially at the lower part. The lower end was hemispherical, with a well-defined edge, and this part was the most movable of the whole tumour. The uppermost portion was in great part covered by the hamstring muscles, so that its outline was not so well defined. The skin over the whole swelling was normal in appearance. Over the greater part of the tumour there was tenderness on pressure. The movements of the hip and knee-joints were perfectly free. There was no wasting below the knee. No enlarged glands could be felt either above or below Poupart's ligament and no tumours were discoverable elsewhere. On measurement the increase in size of the left limb as compared with the right was five and a half inches at the gluteal fold, six inches at the middle of the thigh, and two and a half inches at the junction of the middle and lower thirds of the femur. The patient had no limp in walking and was able to get up every day. On June 8th examination was made by means of the Roentgen rays and a fluorescent screen, and it was found that the tumour was quite transparent to the rays. On the 11th, the patient being under the influence of ether, Mr. Berry made a vertical incision about nine inches in length over the tumour in the line of the great sciatic nerve, commencing over the gluteus maximus. The structures superficial to the growth were cut through, the hamstring muscles being divided, and the tumour on exposure was seen to be encapsuled. On searching for the great sciatic nerve it was found to be completely surrounded by the growth. None of the muscles seemed to be actually infiltrated by the growth, though adherent to it. The tumour was cut into in several places, and as it looked in many parts as if it might possibly be a pure fibroma it was decided to remove the growth in the hope of saving the limb. The incision was lengthened by about seven inches, and then it was possible to see that the tumour had infiltrated the hamstrings at the upper part, so they were cut through close to the tuber ischii and also in the popliteal space. The dissection was carried on well beyond the growth, apparently healthy structures being everywhere cut through. Nearly opposite the middle of the femur the tumour was found to be rather firmly attached to the periosteum by fibrous bands. The growth was separated with great difficulty above, as it had to be dug out from underneath the gluteus maximus, nearly as high as the iliac crest. On cutting into the tumour to release the great sciatic nerve, which traversed it, it was seen that nearly four inches of the middle of the nerve were much infiltrated by the growth. The advisability of amputating was considered, but it was decided to leave the limb, at all events for the time. The affected portion of the nerve was excised with the tumour, and as it was quite impossible to unite the ends of the nerve they were cut quite short above and below. The hæmorrhage was controlled without difficulty, and all the bleeding vessels having been tied the wound was closed by silk sutures, a drainage-tube being inserted. A cyanide gauze dressing was applied and the thigh bandaged so as to approximate the sides of the large cavity which had been left. The leg was wrapped in cotton wool and the opposite limb was bandaged with a flannel roller. The operation was well borne considering its magnitude and lasted ninety minutes. The growth with the muscles attached weighed six and a half pounds and measured thirteen inches in length and five inches in width at the largest part. On microscopic examination the growth was found to consist to a very great extent of firm fibrous tissue, but sarcomatous tissue was present, especially at the upper part where the tumour was softer. After the operation there was some collapse, but it did not last long. Some oozing of blood-stained serum required the application of additional dressing. Nutrient enemata were ordered. On June 12th the patient slept with the help of a hypodermic injection of morphia. She complained of some pain, but was able to take food. In the early morning the temperature rose to a little over 100° F., but fell to normal during the day. On the 13th the wound was dressed and looked well, though there was a good deal of discharge. The foot was quite insensitive to touch. On the 15th the temperature rose a little at night; the previous night it reached 101·5°. She complained of no pain, but said that the left leg felt heavy. On the 17th all the stitches were removed, as the wound had healed by first intention except for a small portion at each end. On the 18th the patient felt very well. On examination for power of movement it was found that, except for mobility at the hip-joint, the limb had no power of motion. As to sensation, it was normal internal to the crest of the tibia from the knee down to the heel. The rest of the foot and the outer part of the leg were quite insensitive. On the 19th the patient was certain that she could feel the warmth of the hand on the outer side of the leg. The temperature was never above 100° at this time. On the 22nd a small patch of skin on the left buttock had sloughed. There was then only a narrow strip on the outer side of the front of the leg where there was no sensation. On the 26th the left leg was massaged; it measured a quarter of an inch less than the right leg round the calf. The left foot was warmer than the right, but had no sensation, which was also absent from the left external malleolus. The whole of the leg possessed sensation, though it was a little imperfect on the outer side.

[1] THE LANCET, Sept. 19th, 1891, p. 654.
[2] Annals of Surgery, January, 1895, p. 52.
[3] Ophthalmic Hospital Reports, 1882, p. 296.
[4] Transactions of the Pathological Society, vol. xxvii., p. 23, and vol. xxviii., p. 23.

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She got up every day. On the 30th the wound had almost healed, and the surface from which the slough came was granulating well. A gutta-percha splint had been applied to prevent foot-drop. On July 6th she was doing well and was able to flex the knee. Sensation was perfect on both sides of the left leg, but was still deficient over the foot. She was able to walk with the help of crutches. On July 31st sensation over the foot had improved, but it was still not perfect. She was able to walk with a stick. On August 24th she seemed quite well and was able to get about without any crutch or stick, the sensation on the foot was practically perfect, and the wound was completely healed. She still wore the gutta-percha splint, and on Aug. 25th went to a convalescent home. The patient has been seen several times since returning from the convalescent home, and she has continued well. Recent inquiries at the address she gave have failed to find her.

Remarks by Mr. BERRY.—The chief points of interest about this case are the unusually large size of the tumour, the slight amount of pain that it had caused notwithstanding the extensive infiltration of the sciatic nerve, and, lastly, the ability of the patient to walk without artificial support after complete removal of the three posterior hamstrings as well as practically the whole sciatic nerve. The diagnosis of the sarcomatous nature of the tumour presented no difficulty, although the exact origin of it was not definitely diagnosed. It was thought before operation that the tumour probably sprang from the inter-muscular fascia of the thigh or from the muscles themselves. Its hardness and its comparatively slow growth led to the belief that it was not of a high degree of malignancy, and that consequently there was a fair prospect that it had not caused secondary deposits. The operation was begun with the expectation that amputation would be necessary on account of the probable involvement of the femoral vessels. It was the freedom of these that determined me to make the attempt to save the limb in spite of the necessary sacrifice of the sciatic nerve and hamstring muscles, and in spite of the enormous size of the wound caused by the removal of the tumour. I hardly expected that the patient would retain, as she has, the power of flexing the knee. This movement she performs solely with the sartorius, which is the only flexor of the knee over which she has any power. Even should an amputation eventually become necessary, on account of the paralysis below the knee, it could be done at a level much below that at which it would have been done if performed for the removal of the tumour. Lastly, the case is an illustration of the fact that many of the sarcomata springing from nerve trunks do not possess a very high degree of malignancy.

GENERAL INFIRMARY, LEEDS.

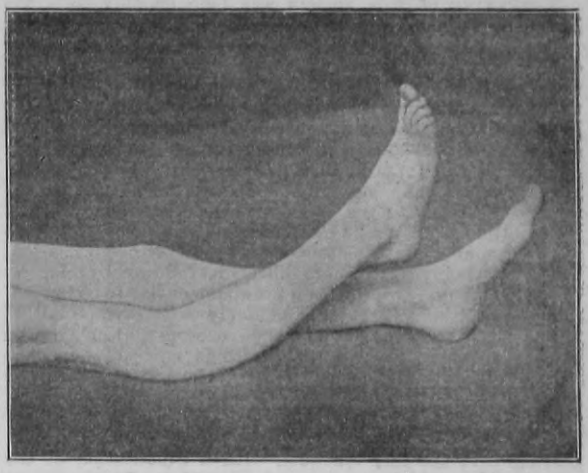
A CASE OF UNUSUAL DEFORMITY OF THE TIBIA TREATED BY OPERATION.

(Under the care of Mr. W. H. BROWN.)

As the patient in the following case was only sixteen years of age when the accident occurred, the upper epiphysis of the tibia had not joined; it is therefore not improbable that the cause of this interesting deformity was the partial premature union of this epiphysis with the diaphysis—that is to say, that the epiphysis had become united with the shaft anteriorly, so that there the growth of the bone ceased, but that posteriorly the tibia continued to grow. That the knee-joint had been greatly inflamed is shown by the ankylosis which occurred, and it is a fairly common result of inflammation in a joint that an adjoining epiphysis should unite prematurely with its diaphysis. The peculiarity in this case seems to be (if the above explanation is correct) that the union was not equally complete everywhere.

A pit-boy, aged twenty-one years, was admitted to hospital for a tuberculous abscess near the crest of the right ilium. The deformity of the tibia shown in Fig. 1 was said to be the result of a crush between two slack waggons five years previously. The effect of this accident was to confine him to bed for six months, during which time several abscesses formed and burst round the knee-joint. After this he commenced his work, and two years later—that is, three years prior to his admission—his leg commenced to bend forward and had since got gradually worse, although it caused him no pain, and he was able to walk fairly well. The right knee was firmly ankylosed, and there were several scars round about the knee-joint. The leg was muscular, and the length of the tibia and fibula corresponded with those of the sound side. So soon as the abscess near the ilium had healed it was suggested to the patient that the attempt should be made to rectify the deformity of his limb. He readily consented, and accordingly, under an anæsthetic, an osteotomy was under-

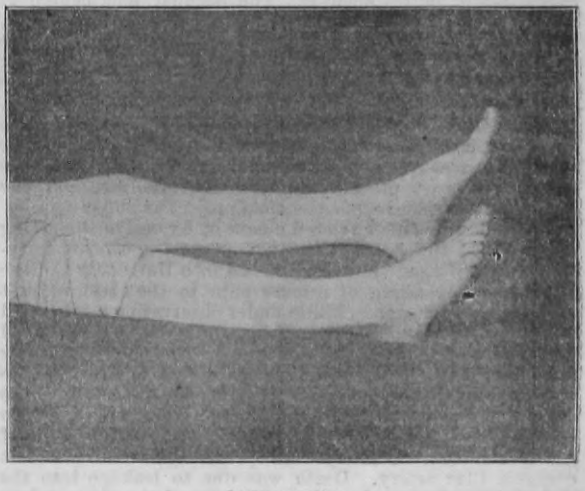
FIG. 1.



Before operation.

taken, the tibia being chiselled through at the point of bending—i.e., about one and a half inches below the tubercle. After the bone had been cut through to half its thickness it was easily broken and the limb returned to its normal position; the fibula did not require to be interfered

FIG. 2.



After operation.

with. The after progress was quite satisfactory, the wound running a normal course. Fig. 2 shows the present condition of the limb.

Remarks by Mr. BROWN.—Although I have from time to time met with instances of unusual growth in bone following upon injury I have never before seen a case in any way resembling the one above mentioned. The only solution which occurs to me is that the crush, which seems to have been very severe, has in some way so altered the nutrition of the tibia as to arrest development in its anterior planes, whilst it allowed the posterior half of the bone to continue growing. The fibula followed the new direction of the tibia. I should be glad to hear the opinion of others more skilled in the unravelling of pathological problems, of this deformity, which, so far as I can learn, has no parallel on record.

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Medical Societies.

CLINICAL SOCIETY OF LONDON.

Intra-cardiac Thrombus.—Dissecting Aneurysm Rupturing into both Pleural Cavities.

A MEETING of this society was held on May 28th, the President, Dr. BUZZARD, being in the chair.

Dr. W. EWART and Dr. H. D. ROLLESTON described the details of a case in which a large Ante-mortem Thrombus was attached to the fossa ovalis in the left auricle, passing through the mitral valve, which was not contracted, into the left ventricle. The patient was a woman, forty-three years of age, who had had some acute chest trouble, probably pleuro-pneumonia, in February, 1896. Afterwards a slight systolic murmur with a snapping first sound was noticed. There was no knowledge as to the physical signs before the illness. After a time a presystolic murmur developed. The symptoms were those of mitral stenosis with failure of compensation. There were many periods of improvement followed by relapses. Later she became dropsical and the abdomen had to be tapped. She died ultimately rather suddenly with symptoms of pulmonary apoplexy. At the necropsy the viscera showed the usual changes met with in cases of advanced mitral disease. The heart itself weighed 19 oz., and was generally dilated, with hypertrophy of its walls. A firm, smooth, dark hourglass-shaped thrombus was found firmly attached to the lower posterior part of the foramen ovale, passing into the left ventricle, with a constriction at the mitral orifice, which was otherwise healthy. There were no adhesions between the flaps of the valve and the thrombus. Examination of the thrombus showed that it was old internally, and that recent clot had been added to it lately. The clinical interest of this rare case lay in the fact that the symptoms and signs were exactly those of mitral obstruction, which, indeed, existed, although there was no actual disease of the mitral cusps.—Dr. KINGSTON FOWLER referred to a case formerly under his care, which was reported by Dr. Voelcker in the Transactions of the Pathological Society for 1893, in which he noted that the cardiac rhythm was suggestive of mitral stenosis. The peculiar lengthening of the systole was one sign and the snapping first sound another. The case altogether had a very strong resemblance to the one described in the paper. He commented on the fact that there was a cavity in the centre of the thrombus, as was the case with the "ball clots" sometimes found in the heart. When met with in the auricle these clots usually arise between the strands of the musculi pectinati and in the ventricle between the chordæ tendineæ. In the early stage the central part probably underwent softening, and the cardiac contractions made the clots project as polypi.

Dr. BERTRAM HUNT related a case of extensive Dissecting Aneurysm of the Aorta. The patient was a woman, forty-three years of age, who was admitted into University College Hospital complaining of intense pain in the chest and left side of the abdomen. While under observation a left-sided hæmothorax developed, and thirty-three ounces of blood were removed by aspiration. A murmur was then heard over the spine. The patient remained in fair health for nine months, when she died suddenly. At the necropsy a large dissecting aneurysm was found, which commenced by an orifice in the inner coat of the aorta just below the origin of the left subclavian artery and opened again into the left common iliac artery. Death was due to leakage into the right lung and pleural cavity. The site of the old leak into the left pleura was closed by adhesions. Dr. Hunt had only been able to find ten recorded cases of dissecting aneurysms along which blood undoubtedly flowed. The clinical histories of these recorded cases are very similar and it might be possible to diagnose the condition during life. It was very interesting to note the fact that an aneurysm leaking into the pleura might close after aspiration of the effused blood.—Dr. DE HAVILLAND HALL said that in his experience, when a large aneurysm opened into a serous cavity there was usually a large sudden escape of blood, whereas when the aneurysm ruptured on to a mucous surface, the opening was valvular and blood escapes slowly.—Dr. KINGSTON FOWLER said that he had elsewhere drawn attention to this difference. The reason for the slow escape in this case was probably that the blood came from a dissecting aneurysm, and therefore not directly from the lumen of the aorta. He had placed a similar specimen in the museum of the Middlesex Hospital, in which there was also a small sac containing laminated clot opposite each intercostal artery.—Dr. ROLLESTON referred to two cases of hæmorrhage from the aorta into the pericardium, in which leakage occurred slowly. One was that of a man who was admitted with signs of pericarditis with much effusion. He died eight days later, when the pericardium was found to be distended with signs of pericarditis, and there was a leakage from an aortic aneurysm. The other case was one in which there was a very minute opening into the pericardium, which, however, contained twenty-five ounces of fluid. He remembered one case in which Dr. Dickinson diagnosed a dissecting aneurysm during life from the very acute pain which radiated along the arteries in both arms and legs.—Dr. EWART agreed that gradual leakage sometimes occurred in cases of rupture of an intra-pericardial aneurysm. He inquired where the puncture was made in the chest in this case. Was it possible that the fluid was really drawn off from the sub-pleural space, and not from the pleural cavity?—Dr. HUNT, in reply, said that it was obvious at the necropsy that blood had escaped by gradual leakage into the right pleura. With regard to the hæmorrhage into the left pleura, the needle was passed in deeply on several occasions, and there could be no doubt that the blood was in the pleural cavity. A microscopical examination of the wall of the aneurysm showed that it had burrowed down between the layers of the middle coat.

Annual Meeting.

The annual meeting for the election of office-bearers and general business was then held.

The report of the council showed that the society was in a prosperous condition both as regards accession of new members and an increased balance at the bank.

On the motion of Dr. DE HAVILLAND HALL, seconded by Mr. A. E. BARKER, an enthusiastic vote of thanks was passed to Dr. Buzzard, the retiring President, for his invariable tact, kindness, and courtesy in the chair.

Dr. BUZZARD, in reply, congratulated the society on its flourishing condition, and said that his work as President had been unalloyed pleasure.

The usual votes of thanks were passed to retiring members of council and a number of alterations in the wording of the rules to bring them into harmony with the modern procedure at the meetings were unanimously adopted.

The following gentlemen were elected to hold office during the coming session:—President: Mr. John Langton. Vice-presidents: Dr. Thomas Barlow, Dr. James Frederic Goodhart, Dr. Leonard William Sedgwick, Mr. William Henry Bennett, Mr. Rickman John Godlee, and Mr. William J. Walsham. Treasurer: Dr. William Miller Ord. Council: Dr. J. Ford Anderson, Dr. Arthur T. Davies, Dr. Sidney Martin, Dr. W. Julius Mickle, Dr. F. W. Mott, Dr. J. F. Payne, Dr. F. G. Penrose, Dr. J. J. Pringle, Dr. Seymour J. Sharkey, Dr. E. Markham Skerritt, Dr. W. Hale White, Mr. A. Pearce Gould, Mr. C. R. B. Keetley, Mr. C. B. Lockwood, Mr. Rushton Parker, Mr. Bilton Pollard, Mr. A. Q. Silcock, Mr. W. G. Spencer, Mr. T. P. Teale, and Mr. G. R. Turner. Honorary Secretaries: Mr. G. H. Makins and Dr. J. Kingston Fowler. Trustees: Mr. Christopher Heath, Dr. William Miller Ord, and Dr. J. Burdon Sanderson.

EPIDEMIOLOGICAL SOCIETY.

Seasonal Fluctuations of Epidemic Diseases.

A MEETING of this society was held on May 21st, Brigade-Surgeon-Lieutenant-Colonel J. LANE NOTTER, the President, being in the chair.

Dr. ANDREW DAVIDSON read a paper on the Seasonal Fluctuations of Epidemic Diseases. These fluctuations recurred constantly in each country, but varied in different climates and regions. Differences of season, however, frequently corresponded with like conditions of temperature and moisture of the soil, as was seen by the curves representing the single wave of cholera in temperate climates and the single or double curves observed in India, where it was endemic, depending on the period of the rainy season or monsoons. In seeking the causes of these seasonal variations the diseases due to facultative saprophytes existing in the

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soil, such as cholera, enteric fever, malarial fevers, must be considered separately from small-pox and measles (obligatory carasites), which could be influenced by meteorological ponditions indirectly only, through the action of these on the resisting power or the habits and surroundings of the individual. Small-pox and measles had similar autumn, winter, spring, and summer curves; but when introduced into a highly susceptible community spread irrespectively of season until the susceptible material was exhausted. The heights of the spring and autumn curves of measles were reversed in the English and Scotch towns, as well as in other countries. But comparing compound curves of series of years with single ones, it was seen that in most years only one was strongly marked. Habits of life, overcrowding in cold or wet weather, and the aggregation of children in schools, were factors not to be ignored, and as regards the latter it was a common occurrence in Germany and Poland for an epidemic of measles to be restricted either to the Christian or to the Jewish population. Small-pox and measles had one or two annual curves in Baghdad, but were wholly absent during the absolutely rainless summer months. In London the death-rate from measles was highest in the second quarter in epidemic and in the fourth in non-epidemic years; but Dr. Davidson could not say whether the prevalence or the case mortality corresponded to the number of deaths, though the Hamburg returns showed such to be the case in that town. He would suggest in explanation of many of these phenomena that in non-epidemic periods only the more susceptible were attacked, and that the virus passing through such individuals gained in intensity and the disease spread further; but that when, as in epidemics the more resistent were attacked it became alternated in them until it died out. Why epidemics should usually occur in winter and spring it was not easy to say. In Europe, India, and America small-pox followed approximately the temperature curve, though it began to rise in winter when the temperature fell, but attained its maximum with the spring. The regular appearance of small-pox in the winter was ascribed by Flügge to the aggregation of persons indoors, the less frequent change of clothing, and the neglect of ablutions in cold weather; but this would not account for its maximum prevalence in early summer, and the conditions of domestic life in Europe did not apply to India where the same general curve was followed by the disease. It was easy to understand that facultative saprophytes multiplying in the soil were dependent on temperature and moisture, but these conditions could not directly affect those obligatory parasites whose soil was the living body; and these diseases followed their usual course irrespectively of climate and temperature. He had seen small-pox raging in Madagascar in 1868 when the temperature ranged between 90° and 100° F., and in 1870 it prevailed in the Hudson's Bay Territory with the thermometer at 4° F. below zero. All alleged relations between the prevalence of measles and the temperature were true of particular countries only, and therefore could only be accidental. Weather conditions tending to induce catarrhs of the pharyngeal and the respiratory mucous membranes could not fail to render the individual more susceptible to infection from diseases, such as scarlet fever, diphtheria, and measles, which were known to enter the body by these surfaces, and in like manner catarrh of the gastro-intestinal canal favoured the development of cholera and typhoid fever.

Dr. RANSOME showed numerous Charts of the Epidemiology of Manchester for Ten Years, which were practically the same as those for London. He fully agreed with Dr. Davidson's suggestions as to the influence of catarrhal affections in favouring infection by specific diseases, but he had observed also in 70 per cent. of outbreaks or exacerbations of scarlet fever that they coincided with a sudden fall of the barometer, suggestive of the escape of the poison with the ascent of sewer or infected ground air.

Dr. MCLEOD criticised the paper from an Indian standpoint, and the discussion was continued by Dr. PARSONS, Dr. NEWSHOLME, Dr. WILLOUGHBY, Dr. BULSTRODE, Dr. COUPLAND, and Mr. CHILD.

HARVEIAN SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on May 27th, the President, Dr. MILSON, being in the chair.

Dr. LEONARD GUTHRIE showed a man, aged twenty-nine years, the subject of Muscular Dystrophy. There was marked atrophy of the quadriceps femoris on both sides, with pseudo-hypertrophy of the calf muscles. The infraspinati muscles were apparently enlarged, but not the deltoids or pectorales. The buttocks were wasted. Lordosis was slight. The gait and the method of rising to the erect position were characteristic of pseudo-hypertrophic paralysis. Swelling of the calf muscles and fatigue on exertion had been noted since early childhood. The symptoms had increased during the past three years. The patient's maternal grandfather and also an elder brother were said to be similarly affected.—Mr. JACKSON CLARKE observed that when lordosis was present in these cases it was the result of disturbance of balance rather than of muscular action.

Dr. KNOWSLEY SIBLEY showed a case of Phthisis associated with Rheumatism and Subcutaneous Abscesses, probably Tuberculous. The patient, a woman sixty-four years of age, had lost a sister from phthisis. The patient had never been very strong, but until last October, when both hands were attacked with rheumatism, she had never been laid up. Shortly after this a swelling appeared on the back of one hand and on the wrist of the other; these had persisted ever since. The patient had an irregular temperature, usually from 100° to 101° F. at night and subnormal in the morning; she had signs of old-standing tuberculous mischief at the right apex. Both hands were enlarged and all the fingers more or less stiff and painful; there were considerable thickening and grating about both the wrist-joints. There was a swelling about the size of a walnut over the dorsum of the left hand and another rather larger over the ulnar surface of the right wrist. These swellings were soft, fluctuating, and not tender. The contents, drawn off with a hypodermic syringe, consisted of clear pus. A trace of albumin was present in the urine. It was unusual that a patient suffering from chronic phthisis should late in life be attacked with a subacute form of rheumatism, followed by what appeared to be subcutaneous abscesses probably of a tuberculous nature. Dr. Sibley did not consider the whole process to be tuberculous, as there were distinct thickening and stiffness of the individual finger-joints apart from the disease of the wrist-joints. The patient had considerably improved since she was admitted into the North-West London Hospital and had undergone treatment by the Tallerman-Sheffield hot-air baths.—Mr. RAYMOND JOHNSON was inclined to regard the affection of the wrist-joints as tuberculous, and believed the superficial abscesses over the joints to have a deep origin. He referred to the fact that tuberculous disease of the wrist is usually met with in adults, and that probably it is more commonly associated with tuberculous disease of the lungs than is the case with the other large joints.—Dr. ALFRED EDDOWES said that it would not surprise him if such a condition of joints proved to be due to the tubercle bacillus, as that organism seemed to produce lesions varying greatly in appearance according to the position of the part and nature of the tissue attacked.

Dr. EDDOWES showed a case of Lichen Simplex Chronicus in which the lesion had existed for many years without improvement. He strongly advocated the employment of Unna's compound mercurial plasters, especially Nos. 16 and 88, for this rebellious disease. He had several such cases under his care and all had progressed as favourably as the patient shown, who was nearly cured. The treatment was simple, cleanly, and highly satisfactory to the patients. Dr. Eddowes also showed a patient suffering from Psoriasis Circinata in its most typical form.

BOMBAY MEDICAL AND PHYSICAL SOCIETY.

Dengue Fever.—The Pneumonia Type of Plague.

A MEETING of this society was held in the Durbar Room, Town Hall, Bombay, on April 2nd, Brigade Surgeon-Lieutenant-Colonel J. ARNOTT being in the chair.

Staff-Surgeon P. W. BASSETT-SMITH, R.N., read a paper on Dengue Fever in Bombay, making special reference to a frequently observed mild form which is characterised by a very slight degree of pain in the bones and muscles, and has led to great difficulty in the diagnosis. The earliest accounts

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of dengue appeared in 1779, when it prevailed in Batavia and Egypt; it then spread to Zanzibar and the west coast of India, and in 1818 to America. In 1824–28 it was epidemic on the east side of India, spreading to Burma on the one side and to Gujerat on the other. Since then there have been many epidemics in both hemispheres. Dr. Sandwith, of Cairo, states that it is met with in a sporadic form in Egypt every year. In 1887 the rash was a very marked feature, suggesting that the disease was scarlet fever, and in 1896 some called it rötheln. The principal symptoms observed in Bombay have been a rapid onset of fever lasting three or four days, with a more or less perfect remission, then a secondary and shorter fever, followed by a period of two or three days with a subnormal temperature. At the same time there are severe frontal headache, pains in the back and thighs, and in a certain number of cases an eruption either with the primary or secondary fever or with both, generally of a very evanescent character. The attack is sometimes ushered in by slight shivers, always with intense headache. The temperature generally rises suddenly to between 102° and 104° F. on the first evening; it may remain up for two or three days, showing slight evening exacerbations, but more frequently there is a steady fall, taking two or three days to reach normal, and the patient then feels almost well. After a very short interval, generally on the fifth day, the secondary fever comes on, the temperature sometimes rapidly running up as high as in the primary. The subnormal period is always present. Rigors and severe sweats were never noticed. The headache, pain in the eyeballs, and backache were always very marked, but there was never any "break-bone" pain or severe pain in the joints. In the epidemic of July and August, 1896, an eruption very seldom appeared, but it occurred in about half the cases in the epidemics of December, 1896, and January, 1897, being then nearly always of a distinct scarlatiniform character, and the favourite seats being first on the elbows, the outer sides of the forearms and the front of the thighs, particularly over the knees. Generally it was very slight, and lasted often only a few hours. There was never any sore-throat or coryza. No enlarged glands were found anywhere, and beyond the anæmia and debility there were no consequences. The prognosis was good; each case lasted from one week to ten days, with one week's convalescence or less. Quinine was quite useless.

Surgeon-Captain L. F. CHILDE read a paper on the Pneumonia Type of Plague. He said that the increased death-rate in Bombay due to plague was accompanied by a large and unexplained increase assigned to remittent fever and respiratory diseases, a coincidence which induced him to examine the bodies of all hospital patients who had died from fever, pneumonia, or any acute illness, to see if there were evidences that any of them had really died from plague. He found twelve cases (the first of them in the end of December) in which during life all the symptoms pointed to disease of the lungs, and in which there were no evidences of glandular enlargement, whilst after death there was clear proof of enormous growth of plague bacilli in the lungs and of only very slight growth in the lymphatic glands. Surgeon-Major Manser was suddenly taken ill on Jan. 2nd, the disease assumed this form, and he died on Jan. 6th; he had no glandular enlargement or pain in the glands anywhere, but his sputum was seen with the microscope to be full of plague bacilli, and pure cultures were obtained from it.

THE MIDWIVES REGISTRATION BILL.—On Tuesday, May 25th, Lady Balfour of Burleigh presided over a meeting at the parish room, Kensington, in support of the above Bill. The Hon. A. de Tatton Egerton, who has charge of the Bill in the House of Commons, gave an account of its position there, and alluded favourably to a proposal made by Sir J. Blundell Maple as meeting one of the chief objections of the medical profession. This proposal was that every midwife or every person attending a confinement should within twenty-four hours notify to the district sanitary officer or officer of health that a confinement had taken place, and that such officer or medical practitioner appointed by him should visit the place, see that everything had been properly conducted, and receive a fee of 2*s.* 6*d.* for a distance not exceeding three miles. Mr. Egerton advocated the adoption of the proposal as being likely to overcome a large amount of objection to the Bill. Dr. Cullingworth also urged the acceptance of Sir J. Blundell Maple's suggestion.

Reviews and Notices of Books.

Diphtheria and Antitoxin. By NESTOR TIRARD, M.D., F.R.C.P. Lond. London: Longmans, Green, and Co. 1897. Price 7*s.* 6*d.*

THE undesirable prominence which has been gained by diphtheria within recent times, the regrettable mortality which it causes, the difficulty which seems to be confronted in the attempts to control its spread, and the numberless expedients which have been had recourse to for its treatment render it one of the most important subjects for investigation at the present day. Although its dependence upon a specific microbe has been established the conditions of its fateful diffusion amongst the child community are still to a large extent veiled in obscurity; for unhappily its recognition as a highly infectious disease does not explain all the facts of its dissemination, and the conditions under which it arises are so varied as almost to defy generalisation. It is, therefore, with pleasure that we welcome a monograph of the character of the one before us. Dr. Tirard writes with a commendable restraint upon the problems that surround the etiology of this dread disease, but gives wise counsel as to the lines upon which prophylaxis should be pursued. His experience of the disease in the wards of the Evelina Hospital has enabled him to give a lucid and thoroughly scientific account of the symptoms and complications which cannot fail to be of service to the practitioner. The work, however, lacks in completeness, as it does not embrace any study of the pathology and morbid anatomy of diphtheria. Its standpoint is almost purely the clinical one; yet, perhaps, for its purpose it is better that this should be so. It is instructive to note that Dr. Tirard does not lay much stress upon the symptom of albuminuria, which he, like Henoch, finds to be present in about one-half of the cases. He sees no cause for anxiety in the appearance of this symptom unless the albumin "exceed 30 per cent." (p. 17)—surely a very large amount—and he finds no ground for the belief that the kidneys are permanently damaged. At the same time if albuminuria is not as a rule a sign of severity it must indicate that the toxin has been absorbed into the circulation, and its early appearance must warrant the belief that this absorption occurs too soon to hold out much hope of arresting the disease by purely local treatment. Among special phenomena of the disease attention is drawn to the disproportionate rapidity of the pulse (another evidence of the early action of the virus) and to the marked pallor of the skin. The distinguishing features of the pharyngeal, laryngeal, and malignant forms are well brought out. An excellent account is given of diphtherial paralysis, and it may be noted that the author thinks that in cases of paralysis of the diaphragm death more often occurs from cardiac failure or secondary lung inflammation than from asphyxia due directly to the paralysis of the respiratory muscles. There is, we think, some ground for this statement, which, of course, does not apply to all such cases. Chapters on diagnosis and prognosis follow, whilst the subject of treatment is dealt with under the heads of hygienic, constitutional, local, intubation, tracheotomy, and, finally, of antitoxin serum. It is interesting to learn that at the Evelina Hospital intubation is now being so much practised and with such success. As regards the value of antitoxic serum Dr. Tirard's experience serves to confirm that of others, both as to its efficacy and as to the great importance of its early administration. The work is furnished with the details of many illustrative cases, and it is one which we can heartily commend to the profession as

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constituting a faithful record of experience and containing much that is of real practical value.

Text-book of Forensic Medicine and Toxicology. By ARTHUR P. LUFF, M.D. Lond., B.Sc., &c., Lecturer on Medical Jurisprudence and Toxicology in St. Mary's Hospital, Examiner in Forensic Medicine in the University of London, Official Analyst to the Home Office. In 2 vols. Pp. 760. London and New York: Longmans, Green, and Co. 1895.

THIS is one of the best works on forensic medicine. The section on Toxicology, as would be expected from Dr. Luff's experience as analyst, teacher, and examiner, is of great excellence. The description of the various steps for the identification of poisons is lucid, concise, and accurate, contrasting strongly with the discursive method adopted in some text-books. The reader is not left in doubt as to the value of observations and experiments. In addition to the usual list of poisons we find a series of toxic agents introduced for discussion. Amongst these may be mentioned sulphonal, duboisine, gelsemium, jaborandi, antifebrin, exalgin, antipyrin, resorcin, salol, paraldehyde, &c.

The chapter on Criminal Abortion is well written. The method of removing the uterus might with advantage have been given in more detail, and a fuller description of the character of instrumental wounds, especially with regard to their probable age, would have been acceptable. The subject of Animal Alkaloids is handled with singular tact—a better account of a difficult problem in so short a space it would be difficult to conceive.

It is unnecessary to review in detail all the sections of the work. Taking it all in all, we are of opinion that no better exposition is within the reach of the student and practitioner. The type is clear and bold and the illustrations well executed. In a future edition we should like to see a separate index to each volume.

Practical Handbook of the Diseases of the Eye. By D. CHALMERS WATSON, M.B., C.M. Edin., Ophthalmic Surgeon to the Marshall-street Dispensary, Edinburgh. Pp. 248, with 9 Coloured Illustrations and 24 Figures in the Text. Edinburgh: W. F. Clay. 1897. Crown 8vo. Price 4*s.* 6*d.*

IN this little manual for the student and practitioner the principal forms of ophthalmic disease are briefly and dogmatically given under the heads of Causes, Symptoms, Prognosis, Result, and Treatment. The author has had considerable experience, and but little fault can be found in regard to the accuracy of his facts, which, perhaps, is the essential point in a work of this kind. At the same time, it must be acknowledged that the account of each disease is a trifle bald and dry and offers little temptation to the student to read the next page.

The two introductory chapters are devoted to the examination and therapeutics of the eye. In making a few comments that have suggested themselves to us in perusing this little book we should be disposed in the first place to dispute the statement made on p. 22 by the author, that in blepharitis ciliaris the health is always low, and he does not mention among the causes of that condition hypermetropia, which is of common occurrence. Tarsal cysts are not always cured by everting the lid, dividing, and scooping out the contents; certain forms are more perfectly removed by dividing the skin and excising the cyst completely.

The operation of slitting up the canaliculus is spoken of too lightly; it is here put in the first place, and the student might easily be induced to undertake it in slight cases where the extraction of a tooth, attention to the nasal mucous membrane, the use of probes, and a lotion might effect a cure. The operation, as most men of experience know, not unfrequently leaves the patient in worse plight than he was before, simple as it may seem. Under the head of Diphtheritic Conjunctivitis chlorine water might have been mentioned as a highly effective remedy.

Dr. Chalmers Watson has no hesitation in admitting the presence of radiating dilator muscular fibres supplied by the sympathetic nerve in the iris. His view is probably correct, but the radiating fibres are uncommonly difficult to demonstrate.

A few more examples of the mode of correcting errors of refraction might have been given with advantage. None is given of mixed astigmatism, which, however, the author may think can hardly be undertaken by those who are likely to use his work. He lays down the following rules in regard to the use of glasses in myopia. "Before full growth correcting glasses should be worn for near work....After full growth, twenty-two or so, there is not the same necessity for wearing full strength for reading."

The account of each affection given is good as far as it goes, but this is not always far enough; if we take Pterygion as an example we find the treatment recommended to be—"(*a*) as a rule, leave alone; (*b*) removal under cocaine may be had recourse to in cases when the patient is young and the disfigurement is marked," but some account of the mode of dealing with the apex of the growth should have been given, otherwise the affection returns. The book will prove of most service to those who are attending the practice of an ophthalmic institution and who are about to present themselves for an examination. The chromo-lithographs are fairly done, and though they do not pretend to be finished drawings the diseases they are intended to illustrate are easily recognisable.

Functional Disorders of the Nervous System in Women. By T. J. MCGILLICUDDY, A.M., M.D., Consulting Physician to the Italian Hospital, New York, &c. Illustrated by 45 Wood Engravings and 2 Chromo-lithographic Plates. London: Baillière, Tindall, and Cox. 1896. Price 12*s.* 6*d.*

THE author considers that the attention of the profession has been confined of late years too exclusively to surgical gynæcology and to diseases with marked pathological changes. His intention in the work before us has been to draw attention to a class of affections which are more frequently seen in private than in hospital practice, and are not so minutely described as the important organic diseases and surgical affections. To write a good book on the functional derangements of the nervous system in women is a work of considerable difficulty; but we think that, on the whole, the author has succeeded in his task. The book is clearly written, and contains much that should prove useful both to the general practitioner and to the obstetrician. We may quote the following as illustrative of the author's standpoint:—

"For example, if the confiding and unsuspecting patient with a run-down constitution—the result of anxiety, bad air, and a worse diet, with a headache and some abdominal or uterine symptoms—strays into the office of an enthusiast in ocular tenotomy he will probably want to relieve her distress by dividing the rectus muscle for eye-strain. If, however, as is more likely, she applies to a surgical gynæcologist of a certain class, a symptomatic uterine catarrh, an inoffending laceration, or a harmless, retiring, cystic ovary will be pounced upon by this enlightened specialist and receive vigorous treatment, and if he does not always sterilise carefully his instruments he usually succeeds in sterilising the patient."

After this we are disappointed to see it stated at the end of the chapter on Therapeutics that dilatation for stenosis and flexion of the uterus may be necessary in many neurasthenic and hysterical women, and that "stenosis is very frequently at the internal os and is caused by flexion of the neck on the body." The author makes the old mistake of

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comparing the thick-walled uterus to a piece of relatively thin-walled indiarubber tubing. In many ways the advice given as to general treatment seems to us to be excellent.

Materia Medica, Pharmacy, Pharmacology, and Therapeutics. By W. HALE WHITE, M.D., F.R.C.P. Lond. Second Edition. London: J. and A. Churchill. 1897.

AT the rate at which new drugs are now introduced to the notice of the medical profession it would seem that a new edition of a book on Materia Medica would have to be a frequent occurrence. Fortunately, however, for those who compile text-books on this subject, and still more fortunately for those who have to learn them, the authorities put a merciful limit to the subject by only making those drugs "official" which have substantially proved their usefulness in the healing art. In practice, however, no hard and fast line can be drawn, and drugs which are "non-official" are being every day used, and while the student working for examination only concerns himself with the official drugs, the practitioner takes a wider view and likes to know something of those which, though useful, have at present failed to gain the distinction of being included in the Pharmacopœia. Dr. Hale White has in this edition met the desires of both these classes of readers, for he has removed the principal non-official drugs from an appendix and has placed them together with the other drugs in their proper places according to their actions. The first part of the book is set aside for definitions and explanations of the physiological actions of drugs, and the drugs are grouped according to their various actions on the different systems of the body. The rest of the book is devoted to the different drugs in detail, and at the end is an appendix containing the pharmacopœal vegetable drugs arranged according to their natural orders. The work has already proved a useful text-book for both students and practitioners, and in the present edition it has been brought up to date and will no doubt continue to be widely read.

LIBRARY TABLE.

Formulaire Aide-Mémoire de la Faculté de Médecine et des Médecins des Hôpitaux de Paris. (Selected Prescriptions and Hints, Medical and Surgical.) Par le Docteur FERNAND ROUX. Quatrième Édition. Paris: G. Steinheil. 1896. Pp. 423. Price 3 francs.—*Nouvelles Formules d'Oculistique. (Prescriptions for Use in Ophthalmic Practice.)* Par le Docteur de BOURGON. Paris: Société d'Éditions Scientifiques. Pp. 299. Price 5 francs.—*Formulaire des Médications Nouvelles. (Modern Methods of Treatment.)* Par le Docteur H. GILLET. Paris: J. B. Baillière et Fils. 1896. Pp. 252. Price 3 francs.—*Formulaire des Médicaments Nouveaux pour 1897. (Recent Additions to the Materia Medica.)* Par H. BOCQUILLON-LIMOUSIN. Paris: J. B. Baillière et Fils. 1897. Pp. 308. Price 3 francs.—These little books will be found useful by all who desire to know something of the special features of French medical practice; they also contain much information in reference to many therapeutic novelties. The one first mentioned is of course not an official publication of the Faculty of Medicine; it is a kind of "prescriber's handbook," in which the diseases or other morbid conditions are arranged alphabetically, beginning with "Abcès" and ending with "Zona"; on an average two or three fully written-out prescriptions are given under each heading. The second contains a tolerably full account of the various medicinal substances used in ophthalmic practice. With respect to the third, mention may be made of the sections on asepsis and antiseptic methods, on various kinds of baths, on a large number of antitoxin serums, on animal extracts, on intravenous and subcutaneous injections of many kinds, &c. The fourth gives an account of several hundreds of new or comparatively new drugs, preparations, and medicinal plants, including the following bactericides and antiseptics:—Actol, antinosine, ferrostyptine, glutol, iodoformine (not the same as iodoform), itrol, orphol, quinosol, sanoforme, and xéroforme.

Annuaire des Eaux Minérales, Stations Climatiques, et Sanatoria de la France et de l'Étranger. (Guide to the Mineral Springs and Health Resorts of France and several other Countries.) Paris: The Publishing Office of *La Gazette des Eaux*. 1897. Pp. 272. Price 1 franc 50 cents.—This useful little book, which is now in its thirty-ninth year of issue, is written principally for the benefit of visitors to the numerous places in France where treatment by mineral water is carried out. There is also a large amount of concisely expressed information concerning the mineral springs in other continental countries, and those in England are not neglected.

JOURNALS AND REVIEWS.

The Practitioner.—We heartily congratulate Mr. Malcolm Morris on the enterprise by which he has been enabled to present the readers of his journal with a double number in special commemoration of Queen Victoria's Diamond Jubilee. He has been fortunate to secure as contributors writers whose special knowledge well entitles them to fill the *rôle* of historians. Thus Dr. Wilks gives under the title "Fifty Years Ago" a most interesting account of the state of hospital management, medical education, and practice in these days. No one can read these personal reminiscences without being vividly impressed with the enormous advance which has been made in these respects during this time. To Sir Dyce Duckworth is assigned the task of recounting in detail the Advance in the Principles and Practice of Medicine during the Sixty Years of the Reign of Queen Victoria, and it is needless to say that his survey is accurate and complete. Sir W. Broadbent traces the remarkable growth of knowledge in the domain of Nervous Diseases; Sir James Crichton-Browne that of Psychological Medicine. Mr. F. Treves writes on the Progress of Surgery, and Mr. Watson Cheyne on Wound Treatment during the Victorian Era. There are also articles by Dr. Champneys and Dr. Drummond Robinson on Midwifery and Gynæcology; by Mr. Henry Power on Special Branches of Medicine and Surgery; by Professor D. G. Hamilton on Pathology; by Dr. Sims Woodhead on the Birth and Development of Bacteriology; by Professor D. G. Leech on Therapeutics; by Dr. Edward Seaton on Public Preventive Medicine; and by Miss C. J. Wood on Nursing. An interesting feature of the number is the list of physicians and surgeons who have held Court appointments during the reign, special memoirs with portraits being given of Sir James Clark, Sir Charles Locock, Sir W. Jenner, and Sir James Reid.

The Cornhill for June contains several interesting papers. Lady Jane Ellice's Recollections of the Queen's Childhood are written by one who was Her Majesty's bridesmaid. The "Pages from a Private Diary" are witty and chatty as usual, while Cambridge men will read with especial interest Mr. Owen Seaman's verses on the recent development of the Women's Question at the university. The following argument for justice to women is worth quoting:—

> "It took a woman's tact to jog
> The Infant Don upon her knee;
> Nay, but for her the pedagogue
> Would be without a pedigree."

The Contemporary Review.—In a paper on Darwinism and Design Professor Schiller opens up a subject full of thought. Whilst accepting the interesting links in the story of evolution, first intelligibly put before the world by Charles Darwin, he is not satisfied that natural selection is sufficient to account for the whole design in creation. The question he

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asks is, "What is the value of natural selection if it does not explain evolution completely?" Incomplete as the explanation offered by the Darwinian theory may be, there can be little doubt that evolution affords, as Professor Schiller admits, the most hopeful method of approaching the mystery of existence.

The Westminster Review.—None can doubt the importance of the question of food supply in time of war, and this, perhaps, is one of the most interesting subjects treated in the June number. Lieutenant-Colonel T. A. Le Mesurier deals with the subject, as might be expected, largely from a military aspect, but still he has an eye to the economics of the question. He points out that two-thirds of our annual consumption of farinaceous food and three-sevenths of our meat supply have to be imported from abroad. Worse still, 2,000,000 of acres of wheat land have during the last two decades been devoted to other uses. "More ships, more men, and more guns" are our only need, according to this writer, if we are to maintain the commercial supremacy we now enjoy and if we may hope to be able to import such supplies as may become an absolute necessity in time of war. He proposes further to redeem our agricultural shortcomings, by directing the labour at the disposal of our workhouses and prison establishments to the cultivation of the soil. For ourselves, we do not think we shall at any one time make enemies of every country in the world, especially as arbitration is beginning to appeal strongly to the nations as the only wise and rational method of settlement. Coupled with this assurance we may depend with some confidence on the resources of our colonies.

Analytical Records
FROM
THE LANCET LABORATORY.

SCOTCH WHISKY (THE SCOTSMAN BLEND).
(J. H. DEWAR, 47, ROSE-STREET, GLASGOW.)

THE following results of analysis of whiskies of varying ages are interesting in illustrating to some extent the influences of "keeping" upon the composition of spirits. Whisky six years old gave the following results: alcohol by weight 42·05 per cent., by volume 49·55 per cent., equal to proof spirit 86·84 per cent.; acidity reckoned as acetic acid, 0·036 per cent.; extractives, 0·65 per cent.; mineral matter, *nil*. Whisky, ten years old: alcohol by weight 42·05 per cent., by volume 49·55 per cent., equal to proof spirit 86·84 per cent.; acidity, 0·036 per cent.; extractives, 0·685 per cent.; mineral matter, *nil*. Whisky, fifteen years old: alcohol by weight 39·80 per cent., by volume 47·13 per cent., equal to proof spirit 82·59 per cent.; acidity, 0·036 per cent.; extractives, 0·815 per cent.; mineral matter, *nil*. It will be seen from these results that with increasing age, as might be anticipated, the amount of extractives increases. This is, of course, derived from storage in sherry casks which contain more or less resinous matter. There is practically no difference in the alcoholic strength between the five-year and ten-year old samples, but in the fifteen-year old sample the spirituous strength is decidedly lower, owing, doubtless, to the evaporation of spirit during storage in wood. To the taste all were satisfactorily mellow, the oldest sample being particularly mild and soft. These whiskies are evidently pure, well matured, and in excellent condition.

PREPARED COD LIVER.
(NORWEGIAN MEDICAL COD-LIVER COMPANY, CHRISTIANIA, NORWAY. AGENT: B. SCHUMACHER, 7 AND 8, IDOL-LANE, E.C.)

This production is the result of an improved process for the preservation of the liver of the fish in its entirety. The aim of the process is to prevent the oil in which the liver is boiled from mixing with the oil contained in the cells of the liver itself. When fresh liver is boiled in oil in the ordinary way the temperature attained brings about the rupture of the tissue of the liver, so that the oil of the liver mixes with and diffuses into the oil in which it is boiled. This is entirely obviated by boiling the liver in oil under a reduced pressure. The boiling point is correspondingly lowered, and the tissue of the liver is not burst. The preparation presents the characteristic taste of the fresh boiled liver. It is decidedly salt, but contains no objectionable preservatives. On ignition an abundant ash is obtained consisting entirely of common salt and soluble phosphates. The liver may be eaten as an agreeable and excellent substitute for caviare or as an adjunct partaken before a meal. It is very good when spread on bread, rusks, or toast. We can commend it because, being prepared with special precautions, its taste is delicate and its medicinal properties are preserved intact. It should prove an excellent nutritive and tonic.

KEROS FLUID BEEF.
(BOUILLON FLEET, LIMITED, WARNER-ROAD, CAMBERWELL, S.E.)

The following were the satisfactory results yielded by this preparation on analysis: water, 33·9 per cent; organic matters, 43·04 per cent.; mineral matter, 23·06 per cent. The organic matter contained 3·76 parts albumin (separated on boiling after slightly acidulating with a few drops of acetic acid), 25·64 peptonic matter, and 13·64 parts of beef extractives, including crystalline principles. From these results it is evident that the preparation possesses high nutritive power referable to the albumins and peptones, while the excellent proportion of meat extractives makes it of value as a stimulant and appetiser. The taste is good and commendably free from burnt flavour.

VIN KAFRA.
(THE MEAD MANUFACTURING CO., 156 AND 157, ALDERSGATE-STREET, E.C.)

Vin Kafra is described as a "tonic of tonics," which from the results of our examination we suppose is ascribed to the fact that it contains extractives identical with those of the kola nut. On suitable treatment the alkaloid caffeine was separated and identified. Further analysis gave the following results: alcohol by weight, 13·31 per cent.; by volume, 16·43 per cent., equal to proof spirit 28·78 per cent.; extractives, 10·05 per cent.; mineral matter, 0·036 per cent., consisting chiefly of the alkaline carbonates. Vin Kafra is a wine of the colour of sherry, but not quite clear, and possesses a peculiar nutty flavour. It may prove useful as an agreeable tonic and recuperative, but of its claims as an "anuretic," "diuretic," "aphrodisiac" we cannot speak, but are inclined to express on this score an opinion not in its favour. It is difficult to understand how a preparation can be at the same time "anuretic" and "diuretic."

KONIG'S ETHER.
(AGENTS: THOMAS CHRISTY AND CO., 25, LIME-STREET, E.C.)

The specific gravity of this liquid proved to be 0·6564, and on fractional distillation the bulk of it appeared to distil between 30° C. and 50° C., while portions remained boiling at between 60° C. and 70° C. These results are in accordance with what would be obtained with a mixture of petroleum ether, and ordinary methylated ether. The portion boiling between 40° and 60° smelt unmistakably of light naphtha or petroleum ether. The mixture is suggested for use in local anæsthesia. It appears to possess some advantage over pure ether, since while the evaporation is rapid the cold produced is more protracted. Good results are stated to have been obtained with it on the Continent, reports of which have been published in the German medical papers.

"CAMBRIDGE" SAUSAGES.
(J. A. RADCLIFFE AND CO., EXCELSIOR WORKS, HECKMONDWIKE.)

It is satisfactory to be able to state after both a chemical

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and a microscopical examination that there is nothing mysterious in the composition of these useful articles of food. They are free from excess of bread, are well seasoned, and of excellent flavour. They are preserved with a trifling quantity of borax.

EIFFEL TOWER LEMONADE.
(G. FOSTER CLARK & CO., MAIDSTONE.)

Eiffel Tower lemonade consists of lemon-yellow crystals, smelling agreeably of the fragrant oil of lemon. On placing the crystals in water a yellow opalescent solution results, which in appearance is exactly like "lemon squash." The taste of the solution is agreeably and somewhat sharply acid. On shaking the opalescent liquid with ether clarification ensues and the ether on evaporation yields the essential oil of lemon. The preparation is genuine and affords a convenient means of preparing a very pleasant and wholesome beverage. There was no indication of metallic contamination.

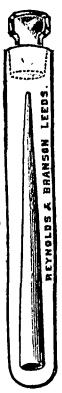
ZULANA PATENT FOOD.
(THE CORNILLA AFRICANA CO., DURBAN, NATAL. LONDON: J. HOWARTH 243, PENTONVILLE-ROAD, KING'S-CROSS.)

This prepared food presents no peculiar feature. It is evidently cooked and accordingly contains soluble starch and dextrine. The taste is biscuit-like and somewhat malty. The yield of mineral matter was 0·80 per cent. which contains a good proportion of soluble phosphate. The microscope showed starch cells identical in form with those of wheat flour.

New Inventions.

ASEPTIC MEMBRANE PERFORATOR.

THERE are times at a confinement when one's finger nails cannot readily rupture the membranes and when one needs a probe or a hairpin with which to perforate them. One cannot always procure a clean hairpin, and in any case the rendering it aseptic wastes time and causes trouble, particularly if one insists on boiling it. Then, again, certain patients are apt to think the use of a hairpin in labour somewhat clumsy, and may even resent it. For the ordinary hairpin this clean perforator will be found a good substitute. It is made of celluloid, or, if desired, of glass or vulcanite, and it is kept in a 1 in 1000 solution of perchloride of mercury in a little glass-stoppered bottle without a collar. Being small it can be used without fuss or the patient's knowledge. It was shown before the Leeds and West Riding Medico-Chirurgical Society on Nov. 6th, 1896. It is made by Messrs. Reynolds and Branson, of Leeds.

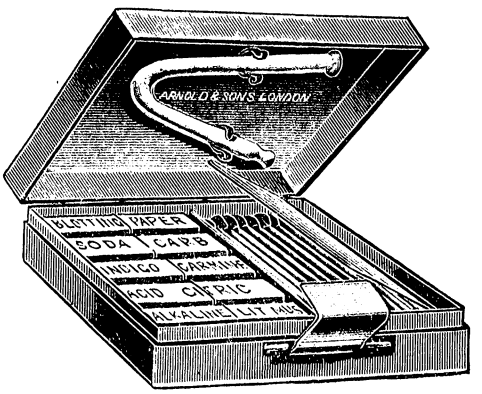


½ SIZE

HERBERT J. ROBSON, L.R.C.P. Edin., M.R.C.S.Eng.
Leeds.

MINIATURE POCKET URINARY TEST CASE.

THIS case is intended for qualitative urinary analysis. It is designed to supply especially a rapid, simple, and satisfactory method of testing for albumin by boiling. The leading feature of the case is the V-shaped test-tube, which, from its shape, allows of one portion of the urine being boiled, and then of being closely compared with the unboiled portion. About half a drachm of urine only is required for the test, and it takes, literally, only a few seconds. To use the test-tube one limb is immersed in the urine and the V is then held upright, the liquid falling to the same level in the two limbs. After drying the tube on the blotting-paper provided for the purpose the heat of a burning match is applied near the surface of the fluid in the limb with the contraction, the tube being held by its other limb. The contraction tends to prevent boiling over, and the test can be applied several times to successive portions of the fluid with the same match. The boiled and the unboiled portions of the urine may, of course, be readily compared by holding the tube against the coat sleeve or other black surface. Papers soaked in citric acid or carbonate of soda papers accompany the tube for the purpose of neutralising the urine or for acidulating it after boiling. Indigo-carmine papers are also included for testing for glucose, the test consisting in the production of colours from violet to yellow, according to the amount of sugar present. Dr. Oliver directs that the test-tube be filled with ordinary water boiled with a part of the indigo-carmine test



paper immersed in it, and finally cleared of any turbidity by means of the carbonate of soda paper. A minute portion of the suspected urine is then added to the water and the whole is again boiled for a few seconds. It should be held against a white background. The case is made by Messrs. Arnold and Sons, of West Smithfield, E.C.

GLASGOW UNIVERSITY CLUB, LONDON.

THE annual general meeting of this club was held on the 28th ult., in the Café Royal, Regent-street, W. Lord Kelvin was re-elected President and presided over the dinner, which was attended by about 100 members and their friends. Lord Lister was a guest of the club, and among others present were Lord Shand, Dr. Farquharson, M.P., the Rev. Dr. M'Ewan, Professor J. M. Thomson, F.C.S., Professor G. G. Ramsay, LL.D., Professor W. Paton Ker, Professor Gairdner, M.D. Edin., LL.D., Messrs. M'Vicar Anderson, J. R. M'Ilraith, M.A., LL.B., and J. M. Dodds, and Dr. D. C. M'Vail, Dr. Norman Kerr, Dr. N. M. MacLehose, Dr. Forsyth, Dr. G. A. Heron, Dr. Anderson, &c. Lord Watson and Professor Dewar sent apologies for absence. After the toast of "The Queen" had been proposed by the President and loyally responded to, Professor W. Paton Ker proposed the toast, "Our Alma Mater and the Club," coupling it with the names of Professor Ramsay, of Glasgow, and Professor J. Miller Thomson, lately treasurer of the club, whom he congratulated on having recently become a Fellow of the Royal Society. Professor G. G. Ramsay, in reply, said he was glad the toast had been made to include past and present members of the University. It was a great pleasure to come to these dinners and meet old friends, and Glasgow students might well be proud of the tie which bound them to their Alma Mater. Lord Lister, who was present, was really a Glasgow man, and began his great work in Glasgow where he himself had been a student at the famous little room at the back of Newton-place. Professor J. Miller Thomson replied on behalf of the club, after which Lord Kelvin proposed the health of the guest of the evening—Lord Lister. The noble lord, he said, was born not far from London, but spent twenty-four years in Scotland. He entered on his professional career at Glasgow, where he was a professor of surgery in 1861. Then came Pasteur's researches, and the first man in this country to embark on the new study was Lister. And the result of the new mode of treatment which he advocated in consequence had been the salvation of thousands of lives. London had him now, but Glasgow would never lose him.

Lord Lister, in reply, said that he had spent the happiest years of his life at Glasgow, while it was there that he met with his earliest successes, when wonderful discoveries followed one another almost daily.

The remaining toasts were "The Guests," proposed by Lord Shand and replied to by the Master of Peterhouse, Cambridge, and "The Chairman," proposed by Professor Gairdner and replied to by the President. Before the company parted Mr. Nicholl sang "Annie Laurie" and other songs.

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THE LANCET.

LONDON: SATURDAY, JUNE 5, 1897.

THE General Medical Council rose on Monday last, having sat for six days and deliberated on many subjects of interest to the profession. As we have had occasion to point out before, the coöperation of the Privy Council with the General Medical Council has to be reckoned with. This imposes more carefulness on the part of the General Medical Council in coming to judgment on certain questions and in the form in which it gives force or expression to those judgments.

Three questions which came before the General Medical Council this session emphasised more or less this association of the Privy Council with the medical body—viz., the appointment of surgical examiners to the Apothecaries' Society of Ireland, the consideration of the Midwives Bill, and the disciplinary functions of the qualifying bodies. The General Medical Council bowed, of course, to the direction of the Privy Council in the matter of appointing surgical examiners to the Apothecaries' Society of Ireland. Sir DYCE DUCKWORTH lamented that the Privy Council had imposed this duty on the General Medical Council, and was disposed to complain that the usefulness and authority of the inferior tribunal would be impaired. But we believe that it will be found that the General Medical Council by its compliance has in no way damaged its real usefulness. It has only taken a step for the results of which the Privy Council is solely responsible, while it has simultaneously vindicated its authority in carrying out the direction of the Privy Council, for in appointing surgical examiners it did not appoint the two gentlemen suggested in the letter of the secretary of the Society of Apothecaries of Ireland but two other gentlemen, doubtless equally qualified to hold the posts. The representative of the Society on the Council, Mr. TICHBORNE, showed his good sense in at once agreeing to the gentlemen selected by the committee of the Council to which the matter had been referred.

In regard to the Midwives Bill, the Privy Council is already in possession of the views of the General Medical Council as to the general principles to be observed in such a measure. But their Lordships, in response to an invitation, courteously desired its opinion on the Bill now before Parliament, anticipating that the Bill may be brought forward quite soon. It will be a serious thing for the General Medical Council if a Midwives Bill is annually referred to it for consideration. On the last occasion such a Bill was referred to a committee and then fully and at length debated in conclave, while the present Bill is not essentially different. It is to be referred in the same way and to go through the same process, which is satisfactory, as the Council now contains two new members representing the profession directly, whose views should be heard. But why the General Medical Council, having asked the Privy Council if an opinion would be of any use to them at once, and having received a reply in the affirmative, elected to delay giving the opinion we cannot exactly understand. For the mere sake of protecting the General Medical Council from an annual demand upon its time expedition would have been desirable. The views of the new members could have been elicited without delay. The third subject, showing the association of the Privy Council with the General Medical Council, was that of the disciplinary functions of the bodies which grant degrees and diplomas. The Privy Council has of late years strengthened the ethical powers of one of the corporations, and in a letter to the General Medical Council, alluded to in the recent debates, it has expressed its willingness to consider applications from chartered medical bodies for supplemental charters, and has pointed out ways in which universities and other licensing bodies could proceed for similar purposes. It was sought in the recent debate to make it appear that the Privy Council would only grant such supplemental powers within very strict limits. This is an assumption that might be disproved by further appeals by the bodies to the Privy Council, which is in advance of some universities in desiring greater disciplinary powers where the responsibility of granting degrees is present.

Advantage was very properly taken of the sitting of the Council to bring its influence to bear on pending legislation. A committee was appointed, with Dr. THORNE THORNE as its chairman, to consider the grave faults of the proposals now before Parliament in connexion with the Public Health Bill of Scotland, proposals that are inconsistent with the spirit of all recent legislation and of the rules of the General Medical Council in reference to the high qualifications of medical officers of health. All our readers know our views upon certain amendments to this Bill. The committee's report was adopted and ordered to be forwarded to the Secretary for Scotland and the Lord Advocate, and also to members of the Committee on Law. In like manner it was sought to procure the insertion of a clause in the Metropolitan Police Act to rectify the fault by which, in the Metropolitan area, fines which are imposed under the Medical Acts, which should go to defray expenses of prosecutions, are used to pay the expenses of police courts. Altogether the Council has had great public questions under consideration, and has taken for the most part a sensible course in regard to them. It is in the true interest of the profession that the Council should recognise the importance of questions affecting public health and professional morals, in which also the public is very deeply concerned.

THE PRINCE OF WALES, accompanied by the PRINCESS OF WALES and PRINCESS VICTORIA OF WALES, visited the City-road on May 28th for the purpose of laying the foundation-stone of the new building of the Royal London Ophthalmic Hospital. The PRINCE OF WALES made an interesting speech on the occasion, in which he adverted to the fact that this hospital was founded in 1804 by some gentlemen whose sympathies were aroused by the terrible sufferings of men of the Army and Navy invalided from the force under Sir RALPH ABERCROMBY during the Egyptian Campaign. It is a significant fact, said His Royal Highness, that while in this campaign in the early part of the century ophthalmia

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produced great ravages—out of a regiment of 700 men there were 636 cases, of whom 40 became blind of one eye and 50 blind of both—in the Egyptian Expedition of 1882, though there were 1800 cases of ophthalmia after Tel-el-Kebir, not one man lost his sight. This, added the PRINCE OF WALES, was entirely due to the excellent precautions taken.

The facts connected with the history of contagious ophthalmia in the British Army are interesting and instructive. About the best practical illustration that can be furnished of what has been accomplished by the sanitary changes that have taken place in the Army since the Crimean War is the great difference that has taken place in the prevalence of ophthalmia. In the past this disease was for years a scourge of the Army; invalids suffering from the intractable effects of ophthalmia were to be found at most large military hospitals; outbreaks of ophthalmia were common at many of our Mediterranean and foreign stations, and unfortunate soldiers invalided and pensioned from the service on account of it were to be frequently encountered in civil life. But old soldiers with contracted brows, swollen eyelids, and blinking eyes—telling their tale of pain, intolerance of light, and defective vision—are no longer to be seen. Contagious ophthalmia was held by some to have been introduced into Europe in the beginning of the present century by the return of the French and British armies from Egypt. Be this as it may, there was a good deal of this distressing affection in European armies long after that date, and in 1858 the report of the "Congrès d'Ophthalmologie de Bruxelles" gave much information in regard to it. That it was a disease intimately associated in its earliest stages with follicular changes and the presence of so-called "sago grain" appearances in the palpebral conjunctiva soon attracted attention, and that these appearances, again, were associated with the unhygienic conditions to which people living in community were exposed was also soon recognised; indeed, some have even gone so far as to declare that the condition of the conjunctiva of the men of a regiment or of a large school affords a delicate test of their sanitary environment. In 1860 and 1861 two medical officers of our own army directed attention to the nature, causes, and prevalence of the disease in papers published respectively in *Beale's Archives* and the *Army Medical Reports*, and their observations were soon followed by those of others. The writers of the papers in question — Dr. JEFFERY MARSTON and Dr. PHILIP FRANK—not only went fully into the anatomical nature and pathological changes induced in the affected structures, but described the etiological conditions that gave rise to them; and the former subsequently prosecuted his inquiries in connexion with the late Sir WILLIAM BOWMAN at the Central London District Schools.

The sanitary report of the expedition to Egypt of 1882 contains some interesting observations on the subject of ophthalmia generally and on the disease as it appeared in the force taking part in that expedition. The appearance of the disease among our troops on that occasion gave rise, it will be remembered, to all kinds of gloomy prognostications, which were happily not fulfilled. Of the total number attacked, and of those invalided to this country during the Egyptian War of 1882, not a man, as the PRINCE of WALES said, lost his sight. The knowledge that then existed in regard to the causes of contagious ophthalmia and the way to prevent or limit its spread, together with the application of antiseptic methods of treating it, gave rise to the strikingly different results of the earlier Egyptian expedition under Sir RALPH ABERCROMBY and that of 1882 under Sir GARNET (now Lord) WOLSELEY. The medical officers of the latter expedition are to be congratulated on the results they obtained in this respect, as well as on the complete freedom of their patients from infective wound disease (almost unprecedented at that time in the annals of military surgery), which was due to the careful application of the principles of Listerism in the treatment of gunshot wounds.

IT seems evident that the public in Scotland are becoming alive to the serious nature of the "amendments" on the Public Health Bill to which we recently called attention.[1] The Chamber of Agriculture has dealt with the matter, and the leading newspapers have also pointed out the dangers likely to result from the dear and nasty system which has, unwittingly as we believe, been approved by the Grand Committee, and under which property of every sort would be open to attack as "injurious or dangerous to health" under a certificate granted by a sanitary inspector who himself is not required to possess any kind of knowledge on the subject. The General Medical Council, on the initiative of Dr. THORNE THORNE, has now also taken very satisfactory action in the matter, and a copy of the resolutions which it has unanimously passed is to be forwarded to the proper authorities.

A careful examination of the Bill reveals some extraordinary possibilities. Everyone now knows that it is proposed that whenever any individual, be he labourer or artisan or police constable, is appointed as a sanitary inspector, he is to be thereby endowed with the statutory right to certify what is dangerous or injurious to health; and on this certificate, without further evidence of any sort, the sanitary authority may proceed to a prosecution. This, however, is by no means all. Another clause of the Bill enacts that a sanitary authority may appoint any committee to take proceedings on its behalf. The same clause says that a quorum of two shall be sufficient for such a committee. Then the clause goes on to declare that this committee may itself delegate to any officer the duty of taking legal proceedings which has been already delegated to itself by the sanitary authority. Here, therefore, we may have first of all delegation by the sanitary authority to a committee; next, any two members constituting a quorum may delegate to the sanitary inspector the right to carry on prosecutions; and, finally, the sanitary inspector, acting under one clause, may thus certify to the same sanitary inspector acting under another clause that he ought forthwith to proceed against the owner, say, of a street of dwelling-houses, and that these proceedings ought to be taken before a court consisting of a single one of the two members (he being a magistrate or justice) who delegated to him this power of prosecution; and this court so constituted may forthwith decide that the dwelling-houses

[1] THE LANCET, May 8th and 15th, 1897.

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in this street are unfit for human habitation, and from this decision there can be no appeal.

A few days ago it seemed possible that the Bill might get through the Grand Committee stage so quickly that the report stage in the House of Commons would be reached before Members of Parliament and the public had become alive to the possibilities opened up by the vesting of this power of certification in the hands of any individual who had chanced to receive an appointment as a sanitary inspector. It turns out now, however, that the report stage will not come on till after the holidays—or probably before the end of June. There is still, therefore, time to call attention to the facts of the case. The General Medical Council has done its duty, but a great deal remains to be done. The matter is of interest to every medical officer of health in England and Ireland, and even to the whole profession. The question of what is and what is not detrimental to health is essentially a medical question, and to give to any man who is not required to have the necessary general and special education the statutory right to certify as to both danger and injury to health is to befool the public and to belittle the profession. What is being attempted to-day in Scotland will, if successful, be attempted to-morrow in England. Even now a Public Health Bill for England is being talked of, and as Parliaments are swayed by nothing more than precedents, it behoves the English and Irish medical officers to act without hesitation and delay. Every one of them who has access to a member, either of the Lower or the Upper House, ought to point out the utterly objectionable character of this part of the Bill, and the certainty that its results will be felt more by the public than by the profession. The subject of sanitation is far too important to be left to be dealt with by incompetent hands. Owners of property are learning more and more to realise that it is a moral duty on their part to have their premises in a sanitary condition and to be willing to perform their duty; but in its performance they have at least the right to demand that the complaint in consequence of which alterations in their property are to be undertaken shall be based not on ignorance but on knowledge; and not merely on the knowledge of the "practical man" whose practicality consists in the fact that yesterday he was digging a hole or climbing a ladder, but on the knowledge of the man who has both general education and medical training as a foundation, and who has built on this foundation a special knowledge, both theoretical and practical, of all that relates to the public health. In all seriousness we ask that medical men throughout the country, and medical officers especially, shall take a personal interest in the rectification of this Bill.

THE NEW CHOLERA HOSPITAL FOR CARDIFF AND BARRY.—The official inspection previously to the taking over of the new cholera hospital on Flat Holm Island by the Cardiff corporation was made on May 27th by the health committee. The hospital buildings consist of a ward, pavilion, and a laundry block. The pavilion contains two wards providing accommodation for twelve patients. A crematorium has been erected for disposing of the bodies of any patients who might die from cholera. The buildings, which are well fitted up, are of local stone, the cost being nearly £3000.

Annotations.

"Ne quid nimis."

ISOLATION ACCOMMODATION IN THE METROPOLIS.

DR. ORME DUDFIELD, medical officer of health of Kensington, draws attention in his last monthly report to the disproportionate provision in the hospitals of the Metropolitan Asylums Board for scarlet fever cases as compared with that for diphtheria, some 3800 beds being set apart for the former disease and only 700 for the latter. Dr. Dudfield urges that it would be better, having regard to the much more serious nature of diphtheria and to the liability of those suffering from the disease to complications of an urgent nature, if provision were made to isolate more diphtheria cases, even if such a step necessitated the non-isolation of many scarlet fever cases. There is much to be said for the view taken by Dr. Dudfield, more especially in respect to the chances of recovery of a patient suffering from diphtheria; but from the public health standpoint there is the consideration that scarlet fever is more likely to spread in a household than is diphtheria. Similarly with regard to enteric fever, there is but little doubt that if cases of this disease were nursed by well-trained nurses, who, in their turn, were supervised by thoroughly competent medical attendants, recovery would be rendered more certain than when such cases are treated in the homes of the poor; but, at the same time, from the public health aspect there is less danger to the community from a case of enteric fever than from one of scarlet fever. We are, however, entirely at one with Dr. Dudfield as to the necessity for the more extended isolation of diphtheria. Dr. Dudfield furnishes in the report to which we are alluding an abstract of the number of beds available for the infectious sick of the metropolis, and as the figures may be of interest to those who have not access to the reports of the Metropolitan Asylums Board we reproduce them here. For acute cases of fever and diphtheria there are at present 3459 beds, and for convalescent cases of the same diseases 1707, giving a total provision of 5166 beds, figures which include the "emergency" beds placed in various hospitals during the recent pressure on their accommodation, and which may probably, therefore, be taken as implying a little "overcrowding." In addition to the above provision there are in course of erection the Park Hospital at Hither-green for 548 patients and the Grove Hospital at Tooting for 520 patients, while a site has been procured at Carshalton for 700 convalescent fever and diphtheria patients. The Park Hospital is expected to be ready in July and the Grove Hospital some time next year. In the matter of small-pox provision there are some 1492 beds available, but a considerable number of these are at the present time occupied by scarlet fever patients. In reference to this question of small-pox provision Dr. Dudfield recalls to the minds of the Kensington Vestry the excellent results which accrued from moving small-pox cases from the London hospitals to Darenth—results which have prompted the Local Government Board to insist upon a somewhat similar isolation in the case of all newly erected small-pox hospitals.

THE NEW METROPOLITAN WATER BILL.

"A BILL to Amend the Law respecting the Metropolitan Water Companies" has been printed. As we stated last week, it is but a provisional measure pending the results of the inquiry of the new Royal Commission. By its first clause any water consumer or any local authority may complain to the Railway and Canal Commission that any of the metropolitan water companies has failed to perform

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some statutory duty. By the second clause any complaint as to the quantity or quality of the water-supply for domestic use will be heard by the same Commission. If in each case provided in these clauses the Commission are satisfied that the companies have failed in their duties, or that a complaint is well founded, the Commission may bring pressure to bear upon the defaulting company to carry out its duties properly or to make the supply efficient both from the points of view of quality and quantity. We regard this measure as of unquestionable public service, and though to an extent it is provisional, chiefly in regard to the authorities to whom appeal has to be made, yet as a legal requirement binding on the companies we have no doubt it will hold good and be approved by the Royal Commission.

PROSECUTION FOR SELLING WEAK LAUDANUM.

A CURIOUS defence was tendered in the Nottingham Summons Court last week by a druggist who was summoned for selling tincture of laudanum which was not of the nature, substance, and quality of the article demanded. It appears that the inspector appointed to purchase samples in accordance with the requirements of the Food and Drugs Act first sent a boy into the shop for a pennyworth of laudanum. When the boy came out the inspector went in himself and asked for four ounces. The defendant served him, but with some hesitation, requesting the inspector to let him filter it, which was not agreed to. The sample, which was divided into three parts in the usual way, was out of the same bottle from which the boy had been supplied. The report of the analyst showed a deficiency of 63 per cent. of alcohol and 90 per cent. of morphia. It would thus appear that the defendant had made the laudanum with water and not spirit. He objected, he said, on moral grounds to sell the poison as it was commonly sold. This plea was obviously useless when the Act requires a drug to conform to a definite standard, or, in other words, to be of the substance, nature, and quality demanded. It would be distinctly serious to supply a medical man with a preparation of laudanum highly deficient in those active principles upon which he so largely depends. The law in regard to the sale of poisons should leave no doubt in the defendant's mind as to his moral position in the matter. Of course, by employing water in place of spirit the active principles of laudanum, chiefly morphia, would not be soluble in the resulting fluid, and the filtered and clear liquid would contain very little of the narcotic. The aqueous mixture would, moreover, in all probability not be uniform, especially on standing, and it is just possible that the last portion left in the bottle would contain a superabundance of the insoluble constituents of laudanum. The line of defence was feeble in the extreme, and the magistrate imposed a fine of £5, thus establishing that an offence, as we certainly think, had been committed.

A PECULIAR FORM OF "TIC CONVULSIF."

DR. FINLEY, of Montreal, has published in the *Montreal Medical Journal* for March, 1897, under this title, a description of a very rare form of family neurosis. The cases both occurred in one family. The mother was said to have had chorea in childhood, and to have been insane before the birth of the elder patient. Her brother also showed some nervous peculiarities. The elder, who was twenty-three years of age when he came under observation, was a French Canadian. His birth was natural, but there seems always to have been some mental dulness, and he did not prove capable of education. Previously to the onset of the convulsive movements he was impelled to carry out any sudden order that might be given—e.g., to drop anything that he might be carrying. On one occasion he rendered a little girl insensible by a blow on the chest at the suggestion of a mischievous individual. His uncle, referred to above, was affected in a precisely similar manner. The symptoms were first noticed in 1890, and in June, 1894, he had a fit, and there were three others in 1896. From the description these appear to have been hysterical in character. The patient also exhibited single twitching movements of the face and various parts of the limbs every few seconds, and in addition there were violent jerking incoördinate clonic movements in attempting any voluntary action, it being quite impossible for him to button his clothes. The movements continued during sleep. Sensation was unaffected, and there was no marked motor weakness. He was very dull and stupid, but not troublesome. A younger brother, twenty years of age, exhibited similar incoördinate movements on voluntary effort, but spontaneous twitching had only been noticed on a few occasions, and then only during sleep. In this case the knee-jerks were somewhat sluggish, but in the elder brother they were active. There were no disturbances of sensation, but in this case there was not so much mental impairment as in the elder one. The younger patient also suffered from fits, apparently epileptic in character, in which he passed urine and had bitten his tongue. The common features of the cases were therefore spontaneous clonic movement which increased during sleep, irregular movements associated with voluntary effort, the occurrence of paroxysms of an epileptic character, and dulness of the mental faculties.

THE POPE ON DIET.

WHEN a man has reached well-nigh ninety years of age—years spent, moreover, in theological and diplomatic fields, speculative and practical—he cannot but have accumulated a fund of personal experience interesting to the rising generation. Of that experience not the least noteworthy must be his mode of life—the rules of conduct he has formally or informally prescribed to himself, and the extent to which these have been observed and modified or finally approved and adhered to. Leo XIII. is such a man, and amid the "cares" of a unique "empire" he has found time to take the younger world into his confidence and, at least on one supremely important side, to record his personal experience for its benefit. That side is "diet," and very significant are the revelations he has to make. All his days a man of fortune—as became his family traditions—he was from the first a votary of "plain living" as the essential condition of "high thinking." His custom was, as laid down in the memorable first chapter of Celsus, "modo ruri esse, modo in urbe, saepiusque in agro" (sometimes to affect a country life, sometimes a city life, with a preference for the fields); "venari, quiescere interdum sed frequentius se exercere" (to indulge in sport, resting between whiles, but oftener taking exercise). He was, it is known, a capital shot, and when (after being Nuncio at Brussels) he held the Archiepiscopal See of Perugia, he would return from the hillside with a good bag of red-legged partridges for distribution to the hospitals—the day's achievement to be celebrated in another pastime, taking the form of Catullian hendecasyllabics or Ovidian elegiacs. As to his eating and drinking, it was simple, sparing, but not ungenerous; he was never, for example (what, indeed, no Italian is), a "total abstainer." His whole rule of life in this respect might be that of one who had read his "Pavy" and his "Roberts," his "Brinton" or his "King-Chambers," with intelligence and profit, but who had formed a system of his own which independently confirmed these authorities. That system he has just given to the world in a series of Latin hexameters, modelled on those masterpieces, the Epistles of Horace, and written in exposition of the text:—"Parco ac tenui victu contentus, ingluviem fuge" (contented with a sparing and

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simple diet, avoid gluttony). As to the facility and grace with which he reproduces the Horatian manner, this is not the occasion to speak. The matter of his epistolary excursus is more to our purpose. It is an enumeration of the viands and the beverages most suited to lives such as he has led and is leading, and abounds with practical hints well worth the taking. Curiously enough the School of Salerno early in the twelfth century covered similar ground, but its "Regimen Sanitatis" written for Robert the Norman (son of the "Conqueror") is as little to the taste of latter-day hygiene as its Latinity is to latter-day scholarship. Not that the Pope (except for the rhyming distichs) would object to the following:—

"Si tibi deficiant medici, medici tibi fiant
Haec tria: mens laeta, requies, moderata diaeta."
("Where doctors are not, be thy doctors then
Contentment, ease, and moderate regimen.")

Nor can we think that (barring the versification, "Leonine" but not in *his* sense!) he would take much exception to this:—

"Ova recentia, vina rubentia, pinguia jura
Cum similâ purâ naturae sunt valitura."
("Fresh eggs, red wine, and juicy broth to sup,
With wholesome bread, keep nature's system up.")

Decidedly, however, Leo XIII., on every ground, would give "a wide berth" to the distich:—

"Si tibi serotina nocet potatio, vina
Horâ matutinâ robibas et erit medicina."
("The wine that taken overnight has hurt you
May prove, next morning, not without its virtue.")

A comparison, indeed, between the two poems, the Salernitan and this (in the best sense) "Leonine" one, would be an object-lesson in what was considered good diet for a Crusader in the eleventh century and what is found best for a thinker and statesman in the nineteenth. If the test be that of longevity only, the Pope comes off the victor. Tried by other tests, he would also bear the palm—conspicuous example as he is of the compatibility of the highest intellectual activity with the "Parco ac tenui victu" whose virtues he sings at the close of the first part of this poem:—

"De tenui victu haec teneas, his utere tutus,
Ad seram ut vivas sanus vegetusque senectam."
("On simple diet keep this saving line;
A grand and green old age will thus be thine.")

THE SANITARY INSTITUTE AND THE INSPECTION OF MEAT.

THE report of the late Royal Commission on Tuberculosis showed the necessity for the adoption of proper methods to prevent the sale of meat from tuberculous animals, or of meat from healthy animals that has become infected by the slaughterers from diseased carcasses in the processes of dressing. The existing Royal Commission is to report on those methods which are practicable in this country, and is, as we have already said, so much impressed with the general concurrence amongst the witnesses who have been heard as to the necessity of establishing public abattoirs wherever this is possible, both in the interests of the public health and to protect graziers and butchers against the present want of uniformity in the seizure of carcases on account of tuberculosis, that several of its members, with its honorary secretary, Dr. T. M. Legge, have commenced a tour of inspection of foreign cities to study this question. The first cities to be visited are Brussels, Cologne, Berlin, and Leipzig, where the municipal abattoir system has reached a high stage of development. It may be anticipated, then, that the recommendations of the Royal Commission will include the establishment of public abattoirs in all municipal centres, the regular and systematic inspection of all beasts intended for slaughtering, and of all carcasses during processes of dressing, and the adoption of some plan for the gradual abolition of private slaughter-houses. The Council of the Sanitary Institute has for long recognised that a course of instruction in meat inspection formed a most essential part of the technical education of sanitary inspectors, to whom large powers of condemnation are entrusted by the existing Public Health Acts, and to whom will be relegated in many instances those larger duties in connexion with public abattoirs, which are likely to be a feature of the municipal methods of the near future. The Council, therefore, in the spring of 1896 organised in connexion with the sanitary officers lectures and special demonstrations, held at the institute, with regard to the inspection of meat. The students also were taken under competent guidance to one of the London meat markets to see the methods of preparing meat for sale; and demonstrations were given as to the appearances and physical characteristics of healthy meat, and where to look for, and how to recognise, abnormal appearances indicating disease and unsoundness. The demonstrations given in the museum of the institute were rendered possible by the kindness of medical officers of health in various parts of the country in sending up carcasses and portions of animals affected by various diseases. These specimens were carefully explained to the students by the lecturer, and the students were afforded the opportunity of handling and closely examining the various tissues both before and after the demonstration. The following are some of the diseases which have been illustrated: cysticerci; trichinæ; hydatid cysts of lungs and liver; flukes, tuberculosis of lung, pleura, udder, and lymphatic glands; swine fever; septicæmia; milk fever; inflammatory womb of cow; pericarditis; fibroid tumour; joint ill; joint felon; broncho-pneumonia; ankylosis; and slink meat. The numbers of students attending the demonstrations at the meat market in the three sessions were seventy-seven, and at the museum of the Sanitary Institute 233. Many of the specimens have been preserved for permanent exhibition in the museum by immersing them, first, for twenty-four hours in formalin; secondly, for twelve hours in 80 per cent. of alcohol; thirdly, for two hours in 95 per cent. alcohol; and finally, bottling them in a solution of equal parts of water and glycerine. This process has been found advantageous for fixing the colour of the specimens, and for preserving their normal appearances. For the better preservation of the carcasses sent to the museum for demonstration, a large cold storage chamber with well packed double walls, has been specially constructed in the basement. By means of ice specimens may be preserved in this chamber for several days, even in warm weather. Convenient tables for dressing and arranging specimens have also been provided.

WATER CLOSETS WITHOUT WATER.

THE Essex county council having had their attention drawn to the fact that hand-flushed water closets are very extensively used in the county, and that the medical officers of health make constant complaints of nuisances arising therefrom, directed their county medical officer of health to submit a special report upon the subject, and have since caused copies of this report to be sent to all the local authorities in the county. Doubtless it will come as a surprise to many to learn that at the present time water closets without a supply of water laid on are being fixed daily, and that in Essex alone there are thousands of such closets connected with the cottage property in both urban and rural districts. Such, however, is the case, and the county council is doing good work in directing attention to the insanitary nature of such appliances and in endeavouring to get them abolished. Dr. Thresh's report, which is accompanied by illustrations, proves that not only are these closets a nuisance on account of the filthy condition in which they are generally found, but that as constructed the

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syphon is so easily unsealed that it is almost useless. Whilst urging that their total abolition is to be desired, he points out that the danger of syphonage can be easily overcome if every closet has a ventilating pipe attached to the distal end of the syphon. Unfortunately the traps used have no provision made for any connexion of this kind. The arguments in favour of these closets, economy in first cost, economy in the use of water, and the non-liability to freeze in winter, are discussed, and it is pointed out that the more modern slop closet is nearly as cheap, is much better, probably more economical in the use of water, and is even less likely to be affected by frost. Where water is obtainable, however, a suitable flushing cistern is to be preferred. The procedure necessary to get rid of these abominations is referred to, but the authorities are recommended first to decide that these conveniences are a source of danger to the public health and then to consult with their officers as to the best mode of dealing with them. The serious danger to health resulting from the use of waterless water closets cannot be denied, and it is believed by many of the local health officers that the emanations therefrom have from time to time given rise to outbreaks of diphtheria and typhoid fever. It is to be hoped that the various authorities implicated will seriously consider this report, and act upon the suggestions contained therein.

THE TREATMENT OF TUBERCULOUS ABSCESSES OF JOINTS.

THE treatment of a "cold" abscess is a question about which any two surgeons could probably express at least more than two opinions. As regards that important variety which is connected with tuberculous disease of joints, Dr. Russell A. Hibbs[1] has stated his own view, which is that it should be considerately and watchfully let alone. In support of this proposition he quotes the observations of Cheyne, Warren, and Ogston that such abscesses are generally sterile of pyogenic organisms. He also refers to Volkmann's descriptions of the tuberculous membrane, studded with miliary tubercles, which lines the abscess cavity, and is itself encapsuled in a dense, fibrous case, devoid of tuberculous deposits, and apparently almost impenetrable by the tubercle bacillus. His own observations, extending over four years of hospital and dispensary practice, lead him to think that this form of abscess tends to spontaneous, if slow, absorption or to gradual evacuation by the small aperture contrived by nature, which is in a measure protective against the admission of foreign bacilli. He prefers, therefore, a policy of non-interference, and regards free incision, scraping, and more heroic measures as tending on the whole to complicate the disease by admitting a pyogenetic element, and thus to prejudice recovery by lowering the vitality of the tissues. The science and wisdom of expectancy he understands to consist in supporting by every means the general vital tone, in affording the diseased joint all needful mechanical protection, and in sparing surgical methods except it be now and then to aid an imperfect natural effort at relief by a counter opening or to use an antiseptic douche. Quoting Shaffer,[2] he states that this plan, pursued at the New York Orthopædic Hospital during four years, was successful in obtaining absorption and apparent recovery in 93 per cent. of the cases treated, while the antiseptic operative procedure employed by Lister and Cheyne ("Tuberculosis of Bones and Joints") achieved success in 73·5 per cent. Dr. Hibbs does not attempt any comparison between these two series in respect of the pathological or other condition of the joint after the close of the period of treatment, nor does he furnish any details of the after-history of the naturally absorbed abscesses. His contribution to our knowledge of these cases is, nevertheless, both interesting and suggestive, and the more so when we remember that a combined method exists in the practice of aspiration followed by injection of iodoform in glycerine. It should not be forgotten that this method has been attended by curative results not less effectual, and probably much more speedy, than those attributed to the expectant course which he recommends.

[1] New York Medical Journal, May 15th, 1897.
[2] Ibid., Jan. 29th, 1896.

BEATTY *v.* CULLINGWORTH.

THE plaintiff in this case having presented a petition for leave to prosecute an appeal before the House of Lords *in formâ pauperis*, the matter was referred, according to the usual course, to the Appeal Committee, and was duly considered at a sitting of the committee held on May 27th. The petition was dismissed, on the ground, we believe, that there was no *primâ facie* case for further appeal, and that it was unlikely that the House would reverse the decisions of the Court of Queen's Bench and the Court of Appeal. The result of this decision is that if the plaintiff persists in her intention of bringing her case before the House of Lords she will have to conform to the ordinary rules, one of which involves the payment of a substantial deposit as a preliminary proceeding.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ON Thursday, July 1st, two important meetings of the Fellows of the College will be held. At 1.30 P.M. an election of members of the Council will take place. There are five vacancies, Mr. Howes, Mr. Ward Cousins, and Mr. Heath retiring by rotation, and the other two being caused by the deaths of Mr. Oliver Pemberton and Mr. Walter Rivington. Mr. Howes and Mr. Ward Cousins will, we understand, offer themselves for re-election, but Mr. Heath will not. Sir William Dalby, Mr. Rickman J. Godlee, Mr. Edmund Owen, and Mr. Bennett May will also be candidates. The names of candidates with their proposers must be sent to the Secretary not later than Friday, June 11th. At 5 o'clock the half-yearly meeting of the Fellows will be held, and any Fellow who wishes to introduce a resolution must forward it, signed by the mover, to the Secretary not later than Thursday, June 10th.

'CROSS-COUNTER THERAPEUTICS.

OUR Rome Correspondent writes:—To the casualties—already in Italy and elsewhere a formidable list—occasioned by this most dangerous practice Castellammare on the Neapolitan Riviera contributes another of unusually tragic interest. Signor Edoardo Varrelli having consulted Signor Francesco Rega, a leading pharmacist in the town, received from him a pill containing (we are told) "pochi centigrammi" (a few centigrammes) of aconitum napellus. Shortly afterwards it was found that a terrible mistake had been committed and poor Varrelli died with all the symptoms—the burning sensation in the mouth, the "feeling of searedness," the numbness, the cardiac depression, and the dyspnœa—characteristic of aconite poisoning. In what pharmacopœial form the alkaloid was exhibited we are left to conjecture. It may have been (as, indeed, has happened too often before) the potent English aconitine instead of the impure and inert exotic or German alkaloid or mixture of alkaloids passing under that name. All we yet know is that Signor Rega, profoundly impressed by the "accident" and apparently in doubt as to the dose or pharmacopœial form being to blame, experimented on himself with an exact replica of the pill prescribed to his "patient." And he, too, with scarcely less appalling celerity than Signor Varrelli, succumbed, in his own pharmacy, to the preparation. The incident conveys a loud warning to that all too numerous public which, rather than call in a duly qualified practitioner, consults a chemist and druggist, and takes the

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medicine which it pays for on the strength of the advice which it gets gratis. This "'cross-counter practice" will, I fear, tend to become more common should the Santini Bill (now before Parliament for the exclusion of English-speaking medical men from Italy) pass into law. The tourist or traveller, generally in a hurry, will be at no pains, in the absence of a resident British practitioner, to hunt out an Italian one—with the misgiving, moreover, that neither party to the consultation may have any language in common. He will be apt to think that, "after all" (a fatal phrase, according to Mr. Goschen), the Italian pharmacist is as good as the Italian physician and consult him accordingly. The transaction (to his mind) will have the merit of "despatch"; but whether in the sense recently illustrated at Castellammare it is for himself to consider.

DIPHTHERIA ANTITOXIN AT CHICAGO.

APPENDED to the Bureau and Division Reports for April, 1897, of the Department of Health, City of Chicago, is an interesting statement styled "The Diphtheria Antitoxin Balance Sheet." It contrasts month by month the death rates from diphtheria from 1885 to 1896 inclusive, from which it appears that the average annual rate between 1885 and 1894 was 10 51 per 100,000 living. In 1896 this rate was only 5 9, and in 1895 the figures were somewhat higher. It is calculated that 750 lives had thus been saved in 1896, a saving which "is attributable to no other cause than the use of antitoxin." This statement and the diagram which bears it out are preceded by a report on the total results of the work done by the "antitoxin corps" since its formation as a branch of the Department in October, 1895. Up to the close of 1896 the total number of cases of reported diphtheria visited by the Department physicians was 2981, the total number found to be diphtheria 2436, the total number in which antitoxin was allowed to be used 2302, and the death-rate on these cases only 6·36 per cent., whereas the average mortality previous to the introduction of antitoxin is estimated at 35 per cent. Antitoxin was also employed to "immunise" 2016 persons exposed to infection from diphtheria, and of these 14 were subsequently attacked by the disease. "Experience shows that fully one-half of those exposed under the conditions which obtained in these 2016 cases would have been attacked with diphtheria; and of those attacked 352 or 35 per cent. of the 1008, would have died if not treated with the antitoxin. Only 14 out of the 2016 exposed were attacked, and none died."

PROSPECTIVE GRATUITOUS SUPPLY OF GLYCERINATED LYMPH.

THE answer given by Mr. T. W. Russell in the House of Commons, on behalf of the President of the Local Government Board, on the question of vaccine lymph indicates the probability of a very important change of practice in England. Sir William Priestley had asked a question relating to the future Government lymph service, and he elicited two pieces of information. The first was that changes had already been made permitting public vaccinators to use calf lymph. This we had announced some time since, and, as we explained, the permission means that no public vaccinator resorting to calf lymph will lose his award by reason of his failure to maintain a series of arm-to-arm vaccinations. The second statement related to inquiries that had been made in foreign countries by Dr. Thorne Thorne and Dr. Copeman, and to the probability that, in consequence of these inquiries, glycerinated calf lymph will come to be the future supply of the National Vaccine Establishment, and that this supply is likely to be a gratuitous one. If the supply turn out thus to be gratuitous a considerable change will be effected. Hitherto the proceedings of the Vaccine Establishment have been limited to the gratuitous supply of a small amount of lymph with a view of starting a series of vaccinations which were to be continued by vaccination direct from arm to arm. But a gratuitous supply of glycerinated calf lymph in itself carries with it the abolition—in so far as the Government are concerned—of the use of humanised lymph; and hence the new supply cannot be limited as formerly, but must be so contrived as to meet all demands of registered medical practitioners for all their vaccinations. This will mean a complete change of the existing system; and we can quite understand, as implied in the answer given in the House of Commons, that there may be difficulties in giving effect to the new system until the whole question of our vaccination law has been dealt with by new legislation. The existing law is based on the assumption that it is desirable to vaccinate with fresh humanised lymph from arm to arm; our future law will probably be based on the assumption that it will be best to vaccinate with stored glycerinated calf lymph. The two systems are scarcely reconcilable, and we can well understand that the latter system can hardly be brought into efficient working so long as it is controlled by legislation intended to secure a totally different result. However satisfactory the answer may therefore be, we shall probably have to wait until next session before effect can be given to it.

MULTIPLE TUBERCULOUS ULCERS OF THE STOMACH.

TUBERCULOUS ulcer of the stomach is conceded by all writers on pathology to be of extremely rare occurrence—some, indeed, of the earlier ones considering that organ almost immune from tuberculous infection. Again, some few of the earlier writers claim to have found it with comparative frequency in the necropsies of tuberculous subjects. In the *Johns Hopkins Hospital Bulletin* for April, 1897, is a paper on this subject by Dr. Alice Hamilton, detailing the pathological conditions of three cases in which tuberculous ulcers were found in the stomach. The first case was that of a coloured female aged thirty years. She was the subject of pulmonary and laryngeal tuberculosis. The intestines were the seat of numerous ulcerations. The stomach showed a large number of ulcers, from 115 to 120, scattered over the entire organ, but most thickly in the anterior aspect, near the greater curvature. These ulcers were round or oval, usually smaller than a penny, with rounded, thickened edges, generally smooth and undermined for a variable distance. Microscopically the ulcers varied in appearance, depending upon the extent of their development. In the more advanced stages necrosis of cells existed, with fragments of nuclei. Tubercle bacilli appeared in small numbers along the free surface of the ulcers and singly, embedded in the tissues, among the clusters of epitheloid cells. The second case was that of a male, aged fifty years, who had pulmonary tuberculosis but no intestinal ulceration. The mucous membrane of the stomach was congested, and along the greater curvature, almost over its entire extent, small ulcers occurred, from seventy to seventy-five in number. They presented worm-eaten edges and uneven bases, which sometimes, but rarely, were covered with small granulations. They extended usually only partly through the mucosa. Tubercle bacilli were present in large numbers, and often they occurred in great clumps. The main masses were on the free surface of the ulcers, but they were also found deeper among the glands or within their lumina. The third case (given in an addendum to the paper) was that of a coloured girl, aged eleven years, the subject of pulmonary tuberculosis and general miliary tuberculosis. The serous coat of the stomach was covered with small and large caseous tubercles. Midway between the pylorus and the cardiac orifice on the posterior aspect of

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the lesser curvature was a large, irregularly oval, crater-like erosion, 3 c.m. by 2 c.m. in size. The edges were raised and undermined. A second smaller erosion was found above this one in the middle of the lesser curvature. In the duodenum, just beyond the pyloric orifice, was a large ulcer with caseous tubercles covering its base. Tubercle bacilli were found in the ulcer in the stomach. In this case the question naturally arose whether or not the ulcerative process in the stomach was merely secondary, having been caused by a lymph gland adherent to the stomach, which was caseous and at first was suspected to have ulcerated through to the free surface. The microscopic examination proved, however, that the process in the stomach was quite independent in its origin, as the still intact muscular wall could be traced along the whole extent of the ulcer between it and the caseous gland behind.

THE CHARITY OF LOAN SOCIETIES.

CHARITY in Ireland sorely needs organisation if we are to believe the report recently issued by a special committee on the management of the hundred or more loan societies operating in that country. The evidence contained in the pages of this document is sufficiently startling even in these days of sensational finance. In it we have to search carefully for signs of an honest policy, to so large an extent has the name of charity—for these loan societies are described as "charitable"—become the cloak of fraud. The all-powerful person in a society of this kind is it appears the clerk. This official, though nominally responsible to the members, is practically free from supervision and as a rule has used his liberty to enrich himself at the expense of his society. Falsification is a frequent feature in his accounts, but whatever in them suffers diminution his own salary does not. It is by the clerk's authority that loans are issued irrespectively of the character or status of the applicant, that assumed and fictitious names are used, borrowers accepted as sureties, fines levied with unwarranted freedom, and, in short, that illegality and informality abound in every department of this most uncharitable system. Thousands of poor peasant debtors suffer in consequence, between 70 and 80 per cent. of the families in one district having been, it is stated, indebted to a society for the past ten years. Charitable grants form a part of the plan of operations under this loan system. For these the surplus accruing to any society is liable, but we are informed that the poor and the sick have gained little from this source of supply. It is long since we have read a more disgraceful history than this record of dishonest and slovenly mismanagement. The special committee appear thus far to have discovered no reason to qualify their own strongly expressed opinions on the conduct of these societies, and it is evident have no intention of shielding them from its consequences.

THE DIAMOND JUBILEE: A SUGGESTION.

WHILE every nerve is being strained to make the Diamond Jubilee procession on June 22nd a success, the fact does not seem to have been realised that on that day perhaps more than on any other occurs a most fitting opportunity for making a lasting patriotic impression upon the public and causing the heart of the people to beat in unison with that of their Sovereign. On that day Her Majesty the Queen will be the one object upon which every thought will be centred, and upon her will rest, not only the eyes of the people of the vast British Empire, but also the eyes of the peoples of the world. On that day our people will realise that Her Majesty, surrounded as she will be by representatives of the British Empire throughout the world, is the emblem—and the fitting emblem—of the greatness, the power, and the glory of a nation who, holding out her arms from England, her home, to the uttermost ends of the earth, has gathered to her bosom the heathen and the slave and has scattered broadcast over their lands the blessings of civilisation. For the Diamond Jubilee to be the success which we all wish it to be there must be complete sympathy between the people and the Queen and Empress, who represents in her person the empire upon which the sun never sets. This being so, we can conceive of nothing which would better tend to bring about such a desirable consummation than the official issue of a souvenir taking the form of a programme of the procession, illustrated by thumb-nail sketches in colours (if possible) of the types of those taking part in it, in the exact order in which it will pass the public. The man in the crowd would then be able to take an intelligent interest in all that passes his eye, and he whose interest has been aroused by the expectation of brilliancy and pomp only would awaken to the fact that he, too, is a member of the British Empire, and would then realise that in his loyalty to its figure-head depends its stability. Such a souvenir should not cost more than one penny, but the psychological result would be to the nation and to the Government such that the country would be the gainer even if the souvenir were given away gratis. We are well aware that the time now left for such an undertaking—one of very considerable magnitude—is short; but it is wonderful what the British race, when once they have made up their minds to a definite course of action, can do, and we appeal to the authorities to consider favourably our suggestion.

THE OMNIBUS IN SUMMER.

"FULL outside" is the usual announcement of the omnibus conductor to the would-be passenger when the fine, warm weather of the summer months has set in. And there are few that can endure sitting inside on account of the oppressive heat, the character of which can only be likened to a glass house under full bombardment of the sun's ray. Those, of course, who are anxious to arrive at their destination at a certain time—as, for instance, to catch a train—are compelled to go inside and endure the oppressive and stifling heat as best they can. Surely this discomfort need not be. Why cannot the fixed glass windows be made to slide up and down as in a railway carriage, or, as we believe, in many of the tramcars? We are quite certain that there would be very few persons on a hot sunny summer day who would object to every window being down. It would certainly pay the companies to afford this advantage, since whereas on many days in the summer they now carry only fourteen passengers outside they would secure twelve additional passengers inside if the conditions could be made as agreeable there as on the top in the breeze. As it is, the omnibuses are commonly empty within but full outside, which, apart from any other consideration, adds top-heaviness to the vehicle, and may be dangerous and conducive to capsizing of the vehicles. If the omnibus companies would adopt the simple expedient we suggest it would be a source of increased income to them and a decided boon to the public.

AVULSION OF THE RECENTLY INVERTED UTERUS.

WE record this week an extremely interesting case reported by Mr. Hickson Smith. A patient had been attended in her labour by a midwife. The child was born while she was on her hands and knees. After separating the child and putting the patient to bed the midwife observed that there was a large lump protruding from the vagina. This she thought was the head of a second child, and she pulled on it for three-quarters of an hour till it came away. Mr. Hickson Smith, who saw the patient two hours after delivery, found her

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suffering from shock, and on making an examination found that the examining finger passed freely about among the intestines. No uterus or cervix could be felt. When he examined the lump which the midwife had pulled away he discovered that it was the whole uterus and cervix, with the peritoneal coat, and there was one Fallopian tube attached to it without the corresponding ovary. The patient made an uninterrupted recovery. Inversion of the uterus is fortunately an extremely rare accident. When it occurs the nature of the case is generally evident. But there are many cases scattered through obstetrical history in which the inverted uterus has been mistaken either for the head of a second child, as in Mr. Hickson Smith's case, or for a second placenta. In some examples of the former mistake the forceps even has been applied. Cases like the one recorded by Mr. Hickson Smith are referred to by Dr. Barnes as follows: "More marvellous still, cases have occurred in which the recently inverted uterus has been torn away by the attendant, the patient recovering." The same occurrence is also mentioned by Churchill in his "Diseases of Females" in relation to the question of the extirpation of the whole uterus for cancer: "In one instance the inverted uterus was removed by a midwife (Bernhard); in others it has been torn away (Fignet-Siebold). There are cases on record where the issue was less fortunate." The last sentence evidently implies that in the instances given the patients recovered.

MEDICAL OFFICERS OF HEALTH AND THE DIAMOND JUBILEE.

IT is satisfactory to note that certain medical officers of health are taking advantage of the spirit of loyalty which is finding such remarkable expression all over this great empire of tracing back in their current annual reports the vital statistics of their districts during the years covered by Her Majesty's reign. This action on the part of medical officers of health seems to us to be an especially happy and graceful one, and one which is, furthermore, calculated to interest the members of district councils and other local bodies. The spirit of retrospection is "in the air," and district councillors will read during 1897 summaries of progress which they would be loth to peruse on any other occasion. The progress of sanitary science during the past sixty years will rank high among the events of the nineteenth century, and it is gratifying to learn that in some districts the Diamond Jubilee is to be celebrated by some measure of sanitary reform which is bound to prove a substantial and lasting blessing to the inhabitants of the district. Prominent among such measures as this is to be recorded the cleansing of the "Notting-dale special area," which is situated in the wealthiest parish in the world—the parish of Kensington. This "special area" Dr. Orme Dudfield, the medical officer of health of the district, has shown to possess an altogether abnormally high death-rate, and although the measures which it is proposed to take to commemorate the Jubilee may not for some time find an expression in a diminished death-rate, they cannot fail to infuse more brightness and cleanliness into the lives of the luckless people who inhabit the area in question. It is, however, to be regretted that the committee appointed to carry out the improvements have not seen their way to adopt Dr. Dudfield's suggestion for the amelioration of the condition of the inhabitants by the provision of a certain number of healthy and decent homes.

SALFORD WORKHOUSE.

FROM time to time cases occur which show that even in workhouses, which in general are well managed, perfection has by no means been attained. One night the week before last a constable was hailed by a cab-driver and told that a woman in the cab had been refused admission to the workhouse. He got on the cab and told the man to drive to the Cross-lane police station, Salford. Before getting there the woman gave birth to a child in the cab. Mr. Wolstenholme was called and said she must be taken back to the workhouse. On arrival there great difficulty and delay were experienced in gaining admission. The constable had to climb the gates and, according to the report, to ring a bell for twenty minutes before anyone appeared. It seems there is a night bell at the entrance, but it is so well hidden behind a pillar that the constable, with four years' knowledge of Salford, had never discovered it. This "unfortunate incident" was referred to the House Committee for inquiry, the result being that on Friday last it was recommended "that a bell be placed on the outside of the workhouse." This was most thoughtful, as it would be so much more useful than if placed in the inside. Mr. Somers, one of the guardians, said there was not an institution in Manchester or Salford where so many inmates—about 1000—were housed together without a night porter being on duty. He would have a night porter, but not a bell outside, as "mischievous people would delight in ringing it." Another guardian said it was "quite right that in case of fire in the house they should have a man so placed as to be able to give information outside." There will be general agreement with this proposition, but it may be hoped there is already some provision inside for dealing with fire. The possible repetition of the "unfortunate incident," or of some urgent call for admission at night, does not seem to be contemplated, for—so far as can be gathered from the report—there is to be no bell, but the question of the appointment of a night watchman is to be referred to the House Committee.

DR. W. HALE WHITE will deliver the Croonian Lectures, on "The Means by which the Temperature of the Body is Maintained in Health and Disease," at the Examination Hall, Savoy, W.C., on the following Tuesdays and Thursdays at 5 o'clock—June 15th, 17th, 24th, and 29th.

H.R.H. THE DUKE OF CAMBRIDGE, K.G., will preside at the dinner commemorative of the twenty-first anniversary of the Sanitary Institute on Wednesday, July 7th, at the Holborn Restaurant."

THE annual dinner of the West London Medico-Chirurgical Society will take place at the Trocadéro Restaurant, on Friday, June 11th. Lord Lister is expected to be present.

THERE will be a meeting of the Hospital Reform Association at Bristol on June 18th, at 4 P.M.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Knoblanck, First Assistant in Professor Oelshausen's gynæcological clinic, has qualified as *privat-docent*. Dr. Heinrich Albert, the well-known hygienist has been granted the title of Professor.—*Bonn:* The title of Professor has been conferred upon Dr. M. Wolters, *privat-docent* of Dermatology.—*Breslau:* Dr. E. Kaufmann, *privat-docent* of Pathological Anatomy, has been appointed Extraordinary Professor.—*Gröningen:* Dr. Albert Döderlein, Extraordinary Professor in Leipzig, has been appointed Professor of Midwifery and Gynæcology in succession to Dr. Sänger who has retired.—*Kieff:* Dr. Alexander D. Pavlovsk, Extraordinary Professor of Surgical Pathology, has been appointed Professor.—*Marburg:* Dr. Jacob Zumstein, *privat-docent* of Anatomy and Prosector, has been granted the title of Professor.—*Prague (Bohemian University):* Dr. Ottokar Kukula has qualified as *privat-docent* of Surgery.—*St. Petersburg (Military Medical Academy);* Dr. N. A. Veliarminoff, Extrordinary Professor of Surgical Pathology has been appointed Ordinary Professor.

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The Lancet Special Commission

ON

SICILY

AS A HEALTH RESORT.

I.

Geographical Position of Sicily; the Central Island of the Mediterranean. — Chequered History of Sicily. — Great Importance of Sicily as Contrasted with Sardinia, Corsica, Crete, or Malta.—Modes of Approach to Sicily.—First Impressions of Palermo.—Richness of the Sicilian Flora.—Varieties of Racial Type.—Poverty and Begging.—Institutions of Palermo.—Geological History of Sicily.—General Character of the Scenery.—Coast and Interior.—Diboscamento.—General Sketch of the Climate of Sicily.

THE geographical position of Sicily is the key to the climatic and ethnic characteristics of the island, and affords a clue to the singularly interesting and chequered course of Sicilian history. Sicily is the central island of the Mediterranean. It lies almost midway in the great central sea between Spain and Asia Minor. It is nearer Tunisia—from which it is divided by a channel about eighty miles wide of, for the most part, quite shallow water—than it is to Campania or to Sardinia. Politically a part of Europe, Sicily is in reality an intermediate territory between east and west, between north and south. Hence it has been the meeting place of different nations, the battle-ground of contending dynasties and of rival creeds. It was on the coasts of Sicily that the first Greek colonies settled in that great swarming period of the Hellenic race in the eighth century before Christ. To the same coast came the Phœnician trader from Tyre and his kindred from Carthage. It was in Sicilian waters that Rome and Carthage fought out the first round in their great duel for the supremacy of the world, and at later epochs of the world's history Sicily has been the scene of the strife of Saracen and Norman, of Frenchman and Swabian, of Spaniard and Piedmontese. Several times in the course of her eventful history has Sicily been the seat of a strong local Government—under Dionysius in the days of Syracusan supremacy, under the Norman kings, and under Frederick II, who so nearly inaugurated the Renaissance amidst the orange-groves of Palermo, but her more usual fate has been that of the victim and plaything of more potent or more warlike neighbours. As Manfred in Schiller's *Braut von Messina* says:—"Das Land kann seine Kinder nicht schützen" (The country is unable to protect its own children). Phœnician and Greek, Roman and Carthaginian, Vandal, Goth, and Byzantine, Norman and Saracen, Frenchman, Swabian, Spaniard and Italian, have fought for the possession of Sicily, and have alternately covered the land with waving harvests and artistic beauty or filled it with confusion, rapine, and bloodshed. The course of history marks out Sicily as differing essentially from the rest of Europe, and as possessing peculiar relations with the African continent and with the Orient. It will be seen hereafter that these facts have an important relation to the meteorology and climatology of the island.

The position of Sicily in history is in striking contrast with that of the other great Mediterranean islands—Sardinia, Corsica, Crete, and Malta. Sardinia gave a name to a ruling dynasty, but its own internal history is obscure and unimportant. Corsica is chiefly remembered as the birthplace of Napoleon. The importance of Crete is confined to mythical times, to the days of Minos and Dædalus. Malta is simply an outpost of British commerce and British arms, But Sicily has never ceased to be the scene of great events, and at one time or another has played a leading part in the fortunes of all the great nations which have ruled along the shores of the Mediterranean. Hence the singular charm of Sicilian history; hence the richness of the land in artistic remains, in literary associations, in ecclesiastical architecture. Wherever we go in Sicily we are upon enchanted ground. Homer, Pindar, Thucydides, Theocritus, Virgil, Cicero—to mention a few great names out of many—abound in allusions to Sicily. The rocky height of Enna reminds us of Demeter and Proserpine. The Etna country is strewn with myths of Ulysses and Polyphemus, Acis and Galatea, Titans and Cyclopes, Enceladus and Vulcan. The ruin and desolation of Segesta and Selinunte, of Girgenti and Syracuse tell their moving tale of the fleeting nature of human things, and are eloquent of extinct ambitions and outworn creeds. Wherever we go in Sicily we are oppressed by the weight of the mighty past, and we come to realise the almost literal truth of Professor Strafforello's picturesque statement "Ogni zolla in questa paese è storia" (Every clod in this land is history).

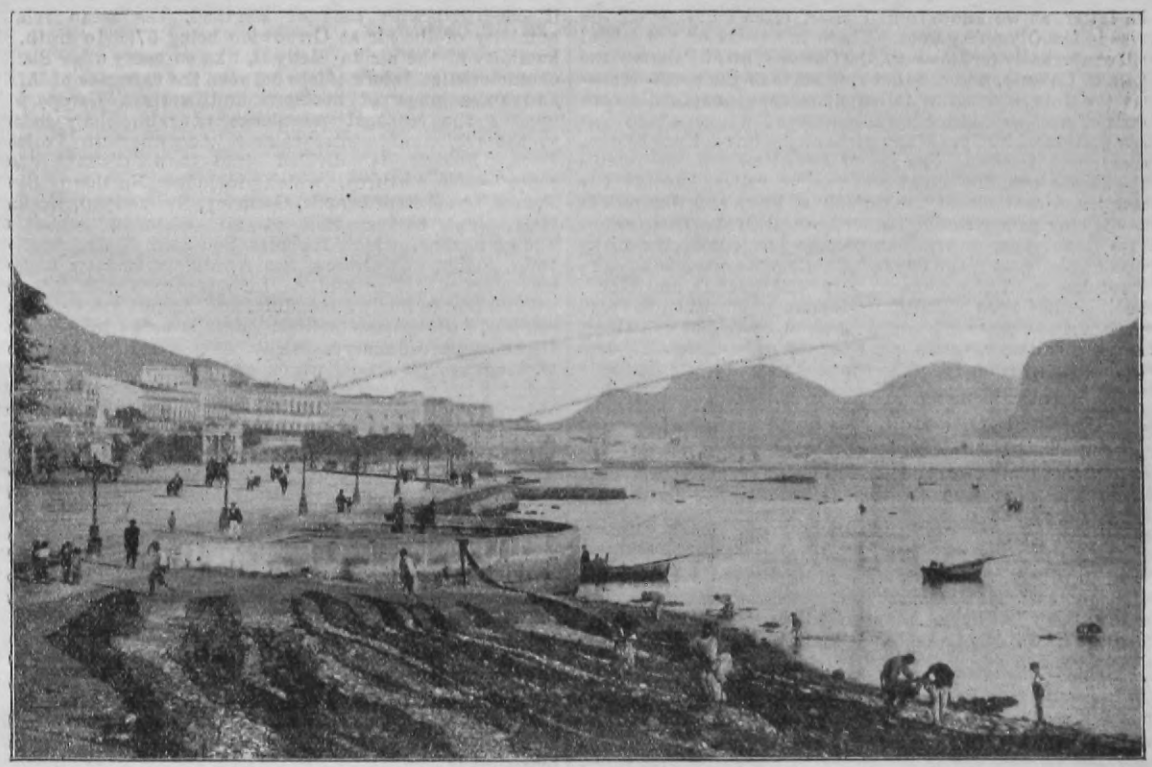
Sicily may be approached (1) by rail from Naples to Reggio, whence the traveller is ferried to Messina, the entire journey from Naples to Messina occupying about 14 hours; or (2) by steamer from Naples to Palermo, a passage of from 11 to 12 hours; or (3) by steamer from Malta, a passage of from 7 to 8 hours. By either the first or the second route the journey from London may be put down at three days, by the third route at about eight days. If the traveller selects the second route, which offers many advantages, he sails from Naples at 8 P.M. in one of the fast and comfortable steamers of the Florio-Rubattino Company, and at dawn the following morning he finds himself in sight of the picturesque northern coast of Sicily. The approach to Palermo is justly celebrated. The beautiful bay flanked by Monte Pellegrino and Monte Catalfano, the rich expanse of the Conca d'Oro with its innumerable orangeries and lemon groves and its girdle of enclosing mountains, in the near distance the busy port, handsome esplanades, and luxuriant gardens of the Sicilian capital, and on the horizon the snowy summits of the Madonian mountains—these constitute a scene which rivals Sydney Cove, the Bay of Naples, or the Harbour of Rio Janeiro. Monte Pellegrino, a solid mass of naked limestone, would seem to have exercised a singular fascination over Goethe. In one passage of his "Italienische Reise" he calls it "the most beautiful promontory in the world," and in another passage of the same work he says: "Seine schöne Form lässt sich mit Worten nicht beschreiben" (Its beautiful form cannot be described in words). It is, indeed, an imposing mass, but it owes no small part of its charm to the ever varying play of colour which Sicilian sunshine and Sicilian air produce on its bare sides and denuded summit. If the weather be favourable the first impressions of the traveller on landing in Palermo will be in a high degree vivid and pleasing. The brightness of the sunshine, the softness of the air, the richness of the flora, the variety of the architecture—Norman, Gothic, Moorish—the diversity of ethnic type, the gay dresses and *al fresco* life of the people, the streets planted with the slender plane or the graceful pepper tree, the gardens waving with palm trees and ablaze with Judas tree and *Erythrina*, the picturesque Sicilian carts, the noisy but musical cries of the multitude of hawkers, the jingle of mules' and donkeys' harness, the clang of the goat bells,—these make a varied and charming scene only to be enjoyed in Sicily on a fine morning in spring or early summer. A closer inspection of Palermo will, on the whole, justify the first favourable impressions of the traveller. An air of vigorous life and progress pervades the Sicilian capital. The port is crowded with steamers from all parts of the Mediterranean; new streets, wide and well planted, are springing up; and in the suburbs handsome villas and beautiful gardens abound. The botanist will find in the singularly rich and varied flora an inexhaustible field of observation. To this subject further reference will be made, as it has important bearings upon climate and health. The student of ancient art and mediæval architecture will find ample scope for his researches in the admirable museum, the beautiful Cappella Palatina, the cathedral, so impressive without, so disappointing within, the numerous churches of different epochs, and, above all, in the grand cathedral of Monreale, which is no unworthy rival of St. Mark's, Venice. The historical inquirer can here work an inexhaustible mine. Carthage, Greece, and Rome have all ruled here. Vandal, Goth, Saracen, Norman, Spaniard, Frenchman, and Italian have fought for this land and have made history in this corner of Sicily. A chequered history has left as its legacy a remarkable diversity of racial type. Here we see a pure Greek face, like a Caryatid from the Erechtheum; there such a face as Titian loved to paint—oval, with dark, lustrous eyes, low forehead, full cheeks, and small nose and mouth; now we are reminded of the Spanish occupation by an unusual hauteur and dignity of pose, and again in the full lips and swarthy hue of some of the lower classes we apprehend the possibility of negroid admixture. The prevailing type is, however, unquestionably Italian and

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not to be readily distinguished from that of Campania or Calabria. The agreeable impression which Palermo makes upon the traveller is not, however, unmixed. The cleanliness of the city, though superior to that of many Italian towns—e.g., Naples or Venice—still leaves much to be desired. Poverty is much in evidence, and strikes the observer the more inasmuch as it exists side by side with wealth and luxury, and begging—"l'eccessivo e nauseante accattonaggio che si esercita per le strade di Palermo" (the excessive and repulsive mendicancy which is practised in the streets of Palermo) is the frank but unexaggerated language of the "Associazione pel Bene Economico" on this subject—is practised to a truly distressing extent. But we must remember that we are in Southern Europe and that such things are, unhappily, the norm of the latitude.

Palermo is not merely the capital of Sicily, it is the true metropolis of the island, the centre of all that is most vigorous in its commercial, intellectual, and social life. There is a university attended by 1100 students, there are numerous schools and philanthropic institutions, a well-equipped astronomical and meteorological observatory, several admirable botanical collections, many hospitals, libraries, and scientific collections of various kinds. In one of the hospitals there exists an operating theatre thoroughly equipped with every modern appliance and in all respects comparable to the theatres of the leading hospitals in London, Paris, and Berlin. In the same institution a new detached ward for operation cases bore over its portal the honourable title, "Sala di Lister." Perhaps the most interesting of the hospitals of Palermo is the "Ospizio Marino," erected in an open and healthy locality near the sea for the treatment of cases of "scrofula" and rickets, especially for those requiring operation. The institution is a model of cleanliness and efficiency, and it is not surprising to learn that the results of treatment obtained there have been most gratifying. There are many evidences of public spirit and philanthropy in Palermo, and it is but just to add that in all such works the members of the English colony have been pre-eminent. The subject of the suitability of Palermo as a health-resort may be reserved for future consideration. This question will more profitably engage attention after we have dealt fully with the meteorology and climatology of Sicily as a whole. The present article is preliminary, and is confined for the most part to a general sketch and to first impressions.

Sicily has an area of 9935 square miles, less than one-third that of Ireland. It is of comparatively recent geological formation. Geology shows that the fauna and flora of Sicily are more ancient than the island itself. The greater part of the island was converted from the sea after the Mediterranean was already populated by nearly all the actually existing species. The separation from Italy took place long before the advent of man. The mountain range which runs out towards the north east of Sicily is composed of crystalline rocks similar to those forming the parallel range of Aspromonte in Calabria, but upon these rest sedimentary strata belonging chiefly to an early tertiary epoch. A subsequent land connexion took place by the elevation of the sea bed, and it is probable that there was a direct post-tertiary connexion also with the African continent. The fossil fauna (e.g., the great quantity of remains of pachyderms) and the great subterranean plains bear testimony to the ancient connexion between Sicily and Africa. From Marsala to Cape Bon in Tunis there still extends to-day a subterranean bridge 120 kilometres long, the depth of the sea being only a little more than 200 metres. "La Sicilia è dunque," says Professor Strafforello, "per così dire, una gran pila rimasta in piedi di questo gran ponte terrestre sommerso da lungo, ma che va del continuo lentamente risollevandosi." (Sicily is then, so to say, a great pillar still remaining above ground of this great terrestrial bridge, submerged long ago, but continuously rising slowly.) The superficial strata of Sicily are mainly tertiary, and the great height attained in some places by tertiary rocks (e.g., Castrogiovanni, the ancient Enna, 3270 ft. above the level of the sea) is one of the chief geological peculiarities of the island. The Monte Peloritani in the north-east are crystalline rocks belonging to the primitive formation, and the mountains of the north coast, with their ramifications to Monte Giuliano (the ancient Mount Eryx), and Monte San Calogero, near Sciacca, are composed of secondary calcareous rocks. The plains of Catania, Terranova, and Licata are quaternary and alluvial. Mont Etna, which stands apart from the other mountain systems of Sicily and rises to the



Palermo.

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height of 10,835 ft., is the youngest mountain in Sicily and belongs to geological times comparatively recent. Sicily is a very mountainous country and has hardly any considerable plains, the Piana di Catania and the Campi Geloi being the chief. The north coast is almost uniformly rocky and precipitous and abounds in striking and picturesque scenery. From Lilybœum (Marsala) to Gela the coast is composed of clay and is almost harbourless. From Gela to Cape Pachynus (Cape Passaro) the coast is low but rocky. From the latter point until the volcanic region of Etna is reached the coast is varied with deep bays and rocky promontories. Several good harbours are found on this part of the coast, notably the Porto Grande of Syracuse and the Bay of Augusta. From the mouth of the Simeto to that of the Alcantara—i.e., the region between Catania and Taormina—the coast is composed of lava and other volcanic material. The scenery here attains a high degree of beauty and grandeur. The centre of Sicily belongs entirely to the tertiary formations—calcareous or arenaceous—and consists of rocky uplands intersected by deep valleys. The fertility of Sicily is lauded by the ancient writers, and we know that the island was one of the great granaries of the Roman Empire. At an earlier period Sicily was famous for its oxen and its horses—the latter, as we know from Pindar, often carrying off the prize in the Olympic games. There are parts of the island still exuberantly fertile—e.g., the Conca d'Oro of Palermo, the Plain of Catania, and the rich vine lands of the north-west—but the fate which has fallen upon the once fertile corn lands of northern Africa has also descended upon a considerable portion of Sicily. Many parts of the interior are barren, naked, and treeless. Ranges of bare limestone mountains fatigue the eye, and silent and sombre valleys bewilder the traveller, who thinks of the worship of Flora and who recalls the glowing panegyrics of Theocritus and Ovid. There seems little doubt that a grievous change has come over many parts of Sicily since the days of the Roman supremacy. The island has been the scene of perpetual warfare and bloodshed. It has been pillaged by Roman pro-consuls, ravaged by Saracen conquerors, and exhausted by feudal exactions. One of the greatest evils has been the deforesting—*diboscamento*—of the country. The once luxuriant forests of Sicily have almost disappeared, with the exception of some isolated regions, such as the confines of Mount Etna and the Madonian Mountains, where the *ilex* and *castagna* still flourish. This *diboscamento*, which has taken place since the sixteenth century and has gone on rapidly in recent times, has been due to various causes—the poverty of the country, the dread which the peasantry have of the injury believed to be inflicted on the crops by the small forest birds, &c. The effect of the deforesting has been to diminish the rainfall of Sicily, to increase the tendency to drought in many parts, and to impair the once extraordinary fertility of the island. On the other hand, the cultivation of Sicily has recently made considerable progress. The cultivation of cereals and of some trees, especially the "agrumi"—a collective term which includes oranges, lemons, and citrons—has had a considerable development. The Saracens inflicted many woes upon Sicily, and the story of their occupation is written in blood and fire; but if the tradition be true which attributes to them the first introduction of oranges and lemons to the country, they have been amongst its greatest benefactors.

The climate of Sicily belongs to the warm marine class. It is characterised by great equability and freedom from extremes, either annual or diurnal, a high proportion of warm, bright, sunny days, moderate humidity, a moderate rainfall, a considerable amount of wind, and comparative exemption from fog, mist, or severe cold. Warmth, mildness, brightness, and equability are the predominant notes of the Sicilian climate. With the exception of an occasional day of sirocco, when the thermometer may rise to 100° F. in the shade or upwards, extreme heat is very rare, and in the lowlands and upon the coast-line extreme cold is unknown. Snow rarely falls at the sea level, and the thermometer only very exceptionally—perhaps four of five times in the year—touches freezing-point. The lowest recorded temperature at Palermo or Catania rarely in any year falls below 28° or 30° F., and in many winters never reaches freezing-point. The mean temperature of the warmest month, July, at Palermo is 26·03° C. (= 78·85° F.), and at Catania 26·65° C. (=79·9° F.), while the mean temperature of the coldest month, January, at Palermo is 10·89° C. (= 51·6° F.), and at Catania 9·73° C. (= 49·5° F.). The mean daily range of temperature is 6·7 C. (= 12° F.) at Palermo, and 7·7° C. (= 13·8° F.) at Catania. These figures indicate a very high grade of equability, annual and diurnal. The mean annual temperature is 18·15° C. (= 64·67° F.) at Palermo, and 18° C. (= 64·4° F. at Catania. Palermo has an average of 167 "giorni sereni"—i.e., days of cloudless sunshine—in the year, and in addition it has an average of 62 "giorni misti"—i.e., "mixed" days, or days of partial cloud and partial sunshine. Catania has an annual average of 164 "serene" days and 118 "mixed" days. As the days denominated "misti" by the Sicilian meteorologists would be called fine, if tried by the English standard, we may say that Palermo has, on an average, 229 fine days in the year, and Catania on an average no less than 282 fine days. We need not stay to comment upon the high importance of these figures to the invalid and health-seeker. Palermo has a mean annual rainfall of 758·68 mm., = 29·87 in., which falls upon 116 days. Catania has a mean of 542·7 mm., = 21·37 in., which falls upon 86 days. The mean relative humidity of the air is 65·4 at Palermo, and 61 at Catania. These figures show that while the climate of Sicily may be described as "damp" if compared with that of Cairo, where the mean relative humidity is only 58·4, it may be described as "dry" if compared with that of England, the mean relative humidity of the air at Greenwich being 87. In truth, the humidity of the air in Sicily is, like so many other Sicilian characteristics, intermediate between the extremes of Africa and some parts of northern and western Europe. As regards the seasonal prevalence of rain, Sicily belongs to the region of winter rains. According to Professor Dove, Europe is divided into two distinct "rain zones"—the northern, which includes Northern Spain, France, the British Islands, Germany, Switzerland, Northern Italy, &c., having rain at all seasons; while the Southern zone, which includes Southern Spain, Southern Italy, Sicily, and Greece, has a rainless summer and the maximum rainfall in winter. In accordance with this law, we find that in Sicily June, July, and August are practically rainless, and that the heaviest rainfalls occur in November, December, and January. Sicily has a considerable amount of wind, though strong winds and storms are not frequent. Palermo has an average of only thirty-three days designated as "ventosi" (windy) in the year. The sirocco is one of the most serious drawbacks to the Sicilian climate. It is most frequent at the equinoctial seasons and is rare in winter. All these questions will be more fully dealt with in a subsequent article. For the present it is sufficient to say that Sicily has the mildest and most equable climate in Europe, that extremes of heat and cold are rare, that the proportion of bright sunny days is remarkably high, that the humidity of the air and the rainfall are moderate, and that the climatic conditions generally are favourable both for the healthy individual and for many cases of debility and disease.

The above is a short sketch of the general features of the climate of Sicily. In the next article the subject will be considered more in detail, and full statistical information will be given.

[Our Special Commissioner, who has been able to collect full details regarding the meteorology of the most important localities in the island, desires to acknowledge his indebtedness to the following gentlemen for much information and kind assistance in connexion with this department of his inquiries: Professor De Lisa and Professor Zona, of the Royal Observatory of Palermo; Signor Antonina Mascari, of the Royal Observatory of Catania; the Marchese di Gallidoro, F.R.M.S.; Signor Guiliany, Director of the Royal Meteorological Observatory of Syracuse; Professor Ciofalo, of Termini; Professor Lancetta, Director of the Observatory of Girgenti; Professor Ughetti, of Catania; and Dr. Palumbo, of Castelbuono.]

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

Report of the Medical Superintendents upon the Use of Antitoxic Serum in the Treatment of Diphtheria in the Hospitals of the Metropolitan Asylums Board during the Year 1896.

THIS report, which has just been issued, constitutes the most exhaustive and elaborate statistical study of the antitoxin treatment of diphtheria which has yet appeared. The

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treatment has been continued during the past year in a most systematic manner in all the hospitals of the Board, with the exception of the North-Western Hospital, and the report is based upon the facts observed by the medical staffs of the hospitals, collated and analysed in a most careful manner. Excluding the North-Western Hospital, it appears that this treatment was pursued in 71·3 per cent. of the total number of cases admitted, its employment not being had recourse to in moribund or hopeless cases, or in those which were doubtful in nature or so mild as not to require any specific treatment. Altogether, there were 2764 cases thus treated, of which 717 died—a mortality of 25 9 per cent., ranging from 32·3 per cent. at ages under five years to 4·2 per cent. at ages of twenty years and upwards. The notable fact that the best results are obtained by the early adoption of the treatment is clearly brought out, for of all cases at all ages in which the treatment was commenced on the first day of the patient's illness the mortality was only 5·2 per cent., for those in which treatment began on the second day it was 15·0 per cent., on the third day 21·9 per cent., on the fourth day 27·8 per cent., and on the fifth day and upwards 31·7 per cent. The value of these results is strengthened by the fact that the proportion of the very young was much greater amongst those treated by antitoxin than amongst those not so treated; thus in the antitoxin series 48·6 per cent. were under 5 years of age, and 13 per cent. above 10 years, whilst in the non-antitoxin series there were 31·1 per cent. under 5 years and 36·7 per cent. above 10 years. Another example of the greater comparative severity of the antitoxin series is to be found in the fact that in this group the percentage of laryngeal cases was 17·6 as compared with 1·9 in the non-antitoxin series. In order, however, to arrive at a definite conclusion as to the effect produced by antitoxin, a comparison is made between the age-incidence and mortality of all cases of diphtheria (whether treated by antitoxin or not) treated in the year 1896 with those treated in the hospitals of the Board in 1894, when antitoxin was not employed. In 1896 the total number of cases admitted was 4175; 871 deaths, or 20·8 per cent. mortality. In 1894 there were 3042 admitted; 902 deaths, or 30·8 per cent. mortality. The comparison is even more striking when the figures are grouped according to the day of disease at which the cases came under treatment; for, as will be seen from the accompanying Tables II. and III. (in the Report the figures for each year of age up to five are separately given), the difference in mortality between the 1894 and 1896 cases admitted on the first day is 22·5 per cent. and 4·7 per cent., on the second day 27·0 and 12·8, on the third day 29·4 and 17·7, on the fourth day 31·6 and 22·5, on the fifth day and after 30·8 and 24·6.

TABLE II. (*condensed*).—*All Cases of Diphtheria, 1896.*

Day of disease.* / Ages.	1st. Cases.	1st. Deaths.	2nd. Cases.	2nd. Deaths.	3rd. Cases.	3rd. Deaths.	4th. Cases.	4th. Deaths.	5th and after. Cases.	5th and after. Deaths.	Total. Cases.	Total. Deaths.	Mortality per cent.
Under 5 ...	34	3	253	54	351	93	338	110	810	281	1786	541	30·2
5 to 10 ...	37	1	216	17	287	47	298	61	670	147	1508	273	18·1
10 to 15 ...	11	0	67	2	83	4	96	12	236	26	493	44	8·9
15 to 20 ...	1	0	9	0	28	1	33	2	63	5	134	8	5·9
20 and upwards ...	1	0	22	0	74	1	57	0	100	4	254	5	1·9
Total	84	4	567	73	823	146	822	185	1879	463	4175	871	20·8
Mortality per cent.	—	4·7	—	12·8	—	17·7	—	22·5	—	24·6	—	20·8	—

* In the case of those not treated with antitoxin, day of disease = day of disease in which the patient was admitted to hospital.

Collating the figures given of those under ten years of age, of whom there were in all in 1894 2246, with 836 deaths, or 37·2 per cent. mortality, and in 1896 3294, with 814 deaths, or 24·7 per cent. mortality, we find that in 1894 the rates range from 25·2 amongst those treated from the first day to 40·0 amongst those treated from the fourth day, whilst in 1896 they range from 5·6 amongst those treated from the first day to 28·8 amongst those treated from the fifth day and after.

TABLE III. (*condensed*).—*All Cases of Diphtheria before the Use of Antitoxin, 1894.*

Day of disease.* / Ages.	1st. Cases.	1st. Deaths.	2nd. Cases.	2nd. Deaths.	3rd. Cases.	3rd. Deaths.	4th. Cases.	4th. Deaths.	5th and after. Cases.	5th and after. Deaths.	Total. Cases.	Total. Deaths.	Mortality per cent.
Under 5 ...	58	22	216	107	243	111	212	108	442	208	1171	556	47·4
5 to 10 ...	53	6	179	34	215	71	208	60	420	109	1075	280	26·0
10 to 15 ...	12	2	85	4	79	8	69	5	128	22	363	41	11·2
15 to 20 ...	6	0	23	0	33	1	28	0	70	6	160	7	4·3
20 and upwards	4	0	36	1	82	1	59	6	92	10	273	18	6·5
Total ...	133	30	539	146	652	192	566	179	1152	355	3042	902	29·6
Mortality per cent.	—	22·5	—	27·0	—	29·4	—	31·6	—	30·8	—	29 6	—

* Day of disease = day of disease on which the patient was admitted to hospital.

Under ten years.	First day.	Second day.	Third day.	Fourth day.	Fifth and later.	Total.
1894.						
Cases	111	395	458	420	862	2246
Deaths	28	141	182	168	317	836
Mortality	25·2	35·7	39·7	40·0	36·7	37·2
1896.						
Cases	71	469	638	636	1480	3294
Deaths	4	71	140	171	428	814
Mortality	5·6	15·1	21·9	26·8	28·8	24·7

It is remarked that the clinical, rather than the bacteriological, evidence was taken as the criterion of diagnosis, and it is interesting to learn that in only 4 5 per cent. did bacteriology fail to confirm this diagnosis, the mortality rate amongst those cases being 27·7, or higher than the general mortality for the year. Thus, then, the difference in mortality between the years 1894 and 1896 was, on the whole, 8·8 per cent., amounting to 365 lives saved by the adoption of the treatment in the latter year. As shown by the following figures, the contrast is the more striking when the mortalities at different ages are compared. For—

	Under 5. Per cent.	Under 10. Per cent.	Under 15. Per cent.
1896.—Antitoxin cases, mortality...	32·2	27·9	26 6
1896.—All cases ,,	30·2	24·6	22·6
1894.—All cases ,,	47·4	37·2	33 6

And this in spite of the fact that the average number of cases under five years was higher in 1896 than in 1894.

One of the most striking effects of the use of antitoxin which has been testified to by every physician who has had experience of it is in the diminution of severity that it induces in cases where the larynx is implicated. This is amply borne out by these returns, for whereas in 1894 the mortality amongst these laryngeal cases was 62·0 per cent. in 1896 it was 29·6, or excluding the Fountain Hospital, which does not enter into the 1894 return, 30·9 per cent. Again the mortality after tracheotomy which was 70·4 per cent. in 1894, was 41·0 (or 42·5) per cent. in 1896, although in the latter year the proportion of laryngeal cases submitted to this operation was 56 as compared with 41 per cent. in 1894.

The same comparative statistics are given in respect to the frequency of complications of the disease as follows:—

	1894.	1896.
Albuminuria	24·1	53 4
Nephritis	1·2	0·5
Paralysis	13·2	21·3
Pneumonia, lobar	0·3	0 5
,, lobular	1·6	2·5
Relapse of disease	0·9	1·6

It must be remarked that the increased attention paid to

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the detection of albuminuria goes some way to account for the larger figures of 1896, whilst the greater proportion of paralysis, and, perhaps, also of lobular pneumonia is confirmatory evidence of the larger proportion of survival from the initial dangers of the diphtheria virus.

As regards effects probably incidental to the injection of antitoxic serum itself it may be noted that a rash was observed in 35·2 per cent. of the cases treated, joint pains occurred in 6 5 per cent., pyrexia following injection in 19·8 per cent., whilst in only 1·2 per cent. did an abscess form at the site of the injection. As compared with 1895 the practice has been improved by the use of serum of a more concentrated form, so that it has been possible for large doses (*qua* immunisation units) to be administered. The average dose was 2000 units per injection, and the average number of injections was 2·3 per patient; but often that dose was considerably exceeded, and some cases received many injections. The rule has been to increase the dose the later the case has come under treatment, and it is pointed out that the only limit to the amount of "units" employed is the bulk of the serum. As compared with the experience of 1895 the returns of 1896 show that a greater proportion of children were submitted to the treatment, but that nevertheless the mortality was lower and the recovery-rate after tracheotomy improved. Some interesting facts are given as to the effects which are observed to ensue in patients treated with antitoxin. Thus the faucial swelling is diminished, there is lessening or cessation of nasal discharge, limitation of extension of the membrane and its earlier detachment, both in pharyngeal and laryngeal cases, besides general improvement in the patient's condition and a manifest prolongation of life even in cases that do end fatally. In Section II. of the report the same line of statistical inquiry is pursued in regard to post-scarlatinal diphtheria cases, which have the advantage of coming very early under observation and specific treatment. When we consider how high the mortality of such cases is usually estimated it is surely a striking proof of the efficacy of antitoxin that the rate amongst cases treated by it was only 5 5 per cent.

The medical superintendents thus sum up the results of their clinical and statistical observations. They find that the improved results in the diphtheria cases treated during the year 1896 are: (1) a great reduction in the mortality of cases brought under treatment on the first three days of illness; (2) the lowering of the combined general mortality to a point below that of any former year; (3) the still more remarkable reduction in the mortality of the laryngeal cases! (4) the uniform improvement in the results of tracheotomy at each separate hospital; and (5) the beneficial effect produced on the clinical course of the disease. "We have had, in fact, somewhat better results to record for 1896 than we had for 1895; and, in view of the extended experience gained during the past year, together with the additional facts concerning the post-scarlatinal cases for 1896, we feel that we are fully justified in the favourable opinion we expressed last year on the value of antitoxin in the treatment of diphtheria." They emphasise the importance of early administration and the trivial character of the secondary effects, maintaining their opinion that "in the antitoxic serum we possess a remedy of distinctly—we would now say much—greater value in the treatment of diphtheria than any other with which we are acquainted." The report is signed by J. MacCombie, R. M. Bruce, F. Foord Caiger, F. N. Hume, E. W. Goodall, C. E. Matthews, F. Meadows Turner, and F. Thomson. Dr. Gayton signs a separate memorandum, in which he notes the reduction in the mortality of the laryngeal cases and in the numbers of these requiring tracheotomy, but states that the results at the North-Western Fever Hospital were not such as to enable him to subscribe to all the conclusions of his colleagues. At the same time, illness prevented him taking much part in the supervision or treatment during last year. The appendix contains a detailed list of the fatal cases amongst those not treated with antitoxin, and also the statistics of each of the six hospitals.

ROYAL LONDON OPHTHALMIC HOSPITAL: LAYING OF THE FOUNDATION STONE.

THE neighbourhood of St. Luke's made a praiseworthy attempt to look gay on Friday afternoon, May 28th, when the Prince and Princess of Wales, accompanied by their daughter, Princess Victoria, attended at 162, City-road, E.C., for the purpose of laying the foundation stone of the new hospital. Punctually at 4 o'clock the Royal party arrived, attended by Lady Emily Kingscote and Captain Holford. They were received by a guard of honour with the band and colour of the regiment, mounted by the Honourable Artillery Company. At the door the Royal party were received by the president of the hospital, Sir John Lubbock, M P.; the chairman, Mr. H. P. Sturgis; the chaplain, the Rev. Prebendary Whittington; the honorary treasurer, Mr. J. Deacon, Mr. John Tweedy and Mr. E. Nettleship, and proceeded to the reception-room. The committee, accompanied by the medical staff, the architects, and the builder, then met their Royal Highnesses, with the Lord Mayor and Sheriffs, the Hon. Alban Gibbs, M.P., Mr. Percy Thornton, M.P., and others. The chairman presented the committee and medical staff to their Royal Highnesses, who afterwards moved forward to the platform. Miss Rosamond Ridley Smith presented a bouquet to the Princess of Wales and Miss Evelyn M. Tweedy one to the Princess Victoria.

Their Royal Highnesses having taken their places, Sir John Lubbock, whose voice was quite inaudible outside the canopy-covered daïs, where the stone was to be laid, addressed the Prince, giving a brief sketch of the events which have led to the present proceedings.

The Prince of Wales said: "Ladies and gentlemen,—As Sir John Lubbock has stated, this hospital was founded in 1804 by some gentlemen whose sympathies were aroused by the terrible sufferings of the army and navy belonging to the force in the Egyptian campaign under Sir Ralph Abercrombie. Many of the earliest patients were sailors and soldiers invalided home. It is a significant fact that while in this campaign in the early part of the century ophthalmia produced great ravages—out of a regiment of 700 men there were 636 cases, of whom 40 became blind of one eye and 50 blind of both—in the campaign in 1882, though there were 1800 severe cases of ophthalmia after Tel-el-Kebir, not one man lost his sight. This was entirely due to the excellent precautions taken. The Queen began her long connexion with the hospital in 1836, before she succeeded to the throne, by becoming patron. The importance of the hospital lies, not so much in the number of beds, which are only 100, as in the extraordinary number of out-patients, which are occasionally 550 in one morning. Altogether it is estimated that over a million different persons of the poorest class, all suffering from eye diseases, have been treated in the hospital since the Queen ascended the throne. The patients come from all parts of the United Kingdom and even from the colonies. Regarding its importance as a school of ophthalmic surgery, there is probably not one ophthalmic surgeon of eminence in the United Kingdom and the British colonies who has not studied in this hospital. Qualified medical practitioners come here from all parts of the world—from Canada, Judea, a large number from the United States, and even from Peru—to study ophthalmic science and surgery. The present buildings in Moorfields are over seventy years old, and are very deficient in the air, space, light, and quiet necessary for the patients, and there is often even insufficient standing room for the out-patients. The new hospital, which it is hoped will be soon completed, will greatly benefit sufferers from eye disease. The cost will, however, be very heavy and beyond the resources of the hospital committee unless they can succeed in obtaining a more liberal support than has been hitherto accorded to them. Therefore it gives the Princess, my daughter, and myself great pleasure to come here to-day, and I feel that in doing so I am performing an act which is deputed to me by Her Majesty the Queen. I know it is her great and earnest wish that the hospital may be very prosperous and successful in every way, and I think we may regard it as a fitting memorial of this special year when the Queen celebrates the sixtieth year of her reign."

The joint architects (Mr. K. D. Young and Mr. Bedells) and the builder (Mr. Gover) were then presented to His Royal Highness, who afterwards performed the ceremony and pronounced the stone to be "well and truly laid." The Bishop of London then offered prayer. Purses were subsequently presented to the Princess of Wales, and the chairman, Mr. H. P. Sturgis, and the Lord Mayor, vice-president of the hospital, thanked their Royal Highnesses for their presence.

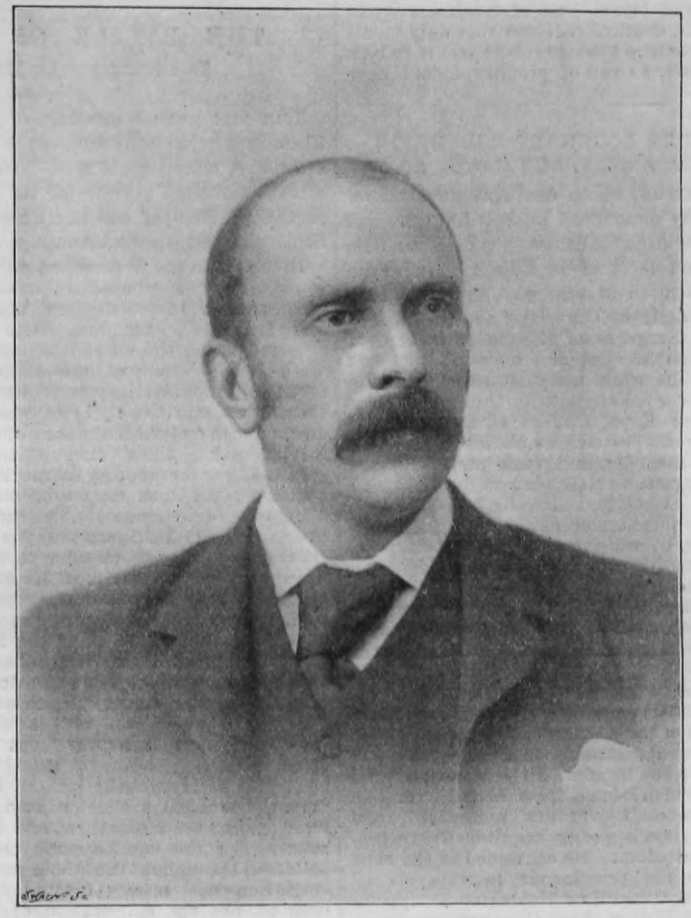
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Obituary.

JAMES GREIG SMITH, M.A., M.B., C.M. ABERD., F.R.S. EDIN.,

PROFESSOR OF SURGERY AT UNIVERSITY COLLEGE, BRISTOL.

THE medical profession has sustained a very serious loss by the death of Mr. James Greig Smith, which took place after a very short illness from pneumonia on May 28th at his residence, 16, Victoria-square, Clifton, at the comparatively early age of forty-three years. The deceased was born at the village of Nigg, in Kincardineshire, and was educated at the neighbouring grammar school and University of Aberdeen. In 1873 he took his M.A. degree with the highest honours and the M.B., C.M., in 1876. After holding the office of house surgeon at the Royal Infirmary, Aberdeen, he was in 1876 appointed assistant house surgeon at the Bristol Royal Infirmary, where he subsequently became house surgeon and medical superintendent. He was elected surgeon at this institution in 1879, and from this date to the time of his death was one of the most active members of the staff, taking the keenest interest in all infirmary matters. During the early years of his Bristol life he gave special attention to pathology, and at that time published several able papers on Diseases of Bones, which clearly showed that love for investigation and intolerance of superficial work which characterised his whole career; his original research gained for him the distinction of election to the Fellowship of the Royal Society of Edinburgh. Starting as a general practitioner Mr. Greig Smith soon limited himself to surgery, and was in much request by medical men in the West of England and South Wales. As his reputation increased patients and practitioners gradually realised that the very best operative skill could be obtained in Bristol. His fame as a consultant was augmented by the publication of his book on "Abdominal Surgery," which is now accepted by the profession in England and abroad as a standard work, the sixth edition of which was in preparation at the time of his decease.



JAMES GREIG SMITH, M.A., M.B., C.M. ABERD., F.R.S. EDIN.,
PROFESSOR OF SURGERY AT UNIVERSITY COLLEGE, BRISTOL.

From the time that Mr. Greig Smith joined the Bristol Medico-Chirurgical Society in 1877 he was a frequent contributor to its proceedings by papers, specimens, and discussion. He took a considerable share in the conception of the *Bristol Medico-Chirurgical Journal*, the first number of which was published in 1883, and he was its editor till 1892, having laid the foundation of its present success with remarkable literary skill.

He was from 1882 to 1884 an examiner in surgery at Aberdeen University, but the demands upon his time forced him to relinquish his journeys to Scotland. For several years he devoted much time and energy to the Professorship of Surgery at University College, Bristol. His skill as a draughtsman and his beautifully prepared museum specimens made his lectures at the medical school—the designs for which building he was largely instrumental in preparing—instructive and valuable to the large number of students who have had the benefit of his teaching. He was also largely responsible for the formation of the present magnificent medical library which may now rank among the first in the kingdom. His personality and force of character made a deep impression on those who came in contact with him, whether as students or colleagues. He will be particularly missed by all at the Royal Infirmary, where his opinion and advice were always eagerly sought. He was the pioneer of the separate ward scheme, which has proved so beneficial. Only a few days before his death he prepared plans for a new operation-room; these have been adopted by the infirmary authorities and will shortly be carried out. His general literary ability was well exemplified in his address on the Art of the Surgeon delivered at the annual meeting of the British Medical Association held in Bristol in 1894.

Both in speaking and writing Mr. Greig Smith's style was at once elegant, terse, forcible, and clear, and at the local meetings when he rose to speak the members expected something original, and were rarely disappointed. He always opposed in his well-framed sentences anything approaching an ill-formed opinion or an unsound argument. Mr. Greig Smith in his home life was a man of simple habits, and in his spare hours devoted himself to modelling in clay or other artistic pursuits. He was greatly devoted to the pleasures of a country life, and for this purpose took a shooting-box near Bristol, and became a good shot, an expert fisherman, and an enthusiastic golfer. His wife and only child, a daughter, survive him.

His remains were buried at Redland Green Cemetery on June 1st. The funeral was attended by most of the medical men of Clifton and Bristol, and by medical practitioners and friends from neighbouring towns who had come to pay their last tribute of respect and gratitude to the departed surgeon. Besides these were many nurses and patients, all showing how deeply they felt the loss they had sustained by the inexorable hand of death.

FREDERICK ALCOCK NIXON, M.R.C.P., F.R.C.S. IREL.

MR. F. A. NIXON, who died from apoplexy at his residence in Dublin on May 23rd, had acquired a considerable reputation as a surgeon, and the news of his untimely death came as a painful shock to his many friends. He received his medical

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education at the Ledwich School and Mercer's Hospital, and became a Licentiate of the Royal College of Surgeons in Ireland in 1870, as well as of the Royal College of Physicians of Ireland in the following year. He then entered the Medical Department of the Navy, and was at sea for some time, but he made only a short stay in the service, and returned to Dublin with a view to engaging in the more congenial duties of a teacher. In 1876 he was admitted to the Fellowship of the College of Surgeons, and in 1880 to the Membership of the College of Physicians. For many years he was attached to the Ledwich School as lecturer on surgery and anatomy, and when this school was amalgamated with that of the College of Surgeons in 1889 he became one of the professors of surgery, an appointment which he retained until his death. For a long time he had a seat on the Council of the College, and was also a member of the managing committee of the Conjoint Examination Board. Many years ago he was appointed surgeon and lecturer on surgery in Mercer's Hospital, the perturbed state of which institution was of late a cause of much anxiety to him. At the time of his death Mr. Nixon was only in his forty-seventh year. Those who knew him best feel it to be a real misfortune that a career so full of promise should have closed thus prematurely.

CHARLES ALEXANDER LOCKHART ROBERTSON, M.D. CAMB. AND ST. AND., F.R.C.P. LOND., &C.

DR. LOCKHART ROBERTSON, whose death at Exmouth on May 18th has been already announced in THE LANCET, was one of our most distinguished alienist physicians. His father was a surgeon and lecturer in Edinburgh, and he received his medical education in that city, taking in 1845 the degree of M.D. at St. Andrews University and the Licence of the Royal College of Surgeons of Edinburgh. He then entered the Army Medical Service, and obtained his first insight into lunacy practice while assistant surgeon at the Military Lunatic Asylum at Yarmouth. In 1849 he was admitted a Fellow of the Royal College of Physicians of Edinburgh. After five years' service at Yarmouth, he proceeded to Cambridge University and once more engaged in medical study, taking the M.B. degree in 1853 and the *ad eundem* M.B. at Oxford in 1857. He then settled in London and joined the newly-formed Medico-Psychological Association, of which he was for several years honorary secretary and subsequently president. More than this, when Sir John Bucknill retired from the editorship of the *Journal of Mental Science*, Dr. Lockhart Robertson, in conjunction with Dr. Maudsley, succeeded him—an appointment which was in several ways beneficial both to the journal and to the Association. A wider field of usefulness was opened to him in 1859, when he was appointed the first medical superintendent of the new Sussex County Asylum at Hayward's Heath, and soon showed that judicious treatment and careful management could accomplish much in the way of brightening the life of the insane. His earnestness and success in this work, which thenceforth became for him an absorbing pursuit, were universally recognised, and the Hayward's Heath Asylum speedily acquired the reputation of being a model institution. He continued at the head of it until 1870, when his prominence in this special department induced Lord Chancellor Hatherley to appoint him to the vacant office of Visitor of the Chancery lunatics—patients scattered throughout the various asylums in England whose affairs have at some time or other come under the cognisance of the Court of Chancery. This post he held for twenty-five years, resigning only in January, 1896, when he was seventy years of age. Dr. Lockhart Robertson was a man of much culture and many accomplishments; he had a very large circle of friends and acquaintances, and during his active years was a prominent figure in social life. His wife was the daughter of Colonel Rochfort of the Indian army.

CHARLES HAWKES MARWOOD MULES, M.R.C.S. ENG., L.S.A.

THE death occurred, at his residence, Ilminster, Somerset, on May 23rd, of Mr. C. H. M. Mules, at the advanced age of eighty-four years. The deceased, who was educated at Middlesex and University College Hospitals, took the qualifications of M.R.C.S. Eng. and L.S.A. as long ago as 1836, and had one of the largest country practices in Somersetshire, to which he joined several public appointments. He was popular, not only with his patients, but amongst a very large circle of friends, and, although in his eighty-fifth year, until quite recently was a frequent follower of the hounds. His death will be deeply regretted by many in the West of England.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent medical man is announced:—Dr. Louis Deroubaix, of Brussels, where he had been Professor of Anatomy for fifty-seven years. He was honorary president of the College of Brussels Practitioners, private medical adviser to the King, and Grand Officer of the Order of Leopold. While surgeon to the Brussels hospitals he devised and performed many important new operations and published a large number of surgical papers. He was in his eighty-fifth year.

THE BATTLE OF THE CLUBS.

THE NOTTINGHAM MEDICAL UNION.

THE first annual meeting of the Nottingham Medical Union was held on the 26th ult. In their report the Council state that the subjects that have especially occupied the attention of the Union during the year are: Rate of Payment in Clubs; Medical Aid Societies combined with Insurance Societies; and Hospital Abuse.

In regard to the first-named subject the Union succeeded in obtaining a practically unanimous agreement of the medical men in Nottingham not to take new clubs after Jan 1st, 1897, for less than 4*s*. per annum. This agreement has, the Council believe, been loyally adhered to. With regard to medical aid societies combined with insurance societies, the objections it is stated in Nottingham resolve themselves into two: (1) canvassing the patients of other medical men on behalf of their own medical officers, sometimes leaving lists of those officers at the houses visited; and (2) canvassing and accepting as members persons whose means should enable them to pay ordinary medical mens' fees or who are chronic invalids. The threat of action by the Union in September, 1896, caused the London and Manchester Insurance Company to offer to amend its ways by withdrawing the printed list of its medical officers and by forbidding its agents to accept persons of good financial position. The local manager of the Liverpool Victoria Society also assured the President of the Nottingham Medical Union that his society did not wish to have, and would refuse, these two classes of persons. It was accordingly resolved to give time for these reforms to be carried out, but, with the exception of the withdrawal of the printed list, there seems to have been no real improvement in the methods of these societies.

The Council regret the lack of support which they receive from the medical profession as a body with regard to their fight against the medical aid and insurance societies, and no successful stand can be made until the profession is consolidated throughout the whole country. To effect this consolidation not merely must unions be formed in every district, but the coöperation of the licensing bodies and General Medical Council must be obtained. It is only, however, by the repeated agitation of the working members of the profession that they will be induced to act.

In addition to the clubs and medical aid societies in Nottingham there exist a number of "sick and annual clubs," meeting at public-houses, which appear open to grave criticism. These will probably form the subject of inquiry in the ensuing year.

The Council have appointed a committee to deal with the subject of hospital abuse, but investigation is still in an early stage. The problem is difficult and delicate, but it is hoped that even if a perfect solution is not found, yet a considerable improvement may be obtained. The provision of suitable accommodation, nursing and medical or surgical care for persons of the middle class who are seriously ill and may need operation has also come under the consideration of the Union. There are many persons of moderate means who neither desire nor ought to become patients in a charitable institution, whose homes are yet quite unfit to be the scene of grave operations, and who may only be able to pay moderate fees for surgical and nursing attendance. To such

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persons the establishment of a nursing home or private hospital, where they could be lodged and boarded at rates varying according to the privacy and accommodation demanded, where they would be under the care of their own medical man at a rate of fees arranged by mutual agreement and where they would be attended by trained nurses, would be a boon.

THE ROYAL MILITARY TOURNAMENT.

THE sanitary arrangements at the Royal Agricultural Hall, Islington, when occupied by the troops taking part in the Royal Military Tournament, have been described in these columns on so many occasions that it is hardly necessary to refer to them again in detail. The building is ill adapted for the housing of troops, but under the able advice of Surgeon-Major Alexander, of the Coldstream Guards, who is assisted by Surgeon-Major James, A.M.S., the sanitary conditions of the hall have been made as perfect as the circumstances will allow. Four new ventilators have been constructed in the roof of the building, and a great improvement has been made in the ventilation of the arcade by the construction of sixteen swinging "lights," eight on either side. This part of the building, where many cubicles are placed, has hitherto suffered greatly from want of fresh air, and though there is still room for improvement, we are glad to note that some of our suggestions have taken practical shape. It is a pity, however, that those in charge of the Tournament cannot see their way to remove it to more commodious premises. As we have said, the building has no doubt been made as sanitary and as comfortable for the troops as circumstances will allow, but apart from the fact that some 870 men and 400 horses here find a home—far too large a number for the amount of accommodation, we think—the building is altogether unworthy of what has now become, perhaps, one of the most important naval and military gatherings of the year. We say most important advisedly, because it is evident from the enthusiasm of the public that the Royal Military Tournament has become one of the greatest factors in popularising the navy and army. To prove this would require too long a digression, but it will, we believe, be generally admitted.

The watchword of the present committee seems to be "economy." For the first time the catering for the troops is done by the military authorities themselves, and with the most satisfactory results. The cost per man is 1*s.* 3*d.* per diem, and the food supplied is greatly appreciated by the men.

The work of economy is seen, too, in other directions. The scenery, which in previous years has formed a sort of background to the combined display of all arms, has been dispensed with, and in its place there have been erected a number of seats which probably bring in not less than £200 per night. This of course, adds greatly to the coffers of the participating charities, but decreases the amount of air space in the building.

With regard to the medical aspect of the arena little is to be said. The performance which has in it the greatest element of danger, though not perhaps so apparent to the eye as in other performances, is the trotting and galloping practice by the artillery. There is, of course, considerable risk to the men engaged in the practice, but in one respect there is more risk to the spectators. Should by chance the wheels of the gun carriage strike against the "obstacles" through which the wheels pass and splinter the wood there is every chance of it being hurled through the air and striking the spectators. Galloping by the artillery under these circumstances should be eliminated from the programmes; the "trotting" is quite exciting enough, as the tremendous applause which greets the successful avoiding of the obstacles demonstrates. Of the condition of the stables, which are under the charge of Veterinary-Major Rowe, A.V.D., there is nothing to complain.

Upon the whole we can congratulate Colonel F. Lorn Campbell, the Commandant; Major F. Lloyd, the treasurer; Lieutenant-Colonel E. W. D. Ward, C.B., the honorary secretary; and the other members of the staff who have assisted in the organisation of this year's tournament.

The Tournament will close on June 10th, and those desirous of viewing one of the best sights of the year should book seats at once, as the hall is filled to overflowing at each performance.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6226 births and 3492 deaths were registered during the week ending May 29th. The annual rate of mortality in these towns, which had been 16·5 and 17·2 per 1000 in the two preceding weeks, declined again last week to 16·6. In London the rate was 14·9 per 1000, while it averaged 17·7 in the thirty-two provincial towns. The lowest death-rates in these towns were 6·9 in Croydon, 9·5 in Cardiff, 12·5 in Swansea, and 12·9 in Portsmouth; the highest rates were 22·1 in Burnley, 23·2 in Gateshead, 23·6 in Bolton, 24·0 in Sheffield, and 28·6 in Salford. The 3492 deaths in these towns included 355 which were referred to the principal zymotic diseases, against 341 and 357 in the two preceding weeks; of these, 111 resulted from whooping-cough, 97 from measles, 57 from diphtheria, 39 from diarrhœa, 32 from scarlet fever, and 19 from "fever" (principally enteric), No fatal case of any of these diseases was recorded in Croydon; in the other towns they caused the lowest death-rates in Newcastle-upon-Tyne, Bradford, Bristol, and Leeds, and the highest rates in Manchester, Bolton, Oldham, and Salford. The greatest mortality from measles occurred in West Ham, Oldham, Birkenhead, Bolton, Manchester, and Salford; from scarlet fever in Huddersfield; and from whooping-cough in Plymouth, Halifax, Manchester, and Salford. The mortality from "fever" showed no marked excess in any of the large towns. The 57 deaths from diphtheria included 36 in London, 4 in Birmingham, 3 in Leicester, and 3 in Burnley. No fatal case of small-pox was registered last week in any of the thirty-three large towns. There were 12 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, May 29th, against 11, 14, and 13 at the end of the three preceding weeks; no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2546, against numbers increasing from 2380 to 2508 on the four preceding Saturdays; 278 new cases were admitted during the week, against 231, 239, and 311 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 198 and 220 in the two preceding weeks, declined again last week to 196, and were 108 below the corrected average. The causes of 49, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leicester, Oldham, Bradford, Sunderland, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Swansea, Birmingham, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 20·7 to 22·3 per 1000, declined again to 21·7 during the week ending May 29th, but exceeded by 5·1 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·2 in Perth and 18·9 in Paisley to 26·9 in Edinburgh and 30·4 in Leith. The 648 deaths in these towns included 34 which were referred to whooping-cough, 24 to measles, 21 to diarrhœa, 5 to diphtheria, 4 to "fever," and 3 to scarlet fever. In all, 91 deaths resulted from these principal zymotic diseases, against 102 and 110 in the two preceding weeks. These 91 deaths were equal to an annual rate of 3·1 per 1000, which was 1·4 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 29 and 35 in the two preceding weeks, were 34 last week, and included 18 in Glasgow and 9 in Edinburgh. The deaths referred to measles, which had increased in the three preceding weeks from 29 to 49, declined again last week to 24, of which 16 occurred in Edinburgh, 4 in Glasgow, and 3 in Leith. The 5 fatal cases of diphtheria corresponded with the number in the preceding week, and included 3 in Glasgow and 2 in Edinburgh. The deaths referred to different forms of "fever," which had been 1 and 3 in the two preceding weeks, further rose to 4 last week, all of which were registered in Glasgow. The deaths

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from diseases of the respiratory organs in these towns, which had been 108 and 135 in the two preceding weeks, declined again to 128 last week, but were 19 above the number in the corresponding period of last year. The causes of 45, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 33·7 to 27·3 per 1000, rose again to 28·3 during the week ending May 29th. During the past eight weeks of the current quarter the death-rate in the city has averaged 30·7 per 1000, the rate during the same period being 16·2 in London and 26 6 in Edinburgh. The 190 deaths registered in Dublin during the week under notice showed an increase of 7 upon the number in the preceding week, and included 15 which were referred to the principal zymotic diseases, against numbers declining from 41 to 15 in the five preceding weeks; of these, 5 resulted from measles, 4 from diarrhœa, 3 from scarlet fever, 2 from whooping-cough, 1 from "fever," and not one either from small-pox or diphtheria These 15 deaths were equal to an annual rate of 2·2 per 1000, the zymotic death-rate during the same period being 1·6 in London and 5·2 in Edinburgh. The fatal cases of measles, which had declined from 19 to 5 in the five preceding weeks, were again 5 last week. The deaths referred to whooping-cough, which had been 6 in each of the two preceding weeks, declined to 2 last week. The mortality from "fever" was below that recorded in any recent week. The 190 deaths in Dublin last week included 36 of infants under one year of age, and 51 of persons aged upwards of sixty years; the deaths of infants showed a decline, while those of elderly persons exceeded those recorded in any recent week. Seven inquest cases and 6 deaths from violence were registered; and 68, or more than a third, of the deaths occurred in public institutions. The causes of 14, or more than 7 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL MAURICE KNOX retires on retired pay.

Surgeon-Captain Thompson has been ordered to the Curragh, and Surgeon-Lieutenant-Colonel Mapleton has been ordered to the Station Hospital, Shorncliffe. Surgeon-Major R. J. McCormac joins at Woolwich.

INDIA AND THE INDIAN MEDICAL STAFF.

Surgeon-Captain Bedford (Bengal) is appointed to officiate as Chemical Examiner and Professor of Chemistry in the Medical College, Calcutta, during the absence on furlough on medical certificate of Surgeon-Major Waddell, or until further orders. Surgeon-Lieutenant-Colonel W. Barren and Brigade-Surgeon-Lieutenant-Colonel S. M. Salaman have respectively delivered over and received medical charge of the Yerrowda Central Prison. Surgeon-Major Pank has assumed medical charge of the Jeypore Residency from Surgeon-Major Harington.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Fleet Surgeon Bernard Renshaw to the *Pembroke*. Surgeons: Francis J. Barter to the *Medusa;* Arthur W. B. Livesay to the *Pembroke;* and Harold G. T. Major to the *Blenheim*.

VOLUNTEER CORPS.

Artillery: 2nd Cinque Ports (Eastern Division, Royal Artillery): Howard Marshall, M.B, to be Surgeon-Lieutenant. *Royal Engineers:* 2nd West Riding of Yorkshire (Leeds): Surgeon-Captain James William Henry Brown resigns his commission, and is appointed Lieutenant. *Rifle:* 2nd Volunteer Battalion the East Yorkshire Regiment: Surgeon-Lieutenant William Albert Wetwan resigns his commission, and is appointed Second Lieutenant.

THE LATE GRECO-TURKISH WAR.

The additional Parliamentary papers that have been published are not, we feel bound to say, calculated to raise our conception of the motives and conduct of Greece, or of the wisdom of the Hellenic Government in adopting a war policy and undertaking a campaign against Turkey in opposition to the advice of the rest of Europe. The Greeks were quite unprepared for war against so formidable an adversary as Turkey. The military, commissariat, sanitary, and medical departments of the Greek army seem to have been badly organised and quite inadequate to their self-imposed task, and the consequence has been that, not only have they been severely defeated, but an incalculable amount of unnecessary suffering has been inflicted by the war upon the military forces and agricultural population of Greece. By their precipitate action in forcing on this foolish war they have rehabilitated the Sultan's power and imposed a most difficult task on the Powers friendly to them, when their real strength was, like the Israelites of old, to have sat still. All independent accounts agree in stating that the Turkish war and hospital organisation and arrangements were superior to those of the Greeks. The English hospital at Chalcis is stated to be excellent. The Queen and Princess Sophia were expected to visit and inspect the hospital and its arrangements. The total number of wounded admitted to the Athens hospitals was 2363 Of these, 836 are still under treatment, 31 have died, and the rest have been discharged.

AMBULANCE SERVICE ON JUBILEE DAY.

The London companies of the Volunteer Medical Staff Corps are to be requisitioned to augment the Medical Staff Corps in view of the possibility of accident on June 22nd. Mr. Arthur S. Dale, of the St. John Ambulance Association, has issued an appeal to the public in view of the large number of fits and accidents which may occur on that day. As it will be inconvenient to treat such cases in the road, and as ambulance stations are too few and far between, householders on the line or contiguous to the route who can place a back room at the disposition of the ambulance service will confer a benefit on the afflicted; and if hotel proprietors and licensed victuallers will afford ice for ambulance cases it will be most serviceable in the alleviation of suffering. Offers of help should be made to the Brigade Chief Superintendent, Mr. W. Church Brasier, of St. John's-gate, Clerkenwell.

THE EXAMINATIONS FOR NAVAL SURGEONS.

The undermentioned gentlemen, who competed on the 17th inst. and following days at Examination Hall, Victoria Embankment, for appointment as surgeon in the Royal Navy, have been granted commissions:—

	Marks.		Marks.
H. P. Turnbull	2780	R. F. Clark	2174
W. B. Maurice	2757	F. C. Stearn	2173
C. R. Sheward, M.B.	2393	H. E. Fryer	2171
S. Roach	2315	A. C. Bean	2053
E. Arkwright, M.B.	2311	S. Conner, M.B.	2019
E. D. J. O. Malley	2211	R. H. Mornement	2016
M. Breton	2200	E. Folliott	1931
W. K. Hopkins	2195	H. Hunt	1797
W. H. O. Garde	2183		

Brigade-Surgeon McLeod, retired from the Indian Medical Service, has been selected for appointment as Professor of Clinical and Military Medicine at the Army Medical School, Netley, to succeed Deputy-Surgeon-General Cayley.

THE HEALTH OF THE ARMY IN INDIA.

The *Pioneer Mail* of May 13th states that the Simla committee on the contagious diseases question did not finish its report early enough to enable the Indian Government to frame its dispatch to the Secretary of State in time for the mail, but that it will probably be sent by the next. Meanwhile, some additional Parliamentary papers—one of a statistical nature on the prevalence of the disease in the Army for many years past, and embracing periods when the Acts were in force and since their repeal—have been issued. When the proposals of the Indian Government have been received at the India Office we may expect that the question will again be taken up in earnest.

THE PLAGUE IN INDIA.

We are extremely glad to learn from the Anglo-Indian papers and the telegraphic report of the Governor of Bombay to the Secretary of State for India that bubonic plague is fast disappearing in Bombay. The authorities are still, very properly in our opinion, exercising the powers conferred upon them by the Epidemic Diseases Act, and there are no signs of relaxation in their efforts to eradicate the disease from the whole Presidency.

ENTERIC FEVER IN INDIA.

We regret to learn that enteric fever is prevalent at Lucknow, the Duke of Cornwall's Light Infantry being the

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chief sufferers. The outbreak among the troops at Subatha has ceased. A provisional scheme for the temporary water-supply of the station has been adopted pending the completion of the larger project at present in hand.

DR. KOCH IN INDIA.

The *Times of India* of May 15th states that Dr. Koch has received telegraphic instructions from the German Government to remain in India and continue his investigations and experiments in regard to rinderpest, and in all probability he will proceed to Bengal shortly, where rinderpest is said to prevail.

Surgeon-Colonel W. F. Stevenson, Professor of Military and Clinical Surgery at the Army Medical School, Netley, will attend as a representative of the British Army at the International Medical Congress to be held in Moscow from Aug. 19th to Aug. 26th.

Correspondence.

"Audi alteram partem."

"THE APPROPRIATION OF FINES UNDER THE MEDICAL ACT."

To the Editors of THE LANCET.

SIRS,—In the leading article in THE LANCET of May 22nd upon the important subject of the alienation of penalties from the General Medical Council, in *re* prosecutions under the Medical Act, you state that "in all other parts of the country other than the metropolis the fines go to the General Medical Council." This is, unfortunately, not the case. Certain boroughs claim, and have claimed successfully, under local Acts the penalties inflicted upon persons convicted under the Medical Act, 1858. The matter has been brought to the knowledge of the General Medical Council by the Medical Defence Union lately, and it is to be hoped that some legal steps will be taken to prevent the alienation in future. If nothing be done by the General Medical Council, prosecutions in the country will be as rare as they are in the metropolis, and for the same reason. I may mention that it was at the instigation of the Medical Defence Union that the question was raised by Dr. Glover in May, 1891, with the result that a deputation was sent to the Home Secretary, as detailed by you.—I am, Sirs, yours faithfully,

A. G. BATEMAN,
May 21st, 1897. General Secretary, Medical Defence Union.

"DEFECTIVE" CHILDREN IN SCHOOLS.

To the Editors of THE LANCET.

SIRS,—The leading article on Ophthalmia in the Liverpool Schools which appeared in THE LANCET of May 15th appeals very strongly to all those who have anything to do with elementary education in our poorer districts. Your pregnant declaration that "in a large proportion of cases there can be little doubt that overcrowding, dark and ill-ventilated rooms, damp soil, and insufficient diet are very efficient agents in developing and in promoting the extension of the disease" is capable of wide application. In London especially both teachers and managers of elementary schools are continually hampered in their educational work by the exact conditions you mention, which unfortunately apply to a large proportion of the children of the poor. The result is that in every school in the poorer localities there are a number of cases of "defective" scholars, who, owing to general home neglect and bad nutrition, are physically incapable of receiving any advanced instruction. Of the children who attend the London Board Schools nearly 60,000 go to school breakfastless every day, and a much larger number are ill-clad and ill-nourished. Fortunately, the Education Department is taking this matter in hand, and special arrangements will now have to be made for grouping these defective children together, providing them with a special teacher, and giving them the most suitable instruction for their special needs. To-day I was in a school which consists largely of the children of casual dockers, and 10 per cent. of the scholars had to be scheduled for this special treatment. But, unfortunately, the causes of defect will to a large degree remain untouched by school care, while the defective homes exist under our present social system. My object in writing to you is to humbly point out that no greater service could be performed by the medical profession to the children, to the nation at large, and to the coming generation than the using of their powerful and unequalled influence to assist in raising such a conscience and opinion in the community as will ere long make the conditions which now literally manufacture defective children things of the past.

I am, Sirs, yours faithfully,

HERBERT BURROWS,
London Board School Manager.
Aberdeen-road, N., May 19th, 1897.

"URIC ACID IN THE BLOOD."

To the Editors of THE LANCET.

SIRS,—Dr. Luff has missed the point of my objection to his experiments. If he will allow me to correct him, he stated in the Goulstonian Lectures that when he added known quantities of uric acid to blood the quantity which he extracted was estimated by the Gowland Hopkins method to be from 80 to 87 per cent. In his description of this method he says: "1 milligramme [should be] added to the final result for each 15 c c. of the filtrate present—this need never be more than 20 to 30 c.c." In the absence of any statement to the contrary, the assumption is that the known quantities were suitable for estimation by this method—i.e., from 20 to 40 milligrammes, and there is no evidence in the lectures that quantities ranging from $\frac{1}{10}$ to $\frac{1}{2}$ milligrammes, added to 500 c.c. of blood, were subsequently extracted and proved either by the Gowland Hopkins method or the murexide test. The extreme delicacy of the murexide test, to which Dr. Luff calls my attention, ought to enable him to prove his point without question. If he adds $\frac{1}{30}$ milligramme to 500 c c. of blood he can (so he says in effect) extract $\frac{1}{100}$ milligramme, which will give the murexide reaction. But no such experiment is recorded. With regard to the "abundant quantity" of uric acid in bird's blood, it would certainly be more satisfactory to state the necessary and sufficient proportion on the hypothesis that uric acid is derived from blood, as it would show at once whether the methods adopted were suitable for the purpose. Dr. Luff has undertaken the difficult task of proving a negative, and before accepting his conclusion one must know what the "known quantities" were and how they compare with the necessary and sufficient quantities in animals and birds.

I am, Sirs, yours faithfully,

Norwood, May 22nd, 1897. DONALD F. SHEARER.

"OPHTHALMIA IN LIVERPOOL."

To the Editors of THE LANCET.

SIRS,—I have obtained liberty to send you the following letter, which I received from Professor Jacob last week. I hope you will be able to insert it as a very interesting and able contribution to the question of granular lids.

I am, Sirs, your obedient servant,

W. ALEXANDER.
Rodney-street, Liverpool, May 25th, 1897.

"Ely-place, Dublin, May 23rd, 1897.

"DR. ALEXANDER.

"DEAR SIR,—An editorial in THE LANCET informs me that in a controversy with Mr. Fuller you have resisted the assumption that granular ophthalmia is, in its nature and in fact, an unquestionably contagious disease. It is, perhaps, well that I have seen neither Mr. Fuller's report nor your reply, for I am thus enabled to give a perfectly independent opinion on the subject, and that opinion is strongly in support of the view attributed to you. If there be any eye disease respecting which Irish ophthalmologists may claim to have special knowledge it is this. I see at my extern about 3000 cases annually, and I do not hesitate to say one-third of these are cases of granular ophthalmia or its sequelæ. Without asserting that such cases are altogether non-contagious, I say that my experience is dead against the contagion theory. Upon this point I note that the most ardent apostles of contagion and THE LANCET itself venture no further than to express their belief that a specific contagium must exist somewhere and will be found sooner or later; and Dr. Stephenson, in his recent monograph on the subject, admits that the announcements from time to time that such contagium had been identified 'have not stood the test of experience.' I am, from practical experience, somewhat sceptical of the existence of such specific agency, because I see scores of instances in which one or two members of a family suffer without any extension to the others and scores of cases in which one eye is affected without any extension to the other. Perhaps more striking evidence is afforded by the fact that the surgeons, nurses, and students of eye hospitals are, so to speak, up to their elbows in the various forms of granular ophthalmia

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and in the closest contact with the discharges from such eyes, and yet it is the rarest occurrence for any one of them to suffer from even a transient conjunctivitis. I have myself manipulated, shall I say, tens of thousands of granular ophthalmias in one or other form, and as yet I have been, happily, entirely free from any such disease.

"My purpose in thus writing is to enforce the suggestion that the fashionable isolation remedy is a stupendous mistake and that the true cause of this decimating disease and its remedy are in danger of being forgotten in our anxiety to find means of prevention. I subscribe to the statement of THE LANCET that 'overcrowding, dark and ill-ventilated rooms, damp soil, and insufficient diet' are very efficient agents in developing the disease. In fact I believe that they are, practically, the only agents and that contagion has but a small influence. The *sequitur* of my argument is that the system of aggregating large numbers of children in big isolation hospitals is good only so far as it removes such children from insanitary surroundings and not at all because it isolates them, which, indeed, it does not do. I hold that if these children could be boarded out in farm houses or could be otherwise provided with fresh air, nutrient diet, and tonic medicine they would get well, with the assistance of a little local treatment, months in advance of the (so-called) isolated patients. I will go so far as to say that I never saw a case of granular conjunctivitis in its primary stage which I could not cure by such means and without any serious danger of infection to the persons with whom they might be boarded out.

"Yours very truly,

"ARCHIBALD HAMILTON JACOB, M.D., F.R.C.S.I.,
"Professor of Ophthalmology, Royal College of Surgeons in Ireland,
Ophthalmic Surgeon to the House of Industry Hospitals,
Dublin."

"THE HOSPITAL REFORM ASSOCIATION: REPORT OF THE COMMITTEE APPOINTED TO INQUIRE INTO THE WORKING OF THE SPECIAL HOSPITALS OF LONDON."

To the Editors of THE LANCET.

SIRS,—In a report published by the Hospital Reform Association on certain of the London hospitals statements are made with regard to the London Throat Hospital which have been brought before the notice of the medical committee of that institution, and on whose behalf I am instructed to write to you as follows:—1. The medical committee protest most emphatically against the manner in which this incorrect information has been obtained. Two gentlemen, it appears, came to the hospital without any permission or invitation from the committee or medical staff or from any subscriber, and without having given any notice of their advent they asked to see the secretary. It now appears they were medical men and their conduct can only be characterised as most discourteous to their professional brethren, and also to the governing body of the institution. 2. They asked various questions, and our secretary absolutely denies having given any such information as they allege to have received, and which is contained in their "Statements and remarks"—i.e., "as to patients' means." They state this is "left to visiting staff"; "a proper system of inquiry is absent." This allegation on their part is wholly at variance with the facts. A most careful inquiry is made into the means and position of each patient by a person especially appointed and paid for discharging that duty. 3. As to beds. The gentlemen who visited the hospital were informed that at that very time of their visit new wards were in course of preparation and almost completed for the reception of fifteen patients, and it was most unfair of them in the face of that information to state there were only five beds. The medical committee trust that you will at once take steps to have these erroneous statements withdrawn, and the facts correctly stated.

I am, Sirs, yours faithfully,

HERBERT TILLEY, M.D. Lond.,
May 31st, 1897. Honorary Secretary to Medical Committee.

THE HOSPITAL REFORM ASSOCIATION: AN APPEAL.

To the Editors of THE LANCET.

SIRS,—May I be allowed to appeal to all those members of the profession who are sincerely desirous of seeing the administration of medical relief in our hospitals restricted to those who are really in want of it to help the Association with funds? The memory of most men is short, and therefore I may be pardoned for reminding them that the Association has placed itself in communication with every hospital in England and Wales, and has held meetings of the profession in London, Birmingham, and Manchester. Only those who have had actual experience in the work of organisation can realise the cost of holding such meetings as we have held. We may perhaps be pardoned for assuming that we have done any real good, but unless I am misinformed the general hospitals of the metropolis have already determined to take steps to bring about a reform of their out-patient and casualty departments. My council believe that they are engaged in a righteous crusade, and they are endeavouring to accomplish their objects without resorting to extreme measures. As far as I am aware, no steps have been taken which are in the least likely to injure the name and good fame of our great charitable institutions. To restrict their use for whom they were originally intended, and to make them *more useful* to those persons who are in need of their aid, has been the aim of the Association to which I have the honour to belong.

I am, Sirs, yours faithfully,

T. GARRETT HORDER, Honorary Secretary.

Cardiff, May 28th, 1897.

"ON CERTAIN SYMPTOMS OF SPINAL CORD AFFECTION IN BICYCLE RIDERS."

To the Editors of THE LANCET.

SIRS,—In reference to two articles in THE LANCET of April 17th and May 15th on the above subject I beg leave to make the following remarks. The symptoms in question are not due either to cycling *per se* or to the "wedge-shaped article ..... called a saddle." They are owing either to the distance between the saddle and the pedals being too great, or to the saddle not being placed horizontally, or to the handlebar being too low. In all these cases the body is bent too much forward and is no longer supported by the tuberosities of the ischium as it ought to be, but by the perineum. When the faulty position of the saddle is corrected the symptoms complained of will certainly disappear.

I am, Sirs, yours truly,

J. HARPÖTH,
Assistant Physician, Frederiksberg Hospital,
May 23rd, 1897. Denmark.

THE OXYGEN TREATMENT OF ULCERS.

To the Editors of THE LANCET.

SIRS,—Having recently had an opportunity of watching the oxygen treatment of ulcers at Netley, and comparing the results with those of an ordinary method, I was not a little astonished to see a report from the assistant professor of bacteriology, who not only had nothing to do with the treatment of the cases, but had not even taken the usual course of seeing and consulting the medical officer in charge. The official report being of a confidential nature I cannot enter into particulars, but feel bound to state that, apart from the bacteriological aspect of the question, Surgeon-Major Semple's facts and inferences are grossly inadequate and misleading.—I am, Sirs, yours faithfully,

Netley, May 31st, 1897. M. KELLY, Surgeon-Major, A.M.S.

THE BRITISH MEDICAL BENEVOLENT FUND.

To the Editors of THE LANCET.

SIRS,—In this eventful Jubilee year many of us are doubtless hampered with special appeals of all kinds; but we shall all agree that those of our poorer brethren who have fallen in the battle of life, and who are helpless and sore stricken, are especially deserving our sympathy and help at the present time. The funds of the British Medical Benevolent Society are now at a very low ebb, and have for some time been quite inadequate to the relief of the large and increasing number of cases, many of which are very distressing. A glance at the last report will show the excellent work done by the Fund; but how piteous are the stories of those 158 cases which were relieved, representing every kind of trouble, affliction, and distress which may at any time befall any one of us; and how much more could be accomplished in the way of relief with a little additional help from the profession. Surely at such a time our hearts will respond to an appeal for thank-offerings, if only for our own good health and prosperity. It should be especially noted that the applicants for relief are spared all the trouble and expense of canvassing or the pain of publicity, and that the cases are most carefully investigated by the committee, while no fund could be more

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judiciously and economically administered. It would relieve the anxiety of the treasurer and the officers of the society, and add greatly to the zest of our own enjoyment of all the good things we have and which are awaiting us, if at this time of general rejoicing we could gladden the hearts of our poorer brethren and sisters by a substantial addition to the fund. It is a great privilege to be able to help others at any time, and this is an unparalleled occasion which can never return in our time. From the report we learn that donations and subscriptions—especially the latter—will be gratefully received by the treasurer, Sir W. Broadbent, Bart., 84, Brook-street, W.; by Dr. Samuel West, honorary financial secretary, 15, Wimpole-street, W.; by Mr. Joseph White, honorary secretary for cases, 6, Southwell-gardens, Queen's-gate, W.; or by the London and County Bank, 21, Hanover-square, W.

I am, Sirs, yours faithfully,

May 24th, 1897. BIS DAT QUI CITO DAT.

"A QUESTION OF COURTESY."

To the Editors of THE LANCET.

SIRS,—As one of the ladies upon whose want of courtesy you comment, I must request you kindly to insert a few lines with regard to the misleading letter published in THE LANCET of May 8th, written by Dr. F. D. Miller, and headed "A Question of Courtesy." That letter asserts that a lady guardian took Miss Annie McCall, M.D. Bern., and also a district nurse, to see a poor patient of Dr. Miller's without communicating with him. Dr. Miller, having already written to the lady guardian on the subject, was acquainted with the fact that the lady guardian was unaware that he had ever attended this patient, and, so far from taking Dr. A. McCall to visit the patient, she had never known of or seen Dr. A. McCall until after she had visited the poor woman. Then as to the district nurse, the lady guardian has never seen her and never "took her" or asked her to call on Dr. Miller's patient. Dr. Cooper Smith, D.D.'s, letter in THE LANCET of May 29th exonerates the district nurse, and will, with the above statement, show that it is hardly fair to pass so severe a sentence as is contained in your editorial comment until your motto, "Audi alteram partem," has been fulfilled.

I am, Sirs, your obedient servant,

E. EDITH MITCHELL,

Down Grange, Basingstoke, May 31st, 1897. Lady Guardian.

"PROFESSIONAL EXCLUSIVENESS IN ITALY."

To the Editors of THE LANCET.

SIRS,—Will you allow me to point out that Mr. J. Eyre is not quite correct in one of his statements which appeared in THE LANCET of May 22nd? He says that "foreign medical men can practise in the United Kingdom without restriction, but unless they are registered they cannot recover their fees by legal process or give medical evidence in courts of law, or hold public medical offices"; he ought to have added that they cannot sign a certificate of death. This is a most important point, as that restriction alone effectually prevents a non-registered foreigner from practising in England. The question of reciprocity with foreign countries is a difficult one, because, if it were granted, the advantages would be very much on the side of England, even if the effects of reciprocity extended to the colonies, which would probably not be the case.

I am, Sirs, yours faithfully,

May 31st, 1897. XENOS.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

XI.—NOTTINGHAM.[1]

Action of the Nottingham Medical Union.—Appeal for Information to all Members of the Profession.—Striking Cases of Abuse.—The Special Hospitals.—Abuses encouraged by Medical Men.

THE question of hospital abuse has reached an acute stage at Nottingham. This is due to two circumstances. First, the formation of a strong medical union in that town gives rise to the hope that there is now an organisation capable of taking up the matter; and, secondly, because an effort is being made to raise £50,000 for the purpose of building a new wing to the Nottingham General Hospital. The annual report of this institution, which was issued last April, shows that there were during the last year, 2367 in-patients and 11,562 out-patients; but, as Dr. W. B. Ransom in his speech at the annual meeting observed, "it was a source of considerable anxiety that so many cases had been each week kept waiting for admission. Some weeks there were as many as seventy cases upon the books waiting till room was found for them. The consequent extension of disease and the aggravation of the symptoms had been in many cases distressing to witness." Under such circumstances it is but natural that strenuous efforts should be made to increase the size of the hospital. Hence the proposal arose to build a new wing as a permanent Jubilee memorial, and appeals were published asking for subscriptions to the amount of £50,000. But at the same time a considerable number of practitioners in Nottingham had been murmuring against the prevalence of hospital abuse, and this appeal to augment the scope of the General Hospital increased their irritation. Letters were written to the local papers calling attention to the gross abuse of the hospitals. One of the practitioners in the town refused to join the Nottingham Medical Union till this question of hospital abuse was actively taken in hand by that organisation. During the last few months this feeling has become more and more acute, and the Nottingham Medical Union has been severely criticised by several medical men because it had not dealt with hospital abuse at an earlier period of its existence. But the Nottingham Medical Union was not inactive, although its committee was in a difficult position; for, while anxious to prevent hospital abuse, it was equally anxious not to check the flow of subscriptions for the building of a new wing to the Nottingham General Hospital. The necessity of enlarging the hospital is obvious, but, at the same time, this is a good opportunity for pressing forward demands for the abolition of abuse. The members of the Nottingham Medical Union sought to attain the desired end in a quiet manner and by friendly coöperation with the governing authorities of all the medical charities in the town. They, therefore, convoked a general conference, and hoped to remedy existing evils without damaging the effect of the appeal to the public for more subscriptions. While anxious not to make any disturbance, they thought that it was a good occasion to demand reforms before asking for money. The lay authorities, however, failed to enter into the spirit of this movement. At the monthly board meeting of the Nottingham General Hospital, held in May, 1896, the matter was brought forward by the medical staff, but the board declined to make any alteration in its present system. In vain the medical men protested that no inquiry whatever was made as to the financial resources of either the in- or the out-patients. The lay members of the board thought that any such inquiry would greatly offend the subscribers to the hospital, many of whom were workpeople.

Early this spring an attempt was made to hold a private conference with the various hospital boards, members of the Charity Organisation Society, and medical men. The lay members, however, of the hospital boards were indignant. Some of them said they were not going to be dictated to by outside medical men. Thereupon the Nottingham Medical Union sent round a request to all the members of the hospital staffs, who are also members of the Union, to stand by their Union and exercise their influence on the hospital boards so as to break down such opposition. But the lay members of the boards still persisted in their opposition, insisting, among other things, that there were no facts to go upon. This assertion has been eagerly taken up as a challenge. The Nottingham Medical Union has appointed a special or sub-committee to deal exclusively with the question of hospital abuse, and a circular letter has been addressed to every practitioner in the town asking for information as to cases of abuse which have occurred during the last five years. Without necessarily mentioning names, every practitioner is asked to describe all

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; (8) May 1st, 1897, The Royal London Ophthalmic Hospital; (9) May 8th, 1897, France, United Action and Legislative Action; and (10) May 15th, 1897, Leicester.

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the cases with which he is personally acquainted of persons who could afford to pay medical fees and yet who have gone to a hospital. As there is a great deal of indignation in the profession with respect to hospital abuse, it is expected that a large mass of evidence will soon be forthcoming. Some such cases have come to my knowledge—for instance, a short time ago a woman who was about to undergo a dangerous operation sent for a solicitor so that she might make a will. She was overheard giving instructions for a legacy of £1800 to one person, and this was only one of the items in her will. Then a well-known manufacturer sent his wife to the hospital. Another woman, after spending some £300 on medical attendance, came all the way from Australia to be operated upon at Nottingham in a hospital where she paid only 10*s.* a week. Another woman came from Scotland, because some friend had praised the skill of a particular Nottingham medical man, and was admitted into hospital and operated upon at the cost of the Nottingham people. A man in receipt of twelve guineas a week came to the Nottingham General Hospital with a recommendation he had obtained from his father, who was a subscriber. Another person, with an income of £1000 a year, came as out-patient for several weeks and was treated for an affection of the throat. A well-dressed woman was asked if she could not afford to have a private medical attendant, and she indignantly replied: "Of course I can pay for a doctor, but I want superior advice." A well-paid commercial traveller also presented himself, and a well-to-do tradesman drove up in his own trap from a neighbouring village. The latter had been under the care of his local doctor, and came up to Nottingham with a recommendation ticket which he had obtained from the Hospital Saturday Fund.

Members of the management boards urge that the workmen who get up this fund would be very indignant if workmen who go to the hospital became the subject of an inquiry conducted by the Charity Organisation Society. In answer to this it is urged that the abuse does not, as a rule, come from the working-classes. The middle-class tradesmen abuse the hospitals, and this is the class of people whose cases the investigators would have to study and report upon. Most of the working men belong to clubs, and it is easier for them to call in their club medical officer, who is generally nearer at hand, than to go to the hospital. Moreover, if they go to their club medical man's surgery they do not have to wait so long as in the out-patient's ward of the hospital. When workmen do go to the hospital they are often very ill or have been ill for a long time and have been treated by their club medical man and seek for a second opinion. There can be no objection, as a rule, to such applicants. Nevertheless, there is some abuse by working men. No inconsiderable number of chronic or trivial cases present themselves. Nervous debility and depression which cannot be shaken off prevails very extensively in the Nottingham district. As a class colliers seem especially susceptible to this complaint, and sometimes strong, powerful-looking men collapse and burst into tears as soon as they are admitted into the presence of the medical man. Hysteria in males, flatulence, palpitations, and nervous dyspepsia are all very prevalent and help to block up the out-patient's department. Then it is becoming the regular practice for all classes, however rich, to go to the hospital to have fractures set. Even the lay members of the hospital board have declared that they would themselves go to the hospital in such a case.

Needless to say that at Nottingham, as in so many other places, there is not only the question of the abuse of hospitals by the patients, but there is the abuse of hospitals by medical practitioners. In other places than Nottingham I have found that the origin of hospitals which now justly enjoy a high reputation would not bear investigation. In Nottingham there are several special hospitals. Accusations are made that some of these special hospitals are utilised as recruiting-grounds for the securing of private patients. Then there was an advertising hospital. Advice was offered free, but the patients were made to pay a good price for the medicines that were sold to them.

With regard to the special hospitals, the excuse given for their existence is that formerly men who were anxious to work out special departments met with no sort of help or encouragement at the Nottingham General Hospital A practitioner, finding that he had no chance of becoming a member of the medical staff of the Nottingham General Hospital, started a special hospital for the diseases of women. The subscriptions did not suffice to support this hospital, so the in-patients were called upon to pay 10*s.* a week, which was less than half the average cost of their maintenance, but with the aid of the subscriptions this enabled the institution to live. In the course of time, however, two out of the three surgeons on the staff of this hospital disagreed with the committee, and not only withdrew but established a rival hospital for women. Thus to-day there are two hospitals for women—one known as the Nottingham Hospital for Women and the other as the Samaritan Hospital for Women. This certainly seems a waste of forces, particularly as there is also a large amount of gynæcological work done at the Nottingham General Hospital. Both the hospitals for women are obliged to take money from their patients—a registration fee of 1*s.* for out-patients and 10*s.* a week for in-patients. These payments are defended on the ground that there are a great number of women in Nottingham who earn fairly good wages and can afford to pay a small sum. Then, again, the wife of a man earning about £3 a week cannot pay ten or fifteen guineas for an operation, but can contribute 10*s.* a week towards her own maintenance while she is in the hospital. Perhaps such a person might prefer making a payment to going to the general hospital and thus becoming the recipient of an absolute charity. There are also a considerable number of women in Nottingham with incomes of from £30 to £40 a year, and they must inevitably become hospital patients when seriously ill. At the Nottingham Hospital for Women there is no wage limit, and as the hospital was not founded for the very poor it would be difficult to establish such a restriction. Most of the patients come from the town and the immediate neighbourhood. They can easily be recognised by their appearance. The greater part of the in-patients are sent by medical men, and if they are not suitable cases for hospital treatment it is the fault of the medical men who have given them recommendations. But the medical staff of the Nottingham Hospital for Women have the right to refuse patients; yet one of the members of the staff assured me that they did not refuse more than two or three applicants in the course of the year. The fact, however, that surgeons who were at the hospital have now some of their old hospital patients as private patients suggests that there is some abuse, and therefore that a greater number of applicants should be rejected.

Speaking to a surgeon on the staff of the Samaritan Hospital for Women, he expressed his fear that hospital abuse would continue to prevail because the members of the medical profession were not unanimous. There would always be some hospital medical officers who would resist attempts at reform rather than see the number of their out-patients diminished. There were men always willing to give to the hospitals their time and their money so as to build up a reputation for themselves. This was the best, perhaps the only, chance a medical man had of spreading his name; and the better the class of the hospital patients the more remunerative this publicity was likely to prove. Medical men would willingly pay for the privilege of working gratuitously for a hospital, and the more their hospitals were abused by rich people going there the better would the medical man's chance be of getting good private patients. The lay members of the hospital boards lend themselves to this and do not seek to check those members of the medical staff who encourage abuse. The hospital boards and the public generally commit a fundamental error in looking at the quantity rather than at the quality of the work done at hospitals. There should be a central hospital board that would act as an impartial and disinterested check on all these tendencies. This central board should also distribute the general funds where they were most wanted. Then to prevent underselling and the starting of numerous special and rival hospitals, a better chance should be given to new men by constantly changing the honorary staffs. Members of the visiting staff should not be kept on for ever, but compelled to retire after a reasonable lapse of time, so as to make room for younger men. The younger men who have something in them cannot for ever sit with folded arms. When they find they have no chance of gaining admission to the existing hospitals they start hospitals of their own. This difficulty might also be met by the appointment of junior visiting physicians and surgeons. At the Samaritan Hospital for Women there seems to be no attempt to prevent abuse; in any case there is no system whatsoever of inquiry. What is more, it is very frankly stated that no attempt will be made to establish such a system unless it be uniformly applied at all the other hospitals. If all the hospitals would refer doubtful cases to inspectors who would

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be in the joint employ of all the hospitals, then the Samaritan Hospital for Women would join in such a uniform attempt to deal with abuse. In the meanwhile there is abuse, though many apparent cases of abuse would prove on inquiry to be due to a long drain on the resources of the patients in question. Others who could pay went because they believed in the superior skill of the hospital staff. Thus, a woman went recently to the Samaritan Hospital for Women who was suffering from gall-stone and her husband expressed his readiness to pay a £30 fee. Another patient, who had paid four guineas in consultation fees, wanted to gain admission to the hospital, and would have done so had she not been warned in time. This patient was, therefore, treated in her own home and paid forty guineas in fees. At the same time her niece did contrive to get into the hospital. An operation, abdominal section, was performed upon her gratuitously, though she was just as able to pay as her aunt. The wife of a leading tradesman was in the hospital at the time of my visit. A well-known public man, whose two daughters also earn considerable incomes, sent his wife to the hospital, and, in the same ward in a bed opposite, another patient openly boasted that she had plenty of money and need not work for her living

The only semblance of an organised effort to prevent abuse is at the Nottingham Free Hospital for Sick Children; the board subscribes, in the ordinary way, to the Charity Organization Society. On the tables there are printed forms or tickets, which the visiting staff can fill up as they question the patient, and these tickets are sent to the Charity Organization Society whenever the medical officers imagine they have a case of abuse. But these tickets also serve another purpose; they likewise indicate when the patients are very poor and worthy subjects of charitable relief. The nurse in the out-patients' department is also expected to endeavour to prevent abuse. The ordinary out-patient pays for his medicine at the hospital tariff, but when there is real poverty the medical officer can order the medicine to be given free of charge. The physician attached to the Nottingham Free Hospital for Sick Children on whom I called thought that there was not much abuse. He was, however, of opinion that cases of real clinical interest should be admitted, whatever might be the financial position of the patient.

At Nottingham, as elsewhere, the difficulty arising from enrolling working men as subscribers to the hospital funds has arisen, though it has not yet reached an acute stage. Last year's receipts for the Nottingham General Hospital amounted to £15,884, but from this must be deducted £4853 legacies and cash in hand. Then there were £1448 income from investments and other large sums from entertainments, donations, and more recent legacies. The expenditure was £9448 and this gives us a better idea of what the normal income should be. Now, out of the £10,000 or so wanted for the working expenses, we find that the annual subscriptions yielded £2909, and the Hospital Saturday and Sunday collections £3571. Of this latter sum £2362 are given by the working classes. Collections in workshops, warehouses, mines, &c., were commenced in 1874 and produced during that year £549. It took about ten years to double this amount; now it has increased more than fourfold and is nearly equal to the annual subscription obtained from the other classes of the community. One day the workmen will claim the same voting power in proportion to the amount they subscribe as that actually enjoyed by the other sections of the community; and then at Nottingham, as in so many other places, the workmen will be masters of the situation. Of course, many of the workmen who subscribe 1*d.* a week to the hospital think they have the right to be treated there when ill. One large employer boasted that all his workpeople gave 1*d.* per week and were therefore taking advantage of the hospital, though several among them earned as much as £3 a week. It will be seen, therefore, that though this question of the control of the hospital by the workmen has not yet reached an acute stage at Nottingham, there is all the material necessary for the development of grave complications and difficulties.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Saturday.

STRENUOUS efforts have been made this year to raise the amount of the Hospital Saturday collection to £20,000 in commemoration of the Queen's Diamond Jubilee and the twenty-fifth year of the collection. On May 25th a large meeting was held in the town hall, mainly composed of delegates from the contributing manufactories, former patients in the homes, and subscribers to the fund. The proceedings were enthusiastic, the following resolution being carried by acclamation: "That this meeting pledges itself to use its utmost endeavours to raise the sum of £20,000 for the present Hospital Saturday collection in order that the fund may acquire the freehold of a suitable property as a permanent convalescent home for the women subscribers to the fund. The collection took place on Saturday, May 29th. Up to the present time the amount received has been £15,396 7*s.* 4*d.*, as against £13,777 2*s.* on the same day last year. This leaves still a large deficiency in the required sum, the realisation of which appears somewhat doubtful.

Medical Benevolent Society.

The annual meeting of this society was held recently The seventy-fifth report read by the hon. secretary, Mr. Haslam, stated that the invested funds now amounted to £12,291 19*s.* 5*d.*, and there was a balance at the bank of £31 17*s.* 6*d.* The sixteen annuitants on the books last year were still in receipt of the society's assistance, and none had been added. The annual value of the grants varied from £20 to £40. A donation of £3 was also given to each annuitant at Christmas. The total number of benefit members of the society was 370, twenty-seven having been added during the year. The society had received a welcome addition of two legacies, one of £250 from the late Dr. Sharples, and another of £2000 from the late Mrs. Brumell. Various votes of thanks were passed, and about two dozen of the members dined together after the meeting.

Birmingham and Midland Hospital for Women.

The annual meeting of the governors of this institution was held on May 27th, under the presidency of the Countess of Dudley. The report stated that the number of new cases treated at the out-patient department for the year was 3110, an increase of 185 on the previous year. The total number of new and old cases was 18,046. 345 patients were admitted into the hospital, a decrease of 14, and the total number of operations was 333, a decrease of 22 on the previous year. The number of operations involving abdominal section was 200; 11 patients had died, giving a death-rate of 5 5 per cent. That was a lower death-rate than in the preceding year. The profits on the charity ball held in January added £1300 to the funds. The ordinary receipts amounted to £2366, and the expenditure to £2619 odd. Some special donations had increased the receipts, so that there was a favourable balance of £142 13*s.* The various officers were elected and votes of thanks passed.

Birmingham Asylums.

The committee of visitors, in their report to the city council, show that the number of patients in the asylums on April 1st, 1896, was 1354, and that there were admitted to March 31st, 1897, 402, making a total of 1756. During the same period 167 were discharged cured, 20 relieved, 21 not improved, and 127 died. The health had been good, and the management of the various departments was generally satisfactory. Owing to the progressive increase in the number of patients the board of guardians have expressed regret that they find themselves absolutely unable to relieve the asylums of a considerable number of feeble and harmless patients, who, in the opinion of the medical officers, might be well cared for in a workhouse infirmary.

June 1st.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Dr. Hope's Report on Tuberculosis as affecting the Milk-supply of Liverpool.

"THE Report of the Medical Officer of Health on Tuberculosis as affecting the Milk-supply of the City," ordered to be printed by the Health Committee, deals with many subjects of importance to the community. Dr. Hope points out that the erection in years gone by in Liverpool and other great cities of what is known as "insanitary property" constituted an experiment upon a gigantic scale upon man, and has conclusively proved the influence of bad surroundings in the propagation of tuberculosis. The effect of improved

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sanitation upon tuberculous diseases is shown by the marked diminution of the death-rate from that cause which has taken place in the last thirty years, the death-rate per 100,000 of the population at all ages from all forms of tuberculosis having fallen from 430·8 in 1866 to 292·5 in 1896. Similarly the death-rate per 100,000 of the population above five years of age from phthisis fell from 362·8 in 1866 to 233·1 in 1896; whilst the death-rate per 100,000 of the population below five years from tabes mesenterica, hydrocephalus, and "scrofula," which in 1866 reached 637·1, fell to 496·9 in 1896. Dr. Hope goes on to point out in the report that no domesticated animal is more closely or more continuously confined than the milch cow, nor do the conditions of confinement of any other animal approximate so closely to those of the insanitary human dwellings in which tuberculosis becomes so rife. Cow-houses, shippons, or byres are found, more especially in country districts, in which dirt, darkness, and vitiated atmosphere are constant; under such conditions tuberculous diseases necessarily result. An infected cow may yield a milk in which the tubercle bacillus is present, and it is not improbable that the presence of a cow in an advanced stage of tuberculosis in a bad shippon may lead to indirect contamination of milk in pails, &c., by means of dried infected excretions blown about with dust. Such milk, if taken in a raw state by a susceptible person, may infect that person, and it is to this particular source or means of infection, which has been the subject of much care and attention, that Dr. Hope's report relates. Dr. Hope shows that during the past few years special efforts have been made to improve the condition of the premises in which cows are kept. At the present time no premises are licensed, and no premises will in future be licensed until their sanitary condition fulfils in every detail the requirements of the regulations dated Jan. 6th, 1897. Dr. Hope further deals with the inspection of shippons, dairies, and the analysis of milk (of which about 700 samples are taken annually for analysis under the Food and Drugs Act). The investigations of Professor Boyce, Professor Delépine, Professor D. J. Hamilton, and Dr. Woodhead in search of the tubercle bacillus in the Liverpool milk-supply, which are included in the report, reveal a very serious state of things. They found, as was stated in the columns of THE LANCET last week, that 2·8 per cent. of the samples of milk taken from *city* shippons and examined by them contained the tubercle bacillus, which shows the necessity for a rigorous application of the by-laws. Important as this percentage undoubtedly is, it sinks into insignificance beside the large proportion of milk infected with tubercle which was sent in from the country, which was no less than 29·1 per cent. This large percentage may not be a matter of astonishment to those who are familiar with the condition of many country shippons, but it is a fact which demands the attention of those who are responsible for the administration of those shippons. The tubercle bacillus can be destroyed by boiling for a few seconds, and it is well that this course should be adopted, since milk, as Nature intended it, differs in important particulars from the milk of commerce. Additional powers are required to prevent the erection of town shippons without adequate yard space and without adequate open spaces around them. More direct powers are required to enable the compulsory removal of diseased animals from shippons. Measures are called for to prevent the importation into cities of the diseased products of insanitary country shippons. There is no doubt that much good will result from the report, which has been compiled with great care, and reflects credit on Dr. Hope for the manner in which he has drawn attention to this most important subject.

Hospital Saturday Street Collection.

The anuual street collection in aid of the Hospital Saturday Fund was made on the 22nd ult. in brilliant, summer-like weather. The work of collecting the contributions was carried out by a body of 600 lady volunteers, who were ubiquitous in their appeals for the cause of charity. It is pleasing to be able to record that the collection exceeded that of last year (which realised £507 5*s.* 1*d.*) by nearly £200 The total amount contributed to the Hospital Saturday Fund since its foundation in 1874 has been £73,303.

Presentation to Dr. James Barr.

The residents and nursing staff of the Liverpool Northern Hospital have presented Dr. James Barr, on his retirement from the honorary physiciancy (on appointment to the Royal Infirmary), with a handsome silver inkstand as a token of their esteem and regard. Dr. Barr was very popular at the Northern Hospital, his genial character and high professional attainments gaining for him the respect and affection of both patients and officials, all of whom much regret the severance of his connexion with the hospital.

Death of a Former Chairman of the Royal Infirmary.

Mr. Edward Gibbon, who was chairman of the Liverpool Royal Infirmary from 1851 to 1878, died at his residence at Gateacre, near Liverpool, on the 17th ult., in the eighty-fourth year of his age. His father had also been chairman for a period of twenty-five years, having resigned the office in 1850.

June 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medical Profession in Glasgow.

AN interesting analysis of the numerical increase of the medical profession in a rapidly extending urban population is contributed by Dr. John Brown to the May number of the *Glasgow Medical Journal*. The statistics are relative to the area which may be called Greater Glasgow, and the periods selected for comparison are the years 1885 and 1897. The municipal boundaries of Glasgow were extended in 1891, but the area taken is the same for both years, and includes, outside the present municipal boundaries, Pollokshaws, Kinning-park, Govan, and Partick—that is, from Springburn and Maryhill on the north to Pollokshaws on the south, Parkhead on the east, and Whiteinch on the west. The corrected local list for Glasgow and these suburbs, given by the Medical Directory for 1885, showed a total of 432 qualified persons, of whom 107 were not in practice, leaving a balance of 325, being all those who did medical work in the specified area, whether general, special, or consultant, including also those who held salaried appointments, but not including the resident assistants in the Royal and Western Infirmaries. Dealing with the year 1897 in the same way the total is 685, of whom 191 are not in practice, leaving a balance of 494 who do the medical work of Greater Glasgow. Thus in the course of twelve years there has been an increase of 169 practitioners actually in practice and 84 not in practice—i.e., a total increase of 253. Simultaneously the population has increased from 718,000 in 1885 to 853,000 in 1897, so that the average population to every practitioner was 2209 in 1885 and 1726 in 1897.

Glasgow Medico-Chirurgical Society.

The following office-bearers have been elected for 1897-98: President: Dr. George S. Middleton. Section of Medicine: Vice-president, Dr. Alexander Napier; Councillors, Dr. Maitland Ramsay and Dr. John Love; Secretary, Dr. Hinshelwood. Section of Surgery: Vice-president, Dr. Newman; Councillor, Dr. John Barlow; Secretary, Dr. J. H. Nicoll. Section of Pathology: Vice-president, Dr. Walker Downie; Councillors, Dr. Rutherford and Dr. W. K. Hunter; Secretary, Dr. R. M. Buchanan. Section of Obstetrics: Vice-president, Dr. George Halket; Councillors, Dr. Edgar and Dr. J. M. Munro Kerr; Secretary, Dr. Balfour Marshall. Treasurer, Mr. Henry E. Clark; General Secretary, Dr. C. O. Hawthorne.

Medical Appointment.

Professor McCall Anderson, M.D., of Glasgow University, has been appointed Examiner in Medicine and Pathology for candidates seeking admission to the Medical Services of the British and Indian armies.

Hospital Extension, Huntly, Aberdeenshire.

Scott's Hospital, Huntly, is to be enlarged by the addition of two wings. In the central portion there will be a new storey with a handsome tower. These additions will about double the accommodation, giving twenty-two new bedrooms and several additional sitting-rooms. Under the will of the late Mr. Morison, of Bognie, £70,000 fell to the trustees to be used on the same lines as the Scott funds, and authority was given to expend not more than £5000 of the principal on extension of the buildings.

Working-class House Accommodation in Aberdeen.

On May 28th (Whit-Sunday removal term) about seventy-five families (numbering 350 individuals) of the poorer classes in Aberdeen suddenly found themselves homeless, having been unable to get dwellings at rents within their

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means, and their bedding and other furniture lay on the streets exposed to a drizzling rain. The scarcity of available low-rental houses is largely owing to the action of the authorities in condemning habitations in the slums on sanitary grounds and demolishing buildings for street improvements without providing new accommodation. The police took compassion on the homeless people, and by hook or by crook procured quarters of some kind within twenty-four hours for fifty of the families, but most of the rest had to be accommodated for several days with their furniture in the central police office. One of the local papers has offered a prize for the best suggestion (and design) as a remedy for this state of matters.

Aberdeen Company, Volunteer Medical Staff Corps.

This corps (to the number of about 120) went into camp on Thursday, June 3rd, at Cluny Castle, Monymusk, Aberdeenshire, the commanding officer being Surgeon-Captain Booth. The camp will break up on Monday, June 7th, and the men will return to the city by rail. The corps is above the authorised strength, and was never in a more efficient state.

May 29th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Academy of Medicine in Ireland.

THE general secretary of the Academy of Medicine, at the request of the secretary of the Anatomical Society of Great Britain and Ireland, has issued a circular letter inviting the Fellows and Members to attend the several meetings and demonstrations which will be held by the society in the Anatomical School of Trinity College on Thursday and Friday, June 10th and 11th. A tour to Killarney has been arranged to take place on Saturday, June 12th, the excursion leaving at 9.15 A.M., and returning on the following Monday or Tuesday. Full particulars can be ascertained from Dr. W. S. Haughton, 113, Lower Baggot-street, Dublin. Professor Wilhelm His, of Leipzig, will deliver an address on the Development of the Brain and Nerves in Connexion with It to the Fellows and Members of the Royal Academy of Medicine in the theatre of the Royal Dublin Society, on Friday, June 11th, at 4 P.M.

The Royal College of Surgeons in Ireland.

Great interest is felt just now in the election of Vice-President of the College of Surgeons for the year 1898. Three candidates are thus early in the field: Dr. Charles Ball, Dr. Lambert Ormsby, and Mr. T. Myles.

The Apothecaries' Hall of Ireland.

Mr. Arthur Chance, surgeon to the Mater Misericordiæ Hospital, Dublin, and Mr. H. A. Thomson, assistant surgeon to the Royal Infirmary, Edinburgh, have been appointed by the General Medical Council examiners in surgery for the Apothecaries' Hall.

The Samaritan Hospital.

On Friday, May 28th, in the presence of a large and representative assembly, the new wing which has recently been added to this institution was opened by Miss Benn, the sister of the late Mr. Edward Benn, who was the founder of the hospital, and by Mrs. Forster Green, whose husband has built the new wing. In the new buildings added to the hospital there are two wards, each of which will accommodate four or, on an emergency, five beds, and each of which is complete with bathrooms, lavatories, &c., while on the ground-floor of this wing there are two bedrooms for nurses and a dining- and also a sitting-room for their use. A new dispensary has been formed, the whole of the old part of the hospital premises has been renovated, and one of the old apartments is being transformed into an operation ward, which will be fitted with the most scientific appliances.

June 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Mercury and Non-syphilitic Lesions.

DR. FOURNIER has communicated to the Society of Dermatology an interesting case of rapid and radical cure of certain non-syphilitic cutaneous lesions under mercury. The patient bore on his arms and hands enormous ulcers of several years' duration, the nature of which was never in doubt. They were tuberculous and had resisted all treatment. No history of syphilis was forthcoming. By accident he gave himself an hypodermic injection containing ten centigrammes of calomel. After an acute attack of stomatitis the ulcers presented a decidedly healthier surface and the treatment was continued. In three weeks the tuberculous patches of two years' duration were replaced by healthy skin. Dr. Fournier concluded from the success of this case that specific treatment in doubtful cases has not the value attributed to it as proof of the existence or absence of syphilis, and he regrets now that he has often attributed to syphilis destructive lesions of the face, which were probably simple lupus, although they improved under mercury. He recalled one case of lupus of the face that had improved markedly under an injection of calomel. In view of this statement in the nature of a confession by one of the chief of French syphilographers, other members of the society plucked up courage to relate analogous cases, the details of which they had hitherto hesitated to publish. M. Auganeur mentioned that he had obtained a cure in a case where tuberculous mischief had lasted for ten years by the energetic exhibition of iodide of potassium. M. Sabourand related to the meeting that the only two cases of human glanders in which he knew a cure to have resulted had been mistaken for syphilis and treated with mercury. The results obtained in psoriasis by Haslung's method and by the employment of iodide of potassium were also alluded to as bearing on the point, the net result of the debate being a rude blow to the classic adage—*Naturam morborum curationes demonstrant.*

The Treatment of Gastritis: Reichmann's Disease.

A lively discussion took place at the Academy of Medicine recently upon this subject, so lively that it verged upon a personal dispute between M. Hayem and M. Albert Robin. On a previous occasion M. Hayem had declared that patients suffering from "gastro-succorrhée," or Reichmann's disease, a condition characterised by the presence of liquid in the fasting stomach, could only expect cure from surgical interference. M. Robin asserted, on the contrary, that medical treatment could not only benefit but actually heal the patient, and quoted a number of observations in which patients of M. Hayem who had been operated upon surgically had been found to suffer from spasm or pyloric contracture without lesion, while M. Hayem had asserted that stenosis is always accompanied by lesion. M. Hayem replied that none of the cases cited by M. Robin had suffered from Reichmann's disease, and that, among others, a woman whom he had treated, and to whose case allusion was made, was an hysteric in whom the particular symptom of Reichmann's disease—namely, liquid in the stomach—had never been present. He pointed out the weakness of the position taken up by his opponent in quoting cases against him which had been only alleviated, not cured. M. Robin replied that he was quite aware of the symptoms of Reichmann's disease as described by all the authors. M. Hayem replied that he had only met with the condition twice in a long career, so that it was certainly very rare, and the frequency with which M. Robin had met with it astonished him. M. Debove tried to reconcile the opponents by saying that without either sharing the views of M. Hayem or opposing them he awaited more convincing observations than those which had been furnished.

Reform in the System of Concours.

The methods by which the medical staffs of the Paris hospitals are elected have for a considerable time been subjected to much criticism both by the public and by the candidates themselves. It should be understood that *concours*, as this method is termed, is a public examination divided into two parts. The first of these is a series of written tests in anatomy and pathology, and is of a qualifying nature. Success in it allows the candidate to enter upon a second or clinical part where the examination of patients and the publication of original work count. The chief grievance of the candidates is that they are compelled always to qualify, so that if at the end of *concours* they are not successful they have on each occasion on which they compete to begin at the beginning again. From this it follows that those who aspire to be chosen on the staffs of the hospitals, and who represent the flower of young French medicine, are compelled to pass perhaps ten years of their life in revising the exercises of pure memory demanded of candidates in written

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examinations upon anatomy and theoretical pathology. Every one agrees that their time would be much better spent in perfecting their clinical knowledge or making original research, and the petition which has emanated from the candidates asking that they shall not be required to qualify more than twice has obtained support from several of the examiners and teachers. It is considered that the profession will gain, inasmuch as the selected men will be free from the evidences of intellectual fatigue and will not have lost heart for original work by repeated plodding over elementary matters. Nor is this the only objection that has been taken to *concours*. One of the members of the last jury, M. Variot, has had the courage to publicly assert what has been very generally hinted—that private influence grows daily more influential in dictating the choice of candidates. M. Variot stated, with unkind frankness, that three recent candidates had been already pronounced by public opinion elected before they had undergone any test, and that by the simple process of calculating the chances that they would have among their teachers or personal friends on the jury. Speculation turned out completely right, and the three candidates who were then nominated before the tests came out triumphantly at the top of the poll. A somewhat similar occurrence amused the public much some two years ago, when, on the opening day of *concours*, the names of the jury being known, a political paper published a note that had evidently been inspired by a humorous candidate, but which the journal thought to be serious information, in which it was gravely announced that *concours* was over and had resulted in the choice of three persons whose names followed.

May 31st.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Bacteria in Parotitis.

AT a recent meeting of the Verein für Innere Medicin Dr. Michaelis, assistant to Professor v. Leyden, read a paper on bacteria discovered by him and Dr. Bein in cases of mumps or epidemic parotitis. Professor v. Leyden had drawn the attention of his assistants to characteristic diplococci present in the sputum of a child suffering from this complaint, and Dr. Michaelis accordingly made a bacteriological examination of seven other cases. He succeeded in proving the presence of these diplococci in every instance not only in the secretion of Steno's duct, but also twice in the pus of the suppurated gland and twice in the blood taken from the veins of the patients. He described the diplococci as being 1 μ in length, and in form very like gonococci, only somewhat smaller. They were, as a rule, found in the interior of the cells, a cell containing from eight to ten of them; but some were arranged in long rows outside the cells, so that they might be regarded as streptococci. Another feature was that they were unusually motile. They could be stained with the usual aniline colours, especially with methylene-blue and also after Gram's method. They were cultivated on the usual media, and grew slowly. On agar they formed small, limpid points, not confluent, very like dewdrops. When they were cultivated in peptone broth a white, granular sediment appeared, the broth itself remaining clear. Their growth depended upon the degree of alkalinity of the medium. Dr. Michaelis also succeeded in cultivating them in ascitic fluid and in milk, which became coagulated within forty-eight hours. Injections of the cultures in animals gave negative results, one case excepted, where a white mouse died within thirty-six hours; the injections were made in the parotid glands of mice, rabbits, cats, and dogs, and in the testicles of guinea-pigs. In healthy persons the above-described diplococci were never found. Dr. Michaelis remarked that Pasteur long ago described bacteria present in the blood of patients suffering from mumps, and that Capitan, Charrin, and Olivier observed cocci and bacteria in the blood and in the urine. Boisset discovered in the blood micro-organisms which were partly diplococci and partly streptococci. The bacteriological researches of Laveran and Mecray gave results similar to those of Dr. Michaelis, they found diplococci in the blood and in the secretion of the gland, and were able to cultivate them.

Kryofin: a New Antipyretic.

Professor Eichhorst, of Zürich, has recently described in the *Deutsche Medicinische Wochenschrift* a new antipyretic to which the name of kryofin has been given. He considers that as a rule the administration of antipyretic remedies is quite unnecessary, and in his clinic such drugs are therefore hardly ever used. An exception has, however, been made in the case of kryofin principally for the purpose of ascertaining its physiological action. Kryofin belongs to a series of chemical compounds which have been investigated by Dr. Bischler, one of the chemists of Zürich University. Kryofin, like phenacetin, is a phenetidin derivate, and is prepared by acting on para-phenetidin with methyl-glycol acid at a temperature from 120° to 130° C. It forms white crystals which are inodorous and tasteless, so that they can be easily swallowed in the form of powder. It is soluble in 52 parts of hot water and in 600 parts of cold water. In a concentrated solution it tastes bitter and acrid. The dose of kryofin was stated to be half a gramme (7½ grs.), the effect being like that of one gramme (15 grs.) of phenacetin. In cases where kryofin failed the other antipyretic compounds—phenacetin, lactophenin, and antipyrin were equally unsuccessful. Professor Eichhorst gave a detailed account of five cases in which kryofin had proved beneficial. Two of the patients suffered from enteric fever, one from pneumonia, one from puerperal fever, one from acute Bright's disease following scarlet fever, and one from erysipelas of the face. In every instance the administration of kryofin brought down the temperature to the normal in from five to six hours, and the pulse simultaneously fell from 120 per minute to 80 or 90. The remedy also proved useful in cases of pulmonary tuberculosis, diphtheria, tubercular meningitis and endocarditis. There was sometimes profuse perspiration while the temperature was in course of falling. The blood-pressure in the arteries was measured with Dudgeon's sphygmograph and Basch's sphygmomanometer, and in the radial artery it showed an increase to the amount of from ten to twenty-five millimetres of mercury. Kryofin also proved to be a good antineuralgic remedy; in several cases of recent sciatica its effect was very remarkable. In one instance of alcoholic polyneuritis where salicylate of soda, phenacetin, antipyrin, and exalgin had been given without any effect, three half-gramme doses of kryofin daily caused the severe pains to disappear. In acute and chronic rheumatic arthritis it appeared to be less efficacious.

Over-exertion in Cycle-races.

Dr. Albu recently made an interesting communication to the Berlin Medical Society on certain effects produced on the heart and other internal organs by over-exertion in cycle-races. His conclusions were based on the condition of twelve professional cyclists whom he had examined both before and after races lasting from five to thirty minutes. The strain thrown on the heart was shown by well-marked dyspnœa, and by the strong pulsation of the heart and arteries, but the most remarkable fact was an acute dilatation of the heart, especially of the left ventricle. This dilatation is of course temporary, disappearing when rest has been taken and returning on the occasion of the next race. When over-exertion is frequent this dilatation may become permanent, and in a heart that was previously weak an irreparable injury may occur. Another symptom was the presence of albumin and casts in the urine, caused by the kidneys being irritated by the effort of cycling. Dr. Albu believes that cycling in moderation is for most persons a very salutary form of exercise, and he explained that the dangers he had described were only incurred by professional riders and competitors at matches.

May 29th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

X Rays in Legal Cases.

THE Roentgen x rays are beginning to be received in courts of law as a reliable method of obtaining evidence in doubtful cases. A man has brought a suit against a railroad for $10,000 on account of the failure of the physician to secure satisfactory results in a fracture of the wrist. A skiagraph has been taken of the injured joint which the court will admit as satisfactory evidence of the present condition and future usefulness of the limb. In another case of a suit for $20,000, on account of alleged false diagnosis of an injury that led to treatment of contusion instead of fracture,

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the x rays were recognised in court as disclosing the true nature of the injury. In another State the x rays were admitted in evidence by the court in a case of alleged malpractice in setting a fractured leg.

Street Cleaning by Direct Labour.

The two cleanest cities on the continent to-day are Toronto and New York, and they are both cleaned by direct labour New York not only employs and thus directs all its street-cleaning forces, but it has an organised department, with an adequate and properly adjusted equipment of horses, carts, brooms, stables, and stations, and it pays its men $2.00 a day and upward for eight hours' work. It is by the method of direct labour under model conditions of employment that this first worthy result of the kind in a large American city has been achieved. Toronto, the other of these two exemplary cities, has gone even further than New York in eliminating the contractor. In this interesting Canadian town, with its 190,000 people, Street Commissioner Jones has during the last seven years entirely revolutionised the care of the streets of the city. He has not only organised the execution of this work under a distinct department, but out of the margin thus saved from the annual appropriations for caring for the streets he has actually built and equipped a modest but complete set of workshops, where the entire construction and repair work of the department is executed. A considerable element of this saving of labour has been due to the automatic loading machines, invented in these shops, which elevate the litter directly from the street into a dump-cart as rapidly as horses can walk.

Public Health in North Carolina.

The State Board of Health of North Carolina held a meeting on March 12th, for the purpose of trying to enlist the coöperation of medical associations and other State Boards in urging upon the National Government the necessity of properly draining the swamps and rivers, and thus removing one of the most fearful causes of death—malarial fever. Another matter discussed by the Board was as to the best means of checking the ravages of tuberculosis among the negroes. It was decided to issue a circular to all coloured school teachers explaining this fact, and showing that the most fruitful cause of the spread of this disease was the habit of expectoration by tuberculous patients on the floors of school buildings and elsewhere.

May 17th.

THE MIDDLESEX HOSPITAL.—H.R.H. the Duke of Cambridge presided on May 27th at a special quarterly general court of governors, at which it was resolved to present an address to Her Gracious Majesty the Queen, patron of the hospital, on the occasion of the sixtieth anniversary of her reign. Sir Ralph Thompson read the terms of the address, in which reference was made to the munificent gifts graciously bestowed upon this charity from time to time by Her Majesty, and also to the fact of her having acted as the patron of the hospital throughout the long period of her beneficent reign. The address continued: "Your Majesty's reign will be conspicuous, not only for the great advance in the science of medicine and for the establishment of a body of highly-trained nurses, but for the endeavours made, under the stimulus and encouragement of your Majesty's bright example, by members of the Royal Family to alleviate the sufferings of the sick, which has now culminated in the noble and generous effort by H.R.H. the Prince of Wales to raise such a lasting fund for the benefit of the hospitals of London as will render the sixtieth year of Your Majesty's reign specially marked in their annals." His Royal Highness, in the course of some remarks, referred to the progress of medical and surgical science during recent years, and to the great interest which Her Majesty and the other members of the Royal Family had always manifested in the welfare of the various hospitals. He was glad that the old hospitals were coming to the front on the present occasion, because there were a great many new hospitals now which were anxious to gain public notoriety, and while they received large subscriptions the old institutions were apt to be left in the shade. This was not due to any want of respect for the old hospitals, or because they were not performing their duties properly. The old hospitals were just as good as the new ones, although their premises could not be so good as those which were erected with all the modern requirements.—A vote of thanks was accorded to His Royal Highness for presiding.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE Summer Session of the General Medical Council came to an end on Monday last with a vote of thanks to the veteran President. It is not too much to say that courage, energy, and devotion to duty have seldom been more extraordinarily displayed in a public capacity than they have been by Sir Richard Quain during the sitting of the Council which has just concluded.

The penal business of the General Medical Council at its late meeting was not very heavy. One case was that of a practitioner of eighty years of age for "covering" an unqualified assistant. The offence was held to be proved; but the practitioner was not quick in the apprehension of his fault. He had consulted a solicitor, who had told him that "anybody might practise medicine." The Council mercifully gave him time to consider his position, while he on his side promised to see that no patients were treated by an unqualified assistant. In two cases the Council proceeded to order the removal of the practitioner's name from the Register.

The position of the General Medical Council towards the Midwives Bill is not easy to comprehend. On Wednesday, May 26th, on a motion proposed by Dr. McVail, and seconded by Dr. Thorne Thorne, the Council inquired whether the Privy Council still desired that the Midwives Bill should be considered during the present Session. The Privy Council replied promptly that it would "be desirable to hear the opinion of the General Medical Council during the present Session." It was accordingly moved that the Council should do as the Privy Council desired, but the motion was lost, and an amendment was carried that the Bill in question should be referred to a committee for consideration and report next November. We agree with Dr. Pettigrew, who said that in his opinion the Council were bound after having approached the Privy Council to act at once. The second reading is now fixed for Wednesday, June 30th, or four months before the Council propose to deliberate and report upon it.

Mr. Thomson did well to direct the attention of the Council to the range of surgical questions put on the examination of dentists by the Royal College of Surgeons of England, as if it were intended that the examinee should take medical charge of the whole head and body. Mr. Bryant promised to bring the matter under the notice of his College.

There was an interesting debate on Saturday, May 29th, on the disciplinary power of the Universities. It seems to us, as it seems apparently to the Privy Council, quite clear that the Universities ought to be able and willing to deprive University graduates of their status. What Professor Allbutt meant by writing on behalf of the Special Board of Medicine of Cambridge University that "the guilds of the profession ..... are the proper bodies to keep up a continuous standard in the ethics of the profession" we do not quite know; but the Board has certainly forgotten to take into consideration the possible case of an ill-behaving medical graduate of Cambridge who does not happen to be a *diplomé* of any guild.

The Council, in accepting Mr. Miller's resignation, has, we are glad to see, awarded him a gratuity of £1000. He did very valuable work, and his sudden breakdown has been a

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subject of sincere commiseration. The vacancy has been filled by the appointment, subject to annual election, of Mr. H. E. Allen, acting registrar, who has served the Council for eighteen years.

The doom of the unqualified assistant has been practically pronounced this session. The somewhat vague regulations made by the Council recently have not abated the scandals arising out of the improper use of unqualified help, and the next move will be to permit only genuine medical students to sell their services, and then only in such a way as to preclude covering. That such regulations will bear hardly upon a diminishing body of men is true but inevitable.

The finances of the Council are always a matter of interest, and must become more so if Dr. Rentoul gets his way and sees the Council become a great spending department. Last year the income of the General and Branch Councils was £1526 18*s.* 10*d.* less than the expenditure. It is noticeable that the receipts from registration fees were less in Scotland and Ireland than in the previous year, though they were more in England. The chief explanation of increased expenditure in the last four years given by the treasurer is the cost of the inspections of examinations and of the preparation of the Pharmacopœia.

The Council may, on the whole, be congratulated on having got through good work quickly.

THURSDAY, MAY 27TH.

Last week we reported the proceedings of the first two days of the session of the Council, and this week we begin with the third day, when Sir RICHARD QUAIN again presided.

The Case of Rees Thomas Edward Davies.

The Council proceeded with the adjourned consideration of the case of Rees Thomas Edward Davies, of New Tredegar, *vid* Cardiff, who at the session in November was charged: "That he systematically authorised, permitted, and enabled unqualified persons, under cover of his name and qualifications, to administer medical treatment to patients and generally carry on medical practice and perform the duties which can properly be performed only by practitioners recognised by law." On that occasion the Council found the charge had been proved, but postponed the further consideration of the case.

Mr. FARRER, solicitor to the Council, said that Mr. Davies was now in attendance. During the time that had been left to him to amend his ways he had got rid of both the unqualified assistants, whom he was said to have improperly employed, and the complainant, Mr. Francis Ignatius Maunsell, Tir Phil, Cardiff, had written to say that for the last three months or more Mr. Davies had been employing qualified men, so that the object of the censure of the Council had, he might say, been attained.

Mr. DAVIES, in reply to the President, said he had discharged the unqualified men and replaced them by qualified assistants.

Mr. BROWN said he should like, through the President, to ask Mr. Davies whether he could give the Council any information as to what had become of his late unqualified assistants.

The PRESIDENT said that was no affair of the Council.

The Council then deliberated in private on their decision.

The PRESIDENT thereafter intimated to Mr. Davies that the Council had further considered the charge made against him, and did not adjudge him guilty of infamous conduct in a professional respect. He had done wisely in accepting and adopting the suggestion of the Council, and he had had a very fortunate escape. He hoped this would be a lesson to him and his neighbours in the future in regard to the employment in their practice of non-qualified assistants.

Mr. DAVIES asked for the advice of the Council in these circumstances. The men he had were leaving, and though he had advertised for the past month for a qualified man he had not been able to get one.

The PRESIDENT said the Council could not proceed further in the matter.

The Case of Timothy Siddall Jones.

The Registrar was directed to erase from the Register the name of Timothy Siddall Jones, late of Gowerton, Swansea, who in November last at Swansea was convicted of manslaughter and sentenced to penal servitude for life.

The Case of Daniel Costelloe.

On the report and recommendation of the Executive Committee the Council decided to restore the name and qualifications of Daniel Costelloe to the Medical Register. The removal was made on Dec. 5th, 1894, in respect of a charge of covering.

Address to Her Majesty.

Sir WILLIAM TURNER read for the approval of the Council the terms of an address to be presented to Her Majesty the Queen on the occasion of the completion of the sixtieth year of her reign.

They were cordially approved, and it was arranged that, as in 1887, each member of the Council should sign the address. Etiquette prevents the terms being given in this report.

Death Certification.

The PRESIDENT repeated what he said on this subject in his opening address. He added that the statement which had been drawn up for presentation to the President of the Local Government Board mentioned some very important particulars in which death certification might be improved. One recommendation, he said, was that undertakers should be registered and have a sort of licence, and another was that births and marriages should be separated from deaths. He hoped that the deputation would be received by the President very soon.

The Society of Apothecaries of London.

Mr. BRUDENELL CARTER intimated to the Council the retirement by rotation of Mr. Adams Frost from the office of assistant examiner to the Society of Apothecaries of London, and moved the appointment in his stead, for a term of five years, of Mr. Louis Albert Dunn, M.B. and M.S. Lond., F.R.C.S Eng., L.S.A., assistant surgeon to Guy's Hospital.

Mr. BRYANT, in seconding the motion, said that Mr. Dunn was an excellent all-round man, and would see that a proper standard of proficiency was maintained at the examinations.

Dr. MCVAIL said it was a very pleasant thing to find the representative of the Royal College of Surgeons of England so cordially seconding the nomination of the representative of the Society. It would be a much greater pleasure to the Council if the Royal College of Surgeons of England would unite with the Society to form a conjoint board and so relieve this Council of the necessity to appoint assistant examiners.

The motion was agreed to.

British Medical Men Abroad.

Mr. ALLEN, Acting Registrar, read the following letter:—

"6, Via Finanze, Rome, May 22nd, 1897.

"DEAR SIR,—The Under-Secretary of the Italian Parliament has announced that he is about to introduce a project of law for the purpose of modifying Article 23 of the Sanitary Law, which permits foreign doctors practising their profession among foreigners in Italy. The reason assigned for this change is that Italian doctors are not permitted to practise in the other countries of Europe, including the United Kingdom, without possessing the diplomas of the respective countries.

"Now, as you are aware, this is not a fact as far as England is concerned, because foreign practitioners can exercise their profession in the United Kingdom, but under certain restrictions if they are not registered. Besides, under the Medical Act of 1886 the General Medical Council have the power to recognise equivalent qualifications obtained in countries which treat the United Kingdom with reciprocity.

"As this proposed change is of vital importance to all the British medical men practising in Italy, particularly if the law should be made retrospective, a meeting of the British medical men practising in Rome was held on the 10th instant for the purpose of guarding our interests in this relation.

"The meeting unanimously agreed that Mr. Eyre and Dr. Brock should form a deputation, representing all the British and American doctors practising in Italy, to call upon the British and American Ambassadors for the purpose of obtaining their powerful aid; that they should endeavour to obtain an interview with the Minister of the Interior for the purpose of placing the above facts before him; and that they should also act for the other English and American doctors practising in Italy. The meeting also requested me to write to our colleagues in Italy requesting their adhesion to these resolutions.

"We have seen the English Ambassador, and he has kindly promised to do all he can for us. We have applied for an audience with the Minister of the Interior, but have not yet had a reply to our letter. I have heard from nearly all the other British doctors in Italy, and they approve of what we have done.

"It has occurred to me that this is an excellent opportunity for us to endeavour to carry into effect the 'reciprocity clause' of the Medical Act of 1886, and I shall, therefore, feel very grateful if you will kindly

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tell me what are the necessary steps to be taken for the purpose of obtaining this object, so that I may acquaint my colleagues with them.

"I remain, dear Sir,

"Yours faithfully,

"JOHN J. EYRE."

Sir WILLIAM TURNER said that the subject of this letter was no new question; a very elaborate report prepared three years ago by the President gave the fullest information with regard to it up to the date of the report. He would suggest that copies of this report should be sent to Mr. Eyre so that he might see the exact position of the question and the attitude taken by this Council. He was sorry to say that the countries which were especially the offenders, France and Switzerland, had paid not the least attention to anything the Council had suggested. The letter might also be sent to the Privy Council.

Dr. GLOVER said he would be glad to second Sir William Turner. He thought the matter so urgent that they should communicate directly with the Privy Council, and he hoped they would get from Italy a better answer than they got from France.

The PRESIDENT said it was remarkable to hear this from Italy, because they had held up the country as a noble example of freedom to foreign practitioners. Now, it appeared, Italy was going to follow the bad example of the neighbouring countries, and he thought it most desirable that a representation should be made to the Privy Council, who would communicate with the Foreign Office, and no doubt something might be done in that way.

Dr. HERON WATSON asked whether there was any convention between this country and Italy whereby Italian practitioners could practise here. So far as he knew they could only practise here as any quack could practise.

Mr. BRUDENELL CARTER called attention to Section 12 of the Act of 1886, which said: "On and after the said prescribed day, where a person shows to the satisfaction of the Registrar of the General Council that he holds some recognised foreign medical diploma or diplomas (as hereinafter defined) granted in a foreign country to which this Act applies, and that he is of good character, and that he is by law entitled to practise medicine, surgery, and midwifery in such foreign country, he shall, on application to the said registrar, and on payment of such fee not exceeding £5, as the Council may from time to time determine, be entitled, without examination in the United Kingdom, to be registered as a foreign practitioner in the Medical Register."

Dr. MACALISTER pointed out that before the foreign practitioner could be registered in this way there must be the antecedent order in Council; the Privy Council must be satisfied in this case, for instance, that Italy had granted reciprocity to us.

Mr. MUIR MACKENZIE said that Section 17 of the Act gave power to Her Majesty in Council to define colonies and foreign countries to which Section 12 should apply.

Dr. MACALISTER: And the moment Italy begins we are ready to follow.

Sir WILLIAM TURNER: Quite so; the foreign country must take the initiative.

It was then agreed to furnish Mr. Eyre with six copies of the memorandum and to appoint a committee, consisting of the President, Sir Dyce Duckworth, Dr. Thorne Thorne, and Mr. Carter, to frame and forward to the Privy Council a representation calling attention to the subject of Mr. Eyre's letter and asking that the Secretary of State for Foreign Affairs might be moved to take such action as was possible in regard to it.

Pharmacopœia Committee.

The following report was presented and adopted, viz.:—

The Pharmacopœia Committee report to the Council that the progress of the work of revision of the British Pharmacopœia can be readily estimated from the draft proofs which have been issued to the members of the Council. These comprise the whole of the text of the volume, and the work which remains to be done consists of the preface, the completion of the appendix, and the preparation of the index. It is proposed to place the modifications desired by the colonies in the appendix, and it is also proposed to somewhat alter the arrangement of the index so as to include complete lists of official preparations, and also the doses. In the labour of revision the Committee has received most valuable assistance from all the referees, who have contributed many very useful criticisms and suggestions. From the present condition of the revision it is hoped that it may be possible to place the completed volume before the Council at the next meeting in November. The Committee cannot ensure this result unless all copies of the draft now issued are returned by June 30th, 1897.

The Case of Robert Alexander Douglas Lithgow.

The Council then proceeded with the consideration of the case of Robert Alexander Douglas Lithgow, of 27A, Lowndes-street, Belgrave-square, S.W., registered in England May 5th, 1873, as Lic. Soc. Apoth. Lond. 1871, Lic. 1872, Mem. 1880, R. Coll. Phys. Edin., Lic. R. Coll. Surg. Edin. 1872, M.D. Univ. St. And. 1890, who had been summoned to appear before the Council to answer the following charge on the complaint of the Medical Defence Union:—

"The complaint has relation, firstly, to Dr. Lithgow's alleged association in medical practice with William Maunsell Collins, of 10, Cadogan-place, an unregistered person, whose name was erased from the Medical Register by direction of the Council pursuant to the 29th Section of the Medical Act, 1858, on the ground that he had been convicted of felony, but who still held the qualifications of M.D., Mast. Surg. of the Queen's University of Ireland; secondly, to his alleged association with, and support given to, an unqualified person named Mrs. Maitland King, who purports to carry on, or has carried on, a medical practice at 49A, Park-street, Grosvenor-square, and 31A, Grosvenor-street, Grosvenor-square, or one of those places. With regard to Dr. Lithgow's association with William Maunsell Collins, it is alleged by the complainants that he had acted as cover to him, and by his presence, advice, and assistance, and meeting him in consultation, and certifying deaths for him, had enabled W. M. Collins, notwithstanding the erasure of his name from the Medical Register, to carry on a medical practice as though he was still duly registered. In particular it is alleged that he so acted as cover to W. M. Collins in the particular case referred to in the depositions taken before the Coroner for West Middlesex on July 4th, 1895, a copy of which is before the members of the Council. With regard to his association with Mrs. Maitland King, the complainants allege that she carries on a so-called establishment for private massage and medical electric treatment, at which she professes to administer medical treatment to patients, and carry on a medical practice, and that such establishment is carried on under, or assisted by, Dr. Lithgow's medical supervision.'

Mr. R. W. Turner, instructed by Mr. W. Hempson, solicitor, and Dr. Bateman appeared for the Medical Defence Union, and Sir Frank Lockwood, Q.C., and Mr. Montagu Lush, instructed by Mr. Percival Ray, solicitor, appeared for Dr. Lithgow.

Mr. TURNER said that Dr. Lithgow attended a patient at the request of Dr. Collins from June 10th, 1895, onwards until the death of the person on June 18th; for obvious reasons he was unwilling to introduce the patient's name. At the beginning of this attendance Dr. Collins was confined to his house by indisposition, but on June 14th they visited the patient together and made an examination. Dr. Lithgow admitted that he saw the patient again on June 15th, but he did not point out, as was pointed out elsewhere, that he and Dr. Collins met at the patient's house. On June 18th he was sent for, and on his arrival, the second time that day, he found the patient dead, and he gave a certificate of death, which certificate was found at the coroner's inquest to be incorrect. The statements of the various counsel engaged in the case showed that Dr. Collins was removed from the Register, not for unprofessional conduct, but in consequence of his being convicted at the Old Bailey of felony—viz, of forgery; no sentence, however, was passed upon him, and he was released upon his own recognisances. Mr. Muir Mackenzie further pointed out that when infamous conduct in a professional respect was charged the Council inquired into the facts, but in the case of a felony they simply proceeded upon the certificate of the officer of the court. Mr. Turner then went on to state that Mrs Maitland King was not registered as a medical practitioner in this country. She carried on a massage practice, styled herself "Mrs. Dr. Maitland King," and said that she acquired the degree of "M.D. U.S.A." after five months' study. In the *Provincial Medical Journal* of January, 1894, Dr. Lithgow published himself as consulting physician to Mrs. Maitland King's establishment. A pamphlet which said that Mrs. Maitland King's massage establishment was highly recommended by Dr. Lithgow was also published both before and after this matter was brought to Dr. Lithgow's notice; it was on the subject of corpulence and other ailments of women, and contained a compilation of advertisements.

Sir FRANK LOCKWOOD then opened the defence, saying that Dr. Lithgow was glad to have an opportunity of meeting the charges which had been made against him, and submitted testimonials which he had received from several distinguished men. Dr. Lithgow had long been acquainted with Dr. Collins, and after his misfortune he still remained his friend. Dr. Collins, being indisposed, was not able to visit this patient, and Dr. Lithgow accordingly attended her, as he would have attended any person in society. The account given to him was that the lady had been bicycling and suffered from a chill. After he had attended her for two or three days he and Dr. Collins met, and that which was said to be an operation, but was really an examination, was performed by Dr. Collins. No operation in the ordinary sense was performed, Dr. Lithgow was absolutely unprepared for what was disclosed at the post-mortem examination, and he gave to the best of his ability a certificate of the cause of death. The Council might think that

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Dr. Lithgow had acted imprudently or even improperly; but he begged them to believe that if he had erred he had done so from want of thought. As regards Dr. Lithgow's association with Mrs. Maitland King, her establishment was not carried on under his supervision, neither had he ever seen a patient along with her; he had only visited people there and examined them to see whether they were fit for her treatment. This conduct the Council might condemn, but was it a justification for driving the man from his profession?

Dr. Lithgow was then examined by Sir Frank Lockwood, cross examined by Mr. Turner, and questioned by several members of the Council, after which it was agreed that the case should be closed and the Council adjourned.

FRIDAY, MAY 28TH.

The Council resumed work to-day, Sir Richard Quain presiding.

The Midwives Bill

Sir WILLIAM TURNER said he wished to interpolate a matter of pressing business. It was within the recollection of the Council that on the first day of the session a motion, moved by Dr. McVail and seconded by Dr. Thorne Thorne, was carried that inquiry be made as to whether the Privy Council still desired that the Midwives Bill should be considered during the present session of the General Medical Council. This morning there had reached them the following letter marked "pressing" from Sir Charles Lennox Peel, viz:—

"Privy Council Office,
"Whitehall, May 28th, 1897.

"SIR,—I have submitted to the Lord President of the Council your letter of the 26th instant, inquiring if the Privy Council still desire, at this period of the Parliamentary session, to have the opinion of the General Medical Council on the Midwives Bill now before Parliament, and I am directed by the Lord President to state, for the information of the Council, that his Grace is of opinion that, as the Bill may be introduced again next session and may then obtain a more favourable position in the ballot, it will be desirable to hear the opinion of the General Medical Council—during the present session—on the Bill for the information of Her Majesty's Government

"I am, Sir, your obedient servant,
"C. L. PEEL.

"The Secretary of the General Medical Council."

The Council would require to acknowledge receipt of this letter, and the next question was whether the Council were still of opinion that this Bill was pressing, that it was likely to be brought forward and carried to an issue during the present session. If it was not likely to be brought forward and carried to an issue during the present session then it could be taken up by this Council next November. If it was likely then it was clear they would have to deal with it now.

Dr. RENTOUL moved that the consideration of the letter be postponed until a later sitting of the present session. He did so because the second reading of the Midwives Bill was fixed for Wednesday, and because there was some difference of opinion in the Council as to whether the Council should deal with it during the present session.

Mr. BROWN, in seconding this motion, said that if the Bill was blocked, as probably it would be on Wednesday, it was not likely to be brought on again during the present session of Parliament. At the same time, having received this important communication from the Privy Council, and it being evident that the Privy Council desired the collective and considered opinion of this Council upon this Bill, he thought it would be well to appoint a committee this session to consider and compare it with other Bills and report on the whole question in November.

Dr. MCVAIL moved, as an amendment, that the Council proceed to consider the Bill during the present session. His opinion was that after what had occurred—the Council having asked the Privy Council whether they wished their opinion this session and having got this quite decided and emphatic reply—there was no other course open to them.

Mr. BRUDENELL CARTER said that in the light of experience he doubted whether the formation of a committee would be of any use in this matter. When the committee had considered the Bill and made their report that report would be discussed clause by clause, probably in committee of the whole Council, just as if the committee had never sat.

Dr. PETTIGREW thought the Council were bound, after having approached the Privy Council in the way they had, to act at once.

Dr. RENTOUL said that after hearing the statement of the Privy Council representative (Dr. McVail) he would ask leave to withdraw his motion.

This motion was by leave withdrawn and Dr. McVail's amendment became the motion before the Council.

Dr. GLOVER moved, as an amendment to this, that the Midwives Bill referred to in the letter from the Privy Council be referred to a committee for consideration and report to the November meeting of the Council.

Dr. MACALISTER seconded the amendment.

The PRESIDENT said it would be a most expensive matter for the Council to deal now with the Bill. It would occupy four or five days and cost £400 or £500, and he was certain the Bill would not pass this session.

Dr. RENTOUL: Do I understand that the discussion of this Bill would cost £400 or £500?

The PRESIDENT: Yes; the cost is about 100 guineas per day.

Dr. RENTOUL: I think it is very cheap.

On a division being taken Dr. Glover's amendment was carried by 16 votes to 11, and became the finding of the Council.

The Case of Robert Alexander Douglas Lithgow.

The Council deliberated for over an hour on the case of Dr. Douglas Lithgow, the hearing of which had proceeded during the latter part of the previous sitting. At the conclusion of the deliberations it was resolved:—

"*a.* That the Council do proceed at once to pronounce its judgment on the case. *b.* That the first charge made against Dr. Robert Alexander Douglas Lithgow has been proved to the satisfaction of the Council. *c.* That the second charge made against Dr. Robert Alexander Douglas Lithgow has been proved to the satisfaction of the Council. *d.* That the Council do now judge Dr. Robert Alexander Douglas Lithgow to have been guilty of infamous conduct in a professional respect, and do direct the Acting Registrar to erase from the Medical Register the name of Dr. Robert Alexander Douglas Lithgow."

Strangers and Dr. Lithgow having been re-admitted, the PRESIDENT announced the finding of the Council.

The Case of Edmund Evance Hooper.

The Council, with Sir William Turner in the chair, proceeded with the consideration of the case of Edmund Evance Hooper, of Bridport-place, New North-road, N., registered in England on Jan. 1st, 1859, as Mem. R. Coll. Surg. Eng. 1841, Lic. Soc. Apoth. Lond. 1841, who had been summoned to answer the following charge, as formulated by the Council's solicitor, under the direction of the Penal Cases Committee, acting on a report by Dr. Wynn Westcott, coroner for the North-East District of London:—

"That, being a registered medical practitioner, he authorised, permitted, and enabled an unqualified person named Frederick Taylor, under cover of his name and qualifications and assistance, to carry on medical practice as though he were duly qualified, and to perform the duties and exercise the functions which by law are confined to qualified and registered medical practitioners."

Mr. Hooper, who is eighty years of age, and who has been in actual practice for half a century, appeared before the Council unaccompanied either by solicitor or counsel. The charge was read by Mr. Farrar, and Mr. Muir Mackenzie read the evidence, which consisted of depositions made at an inquest held last December in the coroner's court at Shoreditch on the body of a boy named Bertram Lott, who was seen some five times by the Frederick Taylor named in the charge after an accident followed by blood-poisoning. These depositions showed that for the five visits Taylor had been paid 3*s*. This man, in his deposition in court, stated that he was not a registered practitioner, and the practice he took charge of belonged to Mr. Hooper, who saw cases with him often. The practice, Mr. Hooper admitted before the coroner, was his. It had been his son-in-law's, and when his son-in-law (Mr. Watt) died he thought he might take it over, as it was near his surgery at Bridport-place. Taylor had assisted Mr. Watt, and he kept him on. He visited the shop, which was at 240, Hoxton-street, every day; and not only was he unaware that Taylor's name ever had been on the window, but he did not know that it was contrary to the rules of the General Medical Council to carry on the practice in the way he was doing.

Mr. HOOPER, in answer to a request for explanations, presented himself for examination. He said that as Mr. Watt had carried on the practice with Taylor's assistance for a long while without notice being taken, he supposed it was quite right for him to continue in the same way.

The CHAIRMAN: Have you no knowledge of the action taken for some years by this Council in connexion with unqualified assistants?

Mr. HOOPER: Not the slightest.

The CHAIRMAN: Do you never read the medical journals?

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Mr. HOOPER: Very seldom. My time is so much taken up.

By Dr. RENTOUL: He supposed Taylor was registered when he was a student. Taylor was now about thirty-five years of age, and had been a medical assistant for some fifteen years. He had been unable to finish his medical course because of his father's death and the want of funds. He was paid a salary of £2 10*s.* a week. He never gave death certificates and never went out to new cases at night.

Dr. MACALISTER: There was only one book of certificate forms and he kept that himself. He never provided Taylor with certificate forms. He himself had advised the coroner of the boy Lott's death. He never had any accounts to send out. The fees were collected without accounts.

Dr. RENTOUL: You charge 7½*d.* a visit. That is about the rate of 3*s.* for five visits. Is that the ordinary fee for your district?

Mr. HOOPER: It is a low fee. I suppose it included medicine.

By the CHAIRMAN: He lived in Brunswick-square, which was about two miles from his surgery. He went there because he wanted to avoid being called out at night, as he found his health was beginning to suffer from going out at night. He boarded at Brunswick-square.

By Dr. MACALISTER: He was the tenant of 240, Hoxton-street, and he had rent to pay for three different premises.

By Dr. GLOVER: Taylor attended midwifery cases at night alone if the cases had been previously undertaken, but he (Mr. Hooper) visited the patients later.

By Mr. MUIR MACKENZIE: He was at Taylor's call in his surgery till half-past nine o'clock at night. Taylor accepted all the money that was brought to 240, Hoxton-street, and accounted for it to him (Mr. Hooper). He never had anything to do on his own account.

Mr. HOOPER, in answer to other questions, said that Taylor had been at the Council's offices that day, but had been obliged to go away. Taylor's character was so good in every respect and he had so much knowledge of his profession that he (Mr. Hooper) did not think the poor people could be in better hands, and he should not have the slightest objection to call him in if he himself were ill. Taylor might be called Dr. Taylor. The people of the neighbourhood were strange in their use of the word "doctor." While they would call him (Mr. Hooper) "Mr.," they would call an ordinary druggist "doctor."

After deliberating in private the Council found the charge proved to their satisfaction, but they postponed further consideration of the case till Monday.

Disciplinary or Penal Powers of the Qualifying Medical Authorities.

Mr. BRYANT submitted an *interim* report by the Executive Committee on the Disciplinary or Penal Powers of the Qualifying Medical Authorities. This report contained a narrative in regard to what has been done on the subject. It showed that communications had been received before the end of last November Session which could be summarised as follows:—

(*a*) FROM UNIVERSITIES AND OTHER BODIES CONCERNED.

University of Durham.—The report of the Executive Committee on the Disciplinary or Penal Powers of the Qualifying Medical Authorities, with Appendix, would be considered.

Victoria University.—Inquiries were being made which it was hoped would lead to some satisfactory result.

University of Edinburgh.—Powers could not be obtained by application to the Privy Council, and the University Court was not disposed in the meantime to obtain such powers either from the Commission or by statute.

University of Aberdeen.—The Scottish Universities Commission had already been approached and would be again.

University of Glasgow.—A change by means of fresh powers from the Legislature, to remove temporarily or permanently convicted graduates, was anxiously desired, but there were insuperable difficulties. By a future Bill it might be required that all qualifications should be suspended during the absence of a name from the Medical Register.

University of St. Andrews.—The University Court would coöperate with the other Scottish University Courts in obtaining powers.

Royal University of Ireland.—The report would be considered.

Apothecaries' Society of London.—It would be useless to apply to Parliament for a new Act at present, but the Society would be willing to do so at a suitable time.

Apothecaries' Hall, Dublin.—The report would be considered.

University of Cambridge.—Disciplinary statute obtained from Privy Council enabling the University to deal with graduates guilty of offences punishable by imprisonment, that being all that it was possible to obtain.

(*b*) From the SCOTTISH UNIVERSITIES COMMISSIONERS.

The matter was outside their province and no action could be taken.

(*c*) From the PRIVY COUNCIL.

The Privy Council was prepared to consider applications from chartered bodies, and the other bodies could proceed by statute.

The report further showed that before the November session terminated the Executive Committee informed the Council that it would continue to give its best attention to the subject, and in furtherance of that object had reappointed its sub-committee with Sir Dyce Duckworth in the place of Sir Walter Foster. On April 15th last, by the direction of the sub-committee, further inquiries were made, in answer to which, and to the previous inquiry of the Council, communications had since been received from which it would appear that as some of the licensing bodies are engaged in seeking for further disciplinary powers, the General Medical Council should in the meantime defer action until the result of the applications by these bodies had been ascertained.

Mr. BRYANT, in moving that the report be received and entered on the minutes, said that if the universities could not individually obtain the powers desired, the Council must find some means of getting it for them, and until it was got the committee could not present a full report.

Dr. MCVAIL mentioned that he was a member of the committee of the University of Glasgow, who sent the communication proposing that the Council should ask for an amendment of the Medical Act which would give the University power to suspend the qualifications of any of their medical graduates during the absence of their names from the Medical Register. He did not know at the time that communication was forwarded that the very power recommended was provided as regards dentists in the Dentists Act. The last paragraph of Clause 13 of that Act provided that "any name erased from the Register in pursuance of this Section shall also be erased from the list of licentiates in dental surgery or dentistry of the medical authority of which such person is a licentiate." While this provided for erasure, Clause 14 provided for restoration on restoration to the Register.

Mr. BRYANT: That is precisely what we want.

Dr. MCVAIL: That is what the Committee of Glasgow University want.

Mr. BRYANT: That is probably the action we should take if we are to do anything.

Dr. MCVAIL: The Executive Committee might bring up a definite proposal next November to make the Medical Act in this matter the same as the Dentists Act.

Mr. BRYANT said it was three sessions ago since the subject was referred to the Executive Committee. He brought up a report in the committee with a recommendation of the automatic kind Dr. McVail had just referred to, in entire ignorance that it already existed in the Dentists Act. Their counsel had given the opinion that they should seek for the power, but the President opposed it very strongly, and they were unable to bring before the Council a report which he supposed was still to be found in one of the pigeon-holes in the office.

Dr. CHURCH did not think this was the right moment to go into a debate on this subject, but he should be sorry to think that any clause of the Medical Act could act automatically, as Dr. McVail supposed. It was quite conceivable that men might have to be struck off the Medical Register for having committed crimes or misdemeanours which came under the Medical Act, and therefore called for the necessity of striking them off the Medical Register which the University might think would not be such as to justify them in depriving these men of their university medical degrees. Consequently, on behalf of Oxford University he should have to oppose any proposal for the enactment of the automatic powers of the kind in question.

Dr. GLOVER moved the adjournment of the debate.

Sir DYCE DUCKWORTH seconded the motion, which was agreed to.

The Council then adjourned.

SATURDAY, MAY 29TH.

The Council continued its session to-day.

The Examinations for Dentists.

Mr. THOMSON asked and at once obtained leave to call attention to certain passages in Mr. Tomes' report on the examination for the diploma in dentistry of the Royal College of Surgeons of England, and to invite an explanation from the representative of the body. Mr. Tomes said that the general conduct of the examination, the scope and the suitability of the questions asked, and the methods of marking adopted, left little to be desired, and the Dental Education and Examination Committee in their report, which was signed by Mr. Bryant as chairman,

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said that they regarded this report as a valuable one, and asked the Council to bestow upon it very close attention. The committee also said that the alterations both in the curriculum and course of examination appeared to be in the right direction, and they believed many of them were worthy of adoption. This report, along with the others, had been sent down to the various dental licensing bodies, and therefore it was not unlikely that they might consider the question whether they ought not to model their examinations upon this one of the Royal College of Surgeons of England. Now he asked the attention of the Council to one or two points in the report of the examination in surgery. Questions were asked on the treatment of paratoid fistula, tongue-tie, and its treatment, removal of the tongue, sebaceous cyst of the scalp, dermoid cyst, wound of the radial artery, gummata, and the stages of syphilis and their treatment. He wished to know from Mr. Bryant, as chairman of the committee and the representative of the Royal College of Surgeons of England, whether he thought this an examination suited for gentlemen who were seeking a qualification as dentists pure and simple. If they were to proceed upon these lines they would be putting the dentist into a much better position than the licentiates or members of any college of surgeons in the three kingdoms, because they were not only testing his capacity to deal with the whole subject of dentistry, but they were enlarging his powers to the recognition and treatment of syphilis and the treatment of sebaceous cyst of the scalp. He failed to see the connexion between the scalp and the teeth or between syphilis generally and the teeth. He could understand that certain syphilitic sores about the mouth might be recognised and examined upon, but upon the general question of the stages of syphilis and the treatment thereof he thought this Council ought to say something with regard to limiting the scope of the examination. They were apparently about to create a new order of practitioner—gentlemen who were to be dentists and who were to know a great deal of what the general surgeon knew—in fact, to make a class of practitioner who in some respects were to be superior to the ordinary members and licentiates of the various surgical corporations. He therefore thought it was a matter of urgency.

Mr. BRYANT said it was the case that the Dental Education and Examining Committee had said in their first report that the report of Mr. Tomes on the examination of his College was a very valuable one, and that they asked the Council to bestow upon it very close attention. The committee felt that the line which his College had adopted in the way of examinations was good, and although they were not prepared then to recommend to the Council a scheme drawn up very much on the lines adopted by his College they thought it would be right to call the special attention of the other dental examining bodies to what the Royal College of Surgeons of England had done, so that they personally might frame their own schemes somewhat in the same line. In the second report of the committee many of the arrangements adopted by his College had been included. He would make no comment on, and he raised no objection to, the remarks which Mr. Thomson had offered with respect to the examinations of his College. It was quite right that Mr. Thomson should call the attention of the Council to the subject. Of course, for a dentist to talk about the removal of the tongue or the treatment of sebaceous cyst of the scalp seemed to be a little beyond his province. At the same time, if one put down a series of questions given at any examination there was never the slightest difficulty in raising objection to one or two of the questions. In this case they had a large series of questions, and he thought, upon looking through them, that they were, on the whole, quite satisfactory. He was pleased, however, to have his attention called to the matter and he would put it before the College.

The Disciplinary or Penal Powers of the Bodies.

Dr. GLOVER then resumed the debate on the motion proposed by Mr. Bryant and seconded by Dr. MacAlister, "that the interim report by the Executive Committee on the disciplinary or penal powers of the qualifying medical authorities be received and entered on the minutes." The Council, he said, were greatly indebted to the Executive Committee for what they had done in this connexion. They had put the disciplinary functions of the bodies into very plain form and given them a prominence from which they could not recede. He had the less scruple in complimenting the committee because, although he was now a member himself, he was only a recent member and had had no share in this work. The ethical standard of the profession was of great importance to the public. Scarcely a day passed without their being reminded of that in the public prints and in the law-courts, and the public looked to the Council primarily and to all the qualifying medical bodies together and singly to sternly maintain the ethical standard of the profession. And the profession looked very much to the Council and to these bodies for doing the same thing. It was satisfactory to find that on this subject there was almost entire unanimity among the qualifying bodies. The only exceptions were the University of Cambridge and his own University—that of Edinburgh. With these exceptions the bodies were agreed that they should have powers of the kind proposed. This prominence of the subject and this unanimity of the bodies on this opinion led him to hope that the Council would accept the slight amendment of the report of the Executive Committee which he was going to propose.

Sir WILLIAM TURNER, who in the temporary absence of the President was acting as chairman, said it might be well if Dr. Glover told the Council what he was going to propose.

Dr. GLOVER said he would do so. They would find in the report that the Executive Committee said that the Council should in the meantime defer action until the result of certain applications by bodies had been ascertained. Now he would read what he proposed to substitute.

The ACTING CHAIRMAN pointed out that this was the whole report of the committee, and that all else was mere narrative, and the question before the Council was that the report be received and entered on the minutes.

Dr. GLOVER said he had no objection to this report being received and entered on the minutes, but he did object to it being taken as a full expression of the mind of the Council.

The question was then put from the Chair that the report be received and entered upon the minutes, and it was at once adopted.

Dr. HECTOR CAMERON moved that the report be referred back to the Executive Committee for further consideration. He understood that Dr. Glover was a member of the committee, and he would, therefore, be able to raise before the committee the questions he now proposed to raise.

Dr. MACALISTER said he would be prepared to second this if the whole subject was to be referred back to the committee.

Dr. GLOVER said this did not quite meet his views. He wanted to know whether this short report, stopping all further action by the Council, was really the mind of the Council. He would, therefore, propose that the Council at once proceed to discuss this report.

Sir DYCE DUCKWORTH seconded this amendment.

Dr. RENTOUL thought this an urgent matter. During the present session they had removed from the Register a graduate of St. Andrews University, and in the present state of things he could continue to have on his doorplate "M.D. of the University of St. Andrews." If they were not to make themselves a public laughing-stock they must take action.

Dr. MACALISTER said that no amount of discussion would give the University of St. Andrews power to deal with its graduates. The University of St. Andrews had expressed its willingness to apply for powers, and really the thing was not mature until they had got the answers from all the bodies.

Dr. GLOVER said there were good reasons for the continued discussion of this report. They had got strong replies from two bodies which he thought should be immediately answered by this Council. They were at the stage of correspondence—friendly correspondence—upon this subject, and unless they hurried on they would never get it settled. If the Council thought the replies of the Universities of Cambridge and Edinburgh quite unanswerable, that, of course, was another matter. His contention was that they admitted of a very strong answer and that they called for an immediate one. The University of Cambridge said by Professor Clifford Allbutt: "I am to inform you on behalf of the Special Board of Medicine in this University that it is not proposed to seek any further extension of our disciplinary powers in respect of the moral character of our graduates in medicine. I will not trouble you with our reasons unless you desire it; but I may say that in our opinion the guilds of the profession—the Colleges of Physicians and of Surgeons for example—are the proper bodies to keep up a continuous standard in the ethics of the profession." A man might be upon the Medical Register with no other qualification than that of the University of Cambridge. He might do all manner

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of discreditable things, infamous in every respect, professional and otherwise; and unless the university got the power to remove him he would still, according to the opinion of lawyers, continue to be qualified, and the members of his profession would be entitled to meet him. He contended that if the universities were to license men they must take the responsibility of looking after them when they were licensed, and a college of physicians or surgeons could not be answerable for the conduct and character of the university graduates. That was, in his opinion, an unanswerable reply. Now he came to his own University—that of Edinburgh—which stood alone in this matter among the Scottish universities. Unless the Council replied to the University of Edinburgh, that body would say there was no reply and that silence gave consent to their letter. In this letter the University Court said they had resolved to take no action in the meantime to obtain the proposed powers either from the Scottish Universities Commission or by statute. In a letter dated July 18th, 1896, the secretary of the Scottish Universities Commission said that the matter was considered by the Commissioners some time ago at the request of the University of Aberdeen, and they were of opinion that if the universities did not already possess the power of dealing with their graduates the Commissioners could not confer the power, and they therefore decided to take no action in the matter. They further said they were of opinion that it was not their province to move the Privy Council with regard to matters which did not fall directly within their powers.

Dr. HERON WATSON (who is one of the Commissioners): Hear, hear.

Dr. GLOVER said this showed that the Commissioners had no intention of going on with this subject, and their opinion was that it did not come within their province. But the Commissioners did not appear to have had before them the opinion of the Lords of the Privy Council. This Council had the entire sympathy and support of the Lords of the Privy Council. The Lords of the Privy Council, in a letter dated July 7th, 1896, stated that they would be prepared to consider applications from the chartered medical bodies for supplementary charters granting disciplinary powers similar to those conferred upon the University of Cambridge, and the other licensing bodies could, if they thought fit, proceed by statute or in the case of the Scottish Universities by ordinance. This was a suggestion to the Scottish Universities Commission, and he wanted to move the President of this Council to bring under the notice of the Commissioners this opinion of the Privy Council.

The PRESIDENT (who had now returned, but had not resumed his place in the chair): The President of the Council cannot and will not do it.

Dr. GLOVER: I am sure I know Sir Richard Quain better than he knows himself, and that if this Council request him to do it he will do it.

The PRESIDENT: But he has no power to do it.

Dr. GLOVER, continuing his speech, said that the situation, therefore, was that on the one side they had the sympathy of the Privy Council and on the other the obstructive attitude of the University of Edinburgh, which he felt certain could not be a final attitude. They had heard something recently about the decadence of the Scottish universities. He had no belief in that decadence. He believed it was the destiny and the duty of the universities of Scotland, and especially of the University of Edinburgh, to take a most conspicuous part in the educating and qualifying of the medical practitioners of this country and this empire, and upon these grounds, and because he was a graduate of it, he the more regretted that Edinburgh should differentiate itself from the other universities of Scotland, and show any attitude of indisposition or *non-possumus* upon this important matter. He hoped, therefore, that the Council would agree with him that they had already material to be answered.

Mr. BRUDENELL CARTER said he wished to point out that the sympathy of the Privy Council which Dr. Glover had laid stress upon was limited to assisting other bodies to obtain the same power that had been conferred upon the University of Cambridge, and that power Dr. Glover had pronounced to be wholly insufficient.

Sir DYCE DUCKWORTH said that his object in seconding the amendment was simply to drive home to the authorities of the Scottish universities that the Council was strongly in earnest, and would do its utmost to move these authorities to take action in the matter. The Council would not accept a *non-possumus* from any body in this matter. He considered that these powers ought to exist in the best interests of the public and of the profession.

The amendment was then put to the Council and negatived, and the motion of Dr. Cameron carried.

Mr. BROWN said he desired to move another motion, that a copy of the letter of the Privy Council be sent to the Scottish Universities Commission calling their attention to the powers they possessed of dealing with this penal question by way of ordinance. He felt strongly that this matter should not be delayed for a single day. It was of little use that the Council should occupy its time in hearing penal cases if the men were allowed to hold their diplomas and parade them before the public. He would move that a courteous request be made to the Scottish Universities Commissioners to carry out the suggestion contained in the letter of the Privy Council.

The ACTING CHAIRMAN: Will Dr. Heron Watson kindly tell us when the Scottish Universities Commissioners go out of existence?

Dr. HERON WATSON: It is a doubtful matter, but it is before the end of this year and nothing can be done by them.

Dr. BATTY TUKE: This resolution would probably put them out of existence a little sooner.

The PRESIDENT suggested that the motion of Dr. Cameron might be put, with the addition of words providing that the Executive Committee should take such steps as they thought necessary.

Mr. BROWN thought there should be an authoritative resolution from the Council. It was clear that there was no intention whatever on the part of these university bodies to carry out the wishes of the Council. He was very much struck by the observation made yesterday by Dr. Church that a person might be struck off the Medical Register for infamous conduct in a professional respect or for a misdemeanour and might still be a desirable person to remain a member of his university. He did not know what the desire of university men might be as to the company they kept.

Dr. CHURCH, interrupting, said he said nothing of the sort. What he said was that it was quite conceivable that men might have to be struck off the Medical Register for having committed crimes which came under the Medical Acts, and therefore necessitated this Council striking them off, but which a university might not hold to be such as to justify the university in depriving them of their degrees.

Mr. BROWN said this was a very acute and subtle distinction, but he was quite willing to accept it, and it made no difference to his argument. He saw no reason why if, under the Medical Act, a man was struck off the Register his university should not be compelled to withdraw his medical diplomas.

Dr. RENTOUL seconded Mr. BROWN'S motion.

The ACTING CHAIRMAN said that if he had been sitting at the table he should have had something to say about this matter, but perhaps he would be allowed a few words. The Scottish Universities Commissioners had told the Council plainly that they had no power to deal with the matter by ordinance, and how could the Council, by transmitting this letter of the Privy Council to them, expect them to alter this opinion which had been arrived at after most mature consideration? It seemed to him that the Council would be putting itself into a very unfortunate position.

Sir DYCE DUCKWORTH asked whether they were to understand that the Privy Council had made a mistake.

The ACTING CHAIRMAN said that apparently they had made a mistake.

Dr. GLOVER asked whether the letter of the Privy Council had been communicated to the Scottish Universities Commissioners.

Mr. BRYANT replied that he did not think it had.

Dr. GLOVER said that in these circumstances he thought it a reasonable request that it should be forwarded to them without delay. High as was the authority of the Scottish Universities Commissioners, the authority of the Privy Council was still higher.

Dr. MACALISTER said it might be that the Privy Council had not looked into the matter.

Dr. BATTY TUKE pointed out that the Commissioners included among their number very great lawyers, and had weighed the thing carefully and knew exactly what were their duties. Dr. Glover had, however, been acting under a false conception. He thought that the various universities were willing to go the length of depriving a man of his

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degrees for any offence he might be found guilty of by the Council. He (Dr. Tuke) did not believe there was a university in the country which would ever ask such powers. All they would ask for was the same powers as had been granted to the University of Cambridge and nothing more.

Mr. BROWN asked leave to modify his motion to a simple instruction to send a copy of the letter of the Privy Council to the Scottish Universities Commissioners for their information.

The ACTING CHAIRMAN said this could do no harm if it did no good. The motion thus modified was put to the Council and rejected by 12 to 11 votes.

The Registrarship.

The Council, with the PRESIDENT in the chair, sat *in camerâ*, and came to the following resolutions, which were made public on the re-admission of strangers :—

"1. That a gratuity of £1000 be given to Mr. Miller, the retiring Registrar. 2. That Mr. Allen, the Assistant Registrar, receive a gratuity of £75 for his extra services during the past six months. 3. That in future the appointment of General Registrar be an annual one, and that he be eligible for re-appointment. 4. That the salary attached to the office be £500 per annum, to be apportioned according to the standing orders. 5. That Mr. H. E. Allen be appointed General Registrar under the Medical and Dentists Acts for a year from June 1st, 1897. 6. That the office of Assistant Registrar be abolished as from June 1st, 1897. 7. That the General Registrar attend at the office from 10 till 4 on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays, and from 10 till 2 on Saturdays, and at other times when necessary, and that he shall not absent himself from his duties unless with permission from the President or one of the Treasurers. 8 That the Executive Committee amend the standing orders in accordance with the above resolutions."

Tropical Diseases.

Dr. LEECH moved the following motion, notice of which had been given by Dr. Bruce :—

"That the attention of the licensing bodies be called to the urgent necessity of more particular attention being paid by students of medicine to the subject of tropical diseases."

He said he moved this resolution as being in accordance with the spirit of the times. They were recognising more and more every year that there was a greater Britain as well as a Great Britain. To the Britain beyond the seas we not only sent many people who chose to stay, but a large number of medical men educated in the home schools. But very little was done for the latter's education in tropical diseases, and in the examinations questions were never put on the subject, except, of course, for those of medical men going on military service, who were obliged to know something of such diseases. It seemed to him that this was a thing that should not go on. If a few questions were occasionally put it would show students that they should have some knowledge of tropical diseases, and instead of totally neglecting the subject, as they practically did now, they would feel themselves obliged to pay some attention to it. It might be said that medical men would get knowledge of these diseases when they went out to the tropics. So they would, but it would be at the expense of their earlier patients. It might be also said that the proposal was only the expression of biased opinion, but biased opinion was sometimes very valuable. Again, it might be urged that this would increase the student's work, but if it enlarged his knowledge of tropical diseases his work should be increased.

Mr. BRUDENELL CARTER seconded the motion. He thought that if it were carried and the qualifying bodies interjected occasional questions into their examinations, students would come to see that it would pay them to give some attention to the subject.

Sir DYCE DUCKWORTH said it was a question how far this motion was a practical one. Of course, the opportunities afforded to British students in these islands of seeing tropical diseases were really very limited. In this metropolis of the Empire a very small portion of these diseases came under observation. The largest school that afforded sight of them was Greenwich Hospital, where sailors frequently arrived suffering from diseases of a tropical origin. A few cases found their way as far as Guy's Hospital, but very few indeed were ever seen in the other large London hospitals; yet in respect to the whole matter of tropical diseases he felt sure that much greater attention was now being paid to the subject than formerly. This was especially the case in regard to malarial fever, and the true nature of malaria was now taught to the ordinary student. What he feared was that if this Council called the attention of the examining boards to the matter they would be told that they had done the like before in recommending special attention to special diseases, and there was nothing very practical likely to come out of it. In two of the London hospitals—Guy's and St. George's—there were lecturers on this subject who had had experience of it in India and elsewhere abroad, but as yet tropical diseases was not a compulsory subject, and, so far as Greenwich Hospital was concerned, although the demonstrators were willing to afford information when it was sought, it was not taken advantage of to any great extent. Still, the subject had been called attention to of late years, and the average student, he thought, was beginning to give a little more attention to it.

Dr. MACALISTER hoped Dr. Leech would be satisfied with having brought forward the subject and that he would not press it further. He should not like the licensing boards to have a proposal of this kind forwarded to them at the present moment. The language of the motion was somewhat exaggerated. They could not give evidence that there was any urgent necessity for this, because of late years it had been said the necessity had been growing less year by year.

Dr. LEECH was quite willing to withdraw "urgent."

Dr. GAIRDNER said he entertained very much the kind of opinion that Dr. MacAlister had expressed, but he put it a little more strongly. The tendency of sending this motion out to the licensing bodies would be that the bodies would regard it as a loading of the curriculum with more systematic work of a kind that could not be illustrated by cases in their own hospitals. The true principle of teaching the use of medicine was the teaching the principles of it with reference to cases that they actually had before them, and to depart as little as possible from practical work. He, therefore, would not like to have the curriculum loaded with a new subject of this kind.

Dr. PETTIGREW was of the opinion that the motion really amounted to adding a new subject to the curriculum, and they should be very careful in regard to that. They had been tinkering at the curriculum for the last twenty years, and it would be a pity to let any statement of the kind contained in the motion go out from the General Medical Council with any show of authority, for he believed it would have a very bad effect. It would injure the curriculum more or less, and it might discourage the student. No one could underrate the importance of a knowledge of tropical diseases among the students of a country like Great Britain, but he understood that the subject was not overlooked at the present time. It was the duty of the teacher to deal with principles and ground the student, and let such things as these tropical diseases come into his experiences. He hoped Dr. Leech, having ventilated the subject, would withdraw the proposal, as this was a somewhat unfortunate time to proceed with such a motion.

Dr. LEECH, while pointing out that it was not proposed to increase the curriculum, the intention being merely to secure the introduction in examination papers of an occasional question that would draw the students' attention to the matter, said he would be glad to withdraw the motion if the Council wished it.

The motion was then withdrawn.

A New Member's Undertaking.

Before the adjournment Sir WILLIAM TURNER mentioned that there was nothing on the business programme that would necessitate the present sittings of the Council going beyond Monday.

Dr. RENTOUL said he had been asked to present the petition of Mr. R. B. Anderson which appeared on the paper and move a resolution. The due consideration of the case would take two days. It was his duty to present the petition.

The PRESIDENT: You need not trouble. We have decided it already. It is entirely outside our authority.

Dr. RENTOUL: I should like, with all due respect to the chair—

The PRESIDENT: But we have nothing to do with it.

The Council adjourned till Monday.

MONDAY, MAY 31ST.

The Council met again to-day and completed the business of the session.

The Registrarship.

There was read a letter from Mr. H. E. Allen accepting the Registrarship and one from Mr. W. J. C. Miller thanking the Council for the resolution passed with reference to him.

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The Apothecaries' Hall of Dublin.

Mr. Bryant, chairman of the Committee on the Appointment of Assistant Surgical Examiners to the Apothecaries' Hall of Dublin, presented the following report, viz. :—

"1. Resolved:—That the committee do recommend to be assistant examiners for a period of two years Mr. Arthur Chance, F.R.C.S. Irel., L.A.H. Dubl., L.M. Coombe Hosp. Dubl., and Mr. Henry Alexis Thomson, M.D. Edin., B.Sc., F.R.C.S. Edin., M.R.C.S. Eng.

"2. That the remuneration of these examiners, for each assistant examiner be 5 gs. per diem while engaged in the examination, with expenses calculated on the scale of charges allowed by the General Medical Council for its members (Section 5, Sub-section 3, Medical Act, 1886).

"3. Also resolved:—That it shall be the duty of the said assistant examiners to secure at the said examinations the maintenance of such standard of proficiency in medicine, surgery, and midwifery as is required under the foregoing provisions of this Act (1886) from candidates at qualifying examinations, and for that purpose the said assistant examiners shall have such powers and perform such duties in the conduct of these examinations as the General Council may from time to time by order prescribe; and any examination held subject to the provisions of this section shall be deemed to be a qualifying examination within the meaning of this Act. (Section 5, Sub-section 2.)

"[The Medical Corporation shall have power to admit to its examinations assistant examiners appointed under this section, and to conduct its examinations in accordance with the requirements of this section, and of any orders made thereunder, anything in any Act or Charter relating to such Corporation to the contrary notwithstanding.] Section 5, Sub-section 4, Medical Act, 1886.

"4. Resolutions suggested to be made under Section 5, Sub-section 4, Medical Act, 1886, in regard to the conduct of examinations made in accordance with the above section, and now submitted for approval to the Council:—

"The Examination in Surgery should include:

A written paper on printed questions.

A Clinical Examination, with or without a written report on a case.

Operative Surgery.

An Oral Examination, with the use of pathological specimens.

"5. The duties of the said assistant examiners to secure at the said examinations the maintenance of such standard of proficiency in Medicine and Midwifery shall be as follows:—To inspect the Examinations in Medicine and Midwifery, so as to ascertain whether they conform to the scheme above laid down for the Examination in Surgery, and to satisfy themselves that the standard of proficiency is of equivalent value."

The report was received and entered on the minutes.

Mr. BRYANT then moved, and Mr. TICHBORNE seconded, the adoption of the first resolution of the committee.

Mr. BROWN said he was very much dissatisfied with this arrangement. He thought the Council were entitled to information as to the reason why the gentlemen put forward by the Apothecaries' Hall were not now proposed.

The PRESIDENT pointed out to Mr. Brown that the matter had been very fully considered by the committee and that this recommendation came from the committee, and was moved by its Chairman and seconded by Mr. Tichborne, the representative of the Apothecaries' Hall of Dublin.

Mr. TICHBORNE said it was only right he should state that the Hall had every confidence in the gentlemen they proposed, and he had only given way to the strong opinion of the committee. Let the Council understand that he did not withdraw their names.

The motion was then adopted, as was also a motion incorporating the second recommendation.

Mr. BRYANT said with regard to the third and fourth clauses of the report that they had caused the committee a great deal of trouble and had been drawn up by the committee under the firm conviction that it was necessary to do so. But since coming into this room he had been assured by the President that they had gone *ultra vires* in proposing them, and that view was supported by Mr. Farrer, the Council's solicitor.

Dr. MACALISTER moved, as the best way out of the difficulty, that it be remitted to the Executive Committee to inform the Assistant Examiners as to their duties, and Mr. BRYANT seconded this motion.

After some discussion this motion was agreed to.

The Scotch Public Health Bill.

Dr. THORNE THORNE, chairman of the Public Health Committee, moved that the following report from that committee be adopted as expressing the opinion of the Council, viz. :—

"1. The attention of the General Medical Council having been called to a proposed modification of Clause 22 of the Public Health (Scotland) Bill, they cannot do otherwise than view with grave apprehension the proposal to place the opinion of the sanitary inspector, in matters where a judgment has to be formed as to what is or is not liable to constitute a danger to public health, on a statutory equality with that of the medical officer of health.

"2. The General Medical Council would recall the fact that the legislature have from time to time extended, by statutory enactment, the requirement that medical officers of health should before their appointment give definite evidence of the possession of special acquirements fitting them for their public duties, and that the General Medical Council have spent much time and expense in requiring and maintaining at a high standard a scheme of education and examination that shall give effect to the intentions of the Legislature.

"3. And the General Medical Council feel convinced that if the opinion of officers, altogether without the requisite technical and professional training, is to be placed on a similar footing to that of medical officers of health, the efforts of the Council to ensure the requisite distinctively high standard of efficiency in the Public Health Service will be seriously frustrated."

He explained that this matter had been brought to their notice by a petition from the Society of Medical Officers of Health in Scotland, who objected to certain changes which were being made in the Bill in its passage through the Grand Committee of the House of Commons on Law.

Dr. PETTIGREW, in seconding the motion, said that if the sanitary inspector was to occupy the same position in settling sanitary matters as the medical officer, then all the Council had been doing of late years in building up an elaborate system of sanitation pretty much went by the board. This, in his opinion, would be a great calamity, because every one knew that nowadays sanitation was one of the most important things that medicine had to deal with. No doubt county councils and others in authority would like to see the sanitary inspector vaulting into the saddle of the medical officer of health. It would probably get them out of many difficulties, and save them both money and time, but they could not pretend that a sanitary inspector was a man of any medical training. He had heard from a Scotch Member of Parliament that there was a strong disposition on the part of the Government to force the sanitary inspector upon them, and he therefore hoped the Council would support the medical officers of health in Scotland to the very utmost of its power.

Dr. GAIRDNER said he had written to Lord Balfour, the Secretary for Scotland, telling him that the Grand Committee were spoiling his Bill. All this had come about in a committee, a good many of the members of which had a very imperfect knowledge of the subject, and others had the object of pressing points in order to economise and cheapen public health administration in Scotland. It was quite evident that the state of things in England differed from that in Scotland. In most of the districts in England where a medical officer of health exists he had really got a firm grip of the whole business of initiating proceedings, and he took care that they were not initiated by other and less skilled hands without his knowledge. In Scotland, however, it seemed to be the sanitary inspector who was chiefly employed by the local authorities. If this process went on in the Committee of the House of Commons, what he would recommend Lord Balfour to do would be to drop the Bill altogether and bring it up in another form in another year.

Dr. CHURCH said he felt sure the University of Oxford would be glad if the Council took the proposed action in this matter.

Sir DYCE DUCKWORTH, Dr. MACALISTER, Dr. BATTY TUKE, Dr. REID, and Dr. WATSON having spoken in the same line, the motion was adopted by the Council.

It was agreed that copies of the report should be sent to the Secretary for Scotland, the Lord Advocate, the members of the Grand Committee, and the signatories to the petition.

The Employment of Unqualified Assistants.

Dr. MACALISTER moved:—

"That it be referred to the Executive Committee to consider whether the Council's resolutions on the employment of unqualified assistants, as they appear in the advertisements inserted in the medical journals, may not with advantage be rendered clearer and more stringent."

He said it was extremely difficult indeed to extract from these advertisements a clear idea of what it was exactly that the Council objected to in relation to covering, and he thought they might be greatly improved. As to the resolutions of the Council being made more stringent he thought he might say that the feeling of the Council had grown in regard to this matter, and it was becoming nearly time for them to say that they would put a stop if they could to the employment of unqualified assistants in the treatment of patients altogether. They had hitherto said that unqualified assistants were not to be unduly used, or wrongfully used, or carelessly used, and it must have become apparent to members who had sat through these trials that the unqualified assistant as such must go; he was a perpetual source of temptation to the practitioner who desired to be just within the lines of the law, and he was a great danger to the public, therefore he thought the time had come for the Council to withdraw the qualifying adjectives and

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adverbs in their regulations. This of course must be done carefully, and therefore he proposed that the Executive Committee should be instructed to take up the matter.

Dr. CAMERON, in seconding the motion, said there exists, at all events in England, a very large class of persons who were not merely unqualified assistants, but who never intended to be anything else. It was a separate profession outside their own profession, and after a certain time, on the strength of being members of this separate profession, they married and reared families and had no intention of leaving it, and when it was suggested that steps should be taken in any way to interfere with their work this Council was told that it would be cruel and inhuman to these men and their wives and families to interrupt in any way their success in this particular profession. Although the Council did not explicitly approve of the employment of these persons, they approved in this sense, that they took no steps to interfere with them until some qualified practitioner was brought before the Council and the complaint laid against him, that he had substituted the work of one of these men entirely for his own. If the charge failed to be substantiated, the Council simply dismissed the case without any expression of opinion in regard to the wrongful attitude which the practitioner had assumed in employing such a person at all. He thought the time had come when the Council might give some such expression of opinion as that a man in whose case six, or eight, or ten, or any other number of years had elapsed since he was registered as a medical student should not be allowed to be employed as an unqualified assistant. That, at all events, was a point which the committee might very well consider.

Mr. BRYANT said he desired to support the motion, and as a member of the Executive Committee to express his pleasure that they had anticipated this request. Not long ago the Executive Committee appointed a sub-committee to draw up a memorandum upon the growth of opinion in the Council in regard to the employment of unqualified assistants and covering unqualified assistants. The drawing up of the report fortunately fell into his hands, and here was the report. He would not trouble the Council with it now, but they came to certain conclusions, and if this report had been laid before the Council it would have been his duty to propose certain resolutions bearing on the subject. The first resolution would have suggested that a definite time should be fixed—say, 1900—when unqualified assistants now practising medicine, surgery, and midwifery would be treated as offenders against the Medical Acts and regarded as guilty of infamous conduct in a professional respect. He would also have proposed that notice of the Council's regulations and intentions should be put into very clear language so that they could not possibly be misunderstood and sent to every member practising in the United Kingdom. Therefore, he hoped this reference would be made to the Executive Committee, and that with the aid of their lawyers the matter would be thrashed out.

The motion was then agreed to.

Covering in the Profession: the Excuse of Ignorance.

The next item on the programme of business was the following motion, to be proposed by Dr. RENTOUL and seconded by Dr. LEECH, viz.:—

"That in order to lessen the number of offences under the Penal Sections of the Medical and Dental Acts the General Council supply to the examining bodies under these two Acts copies of their rules relating to covering and other offences against these Acts, with a request that these examining bodies supply a copy of such rules to each person upon his first obtaining his qualification.

"That each Branch Registrar, upon registering a qualification, supply a copy of such rules to the person when first registered.

"That each Branch Registrar shall supply to each person on first registering a qualification a copy of the Medical Register and of the Standing Orders of the General Council of the date upon which the person is first registered."

Sir WILLIAM TURNER suggested to Dr. Rentoul that in view of the decision just arrived at instructing the Executive Committee to frame a revised code of rules it would be better to postpone this motion.

Mr. BRYANT joined in this suggestion.

Dr. LEECH, as the intending seconder of the motion, made an appeal to Dr. Rentoul to postpone the matter.

Dr. RENTOUL asked whether the Council would agree to this motion being sent as an instruction to the Executive Committee.

Sir WILLIAM TURNER said he could not agree to it as an instruction, although he was quite willing that it should be considered by the Executive Committee. The proposition that this Council should circulate amongst all the members of the profession its Standing Orders which were intended for its own internal administration was one that the Council should under no consideration accept.

Mr. BROWN said he would second Dr. Rentoul's motion, and proceeded to address the Council.

Dr. BATTY TUKE interrupted him saying that his remarks were not relevant to the subject, and moved the previous question.

Mr. BRUDENELL CARTER seconded the previous question.

On a vote being taken the previous question was carried by 16 votes to 4. Eight members did not vote and two were absent.

The Council accordingly proceeded to the next business.

Medical Aid Associations.

It was agreed that the communications in regard to medical aid associations received by the Executive Committee on May 24th should be referred to the Medical Aid Association Committee.

Dr. GLOVER proposed that the committee should consist of Mr. Teale, Dr. Leech, Dr. Bruce, Mr. Bryant, Dr. Rentoul, and Dr. Glover.

Dr. RENTOUL asked if the committee was paid. If it was not he could not act on it.

Mr. TEALE said that the committee was authorised to spend a sum not exceeding, unless with the consent of the Council, £100. The committee, after appointment in 1892, had several meetings, and those who came from a distance got their travelling expenses.

Dr. RENTOUL: But is that fund exhausted?

Dr. MACALISTER: Yes.

Dr. LEECH said he should like to have his name withdrawn from nomination. He thought the committee had come to a wrong decision on this subject, and he should not like to serve further on it.

Mr. BRYANT thought that as the committee would be different from the former committee Dr. Leech should not assume that the conclusion of the committee it was proposed to appoint would be the same. He himself trusted it would not be the same. It would be a pity if they could not retain the services of a man who had gone over the whole of the ground.

Dr. GLOVER proposed Dr. Church in place of Dr. Leech.

Mr. TEALE seconded the nomination of the committee with this alteration.

Dr. RENTOUL moved as an amendment:—

"(1) That the General Medical Council is of opinion that friendly and similar societies have been established chiefly for the purpose of providing sick pay, funeral expenses, widows and orphans annuities, and other grants to their members; (2) that the General Medical Council considers that it would be much to the advantage of the public health if all such societies either (*a*) altogether ceased to employ medical practitioners to act as medical officers to such societies, or (*b*) that the plan be adopted of each society allowing each member to call in any practitioner whom the member prefers to be treated by, the society agreeing to pay the fees of such practitioner; and (3) that the General Medical Council therefore considers that medical practitioners should refuse to act as medical officers to friendly and medical aid associations."

In support of this proposal Dr. Rentoul said that this question of medical aid associations could scarcely be dealt with properly by this General Medical Council. He failed to see how they could attack the high as well as the low. For instance, Guy's Hospital was advertising that any person could obtain medical treatment and medicine for 3*d*. a week. It was customary to sneer at 6*d*. a visit, but a man had much more dignity in accepting 6*d*. a visit than 3*d*. a week. Guy's Hospital had appointed four men at 100 guineas a year to take charge of this department of theirs. If these men were to be brought before the Council for unprofessional conduct it would be less time wasted than for the Council to handle the subject of medical aid associations.

Mr. THOMSON seconded the amendment.

Mr. BRYANT said Guy's was his own hospital, and he must repudiate in the strongest words he could use the accusations which had just been made against it. Dr. Rentoul was entirely in the wrong, and if he would take five minutes' trouble to look into the matter he would see that, and he would probably come back next session and apologise for bringing forward such a gross accusation.

Dr. RENTOUL: Will you bring forward any documents in disproof?

Mr. BRYANT: It is for you to bring forward documents.

The PRESIDENT said that Mr. Farrar, their solicitor, gave

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the opinion that the amendment was altogether outside the statute within which the Council acted, and therefore he had to rule it out of order. It was not in such a way the Council could express an opinion. The subject had been committed to a committee and they might bring up what report they liked.

Mr. BROWN moved, as an amendment, that the subject be dealt with, not by the committee nominated, but by the English Branch Council, who seemed to have little or no work to do.

Dr. RENTOUL seconded this amendment.

On a show of hands being taken, only two members voted for the amendment, which accordingly was rejected. Before the motion was further proceeded with,

Mr. BRYANT said that as Dr. Rentoul had formed an opinion on the subject he was hardly fitted to be a member of the committee.

Mr. TEALE thought it would be an advantage if Dr. Rentoul were on the committee. He had seen one side of the subject, and there was a great deal more in it than appeared on the surface.

Dr. RENTOUL asked if his expenses would be a first claim on any money the Council sanctioned the expenditure of by this committee.

Dr. HERON WATSON remarked that he sat on a committee in the first year of his membership of the Council, and none of the members got either their travelling or hotel expenses. They were all quite willing to do the work *ex gratia*, and he was willing enough to continue to do so. The claim for payment showed a totally new spirit entering the Council.

Dr. RENTOUL said he was a general practitioner, and had no wish to come to this Council, but his fellow practitioners had elected him. He had to pay his assistant while he was in London at great expense, and he should like to get some *quid pro quo* while he was on Council business.

Sir DYCE DUCKWORTH pointed out that in former days they would have heard nothing of this, and he regretted that such a mercenary spirit should come in. He totally disapproved of it.

The motion proposed by Dr. Glover was then agreed to.

Payment of Penal Committee.

Dr. RENTOUL moved:—

"That the same payments be made to members attending a meeting of the Penal Cases Committee as are now made to members attending a meeting of the General Council."

He said it was felt among members of the profession that the Council had not given that due attention to the penal sections of the Act that they ought to give, and the fact that they had this session re-constituted the Penal Committee was an indication that the Council were not pleased with the condition of affairs which had hitherto prevailed. He thought if the committee were paid it would have work better done. Although the expenditure of the Council amounted to between £7000 and £8000 annually only some £800 was spent on the penal cases.

Mr. BROWN, in seconding the motion, thought the country members might get payment at the rate of 5 guineas a day, but the payment to the town members might be restricted to 2 guineas a day.

Dr. MACALISTER altogether objected to this motion. They did not yet know what the Penal Committee was going to do, and only when they had had some experience of the new procedure would they enter upon the question of remuneration, if it ever was to be raised at all.

Mr. BRUDENELL CARTER said the proposition was altogether unnecessary. If general practitioners found it inconvenient to attend they had better retire.

Dr. RENTOUL: With pleasure.

Mr. BRUDENELL CARTER continued to say that Dr. Rentoul had told them earlier in the day that all unpaid work was bad work. He had not thought of hearing Dr. Rentoul say that, for he thought Dr. Rentoul had done more unpaid work than any other member of this Council, and it was testimony to the excellency of the work that his professional brethren had sent him to the Council. If he was not able to come to the committee he could stay away, and the other members would, he dared to say, be able to discharge the business.

As only two members voted in support of it the motion was rejected.

The Case of Edmund Evance Hooper.

The Council *in camerâ* resumed the adjourned consideration of the case of Edmund Evance Hooper. On strangers being re-admitted to the chamber,

Sir WILLIAM TURNER, who occupied the chair, said the Council had now deliberated on Mr. Hooper's case. They had taken into consideration the promise given by Mr. Hooper that he would cease to employ an unqualified assistant, and the decision they had come to was this—that the further consideration of the case should be adjourned until next session. Mr. Hooper would be called to appear before the Council during that session, and would have to produce evidence that he had not in the interval been covering an unqualified assistant.

Mr. HOOPER: I am quite satisfied. Thank you for your courtesy.

Fines under Medical Acts.

With Sir RICHARD QUAIN again in the chair,

Dr. GLOVER moved that a committee consisting of the President, Sir Dyce Duckworth, Mr. Bryant, Mr. Carter, and Dr. Glover be appointed to prepare a memorial to the Home Secretary, and a copy of the same as a petition to the House of Commons, in respect of fines accruing under the Medical Act or Acts within the Metropolitan area.

Dr. MACALISTER seconded, and the motion was agreed to.

A draft of the proposed memorial, read by Dr. Glover, showed that fines accruing in the district in question are diverted from the General Medical Council to whom they were assigned by the Medical Act of 1858. Such as arise in the Metropolitan police courts are received and detained by the Receiver of Police. This has had the effect of stopping prosecutions within the Metropolitan area. On several previous occasions the Council have made representations to the Government on this unfortunate state of the law. The Home Secretary on July 17th, 1891, admitted the facts and held out some hope of eventually effecting an alteration such as the Council desire, but nothing has since been done. As prosecutions are never begun by the police themselves and as the desired alteration will involve no cost to the Treasury, the Council are more hopeful now of obtaining redress.

Dr. GLOVER proceeded to say that he saw a number of members of Parliament a week or two ago on this subject, among them being Dr. Farquharson, Sir Walter Foster, Sir William Priestley, and Mr. Jesse Collings (the Under Secretary for the Home Department), the last named of whom was in charge of the Metropolitan Police Courts Bill. All of them were most willing to promote what the Council desired. He had also seen Mr. Bucknill, who said he would be happy to do anything he could to further the Council's views, and he took in hand a resolution on the subject drawn up by Mr. Farrar. There was therefore some reason to believe that they would get what they wanted with this qualification—that Mr. Collings had said the present Police Courts Bill was for a very limited purpose, beyond which it might not be possible to go; but if they did not succeed in connexion with the present Bill there would be another opportunity when the Bill on the question of the revision of the police of London was brought into Parliament.

It was agreed that the committee should prepare the memorial in accordance with the terms of the draft now submitted to the Council, and that the President should sign it on behalf of the Council and have both memorial and petition forwarded to the proper quarters.

Duration of Speeches.

Mr. BRUDENELL CARTER moved that it be referred to the Executive Committee to consider and report whether it would be desirable to pass a standing order to the effect that no member of the Council, other than the president or the chairman of a committee introducing a report, should speak to any motion for more than ten minutes without the permission of the Council being asked from the Chair and granted by resolution moved, seconded, and carried without debate.

Dr. LEECH seconded the proposal.

Mr. BROWN thought the Council were entitled to hear some good reason why a proposal of this sort was introduced at this particular juncture, seeing that the Council had gone on for thirty or forty years without such a standing order.

Dr. GLOVER hoped that Mr. Carter would not press the motion, as not only was it at the present moment somewhat invidious, but it took away certain of the privileges members of the Council had always enjoyed.

Dr. RENTOUL supported the views of Mr. Brown and Dr. Glover. He said that if any members of this Council wished to obstruct they could do it, because they could talk and take divisions on every motion that was broug t up in Council, and he would promise to talk upon and · allenge

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a division on every motion that came before the Council if such a standing order came into operation. He said that now as a protest against the proposal being proceeded with.

On a show of hands 14 voted for the motion and 10 against. On the names being taken on Dr. Rentoul's demand, the vote was 17 for to 10 against.

Assistant Apothecaries.

Dr. RENTOUL moved:—

"That the Registrar be now instructed to obtain a return showing:—1. The number of persons who have applied during each of the last twenty years to be examined for the diploma of Assistant Licentiate of the Apothecaries' Society, London, and of the Apothecaries' Hall, Dublin, under the Apothecaries Act, Eng., 1815, SS. 17 and 18, and under the Apothecaries' Act, Ireland, 1791, SS. 18 and 19. 2. The number of persons who have been refused such diploma after examination 3. The sum paid for such examination and diploma. 4. The privileges conferred by such diploma upon the holder of such. 5. Period of study and curriculum required from candidates for such diploma. 6. The form of diploma granted to such persons."

In supporting this proposal Dr. Rentoul said that the holders of these diplomas were practitioners, though he did not think the Council knew of them, and he doubted if they knew that the London Apothecaries' Society under the Act named could constitute other fifty-two bodies throughout England and Wales to grant licences to these assistant apothecaries. He had repeatedly made inquiries at the society on the subject, but he had failed to get information in answer to his letters. A fee of £1 6*s*., he understood, was paid in Dublin for the diploma of assistant licentiate, and that was one reason why he asked for the several particulars included in his motion.

Mr. THOMSON, in seconding the proposal, said that until his attention was drawn to the matter he was quite unaware that such a body as assistant apothecaries existed. It appeared that such a body did exist, and that certificates were granted to them and were used in England as representing gentlemen qualified to practise. They could not register, but the certificates were used to enable them to practise. All that the motion asked for was information.

Sir WILLIAM TURNER pointed out that the Medical Act said nothing about assistant licentiates either of London or Dublin. The Council had therefore only to do with the certificates of licentiates. They knew nothing about assistant licentiates.

Dr. MACALISTER: Either these assistants are legal or not.

Dr. RENTOUL: The Acts have never been amended.

Dr. MACALISTER: They are outside the Medical Council's functions, and nothing would be gained by inquiry into what is legal and outside our functions.

Mr. BRUDENELL CARTER said that Dr. Rentoul's own difficulties in getting answers to his letters suggested that "ask for" should be put in the place of the word "obtain" in the proposal. He, however, was under the impression that so far as the London Society was concerned the whole thing was obsolete. There used to be these assistants, but his impression was that nothing of the kind had been done for many years, since the passing of the Act which constituted the Pharmaceutical Society. If it was the wish of the General Medical Council he would undertake to ascertain all the facts and inform the Council of them.

Mr. TICHBORNE hardly understood what Dr. Rentoul meant by assistant licentiates and the Dublin Apothecaries' Hall had none of them and did not know the term. Any assistants to whom the Hall gave certificates were not allowed to act except under the immediate supervision of their masters. He was sure the Dublin Hall would be delighted to give every information they possibly could.

Mr. BROWN mentioned that when he himself went up to the London Apothecaries' Society for examination a number of young men went up at the same time for the assistant apothecary examination. The thing, therefore, was not what was to be described as obsolete.

Mr. BRYANT suggested that as the representatives of the societies had promised information the motion should be withdrawn.

A vote was taken and the motion was rejected.

Registering a Foreigner.

The Council received the following report from the English Branch Council:—

"That the English Branch Council recommends the General Council to register the name of Dr. Bruno Beheim-Schwarzbach, Lic. Fac. Phys. Surg. Glasg. 1880."

On the motion of Dr. MACALISTER, seconded by Mr. BRYANT, the report was adopted.

Midwives Registration Bill.

On the motion of Sir WILLIAM TURNER the following report was received and entered on the minutes:—

"The Business Committee recommend that the committee to be appointed for the consideration of the Midwives Registration Bill, referred to the Council by the Privy Council, consist of the following members: Dr. Thorne Thorne (chairman), Mr. Carter, Mr. Brown, Dr. Rentoul, Dr. Glover, Dr. Cameron, and Dr. Atthill."

Dr. RENTOUL asked if this committee was to be paid.

Sir WILLIAM TURNER replied that on the last occasion when a similar committee was appointed the members met only during the sitting of the Council, and consequently there was no occasion for any special payment.

Dr. RENTOUL: If I cannot have a guarantee that it will meet only during the meeting of the Council I shall ask you to withdraw my name.

Sir WILLIAM TURNER: The committee is not to report till the November session, and the committee can meet at the same time as the Council.

Dr. RENTOUL: If the committee meet during the meeting of the Council I shall be glad to go on the committee, otherwise I shall not.

The report was adopted.

Sequel to a Penal Case.

The REGISTRAR (Mr. Allen) read the following notice, which was on the programme as to be moved by Dr. Rentoul and seconded by Mr. Thomson:—

"That the Registrar forthwith call the attention of the Apothecaries' Society, London, to the case of E. E. Hooper and his 'Medical Assistant,' as heard before the Medical Council, and that the said Society be requested—if it think fit—to institute proceedings against the said unqualified person, under Section 20 of the Apothecaries Act, Eng., 1815 (55 Geo. III., cap. 194), who, it has been stated, is not an Assistant Licentiate of the said Society, E. E. Hooper being a Licentiate of the said Society. That a copy of the printed statements as presented to the Council be sent to the Apothecaries' Society."

Mr. FARRAR suggested that the object of the motion would be sufficiently carried out by calling the attention of the Apothecaries' Society to the case. It would hardly be becoming on the part of the Council to suggest to a constituent body what action they should take.

Dr. MACALISTER objected altogether to do anything at all at the present time, because Mr. Hooper's case was continued till November.

Dr. RENTOUL: It is known about the unqualified assistant.

Dr. MACALISTER: We have nothing to do with the unqualified assistant.

Dr. RENTOUL: Oh, yes.

Dr. MACALISTER: I propose that we defer action.

On a division the proposal of Dr. MacAlister was carried.

Petition of Mr. R. B. Anderson.

The next business on the programme was the petition of Richard Benjamin Anderson, of 30, Montague-place, Bloomsbury, and of the Island of Tobago, in the colony of Trinidad and Tobago. Mr. Anderson's case was before the Council in November last, but the basis of it may be summarised from the present petition. The petitioner, a Fellow and Member of the Royal College of Surgeons of England and a Licentiate of the London Society of Apothecaries, while practising in the colony retired from attendance on a patient after, it is said, due intimation that he was about to retire. An action was raised against him for this, and he was ordered to pay some £13 as damages and costs. An appeal by him was dismissed by the Colonial Court. He asked leave of the Court to appeal to the Privy Council, but they summoned him before them, and, besides imprisoning him for a week, ordered him to find bail to the extent of £1000 to make him pay the damages and costs in the original action against him. He came to this country and lost an action in the High Court against the colonial judge. The jury gave a verdict in his favour, but, on the ground that the defendant was a judge, judgment was entered for defendant. Since then he has been debarred action, but he wishes to appeal to the Privy Council and the House of Lords, and his petition, besides praying that he might be heard personally by the Council, asked "that either by a substantial contribution to the funds so being collected, your Council will assist in enabling, or by yourselves providing the necessary funds your Council will enable, your petitioner to bring his said appeals and carry them to a conclusion."

Dr. MACALISTER: The question is whether this petition should be entered on the minutes.

Dr. RENTOUL: You must enter it.

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Mr. BRYANT moved that Mr. Anderson should be informed that his petition had been laid on the table.

Dr. RENTOUL: I move that the petition be entered in the minutes.

Mr. CARTER: That is an amendment.

Dr. RENTOUL: I have the right to move first. I have been asked by one of my constituents to present the petition. I have no right to refuse to do so. The Business Committee have considered it and allowed it to go on the programme, and have thus led the Council to believe that so far the petition is in order. I think it must go on the minutes.

Mr. CARTER understood that their solicitor had an opinion to give on this question.

Mr. FARRAR said he had consulted Mr. Muir Mackenzie earlier in the day on this subject, and their counsel was of opinion that any action on the part of the Council, either by way of interference or contribution from its funds, would be absolutely *ultra vires* and illegal. If the Council were to vote any part of its funds in aid of Mr. Anderson's appeal any registered practitioner might obtain an injunction from the High Court of Justice restraining such application of its funds, and any such application might be questioned in Parliament.

Mr. BROWN: I do not see how you can object to receive the petition. I second Dr. Rentoul's motion.

Dr. MACALISTER seconded Mr. Bryant's proposal, which was put into the following form:—

"That Mr. Anderson be informed that his petition has been laid before the Council, and that the Council is unable to take any action upon it."

On a show of hands being taken, only five members voted for Dr. Rentoul's proposal, most of the rest supporting Mr. Bryant's.

Dr. RENTOUL: I am very sorry to call for names.

The PRESIDENT: What is the possible good of it?

Dr. RENTOUL: I am claiming my right.

On the roll being called 5 voted for the proposal and 18 against.

The PRESIDENT thereupon put the question that Mr. Bryant's motion be adopted.

Mr. BROWN rose to a point of order. The motion, he said, stated that the petition had been laid before the Council. How had that been done?

The PRESIDENT: It has been on the programme.

Mr. BROWN wanted to know from the legal adviser if that was sufficient.

Mr. FARRAR: Certainly.

Dr. RENTOUL: I wish to speak on the motion.

Dr. MACALISTER: Dr. Rentoul has already spoken. He cannot speak again.

The motion was carried by 17 votes to 2.

The PRESIDENT: Will you have the names?

Dr. RENTOUL: I shall be very happy to have my name recorded.

Accumulation of Examinations.

Sir DYCE DUCKWORTH moved that the following report be received and entered on the minutes:—

"The Examination Committee, having reconsidered the motion of Mr. Teale of June 2nd, 1896, already reported upon on Nov. 30th, 1896, and remitted to the Committee for further consideration on Nov. 30th, 1896, have instructed the Chairman to communicate with the Chairman of the Education Committee with a view to a conference of the two committees on the questions raised in this motion."

Sir DYCE DUCKWORTH mentioned that he had conferred with Dr. Batty Tuke, and it was arranged to hold a conference, which would probably take place next session.

Dr. MACALISTER seconded, and the motion was agreed to.

Finance.

Mr. BRYANT, Chairman of Committee, in moving the adoption of the report by the Finance Committee on income and expenditure for the year 1896, stated that the interesting part of it was the following:—

"The average yearly income of the General and Branch Councils for the last seven years has exceeded the average yearly expenditure by £158 16*s.* 10*d.* But as this average yearly excess of income is considerably smaller than what has hitherto been usual, the following facts may be read with interest. The English Branch Council has during the last twenty years saved £14,141, its present assets representing £39,141. The Scottish Branch Council has saved during the same period £5088, with present assets £7088. The Irish Branch Council has been steadily losing ground, its assets having lessened from £2245, the amount at which they stood in 1877, to £801 18*s.* 5*d.*, the present value. To make the financial position of the Council quite clear it should be stated that in the four years, including 1889 to 1892, the excess of income over expenditure amounted to £5333 8*s.* 4*d.*, whilst in the four following years ending 1896 the expenditure was in excess of income to the sum of £2338 15*s.* 4*d.* The balance of the last eight years is thus still in favour of income by the amount of £2944 1*s.* 3*d.*

"To explain this marked increase of expenditure during the last four years it is only necessary to remind the Council that in 1892 the inspection of the examinations by a paid inspector was commenced, and that the expenses of this inspection during this period have amounted altogether to £3584 12*s.*—*viz.*, for the inspection itself, £1786 6*s.*, and for extra printing connected with it, £1798 6*s.*; the printing expenses of the Council for the four years ending 1892 having been £1938 12*s.*, whereas in the last four years they reached the total of £3736 18*s.* This sum did not include the expenses incurred for the new Pharmacopœia, which in all ways amounted during the last four years to the sum of £2608, whereas in the former four years it was only £1339, or about half.

"The conclusion is therefore evident that during the last four years extra expenses have been incurred, amounting altogether to £4863, or about £1200 a year; £3584 of this have been connected with the inspection of the examinations, which we may now consider closed for a time, and £1269 with the production of the Pharmacopœia, which will soon also not only come to an end, but become a source of profit rather than of expenditure."

Sir DYCE DUCKWORTH seconded the motion, which was agreed to.

Election of Committees.

The Executive Committee was re-elected. The Pharmacopœia Committee was re-appointed. For the Dental Education and Examination Committee Dr. Reid was put in the place of Dr. Fraser; and for the Dental Committee (a statutory committee appointed in terms of the Dentists Act) Mr. Carter was put in the place of Mr. Wheelhouse. The Finance Committee was constituted of Mr. Bryant, Sir Dyce Duckworth, Dr. Heron Watson, and Dr. Bennett. As the Penal Cases Committee under the new constitution Dr. Glover, Mr. Carter, and Mr. Bryant were appointed the members for England, Dr. Heron Watson the member for Scotland, and Mr. Thomson the member for Ireland. Dr. Bennett was put in the place of Dr. Wm. Moore as a member of the Students' Registration Committee.

The remaining committees were nominated as follows:—Examination Committee: Sir Dyce Duckworth, Mr. Bryant, and Mr. Teale for England; Sir William Turner, Dr. Heron Watson, and Dr. Pettigrew for Scotland; Sir Philip Smyly, Dr. Moore, and Mr. Thomson for Ireland. Education Committee: Dr. MacAlister, Dr. Glover, and Dr. Church for England; Dr. Batty Tuke, Dr. Gairdner, and Dr. Reid for Scotland; Sir John Banks, Dr. Bennett, and Mr. Thomson for Ireland. Public Health Committee: Dr. Thorne Thorne, Mr. Teale, and Dr. Church for England; Dr. Cameron, Dr. Bruce, and Dr. McVail for Scotland; Dr. Bennett, Sir P. Smyly, and Mr. Tichborne for Ireland.

Vote of Thanks to the President.

The PRESIDENT said the Council had now arrived at the end of their labours, and he congratulated them upon having got through much business.

Sir WILLIAM TURNER said: Before the Council rises its members would doubtless like to express their sense of the marvellous attention which the President has given to his duties, notwithstanding the serious illness through which he has recently passed. It is not customary for the Council to award a vote of thanks to its President at the conclusion of its meetings, but we cannot regard this as an ordinary occasion. There is a quality which we are apt to regard as especially characteristic of our race—a quality known by the short but expressive term "pluck." This quality has been displayed by the President on this occasion in no ordinary way. Throughout our meetings he has shown a virility and an energy most remarkable in one of his years, more especially considering all that he has recently gone through. I move that the best thanks of the Council be given to him for his services in the chair during the present session.

Dr. GLOVER seconded the proposal. The vote was not without precedent. But what was quite unprecedented in the Council, or anywhere else, was the exhibition of determination displayed by the President during the session. Such devotion to duty, such public spirit, such grip of the business of the Council, and, as Sir William Turner had said, such "pluck" in the peculiar circumstances of Sir Richard Quain's health, had never before, as far as he knew, been exhibited. The incident would long remain in the mind of the Council and of the profession.

Dr. PETTIGREW, in supporting the motion, said that he was fresh from reading a paper by the President to be read to the Royal Society dealing in a most interesting and original way with the question of the significance of the first sound of the heart.

The question on being put by Sir WILLIAM TURNER was carried by acclamation.

The PRESIDENT was much affected by the vote and returned his hearty thanks to the Council. He said what had moved him at all times in his work was a sense of duty.

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His connexion with the General Medical Council had been always a matter of pride and pleasure to him, and his great desire had always been to maintain the honour and efficiency of the Council. When he had to lay down his office it would be with every wish for the welfare of the Council and of its members.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations, and having conformed to the by-laws and regulations, have been admitted Members of the College and are now entitled to register and to practise medicine, surgery, and midwifery, viz. :—

Ahlswede, Oscar Jacob Louis, L.R.C.P. Lond., Hamburg, Freiburg, and Berlin Universities, and St. Thomas's Hospital.
Amenabar, Julio Daniel, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Beadles, Hugh Stanley, L.R.C.P. Lond., St. Bartholomew's Hospital.
Bean, Louis Constantine, L.R.C.P. Lond., University College Hospital.
Betts, Edward Hetley, L.R.C.P. Lond., St. Bartholomew's Hospital.
Brebner, Arthur, L.R.C.P. Lond., University College Hospital.
Brodribb, Arthur Hubert, L.R.C.P. Lond., St. Mary's Hospital.
Brushfield, Archibald Nabauld, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester, and St. George's Hospital.
Burn, Alfred, L.R.C.P. Lond., St. Mary's Hospital.
Butler, Sydney George, L.R.C.P. Lond., London Hospital.
Callum, Harold Sidney Hill, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Campbell, Alfred, L.R.C.P. Lond., University of Sydney and Royal Infirmary, and Royal College of Surgeons, Edinburgh.
Carter, Arthur Burnell, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Case, Hugh Martin, L.R.C.P. Lond., Middlesex Hospital.
Chambers, John Miles, L.R.C.P. Lond., St. Thomas's Hospital.
Clowes, Ernest Francis, L.R.C.P. Lond., Guy's Hospital.
Cock, Herbert Edgcumbe, L.R.C.P. Lond., Guy's Hospital.
Coop, Edward John Ernest, L.R.C.P. Lond., Mason College, Birmingham, and Westminster and St. Bartholomew's Hospital.
Cooper, Harry Gordon, L.R.C.P. Lond., Cambridge University and Owens College and Royal Infirmary, Manchester.
Cowie, Robert Macnamara, L.R.C.P. Lond., King's College Hospital.
Crisp, George Bedford, L.R.C.P. Lond., St. Mary's Hospital.
Croker, Edward Ussher, L.R.C.P. Lond., St. Thomas's Hospital.
Dickson, Avery Winn, L.R.C.P. Lond., St. Bartholomew's Hospital.
Dodgson, George Stanley, Exams. for L.R.C.P. Lond., Cambridge University and Middlesex Hospital.
Dove, William Bathurst, L.R.C.P. Lond., Cambridge University and London Hospital.
Dykes, Percy Armstrong, L.R.C.P. Lond., University College and Royal Infirmary, Bristol, and Guy's Hospital.
Dyson, Malcolm Goodworth, L.R.C.P. Lond., St. Bartholomew's Hospital.
Ellwood, Thomas Ashcroft, L.R.C.P. Lond., Charing-cross Hospital.
Evans, Charles Robert, L.R.C.P. Lond., Guy's Hospital.
Evans, John James, L.R.C.P. Lond., Edinburgh University.
Facey, Samuel Henry, L.R.C.P. Lond., St. Mary's Hospital.
Fegan, Richard Ardra, L.R.C.P. Lond., St. Bartholomew's Hospital.
Fenn, Joseph Hiorns, L.R.C.P. Lond., London Hospital.
Foote, Vivian Percival, L.R.C.P. Lond., Charing-cross and Westminster Hospitals.
French, Louis Alexander Wetherhead, L.R.C.P. Lond., University College Hospital.
Gairdner, John Francis Robert, L.R.C.P. Lond., University of Glasgow and London Hospital.
Gardner, Thomas Hudson, L.R.C.P. Lond., King's College Hospital.
Gilbertson, William, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Goode, Henry Norman, L.R.C.P. Lond., St. Thomas's Hospital.
Granville, Alexander, L.R.C.P. Lond., St. Bartholomew's Hospital.
Gundlach, John, L.R.C.P. Lond., St. Bartholomew's Hospital.
Hall, John Spencer, L.R.C.P. Lond., St. Thomas's Hospital.
Hayward, William Curling, L.R.C.P. Lond., Charing-cross Hospital.
Hindley, Godfrey John Douglas, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.
Howard, Edwin, L.S.A. Lond., St. George's Hospital and Gloucester Infirmary.
Hunt, George Henry, L.R.C.P. Lond., Cambridge University and St. Mary's Hospital.
Hunt, Spencer, L.R.C.P. Lond., St. Bartholomew's Hospital.
Hyde, Reginald Henry, L.R.C.P. Lond., University College Hospital.
Ireland, Archibald Edward, L.R.C.P. Lond., St. Bartholomew's Hospital.
Jonas, Herbert Charlton, L.R.C.P. Lond., St. Thomas's Hospital.
Knowles, Arthur, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Knox, Robert George, L.R.C.P. Lond., King's College Hospital.
Lange, Massillon Henri Joseph, L.R.C.P. Lond., King's College Hospital.
Laurence, Bertram Eustace, L.R.C.P. Lond., St. Bartholomew's Hospital.
Lee, William Howe, L.R.C.P. Lond., Firth College, Sheffield, and London Hospital.
Le Geyt, Edward, L.R.C.P. Lond., London Hospital.
Littlehales, Arthur Gascoyne, L.R.C.P. Lond., Westminster Hospital.
Lovitt, Arnold Edward, L.R.C.P. Lond., London Hospital.
Low, William Stewart, L.R.C.P. Edin., University and Royal College of Surgeons, Edinburgh, and St. Thomas's Hospital.
Lower, Nynian Yeo, L.R.C.P. Lond., Guy's Hospital.
McClean, John Francis, L.R.C.P. Lond., St. Thomas's Hospital.
McKie, Gordon Mackenzie, L.R.C.P. Lond., King's College Hospital.
McSorley, Alexander Somerled, L.R.C.P. Lond., King's College Hospital.
Manasseh, Antonius Joseph, L.R.C.P. Lond., Yorkshire College and General Infirmary, Leeds.
Manning, Herbert Cambell, L.R.C.P. Lond., St. Bartholomew's Hospital.
Martin, James Sackville, L.R.C.P. Lond., Edinburgh University, St. Thomas's Hospital, and Firth College, Sheffield.
Mellish, John Stafford, L.R.C.P. Lond., St. George's Hospital.
Michael, Cyril Eden, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Mills-Roberts, Richard Arthur, L.R.C.P. Lond., Durham University and St. Thomas's Hospital.
Moore, Joseph, L.R.C.P. Lond., Royal Hospital, Belfast, London Hospital, and Oxford University.
Muir, Joseph Corbett, L.R.C.P. Lond., Cambridge University and Owens College and Royal Infirmary, Manchester.
Mundy, Herbert, L.R.C.P. Lond., St. Bartholomew's Hospital.
Myers, Walter, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Nowell, Walter Salmon, L.R.C.P. Lond., Middlesex Hospital.
Parkinson, William, L.R.C.P. Lond., Firth College, Sheffield, and Yorkshire College and General Infirmary, Leeds.
Pearse, William Henry, L.R.C.P. Lond., Middlesex Hospital.
Pelle, William Hall, L.R.C.P. Lond., University College Hospital.
Phipps, John Hare, L.R.C.P. Lond., Owens College and Royal Infirmary, Manchester.
Porter, Arthur Edward, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Prince, Peregrine Charles, L.R.C.P. Lond., Cambridge University and Guy's Hospital.
Ralstone, Robert Gow, L.R.C.P. Lond., Edinburgh University and St. Bartholomew's Hospital.
Read, Edward Henry, L.R.C.P. Lond., London Hospital.
Rouillard, Jean Antoine Abel, L.R.C.P. Lond., St. Thomas's Hospital.
Rowland, Sydney Domville, L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Rygate, Arthur Montague, L.R.C.P. Lond., Durham University and Guy's Hospital.
Sandilands, John Edward, Exams. for L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital.
Sanguenetti, Harold Herbert, L.R.C.P. Lond., Oxford University and St. Thomas's Hospital.
Seymour, Lionel William, L.R.C.P. Lond., St. George's Hospital.
Smith, Arthur Lionel Hall, L.R.C.P. Lond., University College Hospital.
Smith, Edwin Charles Temple, L.R.C.P. Lond., Mason College, Queen's, and General Hospitals, Birmingham.
Smith, Julius Hodgetts, L.R.C.P. Lond., St. Thomas's Hospital.
Stamford, Robert Basil, L.R.C.P. Lond., Guy's Hospital.
Thomas, William John, L.R.C.P. Lond., Middlesex Hospital.
Thorman, William Henry, L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital.
Thornton, George Lestock, L.R.C.P. Lond., Cambridge University and St. George's Hospital.
Thursfield, James Hugh, L.R.C.P. Lond., Oxford University and St. Bartholomew's Hospital.
Tressider, Morton Everard, L.R.C.P. Lond., Guy's Hospital.
Turner, Harry Fulham, L.R.C.P. Lond., Guy's Hospital.
Walker, John Norman, L.R.C.P. Lond., St. Thomas's Hospital.
Walker, Sydney Robert, L.R.C.P. Lond., Westminster Hospital.
Weekes, Charles Peterson, L.R.C.P. Lond., Guy's Hospital.
Westcott, Warren Guy, L.R.C.P. Lond., St. Mary's Hospital.
Williams, John Cadwaladr, L.R.C.P. Lond., University of Edinburgh and Guy's Hospital.
Wilson, Alexander Gordon, L.R.C.P. Lond., London Hospital.
Wood, Percival, L.R.C.P. Lond., St. Bartholomew's Hospital.
Woolcombe, Alfred, L.R.C.P. Lond., St. Bartholomew's Hospital.
Woolliscroft, William Winfred, L.R.C.P. Lond., Charing Cross Hospital.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—The annual general meeting and conference of this society was held on May 26th, at 20, Hanover-square, W. Dr. J. F. Payne, the president, gave his annual address, leading up to the subject which had been chosen for discussion—viz., "The Influence of Light and other Forms of Radiant Energy on the Skin and Tissues, i.e., the Effects of Roentgen Rays, Solar Light, and the Electric Light."—Dr. R. Bowles opened the discussion, and Dr. H. Radcliffe Crocker followed, touching more especially on x-ray dermatitis and the etiology of freckling.—The patients exhibited included two cases of Leprosy, shown by Dr. H. Radcliffe Crocker, and one of Seborrhœa of long standing, shown by Dr. Harrison, of Clifton.—The following officers were elected for the session 1897–98:—President: Dr. Joseph Frank Payne. Vice-Presidents: Dr. Robert L. Bowles, Dr. A. J. Harrison, Mr. Jonathan Hutchinson, Dr. Philip H. Pye-Smith, Mr. Buxton Shillitoe, and Dr. Walter G. Smith.

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Treasurer: Dr. Jas. Herbert Stowers. Hon. Secretaries: Mr. George Pernet and Mr. William T. Freeman. The first annual dinner was held at Limmer's Hotel after the meeting, and was attended by upwards of fifty members and guests. The health of the guests was proposed by Mr. Jonathan Hutchinson, who referred in his speech to the great loss dermatology had sustained by the sad death of Dr. Feulard in the recent disaster at Paris.

DIPHTHERIA IN LONDON.—In the two weeks ended May 29th, the registered deaths from diphtheria in London have been 33 and 36 respectively. The former number in the week ended May 22nd was 3 below the corrected decennial average for the twentieth week of the period 1887-96. Camberwell was credited with 4 and Islington with 3 of the deaths, all the 33 being of young persons aged under twenty years; 7 were infants under one year of age, and 15 were under five years of age. On Saturday there were 785 patients suffering from the disease still in hospital, the admissions during the week having been 108, against 102, 107, and 94 in the three preceding weeks. In the outer ring there were 12 deaths registered from diphtheria, of which 3 were in Edmonton and 3 in West Ham registration districts, whilst 2 belonged to Willesden. Last week the 36 registered deaths from diphtheria in London were 2 in excess of the corrected decennial average for the corresponding week of the period 1887-96, only one being of a person aged over twenty years, and only one of an infant, though 24 were of children aged from one to five years. There were 3 deaths referred severally to Kensington, to Chelsea, and to Newington sanitary areas. On last Saturday there were 786 patients still in hospital, the admissions during the week having been 122. In the outer ring 7 deaths from diphtheria were registered in the week.

PRIZE DAY AT CHARING-CROSS HOSPITAL.—The scholarships, medals, prizes, and certificates awarded in the Charing-cross Hospital Medical School during the summer session, 1896, and the winter session, 1896-97 were presented to the successful competitors on June 2nd. Field-Marshal Sir John Lintorn Simmons, who was in the chair and made the presentations, delivered an address in the course of which he said: "It has given me great pleasure to have been able to distribute the prizes to those students who have won honourable distinction by their attention and industry during the present year. While congratulating them on their success I would remind them that the studies they have gone through are only a beginning of a lifelong labour in which they will have to exert their best energies in order to keep up with the progress of knowledge. As an old soldier now in the sixtieth year of service in Her Majesty's army, I with deep gratitude recall some of the benefits derived from the modern application of science in the treatment of diseases and wounds to which members of the military and naval professions are especially liable. For instance, during the Crimean War, anæsthetics were almost unknown and were never used until towards the end of the war, so that practically all operations were performed without them. Again, a very considerable number of officers and men died from gangrene and hospital fever, but now owing to the discovery of antiseptics these diseases have become almost unknown. To my mind one of the most remarkable features of our social condition in this country is the amount of gratuitous work done by members of your profession for the relief of suffering among the poorer classes, and we may be thankful that the sense of obligation felt by the public for the benefits derived from our great hospitals permits of their being maintained independently of all State assistance. Among the famous names associated with the school I would particularly mention those of Huxley the philosopher, Livingstone the traveller and missionary, and Llewellyn, who sacrificed himself to a sense of duty—men whose achievements may possibly be rivalled by some of those to whom I have the pleasure of presenting prizes in this the Diamond Jubilee year of our much-loved Queen." The Dean's report showed a very satisfactory state of affairs. In seven out of the eight groups of subjects at the examinations of the Conjoint Board the percentage of passes was above the average. Taking all subjects together the average percentage was 63, while the percentage of passes from Charing-cross was 73. At the first Fellowship examination of the Royal College of Surgeons 7 out of 10 candidates from Charing-cross passed, while the average percentage was only 37. The names of the prize-winners will be announced in a later issue.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The London Water Question.

THE second reading of the Bill of the Government to give further protection to water consumers in the metropolis will probably be taken on Monday, June 28th.

Dangerous Performances Bill.

The Bill to raise the limit of age within which dangerous performances are prohibited has received a second reading in the House of Commons.

Midwives Registration Bill.

The order for the second reading of this Bill was reached in the House of Commons on Wednesday, June 2nd, and was postponed until Wednesday, June 30th.

HOUSE OF COMMONS.

TUESDAY, MAY 25TH.

Enteric Fever among the Black Watch.

Colonel Wyndham Murray asked the Secretary of State for India whether an outbreak of enteric fever had occurred among the Black Watch Regiment at Subathu; whether the same regiment suffered severely from the same disease last summer in the same place; whether at that time the prevalence of the disease was accounted for by one of the reservoirs being infected with the particular bacillus which is associated with this disease, the water being found to be swarming with the characteristic microbes; what steps had been taken in the matter since last summer; and, if all precautions had been taken, what special advantages exist at this place that it should be maintained longer as a troop station.—Lord George Hamilton: A fresh outbreak of enteric fever has, I regret to say, occurred among the Black Watch which arrived at Subathu on March 24th last. A telegram from the Viceroy dated May 23rd states that eighteen cases have occurred, fourteen of which, however, are believed to have been contracted on the march up from the plains. Two cases have resulted fatally. Every possible sanitary precaution has been taken, and a thorough bacteriological examination into the cause of the disease is being made. A scheme for improving the permanent water-supply, involving the acquisition of land and springs, is being carried out, meanwhile the laying of a temporary pipe is nearly completed. Subathu, which is 4500 ft. above the sea, has a good climate and is not usually unhealthy.

THURSDAY, MAY 27TH.

Sale of Food and Drugs Bill

Mr. Balfour said, in answer to Mr. Dillon, that this Bill would be introduced, but he did not think there was much chance of its being passed into law during the present session. Of course, if it should unexpectedly turn out that there was a universal enthusiasm for the measure it might possibly be carried.

British Wines.

Mr. Lough asked the Chancellor of the Exchequer whether cider, perry, and British wines containing up to 15 per cent. of alcohol could be manufactured and sold without duty being paid on them; whether any statistics existed of the quantity of these beverages manufactured; and whether they were chiefly made in England; and, if so, whether any compensating immunity from duty could be granted to the native stimulants produced in Ireland and Scotland.—Sir Michael Hicks Beach replied that there was no duty on the manufacture of the liquors mentioned by the hon. Member, but a licence duty had to be paid on the sale of them by retail. There were no recent statistics as to the production of them, but it was found after an exhaustive inquiry which was made in 1887 that about one-sixth of the whole annual production of British wines came from Ireland, and it was estimated that about the same amount came from Scotland. These liquors contained very varying amounts of alcohol—some very little indeed.

FRIDAY, MAY 28TH.

Tuberculosis.

When the house was in Committee of Supply discussing the vote for the Board of Agriculture a debate took place on this subject. Mr. Channing asked the President of the Board whether the department had considered the advisability of extending the facilities for the voluntary use of the tests which were applied in Denmark and France in regard to tuberculosis. The results of the experiments on the Continent certainly tended to establish the accuracy of the test in the great majority of instances, and its general adoption would enable agriculturists to distinguish between healthy and unhealthy animals in their herds. Whatever might be the report of the Royal Commission there could be little doubt that the general adoption of the experiments, which had been carried out with some success by the hon. Member for Mid-Lothian (Sir Thomas Gibson-Carmichael) on his estate in Scotland, would result in enormous saving to farmers at comparatively little cost.—Mr. Lees Knowles took the view that nothing could be expected from the department until they had received the report of the Royal Commission.—Mr. Radcliffe Cooke suggested that the example of the United States and Canada should be followed and experimental farms established.—Mr. Walter Long, President of the Board of Agriculture, replying to these and other speakers, said that the report of the Royal Commission would be in their hands before long, and until then he was certainly not prepared to make any recommendations as to Government interference. He was not a believer in the system of experimental farms carried on by the Government, but he did believe in experimental farms attached to agricultural colleges and similar institutions, and he would gladly do what he could to assist educational centres, county councils, or great agricultural colleges to obtain land in order that practical instruction in agriculture might be given to students. He agreed that it was unfortunate to find how greatly orchards had been neglected in many

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parts of the country, and he would consider the advisability of issuing a circular or leaflet on the subject.

MONDAY, MAY 31ST.

Charges against Scotch Medical Officers.

Mr. Weir asked the Lord Advocate, as representing the Secretary for Scotland, whether, as in the last report of the Local Government Board for Scotland allegations of a serious nature were stated to have been made against fifteen inspectors of poor, and that the Board was called upon to investigate eight charges against medical officers, he would state in what counties the inspectors of poor and medical officers were employed.—The Lord Advocate said that to supply the information requested would be an entire departure from ordinary practice, and would not, in the opinion of the Local Government Board, be to the interests of sound administration.

Nursing in Irish Workhouses.

Mr. Tulley asked the Chief Secretary to the Lord-Lieutenant of Ireland whether he could state the grounds on which the Local Government Board had annulled the appointment of Miss Walker as night nurse in Granard Union; and whether ladies with similar qualifications had been sanctioned in the neighbouring union of Longford, and also in unions in the north of Ireland.—Mr. Gerald Balfour said, in reply, that Miss Walker, aged twenty-two years, and without previous experience in nursing, was elected by the guardians at a salary of £10 a year. The Local Government Board had now informed the guardians that they could not sanction her appointment until they received a report from the workhouse medical officer stating that in his opinion she was qualified to discharge the duties of night nurse. The Board had added that if the guardians persisted in their refusal to secure the services of a trained nurse the medical officer might requisition such additional nursing assistance as he might require. The night nursing in Longford workhouse was in charge of the Sisters of Mercy, who were nurses in the workhouse, the duty being undertaken in rotation by these Sisters. The Board had repeatedly addressed boards of guardians relative to the necessity of appointing only trained and experienced persons to take charge of the workhouse infirmaries and fever hospitals, and wherever vacancies occurred the Board urged upon the guardians the desirability of offering such salaries as would induce qualified applicants to present themselves as candidates for the office of nurse.

TUESDAY, JUNE 1ST.

Irish Workhouse Infirmaries.

Mr. Carew asked the Chief Secretary to the Lord Lieutenant of Ireland whether, in consequence of the defective condition of the nursing in Irish workhouse infirmaries and fever hospitals, he would consider the desirability of suggesting to the Local Government Board to appoint at least one or two lady inspectors, professionally qualified as doctors or nurses, to inspect the Poor-law fever hospitals and infirmaries, and who would also inspect the state of the women and children, the idiots, lunatics, and infirm.—Mr. Gerald Balfour replied that the major portion of the duties of an inspector of the Local Government Board could not be undertaken by a lady inspector. As to the expediency of appointing a lady inspector the question was not one on which he should be prepared to offer an opinion at present.

The Plague in Bombay.

Mr. Maclean asked the Secretary of State for India, whether the measures of segregation of the sick, and of the healthy from plague-infected houses, recently ordered by the Government of Bombay on the recommendation of medical men from Hong-Kong, were in substance urged upon that Government early in October, 1896, by the Surgeon-General with the Government of Bombay, and again in December by a committee of Bombay medical officers presided over by the late Surgeon-Major Manser. Whether the Surgeon-General in October advised medical examination of railway passengers at Kalyan and Virar, as being more effectual than inspection at terminal stations within Bombay limits, and whether the recommendation was disregarded by the Bombay Government for three and a half months, during which the plague was carried to numerous fresh centres of infection; whether, in the measures that had been adopted and the special appointments made to deal with the plague, the Bombay Government had acted in consultation with the Surgeon-General and the Sanitary Commissioner and on their recommendation; and whether he could lay upon the table copies of the report of the committee above referred to and of the recommendations of the Surgeon-General.—Lord George Hamilton said he was unable to answer the first two questions as to the origin and paternity of the measures taken to suppress plague in Bombay, but so far as he knew there had been no divergence of opinion as to the most effective measures of stamping out the pestilence, though there might have been differences of opinion as to the possibility of enforcing off-hand drastic measures. So far as he knew the Bombay Government had acted throughout in consultation with the Surgeon-General and the Sanitary Commissioner. As to the reports referred to he would inquire about them and consider whether they should be made public.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ANNINGSON, B., M.D. Cantab., M.R.C.S., has been re-appointed Medical Officer of Health by the Ely Urban District Council.

ARNOLD, E G. EMERSON, M.B., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

AULD, A., M.B., C.M. Glasg., has been appointed Medical Officer for Snaith, of the Goole Union.

CARTWRIGHT, J. A. T., M.R.C.S. Eng., L.S A., L.M. Lond., has been re-appointed Medical Officer of Health by the Wigmore Rural District Council.

CRANSTOUN, Geo., M.B. Durh., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Ludlow.

DUFTON, H. T., B A. Cantab., L.S.A., has been appointed Medical Officer for the Mendlesham Sanitary District of the Hartismere Union.

EARLE, HERBERT M., M.R.C.S., L.R.C.P., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

GIMSON, W. G., M.D., St. And., M R.C S., has been re-appointed Medical Officer of Health by the Witham Urban District Council.

GODDARD, C. E., L.R.C.P. Lond., M R.C.S , has been re-appointed Medical Officer of Health by the Wembley Urban District Council.

GRIMSDALE, T. B., M.B. Cantab., M.R.C.S. Eng., has been appointed Honorary Surgeon to the Hospital for Women, Liverpool.

FLANAGAN, G. B N., L R.C.P., L.R.C.S. Irel., has been appointed Medical Officer and Public Vaccinator for the No. 6 Sanitary District of the East Grinstead Union.

FRY, John W., M.R.C S., has been appointed Medical Officer for the East Peckham District, including Wateringbury and Mereworth, of the Malling Union.

MORLEY, FRANK, L.R.C.P. Lond., M.R C.S , L D S. R.C.S. Eng., has been appointed Surgeon Dentist to the Metropolitan Hospital, Kingland-road.

O'NEILL, J , M.B., B.S. Irel., has been appointed Medical Officer for the Athy Union, co. Kildare.

O'SULLIVAN, P. T., M.B., B Ch. Irel., has been appointed Medical Officer, pro tem., for the Cork Infirmary, vice E. R. Townsend.

PARKHURST, R , M.B., C.M. Edin., has been appointed Medical Officer of Health by the Long Sutton Urban District Council.

RANKIN, J. S., M.B., C.M. Glasg., has been appointed Medical Officer for the Central Division by the Govan Parish Council.

SANKEY, JULIUS OTTAWAY, M.R.C.S., has been appointed Consulting Surgeon to the Littlemore County Asylum, Oxford, vice E. L. Hussey, resigned.

SELLERS, A. E., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Thornhill District Council.

SKINNER, R. A., L.R.C.P. Irel., M.R.C.S., has been appointed Medical Officer for the Tenterden Sanitary District and the Workhouse of the Tenterden Union.

SOUTAR, ROBERT, M.D., C.M. Aberd., has been appointed Medical Officer of Health by the Montrose Parish Council.

WEBSTER, J. CLARENCE, M.D., F.R.C.P. Edin., has been appointed Demonstrator of Gynæcology in McGill University, Montreal.

WHITAKER, E. T., M.B., C.M. Edin., B.Sc., D.P.H. Camb., has been appointed a Medical Officer of Health (joint appointment) by the Burford, Cleobury, Mortimer, Rock, and Tenbury Rural District Councils.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BOROUGH OF LOWESTOFT.—Medical Officer of Health and Medical Attendant at the Sanatorium for the Urban and Port Sanitary Districts of Lowestoft. Salary for the Urban Sanitary District £100 per annum; for the Port Sanitary District, £20 per annum, and as Medical Attendant at the Sanatorium £30 per annum. Applications to the Town Clerk, Lowestoft.

CONSUMPTIVE HOSPITAL AND ORPHAN HOMES OF SCOTLAND, Bridge-of-Weir.—Resident Medical Officer. Salary £80 per annum, with furnished apartments, board, &c. Applications to the Secretary, 194, St. Vincent-street, Glasgow.

CORPORATION OF MANCHESTER—MONSALL FEVER HOSPITAL.—First and second Medical Assistants, at £150 and £100 per annum respectively, with board and lodging. Applications to the Chairman of of the Sanitary Committee, Public Health Office, Town-hall, Manchester.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Assistant House Surgeon for six months. An honorarium of £10, awarded conditionally, and board, residence, and washing provided.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thorofare, Ipswich.—Second House Surgeon, single, for one year. Salary £70 per annum, with board, lodging, and washing.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for six months. Board, lodging, and washing in the hospital. An honorarium of £10 10s., will be given conditionally.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

KENSINGTON DISPENSARY.—Honorary Medical Officer. Applications to the Honorary Secretary, F. Leach, Esq , 7, Stanford-road, Kensington-square, W.

LEITH PUBLIC HEALTH FEVER HOSPITAL.—Resident Physician, for six months. Salary £1 a week. Applications to Dr. W. Leslie Mackenzie, Medical Officer of Health, Leith.

MEDICAL BURSARY, St. Andrew's University.—A Bursary of £50 per annum, tenable for two years. Applications to the Honorary Secretary, St. Andrew's Graduates' Association, 11, Chandos-street, Cavendish-square, London, W.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART AND PARALYSIS, Soho-square, London.—Resident Medical Officer, for six months. Board, residence, laundry, and an honorarium of ten guineas. Also Assistant Physician.

NOBLES, ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon, single. Salary £90 per year, with apartments, gas, coals, and washing free. The House Surgeon is usually appointed Medical Attendant at the House of Industry at a salary of £10 per year.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £60 per annum. Also Junior House Physician for six months. Board and lodging, including washing, provided. Applications to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

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QUEEN'S HOSPITAL, Birmingham.—An Honorary Physician.
ROYAL VICTORIA HOSPITAL, Bournemouth.—Ophthalmic Surgeon.
SOMERSET AND BATH LUNATIC ASYLUM, WELLS, SOMERSET.—Junior Assistant Medical Officer, single. Salary £110, rising to £130 per annum, with board, lodging, washing, and attendance.
ST. PETER'S HOSPITAL, Henrietta-street, Covent-garden, London.—House Surgeon for six months. Salary at the rate of £100 a year, with board, lodging, and washing.
SUFFOLK COUNTY ASYLUM, Melton.—Locum Tenens for about six weeks. Salary two guineas a week, with board, lodging, and washing.
TIVERTON UNION.—Medical Officer and public Vaccinator for the Workhouse of this Union. Salary £50 a year with an allowance for midwifery and vaccination cases. The appointment subject to the provisions of the Poor-law Officers' Superannuation Act, 1896. Also a Medical Officer of Health. Salary £100 a year. Applications to the Clerk, Tiverton.
TOTTENHAM HOSPITAL, The Green, South Tottenham. — Resident Junior House Surgeon. Salary £40 a year, with residence, board, and washing.
VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S W.—House Surgeon for one year. Board and lodging in the hospital, and an honorarium of £50.
WANTAGE UNION.—Medical Officer and Public Vaccinator for the Vael District. Salary £50 per annum, with the usual surgical, vaccination, and midwifery fees. Applications to the Clerk to the Guardians, Wantage.

Births, Marriages, and Deaths.

BIRTHS.

BEEVOR.—On June 1st, at Serjeant's-inn, Temple, E.C., the wife of Sir Hugh Beevor, Bart., M.D., of a son.
BOWEN-JONES.—On May 30th, at Carmarthen, the wife of Lloyd Bowen-Jones, D.P.H. Lond., of a son.
CADMAN.—On May 30th, at Bushey Heath, the wife of A. W. Cadman, F.R.C.S., of 20, Devonshire-street, Portland-place, of a daughter.
CANT.—On May 28th, at Woodley, near Stockport, the wife of Frederick Cant, M.R.C.S., L.R.C.P. Lond., of a son.
DOVE.—On May 28th, at Parkside, Crouch-end, the wife of Augustus C. Dove, M.D., of a daughter.
EDWARDS.—On May 30th, at Bradford Villa, Matlock Bank, Derbyshire, the wife of Arthur Spencer Edwards., M.B., C.M. Edin., of a son.
EMERSON.—On May 29th, at Leicester, the wife of Romford Emerson, M B., B.S. Dubl., of a daughter.
FRAZER.—On May 27th, at Lansdowne House, Brentwood, the wife of Samuel Frazer, L.R C.S., L.R.C P. Edin., of twins—boy and girl.
PECK.—On May 25th, at Aughton, near Ormskirk, the wife of Herbert Peck, M.B., Medical Officer of Health, of a daughter.

MARRIAGES.

DYALL—CROSS.—On May 29th, at the church of St. Bartholomew the-Less, Thomas James Dyall, M.D., M.S. Lond., F.R.C.S., of Charlwood-street, S.W., to Ellen Marion, third daughter of William Henry Cross, of St Bartholomew's Hospital.
HILLS—PAICE.—On June 1st, at SS. Michael and All Angel's, Chiswick, William Charles Dillon Hills, M.R.C S., L.R.C.P., of Catheart-road, to Edith Jane Carrick, younger daugher of the late William Paice, M.A., of University College School, London.
GALE—MANGAN.—On June 1st, at All Saints' Church, Kingston-on-Thames, Arthur Gale, M.R.C.S., &c., to Ursula, second daughter of the late Rev. James Mangan, D.D., Rector of St. Mildred's, Canteroury.
HOWSE—ELLIOT.—On May 26th, at St. Leonard's Church, Hesten, by the Rev. J. Sharp, Percy H. Howse, F.R C.S., eldest son of the late Alfred Howse, M.R.C.S., to Winifred, second daughter of J. Elliot.
NELSON—SHIELD.—On June 1st at St. Mary's, Grassendale, Liverpool, Philip Nelson, M.B., of Bath, to Lilian, second daughter of James Shield, Eaton-road, Grassendale, Liverpool
OSBORNE—BIRCHENOUGH.—On June 1st, at St. Marylebone Church, Frank Osborne, M.R.C.S. Eng., to Emily, third daughter of the late John Birchenough, Esq., of the Elms, Macclesfield.
STEINHAEUSER—HARDING.—On May 25th, at the parish church, Preston, Brighton, John Robert Steinhaeuser, M.B., B.S., youngest son of Adolphus Steinhaeuser, of 5, Clermont-road, to Gertrude Alana, second daughter of Nathaniel Harding, of 22, Stanford-avenue.
TURNER—TITLEY.—On May 31st, at the parish church, Amersham, Frederic Senior Turner, M.R.C.S Eng., L.R.C.P Lond., of Amersham, Bucks, to Madeline Hope Titley, widow of the Rev. R. Titley, late Chaplain in Lahore.

DEATHS.

BALL.—On April 26th, at Lagos, Francis Robert Knox Ball, M.B., C.M. Edin., aged 28 years, Assistant Colonial Surgeon, eldest son of Colonel William Clare Ball, C.B.
EASTES.—On May 27th, suddenly, at his residence, London-street, Folkestone, Frederick Eastes, M.D., aged 38.
FISHER.—On May 29th, at Sittingbourne, Charles Holdrich Fisher, M.D., aged 62.
HAYDON.—On May 26th, at his residence, 25, St. Peter-street, Tiverton, Devon, William Rudall Haydon, M.D., aged 52. Canadian, American, and New Zealand papers please copy.
SMITH.—On May 28th, at 16, Victoria-square, Clifton, Bristol, James Greig Smith, M.A., M.B., C.M., aged 42 years.
WESTON.—On May 26th, at Chetwynd House, Stafford, Edward Francis Weston, M.R.C.S., aged 62 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 3rd, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 28	29·32	S.	53	49	106	60	49	0·05	Showery
,, 29	29·63	S.W.	58	52	110	65	50	0·10	Cloudy
,, 30	29·79	S.W.	64	58	118	73	58	0·44	Fine
,, 31	29·97	S.W.	60	55	118	72	52	0·25	Cloudy
June 1	29·80	N.E.	56	55	101	69	54	0·02	Raining
,, 2	30·04	W.	58	55	91	67	52	...	Hazy
,, 3	30·11	N.	61	58	93	68	57	...	Hazy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.). City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (9th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (10th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (12th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (8th). — ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—8.30 P M Dr. W. Howship Dickinson: On the Occurrence of Musical Mitral Murmurs in connexion with Aortic Stenosis.—Dr. S. Phillips: A Case of Calcareous Metamorphosis of Tracheal Glands.

WEDNESDAY (9th). — LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens:—Mr. W. G. Spencer: Post mortem Specimens from a case of Laryngectomy for Malignant Disease of Cricoid.—Mr. R. Lake: Microscopic Specimen, with brief notes of a case of Acute Ulcerative Tonsillitis.—Dr. E. Law: Case of Cleft Palate, with enlarged tonsils, inferior turbinals, and adenoids.—Dr. Bond: (1) Cystic Tumour in the Naso-pharynx of a Man; (2) Hypertrophic Laryngitis in a Man, subsequent to an attack of membranous laryngitis (not diphtheritic) —Dr. W. J. Horne: A Young Woman with Syringomyelia, in whom there is paralysis of the left half of the soft palate and also of the left half of the larynx —Mr. R. Lake: Case of Laryngeal Tuberculosis.—Dr. St. Clair Thomson: A Man, aged forty, with Chronic Laryngitis, Atrophic Pharyngitis, Atrophic Rhinitis, and some Cicatricial Stenosis of the Anterior Nares, all consequent on an attack of typhoid fever complicated with diphtheria.

THURSDAY (10th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Specimens:—Dr Macnaughton Jones: A case of Nephrectomy —Dr. Hodgson: (1) Fibro-myoma of Right Broad Ligament undergoing Suppuration: (2) Pan-hysterectomy, Double Oöphorectomy, and Removal of the whole of the Right Broad Ligament. Papers:—Dr. R. T. Smith: Case of Puerperal Peritonitis treated by the Anti-streptococcus Serum.—Dr. Meek: Two Cases of Advanced Carcinoma of the Cervix Uteri treated by Curettage and Chloride of Zinc Paste.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8 P.M. Card Specimens:—Mr. J. R. Lunn: Bilateral Facial Palsy; Deafness; Ulceration of Cornea.—Mr. Lunn and Mr. Marshall: Foreign Bodies Embedded in the Orbit. 8.30 P.M. Papers:—Dr. Argyll Robertson: Note on the Further History of a case of Filaria Loa —Mr. F. R. Cross: Some cases of Sympathetic Ophthalmitis. — Mr. S. Snell: (1) Electrolysis in Trachoma; (2) Tumour of Orbit extending to Cranial Cavity.—Mr. Bickerton: Cases of Spontaneous Dislocation of Lens into the Anterior Chamber.—Mr. E. Green: The Varieties and Degrees of Colour-blindness.

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LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (8th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.
LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abrham: Pityriasis Rosea.
ROYAL INSTITUTION.—3 P.M. Dr. E. H. Starling: The Heart and its Work.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 30 P.M. Dr. Tooth: Clinical Demonstration.
WEDNESDAY (9th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Air.
WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Mansell Moullin: Gynæcological Cases.
HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Habershon: Fibroid Disease of the Lungs.
THURSDAY (10th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3 30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Bacteriology of the Urine.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Dr. Green: Clinical Lecture.
ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square).—5.30 P.M. Dr. T. D. Savill: Neuroses of the Skin.
FRIDAY (11th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.)—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.
LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Typhoid Fever and Diphtheria.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Beevor: Examination of Muscles.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

CAN WALL-PAPER BE RENDERED IMPERVIOUS TO DISEASE GERMS?

DR. FRANTZ has recently introduced a preparation for coating wall-papers which renders them quite impervious, and therefore capable of being thoroughly washed, even with disinfectants, without damage. The object is certainly one of importance, as existing methods of disinfection in this respect are not satisfactory. The removal of the paper may involve much expense, and sulphur fumigation blackens the guildings. A paper coated with shellac has already been used, but it is very expensive and liable to crack. Dr. Frantz's preparation is stated to be a mixture of vegetable gums which is sold under the name of the Paradox Sanitary Wall-paper Finish. It is readily applied with a brush, and does not affect the colouring or lustre of the paper. He claims for it the advantages of being devoid of smell, elastic (so that it will not crack), inexpensive, and lasting. On this last point we have nothing but the assurance of the inventor in a matter which time alone can determine. However, the object appears to be a feasible one to which he has done a service in calling attention.

Cosmos.—We cannot print our correspondent's question without knowing the reason for which the address is required.

J. S. has omitted to supply his name and address.

MEDICAL PRACTICE IN SOUTH AFRICA.

WE learn from the *African Critic* that fifty-seven fresh medical men applied for registration and licence in South Africa last year. If this rate continues the profession will soon be as overstocked there as it is in England. It is not the first time that we have issued the warning to practitioners that is implied in the above information. There are openings, and good ones, in South Africa, but they are not too numerous, and not suitable for persons unable to rough it or desirous of taking their wives and children with them. There is a career; but the career has to be carved out. It is not ready made.

L.R.C.P., &c.—The possible situation is a very hard one, but we cannot suggest a remedy as long as our correspondent's questions are based upon assumption. If he can absolutely prove that one of his patients taking his prescription to the druggist was advised by the druggist to employ another medical man, and did so, an action might conceivably lie. But the exact circumstances when they arise must dictate an answer.

"THE PUBLIC HEALTH EXAMINATION AT CAMBRIDGE."

To the Editors of THE LANCET.

SIRS,—Your correspondents "N. D." and "W. T." bring various charges against those responsible for the examination. May I point out to "N. D." that the present regulations state that all candidates who were qualified after a certain date must have done six months' practical laboratory work. The practical examination is therefore arranged to test this work, and although certain candidates are not required to be signed up, they must expect to be treated as if they have had the necessary training. "W. T." complains of the inefficiency of the apparatus provided in the gas and water analysis. He says: "The test solutions were not all the strength ordinarily used in laboratories." Perhaps not, but each bottle of standard solution bore a label on which was written the strength of the solution; a little arithmetic goes a long way in quantitative work. As "W. T." knew that only three hours were allowed for the analysis, I am astounded that he should have wasted the time even to ask for a 2 ft. tube; nor can I imagine why he should have wanted to heat more than one evaporating basin at one time. The lack of burettes of which he speaks was, when I was examined, conspicuous only by its absence. I feel sure that had he asked either of the examiners for a further supply he could have had them. If a candidate can only do one thing at a time and is unable to proceed with any part of the analysis whilst waiting for a particular reagent or piece of apparatus, I should advise him either to take a course of instruction or to keep away from the examination. That it is never so easy to make an analysis in an examination room as in a private laboratory is self-evident; but my experience is that justice is done to the practical knowledge as well as to the practical ignorance of the candidate. I am, Sirs, yours truly,

May 28th, 1897. EXAMINER.

J. S. K.—There is no restriction on practice, but it is not open to all possessors of foreign qualifications to register.

A. B. C.—The best books are Sully's "Outlines of Psychology" and Ziehen's "Introduction to Physiological Psychology."

THE SAINT MARGARET WHITE WOOL UNDERWEAR.

WE have received from Messrs Cooper, Corah and Sons of Leicester some specimens of a new ventilated woollen underwear which has been designed with the special object of ministering to the needs of the cyclist and golfer. We have placed the articles where they would obtain practical trial and have received a favourable report upon their merits. We are informed that the garments are very comfortable to wear, absorbing the perspiration and giving well to the movements of the body. The material is woven in three qualities, so that the athlete is able to suit his tastes or need with regard to the weight of the garment. It cannot be said that the material of which the underwear is made is unshrinkable, but it stands the test of washing fairly well.

A CARD FOR FRAMING THE PRINCE OF WALES'S HOSPITAL STAMPS.

FOR the possessors of these stamps who are not stamp collectors a card has been prepared with spaces in which the stamps may be placed, surrounded by the arms of Great Britain, the Indian Empire, and the principal colonies. It is published by W. S. Lincoln, 2, Holles-street, London, W., and can be obtained from him or from any bookseller, price 1*s.*

A CHILD'S AUTHORITY.

A CASE which the National Society for the Prevention of Cruelty to Children will probably take to a higher court was heard at Hove last week. A sister was summoned by the society for a common assault on a child whose stepmother had already been convicted of cruelty. The evidence was fairly clear, but the magistrates, on the ground that the child had not in so many words given the inspector authority to act on her behalf, dismissed the information.

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SMITH'S DAY BOOK.

A NEW day book, designed for medical men, has been brought out by Messrs. Pitcher and Co., 4, Newman-street, London, W. It is called Smith's Day Book by its inventor, and is a handy and well-arranged book. The amount paid or credited can be seen at a glance, and no trouble is required to keep the book in order. It is a mistake to have reserved a column for "Diagnosis" on the same page as the cash account, as cash accounts might have to be inspected in a court of law or by an auditor, but the difficulty thus created can be got over by the use of hieroglyphics.

BOTANY AND THE MEDICAL CURRICULUM.

To the Editors of THE LANCET.

SIRS,—The only way in which a medical man can proclaim his wrongs and grievances is through medical journals, and as medical students have no such journal I beg to ask you to allow me a short space in THE LANCET. All I want to do is to point out the absolute absurdity of including the subjects of botany and physics in the first professional examination. Perhaps some readers will say a knowledge of botany is essential for materia medica. Well, we would not object to studying those parts which pertain to this interesting subject; but why should we be asked to learn a lot of useless stuff for three months and forget all we know in three weeks? With regard to physics, I am sure you will agree with me when I say it is of no good at all; but if the Council insist on it it ought most decidedly to be included in the preliminary examination. When we come up to the University we wish to study those subjects which pertain to medicine, and not subjects which have to do with engineering, science, and arts. Here we have Professor Tait lecturing on the properties of matter for six weeks and only devoting three weeks to sound, light, heat, and electricity, which subjects the learned Council say are of the most importance. Well, I cannot ask you to allow me any more space, but I beg of you to publish this letter and sincerely hope others more eloquent than myself will write.

I am, Sirs, yours faithfully,

May 26th, 1897. MEDICAL STUDENT.

A REQUEST.

To the Editors of THE LANCET.

SIRS,—May I through the medium of your valuable paper request your readers, if they should meet with an abortion in the earlier weeks of pregnancy, to kindly forward to me at the address given below the ovum for physiological purposes. I should be very grateful, and would willingly pay the carriage for such. The best medium for preservation is Müller's fluid; but one more commonly at hand, and which answers the purpose almost as well, is a dilute solution of perchloride of mercury.

I am, Sirs, yours truly,

GILBERT KEMPE, M.D. Durh.

Endless-street, Salisbury, May 27th, 1897.

A CASE OF QUADRUPLETS.

A CORRESPONDENT, writing from Bordighera, informs us that on May 27th a German woman married to an Italian in that town gave birth in her third confinement to three girls and one boy. The four children were alive at the date of the letter (May 30th) and were said to be all well developed.

"AN UNUSUALLY HEAVY HEART."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of to-day's date, page 1466, Dr. Reid reports a case in which the heart weighed 41 oz., and remarks that he can find only two cases in which this weight was exceeded. In Section 769: 6 of the "Medical Digest" many instances of far greater weights are recorded. I am, Sirs, yours obediently,

RICHARD NEALE, M.D. Lond.

Boundary-road, South Hampstead, N.W., May 29th, 1897.

THE PREVALENCE OF THE UNQUALIFIED ASSISTANT.

To the Editors of THE LANCET.

SIRS,—In his Oration on the Medical Society of London in the Eighteenth Century, published in THE LANCET of May 22nd, Mr. Owen, speaking of the unqualified assistant of the present day, says: "Fortunately he is now a thing of the past, the General Council of Medical Education having sent him on a mission to minister to the necessities of the dodo and the great auk." The leaders of the profession are not always aware of the real state of things amongst the rank and file throughout the country. I do not exaggerate in the least when I say that I can show Mr. Owen hundreds of unqualified assistants doing a large share of the work of extensive practices. In my own immediate neighbourhood, which is a good and purely agricultural one, two of my medical brethren, both doing good-class practices, employ unqualified assistants, who do a large share of their work. In one case the assistant lives about four miles from the principal and does his work quite independently. Until the General Medical Council appoints officials to see that its work is done this sort of thing will flourish, for who cares voluntarily and without hope of reward to allocate to himself the functions of a private detective? I am, Sirs, your obedient servant,

June 1st, 1897. COUNTRY SURGEON.

COMPENSATION BY THE CARDIFF HEALTH COMMITTEE.

A MILK VENDOR at Roath applied to the Cardiff Health Committee for £22 compensation. The applicant stated that one of his children was suffering from fever, and he was therefore forbidden to sell milk, and consequently lost his trade. The committee decided to recommend the Council to pay the man £20.

"THE CAUSATION OF SEX."

To the Editors of THE LANCET.

SIRS,—It has always seemed to me that the various theories advanced for explaining causation of sex merely rival each other in being physiologically untenable. The fact that the theory propounded by Mr. J. F. Chambers in the *Stock-keeper* of Jan. 8th was thought worthy of annotation in THE LANCET of Jan. 30th is the immediate cause of my sending this note. I have not been able to assure myself that the theory it supports is new, but I have neither seen nor heard it advanced. It, however, seems to me to be so simple and so theoretically perfect that I am doubtful of its newness, though satisfied that if it throws no new light on the subject I shall at least be supporting a hypothesis which accords with the fundamental principles of physiology.

No doubt it originally required some stretching of faith to believe that a small cell, a spermatozoon, is possessed of the inherent property of combining with another small cell, an ovum, to undergo collective division into many cells, which ultimately arrange themselves to form a particular kind of animal—that this particular kind of animal would not only be stamped by the characteristics peculiar to the individual organism from which each germ-cell was derived, but that often it would possess peculiarities, mental or physical, undoubtedly handed down from some remote ancestor of its immediate parent or parents. It seems to me that little or no further stretch of faith is required for believing that each germ-cell is possessed of the still further inherent property of sex. In other words, it not only seems conceivable, but almost incontrovertible, that each spermatozoon is a male or a female spermatozoon, and is capable of taking part in the formation of only a male or a female animal as the case may be; and that each germinal vesicle is a male or a female germinal vesicle, and is capable of taking part in the formation of only a male or a female animal; and that a male spermatozoon cannot fertilise any but a male germinal vesicle, and a female spermatozoon cannot fertilise any but a female germinal vesicle. That is to say, unless a male spermatozoon combines with a male germinal vesicle, or a female spermatozoon combines with a female germinal vesicle, impregnation does not take place. I fancy that there are no human hermaphrodites so true as to controvert this last. Whether more proof or more disproof of this theory can be obtained from an exhaustive inquiry into twin births it would be difficult to say. Although not an obstetrician, I have had personal knowledge of two cases of twin births which lend it support. In one case the twins were boy and girl and had distinct placentæ and each a perfect set of membranes. In the other case the twins were of the same sex, and had a common placenta, though two cords, and a common bag of membranes.

I am, Sirs, yours faithfully,

June 1st, 1897. J. LOCKHART GIBSON, M.D. Edin., M.R.C.S. Eng.

"AN OBSTINATE CASE OF ECZEMA: SUGGESTIONS WANTED."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. Alamuddin's inquiry in THE LANCET of May 29th I would suggest the use of a solution of Jeyes' creolin, from 2 to 10 per cent., beginning with the lower and gradually going to the higher strength as it appears to suit the case. If there is much irritation it will be well to mix with it about an equal quantity of the distilled extract of hamamelis, or, if preferred, the more expensive preparation, hazeline. This lotion should be well applied night and morning, but it would be better to keep the affected part constantly moist. A case of eczema of five years' duration obviously requires perseverance in treatment.

I am, Sirs, yours truly,

Colwyn Bay, June 1st, 1897. HENRY SIMPSON, M.D. Lond.

During the week marked copies of the following newspapers have been received:—*Essex Times, Le Figaro (Paris), Worcester Herald, Brighton Gazette, Devon Weekly Times, Manchester Guardian, New Zealand Herald, Huddersfield Chronicle, Leicester Post, Times of India, Pioneer Mail, East Anglian Daily Times, Birmingham Gazette, Western Morning News, Newcastle Leader, Architect, Rugby Advertiser, Liverpool Daily Post, Northampton Mercury, Bath Chronicle, Westminster News, Builder, Forfar Herald, Glasgow Evening News, Scotsman, Daily Mail, Bristol Mercury, Carlisle Express, Somerset County Herald, Croydon Guardian, Eastern Post, Leeds Mercury, Herne Bay Argus, Dover Express, Le Figaro, North Wales Chronicle, Knowle Journal, Yorkshire Post, Sussex Daily News, Herald of Wales, Hastings News, Oxford Journal, Derby Daily Mail, Grimsby News, Wolverhampton Chronicle, Burnley Express, Lincoln Gazette, Chatham News, Glossop Times, Preston Herald, Mona's Herald (Douglas), Mining Journal, Sanitary Record, Local Government Chronicle, Reading Mercury, Weekly Free Press and Aberdeen Herald, City Press, Educational Times, Surrey Advertiser, Crieff Journal, Citizen (Gloucester), Local Government Journal, Bury Free Press, West Middlesex Herald, Public Health, Witney Gazette, Lowestoft Standard, Darwen News, West Kent Advertiser, &c., &c.*

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O.—*Ophthalmic Record*, Chicago, Editorial Sec. of.

P.—Dr. Pye-Smith, Lond.; Dr. R. H. Phillimore, Cookshire, Quebec, Canada; Mr. W. C. C. Pakes, Lond.; Mr. Y. J. Pentland, Edin.; Peptenzyme Co., Lond.; Phenol, Birmingham; Mr. G. Pernet, Lond.; Messrs. Parke, Davis, and Co., Lond.

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U.—*United Service Magazine*, Lond., Editor of.

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Y.—Dr. John Young, Glasgow.

Letters, each with enclosure, are also acknowledged from—

A.—Monsieur J. Astier, Paris; A., Bristol; Æsculapius, Lond.; Ashton-under-Lyne General Infirmary, Sec. of.

B.—Dr. J. P. Balbirnie, Staveley; Dr. R. C. Brown, Lond.; Mrs. R. W. Branthwaite, Rickmansworth; Messrs. Burroughs, Wellcome, and Co., Lond.; Brin's Oxygen Co., Ltd., Lond.; Dr. J. N. Burns, Lond.; Dr. G. S. Buchanan, Lond.; Miss J. Biggs, Malvern Wells; Bristol Eye Hosp., Sec. of; Mr. F. W. Blackwell, Lond.; Mr. Brewer, Lond.; Banks, Lond.

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V.—Village Practitioner, Lond.

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An Address

ON THE

PROGRESS OF SURGERY AND THE TREATMENT OF SIMPLE FRACTURES.

Delivered before the Medical Society of Swansea on March 26th, 1897,

BY A. PEARCE GOULD, M.S. LOND., F.R.C.S. ENG.,

SURGEON TO THE MIDDLESEX HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—I realise that you have conferred upon me a great and wholly undeserved honour in asking me to address you to-day, and when I recall the names of my distinguished predecessors in this office I am appalled at the serious responsibility I have incurred in accepting your kind invitation. I will not abuse your patience by vain apologies and excuses, but rather at once throw myself upon your generosity, and hope that the kindness which prompted the invitation will be extended to me throughout the address.

A surgeon to-day need have no lack of material for an address, for we who have reached and passed what has been called "the old age of youth and the youth of old age" have witnessed the rise and progress of the greatest and most beneficent advance in the art of surgery that the world has ever known. We have lived in the full flood-tide of surgical progress, and have been witnesses of a widespread change in nearly the whole of surgical practice. But I fear it is true that the treatment of simple fractures is but little better or more successful to-day than it was a generation ago, and for that reason I have ventured to choose it as my topic for this address, conscious, also, that what I say will be judged by those who have far better opportunities than I of estimating its truth and worth. The great recent change in surgical practice has not consisted merely or even chiefly in the adoption of new methods of treatment for old; such changes have been many, but they are only the outward and visible signs of the inward change in the aim, the thought, and in the very spirit of surgeons. By some this has been called a revolution in surgery—a grand upheaval, a *bouleversement*. I prefer, in spite of my critics, still to call it an evolution—the working out of the great root inspiration of all surgical art. Revolutions are not big with progress, prosperity, security, permanence; they are destructive, reversible, and opposed to the very essence of scientific progress; they are cataclysmic, volcanic. Evolution, on the other hand, is the silent, peaceful working out of the great primeval design; its steps are all forwards on the road to fullest truth; its results are irreversible. What if this change has been wrought in a single lifetime—largely by one single life—instead of being slowly and laboriously brought about by centuries? May not one day be as a thousand years?

In an address to the Medical Society of London two years ago I dwelt upon what appeared to me to be the great features of this recent evolution in surgery, and I must not be tempted into going over that ground again, fascinating as it is to me. But I want to draw your attention to three points in it, and then to show you, if I can, their application to the treatment of simple fracture. My first point is that surgeons have come to have a far higher standard by which to judge of their work than they ever had before. *Our aim is higher*, and we are all conscious of a blessed discontent with results that our fathers were well satisfied with. In nearly all directions we see the influence of this idea. The surgeon is no longer chiefly busied with lopping off useless or dangerous members, stepping in only when Nature has obviously failed, content merely to save life or relieve acute suffering. He rightly regards himself as the co-worker with Nature, whose highest duty is to complement the *vis medicatrix naturæ*, and he is satisfied only when his patients leave his hands sound and strong. Our aim to-day is our patients' cure, not recovery only, the re-establishment of perfect physical well-being, and to a large extent we are able to attain this. My second point is that surgeons nowadays recognise a heavy personal responsibility for the results of their work in the cases submitted to them. Although the surgeon's lot is a happier one to-day than ever before, because of the nearly uniform afebrile course of wounds and the speedy and painless convalescence of his patients, it is yet a fact that at no previous time has he borne so heavy a load of personal responsibility. This has come, not only from the prodigious development of the surgical art and the consequent difficulty of keeping abreast of it, but chiefly because the surgeon knows that it very usually depends upon his management of the case whether it ends well or ill. This surgical responsibility is largely a new thing, and should be never absent from our minds. It is twofold. In the first place, the work that will for ever be associated with the great name of Lister—one of the very greatest in the annals of humanity—has compelled us to make sure that our interference shall not be the means of introducing into the tissues of the body any of those potent pathogenic organisms that were the bane of surgical practice. In the second place, while we have been learning so much of Nature's power, we have come to understand the limitations of the *vis medicatrix naturæ*, and we have therefore learned both what we cannot and need not do, and what it is urgently necessary that we should do to help our patients. We have come to see more clearly that surgical art is to be, not only the ally of nature, but her complement, meeting her limitations. For instance, if we no longer speak of our treatment healing a wound, and our ointments, lotions, and potions are fast sinking into deserved neglect, it is because we know that nature does all the healing, and to her alone do we give the credit. The duty of the surgeon is to protect the body from external and accidental malignant influences, by means at once effectual and innocuous. Everywhere this rule holds good; we have to learn what nature does, and what she cannot do, where her powers are thwarted and how supported, and then the surgeon has to step in and help, taking care that it is aid and not injury that he gives. The more clearly we see our duty thus the greater becomes our responsibility. For let us not think that this is giving the surgeon's work a subsidiary place; in reality, it exalts it, his function is more limited than we thought, but in this limited sphere it is indispensable, nature cannot do our part of the task, and if we stand aside when haply by our timely aid nature might accomplish her curative task we incur a very grave responsibility.

And this brings me to my third point, which is *the very different position that surgical operations have come to occupy*. A surgical operation used to be a dangerous weapon in the hands of the most expert and skilled practitioner, and even such an one did well to hold his hand unless the necessity were well established and the attendant risks reduced to the minimum. To-day a well-planned and carefully executed surgical operation is almost a harmless procedure, and therefore to withhold its use where its success is even possible is to fail in our duty.

The recent great development of the operative side of surgical practice is due, not only to its extension to every part and organ of the body, but also to two other influences. With the safety that now attends an operation it is employed very largely indeed to obtain quickly a result that would otherwise be brought about slowly, or to obtain a better result than we could get by non-operative methods. Operations of choice or of convenience now form a very large proportion of our work, while formerly they were few, looked upon by many with grave suspicion and certainly involved the surgeon in great responsibility. Able to render assistance unattended by the terrible evils that formerly everywhere dogged his steps, he looks upon his proper work as not merely to act where unaided nature wholly fails in the conflict with disease and injury, but to assist, hasten, and improve by his art where nature largely succeeds. Closely allied to this is another factor in the great extension of operative surgery. An operation was in former times only justified when it was shown to be necessary or useful as a therapeutic measure—a mode of treatment. To-day we have such confidence in the safety of our methods that we feel justified in even resorting to the knife to gain a more perfect knowledge of our cases and to enable us to arrive at an accurate diagnosis. Diagnostic or exploratory operations are very largely resorted to, and form quite an important part of surgical practice, and it may be worth our while to discuss for a moment their scope and value.

An exploratory operation, if we use that word in its fullest significance, is of course no novelty in surgery. To

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pass a probe along a wound or sinus is an exploratory operation, and to examine the bladder or uterus with a sound most certainly is. One of the glories of medicine is the fact that one after another of the great forces of nature, and one by one our sense organs, have been made our servants in the exploration of disease, and each addition to our physical methods of examination has added greatly to our diagnostic powers. Think for a moment what we owe to percussion, to auscultation, to the microscope, the ophthalmoscope and laryngoscope, to the thermometer and to the electric battery. But the exploratory operations I am referring to just now are cutting operations, the type of which is an exploratory laparotomy. I would submit that such operations are only to be approved (1) when the information they afford—an accurate diagnosis—cannot be arrived at by non-operative methods; and (2) when there is reason to believe that the exploratory operation may be converted into a therapeutic one. An exploration merely for the sake of gaining more accurate information about a case without hope of practical advantage for the patient is not justifiable, nor are such operations as can only be compared to what our legal friends would call "fishing inquiries." I am afraid we cannot in fairness deny that there has been, and is, some tendency to perform diagnostic operations without the two essential justifications I have mentioned. The ease, the painlessness, and the safety of operations, the great familiarity of surgeons with the use of the knife in all parts of the body, and the charm of a clear ocular or tactile demonstration, cannot but influence us powerfully, and if unwatched or unchecked may readily lead us astray. When it has been suggested that it is as vain to attempt to make an exact diagnosis of intra-abdominal conditions without laparotomy as it is to guess what wood a table is made of until the covering cloth has been removed, am I wrong in uttering a caution, or even in protesting that diagnostic operations must only be undertaken under the sanction of distinct and binding rules? I am anxious to put in a plea with you for the most careful, exact, and painstaking pre-operation examination of our patients. I am conscious myself, and I think I have seen it in others, of the tendency to shirk this when the case has once been shown to be one that ought to be submitted to operation. It is said, "Why waste time examining and drawing inferences about a tumour the exact conditions of which will be demonstrated at to-morrow's operation?" My answer is that time so spent is well spent in the interests of both surgeon and patient. The educational value to the surgeon himself of every effort to arrive by mental processes at an exact diagnosis is very great, and by it a mere handiworker is raised to the honourable estate of a surgeon. Again, I have been struck with this, and so must you, I am sure—that in many cases what has been demonstrated by an exploratory operation could have been definitely inferred with at least very strong probability if a sufficiently careful examination of the patient had been made beforehand and if the surgeon had had confidence in applying his knowledge. We may be sure of this—that surgery will not advance as it might unless all its practitioners train their faculties of observation and of reasoning to the highest possible pitch, and to this end make full use of the educational advantages their various cases supply. I may add, too, that some exploratory operations are very grim failures even from the surgeon's point of view; instead of clear demonstration they yield uncertainty and doubt. All riddles are not to be solved by opening the abdomen! From the patient's point of view two things may be said on this matter. 1. That an operation in itself is and always must be an evil thing, to be avoided unless its necessity or advantage is strongly probable. We none of us, I think, ever perform a negative exploration without distinct regret as well as disappointment. 2. Great elements of success in an operation are for the surgeon to recognise clearly beforehand the conditions he has to deal with, to plan out the precise steps to be taken, and to prepare to meet the particular difficulties and dangers of the case in question. The highest level of success is not attained when the operator starts with uncertain intentions and leaves his course of procedure to be determined by the exigencies of the moment. I know that this is sometimes unavoidable. I am only urging that it is a condition unfavourable to success and that we should not accept it unless forced to do so. But having said this as a plea for the most careful and painstaking examination of our patients before operation and for the cultivation to the highest possible pitch of the art of diagnosis, I must not be held to be decrying the proper use of diagnostic operations. Far from that. No one has more reason than I to know the limitations of his power of reaching without operation a distinct and accurate diagnosis in many conditions amenable to operative treatment, and the aid an open wound then affords us is very often invaluable. The regret that follows a negative exploration is, after all, much less keen than the revelation post mortem of a curable condition that a simple exploration would have revealed. In fact, it is my intention to-day to point out a direction in which I think operation may with advantage be more widely practised. And further, I think we ought to make every operation in a sense a diagnostic as well as a therapeutic measure. The tendency to error is so great that, whenever possible, the occasion of an operation should be utilised to confirm or correct our previous diagnosis, lest, proceeding upon an incorrect view, we apply an ill-adjusted remedy. Forgive me for offering to you these simple, trite reflections. The obvious is not always the most heeded! This is moreover a digression, for the point I want to make is this—that as a surgical operation has come to be very largely a harmless proceeding it is justifiably used more widely and to meet less urgent indications than was formerly the case.

I must now pass from these general observations to their application to the special subject that I wish to speak on this evening—*The Treatment of Fractures*. This is one of the most ancient branches of surgery. It is of great practical importance to the community, and as difficult as it is important, and so wide is it that it personally concerns nearly every member of the profession. Any one of these reasons would be a sufficient warrant for my choosing it as my theme to-night. But the real reason of my choice is this: the great surgical progress, in which we all rejoice, has taken place in connexion with open wounds, and the interest of surgeons has largely, almost exclusively, centred in accidental and operation wounds, and so it has come about that while there has been the greatest activity in extending the area of surgical interference by operation and in perfecting our treatment of wounds there has been no corresponding zeal shown in attempts to deal more satisfactorily with simple fractures, although they are so frequent and so grave in their results. The great stream of surgery has flowed on, ever widening and increasing in force and beneficence. But fractures have got into a quiet, almost stagnant backwater. I want to-night to drag them out of this, and to show that from our present vantage ground we can and ought to improve the treatment of fractures. It will be well for us to try to appreciate the causes that have been at work to hinder the treatment of simple fractures sharing in the great surgical revival of the last few years. Among these causes I think the first place must be given to the idea underlying the use of that word "simple." The old surgeons were right when they separated all fractures into two groups—those in which there was no wound leading from the surface of the body to the broken bone, and those in which there was such a wound. They were right, too, in expressing this difference by using such very strong terms as "simple" and "compound." We, without their terrible experience of the different results in the two classes of cases, but who have the key to the problem, and understand at any rate much of the cause of this difference, would find it difficult to fix upon words strong enough to express this difference. With the "simple" fracture were connected in the surgical mind the great ideas of safety to life, uninterrupted welding together of the broken fragments, and more or less perfect recovery. With the "compound" fracture were connected the ideas of hæmorrhage (primary and secondary), suppuration, sloughing, necrosis, blood-poisoning in its many forms, erysipelas, gangrene, greatly delayed union and often non-union, amputation, and, too often, death. Thus the accidental entirely overshadowed the fundamental, and, led away by this, the simple fracture came to be regarded as a simple injury in many senses of the word, requiring little skill in treatment, attended with little risk of functional disability, and almost a *noli me tangere*, lest the surgical "touch" should convert the harmless "simple" into the dreaded "compound" injury. As evidence of this subtle influence of a name and an idea, see how simple fractures are treated in our hospitals. I think I am correct in saying that they are almost universally handed over entirely to the house-surgeons and the dressers, and the surgeons themselves do not regard them as cases requiring their personal attention and care. The public, too, have the belief that anyone can set and treat a simple fracture, and

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to fail in this is at once a demonstration of incapacity or even of malpraxis. I would submit that our error has lain in the too low ideal of excellence by which we have chosen to judge of our results and in failure to appreciate the part we have to play in the treatment of a fracture. Our standard of success or failure has too often been the firmness of the union of the fragments of bone, with, in some cases, a quite subsidiary regard for obvious deformity of the part. But the real standard by which we ought to judge our results is the perfection of function of the part. That point is very simple, and you will no doubt admit it at once, but think of the number of patients who recover from a fracture with more or less permanent impairment of the use or function of the part! How often do patients forget even on which side of a limb or of their body some extensive wound of the soft tissues was—so entirely oblivious of it are they long years afterwards! How rarely do we find anyone equally oblivious of the seat of an old fracture! We must not rest content until we obtain as perfect results in the one case as in the other. Now, this improvement will not come through any new power in nature to deal with these cases, but simply waits for us to do our part in the matter better and with more deftness and skill. Mr. Arbuthnot Lane has attempted to express the loss of function after a broken leg in terms of pounds, shillings, and pence, and he has at any rate shown that a working man's earning power—his market value—is often seriously diminished by an injury that has been repaired and that surgically seemed of secondary importance. We see, then, the application of my first point. We have to apply to the treatment of fractures the higher standard of excellence that we apply so largely elsewhere. We must aim, not at union merely, but at *perfect restoration of function*. Upon what does the perfect restoration of the function of a broken bone depend? First and foremost upon the perfect structural repair of the bone. The relation between structure and function is intimate and ultimate; we are unable to go behind it and explain it, but have to accept it. A very apt illustration of this is seen in the structure of voluntary and involuntary muscle. Chemically all but identical and developed from the same embryonic layer of cells, we might have expected that the one difference between them would be in their nervous connexions, but instead of that we find a striking difference in the intimate structure of their fibres; and the structure of heart-muscle standing intermediate between voluntary and other involuntary muscle shows us how intimate is the relationship between structure and function. We are apt to forget, I think, that this close relationship holds true of bone also. Each bone is exquisitely adapted for its special function, not only by its coarser features—its length and general contour, but also by the disposition of its compact and cancellous tissue, and even by the exact arrangement of its lamellæ; and we cannot interfere with its structure without a corresponding loss of function, and so, if we are to treat fractures well, we cannot be too deeply impressed with the absolute necessity of securing perfect structural restoration of the bone, and not merely firm union. If we ask, How is this perfect repair to be obtained? the answer is, By the bony union of fragments that have been exactly replaced in position. The part that nature takes in the repair of a fracture is the welding together of the fragments into a more or less compact and firm mass of bone, and wonderfully and beautifully is her part accomplished. Our art is here wholly powerless; we cannot replace nature; we may by meddlesome surgery impede her, but at our best we can do little, if indeed anything, actively to aid her. What nature cannot do is to restore to their correct position misplaced fragments. Art can do this—it is her chief part; and when art performs her part as perfectly as nature almost invariably does hers the result is entirely good. This, then, is the surgeon's share of the task.

I have ventured to bring from the Middlesex Hospital Museum a few specimens of old fractures, such as are to be found in all pathological collections. They are generally used as examples of the powers of nature in healing a broken bone; they show us overlapping ends of bone firmly welded together, comminuted fractures with wide separation of the fragments all united again into a solid, resisting bone; they show us, too, the opened medullary cavity securely closed over, and sharp, projecting angles rounded off. For all this they are worthy of admiration. But I have brought them down to show not as feats of nature, but as failures of the surgeon. Each of these specimens tells of a tragedy, of an useless limb, a marred and impoverished life, and all not because nature failed in her part, but because the surgeon failed in his share of their combined work. With the exception of some few cases of ununited fracture, probably also of some cases of fracture into joints and of cases of separation of epiphyses, imperfect functional results of simple fractures are due to failure on the part of the surgeon. I do not say culpable, blameworthy failure, but I want to make it clear that in no case submitted to a surgeon is his responsibility for the ultimate result greater and more direct than in the case of a broken bone. In no case are his duties more important or more necessary if perfect success is to be attained. If this is so I think I have made good my point that a surgeon ought to approach the treatment of a fracture with the same sense of great personal responsibility that he does the treatment of a wound in the soft parts. If the standard of success to strive after has been correctly stated, and if the surgeon's share in attaining it has been duly estimated, you will agree with me that fractures, even if surnamed "simple" are not trivial cases, and in many instances their treatment will tax the ability of the most gifted surgeon, and in some cases baffle all his efforts. We may, however, be sure of this—that nothing has so tended to paralyse us as a conviction—too widespread—that the difficulties presented by fractures are often insuperable, and that it is no reflection on our art to be vanquished by them. Nothing will help us to overcome these difficulties more uniformly and well than a clear appreciation of their nature, of their importance, of the great limitations of the power of nature to cope with them, and of our correspondingly great responsibility. Realising our duty and with faith in ourselves what means can we adopt? what snares avoid? 1. In the first place, we should always do our utmost to make an exact diagnosis of the condition of the bone; not merely of the fact and position of the fracture, but of the number and position of the fragments and the plane of the fracture. In arriving at this we have two great helps. The chief of them is anæsthesia. A recent fracture is a very painful injury, and the manipulation necessary for its exact diagnosis may cause great suffering. I am convinced that it is as much the surgeon's duty to give an anæsthetic to assist him in arriving at his full and exact diagnosis in such a case as in any of the more grave surgical conditions, and of course the anæsthesia which permits of the diagnosis will also greatly facilitate the proper treatment. I believe this teaching would be considered rank heresy by many, but I am convinced of its soundness. The second great aid will be afforded by the x rays and the fluorescent screen. At present this means is the luxury of the few, but the time will come, I hope, when we shall all be able to avail ourselves of its aid in the cottage of the miner as well as in the fully equipped hospital. 2. Having arrived at a full and correct diagnosis, the next point to attend to is to reduce the fragments at once, at the earliest possible moment, remembering that lapse of time always increases the difficulties in doing this, never lessens them, and soon makes them insuperable. 3. This reduction of the fragments must be complete or perfect at once; we must not rest in any halfway house, content with improvement to-day in the hope of still further correction to-morrow. Such is, I believe, an entirely bad practice and a most fruitful source of error and ultimate failure. We are all conscious of the temptation to be satisfied with less than ideal success, but here it is courting failure. I appeal to your experience, necessarily much larger than mine, whether I am not right in insisting upon this point, and whether you have not found that only when reduction is complete is the patient comfortable, and are the fragments easily retained in position. 4. This latter point is specially worth remembering. We often hear of fractures being "set," and of the fragments slipping away again. This undoubtedly occurs. But fortunately the surfaces of a fracture are nearly always uneven, or even considerably jagged; and it follows from this that when these surfaces are *really accurately fitted together they hold together;* and it is worth bearing in mind that recurrence of displacement generally means imperfect reduction, while conversely perfect replacement is in nearly all cases the greatest aid to the subsequent maintenance of the bone in the correct position during healing. The transverse fracture of the patella is of course a striking exception to this rule. 5. The means best adapted to secure this perfect adjustment of the fragments vary with different cases. The causes of the displacement are either the

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fracturing force, the action of gravity, or the pull of muscles. Success in correcting it is best attained by a careful study of each case. We should always try to overcome the action of the muscles by relaxing them, and not by opposing their pull by extension and counter-extension. For this purpose surgical anæsthesia is of the utmost value, and I am of opinion that it is used far too little both for diagnosis and treatment of fractures, and that we ought to use anæsthesia for these purposes in all but the very simplest cases. I was taught, as many of you doubtless were, that it was exceedingly bad practice under any circumstances to give an anæsthetic for the setting of a simple fracture, lest in some unconscious movement the patient should thrust the broken bone through the soft parts. I first unlearned that lesson years ago when a distinguished American surgeon came to me with a broken wrist and insisted on treatment that should certainly restore to him an agile right hand, but by painless surgery. 6. Another point I think of primary importance is to replace the fragments before applying the splints or bandages. The proper use of a splint or other retentive apparatus is to assist in keeping the broken bone immobile while nature is completing her task of uniting the fragments. For this purpose they are excellent; but whenever we trust to them to correct the displacement we are doomed to disappointment. Let me mention one or two familiar examples. Look at the very numerous apparatus for the treatment of fractures of the collar-bone, all of which are supposed to aid in forcing the fragments of the bone into their proper position. What miserable failures they all are! Whenever we are very anxious to obtain repair of this fracture without deformity we discard the whole of them and place our patient flat on his back in bed. Again, what a failure it is attempting to correct the deformity of Colles's fracture by a pistol splint, Gordon's splint, or Carr's splint? But if we first of all correct the displacement and then maintain the fragments in their proper position by resting the limb on either of these splints we at once obtain excellent results. Or, who has seen an oblique fracture of the shaft of the femur recover without any shortening by the use of a long splint and extension? The fact is that the most extraordinary ingenuity has been expended in efforts to make splints and bandages do what they are not intended to do and are not capable of doing. Failure lies that road and we must avoid it. Full success is only attained when the surgeon first reduces the displacement and then secures the part in his splint. The cases in which we fail and which give us the most anxiety are just those where we are unable to do this. 7. Into the details of splints and bandages I cannot enter; nothing is better than a well-fitting Croft's splint, and the more nearly any other splint approaches to the effect this gives the better it succeeds. Nor will I take up your time with any words on the value of passive motion, frictions, and careful use of the limb as soon as the union is strong enough to withstand the strain thus thrown upon the particular bone. For I want, in conclusion, to discuss what part operative interference may play in the treatment of fractures. Should we, or should we not, extend to fractures the same development of surgery that we have step by step extended to other injuries and diseases? Thus stated the question contains its own answer. Let us, first of all, be quite clear as to what operation can do for simple fractures: (1) it can exactly replace fragments in their proper position; and (2) it can mechanically fix them until the natural process of ossification is complete. In old ununited fractures it in addition opens up again the medulla from which the plastic callus is formed. Now, at the outset we ought to bear in mind one or two very grave considerations. 1. It goes without saying that such an operation must only be undertaken under conditions ensuring an aseptic wound. If a simple fracture is ever transformed by the surgeon into a compound fracture it must be done only when all the special evils attaching to compound fractures can be absolutely excluded. 2. The exact fitting together of the fragments may be exceedingly difficult. All fractures are not like transverse fractures of the patella; many, indeed, are worse to piece together than any Chinese puzzle. 3. And even then the difficulties are not at an end, for our surgical means of holding fragments together are imperfect and in some cases very difficult to apply. 4. In fact, except in such cases as the patella or in uncomplicated oblique fractures of the tibia these operations are of extreme physical difficulty and, like matrimony, are "not to be enterprised nor taken in hand unadvisedly, lightly, or wantonly."

My own conviction is that with due care and perseverance, particularly with the aid of an anæsthetic, the cases in which the surgeon is unable to do his duty by exact replacement and fixation of the fragments are very few. But in those few cases I think it is incumbent upon the surgeon to put to himself the question whether the difficulties he meets with can with reasonable certainty be overcome by an operation. If they can and he has all the requisite means at command it is his duty then to operate. He must be prepared to meet with considerable difficulties, and he must act with a clear and full recognition of his responsibilities. I would not for one moment advocate a general or a frequent employment of operations for simple fractures. Such a practice I hold to be needless, dangerous, and ill-advised. But, on the other hand, I am prepared to contend that when other means fail to give us that result for which we should always strive and which our patients ought to demand of us, a serious responsibility is laid upon us if we withhold from them the aid an operation may afford. I admit that here I am not on very firm ground, although I anticipate that in the future this position will in the main be generally held; but I am on quite solid ground when I plead for the general adoption of a higher standard of excellence in the repair of simple fractures and to this end urge the free use of anæsthesia and the most patient and careful efforts in their setting.

SEVEN CONSECUTIVE CASES OF INTUSSUSCEPTION IN INFANTS TREATED BY ABDOMINAL SECTION, WITH SIX RECOVERIES.

BY BERNARD PITTS, M.C. CANTAB., F.R.C.S. ENG.,

SURGEON TO ST. THOMAS'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET; LECTURER ON SURGERY TO THE MEDICAL SCHOOL, ST. THOMAS'S HOSPITAL.

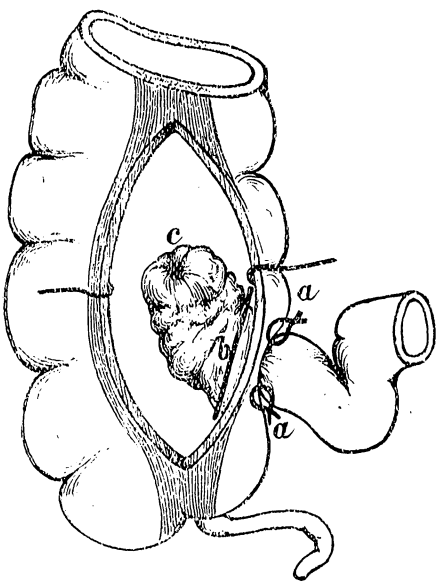
THE following cases have been under my care either at the Hospital for Sick Children, Great Ormond-street, or at St. Thomas's Hospital between 1893 and the present time. No one with any experience of the treatment of intussusception would expect such a favourable record to be maintained. Some cases are almost hopeless from the first moment they are seen in hospital. A run of successful cases must depend either upon immediate treatment or the fortunate absence of severe damage to the bowel. Until the last few years it has been the practice to exhaust all other methods of treatment before abdominal section was resorted to, and it is not surprising that a successful case of surgical interference was most exceptional. Physicians, under whose care these cases are generally admitted, now employ inflation and manipulation only when the patient is in good condition and has come very early under observation, and are satisfied that abdominal exploration should be undertaken without delay if complete reduction is not at once brought about. In all the acute cases now recorded the physician in charge requested the surgeon's immediate attendance, and to this saving of valuable time the successful results must certainly be attributed. Children under one year of age are commonly supposed to be unfavourable subjects for abdominal exploration. With proper precautions, however, abdominal section may be performed without great risk from shock, but the temperature of the body must be maintained by wrapping the extremities in cotton wool, operating on a hot-water cushion, and taking care that the manipulations are carried out quickly and with great gentleness. The seven cases may be divided into two chronic and five acute. The average age of the acute cases was nine and one-fifth months. The chronic cases are of special interest, since it was necessary to incise the colon and remove irreducible bowel in each instance.

CASE 1. *Chronic intussusception (one and a half years' history); removal of intussusception through the colon.*—The patient, a male child, aged two years and three months, was admitted to the Hospital for Sick Children, Great Ormond-street, under the care of Dr. Barlow, on March 11th, 1893. The mother stated that the child was fed on the breast till the age of thirteen months. When nine months old he had a sudden attack of abdominal pain, with sickness and passage of blood with his motions. A similar attack occurred at the age

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of twelve months, and a lump was then noticed on the right side of the abdomen. Since that time he had had four or five attacks of a similar character. At first the child appeared quite well between the attacks, but of late he had suffered from constipation and occasionally from diarrhœa. On the Monday before admission he was seized with pain in the abdomen, and on the Tuesday morning passed blood with his motion. The abdominal pains continued, and after two days sickness commenced. As the attack did not seem to subside the mother determined to bring the child to the hospital. On examination the patient was found to be a fairly well-nourished child with a small moveable lump in the right hypochondrium. The abdomen was not distended, the walls were flaccid, but there was some tenderness over the position of the lump. The child remained under observation and careful feeding from March 11th to the 27th, and during this fortnight had frequent attacks of pain, accompanied by sickness. Several well-formed motions were passed, but they were always streaked with blood. The abdominal lump varied considerably in size and position and could occasionally be traced for a short distance along the transverse colon. On March 20th an examination was made under chloroform and the lump could then be felt to the left of the middle line, but on manipulation seemed to lessen and to take up a position corresponding to the ascending colon. On the 27th it was, after consultation, determined to explore the abdomen as the child was losing power; the attacks of pain were more frequent; some distension of the abdomen

FIG. 1.



Cæcum laid open from the front to show ileo-colic invagination. *a*, Sutures introduced round neck of intussusception. *b*, Line along which intussusception was removed. *c*, Apex of intussusception.

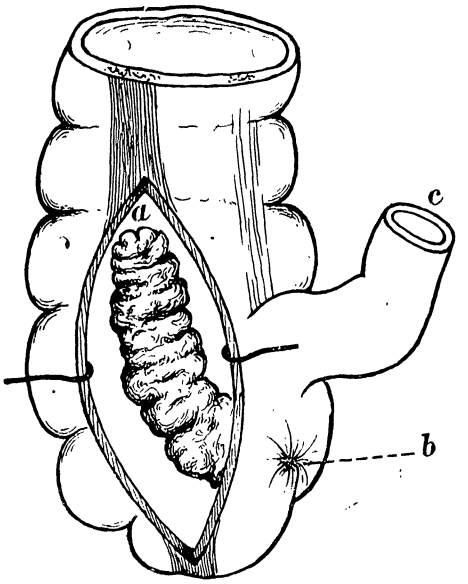
was now also present, and the difficulty in getting the bowels open by enemas was increasing. During the week preceding operation the temperature varied between 97° and 100° F. and the weight had fallen from 1 st. 12 lb. to 1 st. 9 lb. On the afternoon of the 27th an incision 2½ in. in length was made in the right semilunar line with its centre slightly below the level of the umbilicus. The tumour was readily brought out of the wound, and found to be an intussusception of about two inches of the ileum into the cæcum. The appendix was not engaged, and the intussusception was of the ileo-colic variety. A vertical incision two inches long was now made in the commencement of the ascending colon; the intussusception was found to be thickened and solid, resembling very much an os uteri in appearance. The mucous membrane covering it was much ulcerated, and the lumen was reduced to the size of a goose quill. Reduction was quite out of the question, and it was necessary to remove it. The ileum above the affected part was carefully stitched (Lembert's sutures) to the large bowel, and one and a half inches of intussusception were then cut away with scissors. The mucous coats were secured within the colon by interrupted silk sutures, and the lumen examined and found with a little stretching to admit the forefinger. The child stood the operation well considering its severity; his pulse, which was not good at the commencement, became feeble when chloroform had been administered for three-quarters of an hour, and ether was substituted as the anæsthetic. Fig. 1 shows the appearance when the colon was incised and the margins of the opening retracted. The temperature in the evening was 102 4°, but fell to normal on the next morning. Convalescence was steady. After the operation no more blood was passed with the motions, and the attacks of pain entirely ceased. During the following year, on several occasions the child had to be treated in hospital for constipation, which was overcome by abdominal massage and administration of salad oil. He has developed into a fine, healthy boy, and was last seen on Feb. 7th, 1897. The cicatrix was perfectly sound, the abdomen normal, and he was attending a board school. No stricture can therefore have developed at the line of resection. In this case it is probable that the intussusception which occurred at the age of nine months never completely went back, and during the next one and a half years there was a constant tendency to recurrent attacks and the gradual closure of the lumen of the intussusceptum. The hæmorrhage was explained by the ulcerated condition of the mucous membrane about the orifice of the lumen. Such a complete stenosis was not anticipated before the exploration owing to the character of the motions, which were generally well-formed. The formation must have occurred after passing the strictured bowel. The case was, in fact, thought to be one of recurring intussusception due to the probable presence of a polypus. It was only after a fortnight's observation in hospital that operation was decided upon, for it was felt that interference must be attended with considerable risk. The advantage of dealing with such a condition by resection through the colon as originally suggested by Mr. Barker is obvious, and lessened the risk of resection very greatly.

CASE 2. *Chronic ileocæcal intussusception due to a complete inversion of the appendix; removal of the appendix through the colon.*—The patient, a pale, cachetic female child, aged two and a half years, was admitted to St. Thomas's Hospital, under the care of Dr. Acland, on Jan. 13th, 1897. Three and a half months before she had been playing about on her bed, turning head-over-heels. She seemed quite well, and directly afterwards had her dinner, which she vomited, and then complained of pain in her stomach. Next day she repeatedly had spasms of pain of short duration. These attacks continued for many days. The bowels were relaxed and considerable quantities of blood and slime passed. The mother did not notice any swelling of the abdomen, but it was hard and rigid during the attacks of pain. Food was taken well without sickness. She was treated by several medical men, who diagnosed her case as one of gastric catarrh. On Dec. 29th, 1896, the mother found that her bowel had come down, and called in Dr. Ford, who found an intussusception protruding four inches beyond the anus. He could feel a tumour in the abdomen by palpation. After reducing the rectal protrusion the child was inverted and kneading of the abdomen commenced. Suddenly a gurgling sensation was felt, and the abdominal tumour entirely disappeared. Dr. Ford sent the child to St. Thomas's Hospital, and she was kept under observation till Jan. 2nd. During these few days nothing abnormal was discovered; the motions were normal and free from blood or mucus. The very day she left the hospital the pains returned, and were specially severe when walking about. On Jan. 4th the bowels were very loose, and blood and slime were again noticed with the motions. The symptoms continued till Jan. 13th, when the mother noticed that her condition was much worse. On re-admission to the hospital on the evening of the 13th Dr. Toller, the resident assistant physician, examined her under an anæsthetic, and felt a sausage-shaped tumour in the position of the transverse colon—the tumour was freely moveable—and seemed to alter in size and position. The abdomen was somewhat distended, but the child's general condition was good. At 11 P.M. she was again placed under chloroform and an incision made in the middle line just below the umbilicus. The small intestines were found to be full of fluid contents, and in the mesentery of the small bowel numerous caseous glands were to be seen about the size of cobnuts, and a few small nodules like tubercles on the mesenteric border of the bowel. The omentum was adherent to the mass of enlarged glands and the upper part of the abdomen shut off. These conditions at first suggested that

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the tuberculous condition present might account for the symptoms, but as the cæcum could not be found it was thought right to explore further, and after separating the omental adhesions with some difficulty the transverse colon was reached and drawn into the wound. The presence of an intussusception in it was then discovered, and with gentle manipulation this was easily reduced. It was noticed that after apparent complete reduction no appendix was visible. At the position where it should normally be attached was seen a dimple; here also was the base of its mesenteric attachment. On examination of the cæcum an elongated swelling could be felt within it resembling a thickened appendix. A vertical incision two inches long was now made, having its centre at the junction of the cæcum and ascending colon, and a chronically thickened and completely inverted appendix was found. All attempts at reduction failed, so the appendix was cut away and its base sutured, and then further secured by stitching the peritoneal coat of the cæcum over it. The incision in the large bowel was sutured and the abdominal wound closed. The child was kept under the influence of small doses of tincture of opium. Recovery was uninterrupted, the abdominal wound healing by first intention. The last note is on February 10th. The child was quite well and in good spirits, but still kept in bed on account of the tuberculous condition discovered at the

FIG. 2.



Cæcum laid open on its inner side to show invagination of the vermiform appendix. *a*, Apex of invaginated appendix. *b*, Depression in cæcum indicating attachment of appendix. *c*, Lower end of ileum.

operation. The temperature had been normal since operation. The diagram shows the appearance after reduction of the intussusception and retraction of the sides of the incision in the large bowel.

Remarks.—It is highly probable that some condition of irritation within the appendix caused it to turn inside out as the first commencement of trouble. The inverted appendix then acted as a polypus within the bowel, and produced the ileo-cæcal intussusception for which she was treated by Dr. Ford. A chronic recurrent form of intussusception followed; but fortunately no adhesion formed, and the reduction at the time of operation was easily effected. The removal of the appendix was necessary for a radical cure. It is to be hoped that as a result of the thorough examination of the abdomen, and the prolonged rest and after-treatment, that the commencing tuberculous lesion will be arrested. The group of enlarged glands were in the mesentery of the small bowel, far away from the seat of intussusception, and evidently quite unconnected with it.

The following five cases of abdominal section for acute intussusception are given very briefly.

CASE 3.—The patient, a male child, aged nine months, was admitted to the Hospital for Sick Children, Great Ormond-street, on March 11th, 1895, under the care of Dr. Penrose. He was found to be a well-nourished child with a history of being languid and out of sorts for four days. During the twenty-four hours preceding admission the child had suffered from abdominal pain; he had vomited after food and had passed three motions containing blood. On examination the abdomen was not distended, but an indefinite tumour was to be felt on the left side. Dr. Penrose saw the child at 1 P.M. on the morning of admission, and under an anæsthetic the colon was distended with warm water and the tumour seemed to disappear. As the condition of the child was not quite satisfactory, an examination under an anæsthetic was again made at 3 P.M. and a swelling detected in the splenic region. A median incision was made and an intussusception discovered and reduced after some few minutes of traction and compression. It was of the ileo-cæcal variety, a portion of the ileum with the cæcum and appendix being engaged in the colon. The bowel was very œdematous, and the chief obstacle to final reduction was the invaginated mesentery, which contained some enlarged glands. The thickened ileum after reduction was greatly indented by the pressure of these glands and showed no sign of resilience. Recovery was uninterrupted. The child was discharged well on April 24th, 1895, and was kept under medical observation for the next six months.

CASE 4.—The patient, a male child, aged one year and eight months, was admitted to the Hospital for Sick Children, Great Ormond-street, under the care of Dr. Barlow on Dec. 17th, 1895. The patient had been quite well until Nov. 30th, when, while being nursed, he stretched himself back over the arm of his nurse and tried to get free. Shortly afterwards he vomited, and again the next morning, but he did not seem to be in pain. On Dec. 1st attacks of abdominal pain commenced and blood first appeared with the motions. Sickness and attacks of pain continued up to the time of admission. On examination no distension of the abdomen could be found, but just above the umbilicus, running transversely in the direction of the transverse colon, a sausage-shaped tumour was to be felt—at times the swelling became harder to touch—and easily visible. His general condition was good, considering the many days' history of pain and sickness. In the evening, after consultation with Dr. Barlow, an incision was made in the right semilunar line. An ileo-cæcal intussusception was found and somewhat easily reduced, the chief obstacle again being the presence of enlarged mesenteric glands. Recovery after operation was perfectly satisfactory; but on Dec. 31st, when about to leave the hospital, he developed varicella, and was detained in hospital till Feb. 1st. He was re-admitted with a severe attack of diphtheria on April 10th, and discharged again on June 8th. He had remained perfectly free from any intestinal trouble, but there was a little bulging at the lower part of the operation cicatrix. Considering that definite symptoms had been present for a fortnight this case might almost be classed under the head of chronic intussusception. Great difficulty in the reduction was expected, but reduction was, in fact, easier than in any of the other cases.

CASE 5.—A male child, aged ten months, was admitted to St. Thomas's Hospital under my care on March 2nd, 1896. Three hours before admission, after vomiting a large quantity of undigested milk, the child passed blood and mucus from the bowel and was in evident distress. On admission the child was in a condition of shock. A typical tumour could be made out through the abdominal wall, and the top of the intussusception could just be felt within the rectum. Five hours after the first onset of symptoms chloroform was administered and inflation of air tried. By this means, combined with manipulation, the tumour was reduced to the middle of the transverse colon, but could be persuaded no further, so abdominal section was at once performed through the mid-line below the umbilicus. The tumour was delivered through the wound and finally reduced with great difficulty, taxis having to be employed on the gut for quite a quarter of an hour. The ileo-cæcal valve was especially œdematous. The bowels were opened regularly every day after operation, the first motion passed containing some dark blood. Recovery was completely satisfactory and the child was discharged cured on March 30th. Air inflation in this case was most fully and carefully tried and was expected to succeed, since the symptoms had only existed five hours. The reduction was the most difficult of the acute cases, and there can be little doubt that if the child had not been brought at once to hospital it would have speedily been impossible. This case

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was reported in the *St. Thomas's Hospital Gazette* of March, 1896, by Mr. Abbott, together with two other successful cases by Mr. Clutton and Mr. Makins. Some of Mr. Abbott's remarks have been used in the concluding suggestions.

CASE 6.—A male child, aged ten weeks, was admitted to St. Thomas's Hospital, under the care of Dr. Acland, on Nov. 24th, 1896. The child had not passed anything by the bowel for six days—viz., since Thursday, Nov. 19th. He had been seriously ill all that time, refusing food and vomiting for two days. On examination the abdomen was found to be uniformly distended; no tumour could be felt. The finger after introduction into the rectum was covered with mucus. The pulse was very rapid, and the general condition extremely bad. After consultation with Dr. Acland it was determined to explore, and a median incision was made below the umbilicus. The small intestines were found to be greatly distended, and on the most gentle manipulation the peritoneal coat split in several places. A small incision was made into the distended small bowel, and a considerable quantity of fluid fæces were evacuated. This incision was then sutured, and on further examination an intussusception was found at the splenic flexure. The ensheathing bowel was very soft and gave way in the transverse colon. The intussusception was then seen to be in a state of gangrene. The child was in such a collapsed state that a prolonged operation was impossible, so the gangrenous intussusception was cut away with scissors through the opening in the colon, and then the aperture in the colon brought to the surface and an artificial anus established. Death took place a few hours later.

CASE 7.—A male child, aged five months, was admitted to the Hospital for Sick Children, Great Ormond-street, under the care of Dr. Barlow, on the evening of Feb. 3rd, 1897. The child was quite well on Feb. 2nd, but about 10 A.M. on the 3rd he suddenly became pale and bathed in cold sweat, and at 12 A.M. passed blood per anum, and continued to pass blood every hour until his admission. The patient was a well-nourished child; his abdomen was soft. On palpation an elongated mass in the line of the sigmoid flexure was found. Per rectum, within easy reach of the finger, a firm, rounded swelling with an elliptical orifice in the centre could be felt. As the child strained the tumour descended almost to the anus and bright blood was passed. An anæsthetic was given at 2 A.M. on Feb. 4th, fourteen hours after the first symptoms, and an attempt made to reduce the intussusception by water pressure. The tumour receded from the rectum, but no effect was produced either by inflation or manipulation on the abdominal swelling. A small median incision was then made below the umbilicus, the descending colon was brought out of the wound, and by compression and squeezing behind the swelling the intussusception was made to travel slowly upwards as far as the cæcum. It was found to be of the ileo-cæcal variety, the mesenteric glands at the junction of the small and large bowel were considerably enlarged and caused difficulty in the final reduction. The disengaged bowel was soft and inflamed. During the next twenty-four hours two motions were passed, the first containing blood. Small doses of tincture of opium were given. The child was given the breast on the next day, but unfortunately the mother's milk supply ceased, and humanised milk was substituted. Recovery was entirely satisfactory.

Remarks on the acute cases.—It will be noticed that distension of the large bowel by air or water was tried on all the patients except Cases 4 and 6. In Case 4 symptoms had been present for over fourteen days, and in Case 6 the abdomen was greatly distended and the general condition of the child contra-indicated any attempt at inflation. Symptoms had also existed for a week. Notwithstanding the very satisfactory results obtained by laparotomy in these acute cases, and the failure to completely replace the intussusception by inflation and external manipulation, it would be wrong to argue against the trial of such measures in suitable cases. The fact that many cases of acute intussusception have been cured without operation, and the supposed great danger attending abdominal exploration in very young infants, has led in the past to a too prolonged and sometimes a repeated trial of inflation. It is not possible or right from a small sequence of cases to lay down any rules applicable to all conditions, but the following statements result from my experience derived from these cases now put on record, and, unfortunately, from many unsuccessful cases of operation previously to the year 1893.

1. In cases of recent acute intussusception distension of the bowel by air or water combined with gentle external manipulation may be tried under an anæsthetic. The surgeon should, however, be *present* and prepared to at once open the abdomen if a satisfactory result is not quickly obtained. In many cases the effect of such inflation is to reduce the main mass of the tumour, but to leave an irreducible portion in the right iliac and lumbar regions. This amount of success aids the subsequent operation and allows the tumour to be easily delivered through a smaller incision and with less manipulation. Supposing that inflation has apparently been successful the child should be carefully watched, and with evidence of continued trouble abdominal section should be resorted to and no further inflation tried. (Ex. Case 3.)

2. An exploratory operation should be undertaken without preliminary inflation, when from the severity of the symptoms or the chronicity of the case there is reason to believe that such inflation would be dangerous or unlikely to succeed. It must always be remembered that the time taken up by inflation adds considerably to the shock.

3. The median incision is most suitable in the majority of cases, but when the tumour is in the cæcal region a limited incision in the right semilunar line may be found most convenient. For the reduction of the final portion of an intussusception the tumour should be brought outside the wound so that the operator may clearly see the condition of the bowel and make sure that the reduction is complete. Thickening about the ileo-cæcal valve may be easily mistaken for an incomplete reduction. When in doubt an incision may safely be made into the colon, and the parts examined from within the bowel. An incomplete reduction will certainly lead to further trouble. In some of the supposed cases of spontaneous cure, or cure by inflation or manipulation, it is highly probable that complete reduction is not effected, and the chances of recurring symptoms are therefore greater than after careful operation.

4. In none of the cases operated on by me did it seem desirable after reduction to attempt any fixation of the bowel—such as by suture of the mesentery—as a security against recurrence. Such a procedure seemed contra-indicated, since it would add to the length of the operation and must be most uncertain as to the effect produced. All the children were given small doses of tincture of opium and kept under constant medical supervision for a considerable time after convalescence from the immediate condition.

5. When reduction is found impossible a resection inside the colon would seem to afford the best chance. The junction between large and small bowel must be made secure before any part is cut away. When gangrene is present the condition in young children is almost hopeless. Complete resection and end-to-end union, whether by Murphy's button or suture, so far has been practically without success. Perhaps rapid resection, with lateral implantation of the small bowel into a healthy portion of the colon, and bringing the cut end of the large bowel to the surface as a temporary vent for the escape of flatus, would be the quickest and safest method to adopt. Safely, however, as infants stand a short operation, a prolonged one under such circumstances seems almost beyond their power.

Note.—Since the above was written, four months ago, a case of chronic intussusception in a child has been operated on by me at the Hospital for Sick Children, Great Ormond-street, but died a few hours afterwards.

Harley-street, W.

CASES OF FOLLICULAR TONSILLITIS DUE TO MILK INFECTION.

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AND

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1. *Clinical Observations* (by Dr. C. Grey-Edwards).—On Feb. 12th last I was called to a farm to see two children and a servant. They were all sitting up, and complained of general pains about various parts of the body, headache, "chilly feelings," &c. No direct complaints were made about the throat, but my inquiries elicited that "it was a little sore." On inspection I found that the tonsils

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were enlarged, red, and spotted with the soft, creamy, membranous patches typical of follicular tonsillitis. The temperature ranged from 100° to 103° F., and in each case about three days elapsed before they came down to normal. In the case of the maid there was considerable prostration and languor: she was quite unable to work for three weeks. Between Feb. 12th and 24th I attended three more cases, and four other cases occurred which I did not see. On the 20th I was called to another house and here saw a similar case of follicular tonsillitis—that of a young girl with exactly the same type of throat, whose temperature was as high as 104°. As the milk was supplied from the farm where the first cases had occurred, I recommended that all the milk used should be carefully boiled, and also that the case should be isolated as much as possible and every precaution taken to guard against a spread of the malady. On the 26th there were two fresh cases, and I then sent a specimen of some of the suspected milk to the West-end Pathological Laboratory in London for bacteriological examination. The report (exclusive of the technical detail) was as follows:—(1) Staphylococcus pyogenes aureus, present; (2) staphylococcus pyogenes albus, present; (3) streptococcus pyogenes (short form), present; (4) bacillus diphtheriæ (Klebs-Löffler), absent; and (5) bacillus tuberculosis, absent. On March 1st I saw another case from the same house, and sent a sweeping of the throat for examination. The same bacteria were found as in the milk. Three of the patients in this house had partaken of the milk, but the fourth had not, and I consider it probable that infection took place from one of the other three cases in the early stages. Three children, between the ages of two and three years, escaped altogether, owing, I believe, to the fact that their milk was invariably boiled. In addition to the above cases I was called in to one other patient with a throat of the same character, and here again the milk partaken of had been supplied from the same farm. On receiving Mr. Severn's report on the first specimen of milk I induced the farmer to have the cows examined by a veterinary surgeon, who, however, failed to detect anything wrong, and it was not until the milk from all the cows had been separately examined that the offending animal was discovered. In the milk from this cow were found the same organisms as were present in the first specimen of milk and in the sweeping from the throat.

2. *Bacteriological Evidence* (by Mr. Walter D. Severn).—It is seldom that one obtains such exactly correspondent results from bacteriological researches as have been obtained in Dr. Grey-Edwards's epidemic of follicular tonsillitis. In examining the first specimen of milk, plate and Petri dish cultivations on gelatin, agar-agar, and glycerine agar-agar were made immediately on arrival, and large surfaces of Kanthack-Stephens medium and serum were well rubbed over with heavy platinum spatulæ and incubated at 37° C. Portions of the milk were also placed in sterilised strong glass tubes and rotated on a motor centrifuge, and from the resulting deposits after treatment with ether, &c., cover-glass preparations were stained and examined for tubercle bacilli and bacillus diphtheriæ. Other cover-glass preparations stained by the Gram-Weigert method were found to contain a few organisms resembling morphologically the pyogenic cocci. Numerous short and long rod forms were also present, but most of these latter were very faintly stained. In the deposits from this specimen in addition to the epithelial débris and leucocytes of the form usually found in cows' milk, there were present true pus cells, variable in shape and dimensions, multinuclear, and fairly numerous. Staphylococcus albus was the organism which greatly predominated in the first specimen of milk; streptococcus brevis was fairly numerous; while staphylococcus aureus only appeared to the number of three very distinct small orange colonies on a plate poured from 0·2 c.c. of the milk. Of the two infected specimens of milk examined this first one was by far the richer in cocci, but it also contained rather numerous decomposition bacteria, including bacterium lactis, owing to its not having been taken with any special precautions as to sterility. The gelatin plates, which were as low as attenuations from a loopful of milk, were not rich enough in colonies of the organisms sought for, while the bacillar forms present were, even at these high dilutions, too numerous. In such cultures as could be incubated at 37° C. the temperature hastened the development of the pathogenic cocci, at the same time inhibiting the contaminating bacteria, isolation becoming fairly easy. In the case of the throat sweeping no plate cultures at all were attempted. The rather large brush which was used appeared to be somewhat dry on arrival at the laboratory, so it was moistened with sterile water and well rubbed over in the following order: (1) a large glycerine-agar surface; (2) a large plain faintly alkaline agar surface; and (3) a surface of serum. Incubation took place at 37° C., and the same organisms were found again, but only two colonies of staphylococcus albus were found. Some colonies of micrococcus citreus formed were, however, easily distinguished by the size of the cocci and by the non-liquefaction of gelatin from staphylococcus pyogenes citreus. The last specimens sent consisted of one of water from a well on the farm in question, and three different specimens of milk labeled each with the name of the cow which produced it. The water was carefully examined by plate culture and may be dismissed at once as a very good water with no suspicious feature (bacteriologically). Two of the specimens of milk were also free from suspicion. The bottles containing the milk were sterilised and the specimens were taken with certain aseptic precautions; it was probably owing to this care that in the two specimens just mentioned very few colonies indeed appeared even of aerial or putrefactive bacteria; the task of working up the colonies was thereby greatly simplified. In the milk of the third cow, which we may regard as the one to which the infection has been definitely traced, the two staphylococci and the streptococcus were again found. They were, however, apparently not so abundant as in the first specimen of milk examined, and the staphylococcus albus had almost disappeared. At a rough estimation I should think, however, that the pus was not diminished in quantity. In conclusion, I would like to emphasise the necessity and usefulness of cultures made by rubbing the surface of already cooled and set agar plates with a small quantity of milk or other suspected fluid in such examinations, in addition to the ordinary plate cultures. Agar-agar of a high melting point is sometimes very difficult to maintain sufficiently fluid throughout at a temperature which is not distinctly inhibitory to pyogenic cocci at their first critical transition to saprophytic growth. It is also necessary to make quite sure of the identity of any cocci found by morphological appearance and aggregation, by staining reactions and by careful micrometer measurement, by culture characteristics, and finally, if necessary, by inoculations.

THE ANTITOXIN TREATMENT OF DIPHTHERIA AT ST. GEORGE'S HOSPITAL.

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THE treatment of diphtheria by antitoxic serum is still held to be on its trial, and therefore any results of such treatment appear worthy of record. The cases dealt with in this paper are those admitted to St. George's Hospital during the period October, 1894, to June, 1896. The injection of anti-diphtheritic serum was the routine treatment and a bacteriological diagnosis the rule; but both were subject to many exceptions. In the earlier months of the treatment the slight cases were frequently not injected. Owing to a change of registrars, due to severe illness, in 1895 the case records were for some time irregular, and it has been necessary to reject certain cases from consideration, though they would have had a favourable result on the statistics of treatment. The serum employed was in all cases that supplied by the Institute of Preventive Medicine and the seat of injection the flank or abdomen. In one case only did any septic accident occur; in this case a small abscess formed at the seat of injection, but was followed by no further ill effects. The following table shows the number of patients admitted as cases of diphtheria during the years 1891-1895, together with the first six months of 1896. The percentage of deaths and recoveries in each year is also shown. The diagnosis

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throughout rests on clinical grounds, and the results of each year are strictly comparable:—

TABLE I.

Year.	Number of Admissions.	Recoveries.	Deaths.	Percentage of Recoveries.	Percentage of Deaths.
1891...	27	19	8	70·3	29·7
1892...	18	8	10	44·4	55·6
1893...	83	51	32	61·4	38·5
1894...	62	47	15	75·8	23·8
1895...	152	122	30	80·8	19 2
1896*	70	60	10	85·7	14·3

* Six months.

This table shows a great increase in the number of cases of diphtheria since 1892—an increase now well recognised—and a fall in the percentage death-rate during the last three years. This fall is coincident with the introduction of the serum treatment. The year 1892 is remarkable for the paucity of the cases and the high mortality. Of the 10 cases which died 8 were tracheotomised and only one recovered. Since October, 1894, there were admitted 241 cases with the provisional diagnosis of diphtheria, and of these 180 cases were examined bacteriologically or treated with antitoxin. The 180 cases are grouped in Table II.

TABLE II.

Bacteriological diagnosis.	Number of cases.	Number injected.	Recoveries.	Deaths.	Percentage of Deaths.
Positive	112	76	90	22	19 6
Negative	49	16	48	1	2 0
Doubtful	6	4	6	0	—
Omitted	13	13	10	3	23·0
Total	180	109	154	26	14·4

Of the 167 cases bacteriologically examined the diphtheria bacillus was found in 112 cases, or 67 per cent. The agreement between the clinical and bacteriological diagnosis is really closer than appears from these figures, as in many of the 49 in which the diagnosis was negative the examination was made as a measure of precaution; 8 of them were out-patients and never admitted. Amongst the 76 cases which were injected and in which the diagnosis was confirmed bacteriologically there were 15 deaths, or a percentage of 19 8. This percentage death-rate is practically identical with the death-rate for the total cases admitted from 1894 to June, 1896. This indicates an improvement since the introduction of the treatment, as amongst the total cases there are many which were not diphtheria; but it is impossible, owing to the previously mentioned irregularity in the records, to actually compare the figures between the treated and untreated amongst the cases in which the bacillus was found. The following table shows the death-rate in various age periods amongst the cases treated by antitoxin:—

TABLE III.

Age.	Diagnosis confirmed.			Diagnosis unconfirmed.		
	Number of cases.	Deaths.	Percentage of deaths.	Number of cases.	Deaths.	Percentage of deaths.
Under 1 year	1	0	0	—	—	—
1-2 years	7	2	28·6	6	2	33·3
2-3 years	11	2	18·8	2	1	50 0
3-4 years	9	1	11·1	3	0	0
4-6 years	20	7	35 0	9	0	0
6-10 years	15	2	13·2	4	0	0
10-20 years	8	1	12·5	6	1	16 6
Over 20 years	5	0	0	3	0	0
Totals	76	15	19 8	33	4	12·0

The general opinion of the physicians employing the serum has been that the need for tracheotomy in even severe cases of laryngeal obstruction is now much less frequent than formerly. If the need did not arise immediately on admission it rarely did so later, when the serum had been used. As a result, the local treatment of the throat has become much less active.

Effect on tracheotomy.—The operation was performed thirty-five times, with 42·8 per cent. of deaths. Of 27 cases treated with antitoxin 9 died—mortality 33·3 per cent.; and of 8 not treated six died—mortality 75 per cent. Amongst the 8 untreated cases were of course some desperate ones, which nothing would have saved, but, on the other hand, 2 cases are included amongst the treated who recovered from the tracheotomy but died subsequently from paralysis. That the treatment has improved the chances of cases requiring tracheotomy is very strongly impressed on all who have had to deal with such cases, and this impression is confirmed by the above figures and a comparison with former statistics. In the three years 1891–93 there were 38 cases with 27 deaths—a mortality of 71 per cent., as compared with 33·3 per cent. amongst those treated with antitoxin. The mortality amongst the untreated cases has remained practically constant (from 71 per cent. to 75 per cent.).

The amount of serum used varied from 5 c.c. to 60 c.c. The usual quantity was 30 c.c. given in two injections—20 c.c. the first day and 10 c.c. the second. The maximum amount used at one time was 20 c.c. The date of the injections varied from the second to the ninth day of the disease. No general connexion between the date of the injection and the therapeutic result can be drawn from the figures.

Immediate effects of the injection.—The most striking effect is the rapid clearing of the throat. The charts of the cases reveal no immediate effects on the pulse, respiration, or temperature, though the period of pyrexia is materially shortened. Albumose was found in the urine in eight consecutive cases on the day following the injection. Unfortunately, this point has not been regularly investigated.

Remote effects.—These include the now well-known rashes and pains in joints. A rash of morbilliform character was seen in several cases, preceded by an urticaria lasting two or three days. Constitutional disturbance, evidenced by increased rate of pulse and respiration and rise of temperature, is by no means an uncommon accompaniment of the rash, and may precede it by several days. A rise of temperature without a rash may occur about the seventh or eighth day, this being the usual time at which the rash appears after the injection. The earliest day on which the rash was noted was the third and the latest the eighteenth. A second and even a third period of eruption and constitutional disturbance has been observed, but occurs rarely. A rise of temperature accompanied the rash in 40 per cent of the cases. Paralysis occurred in 21 of the injected cases and 6 died. Two of the fatal cases had been discharged as cured, and some of the others had also been discharged, so that it is possible that more cases of slight paralysis occurred than appears from the above numbers. In one case the bacteriological diagnosis had been negative. Albuminuria seems to have been unaffected by the treatment in either sense.

There remain to be noticed a few detached points of interest. One case of relapse or second infection occurred. A child, six years of age, was admitted with a second attack thirty-four days after her first admission. On both occasions the bacillus diphtheriæ was found. A child, apparently healthy except for a "cold" in the head, was the source of infection for two other members of the family. The nasal discharge of the *healthy* child was full of diphtheria bacilli. There was no constitutional disturbance in this child. A case in which, on post-mortem examination twenty-one hours after death, membrane was found at the cardiac end of the stomach, and from this a culture of the bacillus diphtheriæ was obtained, is of bacteriological interest.

But little confirmation was obtained in these examinations of the statements that the severity of the disease is related to morphological varieties of the associated bacillus. Such statements can only be of value if made on the basis of direct examination of the false membrane. A few cases occurred amongst patients in hospital for diseases other than diphtheria, and were characterised by the typical appearance and purity of the cultures obtained and the extreme mildness of the disease. One case was remarkable—it has been reported by Dr. Ogle[1]—in that death was caused by a small

[1] Transactions of the Pathological Society of London, 1896.

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stalked papilloma growing from the healed scar of a tracheotomy wound and causing obstruction of the larynx.

With the exception of the effect on tracheotomy cases, it is impossible to draw from the above statistics any strong evidence in favour of the serum treatment; nevertheless, noting the decided improvement in the statistics of the later years, the increased success of tracheotomy, the rapid clearing of the throat after injection, and the many details not capable of being reduced to statistics, there seems no doubt that the antitoxic serum has been of great value in the treatment of diphtheria. With a greater uniformity in the strength of the serum supplied, and a more accurate knowledge of the dosage, a better result may be hoped for.

NOTES ON

TWO CASES OF TOXIC AMBLYOPIA FROM IODOFORM.

BY JAMES W. RUSSELL, M.A., M.D. CANTAB., M.R.C.P. LOND.,

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DURING the last two years I have treated most of my phthisical out-patients with considerable doses of iodoform, according to the system advocated by Dr. Foxwell in a paper published in the *Birmingham Medical Review* in August, 1894. As to the real value of the treatment I hope shortly to obtain some evidence by the analysis of my cases, and I may here merely say that I have hitherto firmly believed that comparatively good results are to be obtained by its means. The dose taken has varied with the circumstances of the case. Generally, unless any special contra-indication has been observed, the initial dose has been two grains three times a day, and this has been increased by two grains per dose every week, as inquiry showed the absence of toxic symptoms. From eight to ten grains has always been the maximum dose, and when this quantity has been reached constant inquiry for symptoms of poisoning has been made, and occasional intermissions in the treatment have been insisted upon. In only two cases have I observed any important symptoms of poisoning from the use of the drug, and in each of these the symptom has taken the form of a well-marked amblyopia. The following are brief notes of these cases, for part of which I am indebted to Dr. Wood White, who kindly examined the patients at the Birmingham and Midland Eye Hospital at my request.

CASE 1.—The patient, a man aged thirty-two years, came to my out-patient department on March 26th, 1896, complaining of cough, wasting, and shortness of breath of recent onset. On examination, signs of early phthisis were found at the apex of each lung. He was ordered a mixture containing cod-liver oil and iron and two-grain pills of iodoform to be taken three times a day. On April 16th he had been taking six grains three times a day for a week, and complained of a disagreeable "metallic" taste and smell; I therefore reduced the dose to four grains, and next week he reported that these symptoms had practically ceased. On May 7th the dose was increased to five grains, and from this time the quantity taken was gradually increased, without any further complaint on the part of the patient, until on June 18th ten grains were ordered to be taken three times a day. On July 9th an inquiry as to the condition of the sight elicited the fact that for the last week or two he had experienced some increasing difficulty in reading, especially at night; the iodoform was accordingly stopped and the patient was sent to the Birmingham and Midland Eye Hospital for examination. On July 20th Dr. Wood White reported that the vision of each eye was reduced to $\frac{6}{18}$. Beyond the omission of the iodoform no special treatment of the condition was adopted, but on Aug. 6th Dr. Wood White reported that the vision of each eye was $\frac{6}{9}$, and on Nov. 26th it was noted that the sight was normal.

CASE 2.—The patient, a man aged twenty-six years, first attended my out-patient department on Sept. 14th, 1895, complaining of an attack of hæmoptysis which had occurred a few days previously. He had been suffering of late from profuse night sweats; there were, however, no definite physical signs to be found in the lungs. During the next six weeks he had several further attacks of hæmoptysis, and by the end of October had developed distinct signs of phthisis at the left apex. On Sept. 28th he was ordered to take one grain of iodoform three times a day, together with a mixture containing cod-liver oil and iron. The quantity of iodoform was slowly increased, and on Nov. 2nd had reached eight grains per dose; and although I find that for some reason the dose was on Feb. 1st, 1896, reduced to six grains, yet on April 26th he was again taking eight grains, his weight having increased by eight pounds since the beginning of treatment. Shortly afterwards the dose was increased to ten grains. From this time he continued, with occasional intermissions, often of a few weeks' duration, to take varying quantities of iodoform, with apparently excellent results; but on Jan. 2nd, 1897, after having taken ten grains of iodoform for only three weeks continuously, he stated in answer to my inquiry that he had noticed of late some increasing difficulty in reading, again especially at night. The iodoform was at once stopped, and Dr. Wood White, who examined the patient at the Birmingham and Midland Eye Hospital, kindly sent me the following report of his condition: "Consensual light and accommodative reflexes present. There is no reflex on stimulation of sensory nerves in either eye. Vision: right eye, $\frac{6}{60}$, improved by + 50 cylinders; left eye, $\frac{5}{60}$; colour vision normal; right field of vision normal; left slightly contracted; discs pale, but not atrophied. The amblyopia in this case differs from that due to tobacco in that there is no central colour scotoma" After the above examination the patient failed to attend at either hospital for some time, but returned to my out-patient department early in April. He stated that his sight had rapidly recovered after leaving off the iodoform; and on testing I found that it was normal in each eye. His chest was free from signs of active mischief, and he looked and felt in good health.

The cases of toxic amblyopia from the administration of iodoform hitherto published are few in number. In a paper describing one such case, published in 1893 in the *Ophthalmic Review* by Mr. Priestley Smith, reference is made to two cases as the only ones then recorded. One of these was published by Hirschberg in 1882,[1] and resulted from the local application of iodoform; the other, recorded by Dr. E. Hutchinson,[2] was due to its internal administration. The third case, published by Mr. Priestley Smith, occurred in the out-patient practice of Dr. Foxwell at the Queen's Hospital, Birmingham, and was also caused by the use of the drug internally in considerable doses. I have been unable to discover any later addition to the literature of the subject. It is difficult to say in what proportion of cases treated with iodoform amblyopia is likely to make its appearance. Dr. Foxwell seems to regard the symptom as a very uncommon one; my cases would rather suggest, however, that when large doses are taken for any length of time it is likely to be not very infrequently met with. On referring to my case-books I find that I have notes of 187 cases in which iodoform was administered, excluding all those in which the patient attended a single time only. Of these 187 patients 20 complained of the unpleasant taste and smell to which the drug is apt to give rise; and 12 of these were taking only six grains or less at the time. Of the two patients who suffered from amblyopia only one had complained of the taste of the pills. It is to be noted, however, that in only a certain proportion of the cases did the dose reach as much as eight or ten grains; and that, moreover, a considerable number of the patients attended for but a short time only. The following table will present a summary of these points:—

Total number of patients taking over 5 grains 133					
" " 8 or 10 grains 84					
Attended over 6 months ...	4	.....	Maximum dose 10 grains		4
" from 3 to 6 months	12	.....	" " "		6
" from 6 weeks to 3 months ...	69	.....	" " "		32
" under 6 weeks ...	102	.....	" " "		5

Again, the time during which the large dose has been taken has varied considerably, 27 patients taking this dose for periods varying from four weeks to five months, with occasional intermissions, as already described. None of these patients developed any important signs of poisoning during the continuance of the large doses, but 5 complained of the smell or taste at some period of the treatment. The 2 patients who developed amblyopia had each

[1] Centralblatt für Praktische Augenheilkunde, p. 92.
[2] New York Medical Journal, Jan. 2nd, 1886.

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been taking ten-grain doses for three weeks only at the time when the symptom was reported.

Since the cases above referred to, together with the two recorded in this paper, appear to establish the fact that iodoform is liable to cause amblyopia, it becomes a question whether its use internally is any longer justifiable. This question may, I think, be answered in the affirmative, always supposing that the treatment is of real value. In my own cases and in that recorded by Hirschberg, recovery was complete and rapid after the discontinuance of the iodoform; in the other two recovery was progressing satisfactorily when the last notes were taken. It therefore seems probable that if the amblyopia be early recognised and the drug promptly omitted no permanent mischief need be feared. I have now adopted the plan of recording the vision of all those patients whom I am about to treat with iodoform before beginning its administration; I then make periodical inquiries as to the sight, and am able to discover when any diminution is acknowledged whether alteration has really taken place. This measure is, I find, absolutely necessary owing to the certainty in hospital out-patient practice that any symptom frequently inquired for will sooner or later be acknowledged by the patient. I have only to add that in my cases the onset of the amblyopia was not accompanied by any other symptom.

Birmingham.

FOUR SUCCESSFUL CASES OF TRANSFUSION OF SALINE FLUID.

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IN THE LANCET of Aug. 17th, 1895, I recorded six successful cases of transfusion of normal saline solution, and since that time several cases have occurred in the practice of the Dundee Royal Infirmary in which transfusion has been employed, in some with wonderful effect and in others with well-marked temporary improvement. The following is a brief note of the successful cases.

CASE 1.—A woman, aged thirty-nine years, pushed her arm through a window, severely lacerating it. She bled profusely and on admission to the infirmary an hour afterwards was in a very serious condition. She was quite unconscious and markedly anæmic; the respiration was shallow, with occasional sighing; no pulse could be detected. She had a transverse wound over the front of the left elbow-joint severing the radial artery at its origin. The median cephalic vein was also divided, and into this were transfused five pints of normal saline solution at a temperature of 105° F. The effect was very wonderful. In a few minutes she opened her eyes, consciousness slowly returned, and the pulse became quite good and regular. She made a good recovery and went home in ten days.

CASE 2.—A boy, aged twelve years, was admitted to the infirmary on March 25th, 1896, under the care of Dr. MacEwan, with extensive disease of the right knee-joint. He was in a fairly healthy condition. Dr. MacEwan excised the right knee-joint, and numerous tuberculous deposits were found in the femur and tibia, even above the epiphyseal lines. The medullary cavity of the femur was opened and drained. The patient did not suffer from shock or loss of blood, and he bore the operation well. He remained fairly well for thirty-six hours, when he suddenly developed a rigor and became delirious; his temperature was 103° F. and his pulse 144. The wound was dressed but found to be sweet. Eight hours afterwards he was quite unconscious and apparently dying. The left internal saphenous vein was opened, and four pints of saline fluid were introduced with a very good effect, as, with the exception of a severe rigor half an hour after the injection, he made a good recovery and is now almost well.

CASE 3.—A man, aged thirty-two years, had his arm caught in machinery, rupturing the brachial artery and smashing the arm. He lost a very large amount of blood and when brought to the hospital was in a very collapsed state. Amputation at the shoulder-joint was performed. He suffered from collapse, and during the night his pulse could not be felt. He was transfused with five pints of saline fluid. An hour afterwards he had a rigor, with a temperature of 103° F., but with this exception he made a rapid recovery.

CASE 4.—A woman, aged twenty-three years, was admitted on June 6th, 1896, under the care of Dr. Whyte, suffering from purpura and anæmia. She had several severe attacks of violent epistaxis which were difficult to control. The patient's condition became very serious; the pulse was quite imperceptible, and she was apparently dying. She was transfused with five pints of saline solution, with the effect noticed in Cases 2 and 3—viz., a rigor and temperature of 104° F. one hour later. She revived almost at once and made an excellent recovery.

Remarks.—There can be no doubt that we have in transfusion one of the most simple yet efficacious remedies in all cases of shock from hæmorrhage. How far it is of service in cases of nervous shock and collapse is yet undecided, but in some cases it is of great value. Larger quantities should be given than those generally recommended, four or five pints being a usual quantity. I have given as much as twenty-four pints at four injections within twenty-four hours without any apparent discomfort. I have noticed in several cases the occurrence of a rigor, commencing from half an hour to an hour after the operation and lasting about five minutes, with a high temperature. This seems to have no serious effect, the temperature quickly subsides, and recovery is not retarded by it. In Case 2 there is every reason to suppose that an acute attack of septic osteo-myelitis was cut short by the transfusion, my explanation being that an increased volume in the vessels would offer a greater resistance to attack and at the same time dilute the blood stream and so disperse the micro-organisms. If this be so, there is reason to suppose that transfusion may be employed in acute specific diseases due to micro-organisms, as in any case it could have no other than a highly beneficial effect if performed with ordinary care and with a sterilised solution. The apparatus I use consists of an ordinary glass funnel and tubing, with a glass nozzle for insertion into the vein.

Dundee.

NOTES ON THE ANATOMY, DEVELOPMENT, PATHOLOGY, AND SURGERY OF THE FRONTAL SINUSES.

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Anatomy.—The frontal sinuses are generally two irregular cavities between the inner and outer tables of the frontal bone, near the root of the nose. In the fresh state these cavities are lined with a thin, pale, closely-adherent mucous membrane, and separated from each other by a well-marked septum. They usually communicate separately with the corresponding nasal cavity by an opening, variable in size, leading into the anterior extremity of the middle meatus of the nose. The examination of a large number of frontal sinuses in the moist and dry state discloses many points of interest. In the first place there is no space between the tables of the frontal bone before the seventh year. There may be a complete absence of these cavities even in extreme old age. I have bones in my possession showing a frontal sinus only on one side. The extent of the frontal sinuses varies widely, and unfortunately the external appearances of the skull give no indication of these variations. The frontal sinuses are seldom symmetrical, except in a general sense. Of the extent of these spaces there are specimens in the Museum of the Royal College of Surgeons of England, showing a separation of the inner and outer tables of the frontal bone almost to the coronal suture. The orbital plate of the frontal bone is frequently the site of a large cavity, communicating with, and forming part of, the frontal sinuses. The frontal sinus of one side may not communicate with the nose or its fellow of the opposite side, but may communicate with the anterior ethmoidal cells of the same side. The septum dividing the two sinuses is usually partly bony and partly fibrous, but is always well marked. It may be entirely bony or entirely fibrous. Its central position is constant. I have never found a frontal sinus not in communication, directly or indirectly, with the nose. The evolution of the frontal sinuses is not complete until the twenty-first year.

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Development.—In the records of the Transactions of the Provincial Medical and Surgical Association for 1883, vol. i., appears a very able and highly suggestive article on "The Development of the Frontal Sinuses." by Dr. Milligan, of Edinburgh; also in his notes on "Majendie's Physiology" are some pertinent remarks in the same direction. Milligan shows that the functions of the two tables of the skull are quite different—that the inner table, being moulded closely to the fissures and convolutions of the brain, is mainly supporting and protective to that organ alone; next, that the brain arriving at its full state of maturity at seven years of age, the inner table ceases to grow or to expand after that date. Not so the outer table, which is an irregular envelope, at some places as thin as a wafer, at others thicker than all the rest of the cranium. If viewed from without we find that every particle of its surface is adapted to some purpose it has to answer in combination with the soft parts it is in contact with. Many prominences are levers for the muscles; others are scabrous surfaces for their insertions; others are condyles for joints; others organs of hearing; others organs of fixation; others of protection. And all this in direct reference to the organs of contact, but without the least relation that can be discovered to the encephalon. Hence we are forced to conclude that its projections solely originate under the influence and for the completion of functions that are external to the cranium. The evolution of the frontal sinuses does not take place till the seventh year, nor is it complete till the twenty-first year. At the seventh year the bones of the face are yet small and childish and the jaws are occupied by the first set of teeth. At this time the Wenzels inform us from many observations that the brain has arrived at its full magnitude. Up to this time the internal carotid artery was many times larger than the external, but immediately after full development of the brain has taken place a sensible diminution in its calibre occurs and a rapid and large increase is apparent in the external carotid and its branches. The bones of the face, the teeth, eyebrows, and outer table of the skull now grow rapidly, and, the internal table being at a standstill, large spaces occur between the tables of the skull; hence the frontal sinuses. In dealing with the diseases and surgery of the frontal sinuses one is struck with the fact that the patients do not apply for relief to the institutions most capable of affording relief. Seeing, indeed, that these are essentially cases for the general surgeon who at the same time has a special knowledge of the diseases of the nose, and primarily in no sense ophthalmic troubles, it is unfortunate that in most cases these patients apply for relief to the various ophthalmic institutions. The records of the special hospitals for diseases of the nose and throat are almost blanks; but, on the other hand, if anyone examines the reports from the various ophthalmic hospitals he will find many cases recorded of affections of these spaces. This is accounted for by the fact that accumulations of fluid, be it pus, serum, or mucus, or what not, in ninety-nine cases out of a hundred, bulge or perforate the roof of the orbit and protrude at its upper and inner angle under the upper eyelid, usually causing diplopia as a prominent, and often to the patient only, symptom. The records of these cases are not a few, and the names of ophthalmic surgeons are invariably associated with them. Hulke, Lawson, Soelberg Wells, Bell Taylor, and many others have each reported one or more cases.

The lining membrane of the frontal sinuses is but an extension of the lining membrane of the nasal cavity through the infundibulum. It differs widely in character from the nasal lining membrane. It is extremely thin, and in the healthy state pale in colour, and intimately adherent to the subjacent periosteum. From these differences in anatomical character it follows that the lining membrane of the frontal sinuses would probably not be subject to the same *rôle* or list of diseases that characterise the more vascular and complicated lining membrane of the nose proper. By far and away the most common affection of these spaces is catarrh, in one form or another, leading commonly to distension and abscess by the retention and accumulation of the products of inflammation. The pressure of the retained fluids bulges in some cases the bony casement at its weakest point, the roof of the orbit causing displacements and protrusion of the eye. Cases are not unknown where the contents have pressed backwards and necrosed the bone, and so entering the arachnoid cavity have set up a fatal meningitis or abscess of the brain. Again, the pus—although rarely—may bulge and perforate the bone in a forward direction. Cases, again, occur where the accumulation is intermittent, the pressure due to retention forcing the normal passage into the nose. These latter cases are not marked by a protrusion into the orbit, and being free from any gross external signs to assist the diagnosis are, as a rule, unrecognised. To this class of cases the term "latent empyema" of the frontal sinus is, I think, properly applied. The diagnosis and treatment of these two classes of cases is radically different. In the former we have to make a diagnosis and differentiate from distended lacrymal sac, dermoid cysts, cellulitis of orbit, exostoses, and new growths. In latent empyema of the frontal sinus the diagnosis to a large extent depends upon subjective symptoms alone. In the one class of cases the first and only symptom may be a displacement of the eyeball associated with diplopia, but unaccompanied with pain or uneasiness at the root of the nose. Latent empyema of the frontal sinus is not necessarily associated with any other affection in the throat or nose. The onset is usually undefined, and patients have merely perceived that from a certain date without well-marked cause they began to suffer from pain and uneasiness in the situation of the frontal sinuses (Professor Ogston). After a while headache at the root of the nose, varying in intensity but always present, is a main feature of these cases. A discharge of pus, not abundant but variable in quantity if looked for, may generally be made out. Pus may also be found at the anterior part of the roof of the cavity, but is small in amount and rarely visible. Pain or tenderness on pressure may or may not be present, but percussion with the fingers or a pleximeter generally elicits some uneasiness. The pain varies in some degrees, it is constantly present, but is seldom acute or unbearable. Bending forwards, stooping, or reading increases the trouble, and as a rule it is increased when in the recumbent position and after sleep. Dull, damp, and rainy weather increase the discomfort, but high altitudes and bright and dry atmospheres improve matters considerably. Many of these cases escape diagnosis, and are treated with bromides and iodide of potassium, shower baths, and the usual list of remedies for headaches without material benefit. I have the notes of several cases of latent empyema of one or both frontal sinuses where with symptoms such as related above the diagnosis has been made, and on the sinuses being trephined from the front the lining membrane has been found so granular as almost to constitute a polypoid state. In other cases many actual polypi have been found. These cases have without exception in my own hands done well, leaving on the forehead scarcely an indication of the site of the operation. In latent empyema of the frontal sinus to reach and effectually treat the disease by way of the infundibulum is, in my experience, practically out of the question. Resort must be had, then, to opening the sinuses in front at the root of the nose in the mid-line, or at the inner and upper angle of the orbit. A strong and fatal objection to this latter procedure being that the empyema may be one-sided, and it is impossible as yet to make sure on which side the disease is located. The procedure requisite to open the frontal sinus from the front is the following: The patient being anæsthetised, preferably with chloroform, and the interval between the eyebrows being divested of any hairs and made scrupulously clean, a note is to be made of the exact spot in the mid-line on a level with the upper margin of the orbits. This, for the purposes of the operation, may be termed the "pin spot," as it is the spot where the pin of the trephine is subsequently placed. An incision should be made exactly in the mid-line commencing at the root of the nose below the glabella and carried upwards for about two inches. In this incision everything is divided to the bone. There is no hæmorrhage as a rule. Next the pericranial covering is raised by an elevator and retracted to each side with blunt hooks or retractors. Bone to the extent of a five-shilling piece will now have been exposed. A trephine with a crown the size of a sixpenny-piece or less should now be so placed on the glabella that the pin of the trephine enters the bone at the "pin spot." The trephine is worked in the usual way with caution, examining with a fine probe the depth of the incision after every few twists. As it is important to remove the button of bone without lacerating or opening the lining of the sinus great care must be observed during the last few twists of the trephine. The trephine does its work first below and there is always some difficulty in removing the button, the bony septum or arch dividing the sinuses retaining it above. By careful manipulation with an

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elevator the button of bone is detached, leaving the mucous lining of the sinus intact. This step is important for the following reasons. One or both sinuses may be healthy. The nature and character of the contents is obscured by admixture of blood. There may be no frontal sinus, and the cerebral cavity may be below what is supposed to be the lining membrane of the sinus. One or both sinuses, according to circumstances, is, or are, next to be opened with forceps and scissors and examined. Any secretion is to be removed. Any disease of the mucous membrane is to be treated by curetting or chloride of zinc, or both. Any polypi are to be removed, and the stumps treated with caustic, if requisite. Above all things, an opening must be established with the nasal cavity, and a drainage-tube inserted and maintained in position. Daily ablutions with antiseptic fluids will keep up a healthy action and assist a cure. The wound is to be accurately joined, the pericranium and pericranial aponeurosis, as well as the skin, being separately and carefully adjusted. The tube may protrude from the centre of the wound for the first few days for the purposes of irrigation, but subsequently may be shortened or dispensed with entirely. The result of this operation is usually immediately beneficial. The patients lose their troublesome symptoms and are permanently relieved. The wound healing by first intention there is no scar or disfigurement, and the line of the incision is scarcely perceptible. The method adopted by ophthalmic surgeons of treating the other and more common class of cases as illustrated by a protrusion and displacement of the eyeball is rarely satisfactory. Lawson, Hulke, and others have laid down the rules and steps of the operation for opening the frontal sinuses at the upper and inner angle of the orbit at the most prominent point of the swelling with great exactitude. I have adopted this procedure seldom with more than temporary benefit, and never with speedy relief or cure. In this procedure the protrusion in the orbit is attacked and opened at its most prominent point. The incision is made through the orbicularis muscle, suspensory ligament of the eyelid, and often close to the pulley of the superior oblique muscle and in proximity to the lacrymal sac. The opening speedily closes and granulations spring up, impeding the discharges and ultimately hampering the movements of the lids and leaving a nasty scar and much disfigurement of the parts. More than this, during the operation no clear or exact view is obtained of the interior of the sinus or lining membrane. In this operation it is most difficult to find the infundibulum or enlarge the same, if required, from the orbital opening. A drainage-tube in the upper eyelid is most annoying to the patient and most unsightly. Experience shows that these cases treated thus go on discharging for years and are not cured. I have long discarded opening the swelling in the orbit. I now always trephine in the front, a little to one side of the mid-line, and treat the case after the method of a latent empyema. Six weeks will usually suffice to cure these cases if operated on from the front. More rare affections of the frontral sinuses next to accumulation of fluids or pus are exostoses, polypi, and new growths. Exostoses are very rare and are usually of the hard description. There is one specimen in the Hunterian Museum, a large one, filling both sinuses and protruding into the nose and orbit. The museum at Cambridge contains another specimen, and a third is to be found at the museum of St. Bartholomew's Hospital. Mackenzie had two small specimens found, I believe, unexpectedly post mortem. Polypus of the frontal sinus of any size or in the form of pedunculated growths is rare, but when occurring is usually associated with the same disease in the nose. Mr. Hulke[1] reported several cases of polypus of the frontal sinus, only one case of which was unassociated with a similar state of things in the nose. These cases generally led to accumulation in the sinuses and were not primarily diagnosed as polypi. New growths are extremely rare, but sarcoma has been reported as presumably originating in these spaces. Of insects in the frontal sinus cases have been reported by Mackenzie and others. One interesting case of foreign body in the frontal sinus was under my own care—the only case of the kind, so far as I am aware, on record. During the exhibition of snuff a quantity was drawn into an unusually patent frontal sinus, and set up the most intense inflammation with great headache, high temperature, and delirium.

Harley-street, W.

[1] THE LANCET, March 14th, 1891.

OBSERVATIONS UPON RE-VACCINATION.

BY ROBERT J. CARTER, M.D. LOND., D.P.H. ENG.

DURING a recent small-pox epidemic I collected notes of 319 cases of re-vaccination. Calf lymph prepared with glycerine was used in every case, and the operation was performed indiscriminately on all persons who presented themselves, the ages varying from four to sixty years. Four insertions were made in the usual situation on the arm in every case, and only those arms which presented a vesicular stage on the eighth day after the operation were accounted successful. At the same time short notes as to the clinical condition of the patients were taken. The results obtained show very clearly how rapidly in early life the effects of primary vaccination wear out, the insusceptibility to re-vaccination being of a much more evanescent character than is generally believed. For the purpose of showing this clearly I have arranged the successful cases in two Tables. Table A comprises 148 children up to, and including fourteen years of age, all vaccinated in infancy; Table B comprises 171 adults over twenty-four years of age, vaccinated later in life than the fourteenth year.

TABLE A.

Number of years since last vaccination.

4	5	6	7	8	9	10	11
S. F.	S. F.	S. F	S. F.	S. F.	S. F.	S. F.	S. F.
3 —	6 —	7 —	6 —	15 1	14 —	19 —	20 —

12	13	14
S. F.	S. F.	S. F.
15 —	16 —	26 —

TABLE B.

Number of years since last vaccination.

1	2	3	4	5	6	7
S. F.	S. F.	S. F.	S. F.	S. F.	S. F.	S. F.
— 12	— 13	— 6	— 8	— 2	— 6	— 1
8	9	10	11	12	13	14
S. F.	S. F.	S. F.	S. F.	S. F.	S. F.	S. F.
1 4	1 2	2 2	1 —	1 2	2 8	— 3
15	16	17	18	19	20	Over 20
S. F.	S. F.	S. F.	S. F.	S. F.	S. F.	S. F.
2 1	— 2	— —	1 —	— 2	— —	82 4

Comparing these results somewhat in detail, it will be noted that of those under fourteen years of age vaccinated in infancy the earliest successful case is four years after the primary vaccination, whilst in Table B the earliest successful vaccination is after a lapse of eight years. In Table A the only three cases vaccinated at the fourth year were all successful; in Table B the earliest successful case occurs in the eighth year after previous vaccination. The proportion of failures to successes gradually diminishes in Table B. In Table A the solitary unsuccessful case is probably an accident. Practically at the tenth year re-vaccination of children vaccinated in infancy always results in a more or less typical vaccinia, whereas in adults it is not until about twenty years after a previous vaccination—and not always then—we can ensure any successful result. I feel that the paucity of numbers and possibilities of failures due to the vaccinator tend to depreciate these results, but when allowance has been made for such deficiencies I consider they still will bear the interpretation I have put upon them—viz., the greater rapidity with which the effects of vaccinia upon the organism wear out

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in early life compared to more mature age. The explanation of this, I venture to suggest, is that up to puberty the tissues are in a much more active condition; tissue change is more rapid, and impressions on the organism more easily effaced than in adult life.

The Local Government Board do not allow public vaccinators to be paid for re-vaccinations upon children under ten years of age; but in the face of these results I would suggest that in small-pox epidemics every child in whose case four years have elapsed since the primary vaccination should be re-vaccinated. The condition of the arm on the eighth day after re-vaccination varies exceedingly. The areola appears much earlier than in primary vaccination. In 197 cases it was present on the second day. On the eighth day it varies from a circumferential blush around the vesicles to a uniform redness extending from the shoulder to the elbow, of a bright crimson colour, disappearing on pressure. I regard this condition as different to that in which we see œdema and redness extending down to the finger-tips. Some enlargement of the axillary glands can always be discovered if looked for. In 106 cases these glands were large, hard and tender, and in some instances exquisitely painful. In three cases the glands above the clavicle were also affected. Lymphangitis was present in nine cases, the lymphatic vessels being felt as hard, swollen, tender cords along the course of the axillary vessels. Induration and œdema of the arm were present in ninety-eight cases, and were of a curiously persistent character. They did not appear to be associated entirely with the glandular affection, but were apparently dependent upon the intensity of the local inflammation at the site of the vaccination.

Constitutional symptoms, except the temperature, are difficult to estimate, apart from the idiosyncrasy of the patient. Several complained of aching pain in the lumbar region, headache and nausea which, while not uncommon symptoms of a febrile condition, are the cardinal symptoms of the early stage of variola. Lassitude, giddiness, and loss of appetite were common among the male adults, whilst fainting and neurotic manifestations were noticed among the females. Post-vaccinal rashes were only seen in four instances. It was impossible to take the temperature of all the cases, but in those in which fever was noted the pyrexia appeared directly proportional to the amount of inflammatory action in the arm. It is commonly accepted that the amount of inflammatory action depends to some extent on the active use of the arm during the week following vaccination. In all my cases the occupation was noted, and it was found that the most severe cases occurred in women who had worn slings directly the vaccination showed signs of being successful. Its severity appears to me to depend entirely upon the general constitutional condition and the environment of the individual.

The treatment of severe cases was simple and apparently successful—free saline purgation, rest for the arm, the application of a lead and opium lotion, early and frequent removal of the scabs, and a boracic ointment dressing for the subjacent ulcers.

Acacia-road, N.W.

THE CONTINUOUS ADMINISTRATION OF NITROUS OXIDE GAS AND OXYGEN DURING MINOR SURGICAL OPERATIONS.

BY H. BELLAMY GARDNER, M.R.C.S. ENG., L.R.C.P. LOND.,
ASSISTANT ANÆSTHETIST TO CHARING-CROSS HOSPITAL.

EIGHT years have elapsed since the possibility and distinct advantage of giving small percentages of oxygen with nitrous oxide gas to produce anæsthesia at ordinary atmospheric pressures were first pointed out in THE LANCET by Dr. Frederic Hewitt.[1] Though this method has now obtained a very wide and substantial footing in the dental profession, it can hardly be said that its remarkable value in prolonging the anæsthesia and rendering the patient flaccid and free from spasm for several minutes at a time has procured sufficient recognition among surgeons, who would have been expected to readily appreciate a mixture which leaves neither nausea nor mental disturbance after its inhalation, and, more important still, which subjects a patient to the least possible risk incurred by the exhibition of any known anæsthetic agent. The presence and concurrent inhalation of from 10 to 15 per cent. of oxygen with nitrous oxide gas are sufficient to maintain the due proportion of oxy-hæmoglobin in the arterial blood, and thereby to render an inhalation which formerly was cut short by the supervention of asphyxial symptoms capable of being sustained while many minor surgical operations are being effected. While the condition produced by the presence of oxygen is clinically free from asphyxial symptoms in those surgical procedures which are undertaken after removal of the face-piece, I have also found that a very tranquil anæsthesia may be obtained in those others which permit of its continuous application, even with quantities of oxygen rather larger than those usually administered in the first class of cases. To illustrate the kind of painful operation for which I think this method has proved to be appropriate the following cases are taken from my notebooks.

CASE 1.—A man, aged forty-seven years, with good chest expansion, stoutly built, and of rather florid colour, required the removal of four sebaceous cysts from the scalp. Before the administration he was seated in a comfortable armchair. The surgeon washed and prepared the skin around the cysts, and the face-piece was then applied. Commencing with a small percentage of oxygen (to allow for that already present in the lungs), the amount was gradually increased whilst the lid-reflex disappeared. Breathing continued deep and free as during sleep; the colour was good; no inconvenient movement occurred; and the operation—during which the cysts were excised and the incisions sewn up—proceeded for five and a half minutes. At its completion the patient awoke—one minute after removal of the face-piece—without any untoward sensations whatever.

CASE 2.—A girl, aged seventeen years, of average height and build but rather anæmic, suffering from a tuberculous abscess in the left side of the neck, was seated in an upright chair with a head-rest while the swelling was incised, thoroughly scraped, cleaned out, and then sutured with four separate stitches. During this operation, which lasted four and a half minutes, she was kept absolutely tranquil with a good, regular pulse under the influence of nitrous oxide gas and oxygen. The recovery was rapid and presented no after-effects of any kind.

CASE 3.—A man, aged thirty-five years, of average height but rather thin and pale, had two suppurating cysts on the scalp, one of which was very painful. He was seated in an easy-chair when the face-piece was applied. Again the percentages of oxygen with the gas were gradually increased until he was softly snoring as if under chloroform. The pupil remained of moderate size and the pulse and colour were very good whilst the incision, scraping, and dressing of the inflamed areas were completed. This operation also lasted four and a half minutes. He afterwards said it was very pleasant to inhale, that he felt quite well, and had not the slightest sensation or consciousness during the administration.

In the course of my work at Charing-cross Hospital I have lately administered nitrous oxide gas and oxygen during the excision of a varicocele lasting fourteen minutes. The patient, who was a male, aged twenty-two years, of a rather florid type, was inclined now and then to become a trifle dusky in colour, but this was owing to there not being quite sufficient oxygen at command; his absolute flaccidity and quietude during the time were, however, quite satisfactory to the operator. His breathing remained regular and the circulation was well maintained throughout. Recovery was complete in two minutes and he was not sick subsequently.

It has been my custom for the past two years to administer this anæsthetic in the aural department for the removal of post-nasal adenoid growths, and the advantages which may be claimed for its use are: (1) that it is not attended with danger to life; (2) that preparation for the operation is not absolutely necessary, though undoubtedly the *best* results are obtained after abstinence from food for three or four hours; (3) that hæmorrhage is unaffected by it; (4) that the jactitation and cyanosis produced by pure nitrous oxide gas are absent; (5) that any posture desired by the operator may be safely assumed; (6) that when the face-piece is removed the available anæsthesia is about fifteen seconds longer than that

[1] THE LANCET, April 27th, 1889, p. 832.

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yielded by gas alone; and (7) that unpleasant after-effects of any kind are of very rare occurrence. After an experience of several hundreds of cases I ought to state that during this operation some of the patients will move a little and in some there will be a little phonation; but, on questioning them it will be found that they felt nothing of the operation and would quite willingly take the anæsthetic again. This result is not often attainable with gas alone, for children yield a very short anæsthesia under its influence and may be very blue and rigid, whilst if oxygen be present there will be muscular relaxation with good normal colour.

For the removal of enlarged tonsils the mixture is a distinct improvement upon gas alone, because there is less venous turgescence and therefore less swelling of the tonsils and tongue, with a corresponding immunity from obstructed breathing during unconsciousness. Incision of the tympanum, removal of aural and nasal polypi, and other procedures of a like nature have also been successfully accomplished under its anæsthetic influence.

I believe that for the painless movement of stiff joints and the stretching of adhesions in their vicinity it forms by far the most suitable agent at our disposal, because muscular flaccidity is quickly produced and the patient will not object to a second inhalation of these tasteless gases if the operation has after an interval to be repeated.

In sensitive subjects the passage of a catheter is often a matter of apprehension and pain; those who would otherwise resist the surgeon's manipulations can be kept quietly unconscious by inhaling the mixture until this procedure is accomplished and fear of suffering is at an end. I hold that it is an anæsthetist's aim and ideal to render his patient insensitive to pain with as little damage to the physiological processes of his system as possible, and for these or similar operations I find this method a great improvement upon gas alone, while the danger of chloroform and the sickness resulting from the use of ether are entirely avoided by its employment.

Welbeck-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CLINICAL NOTE ON THE PROPERTIES OF ACETANILID.

BY EDWARD F. GRÜN, M.R.C.S. ENG., L.R.C.P. LOND.

IN THE LANCET of June 27th, 1891, you were kind enough to insert an article written by me on the treatment of what I designated "Specific Bronchitis." In that article I adverted to the germicidal properties of what at the time was a comparatively unknown drug, acetanilid, giving bacteriological proof of the very high comparative value in arresting growth of all forms of micro-organism in nutrient media, and urging medical men to give the drug a trial. Since that date—now nearly six years—I have taken every opportunity afforded me by private practice to test the value of this compound as a dressing for wounds, and the result of my experience is that for convenience, reliability, and general utility there is no antiseptic drug to equal it. This question is so easy of proof (which is not always the case with drugs recommended for internal use) that I feel the preparation has only to be thoroughly tested under fair conditions to become universally accepted as the dressing for wounds *par excellence*. During the past six years among a number of cases which have come under my care the following will serve to illustrate the valuable healing powers of this compound of aniline. There is no necessity to quote the names of the cases, but many were seen by members of the profession beside myself, and I can, if necessary, give the full details. It is sufficient to say that every one healed without the formation of pus and the majority by first intention, although the operations described were often performed under conditions which rendered antiseptic precautions absolutely impossible.

CASE 1.—July 14th, 1895: A compound fracture of the metatarsal bone, caused by the wheel of a waggon loaded with two tons of coal passing over the foot of a man, was complicated with severe laceration of the skin. The patient was able to resume work in about twelve weeks from the date of the accident.

CASE 2.—Aug. 18th, 1895: After amputation of the forearm of a woman union by first intention resulted, and the dressings were removed at the end of a fortnight.

CASE 3.—Sept. 30th, 1894: A man was operated upon for strangulated hernia. The operation was performed in great haste in a cowshed, the sac being opened and Gimbernat's ligament divided. The patient was removed to the infirmary at Alton on the same day, and was discharged cured at the end of seven days. The wound healed by first intention.

CASE 4.—1893: This was a case of removal of the breast for suppurating cancer. The breast had been injected with methyl-violet, according to Professor Moestig's method, which caused suppuration of the cancer. The breast was subsequently removed. The wounds were entirely healed at the end of ten days.

CASE 5.—In this case the operation of amputation of the leg was performed in the tap-room of a public-house. The patient was removed to the hospital, and he subsequently made a very good recovery.

The foregoing are the most serious cases in which I have made use of acetanilid as a dressing for wounds. In addition to these I have made use of the remedy in innumerable cases of minor surgery, such as removing fingers or toes, burns, lacerations, &c. I was induced to try the drug in 1891 on purely theoretical grounds, and am happy to say that in actual practice the beneficial results far exceeded my anticipations. As many of your readers may not be acquainted with the physical properties of this compound I may say that it is a white, crystalline powder, quite tasteless, inodorous, and almost innocuous when taken internally up to quantities of from five or ten grains. It may be mentioned that occasionally it causes a bluish tinging of the skin and some blueness of the lips and finger-nails. The urine occasionally is tinged with blue. The bluish discolouration I believe to be due to some impurity which was formerly present in the commercially prepared compound, for latterly I have failed to notice any of this colouring in patients under the treatment. The drug is applied as a dry powder, when it appears to cause a dry, healthy scab on lesions of continuity, and a gluing together of the edges of incised wounds. Recently I have been using this remedy for treatment of ulcerated legs in old people, and find that in the majority of the cases a clean, dry surface is formed in a few days and healing rapidly promoted without the necessity of bandaging or strapping.

Southwick, near Brighton.

"FUNCTIONAL ACTIVITY OF MAMMARY GLAND IN AN INFANT."

BY F. S. D. HOGG, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE HOUSE SURGEON, WEST LONDON HOSPITAL.

MR. HAWTHORNE'S communication on the above subject in THE LANCET of May 29th is of interest as relating to a somewhat unusual occurrence in the infant and one which is not referred to by many writers on infantile complaints. I came across such a case a few days ago. I was asked to see a female child, one week old, on account of her having vomited a small quantity of blood and, as the nurse believed, having passed some blood by the vagina. On examining the child I could find nothing amiss with her excepting that the breasts were considerably enlarged, not painful, and a milky fluid could be expressed on slight pressure. I directed that this milky fluid should be expressed occasionally, and have heard nothing further of any trouble with the child. The mother of this child and the nurse who was with her at all her confinements stated that both her former children (a boy and a girl) secreted a milky fluid in the same manner, and the mother further states that as infants she and her brothers and sisters were similarly affected. I have only seen one other case, in a child, a female, now eight years old, whose breasts do not now at all differ from those of other children of her age; but on the hearsay evidence of several mothers and nurses I think that this condition must be more frequent

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than the absence of all mention of the subject in most of our text-books might lead one to suppose.

Tillingham.

A MARKED HISTORY OF SYPHILIS.

BY E. CECIL WILLIAMS, M.B. CANTAB.,
PHYSICIAN IN CHARGE OF OUT-PATIENTS, HOSPITAL FOR SICK CHILDREN AND WOMEN, BRISTOL.

THE following history may prove of interest to the readers of THE LANCET on account of its completeness and the remarkable fertility of the woman.

The patient, aged forty-two years, married twenty years, had been pregnant twenty-one times. She was fragile and debilitated, had had no serious illness, but shortly after marriage she had a primary sore, followed by sore-throat and a well-marked rash over the body, for which she was under treatment for ten months. She says that her husband was suffering from syphilis at the time of her marriage. The eldest child was born ten months after marriage, and died at seven weeks. The child had well-marked signs of congenital syphilis. The second pregnancy resulted in a miscarriage at six months; the third in the birth of an eight-months' child, dead; the fourth in the birth of an eight-months' child, dead; the fifth in the birth of a child at full time, who lived two years and seven months, and was rickety; the sixth in a child born dead at six months; the seventh in the birth of a child who is still living and fairly healthy (now aged fifteen years, but has rather a characteristic expression); the eighth in the birth of twins at full time, both dead; the ninth in a child born dead at eight months; the tenth in the birth of a child at full time, who died at the age of nine months (had snuffles and rash on buttocks); the eleventh in the birth of a child at full time, who is alive and fairly healthy; the twelfth in a miscarriage at four months; the thirteenth in a miscarriage at three months; the fourteenth in the birth of a child at full time, who is living; the fifteenth in the birth of a child at full time, who died aged seven weeks; the sixteenth in a miscarriage at three months; the seventeenth in a birth at eight months, the child dying at the age of seven weeks; the eighteenth in a miscarriage at four months; the nineteenth in the birth of a child at full time, who is three years of age and healthy; the twentieth in the birth of a full-time child, who is two years of age, but rickety; and the twenty-first in the birth of a child at full time (now aged six months), who is markedly syphilised and has snuffles, excoriations on the buttocks, and is wasting. The mother presents no symptoms of tertiary syphilis. She says that since the secondary symptoms, twenty-one years ago, she has had no symptom of the disease, but she has suffered from leucorrhœa and bearing-down pains. It certainly appears as though she had been rendered immune to the disease. I have seen two of the children; they have the facial expression of congenital syphilis, but appear to be fairly well. From what I could gather from the mother those that died were markedly syphilitic.

Bristol.

LONGEVITY.—A correspondent has forwarded to us a paragraph which has recently come under his notice, giving the following instances of longevity. It was taken from the *Saltburn-by the-Sea and Guisboro' Herald* of Sept. 2nd, 1887: "There were interred in the Skelton Churchyard, on Sunday last, the remains of an old resident, Mary Husband, aged 101. In the same churchyard is to be found a tombstone recording the death of James Moon, aged 106; his wife, 84; and his sister, 101."

THE annual meeting of the Association of Registered Medical Women was held in the library of the Association (New Hospital for Women) on June 1st, at 8 P.M. There were present Mrs. Garrett Anderson, M.D. Paris, retiring President, in the chair, and twenty-four members. The proceedings were of a business character; the managing committee and sub-committees for the ensuing year were elected and the constitution of the association was reconsidered. Miss Cock, M.D. Brux., was elected president for the year in succession to Mrs. Garrett Anderson, and Mrs. Stanley Boyd, M.D. Brux., was elected vice-president.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF STRANGULATED FEMORAL HERNIA; GANGRENE OF BOWEL; PRIMARY RESECTION; RECOVERY.

(Under the care of Mr. H. BETHAM ROBINSON.)

THE best method of treatment to be employed in cases of gangrene of the bowel resulting from strangulated hernia is by no means settled. Two plans are open to the surgeon; he may at once resect the gangrenous gut and suture the divided intestine, or he may content himself with making an artificial anus and postpone to a future occasion the operation for restoring the continuity of the bowel. Primary resection of the intestine is by no means new; it was done in 1794 by Nayler, of Gloucester, and in two cases Sir Astley Cooper performed it, advising it in the following words:[1] "When the whole cylinder of the intestine is mortified it is necessary to proceed very differently. Then the mortified part of the intestine should be cut away and the ends are to be brought in contact and confined by means of four sutures," though Sir Astley Cooper saw fit later to modify his opinion. The formation of an artificial anus, though easily and rapidly carried out, necessitates a second operation later, and this naturally greatly increases the risk. If reliance could be placed on statistics the question would be at once settled, for Kendal Franks[2] gives the mortality after primary suture in 220 cases as only 48 per cent., while the death-rate of the cases in which an artificial anus was made was 80 per cent., and of the secondary resections 38 per cent. Zeidler[3] gives the following mortality in cases of gangrene of the bowel in herniæ in St. Petersburg:—Of 289 cases of primary resection 49 per cent. died, and of 287 cases in which an artificial anus was formed 74 per cent. died. These results are even more striking when we compare them with the statistics collected by Berry[4] of all cases of strangulated hernia in ten years in the hospitals of St. Bartholomew's, Guy's, and St Thomas's; of the 946 cases the mortality was 44 per cent, or only a little less than the mortality after primary resection. There are, however, many fallacies in these statistics of the treatment of gangrenous bowel. In the first place, many of the unsuccessful cases of primary resection undoubtedly never find their way into print; and secondly, primary resection is generally only employed in cases in fair general condition, and in all moribund cases the surgeon contents himself with making an artificial anus. Another fallacy is due to the difficulty of being certain in many cases that the bowel is really beyond recovery, and it is by no means improbable that the list of successful cases includes some in which an unnecessary resection has been made; but even when all these sources of error have been taken into account most surgeons will agree that primary resection is the preferable operation in suitable cases. Indeed, the general condition of the patient at the time of the operation is the only trustworthy criterion of the course to be adopted. Should the strangulation have been of long standing, and the patient be utterly collapsed, it is unwise to waste time in doing a resection, and an artificial anus holds out the only hope of a successful issue; but should the general condition of the patient be fair and the pulse good a primary resection offers the best chance of a cure. There is an objection to an artificial anus to which often sufficient importance is not attached; if the opening into the bowel is at a point higher than the lower part of the jejunum the lack of absorption of the products of digestion may be so great that the patient may die from exhaustion, even though taking an abundance

[1] Anatomy and Surgical Treatment of Inguinal Hernia, p. 33.
[2] THE LANCET, April 8th, 1893, p. 794.
[3] Centralblatt für Chirurgie, 1893, p. 62.
[4] Quoted by A. Bowlby, THE LANCET, April 8th, 1893, p. 795.

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of food.[6] Sir William MacCormac in his Bradshaw Lecture,[6] after advocating primary resection in suitable cases, recommended that the resection should be performed at the site of the hernia in the inguinal variety, but through an abdominal section in the femoral form. Primary resection has many advocates, as Chaput,[7] C. B. Lockwood,[8] Kendal Franks,[9] F. T. Paul,[10] and Heydenreich.[11] Recently some surgeons have advised the formation of a temporary artificial anus, followed after a very short interval by a resection; the interval may be from five days to three weeks.[12] This is an important modification, which will, without doubt, be of value in cases too profoundly collapsed for primary resection.

A widow, aged sixty-two years, was admitted into St. Thomas's Hospital on Oct. 3rd, 1896, suffering from a strangulated femoral hernia on the right side. She had noticed a swelling in the groin for about two years which had gradually become larger, but without causing any symptoms. For four days before admission this had been getting harder and uncomfortable, and there had been absolute constipation; vomiting had been frequent, but only bile-tinged. On admission to hospital the hernia was dense and hard, without any impulse, the skin over it was rather reddened, and there was considerable tenderness. At 10.30 P.M. the operation was performed. The incision was the usual vertical one, and on opening the sac blood-stained fluid with a faint fœtid odour escaped. The contents were omentum and gut. The omentum was matted and considerably ecchymosed; the gut, which was hidden under the omentum, was seen to be small intestine and very dark. The constriction at the neck was extremely tight, so that the hernia knife was introduced with difficulty. After releasing the structures and pulling the gut down it was seen that the dark gut was sodden and without polish, and had been so tightly gripped as to leave nothing more than peritoneum at the neck. As the woman's condition was extremely good it was decided to resect immediately. Assisted by Mr. Abbott, the resident assistant surgeon, the matted omentum was first removed and the loop of gut was then drawn down. As the damaged bowel was four inches in length five inches of bowel were removed with the corresponding wedge of mesentery. Before doing this Makins's clamps had been put on the bowel above and below. After the section the ends of the bowel were carefully cleansed and disinfected. Bleeding from the mesentery was free and particularly from the upper angle; so much was it so, and owing to some retraction under Poupart's ligament, that the latter structure was divided across, throwing the lower part of the abdomen and hernial sac into one. This proved a great gain, for not only could the bleeding mesentery be easily dealt with and its vessels secured, but afterwards it enabled the sutured bowel to be replaced with care and not subjected to the squeezing which is unavoidable through the slightly enlarged femoral ring. The assistance of any mechanical aid to suturing was dispensed with. Beginning from the mesenteric border the mucous membrane was brought together by continuous silk sutures, taking great care to lessen the lumen as little as possible. Lembert's sutures of fine silk were next inserted in a single row, the mesenteric border being securely covered in. The edges of the mesentery were brought together with a continuous silk suture, and the re-united bowel was placed in the lower abdomen over the femoral ring. The hernial sac was removed, the peritoneum of the lower abdominal wall was sutured, and the soft parts were brought together with silkworm gut and horsehair stitches. No drainage was used and the wound was dressed with cyanide gauze. Suturing the bowel took thirty-five minutes, and the patient's condition at the end of the operation was very satisfactory. Her progress was good and for the first few days without anything to comment on. Her temperature varied between 99·4° and 100·6° F. Nutrient enemata were given and the mouth was kept moist. On the evening of the 7th (the fourth day) she passed flatus freely and the enemata were returned. On the 8th she was not quite so well owing to a feeling of discomfort in the abdomen. There was a little fulness and she had an inclination to vomit. The tongue was moist and the temperature only 99·4°. A turpentine enema was given with a good result, a feeling of relief ensuing. The bowels were opened a little naturally in the evening. On the 9th, although she felt much better generally, she had passed a restless night, with some pain and distension. On exploring the wound there were found to be present some swelling and fluctuation at the lower part. Two stitches were removed and about three ounces of offensive, fæcal-smelling, dirty pus were evacuated. As this appeared to occupy the space of the original hernia a counter opening was made and a drainage-tube was introduced and the cavity washed out with boracic lotion. From this time she rapidly recovered. There was no discharge of fæces from the wound at all. The bowels were opened naturally again on the 12th and from then generally daily. The drainage-tube was taken out on the 13th and the wound soon healed. She was up on the couch on the twenty-first day after the operation, although she was rather weak and low, which was not surprising considering her age. She soon left the hospital and gradually recovered strength without any subsequent symptoms. As lately as the middle of April she was looking strong and well without any complaint. There was bulging over the seat of the operation, and for this an ingenious truss has been applied causing pressure on both lower abdominal and femoral regions.

Remarks by Mr. BETHAM ROBINSON.—In the first place, here is another case which demonstrates the feasibility of immediate resection of gangrenous intestine and its great gain to the patient if successful. This method of treatment, still on its trial so to speak, can only be judged by the result of cases collectively, although isolated cases may show successes. Undoubtedly many, because unsuccessful, get buried in oblivion, whereas, if recorded, they might assist in arriving at a positive conclusion. That it has its place there can be no doubt, and among the failures many factors have to be considered. Secondly, it will be noticed that simple suturing was adopted—a method probably, if done with fair speed, superior to all mechanical aids so far introduced. Lastly, the age of the patient shows that this need prove no barrier to success.

[6] Sir Astley Cooper, loc. cit., p. 33.
[6] THE LANCET, Dec. 16th, 1893, p. 1490.
[7] La Semaine Médicale, March 21st, 1894.
[8] THE LANCET, March 17th, 1894, p. 672.
[9] Loc. cit.
[10] Transactions of the Clinical Society, 1892, p. 229.
[11] La Semaine Médicale, Jan. 13th, 1892.
[12] Treves: THE LANCET, March 17th, 1894, p. 673. Also H. H. Clutton: Annals of Surgery, 1894, vol. xix., p. 416.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Musical Mitral Murmurs in Connexion with Aortic Stenosis.

A MEETING of this society was held on June 8th, the President, Dr. HOWSHIP DICKINSON, being in the chair. Various alterations in the by-laws proposed by the council were adopted, with trifling modifications. The most important was one diminishing the distance from the society's house within which Fellows were regarded as "resident Fellows," with the higher rate of subscription, from fifteen miles to seven miles. The congratulatory address to Her Majesty as patron of the society, drawn up by the council in accordance with the resolution passed at the previous meeting, was approved by the Fellows and signed by the President.

The PRESIDENT read a paper on the Occurrence of Musical Mitral Murmurs in Connexion with Aortic Stenosis. Four cases were related in which a systolic musical murmur, thought to be produced by mitral regurgitation, was associated with obstruction of the aortic exit. In one the mitral valve was practically sound; in the others the mitral valve was diseased as well as the aortic. Case 1 was that of a boy who had, together with much evidence of intra-ventricular tension, an intense apex systolic murmur which had a musical tone. After death the aortic orifice was found to be almost completely closed by recent vegetations; the mitral valve was practically natural. The mitral murmur, as it was thought to be, was the only murmur heard. It was attributed to the over-distension of the ventricle due to the obstruction of its aortic exit, and to consequent leakage of the mitral valve under the abnormal pressure to which it was subjected. Case 2 was that of a man who, after having been for some time under treatment with the ordinary signs and symptoms of disease of the aortic valve, developed a murmur indicative of mitral regurgitation which was attended with a definite squeak like that of a mouse. After death the

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heart was found to be greatly hypertrophied, especially as to the left ventricle. The pericardial cavity was obliterated by old adhesions. The aortic orifice was obstructed by fibroid thickening, the mitral orifice being crescentic and contracted. The sound was presumably imparted to the murmur by the intra-ventricular tension occasioned by the ventricular hypertrophy and the state of the aortic exit. Case 3 was that of an old man who displayed shortly after admission, and shortly before his death, a systolic whistle in the mitral area. The left ventricle was found to be hypertrophied, the aortic valves calcified, and the opening contracted; the mitral valve was thickened, but the orifice was not dilated. Case 4 was that of a man, fifty-four years of age, who had at the apex a distinct systolic squeak like the high note of a fiddle. The heart was found to be hypertrophied. The aortic orifice was almost closed, partly by old rigid thickening and partly by recent soft vegetations. The edges of the mitral valve were slightly thickened, as also were those of the tricuspid. The musical murmur was attributed, as in the other cases, to the occurrence of mitral regurgitation in small volume and at high pressure, the high pressure being due to the ventricular hypertrophy and the aortic obstruction. The cases recorded were held to indicate that in aortic obstruction, together with hypertrophy of the left ventricle, a peculiar tone may be imparted to mitral regurgitation, probably in consequence of the force under which it is produced.

Dr. NORMAN MOORE thought that the President had done well in drawing attention to these cases, in which the nature of the lesion had been verified by post-mortem observations. It was too often the custom to speak as if everything were known about murmurs and their production. But there were many gaps in knowledge, particularly as regards post-mortem verification. Dr. Dickinson's explanation of the condition he described was ingenious and probable, but he still felt in some doubt as to whether it was the only possible explanation. He wished particularly to know what was the character of the murmur as heard at the patient's back. Following the teaching of the late Dr. Andrew, he had been led to assume that if a systolic apical murmur was lost in passing out into the axilla, and was inaudible at the angle of the scapula, it was probably of aortic origin. Now that attention had been drawn to these cases it would be most important for future observers to go carefully into the character of the pulse, and possibly the sphygmograph might give evidence as to whether there was mitral regurgitation. Dr. Moore remarked that it was often possible to obtain information as to the origin of a systolic murmur which was audible at the base as well as at the apex by listening at the right supra-scapular fossa and at the angle of the right scapula. If the murmur were heard loudly above, but faded away on passing downwards, and was inaudible at the angle of the scapula, the murmur was probably due to aortic stenosis only; but if the murmur became clearer at the angle of the scapula there was probably mitral regurgitation associated with aortic stenosis.

Dr. DE HAVILLAND HALL said that he had met with puzzling cases which he now thought might have been of this nature, but he had had no opportunity of making pathological observations. He asked Dr. Dickinson if there were any thrill in the cases.

Mr. F. J. GANT remarked on the unfavourable influence which such a condition of the heart would have on the prognosis if a patient were attacked with pneumonia.

The PRESIDENT, in reply, said that in some of the cases there were ordinary mitral murmurs present as well as the squeak, and they were conducted into the axilla in the ordinary way. In one case the squeak was heard in the axilla, but he could not say if it was conducted to the back. In only one of these cases was the squeak associated with mitral stenosis.

OBSTETRICAL SOCIETY OF LONDON.

Parturition during Paraplegia.

A MEETING of this society was held on June 2nd, Dr. C. J. CULLINGWORTH, President, being in the chair.

Dr. AMAND ROUTH read a paper on Parturition during Paraplegia, with cases. The patient was a multipara, with complete paraplegia below the level of the sixth dorsal vertebra, who was admitted into a surgical ward of Charing-cross Hospital under his colleague, Mr. Astley Bloxam, half an hour after the accident which caused the paralysis. She was then nearly seven months pregnant. For eight days uterine intermittent contractions were absent, when they became gradually more and more perceptible. After two months the patient was transferred to a special ward, and labour came on 261 days after the last menstruation without the patient feeling any pain. The first stage lasted ten hours, and the second two and a quarter hours. The placenta followed, aided by a slight "expression," in five minutes. The patient's only sensation during a "pain" was a "tight feeling" at the epigastrium, giving her an inclination to hold her breath, but this tightness was in no sense painful. As the head was passing the vulva the patient cried out, but this also seemed a reflex act and was unaccompanied with sensation of pain. The "pains" were not as well defined as in a normal case, the intermissions being often absent, as judged by the vaginal touch and the hand on the uterus. In fact, the "pains" rather remitted than intermitted. Retraction was not good for some hours, but there was no undue hæmorrhage. Uterine involution and lactation were quite normal. Death occurred six months later, and full details of the pelvic organs, the fractured spine, and the cord were given. The following views seem to be fairly established:—1. The act of parturition is partly automatic and partly reflex, these actions corresponding in the main to the first and second stages of labour respectively. 2. Direct communication with the brain is not essential to coördinate uterine action though the brain seems to have a controlling influence upon the "pains," helping to make them regular with well-defined intermissions. 3. Direct communication between the uterus and the lumbar enlargement of the cord, through the medium of the sympathetic ganglia between the first and third lumbar, is probably essential to the regular and coördinate contraction and retraction of the uterus, as occurs in normal parturition. 4. It seems also probable that the uterus is able automatically to expel its contents as far as the relaxed part of the genital canal even when deprived absolutely of spinal influence, spinal reflexes being then necessarily absent. 5. Lactation is not solely due to nervous influence, but partly to chemical changes in the blood.

Dr. MOTT remarked that he had examined sections of the spinal cord at the seat of the lesion, and had found that the crush had completely destroyed the nervous structure at the seat of the injury; but that apparently many cells in the anterior horn of the lumbar enlargement were fairly normal in appearance. Inasmuch as these were still in connexion with the uterus, this case did not prove, like the dog of Goltz, the independence of action of the uterus. He (Dr. Mott) had seen demonstrated at the International Congress at Berne the control of the sphincters in this animal, deprived previously of a great part of its spinal cord. The experiment proved that in the dog the uterus could contract effectually without cerebro-spinal influence, and that the sphincters could maintain their tonus—facts which upset all previous notions. It must be remembered, however, that the sympathetic chain and the posterior spinal ganglia remained. These are connected and probably formed the reflex arc which maintained the tonus in the sphincters. He ventured to suggest that the physiological stimulus for the blood of the onset of labour might be a bio-chemical condition of the fœtus at full term—e.g., an increase of carbon dioxide. That profound bio-chemical changes take place during pregnancy is highly probable; the enlargement of the mammary glands in this case after interruption of the spinal connexion between these structures and the uterus suggests this, and the fact that the mammary glands enlarge after all the nerves have been divided, both cerebro-spinal and sympathetic, proves that an altered condition of the blood can be the only means of bringing about disassociated functional activity in two remote structures.

After remarks by Dr. GILES, Dr. MCCANN, Dr. PEMBREY, Dr. HEYWOOD SMITH, Dr. HANDFIELD-JONES, Dr. JOHN PHILLIPS, Dr. BERTRAM ABRAHAMS, and the PRESIDENT, Dr. AMAND ROUTH replied. He agreed with Dr. Mott that the crux of the whole question was the difficulty in determining the cause of the onset of the labour at term. The cause was probably a bio-chemical one, and Dr. Mott's suggestion that this resulted from the accumulation of carbonic acid in the placental circulation was not likely to be rejected, for it was known that asphyxia produced uterine contraction and caused abortion if pregnancy existed.

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WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A CLINICAL MEETING of this society was held on June 4th, Mr. W. BRUCE CLARKE, President, being in the chair.

Dr. HENRY SUTHERLAND showed (1) a case of Epilepsy, the disease having commenced after a miscarriage at the fifth month; and (2) a girl, aged nine years, with congenital absence of the iris.

Mr. MCADAM ECCLES showed (1) a woman, aged forty-eight years, with Symmetrical Nodules of a Fibrous Nature on the posterior aspects of both ulnæ; she was affected with chronic rheumatoid arthritis; and (2) a man, aged seventy-five years, with a Rodent Ulcer of the Left Axilla. There was extensive superficial ulceration, with rolled edges, serosanious discharge, and slight induration. A microscopic section of the ulcer showed the usual appearance of rodent ulcer.

Dr. H. P. POTTER showed a man, aged fifty-nine years, with Scurvy due to privation. He had extravasations on the dorsum of each foot, in the calf of one leg, ecchymosis and purpura of the legs and arms, spongy and bleeding gums, with marked fœtor of the breath. Under a liberal diet, including potatoes, he was recovering.

Mr. L. A. BIDWELL showed (1) a woman, aged fifty-one years, with a Swelling connected with the Left Wrist and another on the outer side of the Right Elbow; they were probably of a tuberculous nature; (2) a man, aged thirty-four years, with a Primary Sore affecting the Right Cheek; and (3) a girl, aged seventeen years, who had had a Swelling just above the Hyoid Bone for ten months. This swelling had gradually increased to the size of a hazel nut.

Dr. BURRELL showed two cases of Mucoderma.

Dr. SEYMOUR TAYLOR showed a man, aged fifty years, who had had an Injury to his Head twelve weeks ago, when he was admitted to hospital in a comatose condition, with hæmorrhage from the right ear. He now has facial palsy, loss of taste in the right side of the tongue, and paresis of the right side of the soft palate; there was no deafness. The diagnosis was fracture of the petrous bone or hæmorrhage into the aqueduct of Fallopius.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.

A MEETING of this society was held on June 2nd, the President, Dr. ARGYLL ROBERTSON, being in the chair.

Mr. CATHCART showed a woman on whom he had successfully operated for Perforation of a Gastric Ulcer. He had seen the case seven hours after the onset of the symptoms and agreed with the patient's medical attendant that they were due to the condition indicated. At the operation it was found that the peritoneum generally was not affected. The perforation was found on the posterior wall near the lesser curvature. It was closed by folding in the edges and stitching the opposed surfaces together. He washed out the lesser peritoneal sac. The patient made an excellent recovery and was in better health than she had experienced for years.

Dr. STEWART STIRLING showed a child with Psoriasis in whom the distribution was unusual.

Dr. NORMAN WALKER showed a girl with Scleroderma of the Upper Arm, which had improved under the internal administration of thyroid extract combined with baths and massage.

Mr. MILES showed a specimen of Hydrocele of the Cord obtained as the testicle had to be removed for strumous disease. He also showed the bones from a case of Middle-ear Disease in which death was due to septic meningitis, notwithstanding free opening and other measures. The case clinically presented several of the characters of cerebral abscess.

Dr. ALEXANDER BRUCE made a communication on the Endogenous Fibres of the Lumbo-sacral Region of the Cord. These fibres occupy a small area on the posterior aspect of the cord at the side of the posterior fissure, and another area anterior to the postero-median column. These two areas were unaffected in locomotor ataxy, but were degenerated below the seat of lesion when the cord was destroyed transversely. He believed that the fibres in these tracts contained fibres derived from the posterior horns and united different levels of the cord. He held that the fibres had a downward course in the cord. The communication was illustrated by an admirable lantern demonstration and by sections shown under microscopes.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Distension of the Bladder with Air in Supra-pubic Cystotomy.—Pyloroplasty.—Fracture of the Metacarpal Bone of the Thumb.

A MEETING of this section was held on May 14th, Mr. WILLIAM THOMSON, President, being in the chair.

Mr. JOHN LENTAIGNE exhibited an apparatus for distending the bladder with air in the operation of supra-pubic cystotomy. It consisted of an indiarubber air-pump with reservoir of the same material, similar to that used with the ordinary hand spray. This was attached by means of a rubber tube to a silver catheter, which was introduced into the bladder. In using the apparatus the reservoir was first distended with air, which was then allowed to gradually distend the bladder, and the operation was then performed. If it became necessary to force the bladder forward in the wound pressure was made on the reservoir outside. Mr. Lentaigne had used this apparatus in a recent case, in which he had closed the bladder wound with catgut sutures, and the entire wound had healed by first intention.

Mr. LENTAIGNE also exhibited a patient on whom he had performed the operation of Pyloroplasty on Feb. 26th last for fibrous stricture of the pylorus with great dilatation of the stomach. The healing of the wound had been uneventful, and the patient, who was now apparently in perfect health, had gained over 2st. in weight.—Mr. MYLES said that if the operation of pyloroplasty took two hours in the hands of a skilful operator it compared very unfavourably with the operation of gastro-duodenostomy, which could be done in about twenty-five minutes. The results of the latter operation were also very favourable.

Professor E. H. BENNETT gave some further particulars in relation to the Fracture of the Base of the Metacarpal Bone of the Thumb in addition to those which he published in 1881 and in 1886. Continued observation has fully established this injury as the commonest metacarpal fracture. Photographs taken with the x rays confirm the view he had published as to the path of the fracture passing obliquely through the base without implication of the dorsal surface of the bone.—Mr. SWAN said that many surgeons had considered the injury to be a dislocation; it was not until he read Professor Bennett's communication in the *Dublin Quarterly Journal* of 1881 that he understood the nature of the injury.—Sir WILLIAM STOKES said that they owed the description of the injury to Professor Bennett, who had received very full recognition by eminent writers, not only at home, but in France and Germany, for having given the best description of the injury.

Reviews and Notices of Books.

A Short Practice of Midwifery, embodying the Treatment adopted in the Rotunda Hospital, Dublin. By HENRY JELLETT, B.A., M.D., B.Ch., B.A.O. Dublin University, L.R.C.P. Irel., L.M., Assistant Master, Rotunda Hospital. With a Preface by W. J. SMYLY, M.D., F.R.C.P. Irel., late Master of the Rotunda Hospital. With 45 Illustrations and an Appendix containing the Statistics of the Hospital for the last Seven Years. London: J. & A. Churchill. 1897. Price 6*s*.

DR. JELLETT has written this little book partly at the request of several of his pupils, and partly as an exposition of the principles that govern the practice at the Rotunda Hospital. There is an interesting introductory preface by Dr. Smyly, who indicates some of the main points in which that practice differs from what is generally taught elsewhere, and he expresses his responsibility for them.

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Foremost among these may be mentioned plugging the vagina in cases of accidental hæmorrhage. Formerly, Dr. Smyly tells us, his custom at the Rotunda in all serious cases of accidental hæmorrhage was to rupture the membranes. The results under this treatment were not at all favourable. Latterly, therefore, he has altered his practice, and now in all cases of external accidental hæmorrhage, when the pains are absent or slight and the membranes are intact, he plugs the vagina tightly, and under this form of treatment the results have shown a great improvement.

There is a very excellent chapter on the subject of Antiseptics in Midwifery. The bacteriological condition of the vulva, vagina, and cervix is carefully described, as well as the means provided by nature when labour is normal and free from interference to protect the mother from any evil consequences. It is recommended that the external genitals and skin round should be washed thoroughly with soap and water. If any intra-uterine operation is about to be performed the vagina is disinfected as well. This is done by first douching with creolin solution (half an ounce to a gallon), then scrubbing its walls with a clean piece of soap and the fingers, and then douching again. Dr. Jellett objects to the use of corrosive sublimate in vaginal douching, as, apart from the possibility of poisonous effects, it causes roughening and brittleness of the vaginal mucous membrane, making it more likely to crack, and so facilitating the introduction of septic matter. The advice given as to the disinfection of the hands is altogether satisfactory, and we quite agree with him as to the employment of lubricants. "Avoid," he says, "the use of lubricants if possible. Carbolised vaseline is never safe, particularly when kept in a box into which dirty fingers are introduced from time to time." He prefers soap which has been boiled in the making as a lubricant if the outer layer is first washed off. We think, however, that perchloride glycerine (1 in 1000) is more convenient and reliable for this purpose.

In the chapter on Craniotomy and Embryotomy a Winter's modification of Auvard's combined cranioclast and cephalotribe is recommended, which is little known here and would seem to be worth trying. As regards the conditions necessary for performing craniotomy we do not quite agree with the author that the conjugata vera must measure more than two and a half inches. It is quite true that even in a flat pelvis with a true conjugate of that value craniotomy or cephalotripsy may be an extremely difficult operation, but it is not by any means always so, still less is it impossible to perform it. Nor can we agree that "the extraction of even a perforated head through a pelvis which is smaller than this is so dangerous that it should not be attempted." Perhaps this is meant to apply to those with only an ordinary amount of experience. But obstetricians of large experience at the present time have certainly not had reason to agree with the extract just quoted. Dr. Smyly tells us that he has with the greatest reluctance abandoned the use of chloroform in puerperal eclampsia. He thinks that chloroform does not save the patient's life, but on the contrary increases the chance of a fatal issue. He prefers morphia—half a grain is given hypodermically when the first fit occurs, and is followed every two hours by a quarter of a grain till the fits cease; not more than two grains are to be given in the twenty-four hours.

The book is clearly and concisely written. It appears to us admirably suited to the student; we may add that it also contains much that should make it useful to the practitioner.

JOURNALS, REVIEWS, &c.

The contents of the *Medical Magazine* for June are a little disappointing. A good paper by Mr. Poyntz Wright defines the various relative powers, duties, work, status, and mode of appointment of county medical officers of health, local district health officers, and sanitary inspectors, and will be found instructive reading; but is the author not a little hard upon district councils when he sweepingly speaks of their "bigoted prejudice," "supineness," and "inveterate obstinacy"? In our opinion these councils are remarkable chiefly for their willingness to be led. If the moving spirit is liberal-minded the council is on the side of the true public weal, but if the most important man on the council is a reactionary and ignorant man short-sighted methods will follow. Of the rest of the contents the most noticeable is a short article by Dr. Pye-Smith, F.R S., upon the complicated question of the University of London—a sequel to a previous contribution. The reader will find in this article a lucid statement of the present difficult situation.

Belgravia contains an informatory article from the pen of the editor, entitled "Sixty Years of Healing." The subject is the work of the London hospitals during the present reign, and there is no doubt that the publication of such papers in magazines stimulates popular charity by bringing home to general comprehension the magnitude of the work undertaken by the greatest of the metropolitan charities. The article is not exhaustive, and several institutions that have obtained no mention are much more worthy of notice than several whose claims are urged; but the information here collected concerning the income and expenditure of the hospitals is not often seen outside the columns of the medical journals, and will therefore appeal as something fresh to a lay public.

The *Inter-colonial Medical Journal of Australasia* contains among other papers an interesting communication by Dr. R. R. Stawell upon Thyroid Gland Extract as a Galactagogue. The value of a reliable medicine that would promote the secretion of milk would be immense, so that Dr. Stawell's results will have an interest for many practitioners. He details only nine cases, and, while admitting that this is but small clinical experience from which to generalise, concludes with some reservations that extract of thyroid gland is an efficient galactagogue. The dose given was from three to five tabloids per diem. In view of Dr. Stawell's results we think that medical men are justified in giving the treatment a trial.

In the *Phonographic Record of Clinical Teaching* for May Dr. Poore, in a lecture on Writer's Cramp, points out that the cause of the failure must be looked for anywhere "between the motor cortex and the tips of the fingers," and there is always some other defect than the inability to write. Dr. Poore has never examined a case without finding something definitely amiss, some wasting, tremor, paralysis, or something wrong with bones or ligaments, and the defect may be the forerunner of hemiplegia, a symptom of lateral sclerosis, or a result of lateral curvature of the spine. Mr. Jones Greer, writing from personal experience of West Africa, advises those who proceed to that white man's grave to maintain a high standard of personal health by the avoidance of excesses of all kinds, by keeping regular hours, by the use of the morning tub, and by boiling all drinking water if it appears of doubtful quality. On feeling out of sorts ten grains of quinine should be taken with a little whisky, and the patient should go to bed and perspire freely. In the treatment of the endemic fevers hyperpyrexia is best treated by antipyrin, phenacetin, and the cold bath, rather than by quinine. Not more than thirty grains of quinine should be given in twenty-four hours, and the quantity should be gradually diminished as the fever subsides. A shorthand edition of Dr. Gowers's lectures on the diagnosis of diseases of the brain, brought up to date, is announced as nearly ready for issue.

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THE LANCET.

LONDON: SATURDAY, JUNE 12, 1897.

THE attention of Parliament is again to be directed to the question of lunacy reform. It has been found expedient further to amend the Lunacy Act of 1890, and a Bill has been issued with this object. The Act of 1890 was a measure of great importance to the public generally, and to those engaged in the care and treatment of the insane. Although defective in many respects it possessed one strong redeeming feature, for under its provisions the various Acts which had been passed from time to time were consolidated, and it became possible to ascertain with some degree of precision the relation of the law to the various classes of patients and to those responsible for its due observance. The Act was doubtless framed with good intentions, and in providing additional protection to the public, in multiplying the safeguards and privileges of patients, in placing the private patient on a nearer equality with the pauper so far as orders of detention are concerned, and in other ways its operation has been attended with beneficial results. On the other hand, owing to faulty draughtsmanship and to somewhat hasty legislation, many of its provisions are defective, others are irritating and vexatious, the meaning of many of the sections is by no means clear, and the increased burden of clerical work thrown upon the medical officers of asylums constitutes a grievance which time and custom have served only partly to modify. The necessity for further amendment is abundantly evident. The new Bill, which attempts to remedy a number of deficiencies, contains thirty-nine articles, or rather clauses, to which those engaged in asylum work must be prepared to subscribe, unless, indeed, the Bill is amended in its passage through the Legislature. It would be inexpedient to dwell at length on the changes dealt with in the various clauses, but some of the more salient features may be alluded to. It is proposed to curtail the time during which an urgency order is to remain in force from seven to four days. Further, the person who signs an urgency order and the medical practitioner who signs the medical certificate on which the urgency order is founded will in future be required to furnish an accompanying statement showing that it is necessary for the safety and proper treatment of the alleged lunatic, or for the safety of others, that he should be forthwith placed under care and treatment. The statement must also show fully and specifically why an urgency order is requisite. This regulation may be regarded as too stringent; it cannot fail to add to the perplexities and difficulties which so frequently confront the certifying practitioner, and it certainly will not tend to lessen his medico-legal responsibilities. Many medical men absolutely decline to sign lunacy certificates, and many more are likely to refuse should this rule come into force. In doing so they will act wisely both for the sake of their pockets and for their peace of mind.

One gratifying feature of the new Bill is the recognition of the claims of asylum officials to assured pensions and allowances. This important concession, too long withheld, will materially improve the prospects of the various grades of officials, and they will experience a feeling of relief from the state of uncertainty in which the question has been involved for such a length of time. Indirectly also the interests of the patients will be promoted, because fewer changes are likely to take place amongst the members of the subordinate staff, and the longer experience gained will render their services increasingly valuable. The proposed pension scheme is based upon the Poor-law Officers' Superannuation Act, 1896. It is directed that the provisions of the said Act shall apply to the visiting committee and to every officer of an asylum, in like manner, as nearly as may be, as they apply to guardians and their officers and servants, subject, however, to several modifications. A Secretary of State is substituted for the Local Government Board wherever the Local Government Board is referred to in the Poor-law Officers' Superannuation Act, 1896. The following are some of the principles contained in the Poor-law Act cited above—compulsory superannuation, compulsory retirement, transferred service to reckon as pension, power to add a number of years not exceeding ten in certain cases for peculiar professional qualifications or special circumstances, and power to grant gratuities in certain cases. Section 24 of the new Lunacy Bill empowers the visiting committee of an asylum to grant allowances or gratuities in cases of injury. When an officer of an asylum is injured in the actual discharge of his duty and through no fault of his own, the visiting committee may grant him an annual allowance, or in case of death from the injury they may grant to his widow or mother and to his children, or any of them, such annual allowance or gratuity as they, the visiting committee, may consider reasonable. Certain restrictions are appended as to the amount to be paid, but the scale seems just and fairly liberal. The pension scale is one-sixtieth for every year of service, the maximum of two-thirds not being attainable till after forty years' service; and there is an annual contribution to the pension fund of 2, 2½, and 3 per cent., according to the length of service. Any existing officer of an asylum may signify his intention within three months from the commencement of the new Act of not availing himself of its provisions. The discussion of the pension question some years back revealed very opposing views among asylum superintendents; whether they will be satisfied with the scheme set forth in the new Bill remains to be seen. Their claims to a higher rate of pension are deserving of every consideration, for their whole time is devoted to the service, and their duties are trying, onerous, and frequently dangerous; any endeavour on their part to get the Bill amended in this particular will, we trust, meet with deserved success.

It has been the custom for many years at the State Criminal Asylum, Broadmoor, to allow the patients a certain amount of remuneration for work done. Under Section 28 of the new Bill this principle has been

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adopted; with the object of extending the useful occupations of patients and encouraging them to engage therein, the visiting committee are empowered to remunerate each pauper lunatic for his labour in the asylum at a rate not exceeding one-tenth of the sum at which the committee may estimate the value of the labour, and the remuneration so allowed shall be paid or applied for his benefit in such manner as the committee may direct. This is a wise and judicious step. No doubt the adoption of this principle will mean increased clerical work, but as substantial benefits will accrue to the patients no one will grudge the additional trouble. It is to be hoped that the money credited to patients will not be frittered away in providing them with small additional luxuries at their own request. Rather ought it to be allowed to accumulate and given to the patient when discharged on recovery, or distributed for the support of his family whilst he is under detention. The scheme, if well applied, ought to work beneficially; small difficulties will have to be surmounted in carrying it out, for a perverse lunatic with a balance at his credit on the asylum books is likely to prove on occasion a source of worry to the authorities. A long-recognised want is met by giving the Commissioners power to license houses to be used solely for the reception of idiots and imbeciles. In future all branch establishments must be registered. Heavy penalties are attached to any mis-statement wilfully or negligently made in connexion with an urgency order, or in any petition or reception order, or in any medical or other certificate. With regard to hospitals registered before the commencement of the Act of 1890, the Commissioners shall have power to certify the number of patients to be received, and dire consequences in the shape of fine or imprisonment, or both, are in store for the superintendents of such hospitals should they receive any patient or boarder in excess of the number so certified. Other important subjects are considered in the Bill—e.g., the appointment of magistrates, special inquiries as to lunatics, regulations as to infectious maladies, offences against patients, jurisdiction of Masters in Lunacy, &c. We regret that no mention is made of strengthening the Lunacy Commission by Deputy Medical Commissioners as in Scotland. There were six Commissioners in 1847, there are six now, yet the numbers of lunatics coming under their official supervision have increased sixfold in the space of fifty years.

The new Bill marks a great step in advance in the history of lunacy legislation; no doubt it is capable of amendment in various particulars, but on the whole it may be regarded as an honest attempt to simplify the working of a very difficult and a very intricate subject. We trust that it will prove an additional protection and a lasting advantage to all classes of the insane, and that those engaged in their care and treatment will "under its provisions" reap the benefits to which their arduous and difficult duties fully entitle them.

THE county of Surrey offers many facilities for an investigation into the influence of water-supplies upon health, as it comprises districts having mainly a river water-supply, as Weybridge and Walton; districts supplied from the lower greensand, as Dorking; and districts supplied from the chalk, as Reigate. The fact that these districts are somewhat sparsely populated and present somewhat varying social conditions furnishes difficulties and sources of fallacy, for which allowances must be made. The immediate occasion for Dr. SEATON'S report[1] appears to have been the apprehension created by the events of recent years at Worthing and Newport as to the dangers associated with public water-supplies from the chalk. It would appear that a water-supply from the chalk may be either the purest in respect of organic pollution or the foulest when exceptional and unexpected contamination occurs. The fact that sites on the chalk formations are not infrequently chosen for building large public institutions, which owing to their remoteness from any main system of sewerage are usually drained into soaking cesspools, while chalk in the neighbourhood not infrequently furnishes the public water-supply, gives the subject an added importance. It was brought prominently to the attention of the Surrey local authorities in 1894 by an application to the Local Government Board to borrow £2500 for the purpose of purchasing eight acres of land on Banstead Downs, whereon to erect an isolation hospital for infectious diseases. Objection was made to this site on behalf of the Sutton Water Company. This company derives its water from deep wells in the chalk two and a half miles distant from the site of the proposed fever hospital. Inasmuch as it was proposed to set one and a half acres of the site apart for the treatment of sewage by sub-irrigation and intermittent filtration of all the sewage—except that of enteric patients, which would be cremated—it is difficult to conceive how the water in the Sutton wells could be contaminated. Mr. BALDWIN LATHAM, however, was of opinion that impurities might be carried by fissures in the chalk to the wells of the company, and stated that he knew of fissures in the chalk much longer than two and a half miles. If such objections as this are to hold good, it evidently would be practically impossible to find a site for large public institutions upon the chalk at all. It is satisfactory therefore that the Local Government Board have granted the loan applied for in the above case. Cases like the preceding show the great [practical importance of the subject dealt with by Dr. SEATON. The statistical part of this report consists of a comparison of the death-rate per 1000 during two periods of ten years in four selected districts,—Chertsey (water-supply river, supplemented by shallow wells), Dorking (lower greensand), Reigate (largely chalk), and the Sutton, Carshalton, Leatherhead and Epsom district (almost entirely chalk). In the Chertsey district the death-rate from "fever" fell from 2·4 per 10,000 in 1876–85 to 0·8 in 1886–95; while during the same period it fell in the Dorking district from 1·8 to 0·46, in the Epsom district from 1·1 to 0·48, and in the Reigate district from 1·2 to 0·53.

From these data Dr. Seaton draws the conclusions that (*a*) a marked diminution of typhoid fever has occurred in all these districts; (*b*) that this diminution has been more marked in the districts deriving their water-supplies from the sand and river; but that (*c*) the figures relating to deaths are small, and do not admit of any decisive conclusion, further watching being required, so that conclusions may be revised in the light of the sickness returns now

[1] Annual Report of Dr. Seaton, the medical officer of the administrative county of Surrey.

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becoming available. The following important general conclusion is stated: "So far as chalk water-supplies are concerned, it seems impossible to show that there has been any evidence of their having produced any notable ill-effects as regards typhoid fever." With this conclusion we entirely agree; but it appears to us that the above statistical data, though necessarily based on a somewhat scanty number of deaths, may serve to justify certain additional conclusions which Dr. SEATON has refrained from stating. In the first place, a comparison of the four districts shows that the districts having their water-supply from the chalk had a much lower death-rate from typhoid fever both in the first and in the second decennium than those deriving their water from other sources. Consequently the scope for improvement was much smaller in the chalk districts than in the others. That the mortality from typhoid in the Chertsey district should become reduced by about two-thirds might be expected with improved filtration of its river water, but that Epsom and Reigate should improve by about one-half without any filtration works, appears to indicate that causes are in operation other than the water-supply. In the second place, notwithstanding the smaller scope for improvement, the chalk water-supplies maintain in the second decennium their superiority over the non-chalk water-supplies, as indicated by mortality from typhoid fever. These facts appear to us to give additional importance to the part of Dr. SEATON'S report in which he discusses the question of the origin of typhoid fever apart from polluted water-supplies. The two great water-borne diseases are undoubtedly cholera and typhoid fever, and it has become the fashion to assume that the practical elimination of these diseases is entirely a question of the purity of the water-supply. This fashion Dr. SEATON very ably combats. "In 1879," he says "it had become evident to me that the persistence or endemic prevalence of typhoid fever year after year in districts which I knew to be above suspicion as regards purity of water-supply was incompatible with the assumption that typhoid fever was wholly, or almost wholly, water-borne. The further fact that this endemicity, or persistent prevalence, subsequently disappeared, apparently under the influence of improvements in sanitation (consisting mainly in the control of excremental or filth nuisances), quite unconnected with water-supplies, supplemented the negative evidence by that of a positive character." In England and Wales the death-rate per million from typhoid fever has declined from 277 in 1876-80 to 135 in 1891-94. It might, however, have been expected to be even greater than this, as Dr. SEATON points out, "had impurity of water-supply been the great main factor determining the presence of the disease."

With many other interesting points in this report we have not left ourselves space to deal. It may serve briefly to indicate a few of these. The copious water-bearing resources of the lower greensand in the Hind Head district, are emphasised. The report animadverts upon the reckless waste of water of high organic purity, obtained at the expense of pumping from deep subterranean sources. After a careful consideration of the relative value of the chemical and bacteriological examination of water, they are placed in their true position as "supplementary or auxiliary to inquiry of a medical nature which has generally been spoken of as epidemiology." With Dr. SEATON'S main conclusions most people will, we think, agree. Chalk water should be taken, when the cretaceous formation is on the surface, from sources as remote from the population as practicable. Soaking cesspools in water-bearing chalk or sand should be disallowed. The provision of sewerage systems is as necessary for the prevention of underground pollution in water-bearing strata as for the prevention of pollution of rivers. Finally, a systematic study of the movements of underground water in water-bearing strata is essential "in order to acquire better knowledge of the facts connected with this problem."

THE foundations of the antitoxin treatment were laid in 1890. In that year BEHRING and KITASATO, in their experimental researches on tetanus and diphtheria, discovered that the blood serum of animals rendered immune to the toxins of these diseases was capable of transmitting that immunity to other animals in which it was injected. The subsequent extension of this discovery to the actual arrest of the effects of the virus in inoculated animals led to the introduction of what has been called serum-therapeutics, and, in the case of diphtheria at least, the results of the treatment have been of a striking character. There has been ample opportunity for testing its efficacy, for diphtheria is a disease the prevalence of which is notorious and its share in child mortality is regrettably large. It may be recalled that at the International Congress of Hygiene at Budapest in 1894 Dr. ROUX, of Paris, adduced figures from his experience of the use of diphtheria antitoxic serum that at once attracted attention, for he stated that the continuous employment of this method of treating diphtheria at the Hôpital des Enfants Malades from February to July, 1894, had been followed by a reduction in the diphtheria mortality from 51·7 per cent.—the average of the previous five years—to 24·5 per cent., whereas the rate during the same months at the Hôpital Trousseau had been as high as 60 per cent. This statement alone sufficiently explains the welcome that was accorded to the new practice, and since that day the trials of the remedy, the conditions of its use, and many other facts concerning it have been published in all quarters of the globe. The testimony in its favour has been very large.

It is true, however, that here and there scepticism lingers, and figures have been quoted that seem to tell a different tale. Yet these contrary statements only serve to confirm the general opinion as to its value, for on scrutiny they are deprived of their significance. Thus in a monograph which has recently appeared Professor GANGHÖFNER,[1] of Prague, after detailing the facts advanced on all sides in support of the claims of the remedy, mentions that adverse opinions have been expressed by Professor SORENSEN, of Copenhagen, Professor KOHTS, of Strasburg, and Professor MÜLLER, of Halle. Dr. GANGHÖFNER, however, points out that in each instance conclusions have been drawn on too slender a basis and without adequate trial of the serum. Professor SORENSEN published two papers on

[1] Die Serum-behandlung der Diphtherie, von Dr. F. Ganghöfner (Heft I. des I. Supplementbandes des Handbuchs der speciellen Therapie innerer Krankheiten, herausgegeben von Dr. F. Penzoldt und Dr. R. Stintzing). Jena: G. Fischer. 1897.

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the subject. In the first he contrasts his experience of 51 cases treated with the serum with 46 not so treated. In each series the mortality was 33 per cent., but, believing that the injections favoured a tendency to hæmorrhage, he seems to have used them with great caution, giving only small doses and often delaying the administration for days. Seeing that the success claimed for antitoxin mainly rests upon its earliest possible administration, and that, too, in ample dose, Professor SORENSEN'S negative results are not surprising. In a further return Professor SORENSEN records 9 deaths in 80 cases treated by the serum, but only 5 deaths in 140 without serum, but here the fallacy of selection renders the comparison useless, since the serum group contained twice as large a proportion of severe cases as the non-serum group, and, moreover, in 8 of the 9 fatal cases the serum was not injected until the third to the fifth day. Professor MÜLLER'S figures from the Halle surgical clinic, showing a mortality of 50 per cent. after tracheotomy amongst cases treated by serum, and of 40 per cent. amongst those not so treated, are also open to the criticism that in three-fourths of the former class the injections were delayed until the fourth or fifth day, and in some were of very small amount. The figures of Professor KOHTS, also based on the mortality after tracheotomy, showed but slight difference between the two classes, only his cases were too few in number to allow of any definite inference. Yet even here the mortality was much lower than the average for the preceding five years. But in all these comparative statistics there lurks the great fallacy due to the selection of cases submitted to antitoxin, some cases being untreated because of their mildness and others because the subjects were moribund on admission to hospital. This fallacy has been obviated in the statistics furnished by the medical superintendents of the hospitals of the Metropolitan Asylums Board by contrasting the relative mortality of all cases in the year 1896 (including those in which antitoxin was used and those in which it was not used) with that obtaining in the year preceding the introduction of the antitoxin treatment. The results of that comparison will be found in our last issue, and we may remark that they harmonise with the admitted fact that as a whole the death-rate from diphtheria, not only in London, but in all great centres, has fallen since the introduction of the remedy. As regards these statistics of the Metropolitan Asylums Board attention should be particularly directed to the most striking reduction of mortality effected in those patients coming early under treatment—a fact in favour of the remedial action of antitoxin which is demonstrated with especial force in the case of post-scarlatinal diphtheria, where it was mostly possible to carry out the administration very early indeed.

The utility of the treatment does not rest solely upon statistics, which, however carefully compiled, are open to fallacies due to the varied conditions which must of necessity prevail. It depends quite as much on the general consensus of opinion amongst those physicians who have fairly employed the serum that its use is followed by results no whit less certain than those which are ascribed to other drugs believed to have a specific action. Thus in prescribing antitoxin the physician feels sure of obtaining results as definite as those which ensue on the administration of quinine in ague or salicin in rheumatism. These effects consist in the main in the cessation of the spread of the diphtheritic membrane, its speedy deliquescence, together with a corresponding diminution in the intensity of the local inflammation. It is probably owing to this striking action of the arrest of the local process that under this treatment fewer cases of laryngeal diphtheria are now operated upon and that the percentage of recoveries after operation is larger than it was. How can this be explained except on the ground that the antitoxic serum acts directly upon the virus, preventing further mischief, although impotent to remove lesions already established by the poison? Nor can any objection to its use be based on the fact that certain complications seem to have become more frequent, for if through its agency in certain cases life is prolonged or preserved it would be in these very cases that one might expect the effects of the original virus to be most manifest. It is gratifying to have the assurance of the medical superintendents of the fever hospitals that in all their wide experience they have not met with any effects attributable to the injection itself which were of a nature to cause anxiety. It is true that since its general adoption there have been a few isolated instances of apparent fatal injury, but according to those who have investigated such cases they are one and all capable of other explanation. Even in the case of the most remarkable, and in its circumstances the most painful, of these, which occurred at Berlin last year, it is confidently affirmed that the fatal result must be attributed to cardiac paralysis excited by violent coughing from the inhalation of vomited matters in a susceptible subject, and not to the direct action of the serum or its injection. The subject is discussed in Professor GANGHÖFNER'S monograph, where the grounds for this conclusion are entered into. The case referred to was the more distressing from the fact that the injection was being practised, not for treatment, but for prophylaxis. It is, indeed, remarkable, considering the short time that has elapsed since the method was introduced and the necessarily tentative nature of its application, that so large an amount of confidence should have been awarded to it. This fact by itself surely testifies to its efficiency, and encourages the hope that with time and experience still more favourable results will be obtained.

Annotations.

"Ne quid nimis."

THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON: A ROYAL JUBILEE PROCESSION PROGRAMME.

AN illustrated programme of the Royal Jubilee Procession, authorised by H.R.H. the Prince of Wales, will be published in aid of His Royal Highness's Hospital Fund for London, to which the entire profits will be devoted. The programme will contain detailed particulars of the procession, and sixty-four pages of illustrations will run throughout the pamphlet, with descriptive letterpress underneath. It will be published at one shilling, and will be on sale four or five days

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before the day fixed for the procession, and will form, not only an illustrated guide, but an interesting memento of the day. Our readers, who will remember that last week we advocated exactly this scheme, will join with us in congratulating the officials of the Hospital Fund upon its adoption. We make bold to prophesy that their enterprise will receive substantial reward.

THE PRESENT OUTLOOK FOR THE YOUNG GENERAL PRACTITIONER.

CLUB practice at contract rates and the readiness with which hospitals admit patients combine to render the present outlook for the young general practitioner a far from hopeful one. "If he has means, if he has influence, his success may perhaps be assured; if, without these, he has the good fortune which is the lot of some men, he may find that the lines have fallen unto him in pleasant places; otherwise, he will find that the path is a very stony and a very steep one." So writes a correspondent to us with great truth, continuing: "These reflections are prompted by the fact that, in almost every issue of the journals, one reads that a motion has been passed at a given meeting condemning the acceptance of appointments of a specified nature. It is not fully realised that this affects almost solely the younger generation; it shuts against them another source of employment, already too scanty. The younger men are, as a rule, as eager as their elders to defend the best interests of the profession, but they have a right to ask that they may receive some return for their allegiance and may not be left thereby in a worse plight than formerly. For the settlement of the club question the active support of those who are fortunate enough to draw adequate fees is required, as well as a vigorous and united effort on the part of those already engaged in club practice. The reform of hospitals affects mainly consultants whose reputation is built up upon their hospital appointments; if these continue to place their own interests above those of the profession, they, and not the younger men, are to blame if the latter by these very abuses are driven to work on terms which they know are undignified, but which, by the stress of circumstances, they are compelled to accept."

THE PREVALENCE OF BOVINE TUBERCULOSIS AND ITS POSSIBLE EXTINCTION.

EVERY now and then public attention is called to the great and probably increasing prevalence of tuberculosis among cattle or, more correctly, among cows; for, if we had no more precise information, the disproportion between the 3 per cent. or less of carcasses in the meat markets in which the most careful inspection detects the evidence of disease and the 30 to 60 per cent. or more of cows on dairy farms in which the tuberculin test proves it to be present would be enough to show that tuberculosis is practically restricted to the latter. For the bullocks roaming in the open field or mountain pasture enjoy comparative exemption, and the tuberculous meat in the market is almost exclusively the flesh of cows fattened for the butcher either on account of their age and lessening yield of milk, or from their showing symptoms of the disease in its earlier, though easily recognised stages. There can be no doubt that, though their flesh may at this period be consumed without danger, its quality is deteriorated and its money value proportionately reduced, and that, though their milk may not be already infective, it may at any moment become so, should the glands of the udder be implicated. Unlike human beings, horses, and dogs, cows are notoriously stolid and undemonstrative even when suffering from grave disease, as tuberculosis or cancer; but it is strange that, on grounds both of danger to the public health and of pecuniary loss to the owners, farmers should be so apathetic as to the existence of a disease the aggregate loss from which must be greater than that caused by occasional outbreaks of such affections as pleuro-pneumonia. Tuberculosis, however, being, like other specific diseases, the microbes of which cannot perpetuate themselves for long out of the living body, contracted, whether directly or indirectly, solely by contact or association with other individuals already suffering from it, could be extinguished by rigid segregation and isolation of the healthy from the diseased. Such a procedure cannot indeed be seriously thought of with regard to human beings, and the futility of quarantine and sanitary cordons to arrest the spread of the highly infectious cattle plague has been as conspicuous here as in the case of cholera; but the conditions under which cows are kept on dairy farms, while calculated to favour, if not to render inevitable, the spread of any infectious disease, are also such as to present every facility for the elimination of tuberculosis, requiring as it does for its communication close and prolonged association. The observations of Koch on rodents, of Bang on cattle, and of Boltz on children, not to mention other names, furnish abundant evidence as to the extreme rarity of direct transmission from parent to offspring. Congenital tuberculosis is in the highest degree exceptional, the progeny of tuberculous parents being almost always born free from the disease and remaining so if removed to healthy surroundings immediately after birth; while in the characteristic reaction produced by the injection of tuberculin there is a well-nigh unerring means of diagnosing the existence of the disease, if not in its very earliest beginnings, at any rate at a stage when it is presumably not as yet communicable to others. Bang, whose procedure has been carried out successfully on numerous estates in Denmark, has shown that it is possible to eliminate tuberculosis from a herd in the course of two or three years, without having recourse to the drastic measures employed in the case of cattle plague and pleuro-pneumonia, and with little or no pecuniary loss at the time, but with a great gain in the end. His method consists in testing the entire stock by one or two injections, and the removal of all those that react to a separate establishment at as great a distance from the others as possible. All new purchases are tested in like manner, and the process of inoculation of the apparently healthy animals, with the separation of those that react, is repeated every six months until they cease to give any result. Those that give evidence of being tuberculous are fattened for the butcher, but if already in calf or but very slightly diseased they may be allowed to calve once, or perhaps twice, provided their milk is not used for any purpose except for feeding pigs, and that after being boiled, their calves being transferred at birth to the healthy establishment and tested when about six months old. If public opinion in this country be not ripe for compulsory legislation, it is much to be desired that the county councils should at any rate encourage the practice by diffusing information on the subject and by providing free of cost a supply of tuberculin and the service of expert veterinary surgeons to perform the inoculations and direct the subsequent arrangements.

KISSING THE BOOK.

AS mentioned in THE LANCET of May 29th, p. 1518, the subject of the administration of oaths has again come before the House of Commons in the form of a question put by Sir Walter Foster to the Attorney-General. While it is satisfactory to notice that the learned gentleman promised to consider whether any further amendment of the law was required, this promise was preceded by two statements, both of which are open to criticism. The first is Sir Richard Webster's expression of opinion that the fear of infection alluded to in Sir Walter Foster's question had

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been somewhat exaggerated. Even if this were simply a matter of opinion it is surely rather one to be decided by the medical profession than by the lawyers. But if Sir Richard Webster will devote an hour of his leisure during the Whitsun recess to the practical study of the administration of oaths as seen during the hearing of the night charges in any of the metropolitan police-courts he may be induced to see that it is a matter of fact, rather than of opinion, which cannot be exaggerated. Let him carefully scrutinise each witness as he or she comes up to the book to be sworn and ask himself if he would like to touch or kiss the same book? Let him also ask what will be the effect if one of these days the fact of infection with some disease should be traced to the book beyond all doubt? Will the infected witness have his remedy in an action for damages, and, if so, against whom? Moreover, Sir Richard Webster pointed out that "under the provisions of the Oaths Act of 1888 witnesses were now permitted to take the oath in the Scotch form, in which it was unnecessary to kiss the book." But he must have known perfectly well when he made this statement that numerous cases have been published in THE LANCET and in the daily press in which witnesses (chiefly medical) have been denied this legal right by those whose duty it was to administer it, these latter having been wholly ignorant of the Act referred to. And even when the Act was known, the form of Scotch oath could not be found, though each official to whom this duty is entrusted ought to have it at his fingers' ends quite as readily as the English form. Again, the Attorney-General must be perfectly aware that with very few exceptions the average witness knows no more about the Scotch oath and the fifth section of the Oaths Act, 1888, than he does of the man in the moon, the Act being to him as veritable a dead letter as if it had never been passed. Nothing but its total abolition can change the ordinary form of English oath, and we trust that a Bill for this purpose will be introduced very soon after the reassembling of Parliament. If it is not, we trust that Sir Walter Foster will repeat his question and be warmly supported by other members.

STREET RUFFIANISM.

IN spite of the general prevalence of education and of orderly habits we have not yet got rid of the juvenile ruffian. The youth of seventeen who was convicted of manslaughter last Monday for having shot a child in a street fight was an example of this class. Not only so, but he was a member of a gang most of whom carried revolvers and employed their leisure in street fighting. Under the circumstances it is, indeed, remarkable that life has not been taken long ago by these young scoundrels. It is at least equally remarkable that such revivals of savagery as this have existed and even thriven in our midst in spite of all the machinery of law and order. It is easy enough to account for the origin of this unmanly and unboyish barbarism. We have only to allow the passionate hot-headedness of youth to run unchecked and untrained in the channels of idleness in order to witness the effects of its misguidance. There is much, moreover, in city life which induces temptation and fosters evil. We must look for correctives to the steadying influence of school and of work, to sound home training at the hands of the parents, to the healthy regulation of amusement—forces which, though as yet inadequate, are already active. While accepting all these aids, however, and admitting their remedial value, we must allow that a present and more rapid means of relief is indispensable. Riot on a large scale is promptly repressed. Why, then, should not the same course be followed with its lesser developments? Had the practice of gang fighting been put down in Clerkenwell at its outset we should not now have to remember the fatal encounter which occurred a week since. It is to be hoped that after this boy riots will be treated with summary and exemplary severity and with a primary view to their prevention. Corporal punishment should not be omitted whatever the qualms of the modern conscience in regard to it. An important step, in our opinion, would be to make the bearing of pistols or other arms by boys under a given age a criminal offence.

CHOLECYSTITIS IN TYPHOID FEVER.

As a rare complication of typhoid fever cholecystitis has long been observed; but the number of recorded cases is still very small (about forty), and it is only during the last few years that our knowledge of the subject has developed. Dr. Lawrence Mason has recently published a valuable article on the subject.[1] The pathological changes are variable, the gall-bladder may contain serous fluid, pus, or membranous exudation; ulcers often multiple, may form and cause perforation; abscess may occur in the coats. The inflammation is the result of infection of the gall-bladder by the typhoid bacillus, which was first proved by Gilbert and Girode.[2] Subsequently Chiari reported to the eleventh International Medical Congress the results of necropsies on 22 cases of typhoid fever. In 3 only were typhoid bacilli absent from the gall-bladder; in 15 they were present apart from other microbes and the number was often great. Cholecystitis had occurred in 13. He concludes that the occurrence of bacilli in the gall-bladder is the rule in typhoid fever. This inference seems to us scarcely justifiable; the condition of the gall-bladder in fatal cases cannot be fairly taken to represent that in all. *A priori* we should expect, if the extent of infection of the organism is variable, as it appears to be, a more widespread infection in fatal than in non-fatal cases. However, liberally discounting his inference, his facts seem to show that cholecystitis in typhoid fever is not the rare event indicated by the number of recorded cases. Gall-stones are distinctly a predisposing cause. They have been found in about one-fourth of the necropsies. Conversely, there is some evidence that typhoid infection may cause their formation. Dr. Dufourt of Vichy found that 19 patients had their first attack of colic after severe typhoid fever. It occurred after the fever as follows: in the second month in 2 cases, in the third in 6, in the fourth in 3, in the fifth in 1, and in the tenth or later in the remainder. Whether the bacilli cause a chemical precipitate or act as nuclei themselves, or whether stagnation of the bile as the result of the fever is the cause of the production is unknown. Typhoid cholecystitis often produces no noticeable symptoms. The general condition of the patient often prevents any complaint. In more than half the recorded cases nothing unusual was observed. On the other hand, a characteristic picture may be presented—pain in the region of the gall-bladder and under the angle of the scapula and a very tender swelling in the former situation, dull and giving doubtful fluctuation and sometimes visible. Perforation gives rise to symptoms of general or local peritonitis. The prognosis is unfavourable if there is much distension. The treatment consists in relieving the pain by opium, tapping the gall-bladder if necessary, and the performance of laparotomy if perforation has occurred. Dr. Mason describes a case of his own so far unique. A woman towards the end of the third week of typhoid fever complained of increasing abdominal pain in the right hypochondrium, where a tumour four inches in diameter developed, extending from the costal border towards the umbilicus, and causing a visible, very tender swelling. She became partially collapsed, and rupture

[1] Boston Medical and Surgical Journal, May 13th, 1897.
[2] La Semaine Médicale, 1890, No. 58.

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seemed imminent. Aspiration was performed one inch below the ribs, and four and a half inches from the umbilicus. Three and a half ounces of sero-purulent fluid were withdrawn. Relief of pain was immediate, and recovery followed. The typhoid bacillus was cultivated from the fluid removed. We published some time ago a case, in which laparatomy was successfully performed for typhoid perforation of the gall-bladder.[3] A woman, aged thirty-one years, on the eleventh day of an attack of typhoid fever had severe pain in the upper part of the abdomen, with semi-collapse, thought to be due to perforation. She recovered, and became convalescent. At the end of the sixth week, another sudden accession of pain and tenderness in the right hypochondrium occurred, where a dull tumour, the size of an orange, appeared. Again intestinal perforation was diagnosed, and the condition regarded as nearly hopeless. Next day her general condition was better, but the abdominal symptoms were worse, there being increased tympanites and immobility of the abdominal wall. Laparotomy showed turbid fluid in the right hypochondrium, but no intestinal perforation. The gall-bladder was deeply inflamed, of a dark plum colour, thickened, adherent, and distended. Near the neck was an ulcer of the size of a threepenny-piece, of typhoid appearance, and with a small perforation through which oozed the contents. The gall-bladder was opened and emptied of an ounce and a half of thick offensive pus. It was found impossible to unite the edges of the ulcer by Lembert's method. The edges of the incision in the fundus were, therefore, attached to the parietal peritoneum and drainage provided for. Recovery followed.

COLLECTIVE INVESTIGATION OF THE ANTITOXIN TREATMENT.

OUR New York correspondent writes:—The American Pædiatric Society's report on the collective investigation of the antitoxin treatment of laryngeal diphtheria in private practice for 1896-97 was submitted to the society at its late meeting at Washington. In this second and supplementary investigation the aim has been to ascertain—(1) what percentage of cases of laryngeal diphtheria recover without operation under antitoxin treatment; and (2) what percentage of cases operated on recover. The report now submitted may properly be limited to answering these two inquiries. Sixty thousand circulars were distributed throughout the United States and Canada. The whole number of cases in this report are 1704, with a mortality of 21·12 per cent. (360 deaths). The following were the operations employed: (*a*) Intubation in 637 cases; mortality, 26·05 per cent. (166 deaths); (*b*) tracheotomy in twenty cases; mortality, 45 per cent. (9 deaths); and (*c*) intubation and tracheotomy in 11 cases; mortality, 63·63 per cent. (7 deaths). Non-operation cases, 1036, 60·79 per cent. of all cases; mortality, 17·18 per cent. (178 deaths). Operation cases, 668, or 39·21 per cent. of all cases; mortality, 27·24 per cent. (182 deaths). Two facts may be recalled in connexion with this paragraph. First, that before the use of antitoxin it was estimated that 90 per cent. of cases of laryngeal diphtheria required operation, whereas now, with the use of antitoxin, 39·21 per cent. require it. Secondly, that the percentage of figures has been reversed, formerly 27 per cent. approximately representing the recoveries, while now, under antitoxin treatment, 27 represents the mortality. To put it in other words, before the use of antitoxin 27 per cent. recovered; now 73 per cent. recover, and this in the severest type of diphtheria. The present report will strike many as revealing a mortality a little too large in each of the two classes. The mortality is large—larger than the personal experience in private practice of many would expect. The reasons for this are—(1) that antitoxin is still used too late, either from procrastination on the part of the physician or objection on the part of the friends; or (2) in a half-hearted way, which shows itself in doses from one-tenth to one-fourth as large as they should be. In truth, both the physicians and the friends of the patient are timid. This report, it must be admitted, shows too large a mortality. In the opinion of the committee it is a larger mortality than will ever be shown again. Antitoxin is gradually being used earlier in the disease, and it will soon be used in sufficient doses. To the society the committee desires to say that it has sought to carry out its wishes in putting antitoxin on trial, and to accept no testimony that did not bear the stamp of reliability; that it has employed the methods approved in the case of the first investigation and report; and that it has confined its work to definitely answering the main questions which the society and profession now have in mind. Points that were settled in the first report, and have since been corroborated by general medical literature, are not again taken up. The committee states that the three most valuable points established in this eleven months' work are—(1) the mortality of laryngeal diphtheria at present rests at 21·12 per cent.; (2) that 60 per cent. approximately have not required intubation; and (3) that the mortality of cases operated on is at present 27·24 per cent.

[3] Mr. Monier-Williams and Mr. Marmaduke Sheild, THE LANCET, March 2nd, 1895, p. 534.

PILGRIMS AND QUARANTINE.

THREE weeks ago the great festival at Mecca took place; the faithful assembled in their thousands and the usual sacrifice of animals was made. The health of the immense concourse of pilgrims was officially declared to be perfectly good, and searching telegrams from Egypt could not discover any unusual amount of diarrhœa or dysentery among the worshippers. But "pilgrim diarrhœa" has become an annual factor which has never yet been dealt with, and there are some who suspect that cholera for the last few years has been endemic in the holy places and presumably in the holiest of all, Mecca, with its well-known water from the Zem-Zem well. This is only conjecture, for no reliable clinical evidence, and absolutely no bacteriological or pathological information, ever reaches us from the Haj. It is idle to expect Turkey to initiate any reform, but is it not time for Europe to insist upon this pilgrimage being conducted on cleanly and decent lines? India possesses many trained Mussulman physicians, and though her bacteriology is as yet in its infancy she might have done much in all these years past to control her share of the pilgrimage. Cairo, Constantinople, and Algiers all boast of Mohammedan bacteriologists, and there is no reason why one of them should not be sent both to Mecca and Jeddah to work before and during the next pilgrim season. The Great Powers up to the present have treated this annual Haj with Oriental apathy, and have contented themselves with wrangling over theoretical questions at occasional congresses.

SPECIAL INSTRUCTION FOR FEEBLE-MINDED CHILDREN UNDER THE POOR-LAW.

THE Departmental Committee of the Local Government Board in their report on the London district schools pointed out that feeble-minded children are necessarily admitted to the Poor-law schools, and evidence was brought forward showing that about 1 per cent. of children of school age are so far subnormal in physical and mental power as to require special training. A recent order of the Local Government Board places these children for the future under the care of the Sick Asylums Board for the metropolitan area, and that public body will apparently have to provide for their care and education. An objection has been raised that by such a

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transfer these children will be removed from their fellows and placed under a board whose only educational work is in the care of children of unsound mind. It is thought that the arrangements may resemble too much those of an asylum. The managers of the Kensington and Chelsea schools at Banstead wish to make provision for the feeble-minded children under their care, and propose to allot a "special class-room," where a dozen such children, who have been selected with care, may receive special instruction. After some delay the Local Government Board has sanctioned the appointment of a teacher to take educational charge of these children. It is not proposed to separate the children, who will reside in the cottage homes, but to arrange that as now in domestic life, sleeping, and meals, they may join in with the others as much as possible. In school time they will go to the "special class," where they will receive a modified form of Kindergarten training and appropriate physical exercises. The experiment is inexpensive and well worth trying. We hope it may succeed.

RECURRENT MEASLES.

IT is, we suppose, admitted that in none of the infective diseases does one attack confer absolute immunity from a second; but apart from small-pox there are but few available data for estimating the comparative frequency with which such second attacks occur. Dr. Pole Kitson, of Cleobury Mortimer, Salop, reports that in a recent outbreak of measles in his district several examples of this somewhat unusual character took place. In particular he cites one in which several members of one family were attacked with measles in March and again in May or the end of April. He gives details of one of these patients whom he first saw on March 3rd with well-marked eruption and catarrhal symptoms. Recovery followed in a fortnight, but on May 4th Dr. Kitson was again summoned to attend him for an illness in which all the previous symptoms were repeated. Such a case can hardly be regarded as a "relapse," and if the later illness were indeed measles it points to a very brief immunity from infection, and it is not a little remarkable that other members of the same family should also have been again infected. We have assumed that the diagnosis was accurate, for in all such cases, as remarked by a recent writer, there is a possibility of "the first or the second eruption being in reality that of 'German measles.'" To adopt such an explanation, however, in the present instance, in view of the fact that measles was prevalent in the district, would be begging the question; and it would be preferable to admit that under certain conditions the protection afforded by a single attack does not always secure the individual against further infection.

THE Drapers' Company with great munificence have offered to erect a new building for the accommodation of the Radcliffe Library at Oxford, at a cost of £15,000, from plans to be submitted by Mr. T. G. Jackson, R.A., for the approval of the University authorities.

THE death of Professor Charteris, of Glasgow University, is announced. He had been in indifferent health since the end of March, and had not conducted his class during the current summer session.

H.R.H. THE PRINCE OF WALES will open the Brook Fever Hospital, erected by the Metropolitan Asylums Board at Hither-green. The date of the ceremony has not yet been fixed.

The Lancet Special Commission

ON

SICILY

AS A HEALTH RESORT.

II.[1]

The Factors which determine Climate.—Characteristics of the Mediterranean Climate.—Prevailing Winds in Sicily.—The Sirocco.—The Sicilian Climate essentially Insular.—Meteorological Returns of (1) Palermo, (2) Catania, (3) Syracuse, (4) Girgenti, (5) Termini, (6) Taormina.—Sketch of a Year's Weather at Palermo.

THE last article contained a short sketch of the features of the Sicilian climate in general. The present article will be devoted to a more detailed consideration of the same subject, and to the special meteorological characteristics of the different localities—Palermo, Catania, Syracuse, Girgenti, Termini, and Taormina.

The factors which determine climate are the following:—(1) Latitude; (2) elevation above the sea level; (3) prevailing winds; (4) ocean currents; (5) conditions of local shelter or exposure; (6) proximity of warm or cold seas, deserts, snowfields, &c.; and (7) geological formation and conditions of soil.

Sicily lies between 36° 38′ and 38° 19′ of north latitude. Cape Passaro, the extreme southern point of the island, is farther south than Algiers or Tunis, a fact that may serve to emphasise the point that the climatological relations of Sicily with the African continent are intimate and important. As has already been observed, a strait of shallow water, about eighty miles wide, separates Sicily on the west from Tunisia. Lying in the centre of the Mediterranean, Sicily possesses the typical Mediterranean climate, of which the leading features are warmth, mildness, brightness, moderate humidity, a high proportion of fine weather, and comparative immunity from mist, fog, sharp winds, and winter cold. The prevailing winds from October to March are from the west-south-west, hence an equatorial marine current which brings rain. From May to September north-easterly polar currents prevail, and for many consecutive weeks the weather is practically rainless. At the season of the equinoxes there is a conflict between the equatorial currents and the polar currents, with windy and unsettled weather. The sirocco, a south-easterly wind from the southern deserts, blows at all seasons, but it is rare in winter, and at this season its disagreeable features are insignificant. It is comparatively common at the turn of the season in April and May, and again in September and October, while it also occurs, though more rarely, during the summer months. The sirocco is a hot, dry wind, obscuring the sky and bringing clouds of dust. During its prevalence the thermometer sometimes rises to from 100° to 105° F. (= 37·8° to 40·6° C.) in the shade, but this is rare. It lasts one, two, or at most three days, and is usually followed by refreshing rains. Its enervating effects are more felt by the healthy than by the ailing, and some invalids (especially some *poitrinaires*) feel unusually well during the prevalence of the sirocco. Though disagreeable it is not an unhealthy wind, and it does not aggravate existing disease or raise the general rate of mortality.

It would not appear that marine currents exercise any considerable influence upon the climate of Sicily. Conditions of local shelter or exposure have important bearings upon the special features of some of the Sicilian resorts. Palermo owes some of the special characteristics of its climate to its ring of enclosing mountains. Catania is affected by the proximity of the Etna snowfields. Girgenti faces Tunisia and feels more fully than other parts of the island the influence of the African continent.

The influence of the encircling Mediterranean is a dominant factor in determining the character of the Sicilian climate. The Mediterranean is an expanse of comparatively warm water, and as Dr. Marcet has shown, the temperature of

[1] No. I. was published in THE LANCET of June 5th, 1897.

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the surface of the sea has a mean excess in places of about 12° F. (=6·6° C.) over the minimum temperature of the air. Sicily is thus laved on all sides at all seasons by a warm sea, which retains its summer heat until at least the end of November. Occasion will hereafter be taken to compare and contrast the climate of Sicily with that of the Riviera. It is sufficient to remark here that while the climate of the Riviera owes its characteristics partly to the influence of the Mediterranean and partly to that of continental Europe, Sicily owes its climatic peculiarities predominantly to the influence of the Mediterranean and in a minor degree to the influence of the African continent. It does not feel the influence of continental Europe to any appreciable degree. From Sicily to Cape Bon in Tunisia is a distance of less than 140 kilometres, while from Sicily to Genoa is a distance of 780 kilometres. Thus, much is heard in Sicily of the sirocco, but nothing of the mistral or the bise. Hence the rainless summer of Sicily, the absence of frost, snow, and winter cold, the rarity of cold, the rarity of cold winds from any quarter, the high average of fine weather, the marked equability of temperature. The Etna snowfields exercise some slight effect upon local meteorological conditions at Catania, Aci Reale, and Taormina. Otherwise their influence is unimportant. The geological conditions in Sicily are on the whole favourable in their influence upon climate. The surface of the country is in large part composed of tertiary limestone. Alluvial soil and marshy lands occur, but are not widely distributed.

The meteorological characteristics of the various localities will now be considered more in detail.

1.—PALERMO.

Palermo lies on the west side of the Bay of Palermo, and is surrounded by a rich plain, the fertile Conca d'Oro or Golden Shell, which is enclosed by an amphitheatre of lofty mountains, the highest summit, Monte Cuccio, attaining an altitude of 3445 ft. The town is protected on the north by the imposing mass of Monte Pellegrino, but is exposed on the north-east. Palermo owes the special features of its climate—viz., its mildness, equability, and comparatively large rainfall—in considerable degree to the influence of the encircling mountains, which intercept the moisture-laden winds from the south-west and west-south-west and cause a considerable precipitation of rain upon the "agro palermitano," or Conca d'Oro. The mean annual temperature of Palermo is 18·15° C. (= 64·6° F.), while that of Catania is 18° C. (= 64·4° F.), of Syracuse 17·4° C. (= 63·3° F.), and of Girgenti 17·9° C. (= 64·2° F.). These are the official figures. Assuming their correctness it would appear that Palermo, in spite of its geographical situation, has a higher mean annual temperature than the other chief localities in the island. It owes this peculiarity, probably, to the conditions of local shelter already referred to. Palermo has an average daily variation of only 6·7° C. (= 12·8° F.), as against 7·7° C. (= 13·8° F.) for Catania. It is warmer in winter and cooler in summer than Catania, and its climate may be regarded as one of the most equable in Sicily. The mean temperature of the months of the year at Palermo is as follows :—

	Degrees.		Degrees.
January,	10·89 C. = 51·60 F.	July,	26·03 C. = 78·85 F.
February,	11·61 C. = 52·90 F.	August,	26·16 C. = 79·09 F.
March,	13·34 C. = 56·01 F.	September,	23·93 C. = 75·07 F.
April,	15·56 C. = 60·01 F.	October,	20·31 C. = 68·56 F.
May,	18·89 C. = 66·00 F.	November,	15·88 C. = 60·58 F.
June,	22·67 C. = 72·81 F.	December,	12·53 C. = 54·55 F.

The mean average temperature of the invalid season—Nov. 1st to April 30th—is 13·30° C. at Palermo, which is almost equivalent to 56° F. This figure may be contrasted with the mean temperature at London during the same period, which is 41·8° F. (=5·4° C.), and at Cannes—viz., 50·1° F. (=100° C.). The absence of winter cold is brought out clearly by the returns of the Palermo Meteorological Observatory. In the decennial period 1880–89 there were only two years—viz., 1882 and 1883—in which the thermometer touched freezing point on the terrace of the Observatory. In the other years the minimum temperature registered varied from about 32·5° F. to 37° F. (= 0° C. to nearly 3° C.). The mean temperature of the coldest month at Palermo, January—viz., 10·89° C. (= 51·6° F.)—may be compared with the mean temperature of the same month at Ventnor—viz., 41·6° F. (=5·3° C.); at Cannes—viz., 49·6° F. (=9·8° C.); and at Cairo—viz., 53·6° F. (=12·0° C.).

The mean relative humidity of the air at Palermo is 65·4 per cent. (saturation = 100 per cent.). The humidity of the air is greatest in November (69·3 per cent.), December (70·7 per cent.), and January (69·9 per cent.); least in June (63·4 per cent.), July (60·2 per cent.), and August (59·7 per cent.). As pointed out in the first article of this series these figures indicate a moderate, not a high, degree of humidity. The proportion of fine, sunny days on the one hand, and of cloudy or rainy days on the other, is a matter of the first importance in connexion with any health resort. The following are the average annual figures for Palermo :—

1. "Giorni sereni"—i.e., days of cloudless sunshine	167	= 229 fine days per annum.
2. "Giorni misti"—i.e., days of combined cloud and sunshine	62	
3. "Giorni coperti"—i.e., cloudy days	136	
4. "Giorni plovosi"—i.e., days with some rain	116	
5. "Giorni ventosi"—i.e., windy days	33	

The average annual rainfall is 758·68 mm. (=29·87 in.) and the average precipitation per month is as follows :—

Millimetres.		Millimetres.		Millimetres.
January, 118·20	May,	33·55	September,	42·16
February, 74·86	June,	12·57	October,	100·05
March, 72·05	July,	5·96	November,	102·70
April, 66·96	August,	13·13	December,	117·49

It will be thus seen that Palermo has a considerable rainfall (758·68 mm. = 29·87 in.), and that the fall is chiefly in the winter months.

The following may serve as a slight sketch of the usual climatic conditions throughout the year at Palermo. Summer sets in towards the end of May and lasts until September. This is the dry season, and the rainfall is very small. It is not uncommon for an entire month to pass without any collectable rainfall. The mean temperature varies from 19° to 26° C. (= 66·2 to 78·8 F.), and with the exception of an occasional day of sirocco, when the maximum temperature may exceed 100° F., (= 37·8° C.) high temperatures are rare. There is great power of sun-heat from 11 A.M., to 5 P.M., but the mornings, evenings, and night are moderately cool. The sky is for the most part cloudless, the atmosphere is calm except when the sirocco is blowing, and the prevailing wind is N.E., with occasional variations to W.S.W. The settled summer weather begins to break in September. The wind changes frequently and is sometimes boisterous. The sirocco becomes more frequent, and the amount of cloud and of rain increases. The weather is often close and relaxing, and on the whole September is perhaps the least pleasant month of the year. In October the winds settle to W.S.W., from which quarter they continue to blow until April, with occasional changes to N.N.E. and S.E. The temperature falls and rain becomes more frequent. November presents a similar condition of things, with a further fall of temperature and a slight increase of rainfall. St. Martin's summer ("l'estate di San Martino") is sometimes well marked. December and January have a considerable rainfall and a somewhat high proportion of cloudy days. There is little real cold, the thermometer only very exceptionally touching freezing point, and the amount of snow being confined to a slight shower four or five times in the season. A slight film of ice occasionally forms on standing water, but this is rare. February and March often bring fine, bright, settled weather, with a very agreeable temperature and a large proportion of charming days. At this season the weather in Sicily generally is often much the best in Europe. There are no cold winds comparable to the mistral or the bise, though the north-east wind or greco may be felt rather sharply at times by the more delicate invalids. April marks the transition season, and the weather is somewhat less settled. Sirocco days become more frequent. The weather is, however, often charming in the highest degree, the air is delightfully soft and balmy, there is no unpleasant heat or treacherous cold, and the aspect of the country, with its waving corn crops, luxuriant orange groves, and innumerable multitude of wild flowers, is truly "incantevole" (enchanting)—to use the favourite term of the Sicilian meteorologists. In May the temperature rises steadily, rainy days become rare, the winds settle in the north-east, and by the end of the month the cloudless, rainless, Sicilian summer has fairly commenced.

2.—CATANIA.

Having dealt fully with the climatic conditions of Palermo those of the other chief localities of the island may be more briefly considered. The mean annual temperature of

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Catania is 18° C. (= 64·4° F.). The mean temperature of the various months is as follows :—

	Degrees.		Degrees.
January,	9·73 C. = 49·51 F.	July,	26·65 C. = 79·97 F.
February,	10·93 C. = 51·67 F.	August,	26·28 C. = 79·30 F.
March,	12·51 C. = 54·52 F.	September,	24·61 C. = 76 30 F.
April,	14·84 C. = 58·71 F.	October,	20·81 C. = 69 46 F.
May,	18·35 C. = 65·03 F.	November,	16·14 C. = 61·05 F.
June,	23·02 C. = 73·44 F.	December,	12·09 C. = 53·76 F.

The mean temperature of the different seasons is as follows :—

	Degrees.		Degrees.
Winter...	10·88 C. = 51·58 F.	Summer...	25·31 C. = 77·56 F.
Spring...	15·26 C. = 59·47 F.	Autumn...	20·53 C. = 68 95 F.

The mean daily range of temperature is 7·7° C. (= 13·8° F.). The range is greatest in summer, least in November and December. The mean relative humidity is 61·0 (saturation = 100). The average annual rainfall is 542·7 mm. (= 21·32 in.). The average amount of daily sunshine is 0 62 per cent. The following is the average state of the weather :—

"Giorni sereni" (days of cloudless sunshine) ...	164	= 282 fine days per annum.
"Giorni misti" (days of combined cloud and sunshine)	118	
"Giorni coperti" (cloudy days)	83	
"Giorni piovosi" (days with rain)	86	

Snow falls on an average one day in the year, frost occurs once or twice a year, hail falls on from 3 to 4 days, and storms occur on about 8 or 9 days. Cold winds from the Etna snowfields are not frequent or troublesome, but dust from the lava is sometimes a source of annoyance.

A comparison of these figures with those of Palermo shows some interesting points of contrast. The climate of Catania is drier and brighter than that of Palermo, the rainfall is one-third less, the relative humidity is less by 4·4 per cent., the proportion of days of cloudless sunshine is about the same as Palermo, but the "giorni misti" are more numerous by 56, the mean daily range of temperature is greater by 1° C., and the difference between the hottest and the coldest month is more marked. It would thus appear that Catania has a less equable climate than Palermo, but that it has a decided superiority in the proportion of fine weather and in the lower humidity and smaller rainfall. It is probable that the proximity of Mount Etna is a chief factor in the explanation of these peculiarities.

3.—SYRACUSE.

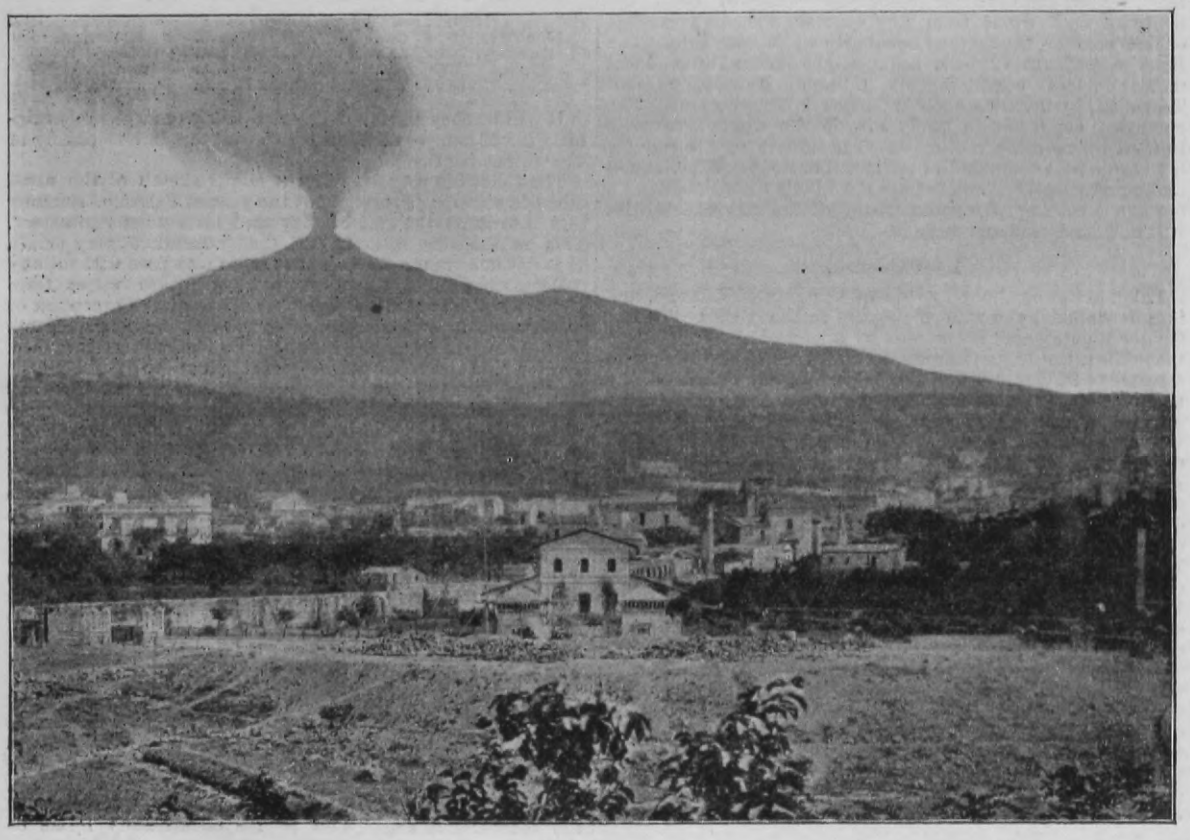
The following figures refer to the year 1896 unless otherwise stated. The mean temperature for the year was 17·4° C. (= 63·3 F.). The mean temperature for the various months was as follows :—

	Degrees.		Degrees.
January,	9·8 C. = 49·6 F.	July,	26·1 C. = 79·0 F.
February,	10·2 C. = 50·3 F.	August,	25·5 C. = 77·9 F.
March,	12·9 C. = 55·2 F.	September,	23·8 C. = 74·9 F.
April,	*12·5 C. = 54·5 F.	October,	20·2 C. = 68·4 F.
May,	16 8 C. = 62·2 F.	November,	16·5 C. = 61·7 F.
June,	22 1 C. = 71·8 F.	December,	12 6 C. = 54·7 F.

* This is the official figure. It is probably a slip for 14·5.

The lowest temperature recorded was 2 9° C. (= 37·2° F.), which occurred in the month of January. The mean relative humidity was 70. The number of days with rain was 85. The number of windy days was 109. The average rainfall (1874–1896) was 570·8 mm. = 22·7 in. The number of "giorni sereni" and "giorni misti" is not stated, but the proportion is probably high.

The above returns being for the most part for one year have but a limited value. The general characters of the climate of Syracuse are, however, clear. It has a fine, bright, somewhat windy climate, with little or no winter cold, frost, or snow. The windiness is its great drawback, and it is a serious defect.



Catania from the gardens of the Villa Bellini: Mount Etna in the distance.

4.—GIRGENTI.

The mean annual temperature is 17·9° C. (= 64·2° F.). The mean temperature of the coldest month (January) is 9·0° C. (= 48 2° F.); of the hottest month (July), 25·2° C. (= 77·3° F.). The average daily range of temperature is 6·4° C. (= 11·5° F.). The average annual rainfall is 560 mm.

The mean relative humidity is 72 per cent.; the mean maximum temperature is 37·1° C. (= 98·8° F.); the mean minimum temperature is 2·4° C. (= 36·3° F.).

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The town of Girgenti is at an elevation of from 255 to 400 metres above the sea level, there is a considerable amount of wind, and the air is on the whole fresh and pure except when the sirocco blows. The rainfall is small, and it will be observed that the rainlessness of the summer season is even more marked at Girgenti than at Palermo, also that the rainless season lasts through September at Girgenti, while at Palermo this month shows quite a considerable rainfall.

5.—TERMINI.

(On the north coast, twenty-three miles from Palermo.)

Mean annual temperature (average of twenty years), 18·68° C. (= 65·6° F.); mean minimum temperature, 3·27° C. (= 37·8° F.); mean maximum temperature, 38·15° C. (= 100·7° F.); average annual rainfall, 674·60 mm. = 26·7 in.; average number of days with rain per annum, 85; average number of cloudy days, from 100 to 105.

6.—TAORMINA.

(About midway between Messina and Catania.)

An inspection of the meteorological records kept at the Semaphore station of Taormina proved them to be of considerable interest, but unfortunately they were not in a form admitting of any proper comparison with the returns from the other stations. It would appear, however, that Taormina enjoys a remarkably rainless, bright, and, on the whole, equable winter climate. The temperature at midday at the coldest season is rarely under 10° C. (= 50° F.). The number of rainy days is very low, not more than twenty in the course of the whole winter, according to the officer in charge of the Semaphore station. As observations have only been made for two seasons this figure cannot, of course, be taken as the correct average, but it may fairly be allowed some weight. Snow hardly ever falls. There is much wind, and the north-east wind (greco) is sometimes rather cold. Cold winds from the Etna snowfields are not frequent. The sirocco blows about three or four times per month in the winter season and brings much cloud with it.

Meteorological returns from many other parts of Sicily were available, but probably the above six localities are sufficient to give a general idea of the climate. It will be observed that two of these places are on the north coast—viz., Palermo and Termini; three on the south coast—viz, Syracuse, Catania, and Taormina; and one on the west coast—viz., Girgenti. The materials do not exist for any exact classification of the various types of climate to be found in Sicily, nor is it possible to contrast in any satisfactory way the climates of the coast with those of the higher mountains—e.g., Etna or the Madonian mountains. This must be reserved for the future. For the present it is sufficient to have given the returns from six of the chief stations in the island, noting the broad features of the Sicilian climate and some of the more obvious differences between the meteorology of the six places in question. It is evident that the climate is one of remarkable warmth, mildness, and equability, that winter cold (in the sense in which the inhabitant of northern or western Europe understands the term) is practically unknown, that the proportion of bright sunny days is very high, that the humidity of the air is moderate, that the rainfall varies considerably, but is generally moderate, that cold winds are rare, and that, with the exception of the sirocco, the climate has no grave drawback. Palermo has a larger rainfall and a higher proportion of wet and cloudy days than Girgenti, Catania, Taormina, or Syracuse. On the other hand, the equability of its climate is more marked than that of the other places in question. Catania excels in warmth, brightness, and large proportion of fine days, but is somewhat less equable. Syracuse has a bright climate with a small rainfall, but it is one of the windiest places in Sicily.

In the next article the above meteorological details will be contrasted with those furnished by some of the chief home and foreign sanatoria, and their importance from the point of view of medical climatology will be considered.

ROYAL MEDICAL BENEVOLENT COLLEGE.

THE annual general meeting of this institution was held on the 28th ult., the treasurer, Dr. HOLMAN, being in the chair.

After the election of three pensioners, six foundation scholars, and one Morgan annuitant (the results of which are announced below), the SECRETARY read the report of the Council to the Governors, which was satisfactory in every respect. In this reference was made to an occurrence which was not unprecedented and was likely to happen again—viz., a foundation scholar of marked ability obtained in open examination a scholarship at Cambridge, but could not, from want of means, avail himself of that opportunity of making his way in the world.

In commenting on this "too early souring of a life" the CHAIRMAN laid great stress upon the fact that it was not necessary to capitalise a large sum of money in order to meet such cases, because a sum of, say, £400 or £500 would enable the Council to assist deserving necessitous foundationers for some years; and he read a letter from a general practitioner, who did not wish his name to be made known, offering a cheque for £50 for the purpose in view if nine others would contribute the same amount by a certain date.

The CHAIRMAN stated that the new building for the junior or lower school, capable of accommodating 100 boys, was opened in May, and that the new chancel in the College chapel, designed by Sir A. W. Blomfield and Sons, had increased the accommodation by 120 sittings. The altar was the gift of Mr. John F. France, who had within the last few years so munificiently placed at the disposal of the Council nine free scholarships for girls at the Royal Asylum of St. Anne's Society. During the past twelve months six open university honours in classics, mathematics, or natural science had been won by pupils of the college at Oxford or Cambridge, which was a good result for a school of 250 boys, and should lead to the education given at the college being recognised by the parents of other boys than those being prepared for the medical profession.

The annual report having been duly approved, Dr. Ralph Gooding was elected a vice-president of the college, in consideration of his having collected £1000 as honorary local secretary; after which the usual formal business was transacted. The proceedings were brought to a close by a vote of thanks to the chairman, proposed by Sir Joseph Fayrer, and seconded by Dr. Hare.

The following were the successful candidates at the election:—

PENSIONERS.

	Votes.		Votes.
Broster, Alfred	4296	Daniel, Benjamin...	2469
Wordsworth, Mary A. ...	2720		

FOUNDATION SCHOLARS.

McCallum, William S. ...	6613	Milner, Chas. E. H.	5668
Seccombe, Charles E	6528	Davies, Stanley W.	5634
Palmer, Ronald C.	6016	Silverlock, Richard G. ...	5617

MORGAN ANNUITANT.

Heeley, Margaret M. 8523

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6581 births and 3661 deaths were registered during the week ending June 5th. The annual rate of mortality in these towns, which had been 17·2 and 16·6 per 1000 in the two preceding weeks, rose again last week to 17·4. In London the rate was 15·4 per 1000, while it averaged 18·7 in the thirty-two provincial towns. The lowest death-rates in these towns were 12·0 in Brighton, 13·1 in Derby and in Birkenhead, 13·4 in Portsmouth, and 13·7 in Norwich; the highest rates were 23·3 in Sheffield, 23·4 in Halifax, 24·9 in Bolton, and 27·1 in Salford. The 3661 deaths in these towns included 364 which were referred to the principal zymotic diseases, against 357 and 355 in the two preceding weeks; of these, 121 resulted from measles, 95 from whooping-cough, 56 from diphtheria, 34 from diarrhœa, 32 from scarlet fever, and 26 from "fever" (principally enteric). No fatal case of any of these diseases was recorded last week either in Swansea or in Derby; in the other towns they caused the lowest death-rates in Croydon, Nottingham, Norwich, and Halifax, and the highest rates in Birkenhead, Burnley, Bolton, and Salford. The greatest mortality from measle occurred in Birmingham, Liverpool, Bolton, Manchester, Salford, and Burnley; and from whooping-cough in Plymouth, Bolton, Manchester, Oldham, and Blackburn. The mortality from scarlet fever and from "fever" showed no marked excess

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in any of the large towns. The 56 deaths from diphtheria included 33 in London, 3 in Birmingham, and 3 in Burnley. No fatal case of small-pox was registered last week in any of the thirty-three large towns. There were 4 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, June 5th, against 14, 13, and 12 at the end of the three preceding weeks; no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2601, against numbers increasing from 2380 to 2546 on the five preceding Saturdays; 274 new cases were admitted during the week, against 239, 311, and 278 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 220 and 196 in the two preceding weeks, rose again to 229 last week, but were 49 below the corrected average. The causes of 44, or 1·2 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Nottingham, Hull, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, Salford, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·3 and 21·7 per 1000 in the two preceding weeks, further declined to 20·3 during the week ending June 5th, but exceeded by 3·9 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·9 in Aberdeen and 17·9 in Dundee to 29·0 in Leith and 37·5 in Perth. The 605 deaths in these towns included 40 which were referred to whooping-cough, 30 to measles, 18 to diarrhœa, 3 to "fever," 2 to scarlet fever, and not one either to small-pox or diphtheria. In all, 93 deaths resulted from these principal zymotic diseases, against 110 and 91 in the two preceding weeks. These 93 deaths were equal to an annual rate of 3·1 per 1000, which was 1·4 per 1000 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 35 and 34 in the two preceding weeks, rose again last week to 40, and included 21 in Glasgow and 14 in Edinburgh. The deaths referred to measles, which had been 49 and 24 in the two preceding weeks rose again last week to 30, of which 15 occurred in Edinburgh, 7 in Leith, and 6 in Glasgow. The 3 deaths referred to different forms of "fever" were within one of the number recorded in the preceding week, and included 2 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 135 and 128 in the two preceding weeks, further declined to 110 last week, but exceeded by 13 the number in the corresponding week of last year. The causes of 45, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·3 and 28·3 per 1000, in the two preceding weeks, declined again to 25·2 during the week ending June 5th. During the past nine weeks of the current quarter the death-rate in the city has averaged 30·1 per 1000, the rate during the same period being 16·1 in London and 26·3 in Edinburgh. The 169 deaths registered in Dublin during the week under notice showed a decline of 21 from the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 15 in each of the two preceding weeks; of these, 3 resulted from measles, 3 from whooping-cough, 2 from scarlet fever, 2 from diarrhœa, and not one either from small-pox, diphtheria, or "fever." These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 1·4 in London and 5·9 in Edinburgh. The fatal cases of measles, which had been 5 in each of the two preceding weeks, declined to 3 last week. The deaths referred to whooping-cough, which had been 6 and 2 in the two preceding weeks, rose again to 3 last week. The 2 fatal cases of scarlet fever were within one of the number recorded in the preceding week. The 169 deaths in Dublin last week included 29 of infants under one year of age, and 41 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. Seven inquest cases and 5 deaths from violence were registered; and 72, or more than a third, of the deaths occurred in public institutions. The causes of 9, or more than 5 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MAY, 1897.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during May in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 8·1 per 1000 of the population, estimated at 4,463,169 persons in the middle of this year. In the three preceding months the rates had been 8·7, 7·8, and 7·2 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Hammersmith, St. George Hanover-square, Hampstead, Stoke Newington, St. Martin-in-the-Fields, Strand, and St. Olave Southwark; while they showed the largest excess in Chelsea, St. Giles, Holborn, Mile End Old Town, St. George Southwark, Rotherhithe, and Battersea. Ten cases of small-pox were notified in London during May, against 48, 8, and 11 in the three preceding months; of these, 3 belonged to St. James Westminster, 2 to Marylebone, and 1 each to Islington, Shoreditch, St. Olave Southwark, Battersea, and Wandsworth sanitary areas. There were 12 small-pox patients under treatment in the Metropolitan Asylum Hospitals at the end of May, against 43, 17, and 12 at the end of the three preceding months; 9 new cases were admitted during the month, against 8 in each of the two preceding months. The prevalence of scarlet fever in London showed a further increase upon that recorded in recent months; this disease was proportionally most prevalent in Chelsea, St. Giles, Mile End Old Town, St. George Southwark, Newington, Rotherhithe, and Battersea sanitary areas. The Metropolitan Asylum Hospitals contained 2495 scarlet fever patients at the end of May, against 2775, 2468, and 2330 at the end of the three preceding months; the weekly admissions averaged 258, against 228, 208, and 225 in the three preceding months. The prevalence of diphtheria in London showed a slight increase upon that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Chelsea, Whitechapel, St. George-in-the-East, Mile End Old Town, St. George Southwark, and Bermondsey. There were 783 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of May, against 855, 776, and 764 at the end of the three preceding months; the weekly admissions averaged 108, against 101 and 127 in the two preceding months. The prevalence of enteric fever in London showed a slight increase upon that recorded in the preceding month; this disease was proportionally most prevalent in Holborn, Shoreditch, St. George Southwark, and Bermondsey sanitary areas. Erysipelas showed the highest proportional prevalence in St. Giles, St. Luke, Bethnal Green, Limehouse, and St. George Southwark sanitary areas. The 20 cases of puerperal fever notified during May included 3 in St. Pancras, 3 in Hackney, and 3 in Rotherhithe sanitary areas.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the various sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, May 29th, the deaths of 5105 persons belonging to London were registered, equal to an annual rate of 14·9 per 1000, against 18·5, 17·4, and 16·6 in the three preceding months. The lowest death-rates during May in the various sanitary areas were 9·8 in Hampstead, 11·2 in St. George Hanover-square, 11·3 in Fulham and in Lewisham, 11·6 in Lee, 12·2 in Wandsworth, and 12·4 in Paddington and in Islington; the highest rates were 19·2 in Bermondsey and Rotherhithe, 19·9 in St. George-in-the-East, 20·1 in Newington, 20·9 in St. Saviour Southwark, 23·8 in Limehouse, and 25·7 in Holborn. During the four weeks of May 480 deaths were referred to the principal zymotic diseases in London; of these, 142 resulted from whooping-cough, 136 from diphtheria, 82 from measles, 48 from diarrhœa, 45 from scarlet fever, 25 from enteric fever, 1 from an ill-defined form of continued fever, and 1 from

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ANALYSIS OF SICKNESS AND MORTALITY STATISTICS OF LONDON—MAY, 1897.

(Specially compiled for THE LANCET.)

SANITARY AREAS	Estimated population in the middle of 1897.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,463,169	10	1372	849	—	145	2	20	380	1	2779	8·1	1	82	45	136	142	—	25	1	48	480	1·4	5105	14·9	105
West Districts.																										
Paddington	126,161	—	23	30	—	4	—	—	9	1	67	6·9	—	—	3	5	7	—	1	—	1	17	1·8	120	12·4	106
Kensington	171,427	—	45	18	—	8	—	1	10	—	82	6·2	—	1	—	7	—	—	2	—	2	12	0·9	177	13·5	114
Hammersmith	105,959	—	24	10	—	3	—	—	1	—	38	4·7	—	—	—	2	2	—	1	—	1	6	0·7	104	12·8	142
Fulham	120,040	—	35	24	—	4	—	1	9	—	73	7·9	—	—	1	3	7	—	1	—	—	12	1·3	104	11·3	105
Chelsea	96,692	—	47	31	—	2	—	—	5	—	85	11·5	—	—	1	5	5	—	—	—	—	11	1·5	112	15·1	102
St. George Hanover-square	80,330	—	10	9	—	1	—	—	6	—	26	4·2	—	—	1	1	1	—	1	—	—	4	0·6	69	11·2	39
Westminster	53,027	—	12	10	—	2	—	—	8	—	32	7·9	—	—	—	1	—	—	—	—	—	1	0·2	71	17·5	120
St. James Westminster	22,576	3	7	2	—	—	—	1	2	—	15	8·7	—	—	—	—	1	—	—	—	—	1	0·6	30	17·3	57
North Districts.																										
Marylebone	140,808	2	38	6	—	6	1	1	20	—	74	6·9	—	—	1	2	2	—	—	—	1	6	0·6	167	15·5	88
Hampstead	77,275	—	12	11	—	2	—	—	5	—	30	5·1	—	1	—	1	2	—	1	—	—	5	0·8	58	9·8	75
St. Pancras	242,255	—	79	35	—	8	—	3	19	—	144	7·8	—	6	3	4	9	—	2	—	4	28	1·5	313	16·8	110
Islington	341,134	1	107	60	—	14	—	1	22	—	205	7·8	—	—	2	12	6	—	—	—	2	22	0·8	324	12·4	86
Stoke Newington	34,136	—	6	4	—	1	—	1	—	—	12	4·6	—	—	—	4	1	—	—	—	—	6	1·9	36	13·7	47
Hackney	216,698	—	66	56	—	8	—	3	15	—	148	8·9	—	4	2	8	6	—	1	—	4	25	1·5	233	14·0	115
Central Districts.																										
St. Giles	37,840	—	14	7	—	2	—	—	9	—	32	11·0	—	—	2	—	2	—	—	—	—	4	1·4	51	17·6	86
St. Martin-in-the-Fields	12,711	—	3	1	—	1	—	—	—	—	5	5·1	—	—	—	—	—	—	1	—	—	1	1·0	13	13·3	—
Strand	23,552	—	3	1	—	—	—	—	2	—	6	3·3	—	—	—	—	—	—	—	—	—	—	—	33	18·3	111
Holborn	30,493	—	12	7	—	4	—	—	4	—	27	11·5	—	—	—	—	1	—	1	—	1	3	1·3	60	25·7	20
Clerkenwell	66,162	—	19	16	—	1	—	—	5	—	41	8·1	—	1	—	—	6	—	—	—	1	8	1·6	86	16·9	131
St. Luke	41,279	—	12	7	—	1	—	—	12	—	32	19·1	—	—	—	2	3	—	1	—	1	7	2·2	59	18·6	99
City of London	30,228	—	9	2	—	1	—	—	2	—	14	6·0	—	—	—	—	1	—	1	—	—	2	0·9	43	18·5	37
East Districts.																										
Shoreditch	121,883	1	35	14	—	7	—	—	16	—	73	7·8	1	3	1	—	5	—	1	—	3	14	1·5	145	15·5	111
Bethnal Green	129,098	—	32	27	—	2	—	1	26	—	88	8·9	—	12	1	8	2	—	—	—	1	24	2·4	165	16·7	89
Whitechapel	79,724	—	26	26	—	1	—	—	6	—	59	9·6	—	4	1	3	1	—	—	—	—	9	1·5	97	15·9	103
St. George-in-the-East	47,917	—	11	21	—	1	—	—	3	—	36	9·8	—	4	—	2	1	—	—	—	—	7	1·9	73	19·9	103
Limehouse	58,508	—	17	14	—	2	—	—	9	—	42	9·4	—	3	1	1	—	—	—	—	3	8	1·8	107	23·8	146
Mile End Old Town	111,883	—	37	41	—	6	—	—	15	—	99	11·5	—	5	—	5	6	—	1	—	1	18	2·1	128	14·9	89
Poplar	169,811	—	49	44	—	6	1	1	22	—	123	9·4	—	5	—	10	2	—	1	—	3	21	1·6	217	16·7	123
South Districts.																										
St. Saviour Southwark	24,919	—	5	5	—	—	—	—	—	—	10	5·2	—	—	—	1	—	—	—	—	—	1	0·5	40	20·9	94
St. George Southwark	60,388	—	46	19	—	4	—	—	10	—	79	17·1	—	—	—	3	1	—	—	—	—	4	0·9	84	18·1	129
Newington	122,191	—	47	21	—	1	—	1	7	—	77	8·2	—	1	2	5	8	—	—	—	2	18	1·9	188	20·1	149
St. Olave Southwark	11,480	1	1	1	—	—	—	—	1	—	4	4·5	—	—	—	—	—	—	—	—	1	1	1·1	16	18·2	53
Bermondsey	85,629	—	32	27	—	5	—	—	3	—	67	10·2	—	1	6	5	8	—	1	—	3	24	3·7	126	19·2	156
Rotherhithe	40,643	—	31	6	—	1	—	3	2	—	43	13·8	—	5	2	2	2	—	—	—	—	11	3·5	60	19·2	74
Lambeth	300,048	—	67	50	—	5	—	—	13	—	135	5·9	—	9	3	9	10	—	1	—	2	34	1·5	352	15·3	98
Battersea	168,877	1	80	39	—	5	—	1	14	—	140	10·8	—	—	3	5	8	—	—	—	—	16	1·2	178	13·7	115
Wandsworth	195,612	1	61	31	—	9	—	—	16	—	118	7·9	—	5	1	5	6	—	1	—	—	18	1·2	183	12·2	104
Camberwell	257,575	—	89	57	—	7	—	1	20	—	174	8·8	—	—	2	7	15	—	2	—	4	30	1·5	259	13·1	108
Greenwich	173,367	—	54	32	—	6	—	—	16	—	108	7·9	—	10	4	4	2	—	1	—	5	26	1·9	204	14·9	90
Lewisham (excluding Penge)	86,152	—	26	11	—	3	—	—	5	—	45	6·8	—	—	1	2	2	—	2	—	—	7	1·1	75	11·3	88
Woolwich...	41,409	—	14	7	—	—	—	—	3	—	24	7·6	—	—	1	1	—	—	—	—	2	4	1·3	47	14·8	119
Lee	39,215	—	12	4	—	—	—	—	3	—	19	6·3	—	2	—	1	—	—	—	—	—	3	1·0	35	11·6	152
Plumstead	61,057	—	16	4	—	1	—	—	5	—	26	5·6	—	—	—	—	1	—	—	1	—	2	0·4	63	13·5	64
Port of London	—	—	1	1	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 27 cases of membranous croup.

† Including deaths from membranous croup.

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small-pox. These 480 deaths were equal to an annual rate of 1·4 per 1000. No death from any of these zymotic diseases occurred during May in Strand sanitary area; among the other sanitary areas the lowest zymotic rates were recorded in St. George Hanover-square, Westminster, St. James Westminster, Marylebone, St. Saviour Southwark, and Plumstead; and the highest rates in Stoke Newington, St. Luke, Bethnal Green, St. George-in-the-East, Mile End Old Town, Newington, Bermondsey, and Rotherhithe. The single fatal case of small-pox belonged to Shoreditch sanitary area. The 82 deaths from measles were little more than a fourth of the corrected average number in the corresponding periods of the ten preceding years; this disease was proportionally most fatal in Bethnal Green, St. George-in-the-East, Rotherhithe, and Greenwich sanitary areas. The 45 fatal cases of scarlet fever were 23 below the corrected average number; the mortality from this disease was highest in St. Giles and Bermondsey sanitary areas. The 136 deaths referred to diphtheria slightly exceeded the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Chelsea, Stoke Newington, Bethnal Green, Mile End Old Town, Poplar, and Bermondsey. The 142 fatal cases of whooping-cough were 116 below the corrected average number; the mortality from this disease was highest in Clerkenwell, Newington, Bermondsey, and Camberwell sanitary areas. The 25 deaths referred to enteric fever were 8 below the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 48 fatal cases of diarrhœa were 14 below the corrected average number. In conclusion, it may be stated that the mortality in London during May from these principal zymotic diseases was nearly 46 per cent. below the average.

Infant mortality in London, measured by the proportion of deaths under one year of age to registered births, was equal to 105 per 1000 during May, and was considerably below the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in St. George Hanover-square, St. James Westminster, Stoke Newington, Holborn, St. Olave Southwark, and Plumstead; and the highest rates in Hammersmith, Clerkenwell, Limehouse, Newington, Bermondsey, and Lee.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAINS G. S. M'LOUGHLIN and J. D. Ferguson have been selected to go with an expedition to East Africa to determine British and Italian spheres of interest.

The under-mentioned Surgeon-Captains to be Surgeon-Majors:—Samuel Hickson, Henry J. Fletcher, Edward Davis, Simpson Powell, Frederick W. C. Jones, James Meek, Arthur E. Morris, Arthur O. FitzGerald, Frederick D. Elderton, Robert E. Molesworth, John W. F. Long, Charles L. Josling, John F. Bateson, William T. Swan, Robert L. R. Macleod, Gofton G. Adams, James M. F. Shine, William B. Day, David R. Hamilton, Robert G. Thompson, Charles T. Blackwell, Robert I. Power, Charles R. Kilkelly, Nicholas C. Ferguson, Samuel R. Wills, Michael L. Hearn, Richard H. Hall, John H. Greenway, Richard G. Hanley, Gerald Cree, Samuel C. Philson, John M. Nicolls, and Frederick W. H. D. Harris.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Lieutenant-Colonel J. S. Wilkins, D.S.O. (Bombay), are placed temporarily at the disposal of the Government of Bombay for employment on plague duty. The services of Surgeon-Captain W. P. Barter, A.M.S., are placed temporarily at the disposal of the Government of the North-Western Provinces and Oudh for employment on plague duty. The services of Surgeon-Captain W. Westropp White (Bengal), are placed temporarily at the disposal of the Government of the North-Western Provinces and Oudh for employment on famine duty. The services of Surgeon-Captain F. M. Mangan, A.M.S., are placed temporarily at the disposal of the Government of the Punjab for employment on plague duty. Surgeon-Colonel N. B. Major, A.M.S., is brought on the Administrative Medical Staff of the Army, vice Surgeon-Major-General H. S. Muir, transferred to Egypt. Surgeon-Major J. C. H. Peacocke has delivered over charge of the Karwar Prison.

NAVAL MEDICAL SERVICE.

Staff Surgeon Chas. F. Newland has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet. Fleet Surgeon William Henry Stewart, M.B., has been placed on the Retired List, with permission to assume the rank of Deputy-Inspector-General of Hospitals and Fleets. Staff Surgeon J. E. Penn, R.N., recently invalided from the *Philomel*, has been pronounced by the medical board sitting at the Royal Naval Hospital, Stonehouse, to be unfit for further active service.

The following appointments are announced:—Surgeons: P. K. Nix to the *Pembroke;* A. R. H. Skey to the *Alexandra;* John Menary to the *Minerva;* Jonathan Shand to the *Victory;* E. C. Lomas to the *Warspite;* T. A. Penfold to the *Collingwood;* John Andrews to the *Benbow;* Frederick W. Parker to the *Colossus;* C. J. E. Cock to the *Galatea;* and Geo. M'Gregor to the *Excellent.*

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Robert Thin Craig Robertson, M.B., 2nd Volunteer Battalion the Cameronians (Scottish Rifles), to be Surgeon-Major. Surgeon-Captain H. F. H. Barham, having resigned his Volunteer appointment, ceases to be an officer of the Army Medical Reserve of Officers.

VOLUNTEER CORPS.

Artillery: 1st Lancashire: Surgeon-Lieutenant T. Hammond to be Surgeon-Captain. 6th Lancashire: Surgeon-Lieutenant R. Humphreys, M.B., to be Surgeon-Captain. *Rifle:* 4th Volunteer Battalion the Devonshire Regiment: Frank Bernard Manning gent., to be Surgeon-Lieutenant. 5th (the Hay Tor) Volunteer Battalion the Devonshire Regiment: John Loftus Cuppaidge, M.D., to be Surgeon-Lieutenant. 2nd Volunteer Battalion the Royal Scots Fusiliers: William Roxburgh, M.B, to be Surgeon-Lieutenant. 1st Surrey (South London): Surgeon-Lieutenant L. J. G. Carré, M.D., resigns his commission. 1st Volunteer Battalion the Dorsetshire Regiment: Surgeon-Major W. A. E. Hay resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 2nd Volunteer Battalion the Gordon Highlanders: Surgeon-Major W. Mortimer to be Surgeon-Lieutenant-Colonel. 4th (Stirlingshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Lieutenant J. Brown Robertson, M.B., resigns his commission.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: William Salisbury Sharpe and Frederic Harvey to be Surgeon-Lieutenants. The Woolwich Company: Surgeon-Captain F. L. Stephenson, to be Surgeon-Major.

THE CARE OF THE WOUNDED IN NAVAL WARFARE.

The *Archives de Médecine Navale et Coloniale* for April contain an important article on the care of the wounded on board ship during and subsequently to an engagement. The writer, Dr. Fontorbe, *Médecin en Chef*, who has twice filled the important post of *Médecin d'Escadre*, has embodied his views in the form of a report addressed to his commanding officer, Admiral Gervais, and the latter, in addition to his concluding comment—"Seen: I associate myself with the ideas emitted by Dr. Fontorbe"—has interspersed several approbatory notes in the body of the document. Owing to the transformation which of late years has taken place in naval architecture, as well as to the equally complete transformation which has resulted from the introduction of antisepticism, the notions that formerly prevailed regarding the management and treatment of the wounded in maritime warfare have been entirely revolutionised. For a little while experts differed considerably as to the best way of meeting the altered circumstances, but at the present time there seems to be a consensus of opinion on the point which may be expressed according to the following formula:—1. The wounded during an action constitute an encumbrance which should be removed as quickly as possible. 2. The means resorted to for this purpose should not of themselves constitute an encumbrance greater than that arising from the presence of the wounded men. 3. The employment of combatants for the removal of the wounded is totally inadmissible. Not only would such a procedure tend to create gaps on the line of fire deeper than those produced by the missiles of the enemy, it would also interfere with the supply of ammunition, and prove a source of disorder in several other ways. 4. The removal of the wounded should devolve exclusively upon trained men, who are not

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otherwise liable to be actively engaged in the action, and should be carried out under the direction of a medical officer, who alone possesses the technical knowledge necessary to prevent a possible aggravation of the injuries *in transitu*. According to existing regulations the duties of the medical staff on board a French man-of-war are thus defined: "During an engagement the principal surgeon and the rest of the medical staff shall remain at the stations that have been assigned to them by the commanding officer." Dr. Fontorbe looks on this ordinance as obsolete, and wishes to substitute an amendment to the following effect: "The medical staff, the hospital (sick-bay) attendants, together with the non-combatants who have been told off in advance for the purpose, are alone permitted to collect and remove the wounded during an action. This duty is to be performed under the supervision and control of the surgeon-in-chief, who receives his authorisation from the commanding officer." Already in certain ironclads these views have been adopted, and it appears that in the German navy an organisation on similar lines has been worked out in detail. The opinion of Admiral Gervais, expressed in a note, is as follows: "I am perfectly convinced that the management of the operations for the removal of the wounded should be entrusted to the medical officer." Dr. Fontorbe next considers the important question of accommodation for the wounded. In some of the war-vessels now afloat not more than twelve wounded men could be suitably accommodated on standing cots within the protected area, while with the exception of the *Redoutable* the maximum number in the most roomy would seem to be twenty-five. Ironclad hospital ships have been suggested, but the idea is premature, if not Utopian. There is, however, a Ministerial order that when a new war-vessel is being designed the provision of suitable accommodation for wounded men shall be taken into account. Meanwhile, every medical officer in charge of a ship should make a study of the various spaces at his disposal, taking counsel with his commanding officer as to the best way of utilising them. There are many equally important matters treated of in this interesting paper, including the transport and treatment of wounded men, the provision and storage of medical and surgical equipment, the necessity for a thorough application from the first of the antiseptic system, &c., but, unfortunately, our overcrowded space does not allow us to deal with them.

ENTERIC FEVER IN THE FRENCH ARMY.

Although, thanks to enlightened sanitation, enteric fever has diminished greatly in the French Army during the last few years, the disease has not yet been completely stamped out, and epidemics of more or less gravity continue to be reported occasionally. On May 3rd the 141st Regiment of the Line was ordered from Marseilles to Carpiagne to go through a course of musketry practice. While quartered at the insalubrious seaport the corps had suffered to a slight extent from typhoid fever, but shortly after its arrival at the ranges, where the men had to live under canvas, the affection assumed a more serious form, and it was reported that upwards of a hundred cases had occurred. Dr. Dujardin-Beaumetz, Inspector-General of the Health Department, was sent to inquire into the origin of the outbreak, and apparently the barracks of Saint Charles at Marseilles are at fault, for disinfecting operations on an extensive scale have been undertaken in them. The remainder of the troops at Carpiagne, numbering in all about 3000 men, are apparently in good health; and yet there are not wanting critics who seek to ascribe the fever to military *surmenage* and the hardship of camp life. During his inspection, which was most exhaustive, Dr. Dujardin-Beaumetz was accompanied by Surgeon-Major Dziewonski; and the record adds that all the recommendations that were made with a view to the rooting-out of the evil were immediately given effect to by General Canonge, "who is himself a distinguished member of the medical profession."

THE ALLEGED UNSATISFACTORY STATE OF THE MILITARY FORCES.

The Service Members' Committee of the House of Commons have addressed a letter to the Prime Minister calling the Marquis of Salisbury's attention to the very unsatisfactory condition of the military forces at the present time, and pointing out that the Forces on the home establishment, more especially those of the Line and Horse and Field Artillery, are inadequate to meet the requirements. The linked battalion system does not seem to have answered the expectations formed of it by its advocates. The recruiting question is an old difficulty, liable to fluctuations from time to time; but it is becoming more and more obvious that the supply of army recruits is inadequate. The remedy is not easy to find, but with a voluntary system of recruiting it means that additional inducements to enlist must be held out, and that the pay of the soldier will have to be increased. The Treasury is not likely to give its assent to this unless it is obliged to do so; but the step will, we presume, have to be taken sooner or later.

ARMY TEMPERANCE WORK IN INDIA.

The Army Temperance Association is successfully carrying on its good work in India. A meeting of the association was recently held at Simla, at which the Viceroy of India, the Commander-in-Chief, and other officials spoke. Sir George White gave some interesting details. The number of members of the association was 22,810 last year. Touching on court-martials, His Excellency said that while 4·70 per 1000 represented the number of convictions amongst abstainers, those among non-abstainers amounted to 42·27 per 1000; and the figures just received from the Principal Medical Officer of H.M.'s forces in India showed that last year only fourteen cases of delirium tremens had been admitted into hospital, whereas if the army in India had been of the same strength as at present the admissions would have been 481. Sir George White also alluded to the military and fighting qualities of the Turkish soldiers, who were water-drinkers.

THE ALDERSHOT SEWAGE FARM.

We notice that this old question is again to the fore. Our service contemporary, the *Army and Navy Gazette*, of the 5th inst. states that it is a never-ending subject, and that it is difficult to know how it will be ultimately settled. The present sewage farm has been condemned long ago, as everybody knows; and notwithstanding that some improvement has taken place under a new system of management the fact remains exactly where it was—viz., that a new sewage farm on a new site is absolutely necessary, and the sooner this is carried into effect the better.

MOVEMENT OF TROOPS IN THE COLD WEATHER IN INDIA.

According to the Indian papers the movement of the troops in India during the next cold weather will be on an extended scale. Many of them will be on the march for some time, and the marches will be through districts at a distance from the large cantonment stations. Troops are usually very healthy under such circumstances during the cold season in India if proper sanitary precautions be taken, and it is thought desirable that British soldiers should occasionally be more *en evidence* than they are in remote districts of India.

THE WHITE CROSS LEAGUE.

We have received a copy of a resolution of the Council of this society which has received the approval of the Archbishop of Canterbury, the president. The resolution respectfully calls upon the archbishops and bishops to confer with the senior authorities in the Royal Navy and Army with a view to making it generally known that fornication is a deadly sin and an evil highly prejudicial to Her Majesty's services.

SUBATHU.

It will be recollected that there has recently been an outbreak of enteric fever among the troops at Subathu, and that this hill-station has not had a good medical history in the past. The Government of India have sanctioned a project for the provision of a pipe water-supply for the cantonment, and an officer of the Royal Engineers has been deputed to prepare a detailed estimate of the cost of the work.

THE MEDICAL SERVICES IN INDIA.

The plague and famine in India have required the presence of a large number of medical officers, and the Government of India has consequently been compelled to restrict the number of medical officers going on privilege leave.

THE HEALTH OF THE TROOPS IN INDIA.

The despatch of the Government of India on the contagious diseases question is understood to have been transmitted home by the incoming mail.

Sir H. S. Cunningham's rejoinder to the reply of Mr. Henry J. Wilson, M.P., to the former gentleman's charge that he (Mr. Wilson), in his pamphlet "A Sanitary Failure," had garbled quotations from Blue-books, has been published in leaflet form. Mr. Wilson boldly asked for proofs of Sir H. S. Cunningham's accusations, and these proofs are here given. In one part of the letter he purports to show that Mr.

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Wilson has been guilty of suppressing a passage which reveals the fact that the Army Sanitary Commission has throughout concurred with the Government of India in insisting on the necessity of protective measures.

Correspondence.

"Audi alteram partem."

"SECONDARY RASHES IN SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 29th is an editorial notice of an article by Dr. J. O. Symes in which he attributes the nephritis, dermatitis, and other inflammatory changes of certain specific fevers to the elimination of the virus from the body. Perhaps I may be allowed to point out that in 1890 I advanced the theory that such organic lesions of skin, kidney, alimentary and respiratory tracts, and so on, were due to the excretion of an irritant from the blood. Further, I traced the analogy between specific bacteria (and their products), certain drugs, and such chemical tissue irritants as that of gout. The facts are published in a small book on Excretory Irritation lately issued.

I remain, Sirs, yours faithfully,

Temple, E.C., June 2nd, 1897. DAVID WALSH, M.D. Edin.

"URIC ACID IN THE BLOOD."

To the Editors of THE LANCET.

SIRS,—Dr. A. P. Luff has informed your readers[1] of the extreme delicacy of the murexide test. Nevertheless, there is an exact procedure necessary to secure infallible evidence of small quantities. For example, one large drop of solution of potassium urate containing 0·4 per 1000 of uric acid—i.e., about a thirtieth of a milligramme of uric acid—gives me one success and three failures, and yet my general procedure has been the same. So that if these experiments were applied to four different solutions I might have concluded uric acid to be absent in three of the solutions. "The Physiology of the Invertebrates," by A. B. Griffiths, contains a demonstrable history of uric acid in our fauna from the protozoa to the mollusca, yet this excellent work does not give us the exact data whereby we may obtain the infallible evidence so necessary to be had. One grain of ammonium chloride added to twenty minims of an alkaline solution of urate immediately precipitates the uric acid, except 1 per 28,000; five minims solution (1—4) of ammonium chloride also determines rapid deposition of urates in about half an hour. Applied to the blood I thought I could obtain morphological evidence of urates in the blood corpuscles by means of this alkaline ammonium chloride test. In the absence of uric acid from normal blood, as demonstrated by Dr. Luff, I would ask, What are these coloured microcytic or albocytic granules about a micro-millimetre in size obtained by this test used with a drop of blood from a pricked finger? In the "Manual of Pathological Anatomy" of Cornil and Ranvier, page 81 (translation), it is stated that "everywhere the deposit is primarily made in the cells." Again: "The primary appearance of uratic infiltration in the cells proves that the latter play an active part even in the phenomena of simple deposit, and differentiates this process from that of calcification, in which infiltration commences primarily in the ground substance." It has appeared to me that ammonia may be a factor in the commencement of urate deposition. Perhaps Dr. Luff will be good enough to formulate an exact procedure for the murexide test for workers.

I am, Sirs, yours faithfully,

JOHN BARKER SMITH, L.R.C.P. Lond.

Holmdene avenue, Herne Hill, S.E., May 25th, 1897.

"THE EXAMINATIONS FOR DENTISTS."

To the Editors of THE LANCET.

SIRS,—In the report of the proceedings of the General Medical Council on May 29th, which appears in THE LANCET of June 5th, I notice that Mr. Thomson objected to dental students being questioned on parotid fistula, tongue-tie and its treatment, removal of the tongue, sebaceous cyst of the scalp, dermoid cyst, wound of the radial artery, gummata, and the stages of syphilis, and their treatment. Mr. Bryant, as representative of the Royal College of Surgeons of England, was asked whether he thought this an examination suitable for gentlemen who were seeking a qualification as dentists pure and simple, and he said that he would put the matter before the College. May I say, as a dentist and a teacher, that I should be sorry to see the subjects mentioned struck out of the examination? I should be very sorry to see dental surgeons trespassing on the domain of surgery, but dental students ought to be taught everything that may be of use to them in their daily work, and although the questions objected to may at first sight seem beyond the province of a dentist I think a good deal could be said in their favour. As regards parotid fistula, which is first on the list, one must remember that sinuses arising from diseased teeth, especially from wisdom teeth, are far from uncommon in the parotid region; and in the dental operation for the removal of impacted wisdom teeth the slip of an elevator, or the external pointing of a large abscess, may be followed by a salivary fistula, so it is just as well that a dental surgeon should know that there is such a thing as a salivary fistula in order that he might refer the case to a surgeon for treatment. With the same object in view I think it desirable that a dental surgeon should know anything that would help him to diagnose a dental or dentigerous cyst from any other kind of cyst, whether dermoid or sebaceous. It will do the dental surgeon no harm to know the difference between a tongue-tie and the adhesions between the mucous membrane of the lip and gum which not infrequently occur in the incisive region as the sequel of ulceration set up by denuded roots of teeth in children. Dental surgeons should also be well versed in all the means available for the arrest of hæmorrhage, and I think that a candidate who knows how to deal with the various forms of hæmorrhage that occur in the mouth might as readily apply the principles of arresting arterial hæmorrhage to the radial artery as to the facial. Be this as it may, I think it very desirable that particular attention should be given to syphilis in its various stages and its treatment. Primary chancre of the lip is uncommon, but the dental surgeon should recognise it, not only for his own sake, but for the protection of other patients whom he may be treating. Specific lesions of the secondary stage are often seen in the mouth, and as for tertiary syphilis dental surgeons are often required to restore artificially the destruction of the hard and soft palate that follows gummata and necrosis. Hereditary syphilis modifies the form of certain teeth, affects their arrangement, structure, and liability to caries. It is needless to refer to the connexion between inherited syphilis and cleft palate, or to add that much can be done by the dental surgeon in the treatment of cleft palate by artificial means.

Mr. Thomson objects to dental students being examined on removal of the tongue, but one should recollect that a large number of the operations required are for removal of epithelioma arising in the first instance from the irritation caused by a decayed tooth. The greater the knowledge of the dental surgeon about epithelioma and its treatment the smaller will be the number of tongues that require removal, and the more the dentist knows about the difficulties of the operation the less likely will he be to attempt it. There are other reasons for not restricting the examination questions to the teeth and their immediate surroundings, for, regarding the profession of dental surgery as a whole, we find that every year shows an improvement in the educational standard. Qualified men are taking the place of unqualified men, and many of us look forward to the time when the dental diploma will be taken after a registrable medical qualification, and then, indeed, will dental surgery be acknowledged a true specialty of surgery. I am, Sirs, yours faithfully,

F. NEWLAND-PEDLEY, F.R.C.S. & L.D.S. Eng.

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—I had not intended to reply further to Dr. Bastian, but Dr. Harry Campbell renders it necessary. In his last letter[1] Dr. Bastian said "The *acquirement* of language is a

[1] THE LANCET, May 22nd, 1897.

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twofold process, comprising what is termed a receptive and an expressive side" (the italics are mine. If language *is* acquired does it matter whether or not it is a twofold process. I stated that it was acquired, and Dr. Bastian disputed it). Once again let me beg your readers to think in concrete, not in abstract terms; let us take the case of a particular word. It appears, then, if I understand my censor right, that an English child learns—i.e., acquires—the word "picture" for instance, but does not learn to *say* it. The distinction is fine but, if Dr. Bastian is right, important. This sound, like all others, is produced by the very nice and complex coördination of a large number of muscles. In other languages the same object is indicated by totally different sounds, each requiring a different coördination of the muscles. Are we to understand then that, apart from all experience, from all tentative efforts, from all *learning*, the English child is able to make this particular coördination. But the word "picture" is not comprised in the French language, and therefore the power of making this particular coördination of muscles cannot arise apart from experience in the French child; it must, of course, be acquired by him. Nevertheless, the French child, reared in England, speaks it with as much facility as the English child, and, if he subsequently learns his native language, speaks that with an English accent. Does not this prove that language is acquired in its expressive as well as its receptive side—i.e., that the power of making quickly and easily all those separate delicate muscular coördinations by means of which the many words of a language are expressed is acquired—just as the power of making quickly and easily all those separate delicate coördinations by means of which we are enabled to write is acquired? If, as Dr. Bastian maintains, speech is a "deferred primary automatic movement," why does the French child reared in England subsequently speak French with an English accent? Dr. Bastian rests his case on two or three children who apparently began to speak by uttering certain words with singular distinctness. But had these children before then been absolutely dumb? Had they never before attempted to coördinate their speech mucles by uttering the usual babbling and inarticulate sounds that infants make, and which, in the ordinary child, may be observed to grow in distinctness with practice till at length the child speaks clearly? The case of bi-pedal progression is exactly the same as that of speech. The infant manifestly cannot coördinate its muscles of locomotion at birth, and, as I think, very plainly learns to do so. In the case of Sir R. Quain's daughter, was she never allowed to use her legs, and so acquire precision of movement? Was she never allowed to crawl about, for instance? Was she never placed on her feet? The muscles of the upper extremity are much less powerful and adapted for locomotion than those of the lower, yet an exceptional man, who had otherwise developed and learned to coördinate them, might at the very first attempt walk on his hands. Thus also might an exceptional child walk at the first attempt on her feet.

Next, as to Dr. Harry Campbell. Low in the animal scale an animal develops fully, mentally and physically, in the absence of all stimulation other than that of sufficient food. In other words, it is a product of heredity pure and simple; exercise and use is not necessary to the development of its mind and body. Thus we see the caterpillar metamorphosed into the butterfly while hanging quiescent; thus even so high in the scale as the frog, if a tadpole finds its way through a crevice into a small cavity, it will there, if it obtains sufficient food, though it leads a purely vegetative life, develop into a normal frog. But as we ascend in the animal scale we find that this power of developing in the absence of stimulation (of exercise, of use) is gradually lapsed, and replaced by a power (which does not exist low in the scale) of developing in response to stimulation. Compare, for instance, a dragon fly at one end of the scale and man at the other. Physically a dragon fly, in the absence of stimulation, undergoes extraordinary metamorphoses; mentally it can *instinctively* coördinate all its muscles, and has besides many other wonderful instincts, but so far as we know it does not change physically in response to stimulation; mentally it learns and remembers nothing. Even to an animal so high in the scale as a fish has memory been denied,[2] and of course all that lies within the memory is acquired. Far different is the case of man. He is born helpless; his physical structures "immature," his mind a blank; but subsequently in response to stimulation (use, exercise, experience), he develops enormously both mentally and physically. On consideration it will be seen that nearly all that separates the adult man from the infant is acquired (i.e., has resulted as a response to stimulation, has resulted from exercise and use). For instance, if the joints of an infant's limb—e.g., the arm—be locked, as by disease, so that the limb cannot be used, it does not develop. Again if a man—e.g., a blacksmith—uses his muscles beyond the ordinary he gets an extra development of them, and this additional development is said by biologists to be acquired. But, as we see, the "normal" standard of development is attained as a response to stimulation, similar in kind but less in amount, whence it is plain that the normal degree of development is also acquired. Mentally, as I say, the infant's mind is practically a blank. It can instinctively coördinate only a few groups of muscles—e.g., those of breathing, sucking, defæcating, &c.—and in these the coördination is never very delicate. How different is the mind of the adult man with its wonderful power of delicately coördinating the different groups of muscles, and with the vast contents of its memory, and all that arises out of memory.

Surely then I am right in saying that the faculties of language and bi-pedal progression are both acquired. Dr. Harry Campbell says that the majority of physiologists think otherwise. But this is not a question of counting heads but of facts, and the discoverer of a fact is always at first in a minority of one.—I am, Sirs, yours faithfully,

Southsea, June 1st. G. ARCHDALL REID.

[2] THE LANCET, Jan. 23rd, 1897, p. 257.

THE GENERAL MEDICAL COUNCIL AND MEDICAL AID ASSOCIATIONS.

To the Editors of THE LANCET.

SIRS,—When the subject of Medical Aid Associations came up for discussion at the May session of the General Medical Council I tried to show that if the Council took action it must attack those practitioners connected with hospitals at which medical aid was given as those practitioners who act as officers to medical aids. To establish this statement I referred to the gross and sad state of affairs at Guy's Hospital where a patient by paying 3*d*. per week or 6*d*. per fortnight (not 6*d*. per visit be it noted) can obtain, as an out-patient, medical or surgical treatment and medicines. This "charity"—if the payors will permit the use of this word—appoints four assistant surgeons and four assistant physicians and pays such practitioners £100 per annum each. During the year ending March 31st, 1895, the out-patients paid £928 and the in-patients £3965. As this seems a fair commercial speculation—because I fail to see how it could *honestly* be called *charity*—I asked, How many out-patients were *refused* treatment? As was to be expected, no answer could be given. Threepenny-a-week patients represent income, and income must be maintained. Hence the present "fifteen per cent. charity" hospital business which is now degrading our charities. Then look at the result of this demoralising system. A young practitioner wishing to live and to compete with the practitioners of Guy's "cuts" their price and charges, not threepence, but one penny per week. Thus we have the various medical aids and their baneful accompaniments. Go a step further down, and we have the private practitioner trying to "cut" the charity prices of Guy's and of the Medical Aids. He charges threepence and sixpence *per visit*, not per week. He is sneered by the chief sinners, who all the time use the charity to kill off competitors. My advice to each practitioner is—Have nothing to do with clubs, medical aids, or sixpenny fees, and above all shun, as one should shun evil, all penny and threepenny a week hospitals.

Mr. Bryant stated at the Council meeting that Guy's was his hospital and that he "must repudiate in the strongest words he could use the accusations which had just been made against it. Dr. Rentoul was entirely in the wrong, and if he would take five minutes' trouble ..... he would probably come back next session and apologise for bringing forward such a false accusation." This is strong language for Mr. Bryant. He suggests I should bring forward documents in proof. I gladly do so. May I refer him to the "Annual Report of Guy's Hospital" for 1895, and will he ask the superintendent of Guy's to show him a copy of a letter dated

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Oct. 16th, 1896, which the superintendent kindly sent to me on this very question?

My stay upon the Medical Council may be long or it may be short. But if Mr. Bryant thinks for one moment that I deliberately concoct statements to wilfully mislead the Medical Council or that I am going to accept his suggestion of "apologising" to the Council because I have been "guilty" of making a statement true in word and fact, then all I can say is that he has not taken my measure with accuracy.

If Mr. Bryant will refer to page 2 of the above annual report he will find that not only are *out*-patients treated for threepence per week, but that in-patients are treated for from 1 to 3 guineas per week. Practitioners would be also edified if, in his reply, he would state the maximum and minimum fees charged by the Practitioners connected with Guy's *in* pay patients, above or exclusive of the 1 or 3 guineas per week. If he will further refer to the Report of the House of Lords on "Metropolitan hospitals," 1892, p. 10, he will find further documentary reference to the sales of charity at Guy's.

Awaiting his reply,

I am, yours obediently,

ROBERT R. RENTOUL.

THE NEED OF ORGANISATION IN THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—I have received a pamphlet entitled "The Just Claims of the Provident Dispensary System" by the secretary of the Provident Medical Association,[1] and have no doubt but that most other London medical men have had copies sent to them. The pamphlet emphasises strongly the necessity for organisation amongst medical men, and as this formed the subject of a paper I had the honour of reading before the Hunterian Society in 1895[2] I venture to send you a few observations on the pamphlet in question. In many of his remarks, as contained in the pamphlet in question, I agree very cordially with the writer, but I disagree with him *in toto* as to the result he arrives at in respect to the fees to be received by medical men attached to provident dispensaries—one of the crucial points.

I must premise that I am able to state on the strength of the observations of a patient of mine—observations covering fifty years' work in a leading builder's office—that wages have increased within the period I have mentioned some 80 per cent., that about 80 per cent. less work is done, and that the work on the whole is inferior to what it used to be, and that, as we all know, there is a marked tendency amongst this class in the direction of undervaluing (from a monetary point of view) the services of medical men.

It is fairly certain that the expenses of living have not increased in the same proportion as wages. Per contra, a medical man cannot, I think, live on less than £400 per annum, with an additional £200 for his trap. If he be properly paid his income, therefore, should amount to at least £600 per annum. The author of the pamphlet evidently considers that "between 4½*d*. and 6*d*. per attendance, whether at the dispensary, the doctor's surgery, or at the patient's house," is a fair remuneration. In order to earn an income of £600 24,000 patients per annum would have to be seen, or at the rate of about 66 per diem all the year round at 6*d*. each. If he does confinements the additional income so earned will probably allow him to have his Sundays free, but would not pay for holidays. In order to be able to earn this, starting at a far less income at age twenty-three or so, he has to lay down capital and to devote five years to acquiring his professional knowledge.

Does it not emphasise the necessity for organisation amongst us when we are assured by one who ought to know about it that such are the conditions under which we should expect to live? The reasons adduced are want of medical union and competition with "charitable" organisations, and not because we know less than we did or do our work less satisfactorily.

Into the fallacies respecting the declarations made by candidates for membership respecting their incomes, the amount of responsibility attaching itself to medical officers of provident dispensaries as to the admission of well-to-do persons into the dispensary—in respect to both of which I think he takes a totally wrong view—I will not enter. I feel that the challenge thrown down should not be allowed to remain unanswered, especially since the author states that "the interests of the general medical practitioner have been placed (in the 'Battle of Clubs') somewhat in opposition to the various means by which medical advice is being obtained." It would appear that it is time they were.

I am, Sirs, yours faithfully,

ROWLAND HUMPHREYS.

Fellows-road, South Hampstead, N.W., June 7th, 1897.

[1] A paper read at a special meeting of the Council of the Charity Organisation Society on Jan. 4th, 1897.

[2] Medical Magazine, June, 1895.

THE SUPPLY OF TETANUS ANTITOXIN.

To the Editors of THE LANCET.

SIRS,—I notice with some interest a case of traumatic tetanus treated successfully by antitoxin reported in THE LANCET of June 5th by Dr. Chalmers. Curiously enough, this case and a similar one, of which the notes were published in THE LANCET of April 10th, 1897, occurred in June of last year. In sending up those notes I drew attention to the difficulty of obtaining a supply of antitoxin, and Dr. Chalmers has further emphasised this fact. I wish to point out that so long as the only places at which the antitoxins can be obtained are either Messrs. Allen and Hanburys, Messrs. Burroughs and Wellcome, or other chemists in London, if the want arises on a Saturday after those firms have closed their places of business a delay of forty-eight hours is at present unavoidable. That forty-eight hours may mean a matter of life and death in some cases is indisputable. Surely it is time that a supply of the various antitoxins should be kept by the Public Health Departments in the various large towns throughout the kingdom, so that when required they should be easily obtainable at short notice.

I am, Sirs, yours faithfully,

Brighton, June 7th, 1897. ARTHUR H. BUCK, F.R.C.S.

MESCAL INTOXICATION.

To the Editors of THE LANCET.

SIRS,—In my note on the above subject in THE LANCET of June 5th I neglected to mention that I obtained the buttons through Messrs. Potter and Clarke, 60, Artillery-lane, E., who are able to supply them in small quantities.

I am, Sirs, yours truly,

HAVELOCK ELLIS.

Carbis Water, Lelant, Cornwall, June 9th, 1896.

THE DIAMOND JUBILEE.

To the Editors of THE LANCET.

SIRS,—Your suggestion regarding the publication of an official programme of the proceedings on the 22nd inst., by which all, even the poorest, of Her Majesty's subjects witnessing the spectacle should be able to identify the various bodies—the troops, colonial corps, and detachments—representing the colonies and dependencies of the British Empire, strikes me as a very wise and excellent idea. The occasion is altogether unique, and the opportunity should not be lost for enabling everybody to realise the geographical extent of the various territories within the sphere of British influence and under the British flag. It would obviously add immensely to the interest of the occasion if those taking part in the procession could be readily identified by the crowds of spectators as the panorama of living pictures passed along. What is wanted is that the power and responsibility of this country, the interdependence of Great and Greater Britain, and all that this implies in the way of the ties—social, commercial, and sympathetic—uniting them with one another, of which the Queen, as the head of the Empire, is the symbol, emblem, and token, should be brought home and impressed upon the imagination of the people. The official guide should be of small and handy size so that its pages could be easily turned over and referred to, and it might also be sufficiently illustrated to fulfil its purpose. It should not cost more than a penny or a halfpenny. It would sell in thousands—possibly millions—and realise a large profit, and the surplus, after the payment

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of all expenses, would make a handsome addition to the Prince of Wales's Hospital Fund.

I am, Sirs, yours faithfully,

June 7th, 1897. VIATOR.

*** Our correspondent will see that our suggestion has been adopted by the Prince of Wales's Hospital Fund, so that the proceeds will go in the direction in which he thinks they should go.—ED. L.

THE BATTLE OF THE CLUBS.[1]

(FROM OUR SPECIAL COMMISSIONER.)

COVENTRY.

History of the Coventry Provident Dispensary.—Action of the Medical Profession against this Institution from 1829 up to the Present Day.—Formation by the Medical Union of a Public Medical Service.

IN 1889, when public opinion at Coventry was much exercised by the question of hospital management and the claim of the working men subscribers for a share of representation as governors of the Coventry and Warwickshire Hospital, the Coventry Provident Dispensary also came in for a large measure of criticism. At a conference held that year to discuss the administration of the Poor-law, Mr. F. Townsend, Member of Parliament for Stratford-on-Avon, delivered a speech expatiating on the advantage of provident dispensaries as inculcating habits of thrift, tending to reduce the poor rates, and as most beneficial generally to both workmen and medical men. The storm seems to have found its origin in this attempt to prove too much. Mr. Stanton, formerly Mayor of Warwick, who had presided at the previous annual meeting of the Coventry Dispensary, does not appear to have been very favourably impressed with the experience he then gained, for he argued against the optimist view taken by Mr. Townsend, M.P. Mr. Stanton urged, on the contrary, that at Coventry there were members of the dispensary "who rode in their carriages, and that the medical officers had a great objection to attending such members. At Warwick no one was admitted who earned 30s. a week. and at Leamington the line was drawn at 40s." These speeches, reported in the local press, gave rise to a controversy, and the arguments for and against such dispensaries, with which we are now familiar, were brought forward. It was pointed out that there were about 20,000 members of the Coventry Dispensary and only five medical men. These medical men, considering their many other duties, could not attend properly to the health of such a vast population. At the price paid their services were charitable services, and it would not be possible that so many persons in the town were in need of charity. To prevent the abuse by the rich of institutions meant for the poor many proposals were made. Among others it was suggested that a list of all members of the dispensary should be printed and deposited at the Free Library, and the public invited to look over the list, so as to denounce all those who were too rich to belong to such an institution. Then the names of all candidates for membership should for the same purpose be hung up outside the dispensary for a month. At a meeting of the Warwick Board of Guardians the Coventry Dispensary was mentioned, and, according to the *Coventry Standard* of June 22nd, 1889, Mr. Longe, Local Goverment Board Inspector, inquired: "Do you mean to tell me that half the population of Coventry are tied down to have their medical attendance from these four or five doctors?" And on receiving a reply in the affirmative he exclaimed: "What a monopoly!"

These attacks on the dispensary did not, however, check the growth of that institution. At the annual meeting held in the spring of 1890 the secretary was able to report an increase in the number of members, amounting to 1462 for the year, and this brought up the total membership to 21,010. Lord Leigh, who presided, explained that the Coventry Institute was the third provident dispensary founded in England, the first being at Southam and the second at Northampton, and urged that such institutions materially helped to prevent pauperism. The next annual meeting was held in April, 1892, and then, according to the *Coventry Standard* of the 30th of that month, the chairman, Mr. J. Bill, said that "it was difficult to give the exact membership, but approximately it was about 25,000 or 26,000." The medical officers' reports showed that during the year 21,305 cases of illness were entered, but as cases are often entered more than once this probably did not represent more than some 10,000 persons relieved. Their drug bill had amounted to £519 8*s.* 9*d.* When to these remarkable figures we add that there were also numerous medical aid societies organised by life insurance companies and various benefit clubs and medical men's private clubs, it will be seen that little remained for private practice. Though there were not many medical men practising at Coventry the incomes they earned were small and quite out of proportion to the population of the town. The figures given by the dispensary proved that matters were getting from bad to worse, and it was under the stress of these distressful circumstances that it was at last determined to summon a meeting of the profession and see what could be done.

This meeting was held on Dec. 10th, 1892, and of the twenty medical men then in practice at Coventry sixteen were present, including some of the staff of the Coventry Dispensary. The meeting had been convoked to discuss the question of imposing a wage limit in connexion with contract work for certain clubs. Dr. Phillips spoke, urging that the members of the profession should consider themselves as a body of men working for a common end—namely, to benefit their fellow men and to receive a just remuneration for their labour. This latter end in any case was not realised, for at least from £7000 to £8000 per annum were withheld from the medical profession. Dr. Phillips pointed out that though the population of Coventry only amounted to 52,000, some 26,000 of this number were said to belong to the Coventry Dispensary. Some 13,000 others belonged to various clubs, and there were about 3000 hospital patients, making a total of 42,000 out of a population of 52,000 who were not paying any medical man. The profession rather than the general public was responsible for this state of affairs. It was obvious that the public would take advantage of the cheapest market. The dispensary medical officers had been paid the previous year £1723 4*s.* 5*d.* for attending to 26,000 persons, and this meant 1*s.* 4*d.* per annum, or $\frac{4}{13}$th of a penny per week, per member. Had these dispensary medical officers received a penny per week per member they would have shared between them £5600 instead of £1723. Then when a consultation was required a member of the dispensary could obtain a second opinion from any of the other medical men on the staff without paying a consultant's fee. To remedy this deplorable state of affairs Dr. Phillips thought that either a wage limit must be established or the profession must take the whole matter in their own hands and organise a public medical service entirely managed by themselves. After some other speeches the meeting carried a resolution to the effect that a wage limit should be imposed. It was also resolved that a deputation should wait on the managing committee of the dispensary to bring the matter of a wage limit before them, and the three medical men belonging to the dispensary staff who were present promised to support the deputation. This promise apparently was not fulfilled and a serious dispute ensued.

The dispensary medical men now withdrew from the movement which the other members of the profession were carrying forward. Many more complaints against the dispensary were made. The subscription was denounced as too low. This was fixed at a penny per week for all persons above twelve years of age, and a halfpenny for children under that age, "except in a family consisting of not more than three children, when a penny per week, and in a family of more than three children twopence per week shall be considered sufficient for all children under twelve years of age." Thus three children could be insured against sickness for a penny and an unlimited number of children for twopence. The argument was that children gave more trouble than adults, and that therefore the subscription for each child should be the same as that for adults. But even the adults do not all pay a penny a week. The dispensary will take any club at 3*s.* per annum per member. Private clubs given up by medical men were taken by the dispensary at this low figure, and several medical men had private clubs. An incident of this description occurred a few weeks ago. Dr. Phillips gave up the "Briton's Pride," a branch of the Oddfellows' Society. They went to several of the

[1] A reprint of the previous articles on the above subject has been published in book form entitled "The Battle of the Clubs," and can be obtained from THE LANCET Office, price 1*s.*

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medical men belonging to the reform party, who all refused to take the club for less than 3*s.* 6*d.*, but the dispensary gladly took the club for 3*s.* Then, again, the rule is that no member of the dispensary can claim medical benefits before he has been three months on the books, but rule No. 23 says :—

"No one actually labouring under sickness can be admitted a member unless two healthy persons above twelve years old enter at the same time, and each pay one year's subscription in advance. Any such person unable to procure two other persons to enter with him shall, by paying 10*s.*, be entitled to the benefits of the institution for three months, and afterwards continue a member by paying the usual rate of subscription."

Practically this means that the medical men are, by their services, to pay a commission to those sick persons who join when sick and are able to recruit two new members. Why should the medical men be the only persons to pay this commission? All this gives a commercial and unprofessional colouring to the institution which is naturally obnoxious to the profession. Finally, the fact that the dispensary medical men agreed to meet each other in consultation and not to call in any other Coventry practitioner was considered very objectionable.

The deputation which waited on the committee of the dispensary and spoke on behalf of the general meeting of the Coventry practitioners, having totally failed in its purpose, another general meeting of the profession was convoked on Jan. 24th, 1893, and it was then decided to establish a public medical service. This was an important departure, and the rules of the new body merit a detailed examination. They were drawn up finally on April 10th, 1893, when the following resolution was unanimously adopted by the eleven medical practitioners present—namely, that the object of the public medical service should be :—

"To provide efficient medical attendance at a small weekly payment for members of families resident in Coventry and Stoke whose average annual income does not exceed £2 per week."

The principle of admission for members of the profession is based on the desire to prevent anything like a monopoly arising. All fully qualified practitioners are admitted to membership. The only exception is given in Rule 10, in the following words :—

"That any member of the medical profession commencing practice in Coventry without an introduction shall not be eligible for election to the service during his first year of residence in the city."

The committee of management consists of all the medical staff of the service, which meets quarterly, and oftener when necessary. A sub-committee of at least three members, elected at each quarterly meeting, attends to all current business. Rule 7 is very important, for it deals with a difficult question. It states :—

"That a number of chemists be invited to coöperate by dispensing the prescriptions of the service, and that payment at the rate of not more than 1*s.* per annum be allowed for each patient on the chemists' lists."

The word "patient" is, I think, a mistake; the word member should have been employed. By this means the dispensing chemists, who are all naturally much opposed to the Coventry Provident Dispensary, have been won over to the Coventry Public Medical Service and readily accepted these terms. There are twelve dispensing chemists on the list of the Public Medical Service, and each subscriber selects the chemist he prefers. The subscriber or member likewise selects the one he prefers out of a list of ten medical men, and he can go to the private surgery of the medical attendant between 9 and 10.30 A.M. or 6 and 7 P.M. Of course, if the patient is not well enough to go out his medical attendant will visit him at his own house if a message to that effect is sent before 10 in the morning. This system scatters the patients among the different druggists' shops and the different surgeries, instead of crowding them together in one waiting room as at the dispensary. It is more convenient to the medical men, who are thus enabled to stop at home; it is more advantageous to the dispensing chemists, who do not lose the custom of the members; and it avoids the risk of infection which the crowding together of all the patients in the single room of a dispensary must occasion. The terms of membership are a penny per week per member, whether the member be an adult or a child. Members over sixty years of age must pay an entrance fee of 5*s.*, and patients who are ill at the time of entrance must pay an entrance fee of 10*s.* 6*d.* to the medical officer in charge of the case. Female patients are not entitled to benefit during confinement or for diseases arising therefrom. Attendance at confinement can be arranged for privately, and patients suffering from diseases arising from intemperance or immorality are not eligible for the benefits of the service. A collector was appointed at a salary of £1 a week and a 10 per cent. commission on all collections exceeding £6 10*s.* per week. Every medical officer had to give £2 on joining the service, and render himself liable for £3 more, if required. Finally, and so as to exercise a control in respect to medical ethics, Rule 14 states :—

"That the Committee of Management shall have power, by a two-thirds' majority, to expel from the service any member who, they may consider, has been guilty of infamous practice in a professional sense."

The definite formation of this public medical service was greatly stimulated by the issue of a handbill, which clearly showed how impossible it was to hope for effective reform of the Coventry Provident Dispensary. As typical of the spirit animating the committee of that institution, the handbill is worth quoting. It reads as follows :—

"Important Notice.—To all those connected with the Coventry Dispensary.—Owing to the splendid success of the institution certain outside medical men are trying to coerce the Dispensary Committee to fix a wage limit for membership, and raise the rate of pay for children. The impracticability of the first is self-evident, while the latter would inflict great hardship on those who have to support large families. While every office is adequately paid and there is a large balance in hand it is undesirable and unnecessary to adopt such suggestions or allow any outsiders to usurp the powers that rightly belong to the members. A resolution will be submitted at the annual meeting to be held at St. Mary's Hall on Wednesday next, the 26th inst., at 8 o'clock in the evening, which practically amounts to a declaration of independence, claiming that the pecuniary position of any applicant for membership shall in future be no bar to admission. Assert your independence by attending and supporting the resolution."

The meeting in question was held in April, 1893. The Mayor of Coventry was in the chair, and he boasted that the dispensary had a balance in hand of from £5000 to £6000 worth of property; he did not, however, say anything about the balance in the hands of the medical men, whose skill and labour had built up this property. Mr. G. A. Bray moved a resolution to the effect that pecuniary position should be no bar to membership. He urged that the time had arrived when "they should definitely and for all time fix their status." He therefore moved :—

"That this meeting resolves that as the dispensary is now a self-supporting institution the pecuniary position of any applicant for membership shall in future be no bar to admission."

Mr. Errington, in seconding the resolution, wished to "make the fact quite clear that in that institution the members paid for what they had," and repudiated the idea of the dispensary being a charity. "There were among the dispensary members men who had been mayor; the committee ballot-box was made by Aldermann Marriott when he was a carpenter, and did these think they were in receipt of charity at any time?" Mr. J. Bill said that he did not agree, and this was the first time after many years that he was in disagreement with the dispensary committee. He thought the pride of rich men should prevent their claiming the medical benefits, but "had they not got absolute evidence to the contrary in the letters to the newspapers? Here was a gentleman coming forward—and he honoured him for his courage—and declaring that he could afford the ordinary medical fees of the outside doctors, but he came here because he thought he was entitled to come." Was the "basis of payment at the dispensary fitted for a rich man"? It was low expressly so as to admit the poor. The institute was founded in a spirit of benevolence. "If they removed that they removed one of the best and strongest supports of the institution. He differed from the proposer of the resolution in this particular: if they let the rich in the poor would be crowded out. It was ridiculous to tell him that the man who said he could pay 5*s.* or 2*s.* 6*d.*, but chose to pay 2*d.* or 3*d.* for a doctor's visit, was a man he ought to honour." Mr. Pears, the only surviving member of the original committee, wrote that the institution was based on philanthropy, and "it was always the desire of the committee, when I was a member and could attend it, to keep *strictly* to the principles of its foundation." The original founders' committee had not only said that the rich people should be excluded, but, Mr. Bill added, they "promised that extra care should be taken to exclude them. ....." "Another point was that the institution possessed £5000 worth of property which was bequeathed to the 'Benevolent and Provident Dispensary."

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The word 'benevolent' was at the head of it, and that property was left to the institution in that character." Such property was not bequeathed to rich men, yet Mr. Daffern had said, "Not only can I afford to employ a medical man, but I am told that there are scores of people in better positions than myself." Mr. Daffern replied that he joined thinking it was a self-supporting institution and not a charity, and denounced the "impudence" of those medical men who called it a charity. The medical staff was paid. The outside practitioners wished to deny them the benefits of coöperation. It was scandalous to call it a pauperising institution. Canon Beaumont and Dr. Fenton thought the resolution was uncalled for, but were so lukewarm in their half-hearted support of Mr. Bill's opposition that the resolution was carried by an overwhelming majority, only about six hands being held up in opposition. Thus in a most emphatic and public manner was it proclaimed that wealthy persons should not be debarred from joining the dispensary. The discussion also clearly shows that the charitable nature of the medical work is not recognised. Yet if we accept the minimum fee for a consultation at 1*s.* 6*d.*, and if, as stated by Mr. Bill, the medical staff received only about threepence per visit, they make a present of 1*s.* 3*d.* to the institution every time they see a patient. Nevertheless, these patients have the audacity to think that because they pay 3*d.* out of the minimum fee of 1*s.* 6*d.* they are not in receipt of charity. In this respect it is curious to note that when the institution was first established a meeting of the medical men of Coventry was held in this self-same hall (St. Mary's Hall) on July 29th, 1829. Dr. Bourne was in the chair, and the following resolution was carried:—

"1. That this meeting regrets, after a full consideration of the subject, that they cannot approve of the establishment of a self-supporting dispensary in this city, the principles of which, they think, are not adapted to the locality of Coventry. 2. That this meeting would most cordially coöperate with their fellow citizens in establishing a charitable dispensary upon the usual terms of such institutions."

This opposition caused the scheme to remain in abeyance for a while, but in October, 1829, a meeting, under the presidency of the Rev. W. F. Hook, was held, and drew up rules similar to those now in force, except that some restrictions were placed upon the class of person to be admitted to membership. In consequence of the opposition of the profession the self-supporting idea remained in abeyance. Fifteen months later it was decided to incorporate a charitable element. At another public meeting the medical men again opposed a self-supporting dispensary, wisely foreseeing that "the system was open to abuses," and again offering to support a charitable institution. Nevertheless, the committee, while seeking to conciliate opposition, persisted in promoting the self-supporting principle. The medical men, therefore, boycotted the institution and refused the appointments offered to them. The dispensary was obliged to import two medical men—namely, Dr. Nankivell and Dr. Bicknell—who entered upon their functions on June 20th, 1831. At an early date the institution had more than 2000 members. The membership was originally limited to 2500—a very wise rule, as this is not too large a number for a couple of medical men, and differs very remarkably from the 26,000 members mentioned in 1892 as being under the care of only five medical men. After some years these early and wise resolutions were abandoned, and the abuses foreseen by the medical profession so far back as the year 1829 were realised to the full.

(To be continued.)

MANCHESTER.

We have been requested by the honorary secretary of the Manchester Medical Guild to publish the following resolution which was recently passed by the Guild:—

"Having had its attention drawn to the conduct of a 'Dr. Wallace, a graduate of Glasgow,' who (as reported in the *British Medical Journal* of May 29th) has allowed himself to become the agent of a medical aid association at Penge and Beckenham in direct opposition to the expressed wishes of the local profession, the council of the Medical Guild at Manchester desires to place on record its emphatic condemnation of such conduct as this gentleman's, not only as derogatory in itself and indicative of deplorable absence of *esprit de corps*, but also as subversive of the true interests of the public and the profession."

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Workhouse Milk.

QUESTIONS as to the adulteration of milk are continually arising, and the conclusions reached are almost as frequently unsatisfactory in consequence of the various standards adopted by analysts, differing as they so often do from that allowed by the authorities at Somerset House. This was illustrated by an unsuccessful prosecution the other week at Manchester. Samples of milk supplied to the Chorlton Union Workhouse at Withington were examined by Dr. W. C. Williams, one of the assistant county analysts. The first showed 3·22 per cent. of fat and 7·68 per cent. of non-fatty solids. Genuine milk should contain at least 8·5 per cent. of solids other than fat. The second sample showed 2·57 per cent. of fat and 8·32 per cent. of solids other than fat. The third sample showed upwards of 10 per cent. of added water and 7·64 per cent. of non-fatty solids. For the defence it was urged that though probably below the standard of some local authorities, it was not lower than that allowed by the authorities of Somerset House. The presiding magistrate said "the bench had carefully considered the evidence, and, after looking at the analysis, and having considered the variations in the results of analyses by different people they had come to the conclusion that the milk in this case had not been adulterated." It is surely time that the limits of normal variation in the composition of milk should be more clearly defined.

Whitsuntide in Manchester.

In the north of England Whitsuntide is the great holiday of the year, and nowhere is it observed more enthusiastically than in and about Manchester. The great flower show at the botanical gardens, Old Trafford, draws exhibitors and visitors from all parts of the country; the theatres and other places of amusement, such as the Belle Vue Gardens—with their zoological collections and spectacular displays of fireworks—attract thousands of visitors. Perhaps, however, the processions of the children from the various Sunday schools is the feature most characteristic of the people and the place. Monday is devoted to the Church of England schools, represented yesterday by a gathering of more than 24,000. On the other days the scholars attending the schools of other denominations march in procession. In addition to this, almost all the schools organise excursions to places more or less distant, or picnic in fields in the suburbs. If the weather is good, all goes well, but if it rains "they take their pleasure sadly." More thought seems now to be given to the protection of the children from exposure and undue fatigue than used to be the case, but unfortunately the long excursions to Llandudno and such far away places are more popular than shorter ones, so that a very early start has to be made, and in some cases midnight has approached before the children—the younger ones asleep or weary and irritable—have got back to Manchester. "A Whit week *fête* and gala" is being held in Trafford-park, with a varied programme of entertainments, but yesterday several thousands of people had the good taste to find their principal pleasure in rambling amongst the woods and in the meadows of the inner park. This is arranged for by the "syndicate" and not by the city council which lost the park for the people of Manchester.

Artificial Filters for Sewage Purification.

In a report submitted to the Mersey and Irwell Joint Committee, last week, Sir Henry Roscoe said the adoption of artificial filters for the treatment of sewage was a move in the right direction, especially in the case of large towns, where it was difficult to obtain a sufficient area of suitable land for sewage purification. He said that the trials, extending over seventeen months, of filters made both of cinders and coke, for the Manchester Corporation, had been satisfactory. The effluent submitted to filtration had previously been treated with milk of lime and copperas. An acre of filter could deal continuously with about 800,000 gallons per day. "It remains, however, to ascertain how long these filters will work satisfactorily before requiring renewal of a part or the whole of their contents, and this is a cardinal point." To obtain the data required to show if they were efficient for dealing with large

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populations he advised the Rivers Committee of the Manchester corporation to carry out artificial filtration on a much larger scale than they had done.

District Nurses for Cheetwood, Higher Broughton, and Kersal.

A public meeting was held recently, Alderman Walmsley, M.R.C.S., J.P., &c., being in the chair, under the auspices of the Manchester and Salford Sick Poor and Private Nursing Institution, to consider the advisability of engaging two nurses for the above district. The chairman was supported by the Bishop of Manchester, the clergy and the ministers of various denominations, as well as by the local medical practitioners and other gentlemen. The institution is affiliated with the Queen Victoria's Jubilee Institution for Nurses. It is hoped that two trained nurses may be engaged by public subscription at a cost of £170 a year. From the feeling manifested at the meeting there is little doubt that this modest but useful enterprise will be carried into effect.

June 9th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Jubilee Day Arrangements in Edinburgh.

IT is hardly necessary to say that the medical classes will not meet on June 22nd. The Royal College of Surgeons of Edinburgh has issued invitations to a Reception at Surgeons' Hall in the afternoon. This, so far as I have heard, is the only medical gathering of a formal kind for which arrangements have been made.

Glasgow University.

The final examination for degrees in medicine and surgery commenced on the 7th inst.; there are 133 entrants, including 11 women candidates. The degree of M.D. has been conferred on Mr. Thos. F. Tannahill, M.B., C.M. Professor McKendrick has been awarded the MacDougall-Brisbane prize by the Royal Society of Edinburgh in recognition of his published researches in connexion with sound and the phonograph.

Faculty of Physicians and Surgeons, Glasgow.

Mr. Edwin Arthur Gibson, M.B., C.M. Glasg., having passed the necessary examinations and been elected by ballot, has been admitted a Fellow of the Faculty.

Medical Appointments.

Mr. Maitland Ramsay, M.D. Glasg., has been elected Professor of Ophthalmology in St. Mungo's College, and Ophthalmic Surgeon to the Glasgow Royal Infirmary and Ophthalmic Institution. Mr. Jas. Henderson Nicoll, M.B., C.M. Glasg., has been appointed consulting surgeon to the Glasgow Hospital and Dispensary for Diseases of the Ear. The following appointments are intimated at the Glasgow Royal Infirmary: W. K. Hunter, M.A., M.D. Glasg., to be physician to the dispensary, and W. J. M. Slowan, M.B., C.M. Glasg., to be extra-dispensary surgeon.

Important Scotch Law Case as to Disinfection.

In Aberdeen Sheriff Court the local authority for the city under the Scotch Public Health Acts petitioned the court for a warrant to take bedding from the residence of a householder to the town council's disinfecting station for purposes of disinfection, three cases of measles having occurred in the house. The judge (Sheriff Substitute Robertson), while admitting that the air or steam method of disinfection is the most effectual if properly applied, held that the provision and use of disinfecting chambers are permissive under the present Public Health (Scotland) Acts, and found, besides, that the householder had disinfected with sulphur fumigation and exposure to sunshine, in accordance with the advice of the family medical man and of a circular issued by the Board of Supervision in 1874, which has not been superseded. The Sheriff Substitute has therefore dismissed the petition and allowed the householder 5 guineas of modified expenses. It may be added that the Public Health (Scotland) Bill now before Parliament proposes to give local authorities compulsory powers in such matters. In the law case referred to an appeal to a higher court is not possible.

Aberdeen Corporation Sea-bathing Station.

Contracts have now been entered into for extension of the baths pavilion, the total of the tradesmen's offers being £7207 odd. New terraces have been laid out at the seaside, the accesses for vehicles and pedestrians have been improved, and an additional number of trees have been planted on the Links (or downs) adjoining.

Aberdeen Hospitals.

Miss Lumsden, hon. superintendent, Royal Infirmary, has resigned. The juvenile patients in the City Hospital are to be entertained on Jubilee Day.

A Donation.

Mr. J. C. Wordie, Oriental Club, London, has, through Dr. Hunter Mackenzie, given a second donation of £100 to the Eye, Ear, and Throat Infirmary, Edinburgh.

June 8th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

AT a meeting of the Fellows held on Monday, June 7th, for the election of president, vice-president, council, and secretary for the ensuing year the following were elected:—President: William Thomson, F.R.C.S. Vice-President: Robert Lafayette Swan, F.R.C.S. Secretary: Sir Charles A. Cameron, F.R.C.S. Council: Archibald H. Jacob, F.R.C.S., Edward Hallaran Bennett, F.R.C.S., Henry Gray Croly, F.R.C.S., Sir Philip Crampton Smyly, F.R.C.S., Sir William Stokes, F.R.C.S., Henry Rosborough Swanzy, F.R.C.S., Sir Thornley Stoker, F.R.C.S., William Ireland Wheeler, F.R.C.S., Austin Meldon, F.R.C.S., D.L., Sir Charles A. Cameron, F.R.C.S., L. Hepenstal Ormsby, F.R.C.S., Richard D. Purefoy, F.R.C.S., Charles Bent Ball, F.R.C.S., Henry Fitzgibbon, F.R.C.S., Arthur Henry Benson, F.R.C.S., Francis T. Heuston, F.R.C.S., Thomas Myles, F.R.C.S., John Lentaigne, F.R.C.S., and George M. P. Murray, F.R.C.S.

Royal College of Physicians of Ireland.

At the meeting of the Royal College of Physicians of Ireland, which took place on the 4th inst., Dr. James Craig, of the Meath Hospital, was elected to the post of Registrar to the College, vacant by the death of Dr. Guy L. Nugent.

Irish University Education.

Professor Leitch, D.Lit., D.D., the new Moderator of the Irish Presbyterian Church, in his opening address on June 7th made an extremely important pronouncement on the vexed question of Irish university education. Referring to the educational disadvantages under which Presbyterians in Ireland had laboured in the past, and to the destruction of the late Queen's University, and to the fact that the Royal University established in its place was a mere examining board (which therefore necessarily failed to fulfil one of the chief functions of a university) in which Presbyterians were not fairly recognised, he said that if a separate Catholic university was established then the Presbyterian Church might in fairness demand that they should have another university for themselves, with all the privileges which the Protestant Episcopal Church enjoyed in Trinity College, Dublin, and which the Roman Catholic Church will have in their university. Professor Leitch thought such a solution of the question, although a fair and justifiable one, would be disastrous to the best interests of Ireland, as it would tend to sectarianise her education by giving a separate university to each of the three chief religious denominations, because that education which ought to liberalise and unite the people in their national, intellectual, and social life, would become an instrument for widening and deepening and perpetuating those differences by which already they are so unfortunately separated. If the Roman Catholics will be satisfied with nothing but a Catholic university, then Professor Leitch advocated the establishment of one great Protestant university in which all denominations would be united on equal terms, and he thought this might be done by the reconstruction of the government of Dublin University (Trinity College) so that Presbyterians should have an adequate share in it; the affiliating to it of another college or colleges which would be on a level with Trinity College and endowed and equipped commensurately with it; and the making of other financial arrangements with Trinity College which such changes would necessitate. In this way there would be in Ireland a university, like Oxford and Cambridge, composed of a number of colleges, where the most healthy rivalry would prevail. The question is, Would

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the authorities of Trinity College consent to such a re-arrangement of their university? If they would not, and if the Roman Catholics demand a Roman Catholic university, fully equipped and endowed, then nothing is left for the Presbyterian Church but to claim that whatever privileges and endowments are given to Roman Catholics in the university established for them, the same shall be given to Presbyterians in a third university founded for that body. Such is the scheme put forward by the head of the Presbyterian Church in Ireland, one of her most distinguished professors, and himself a Senator of the Royal University of Ireland. A great deal can be said for and against such a plan for settling the Irish University education question; but the Government, in announcing their intention of devoting a part of next session to Local Government in Ireland, have probably shown that for the present the education problem must be shelved. They are no doubt wisely waiting until the principal parties concerned put forward practical schemes for consideration.

Monaghan Dispensary.

At a special meeting of the Monaghan Dispensary Committee, held on June 3rd, Dr. Henry was unanimously appointed medical officer in place of Dr. Dunwoody, resigned.

The New Victoria Hospital.

The subscriptions to the new Victoria Hospital amount now to about £94,000, so that it is hoped that before Jubilee Day the required sum (£100,000) will be obtained. The arrangements about the Charter of the new hospital and as to its probable site are at present under discussion.

A Local Government Board Inquiry.

Dr. Browne, Local Government Inspector, held an investigation at Lismore with regard to a singular charge brought by a man named Tobin against Dr. R. J. Baylor, the dispensary medical officer of the district. The charges were to the effect that on April 5th Dr. Baylor was drunk when attending Tobin's wife in her confinement, and that on the same occasion he brought into Mrs. Tobin's room a commercial traveller named Appleby and introduced him as a naval medical officer. The midwife in her evidence stated that Dr. Baylor appeared to be drunk, and that from the demeanour of Mr. Appleby in the sick-room she suspected at the time that he was not a medical man. Some of the women who were in the house when Dr. Baylor arrived corroborated the statement of the midwife, that Dr. Baylor introduced Mr. Appleby as a naval surgeon, and expressed their opinion that Dr. Baylor was drunk that night. On the other hand, Dr. Baylor swore positively that he was not drunk, and that as a matter of fact he had taken only two bottles of stout on the day in question. Furthermore, he stated that at the time he believed Mr. Appleby to be a medical student and that he would not have allowed him to accompany him if he thought otherwise. Three witnesses who saw Dr. Baylor that evening swore that he was quite sober. Mr. Appleby, in the course of his evidence, stated that he had never been a medical student, but that he had studied chemistry and had told Dr. Baylor that he had a great taste for the medical profession and hoped some day to be a medical man. He believed Dr. Baylor misunderstood what he said and took him to be a medical student. He also swore that Dr. Baylor was sober. Mrs. Tobin's evidence was then taken. She stated that Dr. Baylor was drunk, and that she heard him introducing the commercial traveller as a naval medical officer when they got into the kitchen. Whilst describing the incidents of the night the poor woman appeared completely overcome with emotion, and before her evidence was completed she fell fainting from the witness chair. Dr. Browne forwarded his report to the Local Government Board, and their decision was communicated to the Dispensary Committee last week. They found Dr. Baylor guilty on both charges and called on him to resign, intimating at the same time that if he should fail to do so they would dismiss him from office by sealed order.

June 8th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Development in the Medical Use of the X Rays.

AT the meeting of the Academy of Medicine last week M. Combe communicated an ingenious application of skiagraphic methods to the bones of the face. He hangs a delicate photographic film, which has been carefully preserved from contact with the light, upon an artificial palate modelled in vulcanite exactly to the oral cavity of the subject. This, when placed in the mouth, can be maintained in position by the closure of the jaws. The rays from the bulb are directed perpendicularly on the region it is desired to photograph, the exposure being from six to eight minutes. The tube employed is a bi-anodic bulb giving a spark of 45 c.m. The skiagrams obtained showed, among other things, the anterior part of the superior maxillary bone, in which the roots of the incisors and canine teeth were very clearly visible, and in the substance of which the least tumour would have become obvious. Another curious development in x ray photography has been obtained by Messrs. Luys and David, who have exhibited at the Biological Society some skiagrams representing what they term "effluves" given off by the eye and finger in the normal condition, and their results will have much interest for occultists and dabblers in electro-biology. Messrs. Luys and David have employed a new method, which had, however, already been mentioned by Dr. G. Le Bon. It consists in the immersion of the fingers of the subject in an hydro-quinone bath, the fingers being applied by their palmar surfaces to a plaque of gelatino-bromide of silver in the dark for some quarter of an hour or twenty minutes. As a result the observers believe thus to have demonstrated that there emanates normally and continually from the human body during a state of wakefulness a special fluid which they consider "the essential manifestation of life." This phenomenon is similar to that which Colonel Rochas has recently sought to demonstrate under the name of "externalisation of sensibility." To the imaginative all sorts of possibilities will present themselves as the result of the study of this "essential manifestation." By watching the variations of this nerve force taking place in accordance with the age, sex, different times of the day, different environments, and different mental conditions, assistance may be gained in the study of physiology and pathology, while the absence of "les effluves" may possibly furnish that sign for which so many are now looking—an incontrovertible proof of death.

The Toxicity of Human Perspiration.

At the Biological Society also M. Arloing has reported some interesting observations on this subject. He found as a result of making intravenous injections of natural perspirations and also of prepared extracts of the same that when the strength of the injection approached fifteen centimetres per kilogramme in the case of the dog, and twenty-five centimetres per kilogramme in the case of the rabbit, death almost always occurred, generally within three days, though sometimes not for some weeks, when it followed upon a state of profound cachexia. The injection of one-sixth, one-quarter, or one-third of the lethal dose led, according to his observation, to immediate and proportional effects. The toxicity varied with the environment of the subject which furnished the perspiration as well as with the mode of preparation of the extract. The perspiration secreted during arduous muscular toil is richer in toxic principles than that secreted during the ordinary circumstances of life, the degree of extra malignancy amounting to 25 or 30 per cent. All things being equal, perspirations obtained by artificial means of sudation present a minimum of toxicity, but perspiration obtained from a subject who has suffered from retention of the secretion due to cold is poisonous.

The Microbiology of Hospital Wards.

M. Netter communicated at the same meeting of the Biological Society the result of some important researches which he has made and which have revealed the presence of virulent pneumococci in the dust and wards and walls of hospitals. He has collected and examined the dust upon a wall at a point corresponding to the back of the bed of the patient, and over a surface which could not have been directly affected by the coughing of the sick. The dust was collected on April 22nd upon pledgets of cottonwool. On May 19th one of these pledgets was washed with care in sterilised water and the resulting deposits were centrifugalised. The diluted specimen was then used for the inoculation of three young guinea-pigs, two in the peritoneum, and the third in the cellular tissue also. The first subject died on May 25th; the one which had been inoculated at the same time in the peritoneum and the cellular tissue died on May 26th, and both presented all the symptoms of a general fibro-purulent peritonitis. The serous fluids of the body of each contained organisms exactly

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resembling pneumococci, and cultures in gelatin and in bouillon confirmed the presumption drawn from the appearances.

The Hospital Treatment of Parturient Women.

At the Municipal Council the facilities have been discussed for prolonging the sojourn at the hospitals of women who have been accouched and who are at the present time, except in the case of puerperal illness, compelled to be sent away at the end of ten days with their infants. One establishment alone exists in the environments of Paris, l'Asile Ledru-Rollin, where women can obtain shelter during their convalescence. But this asylum contains only sixty beds, and is consequently altogether insufficient for the wants of the class for which it is provided. M. Colly proposed to increase the duration of the legal sojourn at the maternity hospitals after accouchement. M. Strauss preferred to increase the accommodation at the Ledru-Rollin Asylum. A new maternity hospital is about to be built in connexion with l'Hôpital St. Antoine, and a certain number of beds will be provisionally reserved there for convalescents. A new hospital is going to be constructed also in the south-west of Paris as a result of the enterprise and generosity of the proprietor of one of the largest shops in Paris—the Bon Marché. The hospital will be called the Hôpital Boucicault, after the name of its foundress, and will take gratuitous care of the employés of the Bon Marché as well as of all other sick people who can pay their expenses there. It will be officially opened by the President of the Republic on July 13th.

Professional Responsibility.

A medical man has, I regret to state, been condemned at Paris to two months' imprisonment and a fine of 500 francs for *homicide par imprudence*. His patient died as a sequel to an operation for the removal of a fibroma which had been undertaken without proper precautions.

June 5th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

"Pro Silvis."

THE reafforesting of Italy is one of the most momentous problems before her legislature. The new "legge forestale" (forestal law) has been under examination by a special commission, which has approved its provisions "in massima" (in the main), but not without suggested modifications to ensure its effective working, particularly in the matter of regulated tree-felling. This latter provision has heretofore been honoured more in the breach than in the observance, and what wonder, when the miserable pay of the officers told off to enforce it is taken into account. Inspectors, who go about in pairs and are each mounted, are empowered to patrol the wooded districts, and if they come upon a man felling a tree to demand the certificate authorising him to do so. Their salary amounts to 40 lire a month (about 30*s.* in English money at the current exchange), out of which they have to keep their horse. It has been found that to eke out their scanty pay they are often tempted to ignore the tree-feller's failure to produce the certificate and to share the proceeds of the illegally utilised timber. The law has in many places become a dead letter in consequence of those irregularities, and its revision in the direction of greater stringency is imperative. The whole question is, as I have said, a momentous one, in which (characteristically enough) those chiefly interested are medical men. Now that the late elections have given so many of them a seat in Parliament we may expect a more vigorous, as well as a more thorough, promotion of the long-neglected reform. The classic treatise on the subject is, indeed, of medical authorship. "Pro Silvis: Elementi di Economia Naturale basati sul Rimboscamento" ("A Plea for the Woods: Elements of Natural Economy based on Reafforesting")—such is its title. Its writer was the late Dr. Arnaldo Cantani, Professor of Medicine in the Neapolitan School, a physician and bacteriologist in advance of his time, whose public services in fields allied to that of the healing art procured him his seat in the Italian Senate. Italy, he points out, is essentially an agricultural country, finding her chief source of revenue in the soil, a solid revenue, moreover, not of the factitious kind "which fortuitous circumstances may create or undo." The historic retrospect he gives of the fate of the woods which, in Virgil's time, were among the "praises of Italy" is at once most interesting and most melancholy, the denudation of the hillsides being primarily due to causes, manufacturing and domestic, which, now that she has become a limited kingdom and a "great power," may be expected to increase rather than diminish. How little she realises the extent of the bane and the nature of the antidote may be inferred from the fact that she has but one school of forestry, and that a very backward one—the school at Vallombrosa in Tuscany. In Germany, in Austria, in Switzerland, and in a less degree in France, the agricultural population are taught to balance the tree-felling process by that of planting and cultivation—a knowledge rare in Italy even among her landed proprietors. It is, however, the medical aspects of the reckless clearing away of forest growth, with its atmospheric results and the climatic changes, down to the causation of the floods, which every autumn become a national visitation, that lend the subject now before Parliament its most far-reaching and permanent interest. I hope the Di Rudini Administration will give practical proof of its mastery of the lessons so powerfully driven home by Dr. Cantani, whose work is quite an armoury for those of his medical co-legislators, who are the paladins of this sanitary, economic, and patriotic crusade.

"An Incredible Scandal."

The words are not mine. They are those of an Italian publicist in commenting on the Commission of Inquiry which has recently reported to the Chamber of Deputies on the "fatti dolorosi, enormi, incredibili" (sad, hideous, incredible facts) revealed in the administration of the Foundling Hospital at Naples. This hospital, or "Brefotrofio," as it is called, is, I am sorry to say, a specimen—though an exceptionally ghastly one—of the many institutions of the kind established in the great centres of population where the large celibate communities of both sexes, accommodated in religious houses, are the cause of illegitimacy on an enormous scale, the hapless offshoots of which find their way as "foundlings" into the said hospitals, where, if they are not "killed outright," they can hardly be meant to live. The mortality thus occasioned has long been a scandal, though it has seldom, if ever, attained the total given by the Commission of Inquiry in its report on the Neapolitan "Brefotrofio." In the last two statistical years the foundlings admitted into that institution were 856, and their deaths at the close of 1896—the second of those two years—amounted to 853! In other words, the survivors of the "system" were, all told, three! That something hideously wrong prevailed throughout the management of the "Brefotrofio" as a whole had long been more than suspected. The "corpo sanitario" (sanitary authorities) of Naples made repeated attempts to get at the truths officially veiled, but all in vain. There was reason to know that every hygienic law in the institution was "honoured in the breach," not "in the observance"; that the dormitories were positively foul with untidiness and neglect; that the management made absolutely no provision for "sale d'isolamento" (isolation rooms) on the frequent outbreak of infectious or contagious disease; that no addition was made to the wet nurse service when the foundlings were admitted in larger numbers; that, for instance, one nurse was allowed to give the breast to as many as four infants per diem; that the hot-water boiler was unknown in the building; and that the baby linen was as filthy as it was deficient, seldom renewed, and still more seldom washed. Nor is this all. The Commission of Inquiry reports that the milk (cow's or goat's) was never sterilised; that the feeding-bottles were never disinfected, and that a stop was put to the dispensary from which medicines and sick-room necessaries were gratuitously supplied to the out-door nursing service. Worse still remains to be told. In order to relieve the institution of its tiny inmates—as if death did not complete its task quickly enough—the management (so says the Report) trumped up against those of them who had reached seven years of age charges of insubordination or other offences grave enough to relegate them to houses of correction! "Thus," comments the Cavaliere Perrone, chairman of the Commission, "by condemning the child to associate with young thieves and lawbreakers recruited from the worst classes, you bring about his 'civil death,' in the rare event of his having succeeded in escaping 'natural death.'" And so, from the first page to the last, the Report accumulates proof upon proof of criminal violation of all the rules that ought to control such institutions, while the debate it evoked

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in the Chamber of Deputies on the 2nd inst—a debate headed in the parliamentary reports, "Gli Orrori del Brefotrofio di Napoli" (The Horrors of the Naples Foundling Hospital)—drew from several speakers the demand that the "administrators" should be prosecuted to conviction. These "functionaries" have all resigned, and the Minister of Grace and Justice has undertaken that they and their conduct shall come before the tribunals.

The Italian Karlsbad and its Chief Promoter.

Attention has from time to time been drawn in these to columns Italy's wealth in mineral waters, and particularly to those of the Tuscan Monte Catini, known as the "Italian Karlsbad," for their efficacy in hepatic disorders and in the initial phases of gout. Next to the name of Fedeli, the most honourably associated with Monte Catini has of late years been that of Federici, to whom the thermal establishment owes many substantial and enduring services. That eminent physician, who held one of the clinical chairs in the Florentine school, died in 1892, when a full account of his career was given in THE LANCET.[1] On Sunday, May 30th, a commemorative tablet, inserted in the façade of his house in Florence, was unveiled in the presence of a large concourse of the public, professional and lay, the medical schools throughout the kingdom being nearly all represented, and the spokesman of the occasion being his successor in the Direction of Monte Catini and in the Florentine chair, Dr. Pietro Grocco, the acknowledged head of Tuscan medicine. The text of Professor Grocco's speech is now before me, and I need only say of it that it is equally honourable to its subject and to its author. The Italian intellect at its best never appears to greater advantage than in the medical field, whether in enlarging the scientific horizon or in adding to the resources of practice. Cesare Federici was one of those worthy successors of Baglivi and Morgagni, Rasori and Nobili, who have left indelible traces on the evolution of the healing art, and his example was effectively utilised by his successor as a stimulus to the medicine of young Italy to follow the same independent and painstaking line. A few more leaders of his stamp, and the ground she has lost since the Renaissance would be not only retreived but extended, to the development of her professional efficiency all round and especially of her resources in balneary methods of treatment wherein her native advantages have hitherto been inversely to her energy in utilising them.

June 5th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

The Budapest Humane Society.

A MEETING was held on Sunday last in the new town hall of Budapest, the occasion being the tenth anniversary of the foundation of this society. The meeting was honoured by the presence of H R.H. the Archduke Joseph, the patron of the Humane Society, and by his Excellency M. Wlassics, Minister for Public Instruction. The Mayor of Budapest, Count Lamezan, the President of the Vienna Humane Society, and most professors of the medical faculty were also present. The Budapest Humane Society was founded ten years ago by the philanthropist, Chevalier S. Falk, Count A. Andrássy, and its present director, Dr. G. Kresz, and has since risen from small beginnings to an organisation which brings help and comfort to thousands whose lives are in jeopardy. During last year the society was called upon in 13,251 cases. The whole number of cases in which its assistance had been resorted to during the ten years of its existence amounts to 81,315. The society has also done very good work in establishing and organising similar institutions in the larger provincial towns of Hungary, such as Kolozsvár, Székesfehérvár, Szabadka, and Nagyvárad.

The First Hungarian Lady Doctor.

Last week Countess Hugonnay took the degree of M.D. of Budapest University. She completed her medical curriculum and graduated as M.D. in Switzerland some years ago, but was not allowed to practise in Hungary, because, according to law, foreign degrees—save those of Austria—cannot be entered in the Hungarian Medical Register. She had, therefore, to pass the final examinations of Budapest University, and I understand that she will practise in Budapest as an obstetrician and gynæcologist.

Long Forceps (Axis Traction) versus Turning.

Dr. St. Tosh has published out of the rich material of Professor Tauffer's Obstetrical Clinic a series of cases in which he employed long forceps instead of turning. The conclusions he drew in his very elaborate paper were the following: — 1. The use of the forceps at the inlet of the pelvic cavity is not so hazardous as is still believed by many writers, and is decidedly more favourable to both mother and child than internal podalic version. 2. In all cases where speedy delivery is required for the safety of the mother and version is not applicable the axis traction forceps should be tried before resorting to perforation. 3. In cases of moderately contracted pelvis long forceps are to be preferred to turning, because by thus waiting the expulsive powers have a chance to complete labour spontaneously. 4. Should the forceps at the inlet prove of no success, then perforation is to be performed at once. Symphyseotomy may under favourable circumstances prove to be the right proceeding, but internal podalic version is decidedly contra-indicated in these cases. 5. Axis traction forceps of different lengths may be used, but Dr. St. Tosh prefers Tarnier's instrument.

June 3rd.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Pilgrims and Quarantine.

DR. ARMAND RUFFER, the new President of the International Quarantine Board of Egypt, has just returned from the pilgrim camp at Tor. In order to be prepared for the influx of returning pilgrims he had established a large staff of European and native medical men, some of the latter having been temporarily lent by the School of Medicine here. For the first time, also, an Englishman is being employed there, Mr. Chilton. Orders were given that during the three days' quarantine, which every pilgrim is obliged to undergo at Tor, all cases of diarrhœa should be viewed with suspicion and examined bacteriologically. On May 24th, as a matter of routine, a miserably sick man moribund from kidney disease was so examined. The medical officers who conducted the necropsy declared their conviction that it could not possibly be a case of cholera. Yet microscopical examination of the fæces revealed the typical comma bacilli, which were so familiar a year ago in Cairo to some of the workers now at Tor. In some other cases of diarrhœa, among the living and the dead, bacilli of cholera could not be discovered; while, on the other hand, they were found in some cases where diarrhœa was not a prominent symptom. So far cholera bacilli have been found in eight pilgrims during the last week, though the telegraph reports that there were no fresh cases yesterday. Now all these cases of comma bacilli were similar, and all behaved in the same way to various tests employed. For instance, the suspected substance gives the indol reaction with sulphuric acid added to peptonised bouillon, and the addition of cholera serum to an emulsion of the organism produced a flocculent precipitate. Yesterday as a further proof Dr. Symmers and Dr. Bitter inoculated three guinea-pigs with material brought from Tor. All three died within six hours, their temperature falling within three hours after injection from 99·2° F. (two) and 101·5° to something below 95°, which the thermometer could not register. To-day, again, three more guinea-pigs were inoculated with a fatal dose of the bacillus, together with varying quantities of cholera serum (Pfeiffer); but the result of this is not yet known. This is the case for cholera: much diarrhœa, a few deaths, and unmistakable bacilli found in eight patients. The arguments against cholera are that the bacilli are not yet corroborated by clinical, pathological, or epidemiological evidence. So far, it is said, there is an absence of vomiting, cramps, cyanosis, and rice-water stools, and the intestines of the dead are found filled with bile-stained fæces. Dr. Zachariades, who is in medical charge of Tor, has seen three cholera epidemics there, and firmly denies that the present disease is cholera. This is based upon his own clinical opinion, but it is interesting to remember that he was the medical man who in 1895 reported that cholera was then existent at Tor. His French colleague was unable to find any

[1] THE LANCET, June 4th, 1892, p. 1278.

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bacilli. The Quarantine Board in Alexandria supported the bacteriologist and gave no credence to the clinical report. Officially there was no cholera at Tor in 1895, and yet the disease was introduced about that time into Egypt and remained in the country till October, 1896. Up till now the Quarantine Board has declared the present pilgrimage to be "clean," but it is difficult to see how they can now avoid declaring it "unclean." In this latter case all existing and future pilgrims will be kept at Tor for ten days after the last case. By decision of the various congresses a pilgrimage must be in one of these two categories—it cannot be classed "suspect." By declaring it "unclean" some inconvenience would be caused to quarantine officials and to about 2000 pilgrims, but, on the other hand, Egypt would very likely be saved from another outbreak of cholera. Cholera always has entered Egypt from Hedjaz, though it has never been discovered at the time. Also, it must be remembered that cholera has often been at Tor, as in 1890 and 1891, without the disease entering Egypt. Past history tells us that when the quarantine officials have recognised cholera and treated it energetically Egypt has not been attacked. On all occasions when Egypt has suffered from cholera the enemy has been allowed to penetrate the first line of defence without question. At this crisis we may congratulate ourselves that Dr. Ruffer is at the head of the Alexandria Board and that he happened to be inspecting Tor last week.

Unruly Pilgrims.

A few days ago a temporary rising took place at Tor among pilgrims, who naturally demurred at any extension of their quarantine. One of their grievances is that they have to supply themselves with food during their imprisonment in camp. At the time of this rising eighty Egyptian soldiers were guarding 5000 Turks. To any one who knows the two races this is like setting a sheep to watch the dogs. Now the guard has been doubled, and what is obviously wanted is an English officer in command.

Cairo, June 1st.

Obituary.

ROBERT MUNDY GOVER, M.D. ST. AND., F.R.C.P. LOND., LATE H.M. MEDICAL INSPECTOR OF PRISONS.

WE regret to have to record the death of Dr. R. M. Gover, which took place at Falmouth on the 5th inst. Dr. Gover was in the active discharge of his duties until July of last year, when illness compelled him to take leave of absence, and to go to the south of England in search of health. It had been noticed for some time that his health was not good, but it was hoped that rest and change would restore him, and that he would soon be able to resume his duties. Unfortunately these hopes proved fallacious, the desired improvement did not occur, and in December last he felt obliged to place his resignation in the hands of the Secretary of State. The news of his death will come as a shock to his friends, and more particularly to those who were associated with him in the work of the prison department. Dr. Gover qualified as M.R.C.S. in 1856, and L.S.A. in 1859. He became M.R.C.P. in 1876, M.D. St. Andrews in 1882, and F.R.C.P. Lond. in 1883. He joined the prison service at Portsmouth in 1857, and was transferred as resident surgeon to Millbank Prison in 1860. A few years later, in 1865, he succeeded to the full medical charge, and held the position until appointed to the Home Office in 1878. Millbank during his tenure of office there was one of the most important prisons in the country, and his post was no sinecure. He had to deal with all sorts and conditions of criminals, and he became familiarised with all aspects of criminal life. Not only were ordinary offenders confined within the walls, but there was a department for military prisoners, and it was the custom to send lunatics, imbeciles, and epileptics from other prisons for observation and report. The requirements of this large and varied population, their diseases and weaknesses, their excesses and "breakings out," their malingering and grumbling, all kept him busy, and he had not time to contribute much to contemporary literature. Many pertinent observations and valuable suggestions regarding the connexion between lunacy and crime are, however, to be found in his annual reports. The experience thus gained proved of great value to him in the discharge of his more important duties as medical inspector. He was appointed to this post in 1878, a year memorable in the history of prisons, as it was then the local prisons came under the Crown. The transference from the local authorities to a central board of so many large institutions was a work of considerable magnitude, and one requiring the exercise of great tact and discretion. Dr. Gover shared in the work, for there were many medical points which had to be dealt with. One of the most important of these was the introduction of a uniform scale of diet in all the prisons of England and Wales. This subject was submitted to a committee, of which Dr. Gover was a leading member. He displayed great interest in the subject, and published his views in a paper read before the Society of Arts in 1878. During the whole of his career as medical inspector, about eighteen years, the question of prison dietary frequently occupied his time and attention, and he introduced improvements wherever practicable. On many other questions affecting the well-being of prisoners—e.g., the treatment of weak-minded and imbecile criminals, the management of infectious diseases in prisons, &c., he has left traces in the orders which are issued for the guidance of the officials. He had frequently to advise the Home Secretary and the high prison officials in matters of difficulty and delicacy. He gave important evidence before the Commission which inquired into the subject of criminal lunacy in 1880, and he appeared as a witness before the Commission of Inquiry regarding the management of Prisons in 1896. He contributed papers on the treatment of criminal lunatics and weak-minded prisoners to the Paris Penitentiary Congress in 1895. Dr. Gover's manner was gentle and unassuming, and his courtesy and affability were constant. He was held in much esteem by the medical staff of the prison department, and they cannot but regret the loss of one who, as far as lay in his power, upheld their interests and invariably proved a good friend and a kind chief.

JOSEPH LAW, M.D. EDIN., L.F.P.S. GLASG.

DR. LAW, of Sheffield, who died at his residence in Devonshire-street at the great age of ninety years on June 1st, was a veritable link with the past. He was a native of Sheffield, where his family had long been established. His medical education was received at Trinity College, Dublin, and at Edinburgh University, and he became a Licentiate of the Faculty of Physicians and Surgeons of Glasgow as long ago as 1831. He returned to Sheffield, and about 1836 obtained the appointment of house surgeon at the dispensary in West-street, where he remained until, in 1841, he became house surgeon at the general infirmary in succession to Dr. Ernest, who died after more than thirty years' tenure of office. After eleven years' service as house surgeon, during which he was frequently complimented by the governors at the annual meetings, Dr. Law resigned his position, returned to Edinburgh in 1853 for the purpose of taking his M.D. degree, and thereupon established himself in practice in Sheffield. In 1854 he was elected physician to the dispensary and in 1866 physician to the infirmary. On his resignation of the latter appointment in 1876 he became consulting physician, and on his final retirement in 1890, forty-nine years after he had first become connected with the institution, he was presented with a portrait of himself, which was hung in the infirmary board-room. Another portrait of him, executed in 1892, hangs in the Medical School. Dr. Law outlived his wife and his early associates, and witnessed many changes in medicine and surgery. He will be regretfully remembered by numerous friends and acquaintances, to whom his sincerity and goodness of heart endeared him.

THE CIVIL RIGHTS DEFENCE COMMITTEE: PUBLIC MEETING AT PLYMOUTH.—By the help of the members of the Plymouth Medical Society and other medical men in Plymouth both political parties have combined to form an influential committee drawn from the towns of Plymouth, Devonport, and Stonehouse, which committee has convened a meeting to be held on June 14th to receive a deputation from the Civil Rights Defence Committee and hear an address from Mr. R. B. Anderson.

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Medical News.

UNIVERSITY OF CAMBRIDGE.—The Examiners in Medicine for the Third M.B. Examinations in the ensuing year are: Dr. L. Humphry, Dr. Foxwell, Dr. S. Martin, F.R.S., and Dr. Mitchell Bruce. The Examiners in Surgery are: Mr. Bernard Pitts, Mr. Bennett, Mr. Watson Cheyne, F.R.S., and Mr. Golding-Bird. The Examiners in Midwifery are: Dr. J. Phillips and Dr. Cullingworth.—Dr. Haddon has been granted £300 from the Wort's Travelling Scholars' Fund for an anthropological expedition to the Torres Straits.—The Rev. Professor Wiltshire has presented his valuable geological library to the Woodwardian Museum.—Professor Michael Foster has been appointed representative of the University on the Council of the Marine Biological Association.

THE ROENTGEN SOCIETY.—The first meeting of this society was held on June 3rd, at the rooms of the Medical Society, Chandos-street, London, W. The chair was taken by Professor Silvanus P. Thompson. The business included passing of laws, election of forty-four original members, and the appointment of an executive. The following is a list of officers chosen:—President: Professor Silvanus P. Thompson, F.R.S. Vice-Presidents: Professor Ferrier, F.R.S., Dr. J. H. Gladstone, F.R.S., Dr. John Macintyre, Mr. C. W. Mansell Moullin, and Mr. Fletcher Moulton, Q.C., F.R.S. Honorary Member: Professor Roentgen. Council: Dr. Mackenzie Davidson, Mr. F. E. Fenton, Mr. J. E. Greenhill, Dr. W. S. Hedley, Dr. F. H. Low, Mr. T. Moore, Mr. Sydney Rowland, Mr. A. A. Campbell Swinton, Mr. W. Webster, F.C.S., Dr. Norris Wolfenden, and Mr. Snowden Ward. Secretary: Dr. David Walsh.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—The following scholarships, medal, and prizes were awarded during the summer session 1896 and winter session 1896-97:—Livingstone Scholar: Mr. C. J. Mercier. Huxley Scholar: Mr. F. B. Pinniger. Epsom Scholar: Mr. L. C. Badcock. University Scholars: Mr. H. S. Clogg and Mr. R. J. Willson. Huxley Medal and Prize of £10: Mr. A. G. Pitts. Golding Prize: Certificate and £10, Mr. C. J. Mercier. Pereira Prize: Certificate and £5, Mr. S. W. Garne. Anatomy (Senior): Prize, Mr. A. G. Pitts. Anatomy (Junior): Prize, Mr. A. G. Payne. Biology: Prize, Mr. F. B. Pinniger. Chemistry: Prize, Mr. C. J. Mercier. Physiology (Senior): Prize, Mr. A. G. Pitts; Prize (Special), Mr. B. A. Nicol. Physiology (Junior): Prize, Mr. D. Gray. Medicine: Prize, Mr. H. S. Clogg. Surgery: Prize, Mr. E. L. Lilley. Practical Medicine: Prize, Mr. W. H. Unwin. Materia Medica: Prize, Mr. M. G. Hannay. Osteology: Prize, Mr. F. M. Boclet. Practical Chemistry: Prize, Mr. F. R. Bishop. Psychological Medicine: Prize, Mr. V. S. Partridge. Midwifery: Prize, Mr. S. W. R. Colyer. Pathology: Certificate, Mr. W. H. Park. Public Health: Prize, Mr. S. H. Berry. Therapeutics: Prize, Mr. H. W. Abbott. Practical Midwifery (Summer): Prize, Mr. A. E. Weld. Practical Midwifery (Winter): Prize, Mr. W. E. Morgan. Dental Surgery: Prize, Mr. W. Green.

THE LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.—The annual meeting of the Western Branch No. 1 of the London and Counties Medical Protection Society was held on May 27th at Southerton House, Hammersmith, by permission of its President, Dr. Alderson, who took the chair. After the annual report was read and approved, Dr. Heron, treasurer of the society, said that during the past twelve months there had not been any important legal proceedings, but a very large amount of important business had passed through the society's office. With regard to the subject of hospital abuse Dr. Heron was of opinion that abuse did exist to a material extent, for over 1,300,000 people received assistance every year in the out-patients' department alone of the London hospitals. Put into other words, this meant that almost every fourth person one met in the streets of London was a recipient of hospital charity. In Dr. Heron's opinion the remedy for this state of affairs lay to a large extent in the hands of the medical profession in London; and if they did not help themselves they could not expect other people to help them in their difficulties. He also thought that medical men should give up dispensing medicines, and then, but not, he thought, till then, they would be in a position to take action in the matter of prescribing by druggists. As regarded the conduct of medical defence, Dr. Heron stated that he had always held it should be carried out by one large and powerful society, but he had not heard of any scheme which was likely to lead to this being efficiently done in the near future. After some remarks from the chairman and others the meeting closed with a vote of thanks to Dr. Alderson for presiding.

A MEDICAL MAN'S JUBILEE.—An interesting occasion was the celebration at Esher some fortnight ago of Mr. Izod's jubilee. Mr. Izod, who has been in practice for fifty years at Esher, gave two entertainments in aid of the Prince of Wales's Hospital Fund, and bade the members of the local Fire Brigade and the stewards of the entertainments to dinner afterwards, when the proceedings were of an enthusiastic character.

A DAY OF REST FOR LONDON NURSES.—On Thursday, June 3rd, the nurses of the metropolitan hospitals and nursing institutions were invited by Canon Burnside to spend a day in the country at Hertingfordbury. The object in view was not only to afford some relaxation from work, but to exalt the Christian aspect of the ministry of nursing. There was a large attendance. The day commenced with a celebration of the Holy Communion in the parish church at 10.30. The Bishop of Wakefield was celebrant, and was assisted by Rev. W. Ostle, chaplain of St. Bartholomew's Hospital; Rev. A. G. Locke, chaplain of St. George's Hospital; Rev. H. J. Fase, chaplain of Westminster Hospital; and the Rector. At luncheon time the nurses were well entertained, and in the afternoon, by the kindness of the Countess Cowper, the whole party was invited to Panshanger, where they took tea, and afterwards had the opportunity of seeing the beautiful collection of pictures and strolling through the gardens and park on their way home. The Rev. A. G. Locke, of St. George's Hospital, acted as secretary in making all arrangements for the journey of the nurses from London. Looking back upon the day it was generally felt that, the main object being steadily kept in view, the opportunity had been most helpful in deepening in the mind of many a higher sense of the dignity of the nurses' calling, whilst the recreation and enjoyment of such a visit to the country had tended in no small measure to lighten the strain incidental to a nurse's work.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Poor-law Officers Superannuation.

THE House of Commons has passed through all its stages a Bill to amend the Poor-law Officers Superannuation Act of 1896, so that nurses may signify their intention not to avail themselves of the provisions of that Act, and thus retain intact their salaries or wages, and stand entirely outside the scheme of superannuation.

Infant Life Protection Bill.

This Bill having passed the House of Lords is now in the House of Commons, where it has been put down for second reading on Thursday, June 17th.

Scotch Public Health Bill.

The Grand Committee of the House of Commons on Law completed the consideration of the Scotch Public Health Bill on Thursday, June 3rd, and on the same day the Bill as amended by the Committee was reported to the House by Sir James Fergusson. The Bill in this form will now be printed, so that every one interested may see exactly what the Committee has done, and prepare for the report stage in the House, which has been provisionally fixed for Thursday, June 17th.

HOUSE OF COMMONS.

THURSDAY, JUNE 3RD.

Lights after Dark.

Mr. Melville asked the Secretary of State for the Home Department whether his attention had been called to a verdict of manslaughter given in the case of a bicyclist who was killed at Stockport by a cart driven at night without lights? And whether he would be prepared to introduce a Bill to enforce the carrying of lights and prevent similar accidents in the future?—Sir Matthew White Ridley said his attention had not been called to the case otherwise than by the hon. Member's question, but he was afraid he could not undertake to bring in a Bill. The matter, however, was already before the House, for a Bill providing that all vehicles should carry a light after dark had been discussed and read a second time. Under the existing law borough and county councils had ample powers for dealing with the matter by means of by-laws, powers which in many cases had been exercised.

Flogging Prisoners.

Mr. Joseph A. Pease addressed questions to the Home Secretary and the Under-Secretary for War with reference to flogging in civil and military prisons, and received an assurance from these two Ministers that more information on the subject will be forthcoming.

The Vaccination Question.

At this sitting a Bill was introduced and read a first time "to amend

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the vaccination laws by providing a compulsory supply of calf lymph under Government control and for other purposes." The Bill is backed by Mr. Carlile (who introduced it), Sir Cameron Gull, Mr. Bemrose, Mr. Howell, and Mr. Wanklyn. The second reading of the measure has been put down for Wednesday, July 7th.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALEXANDER, A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for Wellesbourne, vice R. Pitt, resigned.

BAYLISS, R. A., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer to the Royal Mineral Water Hospital, Bath.

BENSON, H. T., L.R.C.P. Lond., has been re-appointed Medical Officer for the Maxey Sanitary District of the Peterborough Union.

BROWN, HERBERT, M.D. Lond., F.R.C.S. Eng., has been appointed an Honorary Medical Officer for the East Suffolk and Ipswich Hospital, vice G. Hetherington, resigned.

CRAGO, W. H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed an Honorary Assistant Surgeon to the Sydney Hospital, New South Wales.

CRAIG, JAMES, M.D., F.R.C.P. Irel., has been appointed Registrar to the Royal College of Physicians of Ireland, vice Guy Nugent, deceased.

CUTHBERT, JOHN, L.R.C.P. Edin., L.K.Q.C.P. Irel., L.R.C.S., has been appointed Health Officer to the Victoria-park Local Board of Health, Western Australia.

DAWSON, H. T., M.B., Ch.M. Aberd., has been appointed a Public Vaccinator, Pahiatua District, New Zealand.

DIXSON, T., M.B., Ch.M. Edin., has been appointed an Honorary Physician to the Sydney Hospital, New South Wales.

ELLIS, H. D'ARCY, L.R.C.P. Edin., M.R.C.S., had been appointed Medical Officer of Health by the Kingswinford Rural District Council.

FARMER, P. W., M.B., Ch.B. Melb., has been appointed Resident Medical Officer and Public Vaccinator for the Urban and Suburban Districts of Wyndham and the Rural District of East Kimberley, and Quarantine Officer at the Port of Wyndham, Western Australia.

FIASCHI, T. H., M.D., Ch.D. Pisa, has been appointed an Honorary Surgeon to the Sydney Hospital, New South Wales.

GILL, JAS. M., M.D. Lond., L.R.C.P., M.R.C.S. Eng., has been appointed an Honorary Assistant Physician to the Sydney Hospital, New South Wales.

GITTINGS, C. B., M.B. Lond., has been appointed Resident Medical Officer to the St. Marylebone General Dispensary.

GOWING, B. S., M.R.C.S., has been appointed Vaccination Officer for Stocksbridge, of the Wortley Union.

HARVEY, WILLIAM, L.R.C.P., L.R.C.S. Edin., has been appointed Resident Government Medical Officer to Halls Creek, Kimberley Goldfields, Western Australia.

HAVELOCK, JOHN G., M.D. Edin., has been appointed Physician-Superintendent to the Royal Asylum, Sunnyside, Montrose.

HAWTHORNE, ERNEST S., L.R.C.P., L.R.C.S., L.M. Irel., has been appointed Surgeon to the Etheridge District Hospital, Georgetown, Queensland.

HEARNE, W. W., M.B. Melb., has been appointed a Public Vaccinator for Outtrim, Victoria, Australia.

HENRY, JAMES, M.D., M.Ch. Dubl., L.M.K.Q.C.P. Irel., has been appointed Medical Officer and Medical Officer of Health for the Monaghan Dispensary District of the Monaghan Union.

HEPWORTH, A. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Acting Public Vaccinator for Euroa, Victoria, Australia.

HIRSCH, CHARLES T. W., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., has been appointed Divisional Surgeon to the Police of R Division stationed at Woolwich and to the Police of Woolwich Division stationed at the Royal Arsenal, Railway Plant Depôt, and Woolwich Dockyard.

HOWDEN, JAMES C., M.D., has been appointed Consulting Physician to the Royal Asylum, Sunnyside, Montrose.

HUSBAND, J. C. R., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Workhouse and for the No. 2 Sanitary District of the Ripon Union.

JACKSON, H. W., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed House Physician to the Royal Berkshire Hospital, Reading.

JOHNSTON, J. C. M.B., Ch.M. Edin., has been appointed Acting Medical Officer for Port Phillip and Superintendent of the Quarantine Station, Point Nepean, Victoria, Australia.

MACLENNAN, ALEX., M.B., C.M. Glasg., L.M. Dub., has been appointed Resident Medical Officer to the Hospital for Women, Soho-square, W.

MCDONNELL, JOSEPH, L.R.C.P. Irel., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Roscommon Dispensary District.

MORETON, CHARLES PEYTON, M.R.C.S. Eng., L.S.A. Lond., L.M. Dub., has been appointed Poor-law Medical Officer for the Berriew District and Medical Officer of Health to the Forden District of Montgomeryshire, North Wales, vice F. W. Waters and W. D. Thursfield, resigned.

OLDMEADOW, J. H., M.R.C.S. Eng., has been appointed a Member on the Board of Advice for the New Norfolk School District, Tasmania.

PICKFORD, J. S., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Officer of Health by the Little Lever Urban District Council, vice A. Taylor, deceased.

PLAYER, C. R., M.B., Ch.B. Melb., has been appointed Officer of Health for Bulla Shire, Victoria, Australia.

POPE, R. JAS., M.D. Edin., F.R.C.S. Edin., has been appointed an Honorary Ophthalmic Surgeon to the Sydney Hospital, New South Wales.

ROBERTSON, J., M.D. Edin., B.Sc. (Pub. Health), has been appointed Medical Officer of Health for Sheffield.

ROSS, W. S., M.B., Ch.B. Dub., has been appointed a Public Vaccinator for the District of Waiapu, New Zealand.

RUDALL, JAS. F., M.B., Ch.B. Melb., M.R.C.S. Eng., has been appointed a Public Vaccinator for Foster, Victoria, Australia.

SHACKEL, G. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Ludlow Rural District Council, vice W. M. Thursfield, resigned.

SKINNER, GEO. H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed a Public Vaccinator for Milawa, Victoria, Australia.

SKINNER, W. A., M.B., C.M. Edin., has been appointed Junior Assistant Medical Officer to the Royal Asylum, Montrose.

SYLVESTER, HERBERT M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Leiston-cum-Sizewell Urban District Council.

THOMAS, JOHN, L.R.C.P., L.R.C.S. Edin., has been appointed a Public Vaccinator for the Pleasant Point District, New Zealand.

THORNE, MARY, L.S.A. Lond., M.D. Brux., has been appointed Senior Resident House Surgeon to the New Hospital for Women, Euston-road, vice Miss Keith.

THORP, ALBERT, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Wooldale Sanitary District of Holmfirth.

TOMLINS, WM. H., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed Government Medical Officer and Vaccinator for Lower Richmond, New South Wales.

TOWNEND, R. H., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer for the Cumberworth Sanitary District of the Huddersfield Union.

TYTHERIDGE, W. R., L.R.C.P. Edin., M.R.C.S. Eng., has been appointed a Public Vaccinator for the Halcombe District, New Zealand.

WATSON, G. G., M.B., Ch.M. Edin., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Acting Officer of Health for Borung Shire, Victoria, Australia.

WEBB, A. B., M.B., Ch.B. Melb., has been appointed Officer of Health for the Shire of Meredith, Victoria, Australia, and Public Vaccinator for Steiglitz, Victoria.

WHEELER, L., M.B., B.S. Irel., has been appointed Acting Superintending Medical Officer of the Lunatic Asylum, Freemantle, Western Australia.

WRIGHT, T. N., L.R.C.P. Lond., M.R.C.S. Eng., has been appointed a Public Vaccinator for the District of Waihi, New Zealand.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

BOROUGH OF LOWESTOFT.—Medical Officer of Health and Medical Attendant at the Sanatorium for the Urban and Port Sanitary Districts of Lowestoft. Salary for the Urban Sanitary District £100 per annum; for the Port Sanitary District, £20 per annum, and as Medical Attendant at the Sanatorium £30 per annum. Applications to the Town Clerk, Lowestoft.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

CHORLTON UNION.—Senior and Junior Resident Medical Officers at the Workhouse Hospitals, Withington, Manchester, for twelve months. Salary of the former at the rate of £130 per annum, and of the latter at the rate of £120 per annum, each with furnished apartments and attendance (but not rations) in the Workhouse. Applications to the Clerk to the Guardians, Chorlton Union Offices, All Saints, Manchester.

CONSUMPTIVE HOSPITAL AND ORPHAN HOMES OF SCOTLAND, Bridge-of-Weir.—Resident Medical Officer. Salary £80 per annum, with furnished apartments, board, &c. Applications to the Secretary, 194, St. Vincent-street, Glasgow.

COUNTY BOROUGH OF ST. HELENS.—Medical Officer of Health, Public Analyst. Salary £400 per annum, rising by five equal annual instalments to £520 per annum. Preference will be given to candidates qualified to act as Public Analyst, an office to which an additional salary of £75 per annum will attach. Applications to the Town Clerk, Town Hall, St. Helens.

FISHERTON ASYLUM.—Locum Tenens for about six weeks. Three guineas weekly, with board, lodging, and washing. Applications to Dr. Finch, The Asylum, Salisbury.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for six months. Board, lodging, and washing in the hospital. An honorarium of £10 10s., will be given conditionally.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Resident Medical Superintendent for one year. Salary £105 a year, with board and residence in the hospital.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

LONDON LOCK HOSPITAL, 91, Dean-street, W.—Surgeon and Anæsthetist to Out-patients. Applications to the Secretary, at Harrow-road.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Resident Medical Officer. Salary £80 per annum, with board, lodging, and washing.

NEW HOSPITAL FOR WOMEN, Euston-road, London.—Medical Women as Clinical Assistants in the Out-patient Department, for one year.

NOBLES, ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon, single. Salary £90 per year, with apartments, gas, coals, and washing free. The House Surgeon is usually appointed Medical Attendant at the House of Industry at a salary of £10 per year.

ROYAL FREE HOSPITAL, Gray's-inn-road, London, W.C.—House Physician for six months. Board, &c., provided. No salary.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Assistant House Surgeon, for six months. Salary £50 per annum, with board and lodging. Stimulants and washing not provided.

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SHAFTESBURY UNION.—Medical Officer and Public Vaccinator for the Shaftesbury District. Salary as District Medical Officer £70 per annum, to include all extras, with certain exceptions, and the usual fees for vaccination. Deductions will be made under the Poor-Law Officers Superannuation Act, 1896. Applications to the Clerk, Union Offices, Shaftesbury.

SHAFTESBURY UNION.—Medical Officer for the Shaftesbury Union Workhouse. Salary £35 per annum, to include all extras, with certain exceptions. Deductions will be made under the Poor-law Officers Superannuation Act, 1896. Applications to the Clerk, Union Offices, Shaftesbury.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House Surgeon, unmarried. Salary 60 guineas per annum, with board (exclusive of wine and beer) and lodging.

UNIVERSITY COLLEGE, BRISTOL, FACULTY OF MEDICINE.—Professorship of Surgery.

UNIVERSITY OF ABERDEEN.—Two Examiners for graduation for four years. Applications to the Secretary, University of Aberdeen.

WANTAGE UNION.—Medical Officer and Public Vaccinator for the Vael District. Salary £50 per annum, with the usual surgical, vaccination, and midwifery fees. Applications to the Clerk to the Guardians, Wantage.

Births, Marriages, and Deaths.

BIRTHS.

BROCK.—On June 6th, at Via Veneto, B. Rome, Italy, the wife of G. Sandison Brock, M.D., of a son. (South African papers please copy.)

CARR.—On June 7th, at 19, Cavendish-place, W., the wife of J. Walter Carr, M.D., M.R.C.P., of a daughter.

DYMOTT.—On June 6th, at Dunkeld, Birdhurst-road, South Croydon, the wife of Donald F. Dymott, M.B. Lond., M.R.C.S., of a daughter.

FEATHERSTONE.—At Ballandalloch, Blackheath, on Sunday, June 6th, the wife of J. A. Featherstone, M.B., C.M., Warrender-park-road, Edinburgh, of a son.

JOHNSON—On June 7th, at Weymouth-street, W., the wife of Raymond Johnson, F.R.C.S., of a daughter.

MCELLIGOTT.—On June 1st, 1897, at Belper, Derbyshire, the wife of Maurice Gerald McElligott, L.R.C.P.I., L.R.C.S., &c., of a son.

ROMER.—On June 5th, at 27, Harrington-gardens, S. Kensington, the wife of Frank Romer, M.R.C.S., L.R.C.P., of Malmesbury, Wilts, of a daughter.

RUFFER.—On June 7th, at Ramleh, Egypt, the wife of M. Armand Ruffer, M.A., M.D., of a daughter.

SANDALL.—On May 31st, at Alford, Lincolnshire, the wife of T. Edward Sandall, B.A., M.B., B.C. Cantab., of a son.

SMYTH.—On June 7th, at Abingdon-villas, W., the wife of Surgeon-Captain W. Johnson Smyth, M.D., attached to Grenadier Guards, of a daughter.

THOMSON.—On May 31st, at 34, Queen Anne-street, W., the wife of H. Campbell Thomson, M.D., of a daughter.

WILLIAMS.—On May 31st, at Portmadoc, the wife of Walter Williams, M.B., of a son.

WYBORN.—On June 3rd, at Camden-road, N., the wife of Walter E. Wyborn, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

APLIN—PRESTON.—On June 3rd, at St. Nicholas's Church, Nottingham, Alfred Aplin, Medical Superintendent of the Nottingham County Asylum, to Arundel, younger daughter of the late Martin Inett Preston, Nottingham.

CÆSAR—RUSSELL.—On June 1st, at the Parish Church, Neston, by the Rev. J. O. Young, assisted by the Rev. Canon Turner, Vicar of the parish, Augustus Kirwan Adelmare Cæsar, L.R.C.P., L.R.C.S., L.S.A., of Ladywell, eldest son of Richard Thompson Cæsar, M.R.C.S., of Maidstone, to Helen, eldest daughter of the late David Russell, M.D., of Neston, Cheshire.

GAMGEE—WILLIAMS.—On June 3rd, at St. Mary's Church, Cardigan, by the Rev. D. G. Phillips, Rector of Cilrhedyn, cousin of the bride, Leonard Parker Gamgee, F.R.C.S., of Birmingham, to Margaret, second daughter of David Griffith Williams, of Ayron House, Cardigan.

LEWER—BUSHE.—On June 1st, at St. Mary's Church, Donnybrook, Dublin, Edward Stewart Lewer, M.B., eldest surviving son of Surgeon-Major-General R. Lewer, A.M.S. (retired), of St. Margaret's, St. Edward's-road, Southsea, to Olive Margaret, only daughter of C. Percy Bushe, of St. Joseph's-terrace, Sandford-road, Dublin.

NANCE—MARSHALL.—On June 1st, in the Parish Church, Croft-on-Tees, Henry Chester Nance, F.R.C.S., of Norwich, to Mary Dorothea, daughter of the Rev. J. M. Marshall, Rector of Croft.

NEWNHAM—BELOE.—On June 9th, at St. Mary Redcliffe, Bristol, W. H. C. Newnham, M.A. and M.B. Cantab., of Chandos Villa, Clifton, to Kathleen Mervyn, second daughter of W. C. Beloe, of Comynge-road, Clifton, Bristol.

WEBB—LIZARD.—On June 3rd, at St. Luke's, Battersea, by the Vicar, the Rev. Canon Erskine Clarke, Chaplain-in-Ordinary to the Queen, William Henry Webb, M.D., of Kingsbridge, South Devon, to Maud Lizard, daughter of the late Thomas Edwin Lizard, of Coombe-fishacre, South Devon. (No cards.)

DEATHS.

BLAKE.—On June 6th, at Bedford, Ethelbert Henry Blake, M.D. Edin., late Deputy Inspector-General of Hospitals, aged 78.

GOVER.—On June 6th, at Cliff-road, Falmouth, Robert Mundy Gover, M.D., F.R.C.P., late H.M. Medical Inspector of Prisons.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (16th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (17th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (18th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (19th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (14th).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40 Leicester-square, W.C.).—8 P.M. Annual Meeting: Election of Officers. Paper:—Dr. J. E. Grevers (Amsterdam): Notes on Various Forms of the Articulation of the Upper and Lower Teeth (illustrated by lantern slides).

WEDNESDAY (16th).—NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Demonstration of Clinical Cases.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (14th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. G. Stoker: Impaired Movements of the Vocal Cords.

TUESDAY (15th).—ROYAL COLLEGE OF PHYSICIANS (Examination Hall, Savoy, W.C.).—5 P.M. Dr. W. Hale White: The Means by which the Temperature of the Body is maintained in Health and Disease. (Croonian Lecture.)

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Pemphigus and Allied Affections.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Gowers: Clinical Demonstration.

WEDNESDAY (16th).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Infectious Diseases.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. A. Whitfield: Differential Diagnosis of Sore Throats.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Mr. Godlee: Surgical Lecture.

THURSDAY (17th).—ROYAL COLLEGE OF PHYSICIANS (Examination Hall, Savoy, W.C.).—5 P.M. Dr. W. Hale White: The Means by which the Temperature of the Body is maintained in Health and Disease. (Croonian Lecture.)

LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Methods of Search for Specific Micro-organisms.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Cantlie: Sprue, Tropical Sore Mouth, and Diarrhœa.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square).—5.30 P.M. Dr. A. Eddowes: Ringworm and Favus.

FRIDAY (18th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.)—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Erysipelas and Suppuration.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ormerod: Hemiplegia.

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Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"AN UNUSUALLY HEAVY HEART."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 29th, p. 1466, Dr. G. A. Reid gives an account of a heart which weighed 41 ounces, and two others of 31 ounces and 31½ ounces. He quotes two other cases, one by Delafield and Prudden of 50 ounces and one by Dulles of 48 ounces. He then says, "So far as I can ascertain from the literature on the subject at my disposal no other heart over 40 ounces in weight has been recorded." If he will refer to Taylor, fourth edition, p. 484, he will find one of 48 ounces, and in Osler, second edition, p. 665, he will find one of 53 ounces.

I am, Sirs, yours truly,

Wandsworth, June 3rd, 1897. A. S. MORTON.

THE AUDITOR AND THE WATER DIVINER.

THE Local Government Board auditor, in disallowing the amount of a payment made to a water diviner by the urban district council of Ampthill, Bedfordshire, said that there was no legal objection to the making of experimental borings under competent advice, but no proof that the water diviner possessed special knowledge had been submitted to him, and he held it to be illegal for the council to spend money on speculative enterprises. It was stated that Mr. Leicester Gataker, the water diviner, walked slowly over the ground with his arms spread out, and indicated the position of a spring by stopping suddenly as if he felt a shock. The chairman of the council informed the auditor that in this way a number of springs were found in one field, but on the other hand some dissatisfied ratepayers argued that the spot selected by the diviner was not likely to yield water as the underlying stratum was a bed of clay of great thickness.

Dr. J. Laird.—It would be a great pity to start a newspaper correspondence on such a subject. All such discussions impair the public utility of the profession. The matter is one for discussion between the parties, when facts might be elicited that would give a different appearance. A third medical man known to both should be made a medium of interchange of views, and, if possible, be given the power of an arbitrator.

"WANTED A SURGICAL PHIDIAS!"

To the Editors of THE LANCET.

SIRS,—With reference to the letter referred to in the enclosed cutting from the *Church Family Newspaper*, may I venture to take your correspondent quite *au sérieux*, and say that if he will put himself in correspondence with me, I will guarantee to remove his dissatisfaction without any charge.

Like himself I am a thorough believer in all that surgery can do; and though I do not profess to alter his physiognomy either by any series of surgical operations or in a day, I shall only be willing to undertake his case on condition that he gives to me the "readiness to suffer considerable pain," and his willingness "to run a fair amount of risk" which he offers to fantastic surgery.

One so seldom comes across a soul in earnest, that when such a *rara avis* turns up one's desire is to put his earnestness to the test and to foster a courage by no means contemptible.

You, Sirs, inserted this letter with apologies and a smile; will you accept mine on the same terms? While I assure you that my offer is neither that of a quack nor a catch-penny, I enclose my name for our dissatisfied friend should he write and ask you for it, and to assure you of my *bona fides*, and can only say that with such coöperation as he offers there is no reason whatever to doubt that his face may yet become, in spite of all its defects, the face of an angel.

I am, Sirs, yours faithfully,

June 8th, 1897. EARNEST PHYSICIAN.

*** In accordance with our correspondent's desire, we insert, apologise, and smile.—ED. L.

Curious.—There are by-laws in some of the Colleges which would preclude trading. Permissible or otherwise, such trading is objectionable.

THE ABUSE OF TOBACCO.

THE French Society for the Prevention of Excess in Tobacco, to which we referred in an annotation in THE LANCET of June 20th, 1896, p. 1734, continues to flourish exceedingly under the fostering care of its president, M. Decroix, and its general secretary, Dr. Gélineau. At a recent meeting for the distribution of prizes, which was somewhat incongruously held in the Horticultural Hall, Paris, under high patronage, including that of M. Steeg, inspector-general of public instruction, the funds in hand were said to exceed 90,000 francs, included in this handsome sum being 2000 francs from the president, who regularly devotes his savings as a pensioned veterinary surgeon to the extinguishment of tobacco smoke. The name of Dr. Gruby, who not only presided at the last annual meeting but also offered a prize to the deviser of the best method for breaking a tobacco-chewer of his expectorant habit, is absent from the proceedings on the last occasion, but we sincerely trust that this is not due to any backsliding on his part. The tenets of the society are still as remarkable as ever by reason of their moderation. Being people amenable to reason, the anti-tobacconists recognise the fact that adult mankind is not to be coerced in the matter of the divine weed. The correction of grown-ups being admittedly hopeless they confine their propagandism to the rising generation, and seek to safeguard the innocent babes in the primary schools by revealing to them the awful abysses that are supposed to yawn beneath the, at all events fragrant, pall emitted by countless cigars and pipes. To this end a prize was offered for the best practical means of preserving infancy from the contamination of tobacco, but although a M. Géry, a schoolmaster, was proclaimed the winner and duly crowned as anti-nicotian laureate, the essay upon which he rode to fame has not been reproduced. In like manner a reward of 300 francs was promised some time ago to whomsoever should make known the influence of tobacco on the action of internal medicaments as well as on the cicatrisation of external wounds, but, unfortunately, in this case too we are left in the dark regarding the result. In the course of the proceedings two announcements may, in theatrical parlance, be said to have brought down the Horticultural Hall. The first, by M. Steeg, was an assurance that the ministerial mind was in sympathy with the society; the second, by Dr. Gélineau, was to the effect that in future the bicycle would be employed as a powerful opponent of tobacco.

Killochridge should apply for information to Dr. A. G. Bateman, secretary to the Union, at the offices 20 and 21, King William-street, Strand, W.C.

INCUBATORS.

To the Editors of THE LANCET.

SIRS,—Could some of your correspondents give me any information as to where incubators for babies could be procured in England, and their approximate cost either to purchase or hire?

I am, Sirs, yours faithfully,

June 8th, 1897. H. G. C.

*** Our correspondent will probably be able to obtain the information he requires at the Earl's Court Exhibition. (Vide THE LANCET, May 29th, 1897, p. 1490.)—ED. L.

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"THE PUBLIC HEALTH EXAMINATION AT CAMBRIDGE."

To the Editors of THE LANCET.

SIRS,—I suppose your correspondent "Examiner" wishes us to infer that he is one in authority at this examination. If he is it is a pity he has no apologies to offer but only flippant remark and subtle sneer. He is astonished at candidates' impudence in expecting to be provided with the usual apparatus, but he is willing to waste their time over unnecessary mental arithemetic. "Examiner" will be surprised to hear "N.D." and "W. T." were considerate enough not to exhaust the catalogue of deficiencies—for instance, to mention that in practical bacteriology thirty candidates had only six or seven oil immersion lenses between them, and these attached to old pattern microscopes without coarse adjustment, and so on. However, I refuse to think that "Examiner's" letter is typical of the attention a candidate's reasonable criticisms will meet with at Cambridge, but I even venture to hope that the letters of "N.D." and "W.T." will prompt the syndicate to improve the laboratory equipment.

I am, Sirs, yours faithfully,

June 8th, 1897. W. T.

*** The letter to which our correspondent refers was signed Examin*ee*, not Examin*er*.—ED. L.

To the Editors of THE LANCET.

SIRS,—Your correspondent "Examinee" cannot have had my letter before him when he penned his letter to you or he would have learned from it that I did not fail in laboratory work as he seems to infer. It was the paper in bacteriology which did for me. To repeat the substance of my letter, I complained of the damaged condition of the oil immersion microscope and its being placed in the centre of the room on an uneven zinc-covered table. I believe there was a vacant room adjoining with abundance of light where the microscopes might have been placed. In the second place I had a special paper on bacteriology, which I had not before when I scored enough marks for a pass in this subject only. This time I was informed I had marks to spare in hygiene, which, had the questions on bacteriology been included with those on the general subject as before, would no doubt have totalled sufficient for a pass in the whole of Part I. Your correspondent will perhaps now understand that I responded successfully to the tests on the laboratory work. If I had not had a course of instruction in such work I dare say I could not have done as well as I did. I quite agree with him in his remarks on the letter of "W. T.," as I had nothing to complain of as regards the arrangements in the chemical laboratory, except the waiting for reagents. I think it, however, bad taste to crow over us because he has passed and we have failed. Everybody knows, and persons of experience in examining students will corroborate the statement, that many good men are ploughed at an exam., and others not so well informed generally, but crammed with knowledge imbibed specially for the purpose of getting through the examination, fortunately for themselves do so.

I am, Sirs, yours truly,

June 5th, 1897. N. D.

General Practitioner.—The general practitioner should have been advised as to the situation by the family. It is not in accordance with professional etiquette for the consultant to take over the general practitioner's patient, but perhaps he has not done so or perhaps he has done so in error. He should be asked in a friendly way what has happened. We do not attach much importance to the solicitation of a subscription, nor does our correspondent say that the consultant knew him to be also a supporter of the charity.

"PASSING RICH ON FORTY POUNDS A YEAR."

THE Hampstead board of guardians appear to place little value on medical services. It is humiliating to read in a daily contemporary, which we trust has been misinformed, that last week they decided to apply to the Local Government Board for permission to appoint a resident medical officer at the workhouse infirmary at a salary of £40 per annum, with board and apartments. He is to have the double qualification and will be required, in addition to his medical work, to do all the dispensing required for the workhouse. The salaries of other officials at the workhouse are—porter, £30 per annum; superintendent of nursing, £50; master, £60; and matron, £60.

Ethics.—(1) The practice of "touting" implies the employment of a tout, and we do not see any evidence of this. (2 and 3) We think that the publication of our correspondent's name is being used as an inducement to people to ask for information concerning the club, so that its appearance in the advertisement is unfortunate. The fact that the magazine has a small circulation and the club a good object does not obviate the fact that the marked passage is an advertisement.

THE MORAL EDUCATION OF BOYS.

To the Editors of THE LANCET.

SIRS,—Can any of your readers furnish me with the title of a book published some fifteen or twenty years ago on the moral education of boys (in connexion with sexual matters)? If my memory does not deceive me the author was the headmaster of Londonderry School.

I am, Sirs, yours faithfully,

June 6th, 1897. FATHER.

HOSPITAL REFORM ASSOCIATION.

To the Editors of THE LANCET.

SIRS,—I have received the following donations towards the funds of the above Association in answer to the appeal in THE LANCET of last week.

Dr. J. G. Glover	£2 2 0
Mr. D. B. Balding, F.R.C.S. Eng....	1 1 0

I am, Sirs, yours faithfully,

June 9th, 1897. T. GARRETT HORDER, Hon. Secretary.

Lex.—1 and 2. We think that the course indicated by our correspondent would be arbitrary. The legal position under these and similar Acts generally depends upon decisions, and we will inquire what decisions are in existence. 3. For obvious reasons the medical man in charge of the hospital should have the patient under his care. There is no slur whatever in this on the skill of the practitioner. *Vide* THE LANCET pamphlet on "Difficulties under the Infectious Disease (Notification) Act."

"INVERSUS" WOOLLEN UNDER-CLOTHING.

MR. D. GILBERT, of 7, Buckingham Palace-road, London, S.W., has submitted to us samples of his "Inversus" woollen under-clothing, both vests and drawers, in the making up of which, contrary to the usual custom, the smooth surface of the material is placed next to the skin, thus meeting the difficulty of those whose sensitive skins will not permit of their wearing the ordinary woollen garment by reason of its irritating effects. The material of the articles submitted to us is of pure, undyed wool, of exceptional smoothness—in fact, the claim of Mr. Gilbert that it is as "smooth as silk" is, we think, worthy of corroboration, there being an entire absence of those knots and teazles usually met with in woollen under-clothing. The material is manufactured in two substances—(1) thin, for summer wear, and (2) medium thickness, for spring and autumn wear.

Fair Play all Round.—Our correspondent is referred to our report of the proceedings of the General Medical Council in THE LANCET of June 5th, and to numerous articles in our columns and the columns of the medical press generally upon medical aid associations. All that he urges has been said more temperately and therefore more convincingly.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 10th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 4	30·09	N.E.	55	53	105	69	52	...	Overcast
" 5	30·10	N.	58	56	110	75	55	...	Overcast
" 6	30·09	S.W.	68	64	86	74	58	0.05	Hazy
" 7	30·00	E.	62	59	76	65	62	...	Cloudy
" 8	30·03	S.E.	54	52	69	56	52	0·70	Overcast
" 9	29·66	N.E.	52	51	64	54	50	0·10	Raining
" 10	30·08	N.	53	51	90	60	48	...	Cloudy

During the week marked copies of the following newspapers have been received:—*Wolverhampton Chronicle, Kidderminster Sun, Gloucester Chronicle, Craven Herald, Halifax Guardian, Dover Express, Builder, New York Herald, Surrey Comet, Times of India, Pioneer Mail, Tottenham Herald, Scotsman, Brighton Gazette, Birmingham Gazette, East Anglian Daily Times, Somerset County Gazette, Manchester Guardian, Glasgow Herald, Pontefract Express, Whitby Gazette, Brighouse Echo, Sheffield Independent, South Wales Chronicle, Bournemouth Observer, Leigh Chronicle, Liverpool Daily Post, Architect, Harrogate Advertiser, Shrewsbury Advertiser, Rugby Advertiser, Derbyshire Times, Newcastle Journal, Carmarthen Weekly Reporter, Doncaster Chronicle, Hastings Times, Devon Weekly Times, Yorkshire Post, Berrow's Worcester Journal, Sussex Daily News, Bristol Mercury, Chester Chronicle, Chatham News, Western Morning News, Barnsley Independent, Leeds Mercury, Retford News, Sanitary Record, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Mining Journal, City Press, Reading Mercury, Hertfordshire Mercury, Surrey Advertiser, Australasian Medical Gazette, Local Government Journal, Scottish Highlander, Durham County Advertiser, Academy, Keble's Margate and Ramsgate Gazette, National Observer, West Middlesex Herald, &c., &c.*

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Communications, Letters, &c., have been received from—

A.—Mr. E. G. Arnold, Birmingham; Messrs. Armour and Co., Lond.; Mr. R. C. Absolom, Blackrock, co. Dublin; Messrs. Arnold and Sons, Lond.; Army Medical Staff, Woolwich, Secretary of.

B.—Mr. E. Stanmore Bishop, Manchester; Dr. O. Beven, Edwinstowe; Messrs. Butler and Co., Liverpool; Rev. F. Burnside, Hertford; Mr. F. Booth, St. Anne's-on-the-Sea; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. F. W. Bateman, Lond.; Dr. P. M. Braidwood, Aylesbury; Dr. G. Butters, Kempston; Mr. E. Burrows, Lond; Messrs. Burroughs, Wellcome, and Co., Lond.; B. H., Lond.

C.—Mr. J. Coombs, Bridgwater; Chorlton Union, Clerk of; Mr. R. Cuffe, Woodhall Spa; Messrs. Callard and Co., Lond.; Church of England Society, White Cross League, Lond., Secretary of; Rev. H. A. Cumberlege, Halstead; Messrs. T. Cook and Co., Lond.

D.—Mr. N. Devereux, Tewkesbury; Dr. Ronald Daniel, Chatteris; Dundee Royal Lunatic Asylum, Medical Superintendent of; Mr. L. B. Dhargalka, Bombay; Dorchester Asylum, Medical Superintendent of; Domus, Lond.; Dr. A. Davidson, Liverpool; Mr. J. H. Dewar, Glasgow; Messrs. Dromgoole and Co., St. Helens; Dr. E. Diver, Lond.

E.—Dr. G. J. Eady, Enfield; Dr. A. F. Elliott, Bodmin; Dr. J. W. H. Eyre, Lond.; E. N. H., Lond.; Empire Typewriter Syndicate, Lond.

F.—Mr. W. A. Frost, Lond.; Dr. D. Findlay, Wimbledon; Dr. A. L. Fisk, New York; Mr. W. C. Finch, Salisbury; Messrs. H. Fehr and Co., Lond.

G.—Dr. L. G. Guthrie, Lond.; Mr. H. Bellamy Gardner, Lond.; Mr. W. F. Gardener, Lond.; Mr. G. Gresswell, Grimsby; Dr. A. C. Gurney, Blackburn; G. P., Lond.; Messrs. W. H. Guild and Co., Boston, U.S.A.

H.—Mr. F. Rowland Humphreys, Lond.; Haselton, Brighton; Dr. H. Hun, Albany, U.S.A.; Hangchow Mission, Hangchow, China; Mr. W. F. Haslam, Birmingham; Mr. J. Heywood, Manchester; Dr. Alfred Hill, Birmingham; Howard Association, Lond., Secretary of.

J.—Mr. George Jackson, Plymouth; Mr. W. C. C. Jakes, Lond.; Mrs. H. S. Jackson, H.M.S. *Pembroke*, Chatham; Jeypore Museum, Jeypore, India, Hon. Secretary of; Mr. A. H. Jacob, Dorchester.

K.—Mr. J. R. Kibson, Cleobury Mortimer; Dr. W. A. Kidd, Lond.; Mr. A. Kebbell, Flaxton.

L.—Dr. R. R. Leathem, Belfast; *La Medecine Infantile*, Paris, Editor of; Mr. W. W. Leigh, Treharris; Mr. R. A. Lundie, Edinburgh; Dr. A. P. Luff, Lond.

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THE LANCET

SPECIAL SUPPLEMENT

IN SUPPORT OF THE

METROPOLITAN HOSPITAL SUNDAY FUND

Published in aid of the Appeal to be made on Sunday, June 20th, 1897.

THE HOSPITALS OF THE METROPOLIS AND THEIR CLAIMS ON THE PUBLIC.

THE OLD STORY.

ONCE more it becomes our duty to lay before the readers of THE LANCET and the general public, for whose charitable consideration this Annual Special Supplement is as much prepared as it is for that of our customary professional audience, the claims of the Metropolitan Hospital Sunday Fund upon the sympathy and practical assistance of all London. Nor need the readers of this appeal consider that it is only Londoners to whom the London hospitals may fairly look for aid. Local hospitals have a right and pre-eminent claim upon local purses, but if local purses can spare a tribute to the metropolitan institutions, such help should be offered, for the London hospitals receive daily and uncomplainingly patients from all parts of the United Kingdom.

We have made this appeal for the Fund on ten previous years. Therefore, although we have approached the subject from different directions on different occasions, and have dwelt at length now on this and now on that phase in the history of hospital work in the metropolis, we feel that to many the subject has, perchance, become threadbare. It may even have lost its interest for them altogether through this familiarity, for, vary the rendering of it how we will, our main tale must always be the same. The hospitals of London do noble work; the amount of work is out of proportion to their precarious incomes; London, the city of untold wealth, should be able to furnish not only adequate but regular hospital accommodation for its suffering poor; Hospital Sunday gives the inhabitants of the metropolis and all others on whom the London hospitals have any claim, logical or sentimental, a regular and annual opportunity of showing their appreciation of the splendid work done by these charities; therefore, let all give according to his or her means.

The rich should give out of their bounty, and not only because they are rich, but because they are directly benefited by the hospitals. It must not be forgotten that many of the accidents dealt with in the emergency wards of the London hospitals have befallen the wealthy, who are exposed as much or even more than humbler citizens to the risks of the streets. The poor should give out of their poverty, and they need no reminding what the hospital means to them when they are sick. To the benevolent-minded no scheme can commend itself as more worthy of their aid than a fund to benefit their suffering and poorer brethren. Lastly, in the eyes of the practical, no less than in those of the benevolent, the Fund must find favour, for it represents order in the distribution of charity, while it strengthens the voluntary system of hospital support, of which we are all properly proud.

SPECIAL FEATURES OF THIS YEAR'S APPEAL.

In this our eleventh appeal to the charity of the public in behalf of the Metropolitan Hospital Sunday Fund, we have to take into consideration two entirely new factors that must influence the minds of contributors. The first of these is the selection by the Prince of Wales of the metropolitan hospitals as the fittest object of national munificence in commemoration of the glorious and prolonged reign of his Royal mother. Such an appeal as that made by the Prince of Wales can hardly fail in some directions to militate against the chances of the Metropolitan Hospital Sunday Fund. We do not yet know to what figure the sums given in response to this appeal will attain, so that we cannot yet estimate how far the fund may be looked upon as a stop gap only, however efficient and sorely needed, or how far it will constitute a fund the capitalisation of which will place the hospitals benefiting thereby beyond the reach of poverty—at least, so long as existing conditions hold good. But whether the appeal result in the substantial permanent benefit which we all hope it may, or only in a sum adequate to relieve the more pressing needs of the hour, it must in either case appear to the charitable public as a rival to the Metropolitan Hospital Sunday Fund, or rather as a fund which they may prefer to the Metropolitan Hospital Sunday Fund without altering the direction of their charity. Yet it is perfectly clear that it is a bounden duty, imperative upon all who can afford the dole, to support both funds, and in no way to let the older charity go to the wall because of the more special and (may we be allowed most respectfully to say?) more sensational circumstances which surround His Royal Highness's appeal.

The second factor which will for this year, and not only for this year but possibly for many years to come, be at war with the Metropolitan Hospital Sunday Fund is the feeling that is abroad that the hospitals themselves

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stand in need of reform, institutional, domestic, pecuniary, and even scientific. It is sad, indeed, that any such idea should be rife, for it is based upon insufficient evidence and is the outcome of conclusions many of which are unwarranted and a few of which are absurd. That defects can be found in the management of some of our metropolitan hospitals is not to be denied; we are not even prepared to contradict the assertion that certain of these hospitals are entirely unnecessary and so form but excrescences on the tree of proper charitable endowment; but we uncompromisingly assert that, as a whole, the metropolitan hospitals are deserving of all support, and that whoever hints to the contrary is inspired by ignorance or worse. The movement for what is known as "hospital reform" is one to which we have lent support in work. On the other hand, certain long-felt and well-founded beliefs that this work is much crippled by the perpetual abuse to which the charity of the hospitals is subjected have this year found a loud voice, and the careless listener might think that institutions against which serious indictments of mismanagement were being brought had forfeited public confidence. We hope to show that there is nothing in either circumstance that should jeopardise the collection for the Metropolitan Hospital Sunday Fund for 1897. We hope to show that no one who rightly understands either the truth of the Prince's wishes or the questions included under the phrase "hospital reform" ought to allow his usual subscription to be withheld or diverted from the Metropolitan Hospital Sunday Fund.

STATISTICS OF HOSPITAL WORK IN LONDON DURING THE YEAR 1896.

TABLE I. — GENERAL HOSPITALS.*

N.B.—The figures referring to out-patients in these Tables represent the number of VISITS *paid by out-patients—*NOT *the* NUMBER *of out-patients.*

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies.
	£								
Charing-cross	1,054	2,119	721	1,225	70	150	165	21,567	10,170
French	383	879	181	582	28	41	47	17,619	884
German	479	1,715	638	865	369	99	113	46,757	2,118
Great Northern Central	479	1,476	342	882	97	104	148	63,738	4,453
Guy's	815	6,209	5,070		621	432	599	80,862	37,368
Hampstead	115	301	51	229	3	24	18	1,886	219
Italian	72	253	—	—	—	13	—	16,729	—
King's College	1,581	2,703	967	1,057	187	185	205	66,664	13,197
London	3,833	10,733	3,373	5,885	1,243	645	1,024	294,052	112,869
London Homœopathic	163	1,031	253	521	50	80	68	26,587	597
Phillip's Memorial Homœopathic	34	83	20	76	4	5	—	3,884	4
London Temperance	700	1,157	202	802	—	—	88	17,508	11,281
Metropolitan	479	1,013	150	681	—	68	114	87,295	9,101
Miller Hospital and Royal Kent Dispensary	263	305	59	176	12	14	24	33,928	5,144
North-West London	383	578	—	—	19	48	—	38,545	5,673
Poplar	441	820	33	719	52	60	48	23,624	—
Royal Free	910	2,070	1,767		179	142	161	96,951	17,332
St. George's	1,438	4,027	3,363		1,076	299	385	92,620	12,936
SS. John and Elizabeth	96	96	70	25	23	46	23	—	—
St. Mary's	1,917	3,711	943	2,225	307	239	338	89,968	16,621
Seamen's Hospital Society	958	2,616	733	1,600	15	193	191	67,624	—
The Middlesex	2,204	3,598	2,623		393	289	355	113,491	—
University College	1,342	3,020	675	1,696	336	177	278	40,512	30,177
West Ham	288	580	109	365	12	37	55	75,949	8,664
West London	575	1,725	1,581		—	93	144	80,875	—
Westminster	1,150	2,696	2,288		394	172	236	—	10,580
	£22,152	55,514	9,520	19,591	5,490	3,655	4,827	1,498,735	309,388
Estimated to supply omissions	—	—	6,546	10,906	97	70	50	86,000	9,573
Total	£22,152	55,514	16,066	30,497	5,587	3,725	4,877	1,584,735	318,961

* We reproduce the term "General Hospitals" as employed by the Council of the Metropolitan Hospital Sunday Fund.

THE LANCET, so that it would be pusillanimous of us to be unprepared to discuss its meaning and possible influence; but before doing so we would premise that there is nothing in the abuses to which loud attention is now being called that is either new or of a character that would warrant even the most canny among the subscribing public in drawing tight their purse-strings.

Such are the special circumstances which mark our present and eleventh appeal to the public in behalf of the Metropolitan Hospital Sunday Fund. His Royal Highness the Prince of Wales, with a sense of the fitness of things that should be an element in the character of all princes, and for the possession of which he himself is famed by universal acclamation, has made subscription to the metropolitan hospitals in this year of extraordinary jubilee an act of loyalty and fealty to the most remarkable crowned head in Europe, and his selection of the metropolitan hospitals as the vehicle by which honour may be done to our revered and beloved Sovereign is a warranty of the enormous prestige that these institutions enjoy for unselfish and noble

THE METROPOLITAN HOSPITAL SUNDAY FUND AND THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

"I am aware that the task of distributing the funds when collected will not be without its difficulties. It may be desirable in the future to seek the assistance of representatives chosen by the hospitals, but for the first year we shall rely upon the coöperation of the Distribution Committee of the Hospital Sunday Fund."—*Extract from H.R.H. the Prince of Wales's circular letter to the Press announcing the institution of his Hospital Fund for London.*

As the support of the Prince of Wales's Fund grows larger public interest in his beneficent scheme grows deeper. And this interest is of a twofold character, as we have already pointed out in THE LANCET. There is interest as to the amount of the Fund that is to signalise so great an event as the prolongation of the reign of Her Majesty to sixty years, and there is almost equal interest in the principles on which it is to be used and distributed.

It is impossible even at this very late date to form any precise conception as to the amount that will be realised by the subscriptions to the Prince of Wales's Fund. Some three weeks ago it was announced that sums had been received as donations and subscriptions, commuted or otherwise, representing an income of about £22,000 per annum; but since that date

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the Jubilee Stamps have been issued, and have, we understand, met with a satisfactory sale, while every day the receipt has been advertised of large sums and small sums from all sorts and conditions of men. Hospitals, in fact, have never received subscriptions from so many individuals as they will receive through the powerful agency of His Royal Highness's Fund. The extraordinary jubilee of their venerable Queen has appealed with a commanding effect to all her people; and as a result, whatever the total of the subscriptions in answer to the Prince's appeal may amount to, there can be no doubt as to the number of subscribers.

The class from which the Prince of Wales's Fund has received support has been as varied as the sums subscribed. And this is as it should be. Primarily, the hospital is the gift of the well-to-do to the poor—of the man who, being able in his own home to obtain medical and nursing skill for himself, is desirous of providing the same medical and surgical skill for his poorer neighbour when overtaken by grave accident or disease. But secondarily the British hospital is a national institution, of which all should be proud and to which all should subscribe, for there is no country in the world that can show any institution like it for valuable and unselfish work. Do we sufficiently consider what the voluntary hospital system means, and what the community would lose by placing the hospitals upon the municipal rates, by making them depend upon subsidies enforced, for example, from public entertainments, or by quasi-exalting them into the stations of a new Government department? These, or some combination of these, are the alternatives of the voluntary system—a system of which the whole nation should be proud. The spontaneity of the large annual gifts and bequests to our hospitals stands out pre-eminent in a not unselfish age as a grand testimony to the right-thinking generosity of the wealthy, as a proof not to be gainsaid that the sympathy of the rich with the poor and of the whole with the sick is not merely of the lip, but proceeds from the heart also. Yet it would be wrong to bolster up the voluntary system, however morally splendid, if it were found to be unworkable in a practical world. Most of the hospitals are practically at their wit's end for money. Now it may be asserted: If so, the voluntary system must have broken down. The endowed charities must have lost or mis-spent their endowments, and they, together with the unendowed which have ceased to justify their existence in the eyes of the charitable, must come upon the rates. We do not think so. This is not the place to discuss the problems of State-supported hospitals and the need for a hospital board, and no attempt will be made to do so. But a few words may be said to show that in the opinion of the thoughtful the voluntary system is the best. In the year 1890 the House of Lords appointed a Special Committee to investigate the whole subject of hospital administration and accommodation in the metropolis, and that Committee, after deliberation which extended over two years, during which it received the assistance of a large number of highly competent witnesses versed in the various branches of the subject, produced a report. Although dealing with a great number of topics, this report was mainly directed towards proving how greatly the work of the hospitals would be expedited, how enormously it would be advanced by improved organisation—by a knitting together, in fact, of all the institutions into one coöperative whole; but not a word was said against the voluntary system. More order and uniformity of administration were found to be desirable under the system, but against the system itself *not a word was said.* And, indeed, the advantages of the system stare us in the face. No man can obtain appointments at our hospitals in return for services rendered other than medical; the influence of politics is unfelt in our treatment of pneumonia; and red-tape is not a ligature that is employed in our wards. If the hospitals were supported out of the rates they would be, no doubt, economically managed; for, in spite of ill reports occasionally prevalent, we are all satisfied with our municipal governments. But municipal government is not the rule that is aptest for scientific institutions. It has been abundantly proved that municipal authorities are not faultless or firm judges of medical procedure. Local influences interfere with uniformity of treatment, and are particularly pliable before the blast of vain doctrine. Experimentation in foolish methods might be made to figure as enlightened freedom from prejudice if certain of our municipalities had the right to rule our hospitals. We may consider that the Prince's appeal forms another powerful argument in favour of the voluntary system, for had he entertained any doubt upon this point, or had he been advised that there was any difference of opinion among men of experience on this point, we may be certain that provision would have been made for the answer of possible objections.

We have spoken of the vast number who will this year subscribe to the needs of the hospitals through the medium of the Prince's appeal, as well as through the Metropolitan Hospital Sunday Fund. We now have to say a few words as to the quality of the new subscribers. The Prince's scheme is bringing into the line of hospital supporters thousands, with means ample or narrow, who have hitherto not contributed—rather probably from want of thought than from want of heart. It has been always one of the mysteries in connexion with the support extended to hospitals that it has been offered by so few. It has seemed an insoluble puzzle that thousands of people who could well afford to give something should every day of their lives pass hospitals to which they never contribute a farthing, and that their consciences have never seemed to reproach them for their neglect. The Prince has brought the needs of the metropolitan hospitals home to these thoughtless ones. The daily list and the prevailing sentiment lead us to hope that by the institution of the Prince's Fund a permanent blow has been struck at this indifference, and that consequently the hospitals of London will henceforth be less straitened in their endeavours to meet the really urgent cases of the classes for whom they were intended, because they will henceforth be able to depend upon a wider sympathy.

The value of these small subscriptions from a large number of people can hardly be over-estimated. If we glance at the table below, in which is summarised the practical progress of the Metropolitan Hospital Sunday Fund, we are immediately confronted with the fact that individual generosity has played an enormous part in the collections, and that the people of London have in no way levied a voluntary rate upon themselves to support their voluntary hospitals:—

Progress of the Metropolitan Hospital Sunday Fund.

Year.	Totals.	Donations.	Year.	Totals.	Donations.
1873	£27,700	£1844	1885	£34,320	£2555 [2]
1874	29,936	1605	1886	40,399	4817 [3]
1875	26,396	1424	1887	40,607	4130 [4]
1876	27,042	1339	1888	40,379	3080
1877	26,082	947	1889	41,744	3482
1878	24,904	1199	1890	42,814	3991 [5]
1879	26,501	1120	1891	45,330	9019 [6]
1880	30,423	1567	1892	41,512	4429 [7]
1881	31,856	1638	1893	39,290	3652 [8]
1882	34,146	2106	1894	43,679	7717 [9]
1883	33,935	1980	1895	60,361	21,990 [10]
1884	39,329	6410 [1]	1896	46,035	1672 [11]

[1] In 1884 £4500 was received from the managers of the International Health Exhibition.

[2] In 1885 a special donation of £1000 was received from Dr. James Wakley, Editor of THE LANCET.

[3] In 1886 a further special donation of £1000 was received from Dr. James Wakley.

[4] In 1887 a legacy of £1000 was paid by the executors of the late Dr. James Wakley.

[5] Including legacy of £1003 14*s.* from the executors of the late Mr. Thomas Crouch.

[6] In 1891 donations of £5000 from the late Duke of Cleveland, &c., and £1000 from Sir Savile Crossley, Bart., were received.

[7] In 1892 Sir Savile Crossley, gave a further £1000; and a legacy of £105 was paid by the executors of the late Dr. H. E. Price of Brighton.

[8] In 1893 Sir Savile Crossley gave a further donation of £1000.

[9] In 1894 a legacy of £5000 (less duty) was paid by the executors of the late Mr. W. J. Whitaker, and Sir Savile Crossley gave a further donation of £1000.

[10] In 1895 Messrs. Barnato and Friends gave a donation of £10,000; £3400 was received from the Stock Exchange through Messrs. Pym, Vaughan, and Co., and Messrs. Burdett and Harris; Lord Iveagh gave a donation of £1000; Sir Savile Crossley gave a further donation of £1000; and Mr. J. B. Robinson gave £1000.

[11] In 1896 Sir Savile Crossley gave his sixth donation of £1000, and legacies were received from Mr. John Smith of £500 and Mrs. May Evans of £172 9*s.* 4*d.*

In 1890 the individual donations only amounted to £3991 out of a total of £42,814, so that this year may be taken as marking a high level of general generosity—that is to say, a low level of special contributions. What did it amount to? The collections by offertory came to nearly £39,000, and the population of the metropolis at that time was nearly 4,200,000, so that the average contribution of every individual would amount to something *less than twopence-farthing.* For the purpose of this estimate it is assumed that only the County Council's London is interested in the hospitals of the metropolis. But that is very far from the fact. Outside the official boundary lies a densely populated zone inhabited by Londoners, although nominally appertaining to the adjacent rural districts, and

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to this area are extended in no small measure the benefits of the metropolitan hospital system. Let it, however, suffice to assume, without refining upon the figures, that Londoners were in 1890 prepared to support this great charitable work—the financing of their hospitals—to the extent of an annual subscription of twopence-farthing a head, which particular annual subscription registers general generosity at full work.[1] This is by no means an unfair way of estimating the position, for although it is quite true that a charge of whatever kind distributed evenly over the entire population in proportion to the number of heads would bear very unduly upon the poor, yet if, on the other hand, the benefits conferred by hospitals are considered, it will, of course, be found that these are in a preponderating measure realised by the most numerous and least wealthy classes of the community. The families, including children, of the poor are no less dependent than the families of the rich upon medical attendance, and to a very large extent in the case of poor people this necessity is supplied by hospitals. An estimate of population, therefore, affords the best means of realising how the benefits of the hospital service are distributed, for no class is excluded from these benefits; and when it is realised that the return made in the form of the Metropolitan Hospital Sunday Fund works out at something less than twopence-farthing a head, it will, we think, be freely admitted that there is good reason for regarding it, not only as inadequate to the needs of the hospitals, but also as unworthy of the community which

TABLE II.—SPECIAL HOSPITALS.

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
City of London for Diseases of Chest	1,006	938	818		10	116	121	68,231	—
Hospital for Consumption	1,543	1,595	1,133		284	258	204	71,166	—
North London ,,	345	—	—	—	—	—	—	—	—
Royal Hospital for Diseases of Chest	383	714	618		36	66	63	24,896	—
Royal National Hosp. for Consumption	287	810	676	—	—	134	32	—	—
Alexandra Hospital for Hip Disease	178	174	27	64	38	67	4	1,605	—
Children's Home Hospital (Barnet)	33	88	27	53	—	12	—	—	—
Belgrave Hospital for Children	144	314	251		—	20	34	8,900	24
Cheyne for Incurable ,,	144	69	7	5	15	50	6	—	—
East Lond. Hosp. for ,,	431	1,496	245	819	142	83	265	67,350	19,621
Evelina Hosp. for Sick ,,	431	627	362		64	50	151	19,289	505
Home for Incurable ,,	67	32	—	—	5	26	1	—	—
Home for Sick ,,	144	—	—	—	—	—	—	—	—
Hospital for Sick ,,	795	1,901	548	684	—	—	190	77,629	—
North-East. Hosp. for ,,	287	705	94	523	67	50	88	55,149	2,262
Paddington-green for ,,	144	481	400		82	36	45	45,656	2,117
Victoria Hospital for ,,	575	1,448	1,190		482	97	104	55,125	400
Victoria Home, Margate	29	22	10	6	—	15	1	—	—
"The Vine"	20	41	9	6	25	22	—	—	—
British Lying-in Hospital	38	202	—	—	—	—	1	—	—
City of London Lying-in Hospital	72	493	—	493	—	19	—	—	—
Clapham Maternity	19	355	—	354	3	16	—	15,666	—
East-end Mothers' Home	67	283	—	232	—	9	1	2,740	—
General Lying-in	58	—	—	—	—	—	—	—	—
Queen Charlotte's Lying-in	288	1,151	1,141		87	51	10	7,854	—
Chelsea Hospital for Women	288	590	510		—	32	3	10,120	—
Hospital for Women	412	644	322	265	67	53	12	24,341	—
Grosvenor Hosp. for Children and Women	105	92	44	41	3	3	1	10,776	—
New Hospital for Women	201	502	—	—	—	500	8	30,220	—
Royal Hosp. for Children and Women	220	—	—	—	—	—	—	—	—
Samaritan Free	527	578	156	339	60	31	21	25,856	—
Cancer	575	829	725	—	10	75	105	13,786	—
London Fever	728	374	730		—	128	16	—	—
Gordon for Fistula	38	242	10	209	—	13	1	3,964	—
St. Mark's ,,	38	237	29	193	—	14	1	4,500	—
National for Diseases of Heart &c.	58	144	98	58	6	20	9	9,767	—
Female Lock	168	708	608	—	5	105	2	—	—
Male ,,	—	—	—	—	—	—	—	—	—
Hospital for Epilepsy &c.	58	89	—	—	4	20	3	11,429	—
National for the Paralysed &c.	824	851	460		85	157	48	35,043	—
West-End for Nervous System	105	272	227	42	—	—	—	28,522	—
Central London Ophthalmic	33	197	—	—	7	10	1	26,227	206
Royal Eye	182	426	9	417	—	21	—	40,737	—
Royal London Ophthalmic	587	2,006	362	1,699	12	45	1	130,374	1,500
Royal Westminster ,,	96	558	537		—	21	—	28,397	—
Western ,,	44	165	61	86	6	5	—	24,088	403
City Orthopædic	77	204	50	144	—	10	1	9,000	—
National ,,	62	227	172		—	52	8	2,614	—
Royal ,,	77	153	114	45	—	44	—	3,190	—
Royal Sea Bathing Infirmary	335	574	305	131	—	110	8	38	—
Hospital for Diseases of Skin	10	—	—	—	—	—	—	—	—
St. Peter's for Stone	29	474	463		—	13	11	32,717	—
Central London Throat and Ear	48	302	34	246	4	12	6	40,000	—
Hospital for Diseases of Throat	29	519	32	435	14	16	12	42,753	500
Royal Ear	6	276	—	—	—	—	—	8,834	—
The Dental	125	—	—	—	—	—	—	57,654	—
National Dental	110	—	—	—	—	—	—	—	—
	£13,662	26,622	4,833	7,439	1,573	2,707	1,594	1,183,703	27,538
Estimated to supply omissions	—	1,939	5,360	6,157	497	155	99	127,182	1,394
Total	£13,662	28,561	10,193	13,596	2,070	2,862	1,693	1,310,885	28,932

[1] The figures for the year 1896 would have formed perhaps a better example, but the enormous increase in the population of London during the six years' interval makes any difference between the two sets of figures insignificant.

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contributes it. This is a view of the case which should commend itself especially to persons of moderate means. To these the Metropolitan Hospital Sunday Fund has for four and twenty years afforded a peculiarly fit opportunity of tendering support to the medical charities of London of which no real advantage has been taken. These are the people of whom we may hope that the Prince of Wales's appeal has interested them now and for the future in the principal charitable work of the kingdom. Thousands of persons in London are so situated that the subscription list with its regulation guinea is not for them. The annual collections of the Metropolitan Hospital Sunday Fund have been brought to their notice in vain. Probably (and we most heartily hope that this will be the case) the Prince of Wales's appeal will fall on more alert ears, and will bring to the aid of the hospitals the many possessors of moderate incomes who have hitherto invariably held aloof from subscribing, if they have not as rigidly abstained from seeking gratuitous medical advice. It is from this class that the donations to the Metropolitan Hospital Sunday Fund ought not to be represented by twopence-farthing. Undoubtedly the Prince of Wales's Fund should stimulate many of this enormous class to take a practical interest in the hospitals of the metropolis, which should eventuate in considerably enlarging the circle from which subscriptions may be expected to the Metropolitan Hospital Sunday Fund.

The administration of the Prince of Wales's Fund concerns those interested in the welfare of the Metropolitan Hospital Sunday Fund more deeply than does the amount to which it may attain. It would seem that the future form and use of the Fund are spoken of as if these were still matters for further consideration. If this be so there is wisdom in the want of a definite plan. Time is thus given to study public opinion and the real questions that are at stake in any movement for helping voluntary hospitals and placing them in an unassailable position in public opinion. If the voluntary system of support is satisfactory in the eyes of all who can see clearly—and this we believe—it must not be

TABLE III.—COTTAGE HOSPITALS AND CONVALESCENT HOMES.

Name of Hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Con-valescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
Metropolitan Convalescent	623	3,414	1,222	2,107	—	82	3	—	—
Bexhill ,, ...	287	1,650	462	1,186	—	—	2	—	—
All Saints ,, ...	527	3,581	—	—	—	116	3	—	—
Mrs. Gladstone's ,, ...	96	743	—	—	—	—	—	—	—
Hahnemann ,, ...	38	148	40	100	—	17	1	3,899	—
Herbert ,, ...	29	457	240	151	—	40	2	—	—
Herne Bay (Baldwin-Brown) Convalescent..	24	304	—	—	—	—	—	—	—
Herne Bay Mothers' Home	38	373	—	—	—	—	—	—	—
Homœopathic Convalescent	10	196	—	—	—	6	—	—	—
King's College ,, ...	81	524	82	414	—	16	—	—	—
Mrs. Kitto's ,, ...	26	341	—	—	—	—	—	—	—
London and Brighton Female Convalescent	38	2,341	—	—	—	33	1	—	—
Mary Wardell Convalescent	102	273	—	—	—	—	—	—	—
Morley House ,, ...	144	—	—	—	—	—	—	—	—
Princess Frederica's Convalescent	—	—	—	—	—	—	—	—	—
St. Andrew's (Clewer) Convalescent	172	585	—	—	—	46	10	—	
Do. (Folkestone) ,, ..	249	1,996	—	—	—	—	—	—	—
St. John's Home for Convalescent Children.	67	289	—	—	—	—	—	—	—
St. Joseph's Convalescent Home	53	544	424	115	—	48	5	—	—
Convalescent Home for Poor Children, St. Leonards-on-Sea	105	820	—	—	—	—	—	—	—
St. Michael's Convalescent	38	156	—	—	—	—	—	—	—
Seaside ,, ...	134	—	—	—	—	—	—	—	—
Warley ,, ...	8	45	45	44	—	—	—	—	—
Beckenham Cottage Hospital	53	150	22	114	—	8	6	—	—
Blackheath and Charlton Cottage Hospital	67	141	38	73	—	16	8	3,105	40
Bromley, Kent, ,, ..	80	286	59	183	—	19	18	—	66
Chislehurst, Sidcup, &c. ,, ..	43	113	27	73	—	11	2	—	11
Eltham ,, ..	32	60	5	50	4	5	3	—	11
Enfield ,, ..	38	90	6	68	—	9	4	—	21
Epsom and Ewell ,, ..	56	132	13	110	17	10	8	—	12
Hounslow ,, ..	24	65	15	38	—	2	9	3,583	65
Reigate and Redhill ,, ..	53	223	24	175	20	19	2	—	53
Sidcup ,, ..	32	98	12	76	1	5	2	188	17
Wimbledon ,, ..	38	128	17	100	—	5	6	120	23
Woolwich and Plumstead ,, ..	30	70	15	38	4	7	5	40	30
Establishment for Gentlewomen	105	134	14	110	—	10	4	—	—
St. Saviour's Hospital and Nursing Home ..	48	76	36	29	—	11	6	—	—
National Sanatorium for Consumption ..	57	282	205	—	—	60	3	—	—
Invalid Asylum	53	187	—	16	5	25	1	—	—
Firs Home	38	59	29	—	—	15	15	—	—
Friedenheim Home for the Dying	192	131	18	—	—	33	80	—	—
St. Catherine's Home	29	27	21	—	—	11	6	—	—
	£4,017	21,208	8,091	5,371	51	685	215	10,435	339
Estimated to supply omissions	—	1,805	5,886	7,499	—	207	11	360	—
Total..	£4,017	23,013	8,977	12,870	51	892	226	10,795	339

revenues of the Metropolitan Hospital Sunday Fund should be chiefly drawn. Large contributions are the exception of course, but they bear too high a proportion to the total. The very poor have always acknowledged the claims of the hospitals upon their gratitude, and it would be a sad day when these struggling ones withdrew from the support of the Fund and left it to be carried on by the opulent few. But the many have not really supported the metropolitan hospitals. The rich have now and again made stately donations, and we are not oblivious of several instances of princely generosity that have characterised the eleemosynary record of the past year. The very poor have done their best, as is shown by the offertory returns of the Metropolitan Hospital Sunday Fund and the contents of the contribution boxes. But between the rich and the poor—particularly if we say between the very rich and the very poor—lies the enormous class of persons who could support the hospitals adequately if they would, and whose annual forgotten that inasmuch as many of our hospitals are on the verge of bankruptcy, the system must be held to having broken down to some extent, and the weak spot in the system is very obvious. The irregularity with which the impulse to give must necessarily act deprives the donations of half their value. The voluntary principle is an admirable one, but it is jealous of order or dicipline, and prefers to act locally, impulsively, and irregularly. If certain much-needed qualities could be introduced into voluntary hospitals, if they could be brought to regard each other as coöperating for charitable ends, not merely competing with each other for public subscriptions, if they could be brought to realise certain common principles of administration, a new era of prosperity might be assured to them. In almost these identical words we have on several occasions summed up certain phases in the career of the metropolitan hospitals, and we are therefore glad to believe that there will be an opportunity given to those who will have the administration

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of the Prince's Fund to initiate some scheme of the nature of a Central Hospital Board.

There are in addition two or three principles which doubtless His Royal Highness and his colleagues and advisers will bear in mind. The first of these is to do nothing in promoting their own most popular Fund to damage the existing agencies by which hospitals are supported, pre-eminent among which stands the Metropolitan Hospital Sunday Fund. As will be seen by the summary given on page 1653, the Metropolitan Hospital Sunday Fund, which has now existed for a quarter of a century, has raised a very large sum of money, close upon £900,000, while its average receipts during the last decade represent the interest upon over a million of money. This means that

TABLE IV.—DISPENSARIES.

Name of Dispensary.	Hospital Sunday Fund award.	Out-patients' visits.
Battersea Provident	£67	24,000
Bloomsbury ,,	12	—
Brixton, &c.	57	26,335
Brompton Provident	26	7,255
Camberwell ,,	90	98 654
Camden	13	8,900
Chelsea, Brompton, and Belgrave Provident	45	4 218
Chelsea Provident	12	3,095
City	83	24,500
City of London and East London	94	—
Clapham General and Provident	29	12,554
Deptford Medical Mission	14	24,805
Eastern	35	16,903
East Dulwich Provident	19	14.496
Farringdon General	43	17,786
Finsbury	53	49,146
Forest Hill	38	7,101
Gipsy Hill and Upper Norwood	5	—
Hackney Provident	7	621
Hampstead ,,	48	25,897
Holloway and North Islington	62	27,655
Islington	43	54,137
Kensal-town Provident	10	5,100
Kensington	67	18,266
Kilburn, Maida-vale, and St. John's-wood	88	3,277
Kilburn Provident Medical Institution	29	—
London	17	7,960
London Medical Mission	48	—
Marylebone Medical Mission	—	—
Metropolitan	48	36,399
Notting-hill	16	1,562
Paddington Provident	34	11,191
Pimlico ,,	15	—
Portland-town	14	1,120
Portobello-road Provident	6	—
Public	48	14,685
Queen Adelaide's	34	21,051
Royal General	41	—
Royal Pimlico Provident	48	71,549
Royal South London	53	19,345
St. George's and St. James's	48	—
St. George's (Hanover-square)	38	7,808
St. John's-wood and Portland-town	34	20,000
St. Marylebone General	48	21,585
St. Pancras and Northern	43	6,839
South Lambeth, Stockwell, & North Brixton	43	13,234
Stamford-hill, Stoke Newington, &c.	53	20,913
Tower Hamlets	35	12,067
Walworth Provident	11	4,210
Wandsworth-common Provident	9	3,600
Westbourne Provident	14	11,243
Western	58	23,076
Western General	129	27,983
Westminster General	29	7,093
Whitechapel Provident	19	20,388
	£1,998	861,452
Estimated to supply omissions	—	360,549
Total	£1,998	1,222,001

the Metropolitan Hospital Sunday Fund is now recognised as a permanent agent for stimulating hospital charity and wisely supervising its administration. The Prince of Wales would not, we know, desire to interfere with the ordinary subscriptions to such a fund of those whose steady benevolence has been the reliance of hospital treasurers in the past. We have heard rumours that funds are to be diverted from their ordinary channels into the Prince of Wales's Fund, to which we have to say that such action would appear to us in the light of a particularly mean proceeding, the favour of Royalty being placed above all sentiments of true charity. To give to the Prince of Wales's Fund the subscriptions usually given to the Metropolitan Hospital Sunday Fund is merely saving with one hand to be lavish with the other, and the Prince of Wales would desire no such sycophantic rejoinders to his appeal. That the Prince's Fund is in any way in opposition to the Hospital Sunday Fund is, in fact, expressly contradicted by himself in his circular letter, while the same is sufficiently clearly shown by the reliance which His Royal Highness is placing this year upon the coöperation of the Distribution Committee of the latter Fund in the extremely delicate task of distributing the proceeds of the first extraordinary appeal.

So much, then, for the supposed antagonism between the two Funds. His Royal Highness has opened up new fields of practical benevolence, and we are certain would be the first to regret that an appearance of competition should lead to any serious diminution in the subscriptions of the senior Fund. Both Funds have the same object, and it would be but a poor compliment to Prince or Queen to rob the Fund which has a history of twenty-four years' excellent utility to swell the total of the Jubilee offering. For this year, at any rate, the Prince's Fund may be looked upon as a magnificent adjunct to the Metropolitan Hospital Sunday Fund. What future years may bring forth we cannot guess. We do not know how long the distribution of the Prince's Fund will be left to the Metropolitan Hospital Sunday Fund. We do not know how far the receipts will be treated as capital to pay off the pressing liabilities of some hospitals or how far they will be invested with a view of forming a permanent income. We do not know if any attempt will be made to formulate some common scheme of use for the money, such as a Central Board would insist upon before distribution. But we are certain that it would have powerfully contributed to the success of the Prince's Fund if it had been confined and concentrated in respect of the duration of the appeal, for the continuation of it into future years must tend to detract from its success. And we are also certain that nothing can be further from His Royal Highness's wishes than to imperil the regular prospects and the established income of the older fund, and that in his eyes no gift could have any merit which had been withheld from the Metropolitan Hospital Sunday Fund to be poured into the coffers of the Jubilee appeal. Both by word and deed the Prince of Wales has disclaimed any rivalry.

THE METROPOLITAN HOSPITAL SUNDAY FUND AND THE HOSPITAL REFORM ASSOCIATION.

"We are of opinion that considerable abuse exists among these special hospitals in the following ways: (1) By the treatment, either free or for a small sum, of a patient who could afford to pay a reasonable fee outside; (2) by the admission of patients who do not actually require treatment by a specialist; and (3) by the treatment in some instances of more patients in a given time than can be considered either advisable or defensible."—*Extract from the Report of the Committee of the Hospital Reform Association on the Working of the Special Hospitals of London.*

The mere existence of a Hospital Reform Association would seem to be an argument against generosity to any fund designed to assist hospitals, and if the Metropolitan Hospital Sunday Fund were not in some senses a disciplinary body as well as a charitable body, undoubtedly the argument would be a valid one. But the care which has always been taken in the distribution of moneys received has made the Fund a practical deterrent of some forms of hospital abuse—that is, a sort of Hospital Reform Association. For the Distribution Committee of the Fund, by putting a premium upon good management and economy, and by rigidly exacting that all hospital accounts shall be rendered for their inspection in accordance with a uniform plan, stimulate the less scrupulous institutions to set themselves in order lest they should fail to obtain a grant.[2] This year those responsible for the distribution of the receipts of the Fund have had a communication made to them from the Hospital Reform Association, which previously appeared in

[2] "Your Committee have this year had occasion to question the administration of nineteen institutions. Each of these have been given the opportunity of sending a deputation in conference. Your Committee are, however, glad to report that in most cases the objections raised were frequently explained satisfactorily. There are now very few institutions which do not publish their accounts on the uniform system agreed upon. One special hospital, having no present need, gets no award. One convalescent home, where the charge for maintenance of patients was deemed excessive, has no award recommended. The managers of an institution, classed as a dispensary, were requested by your Committee to produce their minute book. This they declined to do, and your Committee being doubtful of the existence of any such book have recommended no award. The result of all their interviews will, your Committee hope, lead to improvement in the future."—*Extract from the Report of the Distribution Committee of the Metropolitan Hospital Sunday Fund for 1896.*

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the columns of THE LANCET, and which can hardly fail to attract attention from them. The Hospital Reform Association appointed a committee to inquire into the working of the special hospitals in the metropolis, and it is the report of this committee to which we refer. The report was an interesting document, and showed that the newly formed Association perceived the responsible nature of the work that it had assumed. For in these critical times for hospitals it is necessary to recognise, firstly, their value, and, secondly, the danger there is of their altogether losing their original character and with it their claims as charitable institutions of the first order. The authors of the report, while ready to admit, if not the virtues of special hospitals, at least the virtues of those who represent them, pointed out in clear words the reluctance of some officials to give information as to their institutions, and published in a tabular form some statements which should either be explained or denied. Certain contradictions of these statements have reached us, but, giving them their full value, we still find that the Hospital Reform Association has justified its inquiry by demonstrating the need for further inquiry.

Looking at the financial system on which a large number of the special hospitals are worked, the Hospital Reform Association has in the report of its committee stated that many of them are largely dependent on the payments of patients. Of the forty-one special hospitals visited, at least thirty were shown to receive direct payments from their patients, the receipts from this source amounting in 1895 to £24,085, and over half of these institutions obtained more money from patients than from annual subscribers. One institution received twenty-five times as much from its patients as from its subscribers. At another it was open to the medical officers to see private patients, and it was not easy to ascertain who decided which were private and which were hospital cases. At another the income derived from patients' payments was nine times as large as that derived from annual subscriptions, and the authorities appeared by the report to be accommodating in their charges to out-patients, who may be called upon to pay on a sliding scale from 6*d.* to 10*s.*

The conclusion is irresistible that at certain of these institutions charges are made so that, while medical and surgical practice is being carried on in unfair competition with the practitioner, the institutions are losing their character as charities. As soon as a hospital begins to charge its out-patients fees, however small, it must cease to base its chief claim to help from the Metropolitan Hospital Sunday Fund upon the large number of out-patients which it treats during the year. An imposing tale of sick relieved is in such cases counterbalanced by commensurate addition to the funds of the institution, and it will behove the Distribution Committee of the Metropolitan Hospital Sunday Fund to look more closely into this matter than they have ever done. Insistance on a wage limit, with occasional departures from it at the discretion of a competent inquiry officer, might do good; the total abolition of the system of subscribers' letters would also have its advantages; while the staffs of the hospitals can do much to avert the promiscuous abuse of the charities. But we place implicit confidence in the discretion of the Distribution Committee. They can be relied upon not to shirk the difficulties of their position—if we thought otherwise we should not year by year do our utmost to swell the sum with which they will have to deal—and they can be trusted to apportion the moneys with justice.

In view of the urgent importance that the question of hospital abuse has now assumed, THE LANCET this year addressed the following question to the secretaries of all the metropolitan institutions who benefited last year by the collections of the Metropolitan Hospital Sunday Fund: "*Is it your opinion that any considerable proportion, and can you say what proportion, of hospital out-patients are in a position, were they so disposed, to obtain private medical advice?*" To this question we received 60 answers. From the general hospitals 14, from the special hospitals 22, from convalescent homes 4, and from dispensaries 20. Of the 14 replies from the general hospitals, 5 acknowledged the presence of abuse and 9 denied it. In those where it was acknowledged to be present it was stated to be "infinitesimal," "very small indeed," or "quite an insignificant number." In two of those where its presence was denied the improbability of the existence of much abuse was based upon consideration of the fact that the crowded waiting-rooms were so uncomfortable that it was unlikely that any who could afford to go to a private medical man would care to subject themselves to the inconvenience of the hospital. This we do not consider at all a good ground for doubting the presence of abuse, for it is notorious that mean people daily subject themselves to grave inconveniences to escape their just liabilities. (By the way, if these waiting-rooms are really so very uncomfortable they form no fit places wherein to receive the sick, whether worthy objects of charity or not.) Of the 22 answers from special hospitals 7 deny *in toto* that abuse takes place, while 15 admit the possibility of abuse, but in several cases qualify their admissions by saying that the abuse is "very slight," "infinitesimal," or "a decimal percentage." In more than one of these hospitals it appears that the strictest precautions are taken to prevent abuse, the out-patients being visited at their own homes to see what their real circumstances are, while strict inquiry is instituted into the means of all new patients. Of the 4 letters from convalescent homes 3 speak of the possible existence of abuse. Of the 20 letters from dispensaries, 3 deny the presence of abuse and 17 admit it, the amount being very variable. On the one hand we read of "many unfit cases," "30 per cent. of abuse," and "a large proportion able to pay"; and, on the other, we read of "only a very small percentage," or "10 per cent.," of improper cases presenting themselves, the abuse being "very small" or infinitesimal." One curious little discrepancy in the replies could not fail to attract attention. At one dispensary no patient is eligible whose means exceed £2 weekly, while at another the wage limit for a single man is fixed at £1 to avoid abuse. Here someone has blundered.

The conclusion we have come to on perusing these letters in connexion with the report of the Hospital Reform Association is that it will be imperative upon the Metropolitan Hospital Sunday Fund to use all powers of discrimination to reward only such institutions as have a perfectly clean reputation. All trading upon charity of unnecessary hospitals must be abolished. The Metropolitan Hospital Sunday Fund will this year enjoy remarkable power, because the Distribution Committee will coöperate in the administration of the Prince of Wales's Fund. Therefore, this year they will be able to discriminate in a marked manner between the deserving and the undeserving institutions. And, for our part, we heartily desire that in any doubtful case their leaning may be towards severity. For there are many hospitals in the metropolis whose truly charitable character cannot be called in question, and whose pecuniary plight is so desperate that no amount of increase that might be conceived possible to the usual grant could be considered excessive. We should regret that any injustice should be done, but it is evident that any money diverted to one of these hospitals by erroneous sternness from an equally

SUMMARY OF TABLES.

—	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
General Hospitals	£22,152	55,514	16,066	30,497	5,587	3,725	4,877	1,584,735	318,961
Special Hospitals	13,662	28,561	10,193	13,596	2,070	2,862	1,693	1,310,885	28,932
Cottage Hospitals and Convalescent Homes	4,017	23,013	8,977	12,870	51	892	226	10,795	339
Dispensaries	1,998	—	—	—	—	—	—	1,222,001	—
Total	£41,829	107,088	35,236	56,963	7,708	7,479	6,796	4,128,416	348,232

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meritorious hospital would still remain well-directed charity; while it is equally evident that to make a grant to an undeserving hospital by error or out of abundance of funds is to misapply trust money. We have every confidence that those in authority over the Metropolitan Hospital Sunday Fund will deal fairly and thoroughly with the very difficult question of "hospital abuse."

THE METROPOLITAN HOSPITAL SUNDAY FUND IN A YEAR OF EXTRAORDINARY CHARITABLE ENTERPRISE.

It is as an economising agency that the Metropolitan Hospital Sunday Fund has achieved its greatest success. At present there is no sure prospect of the creation of any Central Board, but the Council of the Metropolitan Hospital Sunday Fund have been in a position to accomplish much, by way of suggestion and criticism, to advance the interests of coöperation among the various charities for the London sick. The Council have exercised a gentle but by no means ineffective supervision over hospital expenditure, and by comparison and scrutiny enforce the doctrine that every pound of revenue must be represented by its equivalent in the form of service or of necessaries supplied to the objects of the charity. In this way they accomplish what no private benefactor could do were he never so assiduous to the ungracious task of criticism. The Council speak with the authority of numbers and are free from the suspicion of partiality in their strictures. In this way they effect what has never before been attempted, and in a very considerable measure succeed in a task in which success, though of vast importance, is singularly difficult of attainment. Their contributions thus have a double value, aiding in the support of the assisted institutions and contributing very materially to the economy of the whole revenues from whatever source derived.

The promoters of such work as this have a right to look forward in this, a year of extraordinary charitable enterprise, to an extraordinary measure of support. But circumstances have decreed that in place of these pleasurable anticipations they should be forced to ask themselves most concernedly whether they are likely to receive as large a sum as usual. We appeal most strongly to the public—to the rich, the well-to-do, and the poor alike—to respond to the claim that is made upon their charity in behalf of the Metropolitan Hospital Sunday Fund and to immediately *now, TO-DAY*, contribute all that can be spared to a worthy object. Particularly we would beg to insist upon the fact that the Fund represents not only the purest charity, but order in that charity. It is this fact which makes us regard the organised movement against "hospital abuse" as a factor that should work for the increase rather than the decrease of the contributions to the Metropolitan Hospital Sunday Fund; for the manner in which the Fund has been hitherto administered should be a guarantee to the public that their subscriptions will be used for the alleviation of the misery of fit objects of charity only.

We desire, then, in this the year which sees the preservation of Her Majesty Queen Victoria to reign over us for the unprecedented period of sixty years, to beg of our readers and the public that the Metropolitan Hospital Fund may obtain from them unprecedented support. Do not, we implore, let the claims of this Fund be forgotten. Subscribe freely to any other object of charity that is brought to your notice as a method of commemorating the great Jubilee year; but let such subscriptions be in excess of your ordinary charity, and pay to the Metropolitan Hospital Sunday Fund at least the tribute which you have hitherto paid.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

Amounts received and disbursed in the year 1896.

Dr. RECEIPTS *for the year ending 31st October, 1896.*

1896.	£ s. d.	£ s. d.
To Balance at Bank of England, 1st Nov., 1895	1,216 10 11	
,, Balance in hands of Secretary	12 1 5	
		1,228 12 4
,, Collections made at Sundry Places of Worship	40,469 17 9	
,, Collections at Schools	32 4 0	
,, Donations, including £17 15*s.* 0*d.* for Surgical Appliances	3,582 18 1	
,, Legacies	672 9 4	
,, Dividend on £45,346 1*s.* 3*d.* 2¾ Consols, per Executors to the Will of W. A. Guesdon, deceased	1,247 0 4	
,, Income tax refunded on Dividends to October, 1895	31 3 6	
		46,035 3 0
		£47,263 15 4

Cr. PAYMENTS *for the year ending 31st October, 1896.*

1896.	£ s. d.	£ s. d.
By Awards to 116 Hospitals	39,199 13 3	
,, Awards to 7 Institutions	517 5 10	
,, Awards to 51 Dispensaries	1,990 19 0	
,, Surgical Appliances	2,140 16 11	
		43,848 15 0
,, Rent	170 0 0	
,, Fuel, Gas, and Office Cleaning	22 11 4	
,, Printing and Stationery	260 17 11	
,, Stamps and Postage	98 8 9	
,, Advertisements	275 3 8	
,, Salaries and Wages	841 13 6	
,, Sundries	7 7 7	
		1,675 17 9
,, Special Expenses—		
Presentation Album to Henry C. Burdett, Esq.	31 10 0	
Special Church and Chapel Appeals	35 11 9	
		67 1 9
,, Balance at Bank of England	1,664 16 2	
,, Balance in hands of Secretary	7 4 8	
		1,672 0 10
		£47,263 15 4

Audited and found correct, this 17th day of November, 1896.

(Signed) W. H. PANNELL & Co., *Chartered Accountants*, 13, Basinghall-street, E.C.

*** In the preparation of the voluminous statistics of hospital work which have been here digested and exhibited in collected form (and which have been specially supplied to us in response to our applications, and are quite independent of any returns made to the Metropolitan Hospital Sunday Fund Committee) we have been greatly indebted to a large number of secretaries and other officers of the various medical charities of the metropolis. To them we desire, as on many previous occasions, to tender our sincere thanks.—ED. L.

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Notes on Some Recent Therapeutic Agents.

ANTI-DIPHTHERITIC SERUM, DRIED (B., W. & CO.).

It will be remembered that BURROUGHS, WELLCOME & Co. were the first to produce dry anti-diphtheritic serum of full potency. This form of antitoxin possesses conspicuous advantages. It is readily soluble in three or four parts of water; the volume of the injection is only about 1·3 c.c. for 1000 units. It enables the physician to administer serum of any desired potency. It is perfectly sterilised and keeps better than the liquid antitoxin in all climates. Each package of serum contains practical directions for use, a clinical chart, and an outfit for the transport of specimens for bacteriological diagnosis. Anti-diphtheritic Serum, Dried (B., W. & Co.), is supplied in tubes, each containing 1000 units, price 1s. per tube.

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(1½ *grain and* 5 *grain.*)

Whilst the medical journals at home as well as in the colonies, on the continent and in America, continue to publish convincing clinical reports of the value of "Tabloids" of Thyroid Gland Substance, many physiological investigators who have used the so-called "extracts" have had to face failure and disappointment. In some cases untoward clinical results have even been attributed to the system of treatment, while the fault has lain with the imperfect preparation of the gland used.

It is obvious that extracts are very liable to represent only a portion of the active constituents of the thyroid gland, and necessarily vary in activity and constancy.

"Tabloids," on the other hand, represent the *whole* active substance of the gland. Their method of preparation ensures that the glands are carefully selected and free from disease Many thousands are worked in batches and brought to a homogeneous mass, and an average percentage of the active constituent is obtained. The dose can thus be regulated with the utmost certainty.

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Thyroid Gland Substance "Tabloids" are supplied in bottles of 100 (1½ grains) at 10d. per bottle, and 100 (5 grains) at 2s. per bottle.

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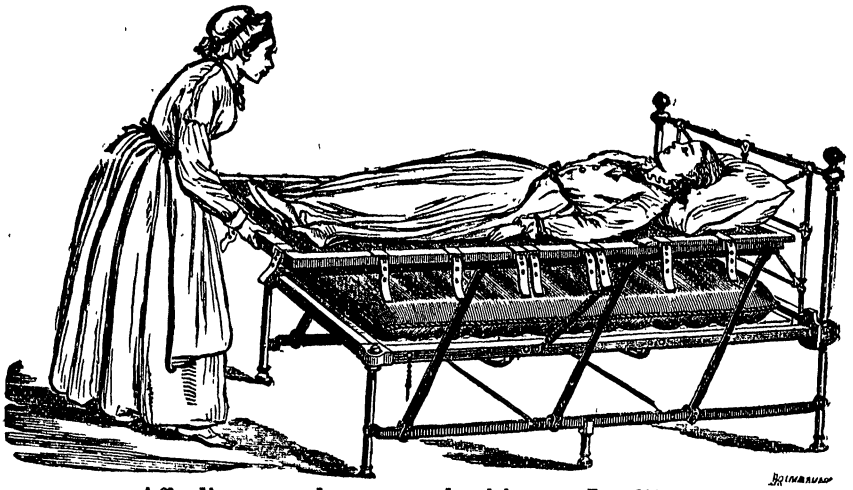
Its soft, silky texture, soothing influence, and other valuable qualities enhance its healing action. It has proved successful for drying weeping surfaces when all other powders have failed.

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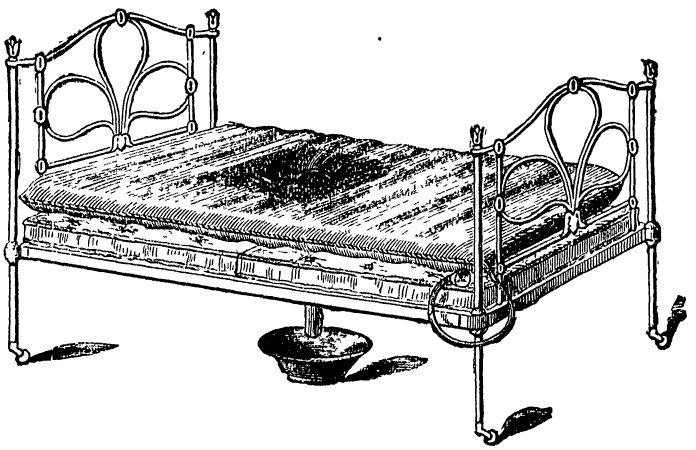
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The Croonian Lectures

ON

THE MEANS BY WHICH THE TEMPERATURE OF THE BODY IS MAINTAINED IN HEALTH AND DISEASE,

Delivered before the Royal College of Physicians of London,

BY W. HALE WHITE, M.D., F.R.C.P. LOND.,
PHYSICIAN TO, AND LECTURER ON PHARMACOLOGY AND THERAPEUTICS AT, GUY'S HOSPITAL.

LECTURE I.[1]

Delivered on June 15th.

MR. PRESIDENT AND GENTLEMEN,—In the first place I have to express my very best thanks for the great honour which our late President, Sir Russell Reynolds, conferred upon me when he invited me to deliver the Croonian Lectures before this College. After I had said I would deliver them I looked down the list of my predecessors, and since I saw how distinguished a list it is I have often regretted my boldness, and I can assure my hearers that no one is more fully aware than I am of the many deficiencies in the lectures I am about to give.

I propose in them to discuss the details of the means by which the temperature of the body is maintained in health and disease. My hearers will find that many points are omitted, but when they call to mind the great complexity of the subject and the scantiness of our knowledge they will, I am sure, forgive me.

I have purposely avoided the word "fever" in the title of these lectures, for it lacks exactitude. It is an admirable word, but it has been handed down from a time when less was known than we know now and when the clinical thermometer was not employed. As we use it to-day it is difficult to define in such a way as to cover every use of it, but probably most of us mean by it to designate a certain assemblage of symptoms which follow the introduction into the body of certain poisons; thus, when an unprotected person is inoculated with small-pox he shows certain symptoms, and is therefore said to have a fever. One of the most prominent of these is pyrexia, but pyrexia may occur, as I shall show, if we remain a long while in a hot bath or as a result of cerebral hæmorrhage. Probably there are some of us who would not consider the man who had had a very hot bath or the man who had a cerebral hæmorrhage to be suffering from fever, but a study of the raised temperature in these conditions will help us to understand the pyrexia which occurs in cases to which everyone is agreed the term "fever" may be applied. Another reason for confining ourselves in these lectures to pyrexia rather than fever is that this term comprehends so many symptoms—e.g., rapid pulse and rapid respiration—that we should not have time to consider them all.

Before studying pyrexia experimentally there are some pitfalls of which we must beware. In the first place, the normal range of temperature in the lower animals is wider than in man. I have very often taken the rectal temperature of rabbits, dogs, and monkeys, and in these animals the range is greater than in man. I have compiled from Dr. Pembrey's article on Animal Heat in Professor Schäfer's forthcoming "Physiology" the appended table (Table I.), which shows very well the range of temperature in different animals.

In the next place the prolonged administration of an anæsthetic causes a fall of temperature. Thus, Pembrey[2] has proved that the temperature falls in anæsthetised mice, and Binz,[3] quoting from Kappeler, says that after the administration of ether to human beings the bodily temperature sinks from 0·3° to 1·5° C. (the mean of twenty etherisations was 0·68° C.); but it rises again in a few hours to normal. Twenty-three observations were made on the effect of chloroform on human beings, and it was found that on the average the temperature fell 0·53° C. The fall did not begin till at least twenty minutes after commencing inhalation and was generally most marked after narcosis had passed off. In from twenty minutes to five hours the normal temperature was regained. Binz, quoting from Scheinesson, says that anæsthetics do not increase the dissipation of heat, and he considers that they directly diminish the power of the body to produce heat. But in rabbits at least I can, from personal observation, state that if the anæsthetic is only given for two or three minutes no appreciable alteration of temperature takes place.

TABLE I.

Animal.	Average rectal temperature.	Extremes of observations.	Number of observations.
	Degrees C.	Degrees C.	
Horse	37·8	36·1—38·6	982
Cow	38·7	37·5—39·4	116
Sheep	40·4	38·5—41·8	304
Dog	39·0	37·1—39·9	250
Cat	38·7	37·9—39·7	41
Pig	39·2	38·7—40·8	269
Rabbit	38·9	37·0—40·8	110
Guinea-pig	37·9	37·0—39·2	19
Rat	37·5	37·0—38·5	16
Mouse	37·4	37·1—38·6	27
Monkey (Rhesus) ...	38·4	36·9—39·7	22

Another fallacy to be avoided in the experimental study of pyrexia is that the performance of artificial respiration will by itself cause a considerable alteration of temperature. This is particularly unfortunate, for at first sight it seems as though we might learn much about pyrexia from a study of the behaviour of the temperature when the spinal cord is cut or curare has been given; but as in either case artificial respiration would be necessary these modes of experiment are closed to us. Le Gallois[4] as long ago as 1817 showed that artificial respiration depressed the temperature, and also that to a less extent anything—such as tying an animal down—which hindered respiration caused the temperature to fall. Dr. Fawcett and I in the course of some experiments we were conducting on the physiological action of β-tetrahydronapthylamine made some observations upon the combined effect upon the temperature of etherisation and artificial respiration. Rabbits were used, the animal was kept fully under ether for two hours, and during this time it was fixed to a board in the usual way, and artificial respiration was carried on through an opening in the trachea. The following table (Table II.) shows the results we obtained.

TABLE II.

Number of experiment.	Fall of temperature.	Hours during which it fell.	Remarks.
	Degrees C.		
1	4·8	3¾ hours.	
2	2·2	2¾ ,,	These two animals were wrapped in cotton-wool.
3	3·4	3¾ ,,	

It will be seen that the depression of temperature was very considerable and that it could not be prevented by wrapping the animal in cotton-wool. It is clear, therefore, that as the combined influence of ether, artificial respiration, and fixing a rabbit to a board produces such a marked fall in the animal's temperature, this method of experiment is quite inapplicable for working out problems dealing with the variations of temperature of rabbits. We may now leave the fallacies and pass on to the chief subject of these lectures.

The fundamental problem in a study of pyrexia is to discover whether or not the production of heat is increased, for it is clear that the temperature of the body may rise either because the loss of heat from it is less, while the

[1] Lecture II. was delivered on June 17th, and Lectures III. and IV. will be delivered on June 24th and 29th respectively.

[2] Proceedings of the Physiological Society, Feb. 16th, 1895.

[3] Lectures on Pharmacology, Sydenham Society translation, vol. i., p. 11.

[4] Annales de Chimie et de Phys., IV., 1817.

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production remains the same, or because the loss of heat remains the same while the production of heat is increased, or, if both vary, because the variations in the production have not been exactly counterbalanced by variations in the loss. The opinion of the profession upon the question whether in fever the rise of temperature is due to a diminution of the loss of heat or an increase of production has varied in accordance with the views of our most distinguished pathologists. Thus Traube taught that the rise of temperature in fever is due to a contraction of the superficial arterioles, there being then less blood in the skin, the body consequently loses less heat by radiation and conduction and hence its temperature rises. Liebermeister, on the other hand, taught that the increased temperature in fever was due to a greater production of heat. But it appears to me to be possible that the discussion has in a sense been beside the mark, for we know that most, if not all, fevers are due to the circulation of poisons in the blood and there is no reason why we should believe that they all produce pyrexia in the same way. All collateral evidence is against such a view; many poisons accelerate the beat of the heart, but some act upon the vagus, others upon the accelerator nerves; many poisons produce diaphoresis, but jaborandi acts upon the peripheral terminations of the sudoriparous nerves while opium acts centrally. And I hope I shall, in these lectures, be able to bring forward evidence to show that sometimes pyrexia is due to an increased production of heat and sometimes to a diminution of the loss. If this can be done it will put an end to the discussion as to whether in fever the production of heat is increased or the loss diminished; but we shall have to discuss the question for each separate febrile disease.

Before however, doing this I should like to call attention to a point that I have never seen discussed—namely, whether there is any evidence that pyrexia may be due to a variation in the specific heat of the body. It takes more heat units to warm to a given temperature a body with a high specific heat than it does to warm a body with a low specific heat to the same temperature, so that if the specific heat of the human body diminished while its production and loss of heat remained the same its temperature would rise; and at first sight it appears that this would be a most economical way of raising the temperature, as there would be no extra expenditure of energy in increasing the production of heat; but perhaps the alteration of the specific heat of the body might entail such considerable molecular change that it would necessitate an expenditure of energy. Most observers have estimated the specific heat of the body by calculation after death from that of the various tissues of the body. The lowest estimate given by this method is 0·75, the highest 0·9; but this is what might have been expected when we remember that a large proportion of the body is water. The properties of dead and living bodies are so unlike, and the specific heat of complex substances is often so difficult to foretell, that I thought it would be worth while to see if some means could be devised of estimating the specific heat of living animals. This would be easy enough in the case of cold blooded animals by observing the relative number of degrees of temperature through which the animal and an equal weight of distilled water originally at the same temperature rose or fell when both were, under exactly similar conditions, subjected to warming or cooling, for it is well known that the temperature of cold blooded animals rises and falls with that of their surrounding medium. But the thermic mechanism of warm- and cold-blooded animals is so different that it would be rash to assume that the specific heat of warm-blooded animals is the same as that of cold-blooded animals.

It struck me, however, that by using hybernating mammals it would be possible to calculate the specific heat of living animals not far removed from man. I employed dormice, for they are easy to obtain and to observe. When hybernating they lie tightly curled up in a ball, with their feet tucked away in the centre of the ball, and it is easy to take their temperature by placing the bulb of a thermometer in the centre of the ball. The first point to determine was whether when they are hybernating their temperature rises and falls with that of the surrounding medium. The figures given in Tables III. and IV. show that it does. For example, it will be seen in Table III. that when the temperature of the room was 37° F. that of the dormouse was 37·5°, and that when it was brought into a room at 52° its temperature slowly rose till it was 49·25°; it was then put back into the cold room and its temperature slowly fell. A large number of observations gave similar results; but the experiment requires to be made with considerable care for many reasons, each of which will be found in a paper which I published.[5]

The method of experimenting was as follows. The hybernating dormouse was carefully weighed. It was then placed on the bottom of a thermometer stand, exactly like an ordinary test-tube stand in which the test-tube stands mouth upwards, except that the holes were only large enough to take a thermometer. The bulb of a thermometer was left buried in the centre of the ball formed by the hybernating dormouse. A number of cubic centimetres of distilled water equal to the weight of the dormouse in grammes were then measured into a very thin, bright, platinum vessel, which had been made to hold just about the right amount. This vessel with its contained water was placed on the bottom of the test-tube stand as far removed from the dormouse as possible. A thermometer was placed in it. The temperature of the surrounding air close to the thermometer stand was observed. All three thermometers had been tested beforehand to see that they gave similar readings. Sufficient time was allowed for all three thermometers to become

TABLE III.—*Weight of Dormouse 13·55 grammes.*

Time.	Temperature of dormouse.	Temperature of equal weight of distilled water.	Specific heat from these figures.	Temperature of room.
	Deg. F.	Deg. F.		Deg. F.
9.10 A.M.	37·5	37·5	—	37
	Both brought into a warm room.			
9.35 ,,	43	42	$\frac{4·5}{5·5} = 0·818$	50
10 ,,	47	46·25	$\frac{8·75}{9·5} = 0·921$	50·5
10 30 ,,	48	47·25	$\frac{9·75}{10·5} = 0·928$	51·5
11 ,,	49·25	48·25	$\frac{10·75}{11·75} = 0·915$	52
	Both taken into a cold room.			
11.30 ,,	43	43	$\frac{5·25}{6·25} = 0·840$	37
11.50 ,,	40·75	40	$\frac{8·25}{8·5} = 0·970$	37
12.30 P.M.	39	38	$\frac{10·25}{10·25} = 1·0$	37

TABLE IV.—*Weight of Dormouse 13·5 grammes.*

Time.	Temperature of dormouse.	Temperature of equal weight of distilled water.	Specific heat from these figures.	Temperature of room.
	Deg. F.	Deg. F.		Deg. F.
10.59 A.M.	40	40	—	40
	Both brought into a warm room.			
11.15 ,,	43·5	43	$\frac{3·0}{3·5} = 0·857$	50
11.40 ,,	46	45·5	$\frac{5·5}{6·0} = 0·917$	51
11.55 ,,	47·5	47	$\frac{7·0}{7·5} = 0·933$	52
12.7 P.M.	48	48	$\frac{8·0}{8·0} = 1·0$	52
12.30 ,,	49·5	49·5	$\frac{9·5}{9·5} = 1·0$	52
	Both taken into a cold room.			
12.57 ,,	44	43	$\frac{6·5}{5·5} = 1·182$	36
1.10 ,,	43	42	$\frac{7·5}{6·5} = 1·154$	36

[5] Journal of Physiology, Supplementary Number, 1892.

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steady. The thermometer stand with the dormouse and the water on it were then taken into a room of a temperature about 50° F., and the readings given by the thermometer which was buried in the dormouse and by that in the water were noted from time to time. When that of the dormouse was about 50° F. the thermometer stand was moved back into the cold room and the readings were again noted. It is clear that as the temperature of the dormouse rose and fell with that of the air, the number of degrees an equal weight of distilled water rose or fell divided by the number of degrees the temperature of the dormouse rose or fell in the same time will give the specific heat of the dormouse. I performed many experiments and found that, calculated in this way, the specific heat of the dormouse varies between 0 812 and 1·18, so that if we set it down at 0 95 we shall probably be very near the mark. It is noteworthy that when the thermometer stand was first brought into a warm room the earlier observations always gave a slightly lower specific heat for the dormouse than the later ones, because at first the rise of the temperature of the animal was, in comparison with the rise of that of the water, slightly the faster. The consequent slight increase in the creature's specific heat was often uniform. Thus in Table IV. the first observation gave a specific heat of 0 857; according to the second it was 0·917; according to the third it was 0 933; and according to the fourth it was 1·0. Another noteworthy fact is that if the specific heat was calculated from observations made when the thermometer stand had been removed from a warm room into a cold one, it was always slightly higher than if calculated from observations made when the stand was brought from a cold into a warm room, and also the earlier observations gave the lower specific heat.

The close agreement of these results with those obtained by calculation from the dead tissues shows, I think, that we may safely put down the specific heat of dormice as being slightly below that of water. There are in these experiments several possible fallacies, but I think I have shown in the paper referred to that they are unimportant. Because of these unavoidable fallacies the specific heat obtained by this method is only approximately accurate, but reference to the paper just mentioned will show that the fallacies lead to only a slight error, and that on the whole the specific heat calculated by this method is slightly too low. Probably the results are more accurate than those obtained by calculating the specific heat of each of the tissues of the dead body and from these results estimating the specific heat of the body as a whole. It will be observed that the figures obtained by the two methods are in close accord, but that by the method here given the specific heat appears higher than when calculated from the dead tissues.

I should not have introduced these figures had I not wished to show that whether we calculate from dead or living tissues the specific heat of the body is high, and it is obviously an advantage for warm-blooded animals, having, as they have, to maintain a constant temperature, to have a high specific heat, for bodies with a low specific heat cool much more readily when the temperature of the surrounding medium falls than do those with a high specific heat; and although it would be unfair to definitely apply results obtained from hybernating dormice to a man suffering from fever, I think we may say that at present there is no evidence that in man the rise of temperature is due to a diminution of the specific heat of the body, as whatever the temperature of these dormice their specific heat varied very little, for reference to the paper from which I have quoted will show that experiments conducted for the same time usually gave nearly the same specific heat. Further, there is no reason to believe that the human body disobeys the law that the specific heat increases with the temperature and therefore until the contrary is proved we must suppose that, other things being equal, it takes a few more calories of heat, and therefore requires a greater production of heat to raise the temperature of the body from 104° to 105° than it did to raise it from 98° to 99°.

We now pass on to a consideration of the question whether or not in pyrexia the production of heat is increased or the loss diminished. There are three ways by which this may be investigated:—(1) By comparison of the variations in the loss of heat with the variations of internal temperature; (2) by calorimetry; and (3) by chemical means; and it will be convenient if we consider them in this order.

1. Comparison of the Variations of the Loss of Heat with Variations of Internal Temperature.

The communication which Dr. Waller made to the Physiological Society on Nov. 11th, 1893, suggests the possibility of easily finding out whether in man the production of heat is increased when the temperature is raised, and of studying in detail the means employed to keep the temperature constant in health. It is clear that when the surface temperature of the body rises the loss of heat by radiation and conduction will be increased, and that when the amount of sweat secreted is increased the loss of heat from evaporation is increased, so that if in any case it can be shown that the internal temperature has risen, and at the same time the surface temperature has risen and the amount of sweat secreted has increased, the production of heat must have increased, provided that the temperature of the surrounding air is constant, and in the wards of a hospital it is kept nearly so. I will now describe the means I have employed to obtain these data.

The internal temperature.—This is taken with an accurate self-registering clinical thermometer. When only slight variations are expected it should be taken in the rectum or the axilla, for the rapidity of respiration and the temperature of the respired air affect the mouth; but when, as in many cases of fever, the temperature is raised several degrees above normal, an observation taken in the mouth will suffice, and if the observer is single-handed it is a great convenience to take it in the mouth, for the internal temperature, that of the surface, and the amount of sweat secreted should all be observed simultaneously.

The surface temperature.—This should be taken with a flat-bulbed thermometer held gently on the skin until the index is stationary; if it be held too firmly the pressure exercised will send up the mercury. Suitable thermometers can be obtained from A. Deane, of Hatton-garden. The skin of the abdomen near the umbilicus is the best place to take the temperature, for whether the person observed have his clothes on, or whether he be in bed, the skin here is less liable than that elsewhere to transient variations of temperature from exposure to currents of air. The temperature registered by the thermometer does not represent that of the skin with absolute accuracy, for part of the bulb is exposed to the air, and the skin covered by the bulb slowly gets warmed because the bulb protects it, but as my object has always been to obtain comparative, not absolute, results these errors are of no importance. The following observation demonstrates very well that these thermometers readily show variations of surface temperature. I exposed the extensor surface of my forearm for some hours to the sun, the vessels consequently dilated, and the part was red, the surface thermometer showed the temperature at a spot well inside the margin of the red area to be 34 25° C., one-third of an inch outside the margin—the vascular dilatation here being just visible—it was 33 25°; and some distance from the red patch the temperature was 32·5°. I have tried this experiment several times and the differences are always well shown. It is of interest to observe that even extreme vascular dilatation quite as great as is observed in any fever, only increased the surface temperature of the skin 1 75° C.

The estimation of the sweat.—This was estimated by using calcium chloride as an absorbent. It was fused into the bottom of a shallow circular glass box. All the boxes used in the observations had air-tight lids, and the inside diameter of all was the same—viz., 4·5 c.m.—and therefore the area of the bottom of each box was 15·9 square c.m. The inside depth was about 2 c.m. The best way to make the calcium chloride adhere to the glass is to take fine pieces of it, place them in the bottom of the box, and then add a trace of absolute alcohol. The box is then put into an oven, which is slowly heated so that in an hour it is 150° C., and then the oven is left to slowly cool again. The absolute alcohol contains minute traces of water, and this is just sufficient to soften the edges of the pieces of calcium chloride enough to agglutinate them, and this water is driven off by the heat; the alcohol, too, acts as a slight solvent. When a reading is taken the box is held inverted on the skin for a given time (in the observations I have made I have, except in a few preliminary cases, always held it for ten minutes) and the difference in its weight before and after gives the amount of sweat secreted. It is best held with one finger so that the heat of the hand shall not affect it. To obtain accurate results the boxes must not be weighed directly after they are removed from the skin, for the glass has been

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warmed by the skin, consequently it displaces more air and warm air currents proceed from it while it is on the pan of the balance, and I always found that as it cools its weight slowly increases.

The following figures, Table V., show this. I tightly held

TABLE V.

Weight of box and lid before box was put in the palm	75·4593 grms.
Weight of box and lid directly after box was taken off at 9.45 P.M.	75·4625 ,,
Gain	0·0032 grms.
Weight at 10 15 P.M.	75·4644 grms.
Weight at 10.45 P.M.	75·4652 ,,
Weight at 11.30 P.M.	75·4658 ,,
Weight at 11.45 P.M.	75·4658 ,,
Total Gain	0·0065 grms.

the box with its lid off inverted on the palm of one hand, pressing it down with the palm of the other for five minutes, so that it was completely shut up in the clasped hands. Directly the five minutes was up the air-tight lid was put on the box. This table shows that the amount of sweat secreted from the palm in five minutes really was 6·5 milligrammes, not 3·2 milligrammes, as a reading taken at once would appear to show, and the weight of the box and lid did not become constant until more than an hour had elapsed from the removal of the box from the hand. But this was an extreme experiment, the box was warmed considerably by being grasped in the closed hands. When it is held on with one finger the weight becomes constant in half an hour, and probably often in less. The following figures show this (see Table VI.):

TABLE VI.

Weight of box and lid before box was put on the palm	81·6438 grms.
Weight of box and lid directly after it was taken off, 10 P.M.	81·6482 ,,
Gain	0·0044 grms.
Weight at 10 30 P.M.	81·6499 ,,
Weight at 11 P.M.	81·6499 ,,
Total gain	0·0061 grms.

Here an immediate weighing appeared to show a gain of only 4·4 milligrammes, but the gain really was 6·1 milligrammes. Therefore it is clear that to get accurate results the boxes must not be weighed till some little time after they are removed from the body. When the box is weighed before the observation it contains air at the temperature of the room, but when it is inverted over the skin it contains warm rarified lighter air, and as the box itself is warm after it is taken off the skin the air in it when the lid is put on is still rarified, and when it is weighed as the cover is air-tight it still contains lighter air than it did before the experiment began. To show this I just lifted the lid and instantly closed it again, when after an experiment the box had been left till its weight was constant. For example, in the last experiment detailed the box weighed 81·6499 grammes. The lid was lifted and immediately closed again; the box then weighed 81·6501 grammes, a gain of 0·2 milligramme. As other experiments also showed that the gain was only 0·1 or 0·2 milligramme it is clear that no account need be taken of this varying density of the air, especially as some of this gain that is only shown in the fourth place of decimals may be due to absorption of moisture from the air let in.

Another possible source of error is the condensation of moisture on the boxes; but the amount in the air in a room does not vary much in three quarters of an hour, and the box was not weighed after an observation until its temperature had become the same as it was when it was weighed before the experiment, so that this source of error is not important. It can, however, always be avoided by having in one pan of the balance a dummy empty box exactly like the one used for experiment, and weighing one against the other both before and after the observation and noting the excess of the difference between the weights of each box. It would probably not be desirable to invert the empty dummy box on the skin at the same time as the box containing calcium chloride and leave both boxes on for the same length of time close to one another, and then to weigh them one against the other immediately after; for though they would both have been warmed by the skin, yet we have seen that the error due to this warming of the boxes may be so considerable that if the two boxes had not taken up equal amounts of heat from the skin the result of observing the alteration of the difference in their weights would not be trustworthy, and it is unlikely that they would have taken up equal amounts, for one box has calcium chloride in it and the other has not, and the amount of glass in the boxes is variable. But whether the method of dummy boxes be adopted or that, which is probably more accurate, of leaving an air-tight box to cool, an air-tight lid is a necessity; for if it is not used the results will be inaccurate, because the calcium chloride will absorb moisture during each weighing, and also if no lid is used the observation must be carried on directly opposite the balance, and immediately after the box is weighed it must be put on the skin, and immediately after it is taken off it must be again weighed, but in clinical work the balance can hardly be carried to the bedside of each patient. The lids of the boxes I used fitted on like a cap, and where the lid came in contact with the box the glass of each was finely ground; if then the merest trace of vaseline was put on the ground glass the boxes became quite air-tight enough. This I proved over and over again by leaving the boxes with calcium chloride in them but with the lids on about the laboratory, and weighing them at intervals of some hours. For instance, six such boxes were left in the laboratory for twenty-six hours during which the air happened to be nearly saturated. The gains in weight are shown in Table VII.

TABLE VII.

Box 1	gained	0·0001	grm.	in twenty-six hours.
,, 2	,,	0·0002	,,	,, ,,
,, 3	,,	0·0003	,,	,, ,,
,, 4	,,	0·0006	,,	,, ,,
,, 5	,,	0·0008	,,	,, ,,
,, 6	,,	0·0010	,,	,, ,,

On another occasion two boxes gained in weight in twenty-six hours 0·1 and 0·2 milligrammes respectively. It is clear, therefore, that if the boxes are weighed within an hour or two of an observation there is no appreciable error due to absorption of moisture from the air. In the next lecture we will consider some examples of this method.

An Address

ON

PELVIC HÆMATOCELE CONSIDERED FROM THE MODERN STANDPOINT.

Delivered before the Nottingham Medico-Chirurgical Society on Friday, March 26th, 1897,

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GENTLEMEN,—I feel it an honour to have been invited to address you this evening. Being but a comparatively recent importation into the medical life of London, my sympathies remain largely provincial, and I appreciate any compliment from my provincial friends with the peculiar heartiness that springs from old association and from an intimate knowledge of the debt that the profession owes to a multitude of earnest workers and close thinkers in the great provincial towns. Amongst these, Nottingham, in regard to the solidity and importance of its recent contributions to medical knowledge, occupies a conspicuous place. I allude especially to the valuable researches lately published by your president—researches that have made his name familiar to all who are interested in the advance of medical science. In my own department Nottingham is well known as belonging to the more active

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and advanced school of gynæcology, and in selecting a subject for my address I have had this fact in mind. I have come prepared, not to deliver a clinical lecture, but to compare experiences with those who are working in the same field, so that we may, if possible, assist one another in the simplification of what has long been regarded as a difficult and complicated problem.

Most of you will remember the feeling of despair with which one arose from the perusal of the chapter on pelvic hæmatocele in one's text-book. The account of its etiology failed to carry conviction. Even what seemed to be definite had an air of speculation and of armchair pathology, and the acknowledged rarity of most of the conditions assigned as causes of hæmatocele did not fit in with our knowledge of its frequency. Even Bernutz, with his admirable series of well-recorded cases and observations of post-mortem appearances, was tempted to build up a theory which would not bear criticism. I allude more especially to his views on menstrual regurgitation as the most common cause of hæmatocele. The history of our knowledge of pelvic hæmatocele has, however, been so recently and so well given in the article on Hæmatocele in Allbutt and Playfair's System of Gynæcology, that I will not occupy your time by further allusion to it beyond paying to Lawson Tait the tribute that is undoubtedly his due, of having been the first to sweep away the existing confusion and, by showing the true cause of the vast majority of pelvic hæmatoceles, to simplify the subject and to give this affection its proper place in pelvic pathology.

In speaking of pelvic hæmatocele I speak of an intra-peritoneal effusion of blood in the pelvis, usually situated behind the uterus and displacing it, and limited towards the general cavity of the peritoneum by encapsulation or adhesions. I do not include unlimited effusions of blood into the peritoneal cavity on the one hand, or effusions of blood in the connective tissue of the broad ligament on the other. Neither of these should in my opinion be called hæmatoceles; the former are simply free intra-peritoneal hæmorrhages; the latter pelvic or intra-ligamentous hæmatomata. It may be that in the near future it will be convenient to describe them in the same chapter, as being for the most part due to causes which are closely allied, if not absolutely identical, and as representing merely accidental differences of site and extent. But at present, at any rate, it is usual to think of them and to deal with them separately.

Taking, then, pelvic hæmatocele in the restricted sense I have just explained, it is now pretty generally agreed that in at least nineteen cases out of every twenty the effusion, when not traumatic in its origin, is in one way or another the result of tubal gestation. In the article to which I just now alluded the writer has expressed his personal dissent from this view. It is to be observed, however, that the value of the article is mainly historical, the writer's position as a non-operating gynæcologist depriving his opinion on points of pelvic pathology of the weight that might have attached to it had he not thus been debarred from frequent opportunities of seeing for himself the condition of the parts implicated. Clinical observation, taken alone, is an unsafe guide in regard to the diseases of the female pelvis. In no department of medicine is it more necessary that close clinical observation should be supplemented by actual inspection in the operating and post-mortem rooms. Without such inspection the clinical observer can but make shrewd guesses at the true interpretation of what he sees and hears and feels. In many instances he has landed himself in a region of pure conjecture. The gynæcological manuals are, or were until recently, full to overflowing of theories dressed up in the guise of recognised facts. I could mention several pelvic ailments that have practically disappeared from the modern gynæcologists' nosology owing to the gradual recognition of the lessons learnt in the operating and post-mortem rooms.

In considering the relationship of pelvic hæmatocele to tubal gestation it is necessary to bear in mind the unfavourable conditions under which the ovum is placed when, instead of passing on, as it normally should, into the cavity of the uterus it is detained in the Fallopian tube. The surroundings of the ovum under such circumstances are ill-adapted for the function they are called upon to fulfil. The walls of the Fallopian tube have no such rich blood-supply as those of the uterus. The result is that the ovum fails to obtain the nourishment necessary for its satisfactory development. There is a certain increase in the number and in the size of the tubal vessels, but in spite of this the vascular connexions between the ovum and the maternal tissues are always more or less insufficient. Hence, no doubt, the frequency with which the embryo meets with an early death in cases of tubal gestation, and hence also the liability to hæmorrhages in and around the membranes and to the formation of tubal moles. But it is not the vascular supply alone that is unsuited for the wants of a developing ovum, the mucous membrane and muscular coat of the tube wall are equally so. There is no properly constituted decidua to contribute to the formation of the placenta and give it firmness of attachment and definiteness of outline, and the muscular coats in the tube-wall, instead of responding to the stimulus of pregnancy and undergoing the remarkable development and hypertrophy that the uterine muscle undergoes in normal pregnancy, becomes thinner and thinner, until, under the influence of some slight effort, the tube-wall gives way, the site of the rupture being the spot where the penetration of the chorionic villi has made it especially weak. I am not professing to give an account of tubal gestation, and therefore will not enlarge upon these points. At the same time, it seemed desirable to call to mind the anatomical reasons for the well-recognised instability of the fecundated ovum when it has accidentally failed to reach the uterus, its proper home. The phenomena which lead to and accompany tubal rupture are now well known. The tube-wall, becoming more and more thin as it becomes more distended by the growing ovum, is often stretched still further by the occurrence of an intra-tubal hæmorrhage. Such a hæmorrhage may of itself be sufficient to cause rupture by occasioning a sudden increase in bulk of the contents of the gravid tube; if not, a slight additional shock or strain will be all that is now necessary to produce it. The accident occurs usually between the fourth and the twelfth week. Sometimes only a small rent takes place at first, to be followed by an extension of the tear some hours or days later. We are all familiar with the diagrams illustrating the two great varieties of tubal rupture. In the one the rent occurs in that part of the circumference of the tube where there is a covering of peritoneum. The hæmorrhage in this case takes place into the peritoneal cavity. If the ovum itself or any part of it escapes through the rent along with the stream of blood, this extrusion is necessarily also into the cavity of the peritoneum. In the other and much less frequent variety the rent is situated in the inferior portion of the tube—that, namely, which is uncovered by peritoneum, in which case the extrusion of the ovum and the hæmorrhage take place into the connective-tissue between the two peritoneal coverings of the broad ligament. This is known as intra-ligamentous or extra-peritoneal rupture, and the swelling in the broad ligament occasioned by the extravasated blood is known as hæmatoma of the broad ligament. Some writers, unfortunately in my opinion, speak of it as extra-peritoneal hæmatocele. The subsequent fate of the ovum, when it has thus escaped whole or in part into the mesosalpinx, need not now detain us. It is only necessary to remind you that a secondary rupture into the peritoneal cavity may take place subsequently, the products of conception and accompanying extravasation of blood escaping through a rent in the peritoneal covering of the broad ligament. Whether the blood, poured out into the peritoneal cavity by primary rupture into that cavity as in the first variety, or by secondary rupture, as in the second variety, forms an intraperitoneal hæmatocele, or remains free in the peritoneal cavity without encapsulation, depends chiefly on the extent of the hæmorrhage and the rapidity with which the blood is poured out. In other words, it depends on the number and size of the torn bloodvessels. If the hæmorrhage is considerable and takes place rapidly, as is the case where one or more large vessels are torn, there is not time for the blood to accumulate in the pelvis and surround itself with a roof of adherent viscera or a capsule of coagulated fibrin. The blood escapes into the general peritoneal cavity and remains diffused amongst the abdominal viscera. I shall show presently that this is what occurs in by far the majority of cases of intra-peritoneal rupture of a tubal pregnancy.

I now pass to the consideration of another group of cases, in which, owing to the causes I have already enumerated, one or more hæmorrhages occur between and around the coverings of the ovum, but in which rupture does not take place. This occurrence is described by some writers as the formation of a tubal mole, by others as apoplexy of the ovum. The usual result is that the embryo is destroyed by

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the pressure and that the amniotic sac is flattened and compressed against the wall of the tube by the intra-tubal blood clot. Mr. Bland Sutton has shown that in most cases of tubal gestation the abdominal ostium of the pregnant tube becomes occluded from the sixth to the eighth week. Up to the sixth week it is open—often, indeed, unusually patulous. It is clear that so long as the abdominal ostium of the tube remains open—i.e., up to about the sixth week in the majority of cases—it is possible for the blood poured out into the interior of the tube to escape through its open mouth into the peritoneal cavity. It is also clear that the ovum itself, or a portion of it, may be expelled from the interior of the tube into the peritoneal cavity by the same route—that is, through the still open free end of the tube—without rupture of the tube itself. Such an occurrence is called a tubal abortion. Mr. Lawson Tait dislikes the expression as suggesting analogies which do not exist; but it is a useful term, and as it has met with general acceptance it would be pedantic in me to ignore it. Where the entire ovum thus escapes the abortion is said to be complete. Where the embryo alone escapes, the remainder of the ovum still lying within the tube, the abortion is said to be incomplete. Where there is simply hæmorrhage from the open mouth of the tube, without the escape of the ovum or of any part of it, there may be said to be a threatened tubal abortion, though I think the better name is the more lengthy one of "hæmorrhage from the open end of a pregnant Fallopian tube." As a rule such hæmorrhage is not excessive in its amount or poured out in a rapid stream; it is most frequently a continued trickle. The conditions, then, are those which I have already described as being favourable to the encapsulation of the effused blood—that is, to the formation of a pelvic hæmatocele. In rare cases the hæmorrhage occurs too rapidly and in too great abundance for this to take place; and then we have, as the result of this bleeding from the open mouth of the gravid tube, a free effusion of blood amongst the abdominal viscera in the general peritoneal cavity. My chief object is to bring forward some rather striking evidence in favour of the view that pelvic hæmatocele is not usually the result of the rupture of a tubal gestation, as is commonly stated in the text-books, but that it is far more commonly the result of the hæmorrhage I have just described as taking place from the open abdominal ostium of a pregnant but unruptured tube, and that it is only in very exceptional cases of rupture that the blood is poured out in sufficiently small amount and with the requisite deliberation to result in the formation of a hæmatocele. The distinction is more than an academical one; it necessarily influences our views as to treatment. But before giving the figures from my own practice I must allude for a moment to the condition known as hæmatosalpinx, and show what relation this condition bears to the phenomena I have just been describing. Hæmatosalpinx is the name given to an effusion of blood within the Fallopian tube. It is now known that the majority of such effusions are due to tubal pregnancy and the formation of a tubal mole. Mr. Bland Sutton thinks that the term hæmatosalpinx ought to be restricted to the small group of exceptional cases in which the effusion results from some other cause than tubal pregnancy. But, as I have shown in a paper on the subject published in the *St. Thomas's Hospital Reports*, there is a considerable number of cases where the Fallopian tube is found distended with blood-clot, forming a sausage-shaped tumour, and where the evidence of its having originated at a tubal pregnancy is inconclusive. The clinical evidence may be strong, but the most careful search may fail to detect an embryo or chorionic villi or other indisputable product of conception. This being the case, it seems convenient for the present to retain the general term hæmatosalpinx for all effusions of blood within the Fallopian tube, and to qualify the term, wherever the evidence is sufficient to warrant this being done, by a few words indicating the source of the effusion in the particular case. In a certain number of cases the evidence is insufficient for definite classification, and in such cases the term hæmatosalpinx seems the most appropriate designation. If Mr. Bland Sutton's suggestion were adopted, the use of that term would imply that the effusion was definitely known *not* to be the result of a tubal pregnancy. It is because there are undetermined cases that I advocate the retention of the term as applicable to all these effusions.

The formation of a tubal mole precedes most cases of rupture—that is to say, the rupture is more frequently the result of the sudden increase in the size of the contents of the tube due to the extravasation of blood than of mere distension of the tube from the growing ovum. We have already seen that hæmorrhage from the unclosed fimbriated end of a gravid tube is also preceded by the formation of a tubal mole. Hence the tube will be found occupied by clotted blood in almost all cases of intra-peritoneal hæmorrhage associated with tubal pregnancy, whether the blood is encapsulated so as to form a hæmatocele or is freely diffused in the general peritoneal cavity, and whether the hæmorrhage be the result of rupture or occur from the open end of the unruptured tube. It follows that there must be a stage, before rupture or before any hæmorrhage occurs from the open mouth of the tube, when the effusion is entirely intra-tubal. In other words, there are cases of tubal mole or hæmatosalpinx without intra-peritoneal hæmorrhage. I have myself operated in six such cases. In two of them the ovum was found and in four we failed to discover it. But the clinical history left little doubt that all these cases were instances of hæmatosalpinx due to tubal pregnancy. Had they been left to their fate intra-peritoneal hæmorrhage would have been inevitable, either from rupture of the over-distended tube or from escape of the imprisoned blood from the mouth of the tube. In most of the cases rupture was imminent, as shown by the condition of the tube wall. The size of the intra-tubal clot varies greatly. Sometimes it is not larger than a walnut, but it is much more frequently found large enough to distend the whole of the outer part of the tube, so as to form a firm, elongated tumour from one inch to three or four inches in diameter. For when an ovum has once become apoplectic fresh hæmorrhages are apt to occur, and either the clot becomes more bulky or the blood finds its way out from the mouth of the tube. Hence in most cases of pelvic hæmatocele there is associated with the hæmatocele a hæmatosalpinx. When the hæmatocele is, as I have shown it to be in the majority of cases, due to escape of blood from the open mouth of the unruptured tube, the clot is seen protruding from the dilated mouth of the tube, and to be, in fact, continuous with the contents of the hæmatocele.

Up to the end of January of the present year (1897) I had operated by abdominal section in twenty cases of pelvic hæmatocele. This does not, of course, represent all the cases of pelvic hæmatocele that have come under my observation. I am not prepared with a statement of the precise number of cases that I have had under treatment in hospital or seen in consultation, but the total number would, I feel sure, be a fairly large one. In the earlier years of my practice no one dreamed of interfering with a case of pelvic hæmatocele unless there was evidence of suppuration, and even more recently the number of cases in which I have abstained from operating has probably been at least equal to the number in which I have operated. But for my present purpose cases not operated upon were of no value. For exact pathological inquiry it is necessary to see and handle the parts; the evidence afforded by mere clinical examination, however carefully conducted, is insufficient. Further, I have only taken account of ordinary typical cases in which the hæmatocele was the most conspicuous lesion. Cases, for example, where a small effusion of blood was found in the pelvis during operations performed for other conditions, and where the extravasation was a mere incidental complication of the disease for which the operation was undertaken, have been excluded from the list. Taking, then, this series of twenty cases in which the source of the hæmorrhage was verified by operation I obtained the following very remarkable result: Every one of the twenty cases was associated with tubal gestation; but so far from finding the majority of the cases due to rupture I found that rupture had occurred in only one case out of the whole number. In eighteen of the twenty cases the hæmorrhage had taken place from the open mouth of the unruptured tube. In the remaining case a very curious condition of things existed. There was tubal pregnancy, but the immediate source of the hæmorrhage was not the pregnant tube. There was a broad ligament cyst on the opposite side of the pelvis. Into this cyst a profuse intracystic hæmorrhage had occurred, and as a consequence the cyst had undergone rupture, thus giving rise to the hæmatocele. The case was interesting as pointing to the occasional occurrence of accidental sources of hæmorrhage. The fact of the coexistence of a tubal pregnancy on the opposite side may have been a mere coincidence. On the other hand, it may be that the general vascular activity of the pelvis, associated with the pregnant condition, was a factor in

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determining the hæmorrhage. This, however, is a matter rather of scientific curiosity than of practical interest. The point of real importance is that, so far as the evidence afforded by my own individual experience extends, the part played by rupture in the causation of pelvic hæmatocele is a very small one, much the more usual source being hæmorrhage from the mouth of the unruptured tube. In a note at the foot of the table I have mentioned two

TABLE I.—*Pelvic Hæmatocele; Source Verified by Operation.*

	Cases.
Free end of gravid Fallopian tube	18
Rupture of early tubal gestation	1
Rupture of hæmorrhagic cyst of broad ligament in a case of early tubal gestation	1
	20

Note.—Two cases of late operation (seven months and four months) should probably be added to Class I., but as the evidence was not absolutely conclusive they have been omitted.

cases in which operation was performed at comparatively long intervals after the occurrence of the hæmatocele. The blood had been almost entirely absorbed, and no pathological evidence of gestation was obtained—that is, no embryo or other portion of an ovum. But the clinical evidence was in favour of both being cases of tubal gestation, and as the Fallopian tubes were found in each case empty and unruptured, the probabilities are great that they were instances of complete tubal abortion at a very early stage of pregnancy.

Having obtained this somewhat surprising result from a consideration of all my available cases of pelvic hæmatocele, it seemed to me that it would be worth while to carry the investigation a little further. The result is given in the three following tables. In Table II. I have shown the condition found in each of the thirty-four cases of early tubal gestation operated upon in my own practice. With the cases

TABLE II.—*Cases of Early Tubal Gestation Operated Upon.*

	Cases.
Tubal mole, without rupture or hæmorrhage external to the tube	6
Tubal mole, with hæmorrhage from the free end of the tube	19
Rupture of the gravid tube...	9
	34

in the first series—the cases in which neither rupture nor (extra-tubal) hæmorrhage had occurred—I have at present no further concern. But the remaining two series of cases it is important to consider separately. Taking first the 19 cases of tubal mole, with hæmorrhage from the free end of the tube, it will be seen (Table III.) that a pelvic hæmatocele resulted in 17, whilst in the remaining two the blood was effused into the general peritoneal cavity.

TABLE III.—*Cases of Tubal Mole with Hæmorrhage from the Free End of the Tube.*

	Cases.
Pelvic hæmatocele resulted in	17
Free intra-peritoneal effusion	2
	19

In Table IV. the cases of rupture are subjected to a similar analysis, with the result that seven out of the nine are seen to have been accompanied with a free effusion of blood in the peritoneal cavity; in one case a pelvic hæmatocele was formed, and in the remaining case rupture had occurred extra-peritoneally, forming a hæmatoma of the broad ligament.

TABLE IV.—*Cases of Rupture.*

	Cases.
Free intra-peritoneal effusion in	7
Pelvic hæmatocele in	1
Hæmatoma of broad ligament in	1
	9

The one case of rupture that ended in the formation of hæmatocele is worthy of being given in brief detail. It was that of a married woman, aged thirty-seven years, who was admitted into St. Thomas's Hospital looking very weak and ill and presenting the ordinary physical signs of pelvic hæmatocele of considerable size. She had been confined with her fourth and last child five years previously. Her last menstrual period had ceased on Nov. 24th, 1891. From that time she had suffered more or less continuous pain. On Jan. 20th, 1892, she had been suddenly seized, whilst sitting quietly in the house, with a very violent pain in the right iliac region, which compelled her to go to bed. Two hours later she had a somewhat profuse hæmorrhage per vaginam. There had been two subsequent attacks of hæmorrhage, slighter in character, during the following month, and she had been in constant though less severe pain. She was admitted to the hospital on Feb. 23rd, 1892. The case was diagnosed as pelvic hæmatocele originating in a tubal gestation, and it was decided to watch it. On May 8th painful uterine contractions came on, and a decidual cast of the uterus, of considerable thickness and measuring two and a half inches by two inches, was expelled per vaginam. This, of course, placed the diagnosis beyond doubt. I still continued, however, to watch the case, being prepared to interfere at any moment if the necessity arose. When the patient had been in hospital a month it was found that the swelling had increased in size rather than diminished. I therefore determined to open the abdomen. This was accordingly done on March 21st, four months from the alleged date of the last menstruation, and two months from the date of the first attack of violent pain and hæmorrhage. A mass of dark, firm clot, eleven and a half ounces in weight, was found filling the pelvis, and in the midst of this mass was found a fœtus four inches in length, with cord, placenta, and membranes. The hæmatocele was roofed in by adherent omentum and intestine. After the pelvis had been cleared the dilated and ruptured right Fallopian tube was brought into view and removed. The rent in the tube was a large one and was situated on its posterior aspect. The patient, as almost all these patients do, made an uninterrupted recovery. The history in this case had misled me. The size of the fœtus made it evident that either the patient was mistaken as to her dates and was really eleven or twelve weeks—instead of only eight weeks—pregnant when the first symptoms of internal hæmorrhage occurred, or, what seems very unlikely, the fœtus had continued to live and grow for three or four weeks after the occurrence of the hæmorrhage. Had I known that the pregnancy had advanced so far I should have been sure there was rupture, and should not have waited in the vain hope of a spontaneous cure. The preparation is now in the museum of St. Thomas's Hospital.

I am quite aware that the number of cases on which this investigation is based is too small to furnish material for dogmatic statement. No one is more keenly aware than I am of the fallacies that are inseparable from hasty generalisations on insufficient data. I merely offer these figures as my personal contribution to the study of pelvic hæmatocele. Other observers both in this and in other countries are arriving at similar conclusions. In a recent discussion on pelvic hæmatocele in the Surgical Society of Paris more than one speaker expressed the opinion that insufficient attention had hitherto been given to the important part played by tubal abortion in the etiology of hæmatocele. Martin and Zedel in Germany, and Bland Sutton and John W. Taylor of Birmingham in our own country, have expressed similar views and published cases in support of them. It would in one sense have made this address more complete if I had included in it a *résumé* of recent literature on the subject and added the experience of others to that of my own. But I am disposed to think that not the least useful contributions to the advance of medical knowledge are sometimes to be found amongst those which are based entirely on the writer's own personal experience. A writer knows his own cases best; he knows best how to classify them; he knows which are available for comparison and which are not; and, what is of equal importance, he knows which cases ought to be excluded on the ground of the record being imperfect.

But enough of apology. My figures are before you to be taken for what they are worth. Most practitioners have met with cases in which the signs and symptoms have appeared fully to justify the diagnosis of pelvic hæmatocele, and in which under treatment by rest alone the swelling has entirely disappeared and the patient has recovered. Some have seen several such cases in the course of their experience. Men who are in the habit of reflecting on their cases must have been finding it difficult to reconcile these recoveries with the current teaching. If pelvic hæmatocele is almost invariably due to ruptured tubal pregnancy, how is it that so many cases took a favourable course without operative interference, and, indeed, without active intervention of any kind? The facts I have been permitted to place before you this evening smooth away this difficulty. It is, in my opinion, because pelvic hæmatocele is usually associated, not with rupture, but with hæmorrhage from the open mouth of the tube in a very early stage of tubal gestation that so many cases

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recover without operation. The embryo is often of insignificant size and is easily absorbed. Along with the diminutive products of conception the effused blood also undergoes absorption. Have we, then, any guide as to when it is safe and when it is not safe to withhold operative influence? It can, I think, only be safe to do this when the clinical history points unmistakeably to the hæmorrhage having occurred within the early weeks of pregnancy. "At a later stage," as I have said elsewhere, "the embryo and other products of conception are too large, and the risk of further hæmorrhage is too considerable for non-operative treatment to be justifiable." Again, whenever the severity of the initial symptoms is sufficient to lead to a suspicion that the case is one of rupture I am of opinion that there should be no hesitation in advising operation. Even where this is not the case, and where the history and symptoms point to a different conclusion, the dimensions of the swelling should be carefully examined from day to day, and when the swelling is found to be increasing, or when, from the repeated occurrence of attacks of pain and faintness, there is reason to believe that hæmorrhage is still going on, then, too, I consider the indications for operation are imperative. I need scarcely add that where the hæmorrhage from a tubal gestation, whether due to rupture or not, is diffused in the peritoneal cavity, the necessity for immediate operation, if the condition of the patient permits it, is indisputable.

A word remains to be said of the rarer causes of pelvic hæmatocele. Whilst preparing this address I received from a Canadian professor of gynæcology, Dr. Wm. Gardner, of the McGill University, a paper containing a clinical record of two cases exemplifying the association of cancer and tuberculosis of the genital organs of women with pelvic hæmatocele. It was a curious coincidence, for they are the only cases of the kind I remember to have seen described. They were unique in Dr. Gardner's own experience, and must be of extreme rarity. A case of my own, included in the tables, shows that the rupture of a cyst into which profuse hæmorrhage has occurred may be occasionally the source of a hæmatocele.

I could also relate cases in which, during the operation for the removal of inflamed uterine appendages, I have unexpectedly opened up intra-peritoneal collections of altered blood, due no doubt to hæmorrhages occurring as accidental complications of the inflammatory process. These and other cases I could cite, from my own records and from those of others, show that there remain exceptional cases unassociated with ectopic gestation. At the same time it is abundantly clear that many of the causes of pelvic hæmatocele enumerated by the older writers are purely hypothetical and that most of the cases attributed to menstrual disturbances, bursting of apoplectic ovaries, rupture of veins, and so on, when read in the light of our present knowledge, are easily recognised as having been misunderstood cases of early tubal gestation.

A MEETING of Fellows of the Royal College of Surgeons of England was held at the Medical Institute, Birmingham, on Wednesday last in support of the candidature of Mr. Bennett May for a seat on the Council of the College. The following resolution was proposed and carried unanimously:—"That this meeting of Fellows of the Royal College of Surgeons desires to express its approval of the candidature of Mr. Bennett May for the seat on the Council vacant by the death of Mr. Oliver Pemberton, and pledges itself to his support."

FREEMASONRY: THE RAHERE LODGE No. 2546.—The Installation meeting of this lodge was held in the Great Hall at St. Bartholomew's Hospital on the 15th inst., W. Bro. Alfred Cooper, P.G.D., the W.M., in the chair. Messrs. Matthews, Miles, and Shewell were initiated into Freemasonry, and Messrs. Gell and Auden were proposed as members of the Lodge, whilst Bro. C. O'B. Harding was proposed as a joining member. Bro. Walsham was then installed by Bro. Trollope as the W.M. for the ensuing year. He appointed Bro. Burns and Bro. Reece as his principal officers and invested Bro. Gripper as treasurer of the lodge. The balance sheet was presented and adopted. It showed that the lodge had a substantial balance, though it had contributed freely to the various masonic charities. A past-master's jewel was presented to W. Bro. Alfred Cooper. The lodge was then closed, and the brethren with their guests betook themselves to Frascati's Restaurant, where they dined together to the number of seventy-three.

ABSTRACT OF

Lectures

ON

DISEASES OF THE GALL-BLADDER AND BILE-DUCTS.

Delivered at the Royal College of Surgeons of England on March 8th, 10th, and 12th, 1897,

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LECTURE III.[1]

Delivered on March 12th.

Gall-stones or Cholelithiasis.—The importance of this subject may be gathered from the facts, that post-mortem records on persons of all ages and both sexes, prove gall-stones to be present in from 5 to 10 per cent. of all Europeans, in Strasburg the record being 12 per cent. (Schroeder), in Kiel 5 per cent., and in Manchester 4·4 per cent. (Brockbank). Time will not permit me to enter on the pathology of the subject, although it is of such great interest, nor can I discuss the causes, composition, sizes, numbers, or varieties of gall-stones or enter into the ordinary symptoms, complications, diagnosis, and medical treatment, all of which subjects I have recently written on in my article in Professor Clifford Allbutt's System of Medicine. I must therefore at once pass on to the consideration of the surgical treatment of cholelithiasis, a subject of great importance, which will, I think, well repay careful study. Permit me, first, to draw your attention to the list of cases on which I have operated and which will serve as a basis for my further remarks. An analysis of the table shows that out of 170 operations of all classes, including malignant cases, 10 patients died. Of the 93 patients without jaundice all recovered, all the deaths occurring among the 77 jaundiced cases. Of the 10 patients who died, only 4 were the subjects of gall-stones, and they had deep jaundice or infective cholangitis, or both, at the time of operation; the remaining 6 were for the most part the subjects of malignant or other fatal diseases. Out of 115 cholecystotomies there were 5 deaths, 3 being the subjects of cancer and 2 of suppurative cholangitis with jaundice; in other words, the mortality of cholecystotomy for gall-stones is only a little over 1 per cent. There were 7 cholecystectomies with 1 death, which is equivalent to a mortality of 14·28 per cent. That death was due to want of efficient drainage. Of the 26 cholelithotrities all recovered. Choledochotomy furnishes 6 cases in the list, out of which 1 patient died, as the result of an accidental laceration of the intestine in separating adhesions not noticed at the time of operation. The mortality equals 16·6 per cent. Of the 11 cholecystenterostomies one died; and as that patient was the subject of extensive malignant disease, the percentage mortality of the operation for gall-stones is therefore *nil*. Of the abdominal sections, 32 in number, 2 patients died from shock and hæmorrhage. These were among the 19 operated on for tumours or other serious organic disease; but out of the 11 operated on for separation of adhesions, 3 for intestinal obstruction and 1 for peritonitis, all recovered.

Surgical treatment—After medical treatment has been fairly and fully tried, and failed, I think all are now agreed that surgical measures should be resorted to. While cholecystotomy is generally recognised as the operation to be aimed at in the treatment of affections of the gall-bladder or bile-ducts, especially in cholelithiasis, it is often impossible to say what operation will have to be done until the abdomen is opened. The indications for operating would seem to me to be as follows:—1. In frequently recurring biliary colic without jaundice, with or without enlargement of the gall-bladder. 2. In enlargement of the gall-bladder without jaundice, even if unaccompanied by great pain. 3. In persistent jaundice ushered in by pain, and where recurring pains, with or without ague-like

[1] Lectures I. and II. were published in THE LANCET of May 29th and June 5th respectively

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paroxysms, render it probable that the cause is gall-stones in the common duct. 4. In empyema of the gall-bladder. 5. In peritonitis, starting in the right hypochondrium. 6. In abscess around the gall-bladder or bile-ducts, whether in the liver, or under, or over it. 7. In some cases where, although gall-stones may have passed, adhesions remain and prove a source of pain and illness. 8. In fistula, mucous, muco-purulent, or biliary. 9. In certain cases of chronic jaundice, with distended gall-bladder dependent on some obstruction in the common duct, although the suspicion of malignancy be entertained. In such cases the increased risk must be borne in mind, as malignant disease may be the cause of the obstruction, and operation in such cases is attended with greater danger than ordinary. 10. In phlegmonous cholecystitis and in gangrene, if the case be seen and recognised at a sufficiently early stage of the disease. 11. In gunshot injury or in stab wounds over the region of the gall-bladder. 12. In suspected rupture of the gall-bladder without external wound. 13. In some cases of chronic catarrh of the gall-bladder or bile-ducts. 14. In suppurative cholangitis. Of the operative measures undertaken for diagnosis, sounding and aspiration of the gall-bladder must be referred to. The so-called "sounding for gall-stones," either by means of a probe passed through a cannula or by the fine needle of an aspirator, is both uncertain and dangerous, and may more safely be replaced by a small exploratory incision, which can be extended for treatment if required. Aspiration of a distended gall-bladder through the unopened abdomen, though apparently a simple procedure, is not unattended with danger, death having followed in more than one instance. Murphy says it is fatal in 25 per cent. It is only in very exceptional cases that it can do any good. Here, again, I infinitely prefer to make a small exploratory incision, then to empty the gall-bladder by the aspirator, and afterwards to explore the bile passages with the fingers. If, however, aspiration without exploration be decided on, a small needle should be used and the cyst emptied as far as possible, in order that intra-cystic tension may not lead to extravasation through the needle puncture. Since in the majority of cases an operation for gall-stones is, in the first place, simply exploratory, the actual operation on the gall-bladder or bile-ducts being only determined by the conditions found when the abdomen is opened, it may be well for us first to consider a simple abdominal section in the gall-bladder region.

Position of the patient.—It has been proposed to suspend the upper part of the trunk when the patient is on the operating table by straps placed under the armpits, in order to allow the intestines to fall away from the liver, and thus to afford a better view of the parts to be operated on, just as the Trendelenberg position does in the case of the pelvic organs; but as this is inconvenient, and, as a rule, impracticable, it is worth considering whether we can in any way modify it. I think it will be found that a narrow, firm sand bag covered with flannel placed at the liver level on the operating table under the back, which is thus arched over it, will do all that is required, as it brings the common duct from two to three inches nearer the surface, opens out the costal angle, and tends to make the intestines slip down from the liver. I have never seen or heard of this method having been made use of by others, but as I have employed it on many occasions I can speak well of its utility.

Incision.—A vertical incision in the right semilunar line is the one most frequently resorted to, and is the one I prefer. If there be a perceptible tumour, it is well to make the incision over the most prominent part; if there be no tumour, but an enlarged liver, the upper end of the incision will have to commence at the hepatic margin. If, however, as is so often the case, there be neither tumour nor enlargement of the liver, the incision will be from the ninth costal cartilage vertically downward for three inches. As a rule the aponeurosis in the semilunar line is divided; but if the rectus be wide, its fibres may be separated, and the anterior and posterior layers of the rectus sheath will then be separately cut. If more room be required it can be obtained either by extending the vertical incision or adding a transverse one, either internal or external to the vertical line, in whichever direction it may seem advisable. It is advisable to avoid as much as possible dividing muscular fibres, as they retract, and can only with difficulty be approximated in suturing the wound. The transversalis fascia and peritoneum are best divided together, without separating them, as together they form a strong membrane, whereas singly they are too weak to hold stitches if there be tension. Kocher employs an oblique incision parallel to the right costal margin, which of necessity divides muscle, but which exposes the parts freely, as the wound at once gapes widely, although for cholecystotomy the transverse incision is quite unnecessary and to my mind usually inadvisable. Where it is necessary to expose or manipulate the common duct it presents the advantages of better exposure and more efficient drainage. The lumbar incision, which has been suggested in order to reach the common duct without opening the peritoneum, is quite impracticable.

Arrest of hæmorrhage.—As a rule pressure forceps and an occasional ligature effect all that is desirable or necessary, but in cases of long-standing jaundice, especially if accompanied by malignant disease, additional precautions are advisable on account of the tendency to hæmorrhage. In order to avert this danger in deeply jaundiced patients I have found the administration of chloride of calcium in 30-grain doses every four hours for a few days before the operation useful in making the blood more plastic and in lessening the tendency to bleeding, both at the time of operation and subsequently. For this therapeutic measure I am indebted to Dr. A. E. Wright, whose researches on the "Coagulability of the Blood"[2] are well worthy of study. After operation, the drug may be continued either by the mouth or by nutrient enema for some time with advantage. In order to remove the danger of ventral hernia I suture the abdominal wall, layer by layer; but if the operations have been very prolonged, and the patient be suffering from shock, it may be advisable to suture the parietes *en masse*. Where it is considered wise to employ gauze packing it is well to apply the sutures and to leave them long, so as to be able to draw the edges of the wound together after the tampon has been removed, without putting the patient to the inconvenience of inserting stitches later. The preliminary preparation and the after treatment of these cases differ in no respect from that of abdominal section in general. Cholecystotomy or cholecystostomy usually follows on exploration, as it is unquestionably the operation *par excellence* in the treatment of gall-stones. The indications for the operation are:—1. In all cases where the gall-bladder is sufficiently large to permit of drainage, after gall-stones have been removed from the gall-bladder or ducts. 2. In cases where there are gall-stones in the ducts, but the patient is too ill to bear a prolonged operation, the gall-stones being deliberately left for treatment by some solvent solution. 3. In empyema of the gall-bladder where that viscus is not too much disorganised to be permitted to remain. 4. In certain cases of chronic catarrh of the gall-bladder or bile-ducts. 5. In suppurative cholangitis. 6. In obstruction of the ducts due to hydatid disease. 7. In dropsy of the gall-bladder. 8. In idiopathic rupture, or laceration, or gun-shot injury of the gall-bladder or ducts. 9. In cases of choledochotomy in order to avoid tension in the sutured duct. 10. In certain cases of obstructive jaundice dependent on malignant tumour, which is occluding the ducts; but in these cases the increased danger must be borne in mind. 11. In some case of phlegmonous cholecystitis or gangrene, where the patient is too ill to bear cholecystectomy.

Technique.—If the gall-bladder be found distended it is aspirated and then opened, the parts being isolated by thin, flat sponges. If, as is so often the case, the gall-bladder be small and atrophied, it will probably be surrounded by adhesions which require careful separation, which can for the most part be better done by touch than sight. If the operation has been undertaken for gall-stones they are removed by means of forceps passed through the opening in the gall-bladder, or, better still, by the scoop which I now show. If they be small they are removed whole; if large they may be directly needled or crushed and removed in fragments. After the gall-bladder has been cleared the fingers of the right hand are passed along the outside of the ducts, when if there be any other concretions they can as a rule be felt, and if possible they should be manipulated backward into the gall-bladder, from which they can be removed. If this be impracticable, without undue force, cholelithotripsy or choledochotomy may be necessary, which operations I shall consider later. Supposing the bile passages to have been cleared, or for some reason further manipulations are considered advisable, a non-perforated rubber drainage tube is inserted into the gall-bladder, and the edges of the incision in it are brought up

[2] Brit. Med. Jour., Dec. 19th, 1891.

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and sutured by fine chromic catgut to the aponeurotic layer of the abdominal wall, not to the skin, thus avoiding the danger of fistula, as between the opening in the gall-bladder and the skin is a considerable thickness of tissue, which soon becomes covered with granulations, and their contraction in healing secures closure. Since adopting this method I have never had a fistula follow cholecystotomy if the ducts have been cleared. Where there is time, I prefer to suture the peritoneum of the gall-bladder to the parietal peritoneum, and the mucous margin to the aponeurosis, thus more completely shutting out the peritoneal cavity. The remainder of the parietal incision is closed as described under simple exploratory incision. In ordinary simple cases, the drainage tube is shortened on the second and third day, and removed on the fourth or fifth; but if there have been much cholecystitis, or cholangitis it is better to drain for a week or even longer. Dr. Terrier, in operating for suppurative cholangitis, suggests that the discharge should be bacteriologically tested from time to time, and that the tube should not be removed until the bile is sterile or nearly so, for at first it is loaded with organisms, and if all goes well these diminish and finally disappear. The tube may be either cut off close to the surface or may be brought through the dressings into a receptacle placed by the side of the patient; the latter method saves frequent dressings, which are otherwise necessary when the discharge is free. This description applies to the ordinary operation on a gall-bladder of ordinary size, or to one distended; but in the case of a contracted gall-bladder situated deeply the operation may be both prolonged and difficult. Where I have been unable to bring up the gall-bladder I have at times succeeded in tucking down the parietal peritoneum to the edges of the gall-bladder opening, and so effecting suture of the contiguous margins; but in several cases where I could not effect this I have with complete success utilised the right border of the omentum, by suturing it to the margin of the gall-bladder opening and to the parietal peritoneum, thus forming a tube of peritoneum around the drainage-tube and shutting out the general peritoneal cavity. This method has also since been efficiently employed by Mr. Arthur Barker. Where occlusion in this way cannot be effected, the insertion of a drainage-tube into the gall-bladder without suture of the margins to the parietes seems to be efficient, for it is, on account of intra-abdominal tension, easier for the bile to pass away directly through the tube than to enter the abdomen, and it is probable that within from 24 to 48 hours plastic peritonitis shuts out the drainage-track from the general peritoneal cavity. The method of packing around the tube with iodoform gauze in such cases is one in which I have great faith, as I have found it to be a safe means of occluding the peritoneal cavity. Mr. Knowsley Thornton suggested supra-pubic drainage in cases where occlusion of the bile channels is doubtful, but if I require to drain the abdominal cavity in such cases I prefer to do it either by means of a tube passed into the right kidney pouch and brought out at the lower end of the original incision, or through a stab puncture in the right loin. Dr. Murphy has invented a "button tube" (which I now pass round) for use in cases where the gall-bladder is contracted and cannot be brought to the surface, but in practice I have found that the contracted gall-bladder is as a rule too small to permit of its employment, and though I have taken it with me regularly to a number of operations I have never yet met with a case where I thought it desirable to employ it. In certain cases where the gall-bladder is contracted, after opening and clearing it and the ducts, the incision may be immediately closed by suture, the line of incision being isolated by a gauze drain; or in other cases cholecystectomy may be performed and the cystic duct ligatured, the gauze drain being again employed; or, as suggested by Mr. Morison, the incision in the gall-bladder may be deliberately left patent and the bile allowed to run into the right kidney pouch, from which it is removed by a drainage tube in the loin. The operation of cholecystotomy has been modified in several ways; for instance, the opening has been closed and then fixed to the abdominal incision, which has been closed over it; this operation is known as cholecystendysis (Courvoisier). It can only be of use where the ducts are known to be thoroughly cleared, where there is no fear of subsequent stricture, and where there is no catarrh or inflammation of the bladder or bile passages. The so-called "ideal" operation suggested by Langenbach,[3] in which the opening in the gall-bladder is sutured and the viscus returned without fixing it to the surface, has been thought by Lange, Meredith, Kuster, Keen, and others to be attended with greater risk than the operation of cholecystostomy. If it be thought advisable to adopt this method, it is necessary to prove that the ducts are clear, and this may be accomplished by distending the gall-bladder with warm sterilised water and then forcing it through the ducts, or by catheterism of the ducts, as advocated by Terrier and Dalby.[4] I have employed both methods, but prefer the former, both on account of its safety and efficiency. Recently reported cases of "ideal" cholecystostomy would seem to prove that the dangers at first attending the operation may be overcome by a proper selection of cases and by carefully suturing the mucous, muscular and serous margins separately; but I think the serious objection to it is that the benefits of drainage are not obtained, as in the operation of cholecystostomy. A real use for this modification is found in cases where it has been necessary to open a contracted gall-bladder, but where, on account of the depth, it is found impracticable to bring it to the surface; as also when, from the contraction of its cavity, it is found impossible to insert a drainage tube. Under such circumstances sutures can readily be applied by means of a rectangular cleft palate needle or by Lane's needle-holder. The line of suture is made secure against dangerous leakage by the gauze drain, the lower end of which is packed moderately firmly over the gall-bladder. Another modification, suggested by Bloch, is that in two stages. The operation consists in incising the parietes until the peritoneum is reached, the cavity of which, however, is not opened; the wound is then packed with gauze and left for several days, when adhesions will have formed between the gall-bladder and the parietal peritoneum. The gall-bladder can then be safely opened. Or if the peritoneum be opened, the gall-bladder is fixed, but not opened until adhesions have formed. As the method is only available for the simplest cases—viz., where the gall-bladder is distended—as it does away with all chance of exploring the ducts by the hand within the abdomen, and as it is frequently followed by fistula, I would only mention it to condemn it as clumsy and uncertain and no safer than the ordinary operation of cholecystotomy. In this opinion I would make one exception, I think the operation "à deux temps" presents considerable advantages when cholecystotomy is being undertaken in the presence of chronic jaundice associated with distended gall-bladder, as in such cases there is usually malignant disease either of the head of the pancreas or of the bile-ducts, and when the peritoneum is exposed, but not opened, pressure can be applied to arrest the oozing of blood, which cannot always be stopped by ligatures or forceps. Bloch, however, in his original papers and in his latest in the *Revue de Chirurgie* for 1895, does not recommend the operation for this reason, but on account of the fear of septic contamination of the peritoneum, which ample experience proves to be groundless. The statistics of cholecystotomy vary very considerably in different hands. As in ovariotomy, experience leads to greater success, and those who have done a considerable number of operations will as a rule show the best results. Out of 115 cholecystotomies which I have performed there were five deaths, three being the subjects of cancer and two of infective cholangitis with jaundice. In other words, the mortality from cholecystotomy for gall-stones is only a little over 1 per cent., or, including malignant cases, 4·34 per cent. Murphy, at the Roman Congress, collected 201 cases of cholecystostomy, the mortality being 19 per cent. Mr. Page (Newcastle) has been so kind as to furnish me with the result of operation at the Newcastle Infirmary, where out of twenty-four operations six died. Mr. Charters Symonds has performed eight operations, with recovery in all. With regard to recurrence, if the ducts be cleared and the gall-bladder drained recurrence is rare. Kehr says of his cases that there has been no recurrence.

Fistula following cholecystotomy.—An eminent operator recently told me that he thought fistula frequently followed on cholecystotomy. I suppose he was arguing from his own experience, which, however, is quite at variance with mine, since I have adopted the modification of suturing the edge of the gall-bladder incision to the aponeurosis and not to the skin, for it distinctly proves that fistula will only follow under such circumstances if the

[3] Centralblatt für Chirurgie, 1887.

[4] Revue de Chirurgie.

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ducts have not been cleared, and then it is better that there should be such a safety valve, which can be remedied by a further operation. In my first ten cases I had five fistulæ; these were all operated on by stitching the gall-bladder to the skin. In my later 160 cases there were only seven fistulæ, all of which were cured by further clearing the ducts or short-circuiting the obstruction. As one would expect, cholecystotomy "à deux temps" is often followed by fistulæ. Martig gives 20 per cent. and Courvoisier 34 per cent., which, of course, are due to imperfect clearing of the ducts. After cholecystotomy has been performed and the gall-bladder cleared of its contents it may be found impracticable to remove other gall-stones impacted in the cystic or common ducts, either by means of forceps or scoop introduced through the gall-bladder incision, or by digital manipulation from without. Under such circumstances the gall-stones may be crushed or removed by "choledochotomy," or under certain circumstances "cholecystenterostomy" may be performed. As crushing is the least severe procedure, and as I have had considerable and favourable experience of it, I will describe that operation first.

Calculi in the common bile-duct.—Before proceeding to a description of cholelithotrity or choledochotomy it may be advisable to refer to the special condition of cholelithiasis, where the gall-stones are in the common duct, which, according to Courvoisier, occurs in about 4 per cent. of all cases. A reference to the cases that have come under my care shows this to be an under-estimate, as I find that out of 170 cases on which I have operated there were gall-stones in the common bile-duct on 28 occasions, which equals 20 per cent. My experience shows a much larger proportion of multiple calculi in the common duct. In my paper read before the Clinical Society of London in 1888, and again on page 82 of my work on Gall-stones published in 1892, I drew attention to contraction of the gall-bladder as an important diagnostic point, and this has been borne out by other observers independently. I then remarked that jaundice with distended gall-bladder was presumptive evidence in favour of malignant disease, but that jaundice without distended gall-bladder favoured the diagnosis of cholelithiasis. Of thirty-five operations for obstruction in the common duct, Courvoisier found that eighteen were due to causes unconnected with gall-stones, such as cancer, stricture, or tumour; of these, the gall-bladder was dilated in sixteen, whereas only seventeen were dependent on gall-stones and of these seventeen the gall-bladder was atrophied in thirteen. I think the explanation is to be found in a combination of causes: (1) All cases of cholelithiasis are accompanied by inflammation of the walls of the biliary passages, as shown by the almost universal presence of adhesions around the gall-bladder; (2) gall-stones in the common duct seldom cause complete obstruction, either because they are floating in the duct or because they only partially fill it, there is, therefore, no sufficient backward pressure to cause dilatation of the gall-bladder; (3) the muscular coat of the gall-bladder, though feeble, is sufficient to enable it to contract, which it doubtless does in efforts of expulsion when there is any obstruction in the common duct; and (4) the contraction, from being at first intermittent, becomes in the long run constant, and the accompanying inflammation fixing the contracted gall-bladder, it atrophies. The special symptoms pointing to stone in the common duct are absence of enlargement of the gall-bladder, with frequent mild attacks of pain, followed by an intensification of the jaundice, which in many cases never quite disappears. The seizures are often associated with intermittent feverish attacks and loss of weight. The pain is in the epigastric rather than in the right hypochondriac region, and passes through to the right dorsal or lumbar, rather than to the right infra-scapular, region. Where jaundice is continuous and intense without much variation, especially if the gall-bladder be enlarged, there is usually malignant disease or some other cause than gall-stones. All the other symptoms characteristic of gall-stones may have been present for some time previously or may coexist with those above mentioned.

Methods of Treatment.—The treatment of calculous obstruction in the common duct is of the utmost interest, both on account of the difficulties to be overcome and of the great importance to the patient, who in the greater number of cases is otherwise condemned to a lingering and painful illness, often ending in death. 1. In a few cases a concretion of moderate size may be manipulated backwards into the cystic duct, and thence extracted by scoop or forceps; but it is seldom practicable on account of the contraction of the gall-bladder and cystic duct. 2. Occasionally a small stone may be pressed into the duodenum, but this is rare, and not infrequently it may be pushed into a dilated diverticulum of Vater, and so be missed, and the whole operation rendered futile. 3. Cholecystostomy, with subsequent treatment by solvent injections, is well worth bearing in mind, on account of its simplicity and safety, together with the certainty of giving immediate relief with a modicum of risk, and putting the patient in better condition for subsequent treatment, should such be necessary. 4. Cholelithotrity, or crushing the stones *in situ*. 5. Needling concretions through the duct walls. 6. Choledochotomy, or incising the duct and removing the calculi. 7. Choledocho-duodenotomy, or reaching the duct through the opened duodenum, for stones impacted in the duodenal end of the duct. 8. Cholecystenterostomy, or short-circuiting the obstruction. 9. Choledochenterostomy, or uniting the duct to the gut in case of largely dilated ducts. 10. Choledochostomy, or attaching the dilated duct to the surface and draining it. It will thus be seen that the surgeon has a great variety of operations to choose from, and he will act the wisest, who, knowing all, is able to choose that peculiarly adapted to the case in hand. The various operative procedures I propose to consider in detail. Cholelithotrity was first suggested and put in practice by Mr. Lawson Tait, and has since been extensively and most successfully employed by him, by myself, and others. The ordinary incision for cholecystotomy may be large enough, but if the patient be stout, or the ducts cannot easily be reached, it may have to be increased so as to allow the hand to pass into the peritoneal cavity, in order that the fingers may locate and grasp the stone *in situ*. If the right hand be used the thumb will enter the foramen of Winslow and the index finger will pass in front of the common duct, or in case of the left hand being used these digits will be reversed, when the whole force of the opposing finger and thumb can be brought to bear on the concretion. I have found by experiment that this force amounts in my own hands to ten kilogrammes without support to the fingers, and thirteen when the fingers are supported. Usually the gall-stone flattens out into a wafer shape, and in altering the position of the digits the edges of the wafer are compressed and the concretion is either converted into pulp or breaks into innumerable fragments, which can be passed on towards the duodenum or subsequently washed through. I have performed this operation twenty-seven times and have had no subsequent trouble on account of damage to the ducts. In some cases of stones in the common duct the concretions have been too hard to crush, and I have had to perform choledochotomy. The disadvantages of cholelithotrity are (1) the fear of seriously damaging the ducts by the manipulation; and (2) the danger of leaving fragments permanently in the passages, which may then grow by further deposit of cholesterine. I have shown by my cases that the first danger need not be feared if the finger and thumb only be used as the compressing force, but I think it might be real if attempts were made to crush hard stones by instrumental means, although I did employ padded forceps to some of my earlier cases. The question of needling impacted concretions by the passage of a needle through the walls of the duct was raised by my colleague, Mr. Teale, in 1895. In my work on Gall-stones published in 1892 (p. 144) I referred to the subject, and Mr. Knowsley Thornton has employed it. It was also fully discussed after a paper I read at one of the societies, and I think it was almost unanimously decided that, although concretions might be broken up by needling, the operation was inadvisable on account of the almost unavoidable damage to the ducts and the fear of infection. It may, however, be borne in mind that some of the very hard stones may be broken up by means of a needle, and that the fragments may be further crushed between the finger and thumb. The second danger—of leaving fragments in the ducts—may be overcome by at the same time performing cholecystotomy and later syringing the ducts with sterilised water until they are clear of débris, or, if any fragments should be unavoidably left, by applying through the fistula some solvent solution. In one case, after cholecystotomy with crushing of calculi in the common duct the fragments did not pass until I injected a few drops of a solution of turpentine in ether into the fistula. Great pain followed, the duct became patent, and the fistula closed, the patient having

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remained well since. The result in this case was probably rather due to the contractions set up in the duct than to the solvent action of the remedy used, and I cannot, on account of the severe pain set up for some hours, recommend its employment, though in this case the result was good. A more efficient method, which I now employ whenever I have reason to think that any of the fragments remain in the ducts, or wherever I have deliberately left a gall-stone which I could not crush and did not think it wise to remove by choledochotomy, is to syringe a warm 0 5 per cent. solution of sapo animalis or warm olive oil through the fistula night and morning until the passages are quite free. The olive oil and soap solution probably act in a double capacity as solvents and as lubricants. Dr. Brockbank found that a gall-stone placed in a 0·5 per cent. solution of sapo animalis in distilled water, and kept at the body heat in an incubator, lost 34 per cent. of its original weight in three weeks, and that a similar concretion in a 0·1 per cent. solution lost 14 per cent. of its weight in the same time.

Choledochotomy or choledocholithotomy is the name given to the operation of incising the bile-ducts for the extraction of gall-stones in cases where the concretions cannot otherwise be removed. It was probably first suggested by Langenbach in 1884, though Kummell (quoted by Fenger) stated in 1890, that he, several years before, had performed cholecystectomy on a female patient aged forty years, after which he had removed a stone the size of a walnut from the common duct through an incision which he afterwards sutured. The operation was a very prolonged one, and the woman died twenty-four hours afterwards. Courvoisier performed the first successful operation on Jan. 22nd, 1890, and two others, both successful, in February and March of the same year. It has since been performed by Langenbach, Thornton, Fenger, Greig Smith, Page, Terrier, Symonds, myself, and others. The cholecystotomy incision must be extended to four or five inches, and after the separation of adhesions the wound must be held open by a retractor on the right and preferably by an assistant's finger on the left, as the fingers can at the same time retract the pylorus and stomach on the left, and the colon and omentum below without inflicting injury, as retractors are apt to do. The assistant who is using the retractor on the right may with advantage use his left hand to draw upwards the overhanging liver and costal margin. The operator should now, after having separated adhesions, have a good view of the common duct within the free border of the lesser omentum, and on inserting his left index finger into the foramen of Winslow, or on grasping the duct between the index finger and thumb, he can without difficulty bring the duct well within reach, the concretion making a distinct projection. Over the prominent stone a vertical incision as low down and as far forward as possible should be made sufficiently large to allow the concretion to pass. Through this opening a probe can be passed, or even a finger, in order to explore the ducts thoroughly, so as to remove other stones if present. The incision in the duct may now be closed by interrupted sutures in two layers, first the muscular and fibrous coats being approximated, and secondly the serous margins; but if this be impracticable the muscular and serous coats may be sutured together and additional Lembert's sutures may be applied over all. I have found a rectangular cleft palate needle the most convenient instrument to employ in applying these deep sutures, though doubtless a small circular intestinal needle and holder will answer equally well, or the special needles and holder suggested by Mr. Lane may be found more convenient. If a gall-stone be felt in the hepatic duct it may be reached by opening the common duct and passing a scoop or forceps through this opening. Fenger has in this way explored the ducts and removed stones quite in the liver substance, and I have passed a long bent probe in this way quite into the primary division of the bile-ducts. Dr. Elliott recommends the application of the sutures before removing the stone. This is certainly an advantage, though if the ducts have to be explored afterwards the sutures are rather in the way. I think the same advantages may be obtained by introducing the two end stitches before extracting the calculus, as when they are drawn on the edges are approximated and more easily sutured. A large drainage-tube should be left in the abdomen, and it may be wise to pack gently iodoform gauze over the duct and to bring the end out by the side of the drainage-tube, if there be any doubt about the closure of the wound in the duct. The tube may be removed in twenty-four or forty-eight hours if there be only a little discharge, and the gauze should be gradually removed day by day until it is all away. Drainage through a stab wound in the right loin is an efficient means of draining the discharge from a leaking gall-bladder or bile-duct. Mr. Frederick Page, on the other hand,[5] advocates careful suture of the opening in the duct and closing the abdomen without leaving in a drainage-tube. Mr Greig Smith says that drainage is always advisable, and in this view I fully agree, as although in several of my cases there has been little or no discharge from the drainage-tube, in others the bile-stained discharge for a few days has proved that the closure of the opening was not perfect, and it must be borne in mind that although the ducts appear to be clear it is impossible to be absolutely certain, as was proved in one of my cases, where, under the supposition that I had effectually cleared the common duct, I removed a shrivelled and mutilated gall-bladder and ligatured the cystic duct, with the result that septic bile became extravasated into the peritoneal cavity and led to my only death from cholecystectomy. A small gall-stone was found obstructing the orifice of the duct where it was opening into the duodenum. The same difficulty was experienced in one of Fenger's cases and in several of Kehr's.

Choledocho duodenostomy is a term applied to the modification of the operation of choledochotomy, where a gall-stone is impacted in, and removed from, the diverticulum of Vater through an incision in the duodenum. McBurney,[6] Pozzi, and Kocher[7] have performed this operation with success. The operation is difficult and should only be done where the gall-stone cannot be brought into the more accessible part of the common duct.

Statistics of Choledochotomy.—As this is perhaps the most difficult and prolonged of the operations on the bile-ducts, the mortality is necessarily greater than that of simple cholecystotomy. In 1892 Martig had collected 27 cases, and in 1895 Mermann 17 others, giving a total of 44 cases, with a mortality of 18 per cent. Terrier, in 1892, had collected 20 cases, with a mortality of 25 per cent.[8] Hans Kehr,[9] collected from various sources 84 cases of choledochotomy, with 31 deaths (=37·8 per cent.). Even excluding severe cases the mortality was 25 per cent, though in his own practice the death-rate was only 6·6 per cent. He remarks: "The operation involves many difficulties which can only be overcome by one performing a large number of operations, and even then it is not very easy to remove all the concretions." Out of 30 cases, in 5 all the stones were not removed; in 3 the operation was repeated; and in 2 cases the wound reopened and gave exit to the calculi that had been left. Fenger has reported 5 cases, of which 1 died (=20 per cent.). Murphy 5 cases, of which 2 died (=40 per cent.). My own cases are 6 in number, out of which I have lost one, due to the accident of a slight laceration of the colon in separating adhesions (=16·6 per cent.).

Cholecystectomy, or excision of the gall-bladder, may be required in (1) bullet wound or other wound of the gall-bladder where suture is impracticable; (2) in phlegmonous cholecystitis; (3) in gangrene of the gall-bladder; (4) in multiple or in perforating ulcers; (5) in chronic cholecystitis from gall-stones, where the gall-bladder is shrunken and too small to drain safely and where the common duct is free from obstruction; (6) in mucous fistula due to stricture of the cystic duct; (7) in hydrops of the gall-bladder due to stricture of the cystic duct, as also in certain cases where the gall-bladder is very much dilated; (8) in certain cases of empyema where the walls of the gall-bladder are very seriously damaged; and (9) in cancer of the gall-bladder. It is contra-indicated in all cases of non-patency of the common duct, and it should not be resorted to under the idea that it will prevent the formation of gall-stones, as calculi may form in the bile-ducts within the liver or below it. The operation is performed through the usual incision for reaching the gall-bladder. The peritoneum covering the gall-bladder just below the liver is incised parallel to the hepatic margin, and the gall-bladder is freed by means of a finger or a blunt dissector as far back as the cystic duct, the latter part of the dissection being done sub-peritoneally as much as possible. The duct is ligatured and divided, the stump being asepticised either by the cautery or by the application of a 1 in 500 solution of perchloride of mercury. The peritoneum is now sutured over the top of the duct. There is

[5] THE LANCET, Dec. 5th, 1896.
[6] Annals of Surgery, Oct. 18th, 1893.
[7] Correspondenzblatt für Schweizerische Aerzte, 1897, No. 7.
[8] Brit. Med. Jour., Supplement, Jan. 7th, 1893.
[9] Berliner Klinische Wochenschrift, June, 1896

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usually little bleeding, and that is easily arrested by sponge pressure or by one or two ligatures. Unless there be oozing, or unless the wound has been infected by pus or gall-bladder secretion, drainage may perhaps be thought unnecessary; but the adage, "when in doubt drain," is a good one, and it can do no harm to leave an efficient drainage-tube in the right kidney pouch for twenty-four or forty-eight hours after extirpation of the gall-bladder. Packing with iodoform gauze in these cases is better than using a tube, as it serves the double purpose of arresting oozing from the lacerated liver and acting as a drain.

Statistics.—Mortig has collected 87 cases of cholecystectomy with 12 deaths and 3 indirect deaths,[10] thus giving a mortality of 17·24 per cent; Kehr 21 cases with 1 death, equal to 5 per cent.; and Murphy gives the mortality up to 93 as being 17 per cent. I have performed the operation seven times with 1 death, giving a mortality of 14·28 per cent.

Cholecystenterostomy consists in establishing an artificial opening between the gall-bladder and intestine, duodenum, jejunum, or colon, preferably the first, when it may be termed cholecystduodenostomy. Although the conception of the operation occurred independently to Harley, Gaston, and Nussbaum, the first operation was actually performed by Winiwarter of Liege in 1880, and my own case in 1889 was the first of the kind performed in England, and the first anywhere for biliary fistula. In its place it is an extremely useful operation, but as it leaves the cause of the obstruction unremedied it ought not to be resorted to except occasionally, where a more radical operation is impracticable or inadvisable. Dr. Murphy, of Chicago, favours the procedure before other methods.

My conclusions are, that the operation is indicated:—1. In biliary fistulæ, depending on stricture or other permanent occlusion of the common duct. 2. Very occasionally in cancer of the head of the pancreas or malignant tumour of the common duct leading to chronic jaundice and distended gall-bladder; but in such cases the mortality will necessarily be so high that the justifiability of the operation is questionable. 3. Occasionally in impaction of gall-stones in the ducts, where the patient is not in a fit condition to bear the more prolonged operation of separating adhesions, and crushing or removing the concretion by choledochotomy. 4. In certain cases of obstruction of the cystic duct where cholecystectomy is impracticable.

Contra indications.—1. In any obstruction of the bile-ducts which can be cleared away with reasonable probability of success. 2 In malignant disease of the head of the pancreas or common bile-duct leading to distension of the gall-bladder the mortality is so great (eight operations with seven deaths) that it is hardly worth doing. 3 In contracted gall-bladder, where it is impracticable to insert the button. 4. Where there are extensive adhesions which would lead to kinking of bowel. 5. In very large gall-bladder with obstruction of the cystic duct, where cholecystectomy should be done. The operation may be performed: (*a*) by means of simple suture; (*b*) by means of my decalcified bone bobbin; and (*c*) by means of Murphy's button. My first case, in 1889, was performed by suture, my second and third cases by means of the decalcified bone bobbins, and in all my later cases I have used the Murphy button. Although all the cases when the operation was unassociated with cancer recovered, I decidedly prefer to make the union by means of the Murphy button, both on account of its efficiency and the expedition with which it can be used. The operation of cholecystenterostomy is performed through the same incision as is made for cholecystotomy, and after the gall-bladder has been aspirated and the intestine clamped either by an indiarubber tourniquet or by intestinal clamps the junction is effected. If sutures be employed, a semicircle of interrupted silk stitches is inserted to unite the contiguous serous surfaces of the gall-bladder and gut, the viscera are then opened, and the mucous margins of the two openings are united by interrupted catgut stitches, after which the circle of catgut stitches and then the circle of serous sutures is completed. If the bone bobbin be used, two continuous sutures only are employed, a silk stitch to unite the serous surface one-third or one-half of an inch from the visceral openings, and a catgut suture to join the mucous margins of the visceral openings. For convenience, the posterior semi-circle of the serous suture is first applied and the needle laid aside for a moment, but not unthreaded; the openings are then made and the posterior half of the mucous suture is inserted; the bobbin is then introduced and the mucous suture continued around until it meets the other end of the catgut, when the two ends are tied and cut off short; the serous suture is then carried around the anterior half until it reaches the point where it began, when the two ends are drawn on and tied. The bobbin keeps open the lumen until it is dissolved, and the mucous and serous sutures effectually protect the channel from leakage. If the Murphy button be used, the smallest size is selected and two running sutures are applied. After the gall-bladder has been emptied and the bowel clamped the openings are made in the viscera just sufficiently large to admit the separate ends of the button. The threads are then drawn on and tied around the central barrel of the button, after which the two ends of the button are approximated and pushed home firmly. The anastomosis is then complete. The whole process occupies a very short time and is really very simple; it is, however, necessary to bear in mind that the button has to separate by causing the approximated margins of the openings to slough, and that the true bond of union is only slight at first, so that it is well to keep the patient absolutely quiet for at least a fortnight, lest the new bond of union should give way and permit extravasation of the visceral contents. In considering the question of cholecystenterostomy, it has to be borne in mind that the operation can only be done when the gall-bladder is of moderate size or dilated, and that it is inapplicable to the difficult class of cases where a gall-stone is impacted in the common duct and the gall-bladder is atrophied. When it can be done, the anastomosis should be made to the duodenum, but if preferred a free loop of jejunum may be selected and brought over the hepatic flexure of the colon. In only exceptional cases should the anastomosis be made between the gall-bladder and colon. From a report up-to-date which Dr. Murphy has been so kind as to furnish me, cholecystduodenostomy has been performed with the aid of the anastomosis button in sixty-seven non-malignant cases with only three deaths, these being due to continuous hæmorrhage from laceration of the liver substance on the seventh day, to cholæmia on the fourth day, and to septicæmia on the fourth day, respectively. Of his twelve malignant cases ten died, giving a mortality of 83·3 per cent. My own cases are eleven in number, with one death, and that in a case of malignant disease with long-continued jaundice; my percentage mortality for cholecystenterostomy for gall-stones is therefore *nil*.

Choledochostomy is the term applied to the direct surface drainage of a dilated bile-duct. Terrier has described four cases;[11] I heard of a fifth from Dr. Arnison, of Newcastle, and found a sixth in the Museum of Guy's Hospital, all ending fatally within a few days or weeks of operation, owing to associated choledochitis and infection of the bile channels in the liver itself. In July, 1896, I performed choledochostomy in a man aged twenty-five years, after crushing a gall-stone the size of a small hen's egg, situated at the junction of the cystic and common ducts; the gall-bladder was much smaller than the duct, and I found it easier to fix and drain the duct. The patient made a good recovery (Case 150 on my list). Where it is impossible to clear the ducts, instead of performing choledochostomy, the operation of choledochenterostomy may be done, the union of the dilated duct to the duodenum being made by means of a Murphy's button. I have twice performed the operation, which has also been done successfully by Dr. Sprengal and Dr. Kiedel, and by Dr. Swaine. In my own cases I removed the shrunken and diseased gall-bladder, and fixed the end of the dilated cystic duct to the bowel by a Murphy's button in one case and by a bone bobbin in another. No drainage was employed. The button was voided at stool on the tenth day. In concluding my lectures I must thank you, Mr. President, and my audience for the kind forbearance which you have shown in listening to details which I fear may at times have been somewhat wearisome. My wish has been to show the importance of the subject I have taken up and some of the results which may be looked for by appropriate surgical treatment, and if I have succeeded in exciting your interest and in making it evident that in the greater number of diseases of the gall-bladder and bile-ducts surgical treatment is well worth considering after a fair, though not too prolonged, trial of medical means, my aim will have been accomplished.

[10] Centralblatt für Chirurgie, April 14th, 1894.

[11] Revue de Chirurgie, Feb., 1893.

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ON THE MECHANISM BY WHICH THE FIRST SOUND OF THE HEART IS PRODUCED.[1]

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IT is a well-recognised fact that the action of the heart is accompanied by the emission of certain sounds, which are described as the first and second sounds of the heart. These sounds, which were observed soon after Laennec had discovered the use of the stethoscope, have been compared to the sounds produced by the utterance of the words "lŭbb-dŭp." They have been studied with interest by the physicist, the biologist, the pathologist, and the clinical physician; by the latter especially, inasmuch as the changes produced by disease in the character of these sounds become of material assistance in the diagnosis and treatment of diseases of the heart. An explanation of the mechanism by which phenomena so distinct, so constant, and so remarkable are produced has been sought for by many observers amongst the classes just mentioned.

The second sound is the result of the sudden tension of the semilunar valves caused by the resistance which these valves offer to the retrograde flow of the blood from the aorta and pulmonary artery respectively into the ventricles on the cessation of systole.

[Sir Richard Quain, after referring to the doubt existing as to the cause of the first sound, continued:—]

It seemed to me to be desirable, amidst such differences of opinion, to solve if possible a problem which has its special interest and its special importance. Two of the most striking events which take place during systole—namely, the closure of the auriculo-ventricular valves and the muscular contraction of the ventricular walls—are regarded by many authorities as the sources whence the first sound proceeds. The result of my investigations, on the one hand, leads me to the conclusion that neither of these explanations is satisfactory; and, on the other hand, enables me to indicate what I believe to be the real explanation of the phenomenon.[2]

A. The action of the auriculo ventricular valves is not the source of the first sound of the heart.—The mechanism of these valves (the mitral and tricuspid) and their action do not possess the elements necessary for the production of such a sound.

[Sir Richard Quain here gave an account of the action of the valves and proceeded:—]

Further evidence on this point may be found in another direction—namely, in the fact that the first sound can be heard independently of the existence and action of mitral and tricuspid valves. Aware of the fact that in some of the lower animals, more especially in the reptile class, the auriculo-ventricular valves exist in but a very rudimentary form, I obtained permission to examine some of these creatures in the Zoological Gardens, and spent many hours on many occasions in the investigation, assisted by my valued friend Dr. John Sibbald.

[Sir Richard Quain then referred to the first sound being audible in the python and the kangaroo—which have only rudimentary auriculo-ventricular valves.]

Objections will, no doubt, suggest themselves to the view above expressed. For example, the clinical physician will say, "I am in the daily habit of hearing a distinct murmur accompanying the systole in cases of diseased heart, and apparently replacing the first sound. On examining the heart after death I find the auriculo-ventricular valves diseased—a condition with which I therefore connect the murmur." It will at once be seen that we have here to deal with morbid sounds, totally different in character and totally different in the seat and mode of production, from the first sound of the heart. To make the explanation more simple I will confine my observations to two principal forms of mitral disease associated with systolic murmur—namely, first, imperfection in structure with distinct regurgitation; and, secondly, induration, roughness, and irregularities on the mitral valve.

[Sir R. Quain described (*a*) the mitral regurgitant murmur, and (*b*) the systolic murmur without regurgitation. He continued:—]

These murmurs, striking and characteristic as they are, are merely accidental complications which occur at the moment of the systole of the heart; but they are unconnected with, and have no relation except in point of time to, the healthy first sound, which may be heard apart from, and independently of, them. The weight of evidence, then, is clearly against the possibility of the structure or the functions of the auriculo-ventricular valves being the source whence proceeds the first sound of the heart.

Two other phenomena occur synchronously with the systole of the heart, and consequently with the occurrence of the first sound. They are (*a*) the contraction of the muscular walls of the ventricles, and (*b*) the propulsion and movement of the blood from the ventricles into the arteries. I shall first consider the supposed share which muscular contraction has in the formation of the sound.

B. The muscular contraction of the walls of the heart during systole is not the source of the first sound of the heart.—The sound produced by muscle during its contraction was first described by Dr. Wollaston.[3] He compared it to "a sound which resembles most nearly that of carriages at a very great distance passing rapidly over a rough pavement."[4] It is very difficult to conceive the slight, soft, rolling sound produced by muscles in action being convertible into the loud, booming first sound of the heart. Yet the theory is accepted. If muscle during contraction could produce so marked a sound, we should expect to find that the powerful muscles of the neck attached to the base of the skull and those attached to the jaw (being through the bones of the skull in direct relation with the hearing apparatus) would give us some striking evidence of the production of muscular sounds when they are thrown into strong action. But there is nothing of the kind. I have failed to hear such sounds when listening to the powerful contraction of the biceps, or on listening to the contraction of the shoulder muscles of a strong cart-horse struggling with a heavy load in ascending a hill. I could hear no other sound save the soft, rolling sound described by Dr. Wollaston. Still, many observers have argued that the contraction of the walls of the heart differs from the action of the skeletal muscles, and that it is this peculiar form of contraction which causes the first sound. They have adduced so many observations in favour of this doctrine that it will be necessary to examine them. But before doing so, for the sake of making my argument more clear, I desire to point out that there is another event which occurs simultaneously with the systole of the ventricle. This is the propulsion of the blood from the ventricles and its impact against the column of blood resting on the semilunar valves. With a view to showing how large a share the sound of muscular contraction has in producing the first sound observers have cut off altogether the supply of blood from the cavities, and on listening during the contraction of the heart have heard a systolic sound. Such were the old experiments of Ludwig and Dogiel, represented as confirmed by Krehl[5] and by Kasem-Beck.[6]

The conclusions which have been drawn from these experiments are disproved by those conducted by my friend Professor Halford, and described in his essay on "The Action and Sounds of the Heart," published by Churchill (1860). He writes: "Large dogs were obtained, and, as in my preceding experiments, the heart was exposed, and the circulation kept up by artificial respiration. A stethoscope being applied to the organ, sounds were distinctly heard. The superior and inferior venæ cavæ were now compressed with a bull-dog forceps, and the pulmonary veins by the finger and thumb; the heart continuing its action, a stethoscope was again applied, and neither first nor second sounds were heard. After a short space of time the veins were allowed to pour their contents into both sides of the heart,

[1] A paper read before the Royal Society of London on June 3rd, 1897.

[2] I have to acknowledge with thanks the assistance rendered me in arranging my notes of this memoir by my valued friend, Dr. Mitchell Bruce, during my recent severe indisposition.

[3] Philosophical Transactions, 1810.

[4] It is interesting to note that Dr. Wollaston, in examining the sound produced by the muscles of his leg, made use of a wooden rod to convey the sound to his ear. He may be thus said, in a measure, to have anticipated the principle of mediate auscultation discovered by Laennec in 1816. The muscular sound which we now recognise is that accurately described by Dr. Wollaston.

[5] Du Bois-Reymond's Archiv, 1889, p. 253.

[6] Pflüger's Archiv, vol. xlvii., p. 53.

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and both sounds were instantly reproduced. On the veins being again pressed all sound was extinguished, notwithstanding that the heart contracted vigorously. Blood was again let in and both sounds restored. I have thus frequently interrogated the same heart for upwards of an hour, and always with the like result" (p. 25). These experiments of Professor Halford must be accepted as sufficient to refute the view of the German observers just quoted. Another source of fallacy in making experiments of this kind is that a very slight stroke of the muscle or ventricle against the end of the stethoscope is sufficient to produce a very loud and distinct sound, resembling the first sound. If the palm of the hand, for instance, be pressed gently over the ear, and the back of the hand be touched by a finger of the opposite hand, it will be felt how slight a stroke is sufficient to produce a very distinct sound. Observers (Ludwig and Dogiel) have recognised the difficulty of isolating muscle from the instrument conveying the sound, and they have placed the empty heart, still contracting, in a jar containing defibrinised blood or warm water, from the side of which a neck is projected covered by a thin layer of indiarubber. At each contraction of the heart a distinct sound, resembling the first sound of the heart, was heard. But the flapping of the heart against the water was quite sufficient to produce the sound which was conveyed to the ear, and I cannot see in such an experiment sufficient evidence of the sound of muscular contraction being the cause of the first sound of the heart.

Experiments of another kind have been emp'oyed to show that the contraction of the muscle is a source of the sound. Hürthle[7] and Einthoven[8] show graphically that the first sound begins with the very beginning of the systole, before the ventricle has got power "to open the valves." This observation is entirely consistent with the view I am about to propose. The moment the ventricle begins to contract the impact of the blood against the semilunar valves commences, producing the commencement of the sound, not when the valves are thrown open. The valves being connected with the fibroid ring surrounding the base of the heart, with which also the muscular walls are continuous, the sounds are conducted to the apex. Pathology confirms this view. It was observed by Dr. Stokes that in the course of typhus fever the first sound of the heart gradually disappears. After death it is found that the walls of the heart are softened, and this morbid state has been accepted as a proof that muscular contraction is the cause of the first sound. The real explanation is that the impulse of the heart is so feeble that it is unable to produce the sound at the valves. The correctness of this view is confirmed by the fact, recorded by Dr. Stokes, that the last point at which the sound disappears is over these valves, and that it is at the same point that the returning sound is first heard.

With the object in view of further investigating this subject I requested my friend, Dr. Alexander Morison, to study the heart of a turtle recently killed by holding it close to the ear as one holds a watch when testing for deafness, and also by pressing it gently against the ear. With this intention I gave him an introduction to the proprietors of the "Ship and Turtle" tavern, where he had the fullest opportunity of carrying out the investigation. Dr. Morison writes to me: "An opportunity was afforded me of examining the hearts of two large turtles immediately after they were killed. The heart removed from the body was easily provoked into active contraction by a gentle tap with the finger, the contraction being sufficient to expel blood from the cardiac cavity. On placing the ear close to the heart whilst thus contracting no sound could be heard; on placing the ear lightly on the heart whilst contracting no sound could be heard. So far, therefore, as a turtle's heart is concerned—no other that I know of has more vigour of contraction after removal from the body—muscular contraction as a cause of cardiac sound must be excluded." These facts and observations are, in my opinion, sufficient to prove that the contractile action of the muscles of the heart is not capable of producing the first sound of the heart.

Having thus endeavoured to show that the cause of the first sound is independent alike of auriculo-ventricular action and of muscular contraction of the walls of the heart, I proceed to consider a third event, the most striking and important of all those which occur during the systole of the heart—that is, the propulsion of the blood contained in the ventricles into the pulmonary artery and the aorta, and herein to indicate what seems to me to be the agency by which the sound is produced.

C. The first sound of the heart is caused by the impact of the blood driven by the action of the muscular walls of the ventricles against the block produced by the columns of blood in the pulmonary artery and aorta which press upon the semilunar valves.—I would adopt the explanation suggested by my valued friend, the late Dr. C. J. B. Williams, that "sound is a phenomenon resulting from resisted motion." Let us examine the condition of the circulation with regard to this particular point—namely, resisted motion. In this inquiry I have derived most important assistance from the admirable and elaborate researches of Professor Bell Pettigrew, F.R.S., first on "The Arrangement of the Muscular Fibres in the Ventricles of the Vertebrate Heart," published in the Transactions of the Royal Society of London, 1864, and, secondly, on "The Relations, Structure, and Functions of the Valves of the Vascular System," published in the Transactions of the Royal Society of Edinburgh, 1864. These refer especially to the left ventricle, but, at the same time, it is to be observed that what applies to this ventricle applies, only in a lesser degree, to the right ventricle. Professsor Pettigrew explains the manner in which the column of blood, projected from the heart into the aorta, is formed by the union of three columns—an arrangement which results from the mechanism of the heart as fully described by him. These columns ultimately unite into one before reaching the orifice of the aorta. The columns have a spiral motion, which is the result of the spiral arrangement of the musculi papillares, of the spiral arrangement of the fibres composing the walls of the ventricle, as well as of the spiral shape of the left ventricular cavity itself. These points, illustrating the character of the flow of the current, are shown in the blood-cast from the interior of the left ventricle of a horse, which, by permission of the President of the Royal College of Surgeons of England, I am able to submit to examination.

By this spiral, or what might be called "rifle," motion the blood is seen to be directed against the segments of the semilunar valves, which are thereby hastily thrown apart, the spiral current being continued for some distance within the aorta. The beautiful rifle mechanism here described is constructed with the definite objects of giving precision to the direction of the moving body against a given point and of securing greater velocity and force in that body—the moving column of blood. We have, in fact, here represented in nature—a matter of the deepest interest to the biologist—the mechanism of the comparatively modern rifle. The resistance to the stream of blood issuing from the ventricle is offered by the block formed by the column of blood resting on the aortic valves. These in their action are described by Professor Pettigrew as "closed by a spiral movement, by which these valves are wedged, and, as it were, screwed, more and more tightly into each other"; the movement here—the spiral movement—being caused by "the direction of the sinuses of Valsalva, which curve towards each other and direct the blood in spiral waves upon the mesial line of each segment."[9]

We find that various estimates have been given of the absolute propelling power of the ventricles and of the resistance of the column in the pulmonary artery and in the aorta respectively. For example, Professor Michael Foster says: "If we take 180 grammes as the quantity in man ejected at each stroke at a pressure of 3·21 metres of blood, this means that the left ventricle is capable at its systole of lifting 180 grammes 3·21 metres high—i.e., it does 578 gramme-metres of work at each beat."[10] Different estimates of the propelling force are given by physiologists, and the estimates of the resistance vary more even than the estimates of the propelling power. It will therefore suffice to say that authorities are substantially agreed that the driving power and the resistance are in the proportion of 4 to 3, the really important point for our present purpose being the relation they bear to

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[7] Ibid., vol. lx., p. 263.

[8] Ibid., vol. lvii., p. 617.

[9] Transactions of the Royal Society of Edinburgh, vol. xxiii.

[10] As an illustration of the great mechanical force exercised by the muscular walls of the heart, Professor Michael Foster says that "the work of the whole heart during the day would amount to 75,000 kilogramme-metres, which is just about the amount of work done in the ascent of Snowdon by a tolerably healthy heavy man" (Text-book of Physiology, by M. Foster, M.A., M.D. Lond., 1893). Professor Haughton, F.R.S., in his learned and most interesting work on "The Principles of Animal Mechanics," says that "the daily work of the left ventricle is equivalent to lifting 89·7 tons through 1 foot" (Longmans, London, 1893).

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each other. In the motion thus described and the resistance we have all the elements for the production of a sound; and a sound being produced, we ask what it is. The reply must be: the first sound of the heart, the cause of which we now seek.

If it be admitted that sound is a result of resisted motion we have in this instance a remarkable illustration of movement and resistance. The movement of the blood with all the force, precision, and velocity of a rifle or spiral movement is directed against a fixed and definite resistance, the moving power and the resistance being capable of definite measurement and found to be quite sufficient themselves to explain the source of the sound of which we are in search. This explanation was first suggested to my mind many years ago by the occurrence of a case of disease in which the aortic valves, being completely broken down by disease, became inadequate to their function. A murmur of such intensity was produced that it was audible at two or three inches from the wall of the chest without any intermediate communicating body. With a view to determine how far this murmur might be conducted along the course of the circulation I examined the femoral artery. There I found that the murmur was not conveyed to the ear, but a sound precisely resembling the first sound was heard—a sound caused by the pressure of the stethoscope resisting the motion of the blood in the artery, which, the valves being destroyed, thus received the full force of the ventricular contraction. My attention was thereby directed to the obstruction offered by the aortic valves in health to the blood in leaving the ventricle. I felt the case to be so interesting that I submitted it to a meeting of the Harveian Society, and my observation is recorded in the minutes of the meeting, April, 1852. From that time to the present I have taken every opportunity of investigating the subject. Observations have been made on the course of the circulation in the femoral artery under like circumstances by Duroziez, Moulie, von Bamberger, and others. These observations, however, have had reference more especially to the diagnosis of disease of the aortic valves, and I mention them here only as indicative of interesting investigations having been made on the femoral artery in cases of diseased aortic valves. The observers named make no special reference to the first sound of the heart in health.

Objections may be offered to the explanation of the first sound of the heart here brought forward, founded on the fact that this sound is heard more distinctly at the apex of the organ, a point removed from the seat of the valves. The observation is perfectly correct, but the explanation is simple. The muscular walls of the heart are connected, as above described, with the fibroid ring which is intimately associated with the semilunar valves. The sound produced at these valves is communicated to the apex of the heart through the fibroid ring and the muscular walls, which at the moment of systole are tense and firm. The sound thus conducted reaches that portion of the heart which is uncovered, and which is in contact with the walls of the chest. But, on the other hand, when opportunity offers it has been found that the sound in question is heard over the aortic valves more distinctly than in any other situation. A remarkable case of this kind has been related by M. Cruveilhier, who was invited to see an infant just born presenting a complete case of ectopia of the heart. He says: "On examining the heart thus exposed both sounds were distinctly heard over the base, and *not* at the apex." He remarks: "We must not forget that one element of the sound, that produced by the shock of the heart against the chest-wall, is absent." [11]

Another point of interest is that which has already been alluded to in the case of typhus fever, as described by Dr. Stokes—namely, that the sound disappears last over the semilunar valves, and also that the returning sound is first heard in the same situation. It is also an object of great interest to compare the characters of the two sounds in relation to the seat of their origin at the semilunar valves. In the first sound we have the character of propulsive force and sustained action, softer and more prolonged than the second sound, which is sudden, sharp, and short, as if produced by an abrupt mechanical disturbance. These distinctions, which may be readily recognised in various degrees by careful observation, serve to convince us that the sounds are both produced at the same point—at the semilunar valves, each by its own single and simple agency.

[11] Gazette Médicale, 1841, p. 488.

D Lastly, sounds resembling the first (and second) sound of the heart can be produced artificially in accordance with the view contained in the preceding communication.—The experiment is thus made: a sheep's heart of good size (or that of a calf) may be used. It must be carefully cleared from pericardium, leaving the large vessels and pulmonary veins as far as possible intact. The orifices of the pulmonary veins must be laid into one, so as to permit a sufficient opening into the left auricle through which to divide the attachments of the mitral cusps and the musculi papillares in the left ventricle, taking care in doing this not to injure the aortic segments when detaching the cusp that lies next them. The coronary artery must next be ligatured, and also the innominate artery where it springs from the aortic arch. The right auricle and ventricle should be removed. Through the opening made by laying into one the orifices of the pulmonary veins a bone nozzle should be passed. It is well, also, to ligature the auricular appendix and any points from which water may issue when the ventricle is filled. To the posterior orifice of the nozzle rubber tubing should be attached, communicating with a source of water-supply, placed on a higher level; and another portion of rigid guttapercha tubing, about three feet long, should be introduced into the aorta. If, now, the ventricle be filled with water by means of the tube in the left auricle the water will of course pass into the ventricle and thence up the aorta, a portion of the water resting upon and closing the aortic sigmoid valves.

If, further, the ventricle be compressed periodically in imitation of systolic contraction, and allowed to relax in imitation of diastolic relaxation, a sound closely resembling the first sound of the heart will be produced when water is propelled from the ventricle into the aorta, and another closely resembling the second sound when propulsive movement ceases, and the sigmoid valves again close under the superincumbent weight of water in the aortic tubing. As the fluid rises in the guttapercha tube the pressure on the valves increases and the sound becomes more marked; when the fluid, on the other hand, diminishes the sounds become less distinct. If the heart be placed horizontally the sounds become wobbly. The terminal piece of small diameter of a binaural stethoscope gently placed over the aorta at its commencement is most suitable for observing the cardiac sounds in this experiment.

The experiment here described, when first suggested by me, was submitted, with the assistance of Dr. Sibbald, to my lamented friend, the late Dr. Sharpey, and to Sir James Paget, who were quite satisfied that with the increase or diminution of the column the sounds closely resembled those of the heart in man, and that they became more or less distinct in proportion to the quantity of fluid contained in the tube.

In conclusion, I may say that I was moved to undertake and continue this inquiry by a desire to obtain a solution of what seemed to by an insolvable problem, and also by a belief that a correct explanation of the cause of the first sound of the heart would be of practical value in the study of the clinical phenomena of diseases of this organ.

I would wish further to add that the explanation of the cause of the first sound of the heart given in this communication being so different from that hitherto accepted may seem calculated to create difficulties in the diagnosis of valvular disease of the heart. Closer consideration will show, however, this not to be the case, but that, like all accurate knowledge, it will be found to simplify and not to confuse. It will afford an explanation of the relations of certain morbid phenomena which are at present unintelligible—such, for example, as that a systolic murmur may be heard at the apex whilst the first sound is audible at the base free from murmur; and it will serve to encourage a closer study of the relation between muscular contraction of the walls of the heart and the tension of the vessels of the system.

Harley-street, W.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—The new convalescent home at East Finchley was formally opened by the Duchess of Albany on Wednesday last. The home is designed for certain cases of epilepsy, hysteria, and kindred affections in women and children. The old home was quite inadequate, and the present country branch is a necessity for the successful treatment of a large number of the patients who are now admitted to the hospital in Queen-square. The new home, which contains forty beds, has been built and equipped at a cost of £10,000.

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VESICO-VAGINAL FISTULA; WITH A DESCRIPTION OF A NEW METHOD OF OPERATION.

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THAT operations for the cure of vesico-vaginal fistula are even now sometimes futile will, I believe, be admitted. Even in the latest list of any importance—that of Milton of Cairo—out of 79 operations 41 were useless. Patients were cured after one operation in 21 instances, after two in 10 cases, after three attempts in 6 cases, whilst 1 case required four operations to effect a cure. In 12 cases no benefit at all was obtained. The lesion is one which is situated in an awkward position for operative work, and one surface at least of the tissue involved is constantly bathed by a fluid which, when it is no longer confined to its own territory, can become very acrid and damaging. Any union which depends for its success upon primary adhesion, if exposed to the action of this fluid, will be extremely likely to break down and allow percolation through into the track of the sutures, and consequent failure. It is necessary, also, with a view to future comfort, that the re-formed bladder should be lined entirely with mucous membrane, any raw surface left being a constant menace, as forming a nidus for the deposition of calculous material. Nothing can be more discouraging to the patient or more exasperating to the surgeon than to see urine once more escaping per vaginam after a tedious and painstaking effort to close the leak. And yet, if the patient determines to leave matters *in statu quo*, she condemns herself to a most miserable existence, the object alike of pity and disgust to all her friends.

Anything like success in the treatment of vesico-vaginal fistula would appear to be a matter of comparatively recent history. Sir James Simpson, writing in 1859, says: "With others I used to regard a patient afflicted with vesico-vaginal fistula as a case generally beyond all relief and all hope." Cumin in 1824 says: "The hopeless nature of these fistulæ is generally acknowledged, and by many they are at once abandoned as incurable"; and Richerand declared that frequent ablutions and a urinal were the *only* means calculated to diminish the trouble inseparable from this disgusting infirmity. And although, as Milton's list shows, present results are not all that could be wished, there has, curiously, been little alteration in the mode of attack by the surgeon during the past fifty years. If the later writers, as Clifford Allbutt and Playfair are consulted, it will be found that all the operations mentioned date back many years, and that in all the edges of the fistula are, without exception, the parts attacked. That they shall first of all be made raw is the essential preliminary, whether the paring method of Sims, Bozeman, Simon, and others, the splitting method of Langenbeck, Collis, and Tait, or the elytroplasty of Jobert and Milton be adopted; the various paring methods differed only in the various angles which the pared surface bore to that of the bladder, the importance attached to preliminary preparation of the patient, the use or non-use of clamps to hold the ends of the stitches or to regulate the position of the flaps, the material of which these stitches were composed, and the position of the patient during operation. The splitting method was the same, whether practised by Langenbeck, Collis, or Tait, and consisted in the splitting from the edge outwards of the tissue between bladder and vagina, so as to obtain a large raw surface at this point. Elytroplasty supplied flaps from various parts of the surrounding tissue, but to fix them in place it was first of all necessary to pare the edges of the existing opening and to fit and suture the raw edge of the flap to these.

The only operation which did not interfere with the integrity of the fistulous edge was the method of desperation, that of kolpocleisis, which transformed the upper part of the vagina into a portion of the urinary reservoir, preventing any escape of the menstrual fluid except through the bladder, and might have been expected effectually to prevent further pregnancy. A case is, however, on record in which this unexpected occurrence actually happened, coition having probably taken place through the dilated urethra. It may be accepted, then, that except in those cases in which any return to the *statu quo ante* is given up as hopeless, the one subdominant idea in the minds of all surgeons who have attacked these cases has been the absolute necessity of a raw surface at the edge of the fistula as the essential preliminary. But is this so essential? Could we not by any means transform this obstacle, on the removal of which surgeons have expended so much time and ingenuity, into our greatest help towards success?

In describing what I think is a novel method I wish to be understood as referring simply to vesico-vaginal fistula, and not to vesico-uterine fistula, although it is suitable for those in the anterior fornix as well as for those lower down in the anterior wall; practically but little is lost by this, since Neugebauer estimated the cases of fistula involving the cervix as only forming 8 per cent. of the whole number, and Hermann and others have pointed out that in the most frequent class, that produced by prolonged pressure of the child's head upon the maternal tissues, the head rarely becomes impacted until after the cervix has dilated and retracted. So far as other causes, such as removal of calculus through the vagina, pressure of impacted pessary, traumatic injury to prolapsed and distended cystocele, as in a case of Kynoch's, go, these will all act on the vaginal wall alone.

During the last two years my attention has been directed to the subject of fistula generally, and especially to the often unsatisfactory result of the usual operation for fistula in ano. It occurred to me that if it were practicable, good results might be expected from separating the fistulous tube as a whole from the tissues around up to, but not through, its connexion with the rectal wall. Sufficient of this tube should then be removed to leave a projection which could be inverted like a glove finger by means of threads attached to its distal periphery and passed through the fistula into the dilated rectum; by pulling upon these the fistulous tube might be inverted into the rectum and fixed by tying a ligature around it just above the level of the bowel wall. What had been its raw outer surface would now be its inner and might be expected to unite with rapidity, whilst the raw surfaces left outside might be immediately united by sutures. The prolapsed inverted tube might then be partly cut away inside the rectum and the ligature left to cut through the remainder, which would not be likely to happen before the outer structures were solidly united. So far I have not been successful, partly because of the action of the sphincter, but mainly because the fistulous track is very seldom a single tube, but usually burrows in various directions. But neither of these objections hold good with reference to vesico-vaginal fistula. Here we have a short straight track, and if there are muscular movements in the tissues around they are more under control, and will be of importance only if there is coincident tension. The tube, however, as it exists, at first sight would be far too small to have any appreciable effect in stopping the gap; but if, instead of looking upon the edge of the fistula as the limit of our available tissue, we regard it simply as a hinge upon which a tube of mucous membrane taken from the vagina and spreading outwards may be made to turn, we have at once at our disposal as much as may be necessary to close any but the most extensive gaps. Both bladder and vagina are lined by the same kind of tissue, mucous membrane, and it is the continuation of this over the edges of the rent which has been heretofore the greatest trouble. Supposing exception to be taken to this, and the edge be looked upon as scar tissue pure and simple, still it is the same tissue as that which it is intended to form by any of the other operations, with the cardinal advantage that it is old and tough, and has passed beyond the dangerous stage in which absorption of deleterious matters is possible.

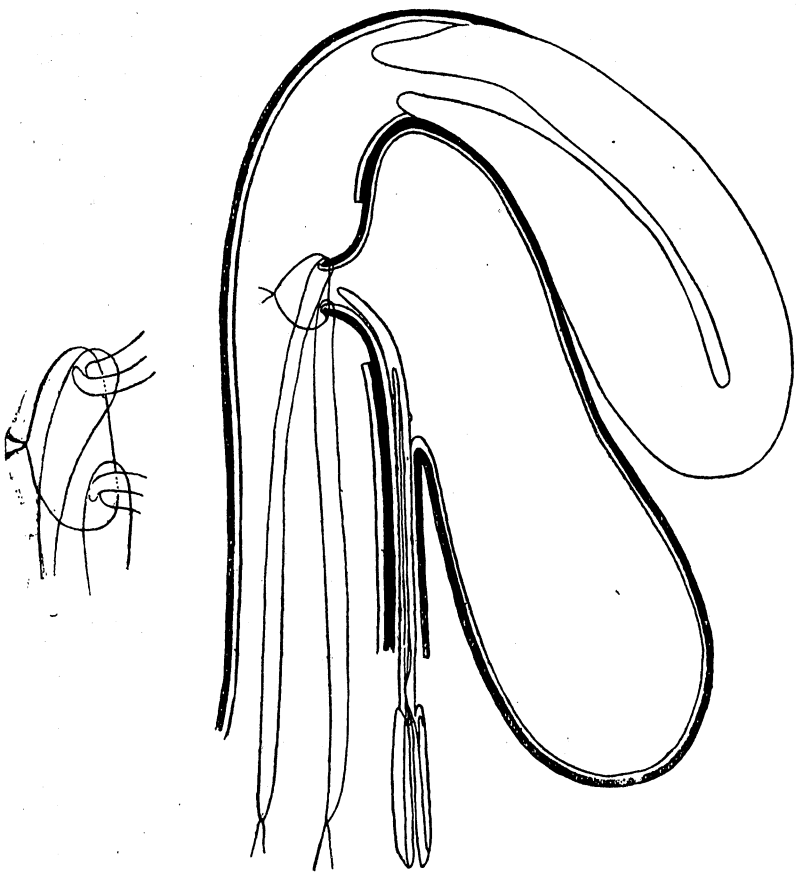
It is clear that it is the re-formation of the bladder which is the essential point. The union of any raw surfaces in the vagina, although important, is of but secondary importance except so far as it may support or strengthen the re-formed bladder wall. If, then, we utilize the vaginal mucous membrane, not as Jobert or Milton, by displacing it as a flap with two raw edges, which require suturing to the equally raw edges of the prepared fistula, with a granulating surface exposed to the action of urine, but with the mucous surface turned towards the bladder cavity, where alone that kind of surface is of primary importance, and with no break in the edges at all, but making a perfectly continuous surface up to a narrow point of union, we shall have gone far towards solving the problem, and the loss of material in the

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vagina will be of very little consequence compared with the advantage obtained.

Acting upon these ideas I suggest, and have carried out with immediate success, the following operation. I pass over, as understood, the extremely necessary preliminary preparation of the patient. The accompanying diagrams will make clear the steps of the operation and the idea of it almost without description. In Fig. 1 it will be seen that a circular incision has been made

FIG. 1.



The flap has been separated and turned into the vagina; two guiding threads are shown in position and the first uniting thread, which passes only around through the connective tissue and muscular coat avoiding the mucosa. A pair of bent forceps is passed through the urethra, its point entering the vulva through the fistula. The guiding threads will be turned up into the vagina and their knots placed between the jaws of the forceps.

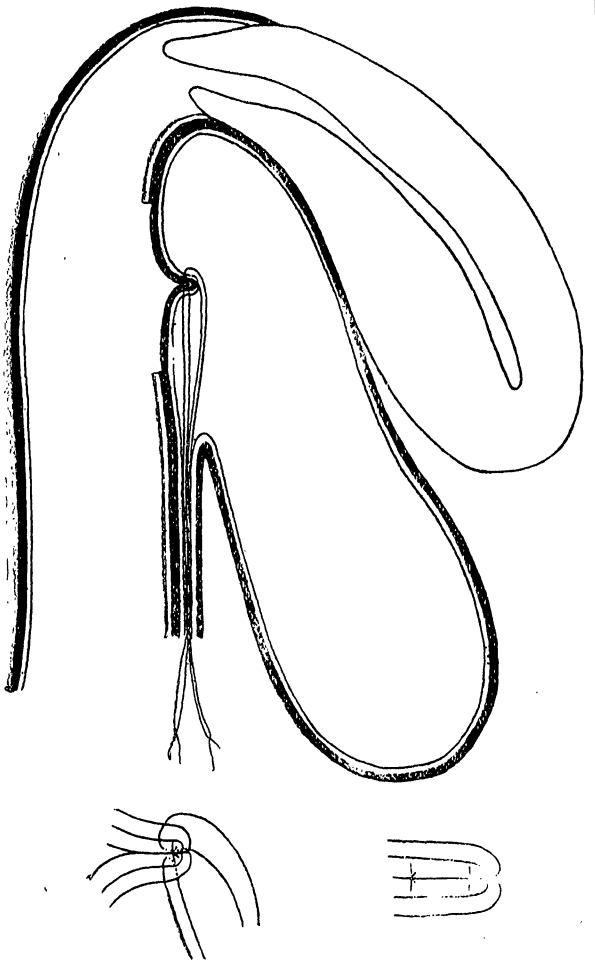
around the fistula, passing through the mucous membrane and part of the subjacent tissue, so that a continuous flap of sufficient thickness can be raised and separated up near to, but not through, the angle at the fistulous edge; the width of this flap must be judged by the surgeon in each particular case. It must, however, be wide enough, when brought together in the way to be described, not merely easily to close the opening, but to project for about a fourth to third of an inch into the bladder cavity at the centre. When so separated it lies like a truncated glove finger attached solely at the edge and continuous with the mucous wall of the bladder. To four equi-distant points in this frill four long double threads are attached, but not knotted, so that they will easily pull out. Each pair is knotted at their ends outside the vagina. Of course, in a section such as shown only two of these double threads can be indicated. When this is done a curved pair of forceps is passed through the urethra until its beak appears in the centre of the frill, the four pairs of threads are brought together, and their knotted ends placed within the grip of the forceps. As this is withdrawn, closed, it will carry the threads through the fistula, through the bladder, and out through the urethra. Gentle traction upon these (see Fig. 2) will invert the circular flap into the bladder in such a way that mucous membrane will face the bladder, whilst the raw connective tissue, surface will face itself and come easily together at the level of the bladder-wall, whilst the innermost edges project as a tube into the bladder cavity; the advantage of this will be shown directly. Whilst traction upon these threads is very gently but firmly maintained, and before the frill is inverted, a fine silk suture is carried round it just above its extremity, the suture passes through the connective tissue, but carefully avoids the mucous membrane. (Fig. 3, enlarged detail). It lies like a purse-string, and it is tightened up just after the inversion takes place. It draws together the raw surfaces of what before inversion was the outer, but is now the inner surface of the frill, and closes the upper extremity of the tuft. When knotted, the ends of this suture are cut off short, and the whole suture is buried by the further inversion produced by a continuance of the traction upon the guiding threads. As soon as this inversion has been carried to such a point that the surfaces of the flaps lie easily in apposition at the level of the bladder-wall another circular suture is applied in the same way and knotted, the ends being cut off. In small fistulæ only one of these sutures may be required; that should always be the one at the level of the bladder-wall. The guiding threads are now divided and drawn out through the urethra, leaving the base of the bladder re-formed (see Fig. 3). As is well known, divided mucous membrane tends to curve over its raw edge. When, therefore, the first suture is tightened the upper surface of the tuft will present nothing but mucous membrane. Fig. 4 shows the appearance of the fistula from the vagina at this stage. The raw surfaces in the vagina, if sufficiently small to be drawn together without tension, are now united by silkworm gut sutures, the ends of which are left long to permit of easy removal. If, however, any tension is likely to be produced, it is better, I think, to apply at once a Thiersch graft taken from some non-hairy portion of skin. This is covered by oiled silk or gutta-percha tissue, and carefully pressed into position. I find careful packing of the vagina with iodoform gauze better than sutures to fix this in position. The patient is made to lie upon her face for ten days, and the catheter is used every two hours the first three or four days.

The advantages I conceive to be obtained by this method are:—1. There is no tension upon the uniting surfaces. 2. Mucous membrane is opposed to the action of urine—that is to say, the contents of the bladder find themselves in contact with the kind of tissue to which they are normally suited and accustomed. 3. The cubic capacity of the bladder is not greatly decreased, as is the case after most of the other operations, but is left normal; therefore, the resulting cure is not discounted by persistent frequency of micturition in after life. 4. The uniting sutures are separated from the contents of the bladder by the entire thickness of the mucous membrane. 5. The uniting surfaces are also thus protected; with the patient on her face, if any urine is projected against the tuft it will drip from its outer layer, which is mucous membrane. 6. Should the ureter be exposed at the edge of the fistula, or should its orifice, which happens in most cases, be near it, it will not, as in the old operation, discharge right on to the line of union, but into a gutter formed of mucous membrane, which cannot be damaged by such discharge, and it will also be noted that it is impossible for the ureteral canal to be compressed by a wrongly-placed stitch, fixed in the middle of the scar, or left outside the re-formed bladder—it must necessarily be

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turned in by the flap thus formed and left in a safe position. 7. In old cases—where, especially, freedom from muscular traction is of most importance—we are provided with a natural replica of Simpson's splint in the tough edge of the fistula, now surrounding the uniting tissues, all the

FIG. 2.



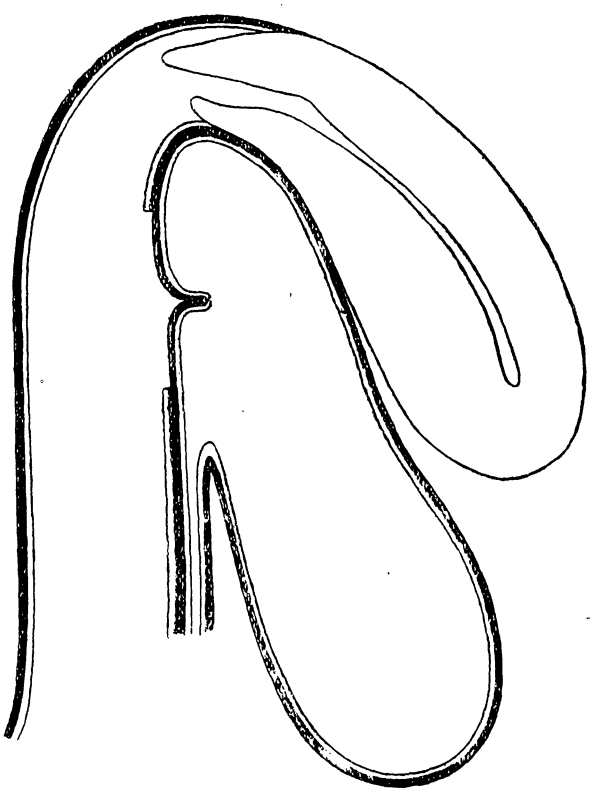
In Fig. 2 the guiding threads have been drawn through the urethra pulling the circular flap or frill into the bladder. The first uniting thread has been drawn tight and knotted, closing the upper extremity of the frill. This is shown also in enlarged detail. The two uniting threads are shown tied, and the frill thus closed above and below.

more effective because it is situated in the tissues themselves. This is another instance of the way in which the altered conditions produced by the operation transform the previous obstacles to success into distinct advantages.

Since this paper was written my attention has been called to one by Professor Ferguson, of Manitoba, in the *American Journal of Obstetrics*, and it is evident that the principle of reversal of mucous membrane from the vagina, which I thought had been original, has been anticipated by him. His operation, however, is otherwise quite different from the one I have described, and does not, I submit, appear calculated to gain all the advantages which are possible. Professor Ferguson separates the mucous membrane of the vagina in much the same way as I have shown, but he makes his flaps only large enough to meet one another easily on a level with the floor of the bladder. They are united in that position by a continuous suture, avoiding the mucous membrane so as slightly to invert the line of union. There is no attempt to pull them inwards into the bladder or to agglutinate them together into a tuft. In all cases the vaginal wound is directly united by interrupted sutures. It appears to me that, first, the resulting line of union will be practically on the same plane as that of the bladder wall, therefore the amount of uniting surface will be much less, consequently the risk of yielding, both immediate and secondary, will be much greater. And most of all, the discharge of urine from the ureters will play directly upon the uniting edges and may very easily contaminate the sutures. As Simpson said in criticising the operations of his day: "There is the danger of infiltration of urine between the raw lips of the wound on the vesical side, provided the internal surfaces of the lips are not entirely closed, which they can scarcely in all cases be expected to be, by the sutures employed." Perhaps the difference between the two operations will be even more clearly apparent if I refer to a kindred condition, differing mainly in position. In supra-pubic cystotomy, when for some reason the bladder has not been immediately closed, a time will come when the opening is no longer required and closure is desired. Closure will here sometimes occur from simple cicatrisation, but now and then it does not. If the bladder-wall be separated from the abdominal, the edges of the opening in the former pared and simply brought together by sutures, one often fails to get primary union, and leakage again occurs; but if the circumference of the opening be drawn in by threads which are carried through the urethra, and the outer surface drawn together by a purse-string suture, the result will be found to be perfect. At least, I have had that double experience.

It would, of course, be presumption to suggest that this method will meet the requirements of every possible case. He is the best surgeon who, with full knowledge, chooses the method best fitted for the individual case which engages his attention, but the more methods he has at his disposal the better will he be equipped and the more likely are his

FIG. 3.



The guiding threads have been divided and withdrawn, leaving the base of the bladder re-formed with no threads exposed to the action of the urine.

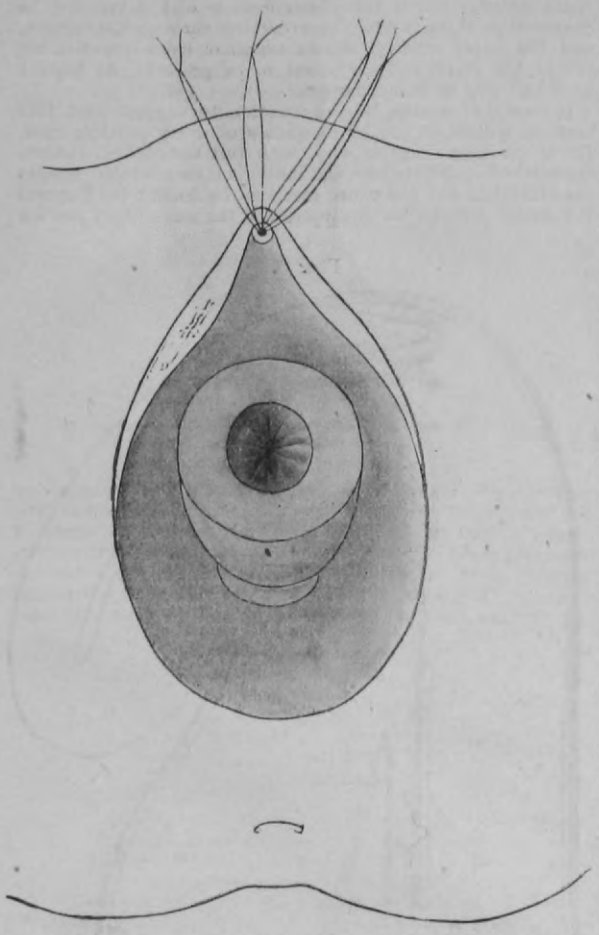
efforts to be crowned with success. The following cases show the result so far obtained. It will be noted that in all there was never the slightest leakage from the time of operation.

CASE 1.—A medium-sized woman, aged thirty-one years, was admitted to hospital on Sept. 22nd, 1896. She had had two children. In the case of the first—who was at this time ten years old—labour was easy, and there were no after-effects. The second was a six months

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dead child. Labour was tedious and was terminated by instruments. The patient had no difficulty with the urine directly after her confinement, but about a fortnight after she first noticed urine trickling from her vagina; this had become much worse lately. She was in bed for three weeks after confinement with, she says, rheumatic fever. In front of the cervix and about half an inch from the vaginal reflexion was an opening which admitted barely two fingers. The opening was smooth and the edge thin. The vagina was slightly excoriated, but there were no deposits. The urine was of specific gravity 1015, acid, and with a very faint trace of albumin. After careful douching, &c., the vagina appeared to be healthy. On Oct. 6th the operation was performed with one purse-string suture. The vaginal wall was united by interrupted silkworm gut sutures. The patient was placed on her face. A catheter was inserted and kept *in situ*. The vagina was irrigated daily with

FIG. 4.



Shows the appearance of the re-formed bladder from the vagina. The guiding threads are shown issuing from the meatus.

boracic solution. There was no leakage after the operation. On the 17th the vaginal sutures were removed and the wound healed. The patient could pass urine herself. On the 29th she was discharged, when she could hold urine six hours easily.

CASE 2.—The patient was a tall, masculine looking woman, aged twenty-eight years, with a flat pelvis. She had had one confinement, which lasted two days and was terminated by craniotomy, which occurred one year previously, when she was five weeks in bed. She had noticed a leakage before getting up. On Nov. 3rd, 1896, the opening admitted two fingers easily; the vagina was tender, somewhat raw, and encrusted in small patches. The urine was slightly alkaline and of specific gravity 1016. By the 20th careful nursing and the use of salol and mineral acids with local treatment produced a fairly healthy vagina, with acid urine, and the operation was performed with two purse-string sutures. A graft was taken from the thigh below the trochanter. The vagina was packed with iodoform gauze. The patient was placed on her face and the catheter was passed every two hours. There was no leakage of urine. On the 23rd some gauze was removed and the vagina was repacked. On the 26th there had been no leakage and all the gauze was removed. Almost all the graft had united, except at one side. This was sloughing and nearly separated, and was cut away, leaving a raw space measuring one inch, which was, however, cicatrising. Douching was performed daily with boracic solution which was followed by insufflation of dermatol. On the 30th there was still no leakage. The patient had passed urine herself. She was not allowed to hold it for more than four hours, but she could do so. She was placed on her back. The vaginal wall had nearly healed. On Dec. 10th the patient was allowed to go home. There had been no leakage. She could hold urine for six hours. The vagina was perfectly healed and felt supple. The grafted patch felt somewhat thinner and smoother than the remainder, but there was no bulging.

CASE 3.—A medium sized woman, aged forty years, married at the age of thirty-five years, had had one child seven months previously to coming under my notice. The labour was tedious, but no instruments were used. A leakage was found on the fifth day. Convalescence was slow. There was no fever. The patient had undergone one operation by another surgeon, but the leakage returned; she was not sure how soon after, but thought that there was some during the first week. On Jan 2nd, 1897, there was an opening of the size of half-a-crown in the anterior wall near the centre, the edges of which were scarred. The patient was very cleanly and the vagina was only slightly sore. The urine was acid, of specific gravity 1020, and there was no albumin or sugar. On the 5th the operation was performed with two purse-string sutures. The vaginal edges were approximated with silkworm gut, two lateral incisions being made to relieve tension. She was placed on her face. Daily douching was performed after the first four days, during which the vagina was lightly packed with iodoform gauze. The catheter was used every two hours for two days, after which she passed urine naturally, but was not allowed to hold it for more than three hours at a time. On the 20th the vagina had healed. The suture was removed on the 13th, and the patient has had no leakage since the operation.

Manchester.

A CASE OF

ADDISON'S DISEASE IN A CHILD TREATED FOR A FEW DAYS WITH SUPRARENAL EXTRACT WITHOUT BENEFIT; CHARACTERISTIC LESIONS FOUND POST MORTEM.

BY JUDSON S. BURY, M.D. LOND., F.R.C.P.,
SENIOR ASSISTANT PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY.

THE following case is noteworthy on account of (1) the early age of the patient—Addison's disease being exceedingly rare under the age of fifteen; (2) the history of a temporary discolouration of the skin occurring one year before the onset of the definite symptoms of the disease; and (3) the family history of phthisis and of brain disease. As regards the treatment of Addison's disease some recently reported cases strongly suggest that an extract of the suprarenal capsules may prove to be of great service. Many of these cases are reviewed by Dr. Ringer and Dr. Phear in a paper published in the Transactions of the Clinical Society for last year. They record a case of their own in which temporary improvement followed the administration of suprarenal extract; the pigmentation diminished in intensity and the patient became brighter and stronger.

A girl, aged thirteen years, was admitted under my care at the Manchester Royal Infirmary on June 6th, 1896. Her mother told me that she was always a delicate child, was easily tired, and always seemed to be very sleepy. When an infant she attended a children's hospital for rickets and diarrhœa, but did not suffer from any other definite illness before the present one. She had never had a severe fall or

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received any bodily injury. About two years ago she stayed for two or three weeks with some friends at Alderley Edge. On her return to Manchester it was noticed that she looked dark coloured, as if much sun-burnt. The neighbours said "If she had stopped there another week she would have been quite black." "Her body was brown all over." But in a few weeks she became a natural colour again. The present illness began about twelve months ago with symptoms of gastric disturbance; thus "she could not take her food properly; it turned on her stomach, and she began to vomit." Sometimes she vomited several times a day. She also suffered from severe headache. On three occasions she fainted. A few weeks from the commencement of her illness a change in the colour of her skin was noticed, and it gradually became darker. The schoolmaster used to send her home from school because she had not washed herself properly, and the patient used to cry when she got home, saying, "I had washed myself." She left school on Jan. 20th—her thirteenth birthday. During the last two months she vomited every other day, and gradually became weaker. She was the eldest of a family of ten, of whom four other children were living and well. The others died in infancy—one from whooping-cough and convulsions, another from convulsions, another from "dentition," another from hydrocephalus, and another from congestion of the brain. Her mother's sister died at the age of thirty-five years from phthisis, and a sister of her father died aged thirty-one years from epilepsy, dementia, and phthisis. On admission she was found to be a thin, slenderly-built child, and had obviously wasted to a slight degree. The discolouration of the skin was the most striking feature; she looked like a Mulatto, all parts of the surface of the body being of a brown colour. The tint varied in depth in different parts, but the transition between a dark brown and a light brown was everywhere quite gradual. The bronzing was most intense at the back of the neck, on the dorsum of the hands, on the lower part of the abdomen, and over the knees; it was least intense on the palms of the hands, the soles of the feet, and over the calves of the legs. No pigmented moles could be found. The nails were of normal colour and the conjunctivæ were pearly white. A faint, patchy pigmentation was seen on the mucous membrane of the lips and the inside of the mouth. The tongue was free from discolouration. No enlarged glands could be found and nothing abnormal could be detected on a careful examination of the chest and abdomen. She complained of pain in the epigastric region, which was worse after food. There was slight tenderness on pressure over each lumbar region, and palpation set up tonic spasm of the abdominal muscles. The spine was free from pain and tenderness. The pulse was 96, regular and feeble. The urine was acid and free from albumin and sugar. The patient was able to walk, but her appearance and action exhibited great feebleness. There was no paralysis and no alteration of cutaneous sensibility. The knee-jerks were increased and the wrist-jerks appeared to be unduly irritable; there was no ankle clonus. The superficial epigastric abdominal and plantar reflexes were exaggerated. She was ordered a bismuth and soda mixture and on June 9th half a tabloid of suprarenal extract to be taken three times a day. On June 16th a freshly made extract was substituted for the tabloids; suprarenal capsules from the sheep were pounded up in a mortar with glycerine in the proportion of one capsule to a drachm of glycerine, and a teaspoonful of the mixture was given three times a day. Since admission the patient had often vomited and no improvement could be noted in her general condition. On June 17th she became decidedly worse, and the pulse was only just perceptible. At 4 30 on the morning of June 18th she had a convulsion and became unconscious. At 10 A.M. she lay with her eyes half open in a state of deep coma; no pulse could be felt at the wrist, and the heart sounds were almost inaudible. The respirations were about 36 to the minute and irregular in rhythm, and inspiration was accompanied by gaping movements. She died at noon.

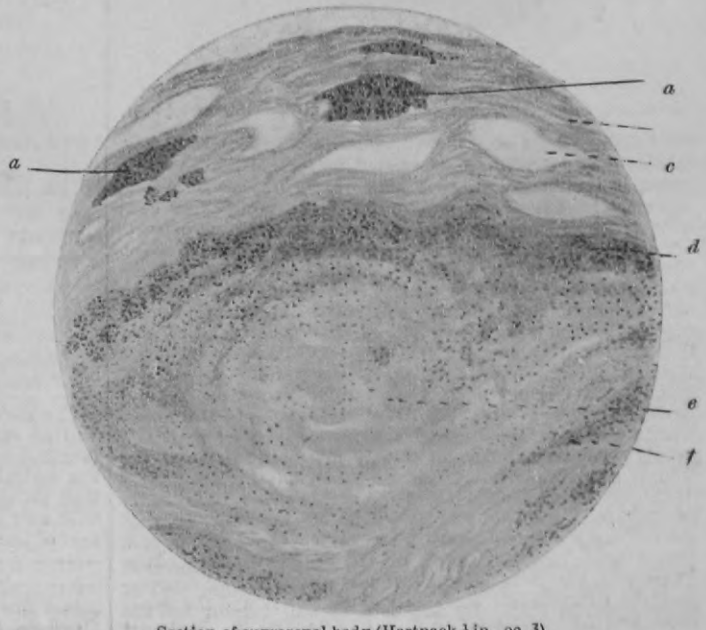
Necropsy. — At the necropsy made by Dr. Kelynack on the following day the suprarenal capsules with adjacent portions of the spleen, liver, kidneys, and other tissues were carefully removed for subsequent dissection and examination. But few changes were found in any of the other organs. The membranes of the brain were unduly congested; several hæmorrhages were found beneath the visceral layer of the pericardium; there were some slight pleuritic adhesions on the left side of the chest but none on the right side. The bronchial and other glands were normal and no signs of tubercles could be found in the lungs or other organs. The thyroid gland was smaller than natural, but otherwise normal. The abdominal cavity did not present any abnormal appearances, and the spleen, liver, kidneys, stomach, and

FIG. 1.



Longitudinal section of the left suprarenal body as seen by the naked eye.

FIG. 2.



Section of suprarenal body (Hartnack ⅓ in., oc. 3).

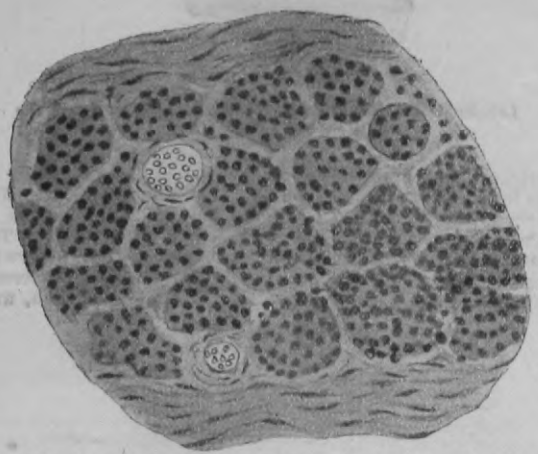
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intestines looked quite healthy. The adrenals were enlarged and firm and adherent to the surrounding tissues.

For the following report and accompanying drawings I am indebted to my friend Dr. W. E. Fothergill: "The right and larger body had the usual cocked-hat shape. A piece of diaphragm was adherent to one end of it; also several flakes of fat. Its length was 6·5 c.m., its breadth 1·5 c.m., and its depth 2 c.m. The coverings of fat and connective tissue were closely adherent to the organ, so that no definite fibrous capsule could be found. Transverse sections did not show the usual differentiation into cortical and medullary portions of tissue. The organ was rather seen to be composed throughout of irregular septa of fibrous tissue which separated masses of light colour and caseous consistency. There were cavities centrally placed in several of these masses. The left and smaller body was less regular in shape than its fellow, being thicker and deeper at one end than at the other. It still, however, would be recognisable as a suprarenal body. Its length was 4 c.m., its breadth 1·2 c.m., and its depth 1·5 c.m. Splitting it from end to end, it gave tough resistance to the knife, and a distinctly gritty feeling was recognised in parts, which on subsequent examination were found to be calcareous. The structure was altered just as in the other body, there being no cortex or medulla visible, but irregularly distributed caseating masses of varying size separated by fibrous septa. (See Fig. 1.)

Microscopical examination.—"Slices of both bodies were hardened and cut by the paraffin method, the celloidin method, and the combined method. The inspection of these showed both bodies to be in an exactly similar condition. As regards the characteristic structure of suprarenal bodies, the condition was as follows: The capsule was thicker and denser than usual, and contained numerous blood-vessels.

FIG. 3.



An island of unaltered cortex—a portion of Fig. 2, *a* (Hartnack ⅓ in.).

The cortical layer was recognisable only in a few places, notably in small islands surrounded by fibrous tissue, which lay round the margin of the organ embedded in the thickened capsule. In these islands were groups or columns of cells lying packed together in the interstices of a delicate fibrous stroma. They had large round nuclei, which stained deeply with hæmalum. The cell outlines were faint. There was no trace of the medullary layer, or of the vessels or nerves supplying the organ. Thus within the thickened capsules all the tissues were altered. In the centre of each of the masses of caseating matter was amorphous débris staining faintly with eosin or picrocarmine (Fig. 2, *e*), around this was more débris, staining more darkly and having scattered through it the nuclei of the cells characteristic of the cortical zone. These nuclei stained deeply with hæmalum, and closely resembled those in the islands of normal tissue. Round this band of incompletely destroyed tissue was a layer (Fig. 2, *d*) in which fairly healthy cells were crowded very closely together, so that their deeply stained nuclei gave under the low power a purple zone round the pink of the débris in the centre. There was, however, no trace of the characteristic arrangement in columns of these cortical cells. Round the whole mass was fibrous tissue (Fig. 2, *b*) arranged in concentric layers, and enclosing vessels (Fig. 2, *c*). No giant cells were visible in any of the sections examined. But the lesion was undoubtedly tuberculous in appearance. The semilunar ganglia and a portion of the left great spanchnic nerve were examined microscopically, but there was no evidence of any pathological change in these structures."

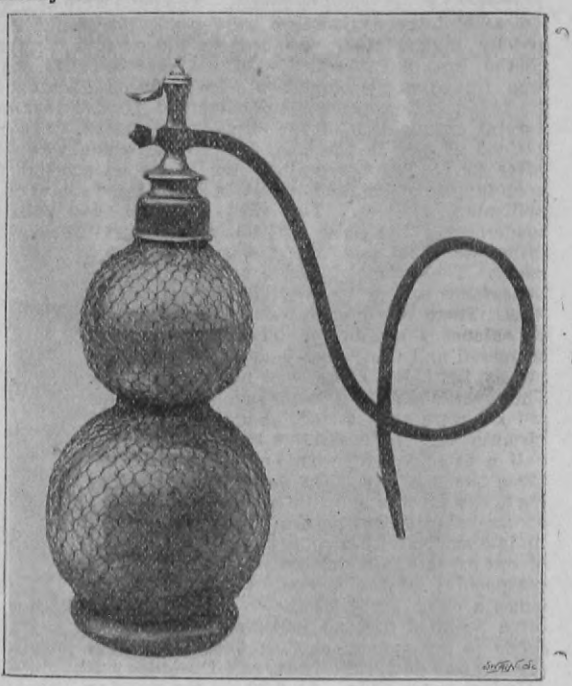
Manchester.

A SIMPLE APPARATUS FOR GASEOUS DISTENSION OF THE COLON:

WITH NOTES OF THREE CASES OF INTUSSUSCEPTION TREATED BY IT.

BY R. A. LUNDIE, M.A., B.SC., M.B., F.R.C.S. EDIN.,
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IN a case of intussusception that came under my care some years ago I tried, among other methods of treatment, the introduction of the contents of a syphon bottle of soda-water through a rectal tube, as recommended by Treves[1] and others. While it did produce a rapid distension of the colon, this was obviously much less rapid than would have been the case had gas alone been used, and when the bowel contracted and expelled the mixture of water and gas it returned not without discomfort and inconvenience. The latter disadvantage is also present in the method strongly recommended by Von Ziemssen[2]—viz., introducing in succession into the rectum solutions of bicarbonate of soda and of tartaric acid. In the house where my next case occurred there happened to be a seltzogene, and it struck me that this could be made to answer my purpose better than an ordinary syphon. I found, as I expected, that it was a great improvement, and showed the device to the Edinburgh Medico-Chirurgical Society.[3] As I recently had the opportunity of using it in another case I think it well to make it more generally known.



The illustration renders description almost superfluous. It will be seen that the upper globe only is charged; I have found the most convenient method of effecting this to use the tartaric acid in large crystals, not in powder, in order that its solution and the consequent evolution of carbonic acid may be somewhat delayed. Pour as usual the charge, first of tartaric acid and then of bicarbonate of soda, into the

[1] Intestinal Obstruction, p. 444.
[2] Deutsches Archiv für Klinische Medicin, 1883, vol. xxxiii pp. 235-245.
[3] Vide Edinburgh Medico-Chirurgical Journal, June, 1893, vol. xxxviii. p. 1146.

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upper globe of the seltzogene; after adding a little water quickly withdraw the funnel, introduce the tube, and screw it home as speedily as possible. A piece of plain india-rubber tubing, with a rectal nozzle attached, completes the apparatus.

The patient's lower bowel should be emptied by an ordinary enema before distension with gas is tried. If this has been done it will be found possible to distend the colon several times in succession, allowing it time to expel the gas before more is introduced, without disturbance from escape of fluid. I have not found it necessary to press the buttocks together round the tube, or to resort to other means of preventing the escape of the gas, and so of increasing or prolonging the pressure and the distension of the colon. This could easily be done when desirable—e.g., if the method were employed for diagnostic purposes. Nor have I found it necessary to give chloroform; when pain is produced, though it may be sharp, it is only momentary. When the tap is opened it will be found that the gas escapes and the patient's abdomen distends very rapidly; a second or two will probably suffice to inflate the colon as much as is required. In this rapidity, it seems to me, lies the chief advantage of the method in the treatment of intussusception; strong and even pressure is brought to bear so quickly that the constricting muscular fibres have probably not time to contract in response to this stimulus until it has reached its full strength. As a dislocated shoulder-joint may sometimes be reduced with ease if the patient be taken unawares, and reflex fixation of the muscles thus avoided, so I think this sudden distension of the intestine anticipates, and so to a large extent escapes, the impediment to reduction caused by that reflex fixation of the intussusception which any stimulation of it is sure to produce. The latter case, moreover, presents one great advantage over the former; for the latent period of the unstriped muscular tissue with which we have to do is much longer than that of voluntary muscle.

It may appear at first sight a violent and dangerous method of treatment; but it must be remembered that the intestines are supported by the abdominal wall, and that so long as there is no gangrene or deep ulceration rupture is hardly possible. Indeed, Von Ziemssen says that he has tried in vain to rupture by inflation outside the abdomen intestine taken from the cadaver while still warm. If, however, the symptoms have been so severe or of such duration as to suggest the possibility of gangrene, inflation should not be attempted unless the operator is prepared to proceed at once to laparotomy in case of rupture. Though my experience is confined to cases where I believe intussusception was present, I have no doubt that this method might safely and profitably be employed at an early stage in various other forms of obstruction. In Von Ziemssen's paper above referred to many conditions are enumerated in which distension of the colon with gas may be of use both for diagnosis and treatment; and in any of these I think the device above described would be found convenient. It has probably been employed before, but I have been able to find no mention of it, and hope this note may induce those who have the opportunity to give it a trial.

I append very condensed notes of all the three cases in which I have used the apparatus. If the symptoms and signs observed do not actually demonstrate the presence of intussusception in any of them, yet that appeared to be the most probable explanation of severe and alarming abdominal symptoms in each; and as in each inflation was followed by immediate and striking improvement, and seemed the turning point in a very anxious case, their interest is not entirely dependent on the accuracy of that diagnosis.

CASE 1.—A woman, aged sixty years, was subject to occasional diarrhœa. On Oct. 11th, 1891, she had sharp pain in the abdomen on awaking in the morning. There was much vomiting. A small hard lump was noticed in the region of the gall-bladder. Morphia was administered. On the 12th there was much pain and vomiting. There was a much larger lump, very tender, elongated, below and parallel to the margin of the liver. The colon was thrice inflated in the evening; she had sharp pain each time. The elongated tumour had gone, and the pain and the tenderness had very greatly diminished. On the 13th there was renewed pain, but less severe; it was not relieved by inflation. This proved to be due to fæcal impaction, which was removed by enemata of olive oil continued for some days. Subsequently the patient had several attacks of fæcal impaction in the same region, but without anything to suggest intussusception. She died in 1895 from malignant tumour in the right hypochondrium. The exact origin was not made out.

CASE 2.—A delicate woman, thirty-four years of age, was subject to occasional attacks of abdominal pain. On the evening of Oct. 31st, 1892, she experienced sudden violent pain in the abdomen more severe than ever before, but not distinctly localised. The patient was much collapsed. No tumour was made out. Morphia was administered hypodermically. On Nov. 1st the pain and vomiting were controlled only by morphia. In the evening inflation gave no relief. Some blood-stained mucus was passed. On Nov. 2nd the patient was much in the same condition. In the evening inflation was repeated. There was sudden, sharp, localised pain above the pubes, followed by great relief. No more morphia was required, and rapid recovery followed.

CASE 3.—A boy, aged eleven years, healthy, but not very robust, on July 11th, 1896, after unusual exertion, ate a large and hurried meal, and continued to rush about afterwards. At 6 P.M. he was seized with sudden pain on the right side of the abdomen. There was localised tenderness from the liver to the right iliac fossa. Repeated vomiting occurred, followed each time by temporary relief. The symptoms continued after the stomach and bowels were empty. The patient had broken, restless sleep. The pulse was quick and small. The colon was thrice inflated in quick succession on July 12th, at 2 A.M. There was sharp pain at the time. Great relief followed; the pulse improved and sleep was sound and quiet. Vomiting continued at longer intervals till noon, but without any other bad symptom. Recovery was rapid.

Edinburgh.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF ACUTE PULMONARY GANGRENE IN A HEALTHY YOUTH; PYOPNEUMOTHORAX WITH SEVERE SYMPTOMS; INCISION AND DRAINAGE; RECOVERY.

(Under the care of Dr. W. EWART and Mr. MARMADUKE SHEILD.)

IT is curious that so striking a condition as gangrene of the lung was practically unrecognised until it was described by Laennec[1] in 1823. It is usual to deny the existence of cases of primary gangrene, cases in which there is no preceding morbid condition; but undoubtedly cases do occur, as the following report shows, in which pulmonary gangrene suddenly appears in persons who are, so far as can be ascertained, perfectly healthy. V. Babés[2] maintains that careful inquiry will always elicit some source of infection, such as tonsillitis, and Volkmann has insisted on the etiological importance of minute portions of food penetrating into the respiratory passages. The occurrence of micro-organisms in the sputum of pulmonary gangrene was first noticed by Virchow[3] in 1846; he described sarcinæ, and the frequent presence of the same bodies was recognised by Fischer.[4] In 1866 Leyden and Jaffé described the leptothrix pulmonalis as constantly occurring in pulmonary gangrene,[5] and their results were confirmed by Kannenberg.[6] Recent researches agree in the importance of bacteria in the production of gangrene of the

[1] Traité de l'Auscultation Médiate, deuxième édition, vol. i., p. 443.
[2] La Semaine Médicale, Dec. 18th, 1895.
[3] Froriep's Notizen.
[4] Ueber der Vorkommen von Sarcinen im Mund und Lungen, Deutsche Archiv für Klinische Medicin, 1885, vol. xxxv.
[5] Ueber Putride Sputa, Deutsche Archiv für Klinische Medicin, 1866, vol. ii.
[6] Ueber Infusorien im Sputum, Archiv für Pathologische Anatomie, 1879, vol. lxxxv.

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lungs, without, however, according to the leptothrix the exclusive *rôle* which Leyden and Jaffé attributed to it. There is probably no specific organism. The following case is one of those in which the gangrene is very superficial, when, as was first pointed out by Corbin,[7] consecutive pleurisy, often accompanied by pneumothorax is very common. The satisfactory result of the case is probably greatly due to the early stage at which the pyopneumothorax was drained.

A young man, aged eighteen years, was admitted into St. George's Hospital on April 14th, under the care of Dr. Ewart, suffering from pain in the back and cough. He had always been in good health and had never suffered from a cough; when a child he had measles, but had never had influenza. He was a teetotaler. His family history was good, and no relative of his had had phthisis. In appearance he was delicate, tall, and rather thin. His nails were almond-shaped and striated. On April 8th, about ten o'clock in the morning, the patient had been attacked by a feeling of chilliness. This, though severe, hardly amounted to a rigor, as his teeth did not chatter, and there was but slight shivering. He was able to keep about, but on April 9th he had to take to his bed, as he was seized with severe pain in the left shoulder (supra-spinous region), passing downwards to below the inferior angle of the left scapula. On the 10th the pain and cough continued, but he did not expectorate; his weakness was so great that he was compelled to lie on his back, and he was unable to move. For the next four days the pain persisted and the cough also, but still there was no expectoration. He felt hot at times and sometimes shivered. On examination, after his admission on the 14th, he looked very ill and lay on his back in bed, and complained of his weakness and inability to move. His lips and ears were slightly but distinctly cyanosed. The pulse was 88 and the respirations were 36. His heart was apparently normal, no murmurs could be heard, and the apex beat was situated in the fifth space two and a half inches from the sternal margin. On auscultation numerous scattered râles could be heard over both sides of the chest in front. Behind, on the left side, there was dulness downwards from the inferior angle of the scapula, with weakening of the breath sounds, and vocal resonance was deficient over the same area. Scattered râles could be heard on both sides. Owing to pain and fixation of the chest he was unable to spit out the secretion which rose. His tongue was greatly furred. The urine was normal. His temperature was 101° F. A diagnosis of diffused broncho-pneumonia, probably post-influenzal in origin, was made. In the evening of this day the temperature rose to 102·4°; he had a fairly good night, but on the morning of the 15th it was noticed that his breath was very offensive when he coughed. The temperature was normal at 10 A.M., but in the evening it rose to 101·6°. On the 16th the cough continued to be very severe, and one fit of coughing culminated in his vomiting a large amount of whitish foul-smelling muco-pus. The pain continued to be severe. The evening temperature was 99°. On the 17th he felt much more comfortable; his cough was decidedly less, but he had brought up a small quantity of extremely offensive sputum. His face was less flushed. From the 18th to the 25th the symptoms and physical signs continued unchanged, except that dulness in the left upper scapular region became noticeable. He slept well, and his temperature, though very variable, hardly rose above 101°. During the night of the 25th he complained of severe pain in the lower part of the left side of the chest; this pain was relieved by morphia. On the 26th there was dulness on percussion over the left side of the chest as high as the angle of the scapula, with bronchial breathing and bronchophony and decrease of the vocal fremitus—in short, all the signs of empyema. On the 27th preparations were made for aspiration, but finding on re-examination that hyper-resonance had replaced the dulness at the left scapular region Dr. Ewart decided not to aspirate. The occurrence of a limited pneumothorax was suspected, but as a careful examination showed that the heart was not displaced to the right an alternative diagnosis was made of bronchiectasis with sudden evacuation of the contents of the cavity. On the 28th the patient's cough was still very troublesome. He had orthopnœa; the cyanosis was more marked, the pulse very rapid, and the exhaustion extreme. The temperature was 102°. The apex beat was now distinctly displaced to the right, and could be felt in the fifth space one inch to the left of the sternum. Over the upper half of the left side of the chest, both front and back, there were hyper-resonance and loss of breath-sounds, but the lower part continued to be dull. The breath was very offensive, and there was urgent difficulty of breathing. Full confirmation having now been obtained for the diagnosis of gangrene of the lung rupturing into the left pleural cavity and giving rise to pyopneumothorax, Mr. Marmaduke Sheild was called in with a view to operation. Chloroform having been administered, an incision was made into the left pleural cavity through the sixth intercostal space immediately behind the mid-axillary line. A large amount of very fœtid pus and gas escaped and an empyema tube was inserted. At the end of the operation it was found that the heart's apex beat had returned to its normal position. On the 29th, after a fair night, with very little cough and little expectoration, the patient's breathing was still rapid, but his general condition had much improved. On dressing the wound a large quantity of very fœtid pus came away. The amount of discharge steadily diminished, the fœtor became less marked, and he rapidly improved in health. On June 11th the wound, though not yet healed, was small, and from it came but a small quantity of pus, which had no unpleasant odour. Breath-sounds could be heard close up to the margin of the wound in front and above, and also posteriorly down to the level of the incision; but behind and below the breath-sounds were not audible, and this area was dull on percussion. The left side of the chest had noticeably fallen in.

Remarks by Dr. EWART.—The points of interest in this case were the patient's early age, healthy antecedents and surroundings, and the absence of any clue as to the source of infection or of septic influence; the changes in the physical signs, which led to the case being viewed in succession as one of broncho-pneumonia, of empyema, of bronchiectasis, and of gangrene with pneumothorax; the almost desperate condition of the patient at the time of the operation; and, finally, the complete recovery, thanks to the latter.

[7] Journal Hebdomadaire de Médecine, 1830, vol. vii., p. 126.

Medical Societies.

KIDDERMINSTER MEDICAL SOCIETY.

Punctured Wound of Abdomen.—Exhibition of Cases and Specimens.

A MEETING of this society was held at the Kidderminster Infirmary on May 28th, Mr. S. STRETTON being in the chair.

Dr. THOMPSON sent notes of a case of Punctured Wound of the Abdomen with Prolapse of about eight inches of Bowel. The patient was a girl, aged four years, who was brought from the country four miles in a spring cart with the protruded bowel covered by a wet cloth. Chloroform was administered, the opening was enlarged, the wound was stitched up, and a pad and bandage were applied. The child was then driven home in heavy rain. She had no bad symptoms and made an uneventful recovery.

Mr. J. L. STRETTON showed a patient upon whom he had performed Cholecystenterostomy. The first part of the operation was performed, and the Murphy's button was passed on the fourteenth day. There was a considerable discharge of bile and fæces through the gall-bladder, to allay which it was plugged with iodoform gauze, when the discharge appeared to cease. The second operation was then performed. An elliptical incision, including the fistulous opening, was made; the edges of the opening were then freshened, and it was closed with deep sutures, the elliptical opening being brought together over it. The wound healed without any trouble, and the fæces now contained bile, which they had not done prior to operation, showing that there was some communication between the gall-bladder and intestine. Although in this case the operation had been divided, Mr. Stretton thought it would be better in future cases to perform it at one time for fear of the contraction of the newly formed opening.—Mr. STRETTON also showed Seven Calculi weighing sixty grains in the dry state removed from the urethra of a youth. Six of them were in the fossa navicularis faceted together, and were removed with urethral forceps.

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Some few months later the seventh was found impacted in the bulbous urethra and was cut down upon.

Mr. J. P. HOLYOAKE and Mr. E. H. ADDENBROOKE also described cases of Urethral Calculi.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Treatment of Puerperal Septicæmia.—Exhibition of Specimens.

A MEETING of this society was held in the board room of the Medical School, Leeds, on May 27th, Mr. H. BRIGGS, President, being in the chair.

Dr. BRAITHWAITE (Leeds) contributed a paper on the Treatment of Puerperal Septicæmia, based upon sixty-three cases seen in the last eight years. In four cases he had used anti-streptococcic serum, and in three out of the four a considerable reduction of temperature followed, but it was uncertain how much of this was due to douching, purgatives, and other treatment. The serum should be employed at the onset of the fever.—A discussion followed, in which the PRESIDENT, Professor C. J. WRIGHT, Mr. CROFT, Mr. RICHARDSON, Dr. HELLIER, and Dr. GEMMELL took part.

Professor C. J. WRIGHT (Leeds) showed the following specimens: (1) Some Molar Masses removed from a Uterus four weeks after the birth of a living child; there had probably been a twin conception with one ovum blighted; the masses consisted of granulation tissue and contained a few bits of placental structure; and (2) the Placenta from a case of Triplets; this was one large placenta with two cords and a smaller one with one œdematous funis; the amniotic sacs were separate.

Mr. W. A. STOTT (Leeds) showed specimens of Carcinomatous Ovaries, Double Hydrosalpinx, and Double Pyosalpinx.

Mr. CROFT (Leeds) showed a Ruptured Female Bladder. The patient had been operated upon for hæmorrhoids; there was no subsequent retention of urine or catheterisation. On the eighth day there were abdominal pain and distension, followed by a diminution in the quantity of urine passed and symptoms of uræmia. The patient died from uræmia, and post mortem there was no evidence of peritonitis, adhesions, tubercle, or abscess in the pelvis or abdomen.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

The Recent Failure of Hospital Accommodation in Dublin.

A MEETING of this section was held on May 10th, Dr. J. M. REDMOND, President, being in the chair.

Sir CHARLES CAMERON read a paper on the Recent Failure of Hospital Accommodation in Dublin. He mentioned that in 1895 he proposed the institution of a hospitals board for Dublin city and county on the lines of the London Asylums Board, and the scheme was approved of by several of the local authorities, particularly by the North Dublin Board of Guardians, but it was opposed by the council of the Dublin Sanitary Association and by the physicians of several of the Dublin hospitals. Three arguments were used against it: (1) that it would be enormously costly; (2) that there was ample accommodation for the treatment of infectious diseases in existing hospitals; and (3) that it would interfere with medical education. Sir Charles Cameron, however, argued that the existing hospital accommodation was last year proved to be quite insufficient, and that the scheme would, as alleged, seriously interfere with medical education seems improbable, for no one can deny that Edinburgh and Glasgow are medical schools of the first rank, and yet the students in those cities have to go to special fever hospitals to acquire a knowledge of contagious diseases. It is the same in London and other places. Last year when measles became epidemic in Dublin scarlet fever also was prevalent, and the severer cases of those diseases were so numerous that the hospitals were crowded with them. Very bad cases of measles and erysipelas had to be retained in tenements of the most wretched kind, as no hospital accommodation could be procured for them. At the period when the congestion of the hospitals had attained its maximum small-pox broke out on the south side of the city, and no hospital was in a position to admit the first three patients, but fortunately the disease did not spread. In any future epidemic of small-pox it would be desirable to have hospital accommodation outside the city. As regards measles there will always be a difficulty in providing accommodation for its victims on account of the great number of patients. In Glasgow a determination has recently been arrived at to provide full accommodation to meet the wants of the largest epidemic of this disease, and in Edinburgh the foundation-stone of a fever hospital has just been laid which will accommodate 600 patients, including measles cases. Sir Charles Cameron was, on the above grounds, still of opinion that an infectious diseases hospitals board should be constituted for the Dublin district, and that the board should establish a small hospital, a home for convalescents, and make provision for epidemics of measles or scarlet fever.

Dr. FALKINER said that the hospital accommodation in Dublin was quite insufficient in the event of three or four epidemics occurring at the same time. He considered that measles was not a disease which must spread broadcast of necessity.

Dr. J. W. MOORE strongly advocated an isolation hospital for small-pox, and thought it a disgrace that Dublin did not possess such a hospital.

Reviews and Notices of Books.

Practical Manual of Diseases of Women and Uterine Therapeutics for Students and Practitioners. By H. MACNAUGHTON-JONES, M.D., M.Ch., M.A.O. (*Honoris Causâ*) R.U.I., &c. Seventh Edition. Revised and enlarged, with 565 Illustrations. London: Baillière, Tindall, and Cox. 1897. Price 15*s*.

WE are told in the preface "that no previous issue of this work has undergone such complete revision and re-construction as the present one, both in the re-arrangement of the order in which the subject is dealt with, the numerous additions which have been made to the text, and in the large number of illustrations it contains." We observe that attention is called to a recent trial which "has shown how careful the operator and those assisting him should be to make no observation on the case while the patient is in the condition of semi-anæsthesia." The author has not apparently shaken himself entirely free from the teachings of the mechanical system of uterine pathology, so much in fashion twenty years or more ago, as version and flexion are retained on his list as causes of dysmenorrhœa, and a large number of pessaries, including intra-uterine stem pessaries, are still figured. Dr. Macnaughton-Jones advocates forcible dilatation of the sphincters under ether in obstinate constipation. He relates the following case:—

"A lady from —— consulted me for constipation ..... she had ever since [her confinement] been relieved by enemata and with difficulty. ..... On examination I found the uterus healthy and in its normal position, the rectum loaded and hæmorrhoidal. There was a vaginal leucorrhœa. The following day, under ether, I forcibly, with my hand, dilated the sphincters. A few fibres of the external were ruptured; the rectum was emptied of its contents. An olive oil enema was given the next morning. She was placed on cascara sagrada and a mild pill of belladonna and nux vomica, and from this to the day she left England, a period of four months, the bowel was regular, and she never used an enema."

It is not very easy to see what harm there would have been in trying the effect of the olive oil enema followed by cascara and the mild pill before stretching this patient's sphincters forcibly with the hand, especially as she was not leaving England till four months later, but no doubt the author had his own reasons for the course adopted.

We do not think the author describes Hegar's sign of pregnancy quite correctly. He says it consists in the

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uterus losing its pear-shaped outline; "the body is bellied out over the cervix in all the transverse diameters, especially antero-posteriorly." This does not seem to be quite clear. Hegar's sign consists in the very marked softening that takes place during early pregnancy in the uterus at the level of the internal os. This softening is so marked in some cases that on bimanual examination the enlarged body of the uterus has at times actually been mistaken for a tumour separate from the uterus. We observe, by the way, that several proper names are spelt somewhat erratically, which we should not have expected in a seventh edition. Thus Dr. Herman appears several times as Dr. Hermann; Mr. Targett is particularly unfortunate, appearing as Dr. Taggert in the index and at p. 558, and as Mr. Torgert at p. 786; Budin appears twice as Buden; even Spiegelberg is given twice as Spiedelberg; and Paquelin given once at least as Pacquelin. Dr. Macnaughton-Jones still thinks that Sir John Williams's views on cancer of the cervix are not borne out "either by clinical experience or the pathological researches of others." We have rarely seen a book in which the quotations from the writings of other authors are so long and so numerous as in the one before us. As the author states that the book is intended for the student as well as for the practitioner we think it right to say that to our thinking the student knowing nothing of the subject wants something more dogmatic. Thus, at one place the author says he agrees in the main with the opinion expressed by Matthews Duncan in his lecture on "Minor Displacements," and yet he approves of dividing the cervix in some cases of anteflexion and figures a long array of pessaries, including eighteen or twenty figures of intra-uterine stems.

In the chapter on Uterine Displacements there is a long list of some results, direct and indirect, of uterine versions and flexions. Among the results are amenorrhœa, menorrhagia, and metrorrhagia, uterine fibroids, perimetritis, and pelvic phlegmon. The author in the preface claims that his book is an epitome of the teaching and opinions of the greatest living gynæcologists. We think the author is here mistaken to some extent; we do not believe there is a teacher of gynæcology at any one of the London medical schools who believes that, for instance, pelvic phlegmon, perimetritis and uterine fibroids are caused, directly or indirectly, by uterine versions or flexions. We are glad to see that total extirpation of the uterus for prolapse is not countenanced by the author. Although the danger in capable hands may not be great, yet we agree with the opinion he quotes, that "the danger of a surgical proceeding should be at least not greater than the danger to life of the condition which the operation is destined to cure." Among the more noticeable features of the book are the abstracts of the various methods of operating on uterine fibroids. Thus there are good descriptions of Doyen's panhysterectomy, and of Baer's operation among the operations that dispense with the clamp, and of Taylor's method of clamping the pedicle when the extra-peritoneal method is employed. Martin's description of his method of operating is also quoted, and is accompanied by his excellent illustrations, which originally appeared in the Transactions of the Obstetrical Society of Edinburgh. The process by which they have been reproduced has not brought them out quite so sharp as the original figures, but they are clear enough to follow. The chapter on tubal pregnancy, short but remarkably clear, has been revised by Mr. Bland Sutton, and is in every way excellent. There is an extremely large number of formulæ for lotions, medicines, and applications scattered through the book, which will probably form an attractive feature, and there is also a large number of suggestions on the important matter of treatment. There is, too, a useful list of the principal foreign and home spas, with a note of the chief characters of the waters at each.

There is now such a large number of operations, major and minor, in gynæcological practice that it is convenient to have descriptions of them under one cover for reference. We think that there are very few of these operations to which some reference will not be found in the book before us.

DR. RENTOUL'S MIDWIFERY NURSES' REGISTRATION BILL.

DR. R. R. RENTOUL deserves commendation for his unwearied efforts to arrive at a satisfactory solution of the midwives question, but he has not arrived there yet.

The subject is one in which the medical profession is interested in a variety of ways, and the opinions of representative medical men will no doubt influence the action of politicians in shaping the legislative measures which have become inevitable. Dr. Rentoul's draft Bill is entitled, "An Act to Provide for the Training, Compulsory Registration, and Supervision of Midwifery Nurses." The object of the Bill, which is to be applicable to the United Kingdom of Great Britain and Ireland, is to protect the general public, and especially its more uneducated members, so that they may know who are trained midwifery nurses. The Bill does not make it illegal for any woman to help another in a friendly manner, neither does it interfere in any way with existing midwives, but it would put a stop to the holding of examinations and the granting of documents which profess to entitle women to call themselves midwives and to act as such. The leading features of the draft Bill are—(1) the special appropriation of the term "midwifery nurse," with heavy penalties for infringement; and (2) the creation of a "divisional midwifery nurses' board" in each of the three divisions of the United Kingdom. The "midwifery nurse" is defined as "a woman who acts, or is entitled to act, as a midwifery nurse in *all* cases of labour under the direct supervision of a registered medical practitioner, and who nurses mothers and infants under such regulations as are laid down in this Act, or which shall be from time to time laid down by the divisional midwifery nurses' boards." The principal rights and privileges conferred on her, as well as the disabilities and penalties to which she may become liable are as follows: "No person, except such as are registered under this Act, shall be entitled to take or use the name or designation of midwifery nurse, either alone or in combination with any other word or words or letters, or any name, designation, word, addition, or description implying that such person is registered under this Act," the penalty for infringement hereof being liability to "a fine not exceeding £10 for the first offence and £20 for the second or subsequent offence, and to imprisonment until such fine be paid."..... "No person unless registered under this Act shall act as a midwifery nurse in any hospital, infirmary, dispensary ..... or under the supervision or control of any registered medical practitioner." ..... "No person shall be entitled to privately ask for or receive or recover any wages or charge in any court of law for services rendered as a midwifery nurse unless such person is registered under this Act." ..... A certificate of registration under this Act does not render its holder "entitled to grant any certificate of the fact or cause of death, or a certificate of the cause or fact of stillbirth, or any medical certificate. Any person contravening the terms of this Section shall be liable to a fine not exceeding £20 and all costs of suit." ..... "No person shall be granted a certificate of registration to act as a nurse whose age is under twenty-five or over sixty years." ..... "A certificate of training in the duties of a nurse shall not be accepted by the divisional board or committee of examiners unless such lectures or training have been given by a registered medical practitioner." ..... "The period of training ..... shall not be less than six months or more than twelve months." ..... "If any nurse shall conduct any confinement upon her sole responsibility, or shall keep in her possession or use any midwifery forceps, sound, perforator, or any other appliance or instrument or drug, or shall upon her sole responsibility administer any drug to any woman or infant she shall be liable to be censured or suspended or fined or have her name removed by the board from the register." ..... "If any

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nurse shall keep any shop or place for the supply or sale of drugs of any kind her name ..... shall be removed from the register."

Dr. Rentoul proposes to establish in each of the three divisions of the United Kingdom a "Divisional Midwifery Nurses' Board," for the purpose of appointing committees of examiners, keeping registers, &c., the board in England and Wales to consist of eleven medical practitioners, and those in Scotland and Ireland of eight each. The divisional boards are to be elected every fifth year, one member being chosen by each of the six Royal Colleges, one by each of the three Local Government Boards, three members in England and Wales, and one each in Scotland and Ireland by the medical staffs of voluntary lying-in hospitals specified in an annexed schedule, five in England and Wales, and four each in Scotland and Ireland by the registered medical practitioners engaged in practice. "Each divisional board shall be constituted and shall hold its first meeting ..... in such time and place as the President of the General Medical Council shall appoint, and shall draw up regulations as to the time and place of the meetings of the divisional boards and such other regulations as are provided for in this Act, and shall submit such regulations for approval or otherwise to the General Medical Council and to the Privy Council." ..... "The regulations for the guidance of boards shall be drawn up by the divisional boards ..... and may from time to time be revoked, altered, or amended. The same uniform regulations shall apply to each and all of the boards. The regulations so drawn up or amended shall be forwarded to the General Medical Council and to the Privy Council to be approved of or otherwise. ..... The regulations shall be framed in such manner as to secure in each part of the United Kingdom one uniform standard as regards the period of training, the subjects of training, age of entry for examination, conduct of examinations, conduct of registered midwifery nurses, and of all such subjects coming under the notice and authority of each divisional board. Provided that the course of instruction and of examination of candidates for the certificate of registration as midwifery nurse shall not include the theory or practice of medicine, or of surgery, or of midwifery, or of pharmacy, or of dentistry, or any part or branch of these subjects. Provided, also, that if any nurse shall obtain any authority to practise pharmacy or dentistry, or any branch of medicine, surgery, or midwifery, she shall cease to have her name registered on the midwifery nurses register and to act as a midwifery nurse." ..... The board for England and Wales shall each year appoint three committees of examiners, who must be registered medical practitioners, to hold examinations in three different parts of England and Wales; the boards for Scotland and for Ireland shall in like manner appoint two similar committees to examine in two different parts of their respective countries. Each committee shall consist of two persons exclusive of the chairman, and shall meet as often as may be directed by its board. "There shall be paid to the divisional board by each woman who presents herself for examination a fee of £1, half this sum to be charged if she fails in one examination and presents herself for a subsequent examination. The original registration fee for each person registered shall be £1, inclusive of the annual registration fee." ..... "From and after the date of the passing of this Act no person or persons or company or body of persons, or any authority or body now holding any examination or granting any document ..... shall hold any examination or grant any certificate or document which professes to empower any person to act as a midwifery nurse, except as provided in this Act, under a penalty for each such offence of not less than £100, and no person or persons shall ..... hold any examination or grant any document which professes to entitle any person to act as a midwife under a penalty for each such offence of £50, any Act of Parliament or charter or regulation to the contrary notwithstanding. Nothing in this Act contained shall ..... in any way affect the occupation of any woman who at the time of the passing of this Act acts or possesses a certificate which professes to entitle such woman to act as a midwife." ..... "The secretary of each examining committee shall ..... transmit a list of the names of the successful candidates to the divisional board ..... and the registrar ..... shall on receiving the registration fee from the nurse forward to her at her address a certificate of registration." ..... "Every nurse shall each year ..... obtain from the divisional registrar ..... a certificate of registration," the fee for which annual certificate shall be 3*s*. 6*d*. "A midwifery nurse shall within one month of her settling in a district to act as nurse, and in every succeeding year, take or send her certificate of registration to the clerk of the local sanitary authority of the district in which she purposes to act as nurse. The clerk shall keep a written alphabetically-arranged list of the names of such nurses, with their addresses. ..... No fee shall be charged to such nurse for showing her certificate of registration to the clerk. The list of the names and addresses of such nurses shall be open for the inspection of any person during the hours at which the office of the clerk is open, and no fee shall be charged for such inspection. Certified copies of such list of nurses shall be forwarded each year by the clerk of each local sanitary authority in the United Kingdom to the divisional board of that division of the kingdom in which the sanitary authority is situated."

The above extracts, which are not given exactly in the order in which they appear in the draft Bill, sufficiently indicate its essential features. It fills nine printed foolscap pages, not including the Memorandum, the Arrangement of Clauses, and the Schedules. There are various clauses relative to offences of sundry kinds, and among them it is provided that if any registered medical practitioner shall wilfully or knowingly employ any registered midwifery nurse to perform any duties other than those laid down or provided for in this Act complaint may be made to the General Medical Council, which may strike him off the Medical Register for two years. The proposal most difficult of comprehension is Clause 9 (1) (*g*) already quoted, which provides "that the course of instruction and of examination of candidates for the certificate of registration as midwifery nurse shall not include the theory or practice of medicine or of surgery or of midwifery." No provision seems to be made for midwifery practice apart from, or in the absence of, a medical practitioner, neither is there any indication of the means which it is proposed to adopt for the discovery and prosecution of offenders. Prosecutions by medical men, whether as individuals or associations, would obviously be unadvisable from every point of view. It is probable that the quinquennial elections of direct representatives to the divisional boards would excite anything but enthusiasm among the electors; but whatever modifications in details may be subsequently introduced, there is no denying the soundness of the general principle that this important branch of medical practice ought to be retained under adequate medical supervision.

THE SOCIETY OF CHARTERED NURSES. — Her Royal Highness the Princess Christian has graciously consented to become the President of the Society of Chartered Nurses, 24, Princes-street, Cavendish-square, W. This society was founded to supply to the public thoroughly competent private nurses. It is under the management of a professional committee, and being conducted on coöperative principles secures to each nurse the full remuneration of her work.

PRESENTATIONS TO MEDICAL MEN.—Mr. H. M. Page, M.D. Brux., M.R.C.S. Eng., D.P.H. Camb., of Redditch, has been presented with a silk umbrella by the Midland Railway Company's Redditch Ambulance Class in recognition of services rendered as lecturer; he has also received a dressing-case from members of the police force.—Mr. James Atkinson, L.R.C.P. Edin., M.R.C.S. Eng., of Crewe, has been presented with an instrument bag by the railway workmen on the Crewe works as an acknowledgment of instruction given to the local ambulance class.—Mr. S. Andrews, L.R.C.P. Lond., M.R.C.S. Eng., of Basingstoke, has received from the local ambulance class a silver-mounted surgical case (containing a hypodermic syringe, &c.), with inscription.—Mr. Geo. H. Johnson, L.R.C.P. Edin., M.R.C.S., of Teignmouth, has been presented with a pocket barometer by the local ambulance class in recognition of services rendered as instructor.—On May 28th the members of the Pride of Cornwall Lodge of Oddfellows presented Mr. Charles W. Chubb, M.R.C.S. Eng., L.S.A., of Torpoint, Cornwall, with a handsome silver tea urn, inscribed as follows: "Presented to C. W. Chubb, Esq., as a token of respect and esteem from the members of the Pride of Cornwall Lodge, M.U. I.O.O.F., Torpoint, on his resignation after fifty-one years' connexion as surgeon." The juvenile members of the society gave Mr. Chubb a claret-jug and a walking-stick.

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VICTORIAE

REGINAE ET IMPERATRICI

Per annos sexaginta Res Britannicas feliciter gerenti Salutem plurimam dicunt Medicinam Profitentes.

οὐκ ἀγαθὸν πολυκοιρανίη εἷς κοίρανος ἔστω,
εἷς βασιλευς.—HOM. Il. II. 204.

"Semper honos nomenque tuum laudesque manebunt."—VIRG. Æn. I. 609.

Quo fonte virtus, quo fluat imperi
Splendor Britannis, Pieri, nos doce
Quae cuncta despectas ab ortu
Solis ad Hesperium cubile,

Quae claustra calles rumpere temporis
Parvasque nostrae primitias rei
Ostendere et victos Latinis
Compedibus Silures ducemque

Pro Claudiana sede Caractacum
Fatis resolventem ora:—"Quiritibus
Non usque durabit superbum
Imperium neque semper Urbi,

Ex aede celsa prospiciet Pater
Ultorve Mavors: saecula quattuor
Labentur et 'Rerum Magistra'
Barbaricae imminuetur Arcto.

Nam per Columnas Herculis ultimos
Cursus Ulixes dum tenet, Insulas
Visum Beatorum, ad Britannos
Devehitur, neque inhospitali

Usus tyranno, reddit aquis suos
Secum refectos, non animo sine
Grato futurorumque nostrae
Nuntius Albioni bonorum,

Quam fatur olim magnanimûm fore
Matrem virorum, duplicis imperi
Largam, subacturamque terras
Et maria Æneadis negata,

Donec ruinis altior Italis
Staret suprema, et Dis melioribus
REGINA et, informata fungi
Plus vice Caesarea, IMPERATRIX."

Quae fert Britannis rex Ithacensium
Romaeque prodit fata Caractacus
Non crediturae, quam probata,
Quam fuerint rata dicat Orbis:—

Dicant triumphi pacis et ingeni
Humanioris, partaque civibus
Cum lege libertas, et alma
Religio genetrix Salutis:

Dicant et artes muneraque indolis
Carae Camenis, seu lapidi datur
Vis viva, seu pictis tabellis
Eloquium, geniusve libris:

Dicant paternae provida Curiae
Consulta, et imis aequa reis Fora, et
Ordo Sacerdotum verendus
Rite gerens Cruce se minorem.

Testes tot inter nec comitem abneget
Mens Æsculapi, militis unice
Pugnacis et nacti tropaea
Non ducibus data bellicosis;

Quo civitatem quis status adjuvet
Curante, pestes inque aciem cohors
Producta causarum facessunt,
Terga vel ante tubas daturae;

Qui sopit aegros rore per halitum
Donante lethen, ne metuant pati
Ferrum quod admorit severum
Vimque salutiferam Machaon;

Qui cultor audens nec tamen impius
Rerum parentis scit penetralia
Intrare vitae non profanis
Luminibus prius haurienda,

Morbumque in antris opprimere intimis,
Ut dormientem Protea, mox sua
Consilia aperturum, quot arma
Ludere, quot soleat timere,

Mos unde nobis normaque sanior
Deducta firment et genus et domos
Dum major integremur aetas
Inque vetus referamur aurum.

Princeps ter alma et tot sata regibus
VICTORIA! Orbi praebita, ceu redux
Astraea, et adscribenda caelo,—
Sera tuis abeas alumnis!

Praesentiori numine nam tuo
Fortuna nobis defluet amplior
Illi propinquatura metae
Usque pils animis petitae,

Quo cum mearint, verius Insulas
Visent Beatas quam vagus Hercules,
Audax Atlanteas per undas
Hespecidum rapuisse poma.

J. P. STEELE,
M.D. EDIN.

Badae Helvetiorum
Id. Jun. MDCCCXCVII.

ARGUMENT.—The Muse of History, invoked to reveal the origin of Britain's greatness, recounts the Claudian subjugation of the Silures and the prophetic discourse of their chief, Caractacus, before the Emperor's tribunal. In four centuries from that date Rome will succumb to the Barbarian North, for (adds Caractacus) Ulysses in his last voyage in quest of the Happy Isles, being storm-stayed on the British coast, was hospitably entertained, and, in return, predicted the future power and expansion of his hosts till, under a "QUEEN and EMPRESS," they would rule a world wider than that of Rome, purer in religion, and more civilised. How far that prophecy, recalled from the grey foretime by Caractacus, has been fulfilled let the contemporary world attest by the triumphs of peace, of liberty under law, and of Christianity; by the fine arts—sculpture, painting, literature; by the Senate, the courts of Equity, and the Church; but not least by the triumphs of the Healing Art, as seen in State Hygiene, in painless Obstetrics and Surgery, in the treasure-trove of Physiology and Pathology, giving the key to the inmost recesses of the human organism, surprising latent Disease like the sleeping Proteus, and forcing it to give up its secrets as to the cause, the course, and the cure of suffering. To the advance of Medicine there is no bound, accelerated as it is by the enlightened sway of the QUEEN and EMPRESS in the character of "Astraea Redux." May that blessed sway continue! The true "Islands of the Blest." J. P. S.

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THE LANCET.

LONDON: SATURDAY, JUNE 19, 1897.

1837. MEDICINE AND THE MEDICAL MAN. 1897.

To tell the story of the progress of medicine during HER MAJESTY'S splendid reign—a reign not only unprecedented in length but in scientific discovery and development of all sorts—would be manifestly impossible within the scope of the editorial statement of a weekly journal. Space will not allow us to enter into detail when a period of sixty years, no year of which has been barren of result, has to be covered. A mere list of the names of men whose life-work has added to the stores of our special knowledge could with difficulty be compressed into the scope of this article if the list were to be exhaustive and to include all whose work directly or indirectly has conduced to the advance of scientific medicine. For as medicine has been metamorphosed from an art into a science the taxes which she levies upon the sister sciences have grown heavier and heavier, until the present position is reached, where the surgeon's aptest assistant is applied chemico-physiological procedure of the most elaborate sort, and where the physician displays the single-heartedness of his studies by employing in his therapeutics an accurate knowledge of electrical phenomena. In the brief account of medical progress during the past sixty years which now follows we have attempted to call attention to the most important steps forward. And we are justly proud of being able to say that if anyone should desire to know more of particular circumstances in this grand record of advance he can consult our columns in the past. For THE LANCET was born fourteen years before HER GRACIOUS MAJESTY ascended the throne, and within its covers will be found the true and exhaustive history of medical progress during the reign.

We start our summary with a brief *résumé* of the advances in our knowledge of physiology and chemistry, for to the enormous strides that these sciences have taken we must attribute much of the success that attends medical practice of the present day. In diagnosis, in prophylaxis, and in therapy alike our methods are now based upon scientific research. But let no one look with anything but respect on the great men of the past whose labours were effected under a less favourable environment. In the "thirties" and "forties" there were giants in the land, and the work that they did has been of incalculable value. Advances in the ancillary sciences could not have been grafted with success upon an empirical scheme. It is because the old work was good and honest and thorough—it is because when true reasons for procedure were absent false reasons were never invented—that medical routine was in a healthy condition and ready to take advantage of all tribute brought to it from exoteric sources. We are sure that no one can read the names of the heroes of medicine in the early Victorian days without feeling that a debt of gratitude and reverence is owing to them, for their technical knowledge, for their intuition, and for their honourable methods.

THE GROWTH OF PHYSIOLOGICAL AND BIOLOGICAL KNOWLEDGE.

To give even a short account of the advances that have been made in physiology and in physiological chemistry during the past sixty years would require a volume. The doctrine of the correlation of forces and the doctrine of evolution have profoundly modified our conceptions of the nature of life and of the secondary causes which have led to origin and diversity of the forms of life by which we are surrounded. We can hardly place ourselves in the position occupied by workers before DARWIN'S revelations and HUXLEY'S magnificent support of them. For the relations of HUXLEY to DARWIN—with LISTER and PASTEUR the foremost scientific names of the Victorian era—are deeply interesting. Without HUXLEY'S powerful aid, valuable corroborative evidence, and telling exposition of the doctrines of evolution DARWIN'S views would certainly have been far more slowly accepted.



PROFESSOR HUXLEY.

The importance of the cell as the physiological unit common to all the tissues of the body has been fully established, though the estimation of the relative value of its component parts—cell-wall, protoplasm, and nucleus—has of late years undergone material modification, whilst each has been shown to possess a structure far more complex than was believed to exist by the originators of the cell theory, SCHLEIDEN and SCHWANN, or even by VIRCHOW, who twenty years later so ably supported the doctrine of "omnis cellula e cellulâ." The successive improvements made in the construction of the microscope have proved of immense service to physiology by enabling observers to comprehend the structure of the different organs of the body, and thus to gain some insight into the mechanism by which the various functions of secretion, sensation, and motion are effected. We are still only on the threshold of this inquiry and are

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very far from comprehending the mode in which this mechanism acts; but the little knowledge that has been gained has served to sweep away much that was inaccurate and even absurd in the opinions and practice of our immediate predecessors, and to establish better, because more rational, methods of treatment of disease.

Experimental physiology dates back to the time of GALEN, and a few names, like those of HARVEY and HALES, stand out in strong relief as experimentalists in the period of revival from the long sleep of science during the Middle Ages; but at no time has it been pursued so energetically as in the last few decades, or with more instructive and satisfactory results. In France the mantle of a great experimentalist, MAGENDIE, fell on the shoulders of a still more successful investigator, CLAUDE BERNARD, to whom physiology is indebted for some of the most striking discoveries of this period. His lectures delivered before the Collège de France or read before the Académie des Sciences were a succession of surprises. Now it was the effects upon the several constituents of food of the different fluids poured into the alimentary canal, the salivary, gastric, biliary, pancreatic, and intestinal juices; now it was a novel function of the liver in the production of sugar; now the action of the sympathetic system on the production of heat, or the effects of various toxic agents as curara and strychnia on nerve and muscle. Subsequent research and the keen criticism of acute observers in other countries have modified some of his results, but the originality and ingenuity of his experiments command admiration, and he must always be regarded as one of the foremost men of his time. The mode of teaching adopted by LUDWIG in Vienna also gave a great impulse to the study of experimental physiology, for he not only did much original work, but he founded a school; in many instances he suggested the subject to be investigated to his pupils, pointed out the mode in which it should be attacked, supplied all necessary apparatus, assisted the student when requisite with his practised eye and hand, and whilst leaving him to take the notes finally put the whole into due order; then with infinite good nature he allowed the young experimenter to publish the results in his own name, so that the initiated alone knew how much was due to the master, thus creating a debt of gratitude which none of his pupils thought could be overpaid. Following the same lines MICHAEL FOSTER established a school of young physiologists at Cambridge, and the work they have accomplished, as recorded in the *Journal of Physiology*, will bear comparison with any of the great continental schools.

It is of small importance what section of physiology is selected to illustrate the immense advances that have been made by the combined labours of numerous painstaking and accurate observers in many different countries. The blood has not been the subject of more research than nerve or glandular structures, yet it is easy to show that our knowledge has been rendered far more exact of late years in regard to the form, size, and number of the corpuscles; of the relative proportions of the coloured and uncoloured, of the spontaneous movements of the latter, and of their ability traverse the walls of the vessels; of the origin of the coloured corpuscles and the effects of reagents upon them, of their chemical composition, and of the nature, quality, and exchange of gases during their passage through the capillaries of the lungs and those of the tissues; while such points as the crystallisation of the hæmoglobin and the phenomena of spectrum analysis are altogether of recent date. More striking still are the accessions to our former knowledge of the phenomena that can be demonstrated in the nervo-muscular apparatus. The form and speed of the ave of contraction in muscle, the rapidity with which the impulses causing sensation and motion are propagated in nerve, the functions of the several columns of the spinal cord, the long denied reaction of the brain cortex to stimulation, have been rendered probable or actually demonstrated by the converging and mutually supporting lines of careful dissection, microscopic examination, experimental and pathological inquiry, and embryological research, whilst comparative anatomy has now and again afforded additional evidence when proof from other sources was wanting.

Of late years the physiological chemist has been persistently engaged in the investigation of the changes undergone by the proximate principles of food—as starch, sugar, fat, and proteids—not only in the alimentary canal, where the first steps in their assimilation are accomplished, but in their passage through the economy, until they are discharged either partially oxidised in the form of urea, lactic, uric, and hippuric acids, creatinin, and the like, or completely burnt in the form of water and carbon dioxide. Great progress has been made in the discovery of the primary changes that occur, such as the origin of sugar from amyloid substances, the emulsification and saponification of fats, the production of peptones from proteids with the subsequent formation of leucin and tyrosin, the aromatic compounds (indol, phenol, and skatol), and others, but many of the more recondite changes in the blood and in the tissues still await explanation. There is every reason to anticipate that such explanations will be forthcoming, and that in process of time we shall know all the intermediate changes. In several Continental universities, departments or laboratories have been instituted where physiological chemistry can be taught and pursued, and where problems hitherto regarded as insoluble are persistently attacked with good hope of success.

The physiological researches of PASTEUR, applied to medicine and surgery by LISTER, have borne magnificent fruit, more particular reference to which will properly follow.

CHEMISTRY IN RELATION TO THERAPEUTICS.

To record the progress of chemistry during the last six decades would be equivalent to writing a complete history of its evolution. Chemistry, in short, was born in the Victorian era, and grew with a pace second to no other branch of inquiry. This enormous progress has had a remarkable influence upon the growth of medical knowledge, and without chemistry medicine could not have taken the high position it now occupies as the healing science rather than the healing art. Medicine has gained a marvellous stimulus from the discovery of synthetical methods. The artificial building up of complex compounds from simpler ones, or from the elements themselves, has proved chemistry to be one of the most useful and faithful servants in the cause of medical knowledge and advance. By this we do not mean simply that synthesis has given to the physician a list of valuable remedies—as antipyretics, hypnotics, or what may be regarded as quinine substitutes (although this is a fact of extreme importance) but rather that by means of synthesis we have been led to a better understanding, and, indeed, in many cases to an exact knowledge, of the constitution or structure of remedies. This knowledge as it grows promises to place pharmacology upon a really scientific basis. If we are not wrong, the therapy of drugs will, perhaps before long, resolve itself into a question of chemical structure. The practitioner endued with the knowledge of what the specific remedial requirements of his patient are, will be enabled to minister to those requirements by adding or omitting, so to speak, groups or radicals in the compound which are or are not requisite in the case before him. It cannot be doubted that the specific therapeutic action of a drug depends not on its composition, but on its constitution, and the more we find out about the chemical structure of remedies the more satisfactory will be their administration.

As our readers probably remember, the first important

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synthesis was effected by WÖHLER some ten years before the QUEEN came to the throne. It was the synthesis of urea, which for ever destroyed the idea that the so-called organic compounds could only be built up by the life processes in the plant or animal organism. Later, FRANKLAND announced the successful synthesis of certain hydrocarbons, while recently sugar has been built up practically from its elements by FISCHER. The synthesis of conine also has been effected by LADENBURG, the first step towards the artificial preparation of that important group of bodies in medicine, the alkaloids. The modern synthetic list, however, is a never-ending one. Take, for instance, the numerous antiseptics derived from coal tar, the preparation of which would never have been suggested without a knowledge of the architecture of molecules! Antiseptic treatment is one of the medical triumphs of the Victorian era, and it was chemistry that placed these agents of healing in LISTER'S hands. The vegetable colouring matters are now prepared in the laboratory of the chemist, who, by his acumen and observation, has forestalled nature in her wonderful building-up processes. Imagine, again, life in this Jubilee year without the colours which coal-tar chemistry has placed at our disposal. It is pretty safe to say that the historical pageant on Tuesday next will owe its brilliance in a very large measure to the beautiful series of colours which the inquisitive chemist has prepared from coal tar. The colours in the procession and in the decorations will afford a striking piece of evidence of the triumphs of chemistry achieved during the QUEEN'S reign. It was in 1856 that an English chemist, PERKIN, who is still among us, prepared the first aniline dye—namely, mauveine. Then followed a crop of discoveries resulting in the wide and beautiful series of aniline colours with which we are all now familiar. From the same source (coal tar) has been derived the long list of modern remedies which are mainly of the antipyretic and antiseptic class. It is interesting to recall the fact that carbolic acid, the first antiseptic, was discovered in tar but three years before the QUEEN came to the throne. The existence of this antiseptic in coal tar led to further investigation with the happiest results. From carbolic acid was obtained by a very simple process salicylic acid, which previously was only to be obtained from natural sources, chiefly in the oil of wintergreen. Synthetic compounds, however, need to be prepared with the utmost care in order to be "physiologically pure."

Within comparatively recent years it has been established that the microbe performs the great double function in nature of both analysis and synthesis. The important bearing of this fact upon the history of disease is now one of the most remarkable acceptances of the Victorian era. The work of PASTEUR is referred to in other columns, but it may here be pointed out that PASTEUR was a chemist. His work bore on the important study of the nature of the putrefactive and fermentative processes. In both these vital processes he found that organisms were at work re-arranging the compounds presented to them and evolving sometimes simpler and sometimes more complex bodies. In putrefaction definite products now known as ptomaines, which in constitution resemble the alkaloids, were recognised. In an analogous way the products of the life processes of bacteria are now known to be the direct cause of disturbance in the economy, giving rise to the manifestations of a specific disease. The importance of bacteriology in the etiology of disease is now fully established, and it remains to be remembered that chemistry cleared the way and opened up this field of study.

Lastly, we may recall the improvements that have been effected both in the preparation and in the form of administration of drugs, improvements depending largely upon chemical advance which have secured for the practitioner an economy and an accuracy in prescribing which two decades ago were quite unknown. This alone is worthy of emphasis as one of the marked features in the progress of administrative medicine during the Victorian reign, and taken in conjunction with what we have said before as to the possible development of an application of accurate chemistry to dosage and even choice of remedy, suggests a forecast that the debt of the physician to the chemist will continue to grow larger. When again there is recorded the history of sixty years of medical achievement we believe that the teachings of chemistry will have to be still further acknowledged in throwing light upon the action of remedies, and it is reasonable to hope that the knowledge of the constitution of remedies will have become so advanced by that time as to place therapeutics on a more exact, because less empirical, basis.

THE RISE OF BACTERIOLOGY: SERUM PATHOLOGY.

To recount the progress of Bacteriology during the last sixty years would be to write practically the whole history of this branch of medical science. Before 1837 there were only a few isolated observations by LOEWENHOECK, SPALLANZANI, and SCHWANN, the latter of whom proved that the agent which brought about fermentation was a something in the air which could be destroyed by heat. Early in the reign further observations were made by HELMHOLTZ, HENLE, and others who enunciated the germ theory of disease. But the science was only laid on a firm foundation by the philosophic genius of PASTEUR, who investigated the subject of fermentation by yeast and then that of putrefaction. He showed by perfectly devised experiments that both processes were directly due to the growth of organisms which were present in the air, and that putrefaction could be indefinitely postponed if these organisms were prevented from entering the vessel in which the fluids were contained. The confirmation of these observations by a host of observers, prominent among whom were TYNDALL and LISTER in this country, gave the death-blow to the doctrine of spontaneous generation. PASTEUR also echoed HENLE'S prediction that all forms of contagious disease would ultimately prove to be due to specific organisms.

Shortly after this, in 1865, DAVAINE announced the discovery of the bacillus anthracis in the blood of animals suffering from splenic fever, and PASTEUR demonstrated that a disease among silkworms, which was threatening to destroy the silk industry, was due to an organism, and proved that by recognising the organism under the microscope and destroying the infected moths and their eggs the plague could be stamped out. Meanwhile, KOCH had been making his brilliant observations on the life-history of bacilli and the mode of obtaining pure cultures. His methods, particularly his plan of obtaining solid media, by adding gelatin to the broth, were eagerly adopted by a host of investigators, and these methods, and his criteria for deciding whether an organism found in connexion with a particular disease is the actual cause or not, are to this day those on which all observers rely. The name of KOCH will ever be remembered with that of PASTEUR as making possible the great work which has been done all over the world since their early investigations. Stimulated by the profound and philosophic teaching of PASTEUR, and by the exquisite methods of investigation brought to perfection by KOCH and his pupils, numerous pathologists in all countries at once set about the quest for the germs responsible for the various forms of disease, and for those which excite specific sorts of inflammation, and discovery after discovery rewarded their efforts. Those which have had the most practical result have been the discovery by KOCH of the tubercle bacillus, and later of the cholera bacillus; that by EBERTH of the bacillus of typhoid fever; that of diphtheria by KLEBS and LÖFFLER; and the

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discovery of the plague bacillus by YERSIN. Not only has this work changed our views of the pathology of many of these diseases, but it has thrown unexpected light on the best ways of preventing their occurrence, and has been the chief cause of the importance that the subject—that of preventive medicine, hardly thought of in the pre-Victorian days—takes at the present time. Foremost among preventive measures was the introduction of "antiseptic surgery" by LISTER, who grasped the significance of PASTEUR'S teaching that septic processes were due to organisms derived from the air, and set himself to devise means whereby to exclude the organisms from



M. PASTEUR.

wounds during an operation, and also to prevent them from finding an entrance after a dressing was applied. The system did not spring into existence in a perfect state, and has undergone much modification in details of procedure since it was first brought into notice by LISTER. But the principles have remained unshaken, and have revolutionised surgical procedure, and so reduced the mortality and pain following an operation, just as anæsthetics have abolished suffering under the knife, that the terrors of surgery have been reduced to a minimum.

Not only has the study of bacteriology led to the prevention of disease, but it has also given us new and unexpected means of dealing with infective diseases, even when they have manifested themselves for some time. The first observations on this point were almost the result of an accident. PASTEUR found that the contents of a flask containing a culture of the chicken-cholera bacillus were innocuous when injected into fowls, but, to his surprise, when he injected a fresh virulent culture into these same animals he found that they were proof against the virus. Starting from this observation he laboured until by similar methods he had obtained from cultures of the anthrax bacillus a "vaccine" which has been the means of protecting thousands of sheep in France from this destructive malady. Recently similar methods have been employed by HAFFKINE to obtain a "vaccine" against cholera, and although sufficient time has not elapsed for an adequately extensive trial of the method to establish its value, the results appear to be highly promising; moreover, during the last few weeks HAFFKINE has reported the result of some inoculations in cases of plague with a "vaccine" obtained from a culture of YERSIN'S plague bacillus in ghee, the bacillus being killed by heat before inoculation. Later PASTEUR found that the virulence of a culture might be modified by various external conditions, notably by the temperature at which growth takes place, so that, if injected into an animal, while not causing an attack of the disease, it may protect against a subsequent inoculation; or may mitigate or arrest an attack even if it is not injected for some time after a virulent culture has been introduced. In this way he obtained a "vaccine" for inoculating persons who had been bitten by animals suffering from rabies, and though not an absolute safeguard it has greatly reduced the mortality from that terrible disease—hydrophobia.

In 1890 a great advance was made when it was discovered by BEHRING and KITASATO that antidotal substances, or antitoxins, could not only be produced in vessels in the laboratory, but could also be obtained in large quantities under certain circumstances in the serum of living animals. They found, in the case of the tetanus bacillus, that if a virulent culture were injected into animals which were not susceptible to tetanus, the serum of their blood had the power of neutralising the effect of a virulent dose of the poison in a susceptible animal, even after the symptoms of the disease were well established. An animal of the same species not so protected infallibly died from tetanus. In many cases this treatment has been employed towards patients suffering from tetanus, often with the happiest results. Similarly it was found that the introduction of a culture of the diphtheria bacillus into the veins of a horse, which is insusceptible to the disease, is followed by the formation of an antitoxin which can be obtained after an interval in the serum and injected without risk into the subcutaneous tissues of human subjects suffering from this serious complaint. Moreover, it has been found possible to standardise the serum so that we can prescribe the dose of antitoxin almost as accurately as that of an ordinary drug, this advance being fully chronicled in the report of THE LANCET Special Commission on the Relative Strengths of Diphtheria Antitoxic Serums.[1] It appears probable that we are only dwellers on the threshold in our application of this method to the treatment of disease.

A serum prepared from the pneumococcus has been employed in cases of pneumonia, and in several cases the painful and dangerous form of septic poisoning acquired through a "post-mortem wound" has been at once relieved by the injection of a serum prepared from the inoculation of streptococci into an immune animal. It is probable that before the end of the century we shall be in the possession of an antitoxin for the various manifestations of tubercle, while it is possible that this method will have a wider application than the relief merely of diseases due to an organised virus, as it has been shown that an antitoxin can be obtained by exactly similar methods against serpent venom and the vegetable poison "abrin." Enough has been said to show what powerful agents for the treatment of disease have been put into our hands through the study of bacteriology, but it must not be forgotten that bacteriological methods have been of the greatest value in the clinical investigation of individual cases. The recognition of the bacillus of tubercle or of diphtheria, for example, may reveal the nature of a case and lead to successful treatment. Carrying the uses of bacteriology in diagnosis further, we have the reaction which ensues when the products of the growth of bacilli, such as tuberculin and mallein, are injected. Here we have, especially in the case of horses and cattle, the most precise indications as to whether the animals are the subject of tuberculosis

[1] THE LANCET, July 18th, 1896.

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or glanders or not. More recently the reaction of the blood, or of the serum, of a patient suffering from typhoid fever, promises to be of great value in clearing up the diagnosis of doubtful cases, while it opens up quite a new branch of inquiry. We refer, of course, to WIDAL'S serum test.

The field is an enormous one, and the harvest already reaped great beyond all expectation, but it is probable that the science of bacteriology is only in its infancy, and that those who live to see it arrive at maturity will witness greater results than we at the present day can possibly conceive.

THE ADVANCE IN ANATOMICAL LITERATURE.

THE greatest advance in our knowledge of anatomy since the accession of HER MAJESTY to the throne is marked by the thoroughness and excellence of the various leading treatises on systematic anatomy. Between 1841 and 1844 the second edition of SÖMMERING'S Anatomy was published in eight volumes, revised and amended by BISCHOFF, HENLE, HUSCKHE, THEILE, VALENTIN, VOGEL, and WAGNER; and the sixth volume of this work, which was produced under the supervision of Professor HENLE, is the high-water mark of descriptive anatomy up to that date. CRUVEILHIER'S work on Descriptive Anatomy, which was translated into English by Dr. ALEXANDER TWEEDIE in the "Library of Medicine" in 1851, and which has since passed through several editions, is even now as worthy of study as most of our more modern text-books, and, with the Descriptive Anatomy of SAPPEY, published in 1847, prove that the French anatomists were in no way behind in this branch of science. TODD and BOWMAN commenced their Cyclopædia of Anatomy and Physiology in 1835, but twenty-four years elapsed before its completion, and it remains even up to the present date the best standard work on descriptive anatomy, although its physiological and histological details have been widely enlarged and improved on. In fact, ordinary descriptive anatomy has undergone no change, although some minor details have been revised, since the first really valuable work on Practical Anatomy came into the hands of, and was made use of by, every intelligent medical student. As text-books in Human Anatomy, those of HENLE in Germany, SAPPEY in France, and QUAIN and GRAY in England are models of what scientific text-books should be, and they are all products of the Victorian era.

Topographical anatomy was practically introduced by BLONDIN about 1830, but his work attracted but little attention until the works of HYRTL and LUSCHKA demonstrated to everyone that a new departure in anatomy had to be dealt with. Frozen sections came later and improved the *technique*, so that at the hands of PIROGOFF and LEGENDRE the relative position of the structures in the limbs in their normal position became absolutely known. HIS and BRAUNE extended this method to the abdominal and thoracic viscera, and on the basis of these researches the whole science of normal topographical anatomy has been built up. The elaborate work that has been devoted to this branch of anatomy in late years is, perhaps, best shown by the beautiful photographs of the anatomy of the brain by DALTON of New York, published in 1885.

Morphological anatomy is almost a product of this century. A few isolated instances of abnormal variations in the body had been previously put on record, but no attempt to systematise them had been made. TIEDEMANN and RICHARD QUAIN the surgeon elaborately investigated the varieties of the main arteries in the human body, and this led them to some very important remarks on the ordinary procedures of operative surgery. WOOD and GRUBER'S researches, in addition to those of several other observers, have opened up the wide question as to the relation between muscular abnormalities in man and the normal arrangement of muscles in the higher vertebrates; but it is questionable if this line of inquiry has led to much lasting result, although at the time it seemed to be most promising.

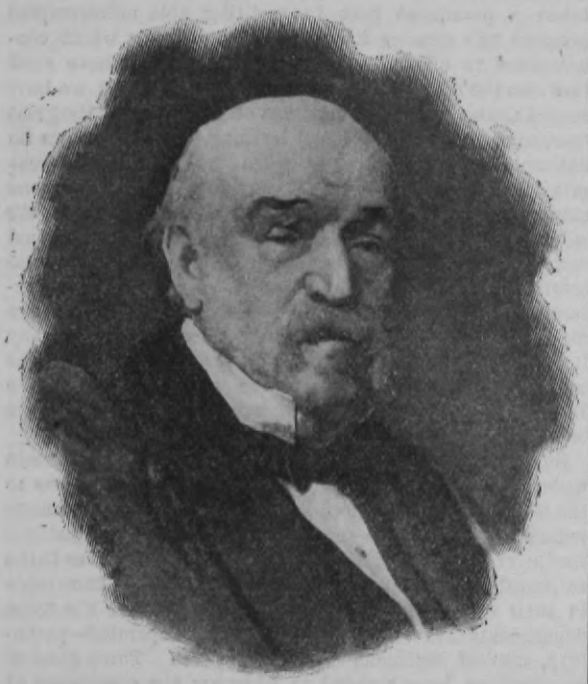
MEDICINE: ITS SHARE IN THE GROWTH OF NINETEENTH CENTURY SCIENCE.

IT is not easy to realise the full extent of the changes that have been effected in the knowledge of the nature of diseases and of their more rational treatment during the sixty years covered by the reign of QUEEN VICTORIA. In almost every direction progress has been so marked that in contemplating it there is a risk of under-estimating the position which had been already attained by medicine in the opening years of the century. It is worth recalling that the first edition of WATSON'S "Lectures on the Principles and Practice of Physic" appeared in 1843 (based on the course delivered by its author at King's College in the session 1836-37), and that, marvellously as pathological science has developed since that time, those two volumes contain much that is of permanent practical value. There must be few medical men whose memories of the practice of medicine take them back to those days, which witnessed the awakening of science in all its departments. Nor should it be forgotten that modern medicine is greatly indebted for its development to the advances made in the ancillary sciences. Physics and chemistry, biology and morphology, have contributed to the fuller knowledge of animal structure and function, knowledge crowned by the researches of the physiologist. It is the application of these studies of the living body in health to that of the derangements that constitute disease which marks our era, an era that deserves to be known as that in which medicine, emerging from the thraldom of "systems" and theories, came to be placed on a rational basis and to gain a footing amongst the sciences. And as regards those who have taken a prominent part in assisting this uninterrupted progress this country has produced not a few whose contributions to clinical medicine and pathology have shed lustre on the reign, whilst during the same period we have reaped the benefits of the products of the genius of the great Continental centres of medical learning. Science knows no nationality, and it is only when we deal with great principles or root ideas that we are justified in placing one man or one nation above another; for the rest all the workers in the great edifice of knowledge may claim an equal recognition from the hands of a grateful humanity in whose service they have faithfully laboured. We ought not, therefore, in a review, however cursory, of the progress of pure medicine—the elder branch of our science—to allow any limitations, but should cheerfully recognise that all the world over there have been the same spirit and the same effort to seek out the secrets of disease, with the common object of its prevention and treatment.

Such a review may perhaps be most appropriately made under three divisions. The first would be an inquiry as to the methods and results of investigation into the intimate nature of diseases; the second as to the greater capacities for their detection and discrimination; and the third as to the enhanced power which has been gained by such knowledge in their control and management. These are the three departments into which medicine may be separated—pathology, clinical medicine, and therapeutics. Three lines of investigation have assisted in widening the conception of the nature of diseases, lines which came into operation successively and have since been pursued concurrently. They are the anatomical, the physiological, and the bacteriological. Of them, the first, dating from MORGAGNI, was the main field of pathological study at the dawn of the century, although the genius of JOHN HUNTER had foreshadowed the prominent

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part which the observation of vital processes would come to take in the interpretation of morbid changes. At any rate, it would be safe to say that when the Victorian era opened the attention of pathologists was in the main confined to post-mortem dissection, and the study was rather of the effects than of the processes of disease. This study was, however, to gain a great impetus, and to have far greater significance than had hitherto been given it. The perfecting of the microscope, and the study by its means of the intimate structure of tissues and organs were about to open up an entirely new field of anatomical research. The importance of the "cell" as the ultimate element in all living things, its transformations and its powers were soon recognised, and received their fullest exposition in the memorable work of VIRCHOW on "Cellular Pathology," which appeared in the "fifties." The insight which the development of this branch of morbid anatomy, supplemented and aided by similar researches in normal anatomy and embryology, has given into the workings of disease has been enormous, so that the numerous published transactions of societies, and the text-books and monographs of this period literally teem with facts gleaned from microscopic investigation and the inferences drawn therefrom. Thus was obtained a clearer conception of the changes which accompany inflammation and repair, the degenerations, and, chief perhaps of all, the systematic and orderly analysis of new growths, not to mention the lesions which are produced in local diseases of individual organs. Nor was the older study neglected; it did not need the microscope to reveal to BRIGHT the fact that albuminuria and dropsy were associated with definite and varied lesions of the kidney, or to ADDISON that a special form of destructive inflammation of the suprarenal capsules was associated with a definite train of symptoms, including progressive pigmentation of the skin. The non-identity of typhus and typhoid fevers was established by STEWART



SIR WILLIAM JENNER.

and JENNER by an exhaustive study and comparison of gross morbid lesions with the clinical course and symptoms of continued fever; and the deep-seated changes wrought by syphilis were made known by WILKS before their minuter lesions were analysed. So has it been with many another disease which has been discriminated by careful observation; but once the distinction has been established the deeper scrutiny of the microscope has revealed still finer differences. Especially has this been the case with diseases of the nervous system, where, as we shall shortly see, clinical observation has been so fruitful of result within this epoch. Amongst the affections upon which inquiry has been especially fruitful in these years of active progress must be mentioned those diseases which depend on changes in the blood and blood-forming organs, rickets and diabetes, cretinism and myxœdema, osteitis deformans and acromegaly, to name only a few where the morbid characters are obvious and striking, but where, too, the knowledge gained from anatomical observation has been vastly supplemented by that of clinical study.

Much as has been learned by the purely anatomical method, its limitations were soon obvious to those who felt that the solution of the mystery of the living body was not to be found in the dead tissues. The application of the principles of the physiologist to the elucidation of disease processes was, however, neither so simple nor so satisfactory a line of research as the older method. Yet the expansion of knowledge upon the nature of disease which has ensued from this field of inquiry has been wide and is far from being completed. To the school of experimental pathology—in which the names of TRAUBE, the physician, and of COHNHEIM, the pathologist, stand prominently out—is owing a large part of our knowledge of the actual process of inflammation, of the derangements of the circulation, and of disordered nerve function, in which latter CHARLES BELL and MARSHALL HALL were pioneers. Here, too, must be acknowledged the light shed on the intimate processes of nutrition and nutritional disorders which are still engaging the attention of the physiological chemist, for they involve problems that are amongst the most difficult of solution. The researches of CLAUDE BERNARD and of PAVY have given us an insight into the pathology of diabetes; those of BOUCHARD and his pupils into that of uræmia and the blood states due to "self-intoxication" from defects in elimination or the absorption of poisons generated in the alimentary canal. The study of the gastric secretion is tending to a rational differentiation of the great group of the dyspepsias, whilst the chemistry of gout and rheumatism is advancing us to a more accurate perception of the *rationale* of those blood states. The recognition of the causes and effects of increased arterial tension and the philosophical views of GULL and SUTTON have done much to give breadth to our conceptions of chronic Bright's disease. The subjects of animal heat and the phenomena of fever have attracted investigators both in physiology and in pathology, with the result that many facts and theories have been harmonised, even if some of the latter have been found inadequate to explain all the former. Indeed, it would be difficult to point to any subject in which the physiological method of research has not been applied with more or less success to elucidate the phenomena of disease.

Meanwhile, however, the problem of disease has been attacked from another side—one, too, which considering its comparative newness has been almost more prolific of result than any other. When PASTEUR by his studies on fermentation and putrefaction discovered the part played therein by the operation of living organisms, it must have been far from the thoughts of the pathologist that these researches could have any bearing upon the causation of diseases. But by his investigations he, a chemist, was laying the foundations of an edifice that was to replace the less substantial fabrics of all the pathologists, and he lived to see it attain dimensions that bid fair to embrace the whole range of infective diseases. There is no subject in the whole history of medicine which has more rapidly attained to an unassailable position in so short a space

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of time than this of the explanation of infective diseases and inflammation by the intervention of bacterial parasites. The science of bacteriology has grown up under the eyes of the present generation and has revolutionised our conceptions of the nature of disease. The speculations of HALLIER and HENLE upon the germs of disease, the theories as to contagion and infection which engrossed attention during the first half of the period of which we are speaking, have in the latter half—nay, indeed, in an even briefer space—been dispelled by the proven facts of bacteriological investigation, since the day that KOCH conclusively demonstrated the pathogenic properties of the anthrax bacillus or OBERMEIER proved the dependence of relapsing fever on the spirillum that bears his name. There is no need here to recount the steady progress to which this pursuit of minute cryptogamic studies has led us in relation to disease; but without a doubt it may be affirmed that in this pursuit, and in all that flows from it, we have the most striking instance of the gains acquired by medicine in this century, and have entered on a field of research which is by no means exhausted.

Meanwhile, if the nature of disease and its causation have become plainer and been placed on a more scientific basis, it must be admitted that *pari passu* there have been most notable additions to the methods of clinical investigation, which have vastly extended the powers of accurate diagnosis. This has been mainly effected by the invention of scientific instruments and appliances, nearly all of which were subsequent to the time at which our survey opens. For sixty years ago but a short time had elapsed since LAENNEC'S genius had demonstrated the new field of observation opened by the use of the stethoscope—an instrument which was then only appreciated by the few, perhaps even despised by the many. In this country we cannot forget how much is owing to C. J. B. WILLIAMS, HUGHES BENNETT, and WALSHE for their studies on the methodical examination of the chest by physical exploration. The interpretation of signs would have been of small service had it not been combined with the more accurate knowledge of the morbid changes in heart and lungs which gave rise to these phenomena. Thus as knowledge grew in the one direction it was helpful to progress in the other, and much as those who claim to be "practical" rather than "scientific" men may affect to ignore the teachings of pathology, it is clear that no one can be eminent in clinical medicine who has not laid a good foundation in pathology. As the years rolled by we find additions made to the clinical armamentaria, such as the thermometer (first used clinically in 1850), the ophthalmoscope (1851), the laryngoscope (1857), whilst the aid given by electro-physiology in diagnosis forms another of the remarkable developments undergone in the study of diseases of the nervous system. Indeed, there is no department which has developed to so great an extent during these two generations as this of neurology. And much of this advance has been owing to thorough and minute clinical observation, which has often led the way for physiology to follow in interpreting the functions of nerve and muscle. The localisation of cerebral functions, the discrimination of the "system diseases" of the spinal cord, the differentiation of spasmodic muscular affections and of the forms of muscular atrophy, the study of neuritis,—these, and many more are the fruits of the clinical medicine of our day, supplemented by pathological and physiological research. We are proud to think that in this study so much has been done by the fellow countrymen of BELL, MARSHALL HALL, and ABERCROMBIE, for where would neurological science have been had not HUGHLINGS JACKSON, REYNOLDS, GOWERS, FERRIER, CHARLTON BASTIAN, BUZZARD, and many others made their invaluable studies on the subject? There is no need to dwell on the other means which have been freely used for the study of disease—the clinical use of the microscope and of the test-tube, the invention of the sphygmograph and cardiograph, and other instruments imported to bedside observation from the physiological laboratory. Enough has been said to show that no means have been left untried to procure greater accuracy in diagnosis and to bring to bear on the investigation of disease every available resource which thought and ingenuity can suggest. Thus has it happened that our present knowledge of the nature and processes of diseases is of far deeper extent and wider range than it was when the QUEEN was called to the throne.

It remains to inquire whether there has been a similar advance in the art of healing. In answer to this it cannot be forgotten that perhaps the chief gain to medicine has not been so much in the direction of the actual treatment of disease as in that of its prevention, a line of practice that has naturally followed upon the tracking out of the causes of disease. The Victorian era has been characterised by the rise and development of sanitary science, and nations have learnt that their principal care lies in the exercise of forethought and the wide application of hygienic principles. Cleanliness and purity of air and water and of food and drink, the more wholesome construction of dwellings, the avoidance of overcrowding, the practice of measures of isolation, the control of unhealthy occupations, the better management of factories, and many another effort to attain conditions which tend to diminish disease, have received increasing attention. And it is in this country that the principles of public health were earliest recognised and put to practical use. Surely this is in itself an achievement which marks an epoch in the history of medicine, with which the names of CHADWICK, of SIMON, and of PARKES will be always associated. And with these efforts to prevent disease on the large scale ought we not also to point to the praiseworthy exertions of those who have striven by precept and example to inculcate a knowledge of the laws of health among the people, and thereby to diminish the suffering and death which ensue on the neglect of these laws? Hygiene, public and personal, is the keynote of modern endeavour to limit the ravages of disease, and it is owing primarily to the medical profession that the gospel of prevention has been so widely spread. If we turn from this—the main gain of enlightened medicine—to the progress made in the actual treatment of diseases, we cannot fail to be struck by the change that has been effected within our day. Such a revolution of ideas as that which caused the abolition of wholesale venesection and of the lowering treatment of fever is not to be explained by caprice or fashion. There has, on the contrary, been a growing effort to place medical therapeutics upon a rational basis, to determine with accuracy the action of drugs, and to limit their prescription to definite objects. Thus we witness the gradual emergence from the empirical to the scientific, the recognition of the limits of physic, and the introduction of methods other than those in which drugs are concerned. Doubtless this altered standpoint is largely due to profounder knowledge of the lesions that it is sought to remedy, but it is equally to be found in the domain of so-called functional as well as of organic disease. Moreover we have seen within quite recent days the direct application of more exact knowledge of the nature of disease to measures for its mitigation or remedy, as in the remarkable result of the thyroid treatment of myxœdema, the Pasteurian treatment of hydrophobia, and the antitoxin treatment of diphtheria. In these and analogous departures there is evidence that the study of therapeutics is becoming more scientific and less empirical, more rational and less a matter of chance or guesswork than it has ever been before. Yet a few years and the nineteenth century will have reached its term.

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Those who essay to record its achievements will find no chapter more interesting than that which deals with medicine. To detail the progress made in each of its departments would amount to the compilation of a cyclopædia, but whoever undertakes the task will find that the most progress and the greatest gains have been made and won in that portion of the century that corresponds to the glorious reign of our illustrious Sovereign; for just as the Elizabethan era was characterised by triumphs in letters and learning, the Victorian era will be known as that wherein science established its dominion and lent its powerful aid to the cause of humanity.

SURGERY: ITS REMARKABLE PROGRESS DURING THE REIGN.

GREAT as has been the progress in so many of the arts and sciences during the present reign, yet surely in few has so much advance been made as in surgery. Not that we would for a moment suggest that surgery had not progressed before 1837, for then there were many surgeons living who had done much for the advancement of their art. Taking London alone we find the names of many who will long be remembered as worthy exponents of surgery, and all of whom have done something to put it on a more scientific basis. To mention only a few, there were ASTLEY COOPER, JOHN SCOTT, CURLING, WILLIAM LAWRENCE, EARLE, STANLEY, SKEY, JAMES WARDROP, SAMUEL COOPER, LISTON, RICHARD QUAIN, the author of the Anatomy of the Arteries, GUTHRIE, BENJAMIN BRODIE, and HAWKINS. As each name strikes the eye it calls up some important surgical fact, some interesting surgical method, superseded, perhaps, now, but still of value as indicative of the unceasing progress which takes place in surgery. Yet though there were indeed giants of surgery in those days, were a surgeon of to-day to return to a ward or an operating theatre of 1837 he would feel overwhelmed by the immense differences between the practice of those days and of our own.

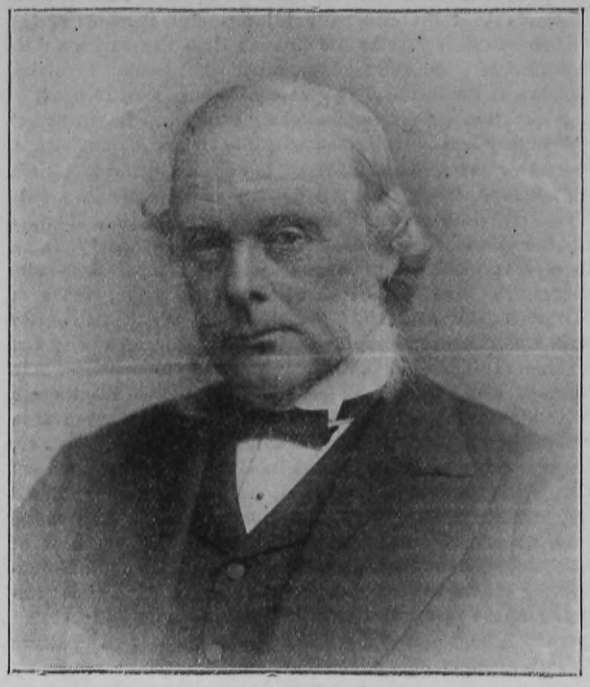
If we were asked to indicate what had done most to bring about the change from those far-off times to these latter days, we should have no hesitation in saying that two things had contributed more than all others to the difference, and these two things are anæsthetics and antiseptic surgery. In operations before the introduction of anæsthetics manipulative dexterity was one of the greatest virtues which a surgeon could possess, for rapidity of operation was essential when the patient was fully conscious of every stroke of the knife; and so surgeons such as FERGUSSON and LISTON arose, whose manual skill was a marvel to their contemporaries. Amputation of the thigh was performed in less than two minutes, and five minutes amply sufficed for extraction of a stone from the bladder by the lateral method. Such celerity in the performance of major operations is now practically a thing of the past, it is no longer needed, and careful dissection has replaced the lightning movements then in vogue; but it is by no means certain that surgical practice has not gone too far in the opposite direction, and we cannot but think that in many cases the "shock" of an operation would be materially lessened by a more rapid system of operating.

Though attempts had been made from the earliest times to prevent or diminish in some degree at least the pain in surgical operations, yet the results must have been unsatisfactory, as the methods fell quickly into disuse and were replaced by others equally unavailing. In 1844 an American dentist, HORACE WELLS, of Hartford, Connecticut, inhaled nitrous oxide gas in order that he might have a tooth extracted, and finding the attempt successful in his own case he employed the method with varying success in other similar cases. Two years later W. J. G. MORTON, of Boston, employed the vapour of ether, "sulphuric ether" as it was called, for relieving pain in tooth extraction, and a little later he administered it in the Massachusetts General Hospital to a patient who was about to have a tumour removed from the neck. The practice quickly spread, and in December of the same year (1846), at the University College Hospital, London, LISTON amputated the thigh of a patient under the influence of ether, but as he had little faith in its efficacy he operated with his usual rapidity. A year later chloroform was introduced by SIMPSON of Edinburgh, and for a long time replaced ether as an anæsthetic in this country; but the frequency of the occurrence of death during chloroform narcosis has lead in England to a return to ether as the ordinary anæsthetic. In Scotland, however, chloroform is still the agent most employed. Nor should the benefits of local anæsthesia be overlooked. The first form used was the result of cold produced by ether spray; it was introduced by B. W. RICHARDSON in 1865. The ethyl chloride spray, a much more recent introduction, is also much used; but of all local anæsthetics by far the most valuable is cocaine, which was not employed till 1884, when it was introduced by KÖLLER, of Vienna, though it was discovered in 1859. It is readily absorbed by all mucous membranes, but unfortunately it cannot pass through the epithelial layer of the skin, so that its use is somewhat restricted; but in many operations upon the eye cocaine has completely replaced general anæsthetics.

The other great agent in the extension and advancement of surgery has been the systematic practice of asepsis. Sixty years ago the treatment of operation wounds varied a great deal. In LISTON'S practice the flaps were allowed to remain apart for three or four hours so that the surfaces became glazed with adherent exudation before they were drawn together, and healing by first intention by no means rarely followed, but suppuration was unfortunately the rule, and many weeks had to pass by before healing was complete. Another method with very similar results was the "open treatment" of BARTSCHER and VEZIN (1856). In this the wound was covered only with a piece of linen, and in a few weeks healing was complete. In this way VOLKMANN, of Halle, treated all his amputation wounds during the war of 1866. Perhaps the most usual treatment was by irrigation or immersion, and some surgeons—as VALETTE, of Lyons, in 1855—added various antiseptic substances, such as alcohol, benzine, and creosote, to the water. Though, as in this case, substances possessing antiseptic properties had been employed for many years in the treatment of wounds, yet the antiseptic method of LISTER was really an entirely new departure. The researches of PASTEUR and TYNDALL had proved the almost universal presence of organisms giving rise to putrefaction, and also that if these germs were excluded decomposition could not occur. LISTER applied these facts to the treatment of wounds, and conclusively proved that in the absence of septic organisms there was no formation of pus, and wounds healed always by first intention. The publication of such satisfactory results in 1870 was rapidly followed by the general adoption of the "Listerian" method. At first there was a certain amount of opposition, and some surgeons declined to turn aside from the paths they had trodden so long; but these were exceptions, and practically the whole surgical world adopted the new process with acclamation. The effect on the prevalence of all forms of septic diseases—such as erysipelas, septicæmia, and pyæmia—was most striking. The testimony of NUSSBAUM, of Munich, is that "during sixteen years the hospital was never free from pyæmia for a single month, and yet it suddenly disappeared on the introduction of the Listerian method." At first the antiseptic treatment consisted of a most elaborate ceremonial, and with slight modifications it continued very much the same for some years, but ideas slowly began to change with regard to the prevalence of septic micro-organisms in the air. It was found that the danger of germs falling into the

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wound during an operation was much less than had been imagined, and so the "spray" was given up. More recently still it has been recognised that unless germs have already made an entrance there is no need to employ any "antiseptic" in the wound; it is sufficient if everything that comes in contact with the tissues is aseptic.



LORD LISTER.

Thus the "aseptic" treatment of wounds has arisen and in great part has replaced the antiseptic treatment, though it is really only a further extension of the same idea. When "asepsis" is carried out thoroughly and conscientiously every wound heals absolutely by first intention, and suppuration in even the slightest degree is banished.

The progress which has taken place in British surgery during the last sixty years cannot be dissociated from the progress of surgery in other countries. There is no surgery exclusively British, for surgery is cosmopolitan, though there are slight differences between surgery as it is practised in Britain and as it is practised in France; but we can also find slight differences in surgical practice between London and—say—Liverpool, and these differences are not in any way inconsistent with the truth that surgery is one and indivisible. In considering, therefore, the progress of surgery our view must include the whole civilised world. Amputations formed the branch of surgery in which perhaps the greatest success had been attained in days anterior to the present era. The circular method and the flap method with various modifications were well known, but the "modified circular" amputation, which LISTON introduced in 1839, was a distinct advance, and it is still extensively practised. In 1853 TEALE, of Leeds, devised his rectangular flap method; yet, although it possesses many meritorious features, it is only occasionally used, as it sacrifices a great extent of the limb. The special amputations which have been introduced are more numerous. Among them may be mentioned SYME'S amputation at the ankle-joint, in which he reduced to a regular operation what had been done by many for a long time previously. PIROGOFF'S modification of SYME'S operation is also worthy of notice. Amputation through or above the condyles of the femur was first practised as early as 1845 by JAMES SYME, but it was brought more prominently into notice by CARDEN, of Worcester, in 1864; GRITTI, of Milan, in 1857 introduced the retention of the patella after removal of its articular surface, and W. STOKES in 1870 still further improved the operation. The results of amputation at the hip-joint are now much better than they used to be, and this in great part is due to the diminution of the shock by the employment of the method devised by FURNEAUX JORDAN. In gunshot wounds far better results are now attainable. It has not very long been recognised that in many cases a gunshot wound is aseptic, and that many will heal almost by first intention if they are not injudiciously probed, and many joints traversed by a bullet are now saved by antiseptic treatment in which formerly amputation would have been performed. The increased velocity of modern projectiles has led to greater splintering of the bone, but our improved methods of dressing such wounds have more than compensated for the increased damage done. The great diminution in the diameter of the bullet has been made too recently to enable decided opinions to be expressed as to the effect on the surgery of gunshot wounds.

In the treatment of hæmorrhage during the period we are considering many decided advances have been made. Artery forceps and the ligature were in ordinary use in 1837; torsion was also sometimes employed, and though it has been, and still is, much used for small vessels, yet it has never to any real extent displaced the ligature for the occlusion of large vessels. Forcipressure, or the seizure of the end of the vessel in a powerful pair of compressing forceps, was introduced by SPENCER WELLS, and has also been employed by KOEBERLÉ and PÉAN. It is now but little employed, though the forceps devised for the purpose are those chiefly used now for the ligature or torsion of arteries. Absorbable ligatures, though used to a very slight extent by ASTLEY COOPER, have only been frequently employed since they were re-introduced by LISTER as a part of his antiseptic treatment.

A great advance in the temporary arrest of bleeding was made by the introduction of the elastic-tube tourniquet by ESMARCH, of Kiel, in 1870.

The treatment of aneurysm by compression of the supplying artery was introduced by the Dublin surgeons, especially HUTTON, BELLINGHAM, TUFNELL, and CARTE; and the tourniquet devised by the last of these, providing, as it does, an elastic pressure, is still the form most commonly employed for instrumental compression. Digital compression was first employed by VANZETTI, of Kharkof, in 1846, and later by KNIGHT, of Newhaven, U.S.A., in 1848. It is now very widely and successfully used.

The very excellent results we now obtain after suturing of nerves, whether primary or secondary, make it difficult to believe that it is a comparatively recent introduction, having been first performed by WEIR MITCHELL; he was followed by NÉLATON, LANGIER, LANGENBECH, HOLMES, MACCORMAC, and many others, and it is now an ordinary procedure. Nerve-grafting, also, though not so uniformly successful as suture of nerves, in some cases gives very satisfactory results.

For the treatment of fractures numerous splints have been devised, but of them all the most useful is undoubtedly that formed by plaster of Paris. In its original form the plaster was rubbed into the meshes of a coarse muslin bandage, but of late years the Bavarian splint, or the modified Bavarian splint, with which CROFT'S name is usually associated, has been more commonly employed. The original form, however, is still used, especially for SAYRE'S plaster jacket.

Compound fractures are no longer dreaded by surgeons as they once were, for antiseptic treatment has almost entirely robbed them of the dangers they possessed.

In fracture of the patella wiring has become almost the

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rule with many surgeons, and the results on the whole justify this mode of treatment. Though it had been tried many years ago it failed on account of sepsis, and therefore it was not until it was employed with antiseptic precautions by HECTOR CAMERON, of Glasgow, in 1877 that it became a satisfactory method of treatment.

In dislocations the use of anæsthetics has rendered the replacement of the displaced bone an easy and simple procedure in most cases, and especially has reduction been aided by the scientific methods of inducing the head of the bone to retrace its steps and pass through the torn capsule at the spot where it came out. Though manipulation was employed many years ago it was not until H. J. BIGELOW, of Harvard, demonstrated its *rationale* in dislocation of the hip that the method was at all extensively used.

Malignant growths are now removed with much greater freedom than formerly, and to this must be attributed the greatly improved results which are obtained, recurrence being decidedly rarer than it was. Though the excisional surgery of the joints was not absolutely unknown in the eighteenth century, and though LISTON had excised the elbow-joint as early as 1821, yet it was not until FERGUSSON performed excision of the hip-joint in 1850 that the operation received general support. For many years excision was applied to most of the joints of the limbs, but of late years it is by no means so extensively practised. It has been in part replaced by erasion or arthrectomy, and in other cases by drainage of the joint the surgeon succeeds in obtaining a cure. Erasion was first performed in England by WRIGHT, of Manchester, in 1881; it is on the whole more applicable to the knee, where strength is required, than to the elbow, where the attainment of mobility should be the first consideration.

The surgical treatment of the bony deformities of the lower limbs resulting from rickets or ankylosis is practically entirely modern. Genu valgum was treated by DELORE, of Lyons, by forcibly straightening the limb; the results were somewhat uncertain, and it has been replaced in great part by osteotomy. In 1875 ANNANDALE sawed off the inner condyle of the femur, and a year later OGSTON did the same operation subcutaneously. In 1878 MACEWEN, after practising section of the inner condyle, chiselled through the bone above the epiphyseal line, and this is the method now employed. W. ADAMS first performed his operation for ankylosis of the hip-joint of subcutaneous division of the neck of the femur in 1869, and F. J. GANT'S method soon followed, the femur being divided below the trochanters. The removal of an enlarged thyroid gland had been practised so far back as 1820, but the result was so unsatisfactory from hæmorrhage and septic infection that it fell into disuse. Since 1870, however, the operation has become fairly common, especially in Switzerland, where the prevalence of bronchocele is so great, KOCHER, of Berne, having had several hundred cases with an insignificant mortality. It was not long, however, after total extirpation of a goitre had become a frequent operation before it was noticed that most of the patients underwent a curious derangement of the general health. The resemblance of the symptoms to myxœdema described by GULL in 1873 was soon observed, and it was seen that these symptoms were due to the absence of the thyroid gland; since then surgeons have not ventured to remove more than a part of the organ. In many cases, especially recently, it has not been found necessary to do more than enucleate an adenoma from amongst the gland substance.

It is in the surgery of the abdomen that the greatest advance has been made. At the beginning of the era there was no surgery of the abdomen; wounds involving the peritoneum were looked upon as almost necessarily fatal; and even though in the early years of the century, both in England and in America, the operation of ovariotomy was occasionally performed, yet it was not until 1857 that it was fully recognised as justifiable, and this was undoubtedly due to SPENCER WELLS. The antiseptic treatment has also materially assisted the extension of ovariotomy. The knowledge gained in this operation, especially after the introduction of antiseptics, led naturally to attempts to treat surgically injuries and diseases of the abdominal viscera. At the present time the surgeon does not hesitate to deal with stabs and gunshot wounds involving the bowel, for suture will give a good chance of recovery if the operation has not been too long delayed. Laceration of the kidney and spleen is successfully treated by excision of the torn viscus. In rupture of the stomach and intestines also laparotomy gives good results, and the results would be better still if it were possible to operate earlier. Rupture of the bladder, at one time almost certainly fatal, is now frequently successfully treated by laparotomy and suture, the two earliest successful cases being those of WILLIAM MACCORMAC. Flushing the peritoneal cavity with a mild antiseptic or sterilised water is in many cases of abdominal operation an important aid to success. In disease, also, of the abdominal viscera the results are almost as satisfactory. Pylorectomy for malignant disease was suggested by BILLROTH in 1877, but the first two cases, performed by PÉAN in 1879 and by RYDYGIER in 1880, ended fatally, and the first successful case was that performed by BILLROTH in 1831. The operation will always be rare, as but few cases are suitable for it. In cases of malignant disease of the pylorus in which the neighbouring parts are so implicated that excision is impossible the palliative treatment by gastro-jejunostomy is available, and in some cases enables a patient to survive in comfort for several months. There are many other operations on the abdomen which we can only mention, such as the operations for abscess and for hydatid of the liver (the latter first performed by LINDEMANN of Hanover); cholecystotomy, for a distended gall-bladder; removal of a gall-stone from the cystic duct, suggested by THUDICHUM in 1859, performed by MARION SIMS and by LAWSON TAIT in 1878; choledochotomy, first performed by KUMMELL in 1890 and later by KNOWSLEY THORNTON, VOIGT, KORTE, ABBÉ, and others; and cholecystenterostomy, suggested by WILLETT in 1886, and first performed in England by MAYO ROBSON. The surgical treatment of acute intestinal obstruction gives very satisfactory results, laparotomy being performed and the cause of the obstruction removed. For chronic obstruction lumbar colotomy was revived in 1839 by AMUSSAT, but during the last few years the far older operation of LITTRÉ—namely, inguinal colotomy—has been reintroduced, and is now the operation usually performed.

For the radical cure of inguinal hernia a large number of operations have been employed. Previously to the introduction of the antiseptic method the operators attempted to perform a cure without making any incision; the chief methods employed were those of C. W. WUTZER, of Bonn, introduced in 1838, and of JOHN WOOD; the latter was by far more commonly employed; but the open method is the only one used at present. The operations now in use are very numerous, and have been introduced by LISTER, ANNANDALE, MITCHELL BANKS, CZERNY, BALL (1887), MACEWEN, HALSTEAD (1890), and BASSINI (1890).

CHESELDEN'S lateral operation of lithotomy continued up to recent years to be the chief method of removing a stone from the bladder, but it is now only rarely performed. So far as cutting methods are concerned the revived suprapubic operation is chiefly used, but the same operation is still more frequently performed for exploring the bladder and for removal of growths of the bladder and prostate. Lateral lithotomy has chiefly been replaced by lithotrity.

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The method practised by CIVIALE in 1824, and improved by FERGUSSON, SKEY, and HENRY THOMPSON, came to be the method of treatment for selected cases of vesical calculi; but it was not until 1878, when BIGELOW introduced litholapaxy or lithotrity at one sitting, that lithotrity became the chief method of dealing with stones of all sizes. In 1886 KEEGAN showed that children were suitable cases for lithotrity. The introduction by LEITER of the cystoscope has greatly facilitated the diagnosis and treatment of diseases of the bladder.

In the surgery of the brain very great progress has been made. No longer are fractures of the vertex of the skull considered to be of especially bad prognosis, for with care and antiseptic treatment they usually heal readily; but it is especially in injuries and diseases of the brain, where the localisation of the lesion would formerly have been impossible, that we can appreciate most the advance which has been made. There is still a large portion of the cortex the function of which is unknown to us, but disease of most parts of the brain declares clearly its locality by the symptoms and signs to which it gives rise. As a result of this knowledge surgeons have been much more ready of late years to explore the cavity of the skull. In 1883 MACEWEN, of Glasgow, trephined successfully for hæmorrhage; and later in the same year he removed a soft mass from the Rolandic area. GODLEE, in 1884, removed a glioma from the position in which its presence had been diagnosed. Others who have done much work in this field are VICTOR HORSLEY and LUCAS CHAMPIONNIÈRE.

Though a form of the laryngoscope was invented in 1829, yet it was not until 1857 that a useful laryngoscope was devised by CZERMAK. Of the various operations which have been performed on the larynx space does not allow us to speak, but we may mention that excision of the larynx was first performed in 1866 by P. HERON WATSON. He was followed in 1873 by BILLROTH. Amongst the recent additions to aids to diagnosis none can compare in importance with the ROENTGEN rays, which were first described in January, 1896; there can be but little doubt that their usefulness will increase, and even at present they are of extreme value.

MIDWIFERY: THE PART PLAYED BY ANÆSTHETICS AND ANTISEPTICS.

THE changes that have taken place in obstetric medicine during the past sixty years, both in the region of theory and as regards the details of practice, are, as everyone knows, in most directions considerable, and in some directions even wonderful. To chronicle these changes with any degree of completeness would necessarily require several volumes, since they could be only fully dealt with by making an abstract of all the works on midwifery and gynæcology, text-books, monographs, pamphlets, and current literature that have been written on these subjects during the period under review. Here we shall only attempt to sketch in the merest outline some of the more important alterations that have occurred. We say advisedly "alterations," since, with all the desire in the world to view matters from a judicial standpoint, we cannot altogether hope to free ourselves entirely from the bias of our own day. Some of the alterations that have occurred in both midwifery and gynæcology since the year 1837 have been regarded at one time as changes in the direction of true progress and at another time, and even by the same generation, as deviations from the real highway into by-paths that, after promising well for a time, led backwards into the darkness which it was hoped had been left behind. In some things, after all allowance has been made for the tendency of each generation to regard itself as superior in knowledge and skill to those that have preceded it, there can be no doubt that real progress has been made, while it is not impossible that in some others the appearance of progress has been fallacious; and it may be that the wider knowledge and larger experience of those that are to come after us will lead them to the conclusion that the authorities of sixty years ago were in some ways not so far wrong after all. We have only to turn for a moment to the region of art to find convincing proof that the lapse of time is not necessarily equivalent to progress, and that indeed the knowledge and skill of to-day may in certain directions be immeasurably inferior to that of, say, a hundred years ago. Such arts as the production of certain kinds of china and of silverwork are good examples of what we mean. As to china, some of the methods and knowledge familiar to many not so very long ago have been totally lost, and the silver-work of the modern workman, with all his advantages and School Board education, is poor indeed compared to what his great-grandfather, who without, very likely, being able to write was in many ways an artist instead of a mere workman, was able to produce. The process by which the practitioner of sixty years ago was evolved was essentially different from that which produces the practitioner of to-day. The latter is no doubt in many respects the better man; but probably something that pertained to his predecessor has had to be sacrificed in order to secure this superiority.

After these preliminary reflections we may come to matters of detail. The changes in the department of midwifery have not been so tremendous and striking as those in gynæcology, no doubt because midwifery is of necessity such a very ancient art. In midwifery, at all events, we do not think we can find any indication of ground having been lost. If we regard the matter from the standpoint of a woman who is pregnant at the present time as compared with that of a woman similarly situated in 1837 the former is undoubtedly in a more favourable position. We should say that should the pregnancy happen to be extra-uterine the advantage of living in 1897 rather than in 1837 is so great that probably no one would care to dispute it. In a standard text-book published in 1841 extra-uterine pregnancy is spoken of as follows:—"This singular deviation from the usual course of conception is fortunately of rare occurrence, for few cases terminate favourably. If it be in the Fallopian tube ..... the patient usually dies from internal hæmorrhage." Modern investigation has, however, shown that cases of extra-uterine pregnancy are by no means so uncommon as was formerly supposed, and that even when a tubal pregnancy has ruptured, causing intra-peritoneal hæmorrhage, the case is very amenable to operative treatment, if seen in time. Many cases have now been recorded where a definite diagnosis of tubal pregnancy has been made before rupture, and where the gravid tube has been successfully removed. There is, of course, in the works on midwifery contemporary with that just referred to nothing to be found on the subject of antiseptics or anæsthetics. We should regard the application of the antiseptic principle to midwifery as the greatest improvement that has been made in obstetric practice within the last sixty years. When it is fully understood and faithfully employed deaths from puerperal fever may be completely or almost completely avoided, as the practice of our best-managed lying-in hospitals has sufficiently shown. Even at the present day, however, in general practice it would appear from the statistics recently published by CULLINGWORTH that puerperal fever is still responsible for a relatively high percentage of fatalities which, it is to be hoped, may be prevented as the details of the antiseptic principle come to be more universally adopted. As regards puerperal fever the same authority already quoted writing in 1841 says:—"But we now come to a source of danger which follows the most favourable as well as unfavourable labours—which is extremely varied in its nature, fatal in

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its effects, and (what renders it so peculiarly formidable) by no means uncommon in its occurrence. Of all the dangers to which a lying-in woman is exposed puerperal fever is by far the most to be dreaded; there are few or no difficulties during parturition which the practitioner has to contend with that can be compared to it; there are none in which he is frequently made to feel so helpless and his various means of treatment so utterly inefficacious; certain it is that puerperal fever in its worst forms has occasionally committed such ravages among patients of this class as to rival in destructiveness the most malignant pestilences with which the human race has been afflicted." With this obviously true picture of the state of things in 1841 before us, it is surely the most noteworthy achievement in obstetric practice of the last sixty years that the nature of this pestilence has been arrived at, sufficiently at least to enable us to prevent its occurrence provided the necessary precautions, which are now well known, be observed.

As regards phlegmasia dolens, or rather as it is there given "phlegmatia dolens," we quote from the same authority (1841): "Phlegmatia dolens rarely or never proves fatal of itself; the patient either dies in consequence of the puerperal fever which has preceded or attended the affection, or from the system gradually sinking under the injury which it has sustained." Nothing was apparently known at that time of the connexion between phlegmasia dolens and pulmonary embolism.

To sum up the matter, broadly speaking the midwifery of sixty years ago did not differ so very materially from the midwifery of to-day, except—and the exceptions are of the greatest importance—that it was conducted without the assistance of anæthesia and without the employment of antiseptics.



SIR JAMES SIMPSON.[1]

It is when we come to consider the progress of gynæcology during the period under review that we are confronted with changes of the most striking kind. Its progress has been marked, however, by many false starts. Theories as to the causation of many of the diseases peculiar to women have been advanced, have become rapidly fashionable, have dominated practice for a time, and have then been proved unsound and have disappeared into a well-merited oblivion. There is, for instance, the period when gynæcological practice was largely influenced by the belief that the so-called "ulceration" of the cervix was accountable for most of the symptoms complained of in relation to the pelvic organs. JOHN WILLIAMS has drawn a vivid picture of the state of things that prevailed about this time. He says: "During my early student days women suffered mainly from two diseases—ulceration of the cervix, which was rubbed weekly with nitrate of silver, and stricture of the cervix, which was dilated with bougies at similar intervals." Then there came the time when the malposition, so-called, of the uterus was supposed to be the key to a right understanding of the majority of women's ailments. The uterus was considered to be pathologically flexed or "verted" in this or that direction, and instruments innumerable were invented and used to correct the displacement. The worst offenders in this class were those who held strong views as to the importance of flexions, and carried their opinions to the logical conclusion in practice by introducing a rigid stem into the cavity of the uterus. They were more mischievous than the pessaries, merely invented for insertion into the vagina. The latter, for the most part, merely acted as foreign bodies that did little harm, if they did no good. But the intra-uterine stems were a source of actual danger to those unhappy enough to be condemned to wear them. Modern investigation has shown that the so-called "ulceration" of the cervix (by which is understood the various forms of erosion) occupies a position of little or no pathological importance, and that the uterus may be allowed to have a very considerable choice as to the situation it may occupy without this freedom of choice in any way acting to the prejudice of its possessor.

It is undoubtedly in the direction of the surgical treatment of the graver diseases peculiar to women that the greatest triumphs have been won during the last sixty years. The rise and progress of ovariotomy till it has come to its present position afford the most remarkable instance in this category. The treatment of cases of ovarian tumour is described in a standard work published in the year 1844 as follows: "Here then are the different modes of treatment recommended in ovarian dropsy: the abstraction of the water with the cautions before described; the extirpation of the ovary in the earlier and later periods of its growth; the removal of a circular piece of the cyst so as to lay open the cyst into the peritoneum; and the prevention of the dilatation and growth by early paracentesis. In the present ill-success of our practice all these operations are well worth your consideration; and if you can bring one of them to such perfection as to cure some of the unhappy individuals who now fall victims of the disease, you will indeed be conferring an invaluable good on the fairest and least offending part of our species." Which of these operations has been brought to the perfection just mentioned is now a matter of common knowledge; and all honour to those whose work established it in its present position. In the treatment of cancer of the uterus practice has also undergone a revolution during the past sixty years. In a standard authority published at the beginning of this period we find both excision of the cervix (the vaginal portion only) and removal of the whole uterus mentioned as possible forms of treatment. The mortality of both operations at that time was frightful. Nineteen cases of extirpation of the uterus are mentioned, of which sixteen died; and it is further stated on the authority of VELPEAU that the operation had been performed twenty-one times in twenty years, and that in not one of the cases was there any permanent benefit. The changes that have occurred since then in the results of such operations are sufficiently familiar to our readers. While the success of

[1] Vignetted by permission from a woodcut in the "Practitioner."

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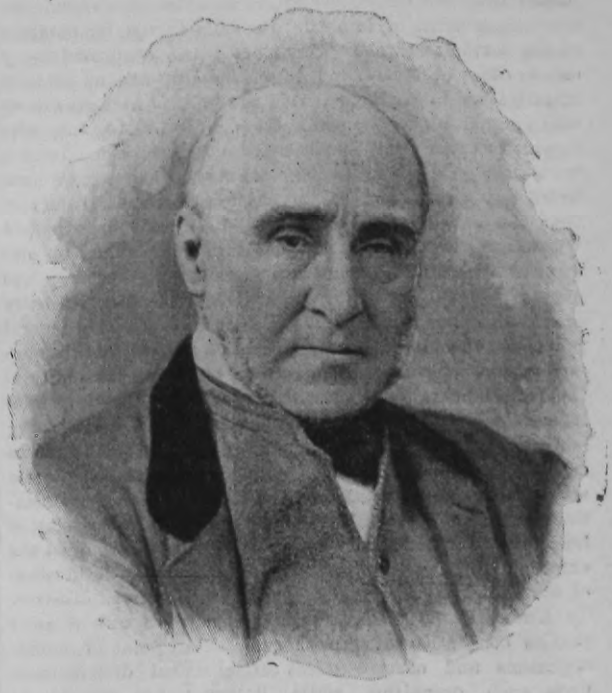
surgical treatment in the cases just referred to has been a matter for the warmest congratulation, it must not be forgotten that there have been drawbacks attending it. The success of ovariotomy has undoubtedly led to the removal of ovaries and uterine appendages in cases where such an operation could not be justified in the opinion of men of moderate views. The measure of safety introduced into all operations by the observance of asepsis has undoubtedly had a tendency to cause a multiplication of operations both major and minor in gynæcology, some of which are regarded by competent observers as of doubtful utility. Probably such a result is the necessary consequence of the enthusiasm engendered by every successful movement—and it may be hoped that the lapse of time will tend to correct any undue activity in the direction indicated.

To sum up, as regards gynæcological progress during the last sixty years in the direction of treatment, the most prominent achievements have been the establishment of ovariotomy and of vaginal hysterectomy, omitting minor operations, while in the way of diagnosis, the improvement of the speculum, the invention of the uterine sound, the introduction of means for dilatation of the cervix uteri in order to examine the endometrium, and the bimanual method for examining the condition of the pelvic organs, stand out as the chief gains to be recorded. The accoucheur of to-day can hardly imagine what his practice would be without anæsthetics and without antiseptics, and similarly the gynæcologist finds a difficulty in realising what his art must have been without these, and with practically no way of investigating his cases except by digital examination of the vagina. Among the instruments that it would seem difficult for any modern operator to dispense with, we think SPENCER WELLS'S artery forceps should certainly be named.

PREVENTIVE MEDICINE: THE PRODUCT OF THE REIGN.

WHEN, perhaps a century hence, the historian sets himself to write of preventive medicine, the reign of QUEEN VICTORIA will occupy a position of no mean degree in the pages of the work. The era has been remarkable in that within its limits preventive medicine has, as we have pointed out, been born. When our beloved QUEEN ascended the Throne in 1837 the pages of the statute book were, from the point of view of preventive medicine, with one exception, unwritten upon, and it is not a little significant that the exception referred to, the Quarantine Act of 1825, should on the eve of the Diamond Jubilee have been erased from the statutes as a vexatious measure no longer to be tolerated. The birth and growth of sanitary science—for preventive medicine can now be justly termed a science—have been in the main the resultant of the concurrent operation of three important factors. These are the development of what must, for the want of a better term, be called the spirit of humanity, which attaches year by year increasing value to human life and well-being; a better appreciation of the economic fact that health is wealth; and last, but in no sense least, an increased knowledge of the laws which govern the spread of infectious diseases—laws which, rightly apprehended, make for health and prolong life. To these three factors may, perhaps, be added a fourth—namely, a relative absence of the disturbing influences of war. It would be an attractive and congenial task to trace here, step by step and in chronological order, the progress which preventive medicine has made during the sixty years of HER MAJESTY'S reign, but we must content ourselves with a brief general survey, which shall form, as it were, a sort of roll-call of the masters in the science and of the works with which their names are and will be associated. In the very year of the QUEEN'S accession to the throne there came into operation an Act which provided for the registration of births, deaths, and marriages, and which formed the starting-point of those "statistical classics" with which the name of WILLIAM FARR will always be gratefully identified. It was, however, the late EDWIN CHADWICK who first entered the lists in the cause of public health, and it was his energetic and persistent efforts which were largely responsible for the memorable Health of Towns Commission and for the placing of the Public Health Act of 1848 upon the statutes, an Act which was quickly followed by others of sanitary import. In his labours CHADWICK was ably supported by such co-workers as SOUTHWOOD SMITH, SUTHERLAND, GUY, ARNOTT, and KAY, and although his reign was but brief the student of public health will always regard him and his coadjutors as the pioneers of the science.

In the year 1847 the city of Liverpool set an excellent example by appointing DUNCAN its first medical officer of health, and to the City of London belongs the honour of having secured in the following year the services of SIMON, who, in 1855, was appointed the medical adviser to the Central Health Authority, for which he laboured with such signal success for well-nigh twenty-one years.



SIR JOHN SIMON.

It may be interesting, too, to call to mind that amongst the first medical officers of health who were appointed and who helped to build up the public health service of this country were BALLARD, BUCHANAN, BRISTOWE, and BURDON SANDERSON; and it has been to the generalship of SIMON, SEATON, BUCHANAN, and now THORNE THORNE, that we are indebted for those highly valuable annual reports of the Medical Department of the Privy Council and of the Local Government Board which have added in so marked a degree to our knowledge of the natural history of infectious diseases and of administrative methods; while on the more philanthropic side of public health we must not neglect to make honourable mention of the work done by such men as SHAFTESBURY, B. W. RICHARDSON, and PEABODY, all of whom in an unofficial

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capacity have in a sense pushed forward the work of CHADWICK.

To STEWART and WILLIAM JENNER this branch of science is especially indebted for the differentiation of typhus fever and enteric fever—a differentiation which has been followed by the almost complete elimination of typhus fever from the country and by an enormous reduction of enteric fever; and similarly to SNOW'S historical reports in connexion with the distribution of cholera we must trace our knowledge of the manner in which certain diseases are water-borne. To BUCHANAN we owe a better understanding of the laws which govern the spread and distribution of enteric fever, typhus fever, and phthisis; while W. H. POWER'S remarkable researches have taught us what a high infectivity small-pox possesses, and how that if we would clearly comprehend the laws of epidemiology we must have regard to diseases affecting animals as well as those that affect the human species—a doctrine which surely receives support from the general principles of biology. To THORNE THORNE and POWER we are indebted for much that is now common knowledge in reference to the natural history of diphtheria; and these two observers, together with SHIRLEY MURPHY, have shown us some of the effects of the aggregation of children in the confined spaces of our public elementary schools. BALLARD, who has but recently passed from our midst, has left us his exhaustive researches into the relation of infantile diarrhœa to the temperature of the earth, researches which are being confirmed every day by other observers, and which have opened up fields of investigation in connexion with the vitality and growth of micro-organisms in the soil. It was BALLARD, too, who provided us with what is now the standard work on offensive trades and on effluvium nuisances. As to small-pox we have heard not a little of late, but we must here recall the fact that the Vaccination Acts of 1840–1871 have been passed within the Victorian era, and that during that time EDWARD JENNER'S immortal, though at first empirical, discovery has not only saved thousands from disfigurement or an early grave, but has received its justification in the general preventive inoculation work of PASTEUR and others. In connexion, too, with vaccination we must mention with appreciation the labours of SIMON, SEATON and the Epidemiological Society; as also of BUCHANAN, MCVAIL, and BARRY; and we may, perhaps, express a hope that ere the Victorian era passes into history the blessings of general systematic revaccination may be added to those of primary vaccination. During later years the progress made in isolation hospital accommodation must be recorded, as also must the extension through the operations of compulsory notification of our knowledge of the distribution of infectious diseases. To KOCH, KLEIN, PARSONS, and others we owe a more precise conception of the thermal death point of micro-organisms and of the effect of chemical disinfectants upon such organisms, while PARSONS has taught us much of the natural history of influenza. The variations, cyclical and seasonal, of epidemic diseases is a subject upon which BUCHANAN, MITCHELL, RANSOME, T. W. THOMPSON, and WHITELEGGE have enlightened us; and NETTEN RADCLIFFE has made it easy for the student of Levantine plague and cholera to trace at the present time the progress of these two diseases in the past The influence of England has made itself felt in matters relative to quarantine in all parts of Europe, and, indeed, of the world, and for this the country is indebted to SIMON, BUCHANAN, and more recently to THORNE THORNE for his able and energetic advocacy of medical inspection as opposed to quarantine at the International Conferences, while in matters affecting the health of the army the names of PARKES and DE CHAUMONT will be remembered with pride by the Army Medical Staff in all parts of the empire Probably, however, the most remarkakle feature, in a public health sense, of this long reign has been the complete revolution of our ideas in respect of infectious diseases by the discoveries as to bacteria and their products, and in this connexion we are called upon to extol with France the genius of PASTEUR and with Germany the work of KOCH. The intensification and attenuation of disease viruses have been the event of recent years, and although the subject is still almost *in embryo* we may hope before long not only to add curative but protective inoculation to our victories over a variety of hitherto practically uncontrolled diseases. Amongst workers in England we recall the eminent services rendered throughout the world by the teachings of LISTER in connexion with antiseptic surgery, and the highly valuable work done by BURDON SANDERSON and KLEIN in the pathology of the infectious diseases. Amongst foreign bacteriologists there crowd in upon us such names as KLEBS, LÖFFLER, EBERTH, GAFFKY, JANOWSKI, BEHRING, KITASATO, DAVAINE, BOSSANO, BRIEGER, FRAENKEL, HAFFKINE, ROUX, YERSIN, and a host of others.

With the mention of these names we must close this necessarily imperfect sketch, but not without insisting upon the fact that the progress of sanitation in the English sense during the Victorian era has been by no means confined to these islands alone. As we have already pointed out, its influence has extended in certain directions all over Europe, but what is perhaps a matter of especial concern to us as Englishmen is that the mother country has sent out to that Greater Britain beyond the seas men like GRESSWELL to Australia, SIMPSON to Calcutta, and more recently GEORGE TURNER to the Cape, there to engraft the principles of English sanitation, and, while preventing in the colonies of the Empire the development of sanitary defects which age has to some extent inflicted upon us at home, to take advantage of the facilities which modern science affords for promoting and protecting the health of our descendants.

THE QUEEN'S REIGN AND THE MATERIAL AND SOCIAL POSITION OF THE MEDICAL PROFESSION.

THE last sixty years have seen great changes in the material and social position of our profession. The QUEEN'S own reminiscences and impressions of the distinguished men who have served her medically would be deeply interesting. Her appreciation of medical service has been always of the keenest and soundest order, and it would be strange indeed if in this just estimate of the profession she were not followed by public opinion. Yet there is a tendency in some minds to represent the public as less appreciative of the profession than it used to be, and the profession itself as less careful of its own methods and less worthy of the respect of the public than it was in former times. Some who hold this opinion might be ready to admit that the select few of the profession from whom HER MAJESTY'S advisers are taken are as worthy and exemplary as any of their predecessors, but would be disposed to maintain that in the rank and file there is a declension in scientific and intellectual standard in professional methods, in manners, and in social status. Such views can only be put forward out of utter and idle ignorance. The profession in point of numbers is probably twice what it was sixty years ago, so that there are twice as many persons to make a livelihood. It is true that the population of these islands has also increased, but the resulting situation is simply competition, and competition means hardship in individual cases, but it means improvement in general standard. In 1876 there were roughly 22,000 medical practitioners on the Register; there are now 34,000. A generation back BENJAMIN BRODIE spoke of the keen competition of the profession. How much more may we recognise it now?

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Competition must be allowed for in passing judgment on the profession and its ways, and in trying to estimate its position in a social respect, compared with what it was sixty years ago.

It is easy to adduce any number of facts which go to support the view that in all essential respects the profession has grown in public usefulness and in public esteem. The very numbers of it are a testimony to such a rise. Men in a wealthy age and country do not flock into a declining profession as they have rushed of late into ours. Compared with the growth in influence of other professions, we have every reason to be satisfied with our own. Neither Divinity nor Law are enough to satisfy men now in respect of the great questions which exercise their minds. The evidence of medicine is sought. This may well be so when we consider the length of the medical curriculum and the field of study which has to be covered by those entering the profession. It is still more intelligible when we remember the enormous and rapid development of medicine and surgery during the sixty years which we are all commemorating, accomplished in large part by men in actual practice, and therefore in constant contact with human nature in all its varied moods and conditions. We do not contribute many members to Parliament, but in the constituencies which are responsible for sending members there are few more influential persons than the members of our own profession. They have not yet found out their full influence, and we are thankful to say that politics play no part in professional successes; but when questions of wide popular interest are on the *tapis* the medical vote and word are already of importance and are bound to become more so. The quiet influence of medical men in the municipal and local life of the country is difficult to realise. But that it is very extensive and beneficial is often strikingly illustrated in our columns by the short biographies of men whose names do not perchance appear in the medical journals until we have to record their deaths.

Medical societies have multiplied and grown in prosperity beyond all precedent. Not only in the capitals, but in almost every provincial town of any consequence medical societies exist, where men stimulate each other in the science and art of their profession by the comparison of methods and the interchange of ideas. But the success of these societies only serves to make more apparent the undoubted and regrettable facts that the organisation and the discipline of the profession are sadly incomplete. Almost within the years of HER MAJESTY'S reign a medical association has been established with half the profession in its membership, and this has attained to such a state of prosperity as can only be marred by the unfalthfulness of its best elements. Yet a spirit of general content with a condition which is undoubtedly one of progress is certainly not prevalent. In matters of ethics the profession can take care of itself. The great disciplinary influence of the profession is its own public opinion and the sound and subtle sense of what is honourable among its own members, and the best proof of the efficacy of these agents lies in the infrequency of gross cases of professional misconduct calling for the attention either of the law courts or of the General Medical Council or of the qualifying bodies. But in matters more concerning the worldly prosperity of the rank and file of the profession the leaders take little interest and the masses are divided in counsel. The profession is in some degree abused by the State, and is in no way protected by the State from gross exploitation, and these facts are known, while their remedy is not so obvious. This, however, is a little cloud in the brilliancy of medical affairs in the Victorian era upon which we do not desire to dwell at the present moment. Amid many grievances and disadvantages the profession bears itself with dignity, and establishes itself in the estimation of society and of those who best represent society. Within comparatively recent years leaders of the two great political parties have taken more than one opportunity of expressing their very high estimate of the position and prospects of medicine, while the State in its own interest has of late had to multiply its medical servants, until State medicine has become a special branch of study, fitting men for duties and offices altogether distinct from ordinary medical practice.

This steady and constant rise in the social status of the profession applies to all its branches. The leading medical men of the day hold their ground in any scientific society or in any social gathering. The House of Lords is more complete for having one medical Peer, but it will need several more before it does justice to itself or to the State. We may safely assume that the medical members of the Lower House are likely to increase. But the true rise of the profession is best seen in the fact that with an ever-increasing tendency to specialism the general practitioner stands out as the basis of the pyramid. He has risen and with him the profession has risen. There are those, we believe, who sigh for the old-fashioned apothecary, with his black clothes and his white cravat, and no doubt he was often an extremely respectable old gentleman, with his ready diagnosis and his equally ready medicaments for the few diseases in his nosology. But they must sigh in vain. For men of the type of Mr. PENDENNIS, senior, who "exercised the profession of apothecary and surgeon in the city of Bath, where he not only attended gentlemen in their sick rooms and ladies at the most interesting periods of their lives, but would condescend to sell a brown paper plaster to a farmer's wife across the counter or to vend tooth brushes and London perfumery," are obsolete. For many years they have been a vanishing quantity, and now they are lost to the social scheme, and, on a broad view of the question, it must be admitted that the public conception of medical practice has been raised thereby. The trade element in it is diminishing. Medical life is not an affair of nostrums and draughts and pills, but of intelligence and cultivation and capability. The apothecary has become the general practitioner, and the general practitioner is more and more perfecting his knowledge and his ability.

UNIVERSITY OF CAMBRIDGE.—At the congregation on June 10th the establishment of the new lectureship in Experimental Psychology was carried by 37 votes to 5. The degree of Doctor of Medicine was conferred on Walter Broadbent, M.A., B.C., Trinity; A. S. F. Grünbaum, M.A., B.C., Caius; J. C. Waithman, M.A., Magdalene; and A. L. Jackson, M.A., B.C., Clare. The degrees of Bachelor of Medicine and Bachelor of Surgery were conferred on W. F. Lloyd, B.A., Clare; C. A. Robinson, B.A., Caius; A. P. Beddard, B.A., Trinity; W. Myers, B.A., Caius; and F. F. Ward, B.A., Selwyn. The degree of Bachelor of Surgery was also conferred on Dr. Waithman, Magdalene.

FOREIGN UNIVERSITY INTELLIGENCE.—*Atlanta Medical College:* Dr. Charles Minor Blackford has been appointed Lecturer on Pathology, Bacteriology, and Histology.—*Berlin:* Dr. G. Behrend, *privat-docent* of Dermatology, has been granted the title of Professor.—*Chicago Medical College:* Dr. Henry Gradle has been appointed Professor of Ophthalmology and Otology in succession to Dr. M. S. J. Jones, who has resigned.—*Halle:* Professor Fehling, who had been offered the chair of Midwifery at Tubingen, has decided to remain at Halle.—*Heidelberg:* Dr. Schottländer *privat-docent* of Midwifery has been promoted to an Extraordinary Professorship of that subject.—*Michigan (Ann Arbor University)*: Dr. Arneill has been appointed Assistant Professor of Medicine.—*Vienna:* Dr. Alfred Topolanski, of the ophthalmic department of the hospital connected with the sisters of charity, has been recognised as *privat-docent* in Ophthalmology in the University.

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The Lancet Special Commission
ON THE
METROPOLITAN WATER-SUPPLY.

XV.[1]

THE GRAND JUNCTION WATERWORKS COMPANY.

History.—In the year 1798 the Grand Junction Canal Company obtained an Act of Parliament (33 Geo. III., c. 33) to enable them to supply water to the inhabitants of Paddington and the places adjacent. The project was not, however, at once carried out. In November, 1810, an announcement was made in the newspapers that "works are now constructing and reservoirs making, under the direction of Mr. Rennie, the engineer, with powers to effect their purpose far superior to any other in the kingdom, and calculated to give to the inhabitants and streets supplied an abundance of pure and excellent soft water even in the upper stories of houses or other buildings." It was pointed out that the height above the Thames from which the water was to be taken enabled the proprietors to convey it at a very small expense to the parishes of Paddington, Marylebone, and St. George Hanover-square, and to the new streets which were then being built in these neighbourhoods. The advertisement went on to say that the "grand main at present casting" was 30 in. in diameter, and it was announced that a company would be started for carrying out the work as a business distinct from that of the Grand Junction Canal Company. A favourable account was given of the water which was to be supplied, and it was said to be "excellent for all culinary and domestic purposes." "It is also," the prospectus went on to say, "lighter and contains less foreign matter than the Thames water." It was added that additional reservoirs were being made, and streams of water "of the finest quality" were being used, and that there would be a sufficient supply for 40,000 houses. It was obvious, the advertisement stated, that the undertaking would be attended with great public benefit, and the proprietors trusted that they had "reason to feel confident of the liberal support of the public." The Company for carrying out the new undertaking was formed under an Act of Parliament passed in the year 1811 (51 Geo. III., c. 1, 69). The expense of carrying out the undertaking proved to be considerably more than was expected, and the Company at first experienced considerable difficulties with regard to raising new capital when it became necessary to do so. A great deal of money was lost because the Company at first adopted the use of stone pipes, which were recommended by Mr. Rennie. It was soon found that these were very unsuitable for the purpose, and it became necessary to substitute iron pipes. At first the Company obtained their water from the Grand Junction Canal, which in its turn was supplied by the River Colne and River Brent. Water was also obtained from a reservoir of nearly 100 acres, which was filled by streams of the Vale of Ruislip. It was said that these sources were remarkably pure and that the water was superior both in softness and transparency to that derived from the Thames. Experience, however, proved that the water was not by any means perfect, and the directors acknowledged that the quality of the water taken from the canal "had disappointed the expectations of the projectors of the original plan," for it was found to be impossible to keep the land drainage out of the canal, and the Ruislip Reservoir. It was discovered also that the waters of Brent were "so foul that it was necessary to prevent their entering the canal," and a like necessity caused the waters of the Ruislip Reservoir to be conducted by a tunnel under the canal. The supply from both these sources proved unfit for the use of the waterworks. In consequence of this arrangements were made for obtaining water from the Regent's Canal Company, but the supply proved inadequate, and complaints were made both as to the quantity and quality supplied to the customers. The Company at length decided to obtain water from the Thames, and about four acres of land were bought at Chelsea. The site chosen was between the Royal Naval Hospital and the Chelsea Waterworks. The water was obtained through a conduit pipe laid into the bed of the river and was pumped by steam-engines to the station at Paddington, a portion of the site of which is now occupied by Talbot-square and Norfolk-square. There were three reservoirs at Paddington capable of holding 153,000, 139,000, and 65,000 hogsheads respectively. Thames water was allowed to remain for some time to settle before it was pumped for the supply of the customers. The higher parts of the districts were supplied by pumping from Paddington over a standpipe 61 ft. higher than the reservoir, which was 85 ft. above the Thames high-water mark. For the low-service supply the water flowed directly from the reservoirs. In the year 1830 the district supplied was chiefly Paddington and the part between Oxford-street on the north and the Green Park on the south. In the year 1831 the directors of the Company adopted a rather ambitious scheme for supplying the whole of the metropolis with water. It was proposed to supply Middlesex, Surrey, and part of Buckinghamshire, and the scheme included deepening and embanking some miles of the River Colne from its entrance into the Thames near Staines. Water was to be conducted through a canal 27 ft. in width and 4 ft. 6 in. in depth and was to have two footpaths, one on each side. The work would have been one of considerable magnitude. The conduit was to pass over no less than twenty-six rivers, streams, and sewers, over thirty roads, lanes, and footpaths, and one of the aqueducts, it was said, would have been about three times the length of Blackfriars Bridge. There were also to be two tunnels, each 1000 ft in length. The Bill for carrying out the project was referred to a committee of the House of Commons in April, 1831, and it was not passed. In the year 1835 the Company was authorised to remove their intake from the Thames at Chelsea to Brentford, just above Kew Bridge. In 1852 an Act was passed compelling the metropolitan water companies to take their supply from some part above the tidal river, and an Act was therefore obtained to enable the Company to remove their station to Sunbury.

Present state: general description.—The Grand Junction Waterworks Company supplies Sunbury, Hampton, Teddington, Hounslow, Sutton, Isleworth, Brentford, Hanwell, Ealing, Acton, Shepherd's Bush, Notting-hill, part of Bayswater, Paddington, Hyde Park, and Mayfair. The water is derived chiefly from the Thames at Hampton, but a small quantity is obtained from the gravel beds there. The Company's stations are—Hampton intake, arrangement for taking water from the gravel bed, reservoirs, filter beds, pumping station; Kew Bridge, Brentford, reservoirs, filter beds, and pumping station; Hanger-hill, Ealing, reservoirs, pumping station; Campden-hill, reservoirs, pumping station.

Hampton (see Fig. 1).—The Hampton station is situated in the parishes of Hampton and Sunbury, Middlesex, between the upper Sunbury-road and the Thames. Several alterations are in progress here. As in the case of the Southwark and Vauxhall Waterworks, a map is given showing the part of the station in which changes are going on, and it may be best to briefly describe the general arrangements of the station before going into detail. At the eastern extremity of the works there is an engine-house marked E on the plan, and next to this the part cross shaded, marked A, is an old reservoir which is now in progress of conversion into filter beds; further to the west is a covered reservoir, R C; five filter beds, marked F 1 to 5; and a small engine-house G. Still further to the west there is a reservoir R; beyond this another engine-house, having to the north of it a preliminary filter bed, F 6. At the part marked B another preliminary filter is being converted into two beds of the ordinary type. F 7 and F 8 are preliminary filters. The land immediately to the west of these belongs to the Southwark and Vauxhall Company,[2] and beyond this, in the part marked I, there is an arrangement for filtering river water through gravel beds. Immediately to the south of this on the island is the new intake of the Company; DD shows the old intake. With regard to the pumping arrangements, it may for the sake of clearness be best to say in this place that the work to be done is of three kinds. Firstly, water has to be pumped from the river to the filter-beds. Secondly,

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., and XIV. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, and 24th, May 1st, 8th, 15th, 22nd, and 29th, respectively.

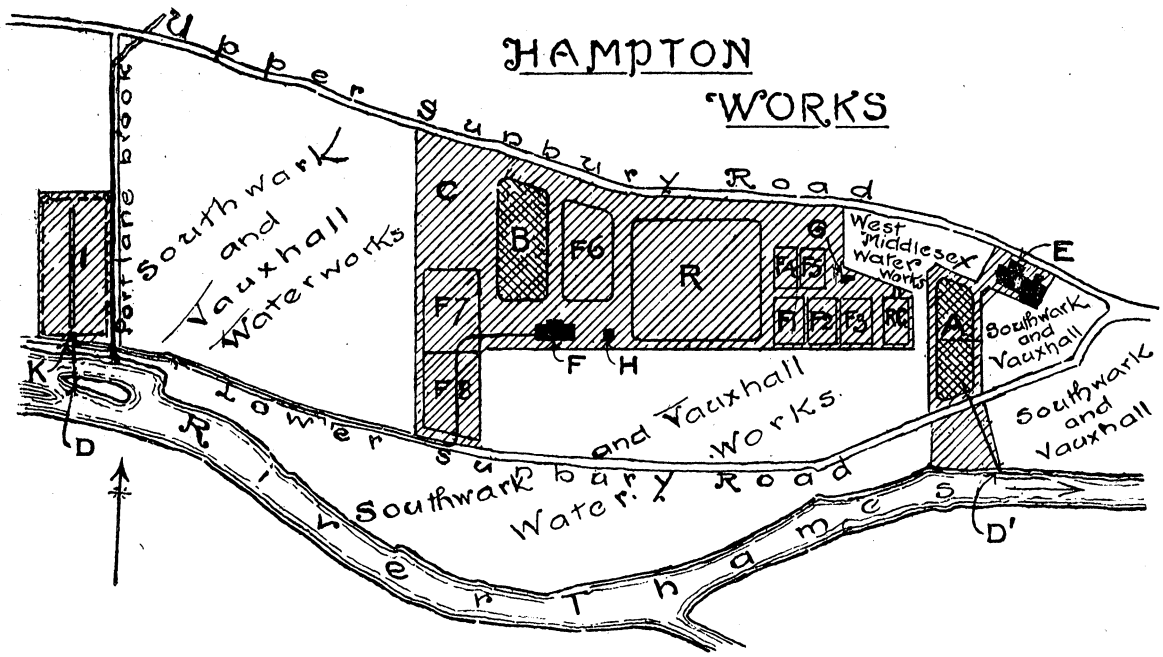
[2] It is the part marked E, Fig. 1, THE LANCET, March 20th, 1897, Article V.

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water after filtration here is pumped directly for the country district. Thirdly, water is pumped to Kew Bridge, where it is filtered for the supply of the London district. Roughly speaking, the amount of the local supply is 6,000,000 gallons, and the amount pumped to Kew Bridge is 14,000,000 gallons daily.

Intakes.—The chief intake of the Company is from the Thames, and is situated on a small island which is separated from the Middlesex shore by a backwater about 20 yards in width. At the part of the bank at which the water is taken there is a bay about 40 ft. across, and the intake is protected mean summer level. The water thus collected from the ballast on the island, the water taken from the Thames, and the water collected from the foreshore in the pipes just described is conducted through a 30-in. pipe to an engine-house H. A certain amount of water is also obtained by a special arrangement situated in a meadow marked I just to the north of the Lower Sunbury-road, and this water passes with that derived from the sources just mentioned. The old intake marked D is situated between those of the Southwark and Vauxhall and the West Middlesex Companies, and from this source water is taken for the supply of the filter beds.

FIG. 1.

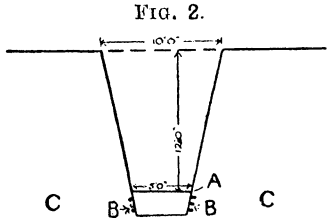


The Hampton Station. Alterations are in progress at the parts cross-shaded and marked A and B. C is spare land. D, Intake on the island. D', Old intake. E, Engine-house. F, Reidler engine-house F 6, F 7, F 8, Preliminary filter beds. F 1, F 2. F 3, F 4, F 5, Filter beds for the local supply. G, House for diagonal engine. H, House for horizontal engines. I, Meadow containing arrangements for collection of gravel water. K, Inspection chamber. R, Reservoir. R C, Covered reservoir.

by a floating boom. There are four gratings formed of bars, which are placed about 3 in. apart, and the depth of the gratings is 2 ft. 6 in. These are cleared as occasion requires. In the autumn, when the river contains a large number of dead leaves, it is found necessary to keep a man constantly at work at it, but at other times the boom keeps off most of the débris. Through the gratings the water flows into a chamber, of which the walls are some feet above the highest flood level, so that it is possible to go there whatever the state of the river may be. The height of the walls of the chamber is 11 ft. above the mean summer level of the river, its size is 24 ft. by 6ft., and there is a grating at the top. Into the chamber situated to the west the water passes through three 30-in. sluices, and after going through the chamber it is continued across the backwater in two 30-in. pipes. On the foreshore there is an inspection chamber (Fig. 1, K.), 6 ft. by 18ft inside measurement. The water is received into this, and is then conducted to the engine-house (F) by two 36-in. pipes. A second intake from the Thames on the island conducts the water into a smaller reception chamber, which is situated on the eastern side, and adjoining the one just described. The chamber is separated from the other by a brick wall. On the island three layers of open jointed pipes were placed to receive water from the layer of ballast which is situated there. The line of pipes is about 8 ft. below the mean summer level of the river. Two of these lines of pipes are still in working order, but it is found that very little water is collected by them except in flood time. The water thus collected passes into the chamber with that taken from the river, and is then conducted to the main land across the backwater through a 30-in. pipe. On the foreshore there is another arrangement for collecting water from the ballast. A line about 50 yards in length of 24-in. pipes is laid with open joints at a depth of about 8 ft. below the

Gravel water system. — From the foreshore inspection chamber which has been described a 24-in. iron pipe conveys the water for a distance of about 40 yards to the meadow, passing in its course under the Lower Sunbury-road and conducting it into a filter screen. The filter screen is an arrangement of unusual character. A trench (see Fig. 2) 12 ft. in depth and 60 yards in length was dug in the meadow; the lower part of the trench is 6 ft. in width, and the upper part 10 ft.; the sides are concreted to a depth of about 15 ft. from the surface, but the lowest part is perforated by small drainage-pipes. The bottom of the trench is filled with washed and screened ballast and fine shingle to a depth of 3 ft. The

FIG. 2.



The trench in section.

FIG. 3.

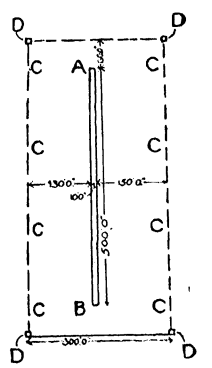


Diagram of section of filter screen.

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water flows in by gravitation from the inspection chamber, and its height is regulated by a cock. As a rule it is kept at about 1 ft. below that of the mean summer level of the river, and as the surface of the filter screens is 2 ft. below this the depth of water above the screen is of course about 1 ft. The water which covers the filter screen gradually percolates through the filter screen and then into the ballast which is situated in the meadow, and after passing for about 150 ft. or so through this natural filter it is collected by a layer of pipes which were laid in the ballast for that purpose. This series of collecting pipes surrounds the filter trench (see Fig. 3 c c). The pipes are situated 12 ft. below the mean summer level; they are of earthenware, 24 in. in diameter, and are laid with open joints. They conduct the water to two brick shafts (see Fig. 3 B) which are in a line with the 30 in. main, and the water passes from them into this main. The surface of the filter screen is cleaned in the same way as that of an ordinary filter—that is to say, the surface is skimmed off to a depth of about 1 in. every month or so.

Pumping arrangements.—The water passes by gravitation through the two 36-in. pipes previously described to an engine-house called the Reidler House, marked F on the map. It is pumped thence either to the reservoir (see Fig. 1, R) or to the preliminary filter-beds (see Fig. 1, F, 6, 7, 8).

Engine-house.—The engine-house contains two pairs of Reidler engines, one pair high lift and the other low lift, a centrifugal and Worthington engine. The low-lift Reidler engines pump the water into the reservoir R and into the preliminary filter-beds, F 6, 7, 8. The centrifugal engine is used for the same purpose. The high-lift Reidler engines pump the water from the preliminary filters and from the reservoir to Kew Bridge. The Worthington engine is used for the same purpose.

Low-lift Reidler engine.—This engine has cylinders of 11 in. and 20 in. and a stroke of 27 in. It works double-action plunger pumps, the cylinders of which have a diameter of 23 in. It therefore lifts 165 gallons per stroke and it is worked at the rate of sixty revolutions a minute.

High-lift Reidler engine.—This engine has cylinders with diameters of 21 in. and 39 in. and a stroke of 36 in. The diameter of the pump cylinder is 20 in. It is worked at a rate of sixty revolutions per minute.

The Worthington engine has cylinders 9½ in., 14 in., and 25 in., and a stroke of 2 ft. 3 in. It works a plunger pump which has a cylinder 30 in. in diameter. It pumps 48 gallons per stroke, and the number of revolutions is from 45 to 50. These engines are worked by seven Lancashire boilers at a pressure of 90 lb. The head of water worked against in pumping to the reservoir is 28 ft., and in pumping to Kew 130 ft.

Horizontal engine-house.—This house contains two horizontal engines having cylinders of from 16 in. to 21 in. in diameter respectively. These work three-throw pumps, which raise the water brought from the river and the gravel-beds through the 30-in. pipe, and raise it to the reservoir and to the filters which are used for the local supply. The pumping capacity is 11,000,000 gallons per day, but about 4,000,000 gallons only are usually required.

Filters.—Preliminary filter, F 6. This has an area of three acres, and it is surrounded by a puddle wall taken down to the London clay. The filtering material consists of 2 ft. of sand and 4 ft. of screened ballast. The filtered water is collected by three 24-in. earthenware pipes which conduct it to the Reidler engine-house. There are no cross drains.

Preliminary filter beds (F 7 and 8).—There are two beds called "preliminary" filter beds, each of which has an area of about one and three-quarter acres. The upper parts are lined with blue Staffordshire bricks, the upper 2 ft. of the walls are vertical, and the lower part is formed of concrete at a slope of two and a half to one. The bed of the filter is formed as follows: Sand 2 ft. 6 in., ballast 1 ft. 6 in. to 2 ft. The ballast is thicker at the centre than at the sides of the bed, and the floor slopes gradually towards the centre, where it is 6 in. deeper than it is at the sides. When cleansed the sand is reduced in thickness from 2 ft. 6 in. to 2 ft. The filtered water is collected in earthenware pipes 12 in. in diameter, which are laid with open joints and conduct the water into a central culvert.

Storage reservoir (See Fig. 1 R).—This reservoir covers an area of about ten acres, the upper part is lined with blue Staffordshire bricks, and the walls, which are built of concrete, have a slope of 3 to 1. It is surrounded by a puddle trench, which goes down to the London clay. The reservoir is 22 ft. deep, and is said to be capable of storing 45,000,000 gallons of water. The water for the supply of this reservoir comes from the river in part through a 36-in. main, and gravel water is also pumped here.

Water for the London district is pumped from Hampton to Kew and filtered there; for the local supply the water is filtered at Hampton and distributed directly to the district.

Filter beds.—The five filter beds which are used for the local supply (see Fig. 1, F 1 to F 5) have an area of three-quarters of an acre each. They are of oblong form; the upper part is lined with Staffordshire bricks. The walls of No. 4 and No. 5 are nearly vertical. The filtering material is formed of 2 ft. 6 in. of sand and 2 ft. of shingle. For the collection of the filtered water there is a central culvert, of which the sides are built in part with perforated bricks to allow the passage into it of the filtered water. The upper part of the culvert has stone covers. Water is conducted to its perforated sides through land drain pipes 2 in. in diameter. These filter beds have no ventilators. The sides of beds Nos. 1, 2, and 3 have a slope of 2 to 1. In other respects they are similar to filters 4 and 5.

Cleansing filter beds.—As a rule filter beds are cleansed once a month and in early spring more frequently. The sand is always washed by means of an apparatus made of cast iron hoppers with ejectors. The pressure of the water used is about 150 ft. It is found that 4500 gallons of water are used in washing a cubic yard of sand. When the sand was washed by means of high pressure without this hopper arrangement no less than 7000 gallons of water were used in washing a cubic yard. The sand is very efficiently washed by the arrangement in use at this station.

The rate of filtration.—The maximum rate of filtration is 2½ gallons per square foot per hour. As a rule the rate is 1⅞ gallons per square foot per hour.

Pumping arrangements for the country district.—For the local supply of water a diagonal engine situated in a house marked G and two pairs of beam engines are used. The diagonal engine is one of unusual form—is capable of pumping 176 gallons per stroke and works at a rate of 14 per minute. The steam for working the engine is generated by three Lancashire boilers, and the pressure used is 80 lb.

Covered reservoir.—There is a reservoir covered by concrete arches built on steel girders which are supported by brick piles. This reservoir is capable of storing 3,000,000 gallons. The water from it is used entirely for the local supply. It passes to the engine-house (marked E) and is pumped by the beam engines.

Engine-house (E on map).—The western part of the engine-house contains two beam engines, which have cylinders 24 in. and 48 in. in diameter, and a stroke of 8 ft. This works bucket and plunger pumps; the diameter of the bucket is 29½ in. and that of the plunger 21 in. The steam pressure used is 60 lb. The head of water worked against is 150 ft. The pump discharges 236 gallons per stroke and the rate is about 12 per minute. There is an electrical communication between this house and Hampton Court Palace. The Company have arranged to supply water there in case of fire. The engine is worked by four Lancashire boilers at a pressure of 60 lb.

Bull engines.—There are three direct acting Cornish engines of the Bull type. Of these one has cylinders of 70 in. in diameter, and two have cylinders of 68 in. These engines were formerly constantly used for pumping water to Kew, but they have not been much used since the erection of the Reidler engines in 1891. Of these engines two are capable of pumping 559 gallons per stroke, and were worked at a rate of about twelve a minute, and the other is capable of pumping 695 gallons per stroke, and was worked at a rate of about eleven strokes per minute. The steam for these engines was supplied by four Cornish boilers at a pressure of 40 lb.

The course of mains from Hampton to Brentford.—A single 33-in. main conveys the water through Twickenham and Isleworth. The course of the main is along the high road. From Isleworth—that is to say, for the last two miles—the water is conducted in two 33-in. mains.

(To be continued.)

THE Chinese Government has conferred on Mr. David Craigil Gray, M.B., C.M. Glasg., the Order of the Double Dragon in recognition of services rendered to the Chinese wounded during the late war with Japan. This Order entitles him to the rank of a Third Button mandarin.

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ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on June 10th, the President, Sir WILLIAM MACCORMAC, being in the chair.

Sir James Paget, F.R.S., and Lord Lister, P.R.S., were introduced, and the President presented to each the honorary medal of the College, with a document declaratory of the award thereof.

Mr. Charles Sissmore Tomes, F.R.S., was introduced, and the President handed him a cheque for the amount of the John Tomes Prize, with a document declaratory of the award.

In accordance with the recommendation of the Board of Examiners in Dental Surgery, the Council added the Sheffield Royal Hospital to the list of hospitals the dental departments of which are recognised for dental hospital practice.

The Library Committee were directed to advertise the vacancy in the office of librarian, to consider the applications, and to nominate a candidate to the Council for election.

A report from the Laboratories Committee was adopted; it was as follows:—

"1. *The work on Diphtheria for the Metropolitan Asylums Board.*—The Preparation of Antitoxin Serum. Since March 5th the director has supplied 3125 doses of antitoxic serum containing 4000 units each, 944 doses containing 3000 units each, and 50 doses containing 1000 units, for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, and all the demands have been fully met. During this period 15,382,000 units have been supplied, against 14,028,000 units last quarter, being an increase of 1,354,000 units.

"2. *Researches in connexion with the Grant from the Goldsmiths' Company.*—Dr. Cartwright Wood and Dr. T. G. Brodie have continued their investigations, but as yet have nothing further to report. In fulfilment of one of the conditions of the grant from the Goldsmiths' Company, that antitoxin should be, if possible, supplied for use amongst the poorer classes of the community, antitoxic serum has continued to be supplied to various general and children's hospitals in London during the past quarter, as well as to certain medical practitioners for cases fulfilling the necessary conditions."

The Council proceeded to appoint the following examiners for the ensuing year:—Elementary Biology: J. B. P. Beale, George A. Buckmaster, Thomas W. Shore, and Thomas G. Stevens. Anatomy under the Conjoint Board: Stanley Boyd, W. Bruce Clarke, George H. Makins, and Arthur Robinson. Physiology under the Conjoint Board: John R. Bradford, Leonard E. Hill, and Walter G. Spencer. Anatomy for the Fellowship: William F. Haslam, Walter H. A. Jacobson, Charles B. Lockwood, and John Bland Sutton. Physiology for the Fellowship: Thomas G. Brodie, D'Arcy Power, Ernest H. Starling, and William H. Thompson. Midwifery under the Conjoint Board: Montagu Handfield-Jones, Arthur H. N. Lewers, Amand Routh, and Herbert R. Spencer. Public Health: Part I., Arthur P. Luff; Part II., Edward Seaton.

The committee which had been appointed to consider a memorial signed by forty-one members of the medical profession resident in Norwich, asking for the advice and guidance of the Council on the question of meeting in consultation the medical officers of the Norwich Medical Institute, and which had also received a deputation from the medical profession in Norwich, presented a report, and it was resolved that—

"The Council, having considered the memorial of members of the medical profession in Norwich and the additional statements made by the deputation from Norwich, are of opinion that the disciplinary powers provided by Section XVI. of the by-laws do not entitle the Council to call in question the legality of Fellows and Members of the College holding the appointment of medical officer to the Norwich Medical Institute or to similar institutions, and therefore they cannot endorse the refusal of any of its Fellows and Members to meet in consultation (particularly in urgent cases) registered practitioners when acting in conformity with their legal rights."

In reply to a letter from Dr. Frederick Pearse, the honorary secretary of the Portsmouth Medical Union, asking whether the College were prepared to take action against its Members for employing men to "tout" and canvass from door to door for them, the following reply was directed to be sent:—

"The Council, while not prepared to express an abstract opinion on the question raised by the Portsmouth Medical Union, are willing to consider any evidence which may be submitted to them respecting canvassing for patients either directly or indirectly by any individual Fellow or Member of the College with a view to determining whether or not such Fellow or Member has been guilty of a breach of the by-laws."

A letter was read from Mr. J. H. Square May pointing out that the reply of the Council to the memorial from Members and Fellows of the College in Plymouth on behalf of Mr. R. B. Anderson does not allude to the request that the Council should explain why Mr. Anderson's case does not come under By-law XV., and asking for an explanation on this point. The Council resolved: "That Mr. May be informed that the Council do not consider it is incumbent upon them to give explanations of the conclusions at which they may arrive, but are of opinion that Mr. Anderson's case does not come within the terms of Section XV. of the by-laws." A letter was read from Mr. Thomas Bryant reporting the proceedings of the General Medical Council at their late session. The best thanks of the Council were voted to Mr. Bryant for his services as the representative of the College on the General Medical Council.

The candidates for the vacant places on the Council of the Royal College of Surgeons of England are:—

	Member.	Fellow.
Howse, Henry Greenway	1865	1868
Cousins, John Ward	1856	1860
Owen, Edmund Blackett	1868	1872
Godlee, Rickman John	1872	1876
Cheyne, William Watson	1879	1879
Lucas, Richard Clement	1868	1871
Morgan, John Hammond	1872	1876
Dalby, William Bartlett	1867	1870
Jackson, George...	1864	1876
May, Bennett	1868	1876
Clark, Andrew	1869	1873

There are five vacancies. Mr. Howse and Dr. Ward Cousins seek re-election.

THE SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND LORD LISTER.

THE following letter to Lord Lister has been enclosed to us for publication by Mr. George Jackson and Mr. R. B. Anderson, with a note to the effect that "did time permit the letter would be numerously and influentially signed, but the importance and correctness of the principles submitted will not," the writers trust, "depend in Lord Lister's estimation on those who thus inadequately represent them."

[ENCLOSURE.]

10, Portland-villas, Plymouth, May 10th, 1897.

To the Lord Lister, F.R.C.S. Eng., &c., &c., &c.

YOUR LORDSHIP,—As the Fellows' Association will not take action on the occasion of the approaching election of members of Council of the College of Surgeons, the Society of Members of the College is desirous of obtaining the support of independent candidates and electors to the claims of the Members for a reform of the College—e.g., (1) for a moderate representation of the Members on the College Council; (2) for the right to assist in electing the President of the College; (3) for the fulfilment of its undertaking given by the Council in Section XV. of the by-laws to "protect and defend" "Fellows and Members" who "may be disturbed" in the exercise "of rights acquired by them as Fellows and Members" or as "Members"; and (4) for the right to assist in choosing the representative of the College on the General Medical Council.

These measures have, to a greater or less extent, been advocated amongst the Fellows up to this period; and some have been received with favour. We believe a large proportion of the five hundred Fellows who on the issues as hitherto unfavourably and inadequately set before them have not voted would support a definite policy of reform, to be carried with spirit to an early issue, besides two hundred who have voted for a moderate extension of the franchise to the Members. Should it be found that the Fellows, as a body, reject the just claims of the Members, the latter contemplate moving in Parliament for an Act to reform the corporation. In case your views are in favour of such a policy of justice and conciliation towards those who are the corporation, and of whom, though Fellows, we ourselves are units, we venture to invite you on behalf of reform, though without asking you for any present expression on the subject, to permit yourself to be placed in nomination for the approaching election to the College Council. You would then be in the best position as the movement advances to aid it by your great influence in such respects as you may deem wise and salutary.

We have the honour to be, your Lordship's most obedient servants,

C. B. KEETLEY, R. B. ANDERSON,
GEO. JACKSON, SYDNEY JONES.

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ANNUAL DINNER OF THE ARMY MEDICAL STAFF.

THE annual dinner of the Army Medical Staff was held on Monday last at the Whitehall Rooms of the Hôtel Métropole. The meeting was in every respect a pleasant one, and, as has been the custom in late years, there was no post-prandial oratory, the only toast given being that of the Health of Her Majesty the Queen. We may note that among some communications read by the Chairman was one expressive of good wishes from medical officers serving at Canea. The following are the names of the officers and their guests:—Surgeon-Major-Generals: Director General J. Jameson (in chair), A. F. Bradshaw, C.B., C.M.McD. Cuffe, C.B., Sir J. Fayrer, K.C.S.I., G. L. Hinde, C.B., J. Inkson, W. Nash, T. F. O'Dwyer, A. F. Preston, J. B. C. Reade, C.B., W. Taylor, W. M. Webb, and J. Warren. Surgeon-Colonels: O. Codrington, H. Cayley, W. G. Don, H. C. Herbert, C. H. Harvey, J. H. Hughes, J. H. Jeffcoat, C. M. Jessop, T. Ligertwood, J. Maturin, J. L. Notter, T. O'Farrell, W. Sly, and J. Watts. Brigade-Surgeon-Lieutenant-Colonels: W. B. Allin, B. M. Blennerhassett, C.M.G., J. F. Beattie, J. A. Clery, R. de la C. Corbett, W. Donovan, W. J. Fawcett, T. J. Gallwey, C.B., W. L. Gubbins, L. A. Irving, W. Keir, C. Mackinnon, H. Mackinnon, D.S.O., W. McNalty, A. A. Macrobin and W. Temple, V.C. Surgeon-Lieutenant-Colonels: J. A. Anderson, F. E. Barrow, U. J. Bourke, W. C. Chester, A. Doig, J. B. Emerson, J. Hector, G. A. Hughes, J. G. Leask, G. H. Le Mottée, R. H. Quill, A. B. Robinson, and T. Wright. Surgeon-Majors: F. M. Baker, J. Battersby, W. G. Bedford, A. E. J. Croly, A. Dodd, J. R. Dodd, H. Grier, F. A. Harris, J. L. Hall, J. G. Harwood, R. J. Hackett, H. E. R. James, R. Jennings, S. F. Lougheed, R. E. R. Morse, W. G. Macpherson, H. W. Murray, F. B. Maclean, C. G. D. Mosse, F. P. Nichols, E. North, R. Porter, G. W. Robinson, G. H. Sylvester, J. Tidbury, G. Wilson, and T. P. Woodhouse. Surgeon-Captains: C. H. Hale, D.S.O., H. St. G. Hore, E. M. Hassard, O. R. Julian, J. C. Jameson, R. E. Kelly, W. B. Leishman, F. J. Morgan, J. A. O. McCarthy, J. Paterson, O. L. Robinson, R. J. Windle. Captain and Quartermaster: D. J. Gillman.

The following guests were present: The President of the Royal College of Surgeons of England (Sir W. MacCormac), the President of the Indian Medical Board (Surgeon-Major-General Hooper), Surgeon-Major W. Collingridge, Militia Medical Staff Corps, Mr. Vesey Holt, and Mr. Thomas Wakley, Jun.

THE ROYAL SOCIETY CONVERSAZIONE.

"LADIES' NIGHT" at the Royal Society is, as a rule, made more attractive than the first exhibition of the year, and the demonstration and reception held on Wednesday last proved to be no exception to this rule. Pure science yields to some extent to popular science. Fittingly enough the visitors were met with a unique design in the entrance hall consisting of the words "Vivat Victoria Regina" displayed in a beautiful series of argon and helion tubes. Of course, Professor Ramsay was responsible for this beautiful display. It illustrated a pretty application of the properties of two important elements discovered only recently in this remarkable Victorian period. Perhaps the most fascinating subject of demonstration was that for which Messrs. Preece and Marconi were jointly responsible. At this exhibit was demonstrated with remarkable success the possibility of transmitting intelligence by means of electric waves, without the ordinary channel of wires, but simply with the ætheriferous medium which pervades all space. In the method shown electrical vibrations are set up by an electrical machine like an ordinary induction coil, which are caught up by a receiver some distance away. In thus bombarding the receiver, a bell is made to ring, and by the varying frequency of the ringing a message may be deciphered. The electric waves produced vibrate at the rate of at least 250,000,000 beats per second. The vibrations, indeed, are so rapid as to permeate rapidly through opaque substances, as, for instance, through brick walls. This fact promises to introduce possibilities of far more reaching consequence than even the x rays. It was further demonstrated that there might exist sufficient electrical disturbance in the muscles of the human body to actuate the instrument. Will this wonderful result afford a working basis for telepathy? By the method described communication was established between the islands and the mainland in the Bristol Channel, but at the Royal Society's rooms the demonstration was limited to an intervening space of some thirty feet. It was none the less convincing of a probable practical success in the future. Some experiments of extreme interest, and illustrating further developments in cathode rays, were shown by Mr. A. A. C. Swinton, Professor Silvanus P. Thompson, and Dr. Macintyre. The last-named gentleman exhibited a series of x ray kinematographic films showing in a beautiful and interesting manner the movements of the joints and sockets in a frog. A pretty effect was produced by Lord Kelvin in illustrating the production of electric conduction through air under the influence of uranium. Uranium salts have the peculiar and apparently inexhaustible property, too, of emitting rays of a similar character and frequency to the x rays, and analogous photographic effects may thus be produced. As to the rest of the exhibits they were, speaking generally, a repetition of the former exhibition, an account of which was published in THE LANCET of May 22nd. Thus examples of the recent advances in colour photography were shown, and the remarkable phenomenon of "commensalism" occurring amongst marine animals was again illustrated by the Marine Biological Association, whilst the pretty optical experiments exhibited by Mr. Shelford Bidwell and Mr. C. P. Butler were once more in evidence.

The President, Lord Lister, received the lady visitors and the Fellows, the company being a very large one, and including, as might have been anticipated, several distinguished persons who are present in England to attend the Diamond Jubilee.

THE PRINCE OF WALES'S HOSPITAL FUND: SOUVENIR OF THE QUEEN'S COMMEMORATION.

THERE will be many souvenirs, which will hand down to posterity the remembrance of this *annus mirabilis* of the British Empire, but among the most interesting of the records of the commemoration pageant will assuredly be that which was issued yesterday (Thursday), by the proprietors of the *Graphic* and *Daily Graphic*, under the auspices of the Prince of Wales's Hospital Fund and by authority of the Prince himself. We refer to the illustrated programme of the Royal Jubilee procession, the publication of which we have already advocated. The book is excellently got up and authentic in detail, as those in authority, knowing the object to which the results of all sales would be devoted and the interest Her Majesty takes in that object, have given the artists all possible facilities. We consider that the possession of this illustrated guide to Tuesday's pageant is almost a necessity to those who desire to understand the significance of the gorgeousness which will fill their eyes.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5492 births and 3297 deaths were registered during the week ending June 12th. The annual rate of mortality in these towns, which had been 16·6 and 17·4 per 1000 in the two preceding weeks, declined again last week to 15·6. In London the rate was 13 8 per 1000, while it averaged 16 9 in the thirty-two provincial towns. The lowest death-rates in these towns were 8 2 in Croydon, 10·7 in Brighton, 12·0 in Swansea, and 12·3 in Huddersfield and in Plymouth; the highest rates were 20·3 in Manchester, 20·6 in Bolton and in Gateshead, 21·1 in Liverpool, and 23·7 in Salford. The 3297 deaths in these towns included 379 which were referred to the principal zymotic diseases, against 355 and 364 in

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the two preceding weeks; of these, 131 resulted from measles, 90 from whooping-cough, 57 from diphtheria, 48 from diarrhœa, 28 from scarlet fever, 24 from "fever" (principally enteric), and one from small-pox. No death from any of these diseases was recorded last week in Plymouth or in Derby; in the other towns they caused the lowest death-rates in Croydon and Bristol, and the highest rates in Liverpool, Bolton, Sunderland, Burnley, and Salford. The greatest mortality from measles occurred in Manchester, Burnley, Birkenhead, Bolton, and Salford; and from whooping-cough in Burnley, Liverpool, and Sunderland. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 57 deaths from diphtheria included 39 in London, 3 in Birmingham, and 3 in Sheffield. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns. There were 2 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, June 12th, against 13, 12, and 4 at the end of the three preceding weeks; no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2637, against numbers increasing from 2380 to 2601 on the six preceding Saturdays; 255 new cases were admitted during the week, against 311, 278, and 274 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 196 and 229 in the two preceding weeks, declined again last week to 191, and were 60 below the corrected average. The causes of 45, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Nottingham, Newcastle-upon-Tyne, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, and Liverpool.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 22·3 to 20·3 per 1000, was again 20 3 during the week ending June 12th, and exceeded by 4·7 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·7 in Aberdeen and 16·1 in Greenock to 24·9 in Leith and 26·3 in Edinburgh. The 606 deaths in these towns included 37 which were referred to whooping-cough, 27 to measles, 15 to diarrhœa, 8 to "fever," 4 to scarlet fever, 2 to diphtheria, and 1 to small-pox. In all, 94 deaths resulted from these principal zymotic diseases, against 91 and 93 in the two preceding weeks. These 94 deaths were equal to an annual rate of 3·2 per 1000, which was 1·4 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 34 and 40 in the two preceding weeks, declined again to 37 last week, and included 14 in Glasgow, 10 in Edinburgh, and 9 in Leith. The deaths from measles, which had been 24 and 30 in the two preceding weeks, were 27 last week, of which 15 occurred in Edinburgh, 7 in Glasgow, and 4 in Leith. The 8 deaths referred to different forms of "fever" considerably exceeded the number recorded in any recent week, and included 6 in Glasgow and 2 in Dundee. The fatal cases of scarlet fever, which had declined from 6 to 2 in the four preceding weeks, rose again to 4 last week, of which 3 occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 128 and 110 in the two preceding weeks, further declined to 108 last week, but exceeded by 15 the number in the corresponding week of last year. The causes of 39, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·3 and 25·2 per 1000 in the two preceding weeks, further declined to 22·4 during the week ending June 12th. During the past ten weeks of the current quarter the death-rate in the city has averaged 29·3 per 1000, the rate during the same period being 15·9 in London and 26·3 in Edinburgh. The 150 deaths registered in Dublin during the week under notice showed a decline of 19 from the number in the preceding week, and included 14 which were referred to the principal zymotic diseases, against 15 and 10 in the two preceding weeks; of these, 4 resulted from scarlet fever, 4 from whooping-cough, 2 from measles, 2 from "fever," 1 from diphtheria, and 1 from diarrhœa. These 14 deaths were equal to an annual rate of 2·1 per 1000, the zymotic death-rate during the same period being 1·5 in London and 5·2 in Edinburgh. The fatal cases of scarlet fever, which had been 3 and 2 in the two preceding weeks, rose again to 4 last week. The 4 deaths referred to whooping-cough showed a slight further increase upon the numbers recorded in recent weeks; and the 2 fatal cases of measles showed a further decline. The 150 deaths in Dublin last week included 25 of infants under one year of age, and 35 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a further decline from the numbers recorded in recent weeks. Ten inquest cases and 9 deaths from violence were registered; and 56, or more than a third, of the deaths occurred in public institutions. The causes of 8, or more than 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN WILLIAM J. CROFTON, half-pay, is placed on retired pay.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant-Colonel Haliday, Bombay Establishment, 13th Regiment of Bombay Infantry, has been permitted by the Secretary of State for India to retire from the service. Surgeon-Major C. M. Thompson succeeds Surgeon-Lieutenant-Colonel H. D. Cook as Medical Officer at Octacamund. The services of Surgeon-Captain Mason, A.M.S., are placed temporarily at the disposal of the Government of Bombay for employment on plague duty.

ARMY MEDICAL RESERVE OF OFFICERS.

The under-mentioned Surgeon-Captains to be Surgeon-Majors: — Q. Chalmers, and J. J. de Zouch Marshall. Surgeon-Captain Harry Thornton Challis, 4th Volunteer Battalion the Essex Regiment, to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 1st (Hallamshire) Volunteer Battalion the York and Lancaster Regiment: Surgeon-Lieutenant J. Hamel, M.B., resigns his commission. 3rd (Sunderland) Volunteer Battalion the Durham Light Infantry: Surgeon-Lieutenant R. E. Beveridge, M.B., to be Surgeon-Captain. 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment: Surgeon-Lieutenant J. H. Gough resigns his commission. 3rd Volunteer Battalion the South Wales Borderers: James Abernethy, M.B., to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The Glasgow Companies: Surgeon-Lieutenant H. C. Reid, M.B., to be Surgeon-Captain.

THE MILITARY DISASTER IN TROCHI VALLEY.

The treacherous attack on an Indian force in Trochi Valley, on the Indo-Afghan frontier, is a rather serious affair. Apart from the loss of life which has to be deplored it must lead to a punitive expedition against the tribesmen, the mere cost of which is embarrassing to the Indian Government at the present time, when there are so many calls upon the Indian Treasury. That the attack was a preconcerted act of treachery there can be no doubt; and it was fortunate, under the circumstances, and seeing that it was quite unexpected, that the whole force was not massacred. As it was, the Indian troops had to make a fighting retreat for a distance of four miles towards Sherani Valley, hotly pursued and hardly pressed by the Pathan tribesmen. Surgeon-Captain Cassidy was one of the wounded —the wound is stated to be in the knee—but we are glad to say that he is reported to be doing well. The Trochi Valley is close to the Kuram route, through which the advance was made in the last Afghan war to avenge the massacre of the Cavagnari mission at Cabul. The inhabitants belong to the fanatical Waziri tribes, and the valley is an important position, as it forms a short cut to Guzni, in Central Afghanistan. It is not the first time within recent years that the tribesmen have attacked a British force in that neighbourhood.

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ENTERIC FEVER IN INDIA.

The Anglo-Indian papers received by the last mail contain, we regret to say, intelligence corroborative of the truth of our remarks that the periods of maximum prevalence of enteric fever commonly corresponded with that of the heat in India, and that the seasons directly preceding and succeeding the rainy season, the monsoon, were those in which outbreaks or cases of enteric fever were wont to occur. We learn that there have been several fatal cases of this fever at Agra, Sialkote, and Rangoon. There have been between fifty and sixty cases, several of them fatal, in the York and Lancaster Regiment since their arrival at Agra. It will be remembered that this was the regiment shipwrecked in the *Warren Hastings* on its way to India, which exhibited such an admirable spirit of discipline on that occasion. The *Pioneer Mail* of the 26th ult. states that the cause is ascribed to the water, the supply of which is obtained from the water-works; but in that case it may be confidently expected that the prevalence of the disease will not have been limited to the York and Lancaster Regiment, but will have extended to other people obtaining their supply from the same source. There is frequently a diminished prevalence of the disease during the monsoon, with a subsequent rise; but we hope the worst of the outbreak is already over.

DEATHS IN THE SERVICES.

Ethelbert Henry Blake, M.D. Edin., A.M.D., Deputy-Inspector-General of Hospitals, at Bedford on the 6th inst., in his seventy-ninth year. He was appointed surgeon in 1841, surgeon-major in 1853, surgeon-lieutenant-colonel in 1861, and retired with the rank of Hon. Deputy Inspector-General in 1867. He served with the 98th Regiment in China (medal), was present at the storm and capture of Chin Kiang Foo, and was in the Eastern Campaign of 1854–55, including the battles of Alma and Inkerman, the seige of Sebastapol, and repulse of the sortie on Oct. 26th, 1854 (medal with three clasps, and Turkish medal).

Staff-Surgeon Henry Clerke, R.N., on the 25th ult., at Boulogne-sur-Mer, aged fifty-two years. He was appointed a surgeon in the Navy in July, 1868, staff-surgeon in December, 1879, and retired in September, 1881.

THE PLAGUE.

The great improvement which has of late taken place in regard to the prevalence of the epidemic in India continues, according to the latest reports from that country, and public confidence in regard to it is pretty well re-established. A report from Constantinople of the 13th inst. regarding the appearance of the disease in the Red Sea may, however, be of serious import if true. Bubonic plague is stated to have broken out at Djeddah on the Red Sea, six of the cases having proved fatal. The Turkish Government is taking active measures to arrest the outbreak.

Correspondence.

"Audi alteram partem."

"URIC ACID IN THE BLOOD."

To the Editors of THE LANCET.

SIRS,—It may be that I am doing Dr. D. F. Shearer an injustice in thinking that he is not practically acquainted with the Gowland Hopkins method for the estimation of uric acid; but it appears to me that he has ventured on the dangerous ground of criticising a process that he has never employed. The process that I described for the estimation of uric acid in the blood consisted of two parts—an extraction process and an estimation process. The former part of the process stops short of the washing of the uric acid, during which there is a loss of from one to two milligrammes of the acid by solution. As I was never able to extract any uric acid from normal blood there was none to estimate, and consequently there was none to wash. The murexide test was applied in every case in which I examined blood for uric acid. It is true that I did not refer to those negative experiments in the Goulstonian Lectures, but the time at my disposal for the delivery of the lectures necessitated the omission of mention of a large number of experiments. It would have been as well if Dr. Shearer had stated on what calculation he based his assumption that an average proportion of one part of uric acid in 1,000,000 of blood would be sufficient to furnish the uric acid found in the urine. The assumption is, I believe, incorrect. If the ratio of the urea elimination in the urine to the quantity of urea known to be present in the blood be taken as representing the ratio between the elimination of uric acid and its supposed amount in the blood, then human blood should contain from five to ten parts of uric acid in 1,000,000. The blood of birds would necessarily contain a much higher proportion than that, assuming that uric acid is present in the blood. Such quantities would readily be found if present.

I am, Sirs, yours very truly.

Weymouth-street, W., June 9th, 1897. ARTHUR P. LUFF.

THE LATE DR. LOCKHART ROBERTSON.

To the Editors of THE LANCET.

SIRS,—As a colleague of the late Dr. Lockhart Robertson (as chaplain of the Sussex Asylum, Haywards Heath, 1859–1867), I was interested in the obituary notice in THE LANCET of June 5th. May I be permitted to mention the share which he took in the formation of the "After-care" Association on behalf of poor friendless female convalescents "on leaving asylums for the insane"? As the result of a conversation between Dr. Robertson and myself a meeting was held through the influence of the former, and by kind permission of Dr. Bucknill at his house, 39, Wimpole-street, on June 5th, 1879. There were present Dr. and Mrs. Bucknill, Miss Cons, Dr. Lockhart Robertson, Dr. D. Hack Tuke, Mr. W. G. Marshall, Dr. Harrington Tuke, &c. A paper on the subject of "After-care" printed in the October number of the *Journal of Mental Science*, was read by the Rev. H. Hawkins. It was moved by Dr. Lockhart Robertson, and seconded by Dr. Hack Tuke, that "this meeting do form itself into an association." The names of Dr. S. Williams and Dr. Savage were, at Dr. Robertson's request, added. It was also moved by Dr. Robertson "that Dr. Bucknill be invited to take the office of president," subsequently held by the late Earl of Shaftesbury and the Earl of Meath. Later in the same year Dr. Robertson again attended and spoke at a meeting at the President's house, and in 1881 he was present and spoke at an anniversary gathering at the house of Dr. Andrew Clark, 16, Cavendish-square. Dr. Robertson's various engagements prevented his attendance at meetings in after years, but at the time of his death he was one of the vice-presidents of the "After-care" Association. These few lines from a former associate in work may serve to indicate the interest taken by his distinguished colleague in the institution of the society.

I am, Sirs, yours faithfully,

HENRY HAWKINS,

Hon. Sec. "After-care" Association; Chaplain of London County Asylum, Colney Hatch, 1867–97.

June 12th, 1897.

"A METHOD OF UNITING THE DIVIDED INTESTINE."

To the Editors of THE LANCET.

SIRS,—Under date May 22nd, 1897, I notice in THE LANCET a description by a London surgeon of a reputed new method of uniting a divided intestine. I desire to call attention through your journal to the fact that this operation was devised by me in 1891. It was published in 1892, a copy of which publication you can find in the library of the Society of Science, Letters, and Arts of London, England, which I forwarded at the request of the secretary of the society. I have demonstrated it from year to year to the students at the West Virginia University, performed it many times on living animals and the human cadaver, and it is now, and has been for some six weeks past, in the hands of the editor of the *New York Medical Journal* awaiting its turn for publication. I think the priority of the above-recorded facts should entitle this side with at least the first description of the operation without in any way detracting from the credit due to the originality of the excellent English surgeon.

I am, Sirs, yours faithfully,

J. W. HARTIGAN, M.D., F.R.M.S., &c.,

Professor of Biology in the West Virginia University.

Morgantown, West Virginia, June 4th, 1897.

*** We presume Dr. Hartigan refers to the Science and Art Department of the Committee of Council on Education,

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South Kensington Museum. We do not know of any learned society with the exact title he mentions.—ED. L.

THE MIDWIVES REGISTRATION BILL.

To the Editors of THE LANCET.

SIRS,—Undoubtedly the suggestion of Sir J. Blundell Maple with regard to the Midwives Registration Bill is an excellent one, but would it not be more satisfactory to nurses, patients, and practitioners alike to allow any registered medical practitioner to be called in to inspect and to notify the case to the medical officer of health?

I am, Sirs, yours faithfully,

June 8th, 1897. HEBAMME.

"THE NEW LUNACY BILL."

To the Editors of THE LANCET.

SIRS,—I beg to draw your attention to a clause in the new Lunacy Bill which has been lately introduced by the Lord Chancellor in the House of Lords. The clause, No. 5, is this: "Whereas it is expedient to extend the disqualifications for signing medical certificates in support of a petition for a reception order, there shall be added at the end of Subsection 1 of Section 32 of the principal Act the words, '(*e*) the person who makes the reception order,' and at the end of Sub-section 3 of the same section the words 'or any officer or servant in the employment of such committee, or in a licensed house under an order made on the application of or under a certificate signed by a licensee of any licensed house, or any person in the employment of any such licensee.'" By this it will follow that every licensee and everyone in such employment, which will include lay proprietors and ladies and visiting physicians, will be deprived of the ordinary privilege of choosing an asylum for any afflicted relative which every citizen now enjoys. I venture to think that this would be a monstrous iniquity. In addition, no licensee or anyone employed by a licensee may sign a certificate for any licensed house. You are probably aware, Sirs, that at the present time there is great difficulty in getting certificates signed by ordinary practitioners, and many totally refuse to do this. Public asylum officers are most of them debarred from private practice, and in London their number is extremely small. This clause will prevent almost all the experts in London from signing certificates for private patients; and, besides the inconvenience, I look upon the proposed enactment as an insult to the whole medical profession. No doubt it is aimed as a blow at private asylums. The effect will be the increase of lunatics kept in unlicensed houses—a practice which even now is greatly encouraged by the difficulty of getting a magistrate's order and certificates under the Act of 1890. I am, Sirs, yours truly,

June 13th, 1897. Z.

THE BATTLE OF THE CLUBS.[1]

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 1639.*)

COVENTRY (*continued*).

NEEDLESS to say that I have heard numerous and doleful stories about patients who have suffered from the mistakes and neglect that are the natural result of overwork at the Coventry Provident Dispensary. Thus a case of strangulated hernia was mentioned which had been left for four days without operative treatment. Another member of the dispensary was treated for rheumatism when he was suffering from a spinal abscess. Of course this patient had not been examined. A woman complained that she remained seventeen days in bed before she could get a medical man to visit her. But it is impossible to blame the dispensary staff. It is composed of medical men who stand high in the profession, only it is mathematically impossible that they should give the necessary time to their patients when, besides extensive private practice, they each have on an average 5000 or 6000 dispensary members on their books. Not only does overwork result in neglect and in mistakes, but it gives encouragement to, and opens out a good field for, the incursions of enterprising quacks. Bone-setters have a good opening, because such operations require more time than can be given for consultations that do not bring in more than two or three pence. If a dispensary patient goes to a quack, it is so much work off the medical man's hands without any reduction in his income. Dispensary medical officers have no cause to be resentful against the quacks who relieve them of some of their most troublesome cases; but all this tends to lower the whole tone of medical practice, and it is high time that energetic measures should be taken against this degradation of the profession.

The next important incident that occurred was the refusal of the medical journals to insert an advertisement of the Coventry Dispensary when a vacancy occurred on its medical staff. The institution was thus placed beyond the pale of honourable recognition by the most authorised organs of the profession. The members of the dispensary medical staff now sought to defend themselves, and their letters were published in the local and in the medical press. They urged that the dispensary was not a charity, but a provident institution founded for the benefit of the working classes. The dispensary, they said, was governed by a committee of twenty-four persons, twenty-two of whom were elected annually by the members from their own ranks. The two other committee men were members of the medical staff. Doubtless a few persons who had entered as workmen had now acquired some wealth, but the working-class character of the institution was fairly well maintained. Whatever abuse there might be, similar abuses existed in other clubs, and when the members of the profession met in 1892 to reform these abuses a great deal of good might have been achieved. In the opinion of the dispensary medical staff, the movement, however, degenerated into an attack upon the dispensary and the dispensary alone. The medical staff of this institution were most anxious to establish a wage limit; but the violence, the lack of courtesy, and the animus of the other medical men produced just the contrary effect, and the resolution that pecuniary position should be no bar to admission was adopted as a sort of reply to these attacks. The adoption of this defiant resolution was deeply regretted by the medical staff, and they promised to use all their influence so that it should be rescinded. They declared that they had "opposed the resolution to the last, and afterwards presented to the committee and entered in the minute book a solemn protest against the whole proceedings." Also in a letter drawn up in November, 1894, and signed by the five dispensary practitioners, the following explanation is given: "For the consideration of the reform movement only two meetings of the profession were held to which we were invited. Three of our number attended the first, while the whole staff attended the second, and again expressed approval. When, however, we were asked to join in this bitter and unwise attack upon our institution we refused, but with a most important qualification, as will be seen from the following quotation from our letter with regard to it, dated Jan. 23rd, 1893. 'While sympathising to the fullest extent with the object in view (medical reform), we feel sure that as a medical committee officially connected with the institution we can do far more to remedy and prevent abuses than by joining a self-constituted committee having no connexion with or power over the management of its affairs.' Not only did we sympathise, but we brought the matter so forcibly before our committee that a special committee was appointed to inquire into the questions at issue, and important modifications were drawn up and agreed to that would have done much to check the abuses complained of, and we also promised that the objectionable rule prohibiting us from meeting medical men not on our own staff in consultation upon dispensary cases should be disregarded (we had no power to abolish it) and that when asked we should meet them as in private practice."

Thus it will be seen the dispensary medical staff took up the argument that reform must come from within, and that pressure from without had produced a reaction against such reform. To my mind, this argument shows that the true spirit which should govern all such efforts had not dawned in the minds of those concerned. If the negotiations for reform were limited to the members of the dispensary on the one side and the dispensary medical staff on the other, this would simply result in haggling and bargaining between

[1] A reprint of the previous articles on the above subject has been published in book form entitled "The Battle of the Clubs," and can be obtained from THE LANCET Office, price 1s.

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persons fighting for their own individual interests. A greater and a nobler cause is at issue. First and foremost, the public has to be protected from the evils, the danger to health, which the abuse of such institutions as this provident dispensary must occasion. Secondly, the profession as a whole must be rescued from the degrading effect of the wholesale and cheap medical relief which dispensaries organise. The strength of the agitation depends on the faithfulness of its adherence to the general interests first of the public and secondly of the profession; and the dispensary medical men would lose all their moral power if they appeared to be pleading for their own interests instead of defending those of the public and the profession at large. Naturally when it was found that they were ready to sever themselves from the other medical men of the town their influence was lost, and the members of the dispensary, instead of establishing a wage limit, proceeded solemnly to declare that the possession of wealth should not be a bar to membership.

It is curious that in all this controversy the interest of the public has not been very clearly and emphatically stated. Mr. T. M Daffern, who has taken a leading position in resisting the demands of the medical men, argued that the dispensary is not a charity, because it pays, and pays well, the medical men in its service. Writing to the *Coventry Herald*, March 1st, 1895, Mr. Daffern says: "May I remind your readers of the state of affairs early in 1893, prior to the passing of the resolution. Of the subscriptions to the dispensary the ordinary members paid £3114, against £18 by the honorary members. For this £18 the honorary members received an equivalent in tickets admitting sick persons as members. Five of the medical staff received an average of £349 13*s.* 8*d.* each from the institution. The sixth, only appointed during the year, received £55 19*s.* 6*d.* They were also allowed to take private practice. It will thus be seen that the ordinary members were themselves properly paying for the benefits they were receiving." This statement, on the contrary, shows, and very clearly, that the medical staff is not properly paid. For 25,000 members, not six or five, but at least twelve medical officers should be employed, and this would reduce the above remuneration to one half the sum for each. The public should know that one medical man cannot possibly attend, thoroughly examine, and give good, thoughtful, and lengthy consultations to the sick out of a population of about 5000 persons, particularly if he has also an extensive private practice. There is no avoiding this dilemma. Such wholesale contract work can only pay if it is "scamped." At this rate of remuneration a proper consultation must be a work of charity; and I put it to the Coventry Provident Dispensary patients, Do they, on an average, obtain the professional ten minutes or a quarter of an hour? If they do they are in receipt of charity; if they do not, then at times public health must be endangered and a public injury is brought about. The honour of the profession is compromised and medical practice is degraded. It is no use saying that each member of the medical staff receives more than £300 a year, the question is, What do they receive per consultation? If they receive less than the minimum fee per consultation, their work is a work of charity when it is efficiently accomplished. If Mr. Daffern had shown that the average of £349 paid in the year to each of the medical staff represented a fee of 2*s.*, or even of only 1*s.* 6*d.* for each consultation given it would be satisfactory. This would prove that the medical men had given only an average of ten or twelve consultations per day, and could therefore well afford to devote about fifteen minutes to each patient. But, in answer to Mr. Daffern's letter, the *Coventry Herald* of March 8th, 1895, published the following:—

"SIR,—My attention has been drawn to a letter in your paper on the Dispensary question. Mr. Daffern has been somewhat unfortunate in the time chosen for his communication. Last week it was published that 3000 prescriptions had been made up at the Dispensary during four days. The thought strikes one, who made up those prescriptions, and again, who wrote them! Unless prescribing can be done by machinery it can hardly be said with Mr. Daffern that 'the Dispensary system is not a sweating one.' Let us make a calculation. As most influenza patients must be seen at home, it is reasonable to allow ten minutes for each prescription; we can hardly imagine that less would suffice. It follows that the six Dispensary doctors must have been hard at work for over twenty hours each day, with an interval of four hours for private practice, sleep and refreshment! In the interests of those for whom the Dispensary was intended, I ask, is such a state of things desirable?" The letter was signed "F.R.C.S."

That such practice is degrading is further shown by the testimony and action of Mr. J. L. Callaghan. Mr. T. S. Allan, one of the dispensary medical officers, on retiring, sold his practice to Mr. Callaghan. The latter did Mr. Allan's work at the dispensary as locum tenens for six weeks, as he had been told there was nothing unprofessional in this work, and hoped ultimately to succeed Mr. Allan on the dispensary medical staff. But his few weeks' experience at the dispensary soon altered his views. The Coventry papers, the *Herald* of July 17th, and the *Standard* and the *Reporter* of July 18th, 1896, inserted the following copy of a letter which had been sent to them for publication, and had been addressed to the chairman of the Coventry Provident Dispensary. It ran as follows:

"13, Queen's-road, Coventry, July 14th, 1896.

"SIR,—As I have led the members of your committee to understand that I would be a candidate for the vacancy on the medical staff caused by the resignation of Dr. Allan, to whose practice I have succeeded, I think it right to let you know my reasons for declining to allow my name to appear among the list of candidates.

"During the six or seven weeks in which I acted as deputy medical officer to the dispensary I discovered the working of the institution to be of such a nature that I fail to understand how any medical man with any respect either for himself or his profession could allow his name to be connected with it, and therefore I have decided to withdraw my candidature.

"I may be at a pecuniary disadvantage in not obtaining this appointment, but as a stranger coming to Coventry, and wishing to uphold the honourable traditions of a learned profession, I cannot see my way to accept an appointment in any institution which is not approved of by the majority of medical men.

"As surgeon to the Public Medical Service, I hope to be able to devote more time to each patient than I could if attached to your institution, and at the same time conduct my practice on lines not distasteful to the majority of the members of my profession.

"Yours faithfully,

"J. LESLIE CALLAGHAN."

That the staff of the Public Medical Service can devote more time to their patients naturally results from the rules of that institution. There is to be a limit for the number of members to be inscribed on any medical man's list. This number has not yet been absolutely fixed by the adoption of a resolution, but it is generally understood that no medical officer of the Public Medical Service must have more than 2000 members on his list. Then, as the service is not a monopoly, but open to all the medical men of the town, there is no danger of some having too much work and others too little. To the public this is the best of guarantees. The interest of the public is to see that no medical man has too much underpaid work. All medical men are willing to do a certain amount of work either gratuitously or for very inadequate pay, but this charitable disposition must not be imposed upon if the temptation to "scamp" the work is to be avoided. The Public Medical Service have now from 5000 to 6000 members on their books, and the success is such that no levies have been necessary. Not only have the medical men not been called upon to pay up the remaining £3 for which they rendered themselves liable, but the £2 they gave on joining have been refunded, and there is a balance in the bank of from £25 to £30. During the first year the medical staff received 2*s.* per member, now they receive 2*s.* 6*d.* per member, and the 10*d.* which remains after the druggists have been paid not only covers the cost of collecting but all the incidental expenses. Thus the organisation of medical aid by the medical men themselves without any intermediaries has proved a financial success.

In dealing with other abuses besides those connected with the provident dispensary the Public Medical Service has also met with a large measure of success. When this association was first formed, it was understood that all private practitioners' clubs should be given up, and the members invited to join the Public Medical Service. Six medical men who were in the service of the Star Benefit Society, the National Medical Aid Association, and other insurance and speculative concerns were induced to relinquish their appointments and bring over as many of their members as possible to the Public Medical Service. To meet this strike the insurance companies were only able to import one medical man from the outside, who still remains in Coventry. Six practitioners belong to the Provident Dispensary, one has a large private club of his own which counts some 2000 members; this he would not give up. Another, on the ground of old age, did not feel disposed to take an active part in the movement, but is not in opposition; he remains neutral. Altogether eleven medical men have joined the Public Medical Service, though only nine are disposed to attend the members. Thus it will be seen that, setting aside the dispensary medical officers, great unanimity prevails among the remaining members of the profession at Coventry, and even the dispensary medical officers are more in agreement with their fellow practitioners than appears on the surface.

Calling upon some of the medical officers of the dispensary,

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I found that they very frankly recognised the existence of abuses, but had concluded that if they resigned it would only mean the calling in of outsiders to take their places. They had been recently assured that in Birmingham alone there were some fifteen medical men all ready to come to Coventry if invited by the dispensary. This assertion is, however, open to doubt. When, many years ago, the late Dr. Fenton was appointed there were no less than twenty-seven applicants for the post he obtained. About three years ago, to fill up another vacancy, there were not more than four applications, while for yet another vacancy, occurring less than a year ago, there were only three candidates. Of these three, only one was a local practitioner, so that his election was practically uncontested. It seems probable that none but inferior men will accept service in an institution which the organs of the profession refuse to recognise. The strength of the Coventry Dispensary rests on the fact that so far the members of its staff are men of undisputed high standing. The question arises whether the people who drive in their own carriages, who live in villas and yet are members of the dispensary, will be satisfied with medical men of inferior standing. Perhaps the medical staff of the dispensary exaggerate the danger of outsiders stepping in to take their place. Besides, if they were to leave the dispensary and join the Public Medical Service, they would bring over a considerable number of the dispensary members with them. As they would receive for each member thus brought over a much larger sum than they obtain from them as members of the dispensary, they might not perhaps experience any very great loss; also some of the Public Medical Service practitioners expressed to me their willingness to hand over some of their own patients to the dispensary medical men so as to cover any such loss if the staff of the dispensary would agree to join them. As for any personal animosities, they would be at once forgotten if the dispensary staff would only step out and stand shoulder to shoulder in union with the majority of the Coventry practitioners. But still the dispensary doctors adhere to their former policy of effecting reforms from within. They are now again negotiating with the dispensary committee for, I believe, the imposition of a wage limit and a distinct definition of the class of persons to be admitted as members of the dispensary. It was, however, explained to me that they did not wish to publish details about negotiations that are still pending. Also their case has been submitted to the arbitration of the Birmingham Branch of the British Medical Association, and they do not care to discuss the matter publicly till they know the result. One of the dispensary medical officers, however, pointed out to me that they had not been idle and had obtained some improvements. It has already been explained that when the medical men in the service of the Star Benefit Society left that insurance company so as to join the Public Medical Service, the dispensary took in all the members of the Star Benefit Society, thus helping a financial company to dominate the medical profession. The dispensary has now, however, realised the unfairness of its action, and about a year ago refused to renew its contract with the Star Benefit Society. This reform—one might almost say this act of repentance—is cordially approved by the members of the Public Medical Service, and may be considered as an important step towards a reconciliation between the two parties.

Still there is the great financial question that bars the way. As a dispensary medical officer remarked to me, "We have families and children. The dispensary, roughly speaking, brings us in £1 a day. We cannot lightly give this up. If in so doing we were to succeed in bringing about the desired and desirable reforms, we know full well that we should be loudly applauded by all the profession. But if we fail we also know that we should not receive a particle of help from anyone, and we should have to endure poverty and perhaps reproaches for engaging in a struggle without having ensured the means of success." In his opinion the matter ought to be taken up in high quarters and before they were called upon to resign, some guarantee ought to be given that others will not step in and take up their position. The main source of income cannot be given up merely on a question of principle. For a material sacrifice of so crushing a character, some sort of material guarantee and compensation must be forthcoming. As matters now stand the dispensary does not increase the number of medical men on its staff unless their average income exceeds £350 a year. Considering the cheap terms for the admittance of children, that clubs are accepted at 3*s.* per adult member, and that there are fifteen clubs attached to the dispensary, it will be seen that an enormous number of members must be enrolled before the income of the six dispensary medical officers exceeds the average of £350 each. A census taken a few weeks ago shows that the population of Coventry now amounts to 60,990 persons; yet (and including the boycotted practitioner who is in the service of the insurance company) there are only twenty-one medical men. But for the dispensary and the clubs there would be room for more, particularly as the working classes earn good wages and the necessities of life are very cheap. But what is to be done when, for instance, a manufacturer who pays £50 a week in wages belongs to the dispensary and pays only 4*s.* 4*d.* a year for his medical attendance; when a number of prosperous tradesmen belong to the same institution, together with many of the workmen who are well able to pay small fees, and could afford to be independent of charity for all but prolonged illnesses or expensive surgical operations. But the people of Coventry have lost the habit of paying medical fees, and the Public Medical Service is at a great disadvantage, because when they seek to impose their wage-limit, the persons affected have only to apply to the dispensary, where they are at once admitted, and this at a lower rate of subscription. Then the high-class character of the medical men on the dispensary staff renders it still more difficult for the Public Medical Service to compete against this institution. As a rule, institutions that are condemned by the medical profession are not served by men of such high reputation, and enough has now been said to show that even without this factor there is good reason for condemning the Coventry Provident Dispensary.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Health of Liverpool.

THE death-rate of Liverpool is nearly always an uncertain quantity, being much affected by outside influences. At the last meeting of the health committee Dr. Hope accounted for the increased death-rate by the prevalence of measles, in consequence of which several schools have been closed; also by an influx of persons from other towns dying in the city hospitals. Eight of such cases had come from Bootle, whilst others had been brought to the hospitals from Conway, Garston, Crosby, and Barrow, accounting altogether for eighteen deaths, which, properly speaking, ought not to be credited to Liverpool. An unusually large number of infants had died from suffocation; no less than nine inquests where such a verdict was returned having been held last week on children under twelve months old. At the same time the death-rate cannot be considered exceptionally high at 23·3 per 1000 of the population. Dr. Hope has been deputed to attend the International Medical Congress to be held at Moscow in August next. The health committee have also authorised Alderman J. Houlding to accompany Dr. Hope to Moscow.

Birkenhead and the Queen's Jubilee.

The Mayor of Birkenhead has opened a fund for carrying out a commemoration scheme having for its objects the extension of the Birkenhead Borough Hospital by the addition and furnishing of a new wing; the establishment of a home for trained nurses; and the providing of free nursing amongst the sick poor of all denominations in their own homes. It is also intended to provide nursing on a graduated scale for those who are able to make small payments, according to their circumstances. A sum of £6000 will be required to carry out the above objects, of which £3775 9*s.* 6*d.* have already been subscribed or promised.

The Cost of the Public Health Department of Liverpool.

The accounts of the city treasurer for the year 1896 have just been issued. The statement includes the expenses of working the public health department, also those of the department of the inspector of nuisances. The sum of £4487 18*s.* 10*d.* was expended on the medical officer of health's department, after allowing for deductions, such as fines, Exchequer contributions, &c. In these accounts are included notification fees for infectious diseases, which amounted to £651 12*s.* 9*d.*; also fees to registrars for death returns, amounting to £181 19*s.* 1*d.* The department of the inspector of nuisances costs the public £5983 7*s.* 8*d.*, allowing

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for deductions of a similar kind to those of the medical officer's department. The port sanitary payments, which include the maintenance of infectious cases in the various city hospitals, are set down at £4372 17*s.* 11*d.* The cost for the year of demolition of insanitary property amounted to £34,960 12*s.* 9*d.* This amount does not include the cost of property purchased, which is stated to have been £223,626 13*s* 6*d.*, with charges thereon amounting to £37,295 0*s.* 4*d.*

Liverpool and the Montreal Meeting of the British Medical Association.

The medical profession of Liverpool are to be congratulated on the number of official positions accorded to them at the meeting of the British Medical Association to be held in Montreal in August. Mr. Mitchell Banks, senior surgeon to the Royal Infirmary, is to deliver the address in Surgery; whilst Mr. T. H. Bickerton, Professor Boyce, of University College, Liverpool, and Dr. W. Permewan have been respectively appointed secretaries of the ophthalmological, the bacteriological and pathological, and the laryngological sections.

Liverpool Royal Infirmary.

Mr. George Melly has presented the Royal Infirmary with a complete apparatus for the application of the Roentgen rays.

June 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Honorary Degrees of the University of Dublin.

A MEETING of the Senate of Dublin University was held on June 14th for the purpose of considering an address to the Queen, and in reference to graces for conferring honorary degrees by the board. The graces adopted were duly confirmed. They included the honorary degree of Doctor of Science conferred on our recent distinguished visitor, H. Wilhelm His, Professor of Anatomy, Leipzig.

The Visit of the Anatomical Society of Great Britain and Ireland.

The business portion of the proceedings of this society concluded by the address to the Fellows and Members of the Royal Academy of Medicine in Ireland by Professor His of Leipzig on the Development of the Brain and Nerves. On the following morning a party consisting of over twenty members, conducted by Dr. William Haughton, the honorary secretary of the Dublin branch of the society, started by an early train on an excursion to Killarney. The party included Herr Waldeyer, the Professor of Anatomy from Berlin; Professor Lebourg, of Ghent; Professor Thaine, of London; Professor Disse, of Marbourg; Professor Spalteholtz, of Leipsic; and Professor Young, of Owens College, Manchester.

The Irish Medical Association.

The annual meeting of this association took place recently in Dublin, under the chairmanship of Dr. T. H. Moorhead, the newly-elected president. A resolution was passed unanimously, instructing the council "to take such proceedings as may seem to them advisable to procure an amendment of the existing Poor-law system, having particular regard to superannuation, annual leave of absence to medical officers, workhouse infirmaries, and the abuses so prevalent in the issue of medical relief tickets."

During a subsequent discussion it was stated by the ex-president, Mr. Meldon, that the failure of the Irish Superannuation Bill of last year was caused by the fact that its passage was blocked by the action of three or four Irish members of Parliament who were alleged to have been influenced by some country Poor-law guardians. After the meeting, the members of the Association dined at the Royal College of Surgeons, where they entertained the Right Hon. Charles Hemphill, Q.C., M.P., Lord Monteagle, and many other guests. Resolutions were proposed by the above, by the President of the Royal College of Physicians of Ireland and the President of the Royal College of Surgeons in Ireland and by the President of the Association.

The Coroner for Dublin.

The salary of the Coroner for the City of Dublin has recently been under consideration and the finance committee of the corporation, have recommended that it be increased from £500 to £600 per annum. It was stated that the average number of inquests held in Dublin during each year is 250. Mr. Kenny, the coroner, is a medical man.

Jervis-street Hospital, Dublin.

The post of gynæcologist to this hospital has recently been filled by the appointment of Mr. T. G. Stevens, formerly assistant master at the Coombe Lying-in Hospital, Dublin.

Poor-law Administration.

The report of the Local Government Board upon the recent inquiry into the affairs of the Glenties Union (co. Donegal) was read at a meeting of the board of guardians held on June 14th. The master is censured and called on to resign, and he has done so; further, the report goes on to say: "From the evidence adduced on the present occasion, as well as at former inquiries, it appears that the management of the affairs of the Glenties Union for some time past has reflected little credit on the guardians. The business of this union appears, owing to the apathy of the rest of the members, to be left practically in the hands of a few guardians, whose administration leaves them open to the strongest suspicion of using their powers to advance their own personal interests. The Local Government Board have retained the minutes of the evidence taken in connexion with this inquiry in order to determine whether a prosecution should be instituted against the guardians concerned in the several discreditable transactions to which attention has been called." A special meeting of the board of guardians has been summoned by direction of the Local Government Board for June 26th to consider this report.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Bicycle from a Medical Point of View.

A LONG discussion has been going on at the Hospital Medical Society as to the benefit or harm to be derived from riding the bicycle, and the debate was all the more interesting from the fact that most of the members taking part in it themselves had experience of the machine in question. M. Petit reported a series of accidents, and cited five recent cases of death occurring in persons either actually riding or who had just left off. He concluded that persons suffering from cardiac affections ought either to abstain from bicycling altogether or at any rate only do so with the most extreme moderation. Phthisical people should for the most part abstain altogether; but, on the other hand, those predisposed to tubercle have in many instances derived great benefit, as have still more those suffering from certain nervous affections, neurasthenia, chlorosis, and constipation. Finally, M. Petit reminded the meeting that various affections of the joints and of the genito-urinary organs in both sexes, incompletely or only recently cured, had been revived or aggravated by the bicycle. M. Hallopeau, replying to M. Petit, said that the bicycle, which was not a physiological method of progression, offered, like all forms of athletics, both advantages and disadvantages. These latter were specially marked in cardiac subjects, in whom cardiac failure supervened. In certain subjects, even when free from cardiac disease, riding provoked painful sensations connected with the heart. He considered it prudent to avoid riding against head winds or up steep hills, and by taking this precaution many grave accidents would be avoided. Some people experienced numbness in the great toes during a prolonged ride, a phenomenon which M. Hallopeau attributed to the pressure of the saddle on the sciatic nerves. M. Rendu had seen symptoms of angina pectoris supervene after a long bicyle ride in a medical man who had never before shown any signs of cardiac affection, and considered that no person over forty years of age should take this form of exercise save in great moderation, so as to avoid a rise in blood pressure and cardiac fatigue. M. Legendre did not believe that the use of a bicycle could create a pathological condition; but undoubtedly it brought out certain maladies which had formerly lain latent; hence the necessity for examining young people before permitting them to commence this form of exercise. He had recently seen several cases of mitral regurgitation appearing in young people who before taking to bicycling had presented no sign of such complaint. Difficulty in nasal respiration owing to a deviated septum was also a cause of cardiac arrhythmia

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and became markedly so in cyclists owing to their aggravated respiratory efforts. On the other hand, women with certain forms of menorrhagia derived much benefit from the bicycle. M. Ferrand stated that the effort of bicycling is in some sense unconscious, and, to use the language of M. Texier, produces a kind of automatism which prevents the rider from being conscious of over-riding and its dangers. M. Debove knew a medical man subject to attacks of cardiac intermittence which came on either during rest or work, and especially before sleep. Exercise had no effect with regard to them; he could go upstairs or ride a bicycle without bringing them on. He suffered from migraine, but his digestion was good and he was not gouty. M. Debove brought forward this case as showing that cardiac intermittence can occur independently of any fatigue, and that the evils due to bicycling are exaggerated by attributing to the practice results for which it cannot be blamed. M. Faisans considered that it was unfair to charge the bicycle with all the accidents that occurred during riding, as a certain number of these sudden deaths would equally have occurred from any form of exercise. M. Debove considered that the result of the discussion showed that excess in any form was harmful, and that as regarded the bicycle over-riding alone was dangerous. Let unsound persons avoid it altogether and the healthy use it in moderation, and all accidents would be avoided.

Koch's Tuberculin and the Academy of Medicine.

According to French law the sale of serums is only authorised after the Academy of Medicine, by means of a committee, has given its approval to samples and inspected the laboratories where they are prepared. This law was passed to prevent all sorts of serums being put forward by druggists for the sole purpose of advertisement and without any guarantee of asepsis or strength. Very few laboratories obtain the necessary certificate. Koch's tuberculin, to have the right of entry in France for sale, has had to undergo the judgment of the Academy based upon the report of M. Nocard, the assistant director of the Pasteur Institute. The report commences by saying that any French product produced under circumstances precluding the Academy from any surveillance as regards the conditions of its manufacture would certainly be refused. The sample sent in, it continues, amounted to 1 c.c. enough for one experiment only as to activity, and the liquid was turbid and full of bacteria and yeasts. The bacteria were very possibly not pathogenic; but their presence was not reassuring, for it would appear to show that the liquid was not prepared under aseptic conditions, and even if the organisms did no harm to the patient they would probably weaken the power of the serum. The Academy, fearing that if they refused the authorisation altogether their action would be attributed to national jealousy, have authorised the introduction of the lymph provisionally, despite the report of M. Nocard. Many of the papers have published articles expressing regret at this decision.

Scandal at a Lying-in Hospital.

The Municipal Council gave a whole sitting to the consideration of the case of a parturient woman who died from not having been admitted in time to the hospital where she applied for relief, and the meeting took advantage of the occasion to deliver a violent attack upon the organisation of hospitals in general. It appeared that the woman had just been delivered of twins, but that only one placenta had come away. She applied in the middle of the night at the hospital, where the midwife on duty would have admitted her except for the fact that there was no vacant bed. She applied to the head midwife and the director of the hospital, who declared that in the absence of a bed the woman could not be admitted. They telephoned, however, to two or three other hospitals, and finally found a vacant bed for her at the Charity Hospital, to which the woman was taken as soon as possible and there delivered. Five hours afterwards she died. The chief of the Assistance Publique reprimanded the director of the hospital and the head midwife and suspended the midwife on duty. The Municipal Council demanded an inquiry so as to make it appear whether or no the responsibility rested with the director only, and regretted that an inferior, who was probably not responsible, had been punished with a view to sparing the chief. The discussion was very heated despite the fact that the Director-General reported that the result of the post-mortem examination showed that the woman had died from causes quite unconnected with the delay in her delivery or in her admission to a hospital.

The Provident Societies.

In the course of a discussion which recently took place in the Chamber on the new law which has just been introduced with regard to provident societies great leniency was shown to these societies, which do grievous harm to medical men by reason of their miserably low fees. It was demanded on behalf of the societies that they should have the right to gratuitous legal assistance in case they had a law-suit, but the legal profession protested vehemently against this, saying that bodies which had a capital of 40,000,000 francs and a membership of 500,000 in France should not in reason be admitted to favours reserved for the indigent alone. The Chamber, where there are many lawyers, saw the justice of this argument and refused the application, but not one of the numerous medical deputies said a word with regard to the shameful tariff which these societies impose on medical men. These members were more concerned for the pockets of their constituents than for the interests of their brethren. On the motion of a deputy, not a medical man, it was decided to insist that there should be two members of the Academy of Medicine on the superior council of the provident societies, and it is possible that these two gentlemen may, if they will, play an important *rôle* for the benefit of their profession.

June 14th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Congress of Internal Medicine.

THE fifteenth annual meeting of the Congress of Internal Medicine, the proceedings of which will be reported in a forthcoming number of THE LANCET, was held this year in Berlin. This Congress dates from the year 1881, up to which time the annual congresses of the Association of German Naturalists and Medical Men offered the only opportunity for the holding of discussions on clinical medicine; the surgeons, however, had their first special congress as early as 1871. The original organising committee, composed of Professor von Leyden, Professor Gerhardt, Professor Kussmaul, and Professor Seitz, proposed to make Wiesbaden the seat of the congress, avoiding a university town in order that no individual university might have a preponderating influence on the proceedings. All the meetings were accordingly held in Wiesbaden until 1889, except that in 1884 the congress took place in Berlin as a token of respect to its honorary president, the late Professor von Frerichs. In 1889 it was decided to meet only every second year in Wiesbaden, and in the intervening years to meet alternately in Munich, Leipzig, Berlin, and Vienna, by which arrangement it was hoped that medical men in distant parts of the German Empire and in Austria who might be unable to make a long journey to Wiesbaden would have an opportunity of taking part in the proceedings. This year's Congress was opened on June 9th in the great hall of the Architects House. Professor von Leyden, the president, having been called away the day before to Bukarest to attend the Crown Prince of Roumania, the chair was taken by Professor Moritz Schmidt, of Frankfurt, and the presidential address which Professor von Leyden had prepared was read by the acting vice-president. Internal medicine, it was remarked in the address, has entered on a stage of revolution, and therapeutics are now in favour, the former pessimism and disbelief being, fortunately, things of the past. Physicians no longer accept any dogmatic system and no longer try to cure the illness, but endeavour to cure the patient regarded as an individual. Medicine must not only be an exact science, but must also be an art—the art of curing. Two new classes of therapeutical agents have become available during recent years—namely, the antitoxins and extracts prepared from various parts of the animal organism. Behring's diphtheria antitoxin has been an undoubted success; as to the other antitoxins, such as those of tetanus and erysipelas, no definite judgment can be pronounced. The thyreoiodin of the late Professor Baumann was an important step in the use of animal extracts. Great improvements have been made in dietetic treatment, as well as in the mechanical and hydro-therapeutic divisions of the subject. The individual practitioner is no longer able to undertake

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all the multiplied ramifications of therapeutics, and the subdivision of medicine into a number of special branches is inevitable, though it is no doubt from some points of view to be regretted. The training of the medical student has also become more difficult owing to the enormous mass of subjects which he is expected to know and which increases from year to year. Moreover, in the midst of this accumulation of details the fact must not be lost sight of that the principal aim of medical education ought to be the cultivation of the faculty of observing rightly. After the inaugural discourse the usual addresses of welcome were delivered by the representatives of the Government, the city, and the Berlin medical corporations respectively. Professor Virchow, speaking as President of the Berlin Medical Society, made the unexpected remark that there was some degree of likeness between the new antitoxin theory and the old humoral pathology. He was of opinion that the utility of the antitoxins was satisfactorily proved, but that from a theoretical point of view their action was still as obscure as the action of Jenner's vaccine. On the conclusion of these ceremonial proceedings the practical business of the Congress commenced.

The Antitoxin Control Office.

The Royal Antitoxin Control Office, over which Professor Ehrlich presides, will soon be removed from Berlin to Frankfurt. The reason alleged by the Government for this decision is that the principal antitoxin factory, the Hoechster Farbwerke, being situated in a suburb of Frankfurt, the work of the Control Office was much interfered with by the distance between that city and Berlin. But notwithstanding this distance the State control of the Hoechst factory has hitherto been so effective that its antitoxin has been declared by competent bacteriologists to be the best that is made.[1] Other reasons must, therefore, have induced the Government to come to this decision, and, in fact, the motives were of a merely financial nature, for the Government, departing from its former policy of open-handedness in this matter, has recently been but little inclined to spend money for scientific and especially for medical purposes, and the town council of Frankfurt having offered to provide both a large sum for the immediate requirements of the new office, and also an annual subsidy for its support, the Government at once accepted this proposal. The city of Berlin, which has rightly declined to spend the money of the city for institutions which it should be the duty of the State to support, will therefore lose the Control Office, and the departure of Professor Ehrlich will be much regretted by the medical profession here. Although Professor Ehrlich has never been an academical teacher in the strict sense of the word as far as the bulk of students are concerned, he has nevertheless exercised a great influence on a select number of students and graduates who worked under him and with him in his laboratory, where so many valuable researches have been conducted. His chair will be taken by Professor Brieger, the head of the clinical department of the Institution for Infectious Diseases.

June 14th.

Obituary.

KARL REMIGIUS FRESENIUS.

THE death is announced of Professor Karl Remigius Fresenius at Wiesbaden from an apoplectic attack at seventy-nine years of age. Fresenius was the director of the chemical laboratories at Wiesbaden, and his name will ever be remembered in connexion with his system of chemical analysis. It may be said, indeed, without fear of contradiction that Fresenius was the founder of analytical chemistry. His work in this direction is admittedly of a purely classical type. His various contributions have a distinct bearing upon medicine, since Fresenius was the author of, as he was the great authority on, the analyses of almost all the baths and springs in Europe used in medical treatment. His chief publication, "Chemical Analysis, Qualitative and Quantitative," was translated into English by Mr. A. Lloyd Bullock many years ago. The book has since reached a tenth edition and is even now the standard work of reference on systematic inorganic analysis. Fresenius was a busy man, a close and diligent worker, and a most skilful operator at the chemical bench. Curiously enough, he had at no time contributed any research, but his analytical results always gave evidence of the most painstaking work and of attention to those rarer saline constituents which, though occurring in small quantity, possessed nevertheless some importance.

[1] Vide the Report of THE LANCET Special Commission on the Relative Strengths of Diphtheria Antitoxic Serums, July 18th, 1896, p. 182.

CHARLES HOLDRICH FISHER, M.D. GLASG., M.R.C.S. ENG., L.S.A.

THIS well-known Kentish practitioner died at his residence at Sittingbourne on May 29th from degeneration of the heart at the comparatively early age of sixty-two years. He always said he should die in "harness," and this was so, for he saw his patients until within three weeks of his death. Dr. Fisher was educated at Glasgow University, where he was a distinguished student and made many lasting friends. He then settled at Sittingbourne, Kent, and became a partner of the late Mr. Ray. He was an especially energetic, active, and tactful practitioner, besides being a most genial and amusing companion and one who always engaged the attention of his hearers. He seldom took a holiday, hunting being his only recreation, and his merry laugh and cheery face were well known in the hunting field. He practised in Sittingbourne for forty years, holding parochial, and, in fact, nearly all the appointments, and he has left behind a large circle of sorrowing friends, especially amongst the poor, by whom he was so well beloved.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men have been announced:—Dr. Nocquart, Professor of Anatomy in the University of Brussels, in consequence of a dissection wound, at the age of forty-two years.—Dr. Auguste Mollien, Professor of Clinical Medicine in the Amiens Medical School.—Dr. Creus, of Manso, Professor of Clinical Surgery in the Central University, Madrid.

Medical News.

THE RECENT NIGER SOUDAN CAMPAIGN.—Mr. E. Craster, P.M.O. Niger Territories, and Mr. Stanton, M.R.C.S Eng., have been mentioned in despatches.

DIPHTHERIA IN LONDON. — The amount of diphtheria in London in the four-weekly period ended on May 22nd does not compare so favourably with the preceding period as did that with earlier like periods in respect of the metropolis as a whole. The number (730) of notified cases in the four weeks ended on April 24th increased to 777 in the succeeding four weeks, the averages per week being respectively 182 and 194. But whilst in April two districts had upwards of fifty notifications each, there was only one such sanitary area in May. All districts save one were invaded in April, and all save two in May. The registered deaths from the disease were 134 in April, and averaged 33 weekly, the per case mortality rate having been 18·4 per cent. In May the deaths registered were 142, and averaged 35 weekly, the per case mortality having been 18·3 per cent. In the corresponding May period of 1896 the notifications amounted to 890 and the weekly average to 222, the deaths to 161 and the weekly average to 40, and the per case mortality rate to 18·1 per cent. The fatality rate was therefore closely allied on both occasions, but the amount of disease and the number of deaths have fallen in the current year as compared with 1896. In the three completed weeks that have elapsed since May 22nd, the registered deaths from diphtheria in London have been successively 36, 33, and, last week, 39. In the week ended June 5th the 33 deaths corresponded with the corrected decennial average for the twenty-second week of the period 1887–96, three of the deaths being of infants and one of a person over twenty years. Six deaths belonged to Kensington, and three respectively to Islington, Poplar, and Wandsworth sanitary areas. Last week the thirty-nine registered deaths in the metropolis were seven in excess of the corrected decennial average for the particular week. Seven deaths belonged to Shoreditch, four to St. George's-in-the East, and three each to Poplar and Greenwich sanitary areas. All thirty-nine deaths were of young persons aged under twenty years, and five were of infants. In the fortnight ended with last Saturday there were eighteen deaths registered from diphtheria in the outer ring of London, eight occurring in the West Ham registration district.

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MEDICAL MAGISTRATES.—Mr. Thomas E. Abbott, L.S.A. Lond., of Gormanston, Tasmania, and Mr. Herbert W. Brownrigg, L.K.Q.C.P., L.R.C.S. Irel., of Broome, Western Australia, have been appointed Justices of the Peace for the district of Macquarie, Tasmania, and for the colony of Western Australia respectively.—Mr. John H. Thomas, L.R.C.P. Edin., M.R.C.S. Eng., has been placed on the Commission of the Peace for Barrow-in-Furness.

VICTORIA UNIVERSITY.—The following have been adjudged worthy of the degree of M.D.:—J. M. Johnson, M.B.: Thesis, Disinfection by means of the Vapours of some of the Members of the Phenol Series; C. E. Ligertwood, M.B.: Thesis, A Form of Alcoholic Cardiac Failure; Frank Radcliffe, M.B.; Thesis, Spread of Tuberculosis in Guinea-pigs; C. H. G. Ramsbottom, M.B.: Thesis, The Isle of Man as a Health Resort.

THE ROYAL AQUARIUM JUBILEE PROGRAMME.—Visitors to London will be gratified to learn that no sensational item is announced among the attractions of this popular place of entertainment during the Jubilee and following week, but some of the attractions which are offered should prove both interesting and instructive. The beautiful living pictures which have proved so popular will be continued, but they will now represent Her Majesty's Accession and Coronation, marriage with the Prince Consort, and a number of tableaux illustrative of the fashions and interesting epochs during her sixty years' reign.

THE LATE MR. J. GREIG SMITH.—At the meeting of the committee of the Bristol Royal Infirmary held on June 8th it was unanimously resolved that a vote of condolence be sent to Mrs. Greig Smith, and the committee also recorded their deep regret at the loss the infirmary had sustained by the sudden death of Mr. Greig Smith, as by his great talents and surgical skill he had contributed in an exceptional degree to the success of the work carried on in the wards. It was further agreed that the re-construction of the operation theatre in accordance with a scheme which had been lately suggested by Mr. Greig Smith himself, and in which he took the deepest interest, should be undertaken as a memorial of him, and that a committee should be formed to receive contributions for this purpose.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—The annual general meeting of this society was held at 40, Leicester-square, on Monday, June 14th, the President, Mr. R. H. Woodhouse, occupying the chair.—The librarian, in presenting his annual report, remarked that there had been an increase in the number of members and visitors who had made use of the library during the year, and that the number of books borrowed had been greater than in previous years.—The curator stated that during the year several valuable additions had been made to the museum, including some excellent specimens illustrating pathological conditions of the teeth in the lower animals. He also appealed to members for gifts of "bone dentures," as specimens of this class of work were becoming day by day more scarce, and he was anxious to have in the museum as good a collection as it was possible to obtain.—The report of the treasurer showed that the receipts had exceeded the expenses by the sum of £26 19*s.* 5*d.*, and that the amount invested stood at £4378 16*s.* 3*d.*—Mr. C. Robbins showed a specimen of a "Home-made Denture." It consisted of a base composed of sheet iron, and to this were fixed three blocks of bone, one being placed on each side and one in front. This denture, which did not conform in any way to the shape of the hard palate, had been tolerated for over thirty years, the curious fact being that the bone block showed not the slightest traces of disintegration. Dr. Grevers, of Amsterdam, read an interesting paper on the Relation of the Bite of the Upper and Lower Teeth. He recounted the various classifications adopted by various authors, and illustrated his points by means of an extensive collection of photographs of skulls from the museums of Amsterdam, Vienna, and Paris. The following gentlemen were elected office-bearers for the ensuing year:—Mr. W. E. Harding, president; Mr. W. H. Woodruff, treasurer; Mr. W. A. Maggs, librarian; Mr. J. F. Colyer, editor of Transactions; Mr. Storer Bennett, curator; and Messrs. J. H. Mummery, H. Baldwin, and J. O. Butcher, honorary secretaries. After the announcement of the ballot the retiring President read his valedictory address, the usual votes of thanks being accorded to the retiring officers. The meeting then terminated.

THE annual dinner of the Epidemiological Society will be held at the Grand Hotel, Trafalgar-square, on Friday, June 25th, at 7.15 P.M. The chair will be taken by the President, and tickets (price 10*s.* 6*d.*) may be obtained from Dr. Bulstrode, 4, The Mansions, Earl's-court, S.W.

MR. ALFRED COOPER, F.R.C.S. Eng., has been appointed Surgeon-in-Ordinary to His Royal Highness the Duke of Saxe-Coburg and Gotha, in the room of the late Mr. Wm. Hickman.

THE UNIVERSITY OF WALES.—The number of candidates for matriculation in the University of Wales this year amounts to 425, as against 216 last year and 89 the year before. The Prince of Wales (the Chancellor of the University) has expressed his gratification at this satisfactory proof of its growing prosperity.

A MEETING of the Nottingham Medico-Chirurgical Society was held on May 19th, Dr. Ransom, President, being in the chair.—Mr. Milner showed a case of Molluscum Fibrosum in a woman aged fifty-seven years.—Dr. Tresidder showed a woman, aged forty-five years, suffering from Pigmented Spots on the Nose. He suggested that it might be a case of melanosis lenticularis progressiva.—Dr. Wesley read a paper on Submaxillary Cellulitis. After referring to the anatomical relations of the submaxillary cellular tissue and the distribution of the areolar planes in continuity with it the bacterial element of the disease was discussed. The micro-organism seemed to have been different in individual cases, the most common variety, however, being a streptococcus, this tending to prove that submaxillary cellulitis cannot be truly looked upon as a specific disease. Numerous cases were detailed which showed most of the varieties and the chief complications of the affection. The cases grouped themselves into—first, the very acute ones, in which the constitutional symptoms were severe and which rapidly ended fatally; and, secondly, the less acute cases which have arisen from extension of inflammation from the lymphatic glands, the general symptoms being less severe, and almost always resulting in recovery. Free and early incision was insisted upon in all cases, and the most favourable position for the various cases was discussed. For the anæsthetic chloroform was to be preferred, a local anæsthetic such as ethyl chloride being occasionally useful. In the acuter cases the use of antistreptococcus serum was advocated in addition to incision. Dr. Ransom and Mr. Anderson discussed the subject, and Dr. Wesley replied.—Dr. Bell Taylor read a paper on the Contagious Diseases Act from a Sanitary Aspect. He said that in the army reports of those cases classified as syphilis and invalided as such two-thirds were due to gonorrhœa and nine-tenths of the remainder were due to non-syphilitic sores; neither of these classes presented constitutional symptoms. In the remainder the disease does not present serious symptoms, tertiary signs being rarely seen nowadays. After quoting numerous authorities in support of his hypothesis that exceptional legislation on the subject is not required, Sir H. Campbell-Bannerman and Mr. Shaw-Lefevre were quoted as legislators who had expressed views antagonistic to the Acts. He thought the Acts failed because the disease in woman is often so dormant and with such difficulty detected. He advocated voluntary hospitals. The subject was discussed by Dr. Ransom, Mr. Anderson, Dr. Handford, Mr. Wood, Dr. Bolton, Mr. O'Mullane, and Dr. Tresidder, and Dr. Bell Taylor replied. Finally, the following resolution was proposed by Mr. Anderson, seconded by Mr. Geraty, and carried: "That the society, having considered the question of the prevalence of venereal disease in the army, hopes that the Government will take immediate steps to check its spread."

BOOKS, ETC., RECEIVED.

ASH PARTNERS, LIMITED, London.
The Fairies' Favourite; or, the Story of Queen Victoria told for Children. By T. Mullett Ellis. Commemoration Day, 1897. Illustrated. Price 1*s.*

ASH, C., AND SONS, Broad-street, Golden-square, London.
The Administration of Nitrous Oxide and Oxygen for Dent Operations. By F. W. Hewitt, M.A., M.D. Cantab. 1897. Price 4*s.* net.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.
From Our Dead Selves to Higher Things. A Course of Human

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Experience and Progressive Development. By F. J. Gant, F.R.C.S. Second edition. 1897.

Clinical Manual of Mental Diseases. By A. Campbell Clark, M.D. Edin., F.F.P.S. Glasg., University Series. 1897. Price 10s. 6d.

"CAPE TIMES," Printing Works, Cape Town.

The Mineral Waters of Caledon. By G. W. B. Daniell, L.R.C.P. Lond., M.R.C.S. 1897.

CARRÉ ET NAUD, Paris.

Essai sur les Lésions du Foie et des Reins. Par Dr. H. Claude. 1897.

CASSELL AND COMPANY, London.

The Surgical Diseases of Children. By Edmund Owen, M.B., F.R.C.S. Illustrated. Third edition. 1897. Price 21s.

CHURCHILL, J. & A., Great Marlborough-street, London.

Remarks on the Uses of some of the Bazaar Medicines and Common Medical Plants of India. By E. J. Waring, C.I.E., M.D. Fifth edition. 1897. Price 6s.

CONSTABLE, A., AND CO., Westminster.

Memories of Seven Campaigns. By Jas. Howard Thornton, C.B., M.B., B.A. With an Introduction by A. Egmont Hake. Illustrated. 1895.

DOWNEY AND CO., York-street, Covent-garden, London.

A Doctor's Idle Hours. By "Scalpel." 1897. Price 6s.

FRÈRES VIGOT, Paris.

Travaux de Neurologie Chirurgicale (deuxième année). Par A. Chipault. 1897.

FROWDE, HENRY, Amen-corner, London, E.C.

Harvey and Galen. The Harveian Oration, Oct. 19th, 1896 By J. F. Payne, M.D. Oxon. 1897. Price 2s. 6d. net.

GEORGI, A., Leipzig.

Bakteriologie des Weiblichen Genitalkanales. Von Dr. C. Menge und Dr. B. Krönig. Teile 1 und 2. 1897.

KEGAN PAUL, TRENCH, AND CO., Charing-cross-road, London.

B. Bradshaw's Dictionary of Bathing Places and Climatic Health Resorts. With a map. 1897. Price 2s. 6d.

LANE, L. C., in the Office of the Librarian of Congress, at Washington.

The Surgery of the Head and Neck. By L. C. Lane, M.D. (Berol), M.R.C.S. Eng.

LEWIN THOS. AND CO., Amen-corner, Paternoster-row, London.

International Clinics. A Quarterly of Clinical Lectures. Edited by Judson Daland, M.D., J. M. Bruce, M.D., and D. W. Finlay, M.D., F.R.C.P. Aberd. 1896-97 series. Vol. IV. 1897. Price 12s. 6d. net.

LIVINGSTONE, E. AND S., Edinburgh.

Diseases of the Eye. By J. Arthur Kempe, F.R.C.S.

The Students' Handbook of Diseases of the Skin. By Utile Quod Facias. 1897. Price 2s. 6 d. net.

LONGMANS, GREEN, AND CO., Paternoster-row, London.

The Value of Electrical Treatment. By Julius Althaus, M.D., M.R.C.P., M.R.I. Second edition. 1897. Price 2s.

MACMILLAN AND CO., London.

The Induction Coil in Practical Work, including Rontgen x Rays. By L. Wright. 1897.

Human Embryology. By Chas. S. Minot. Illustrated. 1897. Price 25s. net.

The Yew-trees of Great Britain and Ireland. By John Lowe, M.D. Edin. 1897. Price 10s.

MASSON ET CIE, Paris.

La Revue Philanthropique. No. 2. 10 Juin, 1897.

MURRAY, JOHN, Albemarle-street, Piccadilly, London.

Waste and Repair in Modern Life. By Robson Roose, M.D., LL.D., F.R.C.P. Edin. 1897. Price 7s. 6d.

NUTT, DAVID, 270, Strand, London.

Caóba: the Guerilla Chief. A Real Romance of the Cuban Rebellion. By P. H. Emerson. 1897. Price 3s. 6d.

Life in Early Britain. By Bertram C. A. Windle, D.Sc., M.D. Dubl. With maps and illustrations. 1897. Price 3s. 6d.

PENTLAND, Y. J., Edinburgh.

The Edinburgh Medical Journal. Edited by G. A. Gibson, M.D., F.R.C.P. Edin. New Series. Vol. I. 1897.

Manual of Bacteriology. By R. Muir, M.A., M.D., F.R.C.P. Edin., and James Ritchie, M.A., M.D., B.Sc. Illustrated. 1897.

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The Psychology of the Emotions. By Th. Ribot. 1897. Price 6s.

SOCIÉTÉ D'EDITIONS SCIENTIFIQUES, Paris.

Formulaire Clinique d'Électrothérapie Spéciale et Appliquée. Par Dr. A. Massey. 1897.

SMITH, ELDER, AND CO., Waterloo-place, London.

Saint Bartholomew's Hospital Reports. Edited by S. West, M.D., and W. J. Walsham, F.R.C.S. Vol. XXXII. 1896-1897.

THACKER, W., AND CO., Creed-lane, London.

Notes on Stable Management in India and the Colonies. By Veterinary-Captain J. A. Nunn, F.R.C.V.S., C.I.E., D.S.O. Second Edition, with a Glossary. 1897.

THE COTTON PRESS, Arundel-street, Strand, London.

Molière and his Medical Associations. By A. M. Brown, M.D. 1897. Price 6s.

Sanitary and Social Questions of the Day. By an Observer. Price 2s.

THE REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections in the Museum of the Saint Louis Hospital, Paris. Edited and Annotated by J. J. Pringle, M.B., F.R.C.P. Part 9. 1897. Price 10s. 6d.

THE ROXBURGHE PRESS, Victoria-street, Westminster.

My Father as I Recall Him. By Mamie Dickens. Price 3s. 6d.

VAIL, J. H., AND CO., New York.

A New Classification of the Motor Anomalies of the Eye. By A. Duane, M.D. New York. 1897.

VALLARDI, F., Milano.

La Chirurgia del Collo-Studio Clinico. Par E. Bottini.

VOGEL, F. C. W., Leipzig.

Pathologie und Therapie der Perityphlitis. Von Dr. E. Sonnenburg. 1897.

WARNER, W. R., AND CO., Philadelphia.

Warner's Pocket Medical Dictionary. 1897.

The British Gynæcological Journal, May, 1897; Part 49; edited by F. F. Schacht, M.D. (John Bale, Sons, and Danielsson, Great Titchfield-street, Oxford-street, London). Price 3s. 6d. — Left-hand Writing: a Complete Course of Exercises; by J. Jackson, F.E.I.S. (Sampson Low, Marston, and Co., St. Dunstan's House, London, E.C.).—Schedules for Plant Description; by John Wishart (E. and S. Livingstone, Edinburgh). Price 6d.—Origin of the Vertebrates; by Stuart Jenkins; reprint (G. S. Davis, Detroit, Mich.).—A Contribution to the Natural History of Scarlet Fever, based upon Official Statistical Records of Mortality and Morbidity; by John T. Wilson, M.D., D.P.H Aberd.; Supplement to "Public Health," February, 1897 (W. H. and L. Collingridge, Aldersgate-street, London, E.C.).—Dairy Sanitation; reprint from the "Sanitary Journal" for February, 1897.—Catalogue of the Collections in the Jeypore Museum; compiled by T. H. Hendley, C.I.E.; Parts 1 and 2 (Imperial Medical Hall Press, Delhi, 1896).—Des Ulcères Simples de l'Intestin; par Ch. Combes (Lurrien, Senior, Toulouse, 1897).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARKER, T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Haxey Sanitary District of the Gainsborough Union.

BIRMINGHAM, A., M.D., L.R.C.P. Irel., has been appointed a Resident Surgeon to the Mater Misericordiæ Hospital, Dublin.

COPEMAN, A. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Littleport Sanitary District of the Ely Union.

DYER, C. HAROLD, M.B., C.M. Aberd., has been re-appointed Medical Officer of Health by the Cleckheaton Urban District Council.

EGLINTON, G. W., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health for the Street Urban Sanitary District.

FARRAR, JOS., M.D. St. And., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for Gainsborough and for the Workhouse.

FAULKNER, W. C., M.B. Edin., has been appointed Medical Officer to the Mount Bischoff Tin Mining Company and the Bischoff Provident Hospital, Waratah, Tasmania.

FLEMMING, PERCY, F.R.C.S. Eng., M.D., B.S. Lond., has been appointed Assistant Ophthalmic Surgeon to University College Hospital, London.

FRIPP, A. D., M.S. Lond., has been appointed an Assistant Surgeon to Guy's Hospital, London.

GAYLOR, E., L.R.C.P. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Ripley Urban District Council.

HALL, C. R., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Hatfield Union, vice L. F. Osbaldeston.

HAMILTON, P. J., M.B., B.Ch. Irel., has been appointed a Resident Surgeon to the Mater Misericordiæ Hospital, Dublin.

HARRIS, H., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the No. 9 Sanitary District of the Bedminster Union.

HARWOOD, E. F., L.R.C.P. Lond., M.R.C.S., has been appointed an Assistant Medical Officer for the Infirmary by the Brentford Board of Guardians.

HELM, R. D., M.D. Edin., has been appointed a Physician to the Cumberland Infirmary, vice S. Lockie.

JAMES, PHILIP, F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Official Railway Medical Officer for the Wellington Section of the New Zealand Government Railways.

KERR, T. B., M.B., B.Ch. Irel., has been appointed a Resident Surgeon to the Mater Misericordiæ Hospital, Dublin.

MANNERS, A., M.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer for the First Sanitary District and Workhouse of the Pewsey (Wiltshire) Union, vice H. Colman, resigned.

MARSHALL, E. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 6 Sanitary District of the Croydon Union.

MCKENZIE, H. V., M.D. Edin., has been appointed Ophthalmic Surgeon to the Torbay Hospital and Eye Infirmary, Torquay.

MOORE, W. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Kidderminster Workhouse, vice S. Stretton, resigned.

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MUNRO, D., M.D., L.R.C.S. Edin., has been appointed Medical Officer for the Aberfeldy Sanitary District.

ROBINSON, JOSEPH, L.R.C.P. Irel., L.F.P.S. Glasg., has been appointed Medical Officer for the No. 1 Sanitary District of the Kidderminster Union, vice S. Stretton, resigned.

ROWBOTHAM, A. J., M.R.C.S., has been re-appointed Medical Officer for the Newton Sanitary District of the Gainsborough Union.

RUSSELL, R. HAMILTON, F.R.C.S. Eng., has been appointed Surgeon to In-patients at the Melbourne Hospital for Sick Children, Australia.

SCOTT, G. W., M.B., B.Sc., has been appointed House Physician to the Infirmary, Sunderland.

SHARPLEY, J. E., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the Blyborough Sanitary District of the Gainsborough Union.

SLADER, G. W. B., L.R.C.S. Irel., has been appointed Medical Officer for Blyton of the Gainsborough Union.

SMITH, LIONEL, M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Westminster General Dispensary, Soho, vice Frederick Green, resigned.

SMYTH, W. A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Ashtead Sanitary District of the Epsom Union.

SNOAD, P. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 6 Sanitary District of the Leicester Union.

STENHOUSE, DANIEL, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Parish of Arnold of the Basford Union.

STEPHENS, L. E. W., M.R.C.S., has been appointed Medical Officer for the Workhouse, and for the No. 1 Sanitary District of the Westbourne Union.

STUART, J. A. ERSKINE, L.R.C.P. Edin., L.R.C.S. Edin., has been re-appointed Medical Officer of Health for the Borough of Batley, Yorkshire.

THOMPSON, C. S., M.B., C.M. Edin., has been re-appointed Medical Officer for the Abbotsham Sanitary District of the Bideford Union.

TOWNSEND, NORMAN J., L.R.C.P., L.R.C.S. Irel., has been appointed Extern Physician to the Cork South Infirmary and County Hospital.

WILLIS, W. MORLEY, F.R.C.S. Eng., has been appointed House Surgeon to the Infirmary, Sunderland.

WIGHAM, WM. H., M.B. Durh., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Ninth Sanitary District of the South Molton Union, vice A. Hind, resigned.

YOUNGER E. G., M.D. Brux., M.R.C.P. Lond., M.R.C.S., has been appointed Sanitary Inspector for the Gray's Inn (Holborn) Sanitary District.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL.—House Surgeon for six months. Honorarium £10 10s., board, lodging, and washing provided.

BRIDGWATER INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

CHORLTON UNION.—Senior and Junior Resident Medical Officers at the Workhouse Hospitals, Withington, Manchester, for twelve months. Salary of the former at the rate of £130 per annum, and of the latter at the rate of £120 per annum, each with furnished apartments and attendance (but not rations) in the Workhouse. Applications to the Clerk to the Guardians, Chorlton Union Offices, All Saints, Manchester.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum. Board and residence provided.

CONSUMPTIVE HOSPITAL AND ORPHAN HOMES OF SCOTLAND, Bridge-of-Weir.—Resident Medical Officer. Salary £80 per annum, with furnished apartments, board, &c. Applications to the Secretary, 194, St. Vincent-street, Glasgow.

COUNTY BOROUGH OF ST. HELENS.—Medical Officer of Health, Public Analyst. Salary £400 per annum, rising by five equal annual instalments to £520 per annum. Preference will be given to candidates qualified to act as Public Analyst, an office to which an additional salary of £75 per annum will attach. Applications to the Town Clerk, Town Hall, St. Helens.

DISTRICT ASYLUM, Mullingar.—Medical Woman as Junior Assistant Medical Officer, unmarried. Salary £100 per annum, with board, furnished apartments, attendance, and laundry.

GENERAL HOSPITAL, Nottingham.—Assistant House Physician for six months. Board, lodging, and washing in the hospital. An honorarium of £10 10s., will be given conditionally.

GENERAL INFIRMARY, Leeds.—Locum Tenens for Resident Surgical and Casualty Officer for five weeks from June 29th. Two guineas per week.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Resident Medical Superintendent for one year. Salary £105 a year, with board and residence in the hospital.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon for one year. Salary £40, with board and lodging.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

MONTROSE ROYAL ASYLUM, Sunnyside, Montrose, N.B.—Senior Assistant Medical Officer, unmarried. Salary £200 per annum, with board, furnished apartments, and washing.

NOBLES, ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY, Douglas, Isle of Man.—Resident House Surgeon, single. Salary £90 per year, with apartments, gas, coals, and washing free. The House Surgeon is usually appointed Medical Attendant at the House of Industry at a salary of £10 per year.

NORFOLK AND NORWICH HOSPITAL.—House Physician for two years unmarried. Salary £60 per annum, with board, lodging, and washing.

PARISH OF ST. PANCRAS, London.—Dispenser. Applications to the Clerk to the Guardians, Vestry Hall, Pancras-road, N.W.

ROYAL EYE HOSPITAL, Southwark, or ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—House Surgeon. Salary £50 per annum, with free board and lodgings in the hospital.

UNIVERSITY COLLEGE, BRISTOL, FACULTY OF MEDICINE.—Professor of Surgery.

WANTAGE UNION.—Medical Officer and Public Vaccinator for the Vale District. Salary £50 per annum, with the usual surgical, vaccination, and midwifery fees. Applications to the Clerk to the Guardians, Wantage.

WEST HAM HOSPITAL, Stratford, E.—Secretary. Salary £150 per annum.

Births, Marriages, and Deaths.

BIRTHS.

ATKINSON.—On June 5th, at Newton House, Knaresborough, the wife of Jackson A. Atkinson, M.R.C.S., L.R.C.P. Eng., of a son.

COCKEY.—On June 12th, at Esher House, Ladbroke-grove, W., the wife of E. Percival Cockey, M.D., of a son.

COYSH.—On June 7th, at Chiswick High-road, Gunnersbury, W., the wife of T. A. Coysh, L.D.S. Eng., of a son.

CROUCH.—On June 8th, at Weston-super-Mare, the wife of Charles Percival Crouch, F.R.C.S., M.B., of a daughter.

HAZLETON.—On June 8th, at The Hazels, Matlock, Derbyshire, the wife of Edward B. Hazleton, M.D., of a daughter (Vera Brooke).

LAST-SMITH.—On June 11th, at Mayfield, Torquay, the wife of Edward Last-Smith, J.P., L.R.C.P., L.R.C.S., of a daughter.

LEES.—On June 8th, at Winchester House, Worthing, the wife of Bernard Lees, M.A., M.B., of a daughter.

LUMSDEN.—On June 11th, at Lower Leeson-street, Dublin, the wife of J. Lumsden, M.D., of a son.

MAISEY.—On June 12th, at 137, Cheetham Hill-road, Manchester, the wife of C. T. B. Maisey, M.R.C.S., L.R.C.P. Lond., of a daughter.

MANSBRIDGE.—On June 13th, at Grosvenor-gardens, Willesden-green, N.W., the wife of Josiah Mansbridge, L.R.C.P., M.R.C.S., of a son.

SANDERS.—On June 13th, at Edinburgh, the wife of Gordon Sanders, M.D., F.R.C.P. Edin., of a son.

WILSON.—On June 10th, at Carlton-villas, Cricklewood, N.W., the wife of G. Morton Wilson, M.B., of a son.

MARRIAGES.

ARTHUR—MAAS.—On June 9th, at St. James's Church, West Hampstead, Francis Arthur, M.R.C.S., L.R.C.P., of La Pompe, Jersey, to Marie, daughter of the late Leopold Maas, of West Hampstead.

COOKE—COGILL.—On June 10th, at S. Mark's, Surbiton, by the Rev. G. Kennedy Cooke, brother of the bridegroom, and the Ven. Archdeacon Burney, Vicar of S. Mark's, Albert William Cooke, M.R.C.S., L.R.C.P., to Jessie, younger daughter of William Henry Cogill, Esq., of Surbiton.

DANIEL—ZAIR.—On June 16th, at Solihull Parish Church, Edgar George Clement Daniel, M.A., M.B. Cantab., eldest son of William Clement Daniel, M.D., of Epsom, to Maud Satchell, second daughter of George Zair, of Solihull, Warwickshire.

GORDON—BLAKE.—On June 2nd, in Renvyle Church, co. Galway, Thomas Eagleson Gordon, M.B., F.R.C.S. Irel., of 55, Lower Baggot-street, Dublin, to Nellie, only daughter of the late Ethelstane Blake, Esq., of Heath Island, Renvyle, co Galway.

HARPER—GIBBS.—On June 10th, at Sonning Church, near Reading, John Robinson Harper, of Barnstaple, L.R.C.P. Lond., M.R.C.S. Eng., to Eva Antonia Hennensjelda Gibbs, daughter of the late Joseph Gibbs, of Lexham-gardens, London.

MAXWELL—WOOTTON.—On June 9th, at Christ Church, Mayfair, Robert Fawcett Maxwell, L.R.C.P., L.R.C.S., of Uxbridge-road, W., to Rose Charlotte, daughter of George Wootten, of Findon-road, Uxbridge-road, W.

REED—COLLINS.—On June 12th, at Christ Church, Epsom, Surrey. John Charles Groscort, Surgeon Royal Navy, only son of the late Surgeon-Major John Groscort Reed, M.D., H.E.I.C.S., to Mary Hammett Vining, only child of the late J. H. Collins, Esq., F.R.C.S., District Surgeon, E.I.R., of Sunnyside, Epsom.

RIGBY—ATKINSON.—On June 16th, at St. Saviour's Church, Liverpool, by the Rev. Richard M. Ainslie, Walter Rigby, M.B., C.M. Edin., of Blackburn, to Gertrude Minta Atkinson. No cards.

ROPER—CODDINGTON.—On June 9th, at the Parish Church, Blackburn, Herbert John Roper, M.R.C.S., of Leeds, to Mildred Elizabeth, eldest daughter of the late Albert Edward Coddington, of Blackburn.

SAVAGE—FISHER.—On the 9th inst., at St. George's Church, Edgbaston, Arthur Thomas Savage, B.A., L.R.C.P., Olton, Birmingham, to Beatrice Louise, second daughter of Walter Newton Fisher, J.P., Lawnfield, Edgbaston.

SMITH—SHARP.—On June 14th, at the Church of St. Bartholomew the Great, Thomas Rudolph Hampden Smith, F.R.C.S., of Stockton-on-Tees, to Ann Ellen Sharp, daughter of the late William Sharp.

DEATHS.

ATWOOL.—On June 11th, at Tunbridge Wells, in his thirtieth year, William Tillinghast Atwool, late Ophthalmic Surgeon to the Torbay Hospital.

HODGSON.—On June 5th, at Montpelier-road, Brighton, George Frederick Hodgson, M.R.C.S., L.S.A., aged 75 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 17th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 11	30·30	S.W.	64	59	125	78	53	...	Fine
" 12	30·29	S.W.	69	62	125	84	57	...	Fine
" 13	30·35	S.E.	77	64	129	86	62	...	Fine
" 14	29·97	W.	68	63	116	87	63	...	Cloudy
" 15	30·20	N.W.	64	55	120	77	56	...	Cloudy
" 16	29·75	S.W.	61	56	122	70	53	0·02	Overcast
" 17	29·86	N.W.	55	49	116	61	49	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (21st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (22nd),—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (23rd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (24th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (25th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (26th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (21st).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. Woakes: Nasal Neurosis.

TUESDAY (22nd).—LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Early Syphilitic Eruptions.

WEDNESDAY (23rd).—LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Disinfection and Disinfectants.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. S. Martin: Aortic Stenosis.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. D. Hood: Epilepsy and Allied Conditions.

THURSDAY (24th).—ROYAL COLLEGE OF PHYSICIANS (Examination Hall, Savoy, W.C.).—5 P.M. Dr. W. Hale White: The Means by which the Temperature of the Body is maintained in Health and Disease. (Croonian Lecture.)

LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Methods of Search for Specific Micro-organisms.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Hopkins: Clinical Lecture.

THE HOSPITAL FOR SICK CHILDREN (Medical School, Gt. Ormond-street, W.C.).—Dr. Garrod: Cases from the Out-patients' Department.

FRIDAY (25th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.)—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Tetanus, Rabies, and Cholera.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Gunn: Extra-Ocular Muscles.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"THE SUPPLY OF TETANUS ANTITOXIN."

To the Editors of THE LANCET.

SIRS,—We read with interest Mr. Arthur H. Buck's letter in THE LANCET of June 12th regarding the supply of antitoxins when city warehouses are closed. There should be no difficulty in obtaining supplies of Messrs. Burroughs, Wellcome, and Co.'s therapeutic serums in every large town, and we have no doubt that many chemists, like ourselves, make a point of stocking such preparations. We can supply all or any of the serums, hypodermic "tabloids," and emergency or regular preparations on Sundays, holidays, or when Messrs. Burroughs, Wellcome, and Co.'s offices are closed.

We are, Sirs, yours truly,

Regent-street, W., June 16th, 1897. J. MUNRO AND CO.

THE VALUE OF MEDICAL SERVICE.

A WELL-MERITED rebuke was administered to the executors of a Mrs. Howells, whose estate at her death amounted to nearly £10,000. Mr. T. W. Burwood, of Ealing, attended the deceased lady for cancer of the bowel from Dec. 9th to the 31st, charging 10*s.* 6*d.* a visit for twenty-six visits, including small operations. The trustees, Messrs. Gilbert, of Avenue-crescent, Acton, disputed the claim and paid into court £9 10*s.*, but the jury found for the plaintiff for the full amount. The case was tried before his Honour Judge Bagshawe at the Brentford County Court, and in giving judgment his Honour remarked that "to defend such a case for the trifling difference between £9 10*s.* and £14 seems to me putting the estate of the deceased lady to an expense which it was injudicious to incur." Taking into consideration the fact that the patient lived out of the district and the serious nature of the case, the medical attendant's fees do not seem to have been at all high; but the case illustrates the estimate which a certain class of people have of the value of medical service.

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CATARRHAL JAUNDICE.

To the Editors of THE LANCET.

SIRS,—I should be very glad if some of your readers would give me their experience of such cases and advise me, especially as to diet, what they have found to answer best. My case is that of a young man, aged thirty-two years, who has also cardiac disease and has been suffering from jaundice for the past four months, otherwise he has been very healthy and did not know of the heart mischief until he was examined at the beginning of this attack. There is slight enlargement of the liver, but little or no pain, and he has lost considerably in weight. The skin and conjunctivæ keep very deeply stained, notwithstanding the long treatment, first with alkalies and Carlsbad aperients, and latterly with dilute nitro-muriatic acid and nux vomica, combined occasionally with digitalis. He is not troubled much with itching or constipation, but the motions keep very pale and the urine deep-red though abundant. As nothing that I have done seems to be of any use, I should be very pleased to have a reply from anyone interested in these cases through the medium of THE LANCET. I am, Sirs, yours truly,

June 14th, 1897. PERPLEXED.

G. G. S. M.—We never give medical advice or recommend medical men by name. Our correspondent is advised to take the opinion of the medical practitioner whom he has already seen, who will tell him if a consultation is required.

THE LATE DR. J. C. LISBOA.

DR. J. C. LISBOA, whose death occurred on May 1st, held a prominent position in medical and scientific circles in Bombay. He was born in Assagaum, a little village in Goa, Portuguese India, in 1823, and went to Bombay for the purpose of studying medicine just four months before the Grant Medical College commenced to receive students. Within a month after passing out of the college on the completion of his five years' course he was made assistant to the surgeon of the Sir Jamsetjee Jejeebhoy Hospital, and assistant to the professor of anatomy in the Grant Medical College. A month later Dr. Morehead, principal of the college, gave him an interim appointment as lecturer on anatomy in the college, and selected him to do duty as a surgeon in the above-mentioned hospital, the records of which for 1851 refer in complimentary terms to his services. The late Dr. Vandyke Carter, in his book on "Leprosy" gives him the credit of having been the first in India to take up the study of that disease. Botany, however, was the subject on which his reputation was mainly founded. Among his numerous writings on this science may be mentioned various papers contributed to the Bombay Branch of the Royal Asiatic Society and the Bombay Natural History Society on the "Mahableshwar Plants," "Plants not mentioned in Dalzell and Gibson's Bombay Flora," "Grasses of the Bombay Presidency," and "Useful Plants of the Bombay Presidency." Two grasses are named after him, Tripogon Lisboæ and Andropogon Odoratus Lisboæ, the latter of which is said by the late Dr. Dymock and his two associates in their "Pharmacographia Indica," to have been discovered by his wife. Dr. Lisboa was elected Syndic (Medicine) of Bombay University, President of the Grant College Medical Society for ten years, and of the Medical Union for four years. He was a member or fellow of many scientific associations, among which may be mentioned the Royal Academy of Sciences of Lisbon and the Linnean Society of London.

Distressed One.—If our correspondent has the various conditions hinted at no time should be lost in consulting the family practitioner as to the course to be adopted. We do not recommend either medical men or treatment.

"THE MORAL EDUCATION OF BOYS."

To the Editors of THE LANCET.

SIRS,—May I answer "Father's" question asked in your issue of June 12th, p. 1649? My essay "Morality," price 1*s.* 6*d.*, tenth edition, is published by Messrs. J. and A. Churchill, 7, Great Marlborough-street. Possibly "Father" may refer to a letter of mine headed "The Grave Social Problem" which appeared in THE LANCET about fifteen years ago. If so, I will with pleasure send him a copy of it on application. By your kindness a few dozen copies of it were printed on slips and sent to me at the time.—I am, Sirs, yours truly,

MAURICE C. HIME

(For twenty years head master of Foyle College, Londonderry).

Hillmount, Londonderry, June 13th, 1897.

*** We congratulate Mr. Hime on the notice which his book has received, for we have had numerous letters answering "Father's" query by referring to this work.—ED. L.

To the Editors of THE LANCET.

SIRS,—Your correspondent "Father" will find what he requires in "The Special Temptation of Early Life," by C. G. Wheelhouse, F.R.C.S., published at the request of the Ripon Diocesan Conference by Messrs. Walker and Laycock, Printers, 37, Briggate, Leeds.

I am, Sirs, yours faithfully,

June 12th, 1897. PATERFAMILIAS.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—Will you allow me, through the columns of THE LANCET, to ask if any of your readers can inform me of a home for inebriates where a young man, unfortunately addicted to alcohol, would be admitted in return for his services as servant, &c.? He is very respectable, well-educated, most anxious to be kept from the temptation of "drink," but is now too poor to be able to pay a fee.

I am, Sirs, yours faithfully,

June 12th, 1897. L.R.C.P.Edin.

X. Y. Z.—When a man holds a public position, as the subject of the paragraph in question does, a certain amount of newspaper notice is inevitable, however regrettable.

THE STATISTICS OF THE ANTITOXIN TREATMENT OF DIPHTHERIA.

MR. LENNOX BROWNE writes to us to dispute the inferences we drew in an article in THE LANCET of June 12th, p. 1621, upon the mortality statistics of diphtheria in the hospitals of the Metropolitan Asylums Board since the introduction of the treatment by antitoxin. He thinks that the very low mortality—10·8 per cent. (or 6·4 per cent. if the "moribund" patients be excluded)—amongst those not treated by antitoxin should be taken into account in any comparison of the antitoxin years with the pre-antitoxin years. We fail to see the necessity for this, since it is expressly stated that (save at one hospital) only the very mildest cases, or those which were obviously moribund on admission, were excluded from this treatment. Supposing that every such case had been given a minimal dose of antitoxin, would that have altered his opinion of the remedy? To our thinking the reporters acted wisely in basing their comparative statistics upon the results of all cases admitted during the year, although the argument in favour of antitoxin is immensely strengthened by the fact that the cases in which it was used comprised the more severe types. Nor can we admit with him that the decline in the mortality, which is especially noticeable in 1895 and 1896, is to be attributed to "better local treatment and more vigilant nursing care." If so, how can we explain the much greater proportional decline in the mortality of post-scarlatinal diphtheria?

"INCUBATORS."

To the Editors of THE LANCET.

SIRS,—We notice an inquiry as to where incubators for babies can be procured in England. We keep a stock of these incubators for either sale or hire, we did this at the suggestion of Dr. Champneys, and they will be found on p. 847, Fig. 3227, of our last illustrated catalogue of surgical instruments and appliances. We shall be pleased at any time to show these incubators to your correspondent.

We are, Sirs, yours faithfully,

26, West Smithfield, E.C., June 14th, 1897. ARNOLD AND SONS.

To the Editors of THE LANCET.

SIRS,—If "H. G. C." will refer to Section 1543:1 of the "Medical Digest," 1890 edition, and Appendix, he will be able to obtain all the information he desires. "Father" will also find references to much instructive literature upon the "Moral Education of Boys" in Sections 1083 and 1084 of the same work.—I am, Sirs, yours truly,

June 14th, 1897. RICHD. NEALE, M.D.Lond.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Herald of Wales, Sheffield Independent, Evesham Journal, Rugby Advertiser, Banbury Guardian, Derby Express, Manchester Courier, Bradford Observer, Tamworth Mercury, Kidderminster Times, Western Morning News, Portsmouth Times, Berrow's Worcester Journal, Oldham Standard, Times of India, Pioneer Mail, Science Siftings, Le Temps, Doncaster Chronicle, East Anglian Daily Times, Architect, Salisbury Journal, Devon Weekly Times, Liverpool Daily Post, Walsall Observer, North Wilts Herald, Brisbane Courier, Builder, Croydon Guardian, Sussex Daily News, Birmingham Mail, South Wales Daily News, Glasgow Herald, Daily Chronicle, Chard News, Yorkshire Post, Barnsley Independent, Newcastle Leader, Leeds Mercury, Brighton Gazette, City Press, Bristol Mercury, Public Health Journal (New York), Forest Gate Weekly News, Hertfordshire Mercury, Printing Trades' Gazette, Weekly Free Press and Aberdeen Herald, Mining Journal, Local Government Chronicle, Reading Mercury, Sanitary Record, Braintree and Bocking Advertiser, Local Government Journal, Southern Daily Mail (Portsmouth), Surrey Advertiser, Mandalay Herald, Huddersfield Examiner, Evening Telegraph (Dundee), Tyrone Constitution, Kirkcudbright Advertiser, Loughborough Monitor, Ayr Advertiser, South Africa, Stowmarket Courier, Penarth Chronicle, Lisburn Standard, West Middlesex Herald, &c., &c.*

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Y—Mr. W. S. Yates, Buffalo, N.Y., U.S.A.

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The Croonian Lectures

ON

THE MEANS BY WHICH THE TEMPERATURE OF THE BODY IS MAINTAINED IN HEALTH AND DISEASE.

Delivered before the Royal College of Physicians of London,

BY W. HALE WHITE, M.D., F.R.C.P. LOND.,
PHYSICIAN TO, AND LECTURER ON PHARMACOLOGY AND THERAPEUTICS AT, GUY'S HOSPITAL.

LECTURE II.[1]

Delivered on June 17th.

MR. PRESIDENT AND GENTLEMEN,—You will remember that in the last lecture we saw that it would be possible by taking simultaneous observations of the internal temperature, the surface temperature and the amount of sweat secreted, to find out in man whether a rise of internal temperature was due to a diminution in the loss of heat or an increase of the production. Further, it is clear that this method will enable us to tell the cause of the fall of a high temperature. The experiments that I am about to detail to you were carried out with these objects. The temperatures are all given in degrees Fahrenheit, and the amount of sweat in milligrammes.

A. *Temperature raised by a hot bath; experiments on myself* (see Table VIII.).

TABLE VIII.—*Temperature Raised by Hot Bath.*

Number of experiment.	Time.	Mouth temperature.	Abdominal surface temperature.	Milligrammes of sweat from abdomen in ten minutes.	Remarks.
	P.M.	Deg. F.	Deg. F.		
1	7.0	98·2	93·7	2·4	
	7.25	—	—	—	Got into hot bath (temperature 112°); remained in fourteen minutes. When I came out I felt faint, breathing deeply. The bath was then 108°. I rapidly dried myself, put on dressing-gown, and lay down.
	7.45	103·2	94·5	185·7	
	7.55	—	88·7	—	
	8.5	99·5	—	—	
	8.15	98·6	—	—	
	9.0	98·0	92·8	2·3	
2	3.30	98·2	92·8	1·5	
	3.40	—	—	—	Got into hot bath (temperature 112°).; remained in fourteen minutes. The bath was then 106°. Faintness and rapid breathing were not so marked. Dried as before.
	4.0	101·0	93·7	92·4	
	4.15	—	91·8	—	
	5.0	98·2	93·7	3·9	

The temperature rises in these experiments owing to the fact that the hot water stops the loss of bodily heat by radiation and conduction, and it prevents evaporation of sweat. Probably the hot water does not warm the body much in so short a time as the specific heat of the body is high. In both these experiments I could, by watching the skin, see that the secretion of sweat did not begin to be very profuse till a few minutes after I was out of the bath, but by ten minutes after it was extraordinarily abundant. It will be seen that in all respects the first bath produced more marked effects than the second; probably this was because the second cooled the faster. But both experiments teach that the evaporation of sweat is by far the most important agent in reducing the bodily temperature when it has been artificially raised by a bath, and it will be noticed that when such a large amount of sweat is secreted the surface temperature is lower than it was either before the experiment began, immediately after the bath, or some time after the experiment, when the secretion of sweat is nearly normal. This is no doubt due to the rapid evaporation of the sweat, and this means of reducing the temperature is so energetic that it actually makes the loss by radiation and conduction less, although the internal temperature is raised, and it will be seen that in the first experiment the surface temperature fell 5·8° in ten minutes, but in the second with much less sweat secreted it only fell 1·9° in fifteen minutes. Other striking facts are the rapidity with which a normal temperature is regained and the enormous quantity of sweat secreted.

B. *Temperature raised by Turkish bath; experiment on myself.*—Before the bath the mouth temperature was 98.8°, and the surface temperature of the abdomen was 90.5°. Milligrammes of sweat from the abdomen in 10 minutes 2 2. After taking these observations I went into the hot rooms and remained there an hour and twenty minutes, mostly at 120°, but for some time in rooms at 150° and 190°. Then I was massaged, shampooed, and had a shower bath. After which I was wiped quite dry, and then the mouth temperature was 99·8°, and the surface temperature of the abdomen was 92·3°. Milligrammes of sweat from the abdomen in ten minutes 46 1. Here, again, we see what a very energetic agent sweating is in reducing an artificially raised temperature, for after I had been sweating profusely for eighty minutes in the bath the sweat was still being secreted twenty times as fast as before the bath, but the quantity was not enough to make the surface temperature lower than before the bath.

C. *Temperature raised by damage to the brain.*—In two papers[2] I have shown that damage to the corpus striatum in rabbits raises their internal temperature. So many experimenters have confirmed this observation that I need not now trouble you with the details. The following table (Table IX.) shows the results I obtained in twenty-seven experiments.

TABLE IX.

Highest temperature after operation.	No. of degrees above that immediately before.	Highest temperature after operation.	No. of degrees above that immediately before.	Higiest temperature after operation.	No. of degrees above that immediately before.
Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.
106·8	5·2	105·4	2·0	104·2	1·1
106·8	4·6	105·4	2·4	104·0	1·8
106·7	4·5	105·2	4·0	103·6	2·7
106·2	3·2	104·9	3·1	103·6	0·6
106·0	3·6	104·8	3·6	103·4	2·0
106·0	3·7	104·6	2·4	103·0	- 0·2
106·0	4·7	104·4	2·2	100·8	- 0·4
105·9	3·3	104·4	2·0	—	—
105·8	4·8	104·2	2·0	—	—
105·6	4·4	104·2	1·2	—	—

In the last experiment the lesion was very extensive, and the fall of temperature was due to loss of blood. I show you a chart in which you can see very well the rise of temperature produced in a rabbit by damage to the corpus striatum (see Chart 1).

Many instances in which in man after a hæmorrhage into the corpus striatum the temperature has been raised have been recorded by Bourneville, Ferrier, J. H. Bryant, myself, and others, and references to these authors will be found in an address I gave at a meeting of the British Medical Association at Bristol in 1894.[3] These cases show that if

[1] Lecture I. was delivered on June 15th and published in THE LANCET of June 19th, 1897; Lecture III. was delivered on June 24th, and Lecture IV. will be delivered on June 29th.

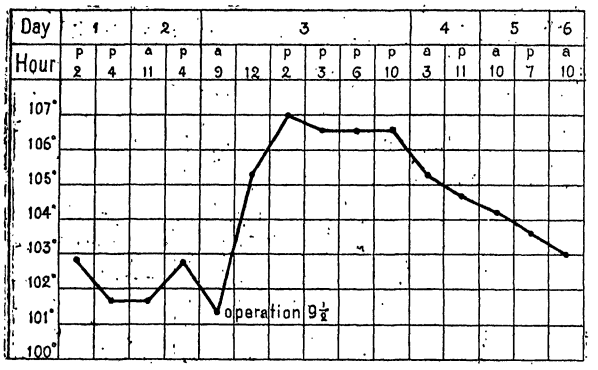
[2] Published in the Journal of Physiology, vol. xi. and vol. xii.

[3] Brit. Med. Jour., Nov. 17th, 1894.

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after a hæmorrhage takes place into one corpus striatum the temperature is raised, it will be higher in the opposite or paralysed axilla than in the axilla on the non-paralysed side,

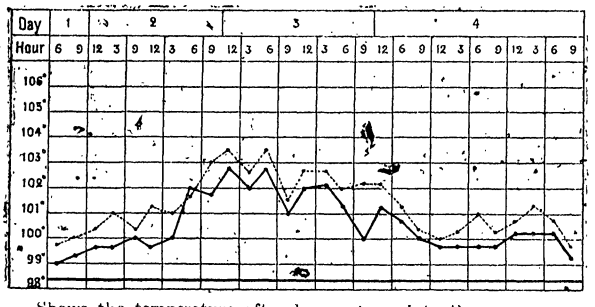
CHART 1.



Shows the rise of temperature in a rabbit after damage to the corpus striatum.

and that the temperature on the paralysed side remains higher than that on the other even during the subnormal period which succeeds the rise. I have seen several cases which illustrate this, and I will show you charts of two of them (see Charts 2 and 3), and since I began to investigate

CHART 2.

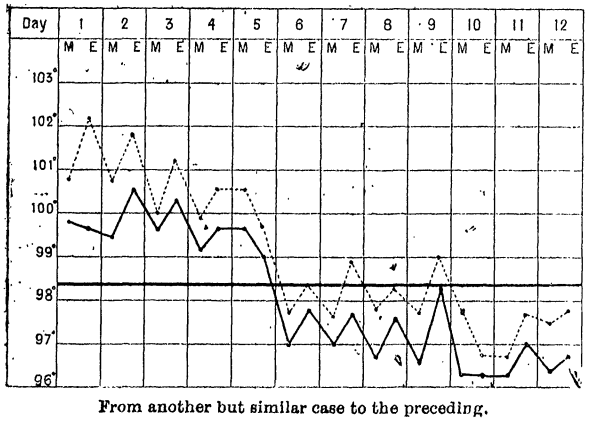


Shows the temperature after hæmorrhage into the corpus striatum on one side. The dotted line shows that in the axilla on the side opposite to the hæmorrhage; the straight line that on the same side as the hæmorrhage. (From a patient in Mary ward.)

surface temperatures two more such cases have come under my care. They gave the following results (see Table X.).

It will be seen that in both these cases the temperature was always higher in the paralysed axilla—that is to say, the internal temperature was higher on the paralysed than on

CHART 3.



From another but similar case to the preceding.

the sound side. In the first case the surface temperature of the two arms was equal, but the amount of sweat secreted on the paralysed arm was much greater than on the other, therefore the loss of heat must have been more rapid on the paralysed side; but as in spite of this the internal temperature was raised, the quantity of heat in the paralysed arm must have been greater than that in the unparalysed arm. In the second case on one occasion the secretion of sweat was almost equal on the two arms and on two other occasions it was greater on the paralysed side. The surface temperature was always considerably greater on the paralysed arm, so that here the losses from evaporation, radiation and conduction are all greater from the arm with the higher internal temperature; therefore in this case, too, the quantity of heat must have been considerably greater in the paralysed arm than in the other. In neither case was there any visible dilatation of the vessels on the paralysed side, nor have I ever observed, even when the difference of temperature has been considerable, any dilatation of the vessels on the paralysed side in hemiplegia. This is evidence against the view that the increased temperature on the paralysed side is due simply to there being more blood in the paralysed arm, and when we remember that damage to the central nervous system, whether experimental or clinical (it is the commonest cause of hyperpyexia in man), frequently causes such a high temperature that we must suppose the production of heat to be increased, the observations I quote do lend strong support to the view that when in hemiplegia the temperature is raised in the paralysed axilla the increased quantity of heat in the paralysed arm is due to a greater production of heat in the paralysed than in the corresponding unparalysed limb. If this is so we have an instance in which a lesion that paralyses the motor function of muscle excites the thermogenetic, and thus we see that the functions are distinct.

D. *Temperature raised in fever.*—In any fever the general condition and temperature of different patients vary very much, and, therefore, single observations would be of little value. I have consequently made several observations on different patients in the following fevers, and if all the cases of any particular fever point in the same direction we shall probably be justified in drawing conclusions. I have always compared the observations made on a patient with a febrile temperature with those made on the same patient before he got up, but when his temperature was normal, or very nearly normal, unless his death prevented this.

I. *Typhoid fever* (see Table XI.).—The table shows that in all cases the amount of sweat secreted during the fever was small (from 2 to 3 milligrammes in ten minutes is the usual amount my boxes absorb from the abdomen of a healthy man) and less than when the temperature had fallen, therefore during the fever the loss of heat from evaporation was diminished. Also in every case except one the surface temperature rose less than the internal—in other words, the loss from radiation and conduction was not increased proportionately to the rise of internal temperature, and was therefore, relatively to the internal temperature, less during the fever. Thus, there is distinct evidence that in typhoid fever the loss of heat is relatively to the rise of temperature diminished, and this diminished loss no doubt helps to raise the internal temperature. Still, as the surface temperature always rose considerably, the actual loss by radiation and conduction must have increased during the fever, and probably the decreased secretion of sweat was not enough to counteract this. Therefore we may conclude that although certainly in typhoid fever the pyrexia is largely due to a lessened loss of heat, yet probably, too, the production is increased. Typhoid fever is remarkable in that, although it is a long-lasting disease with a high temperature, it has a low mortality; and these results suggest that one reason for this may be that the temperature is raised with the least expenditure of energy, for it is obviously more economical of energy to raise the temperature by diminishing the loss of heat than by increasing the production. Then, too, it is interesting to note that experience has shown that the best way to reduce pyrexia in typhoid fever is by sponging, that is by increasing the loss of heat. It is well known that the internal temperature of typhoid fever is irregular as convalescence approaches, and we see that the same is true of the surface temperature (see Case 5, high readings on 5th and 6th) and sweat (same case, reading on 5th). In Case 7 it will be noticed that as the patient got worse the surface temperature approached the internal—that is to say, he was dissipating energy the faster.

II. *Pneumonia* (See Table XII.). All these cases, except the first, show that the excessive sweating which is associated with the crisis lasts some days after it, and the fourth case shows how enormous the sweating of the crisis may be. This sweating must aid in keeping

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down the temperature after the fever. In every case during the fever the secretion of sweat is less than when the temperature has fallen, but as then the secretion is still rather more than in healthy individuals and in typhoid fever patients whose temperature has fallen, probably the sweat secreted during fever is not much less than before the fever began. Therefore it appears that the diminution of the loss of heat owing to a dimunition in the amount of sweat secreted plays but a small part in raising the temperature. In only two cases did the surface temperature rise less than the internal, and in two it rose more (this explains the hot skin of pneumonia), therefore often in pneumonia the loss by radiation and conduction during the fever must be enormous. As, therefore, in pneumonia the loss of heat is so increased, the rise of temperature is for the most part due to an increased production of heat.

III. *Erysipelas* (see Table XIII.).—In both these cases the sweat was increased during the fever, and the surface temperature rose more than the internal temperature, so the dissipation of heat by evaporation, conduction, and radiation must have been very much increased. Consequently, the rise of temperature must have been entirely due to an increased production of heat, and not at all to a diminution of the loss.

TABLE X.—TEMPERATURE RAISED BY DAMAGE TO THE BRAIN.

Case.	Date.	Temperature in the axilla, paralysed side.	Temperature in the axilla, non-paralysed side.	Axillary difference on paralysed side.	Surface temperature on paralysed forearm.	Surface temperature on non-paralysed forearm.	Surface difference on paralysed side.	Milligrammes of sweat on paralysed forearm in ten minutes.	Milligrammes of sweat on non-paralysed fore-arm in ten minutes.	Difference in milligrammes of sweat on paralysed forearm.	Remarks.
		Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.				
Man. — Right cerebral hæmorrhage, left hemiplegia. Onset July 11th, 1896.	July 13th, 1896 (morning)	100·8	100	+ 0·8	92·8	92·8	0	41·1	21·2	+ 19·9	Increased sweat on paralysed side in both cases obvious to feel. The skin was gently wiped before observations; no vascular difference was visible.
	July 13th, 1896	100·6	100	+ 0·6	93·2	93·2	0	13·5	4·3	+ 8·2	
Man. — Right cerebral hæmorrhage, left hemiplegia. Onset, Aug. 8th, 1896.	Aug. 22nd, 1896	97·8	97·0	+ 0·8	93·6	92·8	+ 0·8	5·4	6·1	— 0·7	No vascular difference ever visible. (In both patients the observations on the two sides were always simultaneous.)
	Aug. 23rd, 1896	77·0	96·6	+ 0·4	92·8	91·8	+ 1·0	8·1	4·3	+ 3·8	
	Aug. 24th, 1896	98·2	98·0	+ 0·2	94·4	93·8	+ 0·6	8·3	5·9	+ 2·4	

TABLE XI.—TYPHOID FEVER.

Case.	Date.	Mouth temperature.	Abdominal surface temperature.	Mouth exceeded surface by—	Excess of mouth during fever.	Excess of surface during fever.	During fever surface rose more or less than mouth.	Milligrammes of sweat from abdomen in ten minutes.	Greater or less sweat during fever in milligrammes.	Remarks.
		Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.			
1.	June 9th, 1896	102·0	95	7·0	—	—	—	0·7	—	—
	July 2nd, 1896	98·2	92	6·2	3·8	3·0	- 0·8	2·1	- 1·4	
2.	June 9th, 1896	102·0	97·8	4·2	—	—	—	1·1	—	—
	July 2nd, 1896	98·0	93·2	4·8	4·0	4·6	+ 0·6	1·3	- 0·2	
3.	Oct. 22nd, 1896	102·6	96·0	6·6	—	—	—	0	—	—
	Oct. 23rd, 1896	103·0	96·0	7·0	—	—	—	—	—	
	Nov. 3rd, 1896	99·4	94·8	4·6	3·6	1·2	- 2·4	3·0	- 3·0	
4.	Oct. 22nd, 1896	103·0	97·2	5·8	—	—	—	1·4	—	—
	Oct. 23rd, 1896	102·8	97·5	5·3	—	—	—	0	—	
	Nov. 3rd, 1896	98·3	95·2	3·6	4·2	2·0	- 2·2	7·2	- 5·8	
5.	Dec. 3rd, 1896	104·0	93·2	10·8	—	—	—	1·0	—	A mild case. The first observation was on the eleventh day of the illness. The contrast has been made between this (because the fever was then at its height) and the last.
	Dec. 4th, 1896	102·4	93·2	9·2	—	—	—	1·0	—	
	Dec. 5th, 1896	100·6	95·0	5·6	—	—	—	7·0	—	
	Dec. 6th, 1896	102·2	100·4	1·8	—	—	—	0	—	
	Dec. 7th, 1896	99·0	91·4	7·6	—	—	—	0	—	
	Dec. 8th, 1896	99·8	93.2	6·6	—	—	—	1·0	—	
	Dec. 9th, 1896	98·4	91·4	7·0	—	—	—	1·5	—	
	Dec. 10th, 1896	99·4	93·2	6·2	—	—	—	2·5	—	
	Dec. 11th, 1896	98·4	91·4	7·0	5·6	1·8	- 3·8	3·0	- 2·0	
6.	April 10th, 1896	103·7	96·8	6·9	—	—	—	2·2	—	Patient died from hæmorrhage.
	April 14th, 1896	102·8	96·4	6·4	—	—	—	0·7	—	
	April 18th, 1896	103·0	96·6	6·4	—	—	—	1·2	—	
7.	May 2nd, 1896	104·0	96·8	7·2	—	—	—	1·3	—	Patient died very soon after the last observation from intensity of disease.
	May 11th, 1893	105·6	101·3	4·3	—	—	—	0·9	—	
	May 14th, 1896	102·3	99·2	3·1	—	—	—	1·9	—	

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TABLE XII.—PNEUMONIA.

Case.	Date.	Mouth temperature.	Abdominal surface temperature.	Mouth exceeded surface by—	Excess of mouth during fever.	Excess of surface during fever.	During fever surface rose more or less than mouth.	Milligrammes of sweat from abdomen in ten minutes.	Greater or less sweat during fever in milligrammes.	Remarks
		Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.			
1.	March 6th, 1896	104·2	97·6	6·6	—	—	—	1·8	—	First observation taken immediately before the crisis.
	March 10th, 1896	99·6	92·6	7·0	4·6	5·0	+ 0·6	2·4	- 0·6	
2.	April 30th, 1896	103·6	97·8	5·8	—	—	—	4·1	—	Second observation taken a few days after the crisis.
	May 7th, 1896	98·8	93·0	5·8	4·8	4·8	0	5·9	- 1·3	
3.	July 11th, 1896	103·8	96·8	7·0	—	—	—	2·1	—	Second observation taken four days after the crisis.
	July 20th, 1896	98·0	95·0	3·0	5·8	1·8	- 4·0	5·6	- 3·5	
4.	Nov. 29th, 1895	102·8	96·0	6·8	—	—	—	2·2	—	Second observation taken just at the end of the crisis.
	Nov. 30th, 1896	98·0	92·2	5·8	—	—	—	40·0	—	
	Dec. 2nd, 1896	93·4	92·2	6·2	—	—	—	12·0	—	
	Dec. 3rd, 1896	98·0	92·2	5·8	—	—	—	13·0	—	
	Dec. 11th, 1896	98·0	93·0	4·8	4·8	3·0	- 1·8	5·5	- 3·3	
5.	Dec. 10th, 1896	104·0	100·4	3·6	—	—	—	3·5	—	Second observation taken a few days after the crisis.
	Dec. 17th, 1896	98·0	92·2	5·8	6·0	8·2	+ 2·2	5·0	- 1·5	

TABLE XIII.—ERYSIPELAS.

Case.	Date.	Mouth temperature.	Abdominal surface temperature.	Mouth exceeded surface by—	Excess of mouth during fever.	Excess of surface during Fever.	During fever surface rose more or less than mouth.	Milligrames of sweat from abdomen in ten minutes.	Greater or less sweat during fever in milligrammes.	Remarks.
		Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.			
1.	Aug. 18th, 1896	102·8	101·4	1·4	—	—	—	4·2	—	—
	Aug. 19th, 1896	102·4	100·4	2·0	—	—	—	3·9	—	—
	Aug. 22nd, 1896	98·6	94·6	2·0	4·2	6·8	+ 2·6	3·2	+ 1·0	—
2.	June 30th, 1896	100·2	96·8	3·4	—	—	—	3·2	—	—
	July 2nd, 1896	97·0	92·8	4·2	3·2	4·0	+ 0·8	1·4	+ 1·8	—

TABLE XIV. A.—SUPPURATION.

Case.	Date.	Mouth temperature.	Abdominal surface temperature.	Mouth exceeded surface by	Excess of mouth during fever.	Excess of surface during fever.	During fever surface rose more or less than mouth.	Milligrammes of sweat from abdomen in ten minutes.	Greater or less sweat during fever in milligrammes.	Remarks.
		Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.			
1.	April 30th, 1896	103·6	95·5	8·1	—	—	—	0·3	—	Abscess due to appendicitis. Opened May 9th, 1896.
	May 2nd, 1896	103·3	98·6	5·2	—	—	—	0·2	—	
	May 11th, 1896	103·4	96·3	3·6	—	—	—	5·9	—	
	Compared with first observation				3·2	- 1·3	- 4·5	—	- 5·6	—
	Compared with second observation				3·4	1·8	- 1·6	—	- 6·7	—
2.	March 9th, 1896	104·0	94·0	8·0	—	—	—	3·0	—	Abscess connected with perforating ulcer. Opened March 10th, 1896.
	March 12th, 1896	99·6	91·0	8·6	4·4	3·0	- 1·4	5·0	- 2·0	

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IV. *Suppuration* (see Table XIV. A).—Here the considerable amount of sweat secreted after the abscess was opened and the temperature had fallen appears to show that sweating helped to keep the temperature down. In the first case at least the quantity secreted during the fever was so small that the raised internal temperature may have been partly due to a diminished loss of heat from lessened evaporation. In both cases, too, there was a diminished loss from radiation and conduction, for the rise of surface temperature was less than that of the internal temperature, in fact, on one occasion, the surface temperature was actually lower during the fever than when the internal temperature had fallen, and that although there was no excessive evaporation of sweat to bring it down. We may conclude that in these two cases of suppuration the raised internal temperature was, in part at least, due to a diminution in the loss of heat.

V. *Tubercle* (see Table XIV. AA).—I have made several

TABLE XIV. AA.—TUBERCLE.

Case.	Date.	Mouth temperature.	Surface temperature.	Mouth exceeded surface by—	Milligrammes of sweat from abdomen in ten minutes.	Remarks.
1	May 20th, 1896	103·0	96·8	6·2	9·3	Phthisis; bad case.
	May 31st, 1896	103·8	98·0	5·8	5·1	
	June 2nd, 1896	98·2	95·8	2·4	6·2	
2	March 16th, 1896 (4 P.M.)	104·0	96·4	7·6	30·0	Phthisis; bad case. Sweat observations taken in palm, but even for the palm the amount is very great.
	March 17th, 1896 (1 A.M.)	102·6	95·9	6·7	9·2	
	March 17th, 1896 (5 P.M.)	104·0	96·8	7·2	30·6	
	March 18th, 1896 (1 A.M.)	103·8	95·2	8·6	28·6	
	March 18th, 1896	104·2	94·9	9·3	12·8	
3	Nov. 23rd, 1896	99·0	97·0	2·0	—	Phthisis.
	Nov. 23rd, 1896	99·2	97·0	2·2	5·0	
	Nov. 23rd, 1896	98·0	94·2	3·8	8·0	
4	Nov. 26th, 1896	100·5	95·0	5·5	4·0	Phthisis.
	Nov. 30th, 1896	99·0	91·4	7·6	8·0	
5	Nov. 26th, 1896	100·8	92·2	8·6	3·0	Phthisis.
	Nov. 28th, 1896	98·8	92·2	5·8	9·0	
	Dec. 1st, 1896	99·2	92·2	7·0	3·0	
6	June 10th, 1896	104·0	100·4	3·6	1·9	General Tuberculosis.
	June 11th, 1896	104·5	99·5	5·0	1·1	
7	Oct. 28th, 1896	101·2	97·6	3·6	3·3	General Tuberculosis.
8	Oct. 28th, 1896	101·4	97·8	3·6	4·0	General Tuberculosis.

observations on patients who were suffering from tubercle. Although the temperature fluctuates considerably they are always suffering from their disease, and therefore it is very difficult to obtain a normal standard. Consequently, I do not think the figures teach much about the process of this fever. You will notice, however, that the amount of sweat secreted is large even when the temperature is low, so that no doubt the increased secretion of sweat is often the cause of the fall of temperature. It is interesting to notice that, on the whole, the cases of general tuberculosis secreted less sweat than those of phthisis. In both forms of disease the surface temperature is, as a rule, low; this may be due to the large amount of sweat secreted. As the evaporation of this sweat must lead to a considerable loss of heat it is probable that in tubercle the production of heat is, as a rule, increased.

It appears from these observations that in some fevers the pyrexia is, in part at least, due to a diminished loss of heat, in others this is of but slight importance, and then the production of heat is very great; and this result goes to prove the truth of the suggestion I made earlier in these lectures—namely, that the processes which lead to a rise in temperature are different in different fevers. We have also incidentally learned much about the surface temperature and the secretion of sweat in the fevers we have considered.

Before leaving this subject I should like to draw your attention to some interesting figures obtained from a case of leucocythæmia. There was one white corpuscle to every ten red. The hæmoglobin was reduced to 17 per cent. of the normal, and the red corpuscles to 24 per cent. An observation gave the following result. The temperature of the mouth was 102·2°. The surface temperature at the umbilicus was 102·2°. The amount of sweat secreted in ten minutes was 1·2 milligramme. There are two points of interest here. First we have the high surface temperature with very little sweat; probably it would be impossible to have so high a surface temperature if there were much sweat, for the evaporation of the sweat would reduce it. Secondly, as the surface temperature was so high the loss by radiation and conduction must have been excessive, so the production must have been very high, and therefore even the small amount of hæmoglobin and the plasma carried between them enough oxygen for the metabolism necessary for this increased production. My best thanks are due to my house physicians, Dr. A. Salter and Mr. C. J. Harnett, for much help in these investigations. I have many observations on other fevers which I hope to publish subsequently.

Maragliano has published some observations which do not bear on the question of the production of heat, but they at any rate show that in some fevers the temperature depends very much upon the state of the cutaneous circulation—that is to say, upon the loss from radiation and conduction. He[4] applied the plethysmograph to the arm of fever patients after experiments on healthy men, and, in the fevers upon which he experimented, he found that as the temperature rose the volume of the arm diminished, and as the volume of the arm is chiefly dependent upon the flow of blood through the vessels of the skin, it follows that this was diminished; in other words, less heat was lost by radiation and conduction when the temperature rose. The table I show you gives the results obtained by observing a man suffering from malaria (see Table XIV. B).

TABLE XIV. B

Time.	Volume of arm.	Temp. (Deg. C.).
10.50	100	36·8
10.55	100	36·9
11.15	97	36·8
11.20	95	36·3
11.30	88	36·9
12.0	85	36·8
12.15	80	36·3
12.30	80	36·8
1.0	70	36·8
1.15	65	37·0
1.30	60	37·3 (slight shiver)
1.35	57	37·5
1.50	54	37·7
2.0	53	38·3
2.10	53	38·5
2.20	51	39·0
2.25	50	39·2
2.30	50	39·5
2.40	49	39·6

It will be observed that the contraction of the vessels preceded the rise of temperature. This is very strongly suggestive that it was the cause of it, and in the following table (I have only quoted the part of it which refers to the rise of the volume of the arm) (Table XIV. C) which gives results obtained from a young man suffering from ague, we also see that the vessels begin to dilate before the temperature begins to fall—a fact which also strongly suggests that the fall of temperature was due to the increased vascular cutaneous dilatation.

I should now like to refer to some observations which Dr. Archibald Garrod and I made upon each other with the object of finding out how healthy individuals varied their loss of heat under different circumstances. Table XV. shows the results of six pairs of observations made upon us, each pair being made at the same time. The first five pairs were all made after dinner in the evening. It will be

[4] Das Verhalten der Blutgefasse im Fieber und bei Antipyrese. Zeitschrift für Klinische Medicin, Band 14, 1888.

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TABLE XV.

Date.	Time.	Temperature of air.		Observations on Dr. Garrod.			Observations on self.			Remarks.
		Dry bulb thermometer.	Wet bulb thermometer.	Mouth temperature.	Temperature of surface of abdomen.	Milligrammes of sweat in ten minutes from abdomen.	Mouth temperature.	Temperature of surface of abdomen.	Milligrammes of sweat in ten minutes from abdomen.	
		Deg. F.	Deg. F.	Deg. F.	Deg. F.		Deg. F.	Deg. F.		
April 6th, 1896.	9.30 p.m.	66·5	60·0	97·8	91·3	2·8	98·2	92·7	2·8	1 hour after dinner.
April 7th, 1896.	9 p.m.	67·0	61·8	98·5	89·6	2·1	98·4	93·2	3·0	1½ hours after dinner.
April 11th, 1896.	9.15 p.m.	67·8	57·2	98·6	89·6	2·3	98·4	93·2	3·6	1½ hours after dinner.
April 13th, 1896.	9 p.m.	61·8	53·1	98·5	92·2	2·0	98·3	90·4	2·5	1½ hours after dinner.
April 14th, 1896.	10.15 p.m.	63·5	58·0	98.5	91·3	1·9	98·3	91·7	3·4	1½ hours after dinner.
April 15th, 1896.	9.30 a.m.	60·0	54·0	97·5	86·4	2·8	98·6	93·0	2·8	1½ hours after breakfast; bath before breakfast.

TABLE XVI.—EFFECT OF EXERCISE ON DR. GARROD.

Date.	Mouth temperature before exercise.	Mouth temperature after exercise.	Variation.	Abdominal surface temperature before exercise.	Abdominal surface temperature after exercise.	Variation.	Milligrammes of sweat in 10 minutes from abdomen before exercise.	Milligrammes of sweat in 10 minutes from abdomen after exercise.	Variation.	Form of exercise.
	Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.				
April 19th, 1896.	97·8	98·6	+ 0·8	87·0	92·7	+ 5·7	2·4	4·4	+ 2·0	3⅓ miles fast walking.
May 10th, 1896.	97·7	98·5	+ 0·8	89·6	92·2	+ 2·6	2 0	0·8	- 1·2	5 miles fast walking.
May 13th, 1896.	97·4	97·6	+ 0·2	87·0	94·5	+ 7·5	1·6	3·6	+ 2·0	7½ miles bicycle ride in 1 hr. in hot sun.
May 20th, 1896.	97·4	97·8	+ 0·4	88·8	94·5	+ 5·7	1·9	4·3	+ 2·4	6 miles bicycle ride in 50 minutes.
June 13th, 1896.	97·4	98·5	+ 1·1	89·0	92·75	+ 3·75	2·5	19·2	+16·7	8 miles bicycle ride in very hot sun.
Oct. 11th, 1896.	97·8	96·8	- 1·0	89·0	91·4	+ 2·4	1·8	1·2	- 0·6	17 miles bicycle ride in a very cold N.W. wind.

TABLE XVII.—EFFECT OF EXERCISE ON SELF.

Date.	Mouth temperature before exercise.	Mouth temperature after exercise.	Variation.	Abdominal surface temperature before exercise.	Abdominal surface temperature after exercise.	Variation.	Milligrammes of sweat in 10 minutes from abdomen before exercise.	Milligrammes of sweat in 10 minutes from abdomen after exercise.	Variation.	Form of exercise.
	Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.	Deg. F.				
April 19th, 1896.	98·2	98·4	+ 0·2	91·4	91·1	— 0·3	3·0	9·3	+ 6·3	3½ miles fast walking with Dr. G.
May 10th, 1896.	98·2	98.8	+ 0·6	94·1	93·6	— 0·5	3·7	6·8	+ 3·1	5 miles fast walk with Dr. G.
May 17th, 1896.	98·4	98·4	0	90·5	91·4	+ 0·9	2·4	21.9	+ 19·5	One hour's hard walk on a very hot day.
June 20th, 1896.	98·0	98·2	+ 0·2	93·5	92·6	- 0·9	3·3	16·0	+ 12·7	One hour's hard walk, but in a strong wind.
Oct. 11th, 1896.	98·2	97·4	- 0·8	89·8	89·5	- 0 3	0·5	1·4	+ 0·9	17 miles bicycle ride in a very cold N.E. wind with Dr. G.
Oct. 20th, 1896.	98·2	98·2	0	89·5	88·6	- 0·9	0·5	0·3	- 0·2	14 miles bicycle ride in a very dry cold wind.

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noticed that in these five pairs the temperature of the mouth of both of us was almost the same, but that four times out of the five my surface temperature was higher than his—on two occasions (the second and third) as much as 3·6° F. A possible explanation for the fact that on the fourth occasion my surface temperature was lower than his is that we made the observations in his house, which is about 200 yards from mine, and on the evening on which this observation was made I strolled to his house after dinner while there was a cold north-east wind blowing. On four out of the five occasions I sweated more than he did. The whole amount I perspired during the five observations was 15·3 milligrammes, but his

TABLE XIV. C.—YOUNG MAN WITH AGUE.

Time.	Volume of arm.	Temp. (Deg. C.).
11.0	60	39·9
11.10	62	40·3
11.30	60	40·6
11.45	68	40·6
12.0	76	40·6
12.15	74	40·6
12.30	78	40·5
12.45	82	40·3
1.0	82	40·4
1.15	90	40·2
1.30	96	40·0
2.0	108	40·0
2.30	120	40·0
3.0	126	39·8
3.30	133	39·7
4.0	138	39·5
4.30	143	39·4
5.0	149	38·9

total amount was only 11·1, so that I perspired 38 per cent. more than he did. As, therefore, my surface temperature was higher and the amount of sweat that I secreted was greater I lost heat from radiation, conduction, and evaporation faster than he, and therefore my production per kilogramme was greater than his. We consequently learn that even healthy individuals vary much in their production and loss of heat. The last pair of observations is of little value, as the temperature of our baths was not the same. I have given in the table the temperature of the air, taken with both a wet and dry bulb thermometer. The air was driest on April 11th, on which day I sweated most, but this was not the day that Dr. Garrod sweated most; and on the next driest day I sweated less than on any other, so as far as these few observations go they do not show any relation between the humidity of the air and the amount of sweat secreted.

It is well known that muscular contraction is accompanied by a rise of temperature; therefore, were it not that the loss of heat is increased during exercise the temperature would always rise. In fact, often the increased loss does not compensate for the increased production, and so the temperature does rise. Many references to this subject are given by Pembrey.[5] Jurgensen found that the work involved in sawing wood for six hours raises the temperature of a healthy man 1·2° C. above normal. Davy showed that walking for two or three hours raised the temperature of the urine 0·8° C. Clifford Allbutt found that Alpine climbing raised the temperature of the mouth half a degree, and Liebermeister and Hoffman found their axillary temperature raised by the exertion both of coming up and going down a mountain. Hobday, too, has taken the rectal temperature of omnibus horses, and he finds that it is raised about 2° C. by hard work. Dr. Garrod and I thought, therefore, it would be of interest to make a series of observations on the effect of exercise on each other (see Tables XVI. and XVII.). It will be seen that a bicycle ride of seventeen miles in a high, dry, cold wind reduced the internal temperature of Dr. Garrod by 1·0, and my own by 0·8 of a degree I do not think this can have been due to the inhalation of cold air cooling the mouth, for we did not take the temperature of the mouth until we had been in the house for twenty minutes after the ride, and it must have been due to the rapid loss of heat caused by our going quickly through the high, dry, cold wind. With the exception of this bicycle ride it will be seen that exercise always raised Dr. Garrod's internal temperature and that mine was either unaltered or raised, but that mine was, on the whole, much less affected than his. There are other interesting points of contrast between us. Dr. Garrod's surface temperature was always considerably raised by exercise, while mine was usually slightly diminished. On the other hand, he sweated but little in comparison with me, for his average increased amount of sweat was 3·5 millligrammes, while mine was 7·05. The difference is really greater than this, for I took two bicycle rides in a cold, dry wind to his one, and in a very dry wind the sweat evaporates fast, and consequently not much is secreted when the observation is taken. Apparently, therefore, we are different in our methods of accommodating the loss of heat to the increased production due to the muscular exercise; he chiefly increased his radiating and conducting power; I chiefly increased my loss by evaporation. We have therefore a demonstrated proof that different people accommodate differently. These tables, too, show strikingly what Table XV. has already shown—namely, that when at rest my surface temperature is always higher than Dr. Garrod's, and that I perspire more than he does; in other words, I lose heat faster and therefore must produce more calories per kilogramme. As in fever, so here the data are not sufficient for us to say how many calories of heat the muscular exercise causes to be produced—we can only say that it must at least have been more than a certain number, for instance, my weight without my clothes is 61 kilogrammes; supposing the effect of exercise was to raise my temperature 0·5° C., and the loss by radiation, conduction, and evaporation were all increased, then I, as soon as when taking exercise I had raised my temperature the half a degree Centigrade, must have produced at least more than an additional 30·5 kilogramme Centigrade calories, as my specific heat is nearly that of water.

[5] Op. cit.

ON SOME SUPPURATIONS OF THE URINARY APPARATUS.[1]

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I HAVE selected for consideration some points which seem to arise out of the pathology of certain suppurative processes as observed in the urinary organs in relation to the more modern treatment of surgical lesions and infections as generally practised. I shall first illustrate my observations by taking the most common, as well as the farthest reaching, cause of suppurations of the urinary organs, as occurring in the form of primary gonorrhœal infections in the male and the female, and as secondary developments in other parts of the genito-urinary system, as more frequently observed in the latter sex. The advances that have been made in connexion with the bacteriology of the urinary organs in reference to the kind and extent of these infections have already led to some useful applications in the way of treatment which I will briefly notice. The investigations of Guyon, Janet, Hallé, and others of the French school, more particularly as regards the life-history and cultivation of these micro-organisms, are of much interest and importance. It is, however, to the practical aspect of the subject that I shall confine my remarks. The first point that strikes one is that many of the cases spoken of as instances of chronic suppurative urethritis or gleet represent a far more extensive invasion than is generally supposed to be the case. In this lies, I have no doubt, an explanation of the difficulty that is not infrequently experienced in bringing cases of this kind to a successful and speedy termination. Many gleets are merely re-infections of the urethra from a bladder which serves the purpose of a medium for bacterial cultivation. So long as a gonorrhœa is confined to the area of the urethra as defined by that portion of the canal which lies in front of the compressor urethræ or "cut off" muscle,

[1] A paper read before the Medical Society of Brixton on June 10th, 1897.

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the task of successfully combating the infecting suppuration is not usually a difficult one. The disease is within limits which can be readily acted upon by various agencies, administered either locally or by internal medication, and its course is generally limited both in severity and duration. When, however, these boundaries are exceeded and the bladder becomes invaded it is not easy to prevent re-infection taking place as if from an extraneous source. Hence the disease may be almost indefinitely protracted. Nor is invasion of the bladder in this way uncommon or necessarily indicated by acute symptoms such as would unmistakeably draw attention to the occurrence. In most instances of this the prostate is the only part of the urinary apparatus that may show any active indication of contact with the septic products, the mucous membrane of the bladder, though harbouring them, being singularly insensitive to bacterial influences. That infection occurs in this way can be readily demonstrated. When the bladder has been thus involved the conditions of the urinary organs, particularly during the night, are extremely favourable for bacterial cultivations, a circumstance which may explain the constancy and degree of matutinal suppuration exuded by the urethra which is a prominent symptom in this class of cases. It is rare, I believe, for gonorrhœal organisms to make their way up the ureters and to invade the kidneys—a fact which is no doubt due to the guarded manner in which these ducts enter the bladder and the constancy of the downward flow of the urine. That renal infection and urethral inflammation sufficient to cause a pyelitis of the former and a contraction or stricture of the latter can occur has been demonstrated as possible. Some years ago I examined the body of a middle-aged man who died from acute single pyelitis rapidly following upon a first attack of gonorrhœa. The ureter of the kidney involved was extremely dilated, a circumstance which was believed to be due to the patient having been in the habit for some years previously of passing renal calculi The opposite kidney was much congested. Mr. W. G. Nash[2] has recorded a case of strictured ureter which was probably caused in this way. In the female the widespread effects of the gonorrhœal infection are generally recognised.

The suspicion, however, that the bladder may be infected with micro-organisms should be made a matter of proof, and this can generally be done. For this purpose care should be taken to obtain a specimen of the urine as it exists in the bladder, minus any contaminations it may pick up in its transit along the urethra. The first portion of the urine passed should be rejected as probably containing the flushings of the canal, the balance being separately collected as representing the constituents of what may be called vesical urine. When it is possible a catheter specimen should be obtained, in accordance with the directions of the Clinical Research Association, where there are reasons for believing that the bladder is infected. In this way gonococci may be detected in vesical urine in cases of gonorrhœa. The mere fact that the urine is shown to contain bacteria does not necessarily imply that the individual is capable of inoculating another with gonorrhœa. Where, however, the gonococcus is discovered in the urine or the discharges of the patient, as is not unfrequently the case, I do not think there can be any doubt as to the possibility of its communication to some one else. The bacteriological examination of these secretions may furnish important evidence in determining whether a person who has been comparatively recently infected should be allowed to marry. So long as these conveyers of infection can be detected in the urine or the discharges, so long may we expect that transference of the disease is liable to follow. In these cases of secondary infection of the bladder, caused by extension from the urethra, I have for some time placed much reliance upon the irrigation of the bladder and urethra with antiseptics, as described by Dr. Janet,[3] with some modifications. The object is attained in the following manner. The apparatus consists of an ordinary hydrostatic bladder tank, holding about one pint of water and fitted with a nozzle to which a No. 8 Jacques' rubber catheter can be attached. The tank is elevated about six feet from the ground, and is filled with warm water containing 30 minims of Condy's fluid to a pint of the latter. For lubricating the catheter I use carbolised vaseline. The patient having emptied his bladder spontaneously is placed in the recumbent position and the catheter is then passed. Before the nozzle of the irrigator is connected with the catheter as it lies in the bladder the fluid is allowed to run off for a few seconds so as to ensure that there is no free air in the tube of the apparatus. Then the connexion is made and the fluid is allowed to flow into the bladder by degrees until the patient is conscious of feeling distention. I generally use from twelve to sixteen ounces for this purpose, allowing it to enter the bladder in jets of about three or four ounces at a time. In this way the feeling of any sudden or extreme fulness is avoided, and the entire area of the mucous membrane of the bladder is unfolded and opened out, and thus comes in contact with the permanganate solution. When a sufficient degree of bladder distension is obtained the catheter is slowly removed, care being taken not to allow the fluid to escape. I then usually lightly palpate the bladder above the pubes with the hand before the patient stands up. This he should then do and proceed to empty his bladder of its contents by his natural efforts. Thus not only is the bladder washed out, but the whole urethra is flushed in a manner that is impossible by any other artificial method. As the patient is voiding the contents of his bladder it is well to direct him to suddenly interrupt the outflow once or twice by pressure with the finger on the penile urethra. In this way the lacunæ of the canal are also distended and flushed by the irrigating fluid. This completes the process, which may be repeated once or twice in the twenty-four hours, until the urine and the urethral mucus are found free from organisms. Most patients after proper instruction will be able to carry out all these details. On the conclusion of each irrigation the patient should rest for a time in the recumbent position. I have only referred to the permanganate of potash in great dilution as the flushing agent for use in these cases. Half a drachm of Condy's solution, as I have already mentioned, gradually increased to a drachm in a pint of water, has given me good results. In other instances the preparation known as "Sanitas," in the proportion of an ounce to a pint of water, has also answered equally well. Neutral sulphate of quinine (1 grain to the ounce) may also be used. More rarely I have employed nitrate of silver (one-sixteenth grain to the ounce) and perchloride of mercury. The last sometimes produces a good deal of pain, though only used in the proportion of 1 in 10,000. I have no doubt for aborting infections the perchloride is the most effective. When used for the latter purpose in the proportion of 1 in 10,000, and after the solution has been spontaneously voided from the bladder as in the act of micturition, the bladder may be filled with a strained solution of albumin—say, that yielded by one fresh egg—in a pint of tepid or nearly cold water. If this is done and the albuminoid solution voided in like manner from the bladder, any pain, smarting, or spasm that the perchloride solution produced at once ceases. Similarly, a weak solution of chloride of sodium, injected into the bladder after a solution of nitrate of silver has been used for this purpose, not only removes any irritation the latter may provoke, but coats over the inflamed mucous membrane with a thin layer of chloride of silver, which often affords much relief when cystitis is present. Probably there is no better bactericide than nitrate of silver in these cases, but it requires to be used with the precautions mentioned when good results may be obtained. In this class of cases where suppuration proceeds directly from infection the internal administration of bactericides may be advantageously combined with the local treatment just referred to. In rendering the urine sterile and destructive to the life of the gonococcus there are no more effectual agencies than some of those which are derived from the vegetable kingdom. I refer particularly to the volatile oils which are so largely eliminated by the kidneys of which I may instance sandal wood, copaiba, cubebs, and similar drugs. By these it is possible to so saturate the urine as to render the existence of certain forms of bacteria impossible. I shall, however, refer later to other methods of sterilising the urine which may also be utilised in the treatment of infecting forms of urethritis and cystitis.

I will now notice other varieties of urinary suppurations which may be best illustrated by certain cases of prostatic obstruction. Though the urine is in these instances usually purulent and charged with bacteria the latter are not infective in the same sense as those I have previously referred to in connexion with a specific form of urinary suppuration. On the other hand, it must be remembered that these micro-organisms are readily capable of transference from one individual to another through the medium of catheters and

[2] Brit. Med. Jour., April 8th, 1893.
[3] Journal des Maladies Génito-Urinaires, Paris, 1896.

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instruments of this kind, and thus they may be regarded as factors in the causation of extensive and far-reaching suppurations in these parts. The principles of treatment in this class of suppurations are the same as those I have already mentioned, subject to certain modifications which I will proceed to notice. Putting aside the consideration of the precise means which these cases often require for mechanically emptying the bladder and thus preventing decomposition of the urine taking place, the restoration of the secretion to its normal state will be mainly brought about by antiseptics in the manner indicated. The more or less atonic condition of the bladder in these obstructive cases seldom permits us to employ the process of auto-irrigation as previously described, and we must therefore for this purpose avail ourselves of one or other of the methods usually practised. In offering a few remarks on the toilette of the bladder I will do so in reference—(1) to the disposition of the parts requiring ablution; (2) to the mechanism employed; and (3) to the composition of the cleansing fluid. Most of us, I think, will admit that we are disposed to draw our ideas relative to the process of washing out the bladder from the natural state of the parts such as we see in anatomical plates. If, however, we select for our guidance the majority of pathological specimens illustrating the obstructive diseases of these parts we shall at once recognise the difficulties that beset us in our endeavour to wash out these, as we should do, for instance, in the case of a pint vessel. Take, for example, the hypertrophied bladders, with their various saccules, pouches, and dependencies, which are met with in connexion with advanced urethral stricture in younger adults and in persons of more advanced age who are the subjects of obstructive prostatic disease. In many of these the bladder is no more like the natural organ than the interior of a glass bowl resembles the section of a coarse bath sponge. The contents of the latter you could hardly ever hope to wash out effectually, though you may succeed in soaking them out. For washing out the bladder I almost invariably employ the hydrostatic tank which is now so generally used. It has, I believe, many advantages over syringes which I need not here stop to enumerate. When the bladder is much fasciculated it should be done in the recumbent position, with the object of opening out the mucous membrane as completely as possible without causing pain, the object being to reach irregularities on the surface which otherwise would escape contact with the lotion. When the bladder is much pouched it is a good plan, after filling it and before removing the fluid, to cause the patient to agitate his body from side to side so as to bring any dependencies there may be within reach of the antiseptic. In various ways such as these the process of washing out the bladder may be rendered more searching. For washing out in ordinary cases of bacterial urine I usually prefer boracic acid or the boroglyceride. Condy's fluid, sanitas, and iodoform may also be similarly employed. As I have already said, a solution of nitrate of silver in the proportion of $\frac{1}{16}$ of a grain to the ounce is often efficacious in rendering turbid urine clear after other things have failed. The sterilisation of the urine by internal medicines is an important adjunct in the treatment of the class of cases I am now referring to. It is quite unnecessary to draw attention to the many obvious ways in which the urine may thus be altered. The specific gravity, the reaction, and the composition of this secretion may to a large extent be artificially influenced, and in these directions the course of suppurative diseases of the urine passages may be importantly and favourably acted upon. And this brings me to speak of some of the means at our disposal for rendering the urine sterile so far as the most important factors in suppurative diseases are concerned. I have already referred to the sterilising influence that certain oils and essences, such as sandal wood and copaiba, are capable of exercising in this way. No less marked is the effect that boracic acid taken internally is capable of effecting in controlling bacterial life in the urine. Probably no better proof of this exists than in the results observed in connexion with operations on the urethra, such as the passing of catheters and in internal urethrotomy. The late Dr. Palmer, of Louisville, showed many years ago that by the use of boracic acid beforehand the development of urethral rigors and fever, under these circumstances, was rendered highly improbable, and this has since been amply proved to be the case. Similarly the use of quinine as a prophylactic against urine fever has been shown to be most efficacious; salol and other like drugs are also well recognised as urine sterilisers. Though boracic acid in doses of from ten to fifteen grains three or four times in the day is probably one of the most reliable sterilisers, it so often disagrees and causes dyspepsia as to interfere greatly with its use for the purpose. Some years ago my attention was called to a preparation called boro-citrate of magnesia, which was described by Dr. Koehler, of Kosten,[4] in Germany, as a solvent for uric acid calculi, and gravel. In the communication referred to it is stated that it is prepared by dissolving boracite, a natural borate of magnesia which is found in Stassfurt, in citric acid. Whether it is actually a solvent for uric acid I am not prepared to say. Whilst testing it for this purpose I found that it frequently had a remarkable effect in sterilising and clearing up purulent urine and in favouring the expulsion of calculi and gravel by its flushing effects on the urine passages. For the latter purpose I have used it for the last ten years in conjunction with other means for preventing urine decomposition with considerable effect. I am in the habit of prescribing it in teaspoonful doses in half a tumbler or so of either warm or cold water two or three times in the day. It is extremely palatable to take and readily dissolves. We have other means for sterilising the urine by the mouth which I will mention, as one method or one drug is not universally applicable. There is a combination of the salicylate of soda with the benzoate of soda which possesses this power in a marked degree. I have frequently found urine which has been rendered opaque by the presence of pus and was swarming with bacteria rendered clear in the course of a few days after the use of this preparation. I usually prescribe fifteen grains of both of these salts to be taken together three times a day in an ounce of chloroform water. The hyposulphite of soda in half-drachm doses has also in some instances effected the same object. The principle of urine sterilisation may, however, be extended to other purulent or bacterial conditions of the urinary apparatus. I refer more particularly to some of those chronic suppurations resulting from the formation of abscesses in connexion with the prostate and prostatic urethra, where the pus was originally discharged, sometimes against gravity, into the latter canal. These are often most difficult to heal by reason of the absence of a free and dependent opening. Yet, on the other hand, the opening of the perineum and the incising of the prostate to secure free drainage of the discharge is a proceeding that cannot always be undertaken without some degree of risk in elderly subjects. The thorough cleansing of these deep parts by the use of antiseptics in the form of auto-irrigation, as described in the earlier part of this paper, will be found efficacious in many of these cases of chronic suppuration. In some instances of prostatic suppuration it is almost impossible to flush a sinus connected with this part so long as a catheter of any kind is retained in the bladder. On the other hand, this object may be often readily effected by the spontaneous contraction of a bladder more or less distended with fluid. In the sinuses, for instance, arising out of tuberculous prostatitis this method usually proves very effectual. Again, I have resorted to this way of flushing urinary fistulæ with some antiseptic fluid when the primary cause of them has been removed, as by gradual dilatation or after internal urethrotomy. Tortuous routes through the perineum may, by washing out through the medium of the bladder two or three times if necessary in the twenty-four hours, be thus healed. A few months ago I saw a middle-aged man with a tight stricture in the deep urethra which only admitted a No. 4 bougie. In addition there were two chronic perineal fistulæ—one opening in the left buttock and the other by the side of the scrotum, through which almost the whole of the urine was passed at the time of micturition. The patient's condition was an extremely distressing one, as it was impossible for him to pass urine with any degree of comfort except upon a water closet. I divided the stricture from within by Maisonneuve's urethrotome. A catheter was then tied in the bladder for forty-eight hours, and on its removal a No. 12 silk catheter à boule was introduced morning and evening. After washing out by means of this in the ordinary way the bladder was finally filled with about a pint of warm boracic lotion, which the patient was required to void naturally in the standing position on the catheter being withdrawn. The fluid escaped as in the ordinary act of micturition with this patient—namely, partly by the urethra and partly through the false routes. The proportion of the fluid coming through the

[4] Berliner Klinische Wochenschrift, Nov. 3rd, 1879.

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urethra gradually increased, whilst that passing through the two fistulæ grew less daily, and in the course of ten days entirely ceased. This method of procedure I have found from repeated trials to importantly contribute in promoting the sound healing of these sinuses and the comfort and cleanliness of the patient.

I have thus endeavoured to bring under notice, as briefly as possible, some ways of influencing urine in connexion with certain specific and non-specific suppurations of the urinary organs, from the kidneys downwards.

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ON SUDDEN OR UNEXPECTED DEATH FROM NATURAL CAUSES.

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SUDDEN death from natural causes, especially when it occurs under suspicious circumstances, is not infrequently the subject of medico-legal investigation. It is, therefore, necessary that medical practitioners should be familiar with the conditions under which sudden death is usually encountered, since the investigation of cases of this kind—often intrinsically difficult—may, in the absence of some previous knowledge of the subject, prove extremely perplexing.

Cases of sudden death from natural causes may be classified under three heads: (1) deaths which are due to the presence of a disease which is universally recognised as one liable to suddenly terminate fatally—for the most part such cases yield satisfactory post-mortem evidence as to the cause of death; (2) deaths due to the presence of a disease which, when fatal, does not usually end life abruptly, and which, consequently, is not generally regarded as a cause of sudden death—in such cases post-mortem examination frequently yields inferential rather than conclusive evidence as to the cause of death; and (3) deaths which do not result from any ascertainable disease, and as to which consequently no evidence whatever is afforded by post-mortem examination.

1. Roughly speaking, about one-half of the total number of cases of sudden death from natural causes in adults is, more or less, due to heart disease, which has existed for some time, and in which no furthur change is in progress at the time of death—such as valvular disease, angina, fatty heart, and sclerosis of the cardiac muscle from chronic myocarditis. In many cases concurrent lung or kidney disease complicates the statistics, such cases frequently being tabulated as deaths solely due to heart disease. Spontaneous rupture of the heart, mostly in men, may exceptionally occur; the left ventricle, often towards the front, is almost invariably the seat of the rupture. It is to be remembered that in traumatic rupture of the heart the right side, usually the auricle, suffers more frequently than the left in the proportion of about as 70 is to 54. Apoplexy and other cognate brain lesions rank second as natural causes of sudden death. It is to be noted that miliary aneurysms of the vessels of the brain, although most common in persons past middle life, occasionally occur in young people, even in children, and by bursting cause death from apoplexy. Chronic alcoholism, a potent factor among the causes of sudden death, is frequently associated with rapidly terminating heart and brain disease. Asphyxia, a not unfrequent cause, may be due to œdema of the glottis, membranous deposit in the trachea, pressure of a neoplasm on the trachea, spasm of the vocal cords, pulmonary embolism, air embolism rupture of a vessel or of an aneurysm into the air-passages, asthma, whooping-cough, pneumo- and hæmo-thorax, pleuritic effusion, and epilepsy. The rupture of a gastric or of an intestinal ulcer, of an aneurysm, of a varicose vein, of the surroundings of an ectopic gestation, the formation of a peri-uterine hæmatocele, may severally prove quickly fatal. Nephritis (uræmia and apoplexy), diabetes, exophthalmic goitre, and Addison's disease may also terminate with unexpected rapidity. Hæmorrhage into the pancreas occasionally causes sudden death, apparently from the impression produced on the contiguous nerve centres. It is most common in males over forty years of age, who may up to the occurrence of the hæmorrhage to all appearance be in perfect health. Obesity, the habitual use of alcohol, and the presence of heart disease appear in many of the cases to be predisposing causes. Koetschau,[1] however, observed hæmorrhage into the pancreas in a woman—an alcoholic—in her twenty-fourth year. Occasionally it occurs in spare people who are free from obvious disease and who are abstemious as regards alcohol. The sufferer may die within half an hour after the occurrence of the hæmorrhage or he may survive for twenty-four or even thirty-six hours. Draper[2] records five cases between the ages of twenty-six and fifty-five years, of which three were men and two women. Fitz[3] tabulated sixteen cases, of which eleven were males between thirty-one and seventy years of age, and five were females between twenty-six and forty-seven years. Sudden death has in several instances followed spontaneous rupture of an enlarged spleen, the result of tropical malarial influences, the individual immediately before rupture being to all intents and purposes quite well. Pellereaux[4] gives the history of thirteen cases of rupture of the enlarged spleen; in five the rupture was spontaneous, and in the remainder it was due to apparently inadequate causes, such as a simple fall in the street. It is to be borne in mind that when the spleen is thus enlarged a mere pat with the palm of the hand may determine rupture and consequent speedy death, which, in the absence of a knowledge of the experience of others, might readily be assumed to be the result of criminal violence.

It is to be remembered that some of the above-named diseases may exist without giving rise to any symptoms until the fatal moment arrives; this applies with special force to diseases which have a prolonged course, during which, as a rule, symptoms indicative of the disease declare themselves. Such a disease is gastric ulcer. I have seen more than one case in which, until the fatal rupture occurred, absolutely no symptoms were experienced, not even such as might have been attributed to simple dyspepsia; in one such instance a second ulcer was present in the walls of the stomach in addition to the one that ruptured and caused death, and yet until perforation occurred the patient never felt in the stomach any abnormal sensation whatever. As regards some of these diseases, such as spasm of the vocal cords, whooping-cough, and asthma, the most careful post-mortem examination may fail to determine the cause of death. Epilepsy may or may not leave characteristic appearances, such as recent injury to the tongue, ecchymoses of the conjunctiva, the face, the neck, and occasionally of the trunk, together with froth (possibly blood-stained) on the lips. Lesser[5] examined seventeen cases of death from epilepsy and found that the tongue had been bitten in eight, and that in six conjunctival or subcutaneous hæmorrhages on the face, breast, or trunk were present.

2. *Certain diseases which, when fatal, do not usually end suddenly may exceptionally do so.*—Such are abscesses and tumours of the brain, meningitis, diphtheria, tracheitis, enlarged thyroid, pulmonary apoplexy, pneumonia, phthisis, pneumo-thorax, pleurisy, ulcerative endocarditis, old adherent pericardium, pericarditis, volvulus, and other causes of acute intestinal obstruction, peritonitis, gall-stone colic, rupture of an echinococcus in the liver or elsewhere, Bright's disease, influenza, gout, and acute rheumatism. When fully developed several of these diseases are usually inhibitive of locomotion, but they occasionally occur in a latent or an ambulatory form and terminate suddenly without their presence being even suspected; it is no uncommon event for a man suffering from such a disease to walk unaided into the out-patient department of a hospital and even to die suddenly ere treatment can be adopted. Meningitis may be latent and may lead to sudden death; even pus may be present without giving rise to any symptoms until immediately before death. Ollivier[6] records the case of a man who was taken ill while at work. He went to bed and died in four hours, and at the necropsy the cause of death was found to be purulent meningitis. Death may suddenly attack a person (especially in childhood) who has middle-ear disease, death

[1] Centralblatt für allgemeine Pathologie, 1893.
[2] Boston Medical and Surgical Journal, 1886.
[3] Medical News, 1889.
[4] Annales d'Hygiène, 1882.
[5] Vierteljahrsschrift für gerichtliche Medicin, 1888.
[6] Archives Générales de Médecine, 1838.

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being due to septic meningitis or to the formation of an abscess in the sphenoidal lobe or in the cerebellum. Slow-growing cerebral or cerebellar tumours not unfrequently cause unexpected and rapid death. Rapidly developing œdema of the larynx may exceptionally cause sudden death in adults as well as in children. A man, aged twenty-eight years, who was under treatment for an ordinary sore-throat, one day suddenly grasped his throat with his hands, ran round the room, and expired in two or three minutes. At the necropsy œdema of the larynx, along with signs of death from asphyxia, were found. The advance of an acute disease towards a fatal issue may be extremely rapid. Strassmann[7] examined the bodies of two young women who went to bed not feeling quite well, although they had done their work during the day; the following morning they were found dead in bed, and the necropsy showed that death was due to diphtheritic deposit which had travelled rapidly down the bronchi. Diphtheria may cause unexpected death during the stage of convalescence. Ransom[8] saw a girl, aged fourteen years, who was rapidly recovering from the effects of diphtheria when she died quite suddenly on the eighteenth day. It is extremely important to remember that diphtheritic paralysis, which may be suddenly fatal from heart failure, is by no means uncommon after *a latent attack of diphtheria that has escaped notice;* this holds good when the disease attacks other parts than the fauces. Guthrie[9] saw a girl, aged two years, with diphtheritic vulvitis, who died very suddenly from cardiac failure. In addition to the neuritis, which is liable to affect the innervation of the heart, a clot may form in the right ventricle after an attack of diphtheria and may cause sudden death. When an enlarged thyroid causes sudden death the gland is usually very considerably hypertrophied; sometimes hæmorrhage takes place into a cyst and determines speedy suffocation from increase of pressure which was previously all but sufficient to provoke fatal dyspnœa.

In addition to ordinary pathological conditions which may lead to rapid occlusion of the air-passages, and consequently to sudden death, one or two exceptional causes may be mentioned. Vedi[10] records the case of a man in the first stage of general paralysis who was getting out of bed, when he cried out that he felt ill. He at once became unconscious and died immediately. At the necropsy a round worm (ascaris lumbricoides) six inches long was found in the left bronchus, the characteristic signs of death from asphyxia being present. In a few instances the unsuspected presence of a laryngeal polypus has caused sudden asphyxial death. In young children and in profoundly intoxicated individuals regurgitation of the contents of the stomach into the mouth, with subsequent aspiration of a portion of them into the air passages, is a not unfrequent cause of sudden death; this accident, however, may happen to adults who are not intoxicated. Coutagne[11] relates the case of a woman, aged forty-four years, who whilst walking in the street felt unwell and went into a druggist's shop. She vomited on entering, became cyanosed, and straightway died. A necropsy revealed an enormously dilated stomach containing more than two quarts of semi-fluid food, some of which had found its way into the mouth and nasal passages; the bronchi were completely obstructed with it. Corvisart one evening paid a surprise visit to his clinic. The concierge, who had been dining too well, felt that he was caught, and the emotion caused him to feel sick; he made a violent effort to avoid vomiting and fell down dead. At the necropsy the trachea and bronchi were found full of partially digested food. It is noteworthy that in some cases of death thus caused, especially when occurring in elderly people, death takes place with exceeding rapidity and appears to be due to syncope, the post-mortem signs of death from asphyxia being entirely absent. Pleurisy and old pleuritic adhesions may cause sudden death; pleurisy with effusion may exist (without materially interfering with the breathing) in a man who is going about as usual, who, after slight exertion or trifling violence, or even in the absence of both, may die instantaneously. Brouardel[12] mentions the case of a police officer who, on receiving a blow on the chest from the fist of a man whom he was arresting, fell down dead. At the necropsy the right pleural cavity was found full of fluid, and no other indications as to the cause of death were present. In children the existence of pleuritic effusion, apart from violence in any form, is liable to cause sudden death; in adults also, especially on change of posture—as on getting up after some days' confinement to bed—there is in pleuritic effusion great risk of immediate death; the passage of an aspirating-needle into the pleural cavity has occasioned death either immediately or after an interval of several hours. Latent pneumonia is not unfrequently suddenly fatal in old people, the individual apparently being in his usual health up to the time of his death; in such cases nothing is discovered on post-mortem examination beyond the anatomical changes usually produced by the disease when it has run its ordinary course. Latent pneumonia may also be suddenly fatal in the young. Ollivier[13] records the case of a young woman, aged twenty-two years, who did not feel well, but she dressed herself to go out, and shortly after was found dead; the necropsy revealed double pleuro-pneumonia as the cause of death. Death from latent pneumonia may be exceedingly sudden. Strassmann[14] records the case of a man, aged fifty years, who called at a registry office in order to obtain employment; whilst the clerk was referring to the register the applicant fell down dead, and at the necropsy the whole of the upper lobe of the right lung was found to be in a state of grey hepatisation. Associated with intoxication pneumonia may cause sudden death in the young as well as in the aged. A man, aged twenty-four years, was locked up for being drunk and incapable; the next morning he was found dead in the cell, and the necropsy revealed complete consolidation of the left lung with commencing mischief at the base of the right.

In some diseases which occasionally terminate suddenly the issue may be determined by an overloaded stomach. Sturges and Wilkins[15] record the case of a boy, aged seven years, apparently in good health, who ate a hearty dinner and immediately after played cricket for an hour and a half. He then ran to school, suddenly fell down insensible, and died forthwith. At the necropsy signs of recent pericarditis, with soft adhesions, were discovered, all the organs except the heart being healthy. Under the strain of violent exercise the overloaded stomach impeded the diseased heart to such an extent as to suddenly arrest its action. In a large number of the cases in which death suddenly occurs the victim was undergoing some exceptional form of physical exertion at the time, such as playing a fatiguing game, hastening to catch a train, mounting stairs, defecating, or was engaged in sexual intercourse. Sudden death from acute intestinal obstruction is well illustrated by a case recorded by Rake.[16] A strong man, aged fifty years, when gardening, was suddenly attacked with vomiting and pain in the abdomen. He died in two hours, and at the necropsy a volvulus of the transverse colon was found. Possibly death was due to disturbance of the solar plexus. Rupture of the gall-bladder is an unusual cause of sudden death, but instances of it are on record. In one such a man suddenly experienced a severe pain in the abdomen, he became collapsed and quickly died; on post-mortem examination the gall-bladder was found to be ruptured, and from it a number of gall-stones had escaped into the peritoneal cavity. Bright's disease, both acute and chronic, occasionally causes sudden death without any indications of uræmia or of apoplexy. Debove and Capitan[17] relate two cases of interstitial nephritis, the patients enjoying good health up to the moment of death, which occurred suddenly from syncope, and which was not preceded by any morbid phenomena; no trace of valvular lesion was found after death in either case, but there was some sclerosis of the heart muscle. In advanced contracting kidney with concurrent hypertrophy of the left ventricle sudden death may take place without any post-mortem indications as to the ultimate cause of death either in the brain or elsewhere. It is to be borne in mind that patients with gouty kidney and high arterial tension may die suddenly from rupture of a vessel elsewhere than in the head. I have seen two such cases in which a cardiac vessel ruptured, death occurring very rapidly from accumulation of blood in the pericardium.

Rapid death from the rupture of a typhoid ulcer is, unfortunately, a too common occurrence in the case of patients under treatment for that disease; occasionally it happens in a case of the ambulatory type. A strong man

[7] Lehrbuch der gerichtlichen Medicin, 1895.
[8] Brit. Med. Jour., Dec. 24th, 1887.
[9] THE LANCET, Oct., 1894.
[10] Gazette des Hôpitaux, 1870.
[11] Annales d'Hygiène, 1893.
[12] La Mort et la Mort Subite, 1895.
[13] Cretin, Thèse, 1845.
[14] Loc cit.
[15] THE LANCET, July 25th, 1885.
[16] THE LANCET, April 20th, 1889.
[17] La France Médicale, 1880.

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who was returning home from his day's work in the evening suddenly died; the cause of death was found to be rupture of an enteric ulcer of the ileum. Sudden death from enterica, however, is not always caused by rupture of an intestinal ulcer; in exceptional cases death appears to be due to rapid or instantaneous heart failure, occurring most frequently about the beginning of the third week. Dieulafoy[18] found that the fatal period most frequently occurs from the seventeenth to the twenty-fourth day of the disease, the largest number of deaths occurring on the nineteenth, twentieth, and twenty-first days, and that sudden death is not unfrequent in mild cases; he instances the case of a young woman, aged eighteen years, who, on the seventeenth day of the fever, whilst conversing with a nurse, was seized with convulsive movements of the face, became pallid, and died immediately. In such cases microscopic examination of the heart muscle does not show that it has undergone fatty or other changes. Marvaud[19] describes two forms of unexpected death from typhoid fever—one from syncope, in which death is instantaneous; the other from embolism of the pulmonary artery, in which, though sudden, death is not instantaneous. He records several instances, the earliest occurring on the thirteenth day of the fever, and the latest, which is distinctly exceptional, on the thirty-ninth day. Statistics collected by Dewèvre[20] indicate that sudden death from typhoid fever reaches its maximum between the ages of twenty and twenty-five years, and that it is commoner in men than in women. In children sudden death may occur in the early stage of typhoid fever, just when the intestinal follicles are beginning to swell.

Instances have occurred of sudden death due to heart-failure following an attack of influenza; post mortem, the heart has been found soft and flabby. Occasionally sudden death occurs in elderly people afflicted with gout, and also in those who are excessively corpulent, in some instances without affording any post-mortem evidence as to the actual cause of death. Kisch[21] records nineteen cases of sudden death in obese persons—twelve from acute œdema of the lungs, six from cerebral hæmorrhage, and one from rupture of the heart. Seven were under fifty years of age, and eleven were above fifty. Fifteen were men and four were women.

Acute rheumatism may end in unexpected and sudden death. Priestley[22] states that a woman, aged twenty-seven years, whilst in the early stage of rheumatic fever of a mild type without heart complication, suddenly lost the pain in the joints, went to sleep, and soon after was found comatose and she died. Bristowe[23] relates two cases of acute rheumatism in young women which ended suddenly in fatal syncope. Allbutt[24] records a case in which rapid and unexpected death during an attack of acute rheumatism was due to œdema of the glottis.

3. In most of the cases in which death suddenly takes place without any cause being revealed on post-mortem examination, it is determined by some external causal influence either acting directly on the nervous system or mediately on it by means of a very slight and apparently totally inadequate physical impact; therefore, in relation to this group, the term "death from natural causes" includes death arising from external and possibly abnormal influences, which, however, cannot be regarded as being essentially lethal. Several instances are on record in which death suddenly occurred to an individual who was in a state of extreme mental excitement without the intervention of any physical cause whatever. Templeman[25] examined the body of a man who, ten minutes after a violent scene with a drunken son, no blows being struck on either side, was found dead. At the necropsy the cardiac valves and the coronary arteries were found to be free from disease, and the muscular substance of the heart was free from fatty changes, being to all appearances perfectly healthy; no lesion was found that would account for death. Maschka[26] relates that two women were in the midst of a furious verbal encounter when one of them seized a broom and made as though she would strike the other; without any blow being delivered the woman who was menaced fell down dead. No abnormal condition was found at the necropsy. Marchal[27] received a military prisoner under his care in the hospital; the man had a profound dread of being sent back to prison, and as the medical officer was reading the memorandum of his previous behaviour the prisoner was observed to be greatly perturbed and suddenly fell back dead. At the necropsy no lesion except engorgement of the cerebral meninges was found to account for death. The inferential diagnosis of "heart disease," which is so satisfying to the public and also to many medical practitioners would have been accepted, in the absence of post-mortem examination, as being entirely fitted to these cases; a distinction is to be drawn, however, between death due to disease of the heart and death due to profound perturbation of the nerve centres causing inhibition of a heart in which there is no trace of disease. When searching after death for evidence of disease in a suspected heart it is to be noted that absence of atheroma or of narrowing of the mouths of the coronary arteries is not sufficient to exclude angina as a cause of death; it is necessary to lay open the entire length of the coronary arteries, since the seat of obstruction may be some distance down the artery, the orifice itself being quite patent. In the three cases just narrated there was absolutely no physical injury or impact even of the most trivial kind; death appears to have been due to cardiac inhibition caused by intense mental emotion. Such cases serve to explain those in which death follows a slight injury or physical impact that in itself is a totally inadequate cause of death, but which, when coincident with a climax of expectancy occurring during a period of acute apprehension or of extreme terror, may suddenly and completely inhibit, or in some instances profoundly depress, the heart's action; in the latter case death may not take place until several hours after the occurrence of the causal event, as in the following instance related by Beaunis.[28] A man whilst shooting wild beasts was pounced on by a panther. Some Arabs who were present immediately shot the animal, and on examining the victim found that the panther's claws had only inflicted on the shoulder a few pricks so slight that they scarcely bled; the man remained in a state of profound terror and died on the following day. At the necropsy no lesion was found to account for death; all the organs were healthy and the claw-marks were quite superficial. Another and still more remarkable case which occurred in India is recorded by Francis.[29] A man was roused out of sleep by feeling something creeping over his naked legs. Having an innate and intense dread of reptiles, and imagining that it was a cobra, he became collapsed and died in six hours, although before death took place it was discovered that a harmless lizard had been the cause of his fright; the patient, however, was too profoundly collapsed to recover. The immediately lethal effect literally of a mere touch is well illustrated by an instance which occurred to Dupuytren, who, when about to perform lithotomy on a boy, demonstrated to his students the line of the projected incision by drawing his finger-nail along the skin of the perineum; the boy immediately fell back dead. Nussbaum[30] states that as a surgeon examined with a sound the bladder of a robust peasant woman she closed her eyes and died forthwith. Cazenave[31] relates that a man, aged sixty years, was about to undergo lithotomy, and when the surgeon introduced the sound into the urethra the patient suddenly turned pale, lost consciousness, and died in ten minutes. A woman desired to be placed under the influence of chloroform before having a tooth drawn. The dentist not having any chloroform, and seeing that the tooth was quite loose, thought he might deceive her by holding a cupping-lamp to her nose; he then proceeded to open her mouth, when he found that she was dead. Bonvalot[32] relates the case of a young woman on whom an attempt at procuring criminal abortion was about to be made; the cannula of a ball-syringe was introduced into the os uteri, when the patient fell back before any of the fluid had been injected, and died in a few minutes. Many cases of sudden death during the actual administration of intra-uterine injections have been recorded. On more than one occasion death has suddenly occurred at the moment when a simple digital vaginal examination was being made. Brouardel[33] states that when he was a hospital "interne" one of the physicians digitally examined [an

[18] Gazette des Hôpitaux, 1877.
[19] Archives Générales de Médecine, 1880.
[20] Ibid.
[21] Berliner klinische Wochenschrift, 1886.
[22] THE LANCET, Oct. 1st, 1870.
[23] THE LANCET, Jan. 17th, 1880.
[24] Medical Times, 1868.
[25] Edinburgh Medical Journal, 1893.
[26] Handbuch der gerichtlichen Medicin, 1881.
[27] Bonin: De la Mort Subite, 1861.
[28] Vincent: Des Causes de la Mort Prompte, 1878.
[29] Medical Press and Circular, 1883.
[30] Ueber Unglücke in der Chirurgie.
[31] Gazette des Hôpitaux, 1866.
[32] Annales d'Hygiène, 1892.
[33] Loc. cit.

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in-patient; she died immediately before anything could be done to help her. Brouardel further states that he knows of two other cases in which women died suddenly in the consulting rooms of medical men whilst an ordinary vaginal examination with the finger was being made. Sudden death, apparently from cardiac inhibition, has been observed to occur when certain parts of the body are abruptly handled or compressed; these are the nasal passages, the larynx, the epigastrium, the urethra, the bladder, and the genital organs.

Young children are especially liable to sudden death in a number of ways which do not obtain with adults. Infants die very readily from suffocation. An infant has been innocently suffocated whilst being held by the mother to her breast; the child's mouth and nostrils were so closely covered by the yielding mamma as to cause fatal asphyxia without anything amiss being perceived until it was too late. Convulsions due to reflex irritation are a common cause of infantile death. An infant who "dies in a fit" thus produced dies from asphyxia occasioned either by tonic spasm of the respiratory muscles or of the glottis, or of both. The post-mortem indications of death from asphyxia thus caused cannot be distinguished from those found after death due to criminal or accidental suffocation (overlaying). The sub-pleural ecchymoses held to be indicative of death from suffocation are due to increased arterial blood pressure and are likely to be produced by convulsions. They may, however, be absent after death from convulsions. Spasm of the glottis, as in laryngismus stridulus or in whooping-cough, is another way in which infants are subjected to sudden asphyxial death. A like observation applies to œdema of the glottis. Hyperplasia of the thymus gland is occasionally observed post mortem and has been regarded as a cause of sudden death in infants. Whether death is due to compression of the trachea or bronchi by the enlarged thymus or to laryngeal spasm is a disputed point. As previously stated, young children are easily suffocated by food that has been taken into the mouth or regurgitated from the stomach finding its way into the air passages. Scarlet fever exceptionally ends fatally in eight or ten hours; convulsions, coma, rapid respiration, vomiting, and sometimes hyperpyrexia—110° to 115° F.—are among the symptoms. Finally, sudden death may occur to young children without any ascertainable cause. Hale White[31] mentions three cases in which death suddenly took place in children who were in hospital. In none of them was any coarse lesion found after death.

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THE CARE AND MANAGEMENT OF EPILEPTICS IN COLONIES.

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APART from the actual necessity of lessening the severity or diminishing the frequency of epileptic fits by the administration of drugs, other important measures in the general treatment of epilepsy ought to receive attention, and more especially the care, education, and management of sane epileptics.

I.—CARE AND EDUCATION OF EPILEPTIC CHILDREN.

In the first place the care and education of epileptic children will be considered. For this purpose it is essential to separate those which are sane from the imbecile or idiotic. For the management of these provision has already been made throughout the country in the idiot asylums. The experience of the authorities at such institutions is that much benefit may accrue to epileptic children of this kind where, under careful supervision, regular habits as to food, exercise, and judicious instruction and employment, they improve sometimes to a remarkable extent. Such cases amongst the wealthier classes of society may receive similar attention and instruction in private institutions and homes. But it is more particularly the care and education of the sane epileptic children to which attention is at present being directed. It is difficult to obtain any reliable statistics upon the actual number of such cases, but a report of the Charity Organisation Society throws some light upon this subject. Of 372 children exempted from attendance at the elementary schools in London in 1891, 61 were stated to be epileptic.[1] Of 498,300 children under instruction in the London School Board in 1895, 259 were epileptic, and 226 known epileptics were not under instruction, or a total of 485 sane epileptic children known to the London School Board authorities in that year.[2] These figures probably understate the actual number of sane epileptic children in the metropolis. Reckoning the number of epileptics to the total population as 1·5 per 1000 (vide later) this would only give 0·97 epileptics per 1000 of the general school population, a figure which is too low. The reason of this is well known, for the causes are many and obvious why epileptic children are kept at home. Mainly as a result of this the education of the epileptic child is disregarded; as he grows older, owing to inability to obtain a livelihood, he becomes a burden to his relatives, added to which is the natural tendency towards blunting of the intellect which epilepsy produces, and he eventually drifts either into an asylum or the workhouse.

It is therefore an important point to inquire whether any provision can be made for the education and instruction of these cases. And, firstly, Is it right to educate epileptics along with other children? Most medical authorities are agreed that no harm results from mixing together at school the epileptic and non-epileptic. The fact exists, however, and it has an important bearing upon this question from the schoolmaster's point of view, that the presence of an epileptic has a disturbing influence upon his schoolfellows, as well as from the fact that by the nature of the disease the epileptic child requires special supervision. Although many epileptic children are bright and ready to acquire knowledge, the minds of a large number have, even at an early age, suffered from the blunting influence of their disease. Under such circumstances it is, on the whole, better that they should be educated apart from healthy children. It will be found, however, impossible to carry this out in all instances, partly because in some cases epilepsy exists unrecognised, and partly because the existence of this disease is wilfully hidden by the parents. It is, however, the education of obviously epileptic children that requires special attention. Many are of opinion that the epileptic child is placed at as great a disadvantage, educationally, as is the blind or the deaf-mute. So far, however, the legislature has made no recognition of this, nor has private generosity supplemented the deficiency. It would seem, however, as if the whole question of education in this and closely-related conditions is soon to receive attention, as a Departmental committee has recently been appointed to inquire into, and report upon, the education of feeble-minded children, not under the charge of guardians and not idiots or imbeciles, and of epileptic children. How this is likely to be carried out will no doubt form the subject of a report; but from the medical aspect the following suggestions may be made: (*a*) That where possible, and when there is no blunting of the intellect, or when the fits only occur at night or at long intervals, epileptics may be educated along with healthy children; (*b*) if there is no marked impairment of intellect, but the fits are frequent or severe, or special supervision is necessary, or from other like reasons, provision should be made for the education of such children separately from others; and (*c*) that if along with epilepsy there is feeble-mindedness, but without actual idiocy or imbecility, provision for the suitable education of such cases should be made, and preferably in colonies, such as will be presently described.[3]

II.—THE SANE ADULT EPILEPTIC.

Having drawn attention briefly to the education of epileptic children it is now intended to discuss more fully the management of the sane adult epileptic. Concerning the general prevalency of epilepsy in its relation to the total population there is difficulty, from many causes, in arriving at satisfactory statistical results. First, no census for this purpose has been taken in the United Kingdom, while those taken abroad are only partial; and, secondly, epilepsy

[31] THE LANCET, Feb. 25th, 1882.

[1] Report of the Charity Organisation Society, the Epileptic and Crippled, 1893.

[2] Communicated by the secretary of the National Society for the Employment of Epileptics.

[3] For a series of suggestions on this matter the reader is referred to the Report of the Charity Organisation Society upon the Epileptic and Crippled, 1893.

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is so closely related in the early years of life to idiocy and imbecility, and in the later years to insanity, that it is almost impossible to satisfactorily separate them for statistical purposes. But a few facts may be given upon the estimated number of adult epileptics. In Germany the estimate is given as 1 per 1000,[4] in New York State as 2 per 1000 (Peterson),[5] and in the Canton Aargau in Switzerland at 2·5 per 1000 (Bircher) of total population.[6] In Italy, of 10,000 young men who presented themselves for military duties 11·5 were rejected owing to epilepsy (Morselli),[7] giving a proportion of just over 1 per 1000. It would not, therefore, be placing the number too high if it is stated that the probable proportion of adult epileptics to the total population is from 1 to 1·5 per mille in the European countries in which this subject has been looked into. A census has, however, been taken upon this subject in certain of the Australasian colonies. For instance, in the Victorian Year-book for 1894, p. 398, a table is given showing the relative proportion of epileptics to the total population. The number of epileptics was found to vary between 1 in every 2322 of population in South Australia, to 1 in every 3964 in Tasmania. The average number may be given as that found in the colony of Victoria, where the proportion of epileptics was stated to be 3 68 per 10,000, or 1 epileptic in every 2715 of population. This is found to be considerably below the estimate of the European countries and America; but indications have been already given of the difficulty in ascertaining the true facts about epilepsy, so that it is not improbable that the above numbers really under-estimate the total proportion of epileptics in the Australasian colonies.

Many epileptics are perfectly able to conduct business and to carry on work of an intellectual or mechanical nature with credit and without any harmful result. On the other hand, however, owing to the impairment of the mental faculties to which epilepsy gives rise, or from inability to obtain regular employment owing to defective training, or from the sudden onset of fits and the subsequent incapacity, many epileptics are unable to make a living. An epileptic artisan is absolutely debarred from many trades and occupations, such as building, engineering, &c., while in other cases the services of an epileptic workman are not desired by an employer of labour unless he be of an exceptionally indulgent and charitable nature. Hence in all classes of society the epileptic whose fits debar him from occupation becomes a burden to his relatives; while amongst the poorer classes he swells the ranks of the unemployed, and eventually ends in the workhouse. For instance, in a return made in 1893 by the Local Government Board for the National Society for the Employment of Epileptics[8] it was stated that in the Poor-law Institutions of London, specially examined, there were 34,889 inmates, of whom 604 were sane epileptics. Taking the ratio of epileptics to the general population as 1 per 1000, this would give about 3000 sane adult epileptics in the metropolitan area. As pointed out in the paper above mentioned, this makes one in every five of the total epileptic population of London an inmate of a workhouse, and it also shows that of the pauper inmates of the workhouse one in every sixty is an epileptic. The question, therefore, at the present time which is exercising the minds, not only of medical men, but of those who direct the organisation of Charity and of the Poor-law, is—Is there any way by which such individuals may be able to support themselves under care and supervision? and the answer is being given in this country and in America by the formation of colonies for epileptics. In Germany the formation of such colonies has already met with exceptional success. At Bielefeld, for example, 1100 epileptics are employed in various forms of field and garden work. They are maintained in houses containing from 14 to 15 up to as many as 50 individuals. But in addition to being an institution in which sane epileptics may find useful employment, it is also "a sanatorium, an institution for the education and instruction of epileptic children, and an asylum for imbecile epileptics."[9] The results of this method of treatment and general management may be obtained from a perusal of the reports of the colonies, not only at Bielefeld, but also at Zurich, Potsdam, and Stettin, where there are similar institutions. An average gives a percentage of about six "recoveries," and 30 or 40 per cent. may be stated to have so much improved as to be fit to leave the institution. A certain number of relapses, however, occur, for during one year (1889) of 212 admissions 30 were admitted for the second time. From the consideration of these reports it is evident that in the management of epileptics in colonies provision therefore has to be made, not only for the schooling of epileptic children and for the employment of epileptic adults, but also for those who, from the very nature of their disease, in the course of time become feeble-minded and demented.

In the Craig Colony for Epileptics, recently established in New York State, provision has been made for the education of epileptic children as well as for the employment of adult epileptics. This institution, which has been at work for only a short time, is fulfilling its function in a most satisfactory way. From the third annual report, recently issued, I gather that 145 adult epileptics are employed in the various forms of garden and farm work, and that there are twenty-three children in the school. The general effect of the colony life upon the epileptics is stated to bring about a marked improvement both physically and also as regards the number and severity of the fits. In England until two years ago there were only two small "homes" for epileptics—one at Maghull, founded in 1889 for the reception of both males and females, and Lady Meath's Home for epileptic girls.

In 1894 the National Society for the Employment of Epileptics opened the first House at the Epileptic Colony at Chalfont St. Peter, Buckinghamshire, and it is in connexion with the results obtained at this institution to which attention is especially drawn. In the management of the patients at this colony the same principles are carried out which have conduced to the success of similar institutions elsewhere. These may be briefly stated to be: (*a*) removal of the epileptic from the towns to the country; (*b*) the regular employment in the garden, fields, orchard, workshops, &c., of the colonists under the supervision of capable persons; (*c*) the maintenance of a well-ordered and regular mode of life, with the avoidance of excitement and abstinence from alcoholic liquors; and (*d*) abundance of good nourishment of a simple nature. Living under such conditions it has been found that the epileptic requires only a minimal amount of medicinal treatment, and it is the custom to give each colonist thirty grains of bromide of potassium at bedtime.

The present accommodation consists of two houses, each containing 18 male epileptics. A house to accommodate 24 female epileptics is ready for occupation, while the building of another house for men is progressing. It is also expected that in a short time two houses for children (male and female), with the necessary school accommodation, will be erected. Since the opening of the colony in August, 1894, 62 male epileptics have been under observation for periods of varying duration. Of these, one has left the colony after a residence of two years apparently cured, or at all events so far improved as to be able to resume work. One died from symptoms indicating sudden cardiac failure, one has been sent to an asylum, nine left the colony at their own wish, while eighteen were discharged for various reasons. Up to the present time payment is made on behalf of the colonist either by his relatives or by the boards of guardians interested in individual cases. Epileptics whose relatives are in a position to pay higher annual sums have not so far been admitted owing to the want of suitable accommodation, but as the necessary funds are now forthcoming it is proposed to erect a house for this class of patient. I may now consider briefly the effect of such general care and treatment upon the individual epileptics, and for this purpose look at it from the following points of view.

1. *Frequency of the fits.*—In the majority a marked diminution in the number of the attacks is observed after admission to the colony. This is probably due directly to the removal of the epileptic from bad hygienic surroundings in the town to a pure country air, with abundance of simple diet and a well-regulated *régime*. In a minority there is a temporary increase in the number of fits, which may be due to the fact that previously to admission larger doses of bromide have been taken, this being entirely withdrawn except for a small dose at bedtime. In both instances after a short time the average number of fits is struck, and this is found to vary largely in different cases. The greater number of fits occur during the day, and by far the commonest time is during the first hour after rising in the morning. The attendants have found that fits are rare on

[4] Report of the Charity Organisation Society, 1893, op. cit.
[5] Ibid. [6] Ibid.
[7] Article on Epilepsy in Eulenberg's Encyclopædia, vol. vii., 1895.
[8] Vide Sane Pauper Epileptics, by E. Montefiore Micholls and G. Penn Gaskell.
[9] The Report of the Charity Organisation Society, supra cit.

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going to bed, and that as a rule the patients are much better and brighter during the evening. A point of some interest is that more fits occur in the house than outside in the garden or fields, and this apart from greater difficulty in registering the number outside; while there seems to be a general impression that more fits occur during warm and close weather than during the cold.

2. *Severity of the fits.*—Here, again, there is a majority in which an amelioration in the severity of the attacks occurs, while in a minority no material alteration is noticed, and in some a decided tendency towards increase in severity. Upon this point, however, it is more difficult to obtain accurate observations. In some of the colonists severe fits gave place to attacks of *petit mal;* in others, attacks of an average nature became more severe.

3. *General mental state.*—In quite a minority there has been a progressive tendency towards dementia. In some it appeared to be the natural course of the disease. In others it was owing to the frequency and severity of the fits, or of both combined. In the greater number no such mental deterioration has been observed. On the whole, the mental state of the colonists, considering the duration of the disease, is good. Some of them are capable of work requiring individual alertness and tact, while most are able to do good work under supervision. But the greatest benefit which this system of treatment is capable of producing lies in the general moral effect which it has upon the individuals. These persons amongst the poorer classes are in many instances regarded as "family lepers," the outcasts of the community, between whom and their relatives there is little sympathy. In a colony each epileptic is readily brought to see that he is as useful a person as his more highly favoured brother if placed under proper conditions. Here interest is taken in his work, in his mode of life, and in his amusements, with the natural result that he takes greater interest in himself and obtains a feeling of higher self-respect.

4. *General physical state.*—It is under this heading that the greatest improvement has been noticed. Without exception the general health of each colonist has materially improved. They all put on weight, and this, notwithstanding the fact that they may be subject to frequent and even severe fits.

But it may be asked, What kind of work has been found most conducive to good health among the epileptics? It may be stated that all forms of work appertaining to the fields or the garden have been found beneficial, while good work is also done in the carpenter's shop by picked men. The farm of 135 acres is worked by the colonists with the addition of a few farm labourers and overseers (bailiff and gardener). In the summer months matches are arranged between the cricket club of the colony and the various local clubs of the district, but football is not allowed. Contrary to the experience of the authorities of the Craig Colony for Epileptics, it has been found that the granting of holidays to the colonists at intervals is of value. Certain important precautions are taken before leave is given, but on the whole such a change has been of material service to the individual. It is scarcely necessary to state that the colonists have been carefully selected by the medical committee from a large number of applicants. The points to which attention is especially directed are: Has the epileptic been unable to obtain employment? or has he been discharged from one or more situations by reason of the fits? Is he capable of work under direction? and a point of great importance lies in a statement upon the absolute freedom of individuals from attacks of violence, mania, or other symptoms indicating insanity.

By way of conclusion, a summary of the evidence collected by the Charity Organisation Society from the results of this method of treating epileptics in the colonies on the Continent may be quoted [10]: "Any attempt to provide for the treatment of epilepsy, if large numbers have to be considered, should combine school-teaching with medical treatment and supervision. For young persons and adults regular but not too laborious employment is necessary. For all alike, for the furtherance of self-control, and for healthy enjoyment a well-ordered home life is required, and these the colony system provides. Medically, if the serious nature of the disease be taken into account, the colony system produces the best results. For the worst cases, and to provide against the constant ailments of many of the colonists, hospital accommodation is necessary. This system will have to furnish accommodation suitable for patients of all classes, the highest who may wish to have the best fare and rooms, and the lowest. The growth of the colony system is remarkable. It meets a very widely-felt need. This need is not met in England, for it cannot be said that to provide a residence in a workhouse is sufficient, and that is all that is now done."

I have endeavoured to show in this article that the need has now been met in this country, and that this form of treatment is being successfully carried out at the epileptic Colony, Chalfont, Bucks.

Queen Anne-street, W.

[10] Report on the Epileptic and Crippled, 1893.

ON THE DIAGNOSIS OF CERTAIN SO-CALLED RHEUMATIC DISEASES FROM EACH OTHER AND FROM RHEUMATISM.

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THE distinction between the group of affections due to rheumatism and those of different origin is a much discussed and difficult subject. The limits of this group have of late been extended in some directions and diminished in others. Reasons have been given for including in it the most unlike diseases, such as chorea and erythema nodosum, while others which were formerly included as typical instances have been removed and shown to be due to recognised microbial infections or pyæmia. This has been especially the case with most forms of scarlatinal rheumatism, of malignant endocarditis, and gonorrhœal arthritis. Many uterine and ophthalmic affections have been also excluded. On the one hand, arthritic symptoms have been largely discredited as a test; and, on the other hand, the type of the disease as seen in children does not seem more trustworthy, since, for example, endocarditis has been of late shown to arise from the poison of such different complaints as phthisis, gonorrhœa, and even typhoid fever. The fact is, as Dr. S. Mackenzie remarks, we have no single criterion of rheumatism. We are ignorant of its causes, whether it is at first a local disease, and if so where it arises in the body. We have only a bundle of symptoms, almost any one or any group of which may be present in other complaints. It is of little use to say that various causes produce identical symptoms when they affect the same organ, such as a joint. If there is no test for rheumatism we shall want to know whether the other causes producing similar symptoms have any distinguishing marks. It seems the most promising line of inquiry, then, to focus clearly our ideas of those affections which mimic rheumatism and produce like phenomena. Some of them may be capable of exact definition, and we may then by a process of exclusion arrive at a true conception of rheumatism itself. This, indeed, has been the most fruitful method in the past. Leaving on one side for the present chorea and some other children of doubtful paternity, there are a large number of skin, joint, and pyæmic affections to be considered, such as Osler's erythema exudativum, Quincke's œdema, Henoch's purpura, erythema nodosum, gonorrhœal, scarlatinal, diphtheritic, influenzal, and other forms of pyæmic arthritis, purpura hæmorrhagica, and hæmophilia. Every symptom of rheumatism is seen in one or other of these, but many of them have a distinct individuality and sequelæ which will enable us to withdraw certain cases of seeming rheumatism and refer them to their true parentage. As I happen to have met with several instances of these disorders of late I shall briefly refer to the chief types, with abstracts of my cases, and mention any points which are against a rheumatic origin. To return for a moment to the general question of diagnosis, it may be said that we should be largely guided by a history of previous rheumatic attacks; but this is undoubtedly very misleading and the source of much error, for such histories often refer to a previous attack of something else which bore a superficial resemblance to that disease. Especially is this true since some of the allied affections tend to recur again and again. Even endocarditis is no evidence of rheumatism, for, as we have said, it is produced by numerous causes. There is, indeed, no reason why one of

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these affections should not occur in a person subject to rheumatism, so that even if the previous attack was really of that kind we must decide the case upon its merits. Of course, if rheumatism is really found far more frequently in connexion with one of these affections than in healthy persons we can argue a special relation, but its incidence on the general population is not accurately known.

The action of salicylates, too, is an uncertain guide. Their failure in an apparently typical case of acute rheumatism may lead us to consider carefully our diagnosis, but their reducing the pyrexia is no proof of rheumatism. A French writer has recently denied any specific action to them and considers that they merely exert a sedative or paralysing effect on all inflamed protoplasm. Whether this is so or not their action is not entirely confined to rheumatism. Thus we might be easily misled by them in cases of *influenzal arthritis* such as have been of late described by Dr. Sansom.[1] It is true that salicylates will often relieve the pyrexia and pains of influenza; but these cases where troublesome joint mischief accompanied and followed an attack showed from their course and sequelæ that they were certainly not rheumatic. In some of them the affection proved to be rheumatoid arthritis, which is a very different thing. Others developed into various forms of neuritis. In all there was little or no effusion within the joints, but the ends of the bones were tender and enlarged and the seat of most of the pain. In no instance has Dr. Sansom traced valvular heart disease to an attack of influenza, though dilatation, cardiac neuritis, and angina are not uncommon. Still, these cases were at first very like ordinary rheumatism. It is interesting to notice that some observers claim that salicylates will often relieve the crises of tabes, and of this I have seen some apparent instances, yet no one regards the arthritic symptoms of that disorder as rheumatic.

Henoch's purpura as originally observed by him in children was of a very definite type, presenting severe abdominal pain, intestinal and renal hæmorrhages, purpuric eruptions, often with vomiting, swelling of the joints, œdema of the hands and feet, and nephritis. Von Dusch and Hoche, and recently Osler, have collected some sixty cases, both in adults and children. If we refer to Osler's account[2] we find that he describes it as an erythema exudativum multiforme; but he notices that the skin affections may be absent altogether or appear only in one of the recurrent attacks which may present themselves year after year. The most constant symptom is a sort of gastric crisis, which may vary from a stomach-ache to an unbearable agony. With this there commonly comes on vomiting and diarrhœa, as well as pain and swelling rather around than in the joints. There is not unfrequently pyrexia, sometimes delirium, and nephritis of various degrees, from slight albuminuria to a fatal form with casts and anasarca. Hæmorrhages from the kidneys, bowels, and stomach are frequently seen, and recurrent attacks of bronchitis and hæmoptysis may occur, as well as eruptions of purpura, erythema, and urticaria; occasionally we meet with affections of the heart and spleen. Both here and in a very different disease—purpura hæmorrhagica—the melæna may arise from a slough and subsequent ulceration of the intestines, which causes, not only bleeding, but intractable diarrhœa and even perforation. The following is the history of a well-marked case under my own care for a time.

CASE 1.—A young seaman in perfect health was attacked on July 26th, 1896, by severe abdominal pain, for which he took castor oil. A little urticaria appeared and vanished as quickly. On the 28th the pain became intense, and he was found lying helpless and prostrate, with some tenderness to the right of the umbilicus, but the attack, though puzzling, was clearly not one of abdominal obstruction or appendicitis. The heart, the temperature, and the lungs were normal, nor was there any affection of the skin, kidneys, or joints. Some relief from the distress was obtained by the use of opiates, till on the 31st much pain and swelling of the wrists, especially of the right one, occurred. The temperature was still normal, but on Aug. 1st it rose to 100° F., and the pains became worse, with much aching in the thighs. Salicylates had little effect. An ulcer appeared on the edge of the tongue, as though a piece had been bitten out. On the 8th, and for a week onwards, the temperature varied from 100° to 102°, but meanwhile the arthritis disappeared and the appetite became good. After a sharp increase of the gastric pain, with vomiting and diarrhœa, on the 13th, these symptoms declined, but some dulness and diminished respiratory murmur were noted over the left scapula. On the 20th an extremely painful œdematous swelling spread over the right side of the scalp and forehead, and closed the right eye. There was no redness, and the pain was sufficiently severe to interfere with sleep, but the temperature meanwhile fell to normal and the appetite became voracious. In four or five days the swelling subsided, but on the 26th a purpuric rash appeared on the legs of a dull pale red, forming numerous close-set spots of the size of sixpence, extending a short distance up the thighs and accompanied with slight œdema. From this time gradual improvement set in, the patient gained flesh again, his anæmic condition gradually disappeared, and he returned to work on Sept. 11th sound and well in every respect.

On at least one occasion during the illness the vomit was blood-stained, and the apparent absence of any evidence of intestinal hæmorrhage may have been due to oversight in the nursing. It is noticeable that no history of poisonous food, pork, or shell-fish or of previous rheumatism was obtainable. I can see nothing in the general aspect of such cases when fully developed to entitle us to call them rheumatic. Dr. S. Mackenzie regards Osler's own group of eleven instances as a distinct form "where the hæmorrhages are accidental, not essential," but he appears to refer them all to the rheumatic class. Now it seems to me that there is a strong argument against this in the prevalence of nephritis, which occurred in fourteen out of the sixty-one cases reported; and in the rarity of endocarditis, which was present in only two out of sixty-one, and those not mild ones, for no less than thirteen were fatal. The occasional splenic enlargement is another point in the same direction. It appears rather that we have here a definite disease of an an acute toxæmic type, which I will call the Osler-Henoch, and which may be simple or hæmorrhagic. Many supposed cases of rheumatism are probably of this nature, which it is important to distinguish, if only from the difference in the sequelæ to be expected. It seems difficult, on the other hand, to look on this disease as erythema multiforme or purpura hæmorrhagica, since the eruptions may occur only once in four or five attacks, at any rate in adults. Dr. G. A. Sutherland,[3] in reporting recently three cases, looks on the joint symptoms as septic, though nothing has been discovered bacteriologically. Foreign opinion at the late Dermatological Congress was against any connexion with rheumatism.

Angio-neurotic œdema is a name given to another group of cases which are related in several ways to the Osler-Henoch disease. They are sometimes spoken of as Quincke's œdema, and the attacks are often ushered in by severe gastro-intestinal pain and disturbance. In one variety large patches of œdema of irregular shape appear on various parts of the body.

CASE 2.—A patient of mine, a widow aged fifty-two years, has suffered from it for several years. The wheals or patches recur frequently on the left cheek, the lower lip, and on the eyelids, where they seem almost fluid and transparent. There is no pain, redness, or itching, but a little pricking when the patches begin to swell up, which takes place every few days. She enjoys otherwise good health, but gives a history of "rheumatic fever," which may or may not be correct; there is no cardiac murmur. Two or more fingers in each hand are affected by lesions which appear to be those of rheumatoid arthritis and grate on moving. On the right olecranon and on the left wrist are subcutaneous nodules. The latter, again, it should be noted, are not found in rheumatism alone. Jamieson speaks of the frequently observed connexion of this œdema with rheumatoid arthritis, but beyond this nothing is known of its pathology. No relation whatever to true rheumatism has been made out, though fugitive œdemas, apart from the arthritis, do sometimes appear in the latter.

In *rheumatoid arthritis* we see another well-defined disease distinct from rheumatism, yet presenting many of its ordinary symptoms. Bannatyne and his fellow workers have apparently shown that in this complaint we have a toxæmic infection by a bacillus with irregular pyrexia, sweating, and tachycardia, and not infrequently pigmentation of the skin and purpura. Hæmorrhage from the mucous membranes is very rare, with the exception perhaps of hæmatemesis. The joint affections and muscular atrophy are the most commonly

[1] Medical Press and Circular, June 3rd, 1896.
[2] American Journal of the Medical Sciences, December, 1895.
[3] Pædiatrics, Nov. 2nd, 1896.

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noticed symptoms, and it is remarkable that the great majority of the sufferers are women. This predilection for the female sex is shown, curiously enough, in the cases of erythema multiforme and purpura which Dr. Stephen Mackenzie collected as showing the so-called rheumatic history, the proportion being four or five to one. Another point of similarity with these diseases and Quincke's œdema is the occurrence of gastric crises which may be severe and periodical. Well-marked instances have been recorded by Dr. H. Waldo, and a typical patient of my own, thirty-two years of age, unmarried, complains of them strongly, as well as of the ordinary joint troubles. The history of the patients, the joints affected, the deformities, the sequelæ, and the results of treatment are other well-known points wherein this disease differs from rheumatism, though it bears a superficial resemblance.

I must only refer briefly to certain forms of *septic arthritis*, many of which are clearly non-rheumatic. Such are those seen in gonorrhœa, scarlet fever, diphtheria, especially that following the use of antitoxin, variola, and erysipelas. We may at once dismiss the purulent effusions. Gonorrhœal arthritis is intractable, tends to develop adhesions, and affects special joints, such as the temporo-maxillary, and is sometimes accompanied by purpura and endocarditis where the gonococcus has been isolated. Serous scarlatinal arthritis has usually been accepted as rheumatic. Here again fuller knowledge has narrowed the field. Dr. R. W. Marsden[4] points out that the affection is either (*a*) a simple synovitis which occurs about the sixth day and is six times more common than all the rest put together, (*b*) septic, (*c*) tuberculous, or (*d*) true rheumatism. The last only occurs during a late stage of convalescence, and is always subacute. The early type with which it is usually confounded never recurs, is not accompanied by sweating, does not fly from joint to joint, rarely if ever affects the heart or shows any other rheumatic sequelæ, and is specially apt to develop in the tendons on the back of the hand rather than in the wrist-joint. The true rheumatic type is rarer even than the purulent forms, and appears in a quite insignificant proportion of cases.

Infective endocarditis may present joint affections, sweats, and purpuric rashes, and was formerly regarded as rheumatic in origin. In fact, the transition in the symptoms from septic cases to ordinary rheumatic endocarditis is marked by insensible gradations. Still, it is recognised that most malignant cases are produced by strepto-, diplo-, or staphylococci, though the presence of the lesions of former rheumatic endocarditis favours the outbreak of the disease. Very rarely, says Dreschfeld, it may complicate or follow acute rheumatism. It is usually, if not always, a septicæmia. The symptoms at first may resemble in some degree those of Henoch's purpura, as in a case of my own, where a somewhat purpuric patch went on to gangrene of the finger where it occurred; but the peculiar sweats and pyrexia, the heart signs, and the emaciation are soon distinctive.

Hæmophilia is, indeed, a permanent and hereditary condition, due possibly, as Wright suggests, to a deficient formation of polynuclear corpuscles; but we often meet with attacks in those suffering from it which resemble rheumatism. There is suddenly felt a discomfort and sensation of tension in various parts of the body, the joints swell and become painful, so that the epithet "rheumatic" has been applied to them even by Bristowe. Purpuric spots and hæmorrhages follow, though no wound has been received, and of course hæmatemesis and melæna may occur. Yet this apparent arthritis is probably due merely to hæmorrhage in or around the joints; the throbbing will be felt around any wound far away from a joint before renewed bleeding, as I saw lately in a patient under the care of Mr. Fendick, and the purpuric rash is also produced by any slight blow. Other symptoms of rheumatism are wanting and the disease is limited to the male sex.

The still rarer affection called *pulmonary osteo-arthropathy* seems to have no connexion whatever with rheumatism, though the joint affections may be easily mistaken for it.

To turn to *erythema multiforme*. We have seen little reason for looking on the Osler-Henoch type as rheumatic, but this has been asserted with respect to the other forms. Kaposi notices the joint pains, occasional pyrexia, endocarditis, and meningitis sometimes seen in them, as in other septic affections; while Coulard and Garrod show that a rheumatic history is very common indeed. Erythema nodosum especially is claimed as certainly rheumatic, chiefly on the ground of the great number of patients who have such a history, and partly because the two affections occur together not infrequently. Thus Mackenzie found this conjunction in seventeen cases out of 108 collected from various hospital records, besides twelve others in which the erythema followed rheumatism. The symptoms most relied upon were arthritis, sweats, and sore-throat, while endocarditis developed in some patients at the time of the attack. Even the value of this strong evidence depends on the strict analysis of the cases. As I have said before, joint pains and endocarditis are not uncommon in many septic diseases, and may have been taken for true rheumatism by the compilers of these records if they chanced to be less careful and accurate observers than Mackenzie himself. It is a curious fact that erythema nodosum, which the English and Vienna schools distinguish so carefully from erythema of other kinds, is often accompanied by them and by purpura, the various rashes being visible on various parts of the body at once. The causation of the various erythemas is not easy to reconcile with theories of rheumatism. They often follow the ingestion of noxious food and occur in epidemics in spring and autumn. Both the other varieties and erythema nodosum are most common in women (nodosum being particularly rare in males) during early life or when suffering from some uterine disturbance. The meningitis, gastric troubles, and renal hæmorrhages occasionally seen in them are unknown in pure rheumatism. In any case, as the *Dermatological Journal* remarks, there are on Dr. Mackenzie's own figures 50 per cent. which show no rheumatic symptoms or histories whatever. If erythema nodosum has any connexion of the kind it is probably only that one disease favours the invasion of the other, and not that erythema nodosum is rheumatism attacking the skin.

In *purpura hæmorrhagica* there is another toxæmic infection of definite character, though the skin and other symptoms are occasionally almost indistinguishable from purpuras occurring in rheumatism. The following was a severe case which I attended recently.

CASE 3.—A young man developed a slight purpuric rash at Easter last. He remained at home for a few days and then returned to work, though the eruption continued to appear for some weeks. He felt perfectly well, but the rash at last began to increase, and besides the petechiæ dark-coloured blebs were now seen, which were especially noticeable on and under the tongue and upon the soft palate; a little hæmorrhage from the gums followed. He then presented himself at the Bristol General Hospital as an out-patient, and was with difficulty induced to come into the house, where the next day he died from a hæmorrhage in the brain.

In such cases we often find every evidence of septic intoxication, fever, sweating, joint pains, and a comatose state. Moreover, there is some evidence as to the agent causing the condition. Tizzoni, Babes, Kolb, and Letzerich have all found bacilli present in the tissues and blood of patients which reproduced it in a modified form in animals, and Letzerich managed to infect himself from his pipe during his researches on the subject, and suffered a pretty severe attack. Watson Cheyne also found colonies of bacteria inside the vessels in two cases, though he failed in others. Quite recently Hayem and Rendu showed that the clot formed from the blood in this disease does not contract and squeeze out serum as it does with normal blood, or, indeed, as the clot does also in the secondary non-hæmorrhagic purpuras, which I shall speak of below. Besides the gastric and other hæmorrhages and occasional persistent diarrhœa from ulceration of the intestines, large areas of the skin may be rendered gangrenous by the hæmorrhages. Now, definite as the disease is, several cases where these severe bleedings occurred have of late been claimed as rheumatic Thus, we find one reported by Surgeon-Captain Fayrer, where the tongue and part of the penis were destroyed by gangrene, though the patient, a healthy soldier, regained his health; but it is surely more rational to regard the symptoms as ordinary effects of the purpuric toxin instead of exceptional ones of the unknown rheumatic poison. Even if the attack concurs with one of acute rheumatism, as in a rare instance related by Dr. S. Mackenzie, we know that such coincidences are met with in other diseases; that pure phthisis is exceptional; that rheumatism itself chooses injured joints, and bacteria when injected into the tissues show the same predilection; while the typhoid bacillus so intensifies the bacillus coli that the latter produces a large part of the intestinal

[4] Medical Chronicle, Aug. 5th, 1896.

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lesions. Similarly, these two diseases do at times coexist, and possibly one favours the growth of the other. In the great majority of severe attacks of rheumatism, however, there is no indication of anything of the kind, and the purpuric complication is at best a rare one. The simple forms of purpura which do not affect the mucous membranes or produce hæmorrhages are produced under various conditions. We find them caused by drugs such as iodide of potassium, and again in cancer, heart disease, and leukæmia. I am not concerned to deny the occurrence of this symptom in rheumatism any more than its appearance with arthritis after the injection of antitoxin, or during a streptococcal pyæmia. As Dr. S. Mackenzie describes it, during ordinary rheumatism, or before an attack or after, the patient may complain of a dull pain or feeling of tension in the legs. Towards evening or during the next day small red spots appear symmetrically on both legs and soon take a purple tinge, while the discomfort passes away. Successive crops follow and may even spread to the arms, but any hæmorrhage is extremely rare. Out of forty-two of his cases rheumatism was present, or had occurred in thirty-five, and pyrexia was found in a third of them. I do not know of any evidence to show whether this form is really the effect of rheumatism or of a secondary infection, but some authorities who accept a rheumatic purpura make peliosis a distinct disease, and include under it a large proportion of such cases. They define it as marked by arthritis and a rash appearing around the joints, papular at first, and then hæmorrhagic, sometimes followed by intestinal ulceration and diarrhœa. It is, they say, unaffected by salicylates and rarely causes endocarditis. Dr. Mackenzie found albuminuria and abdominal pain in about a tenth of his cases, which is rare in rheumatism, though not unknown, especially where endocarditis has occurred. Thus it is probable that many of these instances are really purpura hæmorrhagica, or the Osler-Henoch disease, though symptomatic purpura may be found in rheumatism as a result of blood changes.

To sum up, we find that a large number of diseases formerly included under rheumatism have been gradually differentiated from it. First this was done with respect to gout, then many septic joint disorders were separated from it, and now the diseases in the group under consideration are shown to have definite characters, histories of their own, and to be followed by lesions, such as nephritis and neuritis, unknown in rheumatism. This enables us to place under them also many ill-defined cases usually regarded as rheumatic from the joint and heart symptoms present, for close observation shows in them symptoms quite different from those of rheumatism, though common in the diseases referred to. Lastly, these affections do sometimes coexist with rheumatism and produce their own symptoms, and, indeed, they possibly favour the evolution of rheumatic outbreaks, and are themselves aided by its presence.

Clifton.

CLINICAL TYPES OF PNEUMONIA.[1]

BY W. J. TYSON, M.D. DURH., M.R.C.P. LOND., F.R.C.S. ENG.

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I HARDLY know of anything more interesting in one's spare hours than to read a book on general medicine or surgery written fifty years or so ago. What an immense change has come about in almost every department of our profession whether the etiology or treatment of disease be considered! I well remember some twenty years ago, whilst dressing for the late Mr. Cooper-Forster, seeing a woman who was dying from acute septicæmia after an amputation of the breast had been performed, Mr. Cooper-Forster then remarking that it was impossible to account for these deaths, and that every now and then such a result would follow from an operation as the above. Even in my own recollection one most important disease has almost disappeared—viz., ague—and another—i.e., lardaceous disease is becoming very rare; the former forty years ago was rife in my own neighbourhood, and the latter was common when I was a student.

[1] A paper read at Rochester on March 19th, 1897, before the members of the North, West, and East Kent Districts of the South-Eastern Branch of the British Medical Association.

Before coming to the subject of my paper—the various types of pneumonia that are met with clinically—I will consider the past history of pneumonia. There can be little doubt that what is called to-day croupous, or lobar, pneumonia was the only form of the disease known to our forefathers. Watson, writing in 1848, in the third edition of his "Practice of Medicine" practically only describes lobar pneumonia; he gives a few lines to catarrhal or lobular pneumonia, but omits all reference to its pathology, physical signs, and treatment. Fibroid pneumonia he does not mention. Watson at the above date pictures most graphically all the classical signs and symptoms we now generally associate with an acute attack of sthenic pneumonia occurring for the most part in a young person from the so-called cause of chill, such as fine crepitation followed by bronchial breathing, bronchophony, dulness on percussion, the characteristic sputum, the relative increase of the respirations as compared with the pulse-rate, &c.; but, strange to say, the "crisis" is not referred to at all, probably, I suppose, because the thermometer was not in use at this date—still one would have thought that the application of the hand and the often collapsed state of the patient at this critical time would have demanded some special notice to this point. It was in this form of the disease that one, or sometimes all, of three well-known so-called specifics were used—viz., bleeding, tartar emetic, and calomel. The confidence in the foregoing was unbounded, and it would have been almost impossible for anyone not to have employed them, such was the faith in their efficacy. Graves, writing in his "Clinical Medicine" some few years before the period I have just referred to, speaks only of croupous pneumonia. He mentions as a rather common sequela or complication of the disease abscess of the lung; but on carefully reading over the notes of the cases there is some doubt in my mind whether these were not for the most part local empyemata or tuberculous cavities. However, at this date no exploratory needling or incision was made. Graves also recommends the old treatment of bleeding, tartar emetic, and calomel, but he advocated, as a rule, only two bleedings of twelve ounces at each time. The treatment by digitalis and strychnia is not mentioned at this date. My own reading and experience lead me to think that ordinary sthenic croupous pneumonia is not met with so commonly to-day as it was some years ago. I rarely see in hospital or private practice the disease accompanied with all the well known—I was going to say the examination or text-book—signs and symptoms. I believe that the type has somewhat changed. The various clinical varieties that are present with us now are in some instances due to different causes and require different treatment.

The phrase "congestion of the lungs," too, is constantly employed by the public and not infrequently by the members of the profession. It is quite difficult to understand in what sense it is used by the latter; when used by the former I pay no attention to it. Many years ago Dr. S. Wilks was constantly objecting to the prevalent use of the word "congestion," and he taught, I believe, that the term should only be used when the first stage of pneumonia was indicated. There can be no doubt that the first stage of a croupous pneumonia is that of congestion; but the question before us is, Is there such a thing as a congestion of the lung, pure and simple, apart from its association with pneumonia, and one that is not passive in origin, as seen in heart disease? I think that such a condition—which may be called "simple congestion" at present for want of a better term—does exist. It is almost impossible to demonstrate it as it is not a cause of death. The following case came under my notice a few weeks ago. A man, middle-aged, was admitted into the Victoria Hospital, Folkestone. At the base of the left side there was dulness on percussion, with bronchial breathing and bronchophony. On the right side at the base there was some loss of tone on percussion, with fine crepitation, but no bronchial breathing and no bronchophony. At the post-mortem examination the base of the left lung was found to be in a state of red hepatisation, with the characteristic appearance and qualities, and the base of the right lung in the condition known as congestion or engorgement. Now most of us have met with cases which gave only the signs that go with a congestion, and the subsequent history of the case has led us to make no further diagnosis. I see no reason, judging from analogous states in other organs and parts of the body, to say that this congestive state of the lung must necessarily go with pneumonia. On the other hand, I think the public and many of the profession use the word far too frequently and far too loosely.

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When the term croupous or sthenic pneumonia is used in this paper it is that form which I have already mentioned as having been graphically described by Watson, with its well-known classical symptoms and signs, followed by crisis, generally supposed to be caused by exposure to cold. It occurs for the most part in youth and the middle aged, and the prognosis is good. The following forms, I think, we are justified in speaking of as clinically different.

Pneumonia of influenza.—It is very difficult to form an estimate of the proportion of cases of influenza that complicate pneumonia; but this complication is more frequent in some epidemics than in others, and I have sometimes thought some of our brethren seem always to have a very much larger number of pneumonia cases than others. This is probably due to the cause of a different method of classifying some of the chest troubles. The following seem to be the main and prominent characteristics of this form of pneumonia. The consolidation is not as a rule confined to one lobe; it begins in small patches, being more of the type of lobular pneumonia, although by the confluence of the various patches a large area of the lung becomes affected. It is rapid in its extension, and often both lungs are involved. The signs of bronchial breathing and bronchophony are not well marked, but crepitant râles are prominent. The cough is troublesome; the sputum is often profuse, and does not possess the ordinary sticky and rusty-coloured quality. I have seen two fatal cases of influenzal pneumonia, and the rapidity of the extension of the disease was remarkable in each case. No case of ordinary sthenic pneumonia has come under my care in connexion with influenza, although it is said to occur.

Septic pneumonia.—This form seems to be met with more frequently in young adult life or in middle age, and is seen rarely after sixty. The cause is not always easy to fathom, for the origin of the infection may be in some pent-up pus undiscoverable during life. One of the most typical cases ever seen by me followed an attack of facial erysipelas. The pneumonia is patchy in distribution, and whilst one patch is clearing up, another is appearing somewhere else, either in the same lung or in the other. The physical signs are not well-marked, and, of course, change as the disease shifts from one spot to another; the percussion note is impaired, but not very noticeably; bronchial breathing and broncophony are often present. The temperature follows a septic course, and the general appearance of the patient is one of blood-poisoning. There is no sputum, the disease is chronic in its course, and fatal in prognosis. The bacillus streptococcus is present in some cases.

Epidemic pneumonia. — The epidemics of pneumonia described as happening in the sixteenth, seventeenth, and eighteenth centuries are difficult to follow out and to understand; they are described pretty fully by Hirsch, of Berlin, in his "Handbook of Geographical and Historical Pathology," published by the New Sydenham Society in 1886. The epidemics existed in almost every part of the world. In reading the acounts of the above one feels that there is want of detail and accuracy about them which takes away very much of the value of the reports given. We must not forget, however, that auscultation was not practised or understood until the beginning of the present century, and the value of the thermometer is of recent date. It is during the last ten years that reliable knowledge has been obtained in reference to this form of pneumonia. An epidemic broke out in Middlesbrough in 1888 and was thoroughly investigated by the late Dr. Edw. Ballard. Two years later a similar epidemic, although on a smaller scale, occurred in the village of Scotter, in Lincolnshire, and was examined and reported on by Dr. H. F. Parsons. The disease appears to be a constitutional infection—a pneumonic fever. The incubation is short. There is a rapid rise of temperature and the constitutional disturbance is out of all proportion to the evidence of the local pulmonary disease. The cough is trivial. Delirium is early present. The fatal cases occur often on the third or fourth day. It is common for the physical signs of pleuro-pneumonia to be observed in one or both lungs on the second day. Convalescence usually begins by crisis on the seventh day. Relapse is common; mortality is high.

The infection is given off or tends to be given off, in the breath and sputa, and it is acquired by inhalation and perhaps by swallowing. The ease of transmission from person to person is much influenced by lowered vitality on the part of the recipient, and by close and prolonged contact with the patient. The treatment is thus important. The ordinary preventive measures of isolation and disinfection must be carried out.

Typhoid or asthenic pneumonia.—This comes on in a diseased condition, and therefore the clinical type is changed. The so-called typhoid symptoms are generally present, such as low delirium, tremors, paralysis of the sphincters, a brown, dry tongue, sordes on the teeth, the pulse feeble and rapid, &c. The pneumonia begins gradually, and is never sharply defined. The symptoms of rigor, pain, and rusty sputum are absent, and there appears to be no crisis. For the above reasons this complication, as it may be called, is often overlooked, yet it may be the immediate cause of death. In most cases the pneumonia is due to the pneumococcus of Fränkel; in some few, however, the typhoid bacillus has been found.

Pneumonia of the aged.—The pneumonia of old people certainly seems to me to carry with it a certain combination of signs and symptoms differing from the described preceding types. The disease comes on very insidiously and is accompanied with a general weakness of the body, which may overshadow the lung mischief. There is no rigor, no pain, and little cough. The temperature is probably little raised throughout, often not rising above 100° or 101° F.; the pulse at first is not much quickened, but the rapid increase of respiration is marked, and the patient complains of want of air. The patient lies on the affected side. There is little if any expectoration. The physical signs of dulness, bronchial breathing, and crepitation are all present, but the dulness is not great, and the crepitations are coarse in quality. The prognosis is bad. It is important owing to the latency of this form of pneumonia to examine the lungs in all acute illnesses of the aged. The above must not be confused with that which is known and described as "hypostatic pneumonia"; this latter state comes on at the end of an illness, being found in both lungs, and at the most dependent positions. Strictly speaking, it is a passive condition.

Alcoholic pneumonia.—This form is the last I will mention. Alcoholic pneumonia can be better recognised when seen and examined than when described. The delirium which is constantly present calls out for much attention, whilst the chest mischief may be proceeding unnoticed. The man is much worse than his physical signs would lead one to expect, and it is the general downhill condition of the patient that strikes one rather than any local disease. The sputum is profuse and dirty in colour, whilst the temperature is only moderate in height, and if the patient lives long enough the crisis is a feeble one. The prognosis is bad. I may say that as a rule low temperatures and profuse expectoration I have always looked upon as bad omens in forming a prognosis.

Probably most of the types of pneumonia I have been describing are pathologically almost identical, differing more in degree than in kind from one another. However, we know that when meeting with these varieties the prognosis and treatment are unlike in nearly all of them. Let me take as examples one or two diseases in each of which there are forms which pathologically seem alike and yet prognostically and therapeutically are dissimilar. Diabetes in people under forty years of age is a serious disease. The prognosis is bad, yet a case may be much improved by treatment. Diabetes coming on in persons aged over sixty years seems to be almost a harmless disease, and very often, except for the attendance of the medical man, would not be taken heed of by the patient. Clinically these two forms must be classed differently, but as regards the presence and even amount of sugar they are alike. Again acute Bright's disease following scarlet fever, as far as the urine and general symptoms are concerned, is identical with that form following exposure to cold. Yet we know clinically that the prognosis in the former is much better than in that of the latter. So I might give you other instances, but the above will suffice.

In a paper read a few months ago before the members of the West London Medico-Chirurgical Society [2] I advocated that there should be a more precise clinical classification of disease, and that it is unscientific as well as unpractical to speak of pneumonia, peritonitis, meningitis, neuritis, &c., unless some qualifying adjective is used to indicate the nature of the disease. I have attempted here to classify pneumonia clinically, although probably not entirely satisfactorily.

Bacteriologists wish and believe that various forms of disease should be classified according to the micro-organism to which the particular form is due. This method at first

[2] A Plea for a more Precise Classification of Disease, THE LANCET, Jan. 16th, 1897, p. 180.

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sight would seem a simple and satisfactory one, but practically bacteriology is not in such a sufficiently advanced stage for us to adopt this mode. Before many years are passed—the clinical physician and the bacteriologist working more closely together, each correcting and aiding each other—we shall arrive at much more satisfactory classification of disease than at present exists. In the meantime I think that there is room for the clinical physician to be more accurate in his own line than sometimes he has been in the past, hence the reason why I have written my paper on the clinical types of pneumonia.

Folkestone.

A CASE OF STRICTURE OF THE RECTUM.

BY JAMES DUNLOP, M.D.Q.U.I., L.R.C.S. EDIN., &c.,
FLEET-SURGEON R.N. RETIRED.

A WIDOW, aged sixty-nine years, of strong constitution and the mother of thirteen children, had an attack of constipation on April 19th last year while in the south of France, accompanied by abdominal pain, increase of temperature, and vomiting, from which she recovered. Enemata, some with turpentine, were assiduously used until the bowels acted; poultices were applied, and purgatives were given. On May 15th the patient arrived in London, where she again used purgatives to combat constipation, and on one occasion had to keep her bed for several hours, owing to nausea, until the bowels acted. On the 29th, when in Ireland, she had another attack of constipation without rise of temperature or local pain, which yielded to the previous treatment. A fourth attack occurred on June 12th, and five grains of calomel were given. This was followed by nausea and vomiting; retching continued for some time; enemata were then tried, but nothing came from the bowels except a small quantity of a tar-like substance. On the 15th a specialist was called in by the medical attendant. He stated that he made a digital examination of the rectum and carefully examined the abdomen, and that he could detect no stricture or organic disease, and was unable to say what caused the constipation. He further stated that the bowels were so little distended that if there were any organic tumour, impaction of fæces, or stricture, he believed that he would have felt it. He considered that from some unknown cause there was paralysis of a portion of the intestinal canal, similar to that which occurs after a surgical operation, and that by rectal alimentation and the administration of purgatives, combined with medicines to give tone to the intestines, all would come right. Cascara, nux vomica, and belladonna were prescribed. From the 17th till the 30th the bowels acted irregularly, diarrhœa followed the medicine and constipation ensued when it was omitted. The dejecta were fluid and much broken up, on three occasions they were described as small and of a coffee-ground colour. The anticipated relief was not experienced. On two occasions the consultant was told of her condition and he advised her medical attendant to persevere with the medicine. On the 30th, the bowels acted once; the stool was scanty, and semi-fluid; flatulence and nausea were troublesome. From this date till July 6th, there was no action of the bowels. There was no vomiting unless medicine was taken; enemata of glycerine, aloes, soda, turpentine, &c., were used without relief; the patient was in bed and the temperature was normal. The consultant again saw her and found that the bowels were too distended to permit him to examine the abdomen as he had done on his first visit. He stated that a portion of the intestine was filled with fæcal matter, but that it was soft and doughy on pressure. Tincture of belladonna was prescribed; nutrient enemata of peptonised milk and yelk of egg every four hours; no solid food to be taken; tepid water to be used every twenty-four hours to wash out the bowel; expectant treatment to be relied on. On the 13th the medical man who had attended the patient in France, met the specialist and the regular medical attendant in consultation. Absolute constipation had been present from June 30th; the abdominal distension had increased; coils of distended intestine were easily felt and observed raising the abdominal walls; there were marked borborygmi and flatulence, but no vomiting or pain on pressure, the temperature being normal. Pills, each of a quarter of a grain of calomel with two grains of colocynth and hyoscyamus were ordered; one to be taken every two hours until the bowels were moved. By July 17th twenty-nine of the pills had been taken; the bowels had not acted, and the pills had to be omitted because of the irritation of the stomach. The retching was painful to witness; the lips were parched, and the patient almost incessantly sipped cold water; the abdomen became more distended, but there was no pain on pressure. On the 20th there was no improvement; after a tepid water enema, some matter, like shreds of membrane, was expelled. On the 22nd the patient was more cheerful. Two of her sons, surgeons, arrived from London, one of whom expressed his opinion that nothing except an operation could then save life. Consequently, on the 24th, a professor of surgery and the specialist were called in consultation with the medical attendant to consider the advisability of operating. The patient's bowels had not acted for twenty-four days. On examining the patient they found the temperature to be 98° F.; the pulse 92, weak and regular; there was no pain; the abdomen was much distended and pear-shaped; there was tympanites, which did not interfere with chest organs; the liver was displaced upwards; and there was a duller note along the descending colon, which was greatly distended. They considered it inadvisable to operate, but the professor of surgery was of opinion that "Hutchinson's taxis" might be tried if the conditions were not soon spontaneously relieved. An enema of cajuput and assafœtida was given and it was advised to elevate the foot of the bed for fifteen or twenty minutes daily. On the 25th the patient was much the same. A telegram was sent in the evening to a London surgeon. A very brief recapitulation of the case was given and the question asked, "Is colotomy advisable"? The reply was, "Patient is sure to have stricture somewhere in colon or low down in small intestine. Should advise abdominal exploration in middle line of abdomen to find situation of stricture, and then open gut above stricture, bringing it to surface at the most convenient part of abdomen." On the 26th the patient was depressed and worse. The same consultants as on the 24th were called in and requested to come prepared for immediate operation. The telegram was submitted to them to strengthen opinion should they consider the patient had sufficient strength to bear an operation. The opinion held by them was that abdominal section in the patient's present state was unjustifiable. On the 29th another consultant was called in. He examined the abdomen externally before the medical attendant, and expressed his opinion not to operate, but to wait for more urgent symptoms. The bowels had not acted for thirty days and all the signs and symptoms were more grave. Hypodermic discs of one-sixth of a grain of sulphate of morphine with $\frac{1}{150}$th of a grain of atropine were prescribed, one every eight hours placed under the tongue, under the impression that the constipation was caused by a spasmodic stricture of the intestine, which would yield once the system was completely under the influence of opium. The last consultant saw the patient on Aug. 1st, 5th, and 10th. The treatment was continued as it gave the only relief the patient had from urgent symptoms. On the 12th, the bowels not having acted since June 30th, at 10 P.M. an œsophageal tube was attached to a syringe and very carefully passed for twenty-four inches into the bowel. When about seven or eight inches in it seemed to move along a curved surface with difficulty, and then suddenly to glide forward. A tepid water enema was thrown up and retained. On withdrawing the tube about half a pint of semi-fluid fæces, greatly broken up, was expelled; the tube was covered for about sixteen inches from its distal end with tenacious fæcal matter. The next two days, after an enema had been given in the same manner, a similar discharge was noted. On the 15th, as the patient was sinking, the last consultant was again brought. He prescribed various cardiac stimulants, some to be administered hypodermically. On the 16th there was much restlessness and perpetual movements of the hands in jerks. Consciousness was retained until a few hours before death, which occurred at 4 15 A.M.

Remarks.—The bowels had not acted for forty-two days. Life during that period had been sustained chiefly by rectal alimentation. A necropsy was performed thirty-five hours after death. The abdominal cavity and its organs were healthy; there was no effusion or escape of fluid into it. The small intestine was normal throughout; the large intestine was enormously distended, but healthy as far as the rectum, and was gorged

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with semi-fluid fæcal matter. Nothing was observed to account for the obstruction, and the examination was about to be given up, when one of the deceased's sons urged the necessity of examining the rectum. An annular stricture of the latter was found in its first portion, just below the sacral promontory, with puckering of the gut above and below it. The stenosis was about an inch in length, and its calibre was not greater than to admit the tip of a man's little finger; it tore easily, as sloughing had commenced; there was ulceration. A piece of the gut was retained for microscopical examination. No sections were then made of the specimen, as it was considered very rare and worthy of being exhibited at the first available meeting of the Ulster Medical Society to be held in December. In April, 1897, I forwarded the specimen to the Clinical Research Association in London and received the following report with two prepared slides:—"The enclosed sections have been made through the ulcerated and strictured portion of the rectum. In consequence of decomposition the tissues have failed to stain, and much of the growth has disappeared. But this much can be made out. There is a deep ulcer in the wall of the rectum which has excavated the muscular coat and almost perforated it in the centre of the ulcer. Among the muscular fibres there are oval spaces which contain a few distorted cells and some granular matter. At the edge of the ulcer the Lieberkühn's follicles of the normal mucous membrane are seen. From the characters of the ulcer, and the situation of the spaces or alveoli in the muscular coat, there can be no doubt that the stricture is due to a deeply ulcerated malignant growth which has invaded the entire thickness of the wall of the rectum. Such growths are invariably columnar—called carcinomata when primary in the colon—and there is no reason for doubting that such is the present case. It is also well known that carcinoma may produce an exceedingly tight annular stricture of the colon, with very little evidence of new growth owing to the ulceration which accompanies it."

Ballylesson, Belfast.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF PERSISTENT SYMMETRICAL SUBCUTANEOUS FIBROUS NODULES IN AN ADULT, ASSOCIATED WITH MITRAL ENDOCARDITIS.

BY MAURICE EDEN PAUL, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND.

AN able-bodied seaman in the British Navy, aged twenty-five years, came under my care on March 29th, 1896. No history of rheumatism, either family or personal, could be obtained. The patient first noticed the nodules about a year previously; they had been steadily increasing in size and number. He applied for advice because the nodules over the hips pained him when he lay down; otherwise they caused no pain or inconvenience, and he did not regard himself as ill. He was, indeed, the "strong man" of the ship. Over the upper part of each femur, on the outer aspect of the limb, about three inches below the great trochanter, there was a group of nodules, ten or twelve in number, each nodule being about three-eighths of an inch in diameter and a quarter of an inch thick. They were closely packed and felt like beans in a bag. They were not tender. The whole mass formed on each side an elevation about one and a half inches across and one inch high. The symmetry was exact. The skin was moveable over the nodules, and the nodules were moveable over the deep fascia. There were also several nodules irregularly placed on the posterior aspect of each forearm. There was a well-marked mitral systolic murmur, unquestionably organic, but there were no signs of any considerable degree of regurgitation. The rhythm was regular, and there was no increase of dulness to the right of the sternum. As regards treatment I advised counter-irritation and the use of a mixture containing potassium iodide, guaiacum, citrate of potassium, and quinine. The patient was seen by me in the end of March, 1896. A year later the staff-surgeon under whose care he had remained wrote to me as follows: "The man with rheumatic nodules is well and hearty, barring the bruit, which remains, but is not worse. The fibromata were removed where they were giving trouble from their size, and there is no recurrence."

As far as my knowledge goes, this case is unique in the literature of the subject of subcutaneous rheumatic nodules. These bodies occur chiefly in children as part of an attack of acute articular rheumatism, and are usually associated with grave cardiac lesions. Newton Pitt[1] speaks of large, persistent, subcutaneous fibrous nodules associated with arthritis deformans. The evidence of endocarditis in the case I have described led me, however, notwithstanding the anomalous course of the nodules, to regard them as a true rheumatic product. That "rheumatism" can lead to the formation of bodies that deserve the name of "fibromata," and require a surgical operation for their removal, has not, I think, hitherto been recognised.

Nagasaki, Japan.

A CASE OF INSOLATION ACCOMPANIED BY HEMIPLEGIA.

BY ARTHUR F. MESSITER, M.R.C.S. ENG., L.R.C.P. LOND.

ON July 20th, 1896, a healthy boy, aged four years, was out of doors with his father nearly all day long under a burning sun. In the evening the boy "did not seem well," and on the following day he complained of headache. On the 22nd I saw him for the first time. He was drowsy and complained of headache. The temperature was 104° F., the pulse was 120, and the respiration was 18. The tongue was furred; there was no vomiting. Cardiac and pulmonary auscultation revealed nothing abnormal; no abdominal tumidity or tenderness was present. No albumin or sugar was detected in the urine. No joint swelling or pain was present and no scratch or wound was to be found. I ordered three grains of calomel to be administered. On the 23rd the bowels had not acted. The patient was semi-comatose, with a temperature of 104°. An enema was administered with a satisfactory result. On the 24th he was comatose, the temperature being 104·5°. Left facial paralysis was present. The left arm and leg did not respond to stimuli so strongly as the right limbs. During the day the temperature rose to 105·8°, but fell to 103° after the application of an ice-bag to the occiput and the nape of the neck. Nutrient suppositories and enemata of peptonised milk were given. On the 25th and 26th the patient was still comatose; he was breathing quietly, the pulse ranging from 100 to 120 and the temperature from 102° to 103°, rising to 105° on two occasions when the ice-bag became warm or was removed. The bowels and bladder were emptied involuntarily. Rectal feeding was continued as usual. The pupils were neither dilated nor contracted. On the 27th the temperature was 99°. Consciousness was evidently returning. On the 28th the patient was conscious to the extent of speaking intelligently but indistinctly. Owing to his return to consciousness the facial paralysis was seen to be well marked. The eye could be closed with difficulty; the leg could not be moved at all, and the arm only slightly. I was unable to examine the discs for another week owing to his fractious condition; they were normal, and there was no obvious retinal change. Six months elapsed before all traces of paralysis disappeared, and even now he is occasionally noticed to be sleeping with one eye open. He is now (eleven months subsequently to the time of the illness) quite strong mentally and physically.

This case is interesting on account of (1) the gradual onset, (2) the absence of respiratory disturbance, and (3) the occurrence of hemiplegia. Hemiplegia as a complication of heat-stroke must be extremely rare, as I am unable to find any record of it. Dr. Hilton Fagge mentions the case of a sailor who suffered from sunstroke. He was unconscious for some hours, had aphasia for a month, and right hemiplegia for some considerable time. Four years afterwards this man was admitted into hospital suffering from renal dropsy, and died. At the necropsy the arachnoid was seen to be opaque and marked with white spots, and there was an excess of

[1] Transactions of the Clinical Society of London, 1894, vol. xxvii., p. 54; quoted by Archibald Garrod in Twentieth Century Practice, vol. ii., pp. 542 and 543.

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fluid in the brain; the vessels at the base, also, were much diseased. The hemiplegia was, therefore, probably, as Dr. Hilton Fagge points out, an accidental complication depending on pre-existing disease. Surgeon-General Maclean, a man of exceptionally wide Indian experience, in his "Diseases of Tropical Climates" distinctly states that he never saw hemiplegia follow directly on sunstroke.

Epworth, Doncaster.

AN ANENCEPHALOUS MONSTER.

BY SANDERSON MELLOR, L.R.C.P. & L.R.C.S. EDIN., L.F.P.S. GLASG.

A PERFECTLY healthy and comparatively young woman engaged me in the beginning of the present year to attend her in her eighth confinement. My first visit on that occasion was at about 8 P.M. The os was nearly fully dilated; the pains were long and very strong. Through the membranes I felt an uneven, irregular, softish mass, but no bony protuberance of any description. I was told she had been walking about the room since 9 P.M. the previous day. She was becoming exhausted from want of sleep, so I gave her thirty minims of tincture of opium and left her. I was sent for again at 10 o'clock the next morning. Meantime she had dozed for about one and a half hours. The membranes had ruptured and were projecting through the os. I felt something which I likened to the "rim of a cup." She was so worn out that I applied the forceps. Time after time, although the instruments locked, did they slip off. Meantime the fœtus was descending until this irregular mass projected from the vagina. I grasped it with both hands, but finding it impossible to deliver with traction I obtained a piece of "clothes line" and fixing it round the neck, pulled with such force that I thought the head must separate from the body. When the fœtus came away the obstruction was found to be due to the unusual development of the shoulders and upper part of the chest. The head was peculiar. It looked as if it had been arrested in growth from above the orbital ridges in front, and from the level of the protuberance behind. The scalp was intact, the top of the head was quite flat, and the soft pulpy brain could be easily felt. The eyes were extraordinarily large and the eyeballs protruding. The nose was flattened on the face and very broad below. The mouth would not admit the little finger, and the lips were very thick. The spinal column appeared intact. All her previous children were well developed, her sixth and seventh confinements being unusually prolonged. No chloroform was given, and she quickly recovered.

West Malling.

THE NORTH-WEST LONDON HOSPITAL.—The eighteenth annual report of this institution reveals the satisfactory and unwonted fact that not only is the hospital free from debt, but that at the beginning of the year it had a balance in hand of over £2000. The sphere of its work is the somewhat dismal region of Kentish Town, which, if not so poverty-stricken as parts of Westminster or Kensington, yet contains an enormous population to whom the struggle for a respectable existence is very real. During 1896 there were 578 in-patients, as against 683 in 1895, and 17,800 new out-patients, as against 21,227. The decrease in the number of the latter is notable and satisfactory. The hospital is undoubtedly a necessity for the district it serves, and we hope that its satisfactory financial conditions will continue.

WIGAN MEDICAL SOCIETY.—A meeting of the above society was held on June 3rd, the President, Mr. C. T. Street, being in the chair.—The President read his address on the Refusal of Food and Feeding.—A discussion followed, in which Mr. Graham, Dr. R. P. White, Mr. Brady, Mr. Monks, Dr. Rees, Dr. Blair, Dr. Milroy, and Mr. Macdonald took part.—Mr. Street replied.—A cordial vote of thanks was accorded to Mr. Street for his interesting address.—Dr. Benson showed a Radiograph of a Coin Impacted in the Œsophagus, taken by Mr. Thurstan Holland, of Liverpool. He related notes of the case, described the method of removal of the coin (after being lodged for nearly six months), and exhibited it. The child was now quite well.—A discussion ensued, Mr. Brady, Dr. Rees, Mr. White, Mr. Graham, Mr. Monks, Dr. Blair, Dr. Milroy, and the President taking part in it.—Dr. Benson replied.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

UNIVERSITY COLLEGE HOSPITAL.

THREE CASES OF STRANGULATED OBTURATOR HERNIA.

(Under the care of Mr. RICKMAN GODLEE.)

A CASE of obturator hernia was first described by Arnaud; Duverney also noticed its occurrence, but the first clear account of this rare condition was given by Garengeot in the early part of the last century. The frequency with which cases of strangulated obturator hernia end fatally is due in part to the difficulty in diagnosis and in part to the difficulty in treatment. The signs of an obturator hernia are very obscure; the pain in the thigh and knee due to pressure on the obturator nerve and the swelling on the inner side of the thigh are very suggestive when they are present, but, unfortunately, they are very frequently absent. The signs of intestinal obstruction resulting from strangulation of the included bowel are often not at all well marked, and this is probably because the hernia is really in many cases a partial enterocele or Richter's hernia, and the absence of severe symptoms may also account for the delay in applying for treatment. Apparently the small intestine is the most frequent viscus in the sac, but the presence of the right ovary and Fallopian tube has been recorded.[1] As to the treatment to be adopted opinions differ greatly. If the intestine is still viable a good result may follow either a local incision or a laparotomy, but if it be gangrenous the chances of recovery after either operation are very slight. In THE LANCET of last year[2] we recorded a case of bilateral strangulated obturator hernia, in which Mr. W. Anderson successfully operated on both sides by an incision through the pectineus muscle. Mr. W. H. Bennett has published[3] a very interesting case of this form of hernia occurring in a woman seventy-eight years old; he performed laparotomy four days after signs of obstruction commenced and the patient recovered. For the notes of the cases we are indebted to Mr. Douglas Drew, the surgical registrar.

CASE 1.—A woman, aged seventy-four years, was admitted to the hospital on Dec. 11th, 1895. On the 3rd she had been seized with pain in the abdomen, and from that date until admission no motion or flatus was passed, in spite of repeated enemata. She looked older than her stated age and was extremely emaciated. An examination of the abdomen was made shortly after admission—i.e., on the eighth day after the onset of the symptoms. Slight vermicular movement of the intestine was noted, the abdomen was quite flaccid, and nothing abnormal could be made out beyond a small inguinal hernia on the right side, which was readily reducible. A large enema was administered without result, and on the following morning it was repeated without effect. At first it was decided to leave the patient alone, as any operation seemed out of the question; but as her general condition did not get worse, and, if anything, rather improved, though the abdomen became slightly more distended, and she vomited twice, on the second day an exploratory laparotomy was decided upon and performed through an incision in the right iliac region. On opening the peritoneum small intestine presented, and was of a deep red colour and slightly distended. The coil was traced downwards and was found to be adherent in the pelvis. Gentle traction was made upon it and it became loose. On drawing it into the wound it was found to have ruptured transversely, and was in a sloughy condition. It contained solid fæces, some of which escaped into the peritoneum. A second perforation was found three inches lower down. The damaged bowel was clamped, and four inches were excised. The mesenteric vessels were

[1] Von Rogner-Gusenthal, Wiener Medizinische Presse, June 25th, 1893.
[2] THE LANCET, April 4th, 1896.
[3] THE LANCET, May 4th, 1895.

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ligatured, and the ends of the bowel were then secured by continuous silk suture to the edges of the wound, a Paul's tube being inserted into the upper end of the bowel. The patient only survived the operation a few hours.

Necropsy.—At the post-mortem examination signs of early peritonitis were visible. The pelvic peritoneum was injected, and around the right obturator foramen it was almost gangrenous. The tip of the finger could be inserted into the obturator foramen.

CASE 2.—A woman, aged forty-seven years, was admitted into the hospital under the care of Dr. Ringer on March 6th, 1896. The following history was obtained. Eight days previously she was seized with sharp pain in the right groin, which made her feel very faint and was at once followed by vomiting. The vomiting recurred several times the following day and continued until admission. The bowels had not acted after the onset of the pain, but flatus was passed shortly after the onset of the symptoms. She was the subject of chronic constipation, and twelve years previously had had an attack of gall-stones. On admission she did not look very ill. The pulse was 100 and of good quality, the temperature was 96° F., the tongue was red but clear, and the breath was offensive. The abdomen was slightly distended and peristaltic movements were obvious. There was no tenderness, and nothing abnormal could be felt. The rectum was empty, and per vaginam a little tenderness was present on the right side. For two days the treatment consisted of cutting off all nourishment by the mouth, giving enemata and nutrient injections and opium. On the third day, as the bowels had not acted and the abdomen was becoming more distended and vomiting had recurred, exploration of the abdomen was decided upon, and was performed through a median incision below the umbilicus. On opening the peritoneum congested coils of intestine presented. On digital examination the intestine was found adherent around the right obturator foramen, and a small piece had entered the foramen and could not be withdrawn by gentle traction. A hernia knife was passed down and the constriction divided and the bowel drawn up into the wound, when it was found to have given way just above the hernia, some fæces escaping into the peritoneum. On examination a pouch about half an inch in length projected from the side of the bowel; it was deeply congested, but not gangrenous, and had evidently been constricted in the foramen. The peritoneum was cleansed by sponging and the bowel was drawn into the wound and sutured, the opening in it being enlarged. The patient sank a few hours after the operation.

Necropsy.—At the post-mortem examination the coils of small intestine were greatly distended and inflamed, and some lymph was present in the pelvis. The strangulated portion of the bowel was eighteen inches from the cæcum; below the constriction the bowel was collapsed. The right obturator foramen admitted the tip of the little finger, and a hernial sac measuring one and a half inches extended between the obturator externus and the adductor muscles; it was black and gangrenous. The obturator vessels and nerve were situated below and to the outer side. A small piece of omentum was adherent within the sac.

CASE 3.—A woman, aged fifty-nine years, was admitted into the hospital on Dec. 8th, 1896. On Nov. 30th, while sitting in front of the fire, she was seized with severe pain in the right knee, and this was soon followed by abdominal pain. Vomiting occurred soon after the onset of the pain, and persisted throughout. The bowels had not acted, except on the second day after the onset of the illness. On admission the abdomen was found to be much distended, and coils of intestine were visible. There was some tenderness in the right groin, and a small rounded mass could be made out just below the inner part of Poupart's ligament. An operation was at once performed; the incision was situated over the inner part of Scarpa's triangle, and extended from just above Poupart's ligament downwards for three inches, and was placed internal to the saphenous vein. On opening the deep fascia the adductor longus was exposed, and the interval between this muscle and the pectineus defined and opened up. The edges of the muscles were retracted and some fibres of the adductor brevis divided. The superficial part of the obturator nerve was then seen lying over the sac, the latter having come through between the fibres of the obturator externus. The sac was opened; and as the bowel did not appear to be damaged beyond being somewhat congested it was reduced by gentle pressure, the sac being ligatured and cut away. The following morning the patient appeared to be doing well, but in the afternoon she complained of abdominal pain, and shortly afterwards became collapsed and died.

Necropsy.—On opening the abdomen well-marked signs of general peritonitis were present. The small intestines were distended and injected, and here and there flakes of lymph were seen. The omentum was adherent to the right side of the pubis. On separating it, the small intestine was found adherent around the obturator foramen, the part above the seat of constriction was distended and injected, and that below was pale and collapsed. On separating the adherent intestine the strangulated part gave way along the line of constriction for about half an inch. The constriction surrounded a prominent knuckle and involved a little more than half of the circumference; the strangulated portion was of a deep red colour, and did not appear to be gangrenous except where it had given way. The specimen was removed and the vessels were injected. Viewed from the front there was a small protrusion of peritoneum through the somewhat enlarged foramen. The artery was situated below the sac, and was dividing into branches, some of which came out on the inner side and others through the membrane. The two branches of the obturator nerve lay to the outer side. Viewed from the inside the neck of the sac was small, and in depth measured about half an inch. Immediately below it lay the Fallopian tube and broad ligament, the former being drawn down by the broad ligament. On turning the Fallopian tube upwards a second smaller pouch was found, formed by a protrusion of the broad ligament, and was firmly fixed in the sac. The bowel had been protruded through the upper of these two pouches.

Remarks by Mr. RICKMAN GODLEE.—It seems well to record these three cases, though they were all unsuccessful. It will be observed that they were all admitted to the hospital eight days after the onset of the symptoms, and therefore were all very unfavourable ones for treatment. The first patient was so very old and emaciated that she looked more dead than alive, and I thought it was kindest to leave her alone; but when it was found that she remained exactly in the same condition for more than a day I decided to give her a chance. The condition of things was easily made out, and there was no difficulty about the surgical procedure adopted. The operation was delayed in the second case because no diagnosis was possible, and the effect of enemata had not been tried. The third case was easily diagnosed and was operated upon at once. The great ease with which the bowel ruptured in the first two cases, and the difficulty of satisfactorily dividing the stricture from above, determined me to operate on the next case that occurred from outside. The operation in this case was perfectly simple as the patient was thin. Here, as in the other cases, a small part only of the bowel was included in the hernia, and, as in them, was after the lapse of so many days but little altered in appearance. The gentlest pressure of the tip of the finger on the minute knuckle of bowel was enough to make it return into the abdomen, and it seemed fair to hope that the part which had been opposite the neck of the sac might not be gangrenous, but the event showed that this was not the case. It was, of course, impossible to pull the bowel down and ascertain the actual condition of things. I cannot help thinking that if the patient be seen early the right course to pursue is to operate from outside. But if I should meet with another case that has lasted so long as these three I intend to do this and to open the abdomen as well. Supposing the diagnosis has been made, I think it would be best to perform the operation in Scarpa's triangle first and to open the abdomen afterwards; if the bowel then turned out to be healthy enough the wound might be simply closed; but if there were a patch of gangrene corresponding to the stricture the affected part could be excised or an artificial anus could be made as seemed best under the circumstances. If, on the other hand, the diagnosis were only made during the course of the laparotomy I think it would be wisest to expose the sac in Scarpa's triangle, divide the stricture if necessary, push back the bowel, and then pull it up into the laparotomy wound and examine it. I have now pulled it up into the wound in the same way as in the first two cases on three occasions, and in each the result has been the same—namely, the giving way of the gut at the position of the stricture. In performing the operation from outside there appears to be no danger of wounding the femoral vein if the incision be made sufficiently far internally on to the surface of the pectineus; the femoral sheath and all that it contains is then easily pulled outwards out of the way.

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As to which direction is the best for making the section in order to divide the stricture it is difficult to lay down any fixed rule, but I think in the majority of cases it will be safest to make it either directly inwards or forwards and inwards. But should any branch of the obturator artery be injured the double operation will probably render it comparatively easy to secure the bleeding point.

ROYAL INFIRMARY, LIVERPOOL.

A CASE OF INTERMITTENT HEMIPLEGIA.

(Under the care of Dr. A. DAVIDSON.)

THE only condition in which transitory recurring attacks of hemiplegia occur is uræmia, as in a case recorded by Boinet [1] in which a man, aged thirty-seven years, suffered from five attacks of uræmia within a short time; in the first two there were only localised convulsions, in the third he had unilateral convulsions followed by hemiplegia, and in the fourth and fifth attacks the hemiplegia occurred alone. In the following case there seems no reason to suspect a renal origin of the hemiplegia. Dr. Davidson's explanation is extremely ingenious, and is no doubt possible; in its favour is the fact that ultimately the hemiplegia became permanent. Should the case finally prove fatal, it is very desirable that the local lesion should be early and carefully examined.

A watchman, aged seventy-three years, was admitted into ward 10 of the Royal Infirmary, Liverpool, under the care of Dr. Davidson on Jan. 18th, 1897, suffering from left hemiplegia. He had worked on a farm till fifteen years previously, when he came to Liverpool. He always enjoyed very good health. On the afternoon of Jan. 18th, after arranging his lamps, he sat down in his sentry-box before the fire. On trying to get up again he found himself unable to do so; so he called for assistance. Two policeman raised him; he was unable to stand alone, but had no loss of consciousness, either then or at any time. An ambulance was procured and he was brought to the hospital at 6·30 P.M. On admission he was quite conscious. His left side was completely paralysed. The pupils were equal and reacted to light; the upper part of the face was partially weakened on the left side; at the lower part the mouth was drawn to the right side, the articulation was imperfect and mumbling, and the tongue was protruded slightly to the left side. The left arm and leg were totally paralysed. Sensation seemed everywhere normal. The pulse was 76 and regular. Two hours after admission he had regained complete power in his face and limbs. He passed urine without trouble. He seemed somewhat excited, but otherwise was quite well. During the night he had four or five hemiplegic attacks similar to the first, each lasting from about fifteen to thirty minutes, all without loss of consciousness. On the morning of the 19th he was free from any sign of paralysis of the face, arm, or leg. The dynamometer showed the grasp of the right hand as 50 and the left as 40. As regards his general condition, he was a hale-looking old man; the tongue was coated, the teeth were very defective, the appetite was good, the pulse was 76 and regular, the arteries were thickened and tortuous, the heart-sounds were normal; the chest was emphysematous, there were slight cough and expectoration, and the urine was normal. At 12.30 P.M. he was again found to have complete paralysis of the face, arm, and leg of the left side. About 1.15 P.M. Dr. Davidson saw him for the first time. He had paralysis of the left side. He could wrinkle the brow on both sides, and close both eyelids together, but he could not close the left eyelid without the right. The left side of the mouth was immobile. Articulation was only slightly affected. The left arm was quite powerless. In the left leg there was only a very slight ability to move the hip and knee. Sensation was normal. While he was still under examination (1.45 P.M.) he drew Dr. Davidson's attention to the gradual return of power in his left hand, and presently the paralysis entirely disappeared. He could now close the left eye independently as well as the right. He was ordered to have a dose of calomel, and eight grains of bromide of potassium three times a day. During the next twenty-four hours several alternations of paralysis and recovery took place, but the remissions by degrees became shorter and slighter. On the night of Jan. 20th the hemiplegia became almost permanent, and remained so till his removal from the hospital by his friends on the 28th.

Remarks by Dr. DAVIDSON.—I have seen the patient twice since at his own home, the last time in the beginning of June. He remains in good general health and spirits. The pulse is 72 and regular. The arm is completely paralysed, he can just move the fingers; there is no rigidity and no pain except in the shoulder (rheumatic); the leg and face are rather better. He can lift the leg off the bed. There is some tenderness in the thigh. The tongue is protruded straight. The bladder is normal.

This interesting case is unique so far as my experience and reading go. When I related the history lately at a meeting of the Liverpool Medical Society, one of the members, Dr. Kennan, referred to a case of a man with complete left hemiplegia, which disappeared in a quarter of an hour only to return half an hour later and become permanent. One used to hear of "spasm" of cerebral arteries as being a possible cause of temporary hemiplegia; and one can conceive such an explanation reasonable in cases of uræmia, &c. There was nothing to point to that here, or to embolism from the valves of the heart. The explanation which I gave at the time and still adhere to is that a thrombus in the atheromatous cerebral artery became partially detached, and flapped to and fro in the current of blood, occasionally blocking the artery and occasionally leaving the current free. Or, if it was entirely detached and arrested at the next bifurcation of the artery, it might there sway to and fro like a ball valve, until by continued growth it became fixed and a permanent block of the vessel resulted.

[1] Revue de Médecine, December, 1892.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Filaria Loa.—Sympathetic Ophthalmitis.—Blindness following Blows on the Head.—Exhibition of Cases.

AN ordinary meeting of this society was held on June 10th, Mr. E. NETTLESHIP, President, being in the chair.

Dr. ARGYLL ROBERTSON gave an account of Filaria Loa in continuation of a description furnished by him two years previously in the same patient, who had returned to Old Calabar and immediately suffered a return of her former symptoms. There were itching behind the eyes and swellings in the arms, as described by Miss Kingsley as almost universal in the Gaboon district. On one occasion at night the patient felt a bite in the flank, and forthwith extracted a portion of a worm. Movement of a similar parasite was felt under the conjunctiva, and twice incisions were made in the knuckles in quest of one felt moving to and from the arm. Sandflies and mosquitos were sent home and examined by Dr. Robertson and Dr. Manson with a view to finding the intermediate form, but without success. Finally, the patient herself returned, invalided with dysentery and anæmia. Nausea and headache occurred while the parasites were moving about, associated with puffy swellings in the arms. All parts of the body were affected, but especially the scalp; as recently as May 15th, 1897, the parasite was perceived moving near the umbilicus, but could not be secured. The blood, excreta, saliva, and nasal mucus were carefully examined for embryos, but without success. Since the former account of this case was given two instances had been described on the continent, and two were at present under the treatment of Dr. Manson.

Mr. RICHARDSON CROSS read a paper on Sympathetic Ophthalmitis, especially in connexion with Mules's operation of evisceration. He cited several instances in which sympathetic irritation, or ophthalmitis, had followed the operation, the proportion being as high, he said, as 13 per cent. One patient in particular was under treatment of the most watchful and sustained kind for seven months before he happily recovered. In another a black mass at one corner of the stump was mistaken for melanotic sarcoma, but on closer examination proved to be an artificial vitreous of silver which had been inserted ten years previously. Many cases certainly appeared to do well for a time, but sooner or later trouble generally supervened.—Mr. ADAMS FROST referred to the fact that there was a committee at present

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considering the whole subject of sympathetic ophthalmitis. He thought unsuccessful cases—that is, cases in which sympathetic trouble followed—were often those in which delay had occurred between the original injury and the evisceration, giving time for infection to take place before the operation, or else those in which a fistula persisted leaving the channels open for subsequent infection. He cited twelve cases of four years' standing, and others of eight and nine years, without any after-trouble; in one there developed nystagmus in the sound eye after five years, and this was perfectly represented in the artificial one.—Mr. BICKERTON declared his experience in favour of Mules's operation, and referred to published and collected cases, which showed a percentage of 15 sympathetic ophthalmitis after complete enucleation. (These, however, were shown to be picked and more than ordinarily severe cases collected from the point of view of sympathetic ophthalmitis, and not representing the true proportion of the disease following simple enucleation.) He cited a case in which, though the disturbance occurred, it subsided in about ten days, the eye recovering perfectly.—Mr. SNELL questioned whether sympathetic ophthalmitis occurred as frequently as formerly. His experience led him to believe it did not, and he attributed the improvement to the greater care exercised. Though dealing with many cases of injury he enucleated fewer eyes. He thought the percentage of subsequent sympathetic change indicated in the paper a very high one.—Mr. CRITCHETT, Dr. ARGYLL ROBERTSON, and the PRESIDENT all spoke as to the rarity of sympathetic ophthalmitis after complete enucleation. The President said it was an important question in pathology whether the disease occurred in a less intense form after Mules's operation or not.—Mr. TREACHER COLLINS inquired whether the stumps had been carefully examined after removal to see if evisceration had been complete. (Of this there was no record.)—Mr. RICHARDSON CROSS, in reply, said he was sure many cases occurred after Mules's operation even with the strictest antiseptic precautions and often after many years. He preferred enucleation.

Mr. S. SNELL read a paper on Blindness following Blows on the Head. Loss of vision was attributed to fracture extending into the foramen rotundum, and was the result generally of injuries to the front of the cranium; but Mr. Snell showed that a similar condition not infrequently resulted from injuries to any part, and cited several instances of blows on different parts of the skull which led to immediate loss of vision in this way.—Mr. BICKERTON spoke of the remote as well as the immediate effects of injury to the head in producing blindness, and referred to the interest connected with cycling accidents and insurance. He mentioned the case of one man who compounded with an insurance company for £50 as compensation for such an accident which later led to complete blindness.—Mr. LINDSAY JOHNSON spoke of the effects of injury to the head in animals followed by blindness, and quoted instances in a crane, a leopard, a bear, and a kangaroo in which he had subsequently observed white atrophy of the disc.—Mr. CRITCHETT mentioned an instance in which a heavy blow above the nose was followed by a reduction of vision to $\frac{2}{70}$, and subsequently to bare perception of light. The case was the subject of a lawsuit. In a case recorded at the time in "Holmes's System of Surgery" the opinion was expressed that loss of vision might follow late from such an injury.—The PRESIDENT discriminated between immediate and remote loss of vision in connexion with head injuries; of the first there could be no doubt, but the second was liable to great difference of opinion and interpretation.

The following cases were shown:—

Mr. J. R. LUNN: Bilateral Facial Palsy, Deafness, and Ulceration of the Corneæ.

Mr. LUNN and Mr. C. D. MARSHALL: Foreign Bodies embedded in the Orbit.

EDINBURGH OBSTETRICAL SOCIETY.

Report on Specimen—Culture, Diagnosis, and Serum Treatment of Puerperal Fever—Morphology of the Vaginal Segment of the Genital Tract.

A meeting of this socieiy was held on June 9th, Dr. ALEXANDER BALLANTYNE, President, being in the chair.

The specimen shown at last meeting by Dr. KYNOCH was reported upon by Dr. HART, Dr. HAULTAIN, and Dr. BARBOUR. They found it very difficult to say whether it was a case of interstitial gestation or of rupture of the pregnant uterus. The clinical history suggested the former, while the situation of the rent, the marked hypertrophy of the uterine wall, and the appearance of the Fallopian tube were in favour of the latter view.

Dr. F. W. N. HAULTAIN read a paper on the Culture, Diagnosis, and Serum Treatment of Puerperal Fever. He gave detailed accounts of three cases. The first was a primipara where help was needed in the labour by the application of low forceps. The puerperium for the first ten days was normal, except that the strength was not regained with the usual rapidity. On the twelfth day she fainted on attempting to rise, and for a fortnight her pulse was quick and there was a rise of temperature to about 100° F. On the twenty-sixth day she first complained of severe pain and swelling in the right thigh, this rapidly passed off; four days afterwards pain occurred in the left thigh and calf, associated with considerable swelling and severe constitutional symptoms; vomiting, sweating, and faintness. Dr. Haultain then saw her. Pelvic examination revealed nothing abnormal except a subinvoluted uterus and a slight swelling in the left broad ligament. The lochia were a little offensive, and a culture was made of the discharge from the interior of the cervical canal; one was also made from the blood drawn from the finger. The former showed a typical pure culture of the Löffler bacillus; 10 c.c. of the diphtheritic antitoxin were injected with marked beneficial results. On two successive days a similar quantity of serum was injected as the temperature again slowly rose. After the third dose the temperature fell to normal and she had an uninterrupted recovery. No case of diphtheria was present in the neighbourhood and the attending practitioner had not seen a case of diphtheria for some weeks previously, but the drains were found to be in an insanitary state. The second case showed marked signs of fever forty-eight hours after the labour. The medical man had used intra-uterine douches, but without benefit. Dr. Haultain saw her on the fifth day. She then showed signs of marked septic infection, the face had a leaden appearance, and there were erythematous patches on the abdomen. A culture of the discharge, similarly taken, was again made, and examination showed a mixed growth of streptococcus and bacillus coli. Anti-streptococcic serum (10 c.c.) was injected, followed by a similar quantity the next day, and 30 c.c. on the third day, but no beneficial effect resulted. The patient developed an intractable diarrhœa; her left knee-joint became extremely painful; pulmonary complications and parotitis set in, and she died on the tenth day. A culture was made from the blood of the finger twenty hours before death, and a pure growth of the bacillus coli was found, which from its reactions was found to be extremely active and virulent. The patient was a coachman's wife and was confined in a room immediately above the stable. The third case had been attended by an unskilled woman, and showed signs of fever on the third day. Dr. Haultain saw her four days afterwards. The vaginal discharge was offensive. The culture showed many streptococci. Anti-streptococcic serum (10 c.c.) was injected; the uterus was washed out with a 1 in 40 carbolic lotion and packed with gauze soaked in the antitoxin. On the next day a further 10 c.c. were injected. The temperature fell on both occasions. No further rise of temperature occurred, though the cervical discharge showed many streptococci. The uterus was washed out on the two succeeding days, and further examination showed the discharge to be free from septic organisms. On reviewing the cases, the first one was evidently a case of intra-uterine diphtheria, and the diagnosis would have been impossible except for the bacteriological examination. The second case showed features of interest in the presence of mixed infection in the culture from the cervix and in the pure culture of the bacillus coli from the blood. Clinically, the violent diarrhœa, the erythematous patches and the absolute inefficiency of the antistreptococcic serum, were of value. The third case was one of those simple cases of toxin poisoning which usually yield to antiseptic intra-uterine douching, the focus of the disease being thus removed. Still it must be noted that intra-uterine douching had almost no effect until combined with the serum treatment. In all cases of puerperal fever the culture method of diagnosis was much to be preferred to all others. The microscope alone was helpful, but no idea could be obtained of the vitality or virulence of the organisms. In the prognosis, a

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mixture of germ infection in a case was of serious import as there was then increased virulence. The treatment of these cases could only be scientifically met by previous culture diagnosis to detect which toxin was the main cause of the disease. For preventive treatment Dr. Haultain strongly urged the necessity of using a douche after labour in every case, and recommended 1 in 40 carbolic lotion, which had been found more efficient in experimental research than sublimate lotion. Dr. HART, Dr. MILNE MURRAY, Dr. BARBOUR, Dr. MCVAIL, Dr. KEPPIE PATERSON, Dr. JARDINE, and others took part in the discussion, and in reply as to the method in use of obtaining cultures, Dr. HAULTAIN stated that he passed a Fergusson's speculum and exposed the cervix. A platinum wire, previously rendered aseptic by heating in a flame, was passed into the cervical canal and some discharge obtained on it. This was then dipped into the agar in a prepared test-tube, the tube at the time being held bottom upwards to prevent dust and germs from falling into it. A plug was inserted and the tube transmitted to the Laboratory of the Royal College of Physicians of Edinburgh.

Dr. BERRY HART then read a paper on the Morphology of the Vaginal Segment of the Genital Tract. The conclusions arrived at were as follows:—1. The human vagina is derived from the ducts of Müller only in its upper two-thirds; the lower third is due to a blending of the upper portion of the uro-genital sinus of the Wolffian ducts. 2. The hymen is formed between the third and fourth months of fœtal life and is due to the development of two bulbs of epithelium from the lower ends of the Wolffian ducts. These coalesce, break down in the centre, and with an upward involution from the uro-genital sinus form the hymeneal opening. 3. The "calliculus seminalis" of man is the analogue of the lower third of the vagina. 4. In the marsupials the lateral canals are the persistent Wolffian element, and the central blind pouch is the Müllerian element.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF MEDICINE.

A Case of Charcot's Disease.

A MEETING of this section was held on May 21st, the President, Dr. G. F. DUFFEY, being in the chair.

Mr. CONOLLY NORMAN related a case of Charcot's Disease, exhibited the patient, and also exhibited skiagrams showing the condition of the bones.—Professor BENNETT said he thought that the point was the nature of the change in the joints. Was the case to be regarded as a variation of chronic articular rheumatism or a distinct disease? His knowledge of Charcot's disease was very small, he said, having only seen one specimen in Dublin. He had seen Charcot's specimens exhibited in London at the late Congress. The destruction of bone was specially great in Charcot's disease—much greater than in chronic articular rheumatism. He was inclined to think that the disease was essentially the same as chronic articular rheumatism in pathological detail, except that there was a great deal of effusion. As a rule, chronic articular rheumatism was in this country attended with effusion, but not so in France, as proved by the French term applied to the disease—*arthrite sèche*.—Dr. FINNY said that in his limited experience of Charcot's disease he had not found the cases quite the same as Mr. Norman's. The effusion in the joints which he had seen was very much greater, and the backward movement of the leg was one of the remarkable features. He had not himself found in neuritic cases that motility in the joints to which Mr. Norman had referred. He was very much in a difficulty as to the disease being tabetic, because of the mental condition of the patient, and it was not easy to test for knee-jerk. If it was a case of tabes it was interesting to note that the patient was unaffected in the upper limbs; of course, the disease might be limited to the lower extremities for a long time, but there seemed to be none of the other occasional symptoms. The case was one which, he was sure, must remain for a certain time in an unknown category.—Mr. NORMAN, in reply, said that everyone was familiar with the doctrine that Charcot's disease was merely a variety of chronic articular rheumatism. He thought, perhaps, that a truer view to take was that some nervous disorder with which they were at present unfamiliar was associated with chronic articular rheumatism. With regard to the absence of backward displacement to which Dr. Finny had referred, he thought it possible that the condition of disturbance in the joints had been arrested before the customary destruction of the posterior ligaments. He could not say how long the condition had lasted, save that it did not exist in 1890, but did in 1896, and according to the patient's own statement the disease would have commenced in 1895. The only sign of tabes which she exhibited—excepting the condition of her legs—was the Argyll-Robertson phenomenon. There was a great deal of anæsthesia still in her legs, which, of course, was in favour of alcoholic neuritis. He thought it likely that the condition was still undescribed.

Dr. KNOTT read a paper on a Fatal Case of Alcoholism.

Reviews and Notices of Books.

An American Text-book of Physiology. Edited by W. H. HOWELL, M.D., Professor of Physiology in the Johns Hopkins University, Baltimore. Philadelphia: W. B. Saunders. 1896. Pp. 1052.

IT is almost a common-place to remark that physiology has nowadays grown to such an extent that no one man can be perfectly conversant with all its branches. Most text-books written by a single individual are distinguished by special excellence in one particular branch of the subject. The present volume constitutes practically a new departure in physiological text-books on the lines which have already proved successful in medicine and surgery in the "Systems" which have appeared on those subjects. It is written by the leading physiologists of America, each undertaking that branch with which he has special acquaintance. The merits and disadvantages of this plan have been discussed often enough; the results in this case are excellent, and Professor Howell is to be congratulated on the editorship of a most valuable and comprehensive series of monographs. The wise encouragement afforded to pure science in America is bearing fruit in many ways, and in none more conspicuously than in the excellent text-books which from time to time appear in that country. This book professes to be an elementary text-book on physiology; its somewhat alarming bulk may well terrify the student, but its value as a work of reference for the physician or pathologist is very great.

Professor Howell himself contributes a thoughtful and deeply interesting introductory chapter, in which, while admitting the physico-chemical nature of the majority of vital processes, he shows himself fully alive to the difficulties of a purely material explanation of the phenomena of life. From the same pen are the articles on Secretion, on the Chemistry of Digestion and Nutrition, on the Movements of the Alimentary Canal, Bladder, and Ureter, and on the Blood and Lymph, all of which show a deep and thorough acquaintance with the subjects in question and a remarkably lucid power of exposition. Dr. Warren P. Lombard, of Michigan, writes on the General Physiology of Muscle and Nerve and on the Physiology of the Special Muscular Mechanisms—articles which are of great value and clearness. The subject of the circulation is admirably dealt with by Professor Curtis, of Columbia University, and Dr. Porter, of Harvard. Professor Reichert, of Pennsylvania, treats of Respiration and Animal Heat in thorough and masterly articles. Professor Donaldson, of Chicago, one of the greatest authorities on neurology, writes on the Physiology of the Central Nervous System in a peculiarly admirable article, which should form for many years a standard contribution to the subject. Vision is dealt with by Professor Bowditch, of Harvard, and the other special senses by Professor Sewall, of Denver. Dr. Lee, of Columbia University, treats of Reproduction, while Professor Graham Lusk, of Yale, contributes the section on Animal Chemistry.

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The book is excellently printed and well indexed. It is impossible, in the limits of a review of this kind, to discuss the several sections of so large and important a work in adequate detail, and we have preferred not to attempt it, though we have tested the book by daily use. We can commend it most heartily, not only to all students of physiology, but to every physician and pathologist as a valuable and comprehensive work of reference, written by men who are of eminent authority in their own special subjects.

Twentieth Century Practice: an International Cyclopædia of Modern Medical Science. Edited by THOMAS L. STEDMAN, M.D., New York City. Vol. VII. Diseases of the Respiratory Organs and Blood, and Functional Sexual Disorders. London: Sampson Low, Marston, and Co. 1896.

THIS is a uniformly good volume. Every article is full and clear and practical. No better idea could be obtained of the deservedly high position taken by American writers in medicine than by reading the seven American contributions to this volume. Dr. Herbert Whitney, of Denver, devotes 126 pages to a thorough account of Diseases of the Pleura. He is particularly happy in his description of the mechanical conditions at play in pleural effusion and pneumothorax. In discussing displacement of the heart and displacement of the mediastinum in comparatively slight effusions he writes: "The mediastinum, too, cannot remain unaffected. Usually under the equal negative pressure of both pleural cavities, it is now subjected to an increased relative pressure upon the side containing fluid, and much more slightly in the opposite direction. This fact is of vital importance as explaining the early displacement of the heart which may occur in pleuritic effusion. Certain authors (Powell, Garland) have laid great stress upon the assertion that the heart is not pushed towards the well side by the accumulating fluid, but drawn over by the opposite lung. The point does not appear to be well taken. The mechanism of the displacement is clear; and since it is quite evident that the increased unilateral pressure would compel a movement of the mediastinum independently of the well lung, it can hardly be said to be drawn over by the latter." In contrasting the mobility of the fluid in pneumothorax with its fixity in a case of pleural effusion Dr. Whitney sums up thus: "(1) That very large effusions are immoveable; (2) that moderate effusions do show a slight change after a lapse of several minutes; and (3) that the extent of this change rarely amounts to more than a single intercostal space. As to small effusions statements are meagre. ..... I myself have never been able to detect the slightest change in the position of a small effusion." Dr. Whitney's account of vocal fremitus in pleural effusion is not quite satisfactory. Among the many pitfalls in the diagnosis of pleural effusion, the absence of tactile vocal fremitus remains perhaps the most reliable of guides. There are a few cases where with large effusions tactile vocal fremitus is not lost, but in an overwhelming majority it is absent. "Few signs of effusion are more valuable than absence of tactile vocal fremitus. ..... Still, it is not infallible. ..... In a large effusion fremitus is usually considerably increased over the lung because of its solidified condition" (p. 28). This last sentence is certainly at variance with facts. The various forms of empyema and their treatment could not be better summarised. Dr. Whitney states that pulsating pleurisy is "found only when the empyema is upon the left side." This is, of course, true of the great majority of cases, but there are some exceptions.

Dr. Franz Riegel, of Giessen, amplifies and brings up to date his article on Bronchial Asthma in von Ziemssen's "Cyclopædia of the Practice of Medicine."[1] The most interesting pages are those in which he discusses the method of formation of the Curschmann spirals, tracing them to two factors—(1) the viscidity of mucus; and (2) the "corkscrew-like course" of the fine bronchial tubes as demonstrated by Hoffmann. He adopts Gollasch's theory "that Leyden's crystals are crystalline derivatives of the eosinophile cells," and quotes certain facts which give support to this view. The increase in the number of eosinophile cells during an attack of asthma which has been asserted to exist by some observers is not confirmed by all who have investigated this question. Einthoven's experiments are held by the author to prove definitely that the theory of spasm of the bronchial muscles is correct. Dr. Riegel gives a well-balanced account of the treatment of asthmatic patients. Dr. Fletcher Ingals, of Chicago, contributes a good short chapter on Hay Fever, the greater part of which is devoted to treatment. He illustrates by some diagrams the good effects obtained by cauterisation of the nasal mucous membrane between the attacks. Only eight and a half pages are given to Dr. Main for Diseases of the Mediastinum—obviously a very inadequate space.

The longest and most important chapter in this volume is that on Diseases of the Blood, by Dr. Alfred Stengel, of Philadelphia. It extends over 300 pages and is admirable from beginning to end. Ample descriptions are given of all the methods best suited for thorough examination of the blood, and full accounts of the different abnormal conditions. The use of iron in chlorosis and the method of its action afford a constant source of discussion. Dr. Stengel sharply criticises Bunge's theory "that the iron administered to chlorotic patients proves efficacious only by entering into combination with the sulphuretted hydrogen developed in excess by intestinal putrefaction, and thus permits the ferruginous nucleo-albumin of the food to be absorbed." He brings forward much evidence, some of it new, to show conclusively that Bunge's hypothesis is only very partially if at all true. It has been found "that the administration of sulphide of iron itself proves beneficial in chlorosis; that substances quite as prone to enter into combination with sulphur do not exercise the same influence, while other substances, notably arsenic, and other measures of treatment having no influence upon processes of intestinal putrefaction, do have a beneficial effect. Finally, experimental investigation has shown that there is no evidence at all of intestinal putrefaction in many cases of chlorosis." Dr. Stengel falls back on the somewhat vague but probably true view that "iron acts as a direct stimulant to the hæmopoietic organs" (p. 356). The more unusual "diseases of the blood" are very well described. Dr. Jules Comby, of Paris, has a good article on Rickets. The chapters on the disorders of Menstruation by Dr. Cushing and Dr. Cumston of Boston, and on the Functional Disorders of the Male Sexual Organs by Dr. Charles Allen, of New York, are full of facts and common sense. The last chapter, by Dr. French, of Cincinnati, on the Examination of the Urine, extends over 120 pages and is very thorough. In describing the occurrence of the bacillus tuberculosis in urine some mention should be made of the liability to error produced by the presence of the smegma bacillus, the staining reactions of which are so similar.

The bibliographies throughout are excellent. The volume does great credit to all concerned.

[1] New York edition, vol. iv., 1876.

The Procedure in Accident Inquiries and Investigations According to the Law of Scotland. By H. H. BROWN. Edinburgh: T. and T. Clark. 1897. Price 7*s.* 6*d.*

IN this book an endeavour is made to bring into one view the various enactments relating to the subject mentioned in the title. A large number of Acts of Parliament deal, some with one part, some with another, of the matter in question, and Mr. Brown has performed a very useful service to his brother officials and other persons concerned with the

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administration of the law by collecting these various statutes and grouping them in such a way as to render them mutually illustrative. The book deals with the law of Scotland only; and it is much to be desired that some competent person may supplement the present work by a similar *résumé* of the law and formulas applicable to England and Ireland. Mr. Brown points out with much force that when an accident happens with the suddenness characteristic of such events any loss of time in instituting the necessary investigation is apt to be serious. A book such as he has produced is calculated to have a marked effect in minimising such loss of time; for the various officials who are called upon to conduct such investigations depend much upon one another for notice of material facts, and whatever tends to facilitate the giving of such notices must serve in equal measure to accelerate the progress of investigation.

A mere glance at Mr. Brown's book suffices to show that the course of legislation has resulted in extremely complicated machinery. It is by no means a rule that a scheme which looks complicated on paper must prove unmanageable in working, and having regard to the great variety of the circumstances in which industrial accidents occur we are not disposed to argue for any strictly unified system of investigation. The matter of prime importance is that the inquiry should be entrusted to some competent person on the spot, and this condition can only be satisfied by taking advantage of existing machinery in a manner that is quite incompatible with unity of plan. But this condition makes the need of a text-book such as this volume supplies quite imperative.

The plan of the book is to split up the subject into departments, and accordingly separate chapters are devoted to accidents in mines, in factories, on railways, on board ship, from boiler explosions, from explosive substances, and so forth. This plan is excellent, and the various chapters, being written by a practical man and copiously illustrated with official and other necessary forms, are eminently helpful. Altogether it is a very useful book which may be confidently recommended to procurators fiscal, factory inspectors, certifying surgeons, and others concerned in the investigation of industrial accidents.

LIBRARY TABLE.

Diagnostik der Inneren Krankheiten auf Grund der Heutigen Untersuchungsmethoden. Ein Lehrbuch für Aerzte und Studirende. Von Dr. OSWALD VIERORDT. Funfte verbesserte und vermehrte Auflage. Leipzig: Verlag von F. C. W. Vogel. 1897. Preis 14 Mk. (*Diagnosis of Internal Diseases based on Modern Methods of Examination.* A Text-book for Practitioners and Students. By Dr. OSWALD VIERORDT. Fifth edition, improved and enlarged. Leipzig: F. C. W. Vogel. 1897. Price 14*s.*)—This is a standard work. Its author is the Professor of Medicine at the University of Heidelberg, and the popularity of the text-book is evident from the fact that five editions have been called for within nine years. The systematic manner in which the subjects are treated and the clearness with which the signs and their import are described sufficiently account for this appreciation. That it has been brought up to date is evident from the inclusion in it of details concerning the serum test for typhoid fever, which is admitted by the author to be of very high value. A noteworthy feature of the book is the section devoted to the diagnosis of diseases of the nervous system, introduced by remarks on the topography of the brain, the paths of motion, sensation, and the special senses, and the facts bearing on the locality of lesions. The various disorders are described under the heads of psychical disturbance, sensory and then motor derangements, muscular atrophies, spasm, and contractures. The reflexes are next considered, and then the electrical examination of paralysed muscles. There is a very detailed consideration of aphasic conditions, and a description of the derangements of the various systems in nervous disease. More space might with advantage have been devoted to the use of the ophthalmoscope, which is relegated to an appendix, together with laryngoscopy, rhinoscopy, and otoscopy. The work in its earlier edition was translated into English, and it certainly ranks well in the large and ever-increasing series of books on diagnosis.

Vorlesungen über Allgemeine Pathologie. Von Dr. M. LÖWIT. Erstes Heft. Die Lehre vom Fieber. Jena: Verlag von Gustav Fischer. 1897. Preis 5 mk. (*Lectures on General Pathology.* By Dr. M. LÖWIT. Part I. The Doctrine of Fever. Jena: G. Fischer. 1897. Price 5*s.*)—Whoever undertakes to discuss the subject of fever has a formidable task, for there are few subjects in pathology which have received so much attention, or upon which, in spite of this, there remains so much that is uncertain. Dr. Löwit, the Professor of General and Experimental Pathology at the University of Innsbruck, is well qualified for this work, and in this first instalment of his lectures enters with commendable zeal upon his labours. The reader of these thirteen lectures will find them teeming with information and a wide knowledge of the researches of those who have contributed to the subject. It is clearly shown that the conception of fever means much more than mere increase in body temperature, the disturbance of the heat mechanism being only one, if an essential one, of the processes initiated by the causes of fever. The lectures pass from the consideration of the phenomena of animal heat, of the temperature of the body and its regulation, to the consideration of fever and febrile temperatures, the causes of fever, its stages, the metabolic changes associated with it, the changes in the blood, the disturbances in circulation, respiration and digestion, and the anatomical lesions to which it gives rise. The monograph is dedicated to the memory of Cohnheim, whose masterly volume of lectures form, Professor Löwit says, a milestone in pathological science.

JOURNALS AND REVIEWS.

THE May number of the *Veterinary Journal and Annals of Comparative Pathology* contains an essay which partakes rather of the nature of a class lecture than an essay read before the Edinburgh Veterinary Medical Society, on Laryngismus Paralyticus of the Horse. The reports of societies occupy a very large proportion of this number of the journal. A continuation of the experimental and clinical study of the Aspergillus fumigatus and a few extracts and notes make up a less interesting number than usual. The June number contains a note on Cashaw Poisoning by G. Randolph Abrahms, a form of poisoning induced in horses, mules, and cattle by one of the acacias, the Prosopis juliflora, found in Central America, from Mexico to Guayaquil. Then follow notes, editorial articles, and extracts from foreign journals, with notes and news.

In the *Veterinarian* for May are a number of original papers, amongst which the most interesting is an investigation into the Cause of Louping-ill, by Mr. R. Greig Smith, and Mr. Alexander Meek, the Durham College of Science, Newcastle-on-Tyne. The authors do not attempt to go into the history of the subject, but they approach it from the point of view that louping-ill is the result of some infection with pathogenic bacteria through the agency of the sheep-tick. The experiments as given by the authors are as yet very incomplete. The organisms that are described appear to be scarcely more pathogenic than those met with in utrefying substances; the

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authors, however, announce that they intend to return to this question in the coming season and to submit the problem to the test of a practical field experiment. Veterinary-Captain R. W. Burke contributes a paper on Kamri or Paraplegia, or partial paralysis, a disease usually accompanied by a partial loss of sensation which may be due, the author considers, to cold, dietetic causes, and to surgical conditions, in the latter case being reflex in character. Veterinary-Captain Burke also contributes a postscript on Surra, in which he maintains, against Dr. Lingard, that there is practically no difference between the surra of horses and cattle and malarial fever in man. Mr. John A. W. Dollar contributes a *résumé* on Roentgen Photography. The Month's Progress contains a number of abstracts of interesting papers, whilst the Proceedings of Societies for this month occupy a space of 134 pages, and some of the discussions are of considerable interest. The June number contains a note on Pseudanthrax in Meat Meals, by Mr. R. Greig Smith, and Mr. J. Arthur Thomson contributes a short paper on the Artificial Insemination of Mammals and one on Rut or Œstrus. The other original articles are one on Swine Fever and its Prevention, by Mr. George Green, and the Prevention and Suppression of Contagious Diseases of Animals, by the late Professor Walley, in which he deals specially with pleuro-pneumonia and anthrax, and then describes the specific eruptive fevers and infective granulomata as diseases disseminated by contagion and infection, taking as his examples of the first cattle plague, variola, foot and mouth disease, and swine fever, and of the second glanders, farcy, and tuberculosis. Professor Walley's conclusions will be of interest from the point of view of those who are engaged in dealing with cattle. A number of Clinical Cases and the Month's Progress, including a good abstract of Dr. Calmette's paper on Snake Poison and Immunity, which appeared in a recent number of the *Annales de l'Institut Pasteur*, are recorded. A complete list of the questions set at the May examination for the diploma of the R.C.V.S. is given; also an account of the meetings of the various veterinary societies.

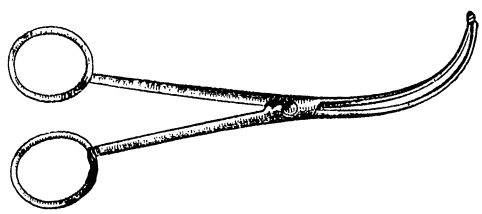
The Ophthalmic Record. Vol. VI. Edited by CASEY A. WOOD, M.D., of Chicago, and many Leading Ophthalmologists of Nashville, Philadelphia, New York, Milwaukee, San Francisco, Omaha, and other American cities. Clark-street, Chicago: L. D. Pierce. Price, annual subscription, 14*s*. 1897.—We have received several numbers of this journal for the present year. Each number contains original articles, reports of the meetings of societies, reviews, editorial comments, and correspondence. Amongst the more important original articles may be mentioned one by Dr. Edward Jackson on the Location of Opacities near the Posterior Pole of the Lens by means of the Corneal Reflex, in which advantage is taken of the relative rapidity of movement of the opacity across the pupil as compared with that of the corneal reflex, which of course represents one of the radii of the corneal curvature. Another is written by Dr. Louis Lautenbach, of Philadelphia, discussing the influence of nasal disease in modifying the quantity and axis of corneal astigmatism. He thinks this is to be explained by the intimate relation existing between the blood-vessels of the nasal cavities and those of the eye and its appendages, especially their anastomoses, the direct mucous connexion of these organs through the ductus nasalis, and their intimate nervous relations. Another article by Dr. Francis Valk, of New York, deals with the curvature of the cornea in reference to the refractive condition of the dioptric apparatus in the two principal meridians, and Dr. Robert Sattler, of Cincinnati, contributes a good paper, with illustrations, on Sarcoma of the Orbit. In addition to these and other original articles there is a well-executed translation of Dr. Th. Gelpke's article entitled "Study of an Epidemic of Acute Purulent Ophthalmia and of its Cause, the Bacillus Septatus." The journal is well got up and reflects credit on the editors and publishers.

Annals of Ophthalmology. Edited by Dr. CASEY A. WOOD, Dr. CHARLES MAY, Dr. WENDELL REBER, Dr. H. V. WÜRDEMANN, and Dr. ALBERT HALE. Vol. VI., No. 1. January, 1897. St. Louis, Mo: Parker. Price, $1.25=5*s*.—This part contains a considerable number of original articles and presents a good feature in giving abstracts of current ophthalmological literature in American, English, Spanish, German, French, and Italian journals, as well as reports of societies. Amongst the more interesting articles is one by Dr. George M. Gould, of Philadelphia, recommending the use of test-cards with black background and white letters. Dr. F. C. Hotz, of Chicago, has adopted skin-grafting in cases of pterygium when the wound is large with good results in four cases. Dr. Alex. W. Stirling, of Atlanta, Georgia, continues an essay on Glaucoma, chiefly dealing with the character of the cupping of the disc observed in this disease and the consideration of the various theories that have been advanced in regard to its etiology. Dr. Alexander Duane, of New York, supplies a reprint of his prize essay on a New Classification of the Motor Anomalies of the Eye based on Physiological Principles. Lastly, Dr. F. W. Marlow, of Syracuse, gives Clinical Reports of Central Lesions with Eye Symptoms, which are interesting.

New Inventions.

IMPROVED TRACHEA FORCEPS.

THE accompanying illustration represents a pair of curved trachea forceps designed by M. D. Harmer. They will be found to be of much use in removing such material as membrane from a trachea without getting into the operator's light. They will also be useful in removing foreign bodies



from the ears, nose, and throat, and also may be used as sinus forceps in those cases where the ordinary straight forceps are found to fail. Messrs. W. H. Bailey and Son, of Oxford-street, W., are the makers.

A. M. C. GEDDES, M.B, C.M. Edin.
Nurses' Home, Howard's-road, Plaistow, E.

IMPROVED CLIP FOR PERFORMING CIRCUMCISION.

FOR performing the operation of circumcision in Bombay the Mussulman operators use a piece of split bamboo and a sharp razor; the prepuce being pulled through the slit, it is rapidly cut off with the razor, and the results are very good. Messrs. Matthews Brothers (10, New Oxford-street, W.), have made for me a somewhat similar clip or shield, which, being of metal and easily adjusted, is, I find, superior to the above-mentioned simple contrivance, and it is easily cleaned. It is placed in front of the glans penis in a slightly sloping direction, by which too much loss of skin from the under part of the penis is prevented.

W. K. HATCH, F.R.C.S. Eng.,
Senior Surgeon to the Jamsetjee Jejeebhoy Hospital, Bombay

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THE LANCET.

LONDON: SATURDAY, JUNE 26, 1897.

THOSE of us who were fortunate enough to witness the memorable ceremony of Tuesday last—and it is believed that upwards of one million and a half of persons enjoyed the privilege—saw a sight of unparalleled importance as well as of splendour that it will be hard in the future to outdo. The appearance of the great procession, its length, its order, its wonderful wealth of colour, the historic character of its constituency, its precision of march, and the stirring melody of its accompaniment, have all received due descriptive justice from the great journals of the day, so that to attempt to add to the fulness of phraseology and the completeness of description with which the pageant of the Diamond Jubilee has already been vividly brought before the notice of the world would be as unnecessary as, in our belief, it would be impossible. But while we know that those of our readers who were not actual spectators have since become so familiar with the story that they, as much as the more fortunate section of the community who saw and heard, do not require from us any details of the procession, we think it well to draw just one simple lesson from the day's proceedings, because we believe very implicitly that it is almost impossible to overrate the influence that the QUEEN'S magnificent journey through her great capital may have upon the community.

Beyond all doubt the Jubilee procession opened the people's eyes, their mental eyes as well as their physical. To many the convincing proofs of the wealth, of the power, and of the far-reaching influence of our nation must have appealed with all the force of novelty. It was a veritable revelation. They knew their geography perhaps, but certainly they had never heeded its significance. They had read of distant dependencies and of colonial appointments, but all these things were merely words to them. Of that great entity the Empire they had the most shadowy notions. Therefore, when the splendid Indian soldiers were seen in procession with the flower of the British army, when the Canadian and Rhodesian horse mingled with the Artillery from Trinidad and Jamaica, with the Sikhs from Malay, the Dyaks from Borneo, the Hong-Kong Chinese Police, and the Haussas from the Gold Coast, an object lesson of the most clear significance was at once supplied where it was most wanted. No reams of fine writing on the abstract beauties of unity and the strength thereof, no amount of argument upon the practical advantage of free trade between mother and daughter, no splendid stories of pioneering achievements, no architectural palaces for the collecting and labelling of produce or the housing of archives, and not even the magical swing and impassioned patriotism of Mr. RUDYARD KIPLING'S verse have separately or together furnished such a justification of the necessity of Imperial Federation as was furnished by the Jubilee procession. A justifiable, reasonable pride fills the breast of every man to-day beneath Queen VICTORIA'S sway at the thought that he belongs to so great and so successful a Crown and serves so great and so good a Mistress. And the wide prevalence of such a feeling is true Imperial Federation, a feeling which has recently been glowing with unusual fervour, but which is now flaming. Upon this feeling those capable of reading the times rely not only to produce results that will be pleasing to our patriotism, but results that will be for the lasting good of the world at large.

When all round either hemisphere the British nation joins hands and, from Premier in Downing-street to policeman in Hong-Kong, from Commander-in-Chief in Pall-mall to Haussa on the Gold Coast, works on a noble and liberal scheme for order, justice, and goodness, then will the real sweets of Imperial Federation be tasted; and he would be a bold man who could set any exact limit to the stride that was taken last Tuesday afternoon towards so noble a consummation.

THE President of the General Medical Council and certain of his colleagues are expecting shortly to have an interview with the President of the Local Government Board on the subject of the acceptance of loose information of the cause of death supplied by unqualified practitioners of all sorts. An inquest is reported in the *Cornish Telegraph* which illustrates in a very striking manner the evils of unqualified practice, the audacity of unqualified practitioners, and the appreciation by jurymen of a registrar who has the good sense to decline a certificate of death from such persons. The coroner was Mr. E. L. CARLYON. The subject of the inquest was the death of Mrs. MARY MARTIN, and the unqualified practitioner who took upon himself the responsibility of attending her and certifying the cause of her death was Mr. SAMPSON TAYLOR ROWE, of Redruth, chemist and surgeon dentist, who had no medical degree, but appended the letters Ph.D. to his name, and explained that the title was got from America, and that "it was a scientific degree." The case is further interesting at this moment as showing how effective little pretences are in the case of the less intelligent classes of the community to convey the impression of full qualification and that over a very lengthened period of years.

We may state the facts elicited a little more fully. MARY MARTIN, aged seventy-two years, a delicate woman, was taken ill on a Tuesday, and died on the following day. She was attended in the meantime by Mr. ROWE, who gave the following certificate:—

"Redruth, June 2, 1897. This is to certify that Mary Martin, aged 72 last birthday, died on the 2nd instant from paralysis of the brain (third attack); duration of disease six months.—S. T. ROWE, Ph.D. and C., Registered Surgeon-Dentist and Chemist."

The sister of the deceased said she was always under the impression that Mr. ROWE was a medical man, and had complete faith in him, he having supplied medicine to her for fifty years. When we consider how well satisfied Mr. ROWE was with himself, and what good use he made of certain capital letters of the alphabet after his name, we may cease to wonder that he imposed on the unlearned. Let us analyse Mr. ROWE'S credentials and sit at his

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feet to learn how a man with no medical qualification can practise medicine and certify deaths for half a century and how, when belatedly brought to book, he shows himself equal to the occasion and full of resource. His reply to one of the many pertinent questions of the coroner is interesting: "*Coroner:* I think you wrote that certificate to deceive. *Mr. Rowe:* I did not. I have been accustomed for fifty years to give the cause of death as an ordinary individual with my name affixed, and it was never questioned until recently. In consequence of its being questioned I have arranged to get a properly qualified man as my assistant." Is it possible that in Cornwall there is any member of the profession so unacquainted with the rules and the judgments of the General Medical Council as to think that he can become assistant to Mr. SAMPSON TAYLOR ROWE and retain his place on the Medical Register? We fear such a thing is not impossible. Only at the last meeting of the General Medical Council a London practitioner was on his defence before the Council for covering an unqualified assistant, and he declared that he had never seen the advertisements of the Council's views and that he was not aware that there was anything illegal in what he was doing. The practitioner was eighty years of age and did not seem to realise the new conditions of medical practice. But we should advise any gentleman with whom Mr. ROWE may have arranged an assistantship not to rely on any similar leniency on the part of the Council. All men are not eighty years old, and even the patience of the General Medical Council has its limits. But we are concerned to-day not with Mr. ROWE'S future qualified assistant, but with the devices with which he has continued for fifty years to convey to the public the impression that he was a medical man. He is indignant at the idea of the coroner that he meant to deceive. He says he did not give a medical certificate. He cannot deny that he wrote a certificate in such a form and with such a parade of letters as were meant to resemble a medical certificate. No thanks to him that it did not run and that the bogus character of his credentials and his claim to pose as a medical man have now been fully exposed. The phalanx of letters was so arranged as to suggest validity and respectability in the certificate—"Ph.D. and C., registered surgeon dentist and chemist." Nor can we congratulate Mr. ROWE on the light which he has thrown on the letters Ph.D. and the way he came by such a title. When asked if his degree was granted after examination he replied to the questioner, "That is my business, not yours." He afterwards admitted that it was from the University of Philadelphia, which has an unpleasant reputation for bogus degrees. The coroner made some important observations on the disadvantages to the public of such irregular practitioners. They may attend infectious cases, but are not compelled to notify, and do not incur the penalty for non-notification. The law allowed, he pointed out, deaths to be registered on such information as in this case, though they were registered as not certified. It was impossible to say whether the treatment was right. The jury found death to be due to natural causes and desired the coroner to severely censure Mr. ROWE. It will be interesting to see the further development of Mr. ROWE'S practice in connexion with the "properly qualified man he has engaged to get." But, apart from his arrangements, it is high time that the whole system of unqualified practice in all its forms was more systematically studied by the General Medical Council. We are aware that it has no power over such gentlemen as Mr. ROWE, whatever it may have over his "properly qualified" assistant, but it has power and it is its duty to represent to Government the unsatisfactory state of the law, and in the interest of the public to demand an amendment.

AT the approaching election of members of the Council of the Royal College of Surgeons of England, the five vacancies which at present exist will be filled, and it behoves all Fellows of the College to consider carefully in what manner they will exercise their voting powers on July 1st. The duties of the Council are many and diverse; to their care is entrusted the maintenance of the valuable library, and the unrivalled museum of comparative anatomy and pathology, the foundations of which we owe to the skill and enthusiasm of JOHN HUNTER; they have to safeguard the dignity of the profession by seeing that none of the Fellows or Members of the College transgress the wholesome rules of medical etiquette; all these are onerous duties, but by far the most important of the many functions of the Council is the very large and important influence the College has on medical education. On the curriculum which they lay down and on the standard of the examinations they conduct depend the surgical training and knowledge of a very large proportion of the medical profession of this country. In exercising, therefore, his right of voting for members of the Council it is the duty of every Fellow to bear in mind that by his individual vote he may make or mar the surgical training of many future medical practitioners. It is not enough that a member of the Council should be a distinguished surgeon; he should be practically acquainted with the medical education of the present day or at least be familiar with its aims and requirements. For this to be possible it is not absolutely essential that he should be connected with a medical school, though it is obvious that the candidates with the desired qualifications are likely to belong to medical schools. Other things being equal it is on the whole desirable that members of the Council should not at the same time be examiners at the College, but a practical difficulty arises: the Council chooses the best men for the posts of examiners, and there can be small reason for surprise that it often happens that the same surgeons are the most suitable candidates for seats on the Council.

At the present election there are five vacancies to be filled; three of these have been created by the retirement "in rotation" of Mr. CHRISTOPHER HEATH, Mr. HOWSE, and Dr. WARD COUSINS. Mr. HEATH does not seek re-election; he has already served two terms, and has been elected president twice. For the five vacant places there are no less than eleven candidates. Three of the candidates are provincial Fellows, namely, Mr. BENNETT MAY, Mr. GEORGE JACKSON, and Dr. WARD COUSINS; and there seems to be a general desire, at least among Fellows residing in th country, that provincial Fellows should be well represented on the Council. We may express the hope that Mr. BENNETT MAY may

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be elected. The eight remaining candidates are Mr. HOWSE, Sir WILLIAM DALBY, Mr. CLEMENT LUCAS, Mr. EDMUND OWEN, Mr. ANDREW CLARK, Mr. RICKMAN GODLEE, Mr. J. H. MORGAN, and Mr. WATSON CHEYNE. Mr. HOWSE has served one term and has done his work so well that it would be distinctly a loss to the College if he were not re-elected. Mr. CLEMENT LUCAS is a colleague of Mr. HOWSE at Guy's Hospital, and his election would increase to four the number of members of the Council derived from that school. This may not be an ideal arrangement, but it cannot be disputed that Mr. LUCAS would decidedly prove a gain to the Council. Mr. RICKMAN GODLEE is a well-known surgeon attached to University College Hospital, and as one of the representatives from that hospital—namely, Mr. HEATH—is retiring from the Council, Mr. GODLEE might very fitly replace him. Mr. EDMUND OWEN is the senior surgeon to St. Mary's Hospital, which is at present unrepresented on the Council; we are inclined to think that Mr. OWEN'S sympathies are rather too conservative for him to assist adequately in the necessary progress of the College; but we do not doubt that, if elected, he would do his best to maintain the high character of the examinations. Mr. J. H. MORGAN has for a long time been an earnest advocate of necessary reforms in the College. He was one of the founders of the Association of Fellows, and was one of its honorary secretaries in the early and more fruitful years of its existence. He is well acquainted with the problems of medical education from his position at Charing-cross Hospital, and would, we feel sure, be a decided acquisition to the Council. Mr. WATSON CHEYNE is well known to a large section of the medical public, and at the present time King's College Hospital has no representative. Mr. ANDREW CLARK is hardly so suitable a candidate as several of the others, though he has had much to do with medical education at the Middlesex Hospital. Sir WILLIAM DALBY has done much good work, but perhaps he is not now quite in touch with our present day questions of education; and we may say in conclusion that in our opinion the candidates who would most satisfactorily assist in the work of the Council—surgical, educational, and ethical—are Mr. HOWSE, Mr. LUCAS, Mr. GODLEE, Mr. BENNETT MAY, and Mr. MORGAN.

Annotations.

"Ne quid nimis."

THE DIAMOND JUBILEE HONOURS.

THE medical profession has no reason to consider that it has been left in the cold in the distribution of Diamond Jubilee Honours. It is true that the greater part of the honours bestowed upon medicine were foregone conclusions, that is, they are either promotions in the orders reserved for official service or recognitions of high official place, but this is the character of the whole list, and has doubtless been deliberately maintained as the only possible course to be pursued on an occasion where so many diverse claims might have been considered from a sentimental point of view. Dr. Wilks, the President of the Royal College of Physicians of London, receives the baronetcy which his eminent services to science and to the practical philanthropy of Guy's Hospital so well merit. Sir William MacCormac, the President of the Royal College of Surgeons of England, can also doubly justify his baronetcy, being a sound surgeon as well as a good organiser and a dignified official. Mr. Thomas Smith's baronetcy will be exceedingly popular in the profession, where his operative skill is as widely recognised as are his amiable qualities. No harder working or more brilliant exponent of modern medicine, of medicine as an exact science rather than as an interesting art, could have been selected for knighthood than Dr. W. R. Gowers. If only all those members of the profession who have delighted in his treatises should recognise the honour given to the author, Sir William Gowers will receive as many congratulations as anyone in the list. There is a fitness about the bestowal of a knighthood upon Dr. Felix Semon, as he is a skilful exponent of a branch of medicine which has been born and has reached its present sturdy size entirely during the Victorian era. We are glad to see in the lists of new knights the names also of Dr. George F. Duffey, the President of the Royal College of Physicians of Ireland, and Mr. William Thomson, the head of the corresponding surgical corporation. Among the promotions in, or selections for, the Order of the Bath, we notice several well-known names—notably, Dr. Richard Thorne Thorne, who becomes K.C.B. (Civil); Inspector-Generals of Hospitals H. F. Norbury, J. J. L. Donnet, and H Macdonnel, and Surgeon-General C. A. Gordon: K.C.B. (Military); Dr. T. Grimshaw, Registrar-General of Ireland; Dr. David Nicolson, one of the Lord Chancellor's Visitors in Lunacy; Surgeon-Major-General J. Jameson, Director-General of the Army Medical Department, and Mr. Hugh Adcock, Consulting Physician to H.I.M. the Shah of Persia: C.B. (Civil); and Surgeon-Major-General C. Sibthorpe and Brigade-Surgeon-Lieutenant-Colonel G. W. McNalty: C.B. (Military). Surgeon-Major-Generals W. R. Hooper, President of the Medical Board, India Office, and J. Cleghorn, Director-General of the Indian Medical Service, receive the honour of C.S.I.; and Messrs. W. M. Haffkine, A. F. R. Hœrnle, and J. Husband, that of C.I.E. Dr. J. Mackie, the President of the Egyptian Quarantine Board, and Dr. C. Gage Brown, the Medical Adviser to the Colonial Office, are promoted to K.C.M.G., and Dr. S. W. Bushell receives the C.M.G. Deputy-Inspector-General of Hospitals H. C. Woods receives the Royal Victorian Order (4th Class). So much for the strictly medical honours, but we notice among the names those of many men distinguished in the scientific and philanthropic world with whose labours the medical man has necessarily much sympathy and sometimes a close connexion. We heartily congratulate, for example, Lord Rowton, who becomes a K.C.V.O.; Sir J. Blundell Maple, who receives a baronetcy; and Mr. H. C. Burdett, now Sir Henry Burdett, K.C.B., on the recognition which their powers of practical organisation have received. We are also glad to see among the new knights the names of Professor Crookes, the eminent chemist, Mr. Binnie, and Mr. Wolfe Barry, the engineers, Dr. Huggins, Mr. Christie, and Dr. Norman Lockyer, the astronomers; and Dr. Edward Frankland, whose researches into the method of securing a pure water-supply have certainly deserved a reward from the State.

MEDICAL FEES AT INQUESTS.

MR. JOSEPH JOHN CLARKE, of Walthamstow, who ordered an injured woman into hospital and, when she died, gave evidence at the inquest in response to a summons, sued the coroner, Mr. Charles Edgar Lewis, at Brentwood County-court, to obtain a guinea for his remuneration. The case being of some importance plaintiff was represented by a barrister, Mr. W. Ellis Hill, instructed by Messrs. Le Brasseur and Oakley, the solicitors to the London

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and Counties Medical Protection Society, Limited, and the South Essex coroner, who was defendant, was represented by the South-West London coroner, Mr. A. Braxton Hicks, who is also a barrister. Mr. Hill said that in the Coroners Act there is a provision that where an inquest was held on the body of a person who had died in a hospital or infirmary used for the reception of patients the medical officer whose duty it might have been to attend to such deceased person as medical officer of such institution should not be entitled to recover any fee or remuneration. The plaintiff, counsel added, was not the medical officer of the institution. Mr. Braxton Hicks resisted the claim because, he said, coroners, if they paid fees to these medical men, were surcharged by the auditors. His Honour held that the plaintiff was not the medical man whose duty it was to attend the deceased person as medical officer of the hospital and was therefore entitled to his fee as a witness. Judgment was given for plaintiff, with costs on the higher scale. Mr. Braxton Hicks said the case would be taken to the High Court, and leave to appeal was given.

EXPERIMENTS ON LIVING ANIMALS: THE RETURN TO THE HOUSE OF COMMONS.

IN a Return made by the Inspectors under Act 39 and 40 Vict., c. 77, showing the number of experiments performed on living animals during the year 1896 under licences granted under the Act, we have a fuller account than usual of the working of the Act and a more detailed statement of the nature of the experiments performed. The total number of licences held in England and Scotland during the year 1896 was 236, under 70 of which no experiments were performed. These licences and certificates have in every case been granted and allowed only upon the recommendation of persons of high scientific standing, and care has been taken that the licensees should be by their training and education fitted to undertake experimental work and to profit by it, and that all experimental work should be conducted in suitable places. In his report Dr. Poore has classified the experiments, separating out those that are of the nature of inoculations and hypodermic injections from the rest, and placing them in a class by themselves. He points out that the process of inoculation is inadequately provided for in the Act of Parliament, and states that "it would be cruel rather than otherwise to anæsthetise an animal before subjecting it to the trivial operation of a prick with a needle, and yet the wording of the Act is such that the administration of anæsthetics can in no case be dispensed with except by a certificate (A) stating that 'insensibility cannot be produced without necessarily frustrating the objects' of such experiments. Notwithstanding that the wording of Certificate A is not wholly applicable to the circumstances, it is nevertheless allowed for inoculations." He then goes on to point out that the rapidly increasing knowledge of the various diseases caused by micro-organisms has necessitated the study of the life-history of these organisms by such inoculations, and further shows that inoculation is largely used for the diagnosis of disease in man and animals; that the preparation of mallein and tuberculin tests and the preparation and testing of antitoxins necessitate hypodermic injections in order that the strength and purity of these substances may be determined. The experiments, not merely inoculations and hypodermic injections, are 1516 in number; of these 969 were performed under the licence alone and 184 under certificate C; in both cases the animals suffered no pain, complete anæsthesia being maintained during the whole of each operation and the animal killed before it was allowed to come from under the influence of the anæsthetic. Under Certificate B 188 experiments were performed, and under B along with Certificate EE 175. Here the animals are under the influence of anæsthetics during the whole of the operation, which, as well as the subsequent treatment, is carried out under antiseptic precautions so that no pain results during the process of healing. Of the painless and hypodermic injections 5984 were made, most of these (5217) being carried out under Certificate A on small rodents, 67 under Certificate A+E, 13 under Certificate A+F, and 687 under Certificate B, those under Certificate B being in almost every case rabbits inoculated with rabic material, anæsthetics being used during the operation. It is interesting to notice that one of the only two cases in which the letter of the Act was doubtfully complied with was due to excessive care on the part of the licensee to avoid giving pain, as he administered an anæsthetic for four subcutaneous inoculations. The second case was that of a licensee who holds no certificate who inoculated a series of four mice with the ringworm fungus. As the Inspector points out, "it would be cruel rather than otherwise to administer an anæsthetic for such a proceeding. No experiment under the licence alone, however, can be performed without an anæsthetic, and the licensee held no certificate enabling him to dispense with anæsthetics. It might possibly be contended that such a proceeding is not "an experiment calculated to give pain" within the meaning of the Act. This, however, is a question which has to be decided by the licensee and those who sign his application for a licence. In the report signed by the Inspector for Ireland we learn that 7 licences were in existence, 3 of which expired during the year, and 3 were granted to gentlemen who had been previously licensed, and 2 to new experimenters. "Twenty-nine experiments were performed by one licensee, and 31, 15, 15, and 7 by the holders of certificates, the animals used being birds, monkeys, rabbits, mice, and rats. The experiments were all painless, except so far as a needle-puncture in some cases; 15 were directed to the investigation of the oxygen tension of the arterial blood, 29 to an examination of the nervous mechanism which governs respiration, 15 to trace the paths of the conduction of nervous influence, and 38 to the investigation of canine rabies for State purposes." He goes on to say that "all the experiments were, in my opinion, useful and calculated to throw light on vital phenomena, and on the relief of disease, and so to assist in the treatment of suffering." These analytical reports should go far to show how carefully regulated are experiments under the Act, and anyone who will read this Return impartially will be struck by the high sense of responsibility that characterises the observations of the Inspectors, who, whilst unwilling to hamper experimenters in any way, take the most careful precautions to carry out the requirements of the Act not only to the letter but in the spirit of those who framed it—to prevent cruelty of all kinds and unnecessary pain in every instance.

FARM SANITATION AND MILK SUPPLY.

MR. G. H. DE'ATH, the medical officer of health of the Buckingham Urban Sanitary Authority, has done good service in publishing a *brochure* upon the very important subject of the sanitation of the farm with reference to milk supply. He points out how scrupulous is the observation of the rules of thorough cleanliness in the dairy farms of Holland and Denmark, and urges the necessity for greater circumspection in the management of cows, and especially in regard to the purity of their food and drink. It is certainly singular that so small attention is often paid to such matters, which must influence the health of the animals who yield one of the staple foods of man. But of equal importance is the care of the farmyard, the cowshed, and the utensils used in the collection and storage of the milk, and Mr. De'Ath gives many useful and practical hints in these and other directions. The pamphlet closes with a vigorous

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protest against the prevalent practices of the milk trade, which was read at the Bucks Sanitary Conference in October, 1894, under the title of the "Sanitary Protection of the Milk Traffic." We trust that the lessons which Mr. De'Ath so plainly and forcibly teaches will be taken to heart by those concerned, and that farmer and dairyman alike will recognise that it is to their own interests that the conditions under which their milk is produced and sold shall be such as to guarantee the purity of the article. To attain this is not merely a matter of the avoidance of adulteration, but one of he application of the common-sense principles of health to the care of cattle, and the enforcement of the most rigid rules of cleanliness.

THE NEW YORK CITY DISPENSARY BILL.

THE Bill introduced into the State legislature with the object of remedying the abuses of the dispensaries in New York City, after being approved by the legislative body at Albany, has been rendered of no effect by Governor Black refusing to affix his signature thereto. This unexpected action on the part of the Governor has caused much surprise. The majority of the medical profession in New York City are deeply disappointed at the failure of the Bill to become law, as it was generally considered well calculated to remedy many of the existing abuses and in other ways to put affairs connected with medical charities on a better footing. Nevertheless, matters are not to be allowed to continue in their present unsatisfactory condition. The local medical men are thoroughly aroused and are determined that a change shall be made in the conduct of the dispensary system. The fact is clearly recognised that things have already been allowed to drift too long, and are rapidly going from bad to worse. It is realised that unless a strong and determined effort is promptly made to effectually stamp out most of these abuses it will be too late to save the whole charity system from shipwreck. The *City Press* (New York) has taken up the matter in the energetic manner usual to the American newspapers when they inaugurate a crusade directed against any social evil. The *New York Herald* has been especially active, and published recently an outspoken leading article indicting the management of the dispensary charities. A part of the article ran as follows: "From what we can learn both parties in the controversy—the medical staff and the boards of management—are equally to blame. The doctors in their eagerness for clinical material are inclined to treat all interesting cases indiscriminately, whether able to pay or not, and the managers are anxious on general business principles to make a good showing for the institutions under their charge. No one doubts the fact that the majority of the patients treated in the dispensaries are able to pay the physician a legitimate fee and are consequently undeserving applicants. It is also true that the dispensaries are too numerous—are out of all proportion to the actual needs of the really poor patients, and are slowly but surely fostering a most dangerous form of pauperism. London is suffering from the latter condition, and New York is falling in the line of its bad example." From a perusal of the foregoing the fact will be grasped that there is much similarity between the abuses of the medical charities of New York City and London. In both places it has been proved up to the hilt that abuses on a very large scale do exist. In both places the management and medical men are to blame, and in both places the dispensaries and special hospitals are too numerous. In the *Forum* for June is an article by Dr. Geo. F. Shrady, entitled "The Dispensary, a Propagator of Pauperism." The subject is ably treated from every point of view, and some of the facts narrated will come as a revelation to many citizens of New York as well as to Englishmen who interest themselves in social affairs. Dr. Shrady says: "It may be broadly stated, as the result of exhaustive statistical study, that fully 50 per cent. of the patients who apply for free medical aid are totally undeserving of that charity. The main fault lies with the managers. In New York alone there are 116 dispensaries, each one of which is vying with the other in propagating the worst form of pauperism. It would appear that charity is monopolised in the same way as any other marketable commodity that is ruled by money. The millionaire philanthropists stand in the same relation to the medical profession as did the camel to the Arab when his beast asked the privilege of poking his nose into his master's tent; when the camel finally occupied it there was no room for the owner, and he was forced to vacate accordingly." Several striking instances are given in this article illustrating the deceptions to which rich persons will stoop to cheat charity and the medical man. We quote the most bare-faced case as told by a dispensary physician. "A wretchedly-clad woman presented herself to me at the dispensary and asked for treatment. She gave a name which I afterwards found was assumed. She was badly in need of attention, and said that she could not pay. I believed her and agreed to treat her. It was an interesting case, and she consented to appear before the class of fifty or sixty practitioners. One day after she had been before the class several times and treated I was driving with my wife in Central Park; we were passed by a magnificent team and carriage, spanking horses, nobby coachman and footman, and glittering harness. In the carriage was a lady whose features were familiar, but I could not remember where I had seen her. That same day my charity patient presented herself attired as usual in the poorest clothes. I recognised her as the lady of the fine turn out. I said nothing, as I thought I would investigate. A few days later I saw the same carriage in front of a fashionable shop, and got a good view of my patient as she alighted. When she next came to the dispensary I asked her for her real name. She gave me her assumed dispensary one. I told her she was deceiving me, and she finally disclosed her identity. She was the wife of a man known all over the city as a millionaire. I sent a bill to her husband and it was paid without a word." The suggestion is made that the control of dispensaries should be vested in a State Board of Charity, which should be granted ample powers to regulate their management, and without doubt at the next session of the Legislature another Bill will be introduced.

THE LATE DR. R. M. GOVER AND MILITARY PRISONS.

A WELL-INFORMED correspondent writes to us as follows:—"Since the publication of your obituary notice of the late Dr. R. M. Gover, H.M. Inspector of Prisons, my attention has been called to the late officer's connexion with the institution at Millbank, with its department for military prisoners. If anyone will take the trouble to refer to the published reports of the House of Commons for many years prior to 1878 it will be found that questions were being constantly addressed to the Minister for War regarding the impaired state of health in which soldiers were discharged from prisons after having undergone their terms of imprisonment. In 1877 the then Secretary for War (Mr. Gathorne Hardy) determined to have the subject of these frequent complaints investigated, and a War Office Committee was appointed for that purpose. The army medical member of the committee, Surgeon-Major J. A. Marston, after long inquiry at Millbank and elsewhere, and after having gone fully into the subject, proposed a scale of diet for military prisoners which was finally adopted. It is a curious fact that the proposed scale before adoption was submitted to a medical expert and another authority, but did not meet with the approval of either, one

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disapproving on the ground that the diet was worse than that for which it was proposed to be substituted, and the other because it was altogether too good. The result of some months' trial of the new dietary at Millbank showed, however, that it fully answered its purpose, that it did not entail additional expense, and that its adoption had the effect of preventing loss of weight among the military prisoners. Moreover, the late Dr. Gover expressed his great satisfaction with the results of the trial of the dietary in question, and added that the amount of petty crime among the military prisoners had been reduced since its adoption. It is believed that from that time to the present there have been no complaints in Parliament on the subject."

MALARIA IN CONNEXION WITH METEOROLOGICAL CONDITIONS AT SIERRA LEONE.

SURGEON-MAJOR E. M. WILSON, C.M.G., lately senior medical officer at Sierra Leone, has published some brief notes and statistical tables illustrative of the effect of meteorological conditions on the malarial fevers endemic at that station. The inferences which the author draws from his observations appear to be well worthy of notice. Briefly expressed they are as follows:—Each battalion of the West India Regiment suffers exceptionally from fever during the first year of its service on the coast, the number of admissions and deaths falling in a marked degree in the second and still more in the third year. The white troops suffer much more than the black. The largest number of cases occur in the middle of the rainy season, in the period of the greatest rainfall and of the highest relative humidity and lowest temperature in the shade—i.e., July and August. The smallest number of cases occur in the period of least rainfall, least relative humidity, and greatest heat. The most important factor in influencing the disease seems to be the relative humidity of the atmosphere. The black troops are more affected by changes in the meteorological conditions than the white. The case mortality, or percentage of deaths to attacks, is small at all periods. The tables are well worth consulting by those interested in the subject, affording, as they do, very useful indications as to the prevalence of climatic fever sickness at Sierra Leone; and the author embodies some useful information in his notes commenting on this, and in his remarks regarding malaria generally and the proper dietary to be issued to troops serving in this climate.

THE POLLUTION OF THE AVON BY THE BRISTOL SEWAGE.

THE influence of a sewage-polluted river upon the health and well-being of the inhabitants on its banks is a difficult question upon which there is some divergence of opinion and not a little conflicting evidence. It is always a difficult, if not an impossible, matter to detect in the death-returns of the neighbourhood the evidence of mischief, but although this is so it would be absurd to infer that no harm results; and there is, indeed, often an abundance of evidence too weighty and well founded to be lightly dismissed, that during periods of drought and heat much nuisance is caused by the effluvium from polluted streams; and, further, that vague symptoms of illness together with a lowered vitality, and perhaps septic complications of diseases are traceable to this cause. If, too, no such evidence as this were forthcoming, it would far from justify the continuance of a grave nuisance, which interferes with at least the happiness of many persons immediately concerned. The sewage of Bristol is discharged untreated directly into the river Avon as it flows through the city, and although it is stated that during ordinary times the scour of the tide is such that no nuisance arises, there would seem to be, from the reports which have reached us, no escape from the conclusion that during hot and dry summers a very considerable nuisance and much discomfort is occasioned by the sewage in question. It appears, in fact, that last year the nuisance was so great that its consideration was referred to a special subcommittee, but it does not seem that up to the present time the members have seen their way to decide upon a definite scheme. Dr. Davies, the experienced medical officer of health of Bristol, has remarked that "the very definite, persistent, and increasing complaints of nuisance from this cause must be allowed considerable weight," and he seems to think that it would be the best course to carry the intercepted sewage at once to the Bristol Channel, unless it can be properly dealt with at some intermediate point before its discharge into the river. Whatever course be adopted after due consideration will, it is to be hoped, be proceeded with without undue delay, inasmuch as the evidence seems to point to the fact that the nuisance is increasing side by side with the growth of the town and the consequent augmentation of the sewage. Bristol is well able to afford the cost of an adequate scheme, and we may rest assured that Dr. Davies will advise the council upon the best course to be adopted. We do not contemplate that in the meantime Clifton and Bedminster will become "depopulated," but the nuisance can scarcely be advantageous to the reputation of a health resort. To those who are taking up the question in a scientific aspect we would recommend the perusal of the First Report of the Royal Commission upon Metropolitan Sewage Discharge, in which will be found some interesting evidence on the effects of river pollution and on the movements of sewage in tidal waters.

FLAT-FOOT: ITS CAUSES AND TREATMENT.

IN our issue of July 18th, 1896, we directed attention to certain recent investigations into the pathology and treatment of flat-foot. From these it was evident that the deformity in question is due to pressure acting upon the inner side of the foot through the medio-tarsal joint—i.e., the joint between the os calcis and astragalus on the one hand and the cuboid and scaphoid on the other. Abduction of the foot followed from the same cause, and its correction was an essential feature in treatment. A similar view is explained with much clearness and also much ingenious detail by Dr. Newton Shaffer in the *New York Medical Journal* of May 29th, 1897. His paper is further interesting as showing the part played by the tough plantar fascia in resisting the downward pressure, and especially the influence of contraction of the post-tibial muscles as tending to overcome this resistance by directing pressure upon the medio-tarsal joint. It may be mentioned that he includes under this term the tarsal articulations anterior to that above described. He thus explains his position: The plantar fascia, which never ruptures, can be stretched. When with a shortened gastrocnemius there coexists a weak and flabby plantar arch, the heel being unable to descend, the arch itself yields at its weakest point, which is the medio-tarsal joint. The scaphoid is pressed down, the inner side of the foot elongated and abducted, and flat-foot is thus produced as a natural sequel to a condition which at first sight appears to negative its production. Dr. Shaffer states that among hundreds of cases treated by him in orthopædic practice he can recall only three or four in which there was not an abnormal tension of the tendo Achillis. He suggests three lines of treatment as being equally logical and more or less practicable: (1) To divide the tendo Achillis and, if needful, the peronei and tibialis anticus which act with it, so as to "crowd the os calcis forward" and relax the plantar tissues, and then to apply an apparatus to adduct the foot; (2) to stretch these tendons under an anæsthetic,

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and then apply the apparatus; and (3) by the gradual action of mechanical means to attain the same result. This latter method he has used with success even in some chronic cases. It consists in supporting the weak plantar arch with a metal piece worn inside the shoe, in depressing the forepart of the foot beyond the medio-tarsal joint by means of a screw foot-piece, and in depressing by similar means the heel while supporting the astragalus. Later an ankle support is worn, and is so made as to cause the patient to walk on the outer side of the foot. Dr. Shaffer's paper contains much that is of interest to the practitioner, and is illustrated by carefully constructed diagrams.

THE SANITARY INSPECTOR IN EXCELSIS.

THE astounding length to which sanitary inspectors in Scotland are prepared to go with regard to their own ability to perform the duties of medical men could hardly receive better illustration than is afforded in a letter to the *Glasgow Herald* by Mr. Peter Fyfe, sanitary inspector, Glasgow. He writes as follows regarding a previous letter which had appeared in that journal:—

"Dr. Nasmyth makes another statement which I feel some hesitation in remarking upon, but as it would, if uncontradicted, do injustice to many qualified inspectors in sanitary practice, I must refer to it. He states that 'sanitary inspectors are not qualified to examine cases of disease,' and therefore the right of examination of patients is not conferred upon them, and draws an inference from that that as they are not, in his opinion, qualified to certify danger or injury to health, similarly no such right ought to be conferred on them. Now, sir, I know personally sanitary inspectors who through experience are very much better qualified to examine and certify cases of infectious disease than medical men are who perhaps have seldom had a chance of seeing these cases, and several cases have occurred where sanitary officers have had to contradict and correct the medical certificate which was granted with reference to infectious cases."

Surely this is a case of vaulting ambition over-leaping itself. There is an old proverb about the results of setting a beggar on horseback, which need not be quoted here, but we really think that our readers, whether medical officers or not, can make excellent use of the passage quoted. We repeat what we said in a recent issue, that it is the duty of every medical man, and especially of every medical officer of health, to call the attention of his representative in Parliament to the extraordinary proposals of the Public Health (Scotland) Bill—the essence of the proposals being to give to sanitary inspectors, of whom the law requires no qualification of any kind, statutory power to certify danger or injury to health.

THE BRITISH INSTITUTE OF PUBLIC HEALTH.

LORD PLAYFAIR gave an excellent address at the Diamond Jubilee meeting of the British Institute of Public Health on the 16th instant; and the speeches delivered by Sir James Dick, Director-General of the Navy Medical Department, Surgeon-Major-General Jameson, Director-General of the Army Medical Department, and Dr. Thorne Thorne, medical officer of the Local Government Board, were also distinctly interesting. The various speakers garnered up the rich harvest of facts illustrative of the progressive hygienic changes that have taken place during Her Majesty's reign within their respective spheres of knowledge. There is no need to dwell upon the very different, wiser, and more practical standpoint from which we now regard epidemic disease. In every direction the progress made in public health and preventive medicine has been great and fruitful of results. It has become more and more evident that there is no short cut or royal road to safeguard people against disease, but the right way has been all along apparent if we would only have heeded it. The aim to be attained has been wholesomeness of life and surroundings, clean air and water and food, and a clean soil to live upon. Epidemics of typhus fever, once so common among the poorest and most overcrowded of our urban populations, have been practically abolished, and the health of our navy and army has undergone an immense improvement. The wonder was not that so many, but that so few, of our troops died from disease under the conditions in which they were placed before the Queen ascended the throne. About the year 1820 the troops in the West Indies slept in hammocks touching each other, only 23 inches of lateral space being allowed for each man; and at the same time in England many of the men slept in beds with two tiers like the berth of a ship, and not infrequently each bed held four men. The barrack accommodation and the overcrowding of our troops in barrack-rooms everywhere was deplorable; and it is needless to say that the barrack-room atmosphere was, in hot climates especially, sickening. There are, no doubt, still many bad barracks, but the worst of them is incomparably superior to the best that existed then; and all those which have been erected of late years are very good, and have been constructed with a due regard to all sanitary requirements and the best attainable convenience and comfort for their occupants. The accommodation for married soldiers and their families has been revolutionised. Contagious ophthalmia, so common in our army in pre-Crimean times and for some years subsequently, has been practically abolished by the sanitary and hygienic changes that have been introduced into our barracks and barrack-room life by the increase of cubic and superficial space, improved systems of ventilation and ablutionary arrangements, and, thanks to Listerism and antiseptic methods of treatment, the disease, when it occurs abroad or during a campaign in Egypt, is usually cured before it assumes the acute and distinctive form of purulent ophthalmia. We no longer encounter actual patients, as was common in our army years ago, or soldiers invalided by the disease with watery, bluish-red eyes, contracted brows, and blinking lids and shuffling gait, so indicative of intolerance of light and the chronic lesions of ophthalmia. If all the changes favourable to health that have been wrought in other respects in our army during the sixty years' reign of the Queen are not so obvious, they are none the less real, and those who witnessed the grand and imposing spectacle of Tuesday last can have no misgivings, at any rate, as to the physical health and efficiency of those of Her Majesty's forces who took part in it.

FŒTAL TYPHOID FEVER.

AN interesting paper on the above subject appears in the *Medical News* (New York) of May 15th of this year by Dr. Crozier Griffith of Philadelphia. The writer remarks that the transmissibility of certain infectious diseases from mother to child has long been an admitted possibility, yet without there being much demonstrative proof of the passing of any germ from one to the other. Syphilis can undoubtedly be given by a mother to her offspring, and for years it was just as firmly believed that tuberculosis was constantly transmitted in this way. A certain reaction then took place, and it was claimed that inheritance existed, not of tuberculosis itself, but of susceptibility to contract the disease later. This would appear to represent the true condition in the majority of instances, but there are a number of cases on record in which tubercle bacilli have been discovered in the tissues of infants born of women suffering from tuberculosis; and the same has been found equally true of the calves of tuberculous cows. When we come to a consideration of the acute infectious diseases we find that children may in rare cases inherit the disease directly and be born suffering from it, or may in other rare instances complete the attack while still *in utero*. This has repeatedly happened in the case of variola, the children being born with the marks upon them. As an addition to the above remarks of Dr. Griffith we may

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say that we examined a case of an infant born at the eighth month, the mother at the time suffering from anthrax. We found numerous bacilli in the maternal portion of the placenta, but not in the fœtal portion. The infant survived its birth a few hours, but there were no indications that it was afflicted with the disease. With regard to typhoid fever the question has been more difficult of solution, since the symptoms are less well marked. Yet cases of apparent typhoid fever in the newly-born have been reported by Charceley, and Hastelius found lesions strongly suggesting the disease in a stillborn child of a mother dying from typhoid fever. Dr. Griffith records his case in which the Widal test was used. A family epidemic of typhoid fever occurred in the practice of Dr. J. O'Malley, of Philadelphia, and the father, mother, and three children, the oldest being five years of age, were brought to the St. Agnes Hospital. On Nov. 18th, 1896, the mother, still ill from fever in the hospital, gave birth at term to a well-developed child. It was concluded that the mother was probably in the third week of the disease when labour took place. The infant seemed to be healthy in every respect except for a slight transitory jaundice. When the child was about seven weeks old a specimen of blood was obtained and submitted to the Widal test. In four minutes the bacilli became much less active and began to collect in groups, and some little time later they became agglutinated. The conclusion drawn from the case is either that the child had had typhoid fever *in utero* and recovered after a short attack, or that the agglutinating principle had passed through the placenta from the mother to the fœtus without the latter having contracted the disease at all. There remains also the hypothesis that the child had imbibed the virus with the mother's milk. Analogy to other infectious diseases, and the fact that fatal typhoid fever does occur, render the first supposition most probable—namely, that the child when born had already had an attack of the fever.

THE HANDEL FESTIVAL.

AMONGST the remarkable developments of the Victorian era must be counted the growing taste of the public for good music. This may be attributed, we think, partly to the earnest efforts of our musical leaders some years ago to cultivate the public taste and to provide or lay the ground for the performance of works of real worth, and partly to the demand which is created by the ever-increasing pace of modern life for a source of true recreation for the mind as well as for the body. The great event held every three years at the Crystal Palace, when, with few exceptions, the choicest of Handel's inspirations are performed, is an important factor towards complying with this healthy and natural demand on the part of the public for this wholesome form of mental recreation. There could have been little disappointment in the mind of the great crowd which assembled on three occasions last week to hear the rendering of Handel's choruses by a choir of 4000 voices. Nor could any dissatisfaction have been expressed in regard to the execution of Handel's delightful melodies by the soloists. The programme of the great Handel week was very much in a line with that followed on previous occasions. For ourselves we confess that some little departure might with advantage have been made. The great composer has supplied a superabundance of material both for vocal and orchestral execution from which to make a selection. But we admit that there must be a considerable difficulty in including every choice excerpt. Handel wrote twelve organ concertos, and, as far as we recollect, the 1st in G major and the 2nd in B flat are played over and over again. Surely the authorities might occasionally give us the 11th in G minor, with its delightful second movement on a ground bass, or the 9th in F major, with the two charming minuets. Perhaps we may hear one of these at the next festival. As medical journalists there is little which calls for remark from us from our own peculiar point of view. We trust, however, that the interest in these festivals will never languish, and we are glad there is no reason for thinking that it ever will, in view of the splendid attendances which were recorded last week. From a point of view of a musical performance we believe, and those competent to judge have said, that the recent eleventh triennial event was an unqualified success. The first performance on Monday must have appealed to those who know and can appreciate the wonderful shades of feeling expressed in the *Messiah;* on Wednesday the light and shade were in still greater contrast, when some of the most popular solo writings, as, for example, the air from *Serse*, more familiarly known as the melody of the Largo in G, was most expressively sung by Miss Clara Butt as was the simple but most appealing air, "Lascia ch' io Pianga," from the opera *Rinaldo;* while those who find delight in the massive and stately choruses of *Israel in Egypt* must have been deeply moved by the excellent rendering of the immense choir on Friday. The festival is not only a joy at the time of performance, but for a long time the impressive numbers remain in the memory and afford the mind a delightful retrospect.

RETENTION OF MENSTRUAL FLUID IN ONE HALF OF A DOUBLE UTERUS.

WHEN this rare condition exists a mistaken diagnosis is very liable to be made. Menstruation occurs regularly from one half of the uterus, therefore the possibility of any retention does not occur to the practitioner. The following case, recently published by Dr. J. Lamond Lackie,[1] was at first mistaken for an early fibroid condition of the uterus with endometritis. An unmarried woman, aged twenty-four years, had suffered for six years from pain in the right side, which was relieved only by a hæmorrhagic vaginal discharge every four months. After a few weeks the pain set in again and became gradually worse until once more relieved. Also, for a day or two every month between her normal periods there was an acute exacerbation of pain, and she felt as if she were going to be unwell, but there was no discharge until the four months had elapsed. The patient distinguished this discharge both from blood and that of ordinary menstruation. It was "more like brown paint." It always came on some days after an ordinary menstruation and continued for about three weeks. Examination showed well-marked bulging in the right fornix and fulness in the hypogastric and right inguinal regions. The patient then stated that she always observed a swelling in the right side before the hæmorrhage came on, which disappeared as it set in. She was kept under observation for seven weeks, during which increase in size and tenseness of the pelvi-abdominal swelling were noticed. The diagnosis was then thought to lie between a sessile ovarian tumour and a dilated tube. Vaginal aspiration was performed. The fluid obtained was of a dark chocolate colour, just like altered menstrual fluid. It consisted chiefly of altered blood corpuscles and pus. The patient recognised the fluid as of the same nature as that which escaped every four months. She remained free from pain or swelling for nearly two months, then there was recurrence. The tumour was incised from the vagina. On passing a finger into the cavity and a sound into the left half of the uterus the septum at the cervical level was found to be moderately thin; through this the sound was forced. The opening was enlarged by a pair of curved dressing forceps and a drainage-tube inserted

[1] Edinburgh Medical Journal, March, 1897.

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Finally, the vaginal incision was sewn up, so that all discharge should pass through the tube. It did so for several days, during which irrigation was employed. In the course of a week she was perfectly well. The tube was retained and bougies passed to ensure patency. Ten days after the operation her normal period occurred; no discharge escaped by the tube, which protruded at the vulva. A fortnight later she menstruated again, but this time through the tube. At this period the amount was less, but accompanied by more pain. This sequence continued for three months, during which the patient remained quite well. Unfortunately, she was then attacked by rheumatism and succumbed to cardiac complications. The case is of great interest in several respects. The writer very aptly suggests as an explanation of the symptoms not commencing until the patient was eighteen years of age (menstruation began at sixteen) that it was only then that the right half of the uterus commenced the function of menstruation. The alternate menstruation of the two halves, which was demonstrated after the operation, but evidently occurred from the first, is a very curious phenomenon. It has, however, been previously observed in cases of double uterus. The emptying of the accumulated discharge of the right half every four months must have occurred through some imperfect communication only available when the tension became so great.

RESECTION OF THE STERNUM.

PROFESSOR W. W. KEEN, of the Jefferson Medical College, Philadelphia, has published in the *Medical and Surgical Reporter* two cases in which the sternum was partially resected on account of tumours. The first patient was a woman, forty-four years of age, whose left breast, together with several enlarged axillary glands and the fascia over the pectoral muscles, was removed for carcinoma in March, 1892. The muscles themselves did not seem to be involved and were left. The patient made a prompt recovery. In January, 1894, the sternum showed a slight bulging at the junction of the manubrium and gladiolus, and in the following month a small nodule was discovered in the right breast. In March, 1894, the sternal tumour had increased very much in size, and as the sternum, the cartilages of the second and third ribs, and the intercostal muscle between them all seemed to be involved, both the cartilages and also the intercostal tissues were removed down to the pleura. The internal mammary artery was divided and secured by a curved needle passing through the thinned wall of the pleural cavity. A considerable portion (about 1 in. by 1½ in.) of both the manubrium and the gladiolus was then removed by the double rongeur forceps until apparently healthy bone was reached. The right breast was also removed, together with a layer of the pectoral muscle and all its fascia, and the right axilla was cleaned out. The patient recovered from the operation, but the disease returned, and she died in the following August. The second patient was a woman, twenty-eight years of age, in whom the tumour commenced in the beginning of 1895. In November, 1895, it covered the end of the right clavicle and the upper left portion of the manubrium, and there were two small nodules over the end of the right sterno-mastoid. It was diagnosed as sarcoma. The operation commenced with the removal of the lower third of the sterno-mastoid, together with all the diseased tissues in front of the sternum and clavicle. The inner third of the right clavicle and one inch of the inner end of the first rib were then removed, the manubrium was separated with the finger from the tissues of the mediastinum and divided just to the left of its right border and horizontally just above the joint between it and the gladiolus. The patient was discharged from hospital in January, 1896; no return has occurred after more than fifteen months, and her general health is now excellent. Portions of the sternum have frequently been removed for fracture, especially gunshot fracture, but Professor Keen has only been able to collect seventeen other cases in which the entire thickness of the bone was resected for tumour, not including superficial resections for such conditions as exostosis.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

AT the meeting of Fellows on July 1st only two resolutions will be brought forward. They are both to be introduced by Mr. R. B. Anderson, and refer to the refusal on the part of the Council to afford him pecuniary support in prosecuting his attempt to obtain a reversal of the judgments against him.

THE WALSALL SCHOOL BOARD AND MEDICAL CERTIFICATES.

THE Walsall School Board has unanimously carried the following resolutions:—

"That two medical men, Mr. Willmore (Walsall) and Dr. Martin (Bloxwich), be appointed, at a fee of 1*s.* 6*d.* in each case, to examine (1) children alleged to be absent from school on account of illness, and whose parents plead poverty as a reason for not obtaining a medical certificate; (2) children alleged to be absent from school on account of illness, whose parents have produced a medical certificate the genuineness of which the board have reason to doubt; (3) all candidates and pupil teachers on admission, as well as in special cases; and (4) to attend at the police-court when necessary and give evidence in relation to any of the cases which have been examined."

This is all very well, and we have no doubt that certificates must be examined by competent authorities occasionally, but we see no provision for letting the original signer of the certificate know that his certificate is to be supervised. As we said over and over again in the case of the London School Board, there is no objection to certificates being revised if the original giver is advertised of the fact, but to do so behind his back without letting him know is unpardonable, and if the Walsall School Board do not make provision for such a courtesy we can only advise every medical man in Walsall to refuse to give any certificate for a School Board.

ALLEGED EXTRAORDINARY HYPERPYREXIA.

SURGEON-MAJOR TUOHY relates the following case in the *Indian Lancet* of May 16th, 1897. A nurse, aged thirty-eight years, contracted typhoid fever whilst attending a case. On the thirteenth day, at 6.30 P.M., whilst the temperature was being taken in the mouth, the thermometer burst at the bulb, with the mercury at the top of the column registering 112° F. At 10.30 P.M. the temperature in the axilla was 112°, the pulse 120, the face dusky and anxious, the breathing rapid and shallow, but the mind perfectly clear. With such a temperature for four hours he regarded the case as hopeless and ordered a wet pack. In half an hour the temperature fell to 98° F. and the patient was put back to bed, feeling drowsy and tired. This extraordinary rise of temperature occurred many times before convalescence was established. On four occasions it reached 117°, and on two of these the thermometer burst, so that a still higher point must have been attained. Once, when the temperature was 114°, another medical officer, Surgeon-Major Ward, verified the observation. For weeks the temperature was taken every quarter of an hour, as the rise was often very sudden. The wet pack was always promptly employed, to which the writer attributes the recovery of the patient. We must say that we view this case with a good deal of reserve. Cases of extraordinary hyperpyrexia have been from time to time brought before medical societies, but always received with suspicion. Patients have been known to cause

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elevation of the mercury in various ways, such as inversion, friction, the application of poultices or hot-water bottles. Dr. Stephen Mackenzie exposed a case of this kind where a temperature of 120° was registered, by placing two thermometers in the same axilla, and finding a difference of several degrees between them.[1] The subjects of extraordinary pyrexia have almost invariably been females, and often neurotic or hysterical. However, it would be going too far to assert that all were necessarily cases of deception. Many years ago the late Mr. John Teale published a case of "Excessive and Long-continued High Temperature after Spinal Injuries, with Recovery,"[2] in which the temperatures ranged up to 122° F. In this case special thermometers were used, and every source of fallacy was apparently guarded against. In commenting on the case at the time, we had to admit that he had answered all objections. The subject is certainly one requiring further investigation.

A CASE OF SEVERE DERMATITIS FOLLOWING TWO EXPOSURES TO THE X RAYS.

ON June 14th M. d'Arsonval presented to the Academy of Sciences at Paris a case, which had occurred in the practice of Dr. Apostoli, of dermatitis following two exposures to the x rays. The exposures were made upon May 22nd and 28th, 1896, the duration of the first sitting being forty minutes, with the Crookes's tube at a distance of fifteen centimetres from the skin, and the second lasted ninety minutes, the tube being at a distance of nine centimetres. After the first sitting nothing was noticed except great nausea on the part of the patient. After the second, however, an erythema appeared over the area which had been exposed—namely, the abdominal wall—and this erythema was followed by vesication and an abundant serous discharge. These gradually healed, and by July the patient was nearly well; but in August the whole of the affected surface sloughed and a severe burning pain was felt. No application to promote healing had the slightest effect and skin grafting was equally useless. At the end of October, 1896, the application of a current of oxygen was tried and promoted healing in a slight degree. In February, 1897, electric treatment was commenced. Statical electricity was used at first alone and then in combination with high frequency currents. In April, 1897, electric baths were commenced and employed twice a week, the current employed being the undulatory form. These applications had a very good effect, and by June, 1897, the whole affected surface, which measured 17·7 by 13·6 centimetres, was soundly healed. Dr. Apostoli considers that this form of dermatitis may be produced by the tube being too near, the sittings being too long, or even when short if following one another too rapidly or being too many in number. The dermatitis is very slow in healing, and apparently the best method of treatment is the employment of electric currents, both locally by using statical and undulating currents and generally by the exposure of the patient to a high frequency current.

IT is with great regret that we have learned of the deaths recently of two prominent members of the medical profession in New York. Dr. J. Lewis Smith, the well-known authority on diseases of children, died on the 9th inst., an Dr. William Lusk, the Professor of Midwifery at Bellevue College, on the following Sunday.

THE Abernethian Society of St. Bartholomew's Hospital will hold its mid-sessional meeting in the medical theatre of the school at 8 P.M. on July 1st, when Dr. Norman Moore will give an address on the Deaths of the Kings of England. All old members are cordially invited to attend the meeting.

[1] Medical Times and Gazette, Nov. 5th, 1881.
[2] Vide THE LANCET, March 6th, 1875.

THE annual general meeting of the Brussels Medical Graduates' Association will take place at the Café Royal, Regent-street, W., on Thursday, July 15th, at 6.30 P.M. At 7.15 for 7.30 P.M. the members and their friends will dine together, and Sir John Williams, Bart., Mr. Rentoul, Q.C., M.P., and Dr. A. E. Sansom will be the guests of the Association. Any Brussels medical graduate wishing to be present at the dinner is requested to communicate with the honorary secretary, Dr. Major Greenwood, at 12, New-court, Lincoln's-inn, W.C., or at 243, Hackney-road, N.E.

MISS JANE HARRISON, LL.D., the well-known authority on Greek antiquities, will give a lecture upon "Hospital Life in Ancient Greece," on July 8th, at 3.30 P.M., at the South-West London Polytechnic, Manresa-road, Fulham. Tickets may be obtained from the honorary secretary, University Extension, at the above address, and the proceeds will be devoted to the Extension evening classes.

THE authorities of the London Post-graduate Course have arranged that daily classes in bacteriology and hygiene will commence on July 5th and end on July 10th. This will enable busy practitioners to compress the needful work into the shortest possible time. Particulars can be obtained from Dr. Fletcher Little, secretary, 32, Harley-street, W.

WE understand that Lord Lister has replied to the communication addressed to him by Mr. George Jackson, F.R.C.S. Eng., and three co-signatories, which appeared in our columns last week, and that he courteously declined to be placed in nomination for the approaching election to the Council of the Royal College of Surgeons of England.

T.R.H. THE PRINCE AND PRINCESS OF WALES have consented to open the Park Hospital, Hither-green, the new hospital of the Metropolitan Asylums Board, on Monday, July 12th, at 4.15 P.M.

LITERARY INTELLIGENCE.—We have received a copy of a new illustrated fortnightly Italian journal. It is published in Florence and called *Scena Illus rata*. The illustrations are well printed. Among the list of contributors to the letterpress are the names of Professor Baccelli and Professor Lombroso among scientific men, and among the purely literary names those of Daudet, Coppée, and Zola, so that the literary part of the paper as well as the art department will evidently be of a high order.

PRESENTATIONS TO MEDICAL MEN.—Mr. Charles W. Izod, medical attendant to H.R.H. the Duchess of Albany, who, as recorded in THE LANCET of June 12th, has been celebrating his jubilee of practice and residence in the village of Esher, was on June 16th, presented with a massive silver salver and three handsome silver bowls by the residents of Esher. The presentation was made by Mr. P. M. Martineau at a public meeting of the inhabitants. Each of the pieces of plate bore the recipient's crest and the inscription: "Presented by his many friends to Charles William Izod, on the completion of fifty years' medical practice in Esher. June 16th, 1897." Mr. Izod, who has also received a silver cup from H.R.H. the Duchess of Albany, was presented with an illuminated album containing the names of the 500 subscribers.—Mr. Edward W. Parsey, M.B., B.C. Camb., has been the recipient, from the King's Norton Ambulance Corps, of an electro-plated biscuit tray, as a thank-offering for his lectures on first aid.—Mr. J. S. Montgomery, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., of Sandyford, Glasgow, who has acted as resident surgeon at the works of the Steel Company of Scotland, at Newton, during the past eighteen months, was entertained to supper and presented with a handsome timepiece, suitably inscribed, and a travelling bag, on his leaving the district.—Mr. J. H. Marsh, M.R.C.S. Eng., L.R.C.P. Lond., has been presented with a handsome quarter chiming oak clock by the members of the Trinity Wesleyan Sunday School Male Ambulance Class, Macclesfield, as a token of appreciation of his services.

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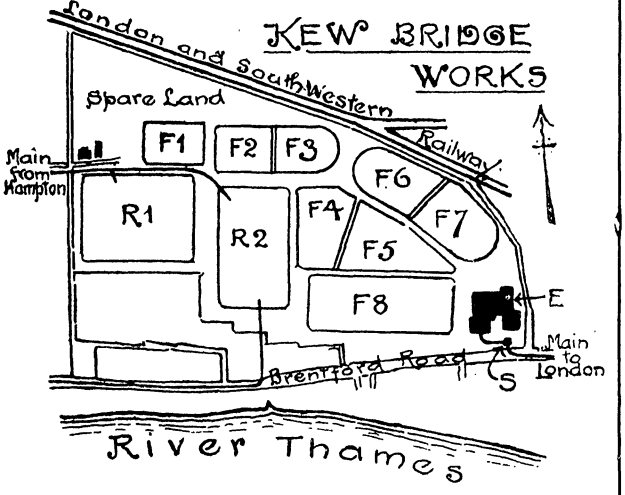
The Lancet Special Commission
ON THE
METROPOLITAN WATER-SUPPLY.

XVI.[1]
THE GRAND JUNCTION WATERWORKS COMPANY
(*Continued*).

Kew Bridge Works, Brentford (see B on Map and Fig. 1).—The Kew Bridge station is situated at Brentford in Middlesex. The area is about 26 acres. It consists of reservoirs, filter beds, and a pumping station, which are situated to the north of the Brentford road. There is a store yard and a house for the assistant engineer to the south of the road.

Reservoirs.—There are two reservoirs, an upper and a lower. The upper reservoir is capable of holding 14,000,000 gallons of water. Its depth in the centre is 14 ft. The slopes are lined with brick and concrete, and the bottom and sides are puddled. The lower reservoir is situated at a level of 8 ft. below the other. Its depth in the centre is 10 ft. It is capable of holding 8,000,000 gallons. The upper reservoir is supplied by both the 33-in. mains. The lower reservoir is supplied from both mains and also from the upper reservoir, from which the water flows to it in the form of a cascade.

FIG. 1.



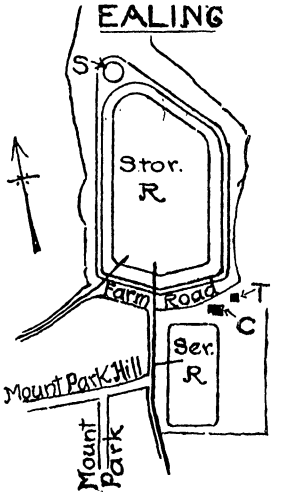
Kew Bridge Station, Brentford.—R 1, R 2, Reservoirs. F 1 to F 8, Filter beds. E, Engine-house. S, Standpipe tower.

Filter beds.—There are eight filter beds which have a total area of about 8½ acres. They are of somewhat irregular shape, but they are constructed on the same lines. They have from 2½ ft. to 3 ft. of sand and from 2 ft. to 2 ft. 6 in. of ballast. The only differences in them consist in the arrangements for the collection of filtered water, the presence or absence of ventilators, and the fact that two of them possess large filtered water chambers beneath. Filter No. 1 has an area of ¾ acre, it has a central filtered water channel and a small ventilation pipe in connexion with the filtered water channel on one side. Filters Nos. 2 and 3 have chambers for the storage of filtered water beneath them. These are covered with brick arches, the upper parts of which form the floors of the filter beds. Each is capable of holding 1,000,000 gallons. No. 4 has an area of 1¼ acres. The arrangement for collecting filtered water is by means of ballast. There are no drain-pipes at the bottom. Two air ventilators are situated over the filtered water culverts. No. 5 has an area of 1¼ acres. There are ventilators at the sides and one central one in communication with the filtered water channel. No. 6 has an area of ⅞ acre and it has no central air shaft. No. 7 has an area of ⅞ acre and two ventilating shafts. No. 8 has an area of 1⅞ acres. It has three large air shafts built of brick communicating with the filtered water culvert. The water from all the filter beds passes into a well situated near the engine-house, and from this it is conducted to the various engine wells.

Pumping arrangements.—A Worthington engine, capable of pumping 5,000,000 gallons a day, is used for the supply of the London district. It is worked at a pressure of 125 lb. The head of water worked against is 180 ft. This engine pumps 104 gallons per stroke, and the rate at which it is worked is 35 strokes per minute. A Cornish engine of the Bull type, having a cylinder of the diameter of 70 in. and a stroke of 10 ft. (and which therefore pumps 253 gallons per stroke), is worked at the rate of 12 strokes per minute. A Cornish pumping-engine, having a cylinder 65 in. in diameter and a stroke of 10 ft., pumps about 2,500,000 gallons a day to Ealing, working against a head of 235 ft. This pump is worked at a rate of 12 strokes per minute. Another engine, called the East Cornish, is also used for pumping to Ealing. This engine has a cylinder of 65 in. and a stroke of 9 ft. An engine called the West Cornish is used for pumping to the London district. It has a cylinder of 65 in., and pumps 140 gallons per stroke, usually working at a rate of 14 strokes per minute. The steam for the Worthington engine is generated by a water-tube boiler, and the engine is worked at a pressure of 125 lb. The other engines are worked by steam, generated by fifteen Cornish and one Lancashire boilers at a pressure of 40 lb. Two other engines called the "Ninety" and "The Hundred," are used for pumping to London. Of these, the cylinder of one is 90 in. and the stroke 10 ft. 6 in. The diameter of the cylinder of the other engine is 100 in. and it has a stroke of 11 ft. The water pumped by the Cornish engines passes through a stand-pipe 200 ft. in height. The stand-pipes are situated in a brick tower. There are two pipes for conducting water up and two for its return, and an overflow pipe. The rising main is 6 ft. in diameter at the base and the return pipe 3 ft. The Worthington engine pumps directly into the main. The station contains a cottage and a large workshop. There is also a store yard situated to the south of the Brentford-road next to the river, the site of the former intake of the Company.

Hanger Hill, Ealing (see C on Map and Fig. 2).—This

FIG. 2.

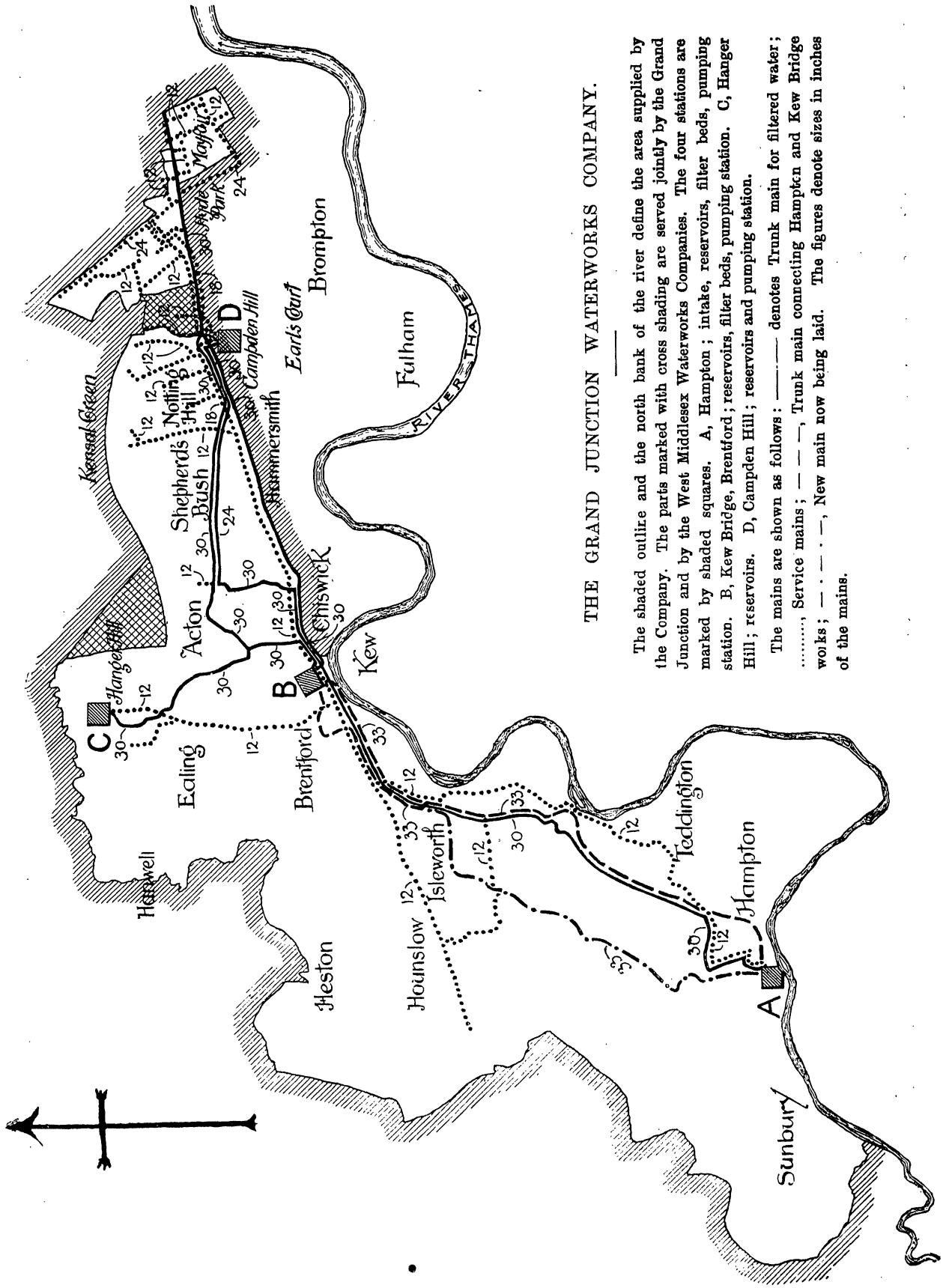


Hanger Hill Station.—S, Strainer. Stor. R, Storage reservoir. Ser. R, Service reservoir. C, Cottage. T, Tower.

station is situated at the highest point of Hanger Hill, 200 ft. above ordnance datum. It consists of two uncovered reservoirs and a tower containing a cistern. The high service reservoir is concreted at the sides and bottom and lined at the upper part with blue Staffordshire bricks. It is capable of holding 3,000,000 gallons of water. There is another reservoir of which the top water level is 7 ft. below that of the one just described. It is capable of holding 54,000,000 gallons. Its depth in the middle is 35 ft.

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., and XV. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, and 24th, May 1st, 8th, 15th, 22nd, and 29th, and June 19th respectively.

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THE GRAND JUNCTION WATERWORKS COMPANY.

The shaded outline and the north bank of the river define the area supplied by the Company. The parts marked with cross shading are served jointly by the Grand Junction and by the West Middlesex Waterworks Companies. The four stations are marked by shaded squares. A, Hampton; intake, reservoirs, filter beds, pumping station. B, Kew Bridge, Brentford; reservoirs, filter beds, pumping station. C, Hanger Hill; reservoirs. D, Campden Hill; reservoirs and pumping station.

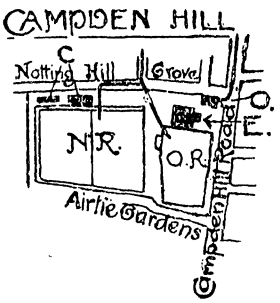
The mains are shown as follows: —·—·— denotes Trunk main for filtered water; ....., Service mains; — — —, Trunk main connecting Hampton and Kew Bridge works; — · — · —, New main now being laid. The figures denote sizes in inches of the mains.

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Its shape is somewhat irregular, the sides slope as 1½ is to 1, they are lined with concrete for the lower 10 ft. and above with pressed bricks laid on edge and set in cement on a concrete bed. This reservoir is provided with an outlet tower fitted with five valves placed at different heights, so that water can be drawn off at some point a few feet below the surface of the water, no matter at what level the height of the surface of the water may be. Water for the supply of this reservoir is pumped from Kew. Before it is distributed it passes through a strainer. The strainer is in reality a filter bed. It is a circular shaft 60 ft. in diameter and is provided at the bottom with 2 ft. of fine shingle. Before distribution all the water from this reservoir passes through the strainer. The reservoirs are separated one from the other by a public road; both are fenced in. Near the high service reservoir there is the tower containing a cistern of which the outside dimensions are 16 ft. by 16 ft. by 8ft. The water is pumped into it by a small gas-engine. This water is used for the high service supply of the houses in the immediate neighbourhood. A caretaker's cottage is situated here.

Campden Hill (see D on Map and Fig. 3).—This station is situated 130 ft. above ordnance datum on the highest part of Campden Hill, just to the north of Airlie-gardens and next to the Campden-road, which separates it from the reservoirs of the West Middlesex Water Company. There are three covered reservoirs, a pumping-station, three cottages, and an office. The total area is about five acres. The reservoir which was first constructed (see Fig. 3, O R) is covered with brick arches built on iron girders, which are supported by brick arches. It is ventilated by means of iron shafts. The bottom of the reservoir is lined with concrete, and the sides slope 1 in 4. The capacity of the reservoir is stated to be 4,000,000 gallons. The top is covered by a thin layer of earth and turfed over. The two newer reservoirs (see Fig. 3, N R) are covered with arches built on brick piers, and are ventilated by perforated bricks at the sides. The slope of the sides of these reservoirs is less oblique than those of the older one. The maximum depth of water to which they are filled is 19 ft., and they are stated to have a capacity of 7,000,000 gallons each. The western reservoir and part of the middle one are partly covered with concrete, and the top is let to a lawn-tennis club.

FIG. 3.



Campden Hill Station.—C, Cottages. O, Office. E, Engine-house. N R, New reservoirs. O R, Old reservoir.

The pumping arrangements.—There are three Cornish engines. Of these, two have cylinders 70 in. in diameter and a stroke of 10 ft. The third engine has a cylinder 90 in. in diameter and a stroke of 10 ft. At the present time one of the two smaller engines only is in use. When visited on June 2nd it was working at a rate of about eight strokes a minute against a head of water of 115 ft. There are nine Cornish boilers, of which three were in use, and the pressure worked at was 40 lb. The water is pumped into a standpipe, of which the top is 288·4 ft. above ordnance datum. The standpipe is situated in the tower which is such a conspicuous object on Campden Hill. The amount of water pumped from this station during the last week was 12,000,000 gallons. The high pressure is obtained for the high-service supply of Maida-vale and the Park-lane district.

Communications with other companies' mains.—The mains of the Company communicate with those of the West Middlesex, the Chelsea, and the East London Waterworks Companies; with the West Middlesex Company's by a 24-in. main in Edgware-road, opposite Kilburn Park-road; with the West Middlesex Company's from the same 24-in. main into a 21-in. main at the junction of Edgware-road and Bayswater-road; with the Chelsea Company's 24-in. connexion at Hyde Park Corner; with the East London Company's connexion from the 36-in. main into Kew works; and with the East London Company's mains into service mains in the Grand Junction-road and neighbourhood.

Length of new pipes.—The length of new pipes ranging from 3 in. to 7 in. laid in 1895 was 4762 yards, and during the year 1896 was 9516 yards.

Hydrants.—The number of hydrants erected during the year 1895 was 35, and during the year 1896 it was 8.

Houses under constant supply.—The number of houses under constant supply on Dec. 31st, 1894, was 59 443; on Dec. 31st, 1895, 60,150; and on Dec. 31st, 1896, 60 910.

Percentage of houses under constant supply.—On Dec. 31st, 1896, the percentage of houses under constant supply was 100.

Highest supply given.—The highest supply given is at about 200 ft. above ordnance datum.

Maximum and Minimum Month of Supply.

	Year 1895.		Year 1896.	
—	Month.	Quantity in gallons.	Month.	Quantity in gallons.
Maximum	June	22,382,109	July	22,618,801 daily average.
Minimum	January	17,686,913	March	16,987,660 ,,

Table of Statistical Details given by the Grand Junction Waterworks Company for the Year 1896.

SUPPLY.	Average daily supply in gallons	18,796,284
	Percentage delivered for other than domestic purposes, exclusive of waste	20 per cent.
	Number of houses supplied	60,544
	Number of houses on constant supply	60,544
	Estimated population supplied	411,663
RESERVOIRS.	Number	6
Subsiding and storage unfiltered water	Area in acres	17
	Available capacity in gallons	64,500
Storage filtered water reservoirs	Number	7
	Capacity in gallons	76,000,000
ENGINES.	Number	25
	Horse power	3716
	Greatest lift	235 ft.
	Head of pressure in the district supplied	155 ft.
WATER PIPES.	Total number of miles of water pipes	445¼
	Number of miles of water pipes in the metropolis	191⅛
	Number of miles of streets with water pipes constantly charged in the metropolis	135⅝
	Number of hydrants erected within the metropolis	1615
FILTERS.	Number of beds	17
	Area in acres	21¾
	Depth of sand and other materials	Old pattern:—Sand, 2 ft. 6 in.; hoggin, 6 in.; fine gravel, 9 in.; coarse gravel, 9 in.; boulders, 1 ft. New pattern:—Sand, 2 ft. 6 in.; gravel, 6 in.; drains, 3 in.

Works in progress (Hampton).—1. A preliminary filter bed is being converted into two filter beds of the ordinary type;

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each of these will have an area of one and a half acres. 2. An engine-house fitted with a Worthington engine is being erected for pumping water to Kew. 3. Two reservoirs are being converted into filter beds of one acre each. 4. A new main is being laid between Hampton and Kew Bridge (see Map).

AREA OF SUPPLY.

The Act of 1852 authorises the Grand Junction Company to supply the following places, two of which are entirely and the others partly supplied by the Company:—

Supplied.—Brentford, Ealing.

Partly supplied.—Hammersmith, Kensington, St. Mary Abbotts, Paddington; St. George, Hanover-square, St. James Westminster, and St. Marylebone.

The Act of 1861 authorises the supply of the following places, almost all of which are entirely supplied by the Company:—Acton, Bushey-park, Chiswick, Hampton, Hampton Court, Hampton Wick, Hanworth, Isleworth, Teddington, Twickenham, and Whitton. (Hampton Court Palace has a separate and private supply.) Parts of Ealing and Isleworth were excluded by this Act. The Act of 1878 authorises the supply of Heston and Hanwell (which are entirely supplied by the Company) and the previously excluded parts of Ealing and Isleworth.

Errata.—We regret that some errors should have crept into the first part of this article. On p. 1702, fifth line from the bottom of the right hand column, for "; D D" read "D ,D'". On p. 1704, fifteen lines from the top of the left hand column, for "Fig. 3 B." read "Fig. 3 D D." The full description of Fig. 3 should read as follows:—Diagram of ground plan of the arrangements for collecting water from the gravel bed. A, B, filter bed into which the river water is introduced. C, C, collecting pipes. D, D, D, D, brick shafts. The two at the lower part of the diagram represent the ones which discharge the water into the main which conducts it to the engine-house.

THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH.

The Surgery of the Bladder.

MR. FRANCIS M. CAIRD, F.R.C.S.Edin., Lecturer on Surgery, Assistant Surgeon to the Royal Infirmary, Edinburgh, delivered a lecture before the Royal College of Surgeons of Edinburgh on June 11th, entitled a Contribution to the Surgery of the Bladder. The address was devoted mainly to a consideration of recent advance in the treatment of tumours of the bladder. The lecturer contrasted the ease with which an accurate diagnosis could be established in the case of vesical tumours by means of the cystoscope with the greater difficulties encountered in formulating an opinion in gastric cases. In the latter instance the line of treatment had been systematised; in the former, despite the greater facilities for diagnosis, it is still uncertain. While the uniformly fatal issue of tumours of the bladder has long been recognised surgical intervention is of very recent date, for only fifteen years ago the general practice was to rely upon internal medication and the unstinted use of opium. A great advance was made when the value of drainage of the bladder became established, since by this means the suffering was markedly lessened and the hæmorrhage became arrested. Of such palliative measures examples were given. The advantages of suprapubic drainage lay in the shortness of the route, the unimportance of the tissues traversed, the remoteness of the wound from septic channels, and the ease with which a permanent tube might be applied. Again, the site of the tumour in the majority of cases is left undisturbed. Radical measures, complete removal of malignant growths, should in every case be the surgeon's object. When the ureters are not affected and the peritoneum can be stripped from the viscus, the whole thickness of the bladder-wall may readily be excised; when the peritoneum cannot be separated the method of Clado should be adopted. In all cases where possible the vesical wound should be sutured. If one ureter be alone affected, its mouth may be removed along with the tumour, and the divided extremity may be successfully re-implanted at a new site in the sutured bladder, or if this be impossible it may be led into the colon or rectum. The implication of the floor of the bladder or of both ureters generally requires complete extirpation of the organ. In the female this operation has been carried out with success on three occasions, the ureters being implanted in the vagina, which was closed so as to form a reservoir with the urethra utilised as an outlet. In the male, greater difficulties present themselves. The ureters have been led into the open wound or grafted into the great gut. It has now been sufficiently demonstrated that the latter method is possible and practicable. The rectum tolerates the urine and the sphincter is equal to the task, so that continence is easily maintained for three or four hours without inconvenience. There are six successful cases reported of bilateral implantation of the ureters for extroversion, and it is sufficiently clear that where other methods are not available the grafting of a single ureter in cases of rupture, &c., or of both in cases of extroversion or preliminary to excision of the bladder is sufficiently justifiable. It was suggested that an attempt might be made to establish an artificial bladder by the occlusion of a segment of the sigmoid flexure and providing it with a valvular outlet to serve as a urethra after the manner of Witzel. At a subsequent date the ureters may be implanted and the bladder may be excised. Reference was made to the various methods of uniting the ureters to the intestine, and the button devised by Boari for this purpose was demonstrated. Special stress was laid upon the value of the Trendelenburg position, the use of Petersen's bag, and Cathcart's method of continuous suction drainage.

The lecture was illustrated by specimens, anatomical and pathological, from the museum of the College. At its close the lecturer was complimented by the President, Emeritus Professor Struthers, on the clearness of the exposition and on the ingenuity of his methods of dealing with the various morbid conditions of the bladder. He had listened with the greatest interest to the lecture, for all these operations were new since he was in surgery, as surgeon to the old Royal Infirmary, from thirty to forty years ago. At that time they approached the bladder only from below. To attack it from above the pubes was regarded as likely to be attended by a fatal result. Thanks to Lord Lister, all these wonderful operative procedures are now rendered possible. The President mentioned that Mr. Caird's lecture concluded the series of College lectures for the present session.

STATISTICS OF SMALL-POX AND VACCINATION.

ON June 15th Mr. Alfred Milnes, M.A.Lond., read a paper before the Royal Statistical Society on "Statistics of Small-pox and Vaccination, with Special Reference to Age-incidence, Sex-incidence, and Sanitation." The paper was understood to be a rejoinder to a paper on the same subject by Mr. Noel A. Humphreys read before the same society a few months ago. The main interest attaching to Mr. Milnes's paper arises from the fact that he is the editor of the *Vaccination Enquirer* and one of the most influential advocates of the party which absolutely refuses to recognise any protective effect from vaccination. That he is an able advocate of this incomprehensible tenet will probably be admitted by all who possess the patience to read carefully his long and elaborate paper; and it is in some respects useful to know what can be said in support of anti-vaccination by one of its most skilful exponents. It is impossible, however, to assert that the paper contains much that is new in the way of argument although many of the well-worn theories and assertions of Mr. Milnes's party are handled with exceptional skill. The paper carefully avoided all but the most incidental reference to the recent remarkable epidemic of small-pox in Gloucester; and Mr. Milnes, when asked during the discussion which followed the reading of the paper for an explanation of this omission, declared that the whole of the facts of that epidemic are still under dispute, and that he does not believe any of the figures that have yet been published relating to it! This remark indicates the tone and spirit of much of the paper, which it is needless to say is objectionably aggressive. It is asserted that "vaccination and small-pox attained their maximum together, and together they have steadily declined." This is not strictly accurate, because infant vaccination reached

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its maximum in 1876, which was certainly not the year of maximum small-pox mortality. Moreover, there is no reasonable ground for expecting that an annual default of 14 or 15 per cent. in the official returns of infant vaccination would immediately cause an increaseed small-pox mortality, unless small-pox were prevalent at the time, as was the case recently at Gloucester.

The comparison of the declining rates of mortality from other diseases than small-pox was dealt with at great length by Mr. Milnes. Because fever and cholera have declined concurrently with the decline of small-pox he argues that there is no justification for attributing the decline of small-pox to vaccination. He refuses to recognise that fever and cholera are diseases distinctly due to insanitary local conditions, and that no one would venture to assert that small-pox can be produced by the same causes. Mr. Milnes is extremely autocratic in his methods of dealing with facts. With a view to mask the remarkable decline in the proportional child mortality from small-pox in recent years, he insists on treating all deaths ascribed to chicken-pox as fatal cases of small-pox; and he further insists, with a view to increase the proportion of small-pox deaths after vaccination, that all the cases of small-pox registered with "no statement as to vaccination" are vaccinated cases. The omission on the part of certifying practitioners to give this information for insertion in the death register is much to be regretted, but Mr. Milnes's assertion that all the "not stated" cases are vaccinated cases is unjustifiable and certainly incorrect, as the "not stated" cases include large numbers of cases in which the deceased persons, although reported to be vaccinated, bore no marks of the operation.

Mr. Milnes devoted a considerable portion of his paper to the elaboration of the pet theory of the opponents of vaccination that sanitation and not vaccination is the controlling factor of small-pox mortality. Because Dr. Farr's life table of diseases shows that small-pox mortality in 1861–70 was far lower in the healthy (that is, the rural) districts than in Liverpool it is asserted that sanitation rather than vaccination governs the mortality from this disease. In another part of the paper it is admitted that "small-pox is a question of exposure to infection," and yet Mr. Milnes does not recognise that this undoubted fact vitiates his conclusions from the small-pox rates in healthy districts and in Liverpool. What is the relative chance of exposure to infection in a healthy rural district and in a seaport town like Liverpool?

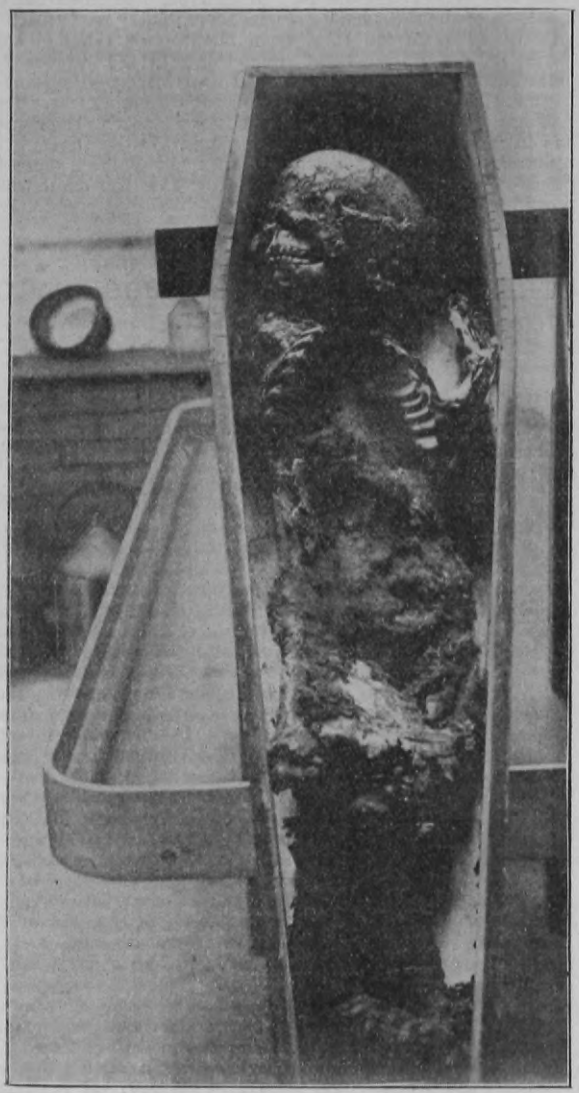
Mr. Noel A. Humphreys, in his recent paper, gave a table showing that the proportion of child mortality from small-pox at each of the six recent local epidemics investigated by the Royal Commission on Vaccination bore a constant relation to the amount of default of infant vaccination in preceding years. In Warrington and Sheffield, where the default of vaccination was under 5 per cent., 23 and 26 per cent. of the deaths from small-pox were of children under ten; while in Gloucester and Leicester, where the default was 68 per cent., the proportion of small-pox deaths under the age of ten years was 65 and 71 per cent. respectively. These facts appear to have disturbed the opponents of vaccination, and Mr. Milnes, as the result of elaborate calculation, comes to the conclusion that the "high proportion of children's deaths in Leicester is due to the high proportion of children's attacks!" This cannot be questioned, but had neglect of vaccination nothing to do with the high proportion of children attacked? We more than suspect that it had in Leicester and also in Gloucester, where 280 children under ten years of age died from small-pox last year.

Mr. Milnes, with reference to the sex-incidence of small-pox, asserts, with a view to depreciate the value of re-vaccination, that "there can be no doubt that re-vaccination is preponderatingly incident on the male sex." We venture very much to doubt the probability of the accuracy of this assertion, for notwithstanding the compulsory re-vaccination of the army and navy, and of the postal service, very large numbers of female domestic servants are undoubtedly re-vaccinated, and it is easier to persuade women than men to be re-vaccinated. It would be interesting to have some actual figures and experience on this point, on which Mr. Milnes seems to think there is no room for doubt. There can, however, be practically no question about the fact that adult males, who appear to suffer from small-pox more severely than adult females, are as a rule exposed to greater risk of infection than females, and if this, o a higher case-mortality of small-pox among males, be the cause of the greater liability of males to fatal small-pox, what becomes of Mr. Milnes's attack on the value of re-vaccination?

At the close of Mr. Milnes's paper, a short discussion followed in which Mr. Noel A. Humphreys, Dr. W. R. Hadwen, Mr. Shirley Murphy, Mr. Yule, Dr. E. J. Edwardes, and one or two others took part, and the usual vote of thanks to the reader of the paper was passed.

THE DISCOVERY OF HUMAN REMAINS IN MARYLEBONE.

BY the kind permission of Dr. G. Danford Thomas we are enabled to publish the accompanying illustration, taken from a photograph of the remains of a body found in a disused house in Little Marylebone on March 24th of this year. Workmen were engaged in pulling up the floor boards of the second-floor back room when they found the remains. The body was partially clothed in a child's shirt and bodice, which were much destroyed. There were also a pair of socks and a pair of boots in a good state of preservation. Under the body was a portion of the *Times* newspaper of Nov. 25th,



1879. A print dress was also wrapped round the body. The lower part was wrapped in American cloth. Mr. Spurgin, the divisional surgeon, who examined the remains, found that they were those of a female child between six and seven years of age. The temporary teeth were all present, and on removing

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a piece of skin over the upper maxilla the first permanent molar could be seen in the ramus of the jaw behind the second temporary molar, these showing the value of dentition in identifying the age of a dead body. The child had been short and squat, as was evidenced by the length of the bones of the legs being out of proportion to that of the spine. There was a curvature of the spine, which might have been a natural deformity or due to the position in which the body had been placed after death. The cause of death had evidently been suffocation as a neckerchief of some silken or gauzy material was found pressed tightly over the mouth and the tongue was protruded between the teeth. The body was in a mummified condition, the skin of the head, face, and abdomen being of a leathery consistence. The parietes of the thorax had almost disappeared, and the contents of the thoracic cavity were represented by a heap of brown dust. The arms were separated from the body. The parietes of the abdomen were better preserved, brown in colour, and almost like parchment. The only organ of which there were any distinct traces was the liver, which was represented by a brownish mass about the size of a cricket ball. The bones were brown in colour and pliable, easily crumbling to dust. A peculiar odour was emitted, somewhat resembling that of old cheese. The fact that the leather boots were in good preservation would negative the supposition that the body had been partially eaten by rats. The mummified condition was probably due to the fact that the body had been laid in a dry place where there was free draught. The time that had elapsed since the body had been placed in the position in which it was found, Mr. Spurgin thought, must have been ten or twelve years at the least, but the date of the *Times* newspaper would suggest a good deal longer than that, as it is not a common thing for a newspaper to lie about for seven years, for, as above stated, the date of the *Times* found with the body was 1879, and there was nothing in the appearance of the body to negative the supposition that it had been there over seventeen years. The appearance presented by human remains after a lapse of time varies greatly, depending entirely upon surrounding conditions. In dry, elevated situations putrefaction goes on very slowly, and other cases are on record where the body of a child has been found in the rafters of a house in a mummified condition.

SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following letter has been sent to all the candidates for the vacant seats on the Council of the College.

West Hill, Putney, S.W.,
18th June, 1897.

DEAR SIR,—Understanding that you are a candidate at the approaching election to the Council of the College, the executive committee of this society has instructed me to ask you to be good enough to communicate your views on certain matters of interest to the Fellows and Members. In explanation of this request from those who are not directly electors, I am to refer you to a resolution passed by the Council in March, 1896, to the following effect: "That this Council represents the Body Corporate of the College, and therefore the Members as well as the Fellows." I am further to add that should you be good enough to favour me with a reply we propose to publish it, subject to your approval.

The Committee of this Society feels that it is desirable that in future the Fellows and Members should be in possession of something more than vague statements in the press as to the views of candidates on current topics.

The following are the questions to which I am directed to solicit a reply:—

1. Are you in favour of granting the Members a limited direct representation on the Council?
2. Do you consider that the President should be elected by the Fellows generally or as at present?
3. How do you think that the representative of the College on the General Medical Council should be appointed in accordance with the Act of 1858?
4. Will you support a literal interpretation of By-law 15, and do you consider that the rights, privileges, &c., of a Fellow or Member referred to in the By-law are those in virtue of which he practises his profession?

I remain, faithfully yours,
W. G. DICKINSON, Honorary Secretary.

Concerning the replies received up to date Mr. Dickinson writes to us as follows:—

"Mr. JACKSON replies 'yes' to the first question; to the second he answers that he thinks that the President should have been a member of Council for at least from two to three years, and should be elected by the reformed Council; the third question he does not answer clearly, and replies 'yes' to the fourth."

"Mr. HOWSE replies 'no' to the first question; 'as at present' to the second and third; to the fourth, which he objects to as 'vaguer than the by-law itself,' he says he will 'support any legal interpretation which seems to me just and good for the profession and the College.

"Mr. EDMUND OWEN prefers to reserve his freedom of action and independence as a member of Council if elected, and therefore declines to answer the questions.

"Mr. ANDREW CLARK coincides with the present policy of the Council, and is in sympathy with their resolution of March 16th.

"Mr. WATSON CHEYNE does not propose to pledge himself to any course of action if elected."

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

THE summer meeting of this society was held in Trinity College, Dublin, on June 10th and 11th. In addition to an unusually large number of British anatomists the following foreign guests were present:—Professor Waldeyer (Berlin), Professor His (Leipzig), Professor Leboucq (Ghent), Dr. Otis (Boston, U.S.A.), Professor Disse (Marburg), Professor Spalteholtz (Leipzig), Dr. de Bruyne (Ghent), Dr. Frohse (Berlin), and Dr. Kœstner (Leipzig). Professor G. D. Thane took the chair at 10 A.M. on the 10th, and after seven new members had been elected the following programme was carried out. Dr. T. H. Bryce, (Glasgow): a Pair of Negro Femora, the left showing a remarkable development of the popliteal surface. Professor Spalteholtz (Leipzig): Stereoscopic Photographs illustrating the Distribution of the Arteries of the Human Skin. Professor Leboucq (Ghent): the Ossification of the Terminal Phalanges of the Finger in relation with Hyperphalangy. Professor Birmingham (Dublin): Models illustrating the Topographical Anatomy of the Abdominal Viscera. Dr. Kœstner (Leipzig): Specimens of Malformed Chick Embryos. Professor Sir William Turner (Edinburgh): X Ray Photogtaphs of Mercurial Injections of the Arteries of the Limbs and Kidneys. Dr. Otis (Boston, U.S.A.): Some Points in the Structure of the Rectum. Professor A. Macalister (Cambridge): A Study of Australian Brains. Mr. J. Cantlie (London): On the Position of the Gall-bladder. Professor R. Howden (Durham): On a Case of Marked Distension of the Colon. Professor Redfern (Belfast): On the Development and Nutrition of Bone and Cartilage. In the afternoon at 2.30 P.M. the following papers were read: Professor Windle (Birmingham) and Mr. F. G. Parsons (London): Note on some Points in the Nomenclature of Comparative Myology. Professor W. Anderson (London): The Peritoneal Relations of the Sigmoid Flexure. Professor Disse (Marburg): The Development of the Olfactory Nerve in Birds. Professor Spalteholtz (Leipzig): Reticulated Tissue in Different Organs. Professor Dixon (Cardiff): The Development of the Eye-muscle Nerves in Mammals. Professor Cunningham (Dublin): (1) the development of the Sulcus of Rolando; and (2) the Development of the Calcarine Fissure. Dr. E. H. Taylor (Dublin): The Applied Anatomy of the Rectum. In the evening the members were entertained at dinner in the College of Physicians by the President of the Royal Academy of Medicine in Ireland. On Friday, June 11th, the meeting breakfasted with Professors Cunningham and Birmingham at the Zoological Gardens in Phœnix Park, after which the following communications were made: Professor v. Bardeleben (Jena) and Dr. Frohse (Berlin); The Finer Ramifications of Nerve Filaments in Muscle. Dr. C. J. Patten (Dublin): (1) Two Curious Modifications of the Lower Jaw; and (2) Cervical Vertebræ in which the Laminæ have not fused. Professor Cunningham (Dublin): Models and Specimens of the Kidneys. Dr. G. Elliot Smith (Sydney): The Morphology of the Fornix and Margin of the Cerebral Cortex. Dr. W. Smyth (Belfast): Absence of Pectoralis Major in a Living Boy. Dr. de Bruyne (Ghent): the Functional Adaptations of Phagocytosis. Professor Waldeyer: The Anatomy of the Outer Wall of the Pelvis, with special Reference to the Position of the Ovary. Dr. R J. Berry (Edinburgh): The Anatomy of the Cæcum and Vermiform

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Appendix. Mr. Booth Pearsall (Dublin): The Linear Determination of the Human Tooth-Form. Dr. W. S. Haughton (Dublin): Applications of X Rays Photography to Anatomical Investigation. Professor D. J. Cunningham (Dublin): Note on Cape Hunting Dogs. Professor Windle (Birmingham): Priestley Smith's Formol Method of Mounting Specimens of the Eye. Professor R. Howden (Durham): On a Case of Bifid Scrotum.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following are a few of the principal amounts received at the Mansion House, the lists of which have been received at THE LANCET Office up to the time of going to press on Thursday, when the total amounted to about £8000. The total sum recorded at the corresponding period last year was £17,000.

	£	s.	d.
St. Paul's Cathedral	593	3	4
Westminster Abbey	459	16	0
St. Michael, Chester-square	1326	0	0
Delta	200	0	0
E. O.	100	0	0
St. Matthew's, Brixton	106	9	2
Foundling Hospital Chapel	104	14	3
Union Chapel, Islington	134	8	2
Metropolitan Tabernacle	109	8	0
St. Nicholas Parish Church, Chislehurst	251	0	8
St. Margaret's, Westminster	239	19	6
St. Peter's, Brockley...	121	0	0
St. Stephen's, South Dulwich	202	6	5
Christ Church, Highbury	100	13	9

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6610 births and 3328 deaths were registered during the week ending June 19th. The annual rate of mortality in these towns, which had been 17·4 and 15·6 per 1000 in the two preceding weeks, rose again last week to 15·8. In London the rate was 14·6 per 1000, while it averaged 16·6 in the thirty-two provincial towns. The lowest rates in these towns were 9·9 in West Ham, 10·8 in Burnley, 10·9 in Hull, and 11·6 in Brighton; the highest rates were 21·6 in Huddersfield, 22·2 in Preston, 22·8 in Bolton and 26·9 in Salford. The 3328 deaths included 354 which were referred to the principal zymotic diseases, against 364 and 379 in the two preceding weeks; of these, 138 resulted from measles, 78 from whooping-cough, 49 from diarrhœa, 41 from diphtheria, 28 from scarlet fever, 20 from "fever" (principally enteric), and not one from small-pox. No death from any of these diseases was recorded last week in Swansea; in the other towns they caused the lowest death-rates in Bristol, Bradford, and Croydon, and the highest rates in Plymouth, Preston, Bolton, and Salford. The greatest mortality from measles occurred in Birmingham, Burnley, Preston, Bolton, Manchester, and Salford; from scarlet fever in Wolverhampton, from whooping-cough in Plymouth and in Huddersfield, and from diarrhœa in Salford and in Norwich. The mortality from "fever" showed no marked excess in any of the large towns. The 41 deaths from diphtheria included 29 in London, 3 in Liverpool, 2 in Burnley, and 2 in Sheffield. No fatal case of small-pox was registered either in London, or in any other of the thirty-three large towns. There were no cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 19th inst., the numbers at the end of the three preceding weeks having been 12, 4, and 2 respectively; no new cases were admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2670, against 2546, 2601, and 2637 on the three preceding Saturdays; 274 new cases were admitted during the week, against 278, 274, and 255 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 229 and 191 in the two preceding weeks, further declined to 141 last week, and were 94 below the corrected average. The causes of 43, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bradford, Leeds, Hull, Newcastle-upon-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·3 per 1000 in each of the two preceding weeks, declined again to 19·4 during the week ending June 19th, but was 4·5 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 11·9 in Perth and 16·1 in Greenock to 22·0 in Dundee and 27·0 in Leith. The 577 deaths in these towns included 29 which were referred to whooping-cough, 24 to measles, 23 to diarrhœa, 5 to scarlet fever, 5 to "fever," 1 to diphtheria, and not one to small-pox. In all, 87 deaths resulted from these principal zymotic diseases, against 93 and 94 in the two preceding weeks. These 87 deaths were equal to an annual rate of 2·9 per 1000, which exceeded by 1·2 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 40 and 37 in the two preceding weeks, further declined to 29 last week, of which 13 occurred in Glasgow, 5 in Edinburgh, 5 in Dundee, and 5 in Leith. The 24 deaths from measles were within 3 of the number in the preceding week, and included 15 in Edinburgh, 5 in Glasgow, and 3 in Leith. The deaths referred to different forms of "fever," which had been 3 and 8 in the two preceding weeks, declined again to 5 last week, of which 4 occurred in Glasgow, where 3 of the 5 fatal cases of scarlet fever were also recorded. The deaths from diseases of the respiratory organs in these towns, which had been 110 and 108 in the two preceding weeks, were 109 last week, and exceeded by 27 the number in the corresponding period of last year. The causes of 36, or more than 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the three preceding weeks from 28·3 to 22·4 per 1000, further fell to 19·7 during the week ending June 19th. During the past eleven weeks of the current quarter the death-rate in the city has averaged 28·5 per 1000, the rate during the same period being 15·8 in London and 25·8 in Edinburgh. The 132 deaths registered in Dublin during the week under notice showed a decline of 18 from the number in the preceding week, and included 14 which were referred to the principal zymotic diseases, against 10 and 14 in the two preceding weeks; of these, 6 resulted from whooping-cough, 3 from diphtheria, 2 from scarlet fever, 1 from measles, 1 from "fever," and 1 from diarrhœa. These 14 deaths were equal to an annual rate of 2·1 per 1000, the zymotic death-rate during the same period being 1·4 in London and 3·7 in Edinburgh. The fatal cases of whooping-cough, which had been 3 and 4 in the two preceding weeks, further rose to 6 last week. The 3 deaths referred to diphtheria exceeded the number recorded in any week since February last. The fatal cases of scarlet fever, which had been 2 and 4 in the two preceding weeks, declined again to 2 last week. The mortality from measles and from "fever" also showed a decline from that recorded in the preceding week. The 132 deaths in Dublin last week included 29 of infants under one year of age, and 24 of persons aged upwards of sixty years; the deaths of children showed a slight increase, while those of elderly persons were considerably below the number recorded in any recent week. Six inquest cases and 4 deaths from violence were registered; and 50, or more than a third, of the deaths occurred in public institutions. The causes of 6, or nearly 5 per cent., of the deaths in the city last week were not certified.

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THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-LIEUTENANT-COLONEL JAMES has assumed Charge of the Station Hospital, Beverley, in relief of Brigade-Surgeon Hoystead.

INDIA AND THE INDIAN MEDICAL SERVICES.

The Queen has approved of the following promotions:—Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels:—*Bengal Establishment:* Edgar Geer Russell. *Bombay Establishment:* William McConaghy and Thomas Stephenson Weir. Surgeon-Majors to be Surgeon-Lieutenant-Colonels:—*Bengal Establishment:* William Owen, Walter Conry, George Jerome Kelly, Dharmadas Basú, Alexander William Mackenzie, Jeremiah Mullane, Douglas Ffrench-Mullen, James Alexander Nelis, Aylmer Martin Crofts, James Crofts, and William Coates. *Madras Establishment:* Henry Augustus Fitzroy Nailer, and Nityananda Chatterjie. *Bombay Establishment:* William Keith Hatch, Hormasji Dadabhai Masini, and Kanóbá Ranchoddás Kirtikar. Surgeon-Captains to be Surgeon-Majors:—*Bengal Establishment:* Francis James Drury, Herbert Jekyl Dyson, Frederick Arthur Rogers, D.S.O., and Edward Richard William Charles Carroll. The Queen has also approved of the retirement from the Service of the under-mentioned officers:—Surgeon-Captain Frederic Hewlett Burton-Brown, Bengal Establishment, and Surgeon-Lieutenant Alfred Moore, Madras Establishment. Surgeon-Colonel E. Townsend, A.M.S., is brought on the Administrative Medical Staff of the Army, vice Surgeon-Major-General C. McD. Cuffe, transferred to the Home establishment. The services of the under-mentioned officers are replaced at the disposal of the Government of India, Home Department:—Surgeon-Captain J. Mulvany and Surgeon-Captain E. H. Condon. The services of Surgeon-Lieutenant P. N. O'G. Lalor (Madras) are placed temporarily at the disposal of the Foreign Department for employment on plague duty. The services of Surgeon-Lieutenant F. Wall (Madras) are placed temporarily at the disposal of the Foreign Department for famine duty.

THE HEALTH OF THE SPANISH ARMY.

The medico-statistical report of the Spanish Army for the year 1894 has recently been made public in the *Revista de Sanidad Militar*, the contents being arranged under four separate headings as follows: (1) the Peninsula and its dependencies, (2) the island of Cuba, (3) the island of Puerto-Rico, and (4) the Philippine Islands. The average strength of the troops serving in the Peninsula and its dependencies, which comprise the posts of Ceuta and Melilla in Northern Africa, together with the Balearic and Canary Islands, was 87,585 of all arms, but exclusive of the gendarmerie which is not under the control of the War Minister. During the year 38,872 soldiers were admitted for treatment into military or general hospitals, and the ratio of sickness was consequently returned as only 443·8 per 1000 per annum; but this unusually low proportion is due to the fact that no account is taken of the numerous, more or less slight, cases which are disposed of in the regimental infirmaries. The deaths amounted to 737, or 8·41 per 1000—a rate considerably in excess of that of most of the other European armies. The compiler of the report is careful to point out that a great deal of the mortality is caused by the preventable diseases which usually attend on defective hygiene, and seizes the opportunity of strenuously urging upon the authorities the necessity for sanitary reform in barracks and hospitals. In support of his argument he cites the case of the British army, of which, in the course of a few years, the annual death-rate was brought down from 17·5 per 1000 to 4·7. In Cuba the average strength, including 4088 gendarmes, was only 19,040, but this, of course, was prior to the insurrection which during the last two years has been such a drain on the military resources of the kingdom. The admissions into hospital numbered 11,404, and were therefore at the rate of 598·9 per 1000; but here, too, unimportant cases find no entrance into the statistics. There were 385 deaths in the course of the twelvemonth, yielding a ratio of 20·22 per 1000 of strength; but this alarming mortality was mainly owing to yellow fever, which was responsible for upwards of two-thirds of the total loss. In other respects the Queen of the Antilles maintained her pristine reputation as one of the most salubrious spots inside the inter-tropical zone. It is true that paludism was rather prevalent, but judging by the mortality of 0·31 per 1000 the type of the disease must have been remarkably benign. In the neighbouring island of Puerto-Rico the general health of the garrison was not so good. Out of an average strength of 3438 men there were 3926 admissions to hospital and ninety-six deaths, the rates respectively being 1142 and 27·92 per 1000. As in Cuba yellow fever caused the greatest damage, the mortality in 171 cases having been equal to 39·2 per cent. Paludal and venereal affections were the chief forms of disease. The average strength of the troops in the Philippines was 20,189, but only 2404 were Europeans, the remainder being natives of the archipelago. The sick-rate for the two classes combined was 510 per 1000, but for the Europeans alone it was 1152 per 1000. On the other hand, the death rate in the case of the latter was 8·49, whereas for the natives it was 12·48.

Sickness and Mortality in the Spanish Army, 1894.

—	Per 1000 of strength.							
	Peninsula and dependencies.		Cuba.		Puerto-Rico.		Philippines.	
	Sick.	Died.	Sick.	Died.	Sick.	Died.	Sick.	Died.
Enteric fever ...	6·96	1·70	1·31	0·47	1·45	0·58	1·88	0·89
Pulmonary tuberculosis ...	7·42	1·70	5·20	1·57	6·39	1·74	4·26	2·33
Pneumonia, &c.	12·10	1·34	1·10	0·10	—	—	1·04	0·39
Paludism	15·57	0·11	133·72	0·31	110 52	0 29	71·87	1·88
Syphilis	11·36	0·01	4·99	—	20·94	—	1·58	—
Venereal diseases	71·80	—	48·50	—	114·10	—	12·72	—
Small-pox	3·09	0·11	1·57	0 05	0·87	0·29	3 07	0·24
Wounds, &c. ...	7·01	0·14	6 30	0·11	7·85	—	8 76	0·84
Suicide	—	0·08	—	—	—	0·29	—	—
Yellow fever ...	—	—	42·76	13·94	49·73	19·48	—	—
Other affections	308·49	3·22	353·45	3·70	830·09	5·25	404 82	5·46
Total	443·8	8·41	598·9	20 25	1141 9	27·92	510·0	12 06
Invalids—								
Permanent... ...	33·56		5·62		6·68		10 90	
Temporary ...	24·71		7·83		20·65		67·80*	

* Europeans only.

CHOLERA IN INDIA.

India has been terribly visited of late, with plague, pestilence, and famine, followed by earthquake. The accounts of the epidemic of plague are, we are glad to say, satisfactory; the health of Bombay is now good, and continues to improve. We regret to notice, however, in the Indian papers received by the last mail, that cholera has made its appearance at several Indian stations. It should be borne in mind, however, that this is the season at which it frequently does so. The disease has broken out in the lines of the 19th Hussars at Secunderabad. Seven cases of cholera have occurred at the Fountain Hotel, Mahableshwur, four of which proved fatal. Latest advices from that station report that no fresh cases have occurred there. There were fifteen deaths at Bombay reported during the week ending June 1st, and the disease is stated to be prevalent in the districts surrounding Jubbulpore. Cholera has also broken out in an epidemic form in Belgaum and its vicinity, thirty cases having occurred in two or three days.

THE BOYLE SYSTEM OF VENTILATION FOR STEAMSHIPS.

This system, a descriptive pamphlet dealing with which we have received, has been severely and carefully tested for several years, and has been favourably reported on by naval and scientific authorities. It possesses double the ventilating power of previous forms of such apparatus, and these ventilators "have no moveable parts to get out of order." Messrs. Boyle have, it seems to us, arrived at a comparatively simple and economic solution of one of the most difficult problems in sanitation, and we look forward to the employment of it in our troop ships, or "hospital" ships when we get them.

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The principles of ventilation are well known, but how to adopt these to climate, the speed of steamers, the limited space available, and such like contingencies are the desiderata. Again, when the medical aspect of the question is approached, and provision has to be made for sick and wounded persons, further difficulties have to be overcome. Messrs. Boyle have taken an initial step towards solving an important problem.

THE DIAMOND JUBILEE HONOURS.

The names of the following medical officers appear among the list of Honours bestowed on the occasion of the completion of the sixtieth year of Her Majesty's reign:—Inspector-General of Hospitals and Fleets, H. F. Norbury, C.B., to be K.C.B. (Military); Inspector-General of Hospitals and Fleets J. J. L. Donnet, to be K.C.B. (Military); Inspector-General of Hospitals and Fleets H. Macdonnel, R.N., to be C.B. (Military); Surgeon-General C. A. Gordon, C.B, Hon. Physician to the Queen, to be K.C.B. (Military); Surgeon-Major-General C. Sibthorpe, I.M.S., to be C.B. (Military); Brigade-Surgeon-Lieutenant-Colonel G. W. McNalty, to be C.B. (Military); Surgeon-Major-General J. Jameson, Director-General, A.M.S., to be C.B. (Civil); Deputy-Inspector-General of Hospitals and Fleets H. C. Woods, to be a Member of the Fourth Class Royal Victorian Order; Surgeon-Major-General Hooper, President of the Medical Board, India Office, to be C.S.I.; Surgeon-Major-General Cleghorn, Director-General of the Indian Medical Service, to be C.S.I.

Correspondence.

"Audi alteram partem."

DRAFT BILL FOR THE REGISTRATION OF MIDWIFERY NURSES.

To the Editors of THE LANCET.

SIRS,—In your issue of June 19th, p. 1684, you kindly publish extracts from my above Draft Bill. Since sending it to you I have resolved to extend this Bill so as to include, not only midwifery, but also medical, surgical, and other nurses. I hope this will please all parties, and that we shall soon get rid of an important subject.

I now wish to ask through THE LANCET that the Secretary of each Medico-ethical Society, each Branch of the Brit. Med. Assoc., and each hospital committee and medical staff interested in this question shall now obtain a Copy of this Draft Bill and bring it before his members. I shall be glad to answer any questions. Copies of this Draft Bill may be obtained from my printers, Messrs. Hill and Co., 10, College-lane, Liverpool, at about the following prices, carriage paid: 25 copies, 5*s.*; 50 copies, 8*s.* 6*d.*; 100 copies, 12*s.*

May I at the same time request practitioners to send me a subscription to the Society, formed for the purpose of pushing this Bill through Parliament. Since 1890 I have expended out of my own pocket £373 13*s.* 8*d.* in opposing the five Midwives Bills. Since Feb. 10th, I have expended about £43. It will require a considerable sum—even to defray postage and printing—when I sent a copy of this draft Bill and a circular letter to all hospitals and Medical Societies, Colleges, Medical Schools, Universities, and Poor-law Guardians—i e., some 1684 Boards of Guardians, 385 Medical Societies, and 1506 Hospitals, or a total of *at least* 3575 penny stamps required. I am more than willing to give my best time, services, and money, and the services of those in my house, but I cannot finance work which directly concerns each practitioner.

I am, yours truly,

Liverpool, June 21st, 1897. R. R. RENTOUL.

"A METHOD OF UNITING THE DIVIDED INTESTINE."

To the Editors of THE LANCET.

SIRS,—Under the above heading the writer of a letter that appeared in THE LANCET of June 19th courteously acquits me of any want of originality. For this I thank him and beg to assure him that after a very careful search among all records and inquiries among many London surgeons I neither found nor heard of any article of his or of anybody else that described the operation I ventured to publish on May 22nd. Without a copy of the article in question it is impossible for me to know how much my operation resembles or differs from that of the American surgeon.

I am, Sirs, your obediently,

Harley-street, W., June 21st, 1897. G. LENTHAL CHEATLE.

*** The Society of Science, Letters, and Arts of London, to which Dr. Hartigan has sent his paper, no longer exists, and was, we are informed, a bogus institution.—ED. L.

"RESPIRATORY SYMPTOMS OF TOBACCO POISONING."

To the Editors of THE LANCET.

SIRS,—A paper by Dr. Morrow under the above heading has recently appeared.[1] I may be permitted to state that some years ago I forwarded to THE LANCET a brief remark upon a case of gasping respiration, in which note the exhibition of the symptom, being commensurate in degree with the extent of tobacco consumption, was attributed solely to this habit, and appeared to be a variety of Cheyne-Stokes respiration (although somewhat departing from the normal type of such), certainly as being some kindred theme from the medullary gamut of lung rhythm. One point in my case was that the distressing symptom was confined to the first hours of bed and was peculiar to the horizontal position. Dr. George Herschell, a few years ago, published a case of laryngeal spasm the cause of which, in part, he referred to tobacco—a point of some interest in this *rapport*. In conclusion, seeing that tobacco may cause perversion of central function, as in Dr. Morrow's thesis, and since it may bring about change of nerve structure also, as in retinal atrophy, it might be worth while to consider and to search out how far this universally distributed luxury be a contributory factor in either the genesis or the development of tabes, general paralysis, indeed, in all diseases of nerve, central or peripheral, functional or structural, cerebral or spinal, sympathetic, vasomotor or trophic.—I am, Sirs, yours faithfully,

G. HASSALL HUNTLEY.

Lees-road, Oldham, June 7th, 1897.

THE PLAGUE IN BOMBAY.

(FROM A CORRESPONDENT.)

II.

MY communication which appeared in THE LANCET of March 27th dealt with some of the physical and social aspects of the city of Bombay from the point of view of a sanitary engineer, but no true appreciation of its present state, and the causes which led to it, can be arrived at without an outline of the governing body which controls the finances and the executive officers of the municipality. The Bombay municipality is the outcome of an experiment on a very large scale made twenty-five years ago by the Indian Government with a view to teach the Indians the art of managing their own local affairs. Based, of necessity, very largely on English models, its defects were soon apparent, and the assumption that the whole city could produce seventy-two representatives, all of them both able and willing to serve the best interests of the community gratuitously, was found to be erroneous. Bombay has never yet sent a fourth of that number of good men to the municipal council at any one time.

Among the seventy-two representatives sixteen are elected by the Bench of Justices, two by the Chamber of Commerce, two by the University, and sixteen by the Government The corporation elects its own President, and from its members the standing committee of twelve is elected, eight of whom are nominated by the corporation and four by Government. They are paid for their attendance. In addition

[1] Brit. Med. Jour., June 5th, 1897.

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to the usual executive officers and office staff, the Bombay municipality has a municipal commissioner, who in recent cases has been a collector and a magistrate from the Civil Service, but there is no law requiring him to belong to any branch of the Government service. He is appointed by the Governor of Bombay, and is the paid servant of the corporation, who have powers to dismiss him. His actual position has no parallel in any other corporate body. The entire executive power rests in the Commissioner. He may prescribe the duties of, and exercise supervision and control over, the acts and proceedings of the health officer, the executive engineer, the assessor, and their several subordinates, and is presumed to be capable of dealing with everything relating to these departments. The situation was none of his making, the pay is good, and under such circumstances it is not surprising if some of the Commissioners entered so far into the spirit of their office as to nullify by interference the responsibility of the executive officers. About a year ago the corporation voted a sum of Rs. 7000 for printing a report on drainage drawn up by the Commissioner for their instruction. It was the same official who had already opposed the making of certain experiments to provide scientific data that were wanting for the proper ventilation of the sewers. It is needless to say that a subject that has not yet been completely developed by the best engineers in India could gain nothing at the hands of an amateur without practical experience. The tendency of the Commissioner is naturally to guide and direct the corporation, and that of the corporation to have its own way. The latter has also strong parliamentary instincts and an innate taste for diplomacy, so the Commissioner's party and the "opposition" form the chief divisions of the corporation. No standard of education is required of members of the corporation. Their elections recall the methods in vogue fifty years ago in England, and many of them, after years of service, have only an elementary knowlege of the Municipal Act which forms their constitution. There are among their number a few men of the best type, whose unselfishness and singleness of purpose would be an honour to any municipal body, but their work is rendered doubly onerous by the opposition of their colleagues, whose salient points are the making of long and inconsequent speeches and the faculty of combining for voting purposes. Many of the members consider they have a right to recommend friends and relatives to subordinate positions in the municipal service, leaving the heads of departments little or no choice in the matter; others resent as an affront notices served upon them by the Health Department for breaches of conservancy rules. The executive officers are elected by the corporation.

The revenue administered by the municipality amounts to Rs.6,300,000 per annum, and the population last year was 823,000, but after an existence of a quarter of a century the corporation generally does not understand its duties, and the present condition of the city is directly traceable to its administration. Shortly before the outbreak of the plague occurred the steadily increasing mortality in the city attracted the attention of the Grant College Medical Society, which, after three full meetings, passed three important resolutions which attributed the rise in mortality to the increasing foulness within and around the dwellings. The society made a careful investigation of the matter, which it presented in the form of a report to the corporation. Instead of promptly recognising the great value of this timely communication on the insanitary state of Bombay the leaders in talk derided the report and jeered at the society that sent it, and the corporation refused to allow it to be read. The epidemic that followed is now a matter of history.

When it was authoritatively established that plague was raging in the city a member of the corporation proposed to his colleagues the establishment of a vigilance committee, with full powers to incur any necessary expenditure for stamping out the disease, which was then confined to one or two districts only. The idea conveyed in the proposal was to establish a permanent Plague Committee, but the corporation agreed not to touch the business, but to place the whole responsibility on Government and hold Government responsible for everything, including, of course, the expense. Government, as has been seen, accepted the position, at least, as far as administration was concerned.

The limited area of the city and its commercial prosperity have resulted in a constant dearth of houses and an increase of rents unknown in the interior. After careful inquiry I learn that the net return on various classes of house property, including ground rent per annum, is as follows:—

	Per cent.
Good chawls or dwellings for the labouring classes	9·75
Bad chawls	15·2
Shops in the fort and city	14·7 to 39·9
Tenement houses	8·82
Offices	8·82
Bungalows with gardens in the suburbs ...	4·87

Many of the most insanitary habitations which have been destroyed by the Plague Committee as unfit for human habitation belonged to some of the wealthiest and most prominent citizens or to members of the corporation. Chawl property, consisting of buildings of from one to three storeys, constitutes two-thirds of the dwellings in Bombay. It was the supineness of the municipality in the early weeks of the plague that brought about the interference of the Government and the appointment of the Plague Committee under General Gatacre, which practically superseded the municipality in all matters dealing with the epidemic. The most powerful faction in the corporation is, of course, that of the house proprietors, who, at the beginning of this year, numbered thirty-one, or 43 per cent. of the whole. Of the twenty-six remaining Indian members it is reasonable to suppose that a certain number, although not owners of property, will vote for various reasons, not all connected with the public interest, on the side of the house proprietor on all questions affecting his interests. The landlords form a body which has the greatest personal interests at stake in the corporation, and, whatever they may have done for the rest of the citizens, they have given the strictest attention to their own affairs, and in this way the worst vices of structural arrangement of dwellings have been maintained, conservancy rules and regulations have been set at nought, and the water-supply has been misused until it is recognised as an important factor in contributing to the death-rate of the city. Bombay possesses one of the finest water-supplies in the world. It is derived from storage reservoirs among the hills to the north and north-east of the city, and it arrives by gravity. The three reservoirs—Vehar, Tulsi, and Tausa—were constructed in succession to meet the growing consumption of the city, which now receives about 42 gallons per head per day of water collected during the five months of rain and stored during the seven dry months. The actual consumption of water by Indian populations has been carefully noted by many observers—that is to say, the amount actually used by the people. What they will waste, if unchecked, is limited only by their facilities. In Cawnpore the maximum average consumption per head per day was 7½ gallons, including that used for flushing the street gutters before the construction of the waterworks. At that time all water for domestic use had to be drawn from wells having a depth of from thirty-five to fifty-five feet. After the waterworks had been in use for three years the average daily consumption of water from the pipes was 5·35 gallons for all purposes. The majority of the Indian people wear very little clothing. Their bedding is scanty, and they have no table linen. Their industries are established near rivers, wells, or tanks, and do not yet depend on water-works supplies. From information recently obtained the consumption of pipe water per head per day in Agra is 6·44 gallons; in Ahmedabad, 10·0; Delhi, 6·0; Simla, 8 0; Lahore, 7·29; Hyderabad (Sind), 9·6; Colombo, 19·0; Quetta, 20 0; Ajmere, 5 0; Peshawar, 5·83; Madras, 16·0; Karachi, 23·8; and Bandra, 2·12 gallons. Madras and Karachi are sewered, and have sewage farms which practically purchase the sewage effluents. Bandra has to pay Bombay 12 annas per 1000 gallons of water supplied from the waterworks of the latter town, and the consumption, as shown above, averages only 2 12 gallons per head per day. The Bombay supply, averaging 42 gallons per head per day, indicates unchecked waste on an enormous scale. This waste has been the subject of annual protests on the part of the health officer, who said that the soil had become waterlogged, that 4,000,000 gallons of the daily supply were not accounted for at the sewer outfall, and that the rate of mortality was steadily rising. Every known method of check upon waste has been determinedly opposed by the corporation, who, so long as they paid their rates by assessment, could waste water in gardens and stables without check. The result is that the cost of waterworks has been increased

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until the water has to be charged when sold by meter at the rate of 12 annas per 1000 gallons, while water at Cawnpore, Agra, Delhi, and Lucknow, which is pumped from rivers and again pumped into the mains, is sold at 4 annas per 1000 gallons. If waste were rigidly checked and the surplus water were sold for irrigation it would be possible to lower the price of water in Bombay. In 67 large towns in Europe, all of them sewered, the average daily consumption of water per head is 20·1 gallons, and they have among them 83,988 water meters. Two years ago the filter beds serving Malabar Hill, the most fashionable suburb of Bombay, were found to be in a horrible condition from neglect. The reservoir water was fouled in its passage through them, and the water engineer, who was absent on leave, was severely censured by the corporation. On his return he produced official correspondence proving that the corporation had refused to sanction the expenditure for cleansing the filters. This gentleman took the first opportunity to find another place.

Interfering with the duties and responsibilities of its executive officers is an incorrigible fault of the Bombay corporation. The construction of buildings by unqualified persons has led to frequent and fatal accidents, for every Indian who can pay for a new house, or even an alteration, considers himself qualified to design it with the aid of a foreman builder, whose advice is, of course, gratis. House property is bought without any proper survey, no questions are asked provided the price is low enough, and storeys are added regardless of the state of the lower part of a building. This went on for years without any movement on the part of the corporation either to check builders or to provide a salvage corps to rescue the victims. This scandal might have continued had not the daily papers entered a vigorous protest against the municipality on an occasion when their engineer stopped the search in the *débris* of a fallen house for bodies, dead or alive, at nightfall, on the pretext that it was dangerous. The defective constitution of the corporation of Bombay seems to have penetrated all its committees, which, as their numbers increase, seem to lose all individual responsibility. Instead of thrashing out the question before them on its merits these committees divide deliberately into factions and contend for the orator who is most likely to influence votes when the time comes for making resolutions. This taste for what is supposed to be eloquence is a very common vice among public men in India. It has had the effect of keeping capable European business men out of the municipal council. They look on it as a waste of time. The Europeans who at present serve as councillors are mostly nominees of the Government or of certain public institutions.

The recent drastic treatment of the Calcutta corporation by the Lieutenant-Governor of Bengal has led the public to indulge in the hope that in view of recent events and of its past history important changes may be introduced at an early date into the constitution of the Bombay municipality. There is another corporation in Bombay from which many useful lessons might be derived. The Bombay Port Trust is administered by a board of thirteen trustees, six of whom are elected by the Chamber of Commerce and seven by the Government. The board administers an annual revenue of about Rs. 5,000,000, and its meetings are remarkable for an absence of speechifying and a capacity for getting through work. Such a body could not be brought together in India by any popular election. The experience of a quarter of a century of municipal administration in Bombay has proved that no body composed principally of Indians can be counted on to initiate and apply vigorously the regulations that are necessary for the well-being of a densely crowded city. Their feelings are on the side of their friends and constituents, and the latter are ever ready to claim the ægis of religious custom—and consequently toleration—for every insanitary habit. This was the plea that was brought forward against the closing of a graveyard in the heart of the town in which victims of the plague were being buried a few weeks ago. Religious custom also required that about twenty-eight hospitals should be constructed in and around Bombay to receive plague patients of the various communities, many of whom would have been ceremonially defiled by being sick or dying in the same room with people of another caste. Each of these hospitals had its own staff even if it contained only one patient. Caste prejudice enters largely into the details of sanitary engineering. The sweeper, who removes nightsoil from dwellings, is looked down on by nearly every community. Neither Parsee, Hindu, nor Muslim will allow him to enter his house. The domestic latrines are so arranged that the sweeper can only approach them from without. They are consequently never properly cleansed, and if any member of the family should contract any disease of a contagious character the latrine plays an important part in the spread of the disease.

Complete freedom of movement without passports, and the enjoyment of his "customs," good and bad, almost without restriction, have combined to render the Indian averse to all change and impatient under new conditions. He does not suspect that in some other countries an epidemic of plague would have brought the city under martial law, with all its summary methods of procedure.

The Bombay municipality as at present constituted is quite unfit to manage the affairs of the city. It has failed signally in the management of the water-supply, the drainage, and the conservancy of the municipal area. The commissioner has too much power and too little—too much for his technical knowledge and too little for the knowledge of public business he brings to his task. He arrives profoundly ignorant of many things he is called upon to adjudicate, and at the end of a five years' apprenticeship he is liable to be called to other duties when he is of most use to the city, to give place to another man as little *au fait* as he was at first in the work.

As the need of good government increases with the population—which cannot spread freely—the present time offers an excellent occasion for a complete reform of the municipal constitution of Bombay. It is no question of expelling the Indian, for without his aid local self-government could not succeed completely. Means must be found to attract the best men—native and foreign—to keep down the dangerous element to a minimum and to increase individual responsibility all round. There is no lack of good material for a governing body in Bombay. What is wanted is the means to get it together.

Bombay, May 15th, 1897.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Overcrowding in Red Bank.

THOUGH much has been, and is still being done, in Manchester to prevent overcrowding and to open out the slums of the city, such cases as the following show that the work is still far from completion. An inquest was held at the City Coroner's Court on Monday week on the bodies of the twin children of a Polish Jewess living in a court off Red Bank. These infants were said to have been healthy at birth, three weeks before. Their bodies were in a dirty, neglected condition, and "bore a number of sores." One, a boy, weighed 4 lb. 1 oz., and the other, a girl, 3½ lb., instead of about 9 lb. each. The boy died from cerebral hæmorrhage, and the girl "from lack of food." The woman had been deserted by her husband, but had for some time been living with another man, a compatriot, and four children, in a room 9 ft. by 6 ft. This district is largely occupied by the poorest of poor Jews, most of them foreigners, many, like the mother of these children, unable to speak English, living sometimes in squalid abundance, at others in a state of semi-starvation, but almost invariably with persons and dwellings disgustingly filthy. And yet, as Dr. Niven tells us, the death-rate among the Jews in Manchester, is remarkably low.

The City Industrial Schools.

The fiftieth annual report of the Manchester Certified Industrial Schools has just been issued, and shows work valuable to the community as well as to those rescued from lives of wretchedness and crime. The admissions during the year have been 145. At the school at Ardwick there are 51 boys, and 73 at the Barnes Home a few miles out of Manchester, while at Sale there are 21 girls. Of these, 5 boys were found begging; 71 boys and 12 girls were found wandering without proper home or guardianship; 26 boys and 3 girls were charged with theft or living with reputed thieves; 12 boys and 3 girls were sent to the schools as incorrigible; 8 boys and 1 girl were charged under the Elementary Education Act: and 2 boys and 2 girls were found living in houses of ill-fame. In the three schools there

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are now 573 boys and girls, 100 of the latter being at Sale. During the past four years 485 boys have been discharged, and 398 are stated to be doing well. Coming as they do in most cases from the lowest stratum of the "residuum," this is perhaps as good a record as could be looked for.

Workhouse Dietary.

Attempts have been made from time to time by the guardians of the Manchester Unions to improve the dietary and avoid the waste complained of under the present system. Their well-meant efforts, however, have always been defeated by the Local Government Board, as they would have disturbed the rigid uniformity now in favour, which, though bad for the ratepayers and not beneficial to the inmates of the workhouses, gives perhaps less trouble to clerks and officials than would follow the change. At Blackburn on Saturday week the guardians discussed this question. One said there could be no waste when "three meals daily only cost fourpence per head." Another said that he and other members of the Farm Committee "had seen five 18-gallon barrels of waste food taken to the swill-tub." A lady guardian said the root of the matter lay in a fixed dietary scale, and that as long as it was imposed "there was bound to be waste." This opinion is widespread among those who see the practical working of the present system, but as it is stereotyped there is no doubt great reluctance felt in breaking it up, even though its use is attended by manifest evils. Fourpence does not seem an extravagant sum for three meals, and the workhouse inmates must surely have their food presented in a very unattractive form if so much goes to the "swill-tub."

The Owens College.

Those interested in the successful progress of the Owens College, are naturally much gratified by the report of the Treasury Commission of Inspection of the University Colleges in Great Britain. The work done at Owens College is reported on in detail with a view to the guidance of the Lords of the Treasury, who are to have £25,000 a year at their disposal for grants, instead of £15,000. The commissioners recommend that the proposed maximum sum of £3000 be given to the Owens College, and, "as their proposed division leaves a balance of £500, they suggest that this sum also should go to the Owens College, in recognition of its pre-eminence. The Lords of the Treasury agree to this."

Explosion at a Chemical Manufactory.

On the 15th inst. a violent explosion, causing the loss of two lives, took place in Manchester at the works of a manufacturing chemist and tar and naphtha distiller. A still, 14 ft. deep and 12 ft. in diameter, containing 30 tons of oil, was blown bodily from its setting of brickwork, and carried over a high wall to the opposite side of an adjoining street. There was a tremendous report, and flames were seen rising from a portion of the works. The burning oil was scattered in all directions, and some of it fell on the vats and tanks that are distributed about the works, containing oil and pitch, setting them on fire. The bodies of the two men killed were so blackened and disfigured as to be almost unrecognisable. They must have been killed instantaneously. The accident is said to have been caused by the stoppage of a condenser in the still. Several other men had narrow escapes. There was abundant help from the fire brigade and private appliances, and the fire was extinguished in about half an hour. No doubt careful precautions against fire are the rule, and with such inflammable materials "distributed about the works"—according to the report given in the *Manchester Guardian*—they are not unnecessary.

Manchester Therapeutical Society.

On Wednesday, June 16th, the first general meeting of the above society was held at the Owens College. Professor Leech delivered an address upon the objects of the society, the considerations which had led to its formation, and the lines of future work. A number of new drugs and preparations were exhibited. Rules for the management of the society were adopted and the following officers elected for the session 1897-98. President: Professor D. J. Leech. Vice-Presidents: Professor Dixon Mann and Professor Delépine. Hon. Treasurer: Dr. R. T. Williamson. Hon. Secretary: Dr. R. B. Wild. Committee: Dr. Bury, Dr. Coutts, Dr. Hopkinson, Dr. Kelynack, Dr. Steell, and Dr. Wilkinson.

June 22nd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Royal Infirmary, Newcastle.

MR. RILEY LORD has accomplished his object and raised £100,000 for the rebuilding of the Royal Infirmary. For years the necessity of rebuilding the infirmary has been apparent and talked of, but nothing was done. It is entirely due to the energy and perseverance of Mr. Riley Lord, the ex-mayor, that funds have been raised enabling the committee to carry out their long-cherished object. It will require a larger sum than that already raised to build a new infirmary, but it will be forthcoming in due time. The raising of £100,000 to build a new infirmary in commemoration of the Queen's long reign is perhaps the largest effort which has been accomplished in England out of London.

Drunk or Ill?

One day last week a young gentleman was arrested in one of the principal streets of Newcastle-upon-Tyne and locked up on the charge of being drunk and incapable. At the station he requested to see a medical man, but this was refused. After having his valuables taken from him and being confined for some hours in a police-cell he was allowed to go home. On Friday last the case was investigated by the magistrates, when an inspector, three sergeants, and four privates swore the youth was drunk when arrested. On the other hand, it was sworn that the accused was a life-long teetotaler, that he had never tasted alcohol in his life, and that he was subject to fits. The magistrates dismissed the case and censured the police. This is a very significant case. That a policeman should make a mistake where the question of illness or drunkenness arises is not to be wondered at; but that eight men, some of them experienced policemen, should all swear positively that a sick man was drunk is, to say the least of it, very disquieting. That the accused should not have been allowed to see his own medical man as he wished is simply a scandal of the gravest kind. We often hear of the uncorroborated evidence of a policeman, but in this case no fewer than seven corroborated, and yet their evidence proved to be incorrect.

Newcastle-upon-Tyne, June 23rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons of Edinburgh: The Queen's Diamond Jubilee.

IN commemoration of the Queen's Diamond Jubilee a reception was held by the Royal College of Surgeons of Edinburgh on the afternoon of the 22nd inst., to which the members of the medical profession in Edinburgh and the heads of public bodies were invited. Refreshments were served in the hall. The conservator, Mr. Cathcart, and other Fellows of the College, attended in the museum to explain the specimens, and various demonstrations of the Roentgen rays were given. In the library were placed a series of photographs of cases which had been elucidated by the rays in the Edinburgh Royal Infirmary. In one of the examination rooms the process of using the rays was shown by Dr. Dawson Turner, medical electrician to the Edinburgh Royal Infirmary, and in another room lantern views of cases elucidated by the rays were shown, with explanations by Dr. Scot Skirving. The guests, about 600 in number, included ladies, and were received by the president, Emeritus Professor Struthers, and the council. The College, the most ancient of all the medical corporations in the United Kingdom, is to be congratulated on its action in thus gathering under its roof the medical profession of the city on the historic occasion of the completion of the sixtieth year of Her Majesty's reign, a period during which such great progress has been made in medical science.

Glasgow District Asylum at Gartloch.

This institution has now been completed and declared open. It consists of two parts, asylum and hospital. The former is for chronic and incurable patients and contains 380 beds. It consists of four large blocks, three storeys in height, with boot and bath rooms attached. These blocks are connected with the administrative and official departments by long corridors, under which are subways where are

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found the heating pipes, water-supply pipes, and electric light cables. The hospital is a separate building, and has a separate kitchen and dining hall, while for asylum and hospital there is a common recreation room. It contains 150 beds and is principally of one storey. In it are the admission wards, wards for the treatment of intercurrent bodily diseases in the insane, wards for old and feeble cases, and infectious blocks. The whole buildings have been suitably furnished and are well adapted for their purpose. The lighting throughout is electric, the heating is by radiators, and the water-supply is from the Glasgow mains. The asylum is situated about seven miles from Glasgow, on an estate of 400 acres, and is built in the Francois Premier style of architecture from the plans of Messrs. Thomson and Sandilands, of Glasgow. The total cost will not fall much short of £200,000. The physician superintendent is Dr. L. R. Oswald.

Glasgow University.

The following gentlemen are understood to be candidates for the chair of Materia Medica and Therapeutics vacant by the death of Professor Charteris—viz., Dr. J. W. Allan, assistant physician, Royal Infirmary; Dr. C. O. Hawthorne, lecturer on Materia Medica in the University, and assistant physician, Western Infirmary; Dr. William MacLennan, University assistant to the late Professor Charteris; and Dr. Alex. Napier, physician to the Victoria Infirmary, and formerly Professor of Materia Medica in Anderson's College Medical School.

Consumption Hospitals for Scotland.

The Medical Board of Advisers has at last issued a statement in support of Mr. Quarrier's appeal for funds to carry out his scheme. The committee draws attention to the fact that some 7000 persons die annually in Scotland from consumption of the lungs, 1400 of these being registered in Glasgow. It is then stated that the disease undoubtedly spreads by infection, more especially in the unwholesome atmosphere of the crowded houses of the poor, and that there is every reason to believe that many cases are curable if treated in the early stage. The committee gives a decided opinion in favour of the situation and arrangement and equipment of the hospital already erected, and recommends to the public the scheme in which it is contemplated to erect six other hospitals at a further expense of £40,000. The committee also express their approval of the arrangements which Mr. Quarrier is making for the management of the hospital and for the medical supervision of the patients. It is so far satisfactory to know that the committee is actually in operation, and no one can doubt their interest both in the public welfare and the advancement of medical science. Their statement is not, however, beyond criticism. Mr. Quarrier's published scheme included the erection of a dispensary in Glasgow at a cost of £3000. Do the committee approve of this or do they not? In their report they say: "It will be necessary to provide in Glasgow a central office where patients recommended may be examined," but this is a very different thing from Mr. Quarrier's plan. Again, it would appear from the committee's report that the arrangements for the medical supervision of patients are entirely in Mr. Quarrier's hands. His plans so far are approved by the committee, but what guarantee is there that those plans will be adhered to, or that, as further arrangements are needed, these will meet the committee's views; and if further arrangements are unsatisfactory, what will happen? Apparently, the committee has no authority or power in the matter. It may every now and then have the opportunity of expressing approval of what has been done, but its existence is purely *ex gratiâ*. There is no need to impugn Mr. Quarrier's disinterestedness or good faith. The question is one of public policy, and a policy which advocates the raising of a large sum of money for the erection of hospitals for the phthisical, the administrative and medical management of which are to be practically at the pleasure of one man, is one which lends itself to comment. Even supposing that Mr. Quarrier is likely always to pursue an enlightened policy and to defer to his board of advisers, what guarantee can be given for his successor? If, when all the money is raised, the board of advisers find they are no longer heeded, surely they ought not to be much surprised. It may fairly be contended that their present position has this radical weakness. They bear responsibility—for undoubtedly subscriptions will be given under the influence of their names—but the responsibility is not associated with authority. Such a severance is most improper, and means at least the possibility of misunderstandings and of disaster.

Congress of Sanitary Inspectors Association of Scotland.

The annual congress of this association took place in the town-hall, Aberdeen, on June 18th, under the presidency of Mr. K. Cameron, chief sanitary inspector of the city of Aberdeen. About sixty delegates, representing all parts of Scotland, attended. The most interesting papers read were: (1) by Mr. W. Mackenzie, county sanitary inspector of Ross and Cromarty, entitled Notes on the Sanitary Conditions existing in the Outer Hebrides, as exemplified in Lewis (which was followed by a resolution calling the attention of the Secretary for Scotland to the public scandal arising from the present miserable housing of the people in the Outer Hebrides and Western Islands), and (2) by Mr. A. T. Gordon Beveridge, M.B., C.M. Aberd., a member of the Aberdeen town council, on the Housing of the Working Classes. The members were afterwards treated by the town council to a drive round the city and suburbs and entertained in the evening to dinner in the Grand Hotel, Dr. A. T. G. Beveridge presiding.

Hospital Saturday in Aberdeen.

The demonstration arranged by the amalgamated friendly societies took place on June 18th. The weather was favourable and the procession through the streets was very successful. The attendance at the athletic games, &c., in Duthie Park, however, amounted only to 10,000 persons, but it is hoped that the total free proceeds from all sources, including subscriptions, will be in accordance with expectation.

June 23rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Health of Dublin.

A GREAT improvement in the health statistics of Dublin was recorded by the Registrar-General's report for the week ending June 12th. Notwithstanding that the epidemic of children's diseases—measles, scarlet fever, and whooping-cough—has not entirely disappeared, the number of deaths registered was below the decennial average. At the meeting of the Public Health Committee on Tuesday, June 15th, Sir Charles Cameron reported the death-rate to be 23·4 per 1000 persons living, the mean rate being 25·7. A novel feature in this report is a sort of epitome of the sanitary work performed during the week. From the latter it appears that 987 houses, 5108 rooms, 65 slaughter-houses, 42 dairy-yards, and 22 nightly lodging-houses were officially inspected. The registrar of Cork-street Fever Hospital, at the last meeting of the Managing Committee, reported a decline in the epidemic of measles. Referring to diphtheria, he remarked that this disease, hitherto sporadic, was showing evident tendencies to assume an epidemic character. The use of antitoxin in early cases was reported as having proved very satisfactory. The conference recently held in the Public Health Buildings of representative citizens of Dublin, to consider the question of providing cheap and healthy dwellings for the very poor, was entirely successful. The Right Hon. Joseph Meade, who presided, made some valuable practical suggestions, while Mr. Adam Findlater in his speech remarked that the mortality during the early months of this year was terribly high, the deaths not being confined to one class, but having spread from the slums to the wealthier portions of the city. An influential committee was appointed to carry out the object of the conference.

Jubilee Honours to Medical Men in Ireland.

His Excellency the Lord-Lieutenant has intimated that, with the approval of Her Majesty, the honour of knighthood will be conferred on Dr. George Duffey, the President of the Royal College of Physicians of Ireland, and on Mr. William Thomson, the President of the Royal College of Surgeons in Ireland.

The Richmond District Lunatic Asylum.

At the fortnightly meeting of governors, which took place on June 15th, Mr. Conolly Norman, the resident medical superintendent, reported that there were now on the asylum books a total of 1812 patients, being 712 above the original nominal limits of legitimate accommodation. He mentioned

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that since the last board meeting three female inmates had been attacked with beri-beri.

The Accommodation in the Belfast Police Cells.

At an inquest held recently in Belfast in reference to the death of a woman which took place in the Union Infirmary on June 12th, some interesting points were brought out in evidence in reference to the prisoners' cells at the Central Police Office. It would appear that the woman was arrested for drunkenness on June 5th and taken to the police office, whence on the next morning she was removed to the Union Infirmary, where she died six days later from pneumonia. No blame was attached to the medical man or to the police, but it came out in the inquiry, from police evidence, that the accommodation in the cells is the same now as it was thirty years ago, although Belfast has since trebled its size. Again, it seems that 10,000 persons pass through the hands of the police at the central office each year, and it would seem that, owing to the very limited accommodation, there is hardly sufficient opportunity for exercising discretion in reference to the treatment of special cases. There would appear to be no special room set apart for the watching of cases where perhaps, in addition to the effect of drink, there may be also surgical or medical complications. There are no female attendants for female patients, neither are there restoratives ready at hand nor beds available for prisoners taken suddenly ill. The jury found that the woman died from pneumonia, and approved of the action of the medical man and police, but added the following riders to their verdict: "(1) That the cells condemned by the corporation themselves should be rebuilt immediately out of the money already voted for that purpose twelve months ago; (2) that female warders should be appointed to relieve the police from personal attendance on female prisoners; (3) that simple restoratives should be available in the cells in cases of extremity; and (4) that proper beds in proper apartments be provided for such cases as that before them."

The Royal Victoria Hospital, Belfast.

The scheme which was started last November, of the people of Belfast honouring the Queen in her Jubilee year by raising £100,000 to build a new hospital, is, I am most gratified to announce, a complete success, as the list of subscribers published this Jubilee day (June 22nd) shows that the whole sum originally aimed at—£100,000—has been raised and additional sums are still coming in. Through the exertions of the Lord Mayor (Mr. Pirrie) the Queen has graciously consented, through the Home Secretary, to allow this new hospital to be called the Royal Victoria Hospital. The greatest praise is due to the Lady Mayoress, to whose constant energy, tact, and popularity the success of this hospital scheme is almost entirely due. The new hospital, built on modern plans, will unquestionably be an immense gain, not only to the city of Belfast, the population of which is now 300,000, but also to the flourishing medical school which it will tend greatly to strengthen on the clinical side.

June 22nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Rabies and the Academy of Medicine.

AT the Academy of Medicine a discussion has just arisen which is most likely only the beginning of an argumentative war as to the Pasteur Institute and the value of the anti-rabic inoculations. These latter have always had bitter enemies in France, and the communication which M. Rendu has just made to the Academy has given them new courage. M. Rendu reported a case of acute ascending paralysis brought on by the anti-rabic inoculations. The patient was a post-mortem room porter at a hospital, who in the course of examining the body of a man dead from acute rabies pricked his finger as he was cutting into the pancreas. Although the wound was carefully washed with an antiseptic solution he betook himself to the Pasteur Institute, and, starting on March 22nd, underwent the regular course of anti-rabic treatment. Quite suddenly on April 1st he developed rigors and fever, which grew worse on the following day. The patient took to his bed, and the gradual progress of the disease, accompanied by the most alarming symptoms, was observed, paraplegia of first the lower and then the upper limbs, paralysis of the sphincter, vomiting, distress, dyspnœa, tachycardia, &c., but with only a slight rise of temperature. Nevertheless, the injections were continued in doses of 2 c.c. per diem and the patient was cupped and treated with antipyrin. On the seventh day after the onset of the symptoms a marked improvement set in, and he was completely restored to health in three weeks' time. The patient was sent for a month to the country, and is at present engaged in his work in the theatre. M. Rendu does not consider this a spontaneous case of paralytic rabies: the period of incubation was too short; the clinical course did not resemble that of the disease in question; there were no other symptoms of rabies; and, besides, paralytic rabies is always fatal. M. Rendu rejects equally the theory of an acute ascending paralysis of toxic orgin. For if the toxins had been introduced by the inoculations it is impossible to explain how the patient got well in the face of the continuance of these same inoculations. M. Rendu can only see one explanation, and that is that the patient, placed as he was by the exigencies of his occupation in very infected surroundings, was in a morbid state, which made him specially receptive. In this state the anti-rabic toxins might have determined an attack of myelitis. M. Roux, the director of the Pasteur Institute, replied to M. Rendu. For himself he did not consider the anti-rabic emulsions injected at the beginning of the treatment were capable of bringing about nervous crises, for they were always tested on very sensitive animals. He had seen two cases of paraplegia similar to that reported by M. Rendu, and he was certain that the anti-rabic treatment had nothing to do with them. These two cases, the only ones noted at the Institute since its foundation out of 19,000 cases treated, permitted him to affirm that there was no relation of cause and effect between the anti-rabic inoculations and these cases of paraplegia. Statistics like those of the Institute proved up to the hilt, he added, the absolute harmlessness of the anti-rabic treatment. M. Laveran had seen some years ago a case similar. It occurred in the Val-de-Grâce, and was considered an abortive form of rabies. Paralytic attacks of this kind did not always terminate in death. M. Grancher remarked that at the commencement of this system of treatment at the Institute a number of cases of so-called paralytic rabies were observed which had no canine origin. Generally they had to do with hysteria or alcoholism. M. Rendu's patient might be the subject of some form of neurosis or intoxication. M. Brouardel said that he had never yet seen rabies transmitted from man to man by inoculation. On the other hand, it is not uncommon for an ascending myelitis to follow a post-mortem prick. The case of M. Rendu should be classed as pseudo-rabies. Paralytic rabies does occur in men, and Morgagni was the first to describe it. M. Dumont Pallier remarked that the discussion which had arisen out of the communication of M. Rendu was of the highest importance. Could the anti-rabic treatment after the Pasteur method be held guilty or no? This question must be cleared up, and he proposed to submit it to the Academy

The Microbe of Seborrhœa.

The excitement caused by the discovery of M. Sabouraud of the microbe of seborrhœa, its identification with that found in cases of falling of the hair, its *rôle* in the etiology of baldness, and finally the researches by which M. Sabouraud was enabled to produce baldness in a rabbit by injecting a culture of his microbe, was so great among dermatologists that it was unanimously decided to hold a special sitting at an interval of a month from M. Sabouraud's first communication to discuss the matter. This meeting has just been held and was somewhat stormy. M. Brocq remarked that the seat of the bacillus was not in the hair follicle, and that its action on the skin could not be explained. M. Sabouraud had said it was from a toxin, but from his experiments the toxin apparently worked at a distance from the hair follicles at least in the rabbit, while in man it acted locally if the bacillus was always the cause of the seborrhœa and the baldness. All clinicians knew that temperament played an important part in the matter of seborrhœa and alopecia. As regards the latter, the arthritic diathesis had to be considered; as regards the former, the lymphatic. In a non-arthritic person baldness never occurred, not even when abundant seborrhœa was present. Clinically, we must not confound seborrhœa and baldness. If baldness was always due to a microbe it should be easily contagious, and it was not so except as accessory to some other disease. M. Jacquet considered

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that the rabbit was not a good subject in this matter, for baldness can be easily produced in this animal by the simple application of bisulphate of calcium. M. Darier stated the histological analogies between seborrhœa and baldness, but as the results on the clinical side were different from those of the laboratories it was impossible without further information to identify the two lesions. M. Barbe said that many seborrhœic patients never had the least amount of falling off of the hair. Other speakers followed, all more or less in opposition. M. Sabouraud, in reply, reminded members that when Pasteur laid the results of his fermentation studies before the Academy everyone was against him. After thirty years, he added, all the discourses of the opposition are not worth one single Pasteur flask. So it would be with his researches—truth would come out, not by mere discourses, but by experience and experiments in the Pasteur way.

The Town Ambulances.

M. Paul Strauss, President of the Commission on Urban Ambulances, has just presented his report to the Municipal Council. The report recommends that every ambulance should be accompanied by a medical man and a hospital orderly. To carry out this scheme there must be four surgeons for every station and three orderlies for every ambulance. The latter will be drawn by two horses. Sixty "avertisseurs d'accidents" will be stationed in the streets, so as to be at the service of the public, in situations where they are considered most needed. The prefect of police will be invited to warn the ambulance stations whenever a fire breaks out. Before organising this system for the entire town the Commission have decided to make a practical trial at the Hospital of St. Louis. It was at this hospital that the experiments in First Aid were tried in accordance with a report drawn up by Professor Terrier (1) the surgeon on duty is in constant telephonic communication with the hospital, and a rota for duty is decided upon among the other surgeons on the list; and (2) a surgical guard is mounted by both the intern and extern pupils in surgery, and there must be at the hospital always one intern and two externs on duty. The rest of the staff, both nurses and porters, must have special surgical training. The operating-room is provided with all necessaries in the way of instruments, dressings, warming, lighting, &c. In taking over the charge of these urban ambulances the Municipal Council decided to build two new stations, the one on the right and the other on the left bank of the river; but the Commission proposed an even more thorough scheme—namely, three new stations on the right bank. One of these is in process of construction in the Rue Caulaincourt, another at the St. Honoré Market, and the third is at the St. Louis Hospital. The station on the left bank will be in an annexe of the Hôtel Dieu. The director of municipal affairs has, besides, taken steps to coördinate the ambulance service by the creation of a central office situated at the headquarters of the sanitary authorities. It will be on duty night and day, and thanks to it an ambulance will always come in answer to a call. This central service completes the connexion between the ambulance societies and the hospitals.

The Congress of Surgery.

The eleventh congress of the French Association of Surgery will open at Paris at the Faculty of Medicine on Monday, Oct. 18th, at 2 o'clock, under the presidency of Dr. Gross, Professor of the Faculty of Medicine at Nancy. Two questions have been submitted to the congress: first, Contusions of the Abdomen, by M. Demons, of Bordeaux; second, the Indication for Operation and Treatment of Cancer of the Rectum, by MM. Quenu and Hartmann, of Paris. Those intending to attend the congress or read papers are requested to send the titles and a short *résumé* of their papers, by Aug. 17th at the latest, to the general secretary, M. L. Picque, 8, Rue d'Isly, Paris.

June 22nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Premature Burial.

THIS subject has a peculiar terror for Italians. In cholera epidemics, particularly in those of 1866 and 1877, "apparent death" has led to the victim being put in a coffin and carried to the cemetery, where, by sheer accident, he has been rescued from the most horrible of fates in the nick of time. In his memorable treatise, written some twenty years ago, the greatest of recent Italian anatomists, the Florentine Filippo Pacini (discoverer of the "Corpuscula Paciniana"), describes several cases of "morte apparente" that came before him and the means by which he "restored" the "life" which had not really been extinguished. Since then physicians have been careful to allow some time to pass in cases of cholera collapse before granting certificates of death, and have practised Pacini's method of the intravenous injection of hot water charged with bay salt in solution before giving up all hope of bringing back the patient to conscious life. In its obituary notice of Pacini, who died in 1883, THE LANCET reviewed the treatise referred to, and, notably in the cholera epidemic which decimated some Italian cities in the following year, drew attention to the check imposed on the hasty burials so common in such visitations before Pacini's time. The rapid spread of cremation and the dread that under that system the "apparently dead" may be "disposed of" before they have a chance of regaining conscious life has, however, revived the subject, never altogether quite absent from the Italian mind, and at Milan on Thursday, the 10th inst., Signor Di Santostefano exhibited to an intensely interested audience an apparatus designed to give the reputed "corpse" a chance of receiving assistance. The apparatus, designed, however, for cases of interment, seems modelled upon that invented recently by Count Michael Karnichi, of Warsaw, who was specially induced to contrive it by the risk of inhumation during trance. As described by Signor Di Santostefano the apparatus brought under the notice of the Milanese audience is the following:—A tube is fitted to the lid of the coffin in which the body is laid and penetrates the lid by a small circular aperture situated just above the sternum of the body and connecting at the surface of the ground with a little metal box. Down through the tube descends a white metallic rod terminated by a ball which just touches the sternum of the "corpse." Supposing a sufferer from catalepsy to have been interred, he must, on coming to himself, as his first act draw breath, move a hand, or his whole body; he will thus inevitably displace the ball. The box situated on the surface of the ground will be overturned, giving air and light to the coffin; it will also set in motion a powerful electric bell, and will raise to the height of a metre and a half from the ground an alarm-signal visible at a great distance. It will finally admit of the "corpse's" calling for assistance by means of the tube, which partakes of the character of a speaking trumpet. Such is Signor Di Santostefano's account of the apparatus contrived in aid of the "buried alive," and, although highly ingenious, it is liable to so many adverse contingencies that it can be expected to fulfil its purpose only in a small percentage of cases. However, if it prove instrumental in rescuing even one victim to "premature burial" it will have amply justified its being put in operation.

June 13th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Relation between the Nose and the Reproductive Organs in Females.

PROFESSOR KLEINWÄCHTER has published in the *Medizinische Presse* an article on a pamphlet which Dr. Fliess has written on the subject of the relation existing between the nose and the reproductive organs in females. It is stated that the inferior turbinated bones of the nose possess a corpus cavernosum the volume of which is liable to alteration under the influence of the spheno-palatine ganglion, and this ganglion receiving fibres from the carotid plexus through the deep petrosal nerve is in communication with the sympathetic nervous system which influences the sexual faculty. Opposite the middle turbinated bone there is on the nasal septum a pledget-shaped elevation with numerous blood-vessels and glands, the so-called tuberculum septi. These two structures, which Dr. Fliess calls the "genital places of the nose," become swollen, cyanotic, and very sensitive at the menstrual period. That form of dysmenorrhœa in which the pain continues after the commencement of the menstrual flow disappears at once if the two "genital places" of the nose are rendered insensible by a 20 per cent. solution of cocaine.

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When an anæsthetic is applied to these places in only one nostril the pains disappear on only one side of the body; anæsthetisation of the inferior turbinated bones removes the abdominal pains in from five to seven minutes. By cauterising these places with trichloracetic acid dysmenorrhœa may be averted for a long time. That form of dysmenorrhœa which Dr. Fliess calls "nasal" is in a great many cases due to infectious diseases which cause hyperplasia of the nasal mucous membrane; but it sometimes arises from the fact that the corpora cavernosa of the nose do not decrease in volume after menstruation, and a congestion remains.

Post-graduate Instruction.

Courses of lectures, the attendance on which is limited to medical men in practice, are delivered in Vienna, but not in any other Austrian University. They have been introduced on the initiative of Professor Wagner, who has for a year been Dean of the Vienna Medical Faculty, and has appointed two months (August and September) during which they are delivered in two series by the most eminent *privat-docents* and assistants of the faculty. Each course lasts four weeks, and the fees vary from twenty gulden (£1 17*s.*) to fifty gulden (£4 13*s.*), according to the subject. The first series begins on August 2nd and comprises the following courses: Pathological Anatomy, Bacteriology, Experimental Pathology, Pharmacology, Internal Medicine, Neuro-pathology, Diseases of Children, Ophthalmology, Laryngology, Diseases of the Ear, Dermatology and Syphilis, Oostetrics and Gynæcology. The second series, beginning on September 1st, includes the following courses: Anatomy, Pathological Anatomy, Bacteriology, Experimental Pathology, Forensic Medicine, Internal Medicine, Surgery, Ophthalmology, Diseases of the Ear, Dermatology and Syphilis, Obstetrics and Gynæcology. These courses are likely to be preferred by medical practitioners to those delivered during the session from October to July, as they are not attended by students.

Bubonic Plague.

At the last meeting of the Medical Society Dr. Albrecht gave an account of his experience of plague acquired by an observation of 247 cases in Bombay. He said that plague is infectious and shows no resemblance to any other disease. Its most frequent form is the septicæmic-hæmorrhagic, beginning with a primary hæmorrhagic bubo in the inguinal, axillary, or cervical region, this bubo being accompanied by œdema of the surrounding parts; there are also hæmorrhages into various organs, changes in the lymphatic glands, symptoms of degeneration in the parenchymatous organs, and a characteristic enlargement of the spleen. Sometimes there is no primary bubo, but all the lymphatic glands become swollen. The bubo suppurates after nine days; when it bursts or is opened and the pus is evacuated the glandular substance is found to have disappeared and only an empty capsule remains. A second form of the disease is marked by pyæmia and numerous deposits in the internal organs; in these cases post-mortem examination shows embolic centres in the lungs, liver, and kidney, together with characteristic hæmorrhage into the walls of the gall-bladder. Sometimes the disease takes the special form of primary pneumonia marked by confluent inflammatory centres, without any swelling of the lymphatic glands. The bacillus is found in the blood and the sputum, but not in the fæces or urine. It cannot be stained by Gram's method, it has a capsule, and is easily destroyed by unfavourable conditions, such as exposure to a high temperature.

June 19th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Twelfth International Medical Congress: the Free Railway Passes.

As already announced in THE LANCET, the Russian Government has decided to grant free railway passes on all Russian railways to members of the International Congress. In the case of foreigners the ticket will be available from any frontier station chosen by the member to Moscow and back. The return route need not be the same as the outward route, but the member must, in applying for a ticket, state which route he intends to follow both outward and homeward. It had at first been announced that this would not be required of members, and that it would be open for them to select even at the last moment the route by which they would return from Moscow, but the Executive Committee has just issued a statement correcting the first announcement and adding that only in exceptional circumstances can the return route for which a ticket has been issued be altered. The reason of this arrangement is obvious; the railway authorities are desirous of having some approximate idea of the numbers of passengers who will be leaving Moscow after the Congress by each particular line of railway and of providing accommodation accordingly. Intending members of the Congress are therefore requested, in writing to Professor Roth (the general secretary, Twelfth International Medical Congress, Moscow) to obtain the free railway passes, to state in their letters which routes they wish to follow both going to and returning from Moscow. The committee has received from the Government 7000 such free passes. The passes will be available on any date until Sept. 10th (22nd) instead of only until the 1st (13th) of that month, as at first announced. Members who have received their free railway tickets are requested to present them at the frontier station, where they will be stamped; they may also be asked to show them by the railway officials at any part of the journey. These trifling formalities will present no difficulties to the foreigner, as at each principal frontier town a committee of medical men (principally army surgeons) has been formed with the express object of assisting foreigners on their journey. In addition, the Custom House authorities have been approached by the committee and asked to "deal gently" with members of the Congress. The free railway ticket entitles the holder to carry one *pood* (36 lb.) of luggage free of carriage. Before leaving Moscow the return ticket must be stamped at the office of the executive committee to the effect that the holder is a *bonâ-fide* member of the Congress, and it will have to be presented at the booking-office of the station of departure to be stamped with the date.

The Ladies' Committee.

As a considerable number of lady guests may be anticipated a committee of ladies has been formed to provide for their comfort and amusement during their visit to Moscow. This Ladies' Committee has been taken under the gracious patronage of the Grand Duchess Sergius, the granddaughter of Queen Victoria and sister of the reigning Empress. The president of the committee is Madame Skliffosofski, who is assisted by Madame Kojevnikof and Madame Pashutin. This committee proposes to organise a small exhibition of women's work, and hopes to make this as representative as possible of the position and activity of women in Russia. The exhibition will be open during the period of the Congress. Members who expect to be accompanied by ladies are particularly requested to communicate the fact to the general secretary, Professor Roth.

The Arrangements in St. Petersburg.

The committee formed in St. Petersburg to arrange for the reception of members of the Congress and their proper entertainment in this, the second capital of the Russian Empire, has already announced a number of interesting engagements for the days succeeding the close of the Congress. The Congress in Moscow will end on the 14th (26th) August; on the 16th (28th), a Saturday, there will be a reception of members by the St. Petersburg medical societies and the profession in general; this will be held in the Salle de Noblesse, the largest and handsomest hall in St. Petersburg. On Sunday, the 17th, there will be an excursion to Peterhof, where there are more than one Imperial palace and a very beautiful park, the fountains in which rival the famous fountains of Versailles. Supper will be served in Monplaisir, a picturesque little Imperial summer-house, dating from the time of Peter the Great and built close to the waters of the gulf. For those members who do not go to Peterhof there will be on the same evening a reception or "rout" given by Her Highness the Princess of Oldenburg. On Monday, the 18th, the new museum at the Imperial Academy of Military Medicine, named after the great surgeon, Pirogof, will be opened in state in the morning, and in the evening the town council will hold a reception. The two following days are allotted to an inspection of some of the medical and other institutions of interest in the city.

The Pirogof Statue in Moscow.

One of the events of the Congress week in Moscow will be the formal unveiling of the new statue to Pirogof in front of the principal entrance to the clinique. The proposal to erect such a monument was made in the year 1891 and a

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subscription list was started; the sum collected amounted in 1895 to 12,000 roubles (about £1300), and the work was entrusted to Mr. V. O. Sherwood, member of the Academy of Arts. The statue is already complete, but a further small sum of money is required for paving the space about the statue and adding a chain or railing round it. For this 1600 roubles are required, and this sum will probably be voted by the town council of Moscow. Pirogof's relations with Moscow were of the most intimate kind, as may be gathered from his own words, which have been chosen to appear on the pedestal of the monument: "The city of Moscow, in honouring me with the title of honorary citizen, have realised the secret dream of my youth, when I was prepared to dedicate the whole of my life solely to Moscow, the place of my birth and of my education."

The Recent Jenner Centenary.

The Russian National Health Society, at their recent annual meeting, awarded the gold medal of the society to Dr. Hubert for his Jenner Centenary volume on "Small-pox and Vaccination," which was reviewed in THE LANCET of April 17th. The gold medal is given once in two years, and a silver medal annually. At the same meeting a number of foreign honorary members were elected, and among them the Epidemiological Society of London as a whole received the honorary membership of the Russian society.

The Russian Census.

The preliminary results of the first complete Russian census ever taken have just been published. The total population of the empire in January last, the date of the census, was 129,211,113; the number of males was 64,616,280, and of females 64,594,833. This proportion of the sexes, in which the males slightly exceed the females, is worthy of remark. Previous attempts to arrive at a knowledge of the number of persons in the empire were made in 1851, when the population was reckoned at over 67,000,000; in 1858, when the figure had risen to over 74,000,000; and in 1885, when it had increased to 108,819 332.

June 5th (17th).

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

The Recent Annual Medical Conference held at Nelson.

THE New Zealand Medical Association is in name a colleagueship of the past, and we are now inaugurated as a branch of the British Medical Association. How this change has come about is not by any means clearly seen by the majority of the members of the profession practising in this colony. I have already maintained that it is a misfortune that circumstances have so come about that at the present time we have no representative journal of our own. The *New Zealand Medical Journal* was edited ever since its inception in a most befitting manner. It had a considerable credit balance at the time of its decease—viz., at the end of the year 1896. It was well supported by the profession, and numerous original articles, dealing with a vast variety of medical, surgical, and general topics, have from time to time appeared in its pages. In was, in fact, a medium of recording special work in the colony, and right well did it carry out its purpose. In its place we have a limited space allocated to us in the *Australasian Medical Gazette*—a journal printed on the other side. How long this arrangement will be considered satisfactory to the members of the profession practising here remains to be seen, but I venture to predict that ere long we shall find it necessary to ventilate our thoughts through the medium of a medical journal edited in New Zealand. Living so far away as we do from "home" perhaps the determination to unite ourselves with the British Medical Association and be subservient to its rules and ordinances will turn out a satisfactory arrangement. It has, however, been found necessary to frame certain by-laws which shall govern our transactions in the colony apart from the ordinary rules of the British Medical Association.

General practitioners in New Zealand—which looks such a small speck on the map, but which is about the size of Great Britain and Ireland minus Wales—live a very long way apart, and have in each locality many miles of surrounding district to cover in their daily work. In these circumstances it is looked upon as very improbable that a very large attendance of the profession will be likely to congregate on the occasions of the annual medical conferences, and this has certainly been the experiences of the past. The year 1897 will be remembered, however, for attracting to Nelson a very representative conclave of medical men from all parts of the colony, to see the old order of affairs superseded and the new state of mission inaugurated.

The majority of the Wellington and the West Coast of the North Island contingent left the empire city on board the Union s.s. *Wainui* on Sunday evening, March 7th, and were rewarded by having a most glorious passage through the "French Pass," no antidotes for *mal-de-mer* being necessary. We had a travelling theatrical company on board and things from the start were characterised by recitations and joviality. Not so rosy a time, however, did the remaining members of the conference experience, who elected to leave the same port on the following day on board the s.s. *Corinna*, for a sou'-wester suddenly sprang up, and by the time the good ship had reached the wharf at Nelson those on board were prostrate, for the storm had played more havoc in the "garden of New Zealand" than any similar visitation during the past thirty years.

Such was our first night at Nelson, the howling wind and driving rain wafting away sweet sleep from most of us and from many of the townsfolk. As the dawn of Tuesday, March 9th, appeared the gale suddenly lessened and shortly gave place to bright sunshine and a crispness of the air which enabled us to visit with pleasure during non-working hours the many beautiful scenes which this part of New Zealand presents. It also enabled us to enjoy to the full the kindly hospitality of our Nelson medical brethren, who had so arranged social gatherings (including a delightful picnic to Cable Bay) and dinners that our time was fully occupied during the week in scientific work and recreative enjoyment which none of us will soon forget. Father Mahoney's hospitality and attention to us must be specially referred to—a genial, kindly gentleman (who has done so much to benefit his flock and the public of Nelson as a whole) that we would all like to give him a "retaliation." It is with gentlemen of his position, endowed with light and understanding, that intercourse with members of the medical profession brings about matters for the public well-being.

Tuesday, March 9th, at 3 P.M., was the date fixed, and the Museum at Nelson the rendezvous, for the introductory address, which related to affairs deferred from the New Zealand Medical Association, correspondence, &c., and notices of motion in connexion chiefly with the vexed "club question." A long and very interesting discussion took place on this latter subject, and it was ultimately decided to leave the matter in the hands of the Provisional Council to report on. Now, as this is one of the most important questions which concerns the members of the profession as well as the public, it was decided by the Council (which was afterwards elected) "to draw up certain suggestions and to send a copy to each practitioner in the colony and to the secretary of each section of the New Zealand Branch of the British Medical Association to report and give information on." This was carried unanimously by the Council. The following were elected members of the Provisional Council: Dr. Scott (Auckland), Dr. Saunders (Wanganui, as delegate for the Hawke's Bay Branch), Dr. Collins (Wellington), Dr. Graham-Campbell (Christchurch), and Dr. Mackie (Nelson).

At 8 P.M. the same evening Dr. Cleghorn, the President for 1897, delivered a thoroughly practical address on the relationship in this colony between the profession and the public. I trust that it will bring forth the fruit in due season which its thoughtful preparation so well merits. That Dr. Cleghorn's address was appreciated by his medical *confrères* was significant by the frequent plaudits which occurred during the course of his remarks. The President received a hearty vote of thanks for his address.

The following papers were read at the meeting: "New Methods of Diagnosis and Treatment of Chronic Disorders of the Stomach," by Dr. Colquhoun (Dunedin); "Osteomyelitis," by Dr. W. Collins (Wellington); "Ununited Fracture of the Humerus: Successful Treatment after Sixteen Months of Solution of Continuity by a Modification of Lane's Method," by Dr. G. R Saunders (Wanganui); "Early Ectopic Gestation," by Dr. F. Batchelor (Dunedin); "Albumose in the Urine," by Dr. Fyffe (Wellington), who also contributed a very interesting paper on a Case of Operation for Perforation of the Stomach. Dr. Scott also gave a demonstration of administration of gas and ether.

A most delightful picnic to Cable Bay, the site of the submarine cable house, wound up a very successful week.

April 15th.

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Obituary.

MATTHEW CHARTERIS, M.D. EDIN., F.R.S. EDIN.

WE announced in our issue of June 12th with deep regret the death of Dr. Matthew Charteris, Professor of Materia Medica and Therapeutics in the University of Glasgow, who passed away on June 7th at the little village of Comrie in Perthshire, where he had gone to recruit after a severe attack of influenza. He was born in 1840 in the lovely district of Wamphray, Dumfries-shire, and received his early education from his father, who was schoolmaster there. He afterwards attended the arts classes at the University of Edinburgh, where he distinguished himself as a classical scholar; but presently deserting these literary pursuits for the study of medicine, he graduated as M.D. in 1863. In the same year he obtained the Licence of the Royal College of Surgeons of Edinburgh, and then proceeded to Paris, where he attended the clinics of the leading men. He also worked for a time in London, where he held several junior medical appointments. Returning to Scotland he settled at Airdrie, but soon left there for the neighbouring city of Glasgow, where he rapidly acquired a high reputation and an extensive practice. In 1874 he became a Fellow of the Faculty of Physicians and Surgeons of Glasgow, and two years afterwards was appointed to the important post of Professor of the Practice of Medicine in Anderson's College. Previously to this he had been elected one of the honorary physicians to the Royal Infirmary, where he rapidly became popular with the students for his unusual powers of clinical teaching. In these posts he had acquired so outstanding a reputation as a teacher and therapeutist that on a vacancy occurring in 1880, the Crown appointed him to the Chair of Materia Medica and Therapeutics in Glasgow University, a position which he filled with honour and dignity for seventeen years. On his appointment he took up the work of the chair heartily and enthusiastically, and getting rid as far as possible of the old-fashioned trammels and traditions surrounding materia medica, he endeavoured to make his lectures on therapeutics a living and practical part of the medical curriculum—an endeavour in which his students will heartily admit that he was entirely successful. Besides being actively occupied with practice and teaching he engaged, as time allowed, in a number of scientific researches. The best known of these is his investigation into the action of the impurities found in sodium salicylate. During the first of the recent epidemics of influenza he was much struck by observing the occasional very depressing effects of this drug, and after prolonged inquiry he was able to show that this was due to the presence in varying quantity of one of the varieties of cresotic acid. Pure or "natural" salicylate he found to be comparatively harmless, and as an outcome of his researches great practical improvements have taken place in the manufacture of salicylic compounds. He also investigated the effects of copper when used as a colouring agent for preserved fruits and vegetables, this like all his other contributions showing a distinctly practical bent of mind. He was a frequent contributor to THE LANCET and to the medical press generally, and comparatively recently had written on the treatment of rheumatism and of sea-sickness. He was recognised as an authority on climatic treatment and health resorts—a subject on which he had written largely, being the author of a well-known book and of the article on Treatment by Climate in Quain's Dictionary of Medicine. He was a Fellow of the Royal Society of Edinburgh and a vice-president of the British Balneological Society, and had lately been nominated a vice-president of the International Medical Congress to be held this year at Moscow. He had a deep sense of the importance of the clinical teaching of thereapeutics and of pharmacology as being calculated to train students in rational methods of treatment as opposed to dogmatic and empirical methods, and for some years past it was a matter of the deepest regret to him that no beds were allotted in the Western Infirmary to his university chair, so that he was unable to illustrate his lectures by his practice. He made a determined effort to alter this state of things, but without success—a result to be regretted both on account of the infirmary and of the University. Personally Matthew Charteris was one of the kindest and most amiable of men—simple, and unassuming as regards his own position and attainments, but appreciative and sympathetic towards the work of others. He took an active part in university affairs, and was greatly beloved by his students for his unvarying kindness to them in every relationship. Many of his old pupils owe to his interest in them their first start in their medical career after graduation, and he will be greatly missed not only in the University, but by a wide circle of friends in Glasgow. He was a keen fisherman and golfer, and a good billiard player. He kept up throughout life a strong interest in the Latin poets, the result no doubt of his early training under his father. He leaves a widow and three grown-up sons.

THOMAS HAMILTON, M.D. EDIN.

BY the death of Dr. Hamilton, who passed away at the ripe age of eighty-three years, Kelso has lost a highly esteemed practitioner of the old school. The deceased was educated at the Edinburgh High School and at the University of Edinburgh, where he took the degree of M.D. so far back as the year 1838. For many years he had an extensive, though it must be confessed not very lucrative, practice, and among the many offices he filled was that of medical officer to the Kelso Union Poorhouse. He was an earnest Presbyterian and was for nearly fifty years an elder. He was a good linguist and classical scholar, while his unfailing kindness and courtesy endeared him to all classes with whom he came in contact. The funeral, which took place on June 6th, was attended by a large number of friends and former patients. Although he had for some time retired from active practice he continued to take a prominent part in town affairs, and his loss will be greatly felt in Edinburgh where he had resided for many years.

HUGH MOSS, J.P., M.D. ST. AND., M.R.C.S. ENG., L.S.A.

THE news of the death of Dr. Hugh Moss, of Congleton, Cheshire, at the age of fifty-eight years, has been received with great regret by many friends and acquaintances in both public and private capacities. His health had been failing for some months, but he was able to continue active work up to the last. Whilst seeing a patient on the morning of May 28th he was seized with apoplexy and died in a few hours. Dr. Moss qualified M.R.C.S. Eng. and L.S.A. in 1862, and in the same year obtained the M.D. degree of St. Andrews University. For over thirty years he was medical officer to Congleton union, and enjoyed an extensive country practice. Dr. Moss took much interest in municipal affairs, and was for three consecutive years mayor of the borough, carrying out his duties with great assiduity. He devoted much of his leisure time to music, and was especially proficient as a player of the flute and violin. He was held in the highest esteem both on account of his personal charm and professional ability. His loss is deeply felt by a large circle of friends and patients, more especially perhaps by the sick poor, to whom he was ever most unremitting in his care and attention. The funeral was a public one, attended by the mayor and corporation and a large number of townspeople. Dr. Moss leaves a widow and four daughters.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the examination in June the following candidates passed in the subjects indicated:—

Surgery.—P. D'E. Burrell, St. George's Hospital; G. F. McCleary, Cambridge University and Middlesex Hospital; E. J. O'Meara (Sections I. and II.), Guy's Hospital; A. H. Turner, London Hospital; and J. H. Whitaker, Belfast.

Medicine.—J. T. Brickwell, Guy's Hospital; F. R. Greenwood, St. Bartholomew's Hospital; G. F. McCleary, Cambridge University and Middlesex Hospital; W. Mawer, St. Bartholomew's Hospital; E. J. O'Meara (Section II.), Guy's Hospital; and T. H. B. Yorath, Guy's Hospital.

Forensic Medicine.—J. T. Brickwell, Guy's Hospital; J. Cater, King's College Hospital; P. H. Collingwood, St. Thomas's Hospital; F. R. Greenwood, St. Bartholomew's Hospital; T. Jones, Middlesex Hospital; G. F. McCleary, Cambridge University and Middlesex Hospital; and E. L. C. Muspratt, King's College Hospital.

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Midwifery.—J. T. Brickwell, Guy's Hospital; J. Cater, King's College Hospital; T. Jones, Middlesex Hospital; H. Lewkowitsch, Breslau; G. F. McCleary, Cambridge University and Middlesex Hospital; and A. E. Seller, London Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery:—Messrs. J. T. Brickwell, P. H. Collingwood, H. Lewkowitsch, E. J. O'Meara, W. Mawer, G. F. McCleary, E. L. C. Muspratt, A. E. Seller, and J. H. Whitaker.

UNIVERSITY OF CAMBRIDGE.—At the Congregation on June 18th, in addition to the honorary degrees conferred on the colonial Premiers and other distinguished persons, the following medical degrees were granted:—

Doctor of Medicine.—Joseph Blumfield, B.A., Caius; and Ernest Noël Nason, B.A., Downing.

Bachelor of Medicine.—L. P. Black, M.A., Trinity Hall; J. M. Martin, B.A., St. Peter's; H. B. Milsome, B.A., Trinity; W. Irving, B.A., Caius; S. H. Long, Caius; A. Mackenzie, B.A., Caius; W. B. Dove, B.A., Christ's; W. E. Manby, B.A., Christ's; H. Roper, B.A., Christ's; H. J. R. Twigg, B.A., Christ's; J. C. Muir, B.A., Emmanuel; and G. B. Muriel, B.A., Downing.

Bachelor of Surgery.—H. B. Milsome; P. J. A. Seccombe, M.A., St. John's; J. M. Martin; W. Irving; A. Mackenzie; W. B. Dove; W. E. Manby; H. Roper; H. J. R. Twigg; J. C. Muir; and G. B. Muriel.

Professor Allbutt has been appointed to represent the University at the forthcoming International Medical Congress in Moscow. Mr. E. W. MacBride has been appointed an Additional Examiner in Elementary Biology for the M.B. degree. There were 145 candidates at the examination just completed. In presenting Sir John Kirk, M.D. Edin., F.R.S., for the honorary degree of Doctor of Science on June 17th, the Public Orator referred to him as "Livingstonii comitem fidelissimum, Livingstonii adiutorem optimum, virum scientiarum laude insignem, Africæ denique in litore orientali per annos plurimos Britanniæ procuratorem indefessum."

OPENING OF THE NEW COUNTRY BRANCH OF THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC AT EAST FINCHLEY.—On Wednesday, June 16th, as we briefly mentioned last week, the Duchess of Albany performed the ceremony of opening the new convalescent home which the board of the hospital have erected at East Finchley in place of an old and less commodious building. A large number of visitors travelled from King's Cross by special train. After a short religious service an illuminated address was presented to Her Royal Highness, and at the request of Mr. G. W. E. Russell, she declared the building open. The Duchess was afterwards conducted over the building by Dr. Buzzard, Dr. Gowers, and Dr. Ormerod, and showed the greatest interest in all the arrangements of the hospital, and conversed with many of the patients. The hospital in Queen-square, of which this is a branch, was one in which the late Duke of Albany took active interest, and after his lamented death Her Majesty the Queen approved of the name of "Albany Memorial" being given to the hospital. It must have therefore been gratifying to Her Royal Highness to find that the institution, which owed so much to the Duke, has been so successful that it has been obliged to enlarge its borders. The new hospital stands in a large garden at the edge of the well-wooded slope which extends northward from Hampstead and is admirably adapted for its purpose. It is intended to accommodate thirty female and ten male patients. Not only epileptics, but patients convalescent from other forms of disease of the nervous system are sent from the parent hospital. It is to epileptics particularly that the home will be a boon, as in consequence of their infirmity they are not admissible to ordinary convalescent homes. Nearly all the rooms are on the ground floor, making movement about the house easy for those who are suffering from some form of paralysis, and protecting epileptics from the risk of injuring themselves by falling downstairs during an attack. The wards are very bright and well ventilated. There is an adequate resident nursing staff, and the patients are visited every week by two of the physicians, or in an emergency by the local officer, Dr. Hicks.

THE Brighton corporation on June 17th passed new by-laws for dealing under penalties with small occupiers who sub-let a part of their houses. This is, in the opinion of Dr. Newsholme, the medical officer of health, one cause of the high death-rate in one or two of the wards of the borough. Competitive plans are being invited for a large number of artisans' dwellings to be erected by the Council. The borough waterworks last year made a gross profit of £33,686; £8500 go to the relief of the rates.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Public Health (Scotland) Bill.

THERE is every prospect of ample discussion on the report stage of this Bill with regard to the amendments made by the Grand Committee putting the sanitary inspector on the same footing as the medical officer of health in deciding what are nuisances and other points in connexion with public health administration. Formal proposals to strike out these amendments have been given notice of by Sir William Priestley and Sir Walter Foster.

The Scottish Universities Commission.

Having regard to what was said at the recent meeting of the General Medical Council with reference to the ability of the Scottish Universities to get from the Scottish Universities Commission an ordinance empowering them to exercise discipline upon their graduates, the assurance given by Mr. Hanbury, Secretary to the Treasury, on Friday, June 18th, in the House of Commons is of some importance. Mr. Hanbury's attention was called by certain of the Scotch Members to the litigation going on between the University of St. Andrews and the College of Dundee, and he stated in explicit terms that until this litigation is concluded and the point at issue settled the Scottish Universities Commission cannot come to an end. Not only so, but provision is made in the estimates of the year for the continued existence of the Commission.

HOUSE OF COMMONS.

THURSDAY, JUNE 17TH.

Education for Blind and Deaf Children.

Sir John Gorst made a statement on this subject when introducing, at this sitting of the House the vote for public education in England and Wales. He stated that the sum now earned by the schools for giving this education amounts to £17,627 a year, the increase in the present year being no less than £5335. The grants allowed were £3 3s. per scholar for ordinary elementary education and £2 2s. per scholar for manual instruction and industrial training. In 1894–95, while 3121 scholars earned the former grant, only 1937 earned the latter; but in 1895–96, out of 3742 who earned the grant for ordinary elementary education, no fewer than 3611 earned the grant for manual instruction and industrial training. These figures showed, he said, that under the improved arrangements of the present day almost every blind and deaf child not only received ordinary elementary education, but also received manual instruction, which in many instances enabled them to earn their own livelihood and become valuable members of society. This result of the new Act, which was to some extent an experiment, was highly satisfactory and ought to encourage Parliament and the country in proceeding in this and in analogous cases with some degree of confidence.

Metropolitan Poor-law Children.

Mr. James Stuart, in the course of the debate on the Education Vote, urged the Education Department to take within its cognizance the poor-law schools of London. Sir John Gorst replied that where guardians in other parts of the country had sent the children to the ordinary public schools the best results had been obtained; but in these large pauper schools in London the education was very inferior and far short of the requirements of the Education Department. Not only so, but if the Department undertook their inspection it would have no security that the recommendations of its inspectors were carried out. The only way to break up these large schools was for the guardians to send the children to the ordinary schools, and in that effort he wished them God-speed.

FRIDAY, JUNE 18TH.

Experiments on Living Animals.

During the debate on the Home Office Vote Mr. Weir made allegations of cruelty in connexion with vivisection, and read extracts from a letter on the subject. The Home Secretary (Sir Matthew White Ridley) undertook to inquire into the matter, but said he did not believe there was any foundation for the allegations. During the course of the last year or two he had received only one or two complaints as to the way the operations were carried on and as to alleged cruelty or irregularity under the Act. The charges made were not substantiated in any case, and he had every reason to believe that the Act was humanely and properly administered, and that the two inspectors were thoroughly up to their work. They paid surprise visits and took every means to secure the efficient carrying out of the Act.

MONDAY, JUNE 21ST.

Food Products Adulteration.

Mr. Balfour said, in reply to questions by Mr. Jeffreys and Major Rasch, that while he could give no specific pledge as to when the Bill dealing with the adulteration of food products would be introduced, he hoped the introduction would take place at no distant date—probably next week or the week after.

Naval Hospital Diet Sheets.

Dr. Tanner asked the First Lord of the Admiralty whether any, and if so what, system was pursued with regard to the audit of all naval hospital diet sheets.—Mr. Goschen replied that the various diet sheets were compiled by the medical officers of wards, who entered personally on them daily the diets they had ordered. These sheets were examined in the office of the principal medical officer in charge of the hospital, who certified on the quarterly provision account that this had been done. The audit of hospital accounts, which included that of diet sheets, had been conducted for some time past by the controller and auditor-general.

Dog Muzzling Orders.

Mr. Walter Long, President of the Board of Agriculture, said, in

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reply to Sir Charles Dilke, that he had caused a special inquiry to be made as to the application of the dog muzzling order to sheep dogs while working, the result of which went to show that no really serious inconvenience was caused by requiring these dogs to be muzzled in districts in which such a measure was necessary. This view was confirmed by the past experience both of the Board of Agriculture and many local authorities when muzzling regulations had been made. Moreover, the proposed exemption would seriously impair the efficiency of the orders now in force and render it necessary for them to be continued for a longer period than he hoped would be necessary.

The London Water Question.

Mr. Chaplin said he was informed that the Royal Commission on the London Water-supply held their first meeting on May 29th, when temporary accommodation was provided for them. Offices had since been assigned to the Commission, and he was advised that the inquiry was proceeding.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

BAILEY, J. G., M.B., C.M. Edin., has been appointed Junior House Surgeon to the Huddersfield Infirmary.

BARTLETT, R. C., L.R.C.P. Lond., F.R.C.S., has been appointed Medical Officer of Health by the Ramsey Rural District Council.

CARWARDINE, THOMAS, M.B., M.S. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Bristol Royal Infirmary.

EATON, JAMES, M.R.C.S., has been re-appointed Medical Officer of Health by the Grantham Rural District Council.

FOX, G. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Walsall Rural District Council.

GIBSON, W. R., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Infirmary of the St. Saviour's Union, London.

GILL, F. A., M.B., C.M. Aberd., has been appointed an Assistant Medical Officer to the Manchester Prison.

GRINDLAY, G., M.B., C.M. Edin., has been appointed Medical Officer for the Kingswinford Sanitary District of the Stourbridge Union.

HASLAM, W. F., F.R.C.S., has been appointed an Examiner in Anatomy for the Fellowship of the Royal College of Surgeons.

LAKE, RICHARD, F.R.C.S., has been appointed Surgeon Laryngologist to the North London Hospital for Consumption, Hampstead.

LATTER, CECIL, M.D., B.C., B.A. Cantab., has been appointed Medical Officer to the Victoria Hospital, Folkestone, vice F. Eastes, deceased.

MACDONALD, J., M.B., C.M. Glasg., has been re-appointed Medical Officer for the burgh of Saltcoats.

MAYNARD, EDWARD FORSTER, M.D. Edin., has been appointed Assistant Physician to the Sussex County Hospital.

MCCLELLAND, W. C., M.B., M.Ch. Syd., has been appointed a Senior Resident Medical Officer for the Sydney Hospital, New South Wales.

MONAHAN, P. F., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer for the Kiltormier Dispensary District.

PASTEUR, W., M.D. Lond., has been appointed Consulting Physician to the North-Eastern Hospital for Children, Hackney-road.

ROBERTS, S. J., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Third Sanitary District of the Acton Union, vice W. G. Cresswell, resigned.

SLADER, G. W. B., L.R.C.S. & L.M. Irel., L.S.A. Lond., has been appointed Medical Officer for the Blyton and Corringham District of the Gainsborough Union, vice D. Mackinder, resigned; also Surgeon to the Manchester, Sheffield, and Lincolnshire and Great Eastern Railways, vice D. Mackinder, resigned.

SOPER, R. W., M.R.C.S., has been re-appointed Medical Officer by the Dartmouth Town Council.

THOMAS, J. T., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Combined Sanitary Districts of Leicester and Rutland, vice J. A. Turnur.

WARDALE, J. D., M.B. Durh., has been appointed Surgical Registrar to the Royal Infirmary, Newcastle-on-Tyne.

WARRINGTON, W. B., M.D. Lond., has been appointed an Honorary Assistant Physician to the Liverpool Hospital for Consumption, vice T. Bushby.

WINGATE, D., M.B., C.M. Glasg., has been appointed Medical Officer for the Easington Sanitary District of the Easington Union.

WOODSIDE, W. A., L.R.C.P., L.R.C.S. Irel., has been appointed a House Surgeon to the Meath Hospital and County Dublin Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index)

BOROUGH OF SHREWSBURY.—Medical Officer of Health. Salary £200 per annum. Applications to the Town Clerk, Guildhall, Shrewsbury.

BRISTOL ROYAL INFIRMARY.—House Physician for two years. Salary £100, with apartments, board, and washing.

CONSUMPTIVE HOSPITAL AND ORPHAN HOMES OF SCOTLAND, Bridge-of-Weir.—Resident Medical Officer. Salary £80 per annum, with furnished apartments, board, &c. Applications to the Secretary, 194, St. Vincent-street, Glasgow.

DISTRICT ASYLUM, Mullingar.—Medical Woman as Junior Assistant Medical Officer, unmarried. Salary £100 per annum, with board, furnished apartments, attendance, and laundry.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury.—Resident Medical Superintendent for one year. Salary £105 a year, with board and residence in the hospital.

LONDON TEMPERENCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer for six months. Residence, board, and lodging are provided, and an honorarium given at the termination of the appointment.

LONDON THROAT HOSPITAL, 204, Great Portland-street.—Two Assistant Surgeons.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer, unmarried, for one year. Salary £150 per annum, with board and residence.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary at the rate of £30 per annum, with board, attendance, and washing.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House-Surgeon, unmarried. Salary £80 per annum, with board, residence, and washing.

MONTROSE ROYAL ASYLUM, Sunnyside, Montrose, N.B.—Senior Assistant Medical Officer, unmarried. Salary £200 per annum, with board, furnished apartments, and washing.

NEWCASTLE-UPON-TYNE UNION.—Assistant Medical Officer at the workhouse, unmarried. Salary £100 per annum, with furnished apartments, rations, and washing, subject to a deduction from salary and emoluments under the Superannuation Act of 1896. Applications to the Clerk to the Guardians, Union Offices, Newcastle-upon-Tyne.

NORFOLK AND NORWICH HOSPITAL.—House Physician for two years, unmarried. Salary £60 per annum, with board, lodging, and washing.

PARISH OF ST. GILES, Camberwell.—Third Assistant Medical Officer for the Infirmary at Havil-street, Camberwell, and the Workhouse at Gordon-road, Peckham; also for relief duty at the Constance-road Workhouse of the Parish for one year. Salary £50, with apartments, board, and washing. Applications to the Clerk to the Guardians, Guardians' Offices, 29, Peckham-road, S.E.

ROTHERHAM HOSPITAL AND DISPENSARY.—Assistant House Surgeon for six months. Board, lodging, and washing provided.

ROXBURGH DISTRICT ASYLUM, Melrose.—Assistant Medical Officer. Salary £100 a year, with board, rooms, attendance, and washing.

ROYAL EYE HOSPITAL, Southwark, or ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—House Surgeon. Salary £50 per annum, with free board and lodging in the hospital.

SHEFFIELD ROYAL HOSPITAL.—House Physician (unmarried) for one year. Board (exclusive of wine and beer) and lodging provided, and an honorarium of 25 guineas will be given.

ST. GEORGE, HANOVER-SQUARE, PROVIDENT DISPENSARY, Little Grosvenor-street, W.—Resident Medical Officer. Salary £100, with allowances, about £80, and residence at the Dispensary.

TOTTENHAM HOSPITAL.—Assistant Surgeon.

WESTERN DISPENSARY, Rochester-row, Westminster, S.W.—Attending Medical Officer.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

CROMBIE.—On June 23rd, at Highden, Sidcup, the wife of James Crombie, M.B., of a son.

KYFFIN.—On June 18th, the wife of John Kyffin, M.R.C.S., L.R.C.P., of Forton, Gosport, of a daughter.

OWENS.—On June 22nd, at Long Stratton, Norfolk, the wife of Charles Arthur Owen Owens, M.D. Brux., of a son.

RENTZSCH.—On June 18th, at the Firs, Waltham Cross, Herts, the wife of Sigismund Henry Rentzsch, L.R.C.P., M.R.C.S., of a son.

SALTER.—On June 19th, at St. Nicholas-parade, Scarborough, the wife of Charles E. Salter, M.D., F.R.C.S., of a son.

SKINNER.—On June 15th, at Bank House, Rye, the wife of Ernest W. Skinner, of a son (stillborn).

MARRIAGES.

BUTLER—HOSTE.—On June 15th, at the parish church, Meonstoke, George William Butler, M.R.C.S.E., L.R.C.P. Edin., son of the late Rev. J. W. Butler, B.D., Rector of Appleton-cum-Tubney, Berks, to Margaret Elizabeth Mary, youngest daughter of the Rev. Canon Hoste, Rector of Meonstoke, Hants.

BYRNE—WALTHEW.—On June 16th, at St. Chrysostom's, Victoria-park, Manchester, George Byrne, M.R.C.S. Eng., L.R.C.P. Lond., of Sunwick, Chorlton-cum-Hardy, to Florence Annie, elder daughter of George Walthew, J.P., of Stockport, and Norman House, Victoria-park, Manchester.

MOWAT—GOLDIE.—At the Waterloo Hotel, Edinburgh, on June 23rd, 1897, by the Rev. Wm. Mowat, M.A., West U.P. Church, Galashiels (brother of the bridegroom), assisted by the Rev. Thos. Kennedy, D.D., and the Rev. J. S. Rae, M.A., Newington U.P. Church, Edinburgh, James Mowat, M.B., C.M., to Jeannie, third daughter of the late Alex. Goldie, Elgin.

DEATHS.

BUNCOMBE.—On June 18th, at his residence, Montserrat-road, Putney, Charles Hope Buncombe, F.R.C.S.

DALZIEL.—On June 19th, suddenly, at his residence, Kensington-park-gardens, London, W., William Frederick Blyth Dalziel, M.D., aged 74.

HOGG.—On June 20th, at Buxton, Charles Hogg, F.R.C.S., of Westhill, St. Leonards-on-Sea, in his 86th year.

RAMSKILL.—On June 22nd, at St. Helen's place, Jabez Spence Ramskill, M.D.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

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Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (30th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (1st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (3rd).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (30th).—DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND (20, Hanover-square, W.).—4.30 P.M Council Meeting. 5 P.M. Ordinary Meeting.

THURSDAY (1st).—THE ABERNETHIAN SOCIETY (St. Bartholomew's Hospital, E.C.).—8 P.M. Dr. Norman Moore: Deaths of the Kings of England.

FRIDAY (2nd).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8.30 P.M. Papers:—Mr. Bickerton: Spontaneous Dislocation of Crystalline Lens into the Anterior Chamber.—Mr. Priestley Smith: Tscherning's Theory of the Accommodation,—Mr. E. T. Collins and Mr. J. R. Rolston: Microphthalmos with Cystic Protrusion from the Globe.—Mr. C. D. Marshall: Metastatic Carcinoma of the Choroid.—Mr. J. Eyre: Tuberculosis of the Conjunctiva. The Annual General Meeting for the Election of Officers will be held at the close of the ordinary meeting.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (28th).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. C. Wilkin: Syphilis as it may affect the Pharynx and Larynx.

TUESDAY (29th). — ROYAL COLLEGE OF PHYSICIANS (Examination Hall, Savoy, W.C.).—5 P.M. Dr. W. Hale White: The Means by which the Temperature of the Body is maintained in Health and Disease. (Croonian Lecture.)

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Ormerod: Clinical Demonstration.

WEDNESDAY (30th).—WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. McAdam Eccles: Cases of Hernia.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. S. Martin: Aortic Stenosis.

THURSDAY (1st).—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square).—5.30 P.M. Dr. Morgan Dockrell: Syphilides.

FRIDAY (2nd).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.)—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Gunn: Intra-Ocular Muscles.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 24th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 18	29·48	S.W.	59	58	118	65	51	0·05	Cloudy
,, 19	29·94	N.W.	55	49	114	65	49	0·24	Cloudy
,, 20	29·82	W.	60	55	87	61	50	...	Cloudy
,, 21	30·08	S.W.	61	56	124	77	52	...	Hazy
,, 22	30·11	W.	65	61	125	80	60	...	Cloudy
,, 23	30·09	S.E.	73	67	131	86	63	...	Hazy
,, 24	29·88	S.W.	77	69	130	89	66	...	Hazy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which is completed with the issue of to-day, will be given in the next number of THE LANCET. It is intended, in future, to include the Index and Title page for each past half-yearly volume in the first number of the succeeding volume, instead of in the last number of the volume itself, as heretofore.

WANTED A HOME.

To the Editors of THE LANCET.

SIRS,—Could any of your readers assist me in finding a home for an imbecile man? He is thirty-five years of age, quite harmless, has no paralysis or fits, can feed and dress himself, but requires a certain amount of supervision. His parents are aged, and would invest a sum sufficient to secure the regular payment of £1 per week, but could not afford to pay more. Naturally, they are anxious to find a home for their only son where he would be cared for and not abused. Any help in this matter would greatly oblige, Yours faithfully,

June 23rd, 1897. M.D.

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"THE SUPPLY OF TETANUS ANTITOXIN."

To the Editors of THE LANCET.

SIRS,—With reference to the letter by Mr. Buck in THE LANCET of June 12th regarding the difficulty experienced in obtaining serums from the wholesale agents in London, we would like to point out to you that we are acting as agents for the supply of serums issued by the Pasteur Institute in Paris, and that these can be procured in London at any time by wire from our west-end depôt, Mr. F. A. Rogers, successor to late Corbyn and Co., 327, Oxford-street; and from another depôt, Messrs. Alsop and Quiller, Sloane street, S.W. We would also like to point out to you that in Edinburgh, Glasgow, Belfast, Dublin, and other large towns we have depôts where these serums are stocked; and if your correspondent will put himself in communication with us we shall be pleased to give him a list of establishments from which serums can be procured without any delay at any time. Thanking you in anticipation of your kindly publishing this information,

We are, Sirs, yours faithfully,

OPPENHEIMER, SON, AND CO., LTD.
(*per* A. W. BALL, Director).

14, Worship-street, E.C., June 12th, 1897.

To the Editors of THE LANCET.

SIRS,—Our attention has just been drawn to the letter signed by Mr. Arthur H. Buck in THE LANCET of June 12th. Had Mr. Buck taken the trouble to consult your advertisement pages he would have seen that for months past we have at frequent intervals had advertisements headed "Sunday," specially drawing attention to the fact that all the antitoxic serums of the British Institute of Preventive Medicine, &c., when wanted from us on that day, should be ordered from our Vere-street branch, the telegrams to be addressed, "Hanburys, Vere-street, London." A line drawing attention to this Sunday supply has appeared in our antitoxin advertisement every alternate week, and we think Mr. Buck might at least have taken the trouble to ascertain the facts of the case before publishing a statement which leads to an erroneous conclusion. May we take this opportunity of adding that any of our goods required on Sunday, or at night, should be ordered from our Vere-street establishment and not from Plough-court or Bethnal-green?

We are, Sirs, yours faithfully,

ALLEN AND HANBURYS, LIMITED

June 22nd. 1897. (*per* FREDERICK J. HANBURY, Director).

POISONED BY BUTTERCUPS.

IT is not generally known that the buttercup which is such a favourite flower with children has poisonous qualities, yet such is the case, and an inquest has recently been held on a boy who after eating some buttercups died within a few hours with all the symptoms of irritant poisoning. The buttercup belongs to the Ranunculaceæ, and nearly all the members of this group possess poisonous qualities, chiefly of an irritant nature, though in a few narcotic principles are to be found. The virulence of the poisons varies very much, but there are very few individuals of this order which are inert. The various species of buttercups have all irritant properties, and in the absence of better drugs they have occasionally been used as vesicatories. Cows avoid buttercups, but hogs and some other animals can eat them with impunity. The active principle is volatile, so that when the buttercups are dried with hay or exposed to the air they become inert. Luckily the buttercup, though pretty to look at, does not usually tempt children to eat it wholesale, otherwise cases of poisoning might be less rare than they fortunately are at present.

Stockton.—We are well known to disapprove strongly of the association of medical men with these medical aid associations, but there is nothing in this friendly society that calls for particular notice from a professional point of view. The sums paid by the members are higher than in many such "clubs," but possibly the medical men are none the better paid for that.

A GOOD WAY BACK.

To the Editors of THE LANCET.

SIRS,—It may be of interest at the present time to readers of THE LANCET to refer them to the volume for 1837, where they will find an account of the death of my father's uncle, William Lynn (who, like my father after him, was for many years one of the surgeons of Westminster Hospital), which took place suddenly on June 24th in that year, four days after the Queen's accession. He had been visiting a friend at Bloomsbury, having been driven there in his carriage from Clapham, where he resided, and died when just about to enter it again for the return journey. During the visit much of the conversation naturally fell upon the recent death of the King (William IV.), and in the course of it Mr. Lynn remarked that he well remembered the death of George II. when he was about seven years of age. This carries us back a good way. I am, Sirs, your obedient servant,

Blackheath, June 14th, 1897. W. T. LYNN.

AN APPLIANCE FOR THE DEAF.

To the Editors of THE LANCET.

SIRS,—Some time ago I saw an appliance spoken of—I think in THE LANCET—to assist in cases of dulness of hearing. It was, I believe, of aluminium, and was designed to hang from a garment so that both hands might be free. All about it has quite escaped me, and you will have my best thanks if you can give me the name of the maker or of the firm supplying it. I am, Sirs, yours truly,

May 29th, 1897. J. W. W.

Lex.—(1) We cannot find any decision. Section 42 of the Public Health (Scotland) Act is as follows: "Where a hospital or place for the reception of the sick is provided or exists within the district of a local authority the sheriff or any magistrate or justice may, on the application of the local authority, with the consent of the superintending body of such hospital or place, by order on a certificate signed by a legally-qualified medical practitioner, direct the removal to such hospital or place for the reception of the sick, at the cost of the local authority, of any person suffering from any dangerous, contagious, or infectious disorder, and being without proper lodging or accommodation, or lodged in a room occupied by others besides those in attendance on such person, or being on board any ship or vessel, or may direct the removal from the room occupied by such person of all others not in attendance on him, the local authority providing suitable accommodation for such other persons." Our correspondent should note, however, that a county council, as such, is not the local authority for carrying out the Public Health Acts, excepting where the county is not divided into separate districts. Wherever there are such districts the district committee is the local authority. (2) Section 121 is as follows: "The constabulary and police force in their respective jurisdictions shall aid the authorities and officers acting in execution of this Act, or any directions or regulations issued as aforesaid." While the Act contains no specific reference to forcible entry under Section 42, yet under Section 17, which deals with power of entry in the case of nuisances, forcible entry is specifically warranted. Reading the above-mentioned Sections 17, 42, and 121 together, we can hardly conceive that any court would blame a local authority for making forcible entry if necessary in order to remove to hospital a patient certified under Section 42. It is obvious that, in the event of resistance, Section 42 would become a dead letter unless there were forcible entry and removal. The question, however, is more properly a legal one. (3) The local authority may make its own regulations regarding the management of its own hospitals, and these regulations may include the appointment of a medical practitioner as attendant on the hospital to the exclusion of other medical practitioners. The method of payment of the medical man appointed would not affect the question. In certain instances we believe that local authorities have made regulations for the treatment of patients in hospital by their private medical attendants.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Scotsman, Liverpool Courier, Grimsby News, Sheffield Independent, Birmingham Post, Hull News, Bradford Argus, St. Andrew's Citizen, Herald of Wales, Le Temps (Paris), Bury Guardian, Times of India, Pioneer Mail, Accrington Observer, Glasgow Weekly Citizen, Auckland Star, Architect, Cambria Daily Leader, North British Daily Mail, Goole Times, Builder, Norfolk Daily Standard, Journal des Debats (Paris), West Middlesex Herald, South Wales Daily News, Newcastle Journal, Rochdale Observer, Llandudno Directory, Eastern Morning News, Shrewsbury Chronicle, South Eastern Gazette, Manx Sun, Northampton Mercury, Preston Guardian, Liverpool Daily Post, Manchester Courier, Brighton Herald, Surrey and Hants News, Hereford Times, Yorkshire Post, Boston Independent, Kentish Express, Devon Weekly Times, Leicester Post, Portsmouth Times, Leamington News, Hampshire Telegraph, Leeds Mercury, Sussex Daily News, Woburn Reporter, Newport Advertiser, Luton Reporter, Bristol Mercury, Christian World, Sanitary Record, Brighton Gazette, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, City Press, Hertfordshire Mercury, Reading Mercury, Walsall Observer, Bradford Observer, Devon and Somerset Weekly News, Bristol Times, Ardrossan and Saltcoats Herald, Grantham Journal, Surrey Advertiser, Guernsey Star, Flintshire Observer, Surrey Comet, The Wilkes-Barre Record, Mail and Express (New York), Family Herald and Weekly Star (Montreal), Evesham Standard, Clifton Chronicle, Chester Courant, &c., &c.*

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